

Profile system

All information in this catalog has been carefully checked. For any errors or incomplete information we can not accept any liability. We reserve the right for technical changes, particularly those serving the technical improvement.

Our kit is designed primarily for indoor use. Outdoor applications require separate consideration.

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Profile system 2022
Part no. 95.3010/4

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MINITEC THE ART OF SIMPLICITY**MINITEC**
A FEW FACTS1986
founded60
Sales- and
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employees
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Locations
Germany, France,
Great Britain,
Slovenia, Spain,
USA, China"Innovative
SME",
"Attractive
employer
Rheinland-Pfalz",
Prize of the
Westpfalz
Region, Hidden
Champion

MiniTec has developed continuously from a specialist for miniature guides into a leading technology company and special purpose machinery manufacturer.

420 experts in 11 locations in Germany, France, USA, England, Spain, Slovenia and China now develop tailor-made solutions for our customers. At the same time, more than 60 partners worldwide ensure reliable service and competent advice.

Our solutions are just as individual as the requirements that our customers set. As a full-service provider, we use our construction system to implement intelligent systems and special-purpose machines for all types of different tasks in all important branches of industry: from the automotive, chemical and electrical engineering industry to energy supply and aerospace through to mechanical engineering, the metalworking and pharmaceutical industries. In line with our high technical standard, the motto of our complete solutions is: **The Art of Simplicity.**

Modular system

Our modular system and our linear technology are modular and based on the same principle. Our designers and engineers follow the principles that characterise all MiniTec products with passion: the greatest possible simplicity, no machining, unlimited possible uses with few components and continuous compatibility. Our constant aspiration is to avoid senseless product diversity. The shortest assembly time, avoidance of machining and reduced stockkeeping have the highest priority. We also pay particular attention to the ergonomic design of our components. Renowned companies worldwide use our components successfully for equipment, automation technology and plant engineering and construction. Working with leading research facilities, the system is developed continuously according to the latest requirements. Our customers benefit from our intensive work in scientific projects such as SmartFactory and the latest workplace design knowledge. Forward-looking research results are thus incorporated into our development work at an early stage.

Comprehensive service

Our engineers develop complete solutions for all branches of industry from our profile system. Here our customers benefit from the longstanding experience of our engineers. We guarantee quality and the shortest delivery time through provision and permanent continued development of all skills in our company. Expert teams for problem analysis, development and design, electrical design, control cabinet building, assembly and commissioning ensure economically and technically perfected solutions for every task of our customers. From equipment to workplace design with conveyor technology through to the complete production line. Everything from a single source, with no interfaces.

Quality

Our products are of the highest quality and demand the highest precision. We therefore work with state-of-the-art machines and methods of measurement. Our entire organisation acts according to the requirements of our certified quality management system to EN ISO 9001.

Environmental protection

Careful handling of resources and active environmental protection are basic principles of our corporate philosophy. Our compliance with environmental protection criteria is controlled to ISO 14001 and is put to the test regularly by external auditors. This also includes responsible use of energy and continuous improvement of our energy efficiency.

Health and safety

Our occupational safety system complies with OHSAS 18001 (Occupational Health and Safety Assessment Series) and has been certified since 2006. These basic principles are also strictly adhered to in all designs for our customers.

Responsibility

We are aware of our social responsibility. With this in mind, we create challenging jobs at our locations, provide young people with future-oriented training and offer all employees opportunities for continued development. We also deliberately rely on qualified older employees and thus ensure that our workforce has a heterogeneous age structure.

Assured processes

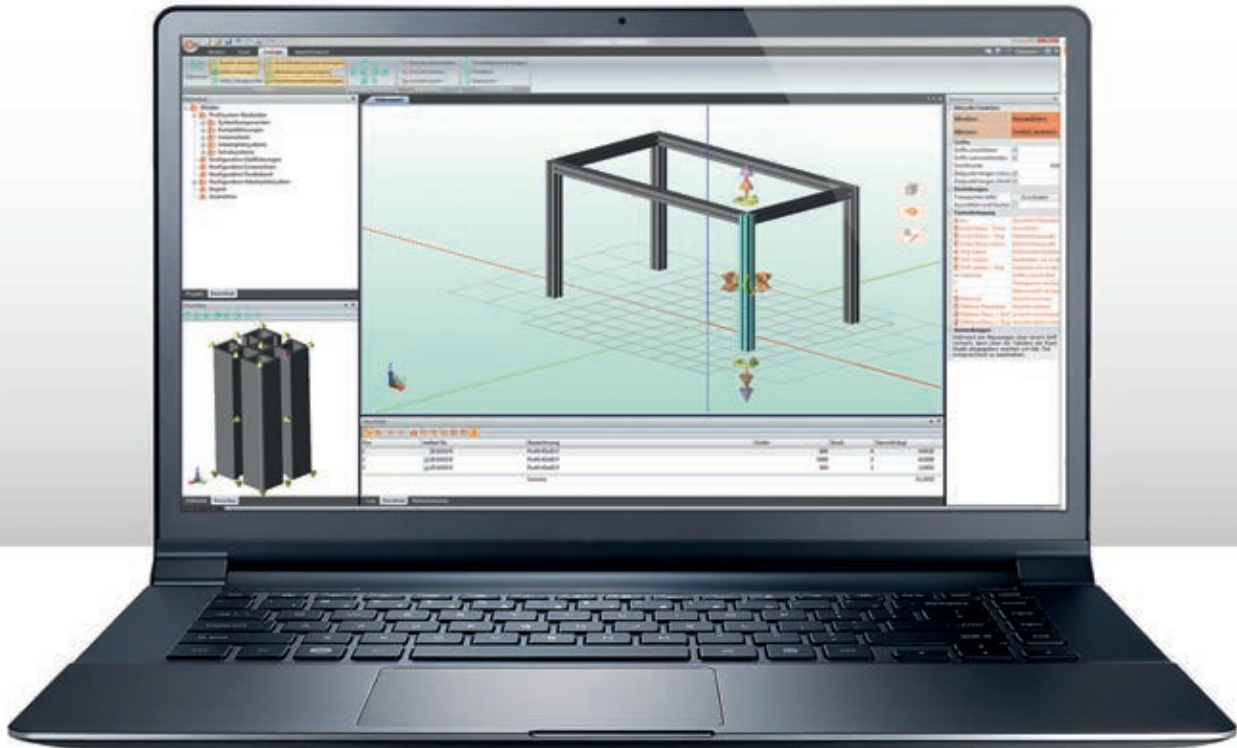
Our organisation meets the strict criteria of the customs authorities and is certified to AEOC 115021. As an approved economic operator, our customers benefit from associated customs simplifications.

CAD support

You can download 3D CAD data for all components from our website www.minitec.de. In addition, our iCAD Assembler CAD tool contains a complete e-catalogue with CAD data.



MINITEC THE ART OF SIMPLICITY



iCAD Assembler – for design efficiency

Our CAD tools are the logical complement to our modular hardware. All requirements of planning and execution are comprehensively considered.

The combination of components and software unlocks the full potential for rational, flexible and modern mechanical engineering.

iCAD Assembler is a CAD tool of the latest generation, which we make available to our customers free of charge.

The tool contains electronic catalogues, automatic parts lists and configurators for common applications such as ergonomic workstations, linear axes, conveyor belts, roller conveyors or protective devices. iCAD Assembler reduces design time by at least 60%, while reliably avoiding errors.

By popular request, **MiniTec** offers regular iCAD Assembler training courses. In one-day seminars we teach the time-saving features of this powerful tool with practical exercises.

The courses are led by our experienced technicians and take place on individually agreed dates.

Advantages

- System independent 3D design tool for MiniTec components
- Time saving for the user of approx. 60 percent
- Planning and design of components and systems independent of CAD software
- CAD functionality without own CAD software
- Easy to operate with special anchors, line snap points and drag & drop
- Direct interfaces to all common CAD systems such as: Mechanical Desktop, ProEngineer, Solid Works, Solid-Edge, MegaCAD and more.
- More than 180 data output formats in 2D and 3D
- Automated design module for: Linear axes, sliding guides, conveyor belts, workstations
- Automatic creation of parts lists
- Integrated plausibility check
- Automatic machining drawings



Download iCAD now from:
www.minitec.de/en/service/software-1/icad-assembler

Technical data

Aluminium profile

Aluminium alloy by DIN EN 573-3

Material	EN AW-Al Mg0,7Si status T66	EN-AW-6063 T66
Specific Weight		2,75 g / cm ³
Material-N°		3.3206.72 (artificially aged)
Tenacity		min. Rm = 245 N / mm ²
0,2 % twist boundary		min. Rp 0,2 = 200 N / mm ²
Ductile yield A 5		> 10%
Ductile yield A 10		> 8%
Modulus of elasticity		E: 70000 N / mm ²
Hear modulus		G: 27000 N / mm ²
Expansion hardness		ca. 75 HB 2,5 / 187,5
Heat extension		23.8 · 10 - 6K-1

Anodizing by DIN 17611

SURFACE	Eloxal E6/EV1, natur anodized, or EURAS CO	
	Layer thickness	ca. 10 - 15 µm
	Layer hardness	250 - 350 HV
TOLERANCE	Aluminium extruded profiles	DIN EN 12020 T 1 + 2
	Outer dimensions	0,2 to 0,4 mm
	Straightness deviatin	max. 1,5 mm / 2 m

Generally we confirm half the values according to the tolerances of DIN EN 12020 part 2.

Blanks	ISO 2768-m
Angle + Length	Usually half values of ISO 2768 m

PROFILE SERIES / BASIC GRID	Profile series	30	45
	Core boring	7,5 - 0,3	
	Standard thread	M8	

All profiles of the profile series 30 and 45 are each developed from the same grid. The profile grooves are uniform in each profile series. All profiles of the respective profile series can be combined with each other. It is also possible to combine the profile series with each other.

SST-PROFILES

Material

X5 Cr Ni 18-10	stainless steel, DIN EN 10 088
Specific Weight	7,9 g / cm ³
Material-N°	1.4301 (cold rolled)
Tenacity	min. R _m = 540 N / mm ²
0,2 % twist boundary	min. R _{p0,2} = 245 N / mm ²
Ductile yield	> 35%
Modulus of elasticity Hear modulus	E: 200 000 N / mm ² G: 80 000 N / mm ²
Hardiness Vickers	220 - 260 HV
Heat extension	11,5 · 10 ⁻⁶ 1/K

SURFACE

bare

TOLERANCE

	DIN ISO 2768 - c
Outer dimensions	± 0,3 mm
Straightness deviatin	0,001 x L
Blanks	ISO 2768-m
Angle + Length	Usually half values of ISO 2768 m

CORE BORING

Uniform 7,5 - 0,6 mm

Thread M8 is made with a tap

GRID

Basic grid 45 mm

Due to its identical groove the profile 45 x 45 SST is fully compatible with the aluminium profile system.

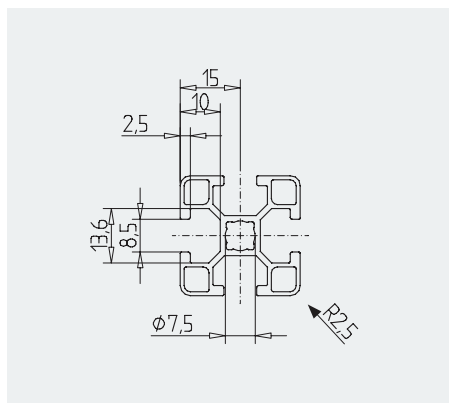
Technical data

Profile series 30

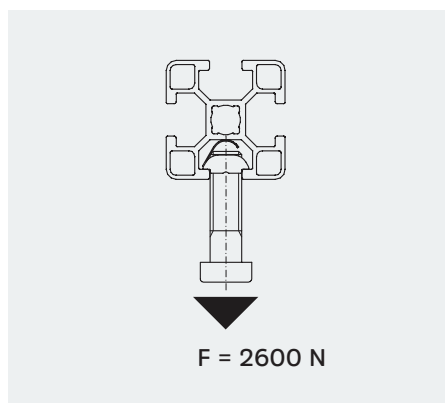
Grooves

One system for profiles 16 to 60 mm. The grooves are identical for all profiles.
Groove width: 8,5 - 0,3 mm.

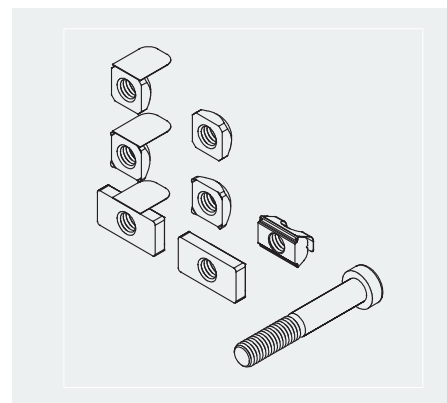
Basic dimensions



Load capacity



Nuts and screw forms used

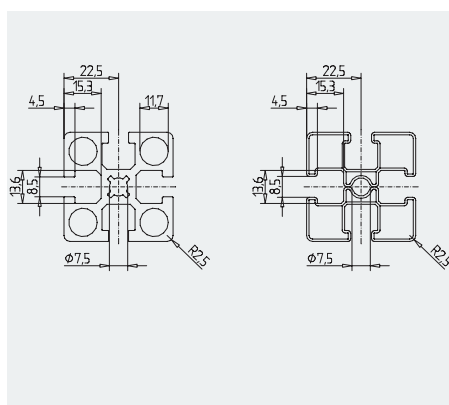


Profile series 45

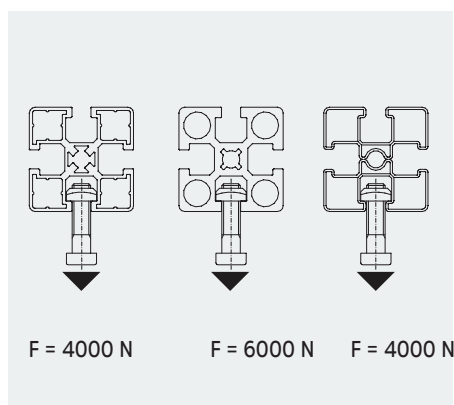
Grooves

One system for profiles from 19 to 270 mm. The grooves are identical in all profiles. Groove width: 8,5 - 0,3 mm. The grooves are designed to accept DIN M8 screws with 13 mm head diameter and 13 mm outer nuts. Square and hexagon nuts and screws are secured against rotation

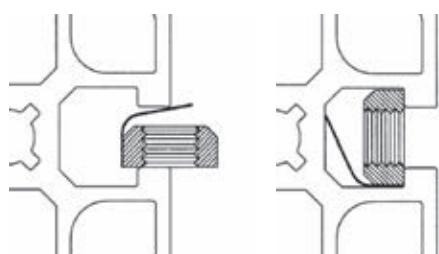
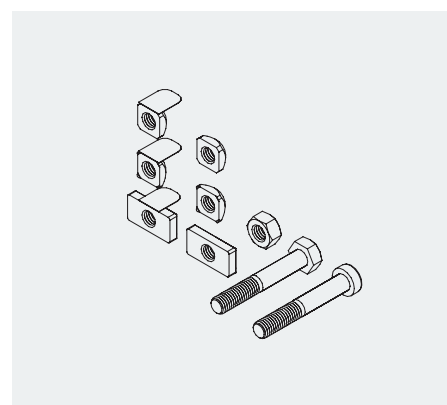
Basic dimensions



Load capacity



Nuts and screw forms used



Sliding nuts can be swiveld in at any point of the profil.

Calculate deflection

The MiniTec app's calculation program immediately shows the user whether the profile or installed axis used has been correctly selected according to the application or whether the deflection is above the permissible limits - and therefore a stronger component from the current MiniTec modular system is the better choice.



This is how it works



The **Deflection calculation** is also available in the iCAD Assembler and on the website.
www.minitec.de/en/products/calculate-deflection

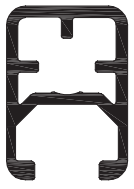


PROFILE SYSTEM

1.1	Aluminium profiles	14
1.2	Fastening elements	63
1.3	Hinges & Joints	104
1.4	Handle, locks, stops	120
1.5	Feet, castors, floor fastenings, supports	148
1.6	Fixing of surface elements	175
1.7	Edge, cover, sliding and sealing profiles	196
1.8	Ready-to-install elements for lifting and sliding doors	213
1.9	Electrical installation	234
1.10	Drive units and control systems	250
1.11	Pneumatic system	257
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Profile cross-sections

Profile series 30



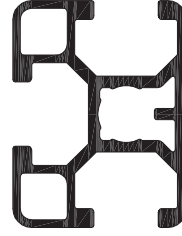
23 x 16
20.1115/0



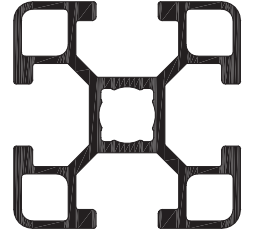
16 x 30
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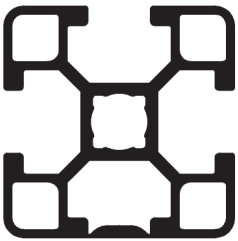
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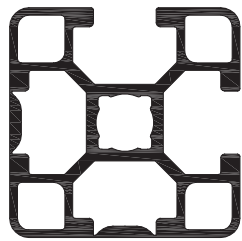
23 x 30
20.1117/0



30 x 30
20.1068/0



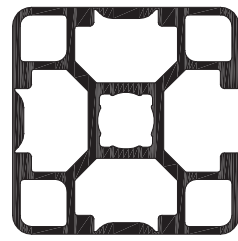
30 x 30 1G
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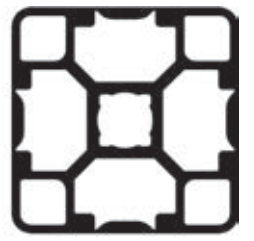
30 x 30 2G
20.1124/0



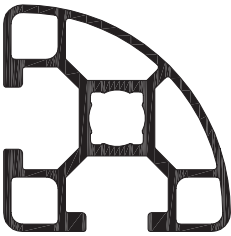
30x30 2GG
20.1156/0



30 x 30 3G
20.1085/0



30 x 30 G
20.1141/0



30 R 90°
20.1125/0



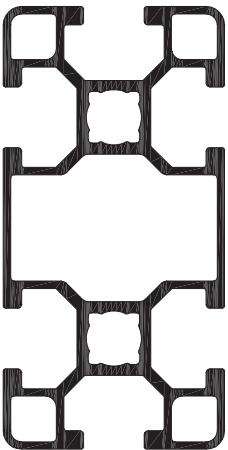
30 R 60°
20.1136/0



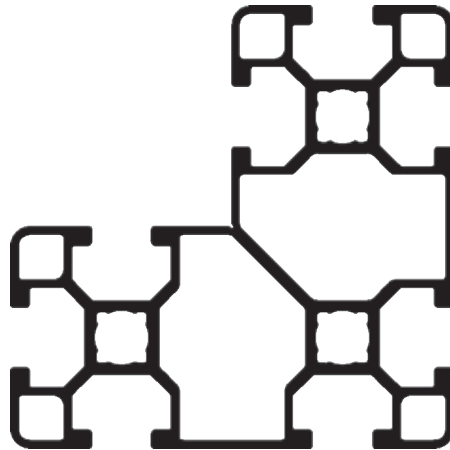
30 R 45°
20.1135/0



30 R 30°
20.1134/0



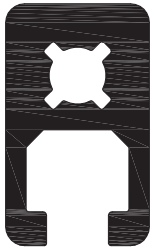
30 x 60
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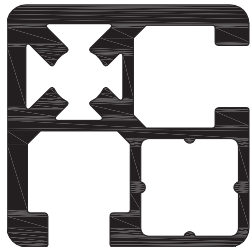
60 x 60 x 30
20.0982/0

Profile cross-sections

Profile series 45



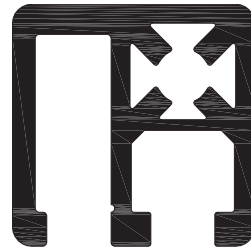
19 x 32
20.1000/0



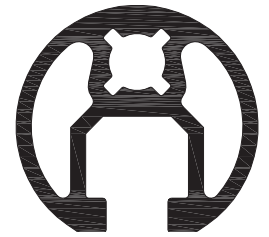
32 x 32 UL
20.1064/0



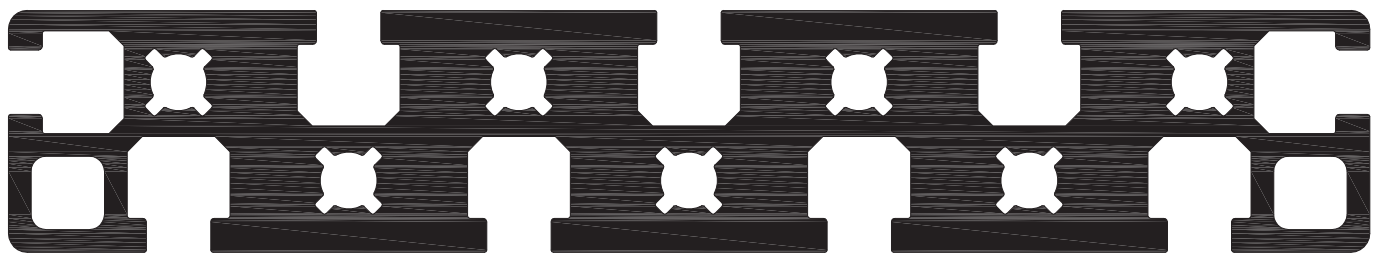
32 x 32 F
20.1054/0



**Clamping profile 32
x 32**
20.1070/0



Handle profile 32
20.1088/0



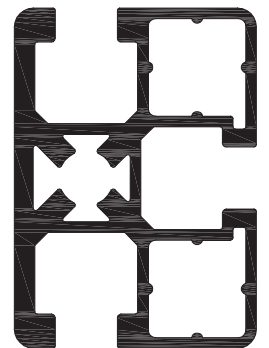
32 x 180
20.1016/0



19 x 45
20.1001/0



45 x 19
20.0993/0



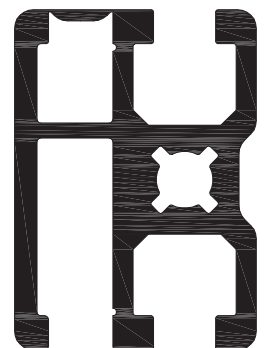
45 x 32 UL
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Clamp profile 45 x 45 F
20.1147/0



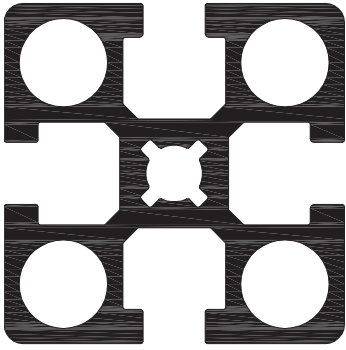
45 x 32 F
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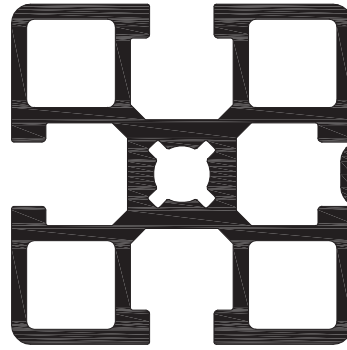
**Clamping profile 45
x 32**
20.1053/0

Profile cross-sections

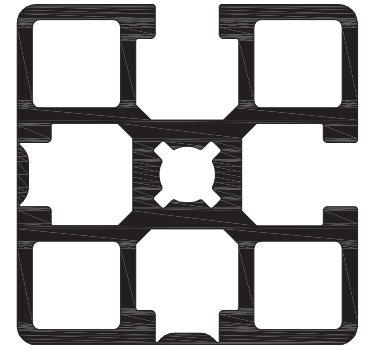
Profile series 45



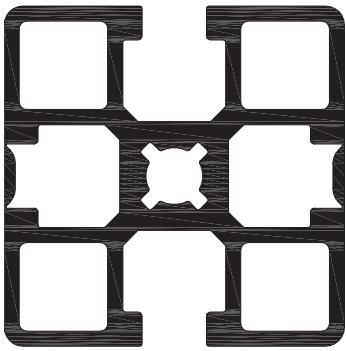
45 X 45
20.1006/0



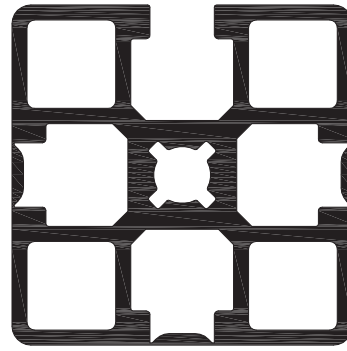
45 x 45 1G
20.1126/0



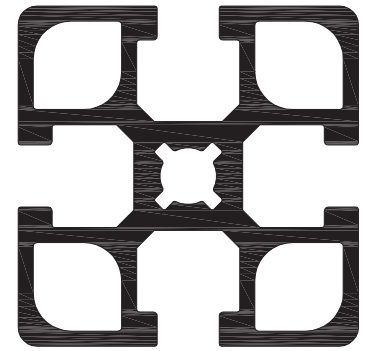
45 x 45 2G
20.1072/0



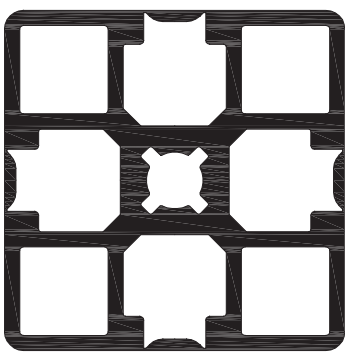
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20.1099/0



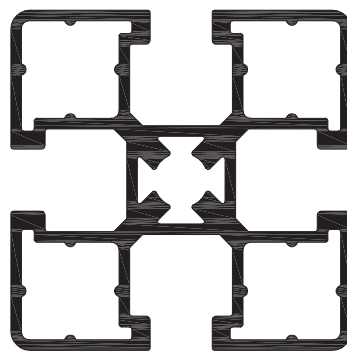
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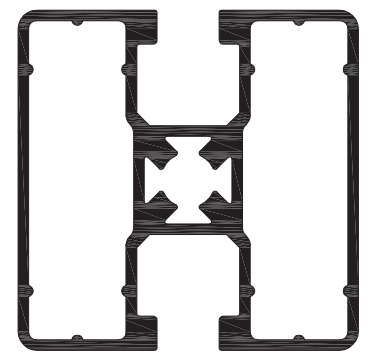
45 x 45 F
20.1033/0



45 x 45 G
20.1028/0



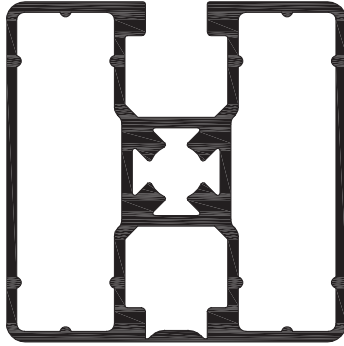
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20.1063/0



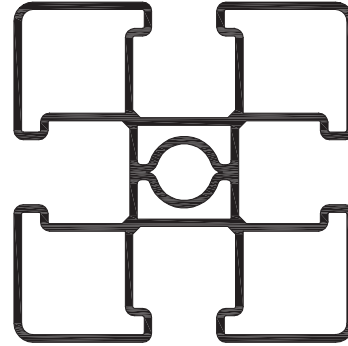
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20.1122/0

Profile cross-sections

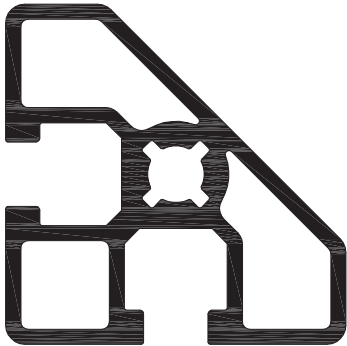
Profile series 45



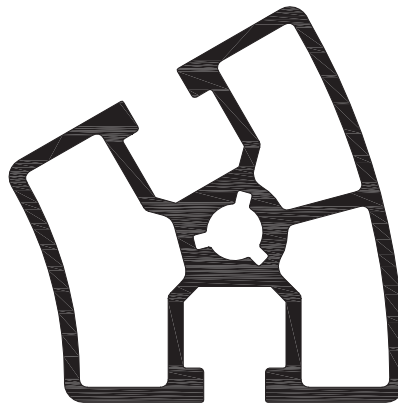
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20.1123/0



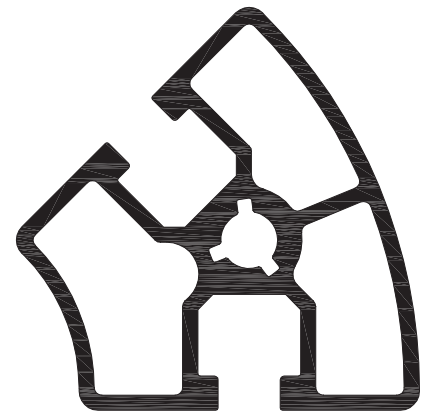
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20.2000/0



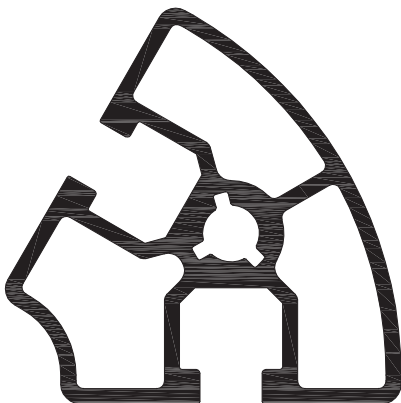
45 / 45°
20.1029/0



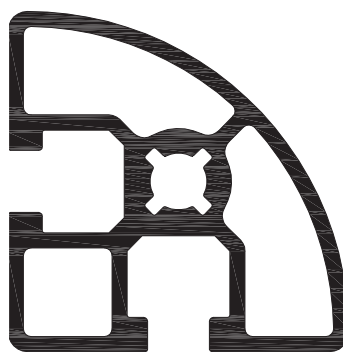
45 R 30°
20.1094/0



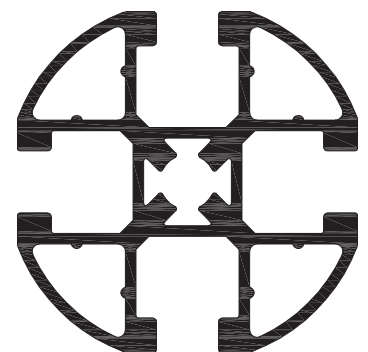
45 R 45°
20.1095/0



45 R 60°
20.1096/0



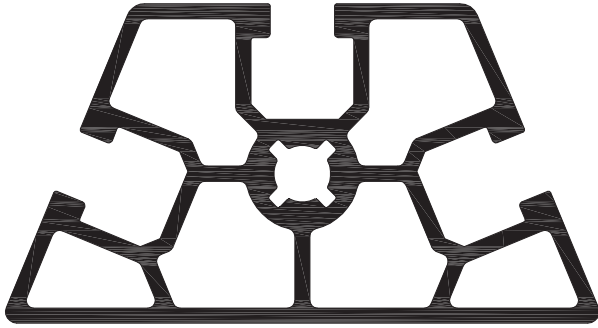
45 R 90°
20.1069/0



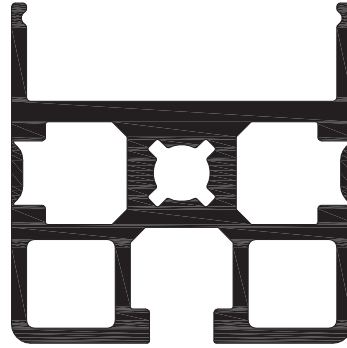
45 R4
20.1120/0

Profile cross-sections

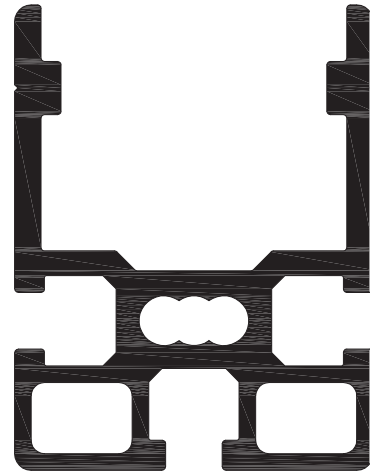
Profile series 45



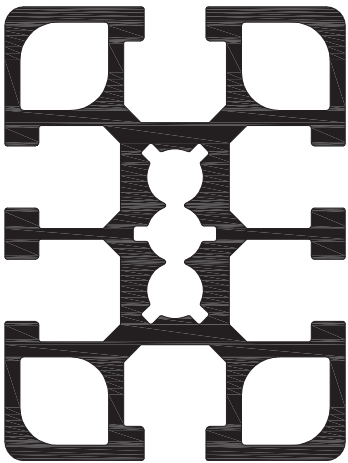
45 / 22,5°
20.1030/0



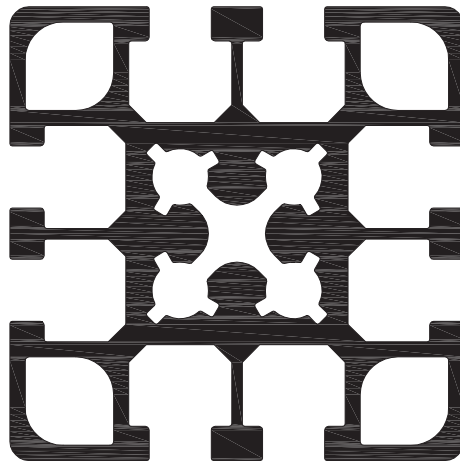
45 x 45 R
20.1046/0



Profile height adjustment
20.1143/0



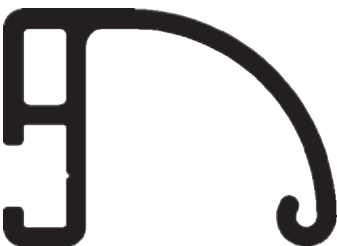
45 x 60 F
20.1023/0



60 x 60 F
20.1049/0



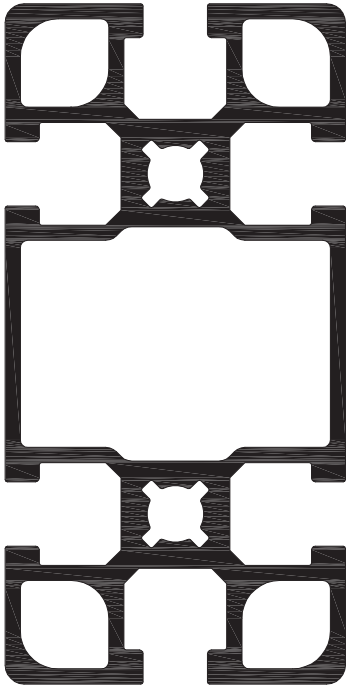
Guide rail profile
20.1038/0



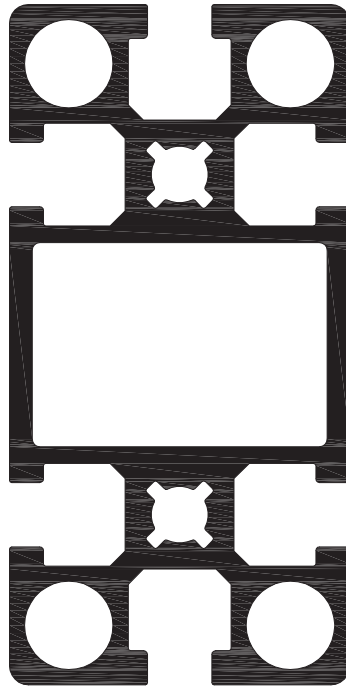
Handle profile
20.1045/0

Profile cross-sections

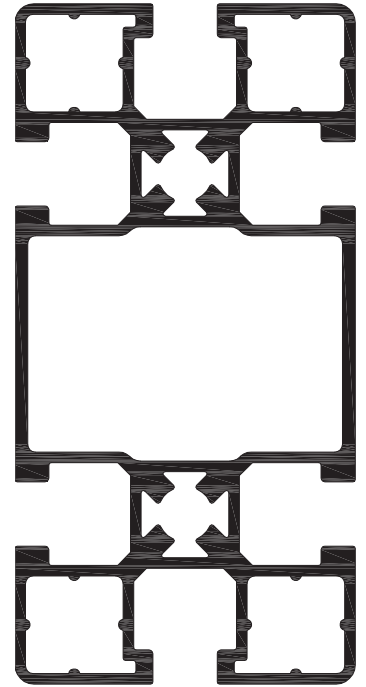
Profile series 45



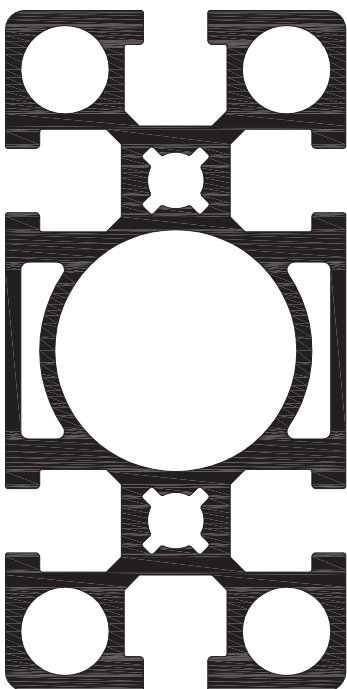
45 x 90 F
20.1032/0



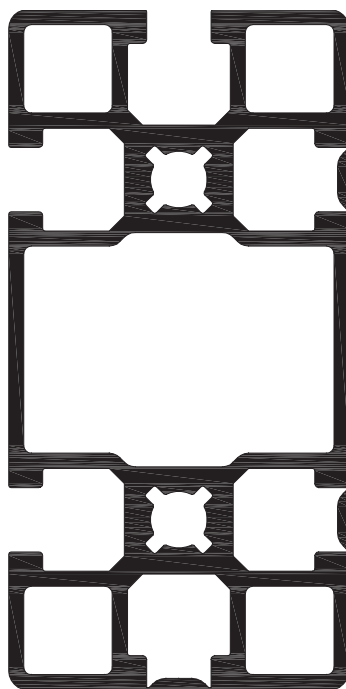
45 x 90
20.1009/0



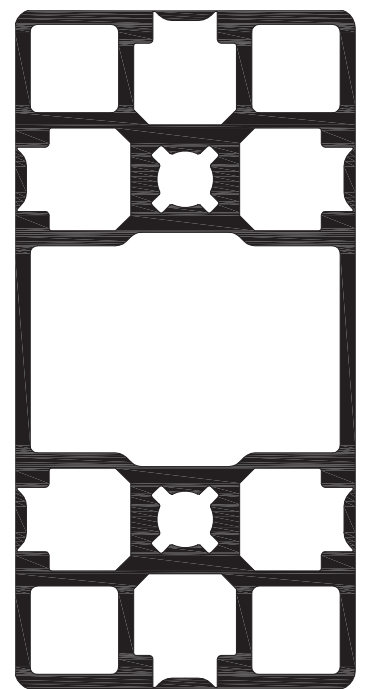
45 x 90 UL
20.1067/0



45 x 90 S
20.1017/0



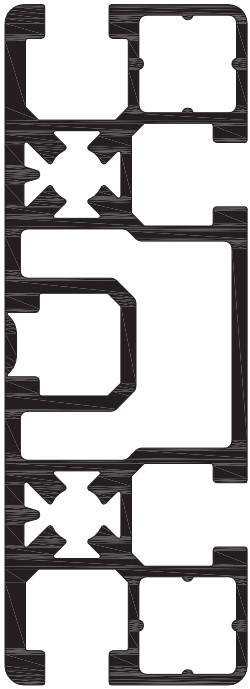
45 X 90 2G
20.1081/0



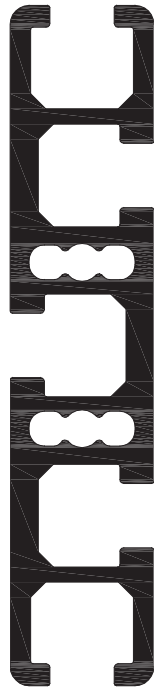
45 x 90 G
20.1015/0

Profile cross-sections

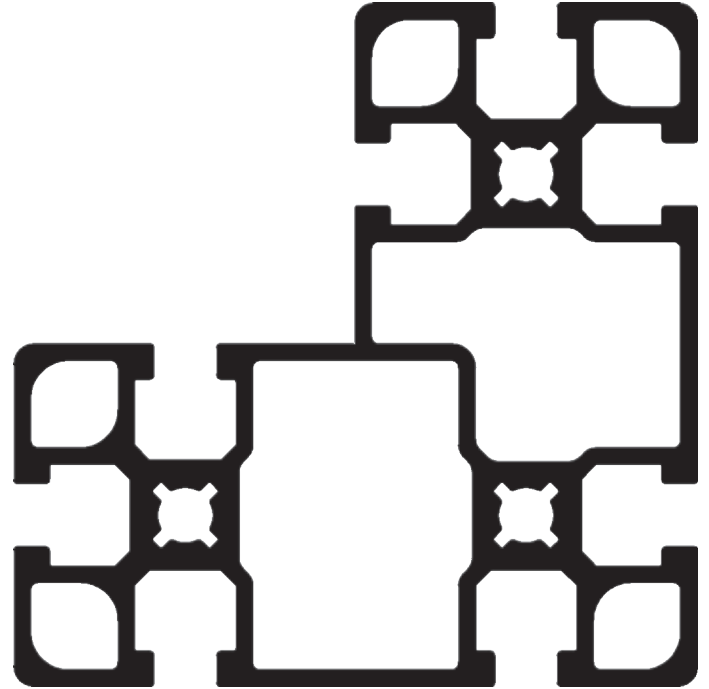
Profile series 45



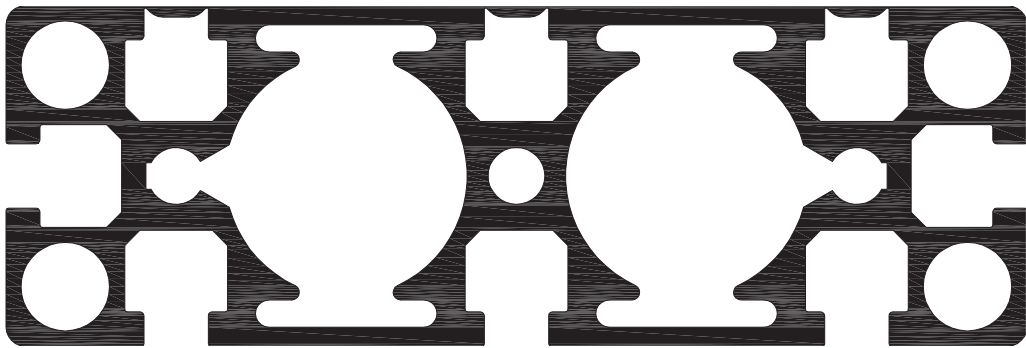
90 x 32 UL
20.1066/0



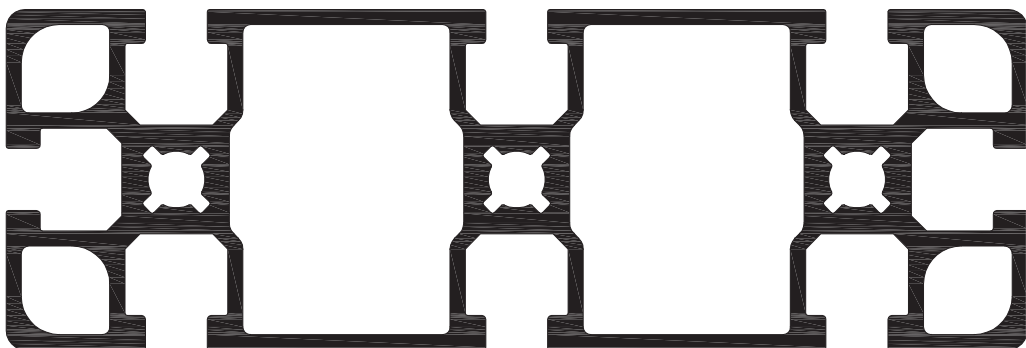
19 x 90
20.0995/0



90 x 90 x 45
20.0984/0



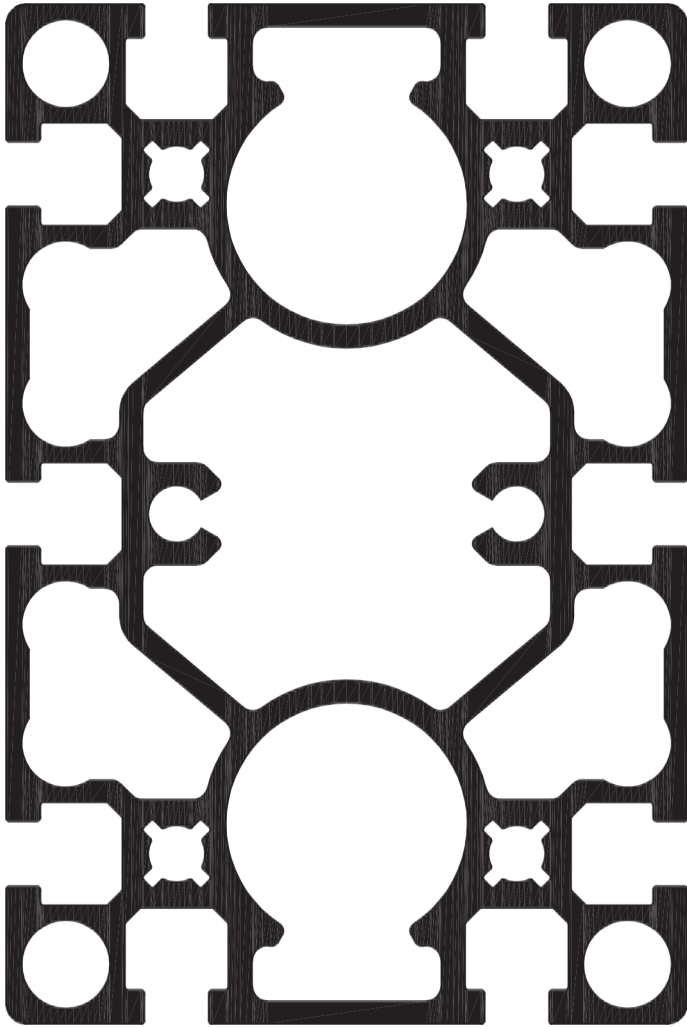
45 x 135 1G
20.1078/0



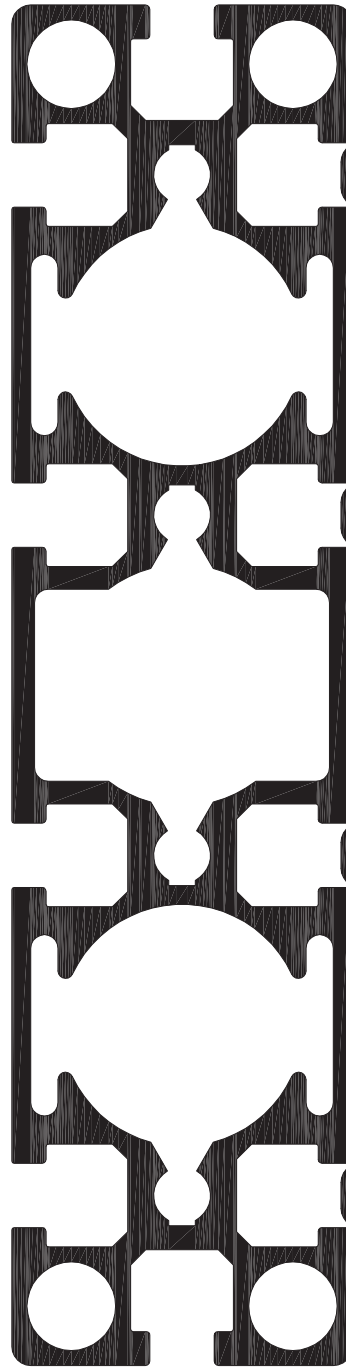
45 x 135 F
20.1087/0

Profile cross-sections

Profile series 45



90 x 135
20.1148/0



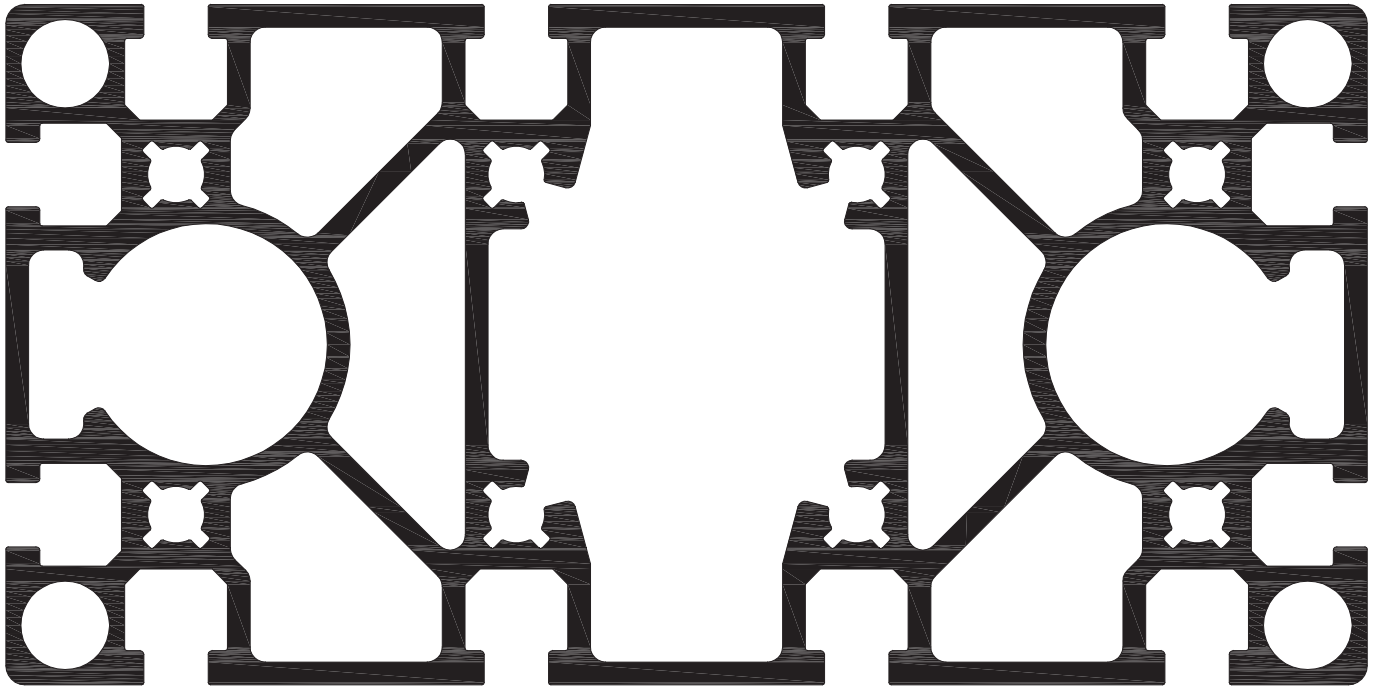
45 x 180 1G
20.1079/0



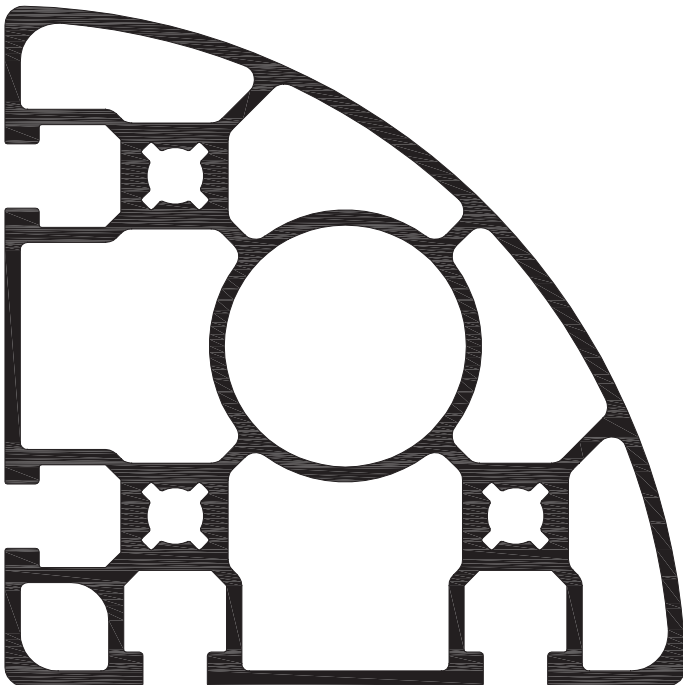
270 x 19
20.1077/0

Profile cross-sections

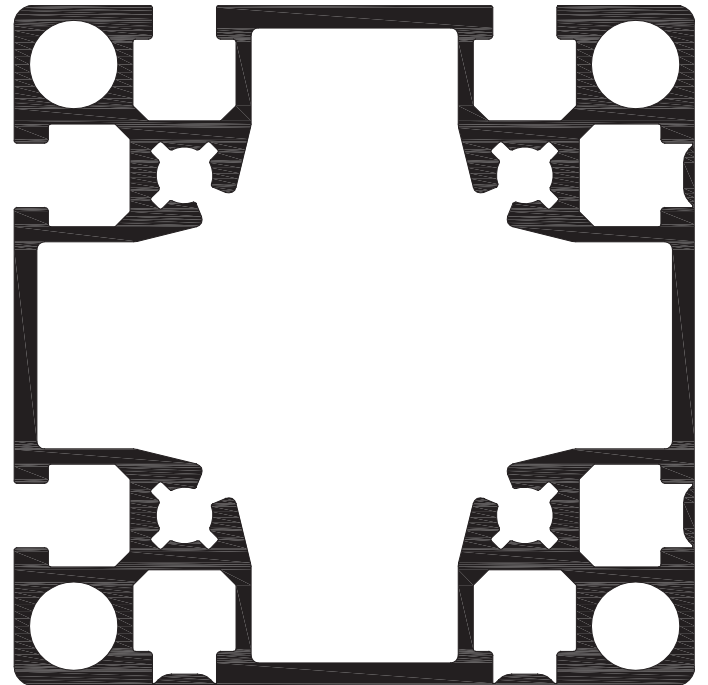
Profile series 45



90 x 180 S
20.1013/0



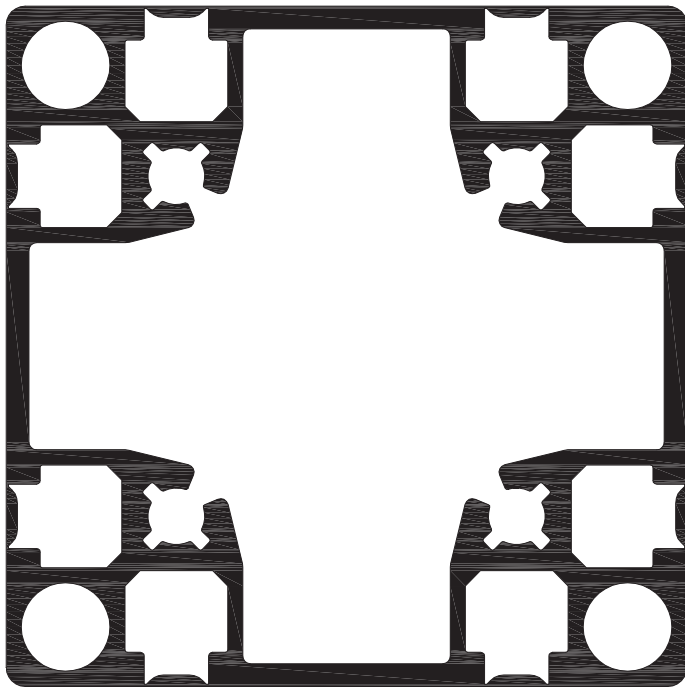
90 R 90°
20.1091/0



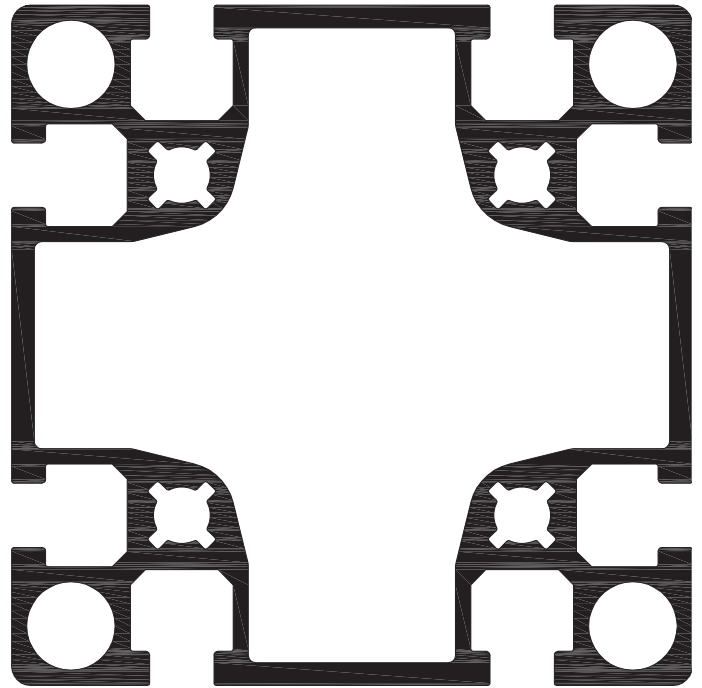
90 x 90 2G
20.1044/0

Profile cross-sections

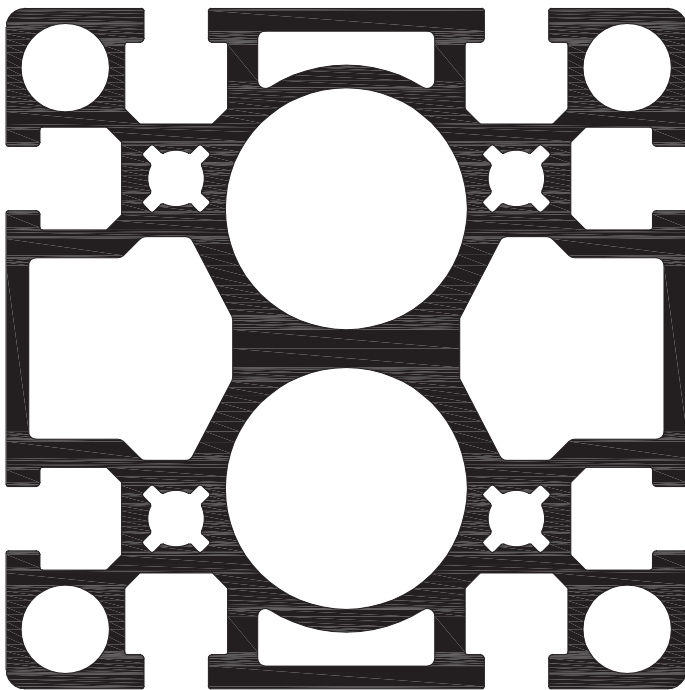
Profile series 45



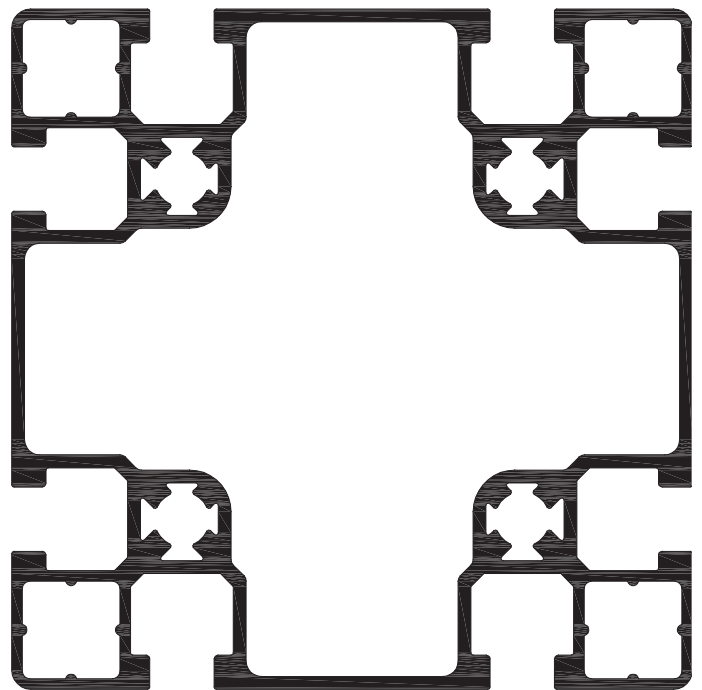
90 x 90 G
20.1082/0



90 x 90 L
20.1010/0



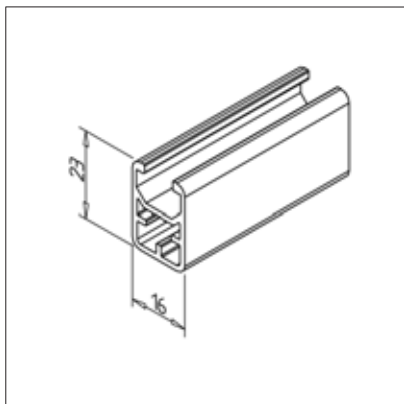
90 x 90 S
20.1019/0



90 x 90 UL
20.0999/0

Profile 23 x 16

Part No. 20.1115/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 0.602 \text{ cm}^4$
- $I_y = 0.442 \text{ cm}^4$
- $w_x = 0.472 \text{ cm}^3$
- $w_y = 0.552 \text{ cm}^3$
- $IT = 0.483 \text{ cm}^4$
- Weight = 0.341 kg/m
- Bar length = 6 m
- Packing unit = 72 m

APPLICATIONS

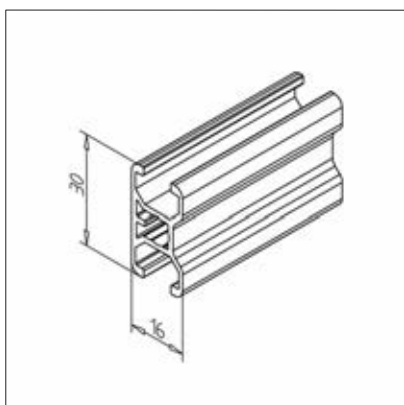
- Light constructions with protective hoods, covers, etc.

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 16 x 30

Part No. 20.0983/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.008 \text{ cm}^4$
- $I_y = 0.479 \text{ cm}^4$
- $w_x = 0.672 \text{ cm}^3$
- $w_y = 0.544 \text{ cm}^3$
- $IT = 1.488 \text{ cm}^4$
- Weight = 0.382 kg/m
- Bar length = 6 m
- Packing unit = 72 m

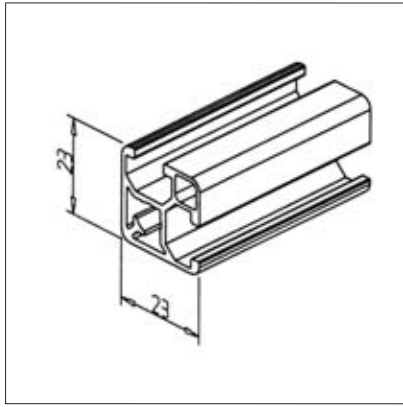
APPLICATIONS

- Light constructions with protective hoods, covers, etc.

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 23 x 23



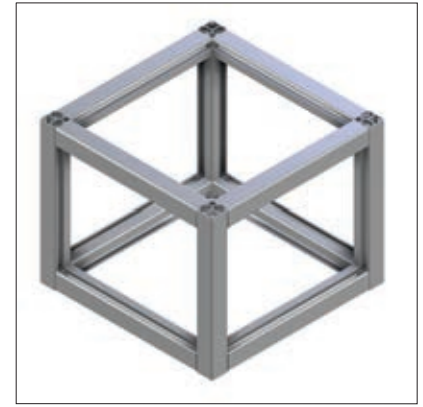
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 0.921 \text{ cm}^4$
- $I_y = 0.921 \text{ cm}^4$
- $w_x = 0.729 \text{ cm}^3$
- $w_y = 0.729 \text{ cm}^3$
- $IT = 0.539 \text{ cm}^4$
- Weight = 0.443 kg/m
- Bar length = 6 m
- Packing unit = 72 m



APPLICATIONS

- Light constructions with protective hoods, covers, etc.

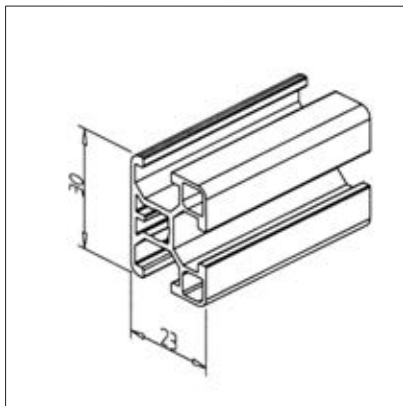


Part No. 20.1116/0

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 23 x 30



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.565 \text{ cm}^4$
- $I_y = 1.187 \text{ cm}^4$
- $w_x = 1.043 \text{ cm}^3$
- $w_y = 0.975 \text{ cm}^3$
- $IT = 0.658 \text{ cm}^4$
- Weight = 0.524 kg/m
- Bar length = 6 m
- Packing unit = 72 m



APPLICATIONS

- Light constructions with protective hoods, covers, etc.



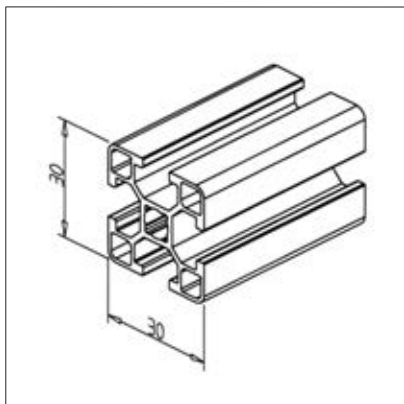
Part No. 20.1117/0

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 x 30

Part No. 20.1068/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.133 \text{ cm}^4$
- $I_y = 2.133 \text{ cm}^4$
- $w_x = 1.422 \text{ cm}^3$
- $w_y = 1.422 \text{ cm}^3$
- $IT = 1.036 \text{ cm}^4$
- Weight = 0.652 kg/m
- Bar length = 6 m
- Packing unit = 54 m

APPLICATIONS

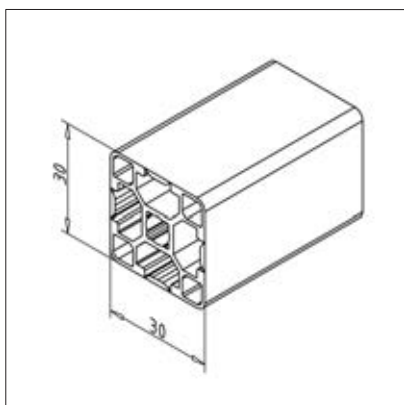
- Light constructions with protective hoods, covers, etc.

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 x 30 G

Part No. 20.1141/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.554 \text{ cm}^4$
- $I_y = 2.554 \text{ cm}^4$
- $w_x = 1.702 \text{ cm}^3$
- $w_y = 1.702 \text{ cm}^3$
- $IT = 5.107 \text{ cm}^4$
- Weight = 0.749 kg/m
- Bar length = 6 m
- Packing unit = 54 m

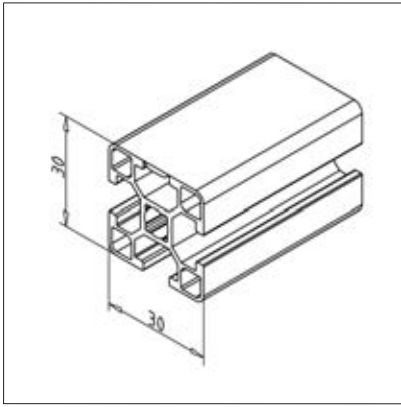
APPLICATIONS

- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 x 30 1G



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.311 \text{ cm}^4$
- $I_y = 2.112 \text{ cm}^4$
- $w_x = 1.481 \text{ cm}^3$
- $w_y = 1.408 \text{ cm}^3$
- $IT = 4.423 \text{ cm}^4$
- Weight = 0.670 kg/m
- Bar length = 6 m
- Packing unit = 54 m



APPLICATIONS

- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages

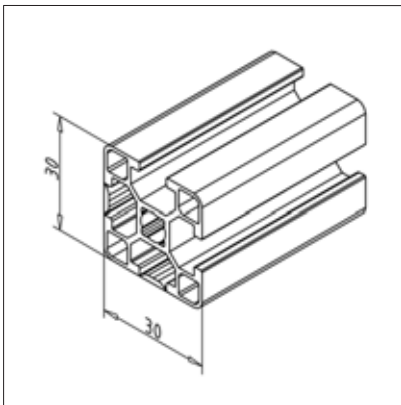


Part No. 20.1139/0

ASSEMBLY

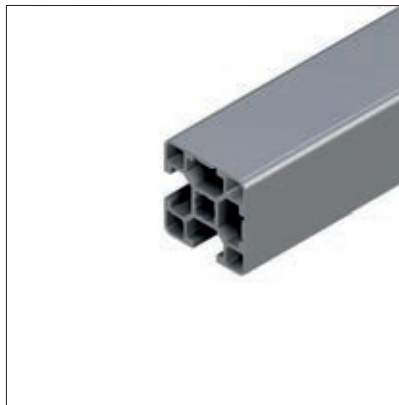
- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 x 30 2G



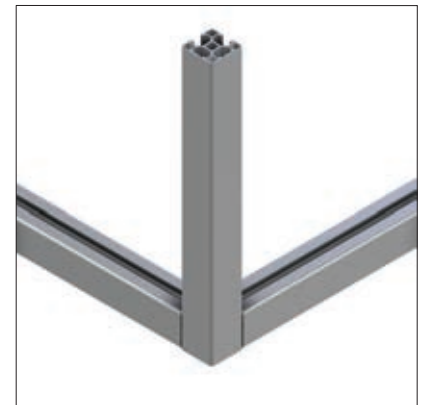
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.334 \text{ cm}^4$
- $I_y = 2.334 \text{ cm}^4$
- $w_x = 1.501 \text{ cm}^3$
- $w_y = 1.501 \text{ cm}^3$
- $IT = 4.631 \text{ cm}^4$
- Weight = 0.695 kg/m
- Bar length = 6 m
- Packing unit = 54 m



APPLICATIONS

- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages



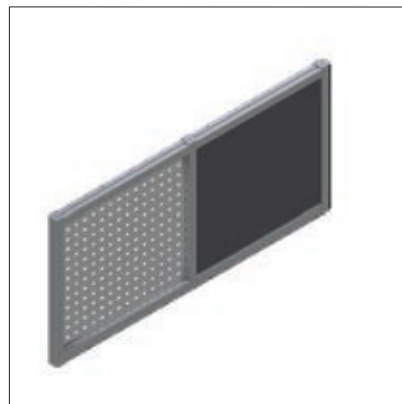
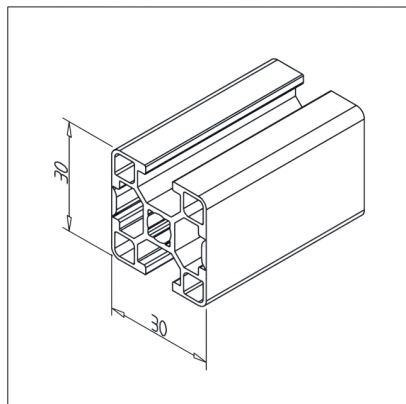
Part No. 20.1124/0

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 x 30 2GG

Part No. 20.1156/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.113 \text{ cm}^4$
- $I_y = 2.532 \text{ cm}^4$
- $w_x = 1.409 \text{ cm}^3$
- $w_y = 1.688 \text{ cm}^3$
- $IT = 4.645 \text{ cm}^4$
- Weight = 0.689 kg/m
- Bar length = 6 m
- Packing unit = 54 m

APPLICATIONS

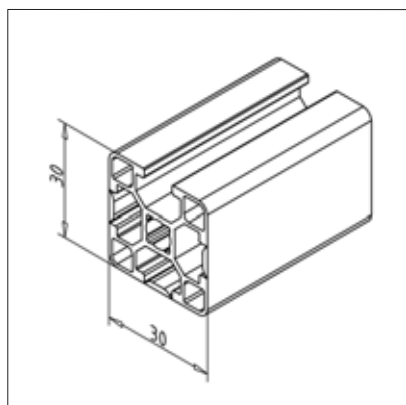
- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 x 30 3G

Part No. 20.1085/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.321 \text{ cm}^4$
- $I_y = 2.537 \text{ cm}^4$
- $w_x = 1.493 \text{ cm}^3$
- $w_y = 1.691 \text{ cm}^3$
- $IT = 4.857 \text{ cm}^4$
- Weight = 0.722 kg/m
- Bar length = 6 m
- Packing unit = 54 m

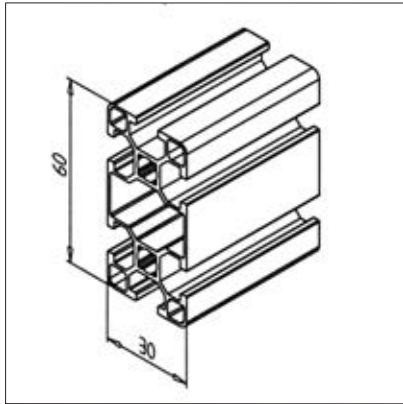
APPLICATIONS

- Light constructions with protective hoods, covers, etc.
- Specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 x 60



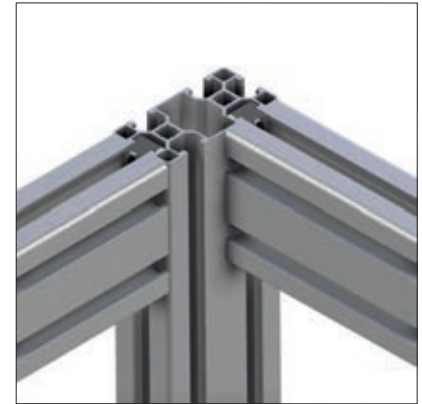
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 14.898 \text{ cm}^4$
- $I_y = 3.792 \text{ cm}^4$
- $w_x = 4.966 \text{ cm}^3$
- $w_y = 2.528 \text{ cm}^3$
- $IT = 7.192 \text{ cm}^4$
- Weight = 1.069 kg/m
- Bar length = 6 m
- Packing unit = 54 m



APPLICATIONS

- Light constructions with protective hoods, covers, etc.

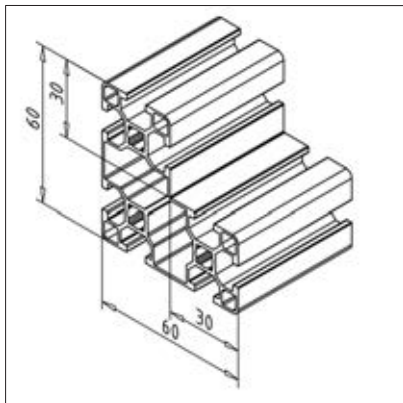


Part No. 20.0994/0

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 60 X 60 x 30



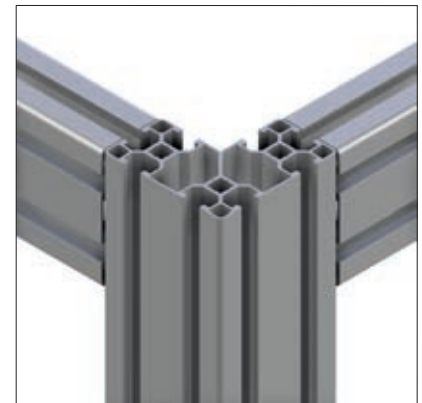
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 19.107 \text{ cm}^4$
- $I_y = 19.107 \text{ cm}^4$
- $w_x = 5.572 \text{ cm}^3$
- $w_y = 5.572 \text{ cm}^3$
- $IT = 38.198 \text{ cm}^4$
- Weight = 1.534 kg/m
- Bar length = 6 m
- Packing unit = 36 m



APPLICATIONS

- Weight optimized constructions
- Tables
- Framework constructions
- Display windows, showcases

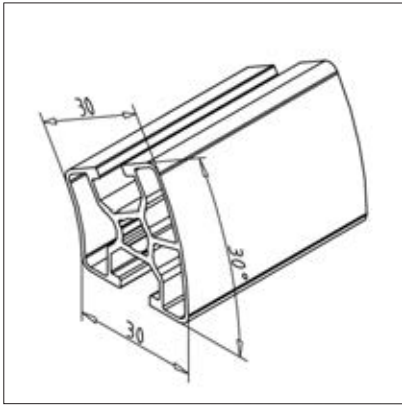


Part No. 20.0982/0

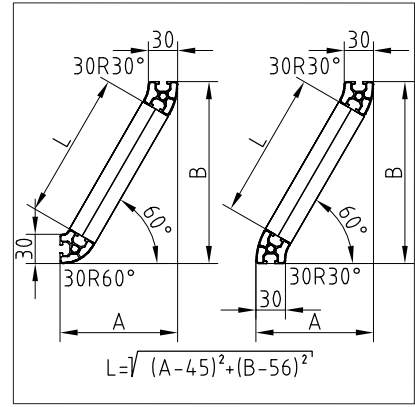
ASSEMBLY

- Power-lock fastener 30 / N 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8
- Connecting plate 60x60x30 **part no. 21.0038/0**

Profile 30 R 30°



Part No. 20.1134/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.939 \text{ cm}^4$
- $I_y = 1.909 \text{ cm}^4$
- $w_x = 0.982 \text{ cm}^3$
- $w_y = 1.006 \text{ cm}^3$
- $IT = 3.848 \text{ cm}^4$
- Weight = 0.601 kg/m
- Bar length = 6 m
- Packing unit = 72 m

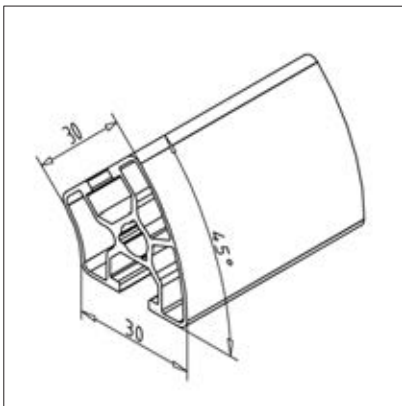
APPLICATIONS

- Weight optimized constructions
- Tables
- Framework constructions
- Display windows, showcases
- As cross beam:
Calculate dimension L of the intermediate support according to calculating formular

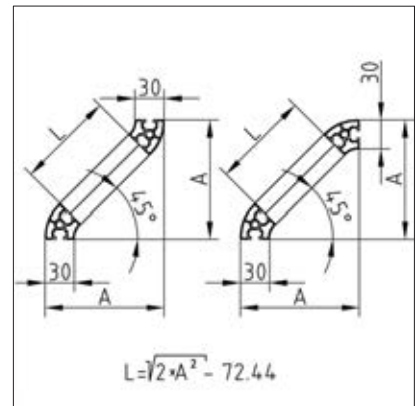
ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 R 45°



Part No. 20.1135/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.909 \text{ cm}^4$
- $I_y = 1.812 \text{ cm}^4$
- $w_x = 0.924 \text{ cm}^3$
- $w_y = 0.951 \text{ cm}^3$
- $IT = 3.720 \text{ cm}^4$
- Weight = 0.601 kg/m
- Bar length = 6 m
- Packing unit = 72 m

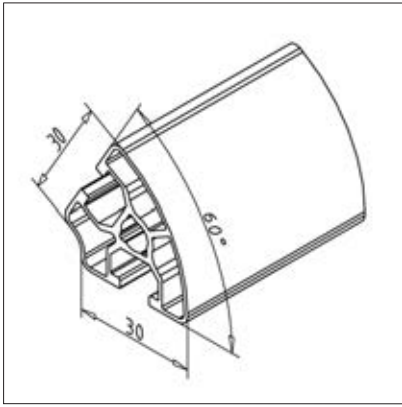
APPLICATIONS

- Weight optimized constructions
- Tables
- Framework constructions
- As cross beam:
Calculate dimension L of the intermediate support according to calculating formular
- Display windows, showcases

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30 M4 / M5 / M6 / M8

Profile 30 R 60°



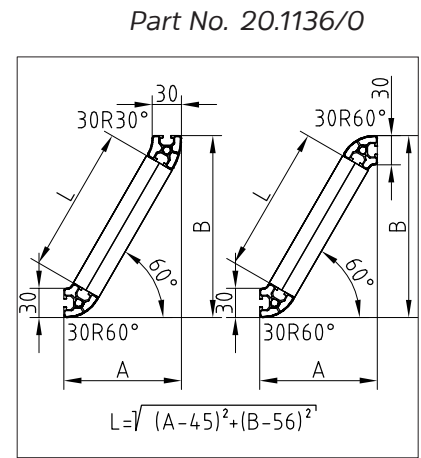
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.847 \text{ cm}^4$
- $I_y = 1.721 \text{ cm}^4$
- $w_x = 0.904 \text{ cm}^3$
- $w_y = 0.951 \text{ cm}^3$
- $IT = 3.568 \text{ cm}^4$
- Weight = 0.590 kg/m
- Bar length = 6 m
- Packing unit = 72 m



APPLICATIONS

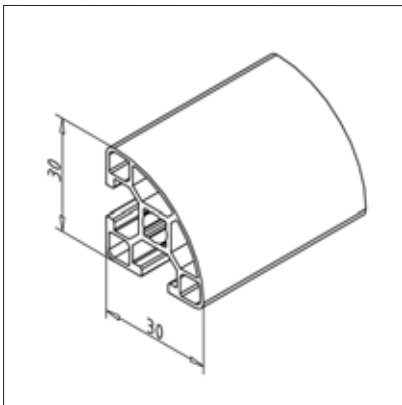
- Weight optimized constructions
- Tables
- Framework constructions
- Display windows, showcases
- As cross beam:
Calculate dimension L of the intermediate support according to calculating formular



ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Attaching accessories with sliding nut 30
M4 / M5 / M6 / M8

Profile 30 R 90°



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 1.847 \text{ cm}^4$
- $I_y = 1.721 \text{ cm}^4$
- $w_x = 0.904 \text{ cm}^3$
- $w_y = 0.951 \text{ cm}^3$
- $IT = 3.255 \text{ cm}^4$
- Weight = 0.580 kg/m
- Bar length = 6 m
- Packing unit = 54 m



APPLICATIONS

- Weight optimized constructions
- Tables
- Framework constructions
- Display windows, showcases

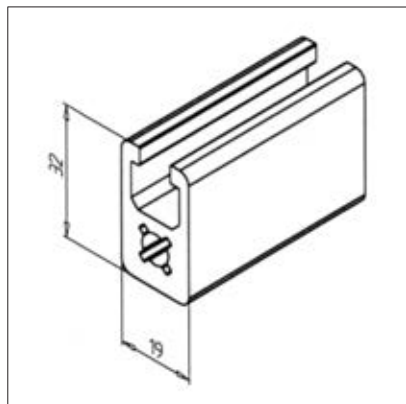


ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30 / 30 R 90°
- Attaching accessories with sliding nut 30
M4 / M5 / M6 / M8

Profile 19 x 32

Part No. 20.1000/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 3.102 \text{ cm}^4$
- $I_y = 1.526 \text{ cm}^4$
- $w_x = 1.651 \text{ cm}^3$
- $w_y = 1.606 \text{ cm}^3$
- $IT = 1.671 \text{ cm}^4$
- Weight = 0.987 kg/m
- Bar length = 6 m
- Packing unit = 60 m

APPLICATIONS

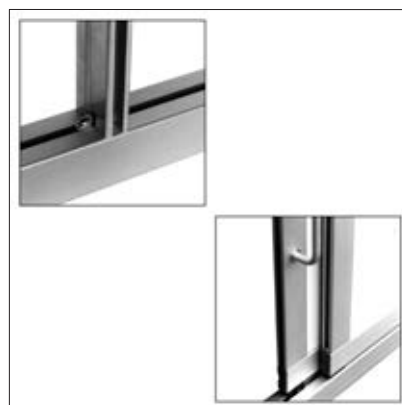
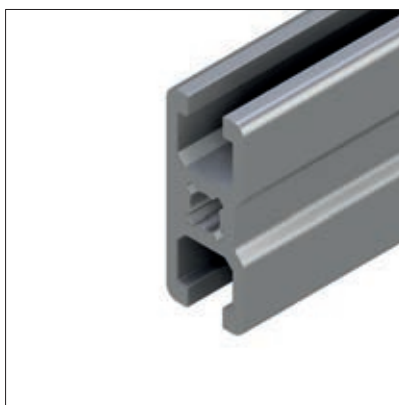
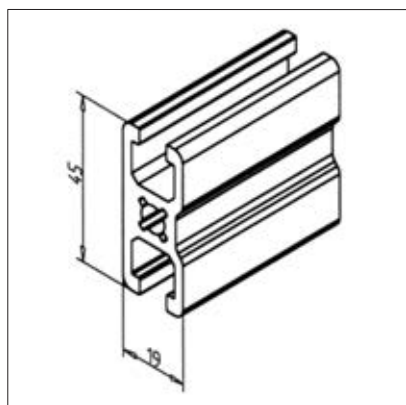
- Light constructions
- Handle bars
- Carrier for initiators, switches
- Frames

ASSEMBLY

- MiniTec power-lock fastener
- Mounting angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection

Profile 19 x 45

Part No. 20.1001/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 6.173 \text{ cm}^4$
- $I_y = 1.843 \text{ cm}^4$
- $w_x = 2.743 \text{ cm}^3$
- $w_y = 1.836 \text{ cm}^3$
- $IT = 1.435 \text{ cm}^4$
- Weight = 1.101 kg/m
- Bar length = 6 m
- Packing unit = 60 m

APPLICATIONS

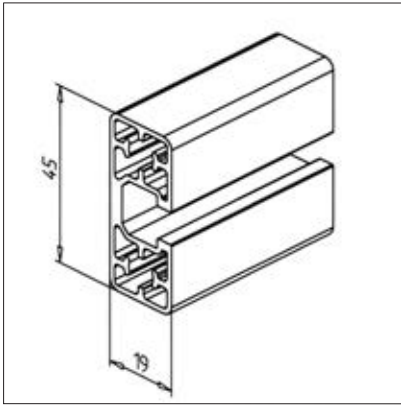
- Bracing, doors
- Guard units
- Weight optimized constructions
- Frames

ASSEMBLY

- MiniTec power-lock fastener
- Mounting angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection

Profile 45 x 19

Part No. 20.0993/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 6.106 \text{ cm}^4$
- $I_y = 1.384 \text{ cm}^4$
- $w_x = 2.71 \text{ cm}^3$
- $w_y = 1.45 \text{ cm}^3$
- $IT = 7.490 \text{ cm}^4$
- Weight = 0.814 kg/m
- Bar length = 6 m
- Packing unit = 72 m

APPLICATIONS

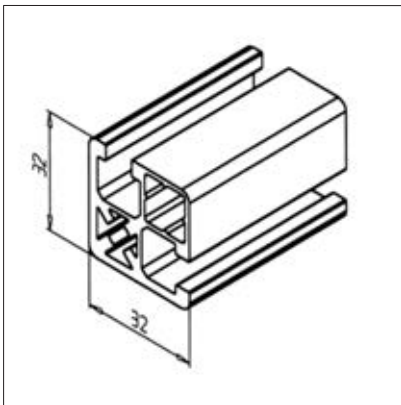
- Weight-optimized constructions
- Light constructions
- Light sliding windows
- Support plates
- Base plates

ASSEMBLY

- Side 19 with MiniTec power lock fastener, **part no. 21.0818/0**
- 45th page with angle mounting bracket, profile connector N or connector

Profile 32 x 32 UL

Part No. 20.1064/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 4.1 \text{ cm}^4$
- $I_y = 4.1 \text{ cm}^4$
- $w_x = 2.267 \text{ cm}^3$
- $w_y = 2.267 \text{ cm}^3$
- $IT = 3.260 \text{ cm}^4$
- Weight = 1.052 kg/m
- Bar length = 6 m
- Packing unit = 48 m

APPLICATIONS

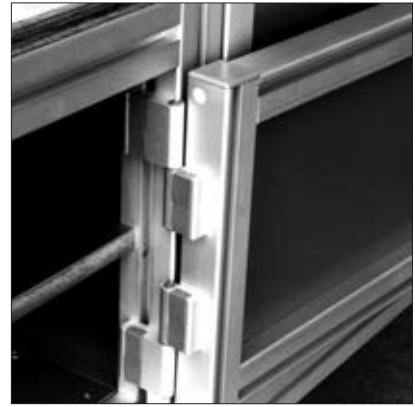
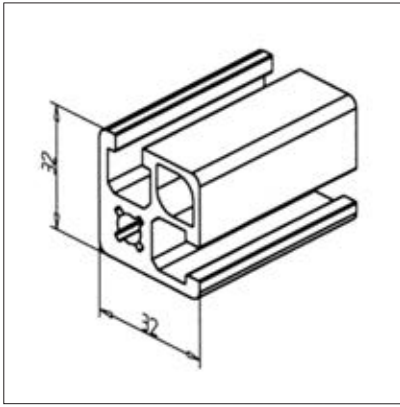
- Weight-optimized constructions
- End table
- Swivel, lifting and sliding doors
- Bracings

ASSEMBLY

- MiniTec power-lock fastener
- Mounting angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection

Profile 32 x 32 F

Part No. 20.1054/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 4.825 \text{ cm}^4$
- $I_y = 4.825 \text{ cm}^4$
- $w_x = 2.703 \text{ cm}^3$
- $w_y = 2.703 \text{ cm}^3$
- $IT = 1.426 \text{ cm}^4$
- Weight = 1.288 kg/m
- Bar length = 6 m
- Packing unit = 48 m

APPLICATIONS

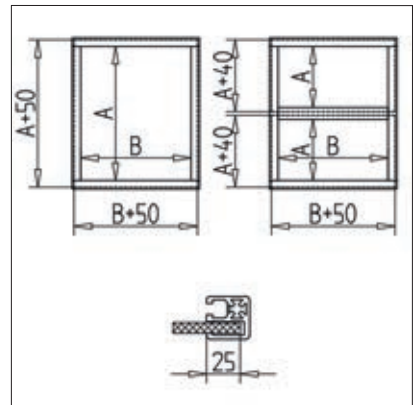
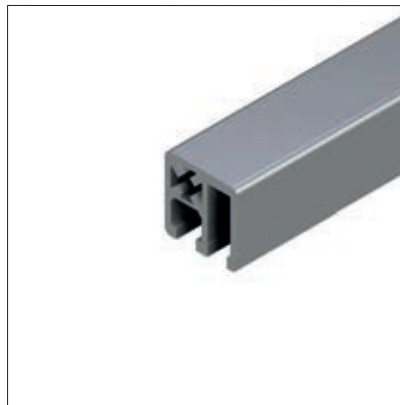
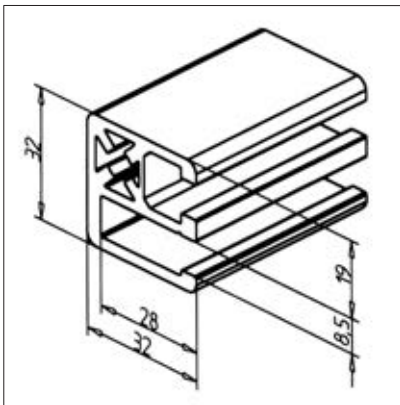
- Weight optimized constructions
- End table
- Swivel, lifting and sliding doors
- Bracings

ASSEMBLY

- MiniTec power-lock fastener
- Mounting angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection

Clamp profile 32 x 32

Part No. 20.1070/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 5.024 \text{ cm}^4$
- $I_y = 4.418 \text{ cm}^4$
- $w_x = 3.041 \text{ cm}^3$
- $w_y = 2.398 \text{ cm}^3$
- $IT = 2.322 \text{ cm}^4$
- Weight = 1.211 kg/m
- Bar length = 6 m
- Packing unit = 48 m

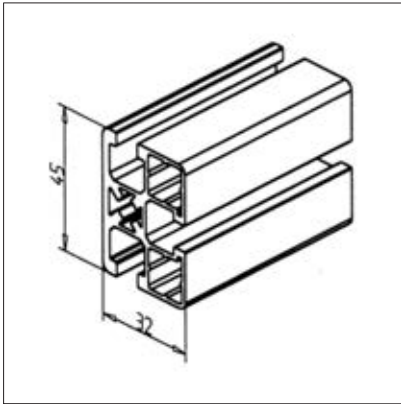
APPLICATIONS

- All types of safety equipment
- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- In the case of larger guard units, intermediate struts made of clamping profile 45 x 32 must be used in order to ensure adequate safety against pushing out of the surface elements; To do this, remove cover strips on clamping profile 45 x 32 mm
- Cut size of surface elements: Dimension A/B - 40/50 mm depending on application

ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching insert seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

Profile 45 x 32 UL



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 8.292 \text{ cm}^4$
- $I_y = 5.178 \text{ cm}^4$
- $w_x = 3.685 \text{ cm}^3$
- $w_y = 2.815 \text{ cm}^3$
- $IT = 5.516 \text{ cm}^4$
- Weight = 1.257 kg/m
- Bar length = 6 m
- Packing unit = 48 m



APPLICATIONS

- All types of constructions, with a closed profile side
- Weight-optimized constructions
- Tables
- Frames
- Sliding doors

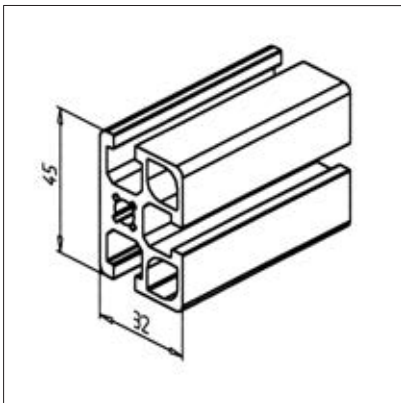


Part No. 20.1065/0

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

Profile 45 x 32 F



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.189 \text{ cm}^4$
- $I_y = 6.499 \text{ cm}^4$
- $w_x = 4.528 \text{ cm}^3$
- $w_y = 3.762 \text{ cm}^3$
- $IT = 2.494 \text{ cm}^4$
- Weight = 1.588 kg/m
- Bar length = 6 m
- Packing unit = 48 m



APPLICATIONS

- All types of constructions, with a closed profile side
- Tables
- Frames
- Sliding doors
- Rails



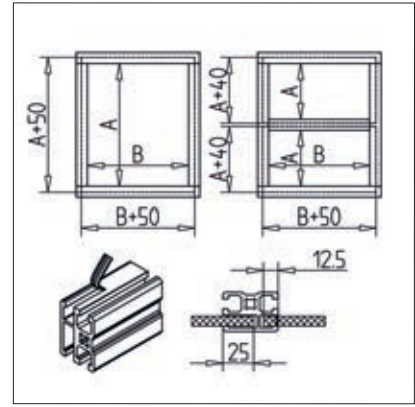
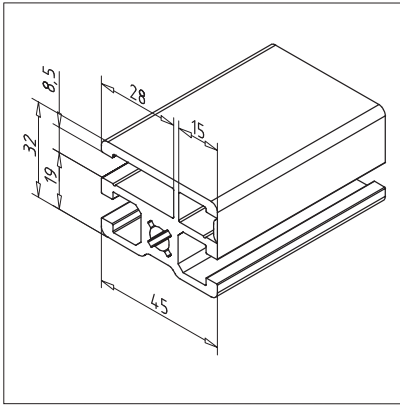
Part No. 20.1055/0

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

Clamp profile 45 x 32

Part No. 20.1053/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 6.465 \text{ cm}^4$
- $I_y = 9.521 \text{ cm}^4$
- $w_x = 3.999 \text{ cm}^3$
- $w_y = 4.119 \text{ cm}^3$
- $IT = 15.996 \text{ cm}^4$
- Weight = 1.615 kg/m
- Bar length = 6 m
- Packing unit = 48 m

APPLICATIONS

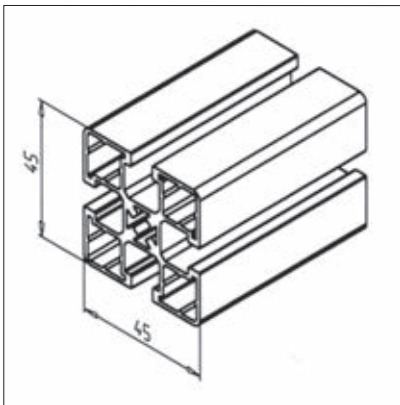
- In the case of larger guard units, intermediate struts made of clamping profile 45 x 32 must be used in order to ensure adequate safety against pushing out of the surface elements; To do this, remove cover strips on clamping profile 45 x 32 mm
- All types of safety equipment
- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- Cut size of surface elements: Dimension A/B - 40/50 mm depending on application

ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching insert seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

Profile 45 x 45 UL

Part No. 20.1063/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 9.953 \text{ cm}^4$
- $I_y = 9.953 \text{ cm}^4$
- $w_x = 4.423 \text{ cm}^3$
- $w_y = 4.423 \text{ cm}^3$
- $IT = 12.256 \text{ cm}^4$
- Weight = 1.445 kg/m
- Bar length = 6 m
- Packing unit = 54 m

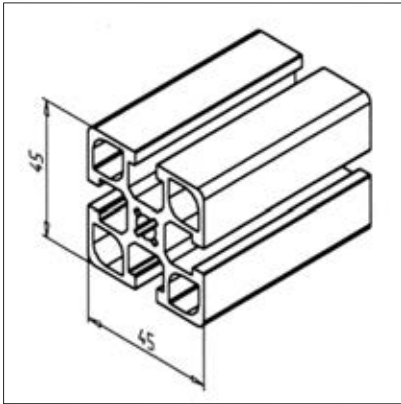
APPLICATIONS

- Weight-optimized constructions
- All kinds of constructions

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

Profile 45 x 45 F



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 14.172 \text{ cm}^4$
- $I_y = 14.172 \text{ cm}^4$
- $w_x = 6.298 \text{ cm}^3$
- $w_y = 6.298 \text{ cm}^3$
- $IT = 13.376 \text{ cm}^4$
- Weight = 2.005 kg/m
- Bar length = 6 m
- Packing unit = 36 m



APPLICATIONS

- All kinds of constructions

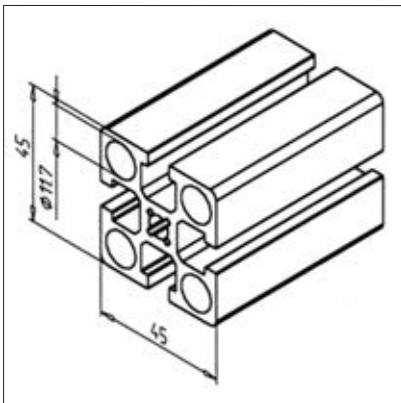


Part No. 20.1033/0

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

Profile 45 x 45



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 15.934 \text{ cm}^4$
- $I_y = 15.934 \text{ cm}^4$
- $w_x = 7.081 \text{ cm}^3$
- $w_y = 7.081 \text{ cm}^3$
- $IT = 13.416 \text{ cm}^4$
- Weight = 2.205 kg/m
- Bar length = 6 m
- Packing unit = 36 m



APPLICATIONS

- All kinds of constructions
- Compressed air piping
- The $\varnothing 11.7$ mm bores can be enlarged to G 1/4 to hold screw plugs or pneumatic connections

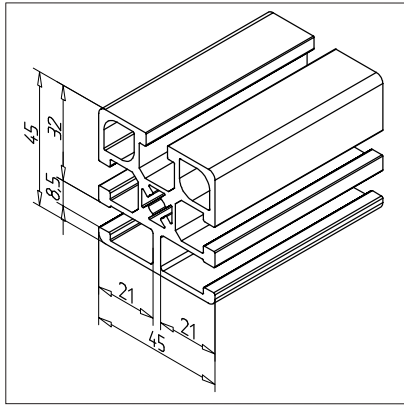


Part No. 20.1006/0

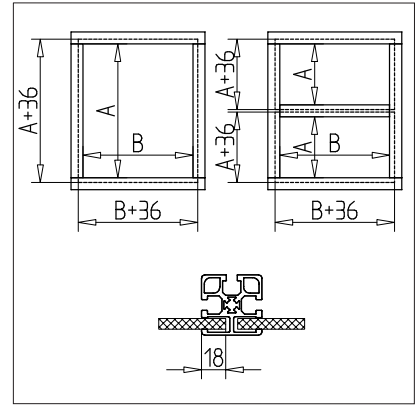
ASSEMBLY

- MiniTec power-lock fastener
- Angle 25 / 45, bolt-fastener, screw connection
- Lateral connections G 1/8" direct into the profile

Clamp profile 45 x 45 F



Part No. 20.1147/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.521 \text{ cm}^4$
- $I_y = 12.308 \text{ cm}^4$
- $w_x = 5.836 \text{ cm}^3$
- $w_y = 5.470 \text{ cm}^3$
- $IT = 7.163 \text{ cm}^4$
- Weight = 1.850 kg/m
- Bar length = 6 m
- Packing unit = 36 m

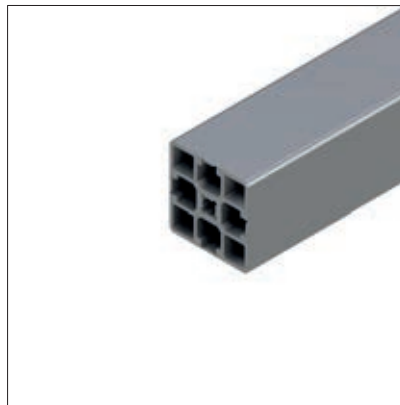
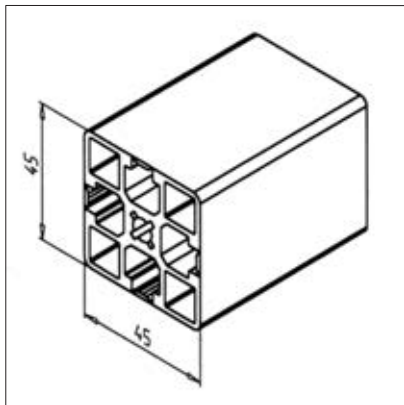
APPLICATIONS

- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- All types of safety equipment
- Cut size of surface elements: Dimension A/B - 36 mm

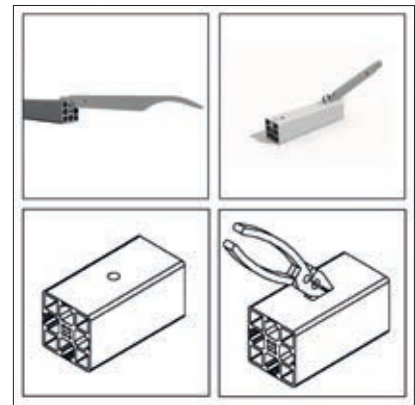
ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching insert seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

Profile 45 x 45 G



Part No. 20.1028/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 14.087 \text{ cm}^4$
- $I_y = 14.087 \text{ cm}^4$
- $w_x = 6.261 \text{ cm}^3$
- $w_y = 6.261 \text{ cm}^3$
- $IT = 59.182 \text{ cm}^4$
- Weight = 1.997 kg/m
- Bar length = 6 m
- Packing unit = 36 m

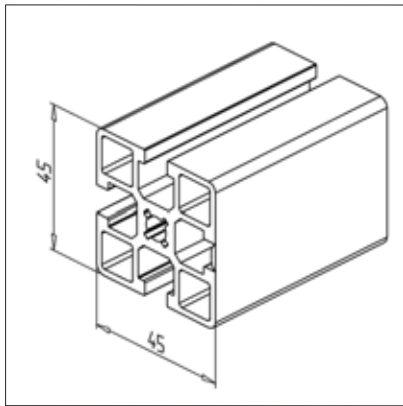
APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 45 x 45 1G



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.617 \text{ cm}^4$
- $I_y = 14.091 \text{ cm}^4$
- $w_x = 6.052 \text{ cm}^3$
- $w_y = 6.262 \text{ cm}^3$
- $IT = 26.755 \text{ cm}^4$
- Weight = 1.897 kg/m
- Bar length = 6 m
- Packing unit = 36 m



APPLICATIONS

- Grooves expandable
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

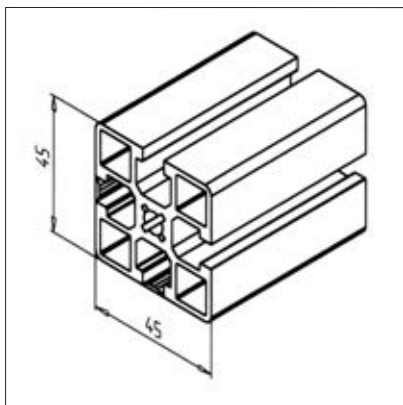
Part No. 20.1126/0



ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 45 x 45 2G



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.549 \text{ cm}^4$
- $I_y = 13.549 \text{ cm}^4$
- $w_x = 5.938 \text{ cm}^3$
- $w_y = 5.938 \text{ cm}^3$
- $IT = 30.578 \text{ cm}^4$
- Weight = 1.925 kg/m
- Bar length = 6 m
- Packing unit = 36 m



APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

Part No. 20.1072/0

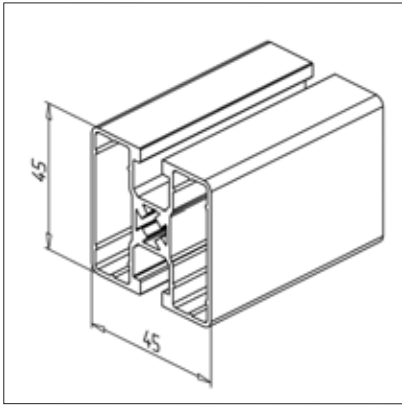


ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 45 x 45 UL 2GG

Part No. 20.1122/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 9.974 \text{ cm}^4$
- $I_y = 8.553 \text{ cm}^4$
- $w_x = 4.432 \text{ cm}^3$
- $w_y = 3.801 \text{ cm}^3$
- $IT = 18.527 \text{ cm}^4$
- Weight = 1.254 kg/m
- Bar length = 6 m
- Packing unit = 54 m

APPLICATIONS

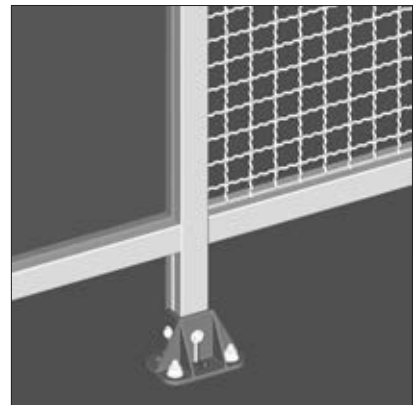
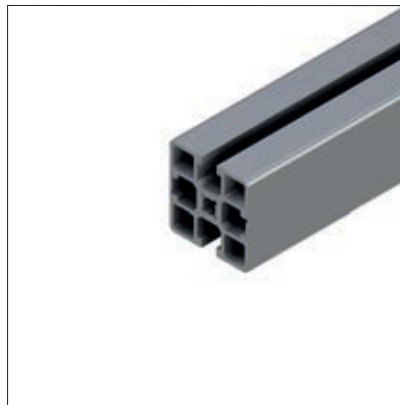
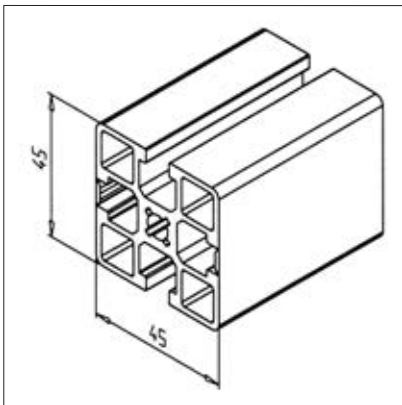
- Weight-optimized constructions
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Silicon sealings for profile connections on request

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

Profile 45 x 45 2GG

Part No. 20.1099/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.069 \text{ cm}^4$
- $I_y = 14.045 \text{ cm}^4$
- $w_x = 5.808 \text{ cm}^3$
- $w_y = 6.242 \text{ cm}^3$
- $IT = 30.130 \text{ cm}^4$
- Weight = 1.925 kg/m
- Bar length = 6 m
- Packing unit = 36 m

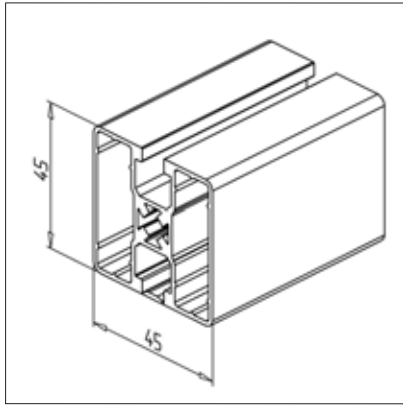
APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 45 x 45 UL 3G



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.44 \text{ cm}^4$
- $I_y = 8.557 \text{ cm}^4$
- $w_x = 4.64 \text{ cm}^3$
- $w_y = 3.803 \text{ cm}^3$
- $IT = 18.997 \text{ cm}^4$
- Weight = 1.281 kg/m
- Bar length = 6 m
- Packing unit = 54 m



APPLICATIONS

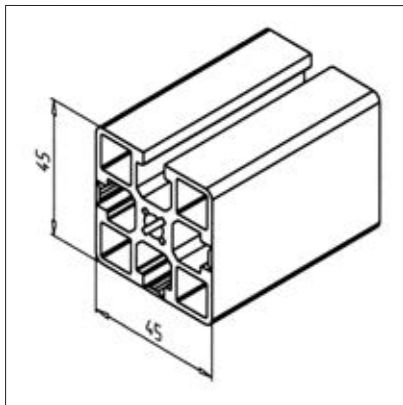
- Grooves expandable
- Weight-optimized constructions
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Silicon sealings for profile connections on request



ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Screw connection

Profile 45 x 45 3G



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.554 \text{ cm}^4$
- $I_y = 14.049 \text{ cm}^4$
- $w_x = 5.941 \text{ cm}^3$
- $w_y = 6.244 \text{ cm}^3$
- $IT = 43.247 \text{ cm}^4$
- Weight = 1.953 kg/m
- Bar length = 6 m
- Packing unit = 36 m



APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- To close open grooves with the cover profile L **part no. 20.1021/0**
- Silicon sealings for profile connections on request

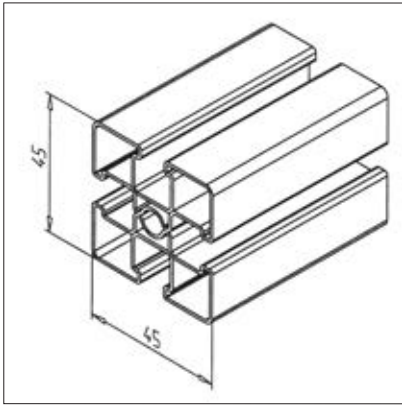


ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 45 x 45 stainless

Part No. 20.2000/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel, Rolled, bright
- $I_x = 6.47 \text{ cm}^4$
- $I_y = 6.47 \text{ cm}^4$
- $w_x = 2.88 \text{ cm}^3$
- $w_y = 2.88 \text{ cm}^3$
- $IT = 13.278 \text{ cm}^4$
- Material: WN DIN 1.4301(X5 Cr Ni 18-10, SUS 304)
- Weight = 2.750 kg/m
- Bar length = 6 m
- Packing unit = 24 m

APPLICATIONS

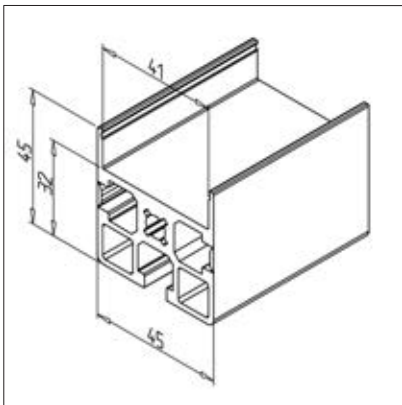
- Food and beverage industry
- Outdoor constructions
- Chemical industry
- Pharmaceutical industry
- High temperatures

ASSEMBLY

- Power-lock fastener H, **part no. 21.1018/1**
- Mounting angle VA, T-sheet VA or angle sheet VA
- Screws M8, stainless

Profile 45 X 45 R

Part No. 20.1046/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 8.296 \text{ cm}^4$
- $I_y = 12.997 \text{ cm}^4$
- $w_x = 3.247 \text{ cm}^3$
- $w_y = 5.776 \text{ cm}^3$
- $IT = 17.332 \text{ cm}^4$
- Weight = 1.711 kg/m
- Bar length = 6 m
- Packing unit = 36 m

APPLICATIONS

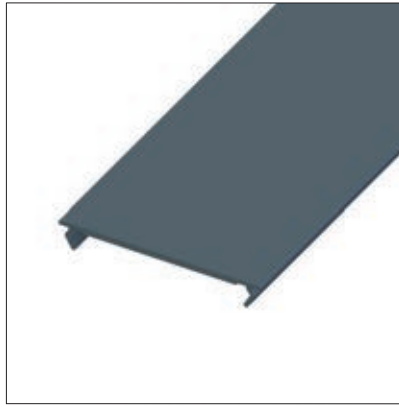
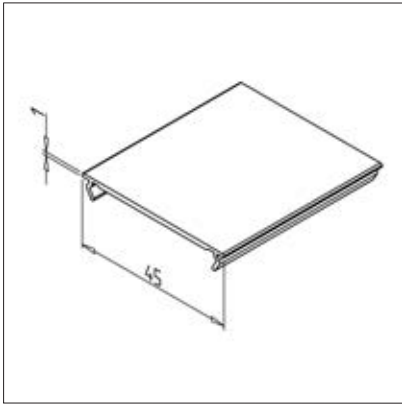
- Combination of construction element and:
- Cable duct
- Guiding groove for belt conveyor
- Storage rail
- Guide for serpentine power chains
- For the manufacture of miniature roller tracks
- For use with the following roll carriers:
roll carrier 45 x 45R with cover **part no. 22.1151/0**
Roller carrier 45 x 45R with SF cover **part no. 22.1152/0**

ASSEMBLY

- MiniTec power-lock fastener
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Cover profile 45 x 45 R

Part No. 20.1037/0



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- Weight = 0.110 kg/m
- Bar length = 2 m

APPLICATIONS

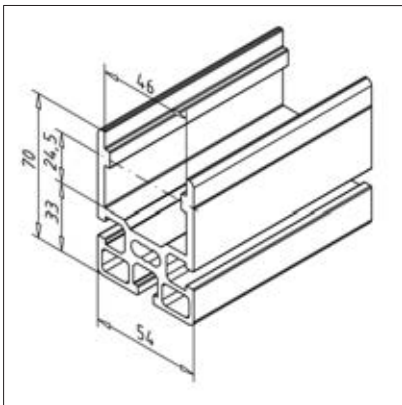
- Covering of profiles 45 x 45 R

ASSEMBLY

- Snaps onto profile

Profile height adjustment

Part No. 20.1143/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 40.251 \text{ cm}^4$
- $I_y = 39.822 \text{ cm}^4$
- $w_x = 9.624 \text{ cm}^3$
- $w_y = 14.749 \text{ cm}^3$
- $IT = 80.08 \text{ cm}^4$
- Weight = 2.940 kg/m
- Bar length = 6 m
- Packing unit = 24 m

APPLICATIONS

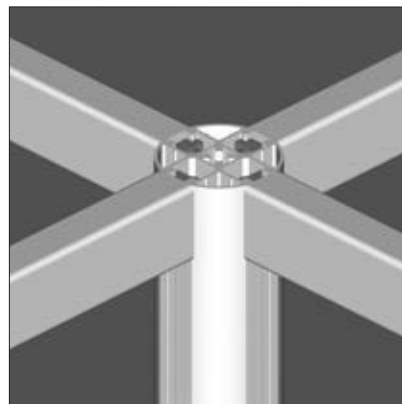
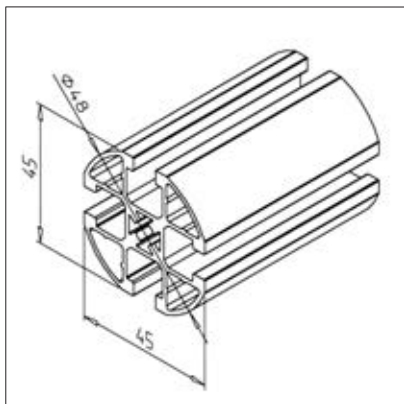
- Height adjustment
- Telescopic applications

ASSEMBLY

- For clamping or snap-in on the profile in the respective process

Profile 45 R4

Part No. 20.1120/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 8.163 \text{ cm}^4$
- $I_y = 8.163 \text{ cm}^4$
- $w_x = 3.628 \text{ cm}^3$
- $w_y = 3.628 \text{ cm}^3$
- $IT = 16.200 \text{ cm}^4$
- Weight = 1.405 kg/m
- Bar length = 6 m
- Packing unit = 48 m

APPLICATIONS

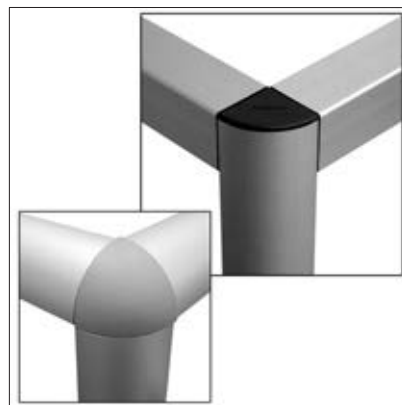
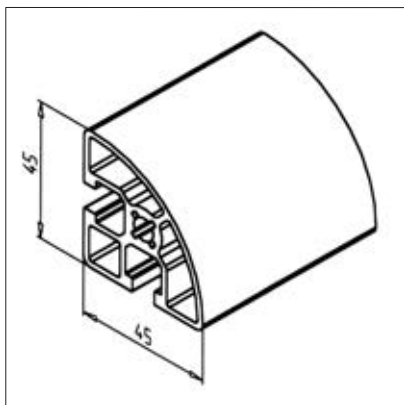
- Weight-optimized constructions
- Handrail
- Connection of profiles 19
- Handles with different length for doors and drawers

ASSEMBLY

- MiniTec power-lock fastener
- Screw connection
- Mounting angle 19 GD-Z, part no. 21.2078/0

Profile 45 R 90°

Part No. 20.1069/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 9.138 \text{ cm}^4$
- $I_y = 9.138 \text{ cm}^4$
- $w_x = 3.581 \text{ cm}^3$
- $w_y = 3.581 \text{ cm}^3$
- $IT = 14.456 \text{ cm}^4$
- Weight = 1.478 kg/m
- Bar length = 6 m
- Packing unit = 48 m

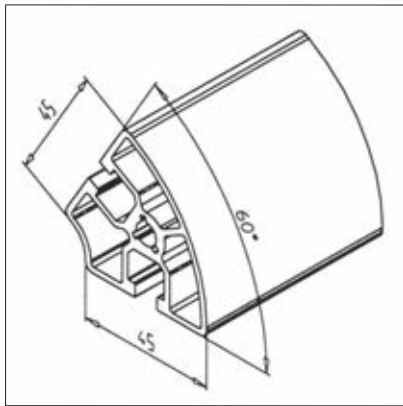
APPLICATIONS

- Weight optimized constructions
- Tables
- Framework constructions
- Display windows, showcases

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 R 90°
- Bolt connector

Profile 45 R 60°



TECHN. DATA / ITEMS SUPPLIED

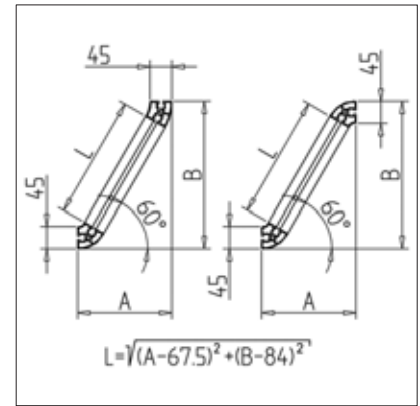
- Aluminium, extruded, anodized E6/EV1
- $I_x = 11.446 \text{ cm}^4$
- $I_y = 10.28 \text{ cm}^4$
- $w_x = 3.667 \text{ cm}^3$
- $w_y = 3.752 \text{ cm}^3$
- $IT = 21.560 \text{ cm}^4$
- Weight = 1.575 kg/m
- Bar length = 6 m
- Packing unit = 48 m



APPLICATIONS

- Angled enclosures
- Tables
- Framework constructions
- Display windows, showcases
- As cross beam:
Calculate dimension L of the intermediate support according to calculating formular

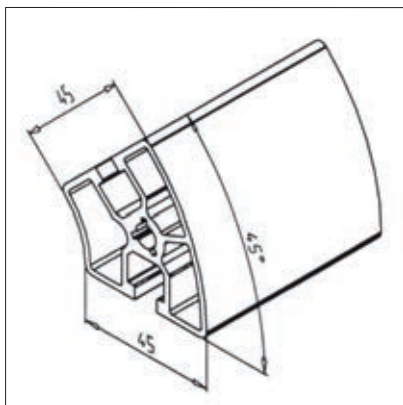
Part No. 20.1096/0



ASSEMBLY

- MiniTec power-lock fastener
- Bolt connector

Profile 45 R 45°



TECHN. DATA / ITEMS SUPPLIED

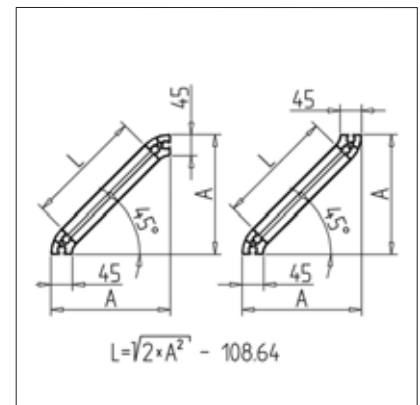
- Aluminium, extruded, anodized E6/EV1
- $I_x = 12.457 \text{ cm}^4$
- $I_y = 11.296 \text{ cm}^4$
- $w_x = 3.976 \text{ cm}^3$
- $w_y = 3.837 \text{ cm}^3$
- $IT = 24.184 \text{ cm}^4$
- Weight = 1.607 kg/m
- Bar length = 6 m
- Packing unit = 48 m



APPLICATIONS

- Angled enclosures
- Tables
- Framework constructions
- Display windows, showcases
- As cross beam:
Calculate dimension L of the intermediate support according to calculating formular

Part No. 20.1095/0

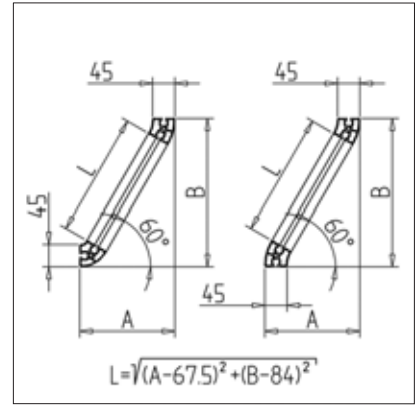
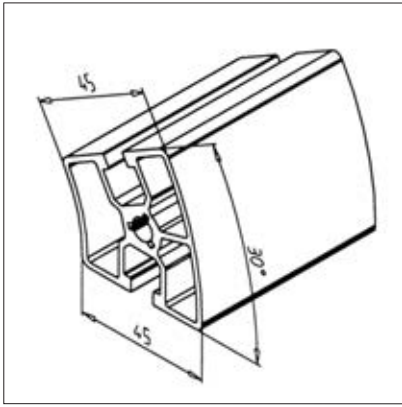


ASSEMBLY

- MiniTec power-lock fastener
- Bolt connector

Profile 45 R 30°

Part No. 20.1094/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 12.138 \text{ cm}^4$
- $I_y = 11.006 \text{ cm}^4$
- $w_x = 4.018 \text{ cm}^3$
- $w_y = 3.883 \text{ cm}^3$
- $IT = 25.698 \text{ cm}^4$
- Weight = 1.626 kg/m
- Bar length = 6 m
- Packing unit = 48 m

APPLICATIONS

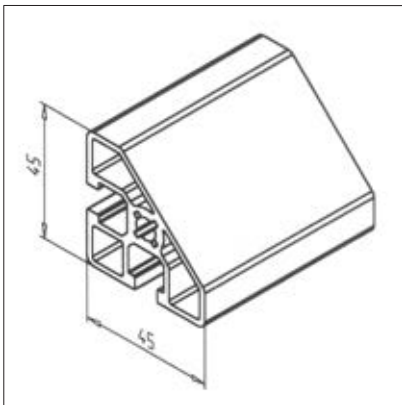
- Angled enclosures
- Tables
- Framework constructions
- Display windows, showcases
- As cross beam:
Calculate dimension L of the intermediate support according to calculating formular

ASSEMBLY

- MiniTec power-lock fastener
- Bolt connector

Profile 45/45°

Part No. 20.1029/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 8.626 \text{ cm}^4$
- $I_y = 8.626 \text{ cm}^4$
- $w_x = 3.315 \text{ cm}^3$
- $w_y = 3.315 \text{ cm}^3$
- $IT = 10.580 \text{ cm}^4$
- Weight = 1.443 kg/m
- Bar length = 6 m
- Packing unit = 48 m

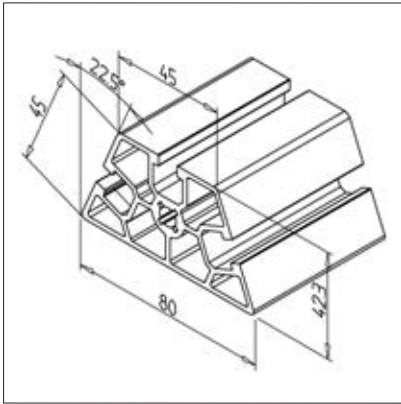
APPLICATIONS

- Weight optimized constructions
- Tables
- Framework constructions
- Bracings

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45°
- Mounting bracket 45 or 90
- Bolt connector

Profile 45/22.5°



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 14.506 \text{ cm}^4$
- $I_y = 33.432 \text{ cm}^4$
- $w_x = 7.934 \text{ cm}^3$
- $w_y = 8.515 \text{ cm}^3$
- $IT = 42.880 \text{ cm}^4$
- Weight = 2.225 kg/m
- Bar length = 6 m
- Packing unit = 36 m



APPLICATIONS

- Guard units
- Tables
- Connection of construction elements at an angle of 45°
- Bracings

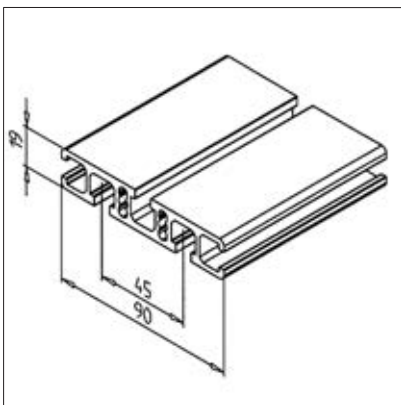
Part No. 20.1030/0



ASSEMBLY

- MiniTec power-lock fastener
- Angles
- Bolt connector

Profile 19 x 90



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 3.436 \text{ cm}^4$
- $I_y = 45.455 \text{ cm}^4$
- $w_x = 3.493 \text{ cm}^3$
- $w_y = 10.101 \text{ cm}^3$
- $IT = 2.274 \text{ cm}^4$
- Weight = 1.919 kg/m
- Bar length = 6 m
- Packing unit = 48 m



APPLICATIONS

- Base plates, tensioning plates
- Contact areas
- Slide plates for linear slides
- Floor fastening plates
- Showcases

Part No. 20.0995/0

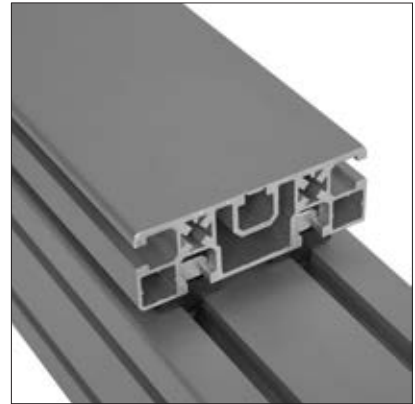
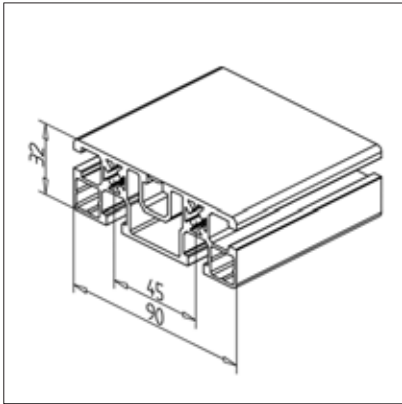


ASSEMBLY

- Bolt connector
- Angles

Profile 90 x 32 UL

Part No. 20.1066/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.627 \text{ cm}^4$
- $I_y = 64.889 \text{ cm}^4$
- $w_x = 5.832 \text{ cm}^3$
- $w_y = 14.34 \text{ cm}^3$
- $IT = 25.108 \text{ cm}^4$
- Weight = 2.464 kg/m
- Bar length = 6 m
- Packing unit = 36 m

APPLICATIONS

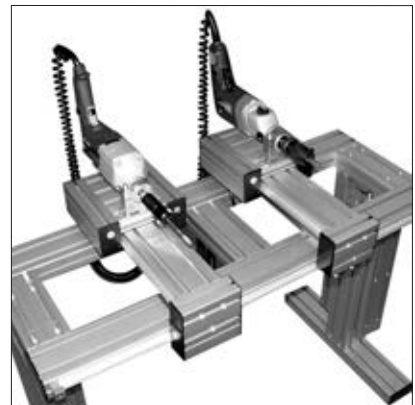
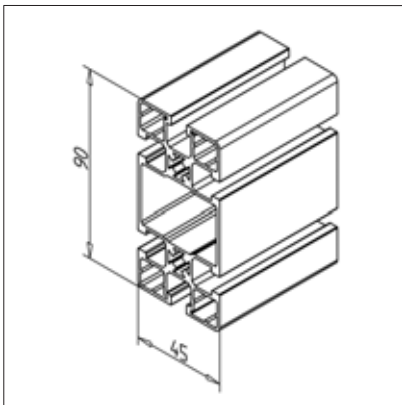
- All types of constructions, with a closed profile side
- Weight-optimized constructions
- Tables
- Frames
- Safety equipment

ASSEMBLY

- MiniTec power-lock fastener
- Screw connection
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length
- Angles

Profile 45 x 90 UL

Part No. 20.1067/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 73.907 \text{ cm}^4$
- $I_y = 19.194 \text{ cm}^4$
- $w_x = 16.423 \text{ cm}^3$
- $w_y = 8.53 \text{ cm}^3$
- $IT = 57.770 \text{ cm}^4$
- Weight = 2.421 kg/m
- Bar length = 6 m
- Packing unit = 24 m

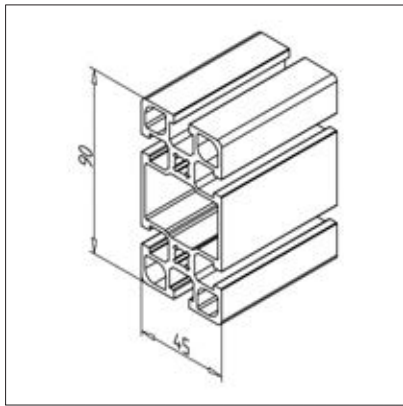
APPLICATIONS

- Universal mounting for all types of weight optimised constructions
- The hollow chamber is designed for receiving and guiding counterweights

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector
- Screw connection

Profile 45 x 90 F



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 100.988 \text{ cm}^4$
- $I_y = 24.34 \text{ cm}^4$
- $w_x = 22.441 \text{ cm}^3$
- $w_y = 10.818 \text{ cm}^3$
- $IT = 60.629 \text{ cm}^4$
- Weight = 3.134 kg/m
- Bar length = 6 m
- Packing unit = 24 m



APPLICATIONS

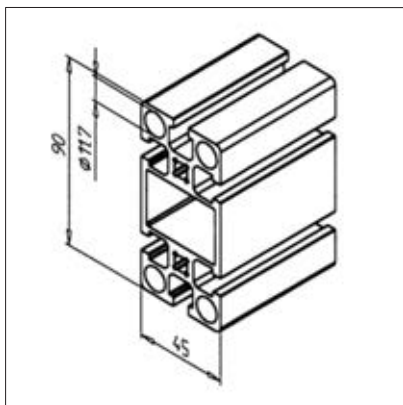
- All kinds of constructions
- The hollow chamber is designed for receiving and guiding counterweights



ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector

Profile 45 x 90



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 113.205 \text{ cm}^4$
- $I_y = 28.584 \text{ cm}^4$
- $w_x = 25.156 \text{ cm}^3$
- $w_y = 12.704 \text{ cm}^3$
- $IT = 65.358 \text{ cm}^4$
- Weight = 3.667 kg/m
- Bar length = 6 m
- Packing unit = 24 m



APPLICATIONS

- General heavy duty construction
- 4 cavities for compressed air piping
- Cavity is not suitable for counterweights

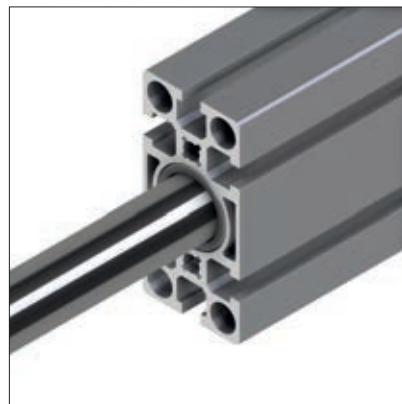
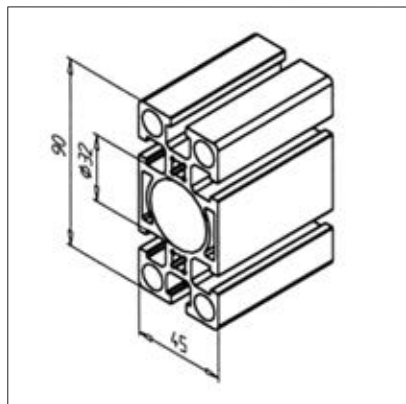


ASSEMBLY

- MiniTec power-lock fastener
- Angle 25 / 45 / 90
- Bolt connector
- The $\varnothing 11.7 \text{ mm}$ holes can be bored with G 1/4 for holding screw plugs or pneumatic connections
- Lateral connections G 1/8" direct into the profile

Profile 45 x 90 S

Part No. 20.1017/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 113.487 \text{ cm}^4$
- $I_y = 30.719 \text{ cm}^4$
- $w_x = 25.219 \text{ cm}^3$
- $w_y = 13.653 \text{ cm}^3$
- $IT = 70.893 \text{ cm}^4$
- Weight = 3.860 kg/m
- Bar length = 6 m
- Packing unit = 24 m

APPLICATIONS

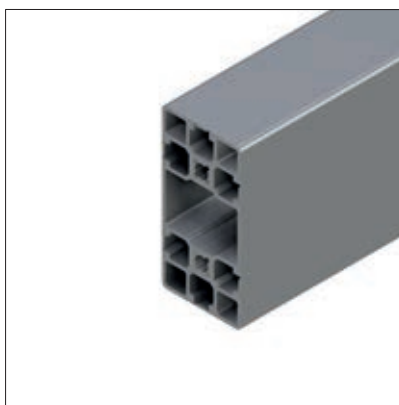
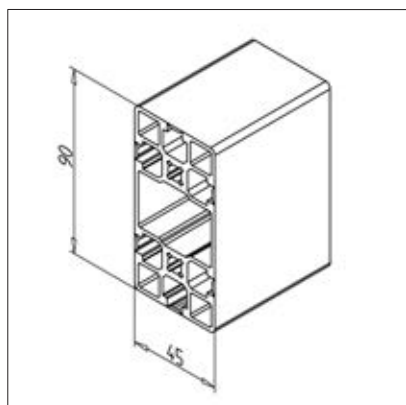
- All kinds of constructions
- Linear guides LB as slide
- Column guides
- Implementation as compressed air line with base and transport plate and sealing set
- Central bore $\varnothing 32 \text{ mm}$ for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

Profile 45 x 90 G

Part No. 20.1015/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 101.241 \text{ cm}^4$
- $I_y = 25.318 \text{ cm}^4$
- $w_x = 22.498 \text{ cm}^3$
- $w_y = 11.252 \text{ cm}^3$
- $IT = 174.9594 \text{ cm}^4$
- Weight = 3.191 kg/m
- Bar length = 6 m
- Packing unit = 24 m

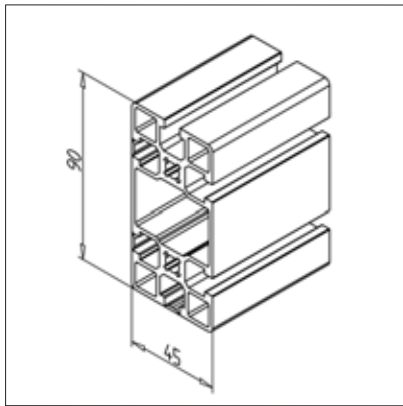
APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Guide for internal counterweights in a central hollow chamber

ASSEMBLY

- MiniTec power-lock fastener
- All 6 grooves can be opened up to the length desired
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 45 x 90 2G



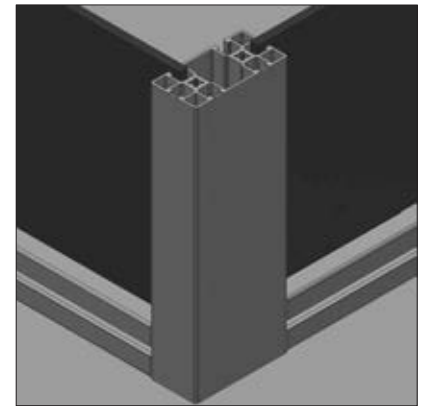
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 98.137 \text{ cm}^4$
- $I_y = 24.317 \text{ cm}^4$
- $w_x = 21.808 \text{ cm}^3$
- $w_y = 10.807 \text{ cm}^3$
- $IT = 122.453 \text{ cm}^4$
- Weight = 3.108 kg/m
- Bar length = 6 m
- Packing unit = 24 m



APPLICATIONS

- Grooves expandable
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Guide for internal counterweights in a central hollow chamber

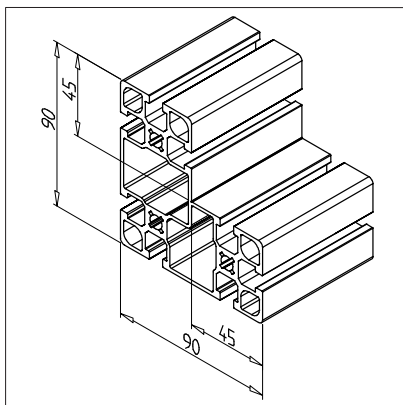


Part No. 20.1081/0

ASSEMBLY

- MiniTec power-lock fastener
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 90 X 90 x 45



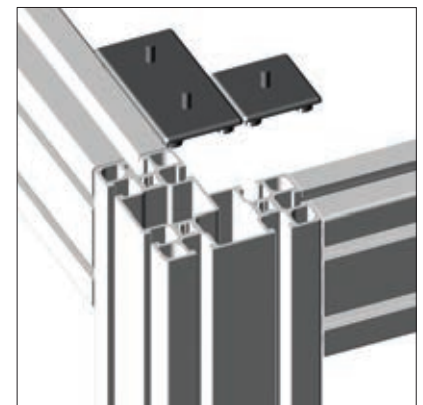
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 127.588 \text{ cm}^4$
- $I_y = 127.459 \text{ cm}^4$
- $w_x = 24.971 \text{ cm}^3$
- $w_y = 24.895 \text{ cm}^3$
- $IT = 182.588 \text{ cm}^4$
- Weight = 4.458 kg/m
- Bar length = 6 m
- Packing unit = 12 m



APPLICATIONS

- All kinds of constructions
- Tables
- Display windows, showcases
- Framework constructions
- One chamber can be used to guide counterweight 45



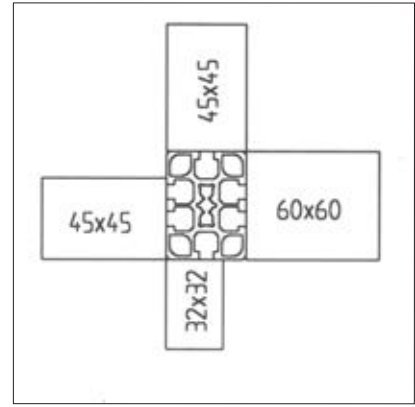
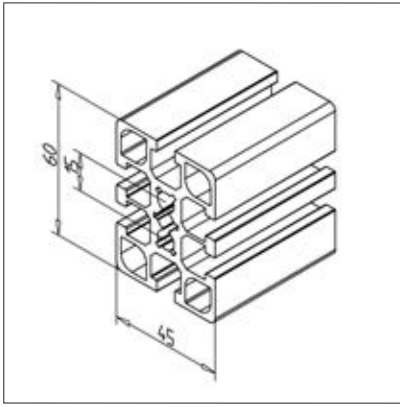
Part No. 20.0984/0

ASSEMBLY

- MiniTec power-lock fastener
- Screw connection
- Mounting bracket 45 or 90
- Base and transport plate 90x90x45 **part no. 21.2505/0**

Profile 45 x 60 F

Part No. 20.1023/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 32.068 \text{ cm}^4$
- $I_y = 17.587 \text{ cm}^4$
- $w_x = 10.689 \text{ cm}^3$
- $w_y = 7.816 \text{ cm}^3$
- $IT = 19.050 \text{ cm}^4$
- Weight = 2.603 kg/m
- Bar length = 6 m
- Packing unit = 24 m

APPLICATIONS

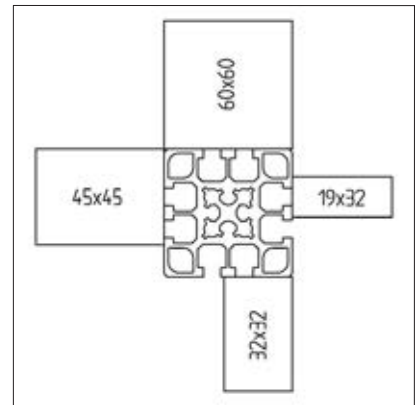
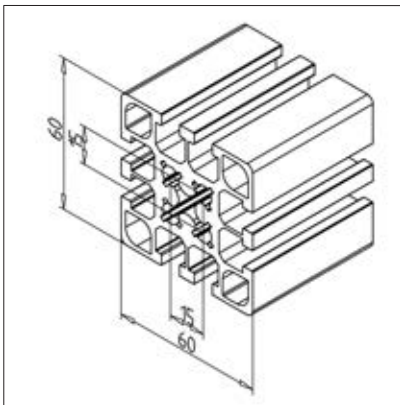
- All kinds of constructions
- Corner posts in large safety devices

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Central boring for thread M8

Profile 60 x 60 F

Part No. 20.1049/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 40.715 \text{ cm}^4$
- $I_y = 40.715 \text{ cm}^4$
- $w_x = 13.571 \text{ cm}^3$
- $w_y = 13.571 \text{ cm}^3$
- $IT = 39.604 \text{ cm}^4$
- Weight = 3.655 kg/m
- Bar length = 6 m
- Packing unit = 24 m

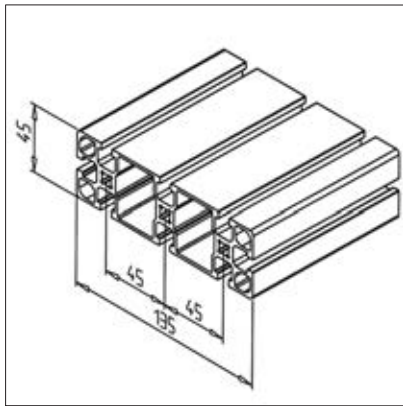
APPLICATIONS

- All kinds of constructions
- Corner posts in large safety devices

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Central boring for thread M10

Profile 45 x 135 F



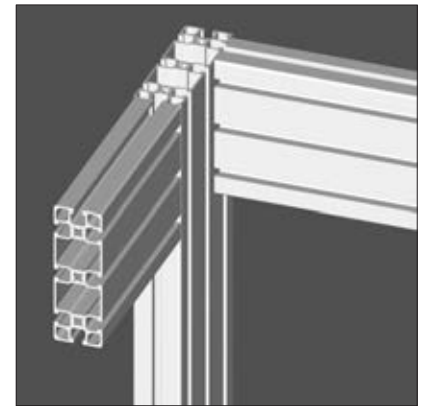
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 34.958 \text{ cm}^4$
- $I_y = 307.866 \text{ cm}^4$
- $w_x = 15.537 \text{ cm}^3$
- $w_y = 45.609 \text{ cm}^3$
- $IT = 119.233 \text{ cm}^4$
- Weight = 4.319 kg/m
- Bar length = 6 m
- Packing unit = 12 m



APPLICATIONS

- All kinds of constructions
- The hollow chamber is designed for receiving and guiding counterweights

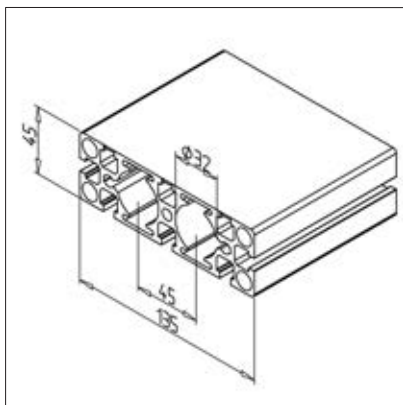


Part No. 20.1087/0

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt connector

Profile 45 x 135 1G



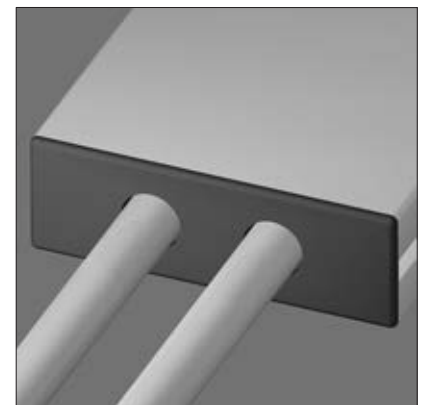
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 47.064 \text{ cm}^4$
- $I_y = 359.242 \text{ cm}^4$
- $w_x = 20.618 \text{ cm}^3$
- $w_y = 53.221 \text{ cm}^3$
- $IT = 189.739 \text{ cm}^4$
- Weight = 5.570 kg/m
- Bar length = 6 m
- Packing unit = 12 m



APPLICATIONS

- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Linear guides LB as slide
- Central bore $\varnothing 32$ mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders



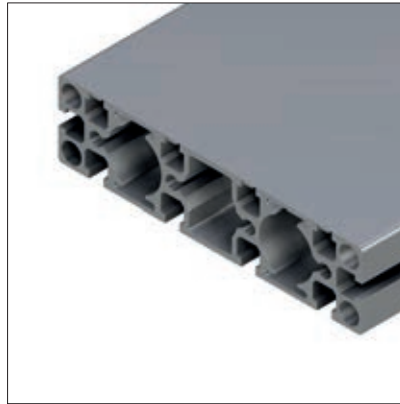
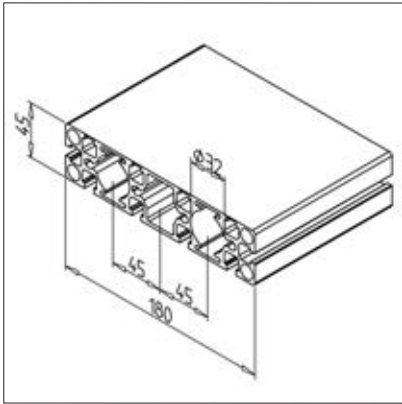
Part No. 20.1078/0

ASSEMBLY

- MiniTec power-lock fastener
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 45 x 180 1G

Part No. 20.1079/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 61.015 \text{ cm}^4$
- $I_y = 810.885 \text{ cm}^4$
- $w_x = 26.704 \text{ cm}^3$
- $w_y = 90.097 \text{ cm}^3$
- $IT = 271.248 \text{ cm}^4$
- Weight = 6.950 kg/m
- Bar length = 6 m
- Packing unit = 12 m

APPLICATIONS

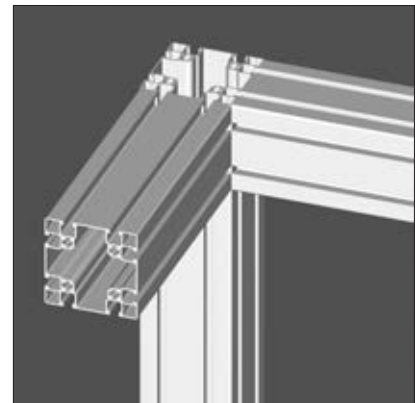
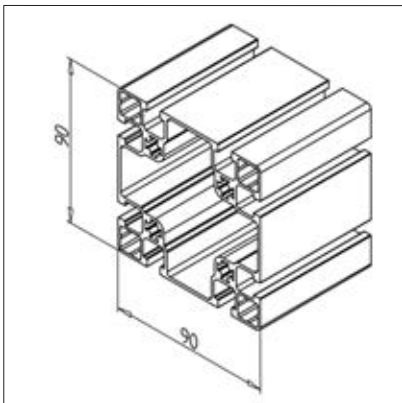
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Linear guides LB as slide
- Central bore $\varnothing 32 \text{ mm}$ for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 90 x 90 UL

Part No. 20.0999/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 132.001 \text{ cm}^4$
- $I_y = 132.001 \text{ cm}^4$
- $w_x = 29.334 \text{ cm}^3$
- $w_y = 29.334 \text{ cm}^3$
- $IT = 343.488 \text{ cm}^4$
- Weight = 3.776 kg/m
- Bar length = 6 m
- Packing unit = 12 m

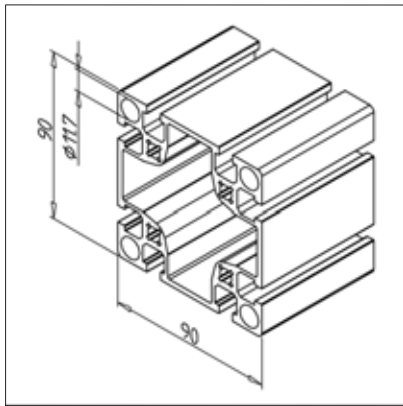
APPLICATIONS

- Weight optimized constructions
- Guide in the central hollow chamber for internal balancing weight for lifting doors

ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection
- Bolt connector

Profile 90 x 90 L



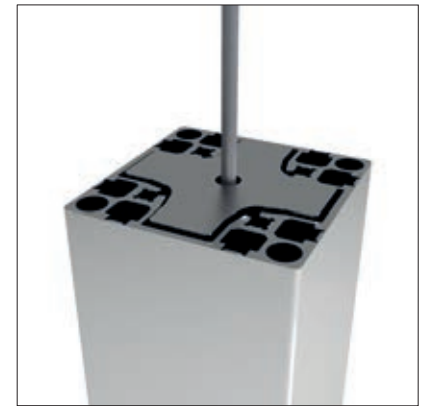
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 186.26 \text{ cm}^4$
- $I_y = 186.26 \text{ cm}^4$
- $w_x = 41.391 \text{ cm}^3$
- $w_y = 41.391 \text{ cm}^3$
- $IT = 378.232 \text{ cm}^4$
- Weight = 5.222 kg/m
- Bar length = 6 m
- Packing unit = 12 m



APPLICATIONS

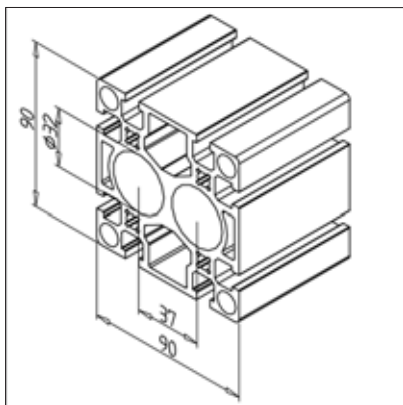
- All types of heavy constructions, designed as 4-fold compressed air line and compressed air reservoir
- Guide in the central hollow chamber for internal balancing weight for lifting doors



ASSEMBLY

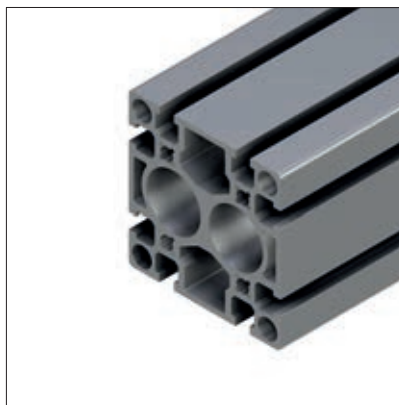
- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection
- Bolt connector

Profile 90 x 90 S



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 208.888 \text{ cm}^4$
- $I_y = 223.949 \text{ cm}^4$
- $w_x = 46.419 \text{ cm}^3$
- $w_y = 49.766 \text{ cm}^3$
- $IT = 569.423 \text{ cm}^4$
- Weight = 7.514 kg/m
- Bar length = 6 m
- Packing unit = 12 m



APPLICATIONS

- All types of heavy constructions
- Linear guides LB as slide
- Central bore $\varnothing 32$ mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders



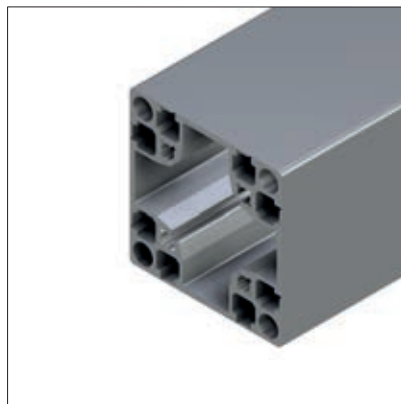
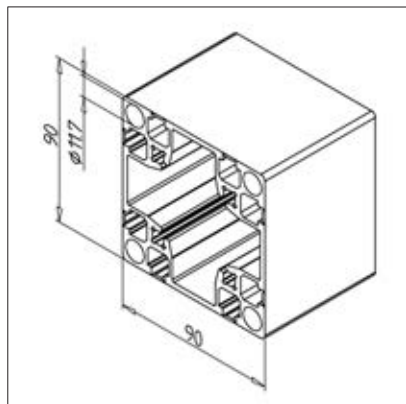
ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

Part No. 20.1019/0

Profile 90 x 90 G

Part No. 20.1082/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 195.271 \text{ cm}^4$
- $I_y = 195.271 \text{ cm}^4$
- $w_x = 43.393 \text{ cm}^3$
- $w_y = 43.393 \text{ cm}^3$
- $IT = 723.070 \text{ cm}^4$
- Weight = 5.329 kg/m
- Bar length = 6 m
- Packing unit = 12 m

APPLICATIONS

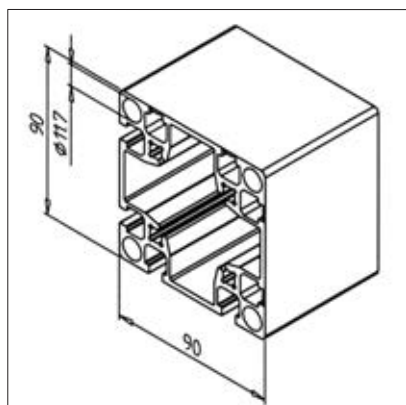
- Grooves expandable
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Guide for internal counterweights in a central hollow chamber

ASSEMBLY

- MiniTec power-lock fastener
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 90 x 90 2G

Part No. 20.1044/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 190.169 \text{ cm}^4$
- $I_y = 190.169 \text{ cm}^4$
- $w_x = 41.825 \text{ cm}^3$
- $w_y = 41.825 \text{ cm}^3$
- $IT = 515.495 \text{ cm}^4$
- Weight = 5.217 kg/m
- Bar length = 6 m
- Packing unit = 12 m

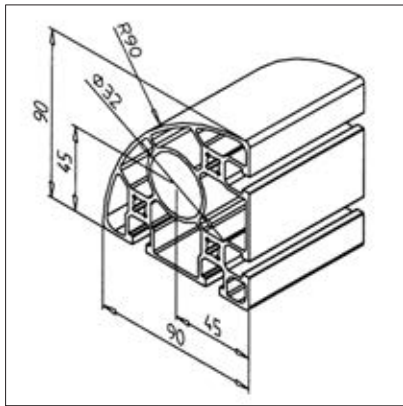
APPLICATIONS

- Grooves expandable
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Guide for internal counterweights in a central hollow chamber

ASSEMBLY

- MiniTec power-lock fastener
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 90 R 90°



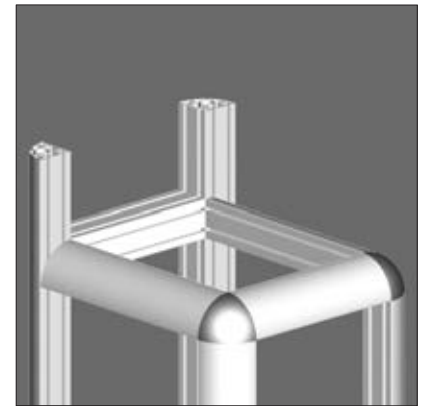
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 113.389 \text{ cm}^4$
- $I_y = 113.389 \text{ cm}^4$
- $w_x = 21.874 \text{ cm}^3$
- $w_y = 21.874 \text{ cm}^3$
- $IT = 378.600 \text{ cm}^4$
- Weight = 4.265 kg/m
- Bar length = 6 m
- Packing unit = 12 m



APPLICATIONS

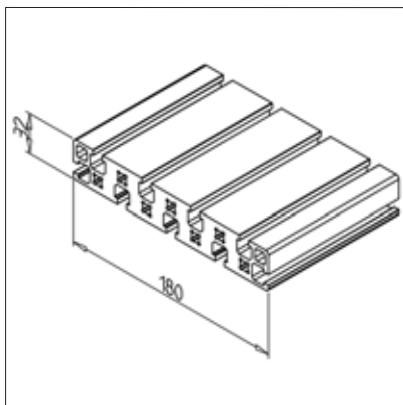
- Tables, frames
- All kinds of constructions



ASSEMBLY

- MiniTec power-lock fastener
- Angles
- Bolt connector
- End cap, **part no. 22.0988/1**
- Connecting plate M10 - M20
- Corner Connection 90 R 90°

Profile 32 x 180



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 33.804 \text{ cm}^4$
- $I_y = 843.825 \text{ cm}^4$
- $w_x = 21.068 \text{ cm}^3$
- $w_y = 93.758 \text{ cm}^3$
- $IT = 66.836 \text{ cm}^4$
- Weight = 9.539 kg/m
- Bar length = 6 m
- Packing unit = 6 m



APPLICATIONS

- Slide plate LR
- Tensioning area
- Base plates
- All types of heavy constructions



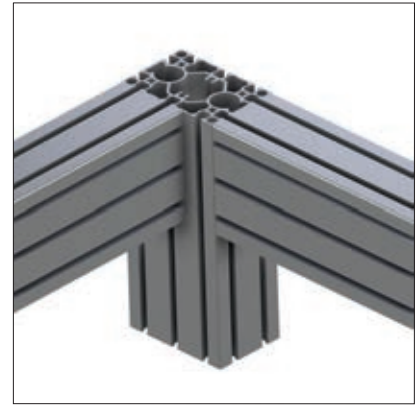
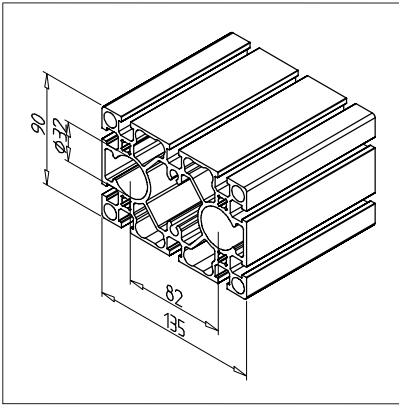
ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

Part No. 20.1016/0

Profile 90 x 135

Part No. 20.1148/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 286.480 \text{ cm}^4$
- $I_y = 631.058 \text{ cm}^4$
- $w_x = 63.662 \text{ cm}^3$
- $w_y = 93.490 \text{ cm}^3$
- $IT = 1276.884 \text{ cm}^4$
- Weight = 8.992 kg/m
- Bar length = 6 m
- Packing unit = 6 m

APPLICATIONS

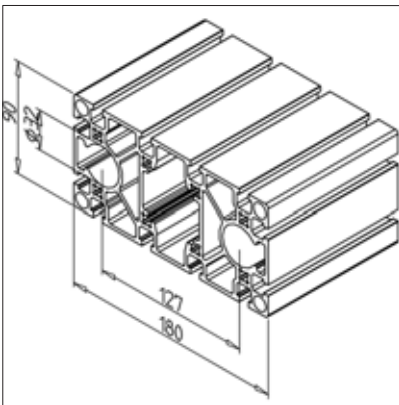
- Central bore $\varnothing 32 \text{ mm}$ for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders
- Linear guides LB as slide
- All types of heavy constructions

ASSEMBLY

- Screw connection
- MiniTec power-lock fastener
- Mounting bracket 45 or 90

Profile 90 x 180 S

Part No. 20.1013/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 376.784 \text{ cm}^4$
- $I_y = 1421.865 \text{ cm}^4$
- $w_x = 83.729 \text{ cm}^3$
- $w_y = 157.983 \text{ cm}^3$
- $IT = 2023.299 \text{ cm}^4$
- Weight = 11.482 kg/m
- Bar length = 6 m
- Packing unit = 6 m

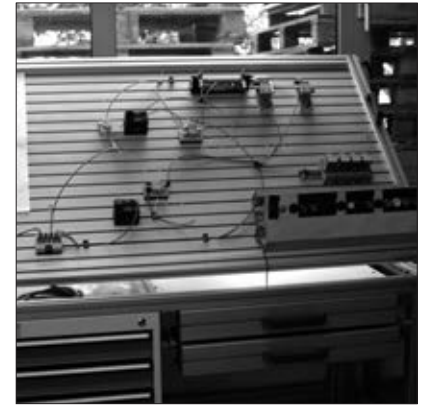
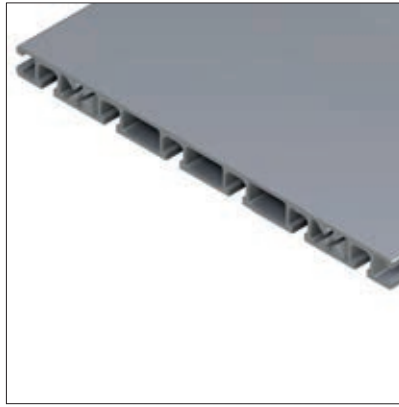
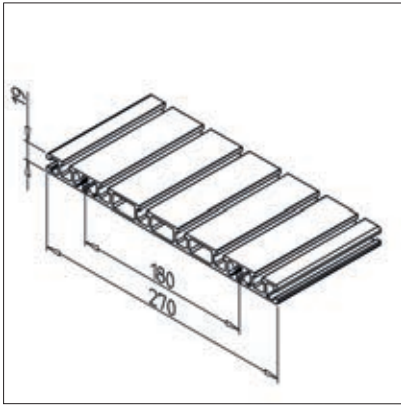
APPLICATIONS

- All types of heavy constructions
- Linear guides LB as slide
- Central bore $\varnothing 32 \text{ mm}$ for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

Profile 270 x 19



Part No. 20.1077/0

TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.348 \text{ cm}^4$
- $I_y = 1352.197 \text{ cm}^4$
- $w_x = 10.167 \text{ cm}^3$
- $w_y = 100.162 \text{ cm}^3$
- $IT = 18.378 \text{ cm}^4$
- Weight = 5.612 kg/m
- Bar length = 6 m
- Packing unit = 18 m

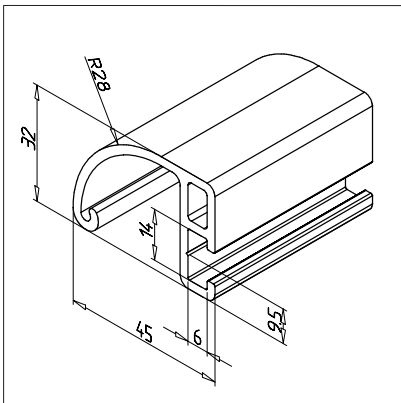
APPLICATIONS

- Mounting plates
- Workstations
- Training set-ups for training and further education with universal clamping socket **part no. P2.0060/0**
- Demonstration units

ASSEMBLY

- Angles
- Screw connection
- Bolt connector

Handle profile alu



Part No. 20.1045/0

TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 3.531 \text{ cm}^4$
- $I_y = 7.654 \text{ cm}^4$
- $w_x = 1.985 \text{ cm}^3$
- $w_y = 2.856 \text{ cm}^3$
- $IT = 0.429 \text{ cm}^4$
- Weight = 0.890 kg/m
- Bar length = 6 m

APPLICATIONS

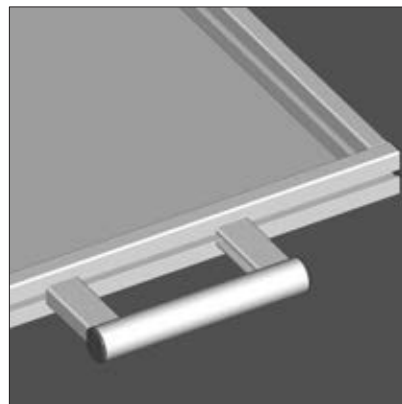
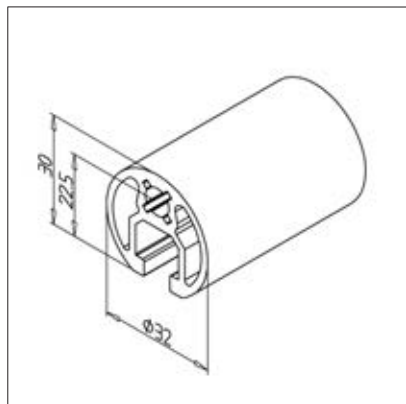
- Handle of diverse lengths
- Sheet edges
- Work station end points
- Cover ledge for cable, pneumatic conducts

ASSEMBLY

- Screw connection
- Angles
- Lateral cover with end cap left **part no. 22.1055/0** and right **part no. 22.1054/0**

Handle profile 32

Part No. 20.1088/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 2.601 \text{ cm}^4$
- $I_y = 2.636 \text{ cm}^4$
- $w_x = 1.682 \text{ cm}^3$
- $w_y = 1.649 \text{ cm}^3$
- $IT = 2.565 \text{ cm}^4$
- Weight = 0.911 kg/m
- Bar length = 6 m
- Packing unit = 84 m

APPLICATIONS

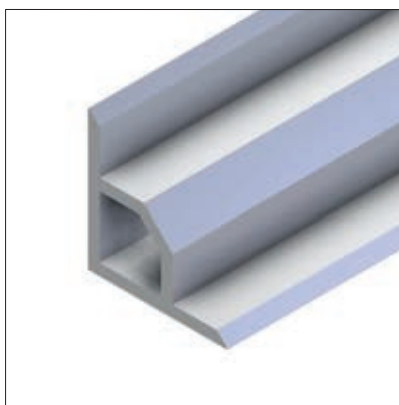
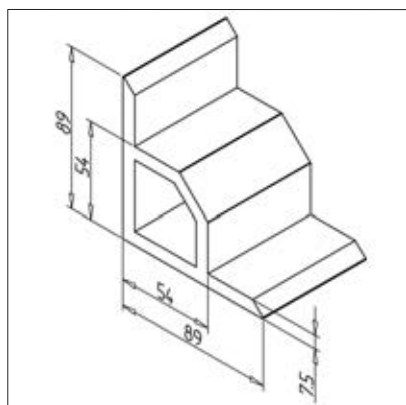
- Handles of different lengths for doors, drawers, handrails
- Edging of surface elements or posters up to 8 mm
- Profile section for suspending roller tracks or similar

ASSEMBLY

- MiniTec power-lock fastener
- Mounting angle 19 GD-Z, **part no. 21.2078/0**
- Bolt connector
- Screw connection
- Lateral cover with end cap for handle profile 32

Angular profile 89 x 89

Part No. 20.1011/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 105.416 \text{ cm}^4$
- $I_y = 105.416 \text{ cm}^4$
- $w_x = 17.413 \text{ cm}^3$
- $w_y = 17.413 \text{ cm}^3$
- $IT = 81.036 \text{ cm}^4$
- Weight = 4.868 kg/m
- Bar length = 3 m
- Packing unit = 12 m

APPLICATIONS

- Consoles
- Contact areas
- Starting material for the production of custom mounting brackets

ASSEMBLY

- Screws M8 x 20 and square nuts M8

PROFILE CAPS

Due to unprotected profile ends, dirt and foreign bodies can penetrate into the inside of the profiles, which can lead to hygienic problems not only in sensitive environments. All this is prevented by profile caps: The profiles remain clean and protected, the risk of cutting injuries is minimized. Last but not least, they harmoniously round off the look of the aluminium profiles. In practice, however, it is annoying for users when these functions are no longer guaranteed due to loose and falling out profile caps. This problem is effectively solved with our self-locking profile caps. These are permanently anchored in the profile by means of an integrated safety pin. It therefore remains at the intended location even under extreme conditions and under the toughest conditions. True to the motto **“The Art of Simplicity”**, the Minitec profile caps are very easy to use: The locking pin is hammered flush into the profile using a plastic hammer. Nevertheless, the profile cap can be removed effortlessly: The pins are punched through with a pin four millimeters in diameter. Separately available spare pins make the profile caps reusable.

SELF-LOCKING PROFILE CAPS FOR ALUMINIUM PROFILES



→ Insert cap



→ Hammer the pin



→ Profile stays clean and protected

MINITEC ALUMINIUM PROFILE CAPS FOR HEAVY LOADS



→ Thread M8 shape



→ Tighten the cap
(Flat headed screw M08x10)



PROFILE CAPS

Profile sections	ABS grey	Al anodized	VA
		(fastening screw included)	

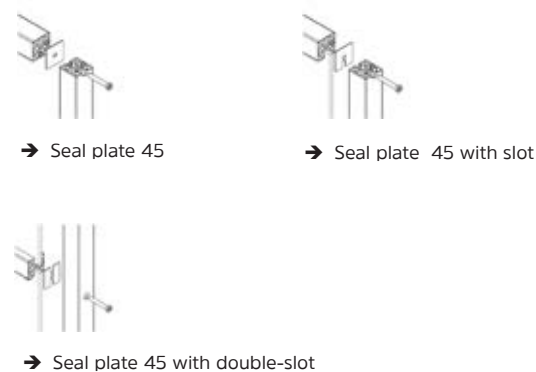
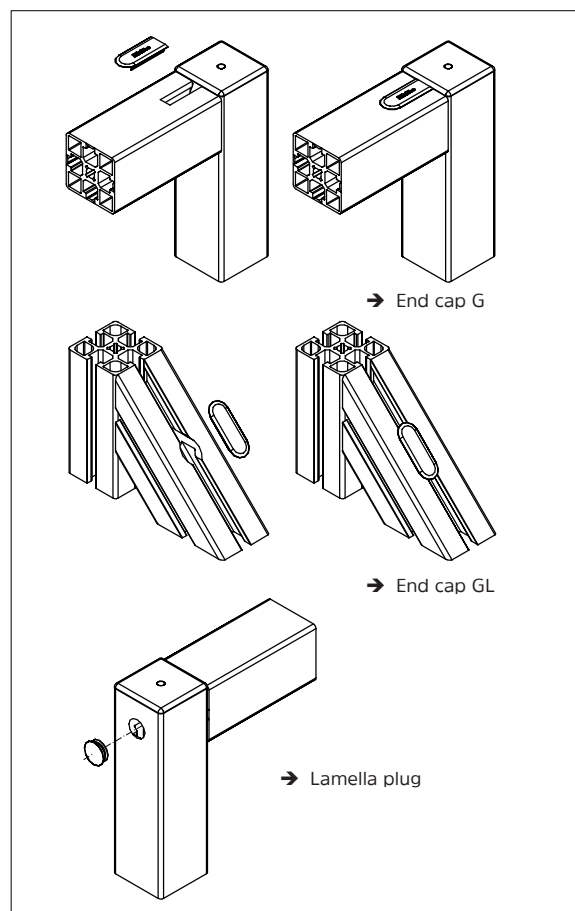
Profile series 30 (Thickness 3 mm)

23x16	22.0994/1	*	
16x30	22.0981/1	*	
23x23	22.0992/1	*	
23x30	22.0993/1	*	
30x30	22.1146/1	*	22.1149/2
30R90°	22.1144/1	*	
30R60°	22.1169/1	*	
30R45°	22.1168/1	*	
30R30°	22.1167/1	*	
30x60	22.1134/1	*	
60x60x30	22.0978/1	*	

Profile series 45 (Thickness 3 mm)

19x32	22.1220/1	*	22.1060/2	
19x45	22.1001/1	*	22.1064/2	
45x19	22.1136/1	*		
32x32	22.1002/1	*	22.1062/2	
45x32	22.1003/1	*	22.1065/2	
45x32 clamp profile	22.1046/1		22.1065/2	
45x45	22.1004/1	*	22.1067/2	22.1067/5
45R4	22.1137/1	*		
45R90°	22.0996/1	*	22.0996/2	
45R60°	22.1018/1	*	22.1018/2	
45R45°	22.1017/1	*	22.1017/2	
45R30°	22.1019/1	*	22.1019/2	
Profile height adjust- ment	22.0979/1	*		
45/45°	22.0995/1	*		
45/22,5°	22.1052/1			
19x90	22.1014/1		22.1014/2	
90x32	22.0982/1	*	22.0982/2	
45x90	22.1007/1	*	22.1068/2	
45x60	22.1058/1			
60x60	22.1057/1			
45x135	22.1049/1			
45x180	22.1048/1			
90x90	22.0983/1	*	22.1008/2	
90R90°	22.1021/1			
32x180	22.1059/1		2x 22.0982/2	
90x180	2x 22.0983/1*		2x 22.1008/2	
270x19	3x 22.1014/1		22.1189/2	
Handle profile	right 22.1054/0 left 22.1055/0			
Handle profile 32	22.1162/1	*		

* With pin



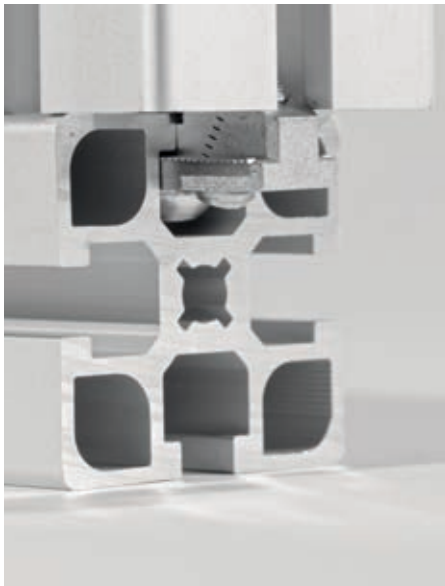
Accessories	Material	Part No.
Flat head screw M8x10 for fixing caps made of aluminum or stainless steel	VA	21.1666/0
Replacement pins for caps with hammer taps (10 pack)	ABS grey	22.1009/1

Sealing	Material	Part no.
Seal plate 45	Silicon	24.1117/0
Seal plate 45 with slot	Silicon	24.1116/0
Seal plate 45 with double-slot	Silicon	24.1118/0

Other covers	Material	Part no.
End cap G for G-Profile 45	PA6 grey	22.1056/0
End cap GL for G-Profile 45	PA6 grey	22.1208/1
End cap G for G-Profile 30	PA6 grey	22.1182/1
End cap GL for G-Profile 30	PA6 grey	22.1183/1
Lamella plug 7	PE grey	22.1200/1
Plug 7	PE grey	22.1215/1
Lamella plug 9	PE grey	22.1201/1
Lamella plug 15	PE grey	22.1202/1
Lamella plug 22	PE grey	22.1209/1

Power-lock fastener

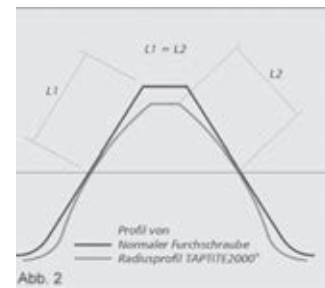
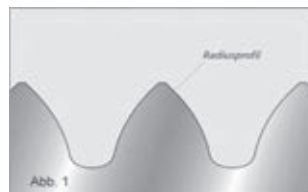
Profile connection without machining



MiniTec power-lock fastener 45 SF

Apart from the cost and time advantages, the MiniTec power-lock fastener has numerous other advantages such as subsequent adjustment, ESD suitability, ergonomic design and optical advantages. The MiniTec power-lock fastener has become even faster with the thread-forming screws. The connector is simply screwed to the profile with the screw at the front. With a standard cordless screwdriver this whole process takes a maximum of 3 seconds. No preparation for drilling, threading, measuring or planning is required. Not only the economic superiority speaks for the MiniTec connector with self-tapping screw: Thanks to the trilobular shank shape combined with the radius profile shape of the thread flanks, the new screws develop low torques. The radius profile shape causes low material displacement and reduces the amount of forming work required. The torque moments are up to 50% lower. This ensures reliable assembly and higher clamping forces with less clamping force dispersion.

see Fig. 1 + 2



The total cost of a connection is composed of a number of factors:

- Design and dimensioning of bores and threads
- Providing equipment and devices
- Procurement and management of drilling and threading tools
- Work Preparation
- Working time for drilling, threading
- Internal transport

The decisive factor in this consideration is not the cost of the individual connectors. Fundamental cost factor is working time - both in design, production planning and workshop.

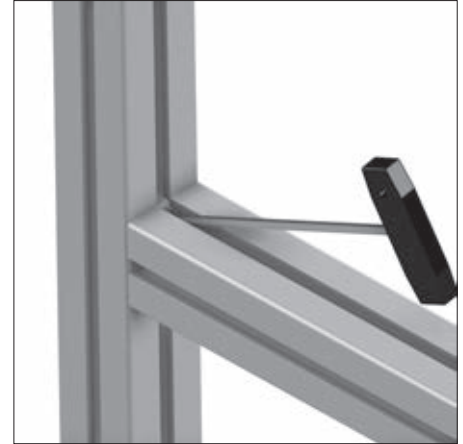
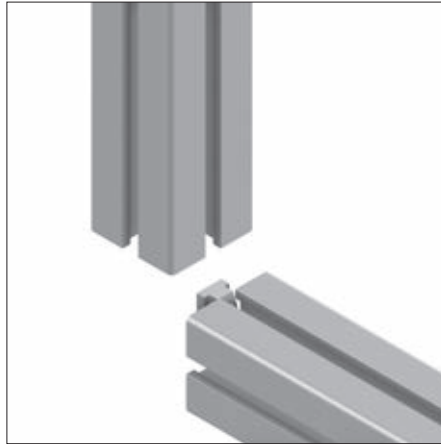
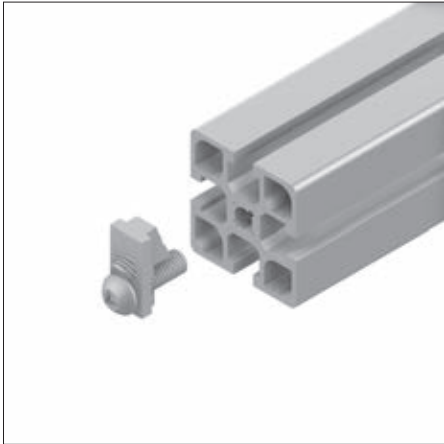
Due to recent studies there is much optimization potential especially in connection technology for profile systems. The connection must be seen as a complete system.

Here you will find all **videos on our profile system**, suitable components and their handling
www.minitec.de/en/service/videos



Power-lock fastener

Easy installation in three steps



Install power-lock connector with button head screw on profile end, then undo the screw slightly so that the connector can be slid easily into the profile groove of the 2nd profile. Make sure that the inclined setscrew does not protrude on the outside. Tighten setscrew M8 using hexagon screwdriver SW4. Recommended tightening torque approx. 12 Nm

Advantages

- The corners of the profile connection remain free for surface elements
- The joint is invisible from the outside
- Secured against rotation
- Load capacity: 6000 N (UL-Profile: 4000N)
- Cross connections can be easily implemented
- Ergonomically optimized
- With the "SF" version, no thread needs to be inserted into the profile beforehand. The thread is produced automatically by screwing the screw into the central bore of the profile.

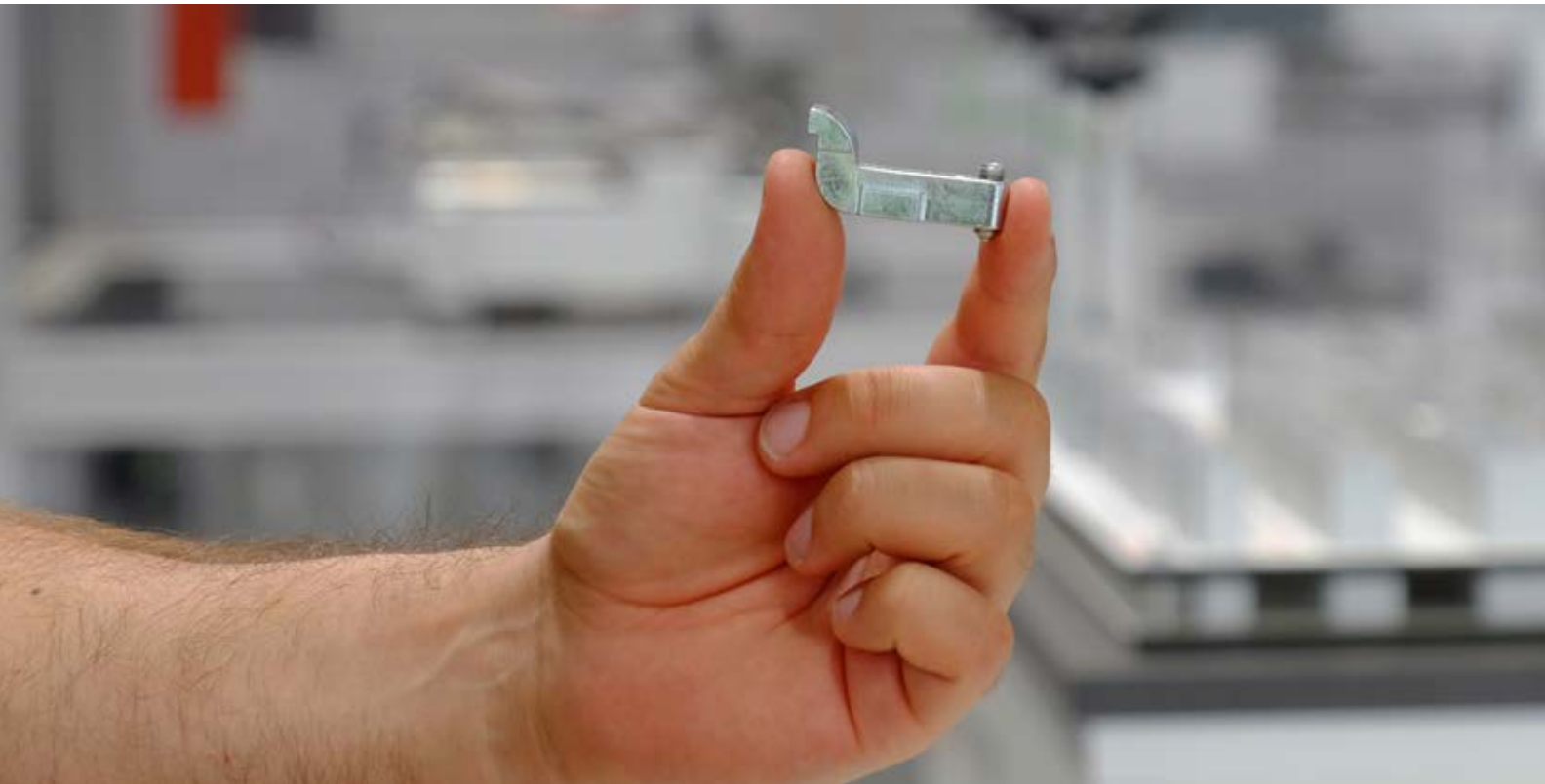
Product	Part no.	Description
Power-Lock fastener 45	21.1018/0	with filister screw M8/SW5
Power-Lock fastener 45 SF	21.0818/0	with self-tapping Torx screw M8/T40,
Power-lock fastener 45 stainless	21.1018/1	Button head screw M8/SW5, Corrosion resistant version for use in corrosive environments
Power-Lock fastener 45 SF short *	21.0020/0	with self-tapping Torx screw M8/T40, for profile connections with flush end cap
Power-Lock fastener30	21.0014/0	with filister screw M8/SW5
Power-Lock fastener 30 SF	21.0016/0	with self-tapping Torx screw M8/T40,
Power-lock fastener 30 stainless	21.0042/0	with button head screw SW 5

* If this connector is used for ESD applications, the electrical conductivity of the two profiles must be established separately

Tip

Impulse wrench **Part no. 26.0800/0**
for particularly joint-gentle work.

Cross-connector



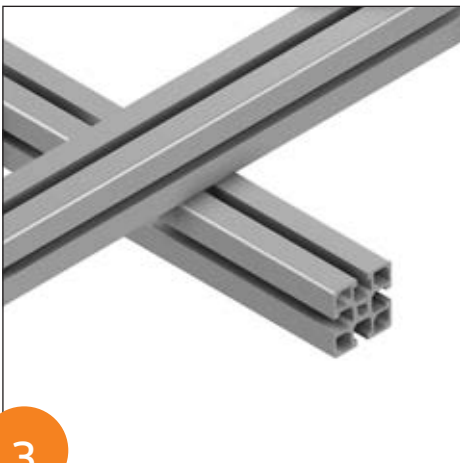
Assembly



1



2



3



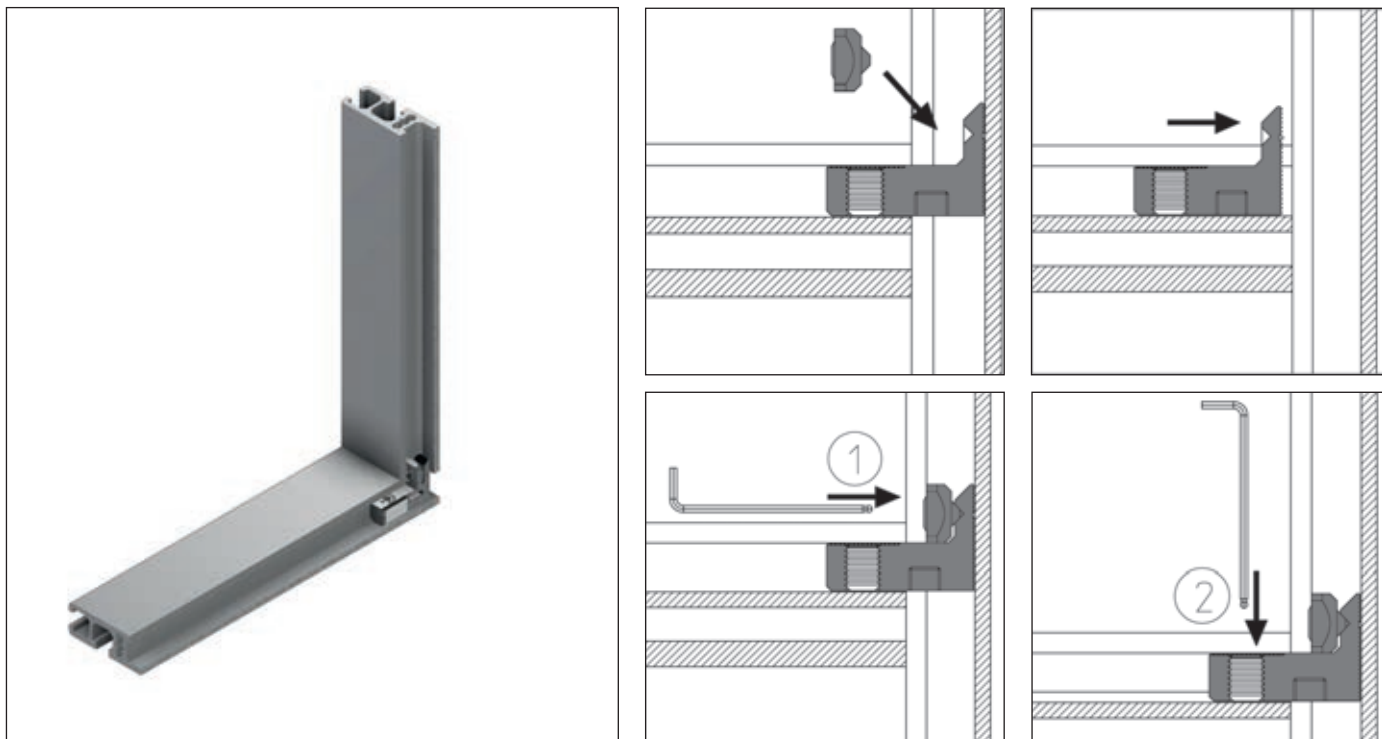
4

1. Swing the connector into the possibly existing frame
2. Push the profile to be connected over the connector
3. Position the profile struts in both directions
4. Tighten setscrew SW 3 in connector to 10 Nm torque

Both profiles are adjustable in direction of the groove. Particularly suitable for the attachment of linear axes LR / LB to machine frames.

Power-lock fastener N

For subsequent fitting of profiles into existing frames without machining



Assembly



1. Slide the connector into the strut to be retrofitted

2. Position the strut in the construction

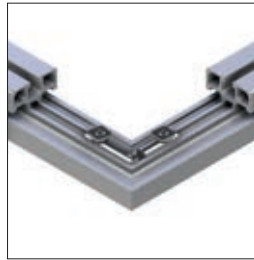
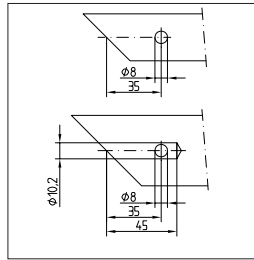
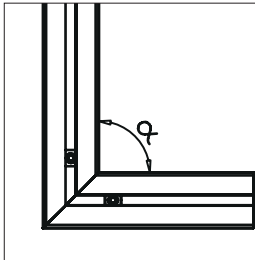
3. Slide connector into existing profile

4. Insert square nut with pre-assembled stud into the groove, position via connector and tighten, then tighten screw in connector (both 10 Nm).

Mitre connections

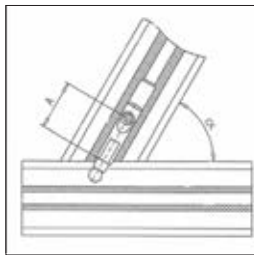
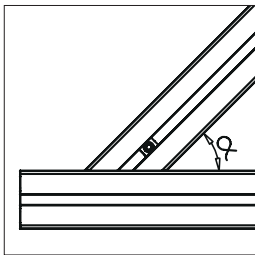
For constructions with high visual standards

Mitre connections are used for high visual requirements on design. It should be noted that the capacity of these compounds are less than standard connectors. For heavily loaded structures mitre connections should not be used!



Mitre connector

for front side connection of profiles at any angle of 60° to 180°



Mitre connector N

for connecting profiles with the grooves of continuous profiles at any angle of 30° to 90°

Description	Part no.	Description
Mitre connector 45 for profiles series 45	21.1400/0	Drill $\phi 10.2$ mm bore in the profile core bore. Drill $\phi 8.2$ bore at the distance 36.5 mm from the profile end. Insert the mitre connector in both open profile ends, position the M8 square nut with the set screw and tighten it.
Mitre connector 30 for profile series 30	21.1890/0	Core bore needs no machining. Other installation steps like mitre connector 45.
Mitre connector N 45 for profile series 45	21.1401/0	Drill $\phi 10.2$ mm bore in the profile core bore. Drill $\phi 8.2$ bore depending on the angle and at distance A from the profile end /see table). Insert the mitre connector in the open profile end, position the M8 square nut with the set screw and tighten it.
Mitre connector N 30 for profiles series 30	21.0945/0	Core bore needs no machining. Other installation steps like mitre connector N 45.

TIP

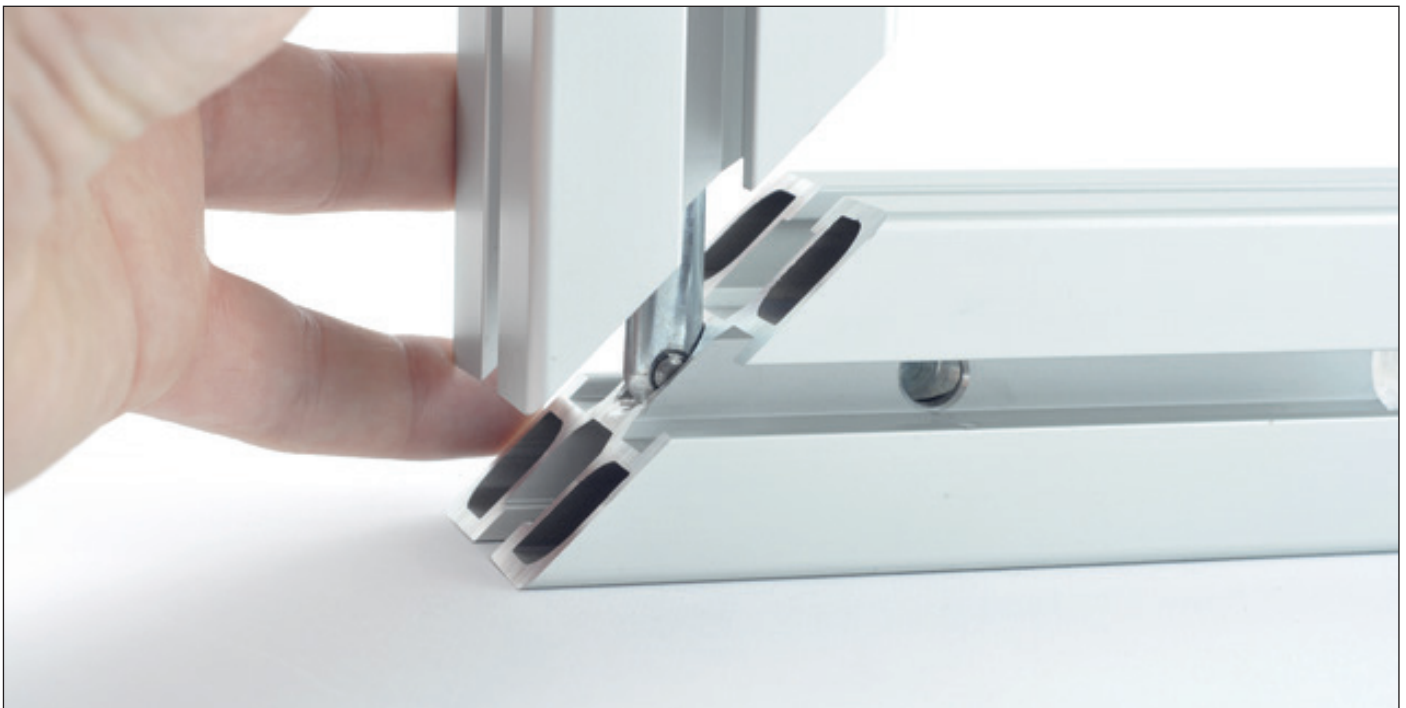
Drilling jig part no. 26.1050/0 for mitre connector 45
 Drilling jig part no. 26.1060/0 for mitre connector N45
 Drilling jig part no. 26.1063/0 for mitre connector 30
 Drilling jig part no. 26.1056/0 for mitre connector N30

Drilling jig for mitre connector 30 / 45

Distance A (position of the lateral bore of the threaded pin) for front-side connection of profiles is consistently 35 mm. The exact amount is to be taken from the middle bore core drilling of the mitred profile to the middle of the drilling. To safely exclude dimensional errors and ensure the correct junctioning of the connection, we recommend the use of our drilling jig for mitre connector 30, part no. 26.1063/0 or 45 part no. 26.1050/0.

Distances for common angles:

α	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
A(mm)	21,0	22,9	24,8	25,9	27,0	27,6	28,2	28,6	29,0	29,2	29,4	29,45	29,5



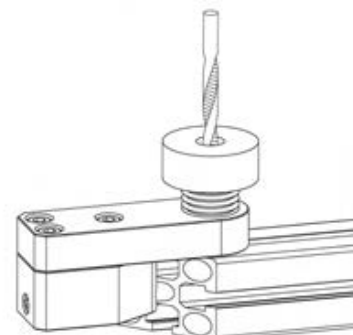
Drilling jig for mitre connector N30 / N45

Mitre connection N

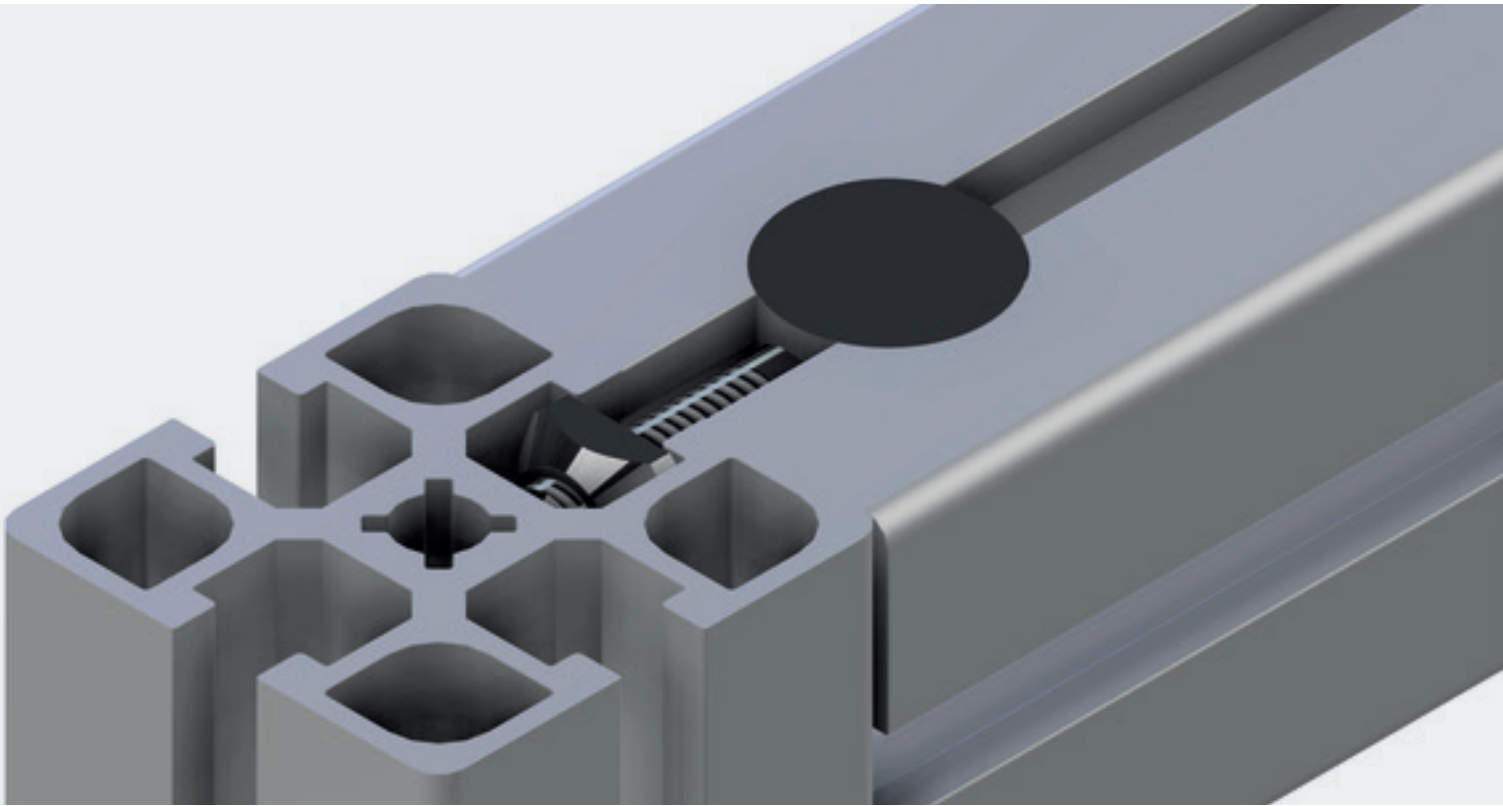
Distance A (position of the lateral bore of the threaded pin) depends on the mitre angle. The exact amount is to be taken from the middle bore core drilling of the mitred profile to the middle of the drilling. To safely exclude dimensional errors and ensure the correct functioning of the connection, we recommend the use of our drilling jig for mitre connector N30, part no. 26.1056/0 or N45 part no. 26.1060/0.

Use of MiniTec drilling jigs

Slide jig central bore of the mitred profile to the stopper. Tighten with screw. Insert into profile with bore through the drilling guide inside the fixing screw.



Bolt and butt connectors



SUBSEQUENT ASSEMBLY OF PROFILES INTO EXISTING FRAMES, EXTENSION OF PROFILES

Bolt connectors

To compensate for the lower load capacity compared to our standard connectors, bolt connectors should always be used in pairs. The weakening of the profile cross-section must be taken into account.

The correct functioning of this connection requires precise machining of the connecting bore. The distance from the end of the profile of 22.5 mm \pm 0.3 mm must be observed. Another criterion is the precise shape of the connecting bore. Deviations from the circular shape lead to a reduction in the load-bearing surface of the connector. It is therefore necessary to drill the connecting bore on a milling machine.

This connection is not suitable for constructions with air flow in the profile for pneumatic applications.

Butt connectors

The machining of the profiles corresponds to the machining of the connectors. For the profile extension we recommend the combination of steel butt connectors and clamping strips.

Application

For rectangular connection of profiles

- Subsequent mounting of profiles into existing frames
- Adjustable
- Extension of profiles

Processing

Step drilling \emptyset 7 / \emptyset 20 mm, resp. \emptyset 9 / \emptyset 15 mm, 16 mm depth: middle of the groove, 20 mm from profile end. Use drilling jig for positioning.

1. Insert hex screw M8 x 35 in bolt and - if possible - preassemble square nut into second profil.
 2. Insert bolt in step drilling and connect with square nut.
 3. Pretighten with ball-headed key SW5. Final tightening with L-key 5 A/F.
- Recommended locking torque: 15 Nm
 - Static load: 3500 N

Mounting bracket and T-slot bar

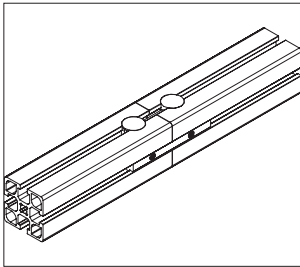
Mounting bracket 45

- Profile extension
- Connection of profiles
- Subsequent insertion of profiles into existing constructions
- Removable attachments
- Movable in groove direction

T-slot bar 90

- Profile extension
- Slide into profile groove and clamp with set screws
- No machining required
- For larger profile cross-sections or higher loads, please use several t-slot bars.
- Can be used in combination with butt connectors

Butt connector



Bolt connector



Mounting bracket



T-slot bar



Description	Part no.	Description
Bolt connector 15	21.1024/0	For profile series 32 and narrow side 19 9x15 stepped bore, 16 mm tief, 22,5 mm from the end of profile
Bolt connector 20 *	21.1021/0	For profile series 45 7x20 stepped bore, 16 mm deep, 22,5 mm from the end of profile
Butt connector 20 *	21.1020/0	For profile series 45 7x20 stepped bore, 16 mm deep, 22,5 mm from both ends of profile
T-slot bar 90	21.1029/0	For profiles with grid dimension 45 Slide into groove and fasten
Mounting bracket 45	21.1411/0	For profiles with grid dimension 45 Insert face front thread

TIP

Drilling jig part no. 26.1092/0 for correct position of the stepped bore

Screw connection

Form-locking connection secured against twisting

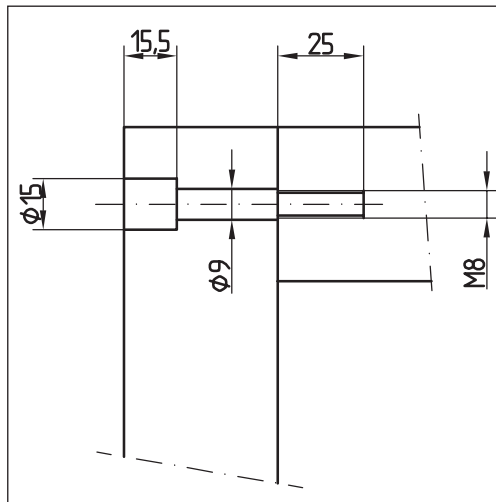
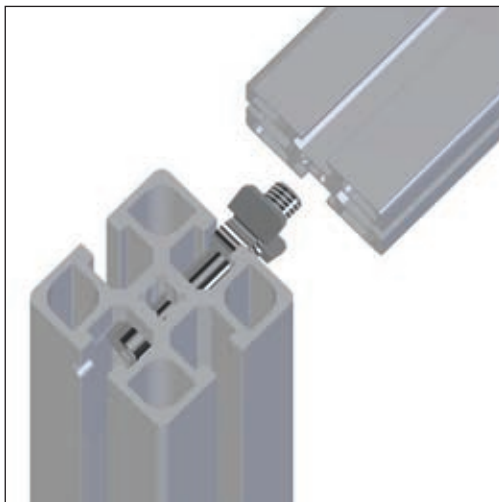
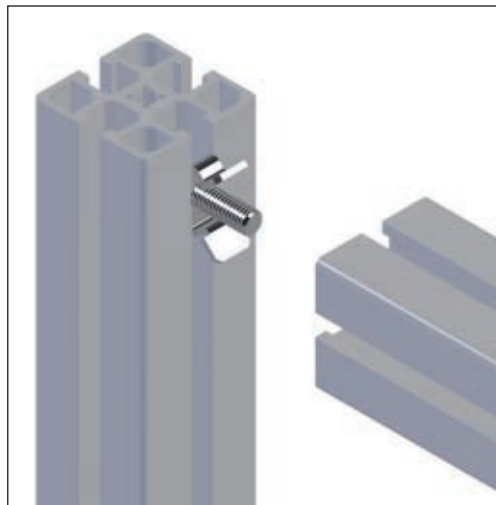
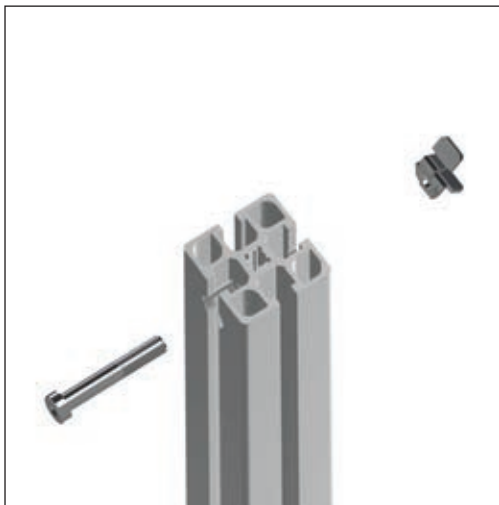


Application

- Construction with high dynamic loads

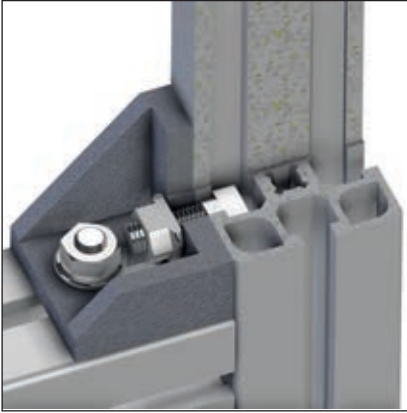
Processing

- Thread M8; step drilling $\varnothing 9 / \varnothing 15$ mm with drilling jig M8 x 50;
- Position anti-twist lock in the groove
- Push the screw through anti-twist lock
- Screw in and tighten the screw into threaded connection profile
- Recommended locking torque: 20 Nm
- Static load: 18 000 N



Mounting angles

Easy installation without processing



→ Angle aluminum die casting, powder coated, grey



→ Optional with cover



→ ESD version

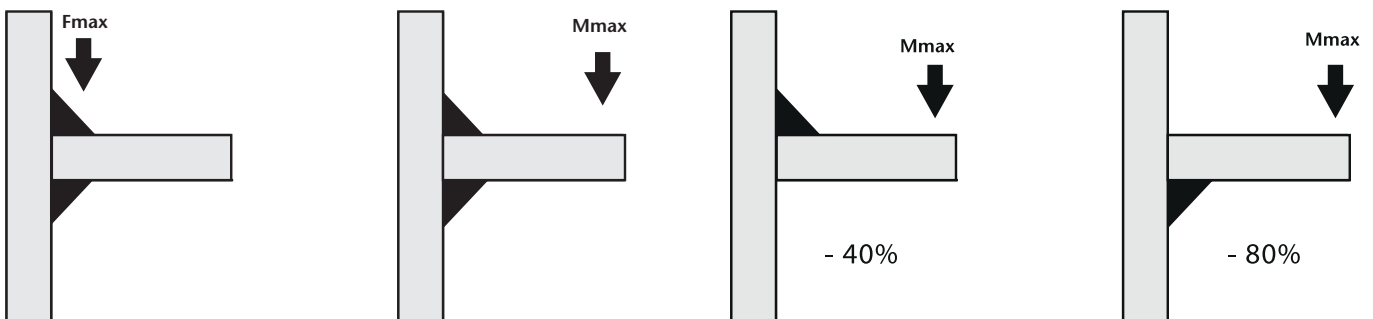
Load capacity

angle	Number of screws	Fmax (N)	Mmax (Nm)
Mounting angles 19	2	3.600	280
Mounting angle 25	2	3.600	280
Mounting angles 45	2	3.600	280
Mounting angles 45x90	4	7.200	560
Mounting angles 90	8	14.400	1.120

→ All values include double safety

- No processing
- Retrofitting of profiles possible
- Adjustable
- Caps made of oil resistant ABS, grey
- Without powder coating
- With ESD square nuts Z

These values are valid only for angles mounted in pairs if used one-sided, the load reduces as follows:



Screws

Cylinder screws

With flat head and hexagon socket



Thread	Galvanized	Stainless
M05 x 08	21.1193/0	
M05 x 10	21.1279/0	21.1279/1
M05 x 12	21.1220/0	21.1220/1
M05 x 16	21.1235/0	21.1144/1
M05 x 20	21.1222/0	
M05 x 25	21.1224/0	21.1224/1
M05 x 30	21.1237/0	21.1237/1
M05 x 35	21.2195/0	
M05 x 40	21.1284/0	21.1284/1
M05 x 45	21.1219/0	21.1219/1
M05 x 50	21.1691/0	
M05 x 55	21.1353/0	
M06 x 12	21.1143/0	21.1143/1
M06 x 14	21.1367/0	
M06 x 16	21.1238/0	21.1238/1
M06 x 18	21.1239/0	
M06 x 20	21.1240/0	21.1340/1
M06 x 22	21.1265/0	
M06 x 25	21.1242/0	21.1242/1
M06 x 30	21.1243/0	21.1243/1
M06 x 35	21.1245/0	21.1693/0
M06 x 40	21.1247/0	21.1247/1
M06 x 45	21.1172/0	
M06 x 50	21.1171/0	21.1171/1
M06 x 55	21.1248/0	21.1248/1
M06 x 60	21.1154/0	
M06 x 65	21.1868/0	
M06 x 70	21.1591/0	
M08 x 12	21.1264/0	
M08 x 16	21.1200/0	21.1200/1
M08 x 18	21.1268/0	
M08 x 20	21.1202/0	21.1202/2
M08 x 22	21.1280/0	21.2017/0
M08 x 25	21.1204/0	21.1204/1
M08 x 30	21.1206/0	21.1206/1
M08 x 35	21.1208/0	21.1208/1
M08 x 40	21.1210/0	21.1210/1
M08 x 45	21.1211/0	
M08 x 50	21.1212/0	21.1212/1
M08 x 55	21.1877/0	
M08 x 60	21.1214/0	
M08 x 65	21.1299/0	
M08 x 70	21.1282/0	
M08 x 75	21.1392/0	
M08 x 80	21.1225/0	
M08 x 90	21.1226/0	
M08 x 100	21.1662/0	

Countersunk screws

With hexagon socket



Countersunk head screws	Galvanized	Stainless
M04 x 08	21.1500/0	
M04 x 10	21.1557/0	21.2279/0
M04 x 12	21.1948/0	21.1948/1
M04 x 16	21.1501/0	21.1501/1
M04 x 20	21.1502/0	21.2447/1
M04 x 25	21.1571/0	
M04 x 30	21.1203/0	
M05 x 10	21.1532/0	
M05 x 12	21.1543/0	21.1595/0
M05 x 14	21.1519/0	
M05 x 16	21.1503/0	21.1503/1
M05 x 18	21.1537/0	
M05 x 20	21.1504/0	21.2448/1
M05 x 25	21.1505/0	21.2449/1
M05 x 30	21.1482/0	21.1482/1
M05 x 35	21.2215/0	21.2215/1
M05 x 40	21.2127/0	
M05 x 45	21.1945/0	21.1945/1
M05 x 50	21.2123/0	
M06 x 10	21.2219/0	21.2219/1
M06 x 12	21.1518/0	21.1518/1
M06 x 16	21.1506/0	21.1506/1
M06 x 20	21.1507/0	21.1507/1
M06 x 25	21.1566/0	
M06 x 30	21.1508/0	
M06 x 35	21.1509/0	
M06 x 40	21.1510/0	
M06 x 45	21.1951/0	
M06 x 50		21.2236/1
M06 x 55	21.1511/0	
M06 x 60	21.1512/0	
M06 x 65	21.2156/0	
M06 x 70	21.2134/0	
M08 x 10	21.1552/0	21.1550/0
M08 x 12	21.1263/0	
M08 x 16	21.1513/0	21.1513/1
M08 x 20	21.1514/0	21.1514/1
M08 x 25	21.1520/0	21.2451/1
M08 x 30	21.1516/0	21.2452/1
M08 x 35	21.1947/0	
M08 x 40	21.1547/0	
M08 x 45	21.1645/0	
M08 x 50	21.1517/0	21.1517/1
M08 x 55	21.1546/0	
M08 x 60	21.1523/0	
M08 x 65	21.1949/0	
M08 x 70	21.1950/0	
M08 x 90	21.1946/0	

Other standards and dimensions are available on request



Square nuts, rhombus nuts and square washers

AVAILABLE FOR M3, M4, M5, M6 AND M8

Square nuts 30 with position-fixing, ESD-conductive



Description	Galvanized	Stainless
M8	21.2343/2	-
M6	21.2342/2	-
M5	21.2341/2	-
M4	21.2340/2	-

Square nuts



Description	Galvanized	Stainless
M8	21.1351/0	21.1351/1
M6	21.1330/0	21.1330/1
M5	21.1320/0	21.1320/1
M4	21.1310/0	21.1310/1
M3	21.1309/0	21.1309/1

Square nuts with position-fixing



Description	Galvanized	Stainless
M8	21.1351/2	21.1351/4
M6	21.1330/2	21.1330/4
M5	21.1320/2	21.1320/4
M4	21.1310/2	21.1310/4
M3	21.1309/2	21.1309/4

Square nuts Z, ESD conductive



Description	Galvanized	Stainless
M8	21.1390/0	-
M6	21.1391/0	-
M5	21.1627/0	-

Square nuts Z with position-fixing, ESD conductive



Description	Galvanized	Stainless
M8	21.1390/2	-
M6	21.1391/2	-
M5	21.1627/2	-

SPECIAL SCREWS

Screws for power-lock fastener



Fillister head screw	Galvanized	Stainless
M08 x 25	21.1189/0	-
M08 x 25 SF*	21.1492/0	-
M08 x 25		21.1189/2

*self-tapping thread

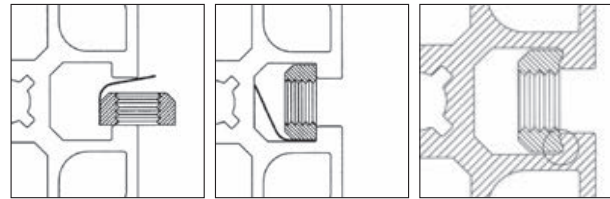
Screws for end caps VA/AL/LR



Flat head screw	Galvanized	Stainless
M08 x 10	-	21.1666/0
M06 x 10	-	21.0808/0

Square nuts can be pivoted at any point in the profile. When used in the vertical profile apply square nut with position-fixing. Can be pivoted like the standard square nut; the position-fixing holds the nut in the desired position.

Square nut Z must be used for ESD applications. Available from M5 to M8, with and without spring plate.



with position-fixing

ESD conductive

Square nuts M8 L



Description	Galvanized	Stainless
M8	21.1368/0	-

Square nuts M8 L with position-fixing



Description	Galvanized	Stainless
M8	21.1368/2	-

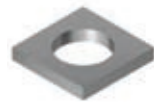
Rhombus nut F

(Thread M6 with pitch error for self-locking of the screw connection)



Description	Galvanized	Stainless
M6	21.1354/0	-

Square washers



Description	Galvanized	Stainless
Square washers 8	21.1360/0	21.1360/1
Square washers 6	21.1363/0	-
Square washers 5	21.1362/0	-

Hex nut with flange, self-locking



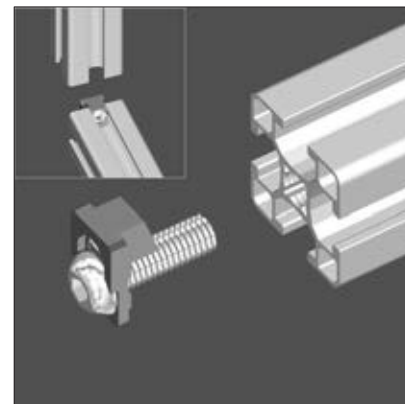
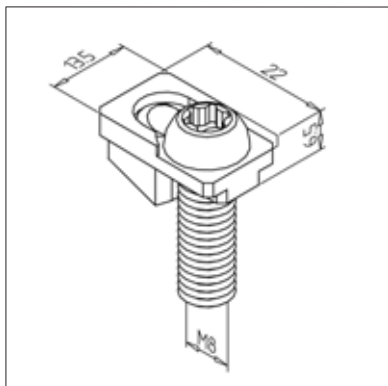
Description	Galvanized	Stainless
M8	21.1334/0	-

Screws for mounting surface elements



Flat head screw	Galvanized	Stainless
M06 x 12	21.2074/0	-
M06 x 16	21.1246/0	-
M06 x 20	21.1246/1	-

Power-lock fastener 30 SF



Part No. 21.0016/0

TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Self tapping torx screw T40
- Power-Lock fastener 30 (standard) **part no. 21.1014/0** with filister head screw A/F 5
- Power-lock fastener 30 H - stainless **Part no.. 210042/0** with button head screw SW 5
- Package size of 100 pieces in Kantainer version SF **part no. 21.0016/0100** version Standard **part no.. 21.0014/0100**
- Weight = 0.021 kg/piece

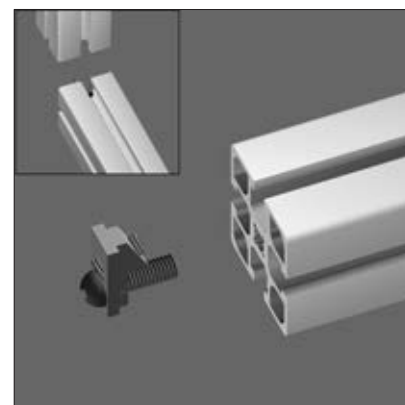
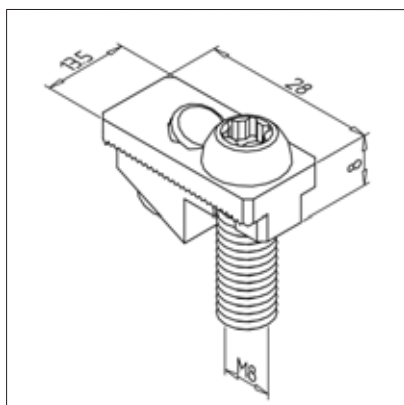
APPLICATIONS

- For force-locked connection
- Also suitable for cross joints
- Appropriate for ESD implementations

ASSEMBLY

- Fasten the connector frontally to the profile with the torx wrench T 40
- Tighten the set screw M8 with the wrench SW 4
- Recommended locking torque: 12 Nm
- For screwing in self-tapping screws for MiniTec power-lock fastener: Impulse wrench **part no. 26.0800/0**

Power-lock fastener 45 SF



Part No. 21.0818/0

TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Self tapping torx screw T40
- Power-lock fastener 45 (standard) **part no. 21.1018/0**, with filister head screw SW 5
- Power-Lock fastener 45 H - stainless version **part no. 21.1018/1**, with button head screw SW 5
- Package size of 100 pieces in Kantainer version SF **part no. 21.0818/0100** version Standard **part no. 21.1018/0100**
- Weight = 0.030 kg/piece

APPLICATIONS

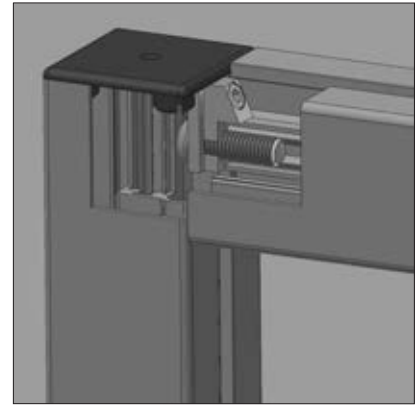
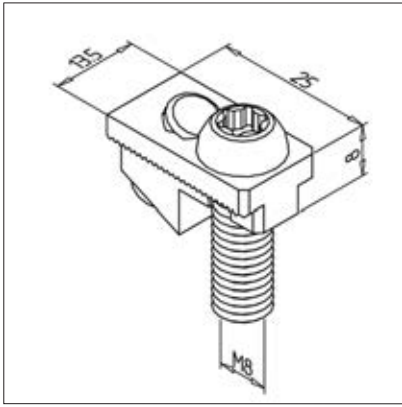
- Power-lock connection for all profiles, also suitable for crossjoints
- For larger profile sections several fasteners can be used
- Appropriate for ESD implementations

ASSEMBLY

- Fasten the connector frontally to the profile with the torx wrench T 40
- Tighten the set screw M8 with the wrench SW 4
- Recommended locking torque: 12 Nm
- For screwing in self-tapping screws for MiniTec power-lock fastener: Impulse wrench **part no. 26.0800/0**

Power-lock fastener 45 SF short

Part No. 21.0020/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Self tapping torx screw T40
- Weight = 0.028 kg/piece

APPLICATIONS

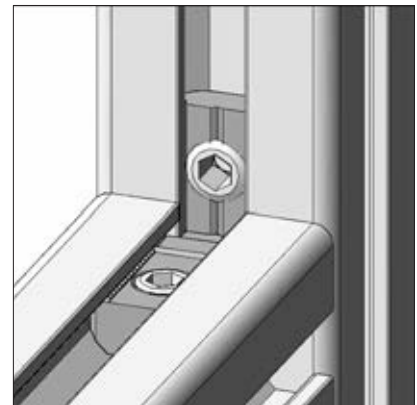
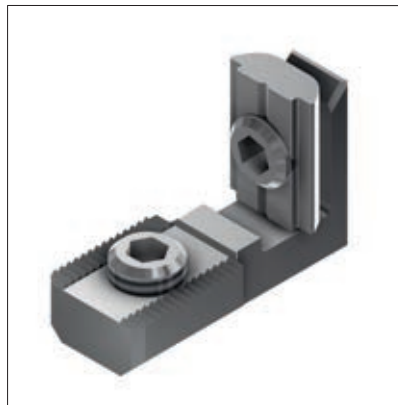
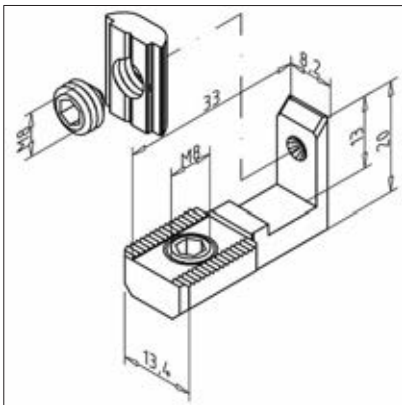
- For mounting profiles with flush cover cap
- For ESD applications of the fastener electrical conductivity of the two profiles has to be produced.

ASSEMBLY

- Fasten the connector frontally to the profile with the torx wrench T 40
- Tighten the set screw M8 with the wrench SW 4
- Recommended locking torque: 12 Nm
- For screwing in self-tapping screws for MiniTec power-lock fastener: Impulse wrench **part no. 26.0800/0**

Power-lock fastener N 30

Part No. 21.0033/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Connection element with pre-assembled threaded pin M8
- 1 Slide nut M8 with pre-assembled setscrew
- Weight = 0.025 kg/piece

APPLICATIONS

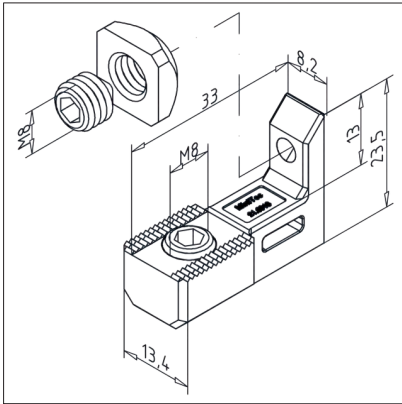
- For force-locked connection
- Especially for post-mounting of additional profiles in existing constructions

ASSEMBLY

- Position the profile with the connector
- Swing in and tighten sliding nut with threaded pin
- Tighten set screw of fastener
- Tighten both threaded pins with SW 4 and with 10 Nm torque

Power-lock fastener N 45

Part No. 21.0918/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Connection element with pre-assembled threaded pin M8
- 1 Slide nut M8 with pre-assembled setscrew
- Weight = 0.036 kg/piece

APPLICATIONS

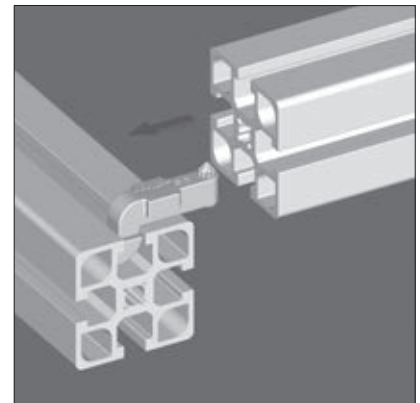
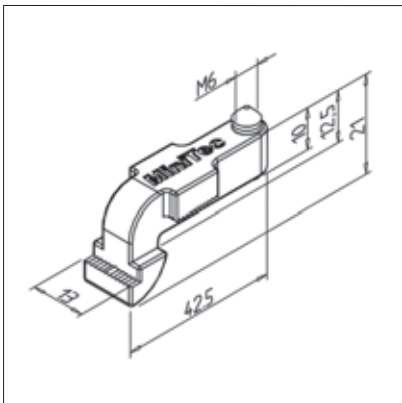
- For connecting all profiles of the profile series 45
- Especially for post-mounting of additional profiles in existing constructions
- For profile sections bigger than 45 x 45 several fasteners can be used

ASSEMBLY

- Position the profile with the connector
- Swing in and tighten sliding nut with threaded pin
- Tighten set screw of fastener
- Tighten both threaded pins with SW 4 and with 10 Nm torque

Cross-connector 45

Part No. 21.0006/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Connection element with pre-assembled threaded pin M6
- Weight = 0.035 kg/piece

APPLICATIONS

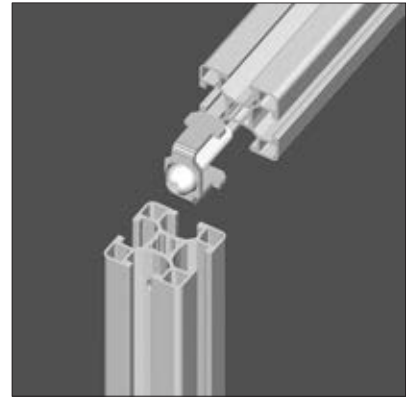
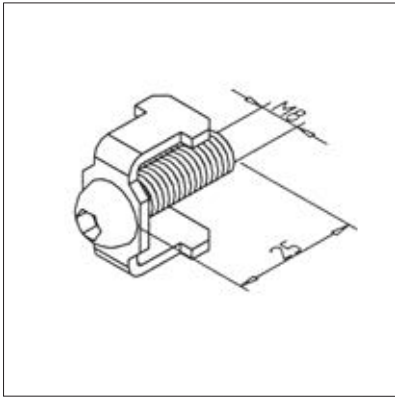
- For connecting all profiles of the profile series 45
- Especially for retrofitting profiles into existing constructions
- Appropriate for ESD implementations

ASSEMBLY

- Swing the connector into the existing frame
- Push the new profile over the connector
- Tighten set screw in connector with wrench size 3 to 10 Nm torque

Screw connection 30 N

Part No. 21.1385/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Anti-twist lock with cylinder-head screw
- Weight = 0.017 kg/piece

APPLICATIONS

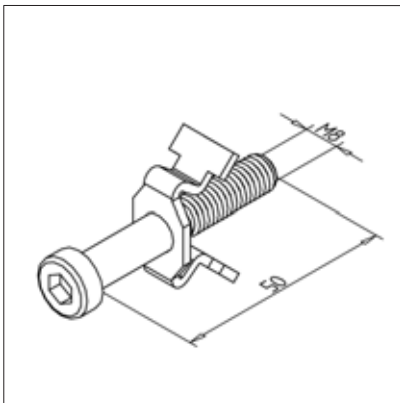
- Connection of profiles

ASSEMBLY

- Bring in the Thread M8 x 25 in the centre borehole of the profile
- Insert bore \varnothing 7 mm in profile 2
- Install screw and anti-rotation lock on profile 1 and insert in groove of profile 2
- Pull through hole \varnothing 7 mm with Allen wrench
- Recommended locking torque: 20 Nm
- The bore \varnothing 7 mm can be closed with plug 7 part no. 22.1215/1, should be used with our closed t-slot profiles

Screw connection 45

Part No. 21.1017/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Anti-twist lock with cylinder-head screw
- Weight = 0.027 kg/piece

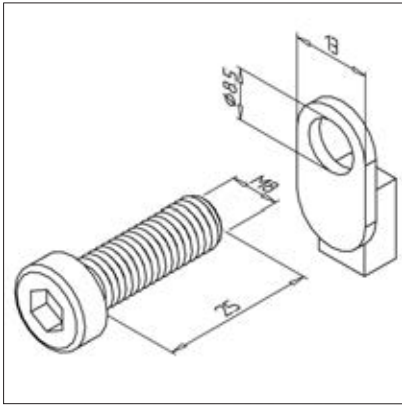
APPLICATIONS

- Effective against slipping
- Secured connection of all profiles

ASSEMBLY

- Insert the threaded screw M8 x 25 into the central bore of profile
- Insert the stepped bore \varnothing 9 x 15 into profile 2
- Insert the anti-twist lock
- Insert the screw through the anti-rotation lock into the tapped hole in profile 2, tighten
- Recommended locking torque: 20 Nm

Screw connection 32



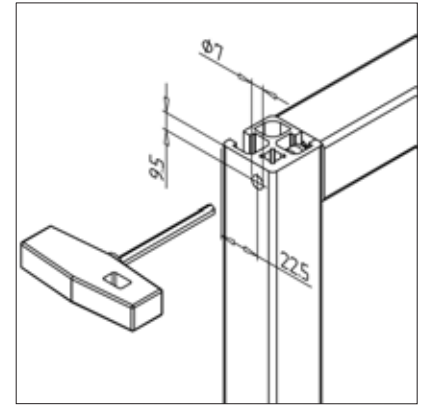
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting
- Hex socket cap screw M8 x 25
- Weight = 0.015 kg/piece



APPLICATIONS

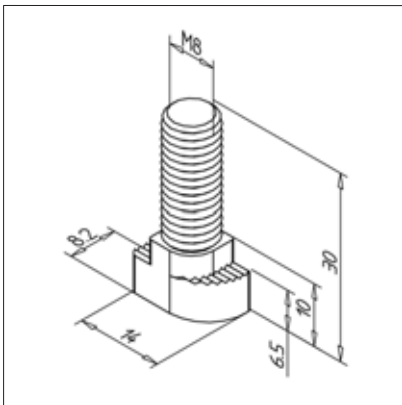
- Effective non-rotating connection for 32mm and 19mm profiles



ASSEMBLY

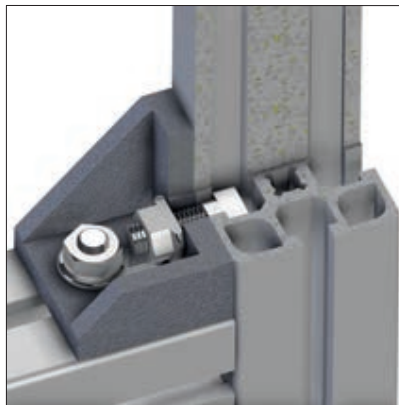
- Insert the threaded screw M8 x 25 into the central bore of profile
- Insert bore Ø 7 mm in profile 2
- Fasten the screw to the profile 1 with the anti-twist lock and insert it into profile 2
- Tighten the screw to 20 Nm
- The bore Ø 7 mm can be closed with plug 7 **part no. 22.1215/1**, should be used with our closed t-slot profiles

T-head bolt



TECHN. DATA / ITEMS SUPPLIED

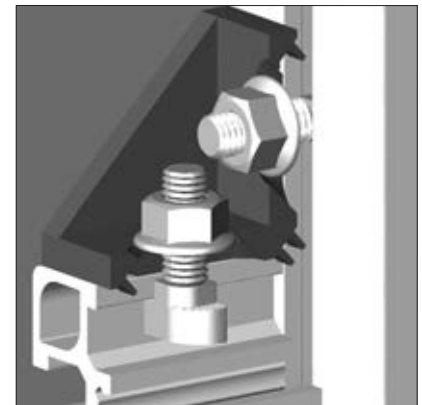
- Steel, galvanized
- Thread (d) : M 8
- Length (l) : 23.5 mm
- Weight = 0.013 kg/piece



APPLICATIONS

- Simple attachment of add-on parts or accessories on profiles
- Attachment of mounting angle: 45 x 90 GD-Z **part no. 21.1397/0**, 45 GD **part no. 21.1133/0**, 45 GD-Z **part no. 21.1349/0**, 90 GD-Z **partno. 21.0978/0**

Part No. 21.1370/0

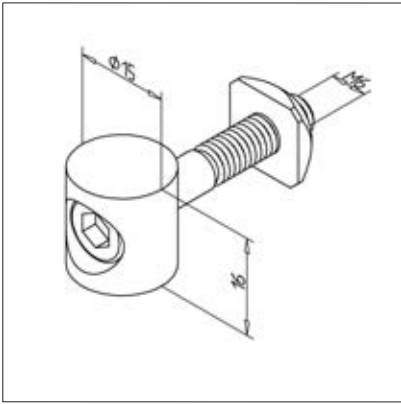


ASSEMBLY

- Insert the hammer screw in the profile groove, screw on nut M8
- When tightening the nut, the hammer head will turn crosswise
- **Recommended nut:** Hexagon nut self-locking with flange **part no. 21.1334/0**

Bolt connector 15

Part No. 21.1024/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.032 kg/piece

APPLICATIONS

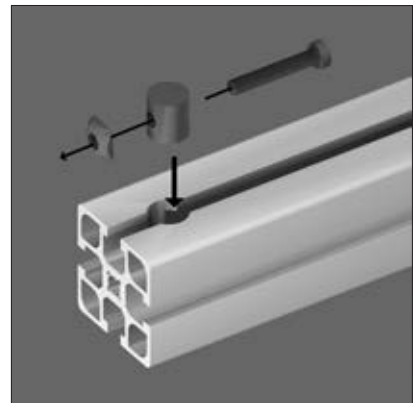
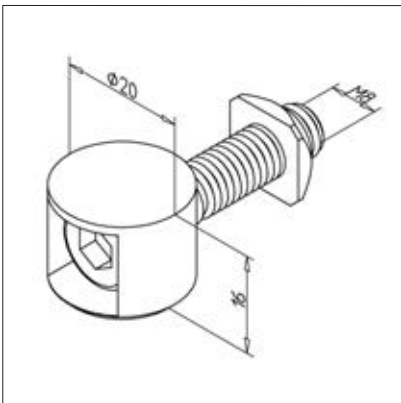
- Connection of profiles 19 and 32
- Especially for post-mounting of additional profiles in existing constructions

ASSEMBLY

- Insert the stepped bore $\varnothing 9 \times 16$ mm deep, positioned 22.5 mm from the end of the profile to the center of the groove
- Insert the connector and pre-tighten the screw with the ball head wrench SW 4
- Fastening with Allen wrench
- Recommended locking torque: 15 Nm

Bolt connector 20

Part No. 21.1021/0



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, galvanized
- With fastening material steel, zinc plated
- Weight = 0.036 kg/piece

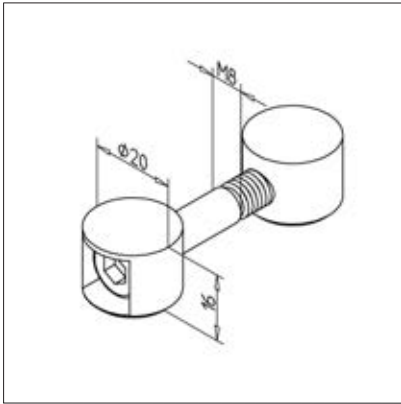
APPLICATIONS

- For connecting all profiles of the profile series 45
- Especially for post-mounting of additional profiles in existing constructions
- For connection of profile 45 x 19

ASSEMBLY

- Insert the stepped bore $\varnothing 7 \times 20$, 16 mm deep, positioned 22.5 mm from the end of the profile to the center of the groove
- Insert the connector and pre-tighten the screw with the ball head wrench SW 5
- Fastening with Allen wrench
- Recommended locking torque: 15 Nm

Butt connector 20



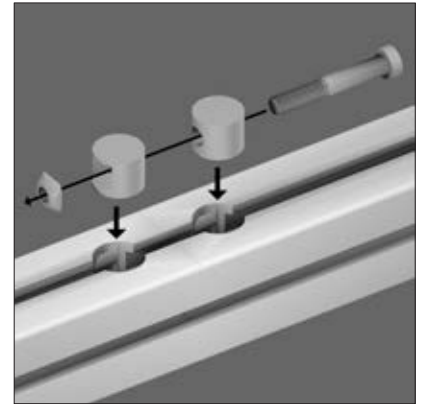
TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, galvanized
- With fastening material steel, zinc plated
- Weight = 0.056 kg/piece



APPLICATIONS

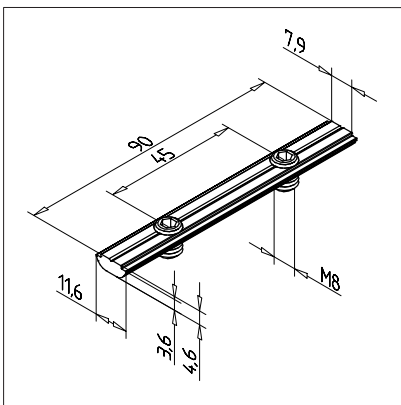
- Profile extension
- Butt connectors



ASSEMBLY

- Insert the stepped bore $\varnothing 7 \times 20$, 16 mm deep, positioned 22.5 mm from the end of the profile to the center of the groove
- Insert the connector and pre-tighten the screw with the ball head wrench SW 5
- Fastening with Allen wrench
- Recommended locking torque: 15 Nm
- In addition, another T-slot bar can be inserted in another unused profile groove. This achieves more accurate positioning of the profiles relative to each other

T-slot bar 30 - 90



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 2 set screws M8, with hexagonal socket SW 4
- Weight = 0.033 kg/piece



APPLICATIONS

- Profile extensions for profiles of profile series 30
- For fastening components to profiles
- After loosening the grub screws, the bar is easily movable

Part No. 21.0043/0

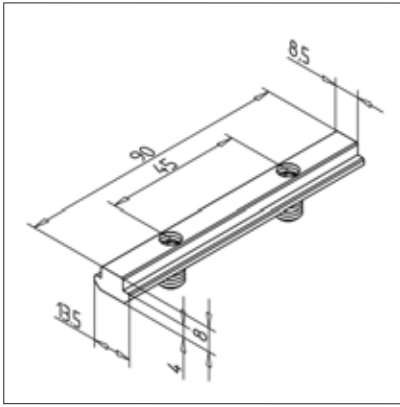


ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required
- In combination with longer setscrews, can also be used on series 45 profiles

T-slot bar 90

Part No. 21.1029/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 2 set screws M8, with hexagonal socket SW 4
- Stainless version **part no. 21.0992/0**
- Weight = 0.062 kg/piece

APPLICATIONS

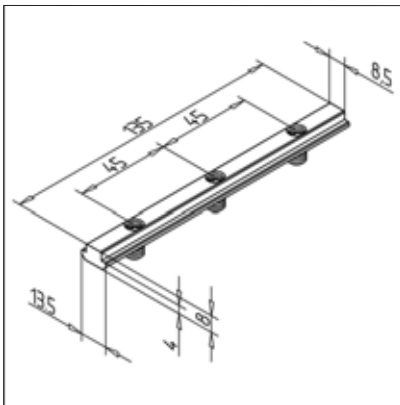
- Profile extension
- Fastening of roller elements in slide LW

ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required
- For larger profile cross sections or higher loads, several clamping strips must be used
- By fixing the setscrews, the T-slot bar fits tight in the area of the groove sides

T-slot bar 135

Part No. 21.0988/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 3 set screws M8, with hexagonal socket SW4
- Stainless version **part no. 21.0987/0**
- Weight = 0.094 kg/piece

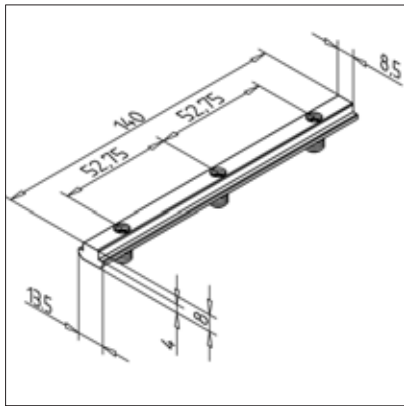
APPLICATIONS

- Profile extension
- Fastening of roller elements in slide LW

ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required
- For larger profile cross sections or higher loads, several clamping strips must be used
- By fixing the setscrews, the T-slot bar fits tight in the area of the groove sides

T-slot bar 140



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 3 set screws M8, with hexagonal socket SW4
- Stainless version **part no. 28.0030/0**
- Weight = 0.096 kg/piece



APPLICATIONS

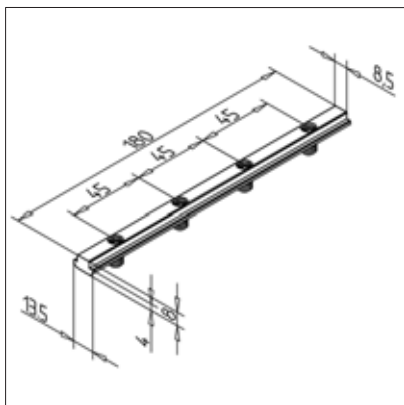
- Profile extension
- Fastening of roller elements in slide LW
- Fastening of pulleys in linear slide LW 32 E



ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required
- For larger profile cross sections or higher loads, several clamping strips must be used
- By fixing the setscrews, the T-slot bar fits tight in the area of the groove sides

T-slot bar 180



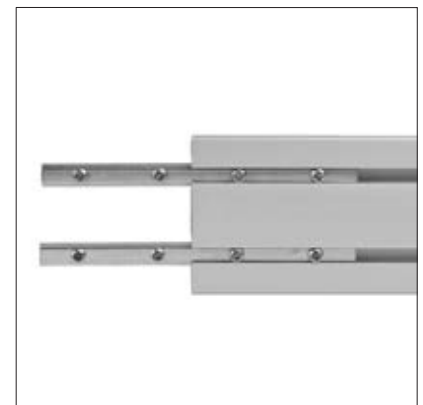
TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 4 set screws M8, with hexagon socket SW4
- Stainless version **part no. 21.0986/0**
- Weight = 0.125 kg/piece



APPLICATIONS

- Front side connection at joining line
- Profile extension
- Fastening of roller elements in slide LW



ASSEMBLY

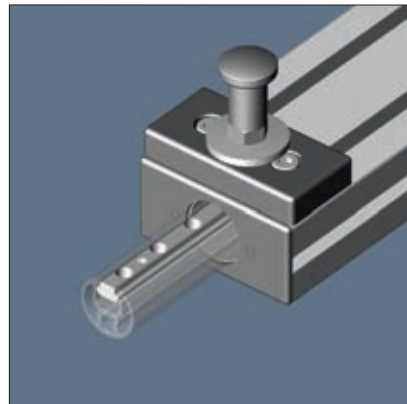
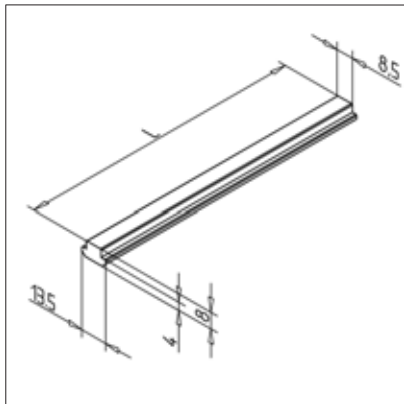
- Swing into profile groove
- Clamp with set screw
- No machining required
- For larger profile cross sections or higher loads, several clamping strips must be used
- By fixing the setscrews, the T-slot bar fits tight in the area of the groove sides

Part No. 28.0026/0

Part No. 21.1101/0

T-slot bar profile

Part No. 21.1030/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, bright
- Stainless version **part no. 21.1030/1**
- Weight = 0.650 kg/m
- Bar length = 6 m

APPLICATIONS

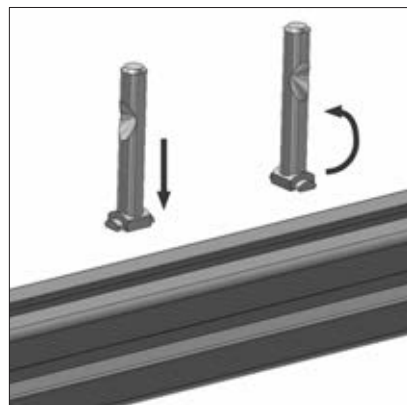
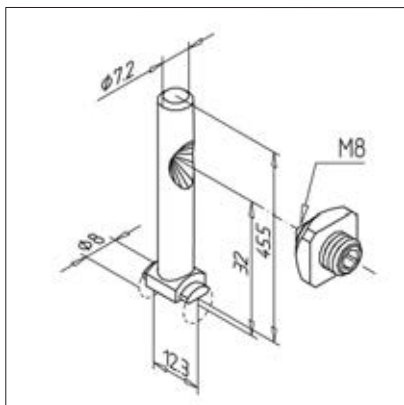
- Manufacture of terminal blocks, connecting elements in special lengths
- Production of reinforcements
- Ledges with special perforation

ASSEMBLY

- Swing into profile groove

Mitre connector N 30

Part No. 21.0945/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.023 kg/piece

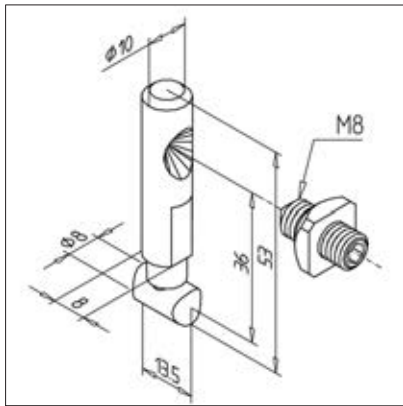
APPLICATIONS

- Mitre connection of profiles on profile groove
- For subsequent fitting in the groove

ASSEMBLY

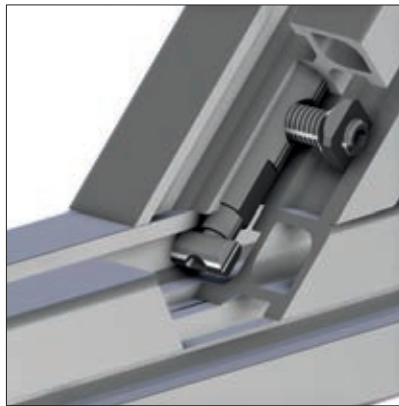
- Insert into groove and central bore
- Use a drilling jig for mitre connector N30 **part no. 26.1056/0**

Mitre connector N 45



TECHN. DATA / ITEMS SUPPLIED

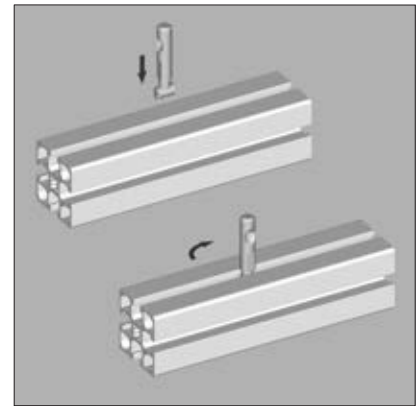
- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.035 kg/piece



APPLICATIONS

- Mitre connection of profiles on profile groove
- For subsequent fitting in the groove

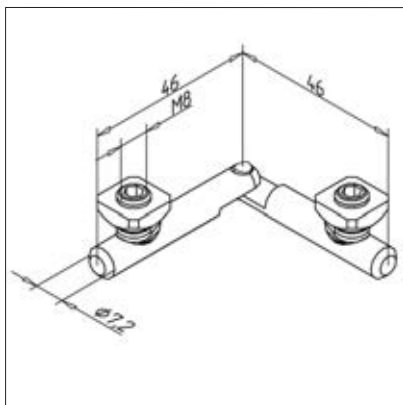
Part No. 21.1401/0



ASSEMBLY

- Drill profile bore of $\varnothing 10.2$ mm
- Use a drilling jig for mitre-connector N45 **part no. 26.1060/0**

Mitre connector 30



TECHN. DATA / ITEMS SUPPLIED

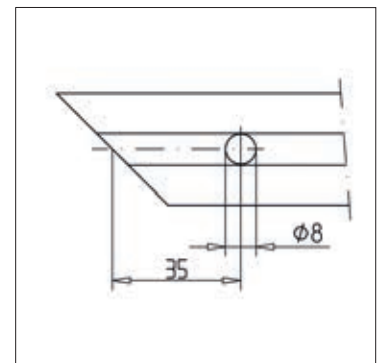
- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.040 kg/piece



APPLICATIONS

- Display windows, showcases
- Store equipment
- Displays
- Frames

Part No. 21.1890/0

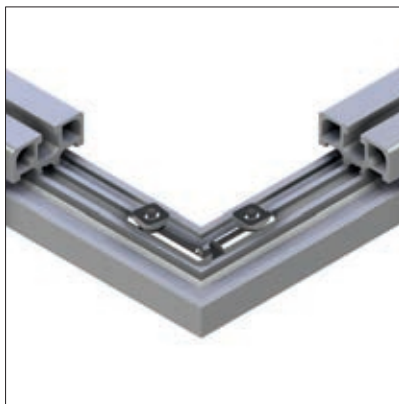
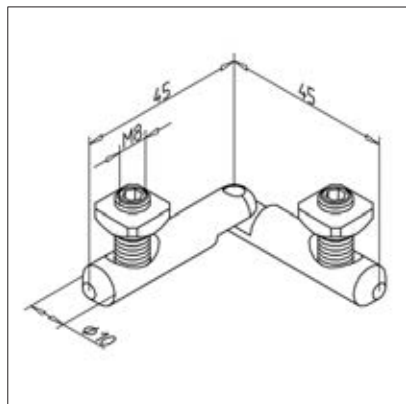


ASSEMBLY

- Insert the miter connector 30 into both profile ends
- Position the sliding nuts M8 above the bores and screw in the threaded pin. Attach the connector with the threaded pin M8
- Drilling jig **part no. 26.1063/0**

Mitre connector 45

Part No. 21.1400/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.065 kg/piece

APPLICATIONS

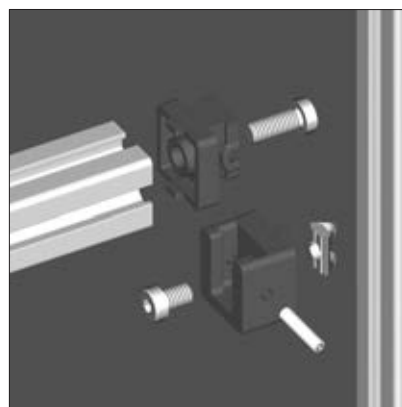
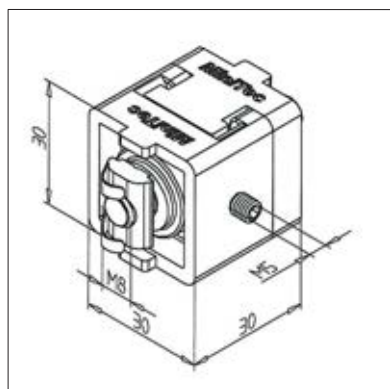
- Display windows, showcases
- Store equipment
- Displays
- Frames

ASSEMBLY

- Insert the mitre connector into both profile ends
- Position the sliding nuts M8 above the bores and screw in the threaded pin. Attach the connector with the threaded pin M8
- Use a drilling jig for mitre-connector 45 part no. 26.1050/0

Mounting bracket 30

Part No. 21.2068/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- With fastening material steel, zinc plated
- Weight = 0.041 kg/piece

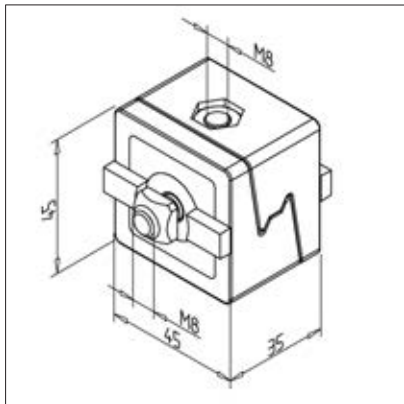
APPLICATIONS

- Connection of profiles
- Profile extension
- Subsequent insertion of profiles into existing constructions, displaceable in groove direction
- Removable attachments

ASSEMBLY

- Fasten to profiles with supplied hardware
- Insert cross-tie profile into T-slot
- For adjustment use set screw M5

Mounting bracket 45



TECHN. DATA / ITEMS SUPPLIED

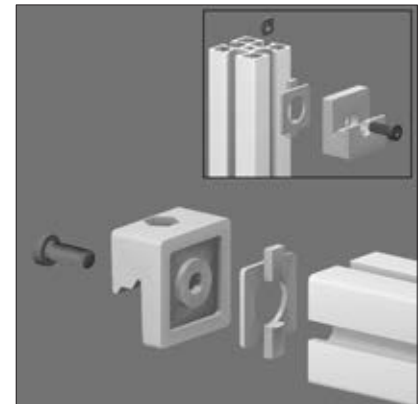
- Zinc, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.429 kg/piece



APPLICATIONS

- Connection of profiles
- Profile extension
- Subsequent insertion of profiles into existing constructions
- Attaching bearing surfaces
- Removable attachments
- Slidable in the groove direction

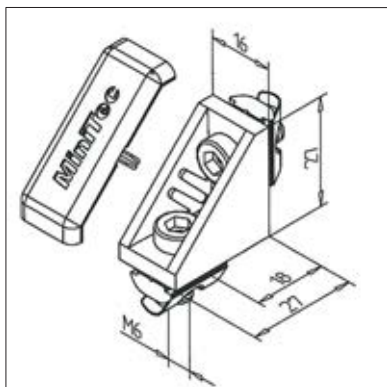
Part No. 21.1411/0



ASSEMBLY

- Fasten to profile groove with supplied hardware
- When retrofitting on a vertical groove, preferably use square nut M8 with position fixing, **part no. 21.1351/2**
- Recommended locking torque: 20 Nm

Mounting angle 16 GD-Z



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Removable centering tabs
- **Conductive version part no. 21.2077/6**
- Weight = 0.021 kg/piece



APPLICATIONS

- Construction from profiles with width of 16 and 23; specifically suitable for the subsequent mounting of elements in existent constructions
- Fastening of surface elements, table tops
- Reinforcement of constructions made from profile series 16 or 23

Part No. 21.2077/0

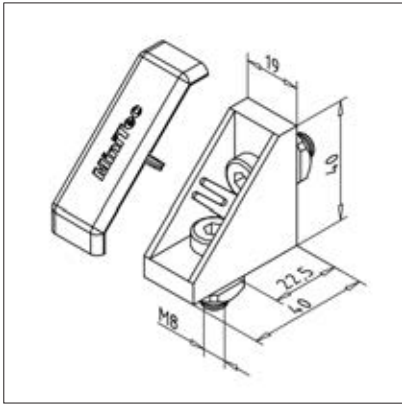


ASSEMBLY

- Fasten to profile groove with supplied hardware
- Recommended torque: 8 Nm
- Fitting end cap MW 16 GD-Z grey, **part no. 22.1138/1**

Mounting angle 19 GD-Z

Part No. 21.2078/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Package size of 50 pieces **part no. 21.2078/050**
- **Conductive version part no. 21.2078/6**
- For use on vertical struts, mounting angle **part no. 21.2078/7** (square nuts with position-fixing)
- Weight = 0.055 kg/piece

APPLICATIONS

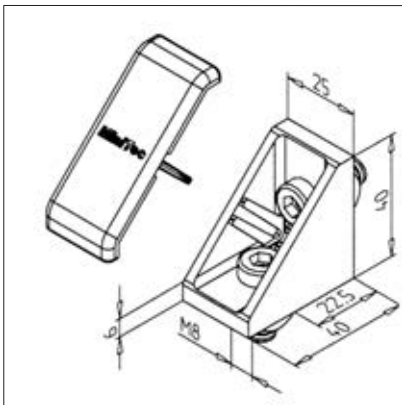
- Connection of profiles 19 and 32
- Subsequent insertion of profiles into existing constructions
- Attaching bearing surfaces
- Slidable in the groove direction

ASSEMBLY

- Fasten to profile groove with supplied hardware
- Fitting end cap MW 19 GD-Z, grey, **part no. 22.1139/1**
- Recommended locking torque: 20 Nm

Mounting angle 25 GD-Z

Part No. 21.0969/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Removable centering tabs
- Package size of 50 pieces **part no. 21.0969/050**
- **Conductive version part no. 21.0969/6**
- for use on vertical struts, mounting angle **part no. 21.0969/7** (square nuts with position-fixing)
- Weight = 0.066 kg/piece

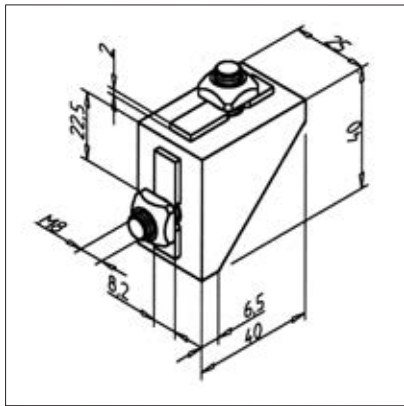
APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

ASSEMBLY

- Fasten to profile groove with supplied hardware
- If non-aligning grooves, break centering tabs with pliers
- Fitting end cap MW 25 GD-Z, **part no. 22.0997/1**
- Recommended locking torque: 20 Nm

Mounting angle 25 S



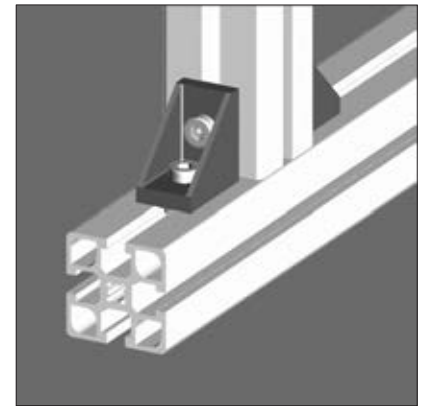
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- With ridge as anti-twist device
- **Conductive version part no. 21.1134/6**
- For use on vertical struts, mounting angle **part no. 21.1134/7** (square nuts with position-fixing)
- Weight = 0.067 kg/piece



APPLICATIONS

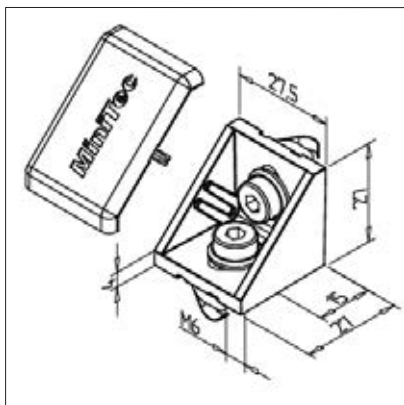
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Strengthening of profile constructions



ASSEMBLY

- Fasten to profile groove with supplied hardware
- Recommended locking torque: 20 Nm

Mounting angle 30 GD-Z



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Removable centering tabs
- Package size of 50 pieces **part no. 21.0905/050**
- **Conductive version part no. 21.0905/6**
- Weight = 0.029 kg/piece
- Bar length = 0.3 m



APPLICATIONS

- All types of constructions; specifically suited for the subsequent mounting of elements in existing constructions
- Fastening of surface elements, table tops



ASSEMBLY

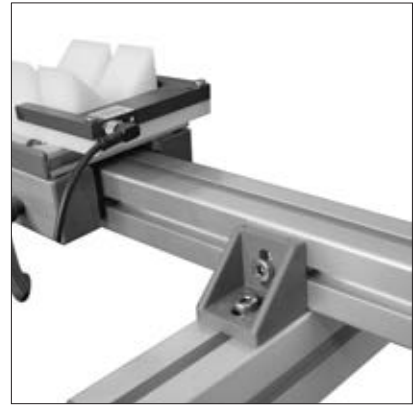
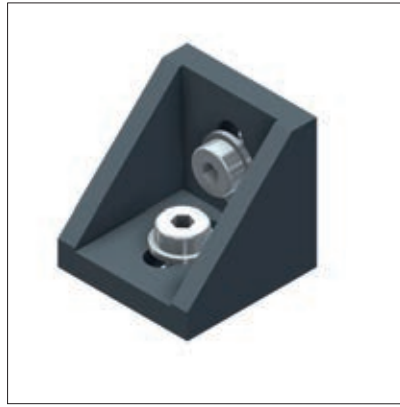
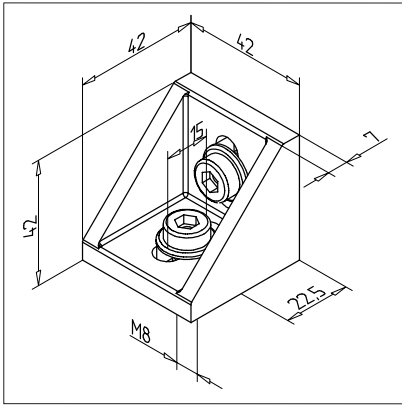
- Strengthening of profile constructions
- Fasten to profile groove with supplied hardware
- Recommended torque: 8 Nm
- Fitting end cap MW 30 grey, **part no. 22.0989/1**

Part No. 21.1134/0

Part No. 21.0905/0

Mounting angle 45 GD

Part No. 21.1133/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Package size of 50 pieces **part no. 21.1133/050**
- Conductive version **part no. 21.1133/6**
- For use on vertical struts, mounting angle **part no. 21.1133/7** (square nuts with position-fixing)
- Weight = 0.114 kg/piece

APPLICATIONS

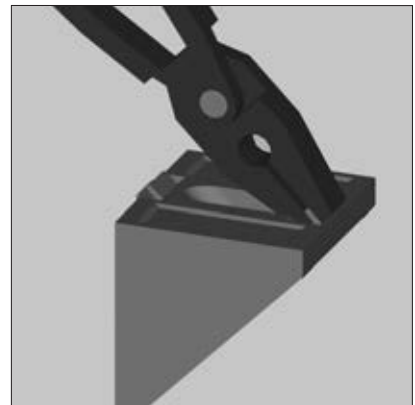
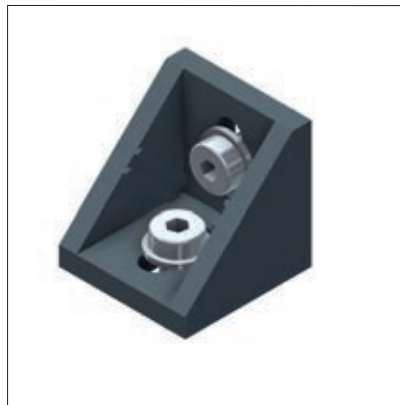
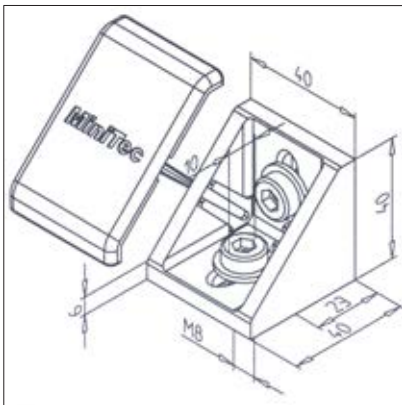
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

ASSEMBLY

- Fasten to profile groove with supplied hardware
- Hammer head screw **part no. 21.1370/0** can be used
- Recommended locking torque: 20 Nm

Mounting angle 45 GD-Z

Part No. 21.1349/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Removable centering tabs
- Package size of 50 pieces **part no. 21.1339/050**
- For use on vertical struts, mounting angle **part no. 21.1349/7** (square nuts with position-fixing)
- Package size of 50 pieces **part no. 21.1349/750**
- Conductive version **part no. 21.1349/8**
- Weight = 0.086 kg/piece

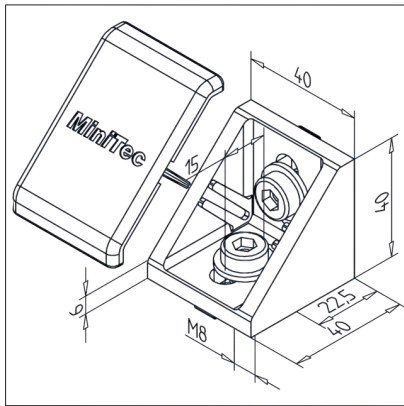
APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

ASSEMBLY

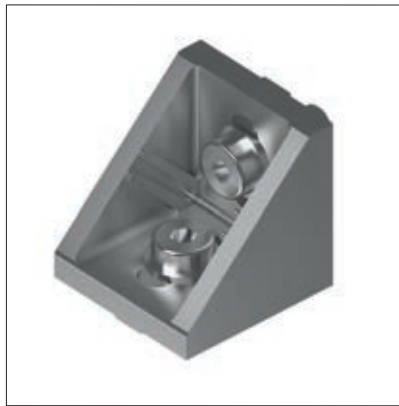
- Fasten to profile groove with supplied hardware
- If non-aligning grooves, break centering tabs with pliers
- Hammer head screw **part no. 21.1370/0** can be used
- Fitting end cap MW 45 GD-Z, **part no. 22.1024/1**
- Recommended locking torque: 20 Nm

Mounting angle 45 VA-Z



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- With fixing material, stainless steel
- for use on vertical struts, mounting angle
Part no. 21.0045/7 (square nuts with position-fixing)
- Weight = 0.204 kg/piece



APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Strengthening of profile constructions

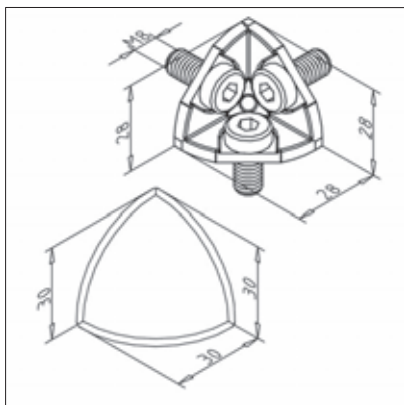


21.0045/0

ASSEMBLY

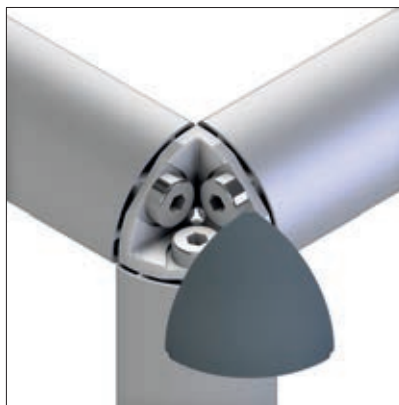
- Fasten to profile groove with supplied hardware
- Recommended locking torque: 20 Nm
- Fitting end cap MW 45 GD-Z, **part no. 22.1024/1**

Mounting angle 30 R 90°



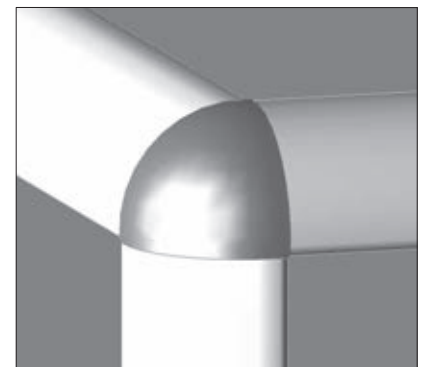
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- End cap MW 30 R 90° **part no. 22.1143/1**
- Weight = 0.043 kg/piece



APPLICATIONS

- Corner fastening of profiles 30 R 90°
- Constructions for show cases, tables etc.



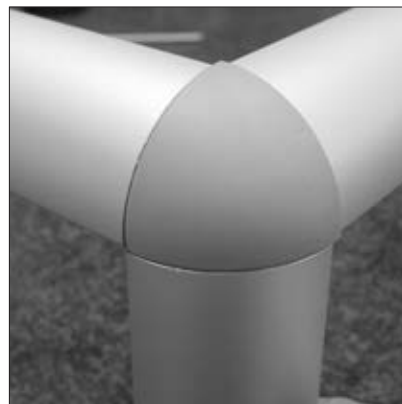
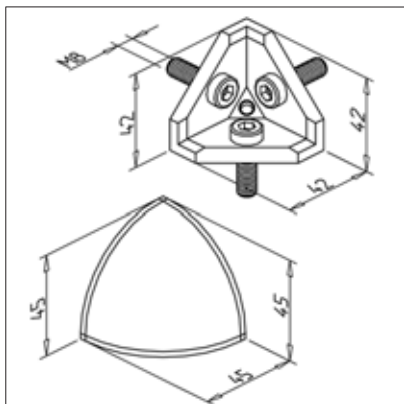
Part No. 21.2109/0

ASSEMBLY

- In the central bore of the profile with supplied hardware
- Clip the end cap

Mounting angle 45 R 90°

Part No. 21.1710/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- End cap MW 45 R 90° **part no. 22.1033/1**
- Weight = 0.098 kg/piece

APPLICATIONS

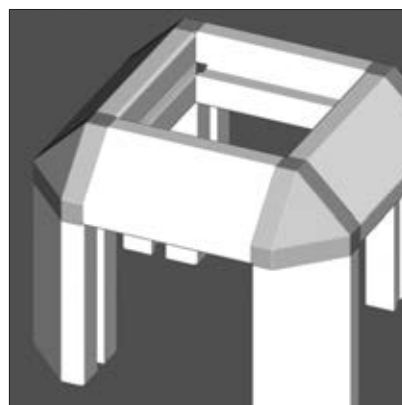
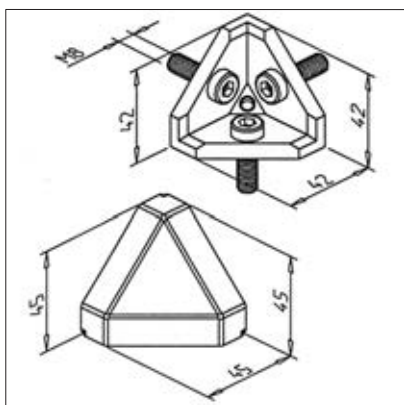
- Corner fastening of profiles 45 R 90°
- Constructions for show cases, tables etc.

ASSEMBLY

- In the central bore of the profile with supplied hardware
- Clip the end cap

Mounting angle 45°

Part No. 21.1708/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- End cap 45°/3, grey **part no. 22.1027/1**
- Weight = 0.107 kg/piece

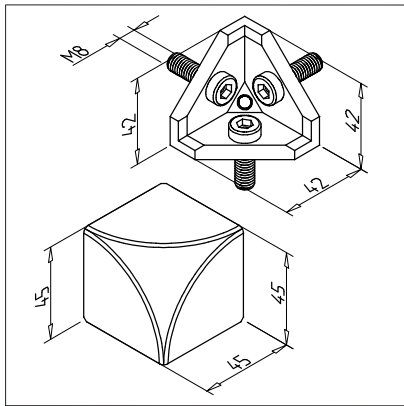
APPLICATIONS

- Corner fastening of profiles 45 / 45°
- Constructions for show cases, tables etc.

ASSEMBLY

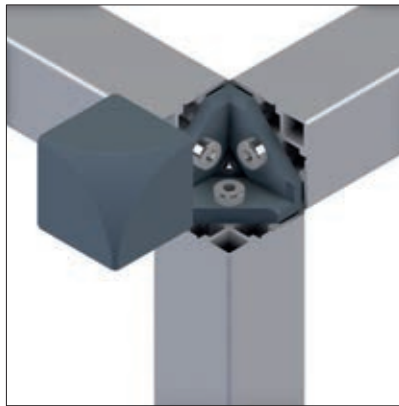
- In the central bore of the profile with supplied hardware
- Clip the end cap

Mounting angle 45 G



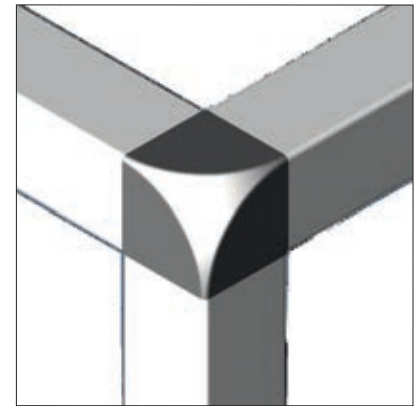
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright, grey
- With fastening material steel, zinc plated
- End cap MW 45/45/45 grey **part no. 22.1177/1**
- Weight = 0.121 kg/piece



APPLICATIONS

- Constructions for show cases, tables etc.
- Connection of profiles 45x45, preferably G-profile

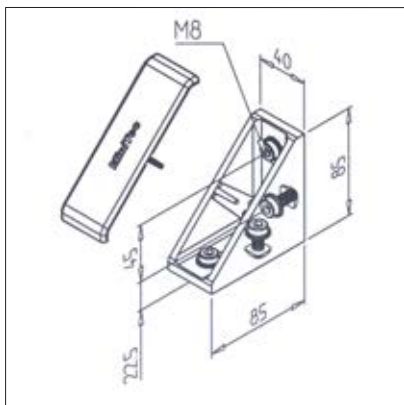


ASSEMBLY

- Fasten to central profile bore with fixation material from delivery scope
- Clip the end cap

Part No. 21.2503/1

Mounting angle 45 X 90 GD-Z



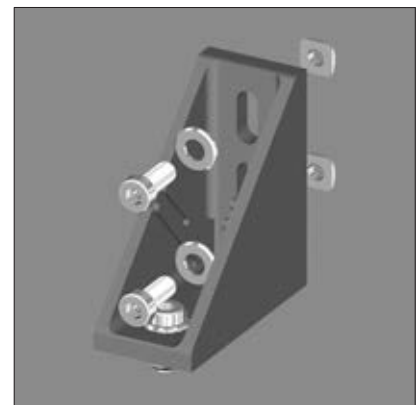
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Package size of 25 pieces **part no. 21.1397/025**
- Conductive version part no. 21.1397/6**
- For use on vertical struts, mounting angle **part no. 21.1397/7** (square nuts with position-fixing)
- Weight = 0.281 kg/piece



APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions



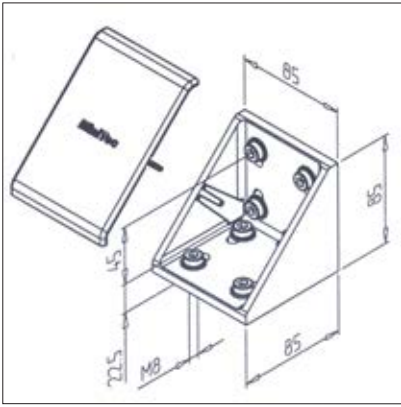
ASSEMBLY

- Fasten to profile groove with supplied hardware
- Hammer head screw **part no. 21.1370/0** can be used
- Fitting end cap MW 45 x90 GD-Z, **part no. 22.0998/1**
- Recommended locking torque: 20 Nm

Part No. 21.1397/0

Mounting angle 90 GD-Z

Part No. 21.0978/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Package size of 25 pieces **part no. 21.0978/025**
- **Conductive version part no. 21.0978/6**
- For use on vertical struts, mounting angle **part no. 21.0978/7** (square nuts with position-fixing)
- Weight = 0.497 kg/piece

APPLICATIONS

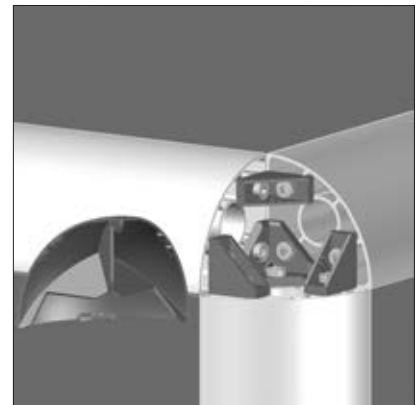
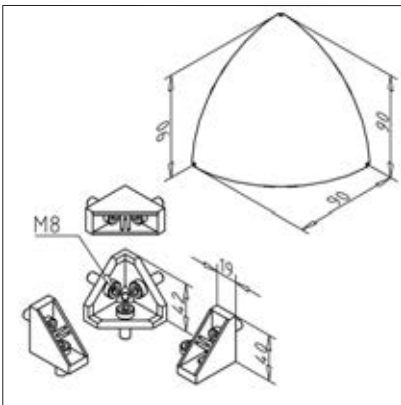
- For profiles 90 and 180
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Strengthening of profile constructions

ASSEMBLY

- Fasten to profile groove with supplied hardware
- Hammer head screw **part no. 21.1370/0** can be used
- End cap MW 90 GD-Z **part-No. 22.0999/1**
- Recommended locking torque: 20 Nm

Corner connection 90 R 90°

Part No. 21.2199/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- 1x end cap MW 90 R 90°, grey **part no. 22.0980/1**
- 1x mounting angle 45°, **part no. 21.1708/2**
- 3x mounting angle 19 GD-Z, **part no. 21.2078/0**
- Weight = 0.267 kg/piece

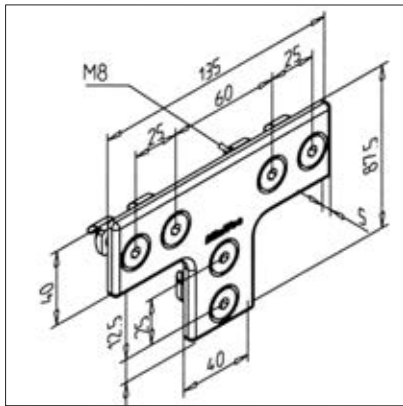
APPLICATIONS

- Corner connections of profiles 90 R 90°
- Constructions for show cases, tables etc.

ASSEMBLY

- Fasten to central profile bore with fixation material from delivery scope
- Clip the end cap

T-sheet stainless



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel, blasted
- With fixing material, stainless steel
- Weight = 0.259 kg/piece



APPLICATIONS

- Strengthening of profile constructions

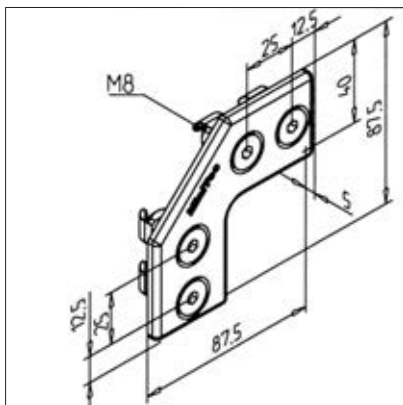


ASSEMBLY

- Attach to the profile with supplied hardware
- Use power-lock fasteners if tractive forces appear

Part No. 21.0019/0

Angle sheet stainless



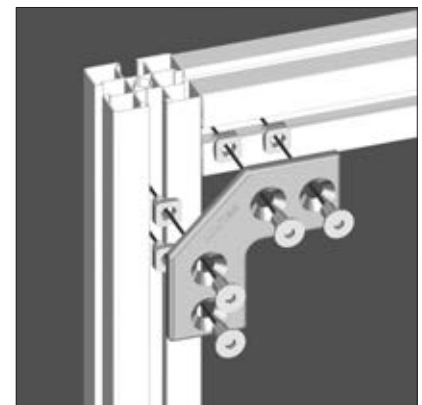
TECHN. DATA / ITEMS SUPPLIED

- Stainless steel, blasted
- With fixing material, stainless steel
- Weight = 0.163 kg/piece



APPLICATIONS

- Strengthening of profile constructions
- Also suitable for cross joints (double application)



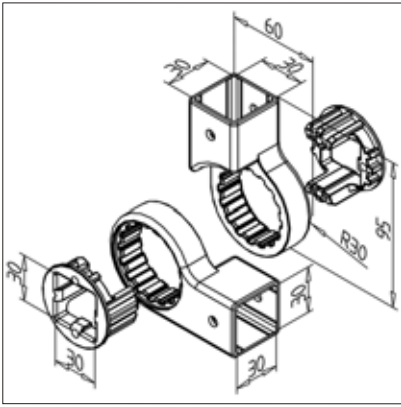
ASSEMBLY

- Attach to the profile with supplied hardware
- Use power-lock fasteners if tractive forces appear

Part No. 21.0018/0

Multi connector 30

Part No. 22.1140/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- With fastening material steel, zinc plated
- Weight = 0.135 kg/piece

APPLICATIONS

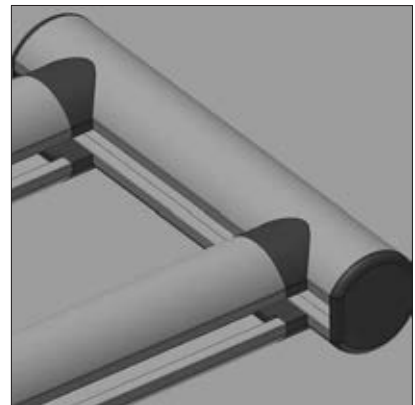
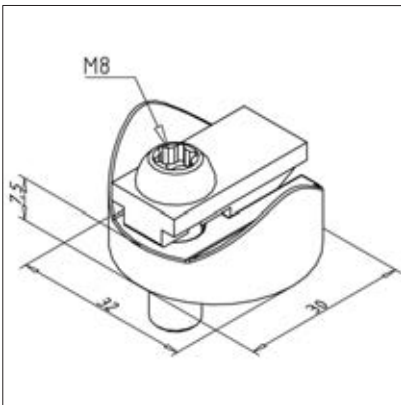
- Easy connection for profiles
- Angle adjustable in 22,5° raster

ASSEMBLY

- Fix swivel arm front to profile
- Insert socket from the side
- Insert other profile into socket and position it
- Secure with 2 cylinder screws against moving

Adapter G32 / G32

Part No. 21.0954/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.041 kg/piece

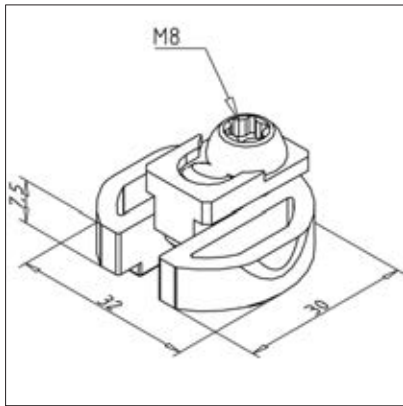
APPLICATIONS

- For connection of handle profile 32 with handle profile 32

ASSEMBLY

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

Adapter G32 / 30 x 30



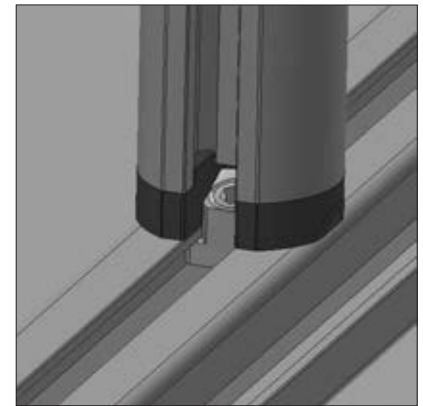
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.032 kg/piece



APPLICATIONS

- For connection of handle profile 32 with profiles of width 30

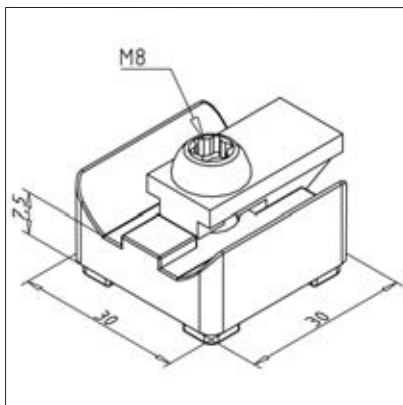


Part No. 21.0955/0

ASSEMBLY

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

Adapter 30 x 30 / G32



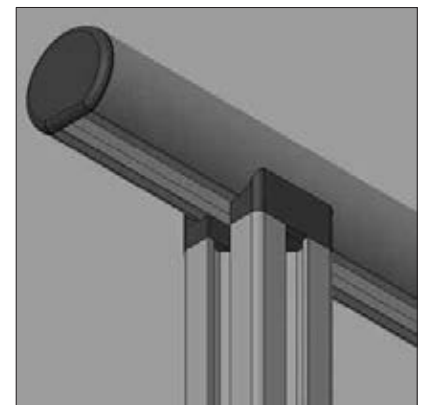
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.046 kg/piece



APPLICATIONS

- For connection of profile 30 x 30 with handle profile 32



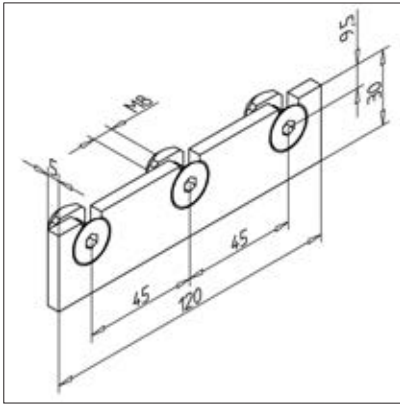
Part No. 21.0953/0

ASSEMBLY

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

Connecting bar

Part No. 21.1113/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.156 kg/piece

APPLICATIONS

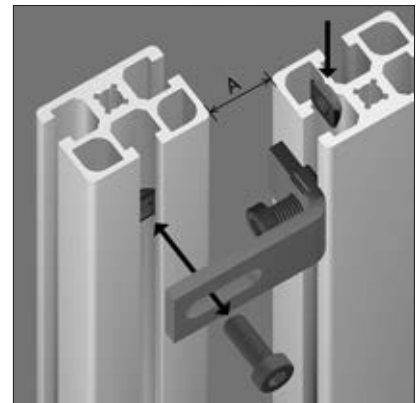
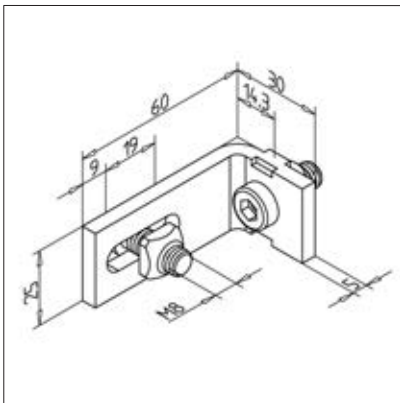
- Connection of different profiles
- Retrofitting profiles

ASSEMBLY

- Fasten to profile groove with supplied hardware
- No machining required

Guard unit fixing angle 45 steel

Part No. 21.1404/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.104 kg/piece

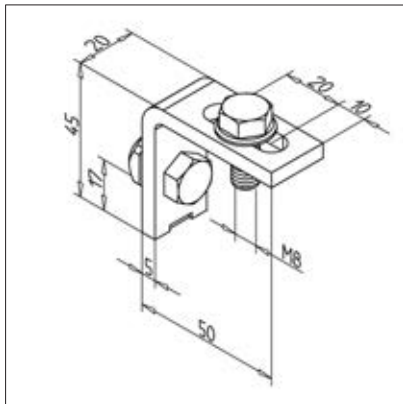
APPLICATIONS

- Fixation of guard units from profile 45 x 32
- Usable in frames made from any profile
- The guard unit flush fits to the column

ASSEMBLY

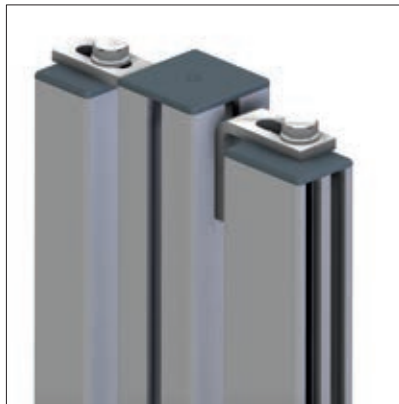
- Fasten to profile groove with supplied hardware
- No machining required
- First attach the brackets to the standing profile, then connect the guard unit from the rear to the brackets
- A = 10 mm - 28 mm

Guard unit fixing angle 19



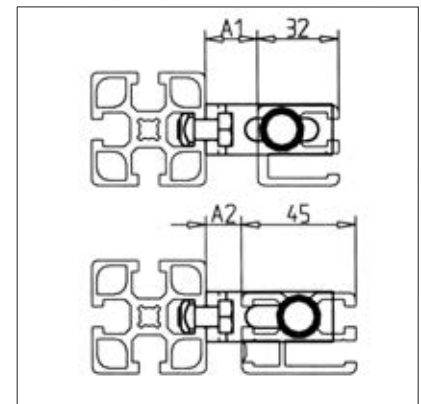
TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.089 kg/piece



APPLICATIONS

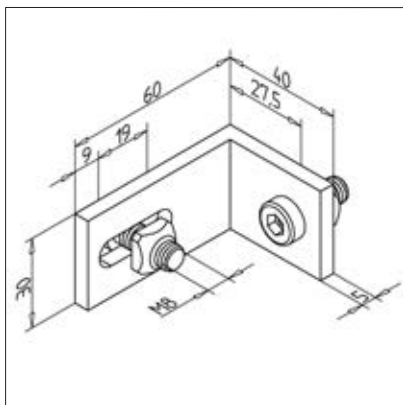
- Fastening guard units from clamping profile 32 x 32, 45 x 32 or standard profiles
- Attachment of guard units at any angle
- When using clamping profile 32x32 use end cap **part no. 22.1032/3**
- When using clamping profile 45x32 use end cap **part no. 22.1046/3**



ASSEMBLY

- Spread screw threads M8 x 20 into the profile ending of the guard unit
- Install guard unit suspension on posts
- Fix guard with screws of fastening kit
- Alternatively: For very fast assembly, the lower two threads can be fitted with the retaining pin 25 **part no. 21.1758/0**. Screw fastening only on the two upper threads
- A1 = 10.5 mm - 30.5 mm A2 = 10.5 mm - 17.5 mm

Guard unit fixing angle 45 alu



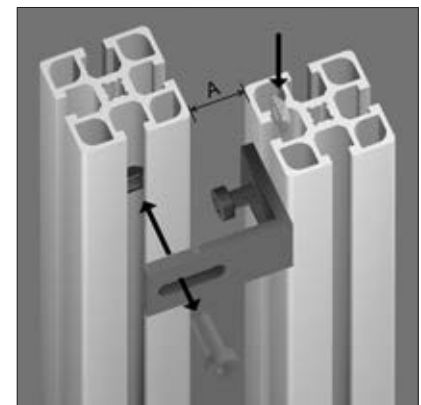
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.068 kg/piece



APPLICATIONS

- Fixation of guard units from profile 45 x 45
- Usable in frames made from any profile
- The guard unit flush fits to the column



ASSEMBLY

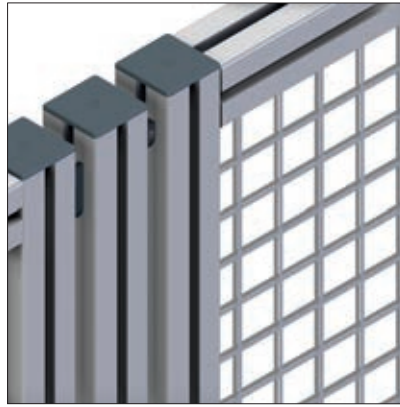
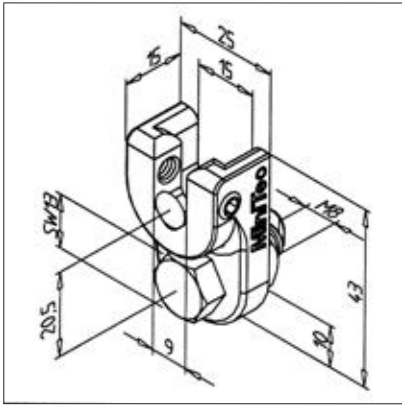
- Fasten to profile groove with supplied hardware
- No machining required
- First attach the brackets to the standing profile, then connect the guard unit from the rear to the brackets
- A = 10 mm - 28 mm

Part No. 21.1399/0

Part No. 21.1407/0

Guard unit fixing angle GD-K

Part No. 21.0008/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.039 kg/piece

APPLICATIONS

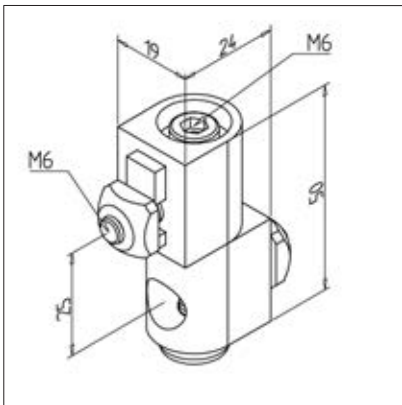
- Guards from all profiles
- Movable flaps
- It is also possible to mount the guards at the front when fitting the suspensions to the front of the post

ASSEMBLY

- Fasten guard unit hanger assembly in place on columns
- Guard unit with cylinder screws M8 x 25 furnished
- Hang the guard in place, and tighten the set screw using an Allen key from the rear
- A = 16 mm ± 0.75
- Guard cannot be removed from outside**

Guard unit fixing angle with adjustable angle

Part No. 21.1403/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.114 kg/piece

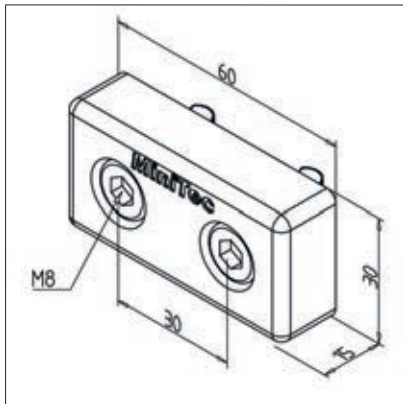
APPLICATIONS

- Connection of profile support under preferred angle
- Installation of safety fence elements at any angle

ASSEMBLY

- Assemble and align lower halves onto posts
- Assemble and mount upper halves on guard unit
- Insert the cylinder head screw and tighten it with key 4 A/F. The inserted hexagon nut in the lower fixing half is secured against torsion

Connecting plate 30 x 60



TECHN. DATA / ITEMS SUPPLIED

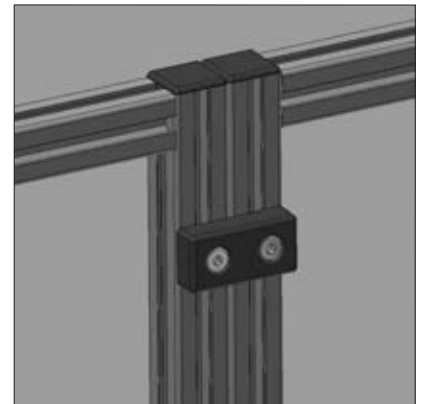
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.085 kg/piece



APPLICATIONS

- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

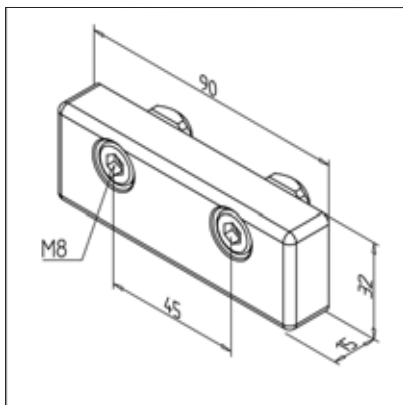
Part No. 21.2113/0



ASSEMBLY

- Install to groove of guard unit and posts with supplied hardware

Connecting plate 90 x 32



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.136 kg/piece



APPLICATIONS

- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

Part No. 21.1346/0

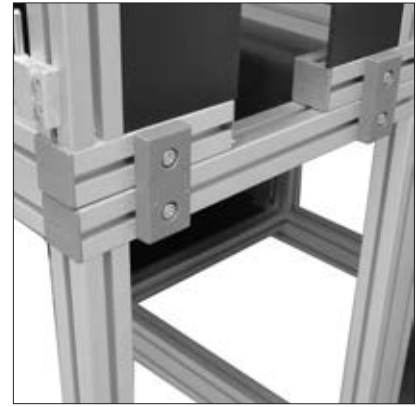
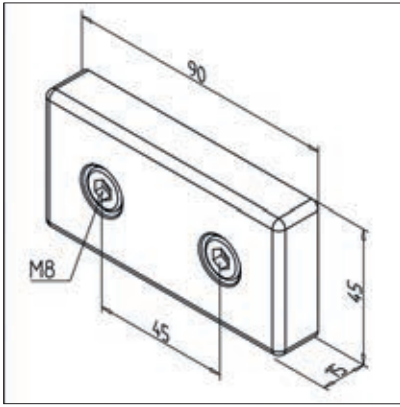


ASSEMBLY

- Install to groove of guard unit and posts with supplied hardware

Connecting plate 45 x 90

Part No. 21.1472/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.182 kg/piece

APPLICATIONS

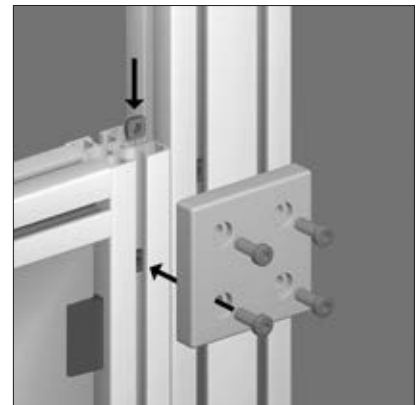
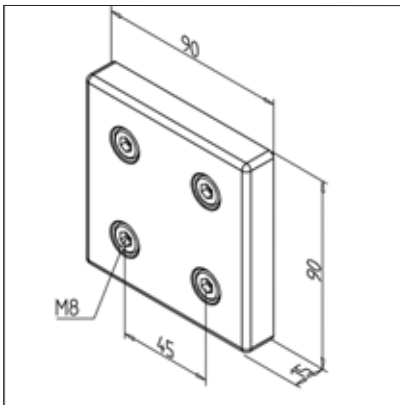
- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

ASSEMBLY

- Install to groove of guard unit and posts with supplied hardware

Connecting plate 90 x 90

Part No. 21.1473/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.366 kg/piece

APPLICATIONS

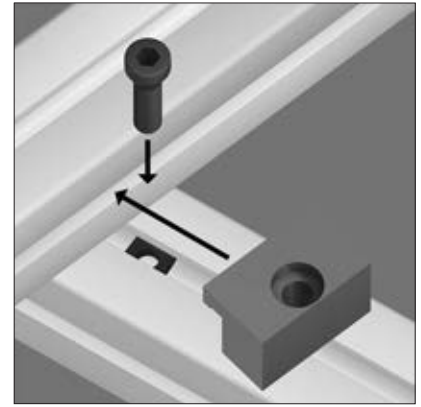
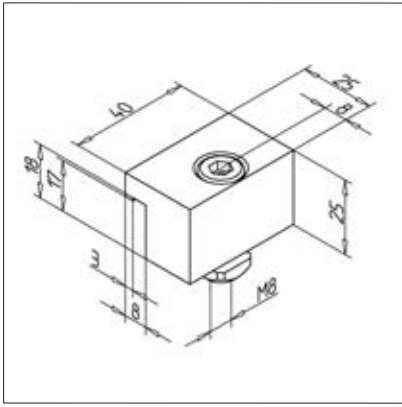
- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

ASSEMBLY

- Install to groove of guard unit and posts with supplied hardware

Clamping claw

Part No. 21.1027/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.063 kg/piece

APPLICATIONS

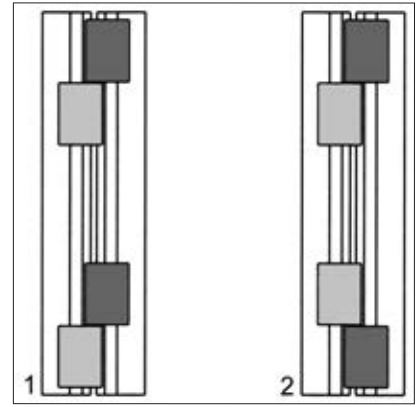
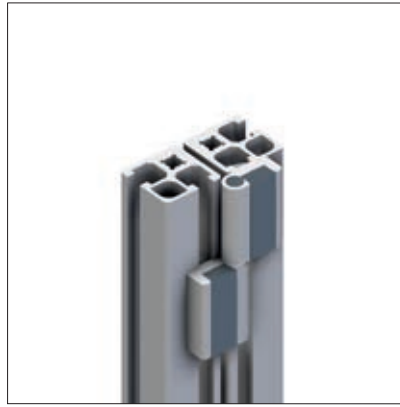
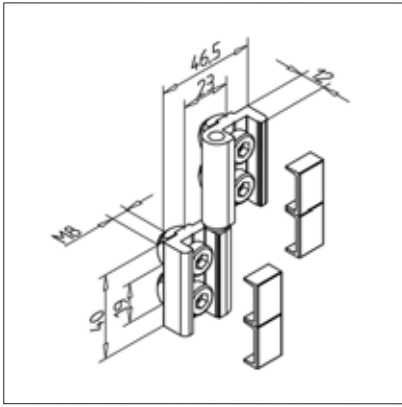
- Parallel connection of profiles at various angles

ASSEMBLY

- Fasten to profile groove with supplied hardware
- No machining required

Hinge 19

Part No. 21.1100/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- End caps
- Spring plate design **part no. 21.1100/7**
- Load capacity up to 400 N
- Weight = 0.110 kg/piece

APPLICATIONS

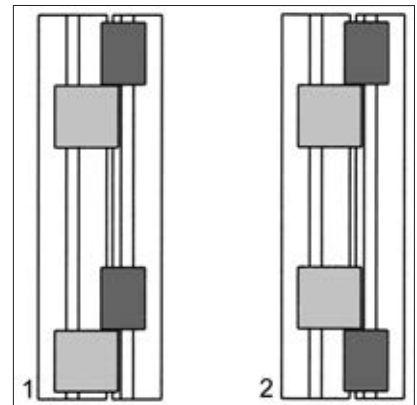
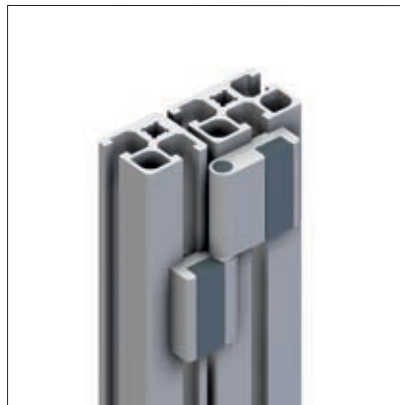
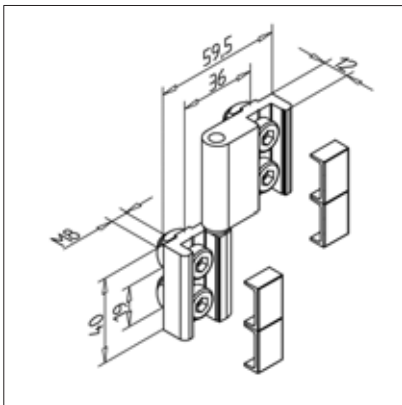
- Detachable doors, hatches, surface elements in a vertical arrangement
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 19 at various angles

ASSEMBLY

- Fasten to profile groove with supplied hardware
- For fixing directly on surface elements or on profile surfaces we deliver hinge 19 without fixing element **part no. 21.1100/2**
- 1: Lift removable
- 2: Arrangement is not detachable

Hinge 32

Part No. 21.1095/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- End caps
- **Order with position fixing nuts, part no. 21.1095/7**
- Load capacity up to 400 N
- Weight = 0.134 kg/piece

APPLICATIONS

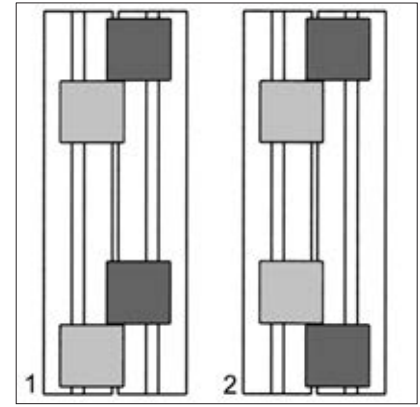
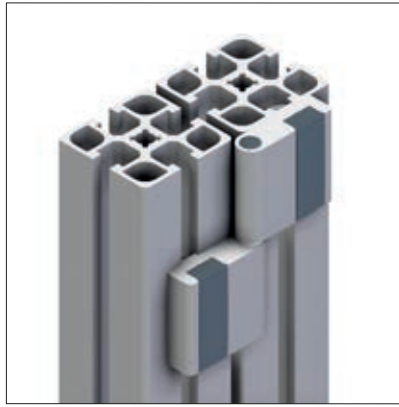
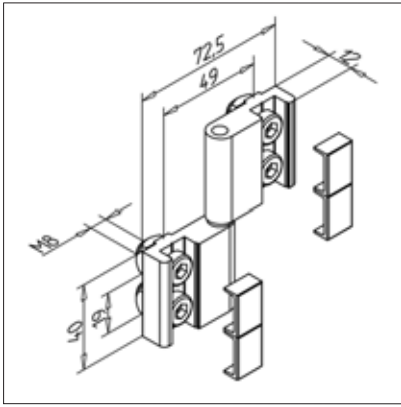
- Detachable doors, hatches, moving parts on profiles 32
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connecting profiles 19, 32 and 45 at any angle

ASSEMBLY

- Fasten to profile groove with supplied hardware
- For fixing directly on surface elements or on profile surfaces we deliver hinge 32 without fixing element **part no. 21.1095/2**
- 1: Lift removable
- 2: Arrangement is not detachable

Hinge 45

Part No. 21.1096/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- End caps
- Order with position fixing nuts, **part no. 21.1096/7**
- Load capacity up to 400 N
- Weight = 0.151 kg/piece

APPLICATIONS

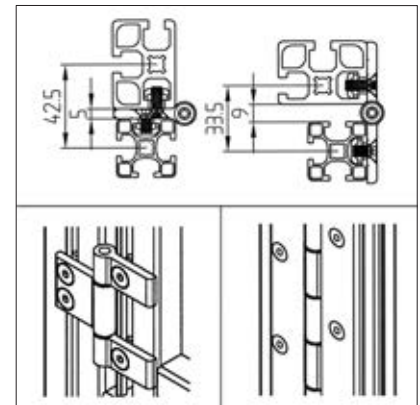
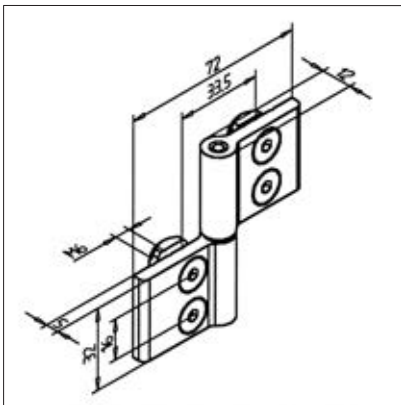
- Detachable doors, hatches, moving parts on profiles 45
- Connection of profiles 45 at various angles
- Guard unit fixing angle
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced

ASSEMBLY

- Fasten to profile groove with supplied hardware
- For fixing directly on surface elements or on profile surfaces we deliver hinge 45 without fixing element **part no. 21.1096/2**
- 1: Lift removable
- 2: Arrangement is not detachable

Hinge L 19/30

Part No. 21.1374/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- Load capacity up to 400 N
- Weight = 0.089 kg/piece

APPLICATIONS

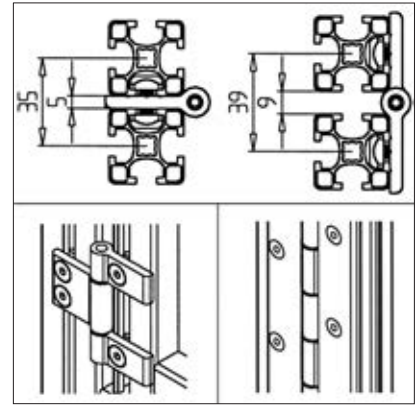
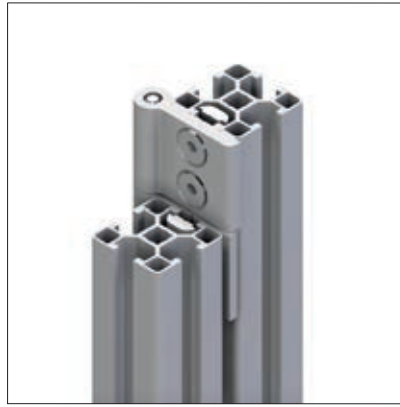
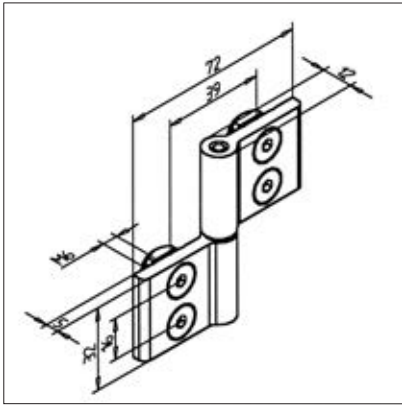
- Detachable doors, hatches, moving parts to profiles 19, 32 and 45
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connecting profiles 19 and 30 at any angle

ASSEMBLY

- Fasten to profile groove with supplied hardware
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

Hinge L 30/30

Part No. 21.1376/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- Load capacity up to 400 N
- Weight = 0.089 kg/piece

APPLICATIONS

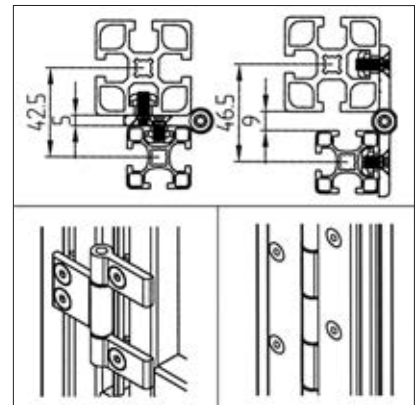
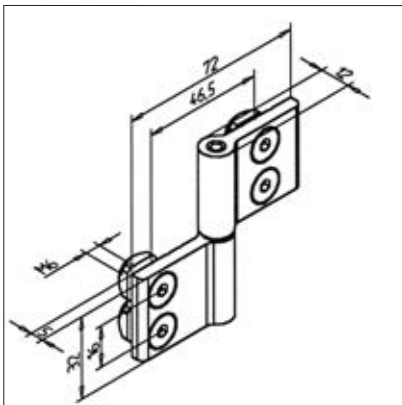
- Detachable doors, hatches, movable attachments
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 30 under preferred angle

ASSEMBLY

- Fasten to profile groove with supplied hardware
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

Hinge L 30/45

Part No. 21.1377/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- Load capacity up to 400 N
- Weight = 0.089 kg/piece

APPLICATIONS

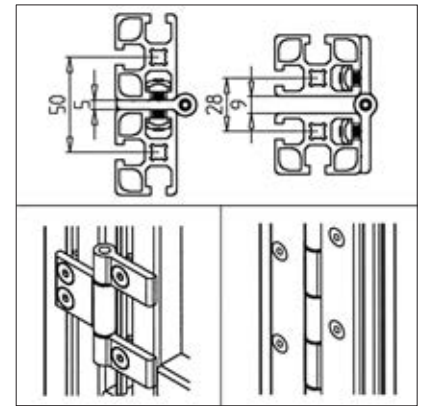
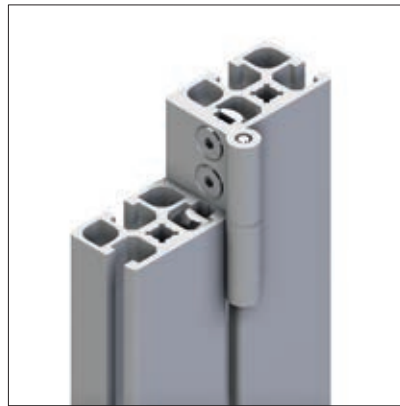
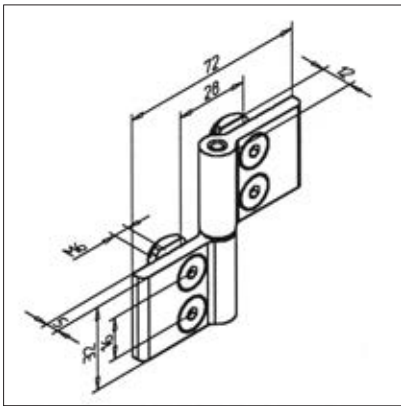
- Detachable doors, hatches, movable attachments
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 30 and 45 at various angles

ASSEMBLY

- Fasten to profile groove with supplied hardware
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

Hinge L 19/19

Part No. 21.1373/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- Load capacity up to 400 N
- Weight = 0.089 kg/piece

APPLICATIONS

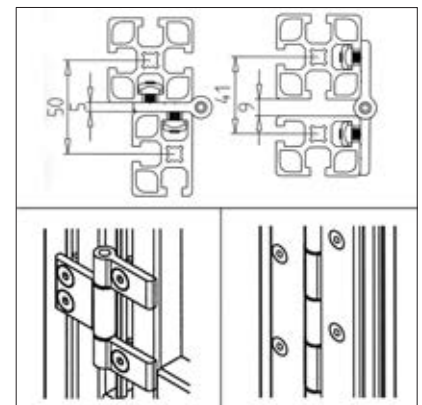
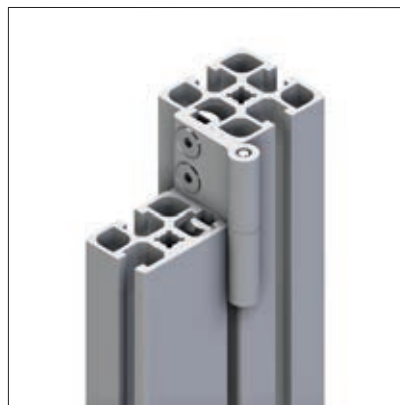
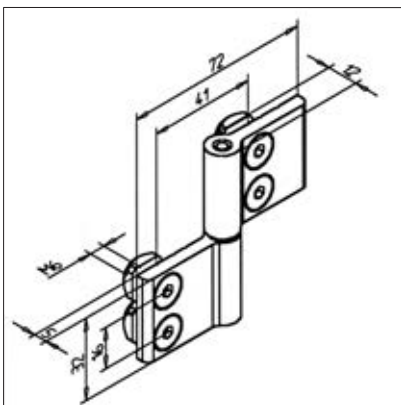
- Detachable doors, hatches, moving parts to profiles 19 and 32
- Guard unit fixing angle
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 19 at various angles

ASSEMBLY

- Fasten to profile groove with supplied hardware
- The hinge profile 5GB part no. 20.0093/0 (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

Hinge L 19/45

Part No. 21.1375/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- Load capacity up to 400 N
- Weight = 0.089 kg/piece

APPLICATIONS

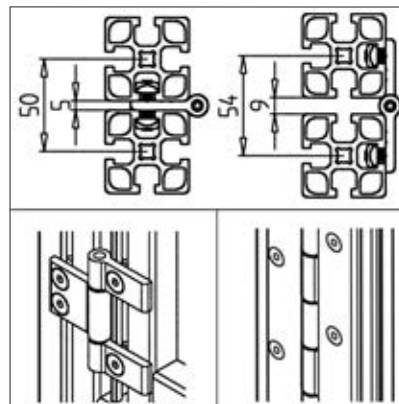
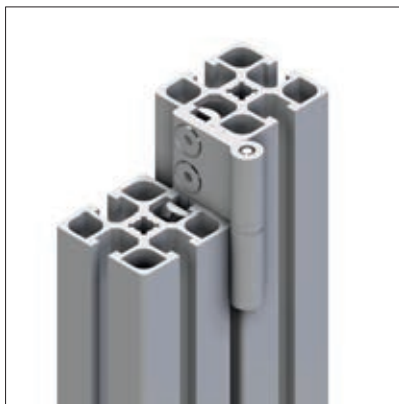
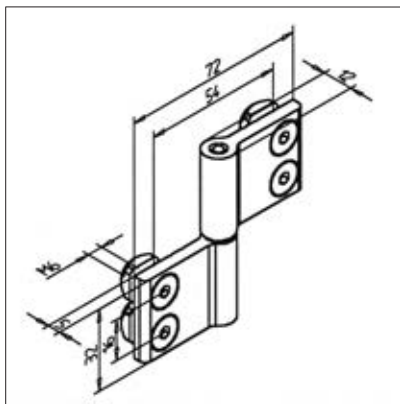
- Detachable doors, hatches, moving parts to profiles 19, 32 and 45
- Guard unit fixing angle
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connecting profiles 19, 32 and 45 at any angle

ASSEMBLY

- Fasten to profile groove with supplied hardware
- The hinge profile 5GB part no. 20.0093/0 (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

Hinge L 45/45

Part No. 21.1378/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- Load capacity up to 400 N
- Weight = 0.089 kg/piece

APPLICATIONS

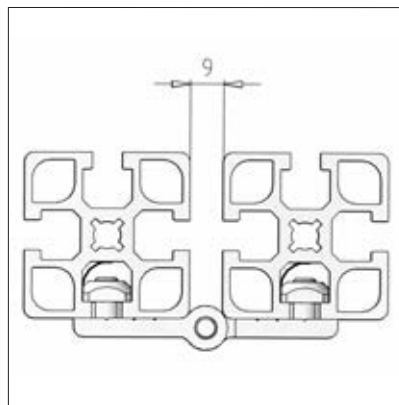
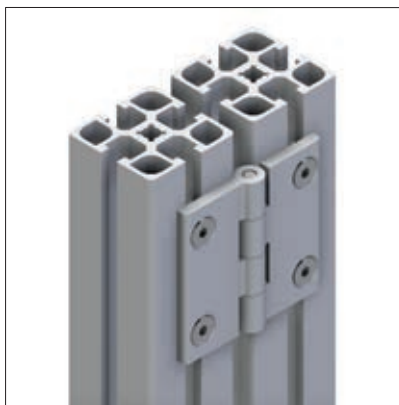
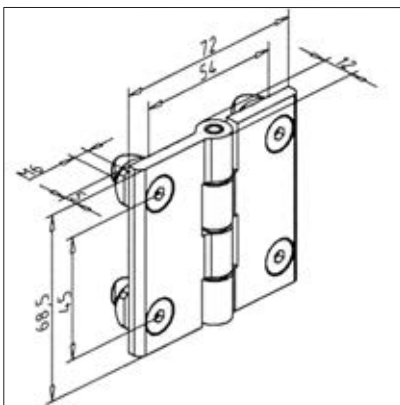
- Detachable doors, hatches, moving parts on profiles 45
- Guard unit fixing angle
- If the hinges are arranged in the opposite direction, non-detachable and horizontally mounted structures can also be produced
- Connection of profiles 45 at various angles

ASSEMBLY

- Fasten to profile groove with supplied hardware
- The hinge profile 5GB **part no. 20.0093/0** (not anodized) is available for the production of hinges in variable lengths and bore spacings as well as piano hinges

Door hinge small

Part No. 21.0973/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- Weight = 0.120 kg/piece

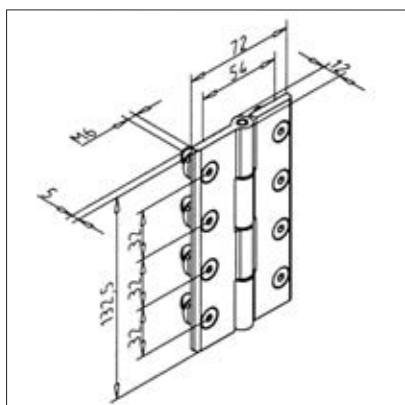
APPLICATIONS

- Suitable for large doors and lids
- Guard units
- Connection of profiles at various angles

ASSEMBLY

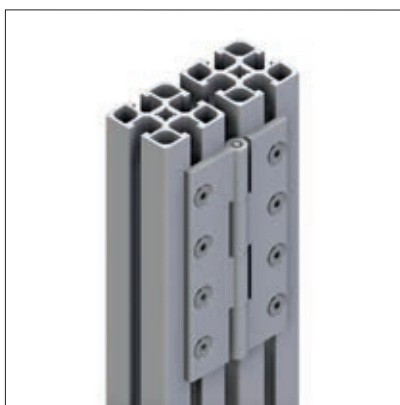
- Screw tight to the profile groove with supplied hardware

Door hinge large



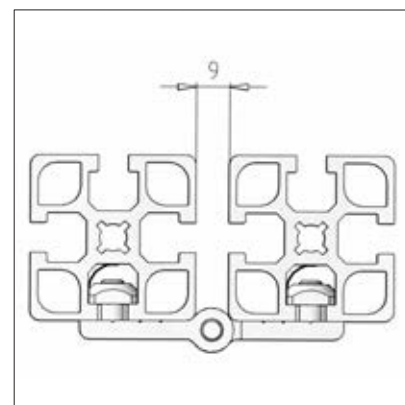
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With stainless steel shaft
- With fastening material steel, zinc plated
- Weight = 0.235 kg/piece



APPLICATIONS

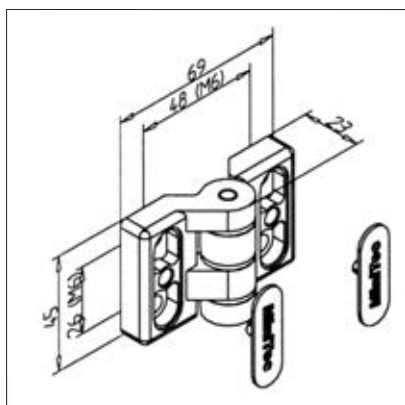
- Suitable for large doors and lids
- Guard units
- Connection of profiles at various angles



ASSEMBLY

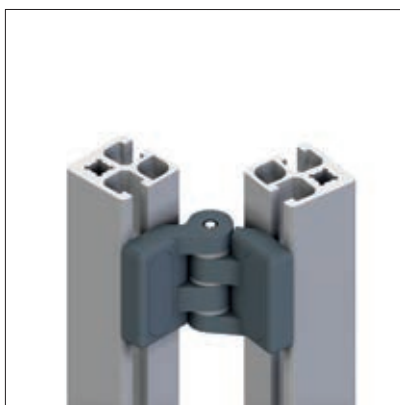
- Screw tight to the profile groove with supplied hardware

Hinge 19 S



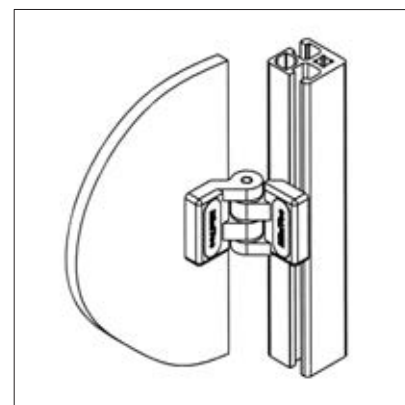
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Hinge pin, steel, galvanised
- End caps
- Without fastening kit
- Load capacity up to 600 N, static
- Weight = 0.100 kg/piece



APPLICATIONS

- Suitable for larger doors and hatches of profiles 19 or 32
- Guard units
- Connection of profiles 19 and 32 at any angle

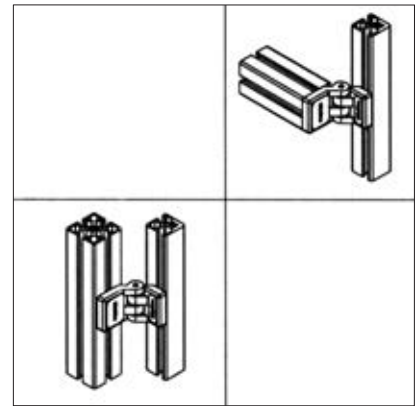
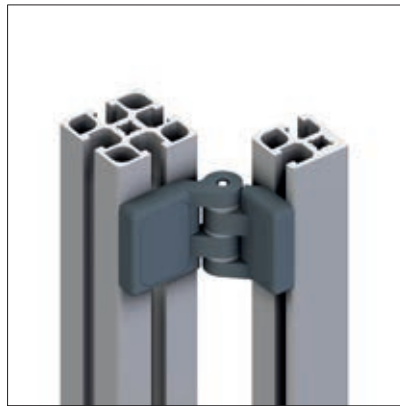
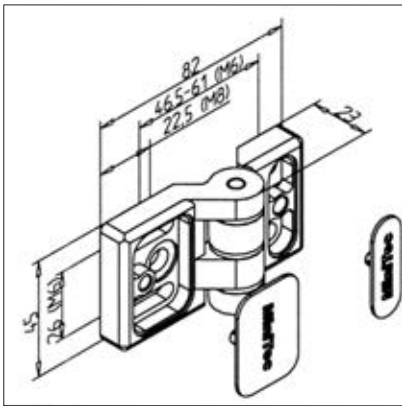


ASSEMBLY

- Fasten hinge halves each with 2 screws M6 x 18 and 2 square nut on profile, or fasten directly with screws on to surface elements according to material strength
- For heavy-duty applications use multiple hinges
- Swivel range up to 270°

Hinge 32 S

Part No. 21.1055/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Hinge pin, steel, galvanised
- End caps
- Without fastening kit
- Load capacity up to 600 N, static
- Weight = 0.102 kg/piece

APPLICATIONS

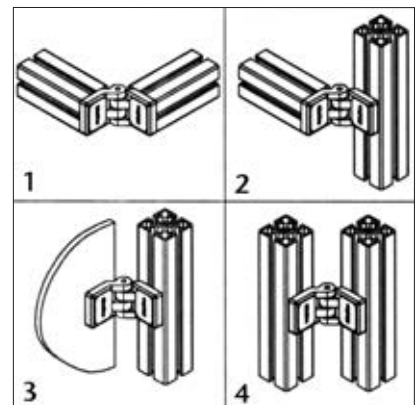
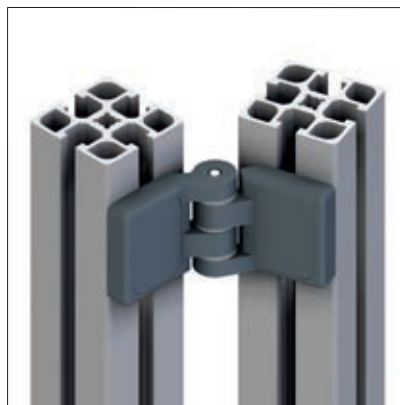
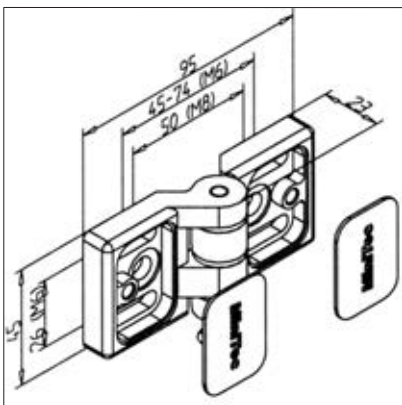
- Suitable for large doors and lids
- Guard units
- Connecting profiles 19, 32 and 45 at any angle

ASSEMBLY

- Fix short half of hinge on profile groove using 2 M6 x 18 bolts and 2 square nuts or use screws corresponding to the material thickness to fix directly on the surface elements
- Fasten other hinge half onto profile 45 x 45 with screw M8 x 30 or 2 screws M6 x 18
- For heavy-duty applications use multiple hinges
- Swivel range up to 270°

Hinge 45 S

Part No. 21.1098/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Hinge pin, steel, galvanised
- End caps
- Without fastening kit
- Load capacity up to 600 N, static
- Weight = 0.099 kg/piece

APPLICATIONS

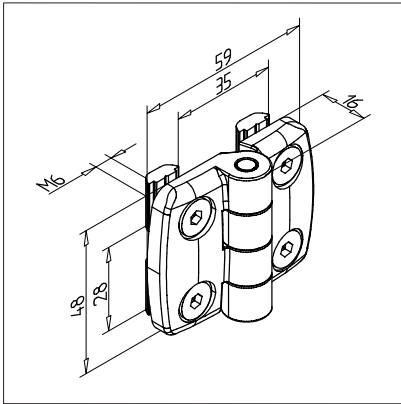
- Suitable for large doors and lids
- Guard units
- Connection of profiles at various angles
- For heavy-duty application use multiple hinges

ASSEMBLY

- 2 screws M8 x 30
 - 2 screws M6 x 18, 2 square nut M6, 1 screw M8 x 30
 - 3 screws M6 x 18, 2 square nuts M6, for panel element 2 screws M6 according to the material thickness
 - 4 screws M6 x 18, 4 square nuts M6
- Swivel range up to 270°

Hinge 30 GD

Part No. 21.2532/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, nickel-plated, silver
- With stainless steel shaft
- Fastening material steel, galvanized
- Load capacity up to 300 N
- Weight = 0.098 kg/piece

APPLICATIONS

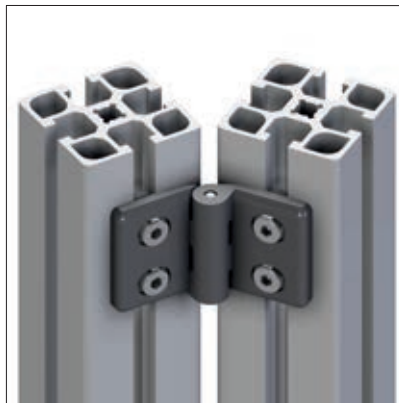
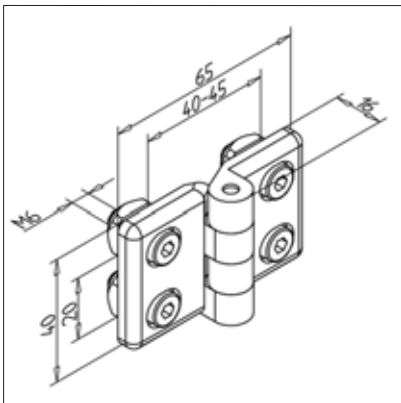
- Suitable for all profiles of series 30
- Doors and lids
- Guard units
- Connection of profiles at various angles

ASSEMBLY

- Screw tight to the profile groove with supplied hardware

Hinge 45 M6

Part No. 21.1175/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- Load capacity up to 160 N
- Weight = 0.061 kg/piece

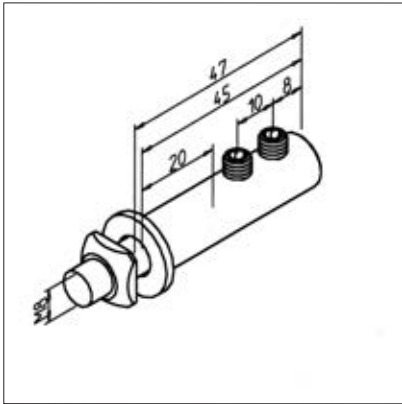
APPLICATIONS

- Suitable for light doors and lids
- Guard units
- Connection of profiles at various angles

ASSEMBLY

- Screw tight to the profile groove with supplied hardware

Internal hinge alu



TECHN. DATA / ITEMS SUPPLIED

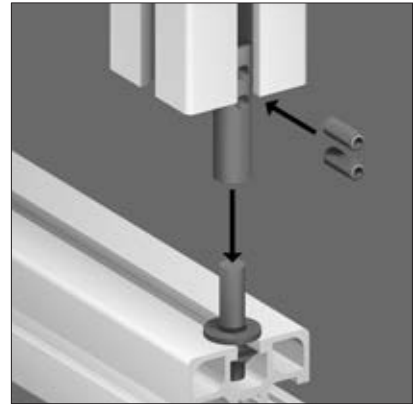
- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Load capacity up to 250 N
- Weight = 0.032 kg/piece



APPLICATIONS

- Doors
- Lids
- Movable elements
- Retrofitting of doors

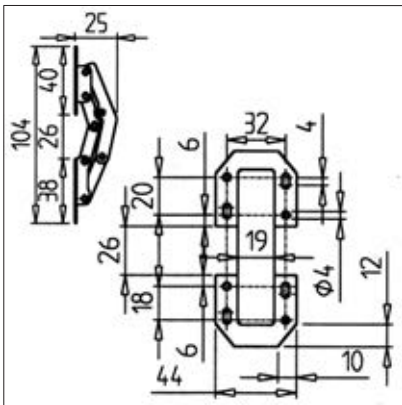
Part No. 21.1142/0



ASSEMBLY

- Fix the retaining pins in the frame and place the plastic washer
- Insert hinge into door element
- Position the door element with the grooves over the retaining pins, push the hinges onto the retaining pins and tighten

Swing-out hinge



TECHN. DATA / ITEMS SUPPLIED

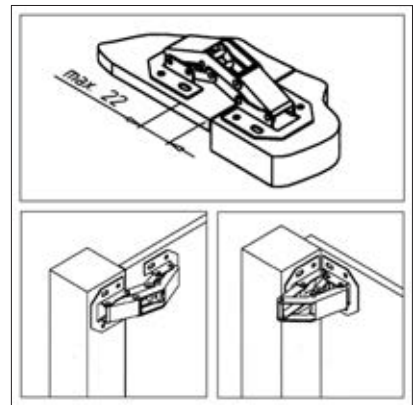
- Steel, galvanized
- Load capacity up to 50 N
- Without fastening kit
- Weight = 0.080 kg/piece



APPLICATIONS

- For lightweight doors
- In windows, measuring devices, safety devices
- Doors latch gap-free either overlying outside or flush inside

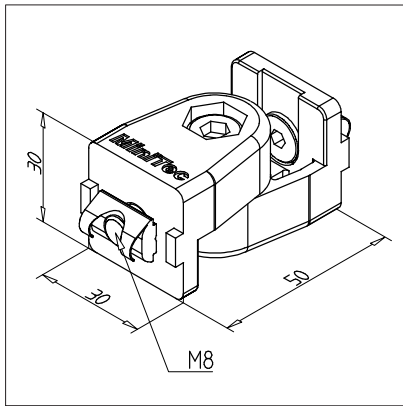
Part No. 21.1187/0



ASSEMBLY

- On profile grooves with screws M4 x 16 and square nut M4
- Direct fixation to panel element, screw length must thus be selected according to material strength
- Fastening directly on the profile surface

Link 30 S



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Locking device against torsion
- Weight = 0.087 kg/piece



APPLICATIONS

- Connection of profile support under preferred angle
- Retrofitting reinforcement in existing racks
- Alternative: Swivel joint 30 S with slide bushing **part no. 21.2222/0**
- Alternative: Swivel joint 30 S with clamping lever **part no. 21.2225/0**

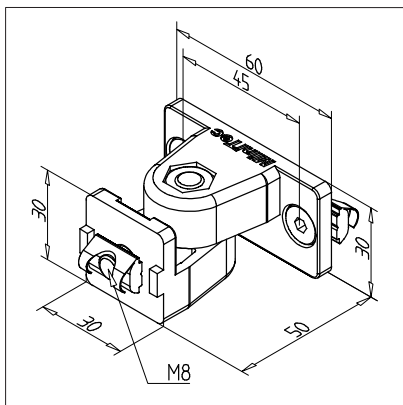
Part No. 21.2106/0



ASSEMBLY

- Attach the first joint half to the profile strut on the face side
- Fasten the second joint half to the supporting frame
- Screw both parts together on hinge point

Link 30 F/S



TECHN. DATA / ITEMS SUPPLIED

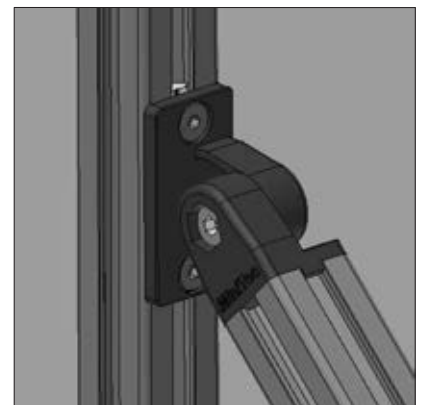
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Locking device against torsion
- Weight = 0.105 kg/piece



APPLICATIONS

- Connection of profile support under preferred angle
- Retrofitting reinforcement in existing racks
- Alternative: Swivel joint 30 F / S with sliding bushing: **part no. 21.2221/0**
- Alternatively: Swivel joint 30 F/S with clamping lever **part no. 21.2224/0**

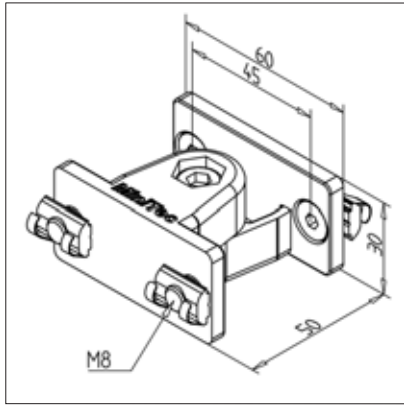
Part No. 21.2105/0



ASSEMBLY

- Attach the first joint half to the profile strut on the face side
- Fasten the second joint half to the supporting frame
- Screw both parts together on hinge point

Link 30 F



TECHN. DATA / ITEMS SUPPLIED

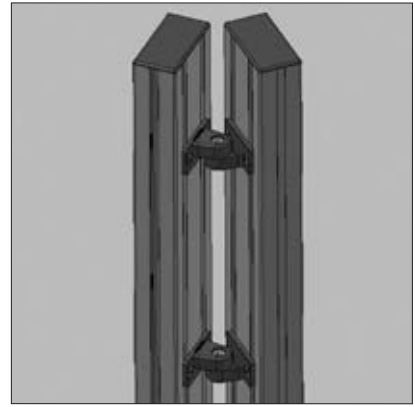
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Locking device against torsion
- Weight = 0.126 kg/piece



APPLICATIONS

- Connection of profile support under preferred angle
- Retrofitting reinforcement in existing racks
- Alternative: Swivel joint 30 F with slide bushing **part no. 21.2223/0**
- Alternative: Swivel joint 30 F with clamping lever **part no. 21.2226/0**

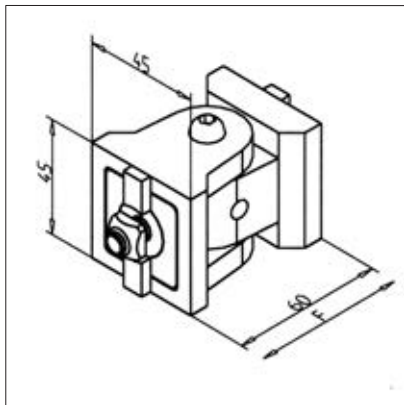
Part No. 21.2111/0



ASSEMBLY

- Fasten link to profile face
- Screw both parts together on hinge point

Link 45



TECHN. DATA / ITEMS SUPPLIED

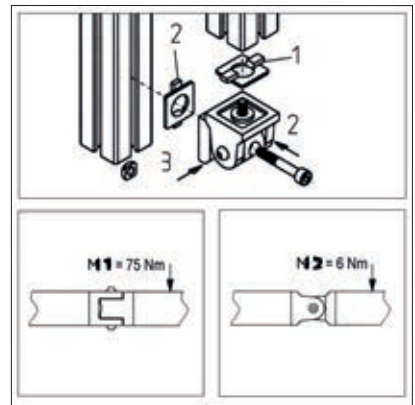
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Anti-rotation device AL GD
- Load F_{max} 5000 N
- For use on vertical struts, link **part no. 21.2030/1** (square nuts with position fixing)
- Weight = 0.250 kg/piece



APPLICATIONS

- Connection of profiles at various angles
- Bracings
- Reinforcement of frame constructions
- Not to be used as a hinge

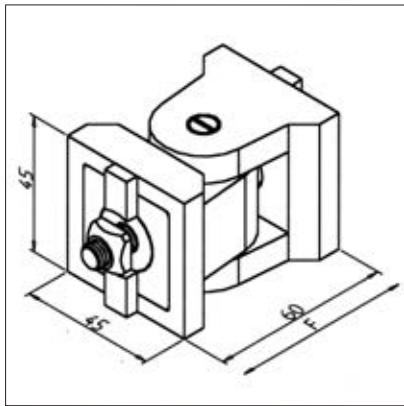
Part No. 21.2030/0



ASSEMBLY

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Insert screw from items included and fix link half 2 (to do so, swing movable side by approx. 90°)
- 3: Tighten lateral connecting screws

Swivel link 45



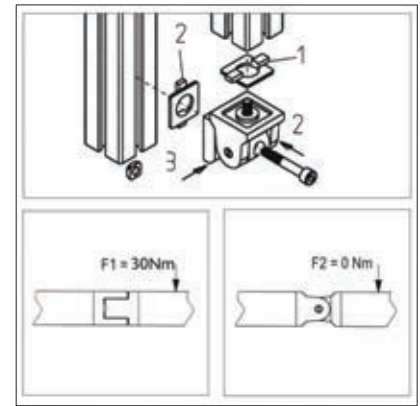
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- With low-friction sliding bearing
- Anti-rotation device AL GD
- Load F_{max} 1500 N
- For use on vertical struts, swivel link **part no. 21.2020/7** (square nuts with position fixing)
- Weight = 0.240 kg/piece



APPLICATIONS

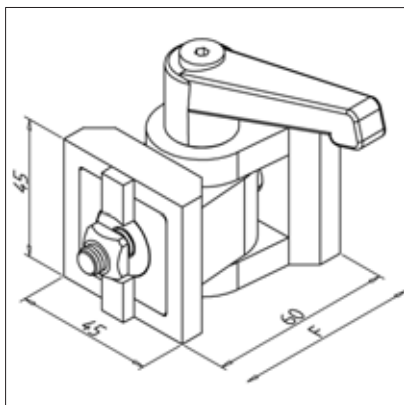
- Heavy duty swing doors, storage of moving parts
- Not lockable
- For heavy loads use multiple hinges



ASSEMBLY

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Insert screw from items included and fix link half 2 (to do so, swing movable side by approx. 90°, do not undo hinge pins!)

Swivel link 45 fixable



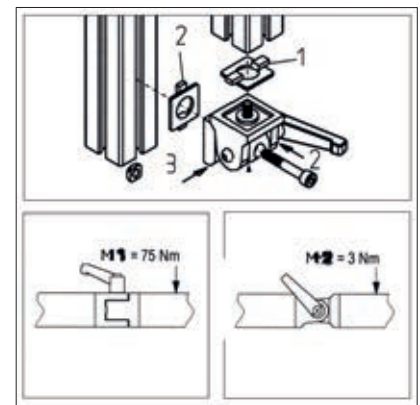
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- With low-friction sliding bearing
- Anti-rotation device AL GD
- Load F_{max} 1500 N
- For use on vertical struts, swivel link **part no. 21.2010/7** (square nuts with position fixing)
- Weight = 0.339 kg/piece



APPLICATIONS

- Heavy duty swing doors, storage of moving parts
- Clamping lever for positioning of add-on parts
- Fastening of quick-to-adjust components such as gripping shells, measuring devices
- For heavy loads use multiple hinges

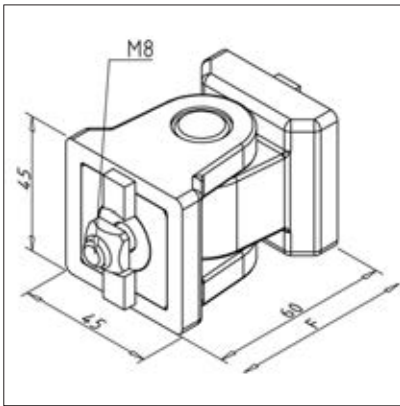


ASSEMBLY

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Fix with screws included
- 3: Tighten clamping lever

Swivel link 45/15

Part No. 21.2315/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- With low-friction sliding bearing
- Anti-rotation device AL GD
- Load F_{max} 2700 N
- Weight = 0.312 kg/piece

APPLICATIONS

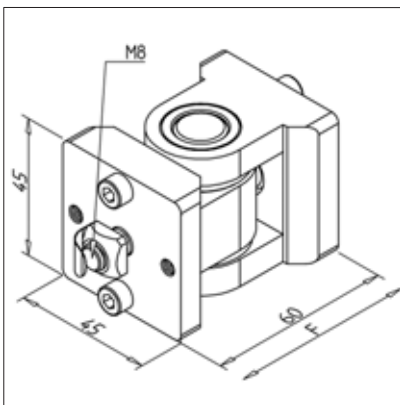
- Heavy duty swing doors, storage of moving parts
- Not lockable
- For heavy loads use multiple hinges

ASSEMBLY

- Attach the first joint half to the profile strut on the face side
- Fasten the second joint half to the supporting frame

Swivel link 45 heavy duty

Part No. 21.2034/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- With low-friction sliding bearing
- Locking device against torsion
- Load F_{max} 3500 N
- Load M1 max 75 Nm
- Weight = 0.680 kg/piece

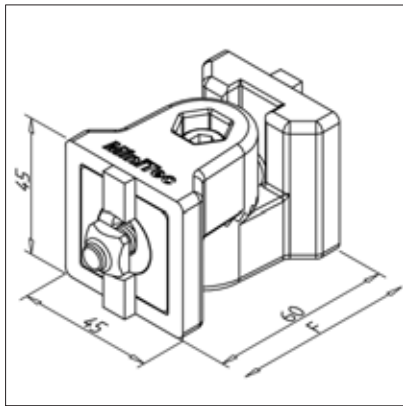
APPLICATIONS

- Heavy duty swing doors, storage of moving parts
- Not lockable
- For heavy loads use multiple hinges

ASSEMBLY

- Attach the first joint half to the profile strut on the face side
- Fasten the second joint half to the supporting frame

Link 45 R



TECHN. DATA / ITEMS SUPPLIED

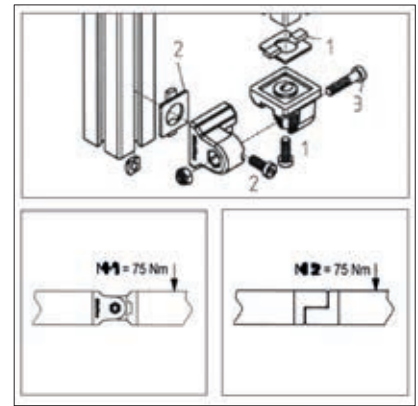
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Anti-rotation device AL GD
- Load F_{max} 5000 N
- Use on vertical struts **part no. 21.2041/7** (square nuts with position fixing)
- Weight = 0.263 kg/piece



APPLICATIONS

- Adjustment range approx. 180° in 15° increments
- Fastening of heavy attachments such as extension arms, gripper cup holders, devices
- Safe adjustment through tooth system

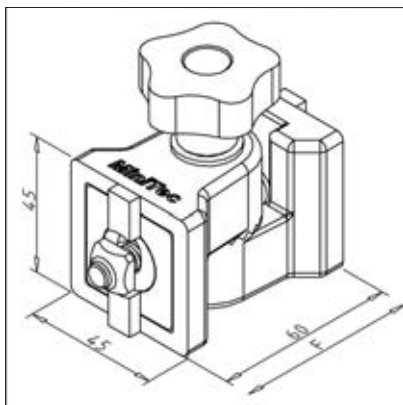
Part No. 21.2041/0



ASSEMBLY

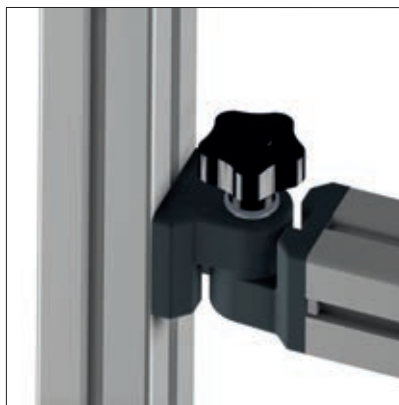
- 1: Place locking device and screw first half of the bracket
- 2: Fix second half
- 3: Connect the 2 halves in desired angle and tighten

Link 45 R with star grip



TECHN. DATA / ITEMS SUPPLIED

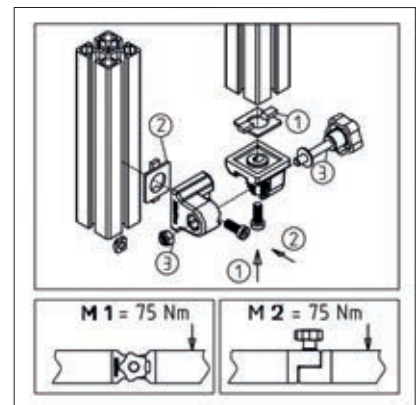
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Anti-rotation device AL GD
- Load F_{max} 5000 N
- Use on vertical struts **part no. 21.2230/7** (square nuts with position fixing)
- Weight = 0.279 kg/piece



APPLICATIONS

- Adjustment range approx. 180° in 15° increments
- Fastening of heavy attachments such as extension arms, gripper cup holders, devices
- Safe adjustment through tooth system

Part No. 21.2230/0

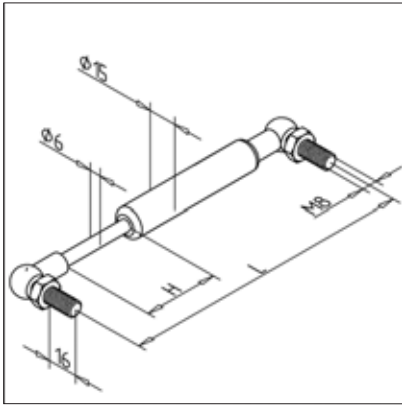


ASSEMBLY

- 1: Place locking device and screw first half of the bracket
- 2: Fix second half
- 3: Connect the 2 halves in desired angle and tighten

Gas pressure spring 6/15

Part No. 24.1126/0



H (mm)	L (mm)
20	115,5
40	155,5
60	194,5
80	235
100	273
120	316
150	375,5

TECHN. DATA / ITEMS SUPPLIED

- Stroke (H) alternatively 20 / 40 / 60 / 80 / 100 / 120 / 150 mm
- Power (F) between 50 and 400 N (increments 50 N)
- Please indicate desired length of stroke and force

APPLICATIONS

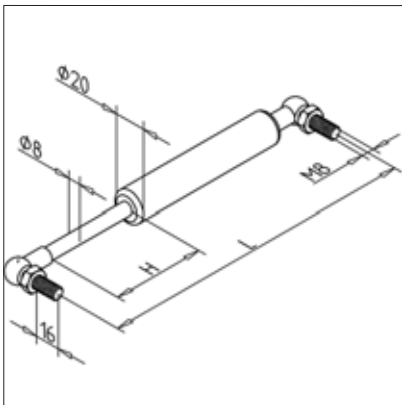
- For weight compensation with foldable elements
- Suitable for lift and swivel movements

ASSEMBLY

- Fix with thread bolt M8 to profile groove of other components

Gas pressure spring 8/20

Part No. 24.1127/0



H (mm)	L (mm)
57	206
80	244
100	286
120	326
140	366
160	405
180	446
200	485,5
220	527
250	585,5

TECHN. DATA / ITEMS SUPPLIED

- Stroke (H) alternatively 57 / 80 / 100 / 120 / 140 / 160 / 180 / 200 / 220 / 250 mm
- Power (F) between 80 and 750 N (increments 50 N)
- Please indicate desired length of stroke and force

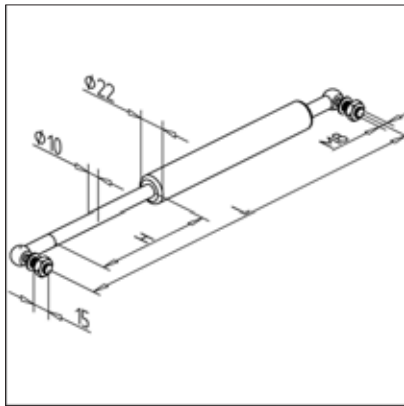
APPLICATIONS

- For weight compensation with foldable elements
- Suitable for lift and swivel movements

ASSEMBLY

- Fix with thread bolt M8 to profile groove of other components

Gas pressure spring 10/22



TECHN. DATA / ITEMS SUPPLIED

- Stroke (H) alternatively 98/ 148/ 198/ 248/ 295/ 345/ 395/ 445/ 495
- Power (F) between 100 and 1200 N (increments 50 N)
- Please indicate desired length of stroke and force



APPLICATIONS

- For weight compensation with foldable elements
- Suitable for lift and swivel movements

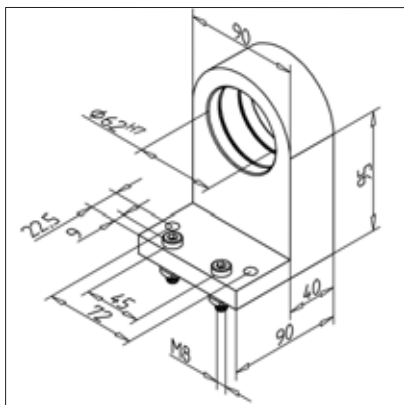
Part No. 24.1128/0

H (mm)	L (mm)
98	286
148	386
198	486
248	586
295	686
345	786
395	886
445	986
495	1086

ASSEMBLY

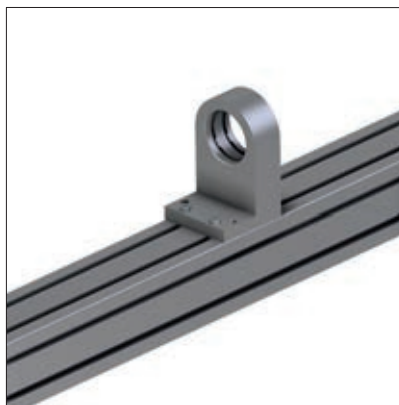
- Fix with thread bolt M8 to profile groove of other components

Upright bearing



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, bright
- With fastening material steel, zinc plated
- 2 retaining rings for ball bearing
- Without ball bearing
- Weight = 1.180 kg/piece



APPLICATIONS

- Large swivelling frame
- Bearing of shafts, axles, rollers and rolls, lengthwise and crosswise in the profile

Part No. 28.0158/0

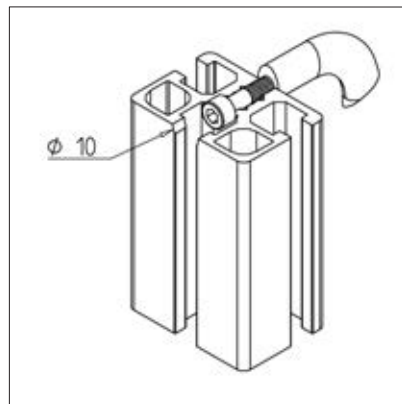
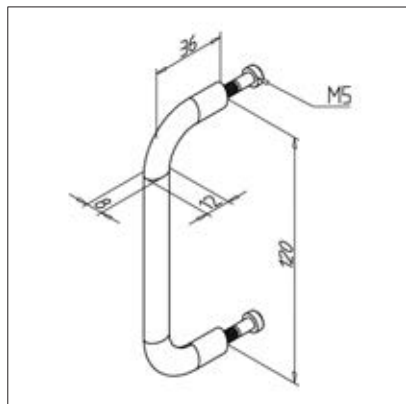


ASSEMBLY

- Mounting hole suitable for radial ball bearings 6206 2RS **part no. 50.0977/1**
- Fasten to profile groove with supplied hardware

Handle alu

Part No. 21.1138/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Mounting thread M05x10 mm
- Weight = 0.050 kg/piece

APPLICATIONS

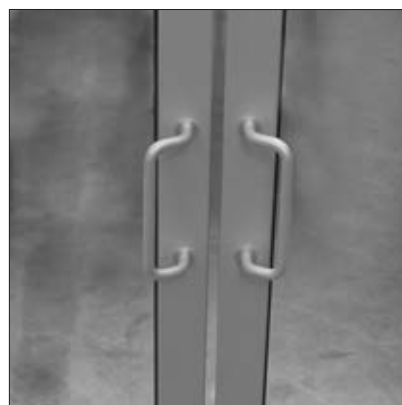
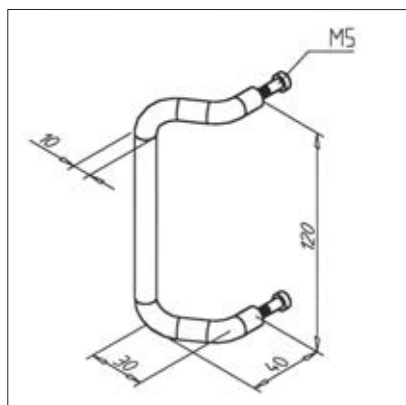
- Display windows, showcases
- Cabinets
- Doors

ASSEMBLY

- Fasten to the profile with supplied hardware
- Provided with stepped bore Ø 10 mm x 5.5 mm or through-hole Ø 5.5 mm
- Fastening kit for handle AL **Part no. 21.0898/0**

Handle AL, angled

Part No. 21.1348/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Mounting thread M05x10 mm
- Weight = 0.065 kg/piece

APPLICATIONS

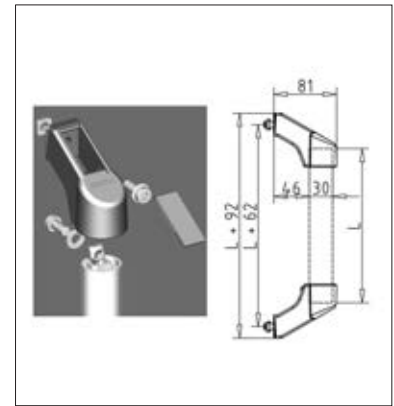
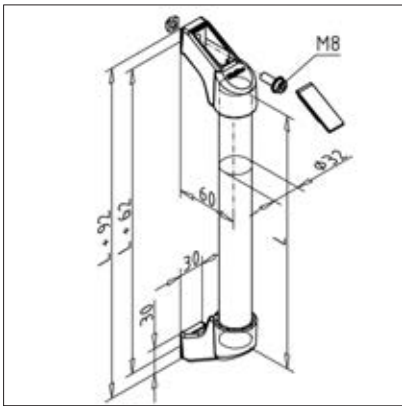
- Display windows, showcases
- Cabinets
- Doors

ASSEMBLY

- Fasten to the profile with supplied hardware
- Provided with stepped bore Ø 10 mm x 5.5 mm or through-hole Ø 5.5 mm
- Fastening kit for handle AL **Part no. 21.0898/0**

Handle GP

Part No. 21.2317/0



TECHN. DATA / ITEMS SUPPLIED

- Handle profile aluminium, anodized E6/EV1
- Bracket ABS, grey
- Fastening material steel, galvanized
- Standard length (L) 300 mm
- **Other lengths under Part no. 21.0962/9 on request**
- **In case of divergent length please specify dimension L**
- Construction set without profile **part no. 21.2317/1**
- Load max. 500 N
- Weight = 0.427 kg/piece

APPLICATIONS

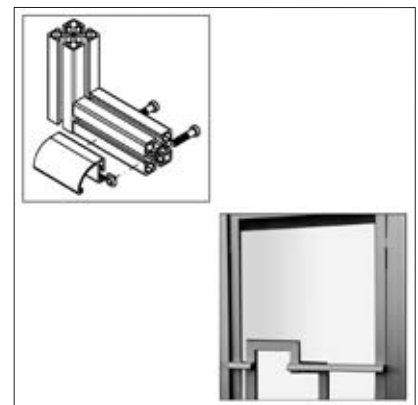
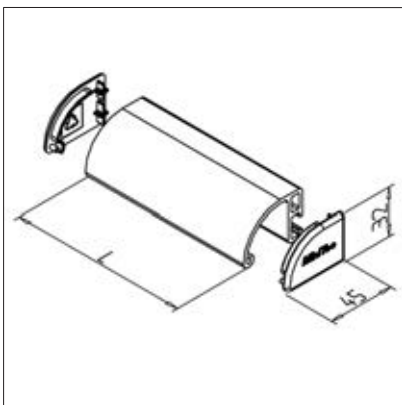
- Doors and lids
- Carriage
- Railing

ASSEMBLY

- Attach bracket to handle profile
- Use the included fastening material to attach the profile to the profile grooves
- Recommended tightening torque: 10 Nm

Closed protective handle

Part No. 21.1048/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- End caps
- Without fastening kit
- Standard length (L) 120 mm
- **Other lengths under Part no. 21.1048/9 on request**
- **In case of divergent length please specify dimension L**
- Weight = 0.110 kg/piece

APPLICATIONS

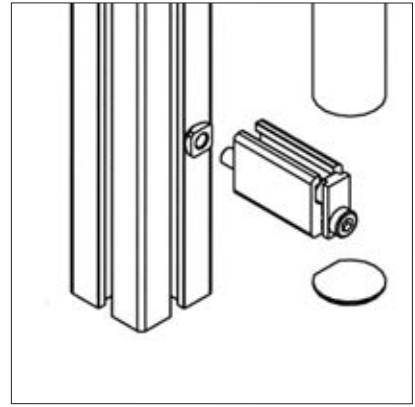
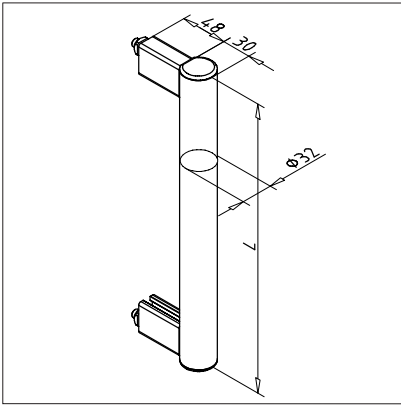
- Doors
- Lids
- Guard units
- Furniture

ASSEMBLY

- Push the square nuts into the groove on the handle and fix with corresponding screw from the back
- **Alternative:**
Drill hole in handle and fix from the front with short hex kant key and cylinder screws or hex head screws

Handle bar 32

Part No. 21.0962/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Ready-to-install kit from MiniTec aluminum profiles
- With fastening material steel, zinc plated
- Standard length (L) 300 mm
- **Other lengths on request**
- **Please specify dimension L**
- Weight = 0.500 kg/piece

APPLICATIONS

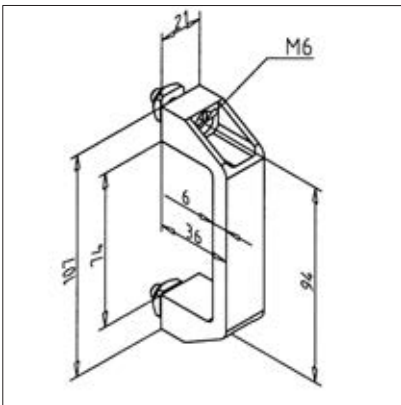
- Handle for very large doors, lids, trolleys, removable surface elements

ASSEMBLY

- Enter square nut in existing construction
- Pre-install spacers with a long screw and connector profile
- Insert the handle profile and tighten the profile connector to spacers
- Install caps

Handle 90 grey

Part No. 21.1099/1



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- For use on vertical struts, handle **part no. 21.1099/4** (square nuts with position-fixing)
- Upon request, available in black, **part no. 21.1099/0**
- Weight = 0.030 kg/piece

APPLICATIONS

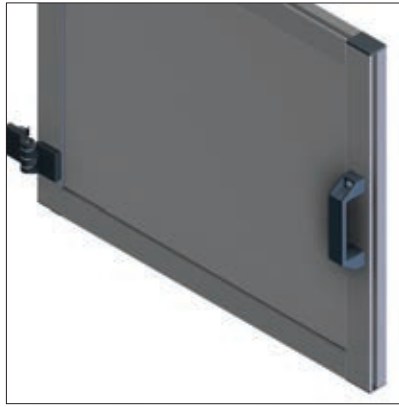
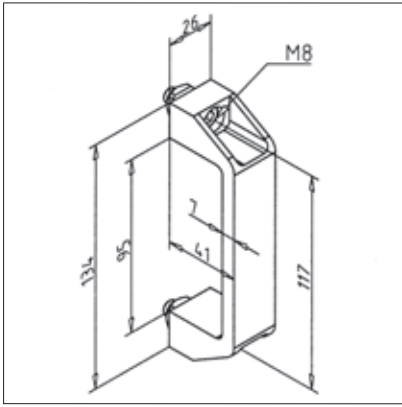
- Doors
- Lids
- Guard units

ASSEMBLY

- Fasten to profile groove with supplied hardware
- Directly on panel element with cylinder screw M6, length according to material thickness

Handle 120 grey

Part No. 21.1092/1



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- For use on vertical struts, handle **part no. 21.1092/4** (square nuts with position-fixing)
- Upon request, available in black, **part no. 21.1092/0**
- ESD-compatible, also available in black **part no. 32.1007/0**, upon request
- Weight = 0.070 kg/piece

APPLICATIONS

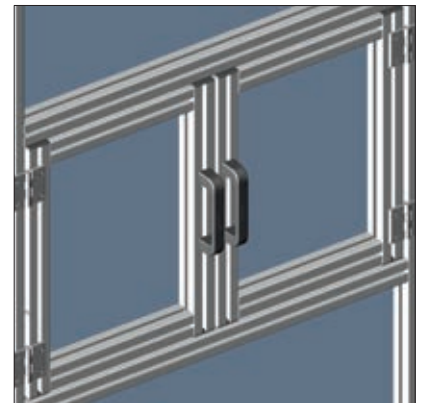
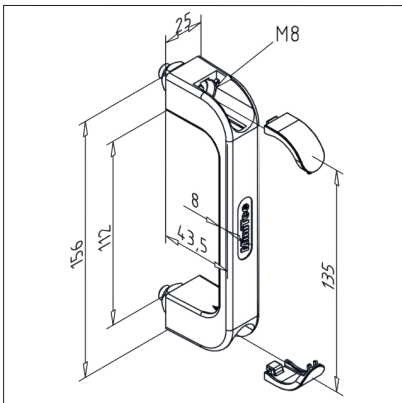
- Doors
- Lids
- Guard units

ASSEMBLY

- Fasten to profile groove with supplied hardware
- Directly on surface element with cylinder head screw M8

Handle 135-45 grey

Part No. 21.2530/1



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- For use on vertical struts, handle **part no. 21.2530/7** (square nuts with position-fixing)
- Weight = 0.080 kg/piece

APPLICATIONS

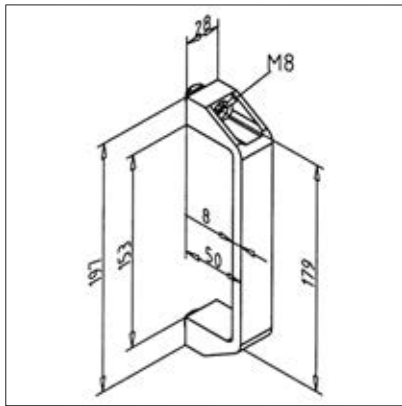
- Doors
- Lids
- Guard units

ASSEMBLY

- Fasten to profile groove with supplied hardware
- Directly on surface element with cylinder head screw M8

Handle 180 grey

Part No. 21.1094/1



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- For use on vertical struts, handle **part no.21.1094/4** (square nuts with position-fixing)
- Upon request, available in black, **part no. 21.1094/0**
- Weight = 0.100 kg/piece

APPLICATIONS

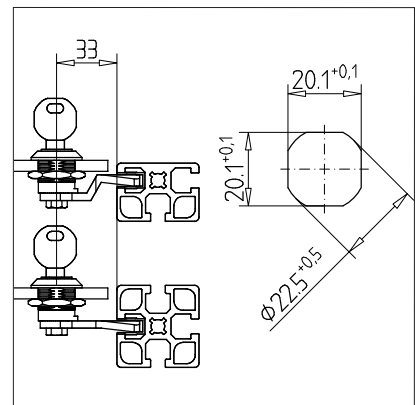
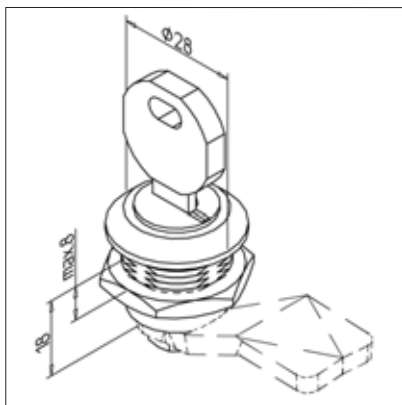
- Doors
- Lids
- Guard units

ASSEMBLY

- Fasten to profile groove with supplied hardware
- Directly on surface element with cylinder head screw M8

Lock cylinder

Part No. 21.1752/0



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, chromed
- With fastening nut steel, galvanized
- 2 keys
- Without locks
- Weight = 0.100 kg/piece

APPLICATIONS

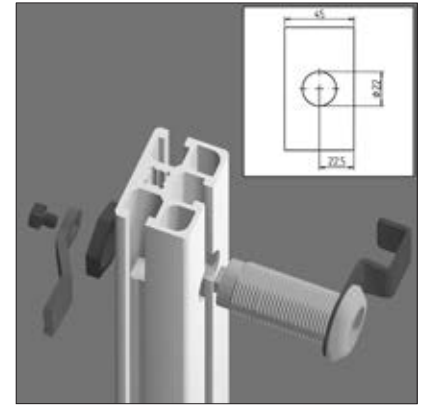
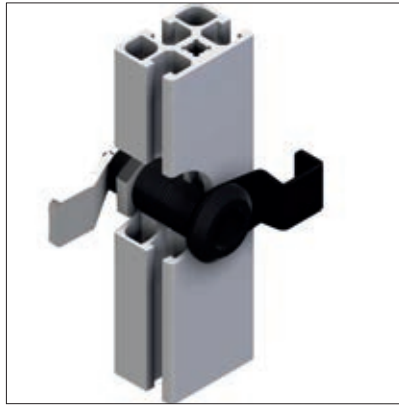
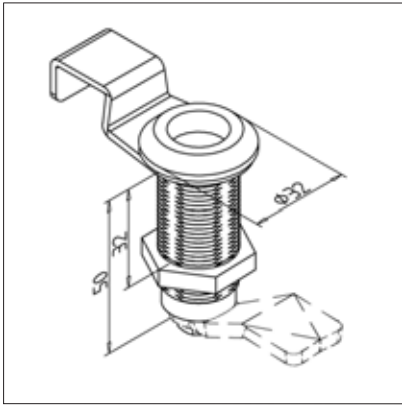
- Light doors from surface elements up to 8 mm thickness

ASSEMBLY

- Bore \varnothing 22 mm in panel element
- As an alternative to torsion-protected mounting Milling according to sketch
- Select the locking tongue suitable for the application or profiles used.
- To prevent damage to the profile grooves, additional edging and cover profiles can be used

Bolt lock 32 socket hex head wrench 10 A/F

Part No. 21.1087/8



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, black
- For Allen wrench SW 10
- With fastening nut steel, galvanized
- With opening bracket, steel, black
- Without locks
- Weight = 0.102 kg/piece

APPLICATIONS

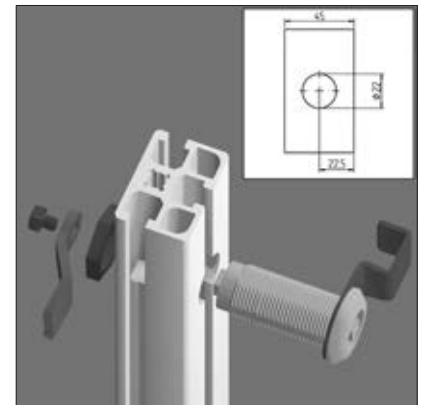
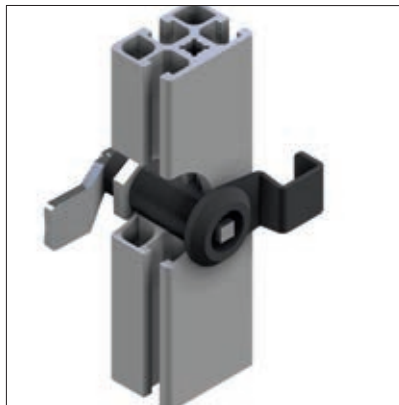
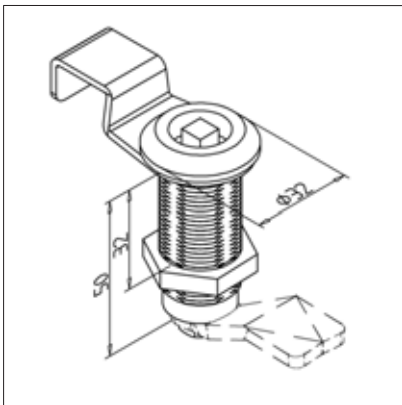
- For profiles 32
- Locking of doors and lids in guard units

ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F part no.. 21.0941/0
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Tighten using front handle from the back side with the fastening nut

Bolt lock 32 with four-faced key

Part No. 21.1087/6



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, black
- With square box wrench
- With fastening nut steel, galvanized
- With opening bracket, steel, black
- Without locks
- Weight = 0.179 kg/piece

APPLICATIONS

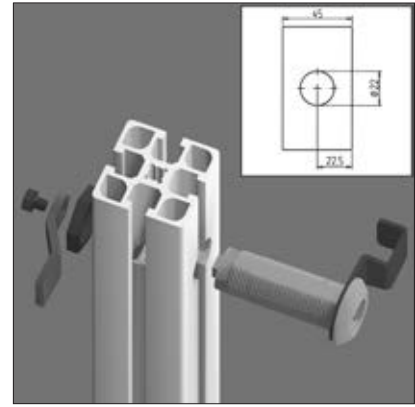
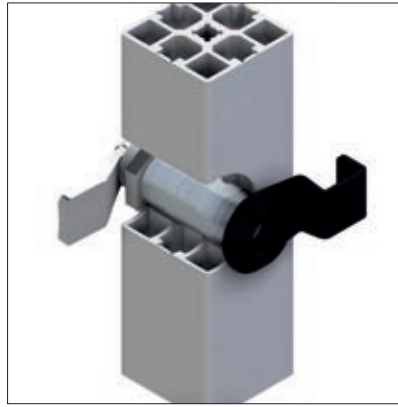
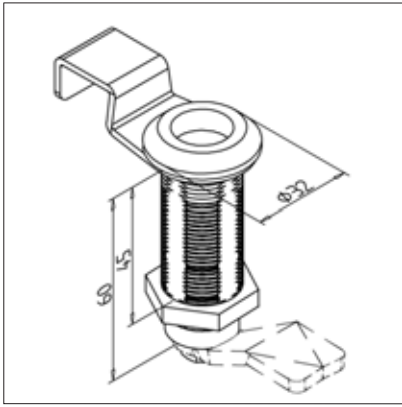
- For profiles 32
- Locking of doors and lids in guard units

ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F part no.. 21.0941/0
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Tighten using front handle from the back side with the fastening nut

Bolt lock 45 socket hex head wrench 10 A/F

Part No. 21.1087/9



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, black
- For Allen wrench SW 10
- With fastening nut steel, galvanized
- With opening bracket, steel, black
- Without locks
- Weight = 0.111 kg/piece

APPLICATIONS

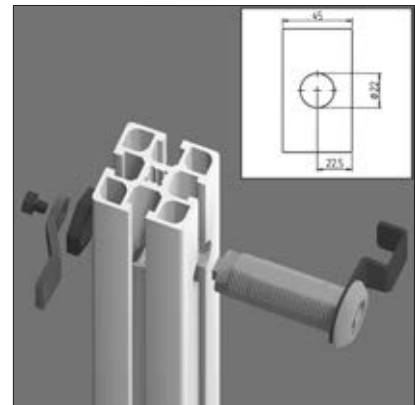
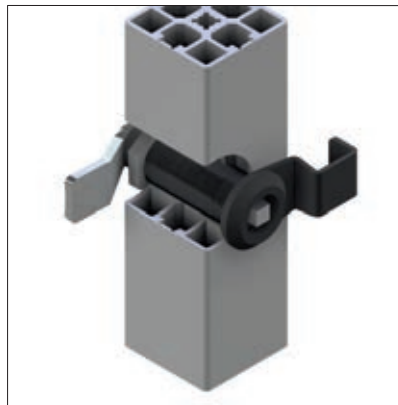
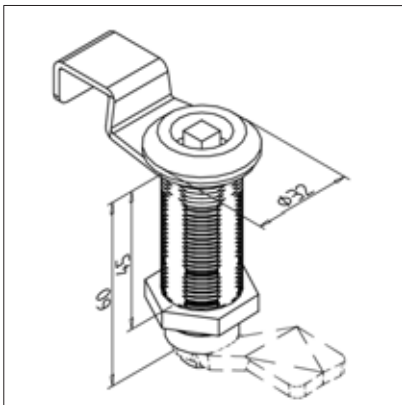
- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F part no.. 21.0941/0
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Tighten using front handle from the back side with the fastening nut

Bolt lock 45 with four-faced key

Part No. 21.1087/7



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, black
- With square box wrench
- With fastening nut steel, galvanized
- With opening bracket, steel, black
- Without locks
- Weight = 0.197 kg/piece

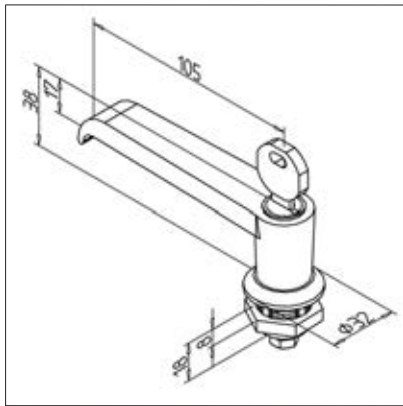
APPLICATIONS

- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F part no.. 21.0941/0
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Tighten using front handle from the back side with the fastening nut

Handle 8 with lock grey



TECHN. DATA / ITEMS SUPPLIED

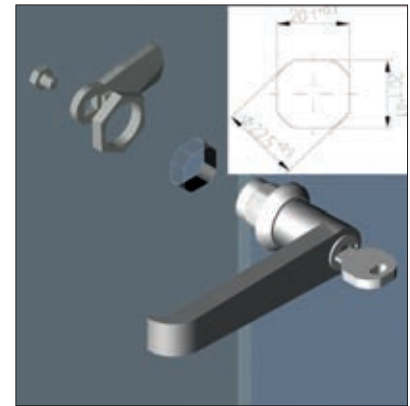
- Handle PA, grey
Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.145 kg/piece



APPLICATIONS

- Locking of doors and lids in guard units
- For surface elements up to 8 mm thickness

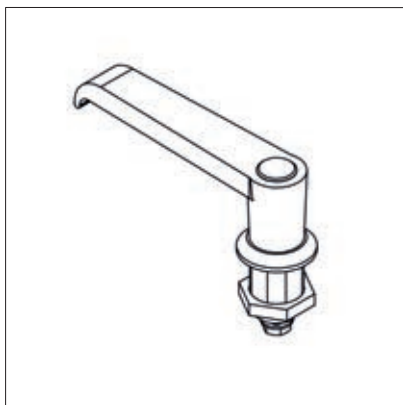
Part No. 21.2305/0



ASSEMBLY

- Drill the bore according to the sketch
- Using a ratchet handle, tighten the fastening nut from behind

Handle 19 without lock black



TECHN. DATA / ITEMS SUPPLIED

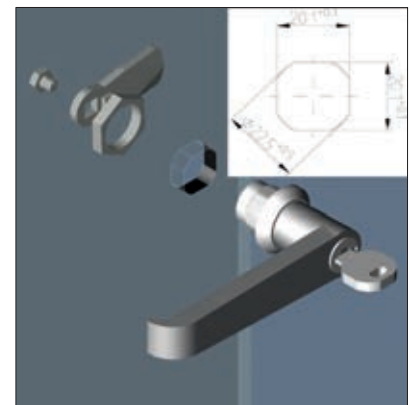
- Zinc, Pressure die-casting
- Handle PA, grey
Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.168 kg/piece



APPLICATIONS

- For profiles 19
- Locking of doors and lids in guard units

Part No. 21.1477/0

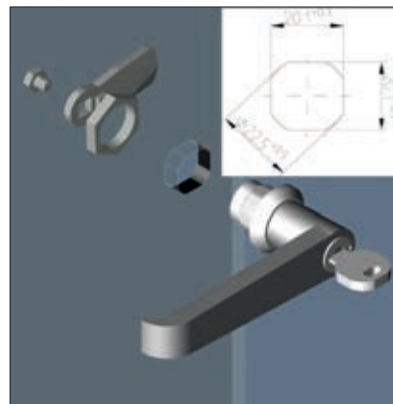
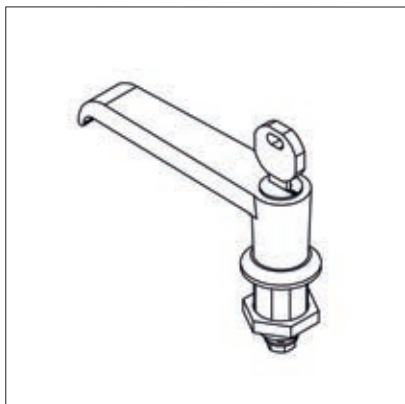


ASSEMBLY

- Drill the bore according to the sketch
- Using a ratchet handle, tighten the fastening nut from behind

Handle 19 with lock grey

Part No. 21.1478/1



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting
- Handle PA, grey
Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.190 kg/piece

APPLICATIONS

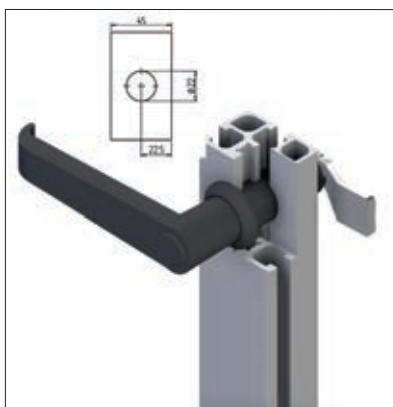
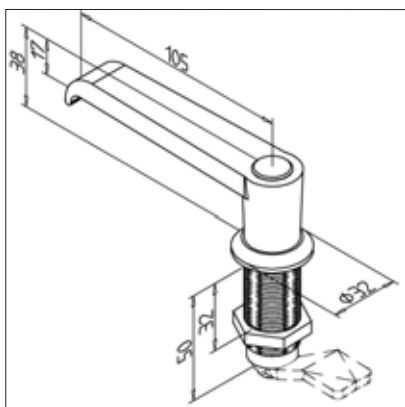
- For profiles 19
- Locking of doors and lids in guard units

ASSEMBLY

- Drill the bore according to the sketch
- Using a ratchet handle, tighten the fastening nut from behind

Handle 32 without lock grey

Part No. 21.1087/4



TECHN. DATA / ITEMS SUPPLIED

- Handle PA, grey
Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- On request also available in black, **part no. 21.1087/2**
- Weight = 0.172 kg/piece

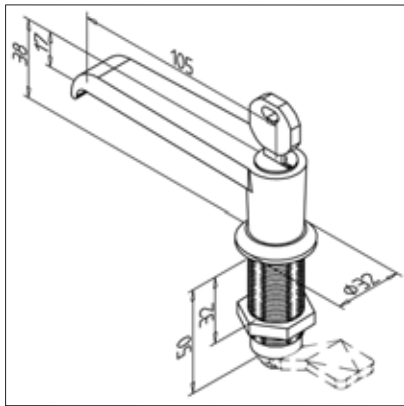
APPLICATIONS

- For profiles 32
- Locking of doors and lids in guard units

ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F **part no.. 21.0941/0**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Using a ratchet handle, tighten the fastening nut from behind

Handle 32 with lock grey



TECHN. DATA / ITEMS SUPPLIED

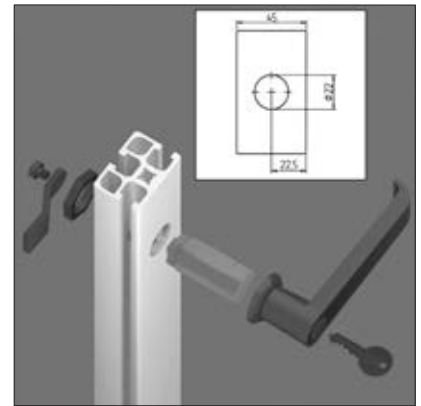
- Handle PA, grey
Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Upon request, available in black, **part no. 21.1091/2**
- Weight = 0.211 kg/piece



APPLICATIONS

- For profiles 32
- Locking of doors and lids in guard units

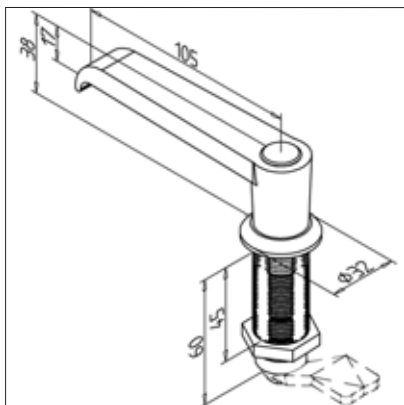
Part No. 21.1091/4



ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F **part no. 21.0941/0**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Using a ratchet handle, tighten the fastening nut from behind

Handle 45 without lock grey



TECHN. DATA / ITEMS SUPPLIED

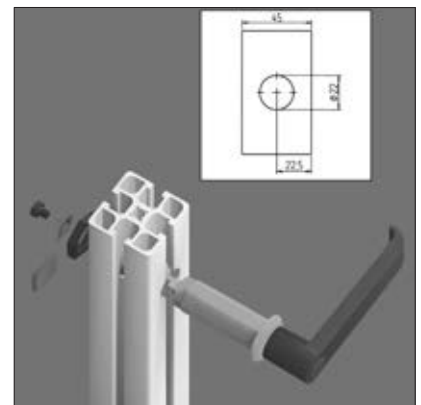
- Handle PA, grey
Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Upon request, available in black, **part no. 21.1087/1**
- Weight = 0.194 kg/piece



APPLICATIONS

- For profiles 45
- Locking of doors and lids in guard units

Part No. 21.1087/3

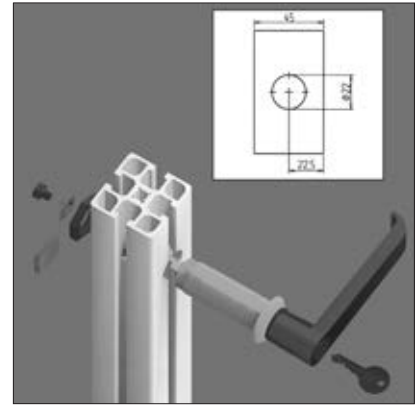
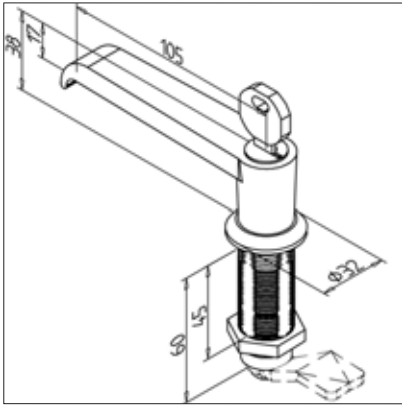


ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F **part no. 21.0941/0**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Using a ratchet handle, tighten the fastening nut from behind

Handle 45 with lock grey

Part No. 21.1091/3



TECHN. DATA / ITEMS SUPPLIED

- Handle PA, grey
Housing DG Zn GD Zn, grey
- With fastening nut steel, galvanized
- Without locks
- Upon request, available in black, **part no. 21.1091/1**
- Weight = 0.230 kg/piece

APPLICATIONS

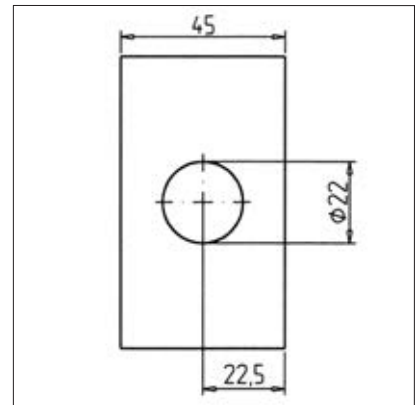
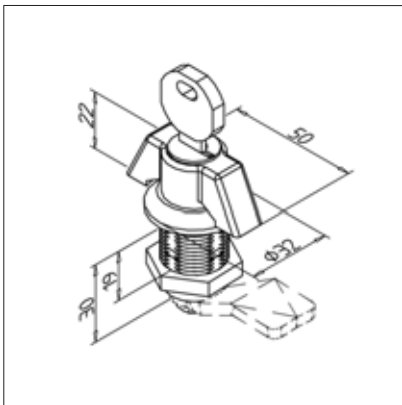
- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F **part no.. 21.0941/0**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Using a ratchet handle, tighten the fastening nut from behind

T-handle 19

Part No. 21.1015/2



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, chromed
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.150 kg/piece

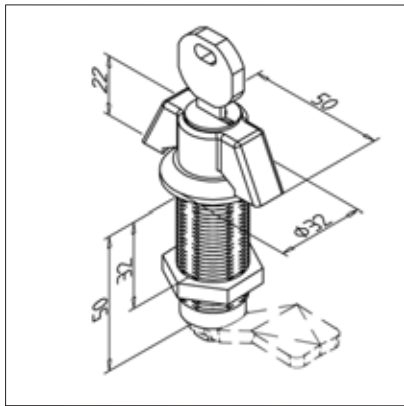
APPLICATIONS

- For profiles 19
- Locking of doors and lids in guard units

ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F **part no.. 21.0941/0**
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Using a ratchet handle, tighten the fastening nut from behind

T-handle 32



TECHN. DATA / ITEMS SUPPLIED

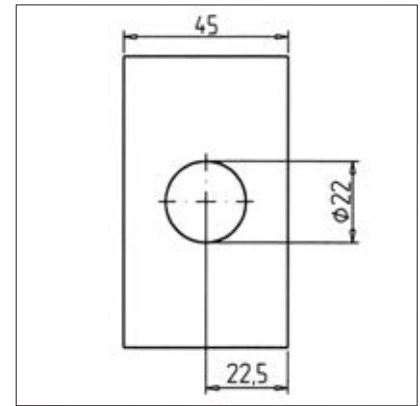
- Zinc, Pressure die-casting, chromed
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.190 kg/piece



APPLICATIONS

- For profiles 32
- Locking of doors and lids in guard units

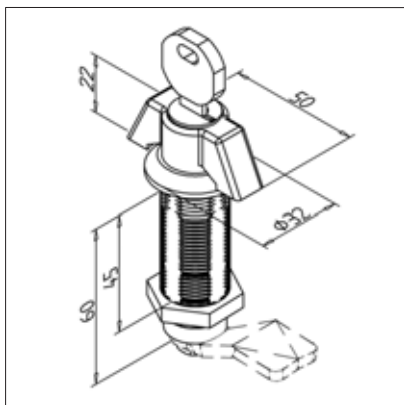
Part No. 21.1015/0



ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F part no.. 21.0941/0
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Using a ratchet handle, tighten the fastening nut from behind

T-handle 45



TECHN. DATA / ITEMS SUPPLIED

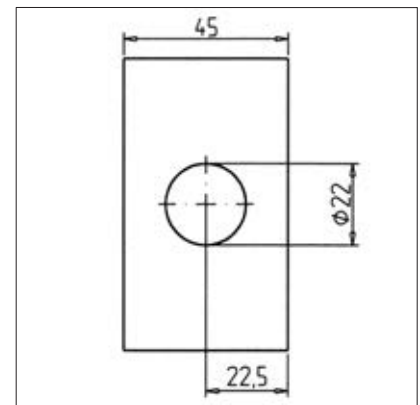
- Zinc, Pressure die-casting, chromed
- With fastening nut steel, galvanized
- Without locks
- Weight = 0.210 kg/piece



APPLICATIONS

- For profiles 45
- Locking of doors and lids in guard units

Part No. 21.1015/1

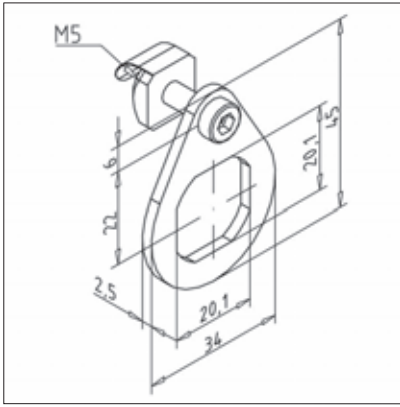


ASSEMBLY

- Drill hole \varnothing 22 mm in the centre of the profile recommended: anti-twist protection F part no.. 21.0941/0
- To ensure the torsion protection, a pocket with SW 20.1 mm can alternatively be milled
- Using a ratchet handle, tighten the fastening nut from behind

Twist protection F

Part No. 21.0941/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- With fastening material steel, zinc plated
- Weight = 0.021 kg/piece

APPLICATIONS

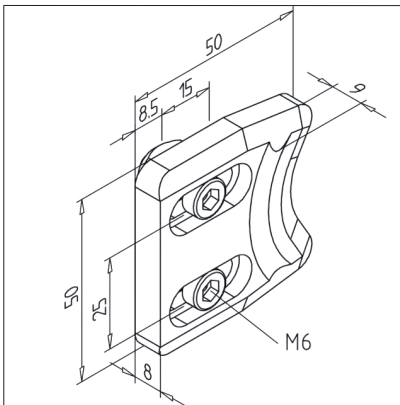
- Secure sash locks, latch handles and toggle handles against self-acting loosening or over-turning
- Specifically intended for use with door stop S, **part no. 21.1767/0**

ASSEMBLY

- Install front handle, T-handle or L-handle as usual, tighten hexagon nut
- Swivel in square nut and mount twist stop
- Install the latch

Door catch S

Part No. 21.1767/0



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, black
- With fastening material steel, zinc plated
- Weight = 0.077 kg/piece

APPLICATIONS

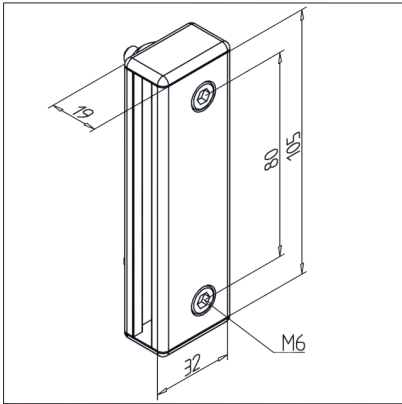
- Stop for doors and hatches
- Specifically suitable in connection with handle, T-handle and bolt lock
- Also door catch

ASSEMBLY

- Fasten to the posts with supplied hardware

Lock plate 19

Part No. 21.1755/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- From profile 19 x 32
- End caps
- With fastening material steel, zinc plated
- Weight = 0.040 kg/piece

APPLICATIONS

- Locking of doors and lids in connection with handles or bolt locks

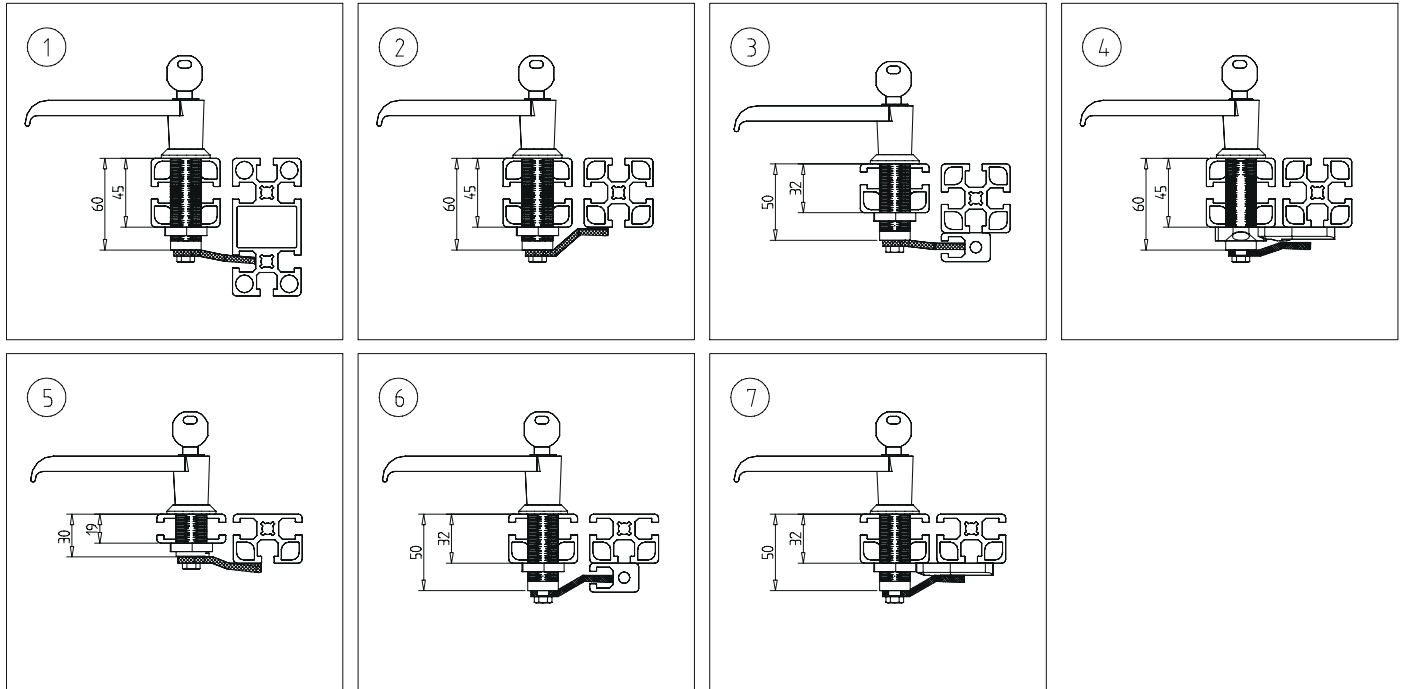
ASSEMBLY

- Fasten to profile groove with supplied hardware

Locks

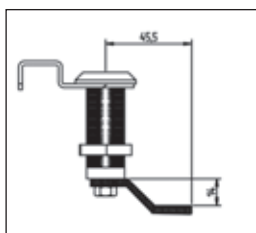
Fitting principles & selection of locks

Fitting principles

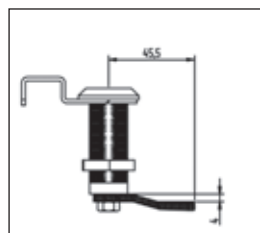


Selection of locks

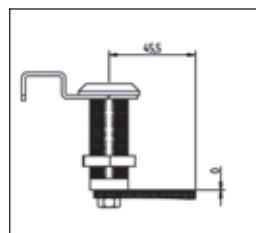
Door profile	Door profile 45 x 45 mm	Door profile 32 x 45 mm	Door profile 19 x 45 mm	Surface element 4-8 mm
	Handle, T-Handle or Bolt lock 45	Handle, T-Handle or Bolt lock 32	Handle, T-Handle or Bolt lock 19	cylinder lock
part no. of locks				
1 - 90 x 45	21.1093/1	21.1093/0	-	21.1093/2
2 - 45 x 45	21.1093/5	21.1093/3	21.1093/4 o. /0	21.1093/2
3 - with catch 19	21.1093/4	21.1093/2	-	-
4 - with door catch S	21.1093/3	21.1093/1	-	-
5 - 32 x 45	-	-	21.1093/1	-
6 - with catch 19	-	21.1093/5	-	21.1093/0
7 - with door catch S	-	21.1093/4	21.1093/0	-



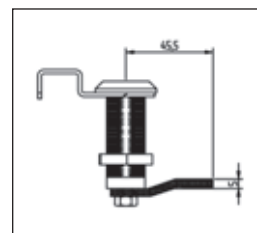
Part no. 21.1093/0



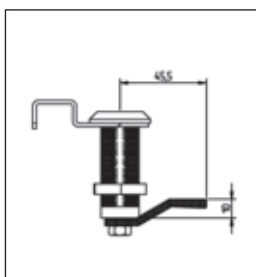
Part no. 21.1093/1



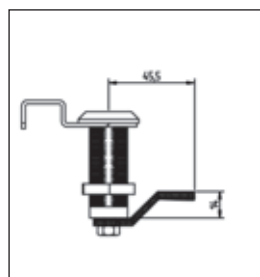
Part no. 21.1093/2



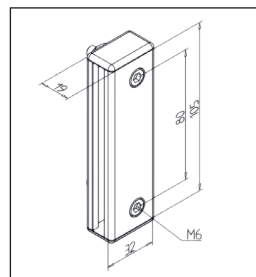
Part no. 21.1093/3



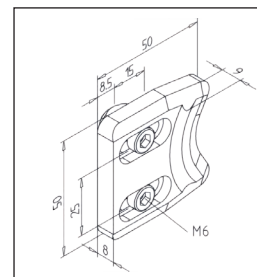
Part no. 21.1093/4



Part no. 21.1093/5



Part no. 21.1755/0



Part no. 21.1767/0

Rotary rod lock

One or two sided locking

Items Supplied

- Bolt lock, steel, black with square key
- Guiding element, steel, galvanized
- Latch with rollers (l = 1100 mm), steel, galvanized
- Rod guide, plastic, black with injected nut M6

Application

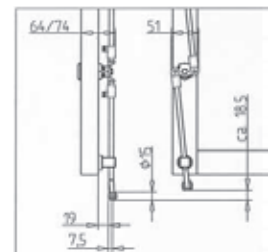
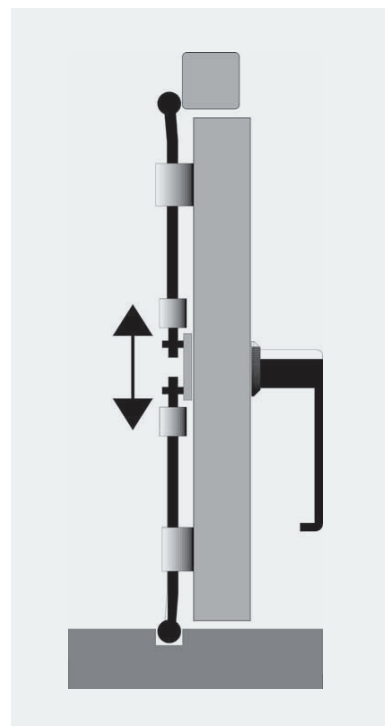
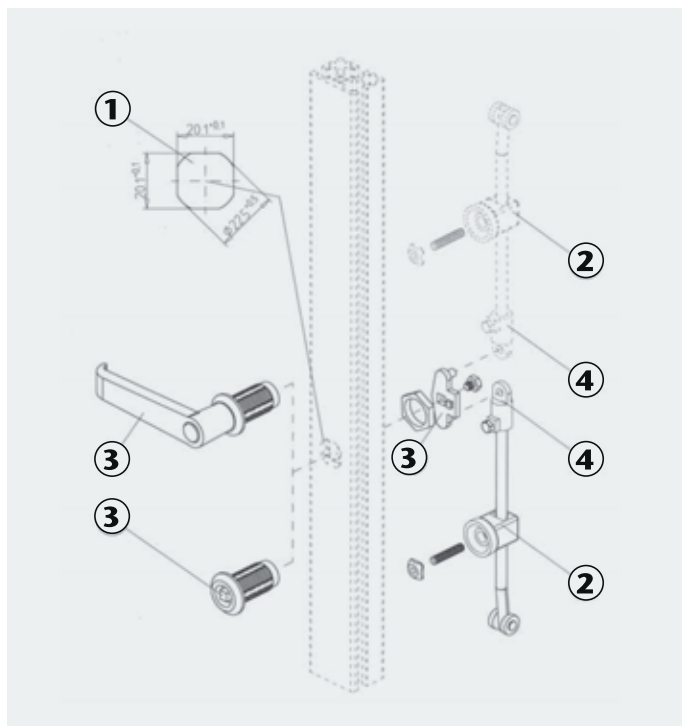
- For locking doors at upper or lower beam
- Use 2 rods for 2-sided locking
- Order bolt lock, handle without lock or handle with cylinder lock
- Especially suited for control boxes or double-sided doors

Optional

- Handle with or without lock

AVAILABLE VERSIONS

Profile	Bolt lock		Lever handle without cylinder lock		Handle with cylinder lock	
	1 rod	2 rods	1 rod	2 rods	1 rod	2 rods
32 x 45	21.1798/0	21.1798/2	21.1798/3	21.1798/4	21.1798/5	21.1798/6
45 x 45	21.1788/0	21.1788/2	21.1788/3	21.1788/4	21.1788/5	21.1788/6



Assembly

1. Insert square recess in vertical door profile
2. Screw in setscrew M6 x 30 in rod guide, screw nut loose onto threaded pin, insert sliding nut in groove and tighten rod guide to position
3. Tighten tongue with cam or handle
4. Insert the ramp in the rod guide and fix it to the tongue

Rod lock with lock latch

21.1490/0

Items Supplied

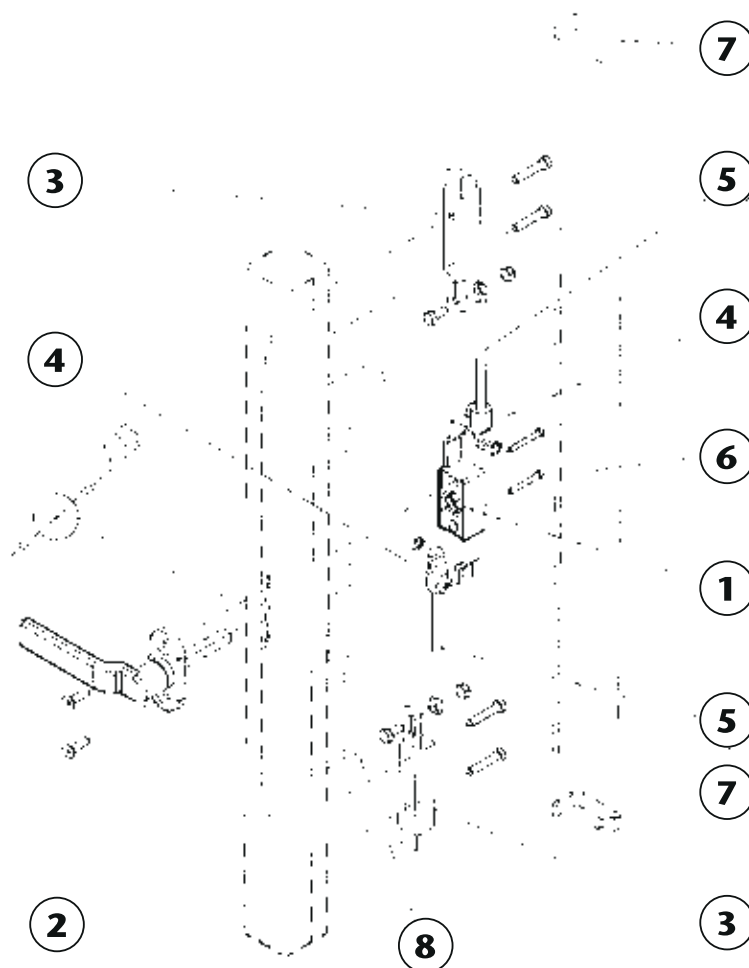
1. Rod lock insert
2. Handle
3. Lock latch (2 pieces)
4. Adapter for round bars
5. Round bar with eye (Lmax = 1200) (2 pieces)

Optional

Cable duct 45 AL part no. 20.1071/0

Protective cap cable duct 45 part no. 22.1117/1

Cable clip 45 part no. 22.1210/0

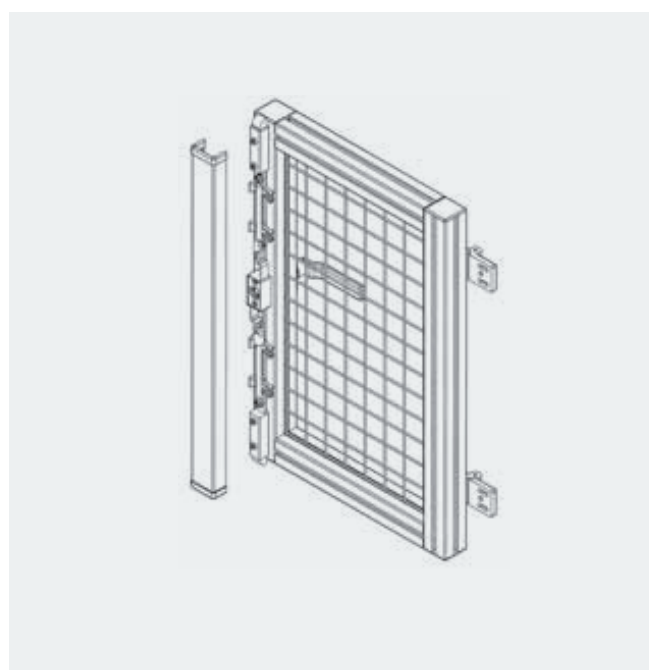


Application

- For closing doors on the upper or lower cross member
- Suitable for doors in racks
- Max. door height 2750 mm

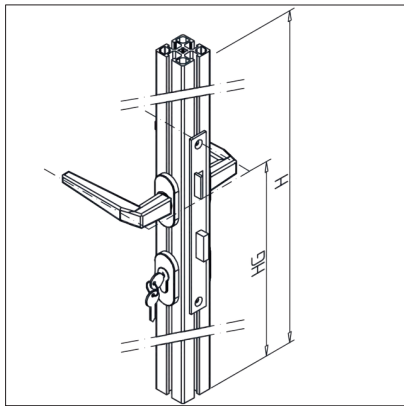
Assembly

- Insert hole \varnothing 13 mm in vertical door profile
- Attach the bar lock insert and lock latch with sliding nuts to the door profile
- Shorten the round bars to the appropriate size and connect with lock latch and bar lock insert
- Insert and fix the handle with square edging
- Adjust lock latch



→ Optional:
Rod cover with cable duct

Door lock



TECHN. DATA / ITEMS SUPPLIED

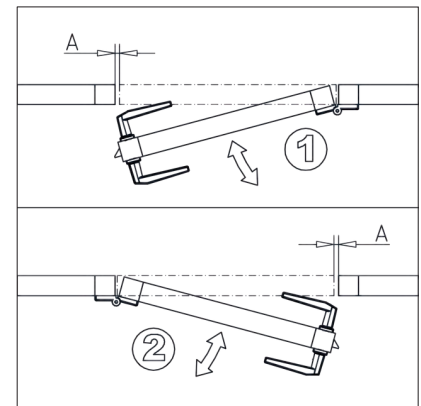
- Door Lock steel, zinc-plated, fitted in profile 45x45
- Fittings aluminum, anodized
- Profile cylinder with 3 keys, mounted
- **Standard design:** H = 2000mm
HG = 1000mm
- **Other lengths and profiles on request**
- **Please specify dimension H and HG level**
- **Please specify a version 1 or 2**
- Construction set without profile **part no. 21.1748/2**



APPLICATIONS

- Swing doors for guard units
- Other embodiments and profiles on request, for example, G - sided profile with fixed knob but without lock mounting

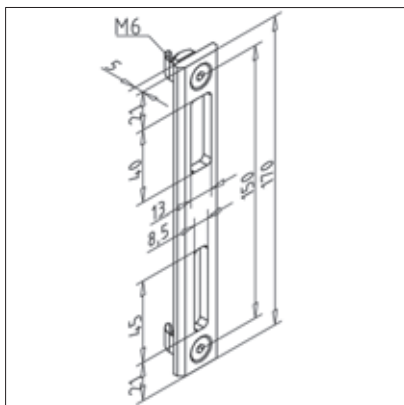
Part No. 21.1748/0



ASSEMBLY

- Allow 5mm space between door and frame
- Using lock plate **part no. 21.0966/0** with 10 mm gap
- Closing wedge engages in opposite groove
- If possible, position cross braces outside the lock area or screw in with countersunk screw M8 x 25

Lock plate for door lock



TECHN. DATA / ITEMS SUPPLIED

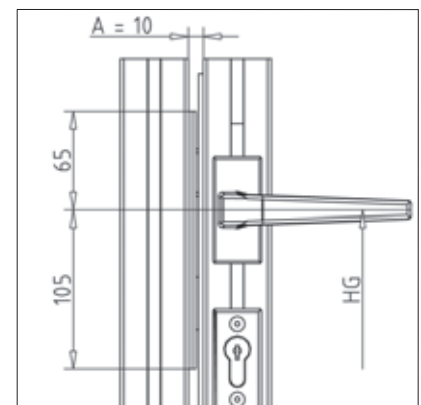
- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.061 kg/piece



APPLICATIONS

- To be used in conjunction with door lock **part no. 21.1748/0**
- No post processing on the profile groove of the door post required

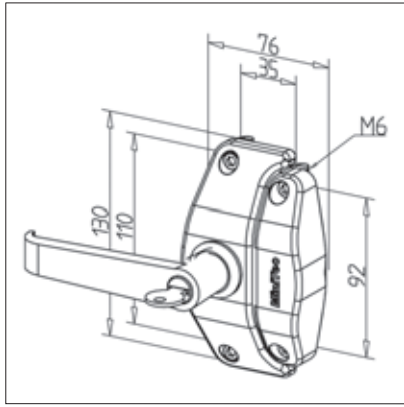
Part No. 21.0966/0



ASSEMBLY

- Fasten to profile groove with supplied hardware
- Door gap at lock 10 mm

Rotary lock 30



TECHN. DATA / ITEMS SUPPLIED

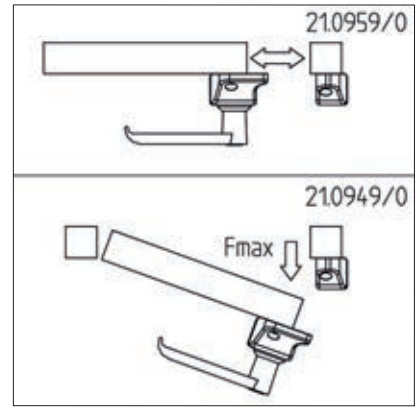
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Mounted handle: see **part no. 21.2305/0**
- Fmax. 1000 N
- Weight = 0.432 kg/piece



APPLICATIONS

- Rotary Lock 30 for swing doors: **part no. 21.0949/0**
- Sliding door lock 30 for sliding doors: **part no. 21.0959/0**
- For profiles series 30
- Locking of doors and panels
- No profile finishing required
- Position moveable

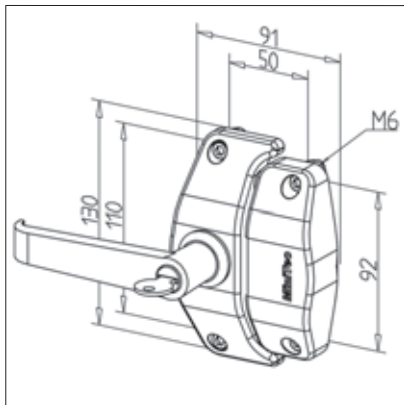
Part No. 21.0949/0



ASSEMBLY

- Fasten to profile groove with supplied hardware
- Fastening on profile groove - without processing/boring of profiles

Rotary lock 45



TECHN. DATA / ITEMS SUPPLIED

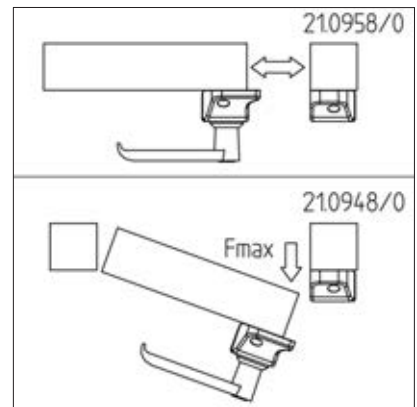
- With fastening material steel, zinc plated
- Mounted handle: see **part no. 21.2305/0**
- Fmax. 2200 N
- Weight = 0.476 kg/piece



APPLICATIONS

- Rotary lock 45 for swivel doors: **part no. 21.0948/0**
- Sliding door lock 45 for sliding doors **part no. 21.0958/0**
- Locking of doors and panels
- No profile finishing required
- Position moveable

Part No. 21.0948/0

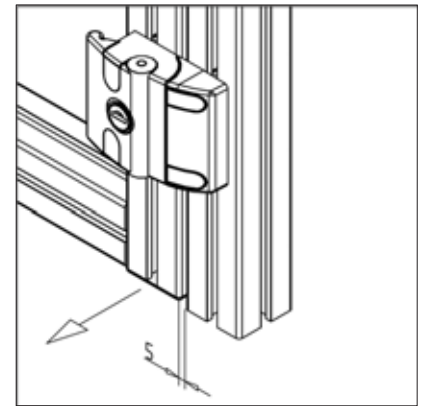
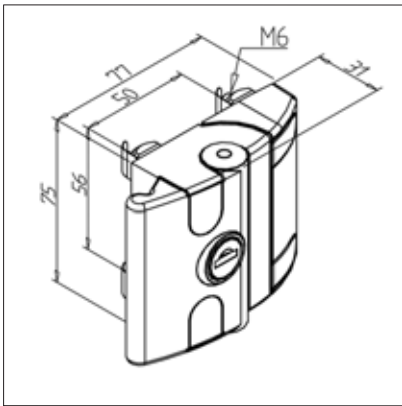


ASSEMBLY

- Fasten to profile groove with supplied hardware
- Fastening on profile groove - without processing/boring of profiles
- No separate door stop required

Trunk lock compact

Part No. 21.2311/0



TECHN. DATA / ITEMS SUPPLIED

- Zinc, Pressure die-casting, powder-coated, black
- With fastening material steel, zinc plated
- Locking cylinder with two keys
- Weight = 0.255 kg/piece

APPLICATIONS

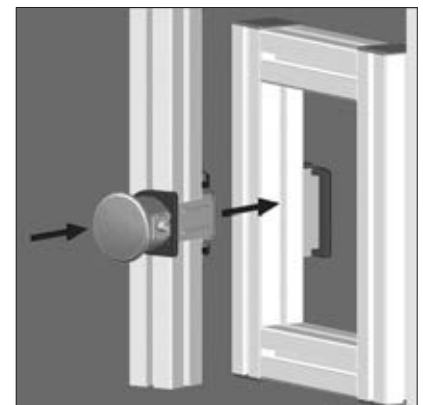
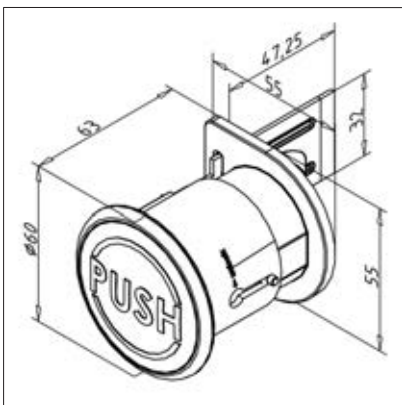
- Locking and securing of doors and panels in protective housings
- Door stop at the same time
- Also suitable for frameless doors
- Closed trunk can not be removed

ASSEMBLY

- Mount the latch lock to the door and posts and fit the screw cover
- No machining of the profile is necessary for assembly
- Due to elongated holes, the screw spacing is variably adjustable from min. 38 mm to max. 58 mm, therefore the door gap can be adjusted accordingly

Emergency release for rim latch lock

Part No. 21.2316/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic / steel zinc plated
- Fastening kit
- Weight = 0.123 kg/piece

APPLICATIONS

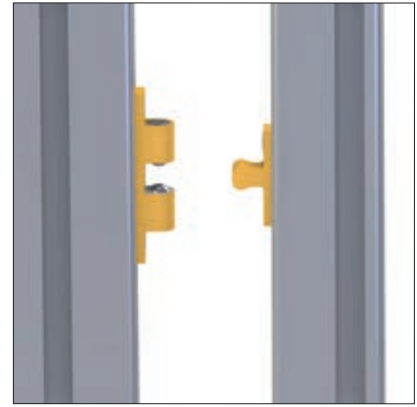
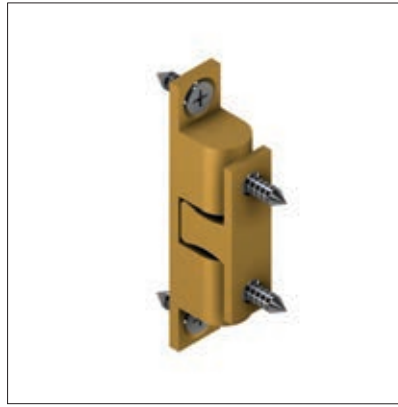
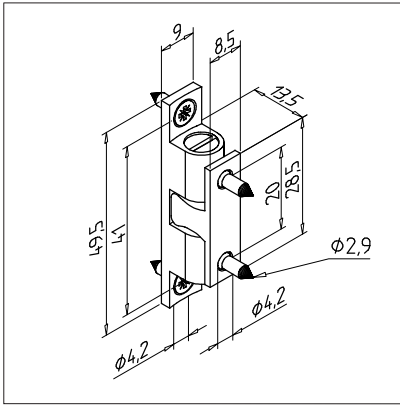
- Assembly in connection with our trunk lock **part no. 21.2311/0** or trunk lock with request **part no. 21.2323/0**
- To open the door from the inside, on the outside lock attached
- Also works with closed latch lock
- When emergency release is snapped into place, closure of door is prevented

ASSEMBLY

- Fasten with supplied hardware on the back of the post

Ball latch 50

Part No. 21.1763/0



TECHN. DATA / ITEMS SUPPLIED

- Brass
- With fastening material steel, zinc plated
- Holding force approx. 10 N
- Weight = 0.030 kg/piece

APPLICATIONS

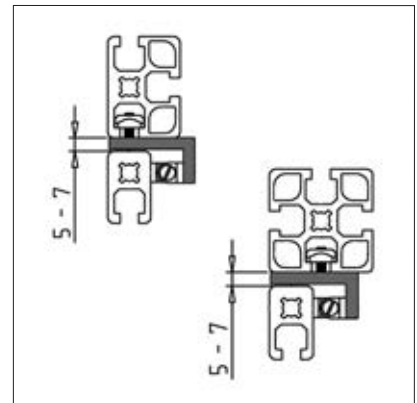
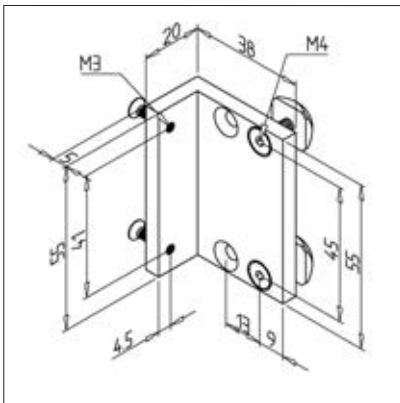
- Stop and catch for sliding doors, swing doors, lids
- Ball latch 50 suitable for T-slots of reworked profiles. Allows gap-free closing of sliding doors
- Doors, lids, removable surface elements

ASSEMBLY

- Use fastening kit to fix the ball latch on any surface
- If applicable, use carrier for catch-bearing 50 **part no. 21.1139/0**

Ball latch support 50

Part No. 21.1139/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.050 kg/piece

APPLICATIONS

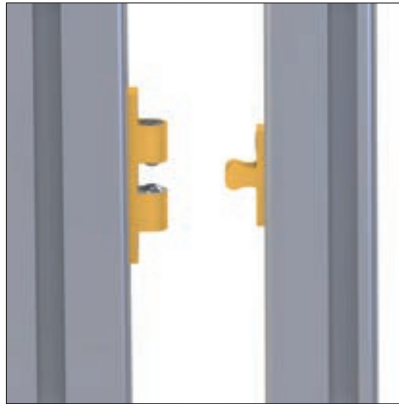
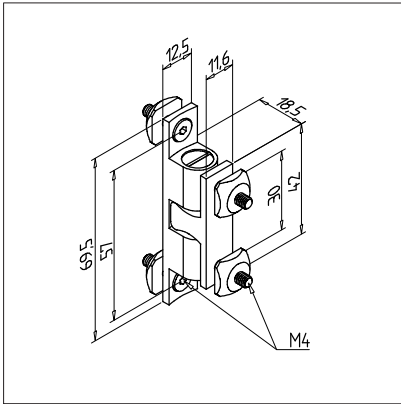
- Mounting of ball catch 50 in doors, hatches
- Removable surface elements
- Door stop at the same time

ASSEMBLY

- Screw tight to the profile groove with supplied hardware

Ball latch 70

Part No. 21.1757/0



TECHN. DATA / ITEMS SUPPLIED

- Brass
- With fastening material steel, zinc plated
- Holding force approx. 70 N
- For use on vertical struts, ball latch **part no.21.1757/2** (square nuts with position-fixing)
- Weight = 0.095 kg/piece

APPLICATIONS

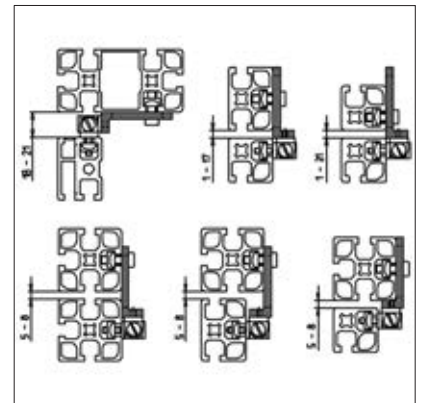
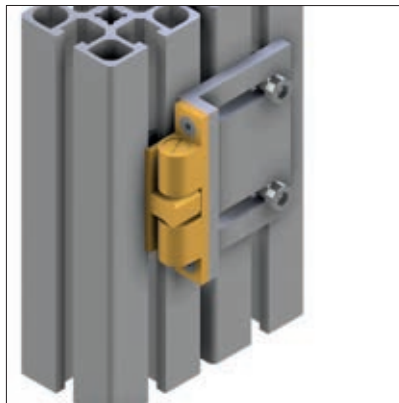
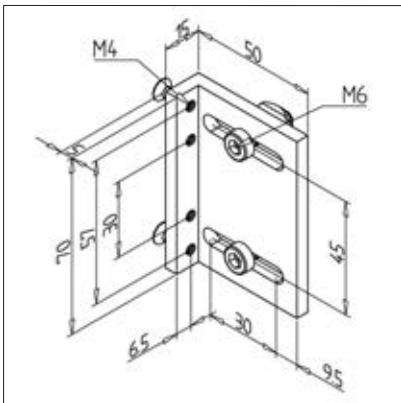
- Fastening easily removable surface elements
- Stop and catch for sliding doors, swing doors, lids

ASSEMBLY

- Fasten to profile groove with supplied hardware
- If applicable, use carrier for catch-bearing 70 **part no. 21.1137/0**

Ball latch support 70

Part No. 21.1137/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- For use on vertical struts, ball latch **part no.21.1137/7** (square nuts with position-fixing)
- Weight = 0.050 kg/piece

APPLICATIONS

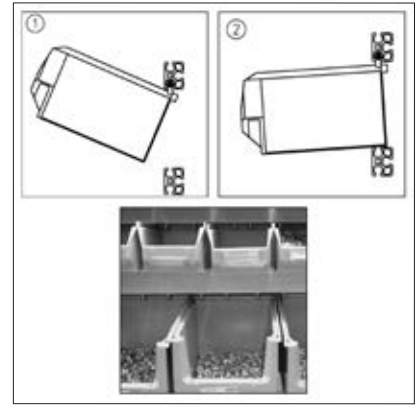
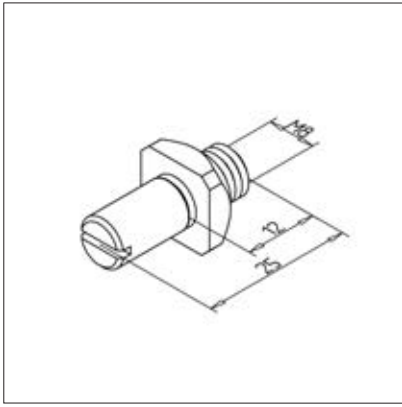
- Mounting of ball catch 70 in doors, hatches, removable surface elements
- Door stop at the same time
- Shorten the carrier when using profile 32

ASSEMBLY

- Screw tight to the profile groove with supplied hardware

Snap bolt 25

Part No. 21.1758/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Stainless version **part no. 21.1758/1**
- Weight = 0.012 kg/piece

APPLICATIONS

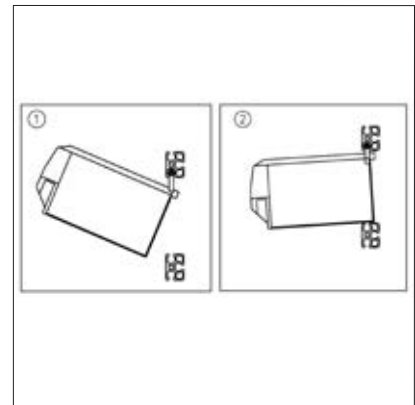
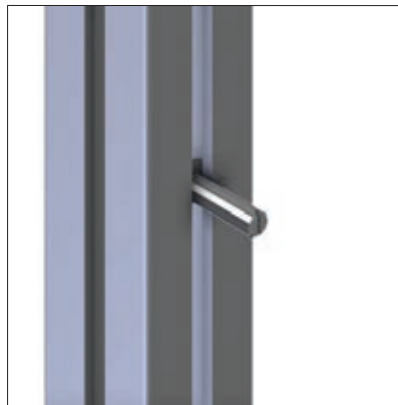
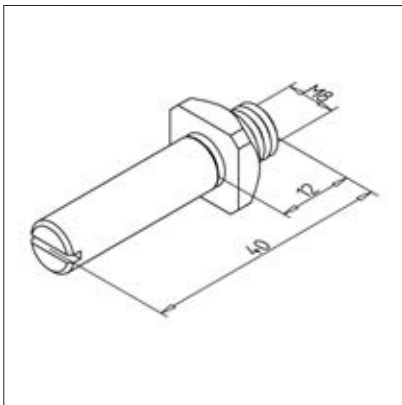
- Holder of grab containers, oddment boxes
- Support plates

ASSEMBLY

- Tighten in profile groove with sliding nut

Snap bolt 40

Part No. 21.1760/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Weight = 0.020 kg/piece

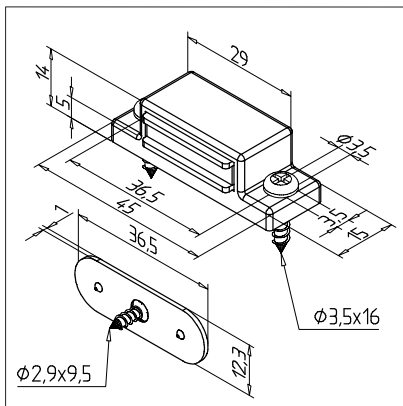
APPLICATIONS

- Holder of grab containers, oddment boxes
- Support plates

ASSEMBLY

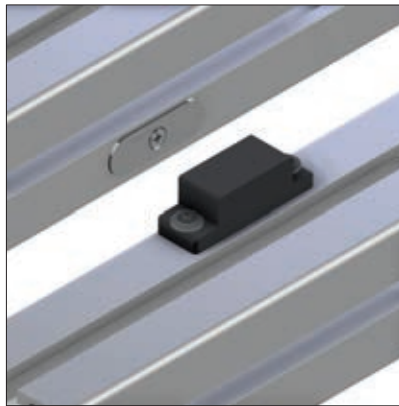
- Tighten in profile groove with sliding nut

Magnetic catch



TECHN. DATA / ITEMS SUPPLIED

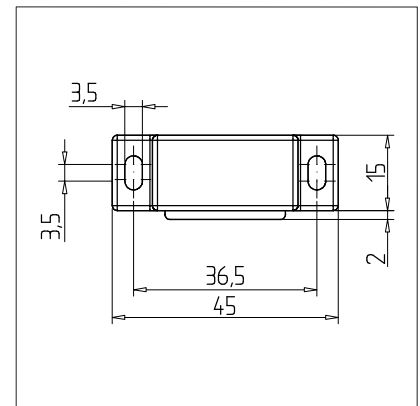
- PA, black
- Holding plate, steel, zinc plated
- With fastening material steel, zinc plated
- Holding force: 20 N
- Weight = 0.021 kg/piece



APPLICATIONS

- Stop and quick-release of swing doors
- Fastening of light surface elements

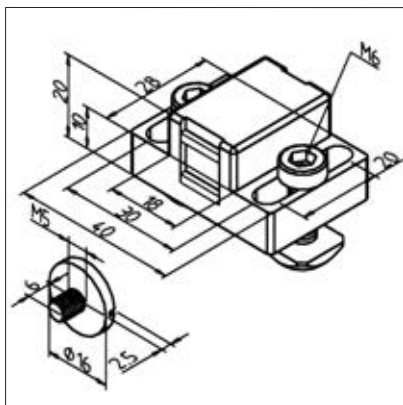
Part No. 21.1753/0



ASSEMBLY

- Fasten with fixing material to profile panel

Magnetic catch N



TECHN. DATA / ITEMS SUPPLIED

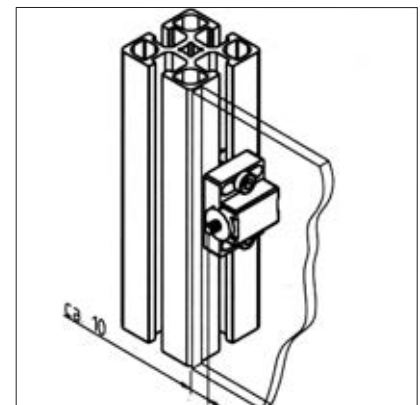
- PA, grey
- Holding plate, steel, zinc plated
- With fastening material steel, zinc plated
- Holding force approx. 30 N
- For use on vertical struts, magnetic catch **part no. 21.1741/5** (square nuts with position-fixing)
- Weight = 0.060 kg/piece



APPLICATIONS

- Stop and quick-release of swing doors
- Fastening of light surface elements

Part No. 21.1741/0

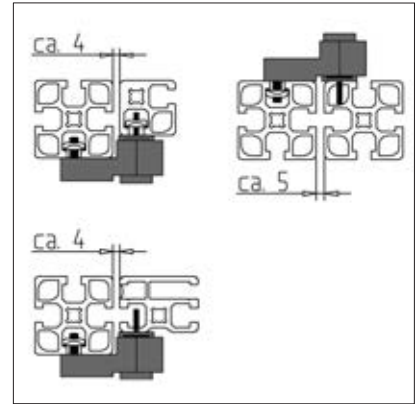
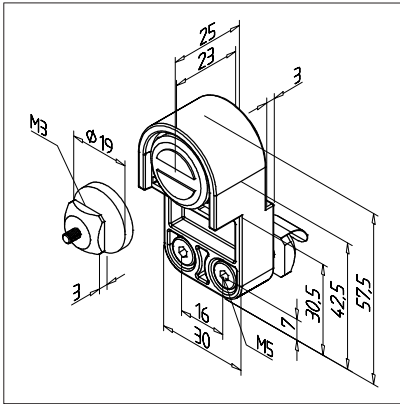


ASSEMBLY

- Fasten with fixing material to profile groove
- Fit striker plate directly on profile surface or surface element; to do so cut thread M5

Magnetic catch S

Part No. 21.0888/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Holder plate steel, burnished
- With fastening material steel, zinc plated
- Holding force approx. 70 N
- Weight = 0.075 kg/piece

APPLICATIONS

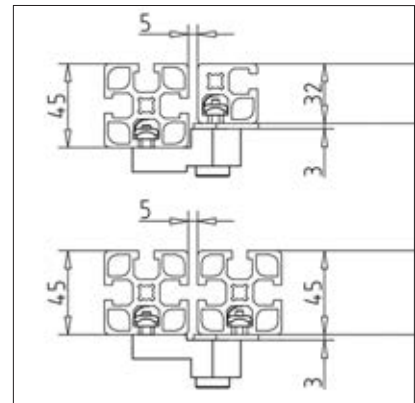
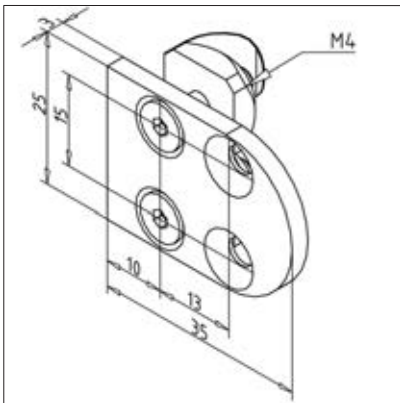
- Stop and quick-release of swing doors
- Fastening of light surface elements

ASSEMBLY

- Fasten with fixing material to profile groove
- Fit retaining plate with fastening kit in profile groove or directly on profile surface; to do so, cut thread M3

Magnetic plate S

Part No. 21.2308/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.031 kg/piece

APPLICATIONS

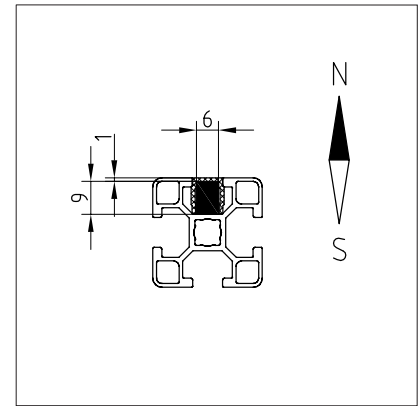
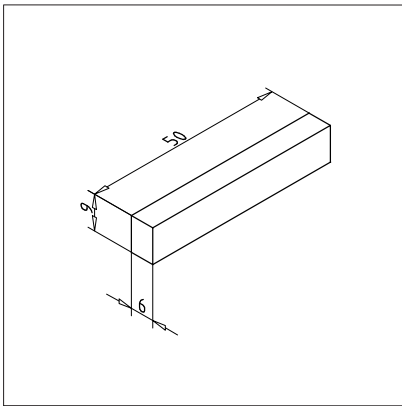
- For magnetic catch S part no. 21.0888/0

ASSEMBLY

- Fasten on profile groove
- No drilling required

Magnet 6 x 9 x 50 mm

Part No. 21.0040/0



TECHN. DATA / ITEMS SUPPLIED

- NeFeB N45, nickel-plated
- Without fastening kit
- Attention: Electric- and memory devices can be faulted by the magnet
- Power density, $BH_{mx} = 342 \text{ kJ/m}^3$
- Remanence, $B_r = 1320 \text{ mT}$
- Coercive field strength $H_{cj} = 955 \text{ kA/m}$
- Max. service temperature $+80 \text{ }^\circ\text{C}$
- Weight = 0.023 kg/piece

APPLICATIONS

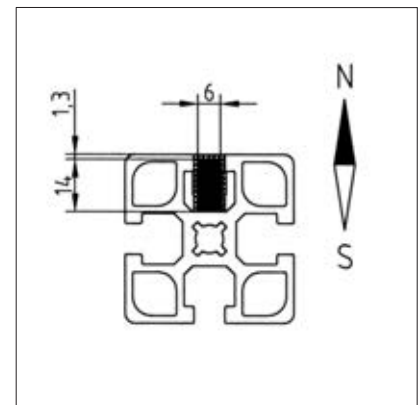
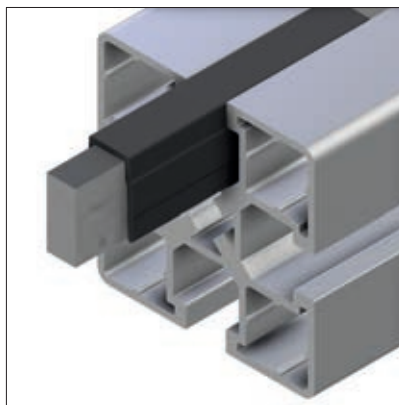
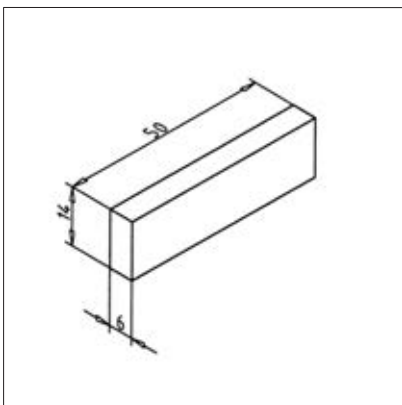
- Adhesive magnet for tools
- Use under conveyor belts as tracking, for magnetizable conveying products or at higher conveying speeds
- Fitting for all profiles of profile series 30

ASSEMBLY

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mighty recommended) Use end cap AL, set screw with square nut or t-slot bar

Magnet 6 x 14 x 50 mm

Part No. 21.0032/0



TECHN. DATA / ITEMS SUPPLIED

- NeFeB N35, nickel-plated
- Without fastening kit
- Attention: Electric- and memory devices can be faulted by the magnet
- Power density, $BH_{mx} = 263 \text{ kJ/m}^3$
- Remanence, $B_r = 1170 \text{ mT}$
- Coercive field strength $H_{cj} = 955 \text{ kA/m}$
- Max. service temperature $+80 \text{ }^\circ\text{C}$
- Weight = 0.030 kg/piece

APPLICATIONS

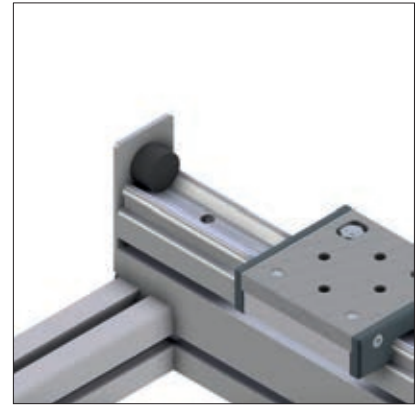
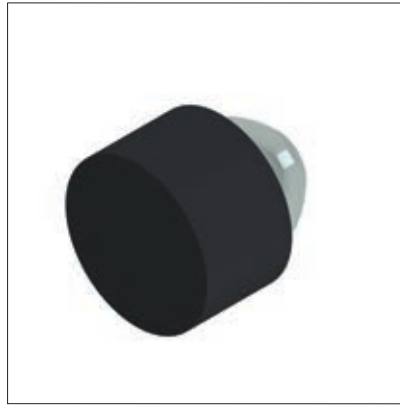
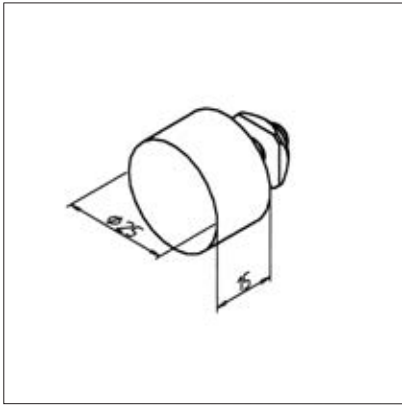
- Adhesive magnet for tools
- Use under conveyor belts as tracking, for magnetizable conveying products or at higher conveying speeds
- Fitting for all profiles of profile series 45

ASSEMBLY

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mighty recommended) Use end cap AL, set screw with square nut or t-slot bar

Stopper 25

Part No. 21.1759/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- With fastening material steel, zinc plated
- With sliding nut M6
- Weight = 0.020 kg/piece

APPLICATIONS

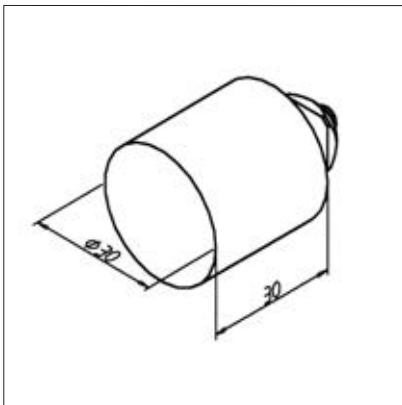
- Stop for doors, linear guides

ASSEMBLY

- Fix with square nut M6 in profile groove

Stopper 30

Part No. 21.1759/1



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- With fastening nut steel, galvanized
- With sliding nut M8
- Weight = 0.060 kg/piece

APPLICATIONS

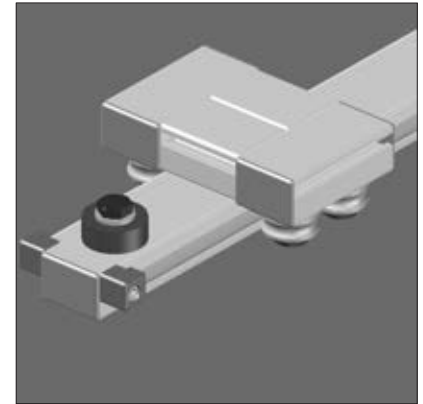
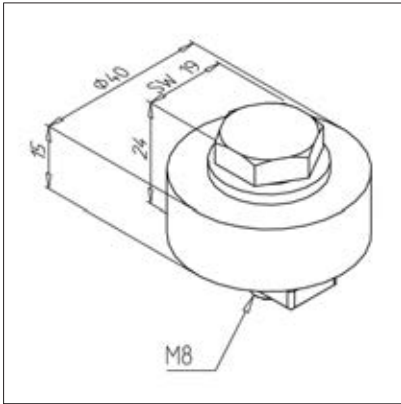
- Stop for heavy doors, long guides

ASSEMBLY

- Fix with square nut M6 in profile groove

Stopper 40

Part No. 21.2301/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Fixation screw steel, burnished
Nut and washer steel, galvanised
- With sliding nut M8
- Weight = 0.055 kg/piece

APPLICATIONS

- Stop for heavy doors, long guides

ASSEMBLY

- Fix with square nut M6 in profile groove

BASE PLATES

CONNECTING PLATE 30 x 60



Items Supplied

- Aluminium, powder coated, grey
- With fastening material

Application

- Fixing of articulated feet and castors on profiles 30x60

Assembly

- Fix on the end face of the profile using fastening material supplied

Thread	Strength	Weight	Part no.
M8	15 mm	0,085 kg	21.2114/0
M10	15 mm	0,084 kg	21.2115/0
M12	15 mm	0,082 kg	21.2116/0

CONNECTING PLATE 90 x 32



Items supplied

- Aluminium, powder coated, grey
- With fastening material

Application

- Fixing of articulated feet to profiles 90x32 UL

Assembly

- Fix on the end face of the profile using fastening material supplied

Thread	Thickness	Weight	Part no.
M8	15 mm	0,164 kg	21.1356/0
M10	15 mm	0,162 kg	21.1357/0
M12	15 mm	0,160 kg	21.1358/0

CONNECTING PLATE 45 x 90



Items supplied

- Aluminium, powder coated, grey
- With fastening material

Application

- Fixing of articulated feet and castors on profiles 45x90

Assembly

- Fix on the end face of the profile using fastening material supplied

Thread	Thickness	Weight	Part no.
M10	15 mm	0,164 kg	21.1038/0
M12	15 mm	0,162 kg	21.1039/0
M16	15 mm	0,160 kg	21.1040/0
M20	15 mm	0,156 kg	21.1047/0

BASE PLATES

CONNECTING PLATE 90 x 90



Items supplied

- Aluminium, powder coated, grey
- With fastening material

Application

- Fixing of articulated feet and castors on profiles 90x90

Assembly

- Fix on the end face of the profile using fastening material supplied

Thread	Thickness	Weight	Part no.
M10	15 mm	0,332 kg	21.1041/0
M12	15 mm	0,330 kg	21.1042/0
M16	15 mm	0,345 kg	21.1043/0
M20	15 mm	0,290 kg	21.1057/0

CONNECTING PLATE 90 R 90°



Items supplied

- Aluminium, powder coated, grey
- With fastening material

Application

- Fixing of articulated feet and castors on profiles 90R90°

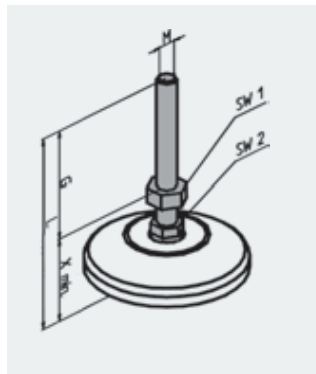
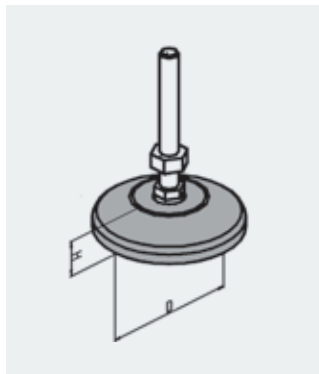
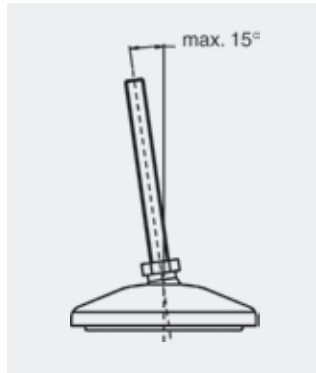
Assembly

- Fix on the end face of the profile using fastening material supplied

Thread	Thickness	Weight	Part no.
M10	15 mm	0,277 kg	21.0009/0
M12	15 mm	0,275 kg	21.0010/0
M16	15 mm	0,272 kg	21.0011/0
M20	15 mm	0,268 kg	21.0012/0

Articulated feet

Hinged feet PA



Items supplied

- Plate PA, grey
- Anti slip insert NBR
- Spindle steel, galvanized
- Lock nut steel, galvanized
- All spindles fit all plates

Application

- Height adjustable constructions of all kinds
- Protective devices, tables, showcases
- Conveyors, system workstations

Assembly

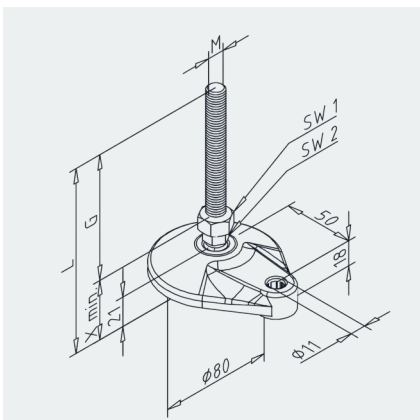
- Direct in central hole of the profiles (depending on profile cross-section, can be enlarged up to thread M12)
- Larger thread in combination with base plate
- For profiles size 45 x 90 and 90 x 90, a base plate is required if the feet are positioned centrally

Spindle	Plate			
	Ø 30	Ø 45	Ø 60	Ø 80
M8		21.1871/0	21.1881/0	21.1891/0
M10	21.1851/0	21.1872/0	21.1882/0	21.1892/0
M12	21.1852/0	21.1873/0	21.1883/0	21.1893/0
M16	-	21.1874/0	21.1884/0	21.1894/0

Ø mm	Plate	
	H mm	Load capacity
30	20	300 kg
45	20	500 kg
60	20	1000 kg
80	20	1000 kg

Spindle					
M	G	X	SW1	SW2	L
8	33,5	38,5	13	14	72,5
10	42	40,5	17	14	82,5
12	90	42,5	19	14	132,5
16	107	45,5	24	17	152,5

Hinged feet PA with mounting hole

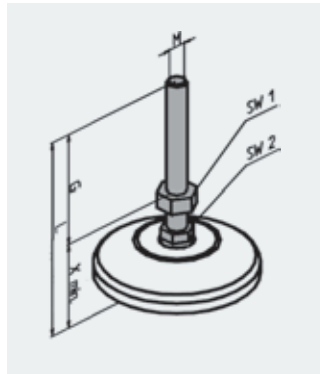
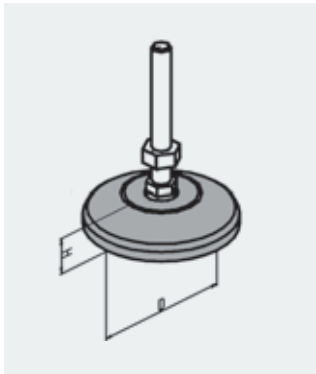
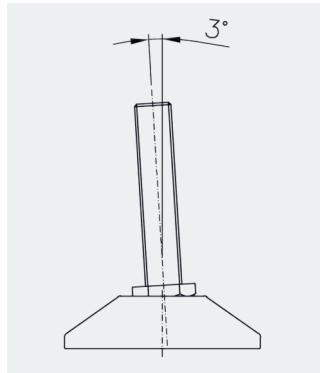


Items supplied

- Plate PA, grey
- Spindle steel, galvanized
- Lock nut steel, galvanized
- Anti slip insert NBR
- Load capacity: 1000 kg

Part no.	Color	M	G	X	SW1	SW2	L
21.2510/0	grey	08	33,5	39	13	14	72,5
21.2511/0	grey	10	42	40,5	17	14	82,5
21.2512/0	grey	12	90	42,5	19	14	132,5
21.2513/0	grey	16	107	45,5	24	17	152,5

Hinged feet GD



Items Supplied

- Plate die-cast aluminium powder-coated, grey
- Anti slip insert NBR
- Spindle Steel, galvanized
- Lock nut steel, galvanized
- All spindles fit all plates

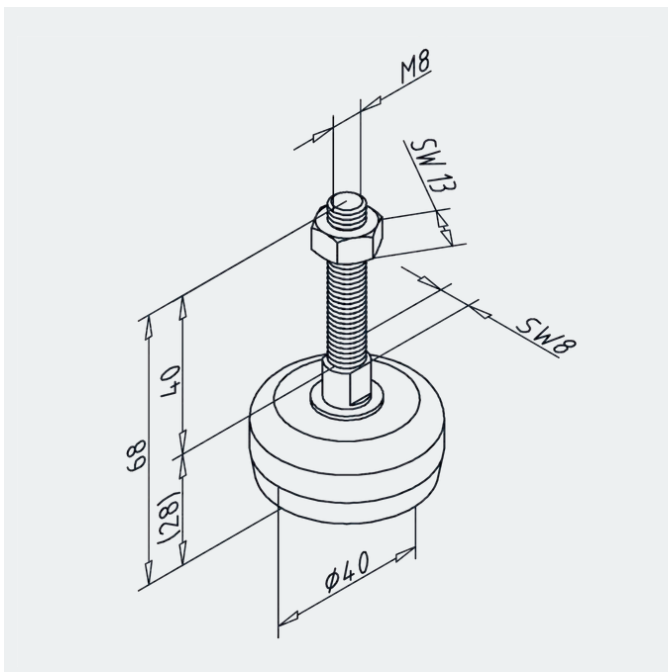
Spindle	Plate	
	Ø 45	Ø 90
M10	21.1842/0	21.1862/0
M12	21.1843/0	21.1863/0
M16	21.1844/0	21.1864/0

Plate		
D mm	H mm	Load capacity
45	25	3000 kg
90	27	4000 kg

Spindle					
M	G	X	SW1	SW2	L
10	52,6	37,5	17	17	89,5
12	50,5	41	19	19	91,2
16	68	45,6	24	24	112,6

Foot SST

Part no. 21.2053/0



Items Supplied

- Plate Steel, VA
- Spindle insert steel VA
- Lock nut steel, VA
- Load capacity: 750 kg

Application

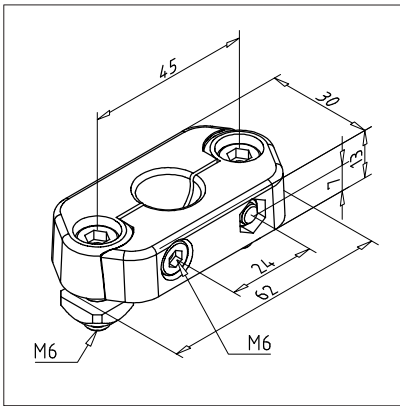
- Height adjustable constructions of all kinds
- Protective equipment, tables, showcases
- Conveyors, system workstations

Assembly

- Directly in central bore of the profiles, also in VA profile
Cut thread M8,
Mold in aluminum profile thread M8

Clip - block for ball head

Part No. 22.1181/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Ball Ø15 mm
- With fastening material steel, zinc plated
- Swivel area 15°
- Load capacity up to 150 kg standing vertically
- Weight = 0.054 kg/piece

APPLICATIONS

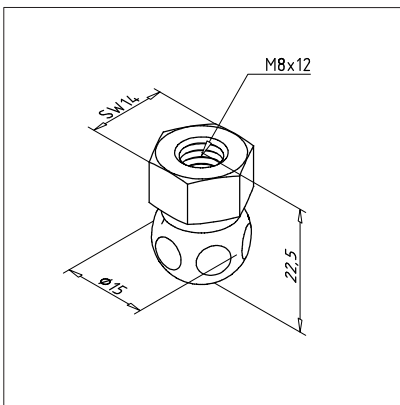
- For the preparation of self-adjusting lines and stoppers
- Exchangeable workpiece or worktool carriers
- To be used with ball head M8 **part no. 21.2506/0** or the ball screws made of hinged feet PA

ASSEMBLY

- Fasten with fixing material to profile groove
- Holding force adjustable 0 - 50 N

Ball head M8

Part No. 21.2506/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Ball Ø15 mm
- Internal thread M8x12
- Weight = 0.020 kg/piece

APPLICATIONS

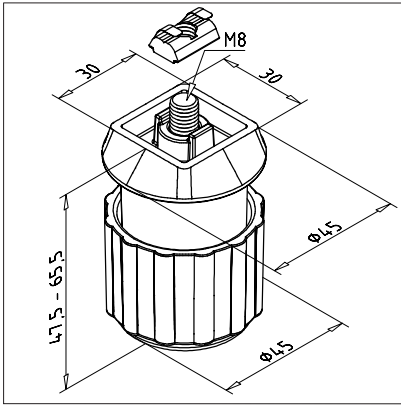
- For use in combination with Clip Block **part no. 22.1181/0**
- For the preparation of linings or hinged feet in special design, see hinged feet PA

ASSEMBLY

- Fasten onto preferred component with screw M8
- Use for fastening to profile groove setscrew M8x20 and square nut M8

Foot 30 compact

Part No. 21.2524/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- With fastening material steel, zinc plated
- Max. load capacity: 100 Kg
- Adjustment area ± 9 mm
- With anti-skid rubber damper
- Weight = 0.121 kg/piece

APPLICATIONS

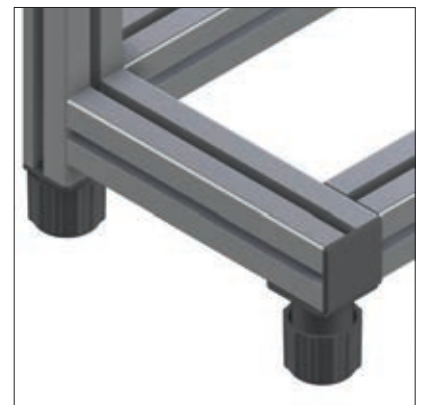
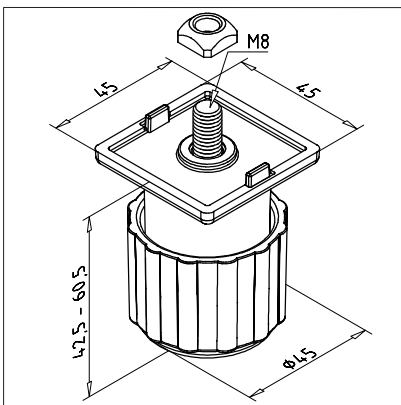
- For installation and levelling of smaller frames with nice design

ASSEMBLY

- Assembly with to profile end or on profile face with delivered fixation material

Foot 45 compact

Part No. 21.2525/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- With fastening material steel, zinc plated
- Max. load capacity: 100 Kg
- Adjustment area ± 9 mm
- With anti-skid rubber damper
- Weight = 0.117 kg/piece

APPLICATIONS

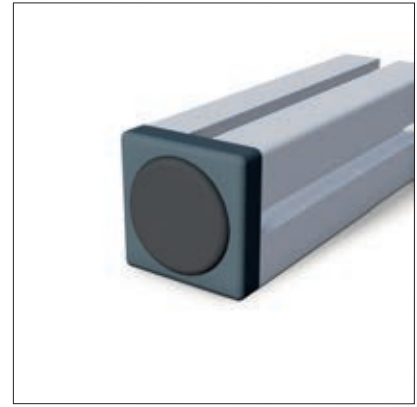
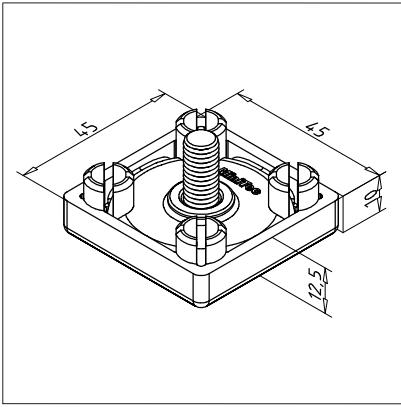
- For installation and levelling of smaller frames with nice design

ASSEMBLY

- Assembly with to profile end or on profile face with delivered fixation material

Floor mounting plate 45x45 G

Part No. 22.1217/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Anti-slip license NBR, black
- With fastening screw M8, galvanized
- Load capacity: 1000 kg
- Weight = 0.032 kg/piece

APPLICATIONS

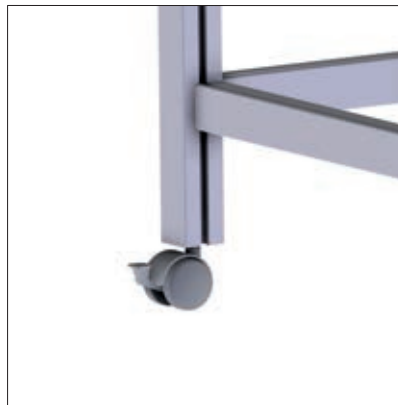
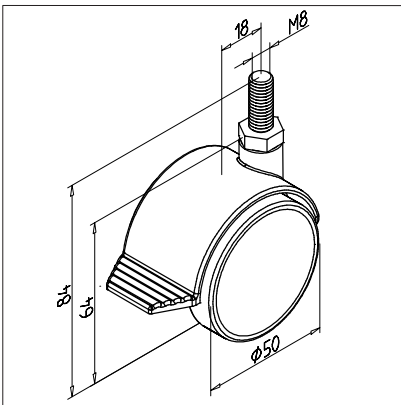
- For use with all profiles with cross section 45x45
- For non-slip installation of tables and racks
- Reduces noise and protects the floor

ASSEMBLY

- Fasten to central profile bore with fixation material from delivery scope
- Then insert anti-slip certificate

Furniture castor with brake

Part No. 21.1153/0



TECHN. DATA / ITEMS SUPPLIED

- PA, black
- Double role with sliding bearing
- With fastening material steel, zinc plated
- Load capacity 30 kg
- Weight = 0.080 kg/piece

APPLICATIONS

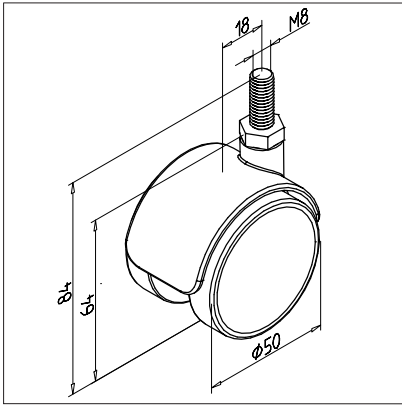
- Light movable tables
- Movable file box
- Furniture

ASSEMBLY

- Install directly in the center hole of the vertical profile with mounting material
- If the wheel must be positioned centrally for profile cross-sections 45 x 90 or greater, a base and transport plate with thread M8 is required

Furniture castor without brake

Part No. 21.1105/0



TECHN. DATA / ITEMS SUPPLIED

- PA, black
- Double role with sliding bearing
- With fastening material steel, zinc plated
- Load capacity 30 kg
- Weight = 0.076 kg/piece

APPLICATIONS

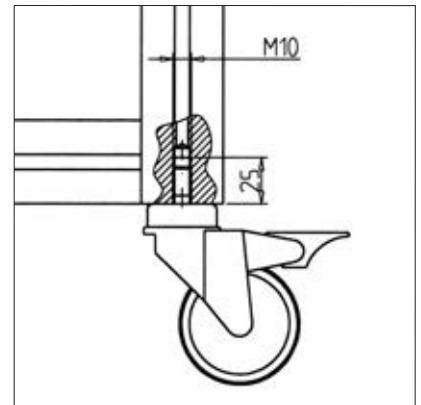
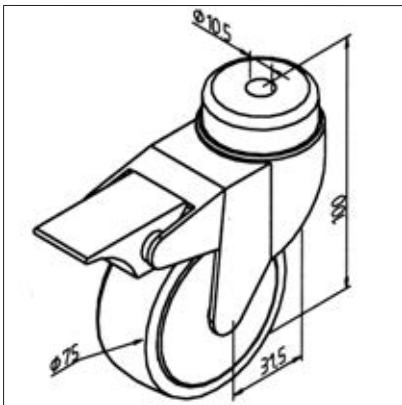
- Light movable tables
- Movable file box
- Furniture

ASSEMBLY

- Install directly in the center hole of the vertical profile with mounting material
- If the wheel must be positioned centrally for profile cross-sections 45 x 90 or greater, a base and transport plate with thread M8 is required

Swivel castor with brake D 75 x 100

Part No. 21.1120/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.450 kg/piece

APPLICATIONS

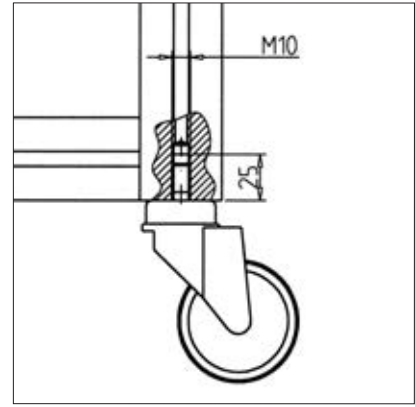
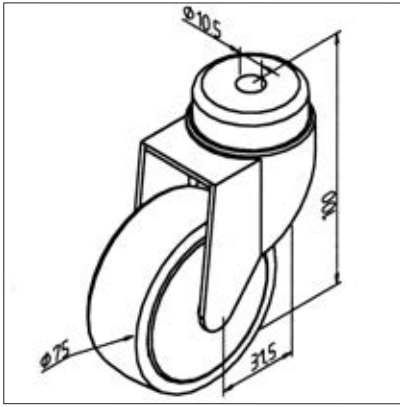
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Attach directly to the central bore of the vertical profile with fastening material, then drill and introduce thread M10
- A connection plate is required if the roller is to be positioned centrally with profile cross sections 45 x 90 or 90 x 90

Swivel castor without brake D 75 x 100

Part No. 21.1118/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.372 kg/piece

APPLICATIONS

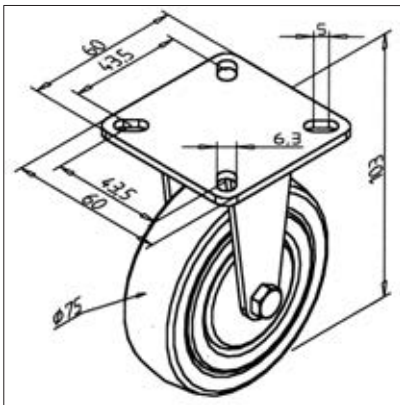
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Attach directly to the central bore of the vertical profile with fastening material, then drill and introduce thread M10
- A connection plate is required if the roller is to be positioned centrally with profile cross sections 45 x 90 or 90 x 90

Fixed castor D 75 x 103

Part No. 21.1475/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.350 kg/piece

APPLICATIONS

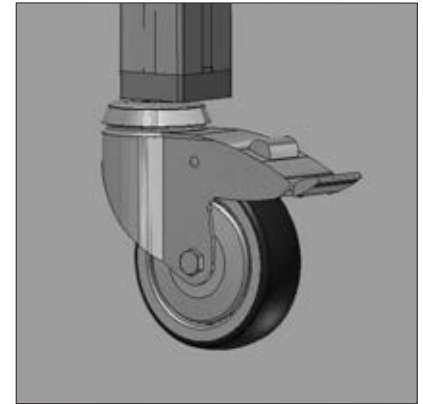
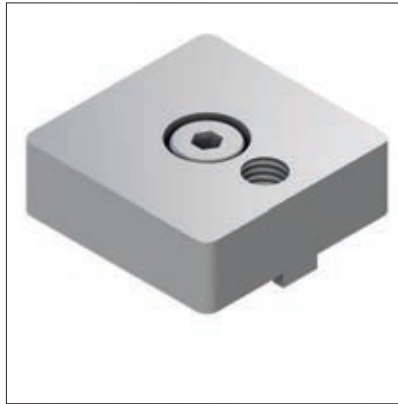
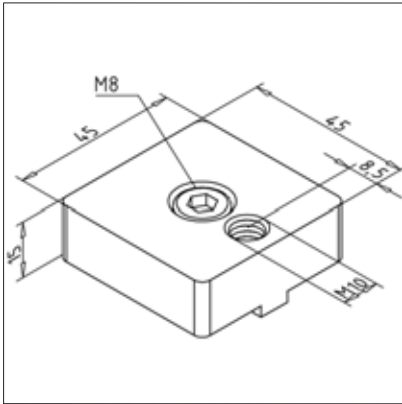
- Work stands
- Frames
- Movable tables

ASSEMBLY

- Use fixing material supplied to fix on profile groove
- With mounting plate for castor **Part no. 21.1476/0** attach to profile

Base plate 45 x 45 stainless M10

Part No. 21.2059/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Fastening kit
- Weight = 0.230 kg/piece

APPLICATIONS

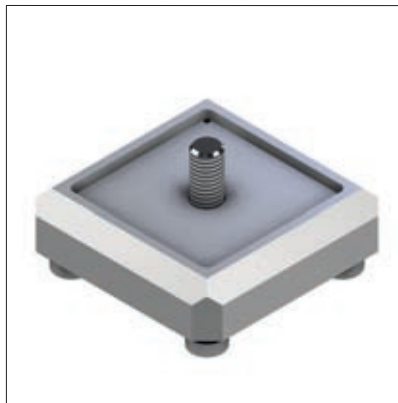
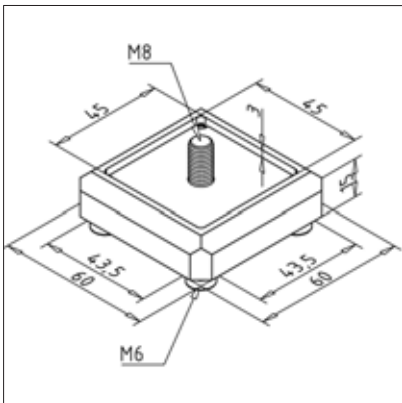
- Profile 45 x 45
- Profile 45 x 45 VA
- Height compensation when mounting casters in combination with fixed casters on a movable base frame
- For using feet M10

ASSEMBLY

- Use fixing material supplied to fix to the end face of the profile

Fastening plate 45 SS for fixed castor

Part No. 21.2058/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Fastening kit
- Weight = 0.360 kg/piece

APPLICATIONS

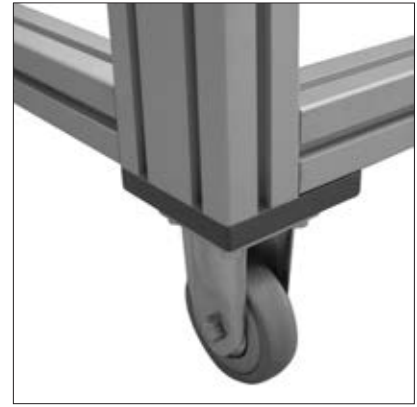
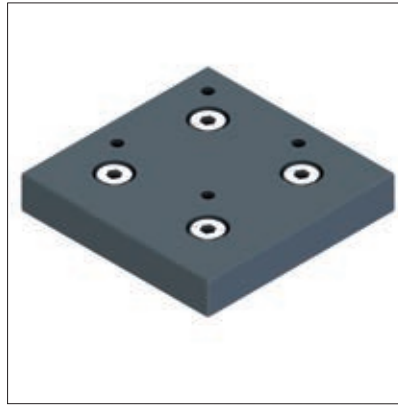
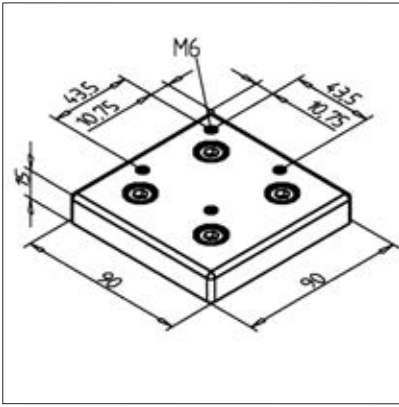
- Profile 45 x 45
- Profile 45 x 45 VA
- For attaching the fixed castor on the front side to profile 45 x 45 and 45 x 45 VA

ASSEMBLY

- Front attachment to profile with supplied hardware

Fastening plate 90 for fixed castor

Part No. 21.1476/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.330 kg/piece

APPLICATIONS

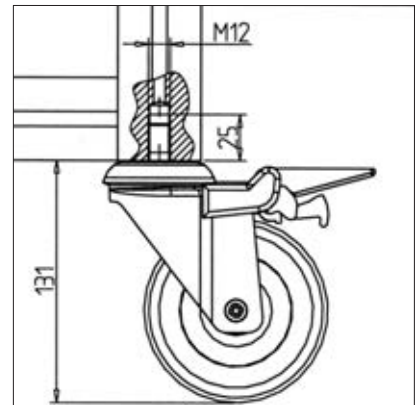
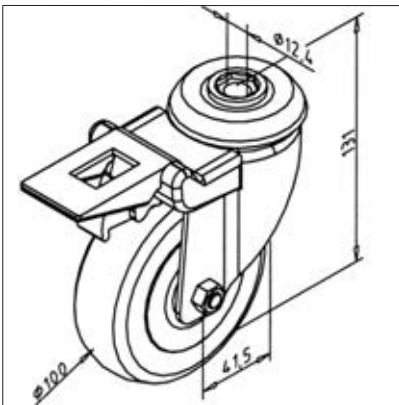
- To attach the castor **part no. 21.1475/0** frontally to profile 90 x 90

ASSEMBLY

- Fasten to the profile end with supplied hardware

Swivel castor with brake D 100 x 131

Part No. 21.0031/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 100 kg
- **Other versions upon request**
- Weight = 0.743 kg/piece

APPLICATIONS

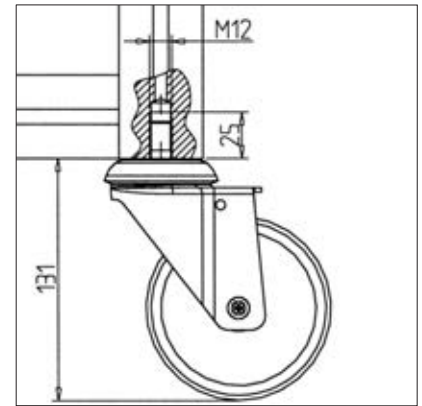
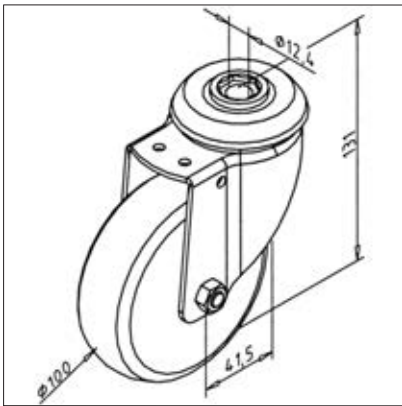
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Connect directly to the central bore of the vertical profile with supplied hardware, drill and introduce thread M12
- If the roller is to be centrally positioned for profile cross sections of 45 x 90 or 90 x 90, a connection plate is required

Swivel castor without brake D 100 x 131

Part No. 21.0030/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Tire, rubber, grey
- With fastening material steel, zinc plated
- Load capacity 100 kg
- **Other versions upon request**
- Weight = 0.660 kg/piece

APPLICATIONS

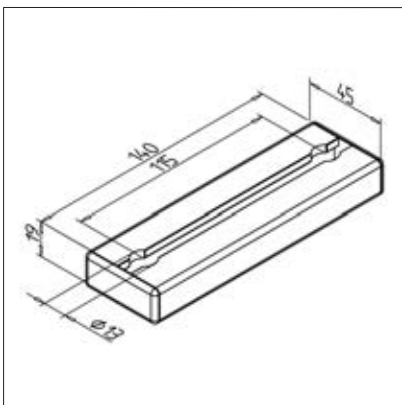
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Connect directly to the central bore of the vertical profile with supplied hardware, drill and introduce thread M12
- A connection plate is required if the roller is to be positioned centrally with profile cross sections 45 x 90 or 90 x 90

Floor mounting plate 45

Part No. 21.1730/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 19
- With caps, grey
- Without fastening kit
- Weight = 0.130 kg/piece

APPLICATIONS

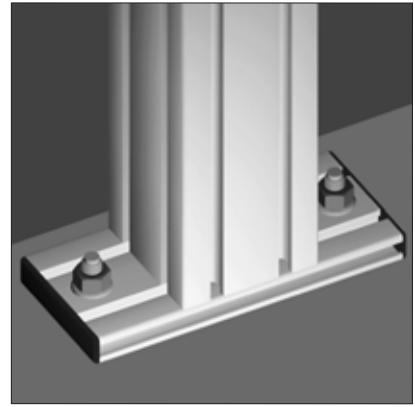
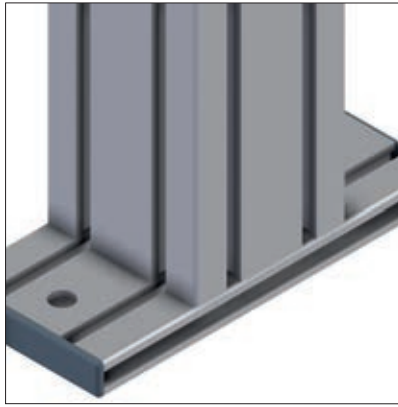
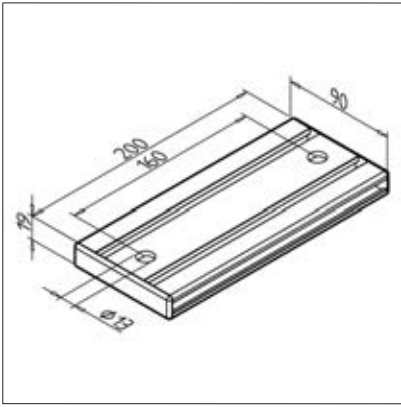
- Floor fixing of columns from profile 45 x 45

ASSEMBLY

- Secure profile with MiniTec profile connector
- On floor side: 2 floor anchors **part no. 21.1082/0**

Floor mounting plate 90

Part No. 21.1733/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 19 X 90
- With caps, grey
- Without fastening kit
- Weight = 0.470 kg/piece

APPLICATIONS

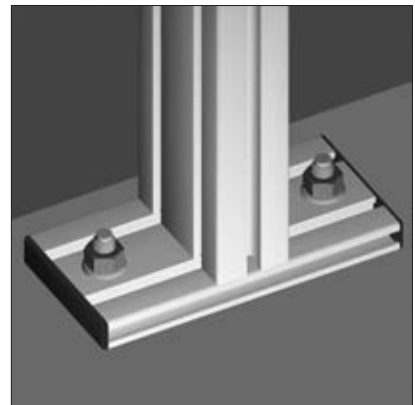
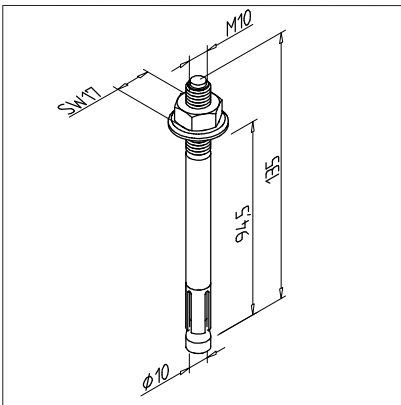
- Floor fixing of columns from profile 45 x 90 oder 90 x 90

ASSEMBLY

- On profile side: 2 or 4 MiniTec power-lock fasteners
- On floor side: 2 floor anchors **part no. 21.1082/0**

Floor anchor 10

Part No. 21.1082/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Ø 10 mm
- With hexagonal nut and washer
- Weight = 0.084 kg/piece

APPLICATIONS

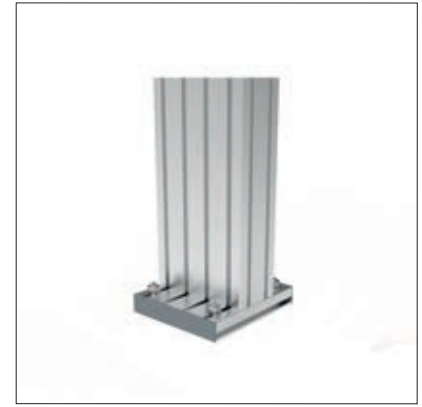
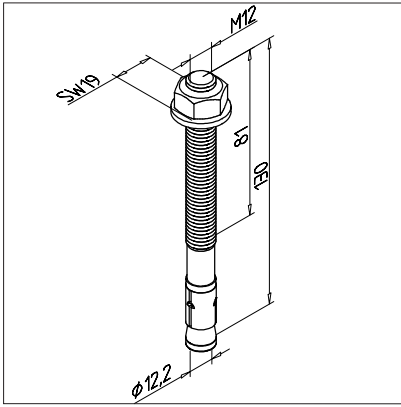
- Secure and fasten constructions in connection with the floor mounting bracket, levelling plate or stationary plate

ASSEMBLY

- Fit bore in the bottom
- Use floor anchor in connection with angle, levelling plate or floor mounting plate

Floor anchor 12

Part No. 21.1115/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- $\phi 12$ mm
- With hexagonal nut and washer
- Weight = 0.114 kg/piece

APPLICATIONS

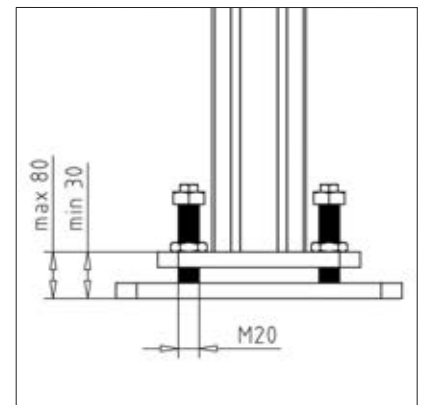
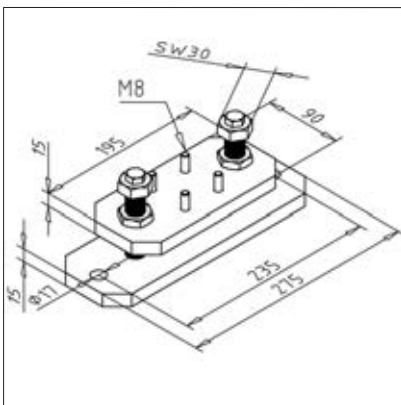
- Secure and fasten constructions in connection with the floor mounting bracket, levelling plate or stationary plate

ASSEMBLY

- Fit bore in the bottom
- Use floor anchor in connection with angle, levelling plate or floor mounting plate

Levelling plate 90 ST

Part No. 21.0976/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With galvanized steel fastening material, for profile
- With leveling element
- Without dowels
- Max. load capacity 2 kN (compressive load static, vertical)
- Weight = 5.146 kg/piece

APPLICATIONS

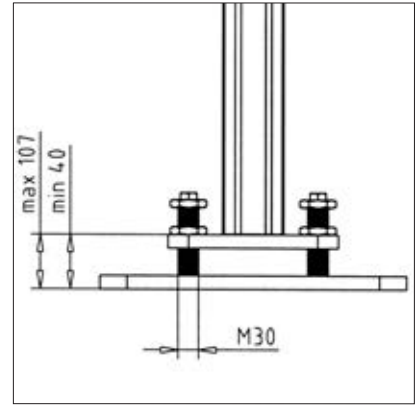
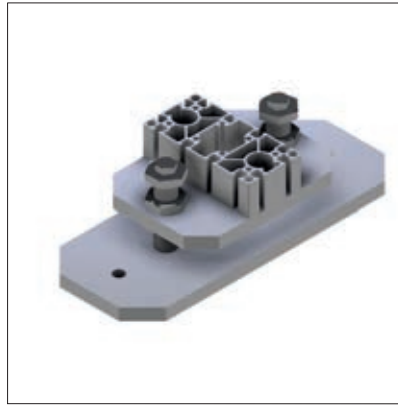
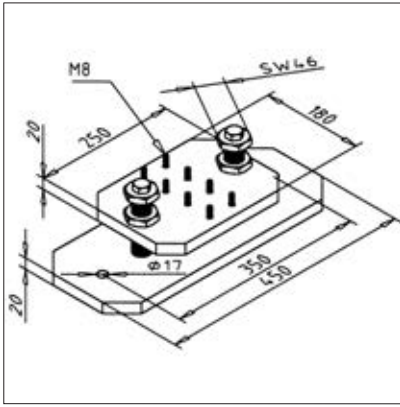
- Precise alignment of heavy constructions with cross-section 90x90 as post profile

ASSEMBLY

- Fasten footplate to the floor using a high performance anchor
- Fasten profile plate to the profile with supplied hardware
- Turn the M20 screw to set the height and secure it with the counter nut

Levelling plate 180 ST

Part No. 21.0977/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With galvanized steel fastening material, for profile
- With leveling element
- Without dowels
- Max. load capacity 2 kN (compressive load static, vertical)
- Weight = 20.347 kg/piece

APPLICATIONS

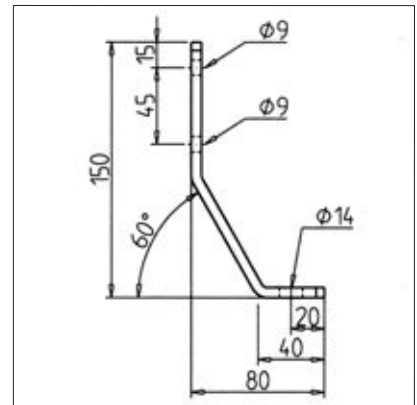
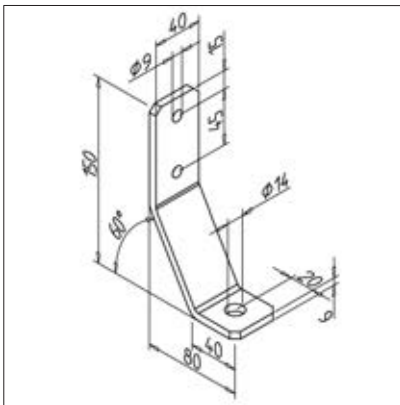
- Precise alignment of heavy constructions with cross-section 90x180 as post profile

ASSEMBLY

- Fasten footplate to the floor using a high performance anchor
- Fasten profile plate to the profile with supplied hardware
- Adjust height by turning screw M30 and secure with counter nut.

Angle bracket for floor fastening

Part No. 21.1112/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Without dowels
- Weight = 0.389 kg/piece

APPLICATIONS

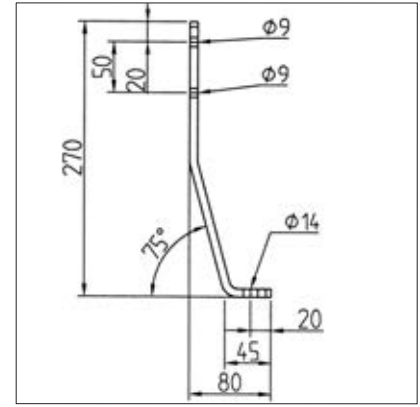
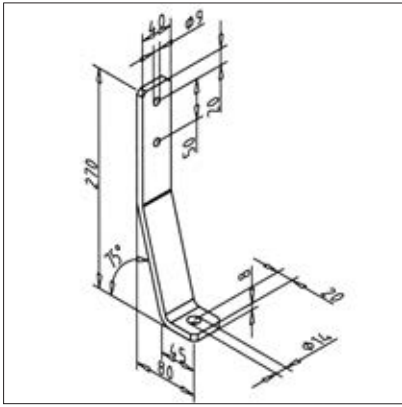
- Securing and fastening of constructions on floor or wall

ASSEMBLY

- On profile side with cylinder screws M8 x 20, SW5
- Bottom side with high performance anchor 12 **part no. 21.1115/0**
- Also suitable for subsequent mounting

Angle bracket for floor fastening long

Part No. 21.0015/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Without dowels
- Weight = 0.786 kg/piece

APPLICATIONS

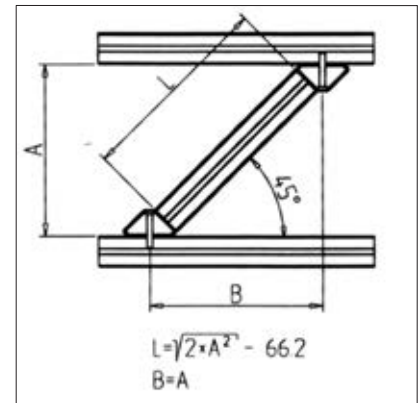
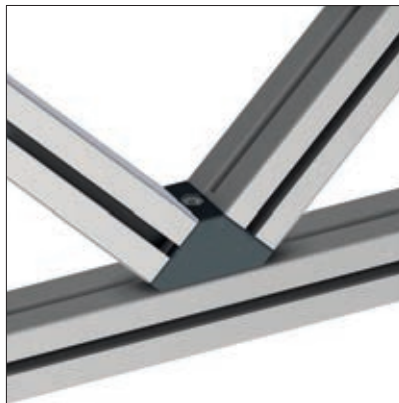
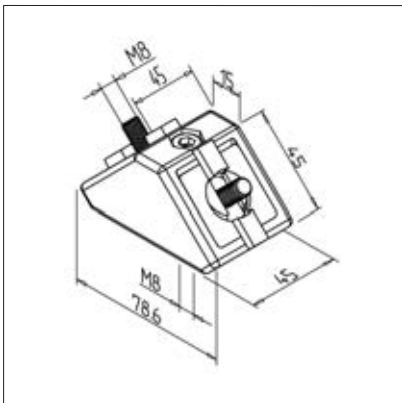
- For securing heavy constructions under dynamic load on floor or wall

ASSEMBLY

- On the profile side with cylinder screw M8 x 20, SW 5
- Bottom side with high performance anchor 12 **part no. 21.1115/0**
- Also suitable for subsequent mounting

Brace socket 45 GD

Part No. 21.1729/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- For use on vertical struts, strut socket **part no. 21.1729/7** (square nuts with position-fixing)
- Weight = 0.261 kg/piece

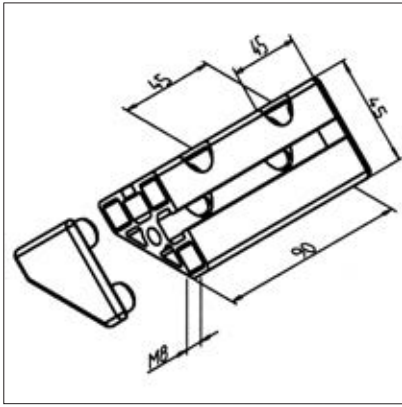
APPLICATIONS

- Bracing in the composite structure

ASSEMBLY

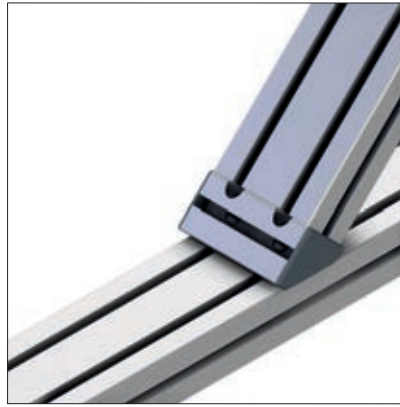
- Pre-assemble brace base and place in frame
- Screw the brace socket onto the frame

Brace socket 45°/90



TECHN. DATA / ITEMS SUPPLIED

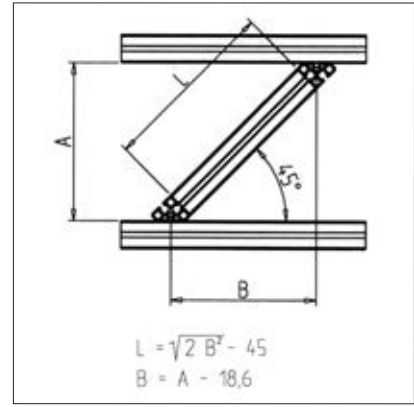
- Aluminium, anodized E6/EV1
- From profile 45/45°
- With fastening material steel, zinc plated
- With caps, grey
- For use on vertical struts, strut socket **part no. 21.1727/4** (square nuts with position-fixing)
- Weight = 0.175 kg/piece



APPLICATIONS

- Bracing in the composite structure

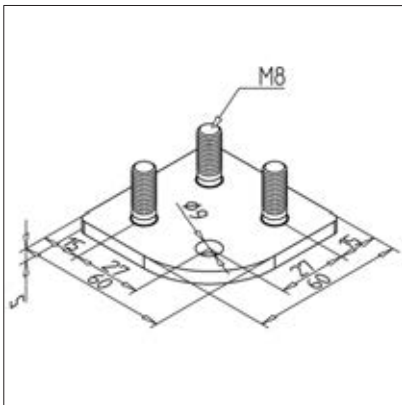
Part No. 21.1727/0



ASSEMBLY

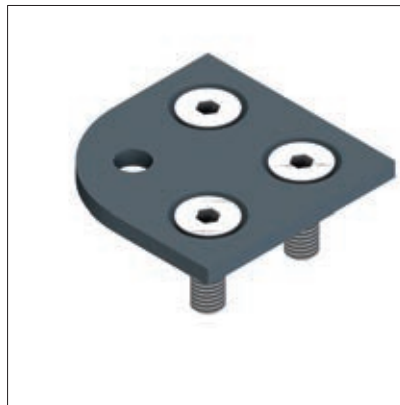
- Screw the brace socket onto the frame
- Insert supports by means of MiniTec power-lock fasteners and tighten
- Install caps

Connecting plate 60x60x30



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Fastening material steel, galvanized
- Weight = 0.145 kg/piece



APPLICATIONS

- Profile 60 x 60 x 30 **part no. 20.0982/0**
- For fixing articulated feet and rollers

Part No. 21.0038/0

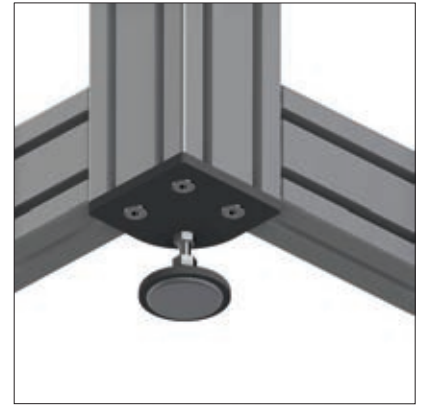
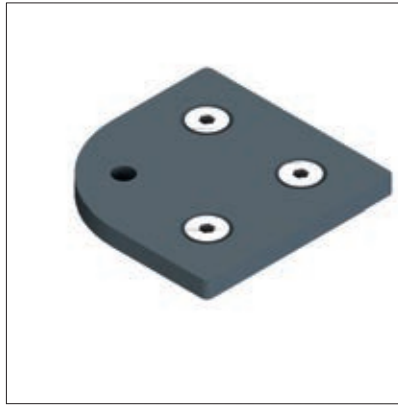
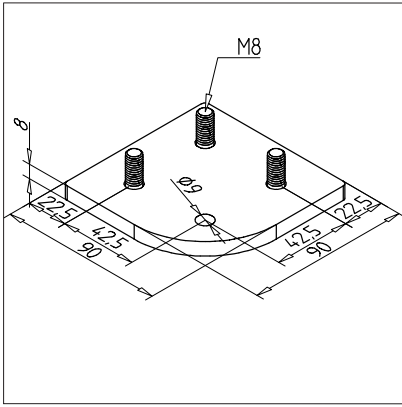


ASSEMBLY

- Use fixing material supplied to fix to the end face of the profile

Connecting plate 90 x 90 x 45

Part No. 21.2505/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.488 kg/piece

APPLICATIONS

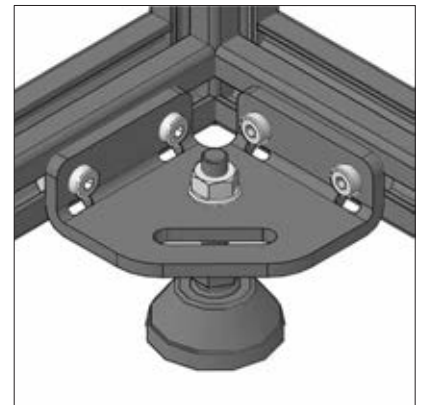
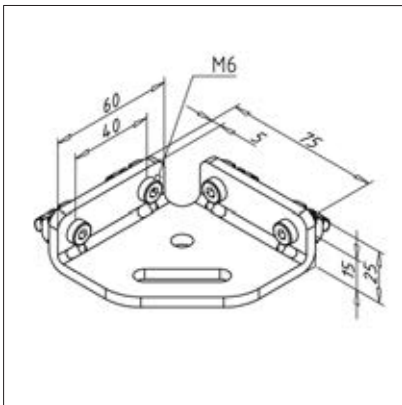
- To profile 90 x 90 x 45 **part no. 20.0984/0**
- For fixing articulated feet and rollers

ASSEMBLY

- Front attachment to profile with supplied hardware

Adapter flange 30

Part No. 21.2120/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.261 kg/piece

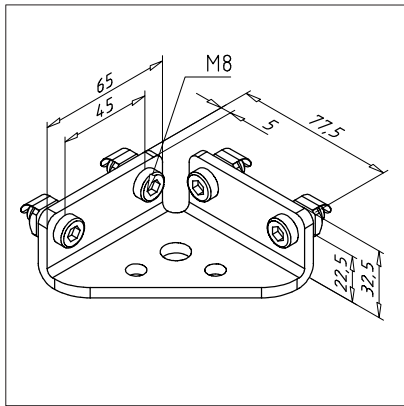
APPLICATIONS

- Strengthening of profile constructions
- Fixation of internal feet or rollers
- Floor mounting and leveling constructions

ASSEMBLY

- Mount onto frame with fixation material from delivery scope

Adapter flange 45



TECHN. DATA / ITEMS SUPPLIED

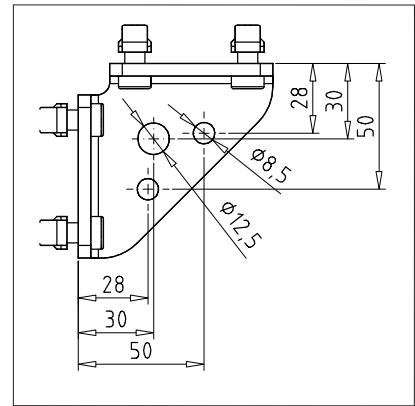
- Steel, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.311 kg/piece



APPLICATIONS

- Strengthening of profile constructions
- Fixation of internal feet or rollers
- Floor mounting and leveling constructions

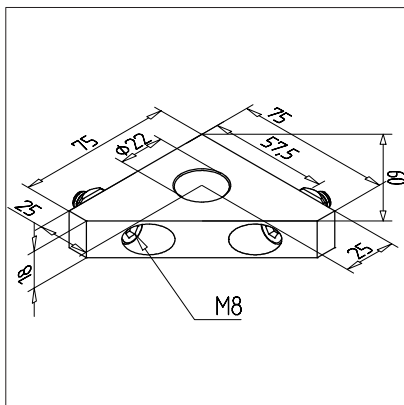
Part No. 21.2300/0



ASSEMBLY

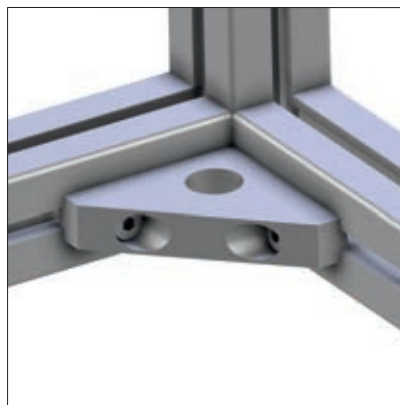
- Mount onto frame with fixation material from delivery scope

Corner 90



TECHN. DATA / ITEMS SUPPLIED

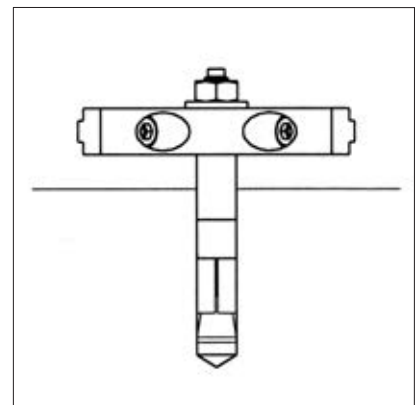
- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- For use on vertical struts, beam **part no.21.1783/7** (square nuts with position-fixing)
- Weight = 0.170 kg/piece



APPLICATIONS

- Strengthening of constructions
- Fixation of internal feet or rollers
- Floor mounting and leveling constructions

Part No. 21.1783/0

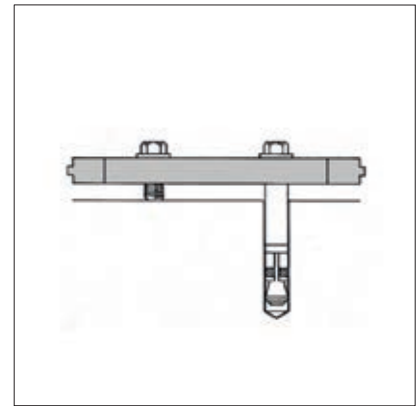
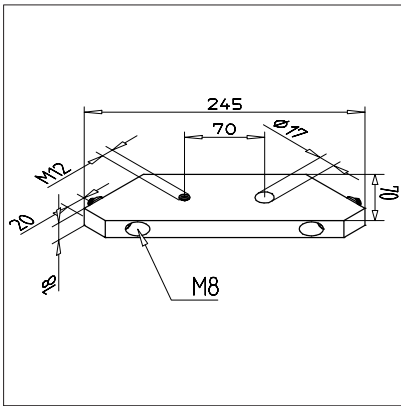


ASSEMBLY

- On profile side, with fastening kit
- On floor side, fasten with floor anchor

Corner 180

Part No. 21.1784/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- For use on vertical struts, beam **part no. 21.1784/7** (square nuts with position-fixing)
- Weight = 0.690 kg/piece

APPLICATIONS

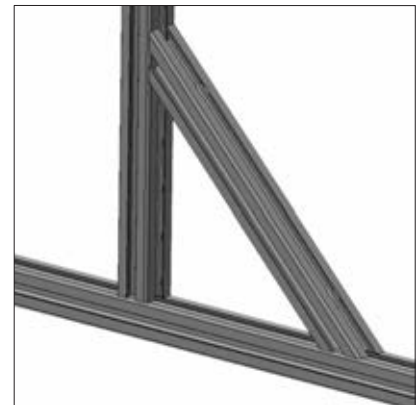
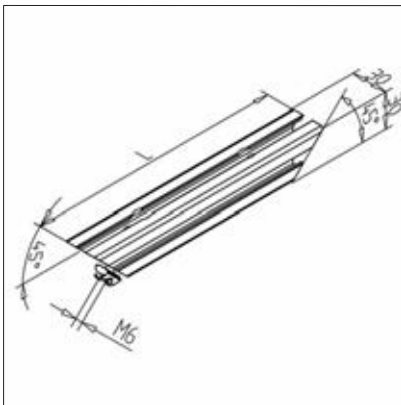
- Strengthening of heavy constructions
- Fixation of internal feet or rollers
- Floor mounting and leveling heavy constructions

ASSEMBLY

- On profile side, with fastening kit
- On floor side, fasten with floor anchor and levelling screw M 12

Strengthening element 30

Part No. 21.2110/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Length (l) : 300 mm
- Profile 30 x 30, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- With fastening material steel, zinc plated
- **Other lengths and versions under part no. 21.2110/5 on request**
- Weight = 0.212 kg/piece

APPLICATIONS

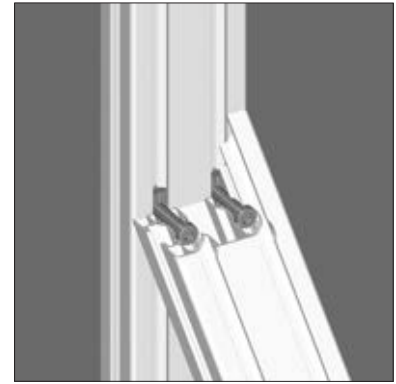
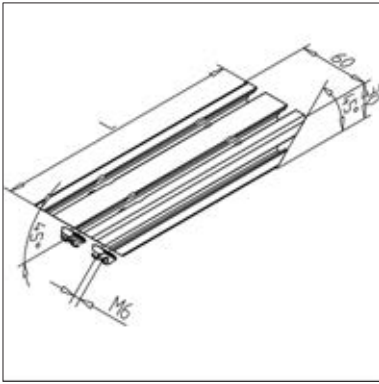
- Reinforcement of profiled superstructures according to the principle of truss construction

ASSEMBLY

- Screw on the profile groove of the frame construction with supplied hardware

Strengthening element 30 x 60

Part No. 21.2210/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Length (l) : 300 mm
- Profile 30 x 60, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- With fastening material steel, zinc plated
- Other lengths and designs under part no. 21.2210/5 on request
- Weight = 0.338 kg/piece

APPLICATIONS

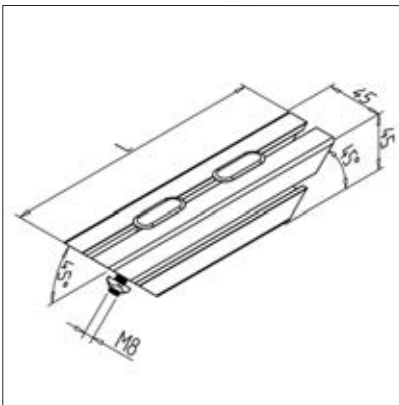
- Reinforcement of profiled superstructures according to the principle of truss construction

ASSEMBLY

- Screw on the profile groove of the frame construction with supplied hardware

Strengthening element 45

Part No. 21.1761/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Length (l) : 360 mm
- Profile 45 x 45, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- With fastening material steel, zinc plated
- For use on vertical struts, strengthening element **part no.21.1761/7** (square nuts with position-fixing)
- Other lengths and designs under part no. 21.1761/5 on request
- Weight = 0.870 kg/piece

APPLICATIONS

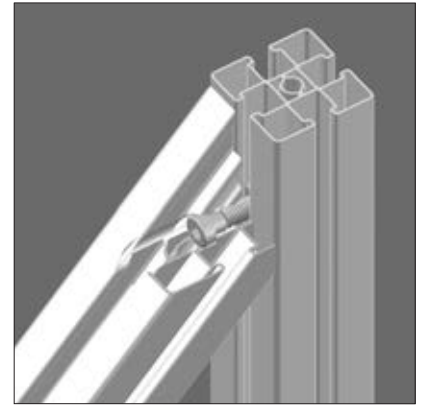
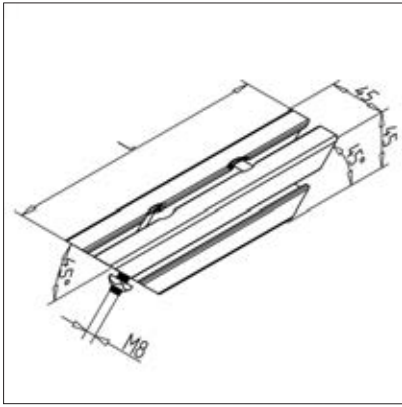
- Reinforcement of profiled superstructures according to the principle of truss construction

ASSEMBLY

- Screw on the profile groove of the frame construction with supplied hardware

Strengthening element 45 stainless

Part No. 21.1706/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Length (l) : 360 mm
- Profile 45x45 VA, ready for installation
- Both ends cut at 45° with counter-bores for fastening kit
- Fastening kit
- **Other lengths and designs under part no. 21.1761/5 on request**
- Weight = 0.890 kg/piece

APPLICATIONS

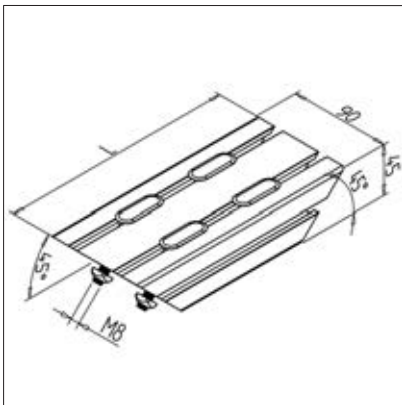
- Reinforcement of profiled superstructures according to the principle of truss construction

ASSEMBLY

- Screw on the profile groove of the frame construction with supplied hardware

Strengthening element 90

Part No. 21.1762/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Length (l) : 360 mm
- Profile 45 x 90, ready for use
- Both ends cut at 45° with 4 counter-bores for fastening kit
- With fastening material steel, zinc plated
- **Other lengths and designs under part no. 21.1762/5 on request**
- Weight = 1.416 kg/piece

APPLICATIONS

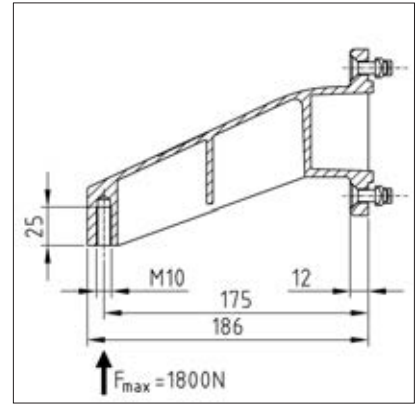
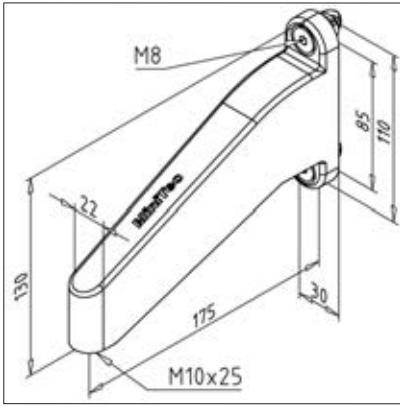
- Reinforcement of profiled superstructures according to the principle of truss construction

ASSEMBLY

- Screw on the profile groove of the frame construction with supplied hardware

Cantilever foot 175

Part No. 21.2191/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.369 kg/piece

APPLICATIONS

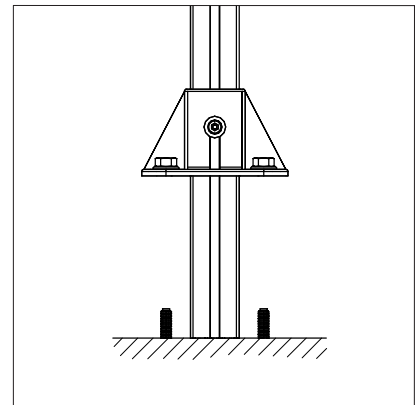
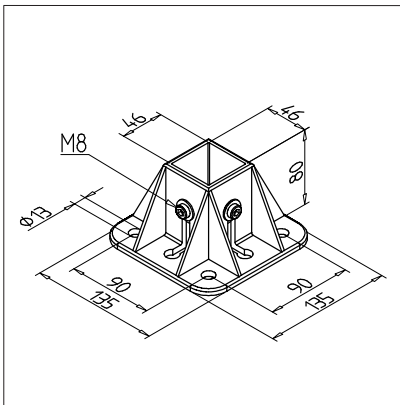
- Placing frames and attaching stands

ASSEMBLY

- Attachment to profile strut with fastening material
- Fastening of casters, articulated feet, and screws M10

Foot 45 GD

Part No. 21.1731/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With galvanized steel fastening material, for profile
- Package size of 10 pieces **part no. 21.1731/010**
- Weight = 0.587 kg/piece

APPLICATIONS

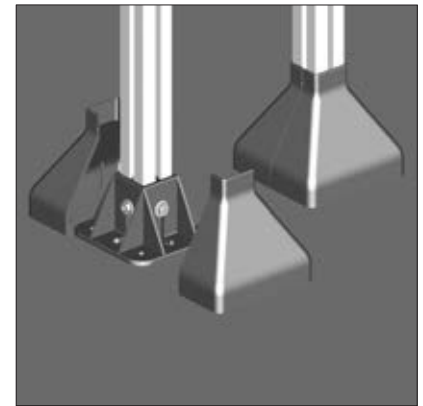
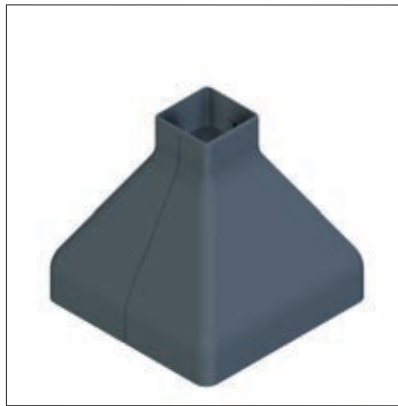
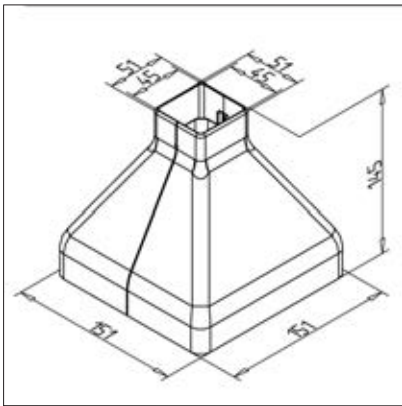
- Suitable for profiles up to dimension 45 x 45
- Floor fastening of guard units, signboards, racks
- As connection element for wall attachment; can be used both-sided

ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the foot on the floor or the wall; use the floor anchors or the universal plugs with a hexagonal head screw
- Tighten fastening screws

Cover for foot 45

Part No. 22.1164/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Weight = 0.166 kg/pair

APPLICATIONS

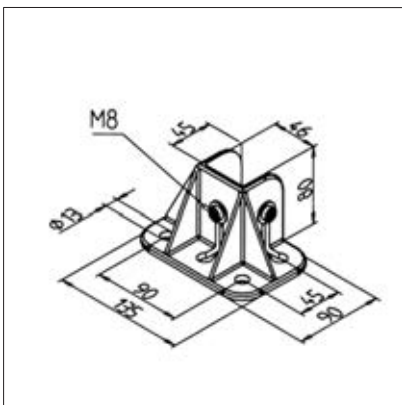
- To cover the stand foot 45 GD and 45 GD open

ASSEMBLY

- Attach to profiles/stand foot

Foot 45 GD open

Part No. 21.1738/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With galvanized steel fastening material, for profile
- Package size of 10 pieces **part no. 21.1738/010**
- Weight = 0.356 kg/piece

APPLICATIONS

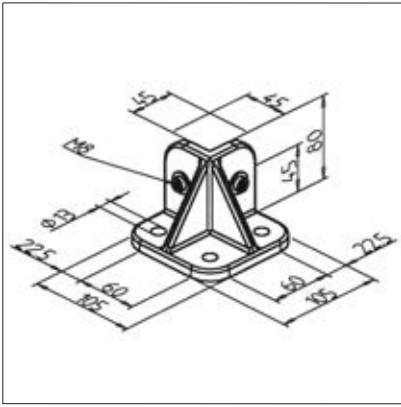
- Floor fastening of guard units, signboards, racks
- As connection element for wall attachment; can be used both-sided

ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the foot on the floor or the wall; use the floor anchors or the universal plugs with a hexagonal head screw
- Tighten fastening screws

Foot 45 GD S

Part No. 21.1723/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With galvanized steel fastening material, for profile
- Package size of 10 pieces **part no.** 21.1723/010
- Weight = 0.499 kg/piece

APPLICATIONS

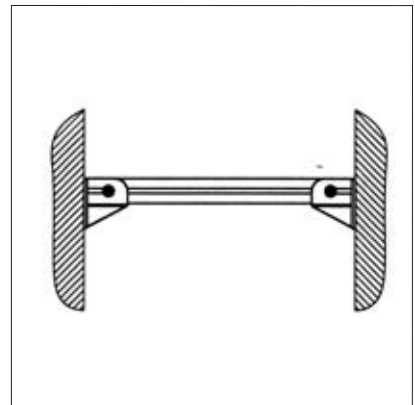
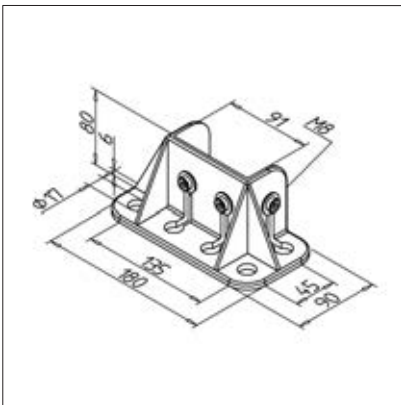
- Floor fastening of guard units, signboards, racks
- As connection element for wall attachment; can be used both-sided
- For all profiles

ASSEMBLY

- Fix the foot on the floor or the wall; use the floor anchors or the universal plugs with a hexagonal head screw
- Tighten fastening screws

Foot 90 GD

Part No. 21.1737/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With galvanized steel fastening material, for profile
- Package size of 10 pieces **part no.** 21.1737/010
- Weight = 0.465 kg/piece

APPLICATIONS

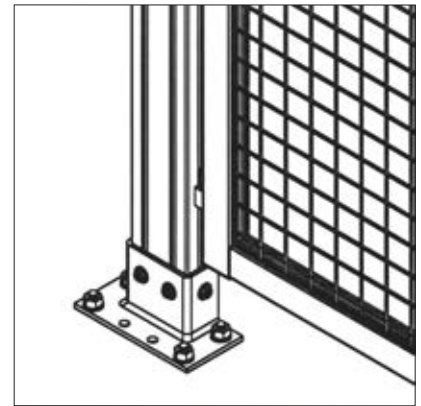
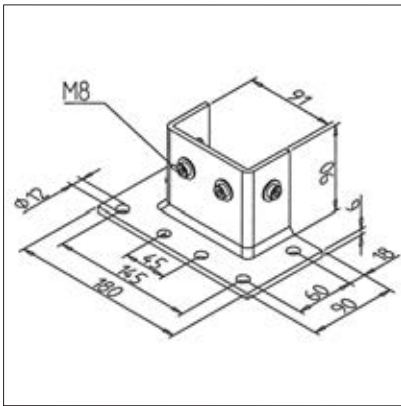
- Fitting for profiles with maximum dimension of 45 x 90, 90 x 90 and 90 x 180
- Floor fastening of guard units, signboards, racks
- As connection element for wall attachment; can be used both-sided

ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the foot on the floor or the wall; use the floor anchors or the universal plugs with a hexagonal head screw
- Tighten fastening screws

Foot 90 S

Part No. 21.1707/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With galvanized steel fastening material, for profile
- Weight = 1.438 kg/piece

APPLICATIONS

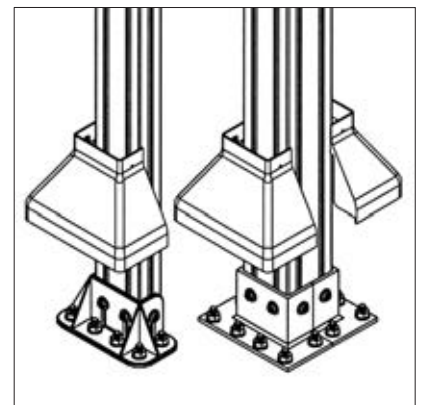
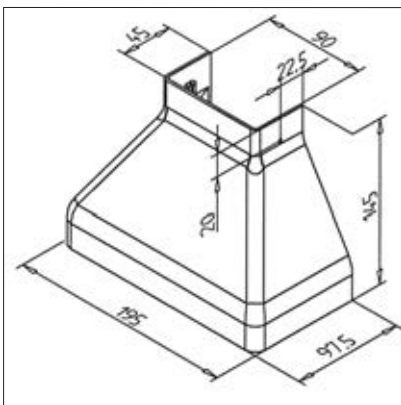
- Fitting for profiles with maximum dimension of 45 x 90, 90 x 90 and 90 x 180
- Floor fastening of guard units, signboards, racks
- As connection element for wall attachment; can be used both-sided

ASSEMBLY

- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the foot on the floor or the wall; use the floor anchors or the universal plugs with a hexagonal head screw
- Tighten fastening screws

Cover for foot 90

Part No. 22.1025/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Weight = 0.131 kg/piece

APPLICATIONS

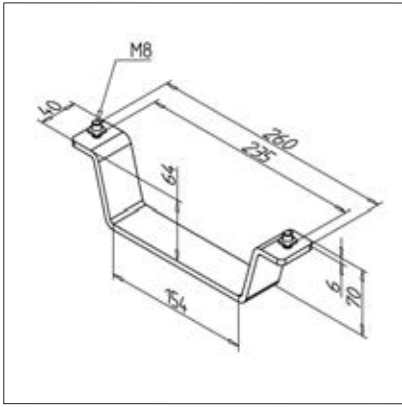
- Suitable for foot 90 GD and 90 S
- Less dust and dirt deposit on the foot
- Easy to clean

ASSEMBLY

- Expand the cover manually and clip in the slots of the profile
- Push the cover downwards
- Fasten on the side with tapping screw 3.4 x 16, then drill hole \varnothing 2.5 mm at the marked location

Transport aid

Part No. 26.1101/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.708 kg/piece

APPLICATIONS

- Securing of constructions when transported by forklift truck

ASSEMBLY

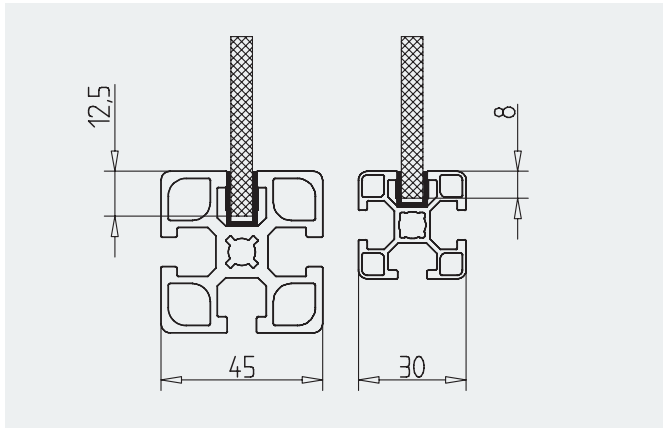
- Mount under construction with fastening material from the scope of supply to the profile groove
- Use always in pairs

Installation of surface elements

Installing surface elements in the profile groove

Basically, a distinction must be made between installation in the profile groove and subsequent fastening of surface elements. For installation in the profile groove, the installation procedure must be planned accordingly. It is recommended to create complete guard unit which are inserted into a con-

struction. This mounting method has particular advantages for large surfaces, when processing woven wire mesh and sealed constructions. The subsequent installation of panel elements is usually easier and the risk of damage is lower.



Clamp profile

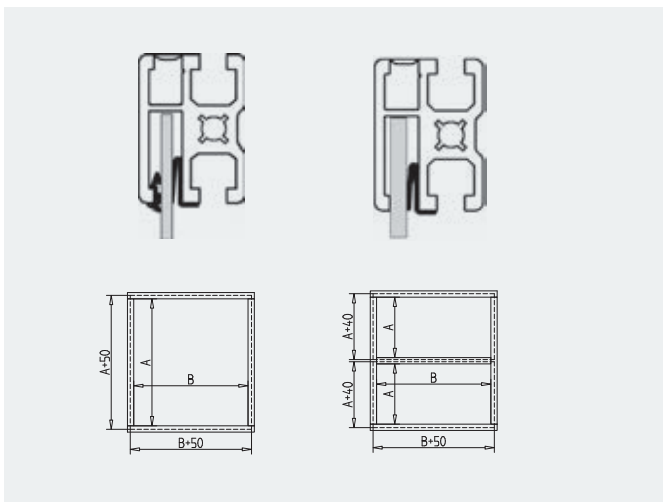
Surface elements of 6 mm thickness can be combined with a clamp profile.

Install directly in the profile groove.

Allowance for surface elements in x and y direction for mounting in profile groove:

30er groove system +16 mm

45er groove system +25 mm



Clamping profile 45 x 32

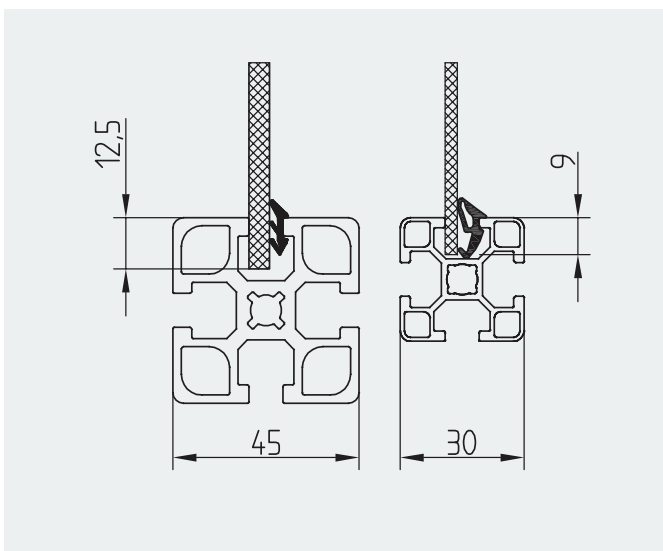
The clamping profile 45 x 32 contains the properties of the system profiles and a safe, simple fastening of surface elements integrated.

This option is particularly recommended for large guard units and wave grid constructions. The guard units are pre-fabricated and can be easily installed with guard unit fixing angle in the frame of the construction. Quick removal of such guard units is also possible.

Allowance for surface elements in x and y direction for mounting in profile groove:

1) Simple frame: +50 mm

2) Frame with one or more intermediate struts: +40 mm



Insert seals

Panes of glass, PVC, composite material, acrylic or similar of 2 - 6 mm thickness can be fixed and sealed in the profile groove with the insert seals 2, 4, 5 and 6. The insert seal is subsequently pressed into the gap between the pane and the side of the profile groove. If using insert seal 4 on both sides, materials < 2 mm can be clamped. Depending on the installation length, the seals should be approx. 5-10 mm longer and slightly pressed together on installation. This prevents gaps caused by the material's shrinkage.

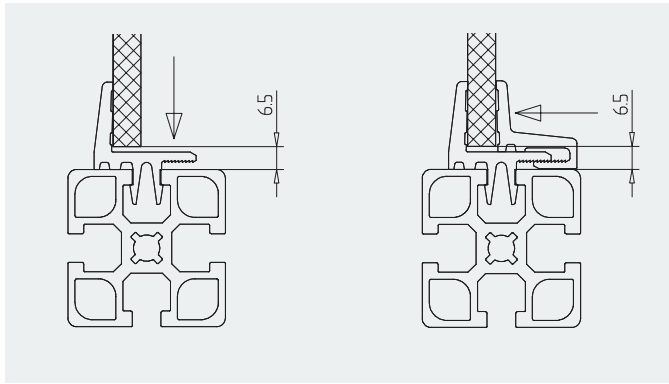
Allowance for surface elements in x and y direction for mounting in profile groove:

30 groove system +18 mm with insert seal 30

45 groove system +25 mm with insert seal 2/4/5/6

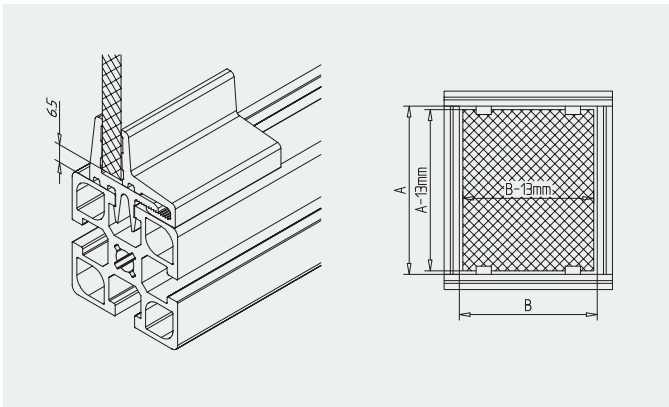
Installation of surface elements

Installing surface elements in the profile groove



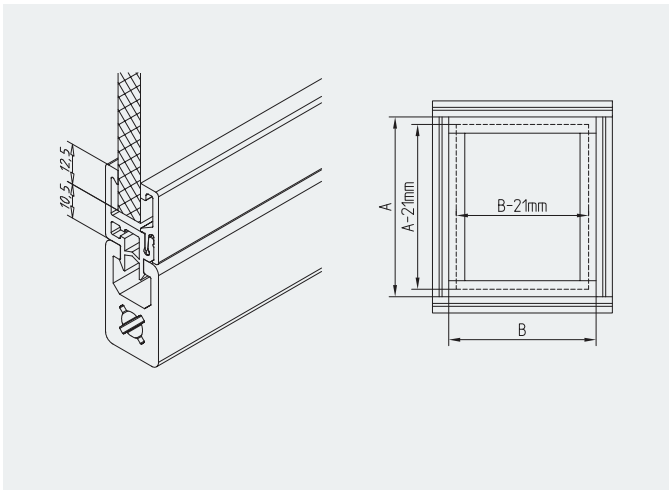
Clamping profile PVC

Optically appealing, simple and secure attachment of surface elements of all kinds, without circumferential gap between the construction profile and surface element. Suitable for surface elements up to 8 mm thick, also for wavy grid. Calculation of panel size: Clear opening - 13 mm



Panel holder

Extremely simple and cost-effective attachment of surface elements. The panel holders consist of 2 halves. Suitable for all surface elements up to 8 mm thick. For corrugated mesh, please use the PVC clamping profile. Calculation of pane size: Clear opening - 13 mm (6.5 mm gap all-round)

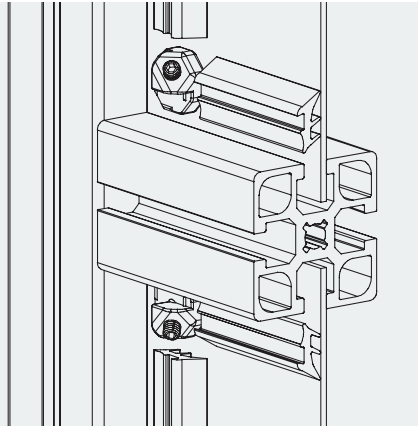


Window Edging Profile

Simple and economical installation of surface elements. Also suitable for retrofitting into existing frames. No mitre cut required. Suitable for surface elements up to 8 mm thick. Dense attachment of panels < 8 mm with the plug-in gaskets. For the subsequent installation of wave mesh, please use the PVC clamping profile.

Installation of surface elements

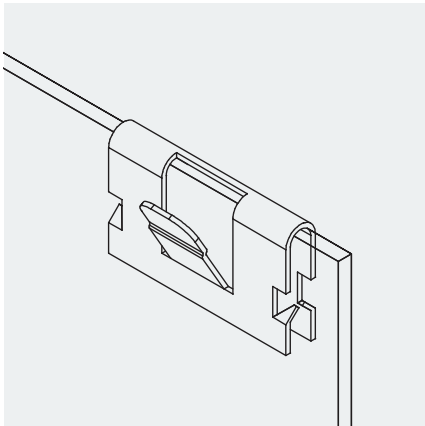
Installing surface elements in the profile groove



Earthing / conductive connection

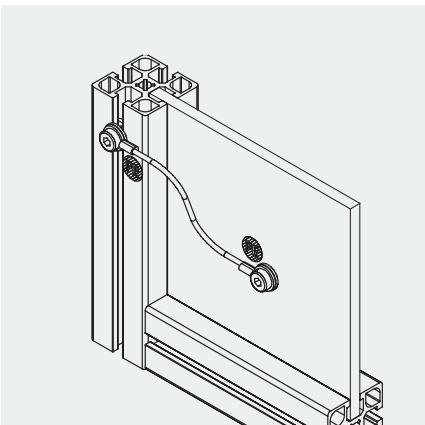
For conductive connection of aluminium or steel sheets with the 1.5mm - 2.5mm thick profile frame, please use our earthing block part no. 22.1163/0.

1 surface block is sufficient per surface element. In combination with our insert seal 2, the metal sheet is fixed in the profile frame.



Earthing clamp part no.: E9.0141/0

- For grounding sheet metal and thin-walled components with wall thickness of 0.7 - 2 mm
- Safe support and conductive connection is provided by claws
- For the connection of the earthing cable with 6 mm flat plug
- Attach to sheet metal edge



Earthing conductor for ESD areas

- Core H07V-K 4mm² Length: 200 mm

Wire line green-yellow 4mm² Length: ca. 200 mm

Attach to profile groove with fixing material from scope of delivery.

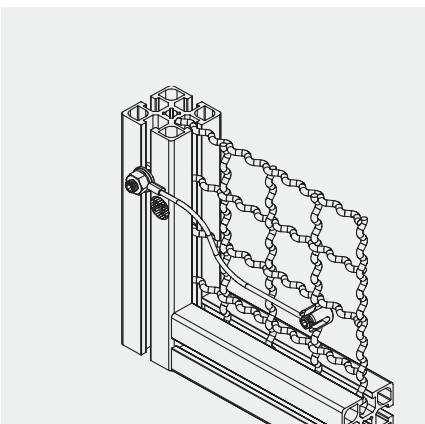
With standard accessory for grounding of surface elements with 8 mm

part no. 32.1013/0

Attachment with eyelet on both sides for M8

part no. 32.1016/0

Attachment with eyelet on one side for M8, other side for M6



Earthing clamp wave grid

part no. E9.0143/0

Wire line green-yellow 4mm² Length: ca. 200 mm

Attach to profile groove with fixing material from scope of delivery.

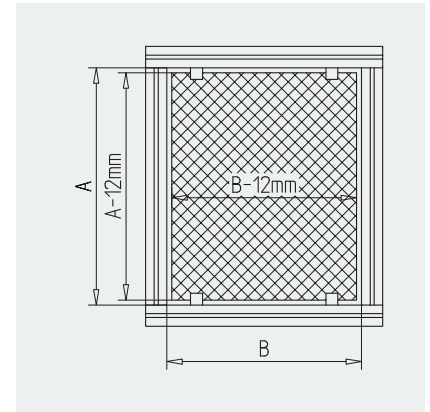
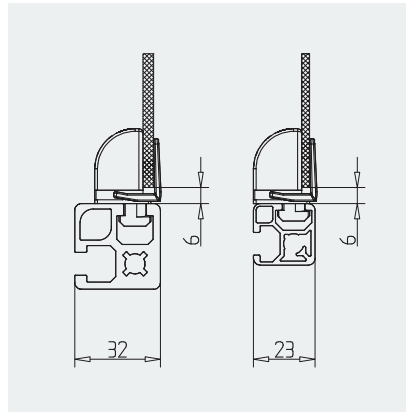
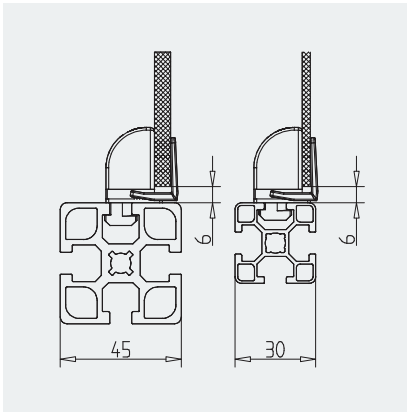
Attach grounding clip to wave grid, fasten and connect with eyelet.

Installation of surface elements

Installing surface elements in the profile groove

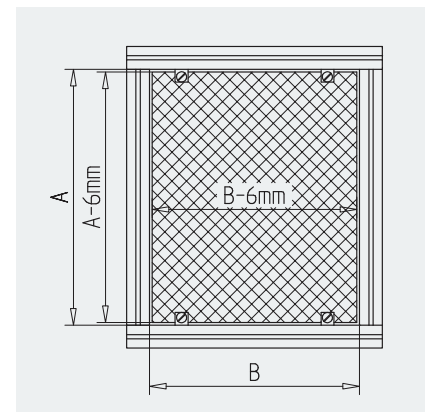
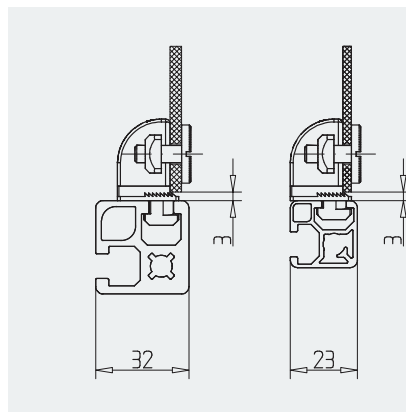
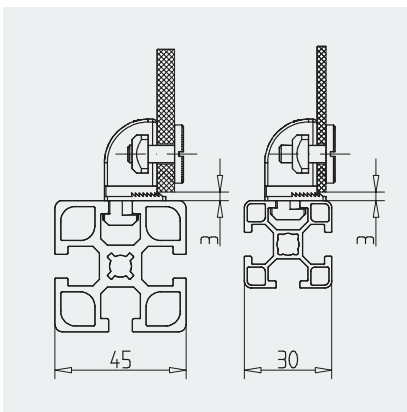
Panel clamp

- Extremely simple and cost-effective fastening of panel elements.
- The terminal blocks consist of a base and locking clip.
- Suitable for all surface elements from 2 to 6 mm thick, except wavy grid.
- Calculation of panel size: Clear opening $A / B - 12\text{mm}$ (6mm air circulating)



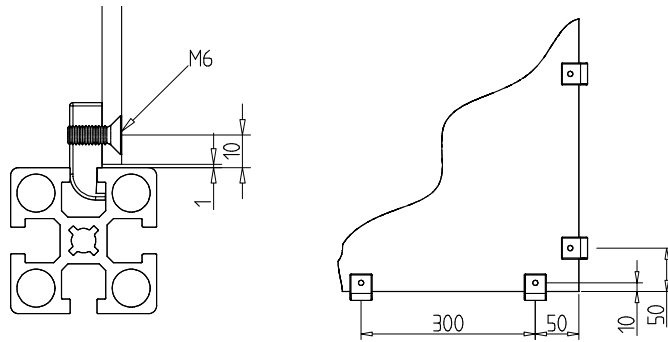
Screw block

- Suitable for panel material up to 6 mm thick, except for wave grid.
- Calculation of panel size: Clear opening $A / B - 6\text{mm}$ (3mm air circulating)



Installation of surface elements

Installing surface elements in the profile groove



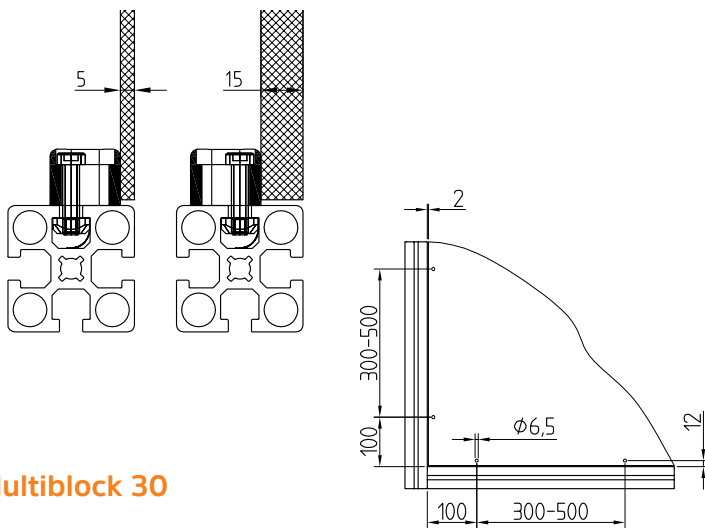
Thread Socket

Safe and easy attachment of surface elements of all kinds except wave grid. The threaded sockets are swiveled into the profile groove at intervals of approx. 300 mm. Select screw length and screw shape according to material thickness and type of surface element.

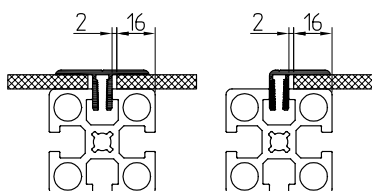
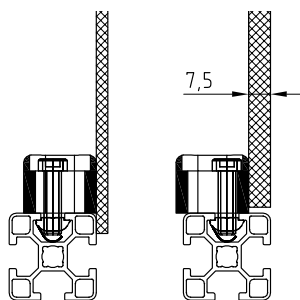
Calculation of panel size:

Clear opening -2 mm (1 mm air circulating)

Multiblock 45



Multiblock 30



Multiblock

The multiblocks are placed in the clear opening of the frame construction at a distance of approx. 300 mm with M6 cylinder screws and sliding nuts.

Suitable for acrylic, sheet metal, aluminum wave grid. With the Multiblock 45, material of 5 to 15 mm thickness can be fastened flush.

With the Multiblock 30, material up to 7.5 mm thick can be fastened flush.

Select screw length and screw shape according to material thickness and type of surface element.

The hole in the surface element for the fixing screws in $\text{Ø}6.5$ mm and with 10 mm margin.

Calculation of panel size:

Clear opening -4 mm (~ 2 mm air circulating)

Furthermore, it is possible to mount surface elements on the Multiblock 30, so there is no air gap.

Screw Bar

Material: PVC

Fixing of surface elements or components at any place with sheet metal- or chipboard screws.

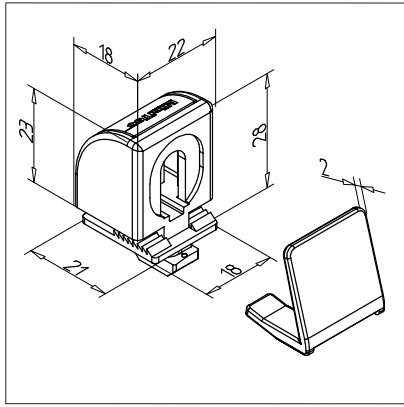
Panel Clamping Profile

Suitable for surface elements from 2 to 10 mm thick.

Insert boring $\text{Ø} 5.5$ mm for M5 threaded pin with a spacing of ~ 250 mm into the profile groove and clamp with M5 x 16 threaded pin.

For panels, woven wire mesh and pressed wire mesh

Clamping block 23



TECHN. DATA / ITEMS SUPPLIED

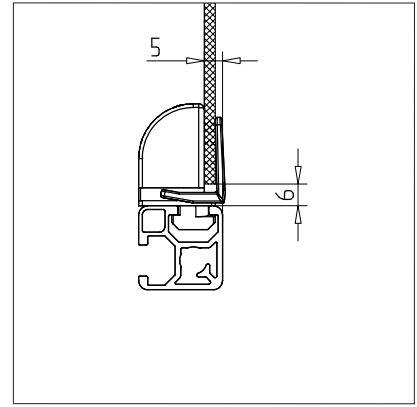
- ABS, Injection Mould, grey
- Weight = 0.008 kg/piece



APPLICATIONS

- Suitable for all profiles of series 30
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 6 mm

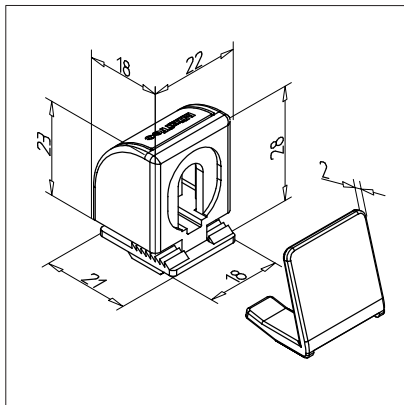
Part No. 22.1235/0



ASSEMBLY

- Insert socket into profile groove
- Insert surface elements
- Press on clip
- **Dismounting:** Lift snap-in clip slightly and pull it out

Clamping block 30



TECHN. DATA / ITEMS SUPPLIED

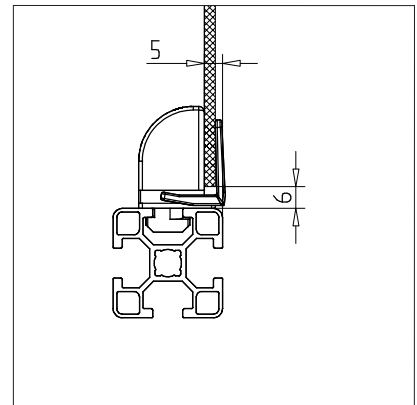
- ABS, Injection Mould, grey
- Weight = 0.008 kg/piece



APPLICATIONS

- Suitable for all profiles of series 30
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 6 mm

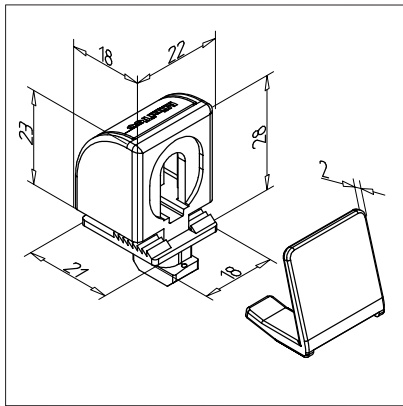
Part No. 22.1230/0



ASSEMBLY

- Insert socket into profile groove
- Insert surface elements
- Press on clip
- **Dismounting:** Lift snap-in clip slightly and pull it out

Clamping block 32



TECHN. DATA / ITEMS SUPPLIED

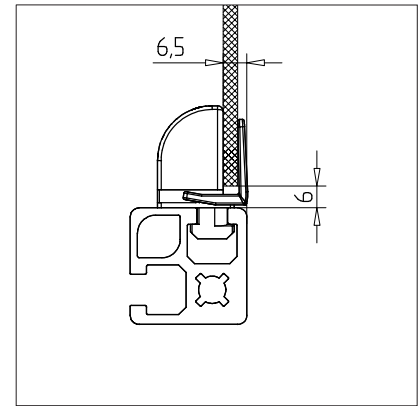
- ABS, Injection Mould, grey
- Weight = 0.008 kg/piece



APPLICATIONS

- Suitable for profile series 45
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 6 mm

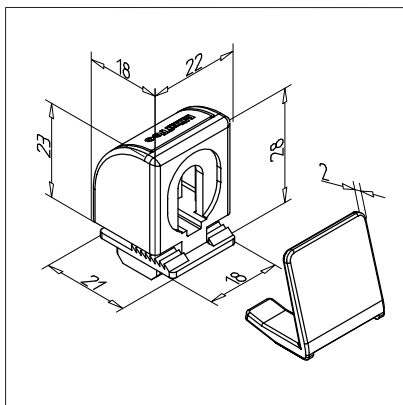
Part No. 22.1245/0



ASSEMBLY

- Insert socket into profile groove
- Insert surface elements
- Press on clip
- **Dismounting:** Lift snap-in clip slightly and pull it out

Clamping block 45



TECHN. DATA / ITEMS SUPPLIED

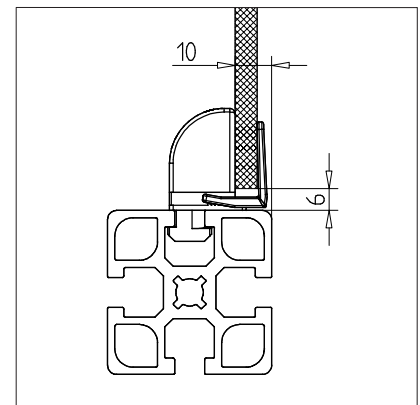
- ABS, Injection Mould, grey
- Weight = 0.008 kg/piece



APPLICATIONS

- Suitable for profile series 45
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 6 mm

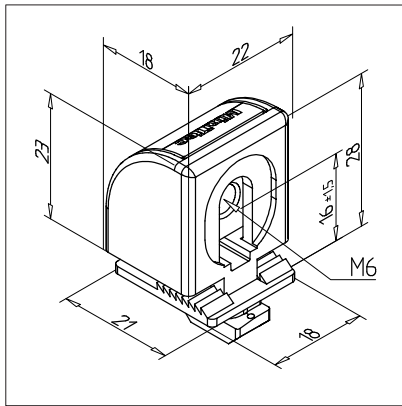
Part No. 22.1240/0



ASSEMBLY

- Insert socket into profile groove
- Insert surface elements
- Press on clip
- **Dismounting:** Lift snap-in clip slightly and pull it out

Screw block 23



TECHN. DATA / ITEMS SUPPLIED

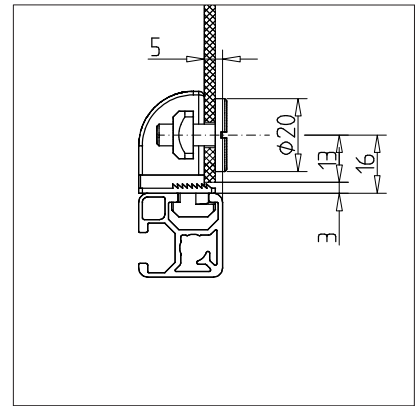
- ABS, Injection Mould, grey
- Nut M6, steel, zinc-plated
- Also available with thread dimensions M4/M5
- Weight = 0.011 kg/piece



APPLICATIONS

- Suitable for all profiles of series 30
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 7 mm

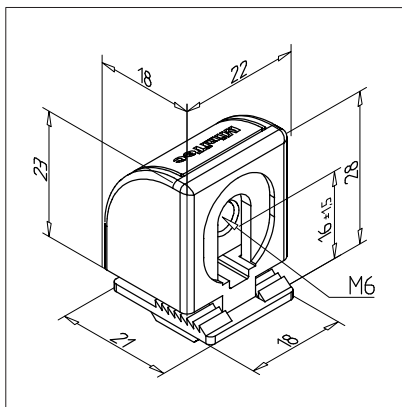
Part No. 22.1255/0



ASSEMBLY

- Insert socket into profile groove
- Insert bored surface elements
- Screw down the surface elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** up to 3 mm disc thickness or M6x16 **part no. 21.1246/0** for greater strengths

Screw block 30



TECHN. DATA / ITEMS SUPPLIED

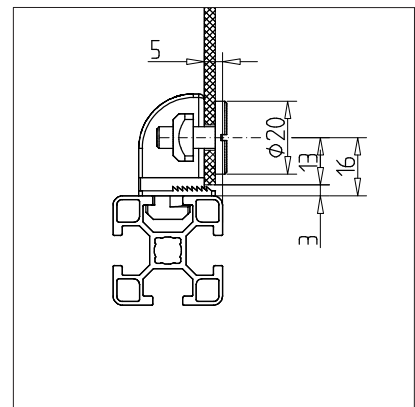
- ABS, Injection Mould, grey
- Nut M6, steel, zinc-plated
- Also available with thread dimensions M4/M5
- Weight = 0.011 kg/piece



APPLICATIONS

- Suitable for all profiles of series 30
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 7 mm

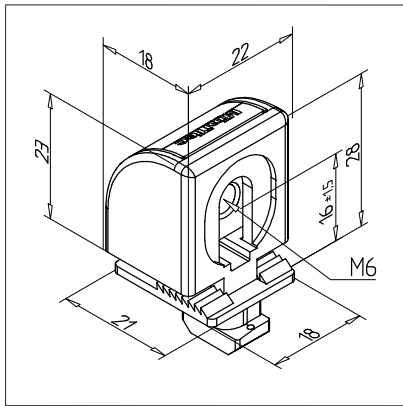
Part No. 22.1250/0



ASSEMBLY

- Insert socket into profile groove
- Insert bored surface elements
- Screw down the surface elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** up to 3 mm disc thickness or M6x16 **part no. 21.1246/0** for greater strengths

Screw block 32



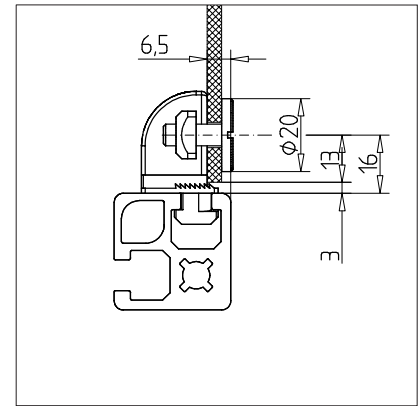
TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Nut M6, steel, zinc-plated
- Also available with thread dimensions M4/M5
- Weight = 0.011 kg/piece



APPLICATIONS

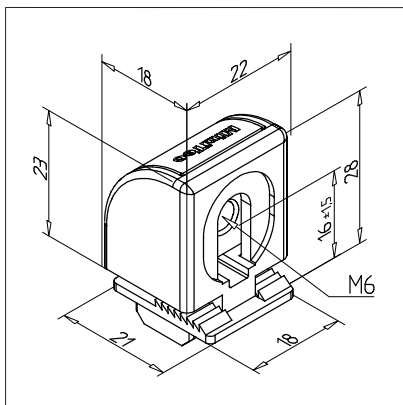
- Suitable for profile series 45
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 7 mm



ASSEMBLY

- Insert socket into profile groove
- Insert bored surface elements
- Screw down the surface elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** up to 3 mm disc thickness or M6x16 **part no. 21.1246/0** for greater strengths

Screw block 45



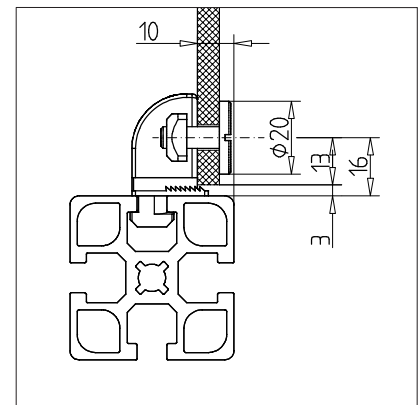
TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Nut M6, steel, zinc-plated
- Also available with thread dimensions M4/M5
- Weight = 0.011 kg/piece



APPLICATIONS

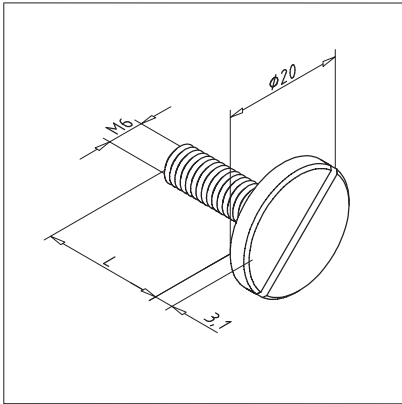
- Suitable for profile series 45
- Retrofitting surface elements 2 mm to 6 mm thickness
- Circulating air gap 7 mm



ASSEMBLY

- Insert socket into profile groove
- Insert bored surface elements
- Screw down the surface elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** up to 3 mm disc thickness or M6x16 **part no. 21.1246/0** for greater strengths

Pan head screw M6



TECHN. DATA / ITEMS SUPPLIED

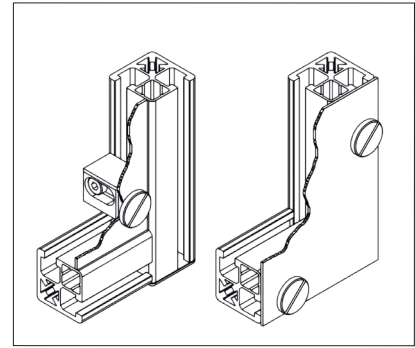
- Steel, galvanized
- Head diameter Ø 20 mm
- M06x12 - **part no. 21.2074/0**, Weight 0,008 kg
- M06x16 - **part no. 21.1246/0**, Weight 0,009 kg
- M06x20 - **part no. 21.1246/1**, Weight 0,010 kg



APPLICATIONS

- Assembly of surface elements directly on profile groove
- In connection with screw blocks, multi-blocks and thread socket

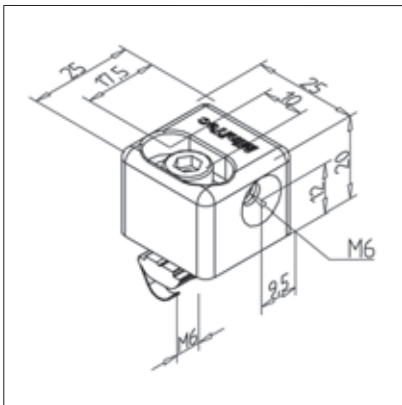
Part No. ---,----/-



ASSEMBLY

- Pre-drill surface elements: Ø 6.5 mm
- Recommended grid dimensions: approx. 150 mm
- Edge distance: see screw block 32 and multi-block

Multiblock 30 GD



TECHN. DATA / ITEMS SUPPLIED

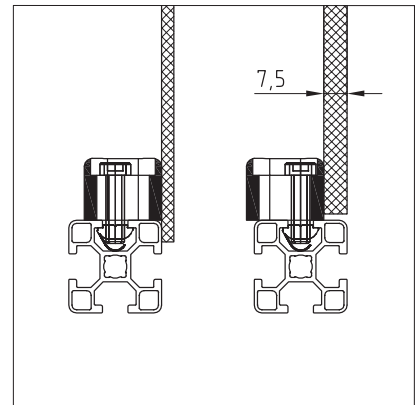
- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Without pan head screw
- Weight = 0.032 kg/piece



APPLICATIONS

- Retrofitting surface elements and attachments
- Plate thickness of 6 to 7 mm can be continuously flush fit
- Alternatively, surface elements can also be mounted on-the-floor, so they can also be installed without an air gap.

Part No. 21.2220/0

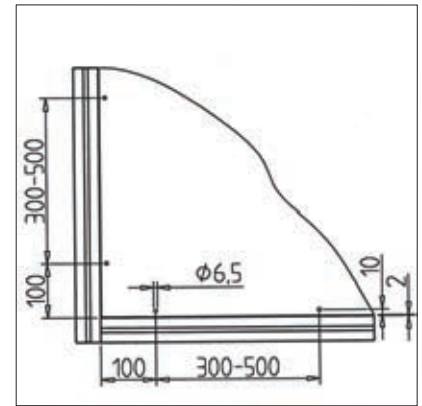
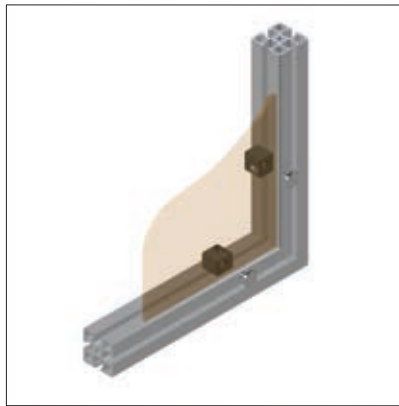
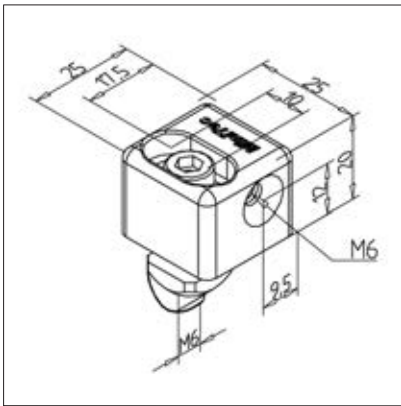


ASSEMBLY

- Fastening surface elements or components with screw M6 or flat head screw
- Determination of panel dimensions: Light opening -4mm (~2 mm circulating air)
- Bore for fixation screws Ø 6.5 mm, edge distance 10 mm

Multiblock 45 GD

Part No. 21.1355/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Without pan head screw
- Weight = 0.035 kg/piece

APPLICATIONS

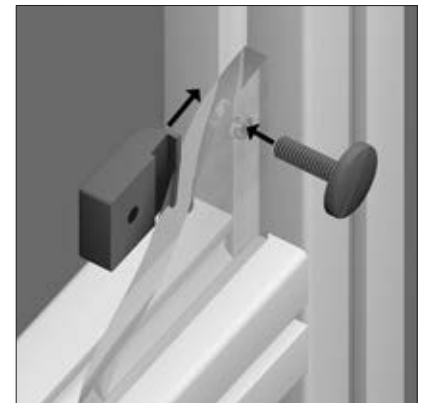
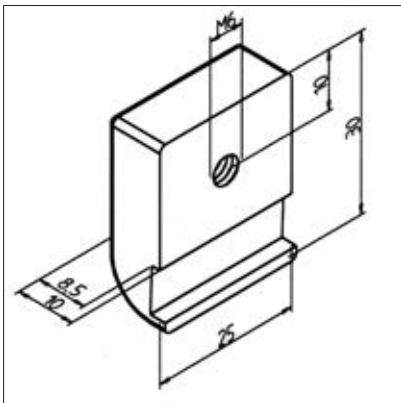
- Retrofitting surface elements and attachments
- Plate thickness of 5 to 15 mm can be continuously flush fit

ASSEMBLY

- For all profile grooves
- Fastening surface elements or components with screw M6 or flat head screw
- Bore for fixation screws $\varnothing 6.5$ mm, edge distance 10 mm

Thread socket GD

Part No. 21.1117/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Without pan head screw
- Weight = 0.018 kg/piece

APPLICATIONS

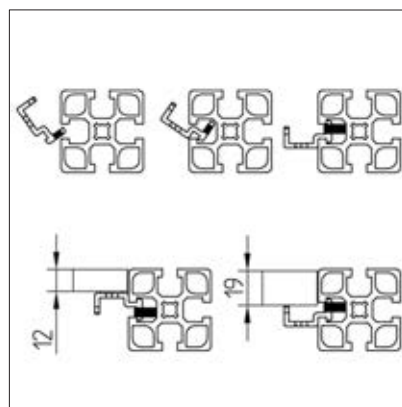
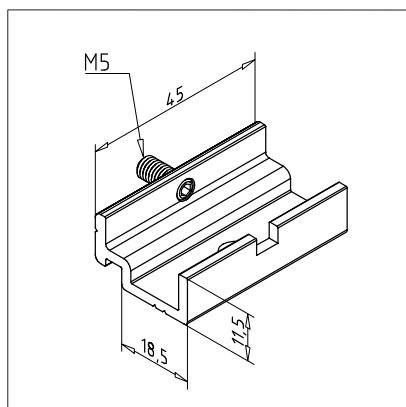
- Fix surface elements in profile frames
- Table tops

ASSEMBLY

- Insert the thread socket into profile groove
- Fix element with screws M6 or flat head screw
- Distance from edge of the thread: 10 mm

Mounting base N pivoted

Part No. 21.0036/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Mounting base N pivoted
- Weight = 0.016 kg/piece

APPLICATIONS

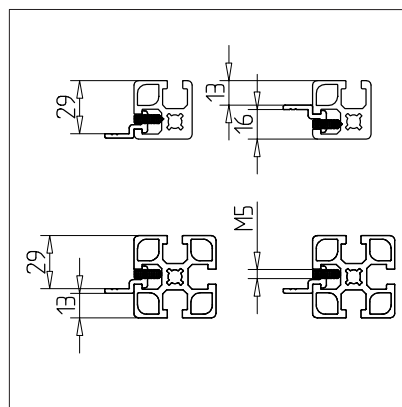
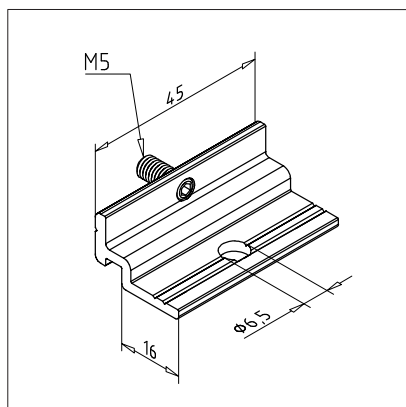
- For the positioning and fastening of table tops and surface elements

ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required

Mounting base F pivoted

Part No. 21.0041/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Mounting base N pivoted
- Weight = 0.014 kg/piece

APPLICATIONS

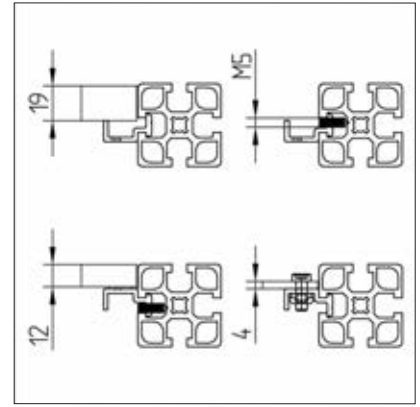
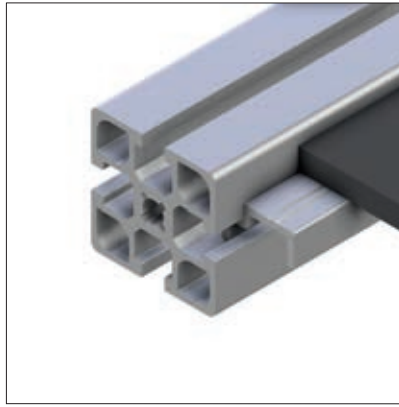
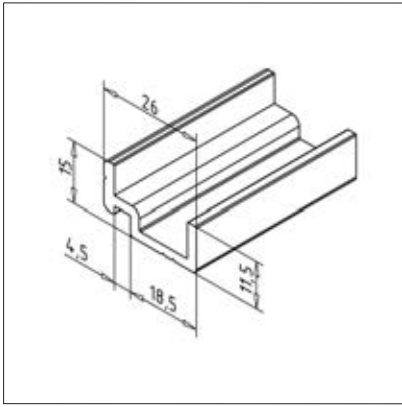
- For the positioning and fastening of table tops and surface elements

ASSEMBLY

- Swing into profile groove
- Clamp with set screw
- No machining required

Support profile N for surface elements

Part No. 20.1121/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.339 kg/m
- Bar length = 6 m

APPLICATIONS

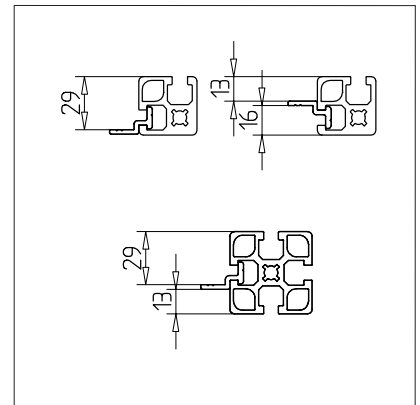
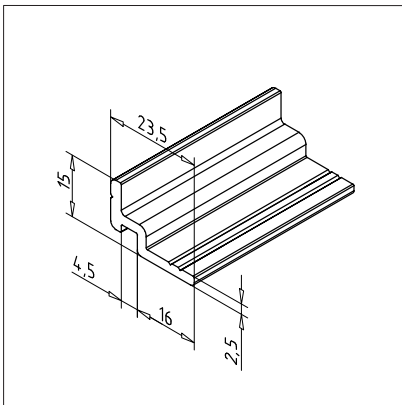
- All types of safety equipment
- For installation of surface elements such as panels and plates up to a thickness of 19 mm
- Subsequent insertion

ASSEMBLY

- Slide the carrier profile into the groove and if necessary, fix it with a threaded pin
- Surface element: clear opening x+y: -2 mm

Support profile F for surface elements

Part No. 20.1149/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.262 kg/m
- Bar length = 6 m

APPLICATIONS

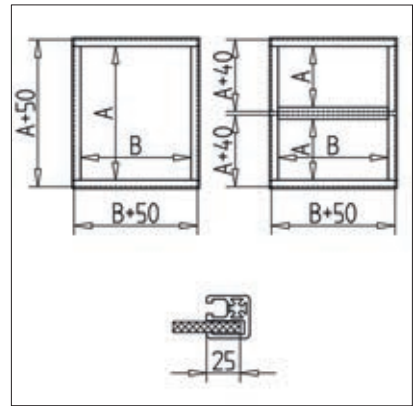
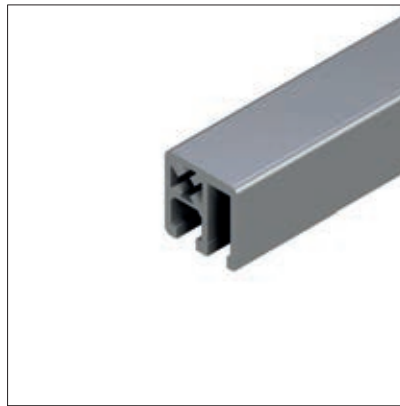
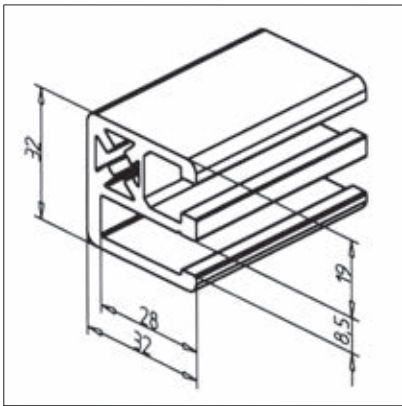
- All types of safety equipment
- For installation of surface elements such as panels and plates up to a thickness of 19 mm
- Subsequent insertion

ASSEMBLY

- Slide the carrier profile into the groove and if necessary, fix it with a threaded pin

Clamp profile 32 x 32

Part No. 20.1070/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 5.024 \text{ cm}^4$
- $I_y = 4.418 \text{ cm}^4$
- $w_x = 3.041 \text{ cm}^3$
- $w_y = 2.398 \text{ cm}^3$
- $IT = 2.322 \text{ cm}^4$
- Weight = 1.211 kg/m
- Bar length = 6 m
- Packing unit = 48 m

APPLICATIONS

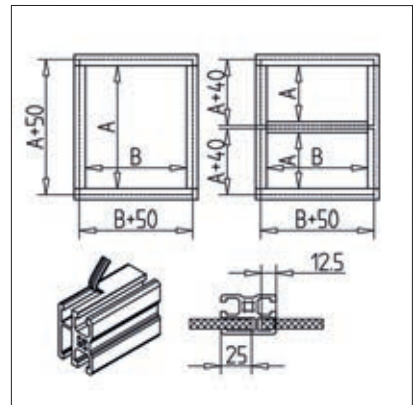
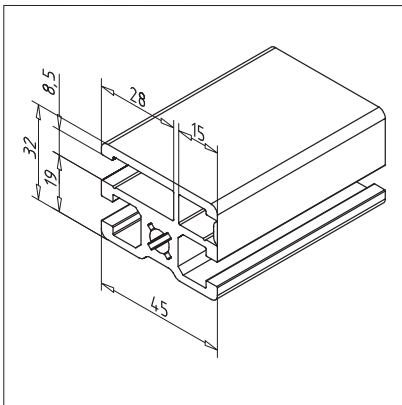
- All types of safety equipment
- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- In the case of larger guard units, intermediate struts made of clamping profile 45 x 32 must be used in order to ensure adequate safety against pushing out of the surface elements; To do this, remove cover strips on clamping profile 45 x 32 mm
- Cut size of surface elements: Dimension A/B - 40/50 mm depending on application

ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching insert seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

Clamp profile 45 x 32

Part No. 20.1053/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 6.465 \text{ cm}^4$
- $I_y = 9.521 \text{ cm}^4$
- $w_x = 3.999 \text{ cm}^3$
- $w_y = 4.119 \text{ cm}^3$
- $IT = 15.996 \text{ cm}^4$
- Weight = 1.615 kg/m
- Bar length = 6 m
- Packing unit = 48 m

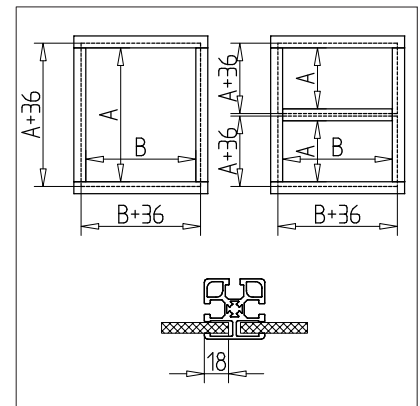
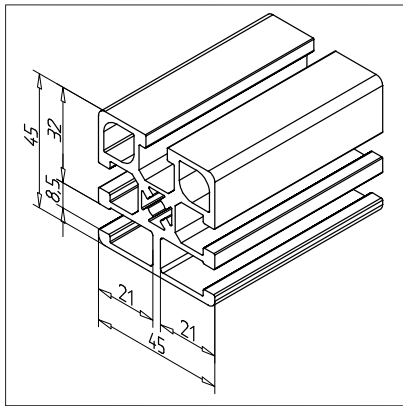
APPLICATIONS

- In the case of larger guard units, intermediate struts made of clamping profile 45 x 32 must be used in order to ensure adequate safety against pushing out of the surface elements; To do this, remove cover strips on clamping profile 45 x 32 mm
- All types of safety equipment
- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- Cut size of surface elements: Dimension A/B - 40/50 mm depending on application

ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching insert seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

Clamp profile 45 x 45 F



Part No. 20.1147/0

TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 13.521 \text{ cm}^4$
- $I_y = 12.308 \text{ cm}^4$
- $w_x = 5.836 \text{ cm}^3$
- $w_y = 5.470 \text{ cm}^3$
- $IT = 7.163 \text{ cm}^4$
- Weight = 1.850 kg/m
- Bar length = 6 m
- Packing unit = 36 m

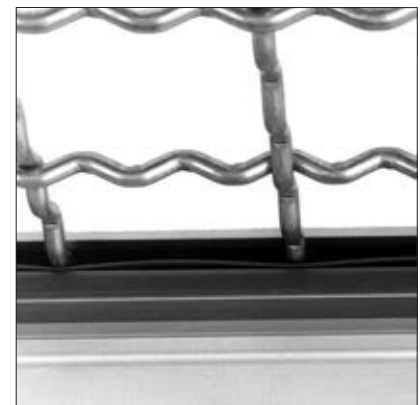
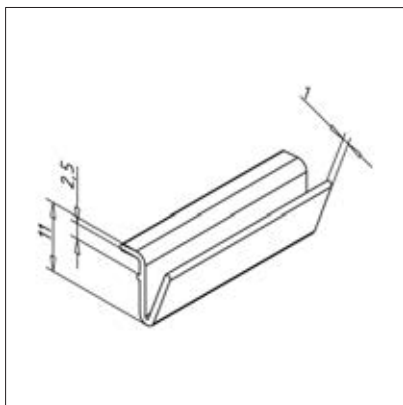
APPLICATIONS

- For clamping of surface elements, such as woven mesh, panels, plates with a maximum strength of 8 mm
- All types of safety equipment
- Cut size of surface elements: Dimension A/B - 36 mm

ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No release of panel element corners required
- Pre-assemble tripartite frame
- Insert panel element and install last profile brace
- Press in the distance profile **part no. 22.1039/0** on the inside or drive in with a flat tool
- For panel elements < Mount 6 mm with matching insert seal or < Mount 4 mm with spacer profile and additionally suitable plug-in seal on the opposite side

Distance profile 30



Part No. 22.1158/0

TECHN. DATA / ITEMS SUPPLIED

- ABS, extruded, grey
- Weight = 0.020 kg/m
- Bar length = 2 m

APPLICATIONS

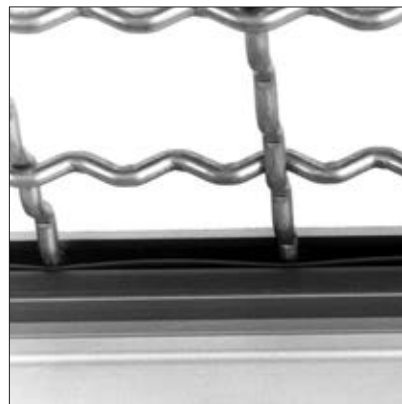
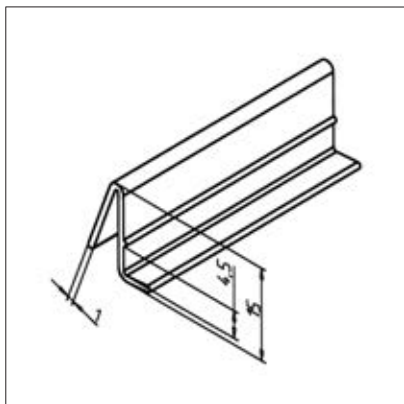
- For fixing surface elements such as corrugated mesh, panes and plates in the grooves of profile series 30

ASSEMBLY

- Mount the profile frames with the surface elements
- Push in distance profile on the inside or knock in with a flat tool

Distance profile 45

Part No. 22.1039/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, extruded, grey
- Weight = 0.028 kg/m
- Bar length = 2 m

APPLICATIONS

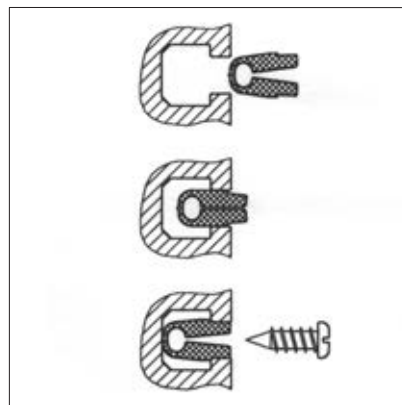
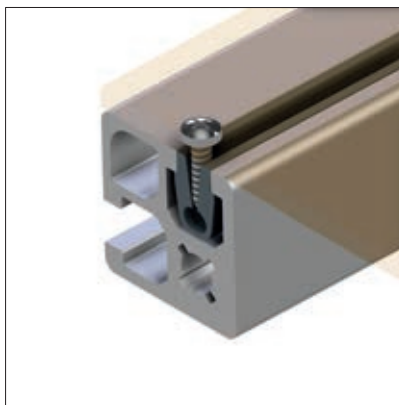
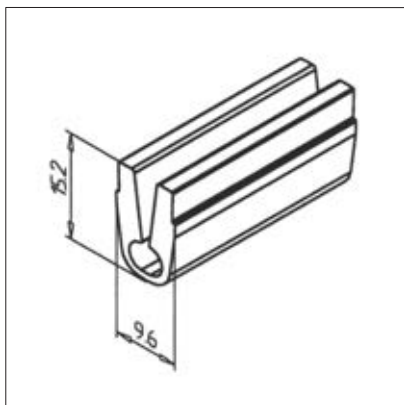
- Use in clamping profile 45 x 32 **part no. 20.1053/0** and clamping profile 32 x 32 **part no. 20.1070/0** for clamping surface elements
- Also for use with all other profiles to fix surface elements

ASSEMBLY

- Mount the profile frames with the surface elements
- Push in distance profile on the inside or knock in with a flat tool

Screw socket profile

Part No. 22.1076/0



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- Weight = 0.118 kg/m
- Bar length = 2 m

APPLICATIONS

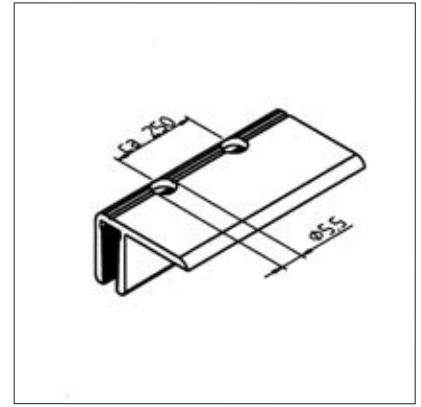
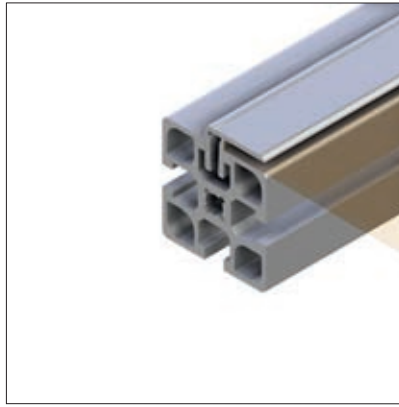
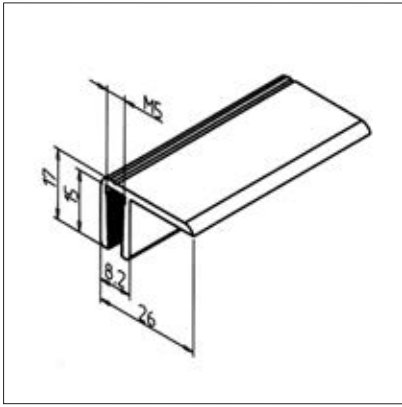
- Fastening surface elements or components at any location

ASSEMBLY

- Clip profile into groove
- Fasten element with commercial-type selftapping screws \varnothing 4-5 mm; Length min: 16 mm
- For material thickness of 1-6 mm, sheet metal screw 3,5 x 16 mm **part no. 21.1365/0**

Panel clamp profile

Part No. 20.1025/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.260 kg/m
- Bar length = 6 m

APPLICATIONS

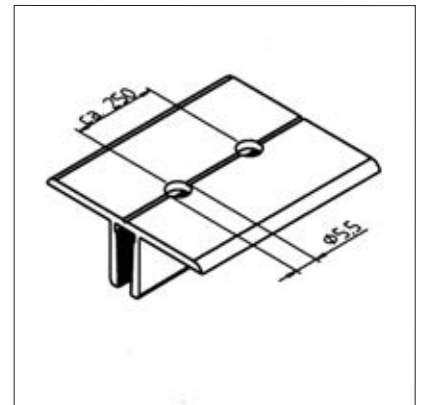
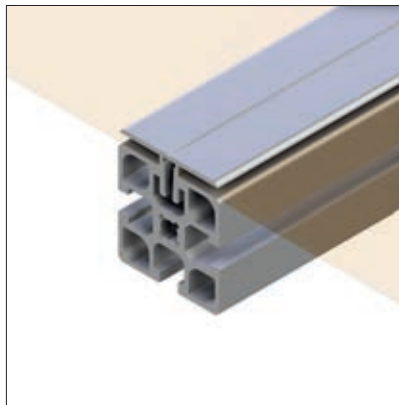
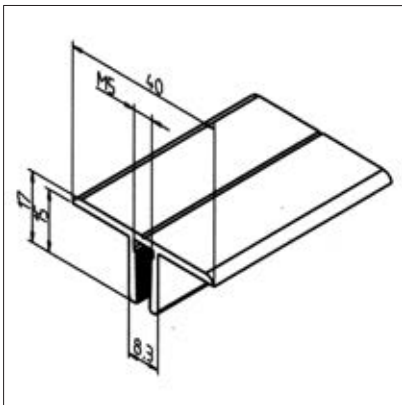
- Fastening of surface elements
- Post fitting of facing panels
- Reception of surface elements with a maximum strength of 10 mm

ASSEMBLY

- Make bore \varnothing 5.5 mm for setscrew M5 in grid size of approx. 250 mm
- Press in the profile groove and clamp with grub screw M5 x 12 **part no. 21.1381/0**

Double panel clamp profile

Part No. 20.1018/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.375 kg/m
- Bar length = 6 m

APPLICATIONS

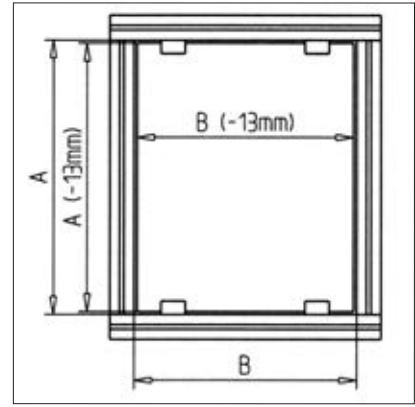
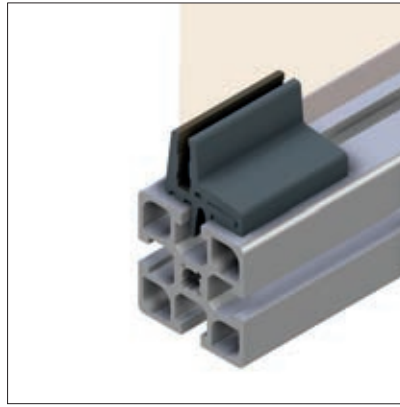
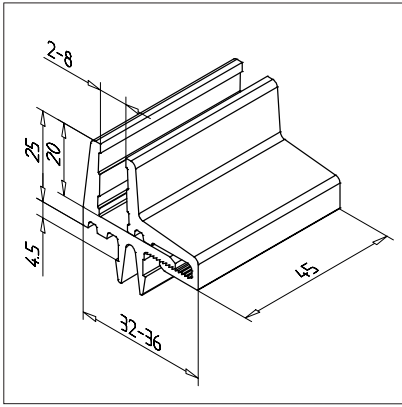
- Attachment of panels on the outer face in the region of a butt joint
- Reception of surface elements with a maximum strength of 10 mm

ASSEMBLY

- Make bore \varnothing 5.5 mm for setscrew M5 in grid size of approx. 250 mm
- Press in the profile groove and clamp with grub screw M5 x 12 **part no. 21.1381/0**
- See also surface clamping profile **part no. 20.1025/0**

Panel holder grey

Part No. 22.1090/1



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- On request also available in black, **part no. 22.1090/0**
- Weight = 0.011 kg/piece

APPLICATIONS

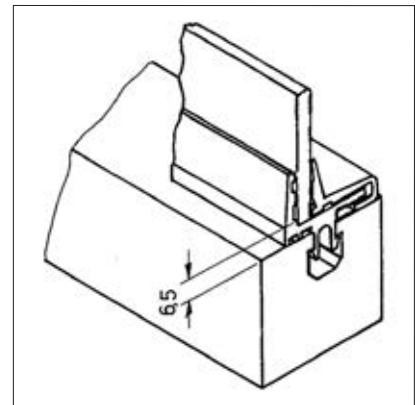
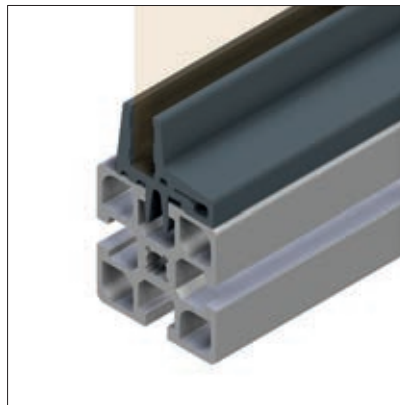
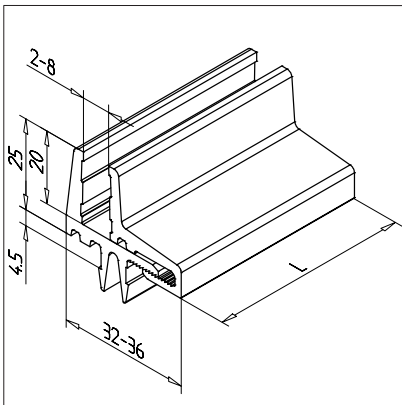
- Fixation surface elements with a maximum strength of 8 mm
- For surface elements smaller than 4 mm, a moss rubber strip must be inserted
- Windows, doors
- Not suitable for corrugated mesh

ASSEMBLY

- Fold the sockets into the profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- To install surface elements less than 4 mm thick, the insertion of an additional sponge rubber strip or similar is recommended, e.g. our flat sponge rubber tape 10x3 mm, self-adhesive **Part no. 22.1129/0**

Clamp profile PVC

Part No. 22.1092/0



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- On request also available in black, **part no. 22.1080/0**
- Weight = 0.550 kg/m
- Bar length = 2 m

APPLICATIONS

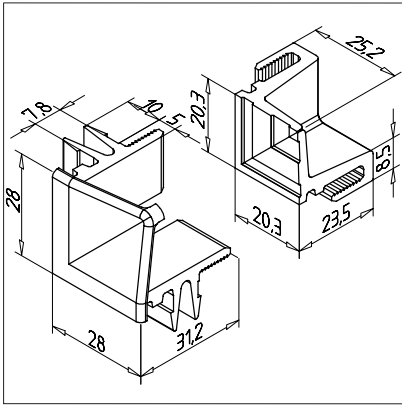
- Fixation surface elements with a maximum strength of 8 mm
- For surface elements smaller than 4 mm, a moss rubber strip must be inserted
- Windows, doors
- No free space between profile and panel element
- Also suitable for corrugated mesh

ASSEMBLY

- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- To install surface elements less than 4 mm thick, the insertion of an additional sponge rubber strip or similar is recommended, e.g. our flat sponge rubber tape 10x3 mm, self-adhesive **Part no. 22.1129/0**

Corner trim clamping profile grey

Part No. 22.1221/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- 2-piece
1st part for fixing in the profile groove
2nd part for fitting on part 1 and clamping the surface element
- Weight = 0.013 kg/piece

APPLICATIONS

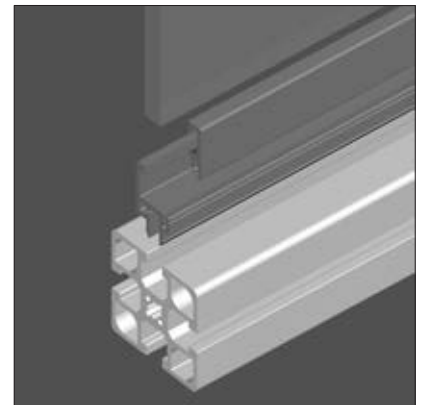
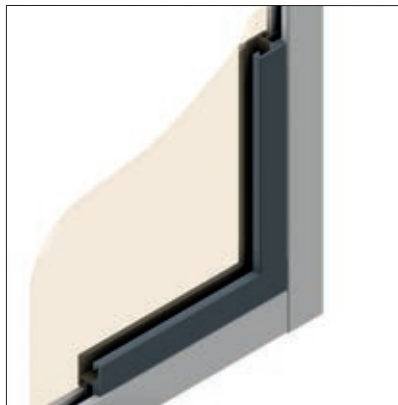
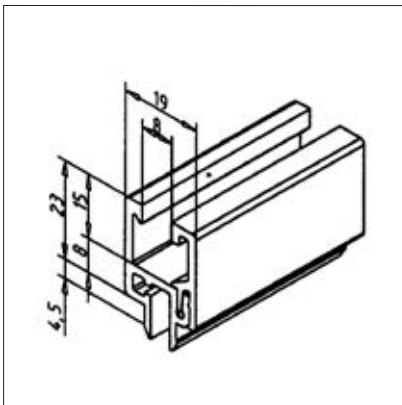
- Use for increased design standard as a replacement for mitre cuts in clamping profile PVC

ASSEMBLY

- Position part 1 in the 4 corners of the profile frame
Clip in part 1 of the clamping profile, all round between the corner pieces and insert surface element
Fit part 2 of the clamping profile and end cap and use it to tightly clamp the surface element
- Cut to size dimension of the clamping profile:
clear width of the frame - 51 mm

Panel clamping profile

Part No. 22.1107/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, extruded, grey
- Weight = 0.229 kg/m
- Bar length = 2 m

APPLICATIONS

- For retrofitting surface elements in existing profile frames
- Fixation surface elements with a maximum strength of 8 mm
- For panels up to 8 mm use additional insert seal
- For subsequent installation of corrugated mesh please use clamp profile PVC
- Windows, doors
- No free space between profile and panel element

ASSEMBLY

- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- **No mitre cut necessary**

Surface elements

ACRYL



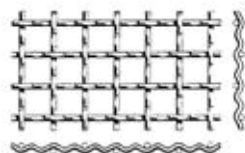
Part no.	Strength	Colour	Weight	Plate size
21.1832/0	4 mm	smoke-coloured	4,76 kg/m ²	2050 x 3050 mm
21.1811/0	5 mm	smoke-coloured	5,95 kg/m ²	2050 x 3050 mm
21.1812/0	6 mm	smoke-coloured	7,14 kg/m ²	2050 x 3050 mm
21.1813/0	8 mm	smoke-coloured	9,52 kg/m ²	2050 x 3050 mm
21.1826/0	4 mm	crystal clear	4,76 kg/m ²	2050 x 3050 mm
21.1836/0	5 mm	crystal clear	5,95 kg/m ²	2050 x 3050 mm
21.1827/0	6 mm	crystal clear	7,14 kg/m ²	2050 x 3050 mm
21.1828/0	8 mm	crystal clear	9,52 kg/m ²	2050 x 3050 mm

POLYCARBONATE



Part no.	Strength	Colour	Weight	Plate size
21.1809/0	4 mm	smoke-coloured	4,76 kg/m ²	2050 x 3050 mm
21.1808/0	5 mm	smoke-coloured	5,95 kg/m ²	2050 x 3050 mm
21.1807/0	6 mm	smoke-coloured	7,20 kg/m ²	2050 x 3050 mm
21.1821/0	8 mm	smoke-coloured	9,78 kg/m ²	2050 x 3050 mm
21.1829/0	4 mm	crystal clear	4,80 kg/m ²	2050 x 3050 mm
21.1833/0	5 mm	crystal clear	5,95 kg/m ²	2050 x 3050 mm
21.1830/0	6 mm	crystal clear	7,20 kg/m ²	2050 x 3050 mm
21.1831/0	8 mm	crystal clear	9,78 kg/m ²	2050 x 3050 mm

WAVE GRID



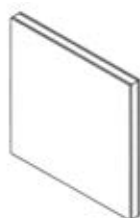
Part no.	Wire thickness approx	Clear mesh size	Weight	Plate size	Material
21.1803/0	4 mm	30 mm -3,5/+8%	6,2 kg/m ²	2000 x 3000 mm	pc, galvanized
21.1805/0	4 mm	40 mm -3/+7%	4,7 kg/m ²	2000 x 3000 mm	pc, galvanized
21.1818/2	4 mm	30 mm -3,5/+8%	2,14 kg/m ²	2000 x 2000 mm	ALMg3
21.1818/1	4 mm	40 mm -3/+7%	1,6 kg/m ²	2000 x 2000 mm	ALMg3

ALUMINIUM-WAVE PANEL



Part no.	21.1853/0
Front	0,8 mm
Back	0,5 mm
Aluminium Shaft	0,2 mm
total thickness	6 mm
Weight	4,6 kg/m ²
Plate size	1500 x 3000 mm
Material	Aluminum adhesive coated on both sides, paintable, printable, recyclable

COMPOSITE



Part no.	21.1834/0
Material outside	Aluminium (anodized)
Material inside	Polyethylene
total thickness	6 mm
Weight	7,3 kg/m ²
Plate size	1250 x 2500 mm
Others	paintable, printable, recyclable

ON DEMAND

Aluminium sheets, steel plates, perforated sheets, plywood panels

HPL compact table-top

part no.	Color	Thickness	Weight	Size	ESD
32.6201/0	light grey	5	7 Kg/m ²	2520 x 1280	Nein
32.6202/0	light grey	8	11,2 Kg/m ²	2520 x 1280	Nein
32.6203/0	light grey	16	22,4 Kg/m ²	2520 x 1280	Nein
32.6204/0	light grey	20	30 Kg/m ²	2520 x 1280	Nein
32.6205/0	light grey	8	11,2 Kg/m ²	2520 x 1280	Ja
32.6206/0	light grey	10	14 Kg/m ²	2520 x 1280	Ja
32.6207/0	light grey	16	22,4 Kg/m ²	2520 x 1280	Ja
32.6208/0	light grey	20	30 Kg/m ²	2520 x 1280	Ja

Extremely scratch-resistant, water-resistant and resistant to a variety of chemicals, acids and alkalis.

PVC-PLATE

Part no.	21.1817/0
Thickness	20 mm
Color	grey, 7011 RAL
Weight	28 kg/m ²
Plate size	1000 x 2000 mm
Others	other colours and strengths, Anti-static Tabletops on request

RECYCLING-PLATE PE

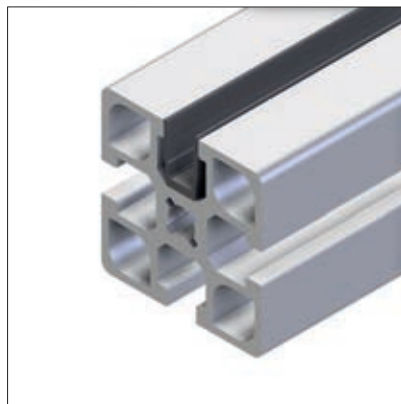
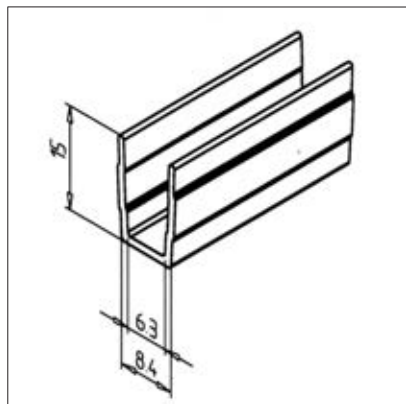
Part no.	32.0406/0
Thickness	10 - 40 mm
Colour	black
Plate size	1000 x 2000 mm
Density	0,93 kg/dm ³
Others	PE-Regenerated

RECYCLING-PLATE PE CONFETTI

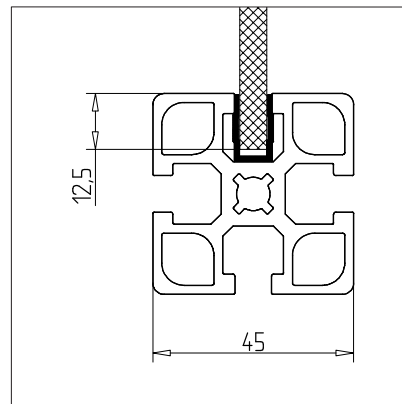
Part no.	32.0405/0
Thickness	10 - 40 mm
Colour	confetti
Plate size	1000 x 2000 mm
Density	0,93 kg/dm ³
Others	PE-Regenerated

*(The colour spread may vary depending on the delivery in shape, colour and size)

Cover profile 45



Part No. ---,----/-



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded
- Traffic black **part no. 22.1070/0**
- Basalt grey **part no. 22.1070/1**
- Light grey **part no. 22.1070/2**
- Sky blue **part no. 22.1072/0**
- Pastel orange **part no. 22.1071/0**
- Zinc yellow **part no. 22.1074/0**
- Silver **part no. 22.1179/0**
- Weight = 0.060 kg/m
- Bar length = 2 m

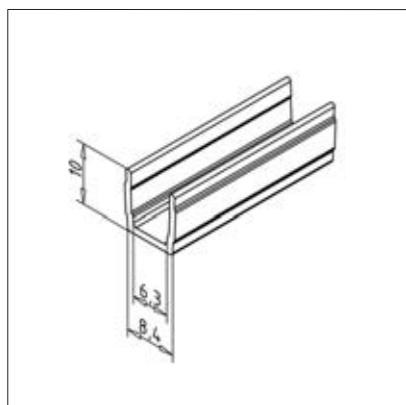
APPLICATIONS

- Mounted with groove inwards: For closing profile grooves
- **Mounted with the groove to the outside:**
For the absorption of surface elements up to 6 mm thickness, dimensional compensation by silicone or sponge rubber cord **part no. 22.1102/0**

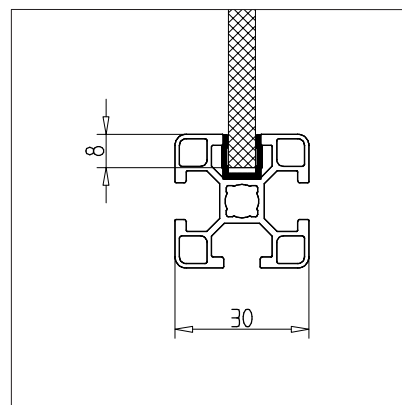
ASSEMBLY

- Snap or slip into profile groove

Cover profile 30



Part No. ---,----/-



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded
- Basalt grey **part no. 22.1161/1**
- Light grey **part no. 22.1161/2**
- Weight = 0.040 kg/m
- Bar length = 2 m

APPLICATIONS

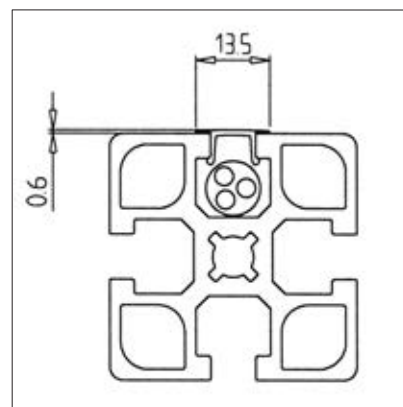
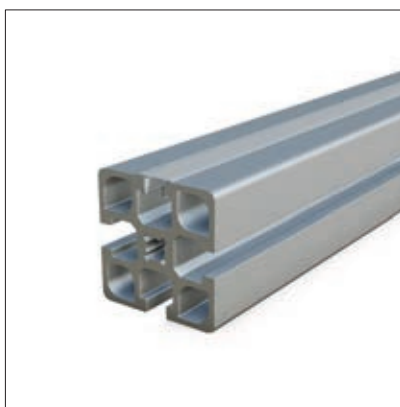
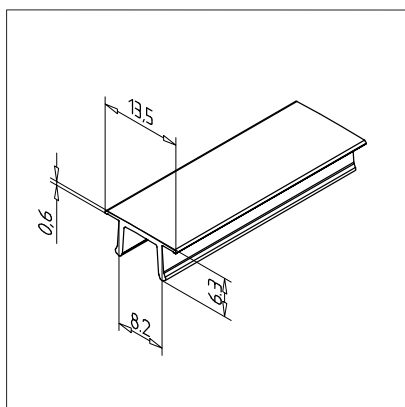
- Mounted with groove inwards: For closing profile grooves
- **Mounted with the groove to the outside:**
For the absorption of surface elements up to 6 mm thickness, dimensional compensation by silicone or sponge rubber cord **part no. 22.1102/0**

ASSEMBLY

- Press or slide into the profile groove

Cover profile K

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

- ABS, basalt grey **part no. 22.1020/1**
- PP, transparent **part no. 22.1020/3**
- ABS, zinc yellow **part no. 22.1020/4**
- Weight = 0.023 kg/m
- Bar length = 2 m

APPLICATIONS

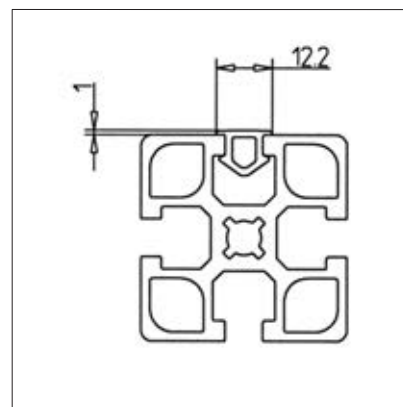
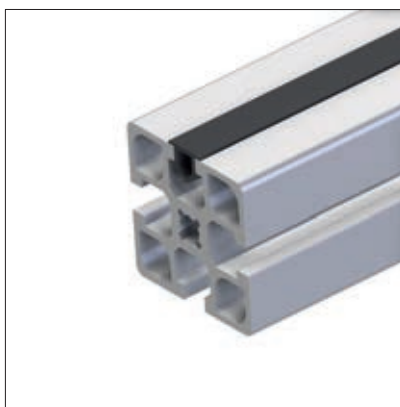
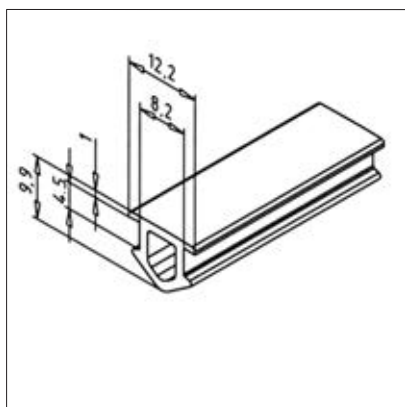
- Dust-tight sealing of the profile grooves
- The groove cross-section remains largely free for laying cables or hoses
- Information plates
- The transparent cover profile can be used to cover lighting elements in the profile groove, e.g. LED strips

ASSEMBLY

- Press by hand onto profile groove

Cover profile G

Part No. 22.1010/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Roll length 100 m
- Hardness (Shore A) 70°
- Weight = 0.072 kg/m

APPLICATIONS

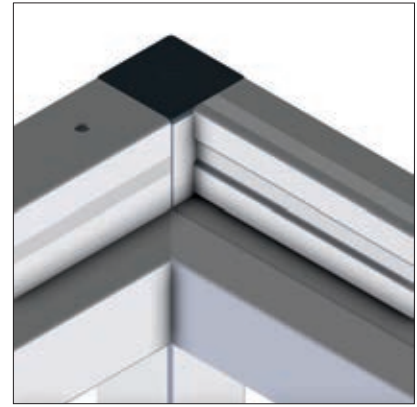
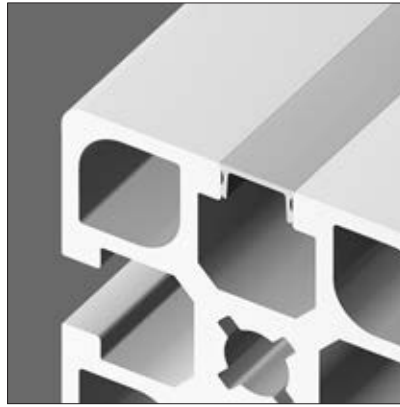
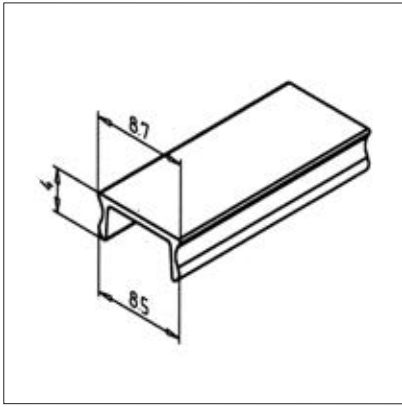
- Dust-tight sealing of the profile grooves
- The groove cross-section remains largely free for laying cables or hoses

ASSEMBLY

- Press by hand onto profile groove

Cover profile L anodized E6/EV1

Part No. 20.1021/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Also available non-anodised on request
Part no. 20.1021/0
- Weight = 0.030 kg/m
- Bar length = 2 m

APPLICATIONS

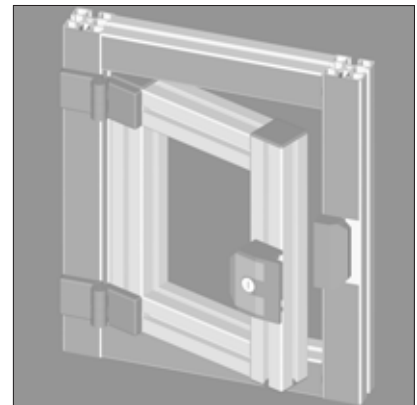
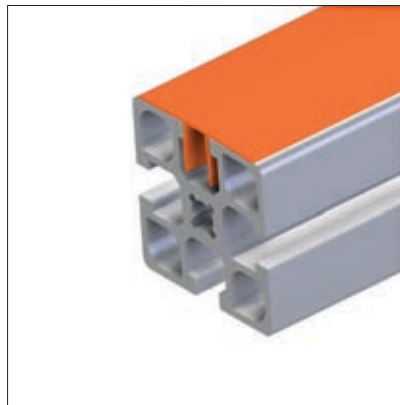
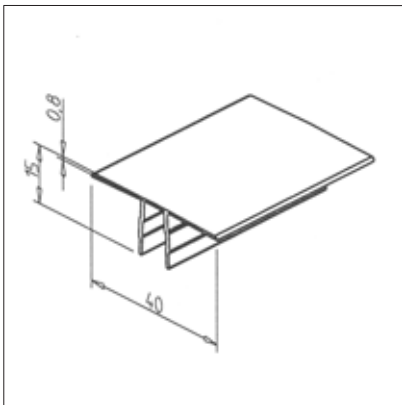
- Dust-tight sealing of the profile grooves
- The groove cross-section remains largely free for laying cables or hoses
- Information plates

ASSEMBLY

- Press by hand onto profile groove

Signal profile

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded
- Yellow-orange **part no. 22.1097/2**
- Fire red **part no. 22.1097/3**
- Signal yellow **part no. 22.1097/4**
- Weight = 0.090 kg/m
- Bar length = 2 m

APPLICATIONS

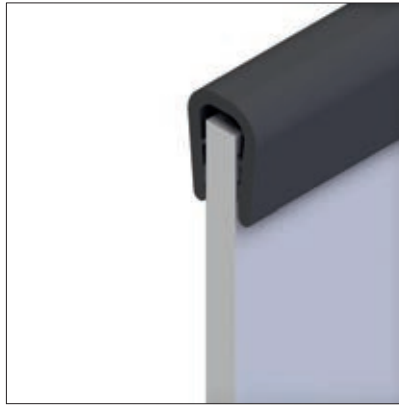
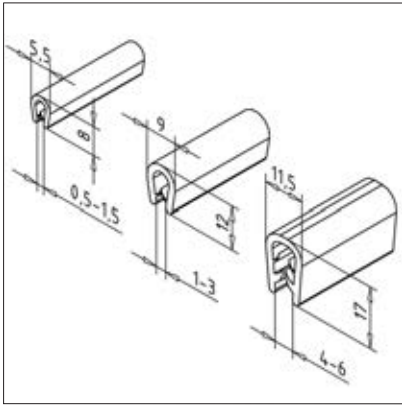
- Marking of safety relevant construction units such as doors and risk zones
- Coloured organization of constructions or parts

ASSEMBLY

- Clip in profile groove

Edge protection

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

- PVC, black
- Steel plate reinforced
- Edge protection 0,5-1,5 **part no. 22.1029/0**
Weight: 0,050 kg/m, Roll length 50 m
- Edge protection 1,0-3,0 **part no. 22.1036/0**
Weight: 0,120 kg/m, Roll length 100 m
- Edge protection 4,0-6,0 **part no. 22.1037/0**
Weight: 0,190 kg/m, Roll length 100 m

APPLICATIONS

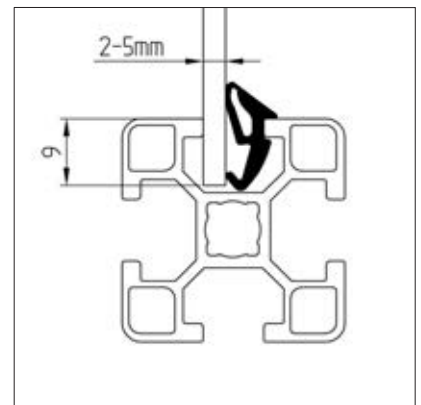
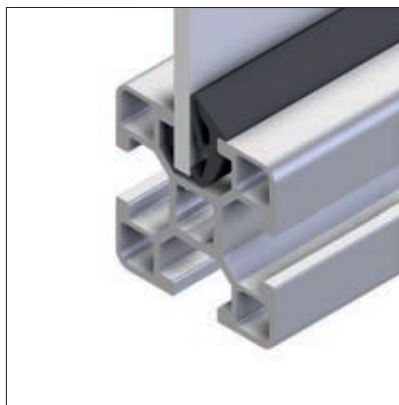
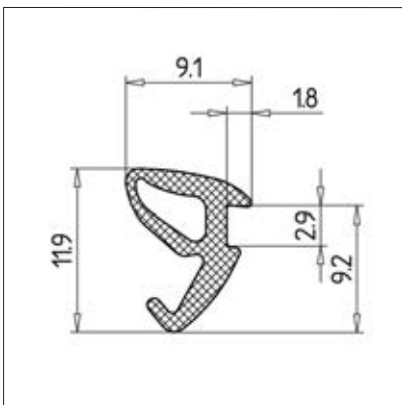
- Edge protection for surface elements
- Protection of MiniTec conduit
- Protection of bores and openings

ASSEMBLY

- Press onto edge of panel element

Insert seal 30

Part No. 22.1174/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.050 kg/m

APPLICATIONS

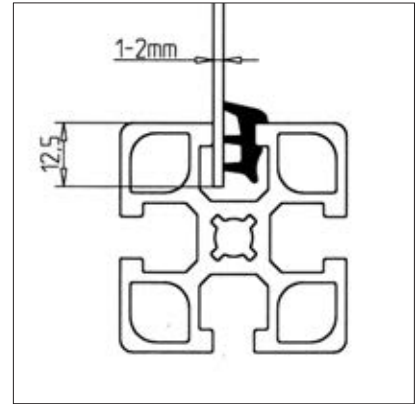
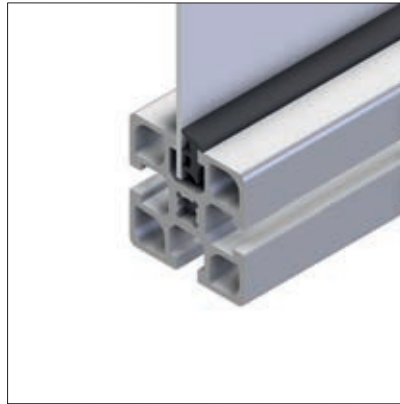
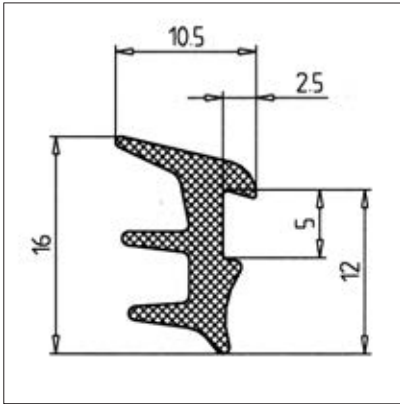
- Fastening and sealing of panels directly in the profile groove, for panels 2-5 mm thick

ASSEMBLY

- Insert panel into profile groove, next push gasket in manually or with an appropriate, wooden or plastic tool

Insert seal 2

Part No. 22.1083/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.096 kg/m

APPLICATIONS

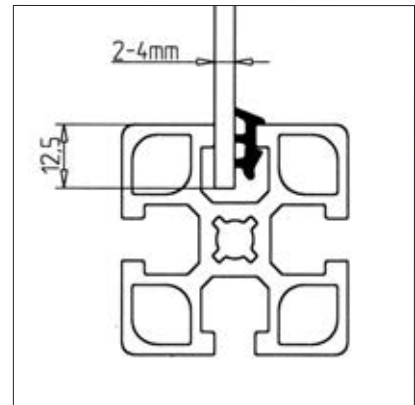
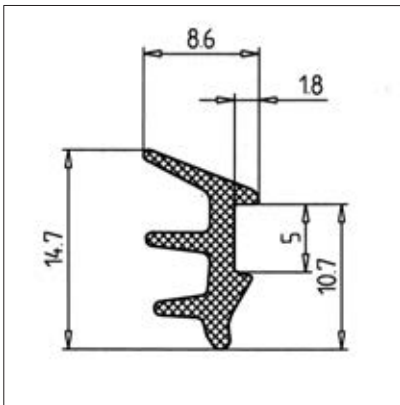
- Not suitable for acrylic glass and polycarbonate
- Fastening and sealing of surface elements directly in the profile groove up to 2 mm thickness

ASSEMBLY

- Insert panel into profile groove
- Press insert seal subsequently into free space between panel element and profile groove with blunt tool made of wood or plastic
- Materials with <2 mm thickness can be clamped by using sealing gasket 6 on both sides, **part no. 22.1086/1**

Insert seal 4

Part No. 22.1081/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.070 kg/m

APPLICATIONS

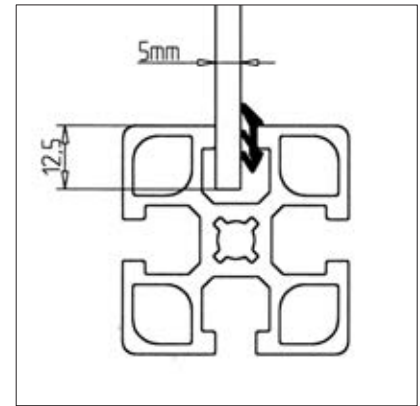
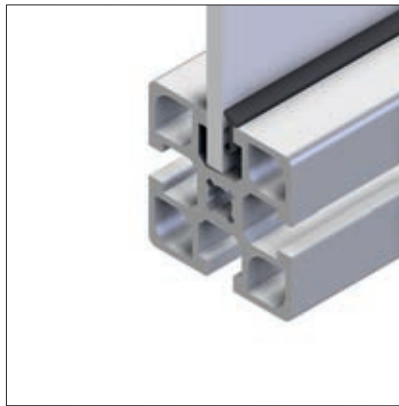
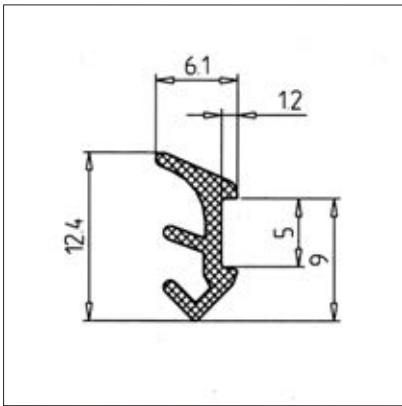
- Fastening and sealing of panes directly in the profile groove, for panes 2-4 mm thick
- Also suitable for acrylic plastic and polycarbonate

ASSEMBLY

- Slide the pane into the profile groove, afterwards press the sealing gasket manually or with a suitable dull tool made of wood or plastic

Insert seal 5

Part No. 22.1099/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.040 kg/m

APPLICATIONS

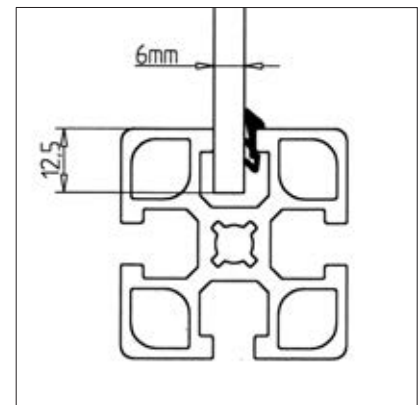
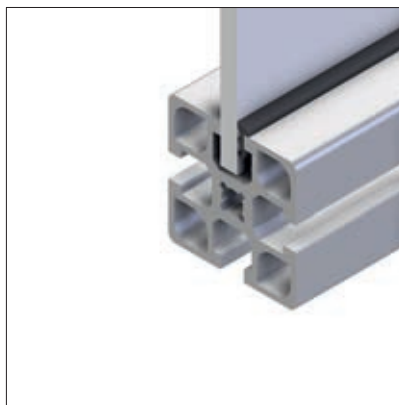
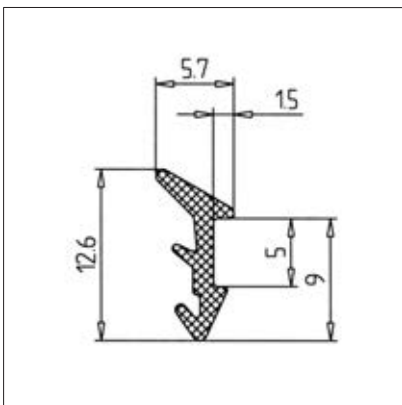
- Fastening and sealing of panels directly in the profile groove, for panels up to 5 mm thick
- Also suitable for acrylic plastic and polycarbonate

ASSEMBLY

- Slide the pane into the profile groove, afterwards press the sealing gasket manually or with a suitable dull tool made of wood or plastic

Insert seal 6

Part No. 22.1086/1



TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Oil-resistant version insert seal NBR, **part no. 22.1086/3**
- Roll length 100 m
- Weight = 0.033 kg/m

APPLICATIONS

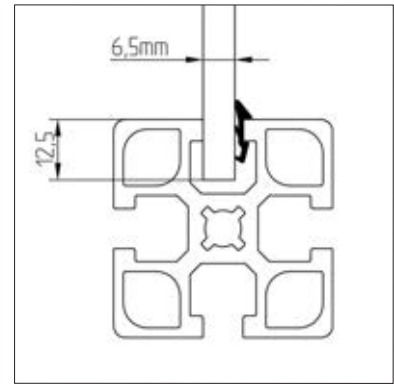
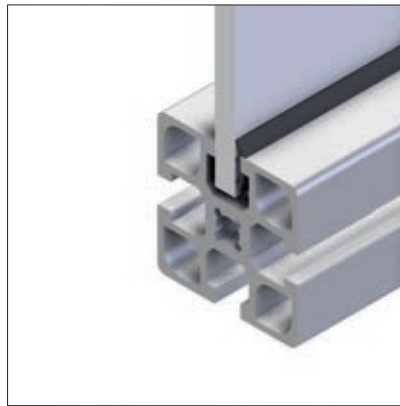
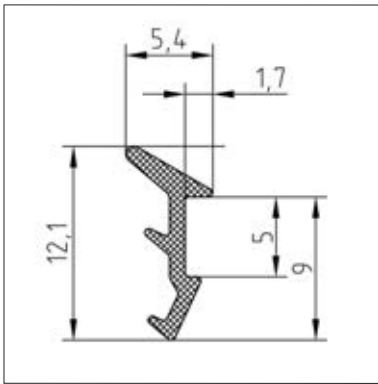
- Fastening and sealing of panels directly in the profile groove, for panels up to 6 mm thick
- Also suitable for acrylic plastic and polycarbonate

ASSEMBLY

- Slide the pane into the profile groove, afterwards press the sealing gasket manually or with a suitable dull tool made of wood or plastic

Insert seal 6.5

Part No. 22.0991/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM, black
- Roll length 100 m
- Weight = 0.033 kg/m

APPLICATIONS

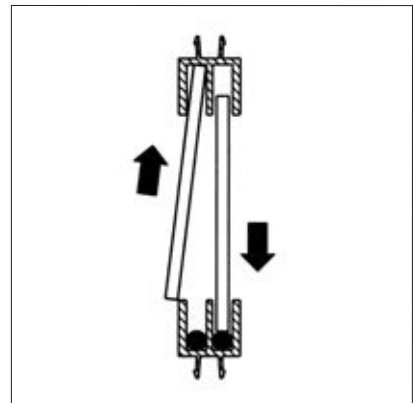
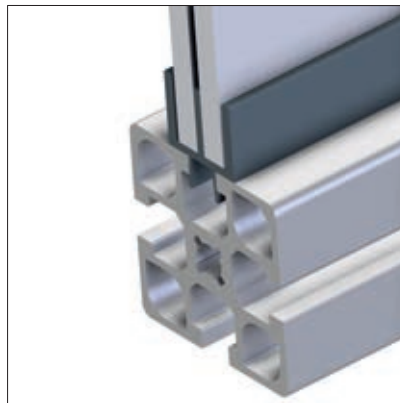
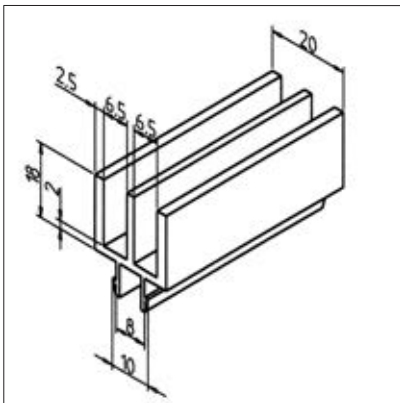
- Mounting and sealing of discs directly in the profile groove, for panels up to 6.5 mm thickness
- Also suitable for acrylic plastic and polycarbonate

ASSEMBLY

- Insert panel into profile groove, next push gasket in manually or with an appropriate, blunt wooden or plastic tool

Guide profile 2 grey

Part No. 22.1073/1



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- On request also available in black, **part no. 22.1073/0**
- Weight = 0.270 kg/m
- Bar length = 2 m

APPLICATIONS

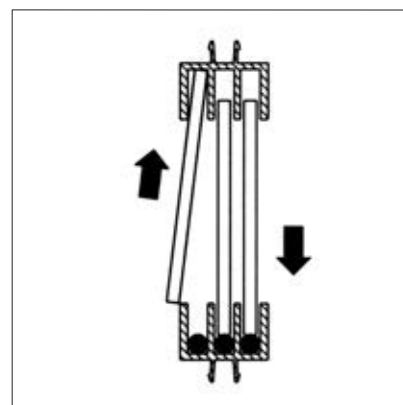
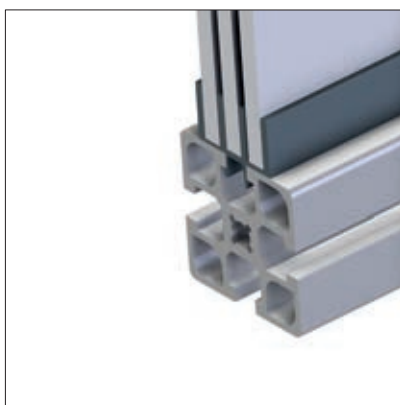
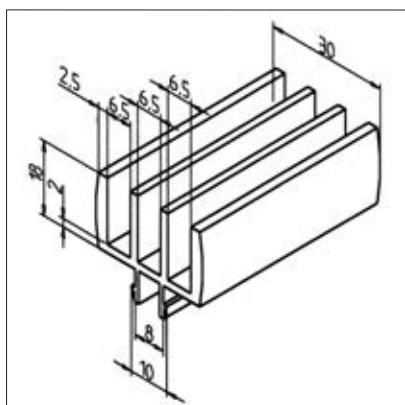
- 2-fold sliding window made of surface elements up to 6 mm thick

ASSEMBLY

- Press into profile groove
- Suitable for subsequent mounting
- For retrofitting the surface elements must be inserted in the grooves of the lower guide profile round rods **part no. 22.1077/0**
- Determination of dimensions for surface elements for subsequent mounting: Light height- 20 mm, further light height - 10 mm

Guide profile 3

Part No. 22.1075/1



TECHN. DATA / ITEMS SUPPLIED

- PVC, extruded, grey
- On request also available in black, **part no. 22.1075/0**
- Weight = 0.340 kg/m
- Bar length = 2 m

APPLICATIONS

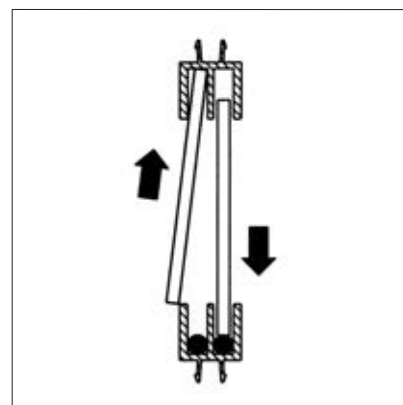
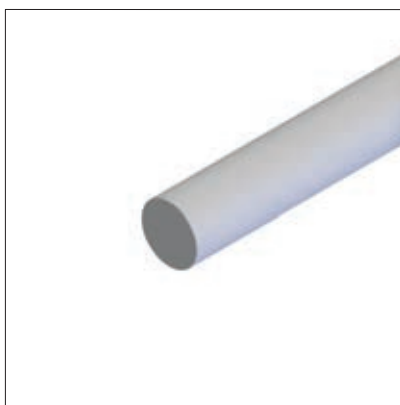
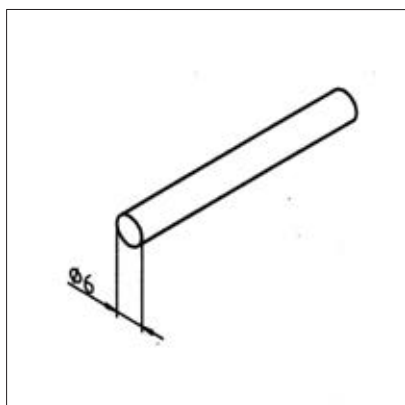
- 3-fold sliding window made of surface elements up to 6 mm thick

ASSEMBLY

- Press into profile groove
- Suitable for subsequent mounting
- For retrofitting the surface elements must be inserted in the grooves of the lower guide profile round rods **part no. 22.1077/0**
- Determination of dimensions for surface elements for subsequent mounting: Light height- 20 mm, further light height - 10 mm

Round rod

Part No. 22.1077/0



TECHN. DATA / ITEMS SUPPLIED

- PA, extruded
- Ø 6 mm
- Weight = 0.040 kg/m
- Bar length = 2 m

APPLICATIONS

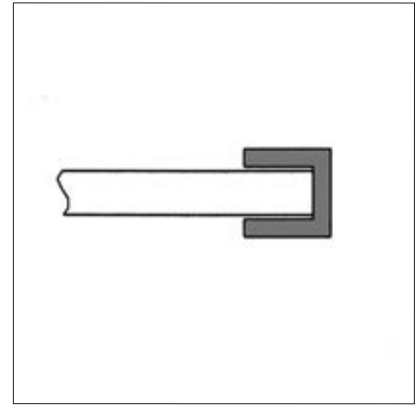
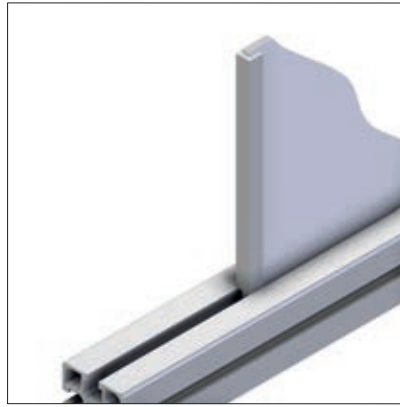
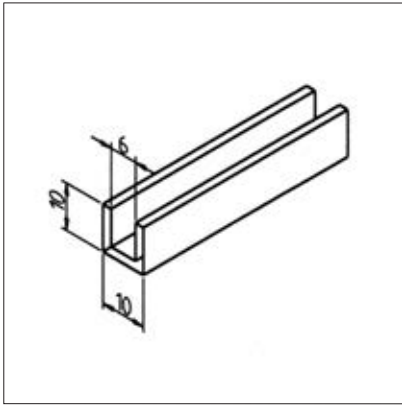
- Guiding of windows or doors in guide profiles

ASSEMBLY

- Insertion into lower guide grooves of guide profiles 2 and 3

U-profile

Part No. 21.1002/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.150 kg/m
- Bar length = 6 m

APPLICATIONS

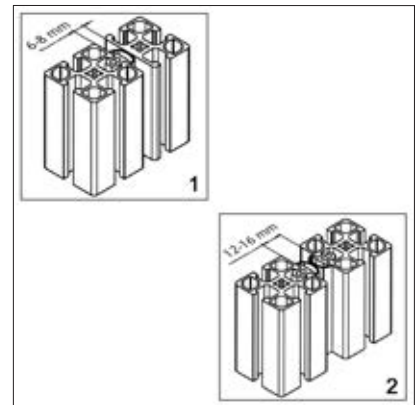
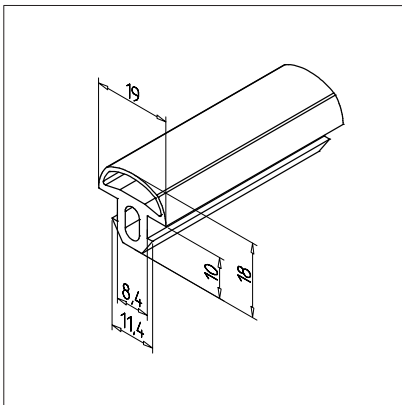
- Fitting panels, for surface elements of 5 mm thickness

ASSEMBLY

- Glue on edges of surface elements with suitable adhesive

Sealing strip

Part No. 22.1078/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Hardness (Shore A) 70°
- Roll length 50 m
- Weight = 0.175 kg/m

APPLICATIONS

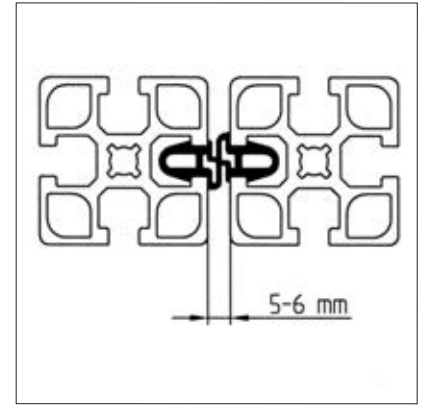
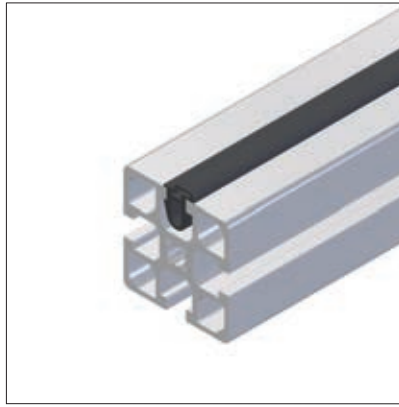
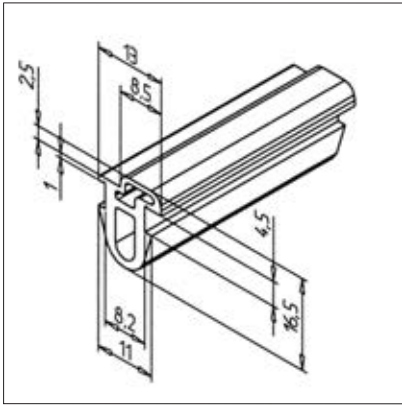
- Sealing of doors, lids and other constructions against water, dust and noise

ASSEMBLY

- Press into profile groove
- 1. One-sided sealing: Gap width 6 - 8 mm
- 2. Double-sided sealing: Gap width 12 - 16 mm

Sealing profile

Part No. 22.1011/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Hardness (Shore A) 70°
- Roll length 50 m
- Weight = 0.122 kg/m

APPLICATIONS

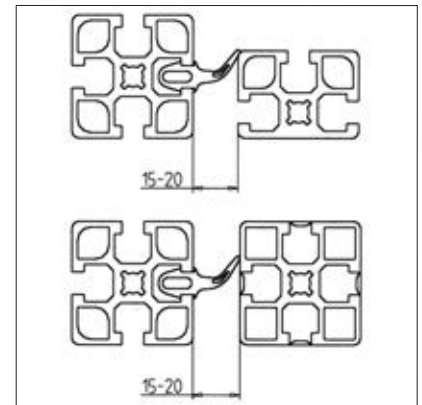
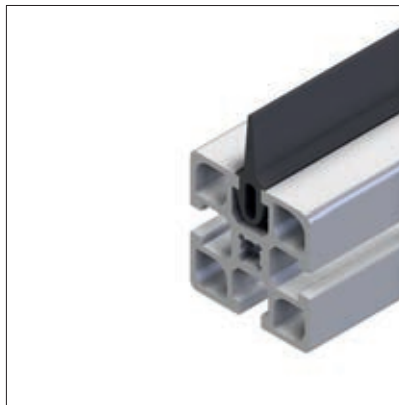
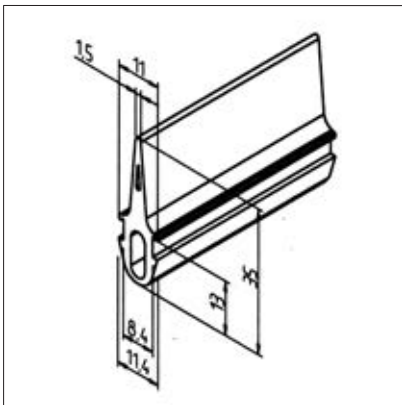
- Sealing of doors, lids and other constructions against water, dust and noise

ASSEMBLY

- Press into profile groove

Sealing lip profile

Part No. 22.1038/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Hardness (Shore A) 60°
- Roll length 75m
- Weight = 0.245 kg/m

APPLICATIONS

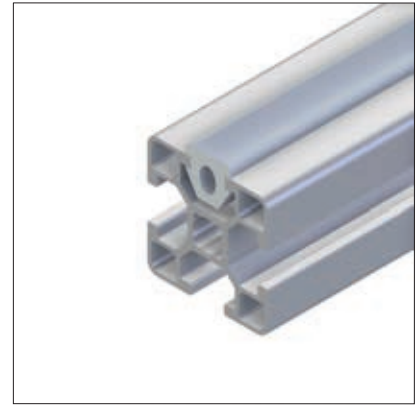
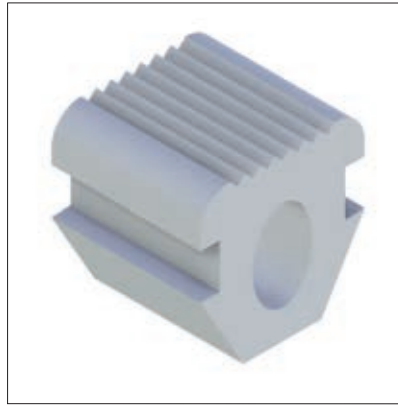
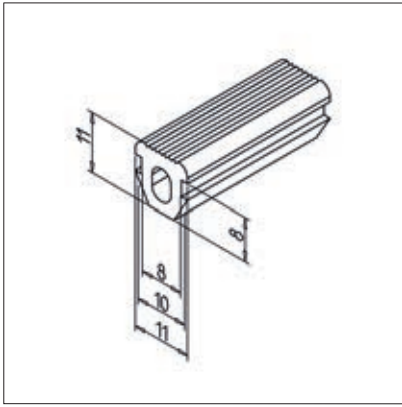
- Sealing of doors, lids and other constructions against water, dust and noise

ASSEMBLY

- Press into profile groove

Cover profile 30 grey

Part No. 22.1185/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM, grey
- Hardness (Shore A) 70°
- Roll length 50 m
- Weight = 0.087 kg/m

APPLICATIONS

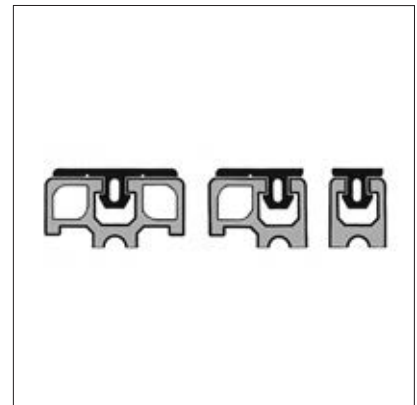
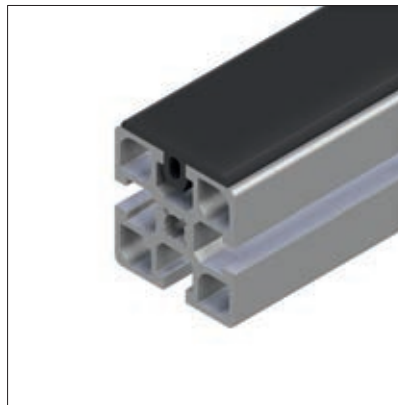
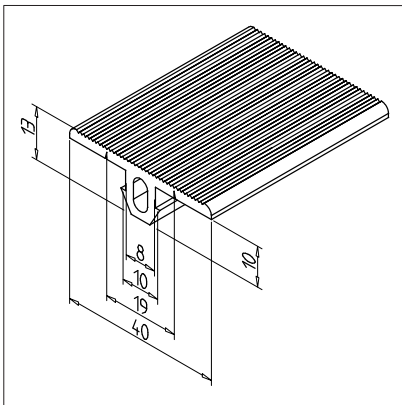
- Material shelves
- Edge Protection
- Support plates

ASSEMBLY

- Press into profile groove
- Suitable for the profiles of the profile series 30

Cover profile 45

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

- Hardness (Shore A) 70°
- NBR black **part no. 22.1098/0**
- EPDM grey **part no. 22.1098/1**
- Roll length 50 m
- Weight = 0.230 kg/m

APPLICATIONS

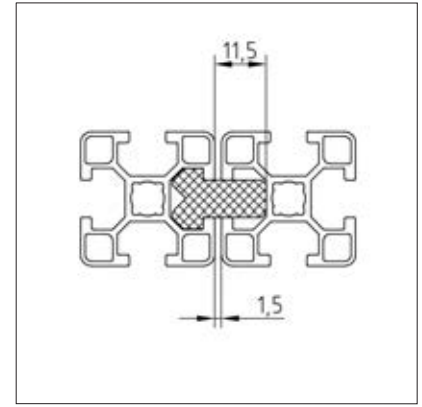
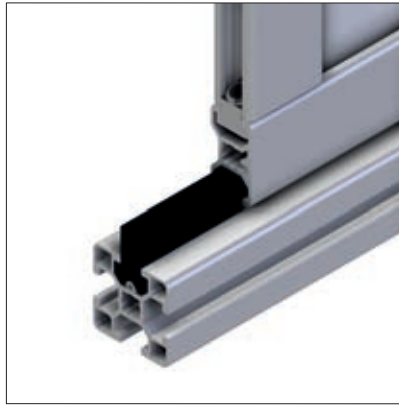
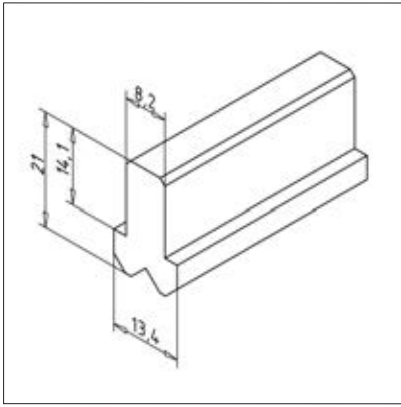
- Edge Protection
- Safety requirement step
- Ladders
- Material shelves

ASSEMBLY

- Press into profile groove
- The lower side of the profile has 2 tear-off notches for adjustment of width to the aluminium profile

Slide rail 8 N 30

Part No. 22.1170/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.178 kg/m
- Bar length = 2 m

APPLICATIONS

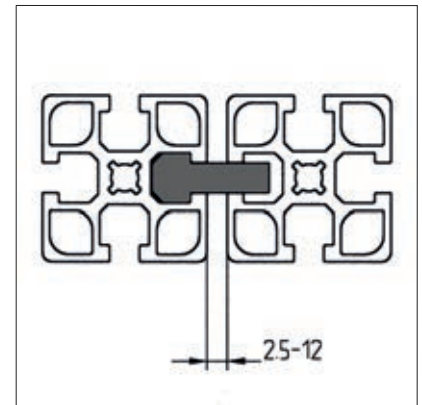
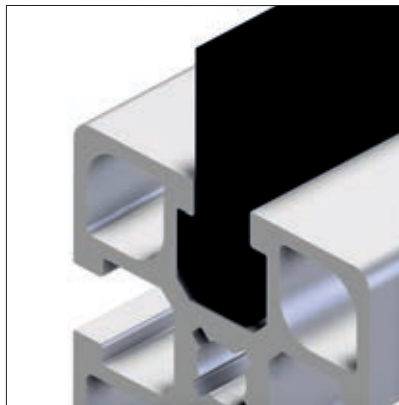
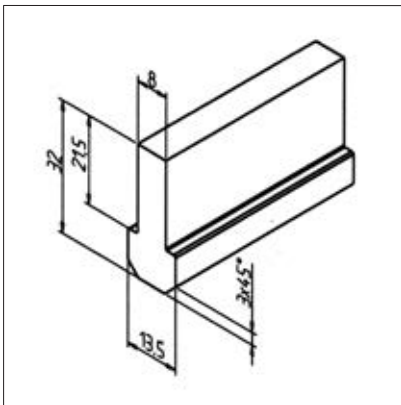
- Guiding sliding doors, pull-outs, fixtures

ASSEMBLY

- Slide into profile groove
- The slide rail can be fixed on request with a threaded pin M4
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Slide rail 8 N 45

Part No. 22.1085/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.300 kg/m
- Bar length = 2 m

APPLICATIONS

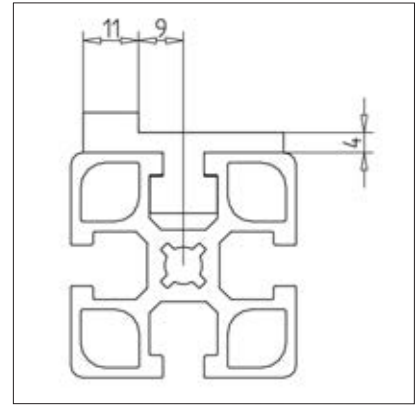
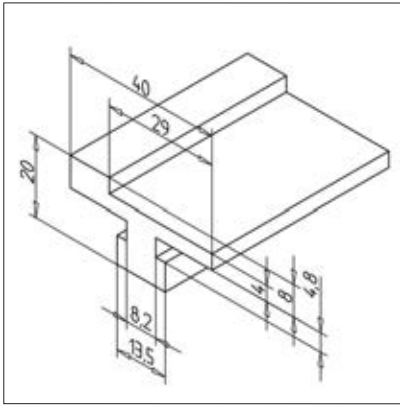
- Guiding sliding doors, pull-outs, fixtures
- Lateral guide for conveyors

ASSEMBLY

- Slide into profile groove
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Slide rail 8 - 40 A

Part No. 29.8012/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.317 kg/m
- Bar length = 2 m

APPLICATIONS

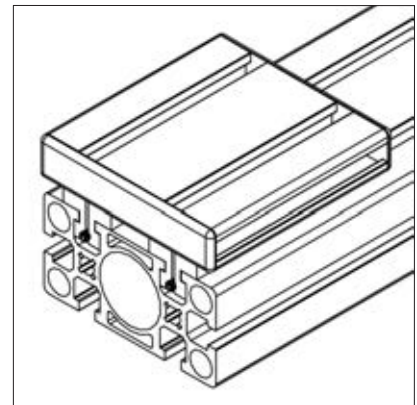
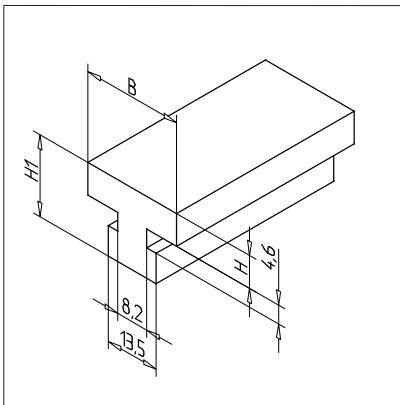
- Sliding support
- Workpiece bearing
- Guide for lifting doors
- Slides

ASSEMBLY

- Slide into profile groove
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Slide rail 8

Part No. ---,----/-



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- B = 25 mm part no. **22.1088/0**
H = 7,5 mm, H1 = 20 mm
Weight 0,314 kg/m
- B = 40 mm part no. **22.1088/1**
H = 8 mm, H1 = 18 mm
Weight 0,400 kg/m
- B = 45 mm part no. **22.1088/3**
H = 8 mm, H1 = 18 mm
Weight 0,463 kg/m
- Bar length = 2 m

APPLICATIONS

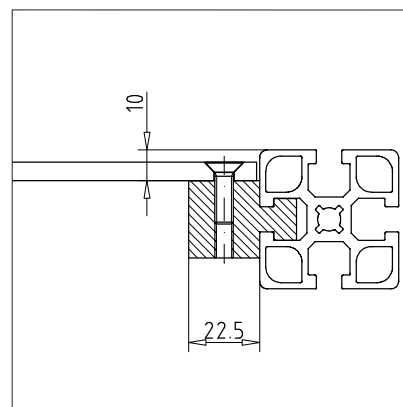
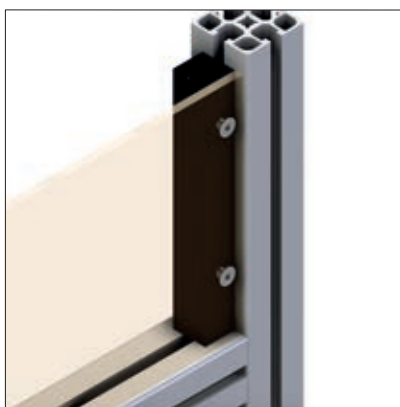
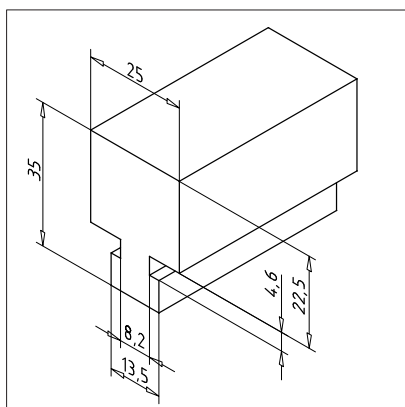
- Sliding support
- Workpiece bearing
- Guide for lifting doors
- Slides

ASSEMBLY

- Slide into profile groove
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Slide rail 23

Part No. 22.1089/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.670 kg/m
- Bar length = 2 m

APPLICATIONS

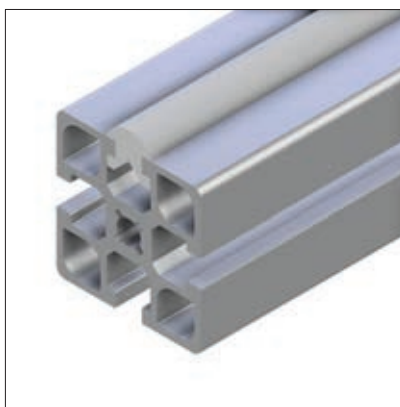
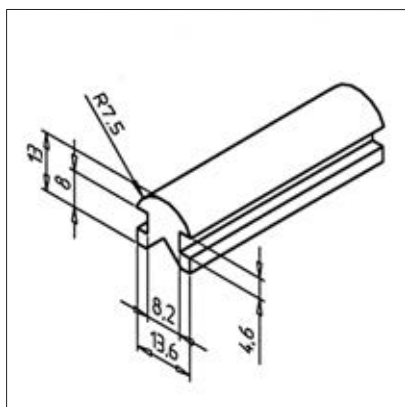
- Profile sled
- Slide supports, initiator holders
- Customer-friendly processing possible due to a greater addition of material

ASSEMBLY

- Slide into profile groove
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Slide bar R

Part No. 22.1104/0



TECHN. DATA / ITEMS SUPPLIED

- PE, white
- Highly wear-resistant
- Weight = 0.115 kg/m
- Bar length = 2 m

APPLICATIONS

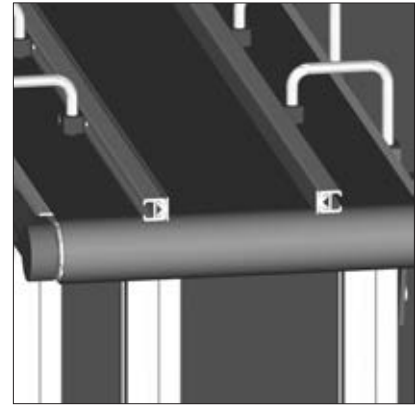
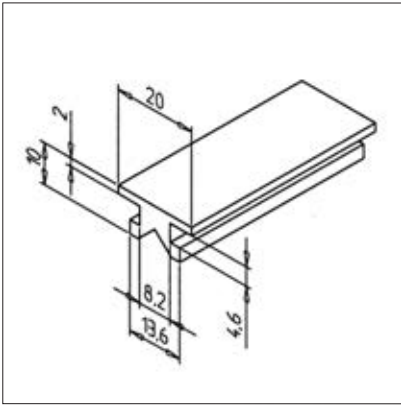
- Lateral guides
- Support plates
- Sliding distance
- Jam tracks

ASSEMBLY

- Slide into profile groove
- Suitable for all profiles
- Secure slide strip at both ends with set screw or adjustable end caps

Slide rail lateral guide flat

Part No. 22.1135/0



TECHN. DATA / ITEMS SUPPLIED

- PE, white
- Highly wear-resistant
- Weight = 0.098 kg/m
- Bar length = 2 m

APPLICATIONS

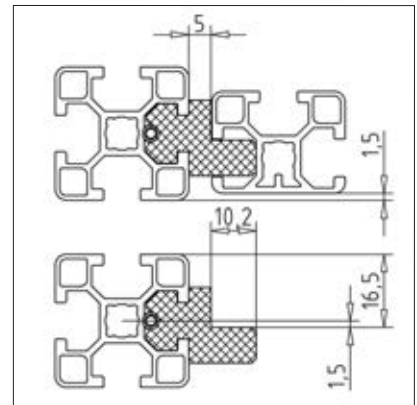
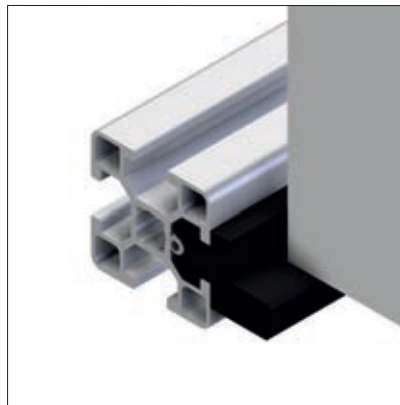
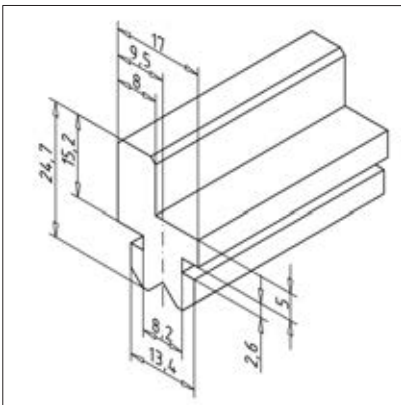
- Lateral guide for flat components
- Slide for containers
- Jam tracks

ASSEMBLY

- Slide into profile groove
- Suitable for all profiles
- Secure slide strip at both ends with set screw or adjustable end caps

Angular slide rail 30

Part No. 22.1171/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.248 kg/m
- Bar length = 2 m

APPLICATIONS

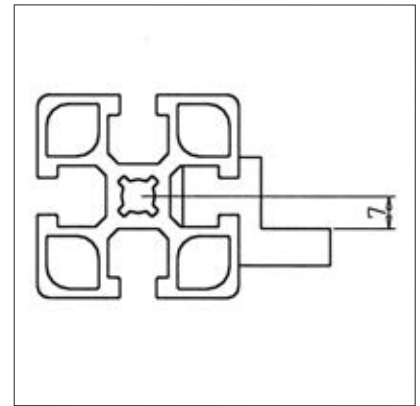
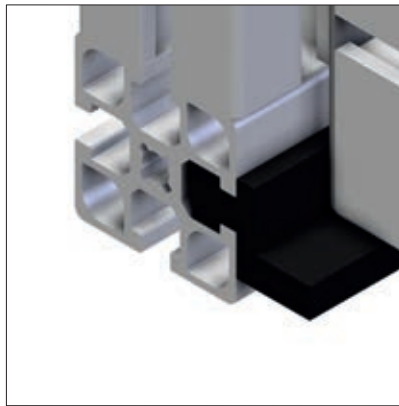
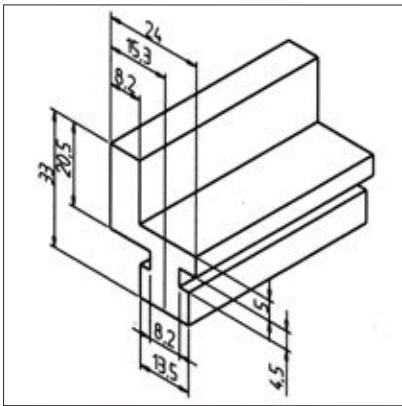
- Guiding sliding doors, pull-outs, fixtures

ASSEMBLY

- Slide into profile groove
- The slide rail can be fixed on request with a threaded pin M4
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Angular slide rail 45

Part No. 22.1040/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.480 kg/m
- Bar length = 2 m

APPLICATIONS

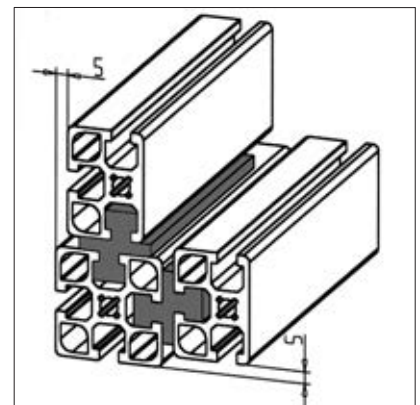
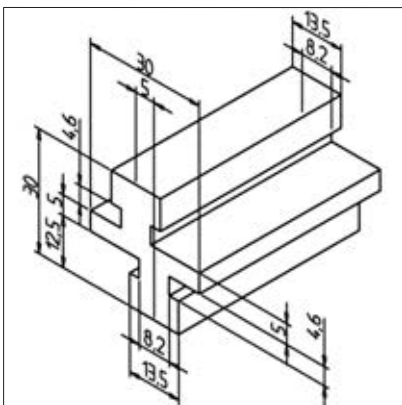
- Conveying systems
- Belt conveyors
- Side stop in conveyor sections

ASSEMBLY

- Insert in profile groove and if necessary with grub screw M6 x 16 **part no. 21.1324/0** secure.
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Double slide rail

Part No. 22.1087/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.420 kg/m
- Bar length = 2 m

APPLICATIONS

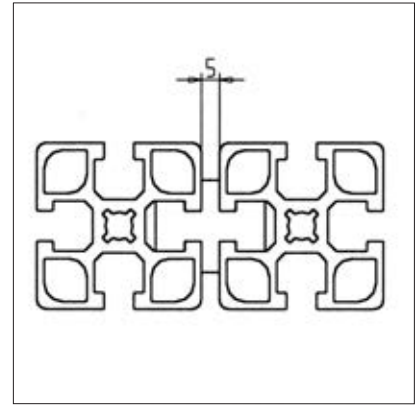
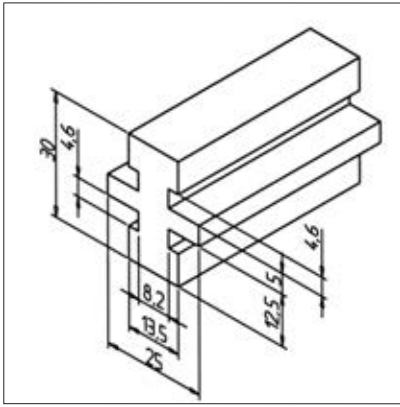
- Simple workpiece slides
- Guiding drawers in profile grooves

ASSEMBLY

- Slide into profile grooves of frame and drawers
- Secure drawers against falling out by cylinder screws M8 x 16 **part no. 21.1200/0** at both ends of the frame profile
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Parallel slide rail

Part No. 22.1041/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Highly wear-resistant
- Weight = 0.390 kg/m
- Bar length = 2 m

APPLICATIONS

- Parallel guide without difference in height
- Externally flush sliding elements

ASSEMBLY

- Slide into profile groove
- If necessary, one-sided by cylindrical pin M6 x 16 **part no. 21.1324/0** fix
- To reduce friction in moving parts, we recommend using the slide rail in short pieces with a maximum length of 100 mm

Ready- to-install elements for lifting and sliding doors

All elements are already pre-assembled for you from our products.

They can be very easily attached to the construction profiles with our connectors. This eliminates the need to stock individual parts and considerably shortens planning and assembly times.



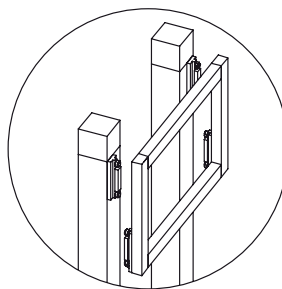
Slide-roller element

A lifting door requires 4 elements:

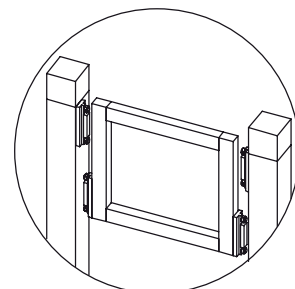
- One on each of the two columns in the upper end position.
- One on each side of the door element in the lower end position.

Length determination guide column: Stroke + 180 mm min.

1. Insert pre-assembled slide roller element in profile groove
2. Fasten in the desired position with Allen wrench SW4
3. Tighten self-locking screws with Allen wrench SW2.5



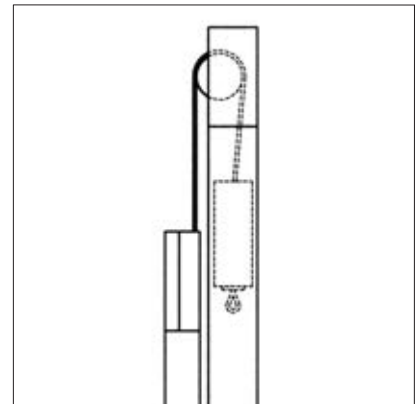
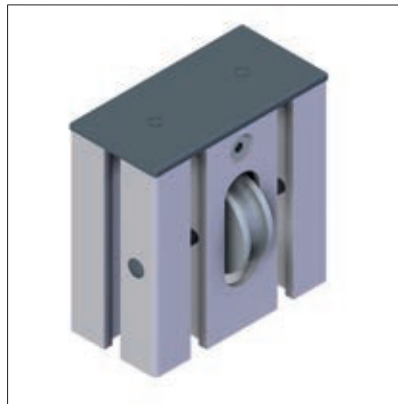
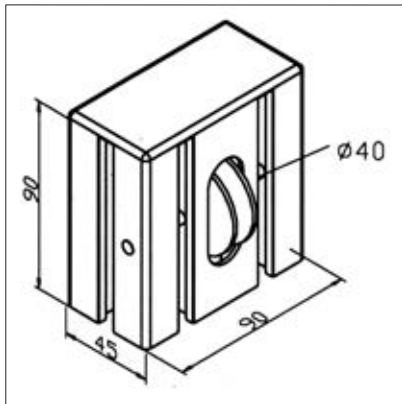
→ Installation possibility in front of the door pillars
Gap width = 8 mm



→ Installation possibility between the door pillars
gap width = 8 mm

Cable Pulley 45

Part No. 21.1775/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Housing from profile 45 x 90
- Pulley steel, galvanized, installed ready for assembly
- End cap
- maximum weight of the lifting door with paired insertion of the pulley, 12kg
- Weight = 0.522 kg/piece

APPLICATIONS

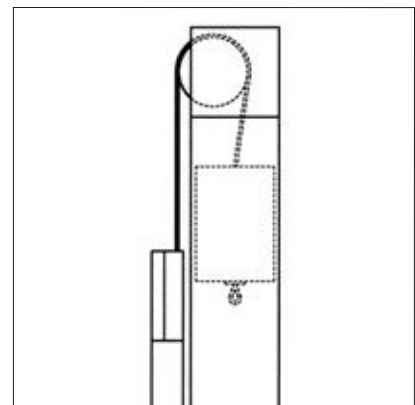
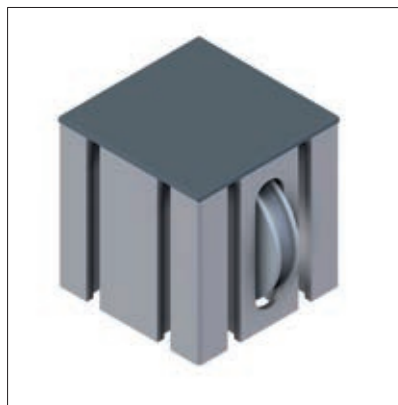
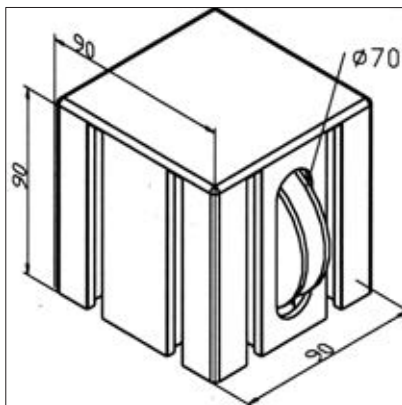
- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 45 x 90 L or 45 x 90 G
- For continuous movement and larger loads use >12 Kg chain redirector 45

ASSEMBLY

- Attachment to the stand profile with 2 terminal strips 90 **part no. 21.1029/0**
- Associated rope **part no. 21.1777/0** is consumable and must be checked regularly and lubricated if necessary

Cable pulley 90

Part No. 21.1776/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Housing from profile 90 x 90
- Pulley steel, galvanized, installed ready for assembly
- End cap
- Maximum weight of the lifting door with paired insertion of the pulley, 30kg
- Weight = 0.680 kg/piece

APPLICATIONS

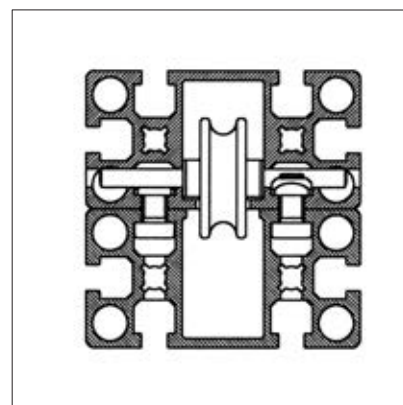
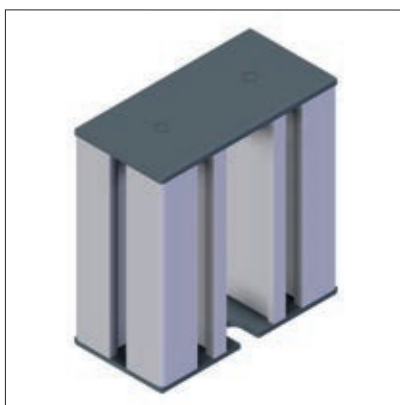
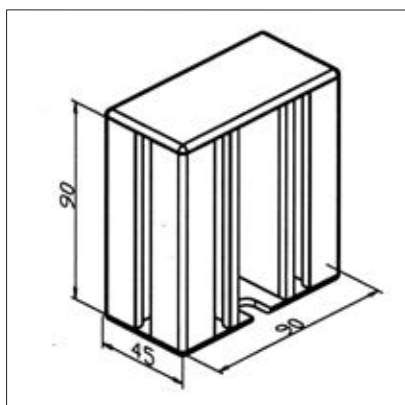
- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 90 x 90 L
- For continuous movement and loads use >30 Kg chain redirector 90

ASSEMBLY

- Attachment to the stand profile with 4 terminal strips 90 **part no. 21.1029/0**
- Associated rope **part no. 21.1777/0** is consumable and must be checked regularly and lubricated if necessary

Hand protection

Part No. 21.1780/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- From profile 45 x 90
- Matching caps, one of them with recess for cable or chain passage
- Length 90 mm
- With fastening nut steel, galvanized
- Weight = 0.290 kg/piece

APPLICATIONS

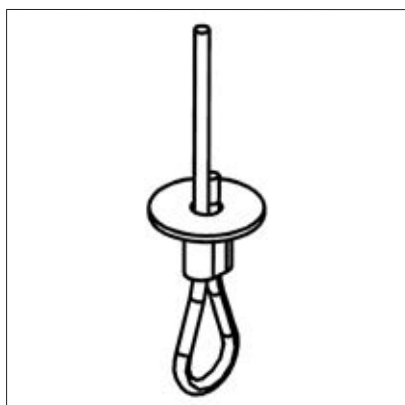
- Securing from squeezing points in the area of the cable or chain inlet

ASSEMBLY

- Mount with supplied hardware

Cable for counterweight L=2,5m

Part No. 21.1777/0



TECHN. DATA / ITEMS SUPPLIED

- Steel cable VA, 2,5 mm
- With clamping eye hook on one side, pressed
- Length 2.5 m
- Different lengths available under Art. no. 21.1777/2 on request
- Cable sold by the metre without pressed clamping eye is available under Part no. 211777/1
- Weight = 0.070 kg/piece

APPLICATIONS

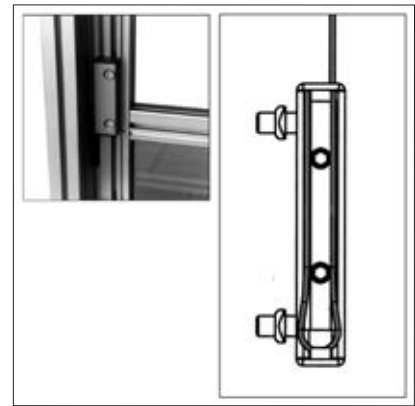
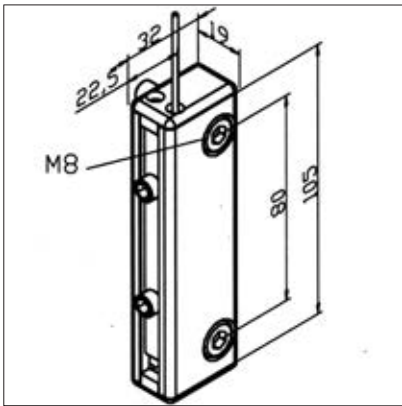
- Use in connection with counterweight 45 or 90 and cable pulley

ASSEMBLY

- Lead the cable through the center bore and into the counterweight
- Rope with rope clamp **part no. 21.1797/0** fasten to lifting door
- Cable is a wear part and must be regularly checked and lubricated if required

Rope clamp 19x32

Part No. 21.1797/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- From profile 19 x 32
- 1 Clamping plate
- 2 hex socket cap screws with square nuts
- 2 suitable end caps, one of them bored
- Weight = 0.150 kg/piece

APPLICATIONS

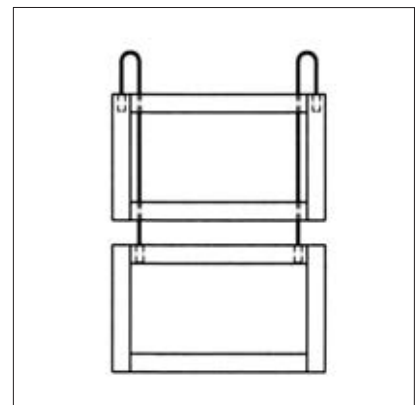
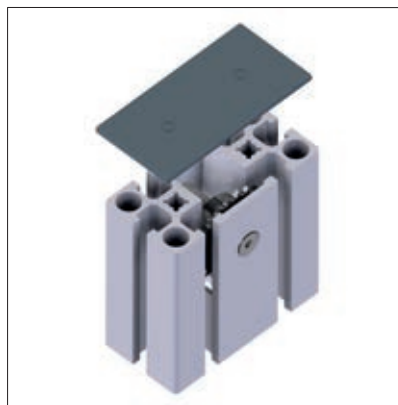
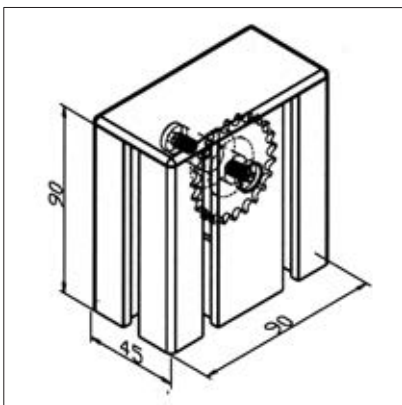
- Fixing the wire cable **part no. 21.1777/0** on the door element of a lifting door

ASSEMBLY

- Remove the lower end cap
- Attach rope clamp with fastening kit at the top of the door element
- Pull the rope through the bore of the upper end cap
- Adjust balance weight to desired position
- Place the cable end around the clamping bar in the loop, insert it into the groove of the cable clamp and secure with a threaded pin
- If necessary, shorten the projecting end of the rope and replace the removed cap

Synchronous pulley 45

Part No. 21.1792/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Housing from profile 45 x 90
- Sprocket galvanized steel, ready for installation
- Maximum weight of the lifting door with paired insertion of the pulley, 34kg
- Weight = 0.340 kg/piece

APPLICATIONS

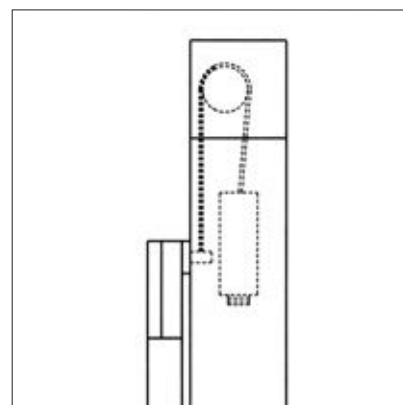
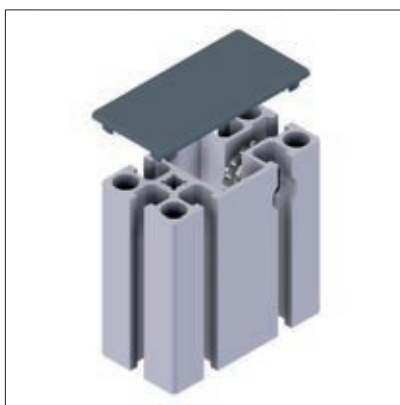
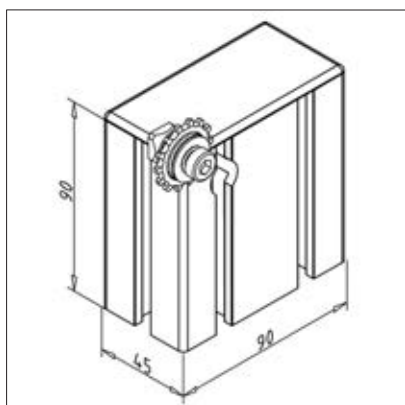
- Simultaneous opening and closing of two lifting doors running in the operate direction; doors are of similar weight
- Posts preferably made of profile 45x90 or 90x90. The lateral profiles of the doors preferably made of profile 90x32 or 45x90 guided in the mullion by means of sliding roller elements

ASSEMBLY

- Attachment to the stand profile with 2 terminal strips 90 **part no. 21.1029/0**
- Chain 04 **part no. 21.1713/0** insert in diversion, with chain clamping door **part no. 21.1712/0** attach to the two doors and insert in the stand profiles
- Chain is guided in the profile groove, thus no hand-protection is required

Chain pulley 32

Part No. 21.1774/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Housing from profile 45 x 90
- Sprocket galvanized steel, ready for installation
- End cap
- Maximum weight of the lifting door with paired insertion of the pulley, 50 kg
- Weight = 0.388 kg/piece

APPLICATIONS

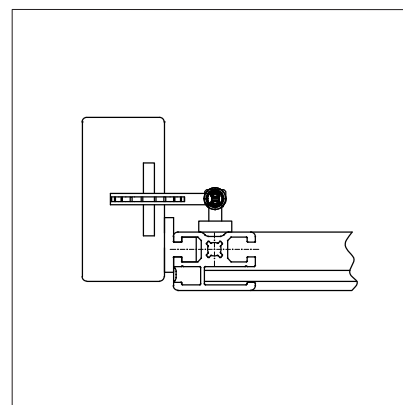
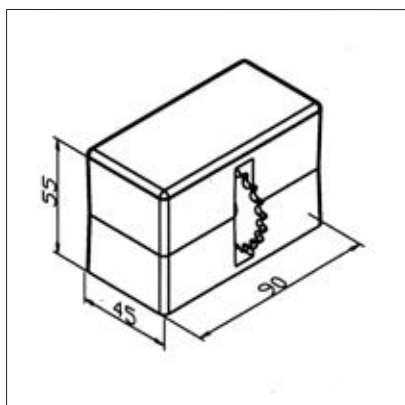
- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 45 x 90 F or 45 x 90 G

ASSEMBLY

- Attachment to the stand profile with 2 terminal strips 90 **part no. 21.1029/0**
- Use of chain 04 **part no. 21.1712/0** and chain clamping weight **part no. 21.1711/0**
- The cable is guided in the profile groove, thus no hand-protection is required

Chain pulley 45 A

Part No. 21.1838/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Sprocket galvanized steel, ready for installation
- End cap
- With fastening material steel, zinc plated
- Maximum weight of the lifting door with paired insertion of the pulley, 50 kg
- Weight = 0.350 kg/piece

APPLICATIONS

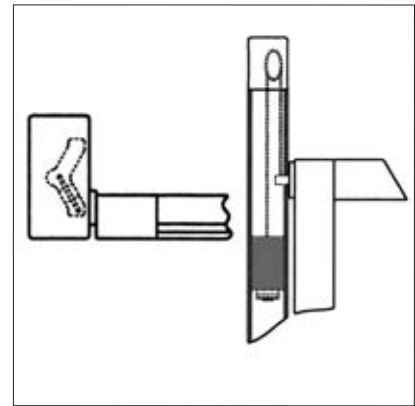
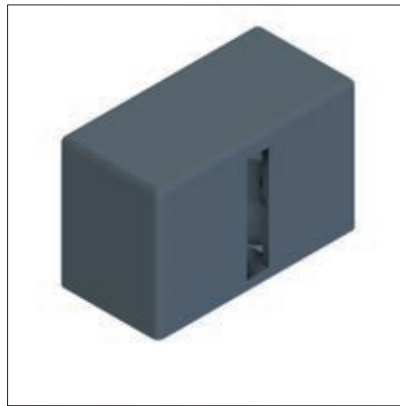
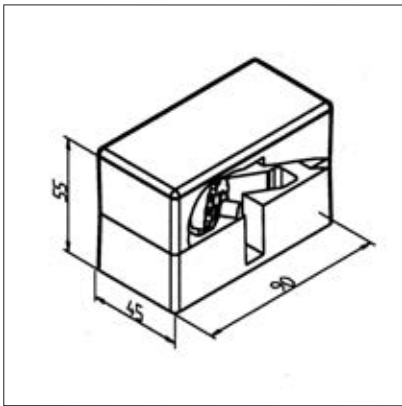
- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 45 x 90 F or 45 x 90 G

ASSEMBLY

- Install with supplied hardware, insert thread M8 into the stand profile
- Use of chain 04 **part no. 21.1713/0** with chain clamp door **part no. 21.1712/0** and chain clamping weight **part no. 21.1711/0**
- Chain runs outside center on wide side of profile, if necessary with hand protection **part no. 21.1780/0** cover

Chain pulley 45 I

Part No. 21.1840/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Sprocket galvanized steel, ready for installation
- End cap
- With fastening material steel, zinc plated
- Maximum weight of the lifting door with paired insertion of the pulley, 50 kg
- Weight = 0.350 kg/piece

APPLICATIONS

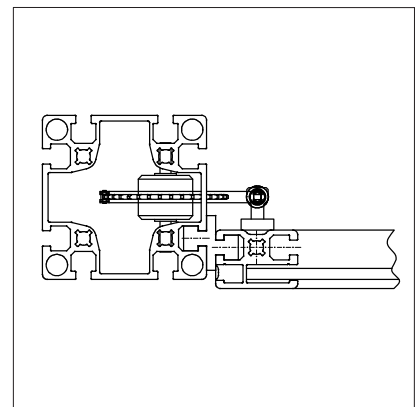
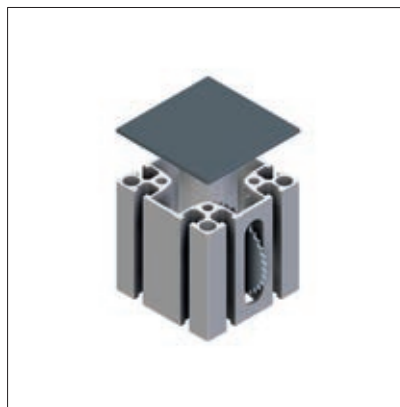
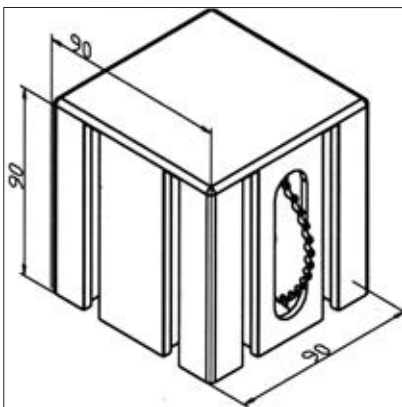
- Chain reverse unit of counterweights on lifting doors, for internal compensation weight in profile 45 x 90 F or 45 x 90 G

ASSEMBLY

- Install with supplied hardware, insert thread M8 into the stand profile
- Use of chain 04 **part no. 21.1713/0** with chain clamp door **part no. 21.1712/0** and chain clamping weight **part no. 21.1711/0**
- Chain runs on the broad side of the profile in the right or left profile groove (adjustable chain wheel), no hand-protection required

Chain pulley 90

Part No. 21.1839/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Housing from profile 90 x 90
- Sprocket galvanized steel, ready for installation
- End cap
- maximum weight of the lifting door with paired insertion of the pulley, 70 kg
- Weight = 0.680 kg/piece

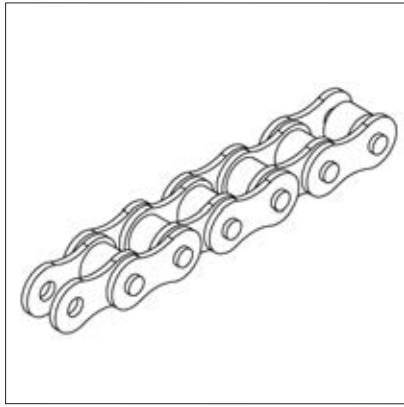
APPLICATIONS

- Chain reverse unit of counterweights on lifting doors, for internal balancing weight in profile 90 x 90 L

ASSEMBLY

- Attachment to the stand profile with 4 terminal strips 90 **part no. 21.1029/0**
- Use of chain 04 **part no. 21.1713/0** with chain clamp door **part no. 21.1712/0** and chain clamping weight **part no. 21.1711/0**
- Chain runs outside center on profile surface, if necessary with hand protection **part no. 21.1780/0** cover

Roller chain 04



TECHN. DATA / ITEMS SUPPLIED

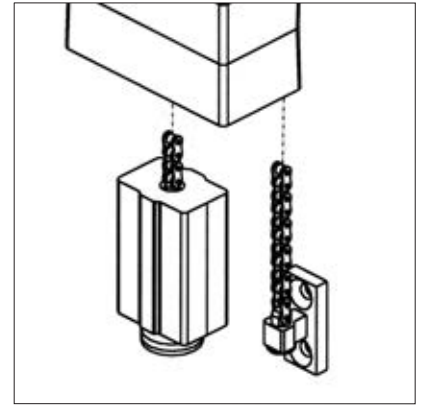
- Steel
- Size 4
- **Please indicate desired length**
- Breaking force min. 3000N
- Weight = 0.150 kg/m



APPLICATIONS

- Use in conjunction with balancing weight 45 or 90 and chain reverse unit
- Use in conjunction with chain clamping door **part no. 21.1712/0** for attaching the chain to the door side
- Use in conjunction with chain clamp weight **part no. 21.1711/0** for attaching the chain to the balance weight

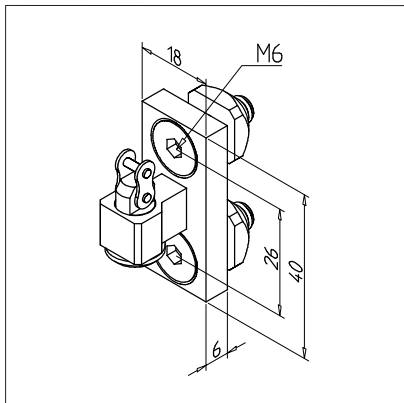
Part No. 21.1713/0



ASSEMBLY

- Guide the chain through the balance weight and guide the chain clamp to the weight **part no. 21.1711/0** and install the chain lock
- When mounted on door, chain by mounted chain clamp door **part no. 21.1712/0** and install bolt with chain lock

Door chain clamping device



TECHN. DATA / ITEMS SUPPLIED

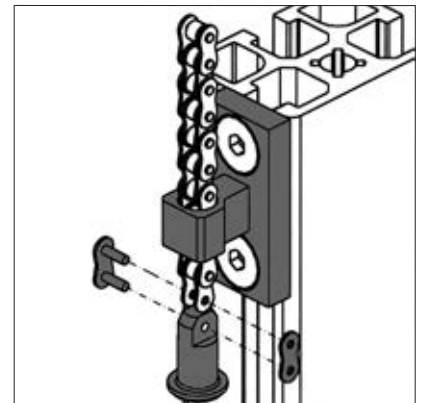
- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.060 kg/piece



APPLICATIONS

- Use in conjunction with balancing weight 45 or 90 and chain reverse unit
- Use in conjunction with chain 04 **part no. 21.1713/0** for fixing to door side

Part No. 21.1712/0

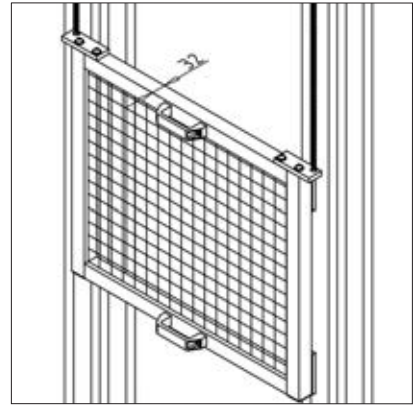
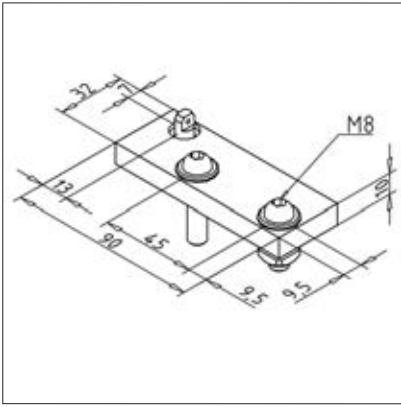


ASSEMBLY

- Guide the chain through the balance weight and guide the chain clamp to the weight **part no. 21.1711/0** and install the chain lock
- When mounted on door, chain by mounted chain clamp door **part no. 21.1712/0** and install bolt with chain lock
- When making lift doors, where the chain is guided in the groove, we recommend the use of our sliding roller element **part no. 21.1796/0**. Here is a door gap to the post of 8 mm provided

Door chain clamping device KV-32

Part No. 21.1980/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material and chain lock
- Weight = 0.247 kg/piece

APPLICATIONS

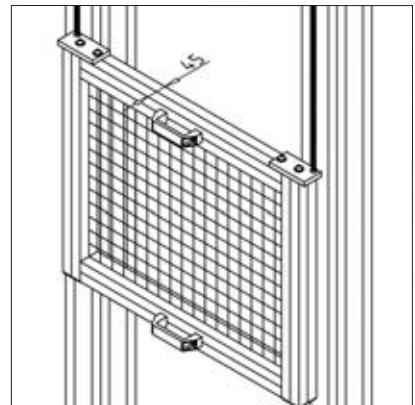
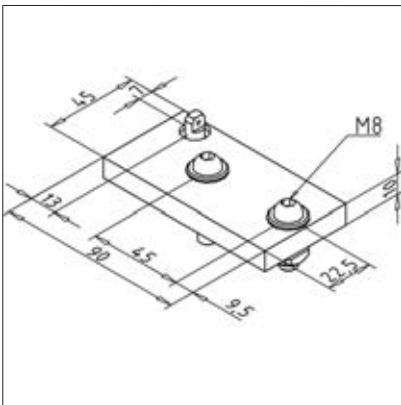
- Use in connection with chain pulley 90 and chain O4
- Lifting plate made of profile 45 x 32 with sliding roller mounted in front of the posts

ASSEMBLY

- Mount plate on lifting plate and secure the roller chain O4 using the supplied chain lock
- Two chain clamps are required for each lifting field

Door chain clamping device KV-45

Part No. 21.1981/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material and chain lock
- Weight = 0.345 kg/piece

APPLICATIONS

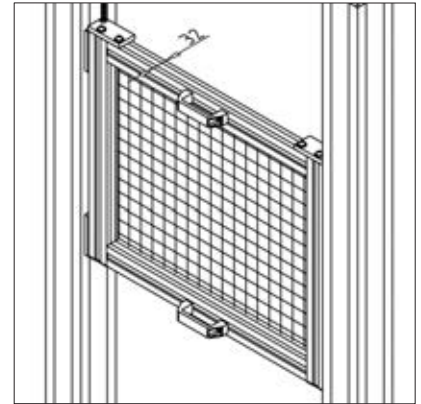
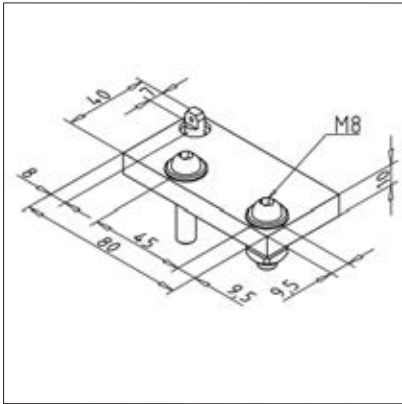
- Use in connection with chain pulley 90 and chain O4
- Lifting plate made of profile 45 x 45 with sliding roller mounted in front of the posts

ASSEMBLY

- Mount plate on lifting plate and secure the roller chain O4 using the supplied chain lock
- Two chain clamps are required for each lifting field

Door chain clamping device KI-32

Part No. 21.1982/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material and chain lock
- Weight = 0.278 kg/piece

APPLICATIONS

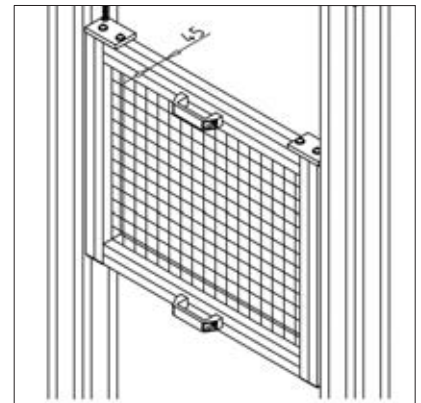
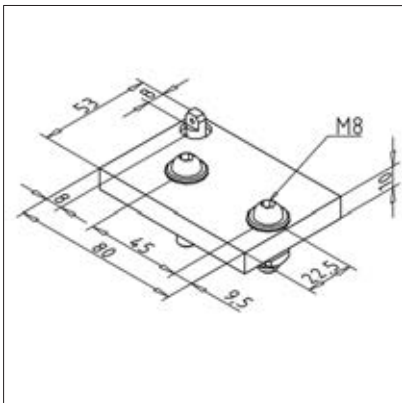
- Use in connection with chain pulley 90 and chain 04
- Lifting plate made of profile 45 x 32 with sliding roller mounted between the posts

ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 04 using the supplied chain lock
- Two chain clamps are required for each lifting field

Door chain clamping device KI-45

Part No. 21.1983/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material and chain lock
- Weight = 0.360 kg/piece

APPLICATIONS

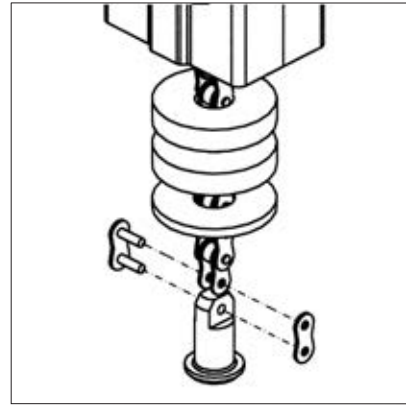
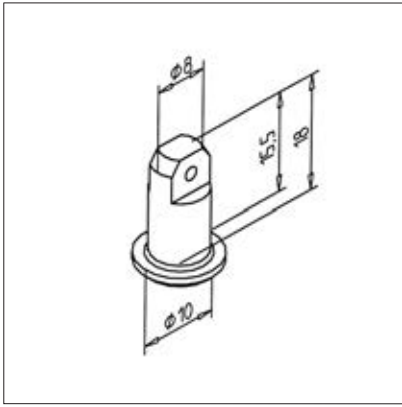
- Use in connection with chain pulley 90 and chain 04
- Lifting plate made of profile 45 x 45 with sliding roller mounted between the posts

ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 04 using the supplied chain lock
- Two chain clamps are required for each lifting field

Chain clamping weight

Part No. 21.1711/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Rubber-ring
- Chain lock
- Weight = 0.015 kg/piece

APPLICATIONS

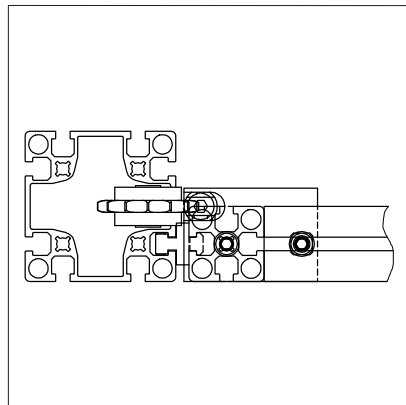
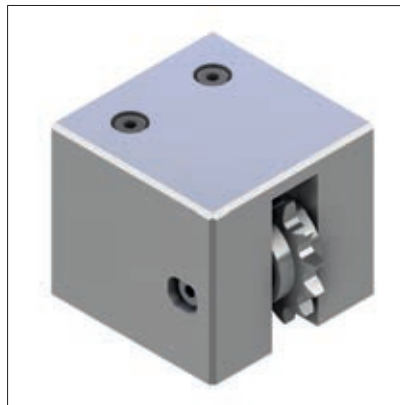
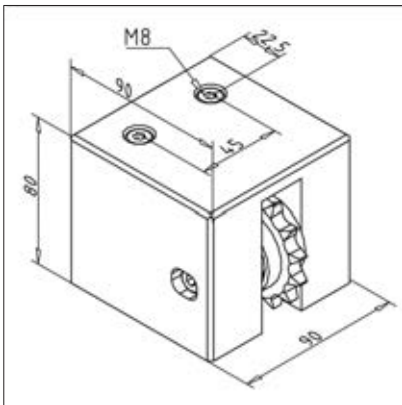
- Use in conjunction with balancing weight 45 or 90 and chain reverse unit
- Use in conjunction with chain 04 **part no. 21.1713/0** for attaching the chain to the balance weight

ASSEMBLY

- Guide the chain through the balance weight and guide the chain clamp to the weight **part no. 21.1711/0** and install the chain lock
- When mounted on door, chain by mounted chain clamp door **part no. 21.1712/0** and install bolt with chain lock

Chain pulley 90 S

Part No. 21.0920/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Maximum weight of the lifting door with paired insertion of the pulley, 150 kg
- With fastening material steel, zinc plated
- Weight = 1.748 kg/piece

APPLICATIONS

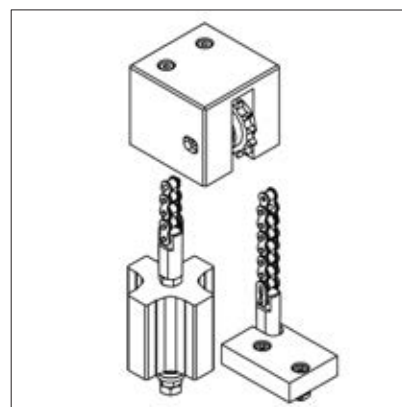
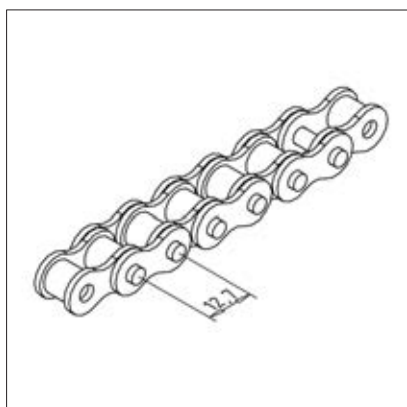
- Chain reverse unit of counterweights on lifting doors, for internal balancing weight in profile 90 x 90 L

ASSEMBLY

- Use fastening kit
- Use of chain 08 **part no. 29.0307/0**, chain clamping weight S **part no. 21.0925/0**

Roller chain 08

Part No. 29.0307/0



TECHN. DATA / ITEMS SUPPLIED

- Steel
- Size 8
- Breaking force min. 18,000 N
- Please indicate desired length
- Weight = 0.700 kg/m

APPLICATIONS

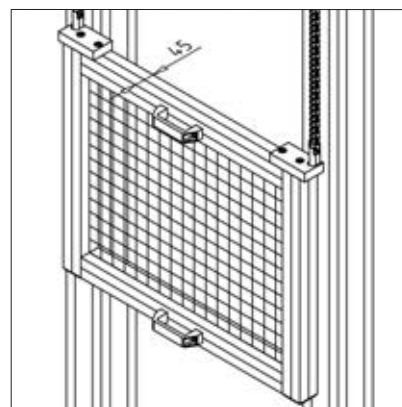
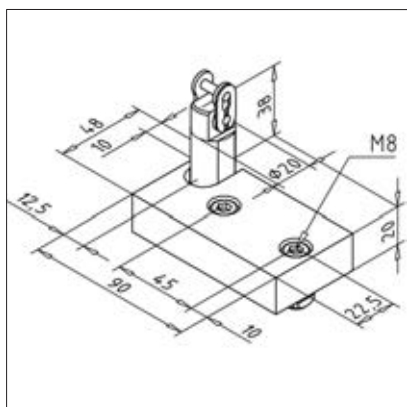
- Use in conjunction with balancing weight 45 or 90 and chain clamping 90 S
- For this chain clamping weight S part no. 21.0925/0 use

ASSEMBLY

- Attachment to the stand profile with 4 terminal strips Fixing with chain clamp weight S part no. 21.0925/0 on threaded rod M10 part no. 21.1667/0 for receiving the balance weights

Door chain clamping device 90 S front

Part No. 21.0927/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material and chain lock
- Weight = 0.381 kg/piece

APPLICATIONS

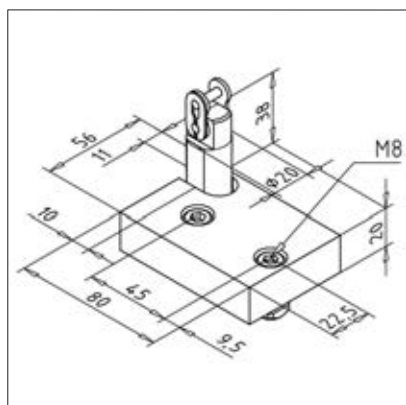
- Use in conjunction with chain reverse 90 S and chain 08
- Add a lifting plate from Profile 45 x 45 with sliding roller in front of the posts

ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 08 using the supplied chain lock
- Each lifting plate requires 2 chain reversing unit

Door chain clamping device 90 S side

Part No. 21.0928/0



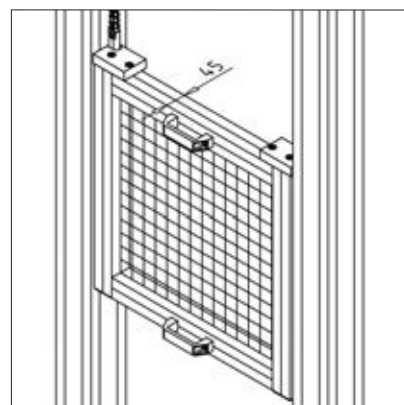
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material and chain lock
- Weight = 0.368 kg/piece



APPLICATIONS

- Use in conjunction with chain reverse 90 S and chain 08
- Add a lifting plate from Profile 45x45 with sliding roller between the posts

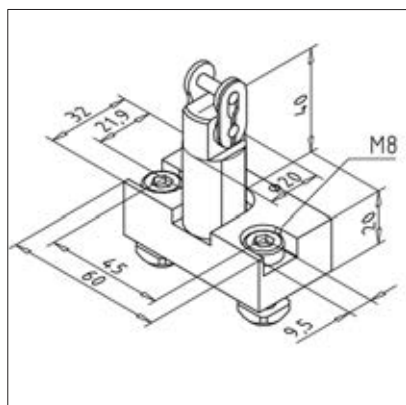


ASSEMBLY

- Mount plate on lifting plate and secure the roller chain 08 using the supplied chain lock
- Each lifting plate requires 2 chain reversing unit

Chain clamping device 90 S slide

Part No. 21.0929/0



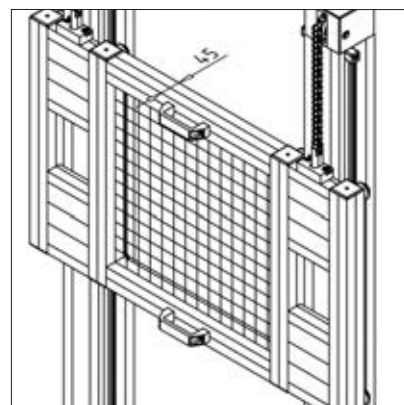
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material and chain lock
- Weight = 0.375 kg/piece



APPLICATIONS

- Use in conjunction with chain reverse 90 S and chain 08
- For mounting on slide LW 45 or LW 90

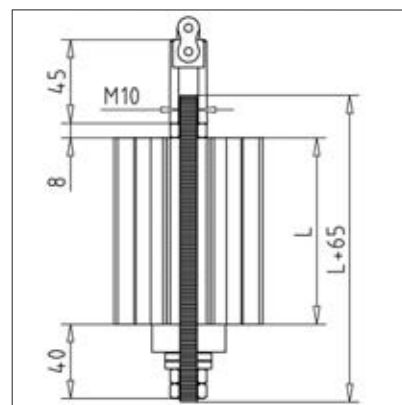
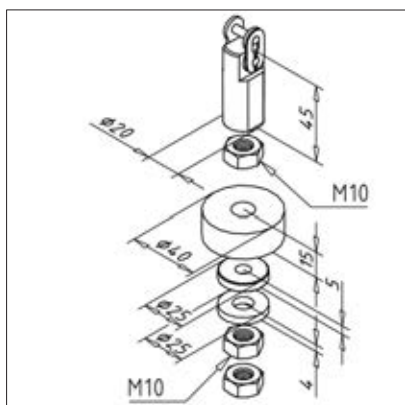


ASSEMBLY

- Mount plate on carriage and secure the roller chain 08 using the supplied chain lock

Chain clamping weight S

Part No. 21.0925/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Rubber-ring
- Chain lock
- Please threaded rod M10 **part no. 21.1667/0** order additionally in the desired length
- Weight = 0.145 kg/piece

APPLICATIONS

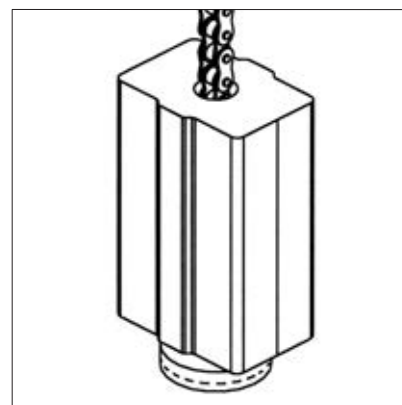
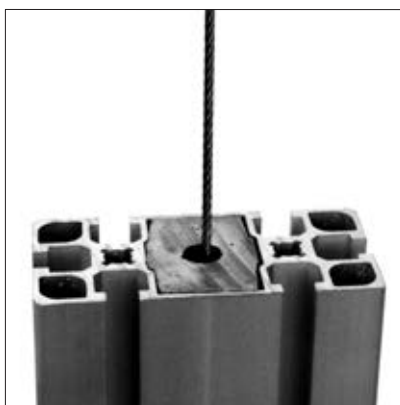
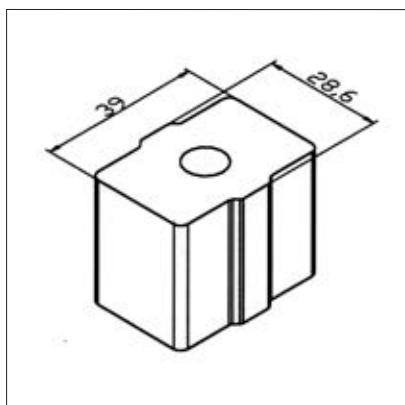
- Use in connection with roller chain 08 and balancing weight 45 or 90
- Length of the threaded rod = length of the weight +65 mm

ASSEMBLY

- Guide the threaded rod through the weight
- Attach the components included at both ends
- Connect threaded rod with enclosed chain lock chain

Counterweight 45

Part No. 21.1772/0



TECHN. DATA / ITEMS SUPPLIED

- Lead
- Fitting for profile 45 x 90 F or 45 x 90 G
- Length 0,333 m
- Weight = 10.000 kg/m

APPLICATIONS

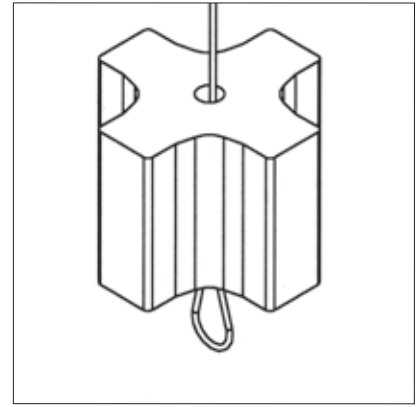
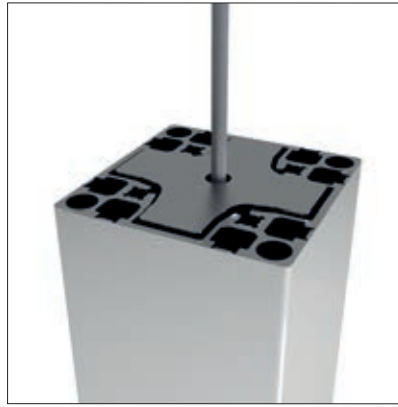
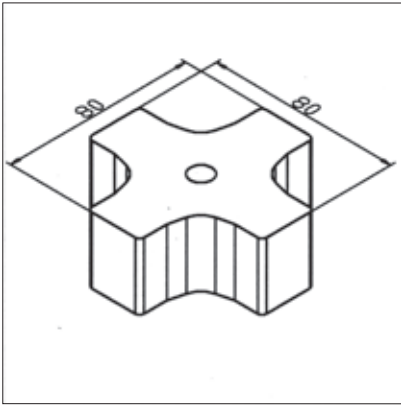
- Weight compensation for lightweight lifting doors
- Suitable for cable or roller chain 04 or roller chain 08

ASSEMBLY

- Set it into profile with pre-assembled cable or pre-assembled chain
- We recommend weighing the weights and adding a small weight allowance, this compensates for friction losses and lifting doors are somewhat easier to open

Counterweight 90

Part No. 21.1778/0



TECHN. DATA / ITEMS SUPPLIED

- Lead
- For profiles 90 x 90
- Length 0,260 m
- Weight = 38.500 kg/m

APPLICATIONS

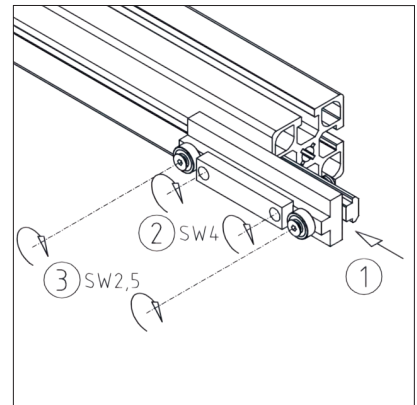
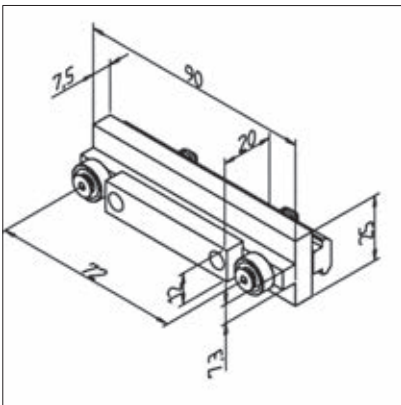
- Weight compensation for lightweight lifting doors
- Suitable for cable or roller chain 04 or roller chain 08

ASSEMBLY

- Set it into profile with pre-assembled cable or pre-assembled chain
- We recommend weighing the weights and adding a small weight allowance, this compensates for friction losses and lifting doors are somewhat easier to open

Slide-roll element

Part No. 21.1796/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- 1 T-slot bar, steel, zinc plated
- 2 ball bearings, pre-assembled
- Fmax. 200 N
- Weight = 0.094 kg/piece

APPLICATIONS

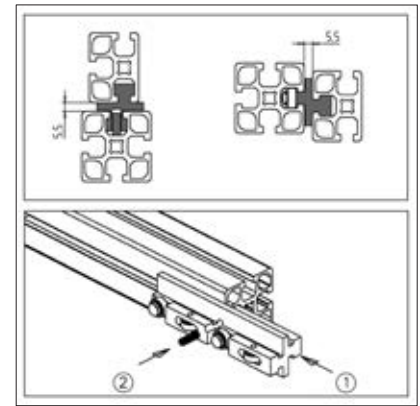
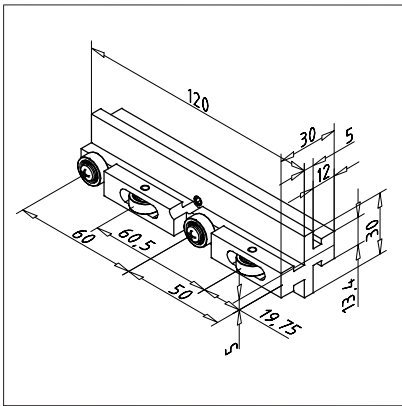
- Guide for lifting doors in the groove of the vertical profile
- Moving parts
- Bearing of workpieces, slides, brackets

ASSEMBLY

1. Insert pre-assembled slide roller element in profile groove
2. Fasten in the desired position with Allen wrench SW4
3. Tighten self-locking screws with Allen wrench SW2.5

Glide-roll element

Part No. 21.1799/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- 1 clamping screw, steel, zinc plated
- 4 built-in ball-bearings
- Fmax. 300 N
- Weight = 0.061 kg/piece

APPLICATIONS

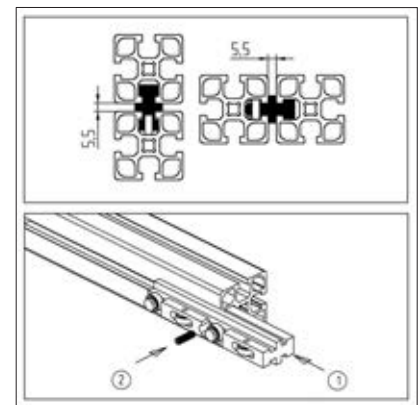
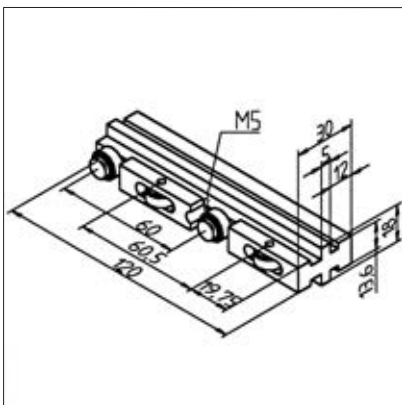
- Guide for sliding doors, lifting-doors, work-piece-slides, light linear guides
- Both groove holders are arranged in parallel, for simplify the design of flush sliding doors

ASSEMBLY

- 1: Insert the element with screw side into profile groove of movable construction part
- 2: secure with threaded pin
- 3: Slide the completely mounted movable part into the grooves of the guiding profiles. Secure the movable part against falling out with screws at both ends

Glide-roll element parallel

Part No. 21.1714/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- 1 clamping screw, steel, zinc plated
- 4 built-in ball-bearings
- Fmax. 300 N
- Weight = 0.055 kg/piece

APPLICATIONS

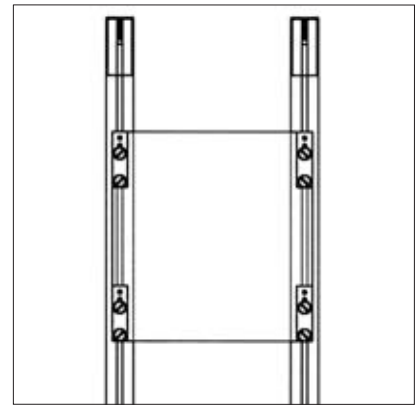
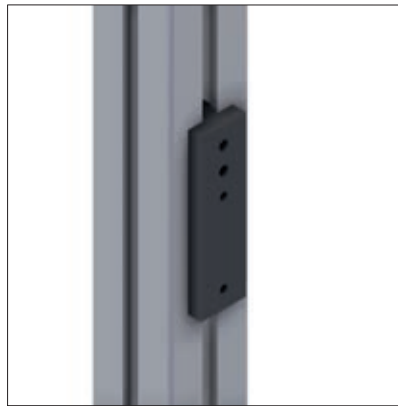
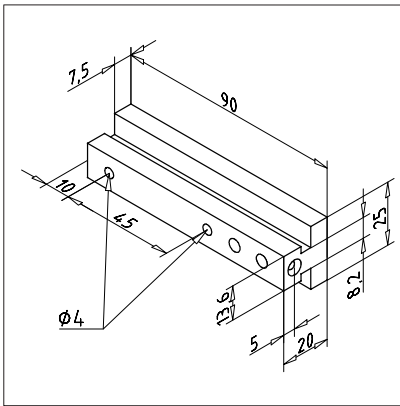
- Guide for sliding doors, lifting-doors, work-piece-slides, light linear guides
- Both groove holders are arranged in parallel, for simplify the design of flush sliding doors

ASSEMBLY

- 1: Insert the element with screw side into profile groove of movable construction part
- 2: secure with threaded pin
- 3: Slide the completely mounted movable part into the grooves of the guiding profiles. Secure the movable part against falling out with screws at both ends

Slide element

Part No. 21.1795/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- With fastening material steel, zinc plated
- Ready to install with cable ducting and clamping
- 2x Ø 4 mm predrilled for fixing the surface element
- Weight = 0.029 kg/piece

APPLICATIONS

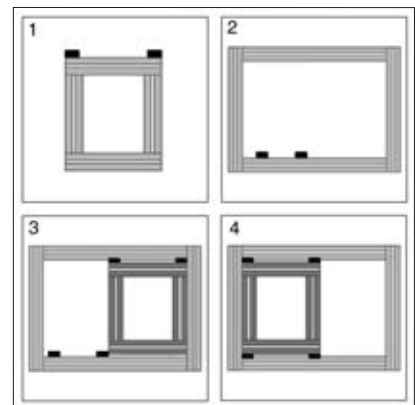
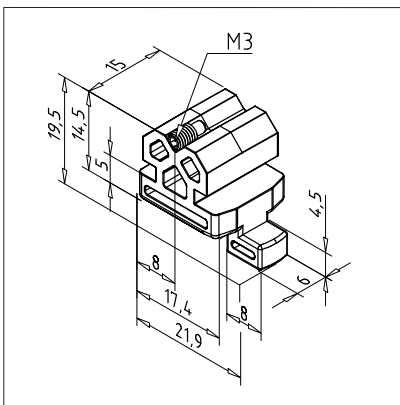
- Guide for lightweight lifting doors and simultaneous connection of door element and balancing weight
- Especially suitable for direct attachment on surface elements without frame

ASSEMBLY

- Connect rope of counterweight with slide tensioning element
- Secure cable end with clamp
- Screw into the groove of the vertical profile
- Screw panel element
- Use screws suitable for installing the surface element and if necessary, rework the 4 mm holes to the required size

Guide for sliding door 30 V

Part No. 22.1184/0



TECHN. DATA / ITEMS SUPPLIED

- PA, black
- 1 locking screw
- For 1 door element 4 guides are necessary
- Weight = 0.004 kg/piece

APPLICATIONS

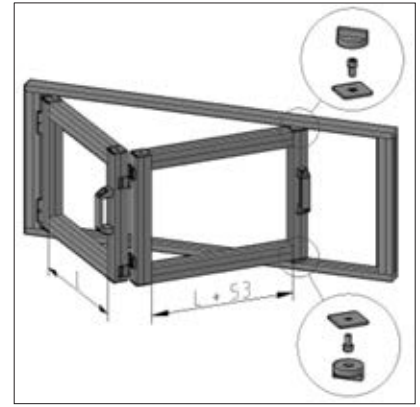
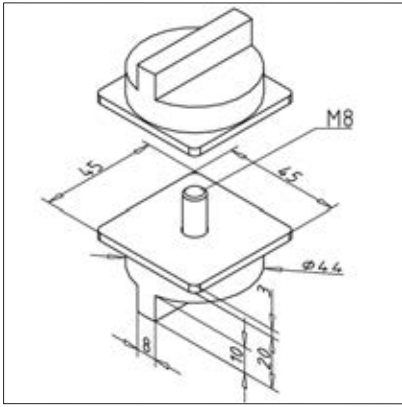
- Sliding doors
- Sliding elements
- For a simultaneous guidance of 2 elements in 1 profile groove
- It is possible to retrofit sliding doors in existing constructions
- For use with door elements of profile series 30
- The outer frame construction can consist of profiles of series 45 as well as of series 30

ASSEMBLY

- 1: Fasten the upper guide to the frame of the door element
 - 2: Insert the lower guide into the frame construction
 - 3: Rotate the door element
 - 4: Slide it into the lower guide and secure at desired position
- Replace the second door element
 - **Height of door elements:** clear height of the installation opening -11 mm
 - **Door element width (for 2 elements):** (inside + 24 mm) : 2

Folding doorway set

Part No. 22.1148/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Delivery: 1 pair
- With galvanized mounting screws M8 and end caps 45 x 45 AL
- Weight = 0.082 kg/set

APPLICATIONS

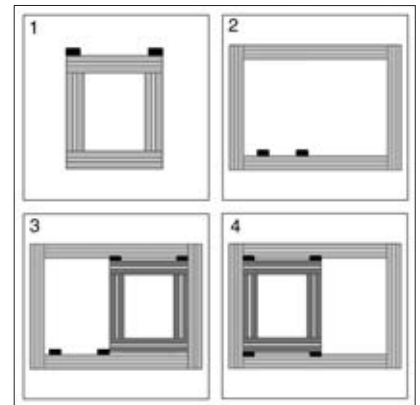
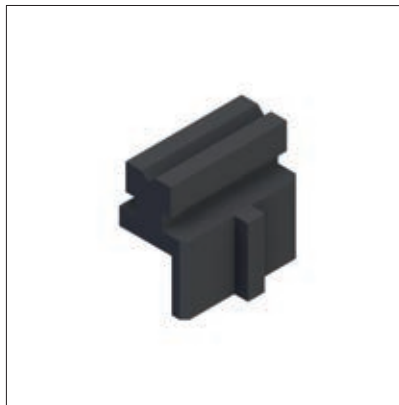
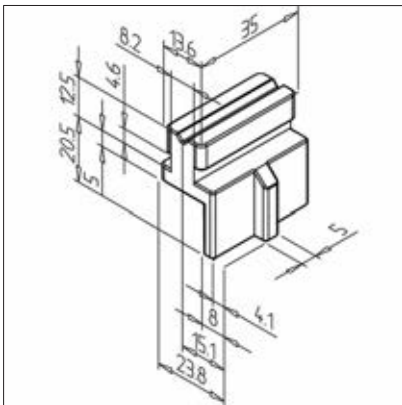
- For upper and lower guidance of folding doors made of aluminium profile
- Guiding in profile grooves

ASSEMBLY

- Mount end caps onto front door profile with screws from delivery scope
- Length of the front door profile = clear height of the outer frame - 28 mm
- Insert sliding piece in guide profile
- Insert mounted screws into drill hole of slide element
- Use always in pairs
- Dimensions are for profile cross section 45x45 for the door with hinge **part no. 21.1378/0**

Guide for sliding door 45

Part No. 22.1079/0



TECHN. DATA / ITEMS SUPPLIED

- PA, black
- 1 locking screw
- For 1 door element 4 guides are necessary
- Weight = 0.014 kg/piece

APPLICATIONS

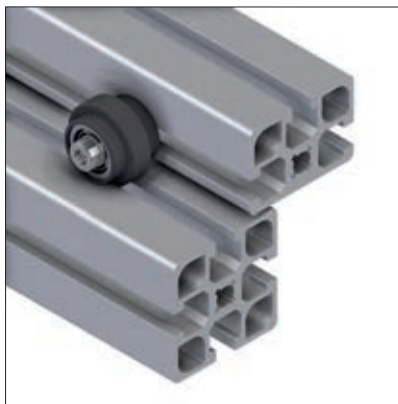
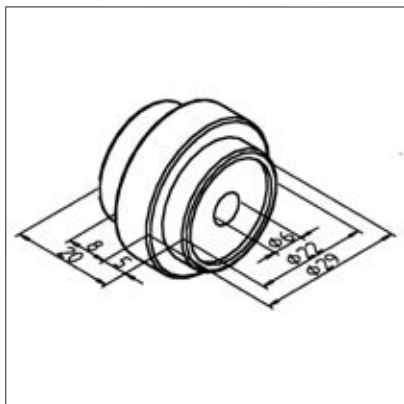
- Sliding doors
- Sliding elements
- For a simultaneous guidance of 2 elements in 1 profile groove
- It is possible to retrofit sliding doors in existing constructions

ASSEMBLY

- 1: Fasten the upper guide to the frame of the door element
 - 2: Insert the lower guide into the frame construction
 - 3: Rotate the door element
 - 4: Slide it into the lower guide and secure at desired position
- Replace the second door element
 - **Height of door elements:**
clear height of the installation opening -11 mm
 - **Width of door elements (with 2 elements):**
(lichte Weite + 49 mm) : 2

Roller element

Part No. 21.1782/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- With 2 ball-bearings 626 ZZ
- Fmax. 200 N
- Weight = 0.030 kg/piece

APPLICATIONS

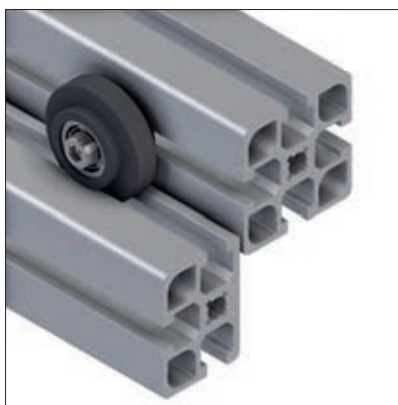
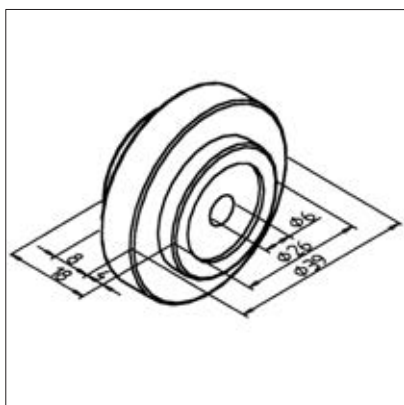
- Guide for sliding doors, lifting doors and drawers

ASSEMBLY

- With cylinder head screw M6 x 35 **part no.:** 21.1245/0 and sliding nut M6 on profile grooves or directly on surface element

Roller element S

Part No. 21.1781/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- With 2 ball-bearings 626 ZZ
- Fmax. 200 N
- Weight = 0.040 kg/piece

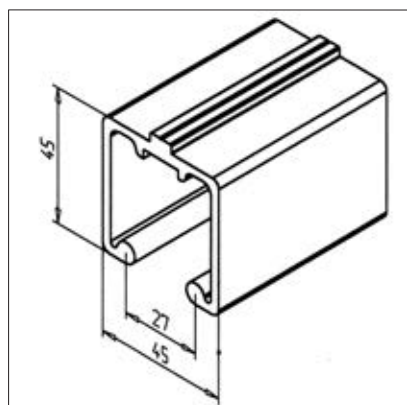
APPLICATIONS

- Guide for sliding doors, lifting doors and drawers

ASSEMBLY

- With cylinder head screw M6 x 35 **part no.:** 21.1245/0 and sliding nut M6 on profile grooves or directly on surface element

Sliding door profile



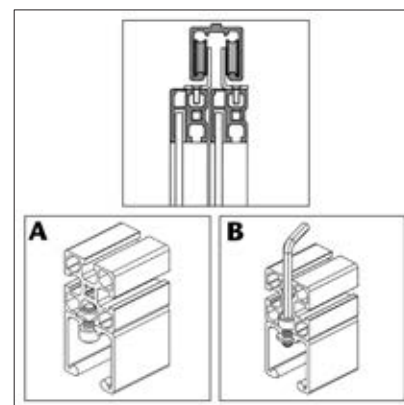
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 15.347 \text{ cm}^4$
- $I_y = 15.597 \text{ cm}^4$
- $w_x = 5.912 \text{ cm}^3$
- $w_y = 6.932 \text{ cm}^3$
- $IT = 0.726 \text{ cm}^4$
- Weight = 1.470 kg/m
- Bar length = 6 m
- Packing unit = 48 m



APPLICATIONS

- Multi-leaf sliding doors
- Single-leaf sliding doors

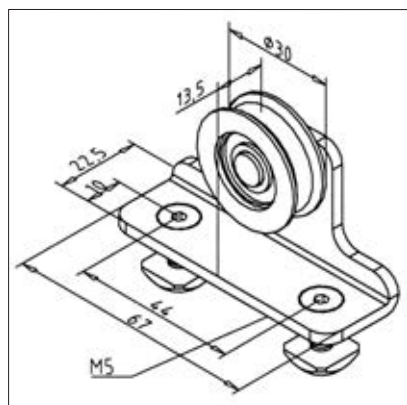


Part No. 20.1038/0

ASSEMBLY

- Drill $\varnothing 8,5$ mm holes in centering groove; bore pitch: 250 - 400 mm depending on the load
- A) Position M8 F square nuts in the supporting profile and fasten the sliding door profile with M8 x 25 hex socket cap screw
- B) Drill through or step holes into the carrier profile and insert square nut into the profile of the runner. Nuts are torsion-proof

Roller element for sliding door



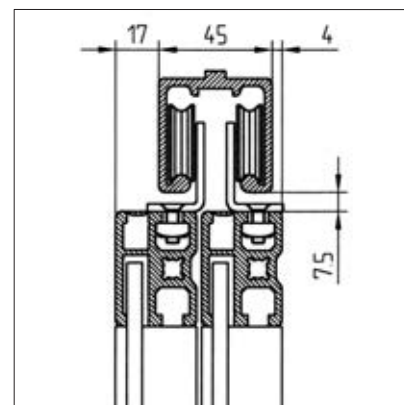
TECHN. DATA / ITEMS SUPPLIED

- Plastic roller with ball-bearing
- Zinc plated steel support
- With fastening material steel, zinc plated
- Weight = 0.080 kg/piece



APPLICATIONS

- Easy-running, multi-wing sliding doors in guard units, exhibition stands, testing units, etc.



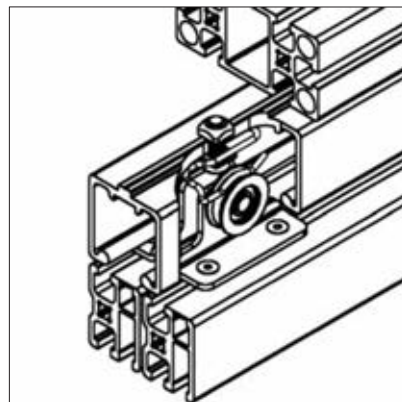
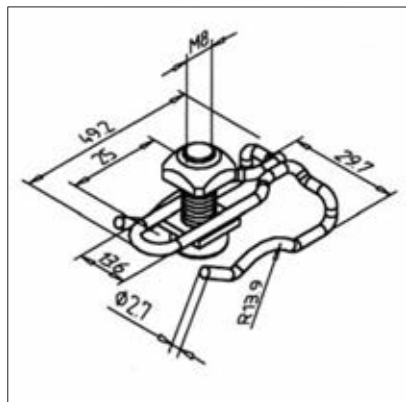
Part No. 21.2000/0

ASSEMBLY

- Attach the rollers to the profile groove using the mounting kit
- Mount the doors into the track profile, slightly swing out the doors at the bottom
- Sliding door at bottom with retaining pins, sliding bar 8N **part no. 22.1085/0** or U-guide sliding door **part no. 21.2002/1** secure against swinging away

Locking device, sliding door K

Part No. 21.2019/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Spring steel wire
- With fastening material steel, zinc plated
- Weight = 0.026 kg/piece

APPLICATIONS

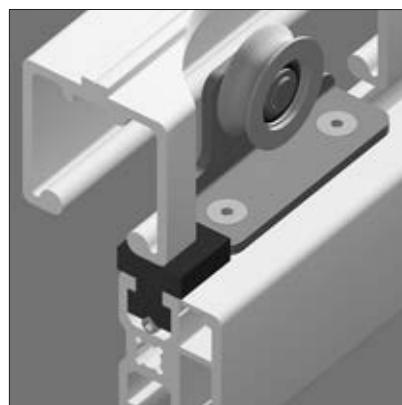
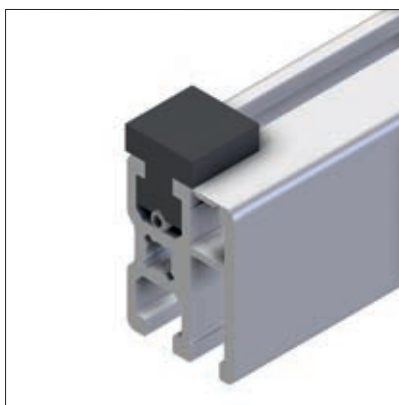
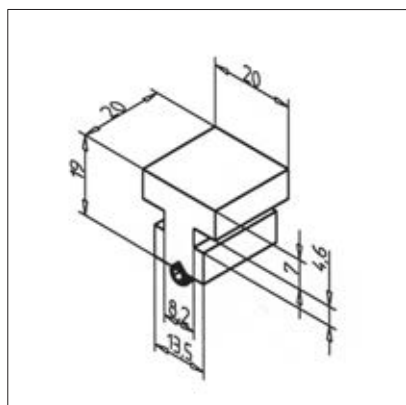
- Interlock sliding doors in their end positions (open / closed)

ASSEMBLY

- Mark the end position of the roll
- Bore drill Ø 8,5 m in sliding door profile
- Screw into rail with carrier profile using mounting kit included

Safety catch for sliding door

Part No. 21.2003/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- With fastening material steel, zinc plated
- Weight = 0.009 kg/piece

APPLICATIONS

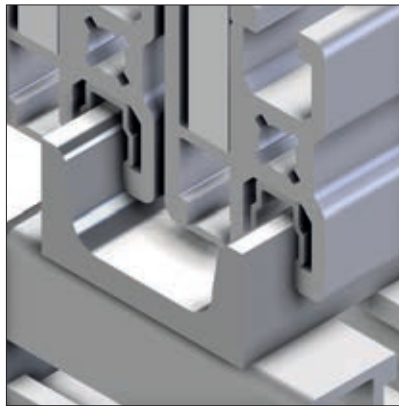
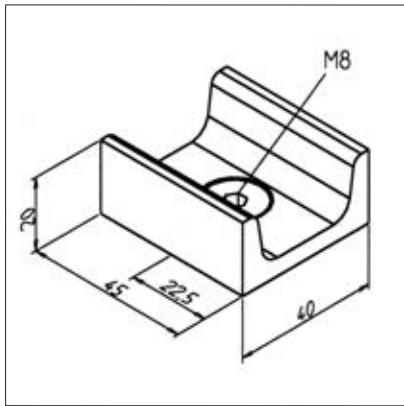
- Securing of sliding doors against lift off
- Reduction of pendulum motion

ASSEMBLY

- Insert the safety catch on the front side into the upper sliding door profile
- Fasten to the groove base through face-side screw using the threaded pin provided
- Install end cap

U-bar for sliding door

Part No. 21.2002/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- With fastening material steel, zinc plated
- Weight = 0.150 kg/piece

APPLICATIONS

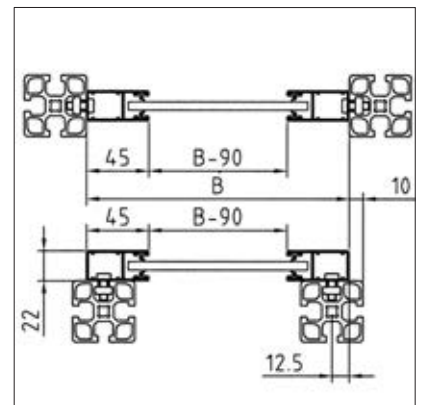
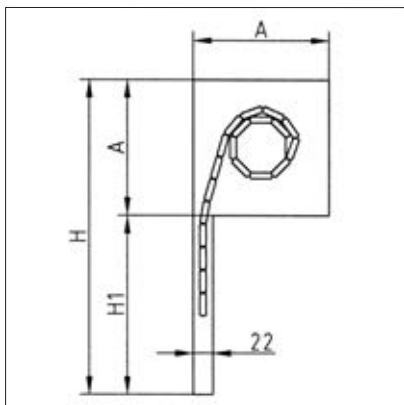
- Securing of sliding doors against lateral swinging

ASSEMBLY

- Hang up the doors
- Mount the U-rail on the profile piece and slide it into position
- Provide doors below with edging and cover profiles, if necessary

Roller shutters with drive

Part No. 29.0402/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder coated, silver
- 2 sides Guide rails; roller shutter box with drive
- Electr. drive 230 V
- Without switch
- Max. width: 2,70 m
- Cable length 2 m
- Please indicate width B and dimension H

APPLICATIONS

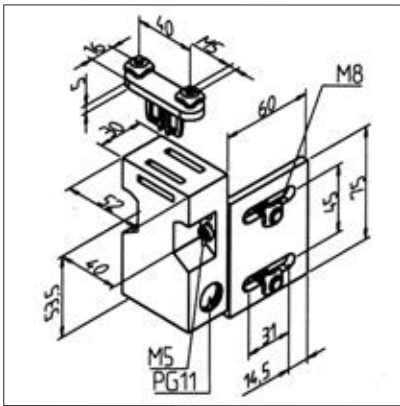
- Cupboard for instruments
- Tool cabinets
- Output switch
- Computer racks
- Machine guards

ASSEMBLY

- Connect the roller shutter box to the guide rails
- Fasten the guide rails and roller shutter box to the profile frame
- Roller Shutter Case A = 152, H bis 1,70 m, **part no. 29.0402/0**
- Roller Shutter Case A = 167,5, H bis 2,20 m, **part no. 29.0403/0**
- Roller Shutter Case A = 181, H bis 2,70 m, **part no. 29.0404/0**
- Stroke H1: H-A

Security switch AZ 16 ZVRK

Part No. 21.1110/0



TECHN. DATA / ITEMS SUPPLIED

- Security switch, complete with switching pad, type B1, standard, IP 67
- 1 NC contact, 1 NO contact
- Fastening angle, aluminium, natural anodized
- Fastening kit
- Latching force 30 N
- Weight = 0.343 kg/piece

APPLICATIONS

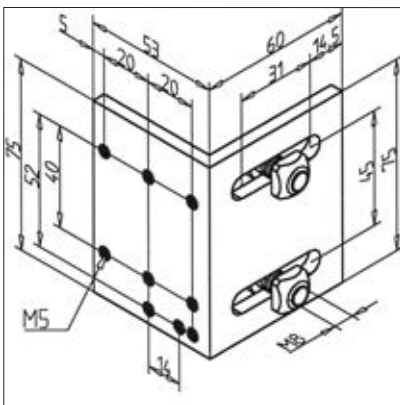
- Protection for doors, lifting devices, panels in all types of protective installations
- Suitable for all 45er profiles

ASSEMBLY

- Fasten with fastening material to profile groove
- Easy adjustment in x-, y- and z-axis by means of long holes in the angle-bracket
- For small radii, operating bars B2 **part no. 21.1110/2** or B3 **part no. 21.1110/3** use

Angle bracket for security switch

Part No. 21.1359/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- For use on vertical struts, angle bracket **part no. 21.1359/7** (square nuts with position-fixing)
- Weight = 0.128 kg/piece

APPLICATIONS

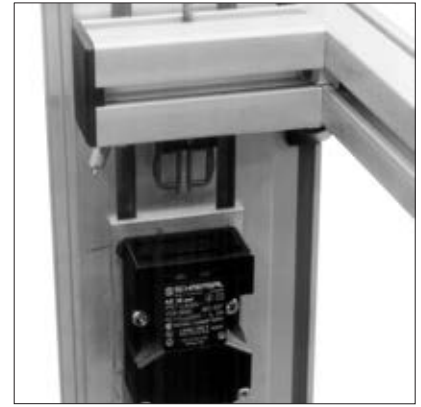
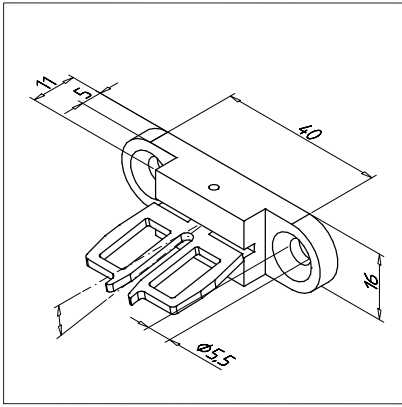
- For safety switch according to DIN EN 50041
- Switch adjustment in two directions

ASSEMBLY

- Fasten with fixing material to profile groove

Actuating bracket for security switch B3

Part No. 21.1110/3



TECHN. DATA / ITEMS SUPPLIED

- Separator guide, typ B3, for particularly small operating radius over the narrow side of the bracket
- Operating radius min. 32 mm
- Weight = 0.030 kg/piece

APPLICATIONS

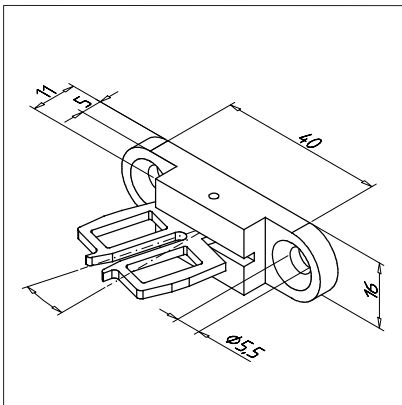
- Operating handle for small operating radii in conjunction with safety switch **part no. 21.1110/0**, replaces the standard strap

ASSEMBLY

- Use fixing material supplied to fix the safety switch on the profile groove
- Directly on panel element with countersunk screws M5 according to material thickness

Actuating bracket for security switch B2

Part No. 21.1110/2



TECHN. DATA / ITEMS SUPPLIED

- Separator guide, B2, for particularly small operating radius over the wide side of the bracket
- Operating radius min. 45 mm
- Weight = 0.030 kg/piece

APPLICATIONS

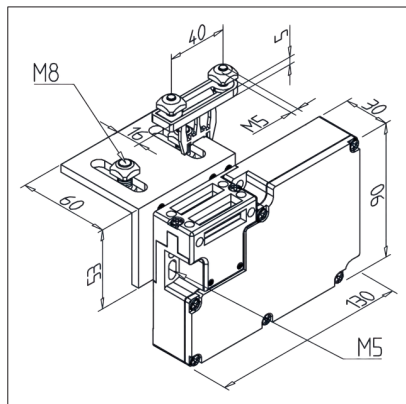
- Operating handle for small operating radii in conjunction with safety switch **part no. 21.1110/0**, replaces the standard strap

ASSEMBLY

- Use fixing material supplied to fix the safety switch on the profile groove
- Directly on panel element with countersunk screws M5 according to material thickness

Security switch with lock

Part No. 21.1766/0



TECHN. DATA / ITEMS SUPPLIED

- Switch, type AZM 161SK-12/12RK-024
- Thermoplastic housing, black, self-extinguishing
- Protective system IP67, nominal operating current 10 A (230 V), driving voltage 24 V AC/DC, power consumption 10 W
- Fastening kit
- Optionally also with control voltage 110 V AC or 230 V AC available
- Weight = 0.480 kg/piece

APPLICATIONS

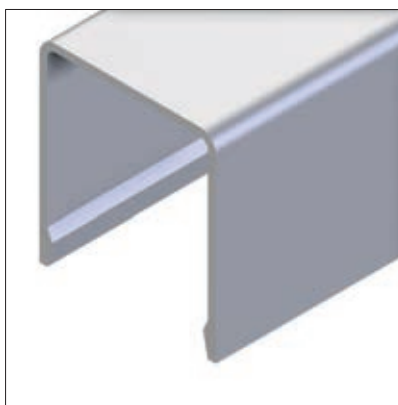
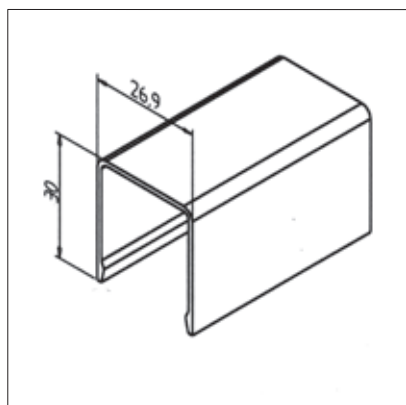
- For protective equipment with high safety requirements

ASSEMBLY

- Fasten with fixing material to profile groove
- For small radii, use actuating yoke B6 **part no.. 21.1766/2**.

Conduit 27 alu

Part No. 20.1051/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.193 kg/m
- Bar length = 6 m

APPLICATIONS

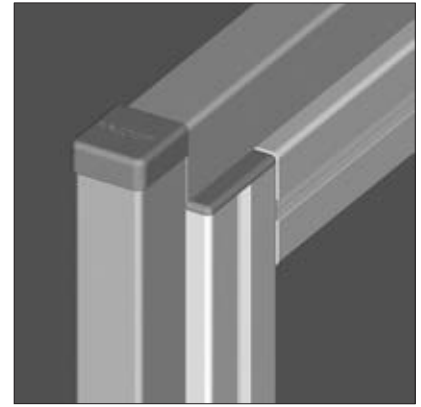
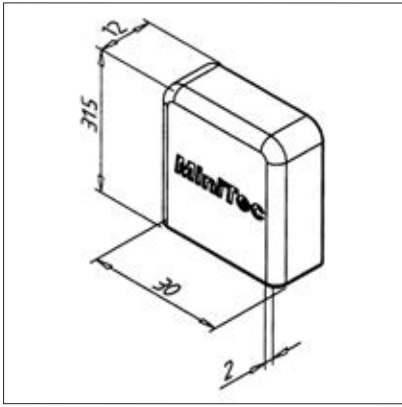
- Cover for cables and pneumatic hoses

ASSEMBLY

- On clamp **part no. 22.1204/0** or **part-no. 22.1212/0** clipping on
- Earthing brackets for optional grounding **part no. E9.0141/0** can be used

End cap conduit 27 alu

Part No. 22.1119/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.004 kg/piece

APPLICATIONS

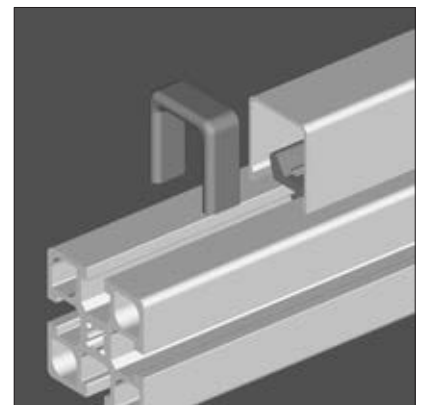
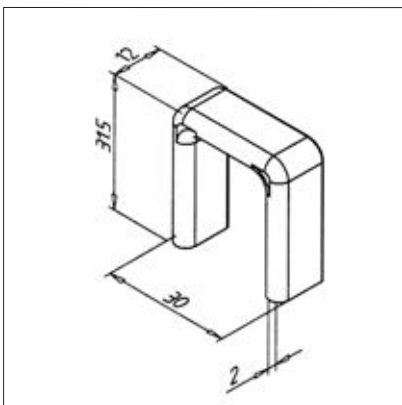
- End cap for conduit AL
- Manufacture external angles with cable duct AL

ASSEMBLY

- Simply push onto the end of the cable duct

Edge protection for conduit 27 AL

Part No. 22.1120/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.003 kg/piece

APPLICATIONS

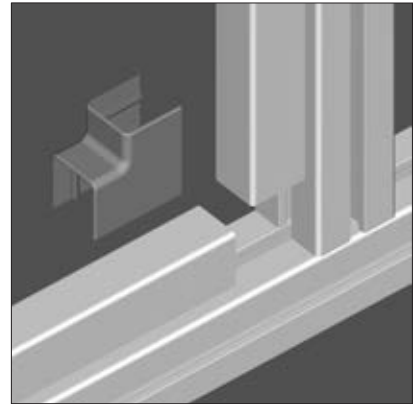
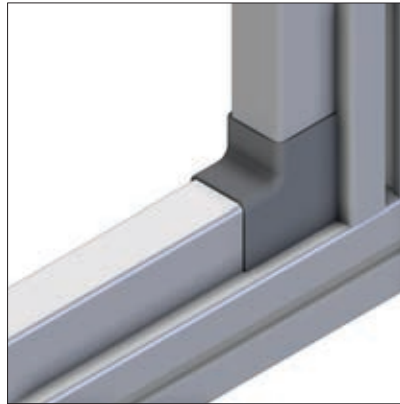
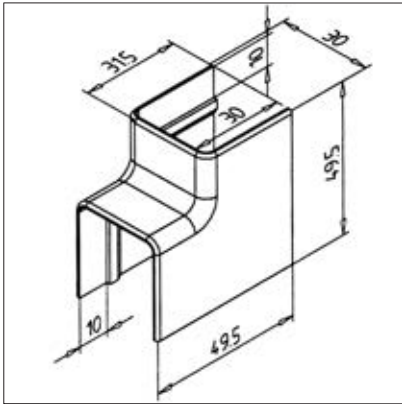
- Edge protection for conduit AL

ASSEMBLY

- Simply push onto the end of the cable duct

Inner angle for conduit 27 AL

Part No. 22.1121/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.009 kg/piece

APPLICATIONS

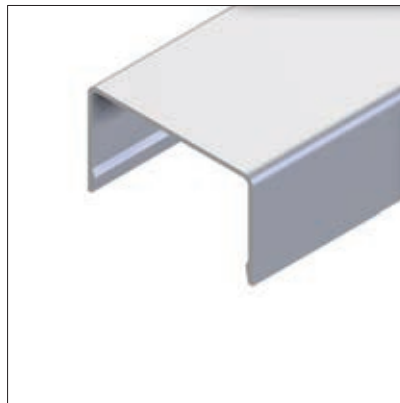
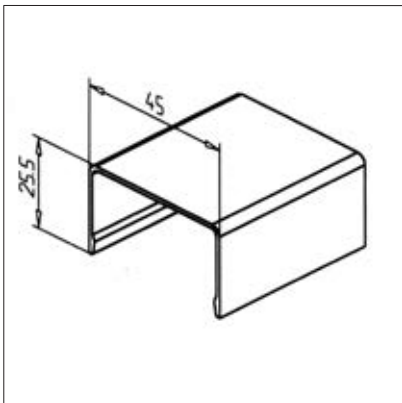
- Connect the cable duct AL to the inner angle

ASSEMBLY

- Clip the first side of cable duct on clamps.
- Insert the angle
- Clip on the second side of the cable duct and push until it stops

Conduit 45 alu

Part No. 20.1071/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Weight = 0.301 kg/m
- Bar length = 6 m

APPLICATIONS

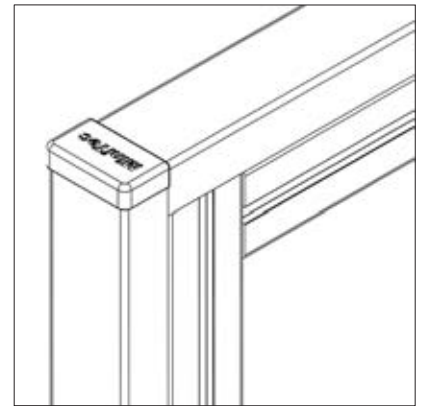
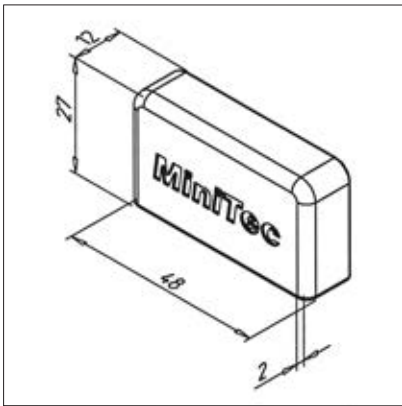
- Cover for cables and pneumatic hoses

ASSEMBLY

- On clamp 45 **part no. 22.1210/0** clipping on
- Earthing brackets for optional grounding **part no. E9.0141/0** can be used

End cap for conduit 45 AL

Part No. 22.1116/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.006 kg/piece

APPLICATIONS

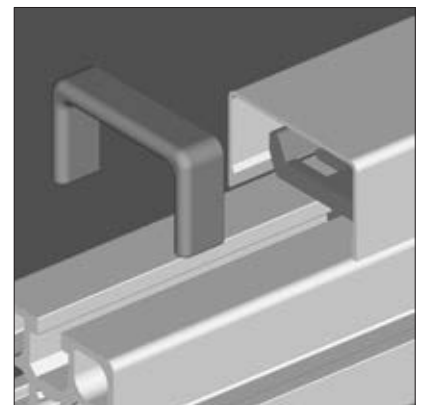
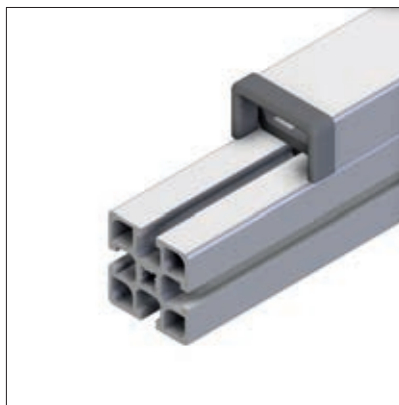
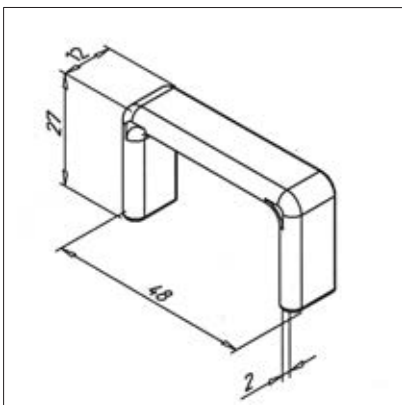
- Finish the cable duct 45
- Production of external angle with cable canal 45 AL

ASSEMBLY

- Simply push onto the end of the cable duct

Edge protection for conduit 45 AL

Part No. 22.1117/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.005 kg/piece

APPLICATIONS

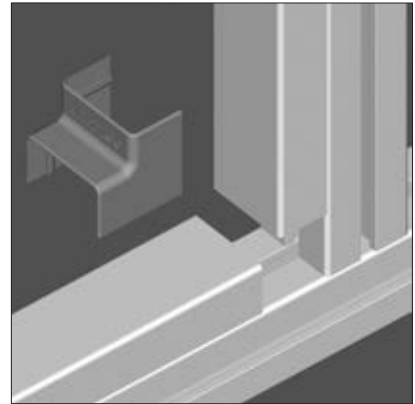
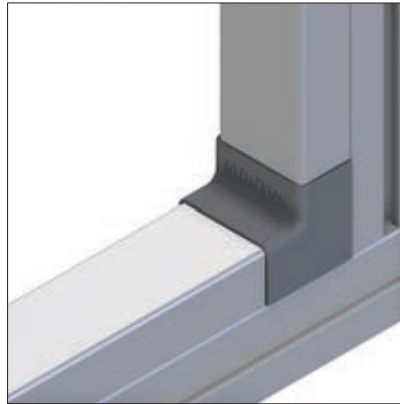
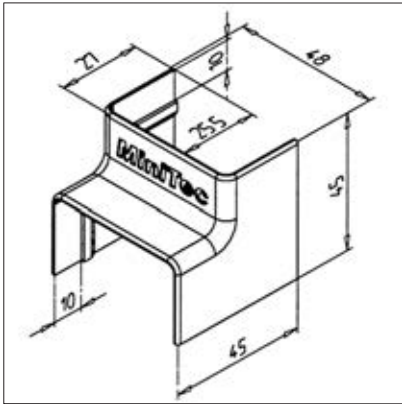
- Edge protection for Cabel Canal 45 AL

ASSEMBLY

- Simply push onto the end of the cable duct

Inner angle conduit 45 alu

Part No. 22.1118/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.010 kg/piece

APPLICATIONS

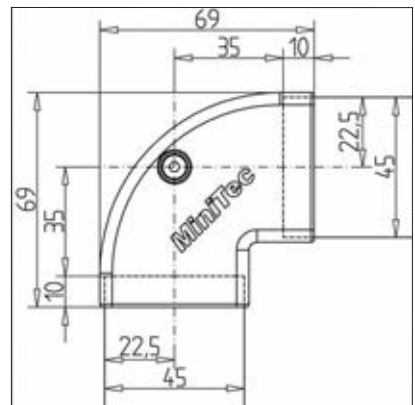
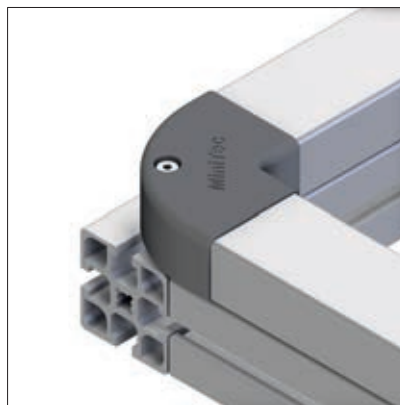
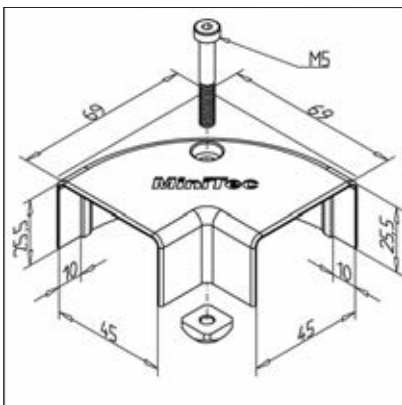
- Connecting cable canal 45 AL to internal angles

ASSEMBLY

- Clip the first side of cable duct on clamps.
- Insert the angle
- Clip on the second side of the cable duct and push until it stops

Angle 90° for conduit 45 AL

Part No. 22.1156/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Fastening kit
- Weight = 0.026 kg/piece

APPLICATIONS

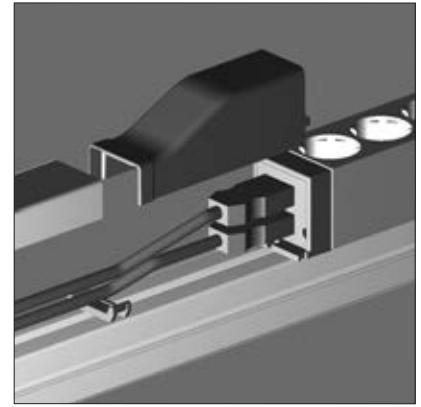
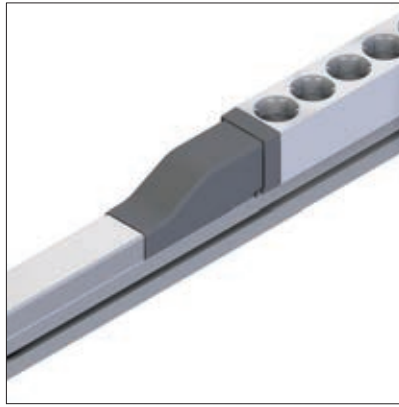
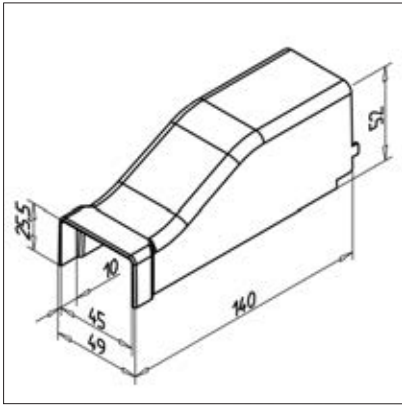
- Connection of cable canal 45 AL

ASSEMBLY

- Push on both channel ends 45, tighten the screw

Adapter cap, connector strip for conduit 45 AL

Part No. 22.1154/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.034 kg/piece

APPLICATIONS

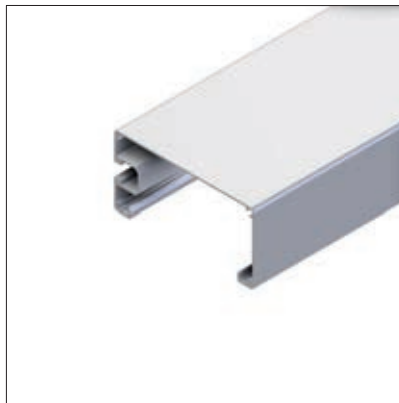
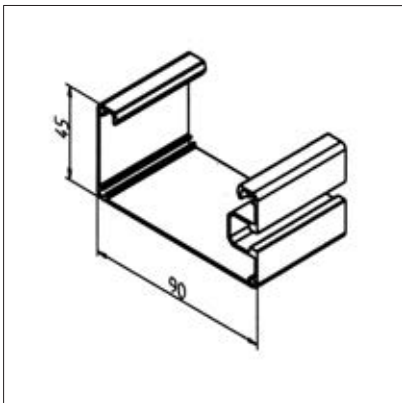
- Cover of cable canal 45 AL

ASSEMBLY

- Clip onto cable conduit 45

Conduit 90 alu

Part No. 20.1056/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Weight = 0.971 kg/m
- Bar length = 6 m

APPLICATIONS

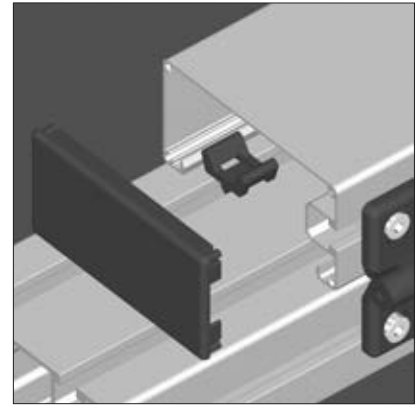
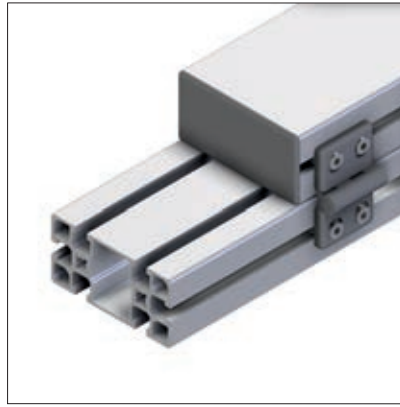
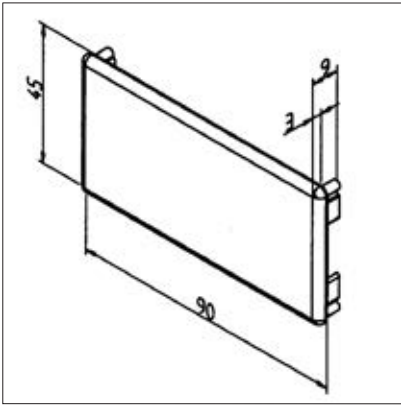
- Cover for cables and pneumatic hoses
- Suitable for MiniTec profiles, grid dimension: 90
- Can also be swung open, when used with hinges
- End ledges with integrated energy supply

ASSEMBLY

- On clamp **part no. 22.1204/0** or **part-no. 22.1212/0** clipping on
- Cap **part no. 22.1045/0**
- Earthing brackets for optional grounding **part no. E9.0141/0** can be used

End cap for conduit 90 alu

Part No. 22.1045/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Weight = 0.011 kg/piece

APPLICATIONS

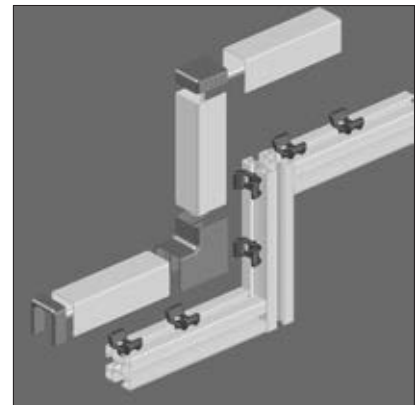
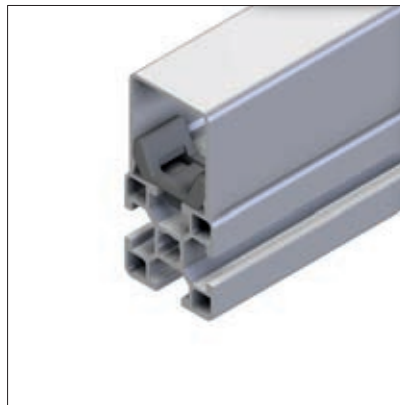
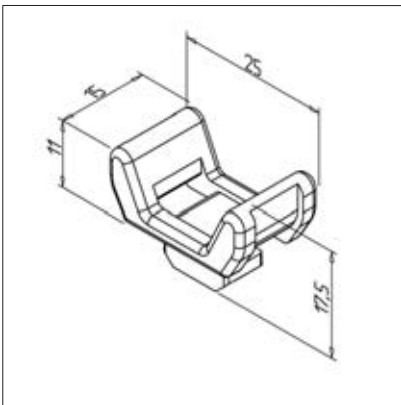
- Termination of cable canal 90 AL
- Constructions of corners on outside face

ASSEMBLY

- Simply push onto the end of the cable duct

Cable clip 27-30

Part No. 22.1212/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Weight = 0.002 kg/piece

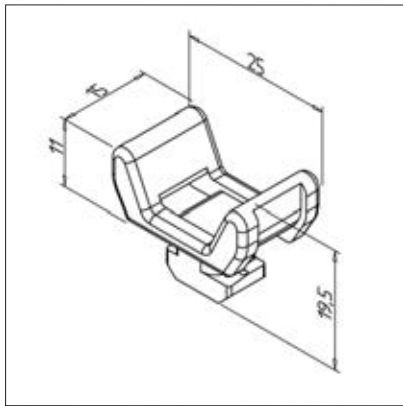
APPLICATIONS

- Simple and rational fastening of cables and pneumatic hoses
- Fixing of cable canal 27 AL
- For use of all profile types of profile series 30

ASSEMBLY

- Insert in profile groove and fix by 90° rotation
- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length

Cable clip 27-45



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Weight = 0.003 kg/piece



APPLICATIONS

- Simple and rational fastening of cables and pneumatic hoses
- Fixing of cable canal 27 AL and cable canal 90 AL
- Use with all profiles of the 45 profile series

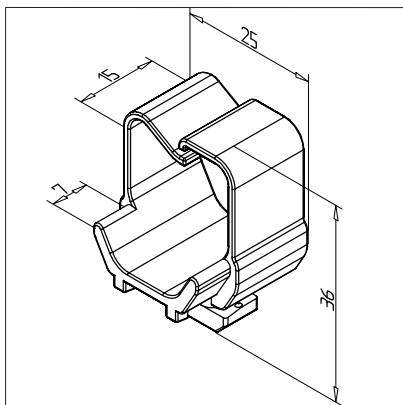


Part No. 22.1204/0

ASSEMBLY

- Insert in profile groove and fix by 90° rotation
- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length

Cable clip 27-45 C



TECHN. DATA / ITEMS SUPPLIED

- PP, Injection Mould, grey
- Weight = 0.004 kg/piece



APPLICATIONS

- Simple and rational fastening of cables and pneumatic hoses
- Fixing of cable canal 27 AL and cable canal 90 AL
- Use with all profiles of the 45 profile series
- Preferably to be used for laying cables and hoses overhead or for frequent changes to the installation.



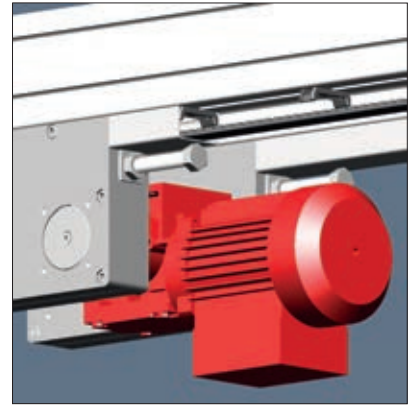
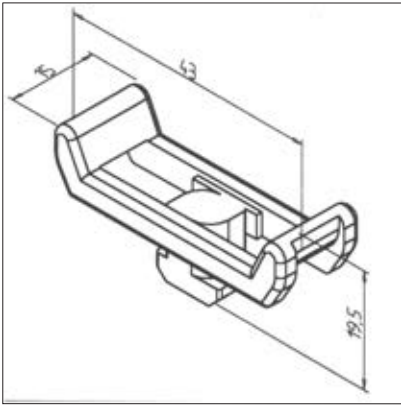
Part No. 22.1216/0

ASSEMBLY

- Insert in profile groove and fix by 90° rotation
- Simply clip cables and hoses up to 8 mm diameter into the clamp. Removal is also possible
- If necessary, fasten cables with cable ties. Thread the cable ties into the end of the clamp (7mm) and tighten

Cable clip 45

Part No. 22.1210/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Weight = 0.004 kg/piece

APPLICATIONS

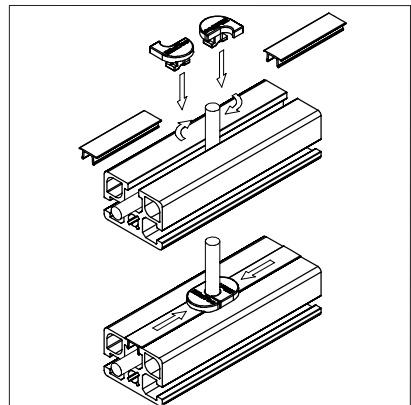
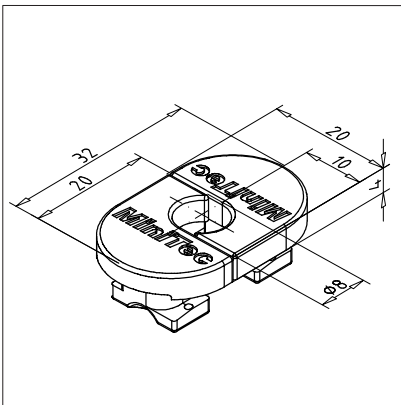
- Simple and rational fastening of cables and pneumatic hoses
- Suitable for conduit 45 AL

ASSEMBLY

- Insert in profile groove and fix by 90° rotation
- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length
- Cover of timing belt, chains etc.

Cable clamp 45

Part No. 22.1270/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- The cable clamp (2-part) consists of 2 identical components
- Weight = 0.028 kg/pair

APPLICATIONS

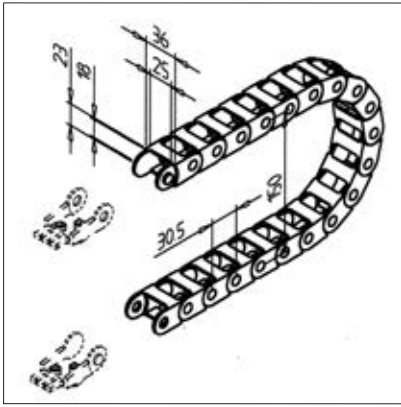
- For fixing cables and hoses laid in the profile groove
- For cables up to 8 mm diameter
- Please note the bending radius of the cables
- Use with all profiles of the 45 profile series

ASSEMBLY

- Swing both parts to the left and right of the cable into the profile groove, then push them together.
- An open-ended spanner SW 21 can be used for easier swinging in
- When using cover profiles to close the grooves, this can be pushed under the cable clamp approx. 4 mm deep

Energy chain R

Part No. 33.0410/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- Without fastening kit
- Weight = 0.341 kg/m

APPLICATIONS

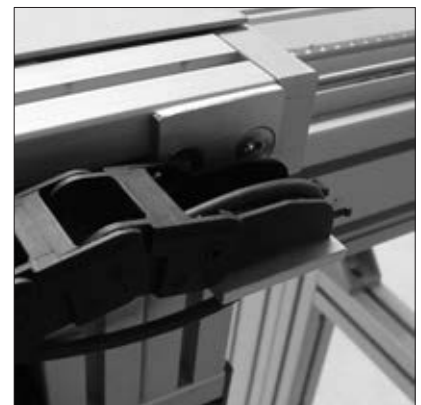
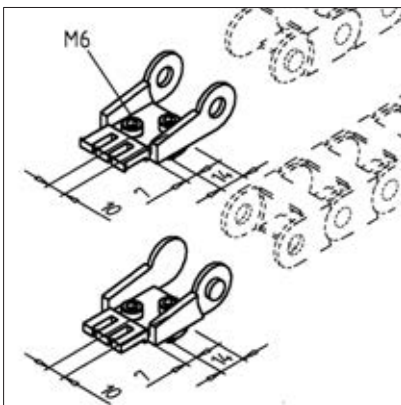
- Energy chain to bind cables and hoses on slides and movable elements

ASSEMBLY

- Fixing the energy chain means of connection elements **part no. 33.0411/0**

Mounting brackets for energy chain R

Part No. 33.0411/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- With fastening material steel, zinc plated
- One element to the right and to the left
- Weight = 0.058 kg/piece

APPLICATIONS

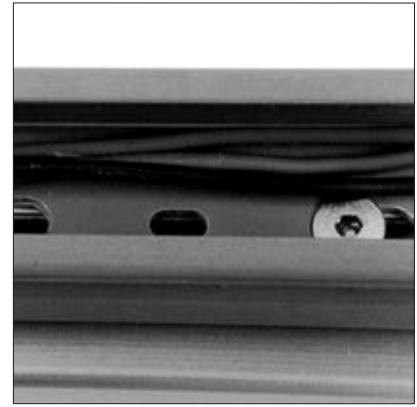
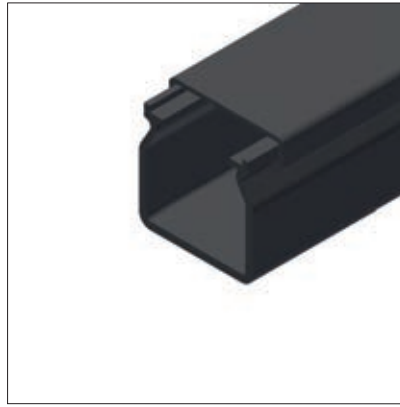
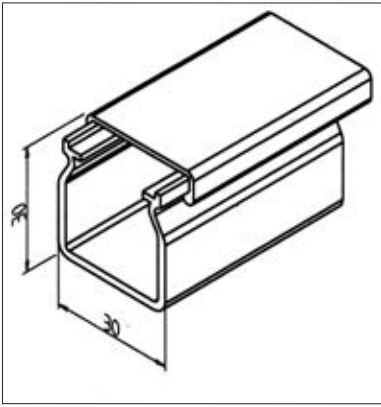
- For fixing the energy chain R **part no. 33.0410/0** on profile constructions

ASSEMBLY

- Fasten at a suitable place with supplied hardware
- Use cable tie band to fix cables and hoses

Conduit 32

Part No. 22.1082/0



TECHN. DATA / ITEMS SUPPLIED

- PVC, grey
- Snap-cover
- Weight = 0.275 kg/m
- Bar length = 2 m

APPLICATIONS

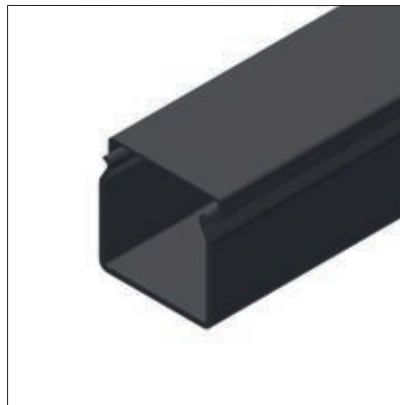
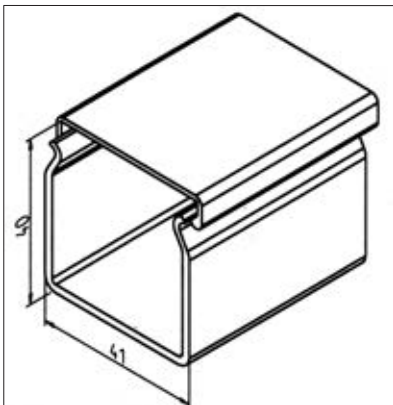
- Laying of cables and hoses in all types of construction

ASSEMBLY

- Fastening with screws M6 x 12 and rhombus-nut M6

Conduit 45

Part No. 22.1084/0



TECHN. DATA / ITEMS SUPPLIED

- PVC, grey
- Snap-cover
- Weight = 0.402 kg/m
- Bar length = 2 m

APPLICATIONS

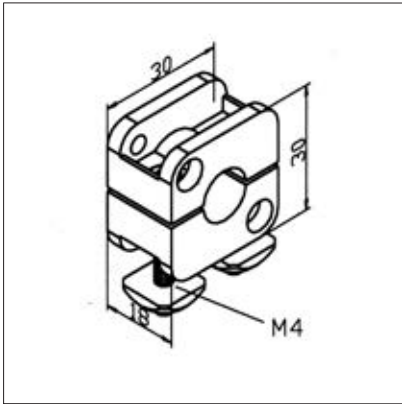
- Laying of cables and hoses in all types of construction

ASSEMBLY

- Fastening with screws M6 x 12 and rhombus-nut M6

Proximity switch holder 12

Part No. 28.0120/0



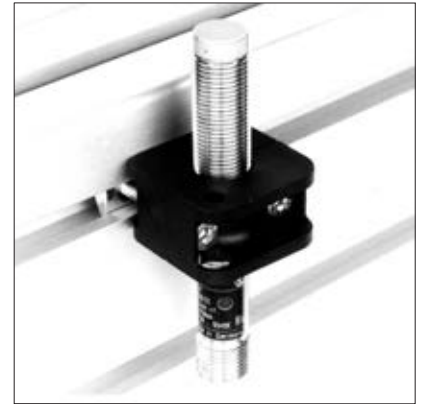
TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- With fastening material steel, zinc plated
- Ø 12 mm
- Weight = 0.036 kg/piece



APPLICATIONS

- Fixing of proximity switches Ø 12 mm in profile constructions and linear axes

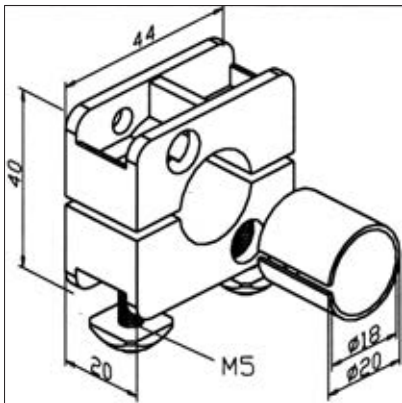


ASSEMBLY

- Fasten to profile groove with supplied hardware

Proximity switch holder 18

Part No. 28.0121/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic
- With fastening material steel, zinc plated
- Ø 18 mm
- Ø 20 mm
- Weight = 0.046 kg/piece



APPLICATIONS

- Fixing of proximity switches Ø 18 mm and Ø 20 mm in profile constructions and linear axes

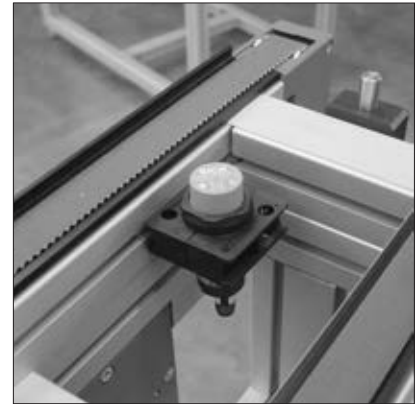
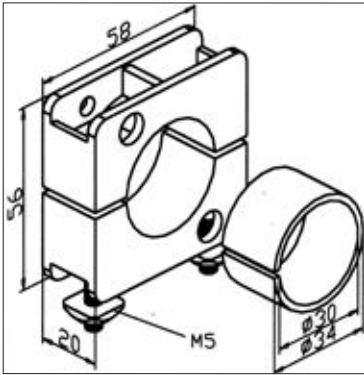


ASSEMBLY

- Fasten to profile groove with supplied hardware

Proximity switch holder 30

Part No. 28.0122/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- With fastening material steel, zinc plated
- Ø 30 mm
- Ø 34 mm
- Weight = 0.068 kg/piece

APPLICATIONS

- Fixing of proximity switches Ø 30 mm and Ø 34 mm in profile constructions and linear axes

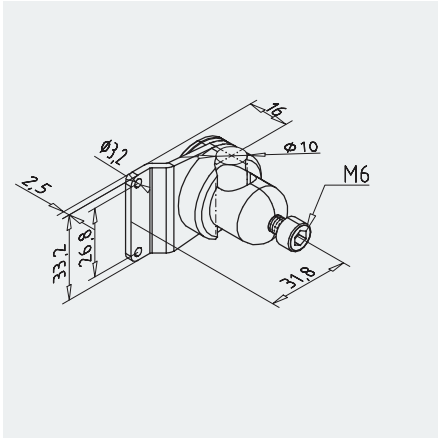
ASSEMBLY

- Fasten to profile groove with supplied hardware

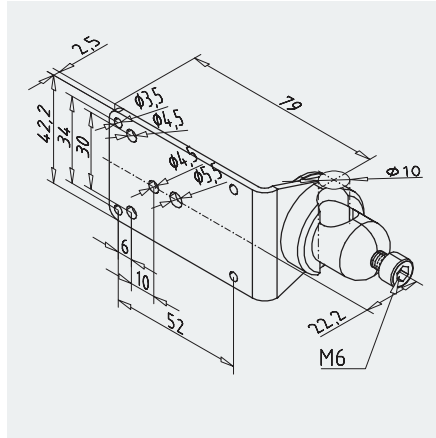
SENSOR HOLDERS

ALL SIDE SUPPORTS CAN BE COMBINED WITH ALL BEAMS

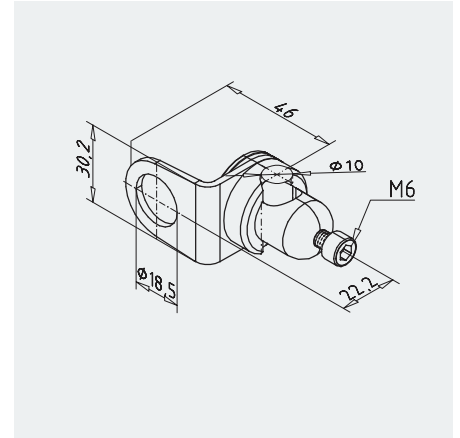
Carriers



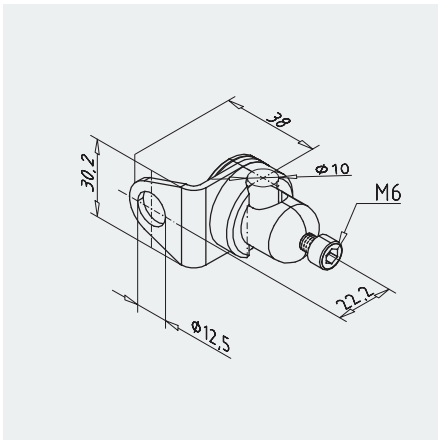
Part no. E1.0055/0
Fastened Syst. top 32



Part no. E1.0070/0
Fastened Syst. top 32

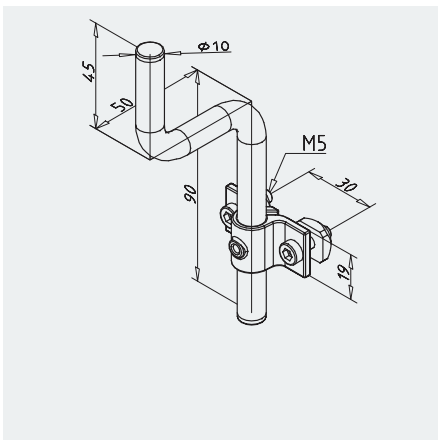


Part no. E1.0068/0
Fastened Syst. top M18

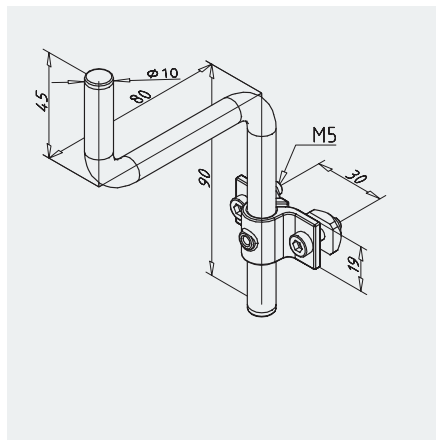


Part no. E1.0069/0
Fastened Syst. top M12

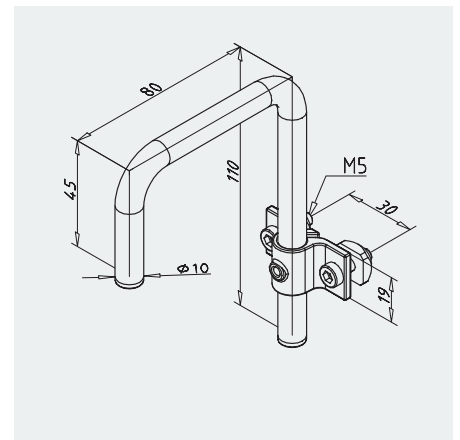
Lateral holders



Part no. 29.5046/2
Fastened below briefly



Part no. 29.5047/2
Fastened bottom long



Part no. 29.5048/2
Fastened bottom U-form

DRIVE AND CONTROL TECHNOLOGY



Electrical design, control cabinet production and software development

From problem analysis to commissioning: we not only offer proven components for plant construction and automation technology, but also project and implement individual overall concepts for material flow and assembly technology with our experienced team. In this way, resources are used in a targeted and effective manner. The basis for this is our flexible modular system consisting of profiles, linear technology and elements for ergonomic workplace design. These are supplemented by pneumatic and control technology components as well as conveyor systems, workpiece carrier transport systems and drives. From these parts, experienced specialists create modules which then grow together to form complete automation solutions for very individual tasks. Our goal is to develop the optimum solution for every task. Already in the planning phase, our customers benefit from our cross-industry experience. From the initial concept to commissioning, you will be expertly and seamlessly accompanied by our team.

Your partner for the complete conception:

- Consultation
- Planning
- Mechanical and electrical engineering
- Software development and visualization
- Commissioning
- CE compliant design
- Documentation
- Service such as remote maintenance

Electrical designs

The basis of the electrical design is the planning of the hardware. Thanks to our experience with tasks from a wide variety of industrial sectors and our many years of cooperation with all capable manufacturers, we are able to select the optimum configuration for the respective task. We create the hardware plans with the most modern CAD software E-Plan Electric P8. A meaningful documentation is thus generated for each development.

As a rule, we create control concepts on a modular basis with decentralized intelligence. Different bus systems such as ProfiNet or I/O Link are used according to the requirements of our customers and the task at hand. Our specialists take over the design of the drives, taking into account the economic efficiency and the mechanics used. State-of-the-art servo technology with integrated safety functions is standard in our systems.

Control cabinet production

Control cabinets are assembled and wired in-house by our specialists according to the specifications of the electrical planning and approval by our customers. An intensive in-house functional test with the latest test equipment guarantees the quality and safe functioning of our systems.



Visualization - safe operation and monitoring

Clear mapping of the control processes is an indispensable prerequisite for safe operation of the system. With WinCC flexible we create user interfaces that not only visualize the process, but also visually signal error messages or display help texts that are easy for the operator to understand. Our mobile HMI panels make it

much easier to operate and set up complex systems. With different user levels the visualization can be activated and adapted according to the respective logged in user.



Software development

The sequence programs of our systems are created for PLC or PC control. Programming is carried out by our specialists using Simatic Step 7 and the TIA Portal according to IEC standards. Manufacturer independent CoDe-Sys programming is also possible.

The integration of our complete solutions into the customer's existing ERP can also be realized on request.

Motors

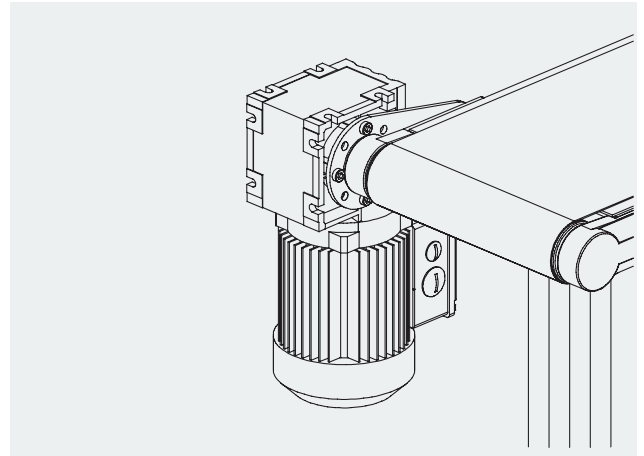
Plug-on motor suitable for conveyor belt series 45*

Technical Data

- Nominal voltage 230 / 400 V
- 50 Hz
- Degree of protection IP 54
- Weight approx. 6kg

A torque arm WA 10 part no. 295040/0 is required for attachment to a drum bearing 45.

Optionally available with holding brake or thermocouple, also with different position of the terminal box and cable inlet (data sheets on request)



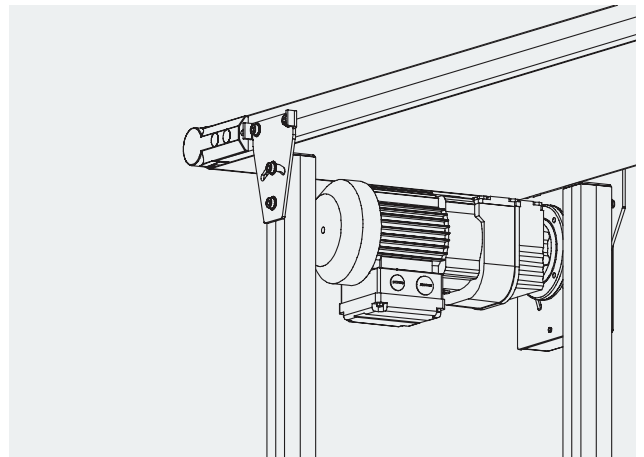
Type	Part no.	Power [W]	Output speed	Output torque	Conveyor belt 45 Conveyor speed
DSGM 90 - 18	33.0015/0	90	18 U/min	19 Nm	2,8 m/min
DSGM 90 - 23	33.0016/0	90	23 U/min	17 Nm	3,6 m/min
DSGM 90 - 35	33.0017/0	90	35 U/min	14 Nm	5,5 m/min
DSGM 120 - 50	33.0023/0	120	50 U/min	15 Nm	7,9 m/min
DSGM 120 - 71	33.0018/0	120	71 U/min	12 Nm	11,1 m/min
DSGM 120 - 84	33.0019/0	120	84 U/min	11 Nm	13,2 m/min
DSGM 120 - 135	33.0020/0	120	135 U/min	7 Nm	21,2 m/min
DSGM 120 - 168	33.0021/0	120	168 U/min	6 Nm	26,3 m/min

Flanged gear motor suitable for motor attachment KIT 45* Ø20

Technical Data

- Nominal voltage 230 / 400 V
- 50 Hz
- Protection IP 54
- Weight ca. 7 - 9 kg

Optionally available with holding brake, thermocouple or external fan, also with different position of terminal box and cable input (data sheets on request)



Type	Part no.	Power [W]	Output speed	Output torque	Kit engine attachment 45 Conveyor Speed
DGM-120 - 17 / F	33.0086/0	120	17 U/min	68 Nm	3,3 m/min
DGM-120 - 31 / F	33.0087/0	120	31 U/min	37 Nm	6,1 m/min
DGM-120 - 47 / F	33.0088/0	120	47 U/min	24 Nm	9,2 m/min
DGM-180 - 59 / F	33.0089/0	180	59 U/min	29 Nm	11,6 m/min
DGM-180 - 82 / F	33.0090/0	180	82 U/min	21 Nm	16,1 m/min
DGM-250-100 / F	33.0091/0	250	100 U/min	24 Nm	19,6 m/min
DGM-370-127 / F	33.0092/0	370	127 U/min	28 Nm	24,9 m/min
DGM-370-157 / F	33.0093/0	370	157 U/min	22 Nm	30,8 m/min

→ * from this motor series, other services and translations are available on request.

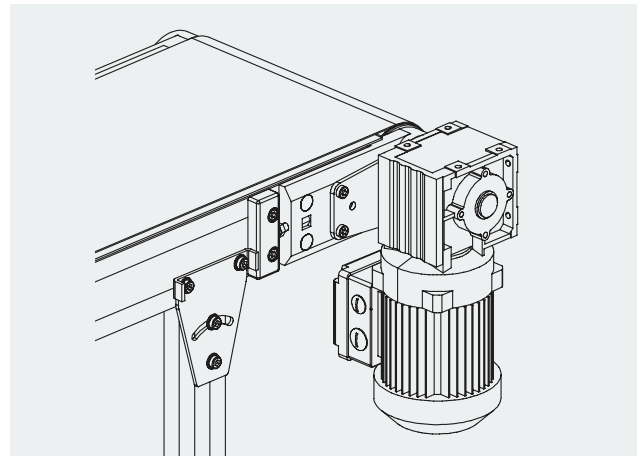
Plug-on motor suitable for conveyor belt series 90*

Technical Data

- Nominal voltage 230 / 400 V 50 Hz
- Degree of protection IP 54
- Weight approx. 7 - 13kg

A torque arm is required for attachment to a conveyor bearing 90. Torque arm WA20 (part no. 295036/0) or torque arm WA30 (part no. 295037/0).

Optionally available with holding brake, thermocouple or external fan, also with different position of terminal box and cable inlet (data sheets on request)



Type	Part no.	Power [W]	Output speed	Output torque	Conveyor belt 90 Conveyor speed	Segmented chain conveyors Conveyor speed
DSGM 180 - 15	33.0080/0	180	15 U/min	47 Nm	4,5 m/min	7,5 m/min
DSGM 250 - 29	33.0081/0	250	29 U/min	42 Nm	8,7 m/min	14,8 m/min
DSGM 370 - 36	33.0082/0	370	36 U/min	62 Nm	10,7 m/min	18,3 m/min
DSGM 370-51	33.0083/0	370	51 U/min	48 Nm	15,2 m/min	14,9 m/min
DSGM 370-73	33.0084/0	370	73 U/min	38 Nm	21,8 m/min	37,1 m/min
DSGM 550-115	33.0085/0	550	115 U/min	35 Nm	34,3 m/min	58,5 m/min

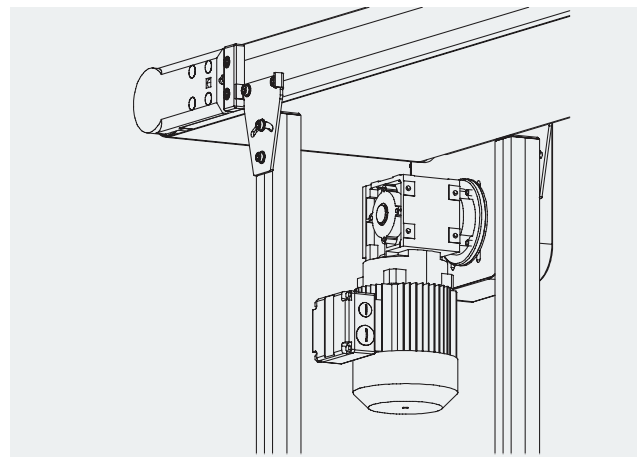
→ * From this motor series, other services and translations are available on request.

Flanged gear motor suitable for motor attachment kit 90*

Technical Data

- Nominal voltage 230 / 400 V
- 50 Hz
- Degree of protection IP 54
- Weight approx. 7 - 13 kg

Optionally available with holding brake, thermocouple or external fan, also with different position of the terminal box and cable inlet (data sheets on request)



Type	Part no.	Power [W]	Output speed	Output torque	Motor 90 attachment kit Conveyor speed	Center drive 3R Belt speed
DSGM 180 - 15 / F	33.0080/1	180	15 U/min	47 Nm	4,4 m/min	3,8 m/min
DSGM 250 - 29 / F	33.0081/1	250	29 U/min	42 Nm	8,7 m/min	7,3 m/min
DSGM 370 - 36 / F	33.0082/1	370	36 U/min	62 Nm	10,7 m/min	9,0 m/min
DSGM 370 - 51 / F	33.0083/1	370	51 U/min	48 Nm	15,2 m/min	12,8 m/min
DSGM 370 - 73 / F	33.0084/1	370	73 U/min	38 Nm	21,8 m/min	18,3 m/min
DSGM 550 - 115 / F	33.0085/1	550	115 U/min	35 Nm	34,3 m/min	28,9 m/min

Frequency converter FU 370 PP



ART.-NR. 33.0126/0

Technical Data

- Built-in on / off switch
- Mode 1Q (without brake chopper)
- Mains overvoltage and undervoltage monitoring
- Motor load monitoring
- Short-circuit monitoring phase / phase, phase / earth
- Adjustable acceleration and deceleration ramp
- Adjustable voltage boost at low output frequency
- Power cord with earthing contact plug 230 V and motor cable, ELPUR, 5 m long with earthing contact plug, colour orange
- EMC filter class B
- IP 66/ NEMA-4X housing
- Equipped as standard with an operator panel that allows operation and setup of the drives without the need for additional equipment
- Output power motor side max. motor power 0.37 kW
- Output rated current max. 2.3 A
- Output voltage 3 x 20 - 250 V
- Overload 150% for 60 seconds
- Input voltage mains side rated voltage 230V
- Input current 6,7 A
- Mains frequency 50 - 60 Hz
- Ambient temperature -20°C to + 40°C
- Heat loss at rated power 11 W
- Dimensions H / W / D: 232 x 161 x 179 mm

Magnetic measuring system

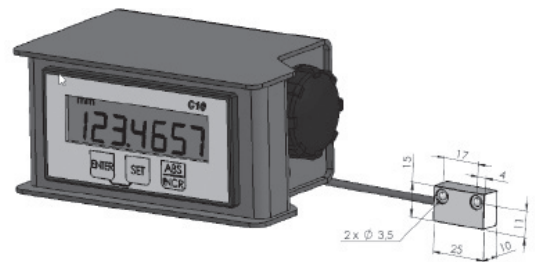
Magnetic measuring system ML

Length or distance measurement is one of the standard tasks in mechanical engineering and construction. A modern and reasonably priced solution is the ML magnetic length measuring system with magnetic tape, magnetic sensor and measuring display. The advantages of this system are mainly in the direct measuring method, the freedom from wear, the simple and cost-effective installation and high accuracy.

At the heart of this measuring system is the magnetic tape, a flexible plastic tape filled with magnetic particles. This is glued to the profile surface and protected with a stainless steel strip, also glued. A magnetic sensor is guided along this tape, at a small distance above it, but non-contact, and scans the magnetic field. Movement direction and increments are then derived from these scanning signals and further processed in a controller or displayed by means of a measuring display.

LCD meter with battery operation incl. magnetic sensor (Part no. 33.0038 / 0)

- Surface mounted housing, aluminium powder-coated RAL 5010, dimensions W = 125 mm, H = 65 mm, depth = 85 mm
- 6-digit LCD display, with 14mm digit height
- Power supply battery C (baby 1.5V)
- Battery compartment on the right side
- With attached magnetic sensor (cable length 0.5m)
- For mounting on stop slides via brackets
- Operating temperature -5°C to +45° C
- Travel speed max. 3m/sec, counting frequency up to 1MHz
- Actual value memory / offset value, selectable
- Absolute - incremental switchover
- Measuring tolerance ± 0.1 mm/m



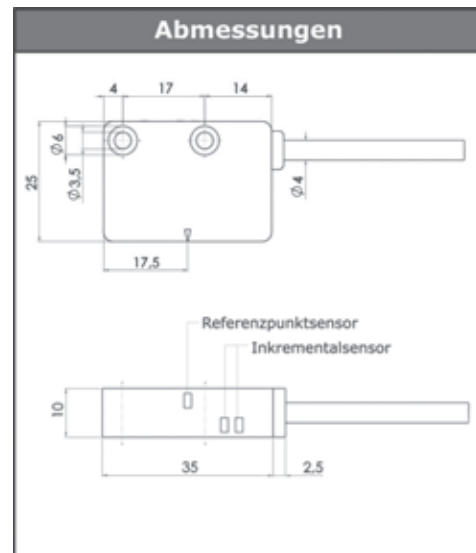
Measurement display for 230V connection Part no. 33.0036/0

- 6-digit LED display, with 14 mm digit height
- Surface mounted housing, aluminium powder-coated RAL 5010, dimensions W = 115 mm, H = 70 mm, depth = 120 mm
- Power supply 230V AC pluggable.
- Sensor connection via SuB-D 9-pin. pluggable, TTL 5VDC
- Operating temperature -5° C to +45° C
- Traversing speed max. 3m/sec, counting frequency up to 1MHz
- Actual value memory / offset value, selectable
- Magnetic sensor Part no. 33.0037/0 please order separately, specifying the required cable length



Magnetic sensor with integrated evaluation unit Part no. 33.0037/0

- Non-contact measuring scanning unit with integrated digital evaluation electronics.
- Detection of the magnetic signals, with index pulse, resolution 10µm
- In conjunction with the above displayed measuring display
- suitable for MiniTec profiles, connection cable integrated (2 m) and D-Sub connector (longer cable lengths on request up to 20 m).



Magnetic Tape Part no. 33.0028 / 0

Technical Data / Includes

- Magnetic tape for sticking onto MiniTec profiles incl. stainless steel masking tape
- Length max. 80 m, width 10 mm (option: tape width 5 mm for gluing into the profile groove)

Application

- For all MiniTec linear guides with rails made of system profiles
- Length measuring stops
- Material feeds

Assembly

- Stick magnetic tape onto profile surface, glue masking tape on the magnetic tape.
- Attach sensor to carriage
- Distance from the magnetic tape: 1.1 ± 0.9 mm

Note: Please specify required magnetic tape length (round up to full meter)



Pneumatic system

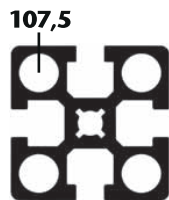
Visually attractive and economical solutions are possible with simultaneous use of the construction profiles as an air duct. The MiniTec standard profiles are particularly well suited for compressed air routing. Commercially available connections can be used without special connection components.

All MiniTec standard profiles can be used as a single or multi-chamber system. Connections are possible at any point. Maximum pressure for round chambers (\varnothing 11.7) 20 bar, otherwise max. 8 bar.

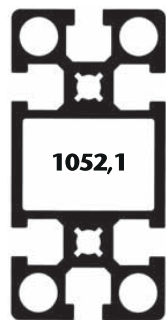
All standard profiles with round corner holes can be used as compressed air lines. Bore \varnothing 11.7 can be enlarged to G 1/4 to accommodate pneumatic connections or screw plugs. Air extraction at any point.

Usable cavities for compressed air ducts

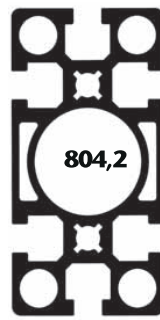
All area information in mm²



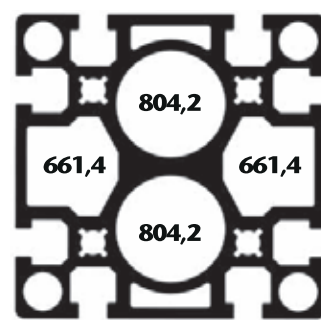
45 x 45
20.1006/0



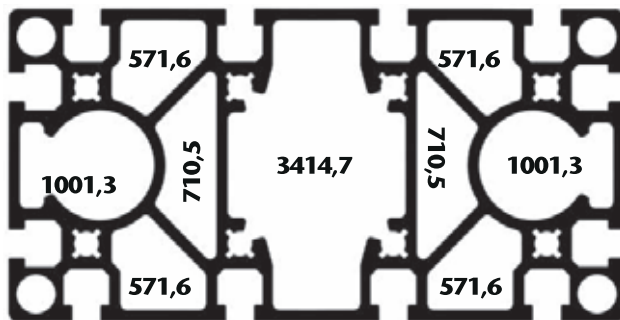
45 x 90
20.1009/0



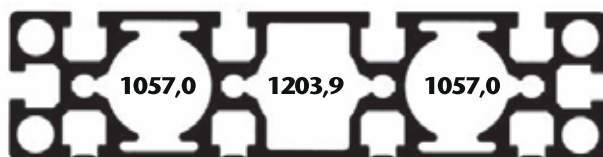
45 x 90 S
20.1017/0



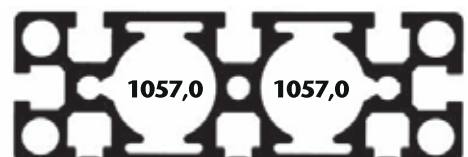
90 x 90 S
20.1019/0



90 x 180 S
20.1013/0

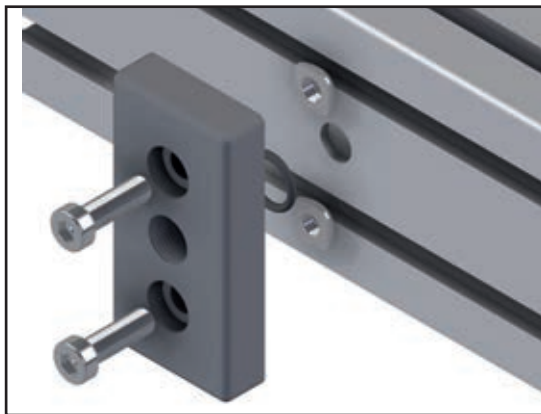


45 x 180 1G
20.1079/0



45 x 135 1G
20.1078/0

PNEUMATIC-PLATE 45, 45 x 90 and 90



Thread	Weight	Part no.
G 1/8"	0,170 kg	24.1107/0
G 1/4"	0,168 kg	24.1107/2
G 3/8"	0,165 kg	24.1107/3

Pneumatic plate 45

Technical Data/Items Supplied

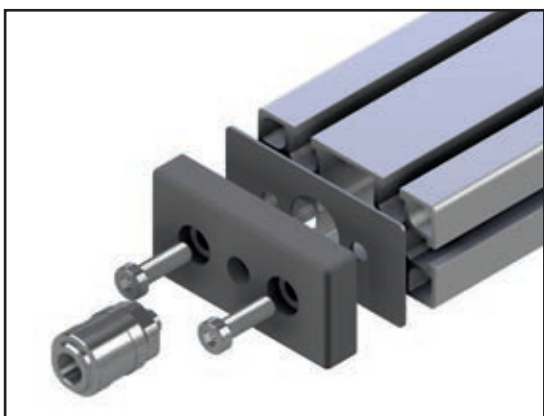
- Die-cast aluminum, powder-coated grey
- 1x O-Ring
- With fastening material

Application

- Side connection for compressed air supply or removal on profiles 45 x 90 and 90 x 90

Assembly

- Mount with fastening material of items supplied
- Insert bore \varnothing 12 mm in the center of the profile



Thread	Weight	Part no.
G 1/8"	0,181 kg	24.1105/0
G 1/4"	0,178 kg	24.1105/2
G 3/8"	0,174 kg	24.1105/3

Pneumatic-plate 45 X 90

Technical Data/Items Supplied

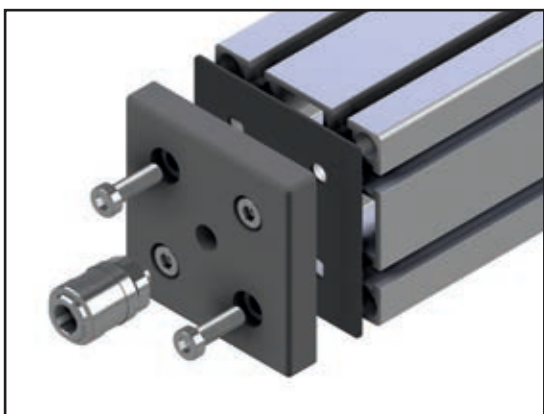
- Die-cast aluminum, powder-coated grey
- With sealing plate made of NBR
- With fastening material

Application

- Closure of the hollow chamber ends of profiles 45 x 90 for connection of pneumatic connections

Assembly

- Apply sealing plate
- With fastening material from items supplied screw on 2 central holes \varnothing 7.5 mm (tightening torque 12 Nm)



Thread	Weight	Part no.
G 1/8"	0,434 kg	24.1106/0
G 1/4"	0,429 kg	24.1106/2
G 3/8"	0,421 kg	24.1106/3

Pneumatic plate 90

Technical Data/Items Supplied

- Die-cast aluminum, powder-coated grey
- With sealing plate made of NBR
- With fastening material

Application

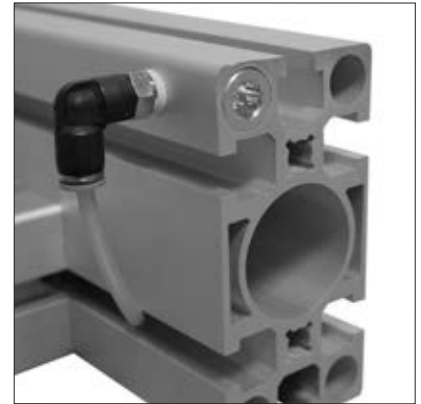
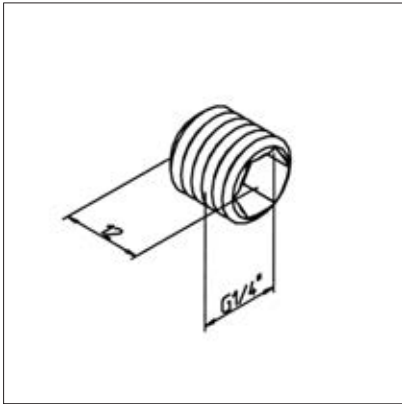
- Closure of the hollow chamber ends of profiles 90 x 90 for connection of pneumatic connections

Mounting

- Apply sealing plate
- With fastening material from scope of supply screw on 4 central holes \varnothing 7.5 mm (tightening torque 12 Nm)

Screw plug G1/4"

Part No. 24.1104/0



TECHN. DATA / ITEMS SUPPLIED

- Brass
- Weight = 0.005 kg/piece

APPLICATIONS

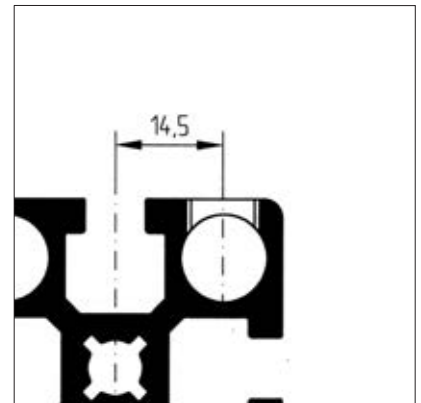
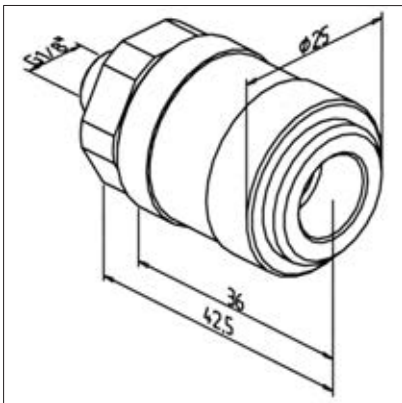
- Closure for profile chambers \varnothing 11,7 mm

ASSEMBLY

- Cut Thread G 1/4" in central hole d 11.7.
- Screw in the plug by using sealing tape

Quick connector 1/8"

Part No. 24.1109/0



TECHN. DATA / ITEMS SUPPLIED

- Brass, nickel-plated
- NW 7 mm
- Connecting thread G 1/8", SW 22
- Weight = 0.087 kg/piece

APPLICATIONS

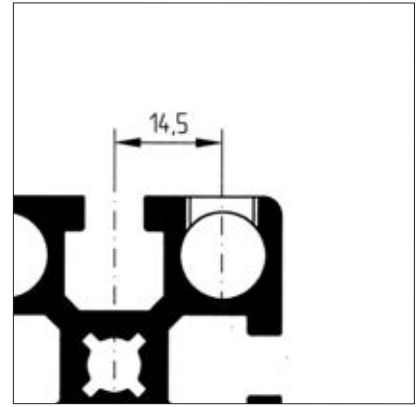
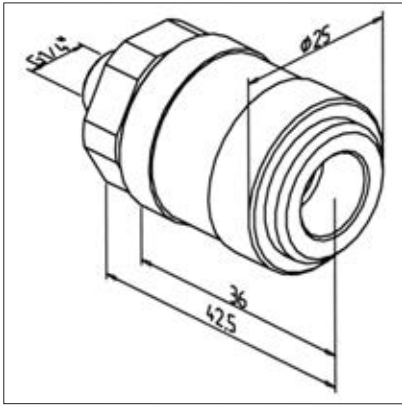
- To connect directly to the profile panel or frontally at the bore \varnothing 11.7 mm

ASSEMBLY

- Thread G 1/8 in profile face, distance thread centre from centre of profile groove: 14.5 mm

Quick connector 1/4"

Part No. 24.1110/0



TECHN. DATA / ITEMS SUPPLIED

- Brass, nickel-plated
- NW 7 mm
- Connecting thread G 1/4", SW 22
- Weight = 0.087 kg/piece

APPLICATIONS

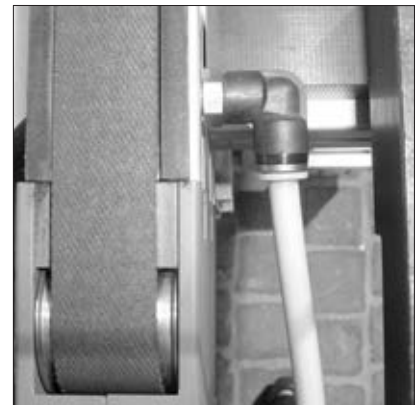
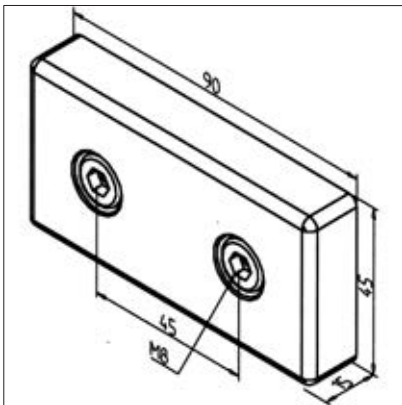
- To connect directly to the profile panel or frontally at the bore Ø 11.7 mm

ASSEMBLY

- Thread G 1/4 in profile face, distance thread centre from centre of profile groove: 14.5 mm

Pneumatic end plate 45 x 90

Part No. 24.1105/7



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With sealing plate of NBR, black
- Fastening kit
- Weight = 0.180 kg/piece

APPLICATIONS

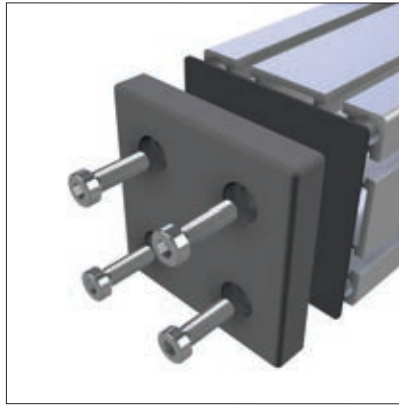
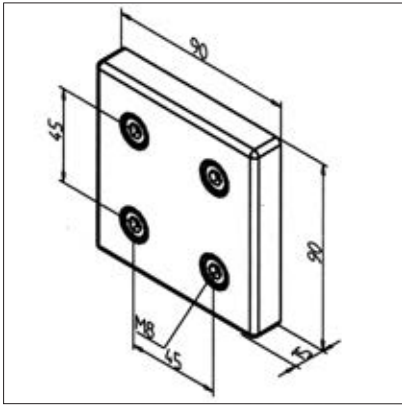
- Closing of chamber ends of profiles 45 x 90

ASSEMBLY

- Insert sealing plate
- Screw in with fastening material from items supplied

Pneumatic end plate 90 x 90

Part No. 24.1106/7



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With sealing plate of NBR, black
- Fastening kit
- Weight = 0.430 kg/piece

APPLICATIONS

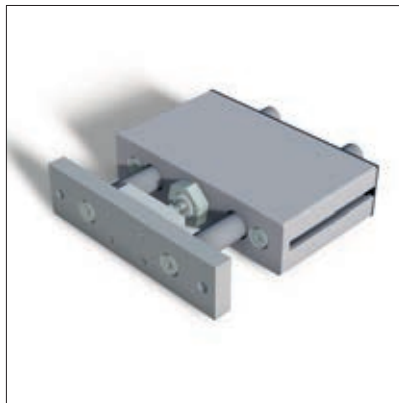
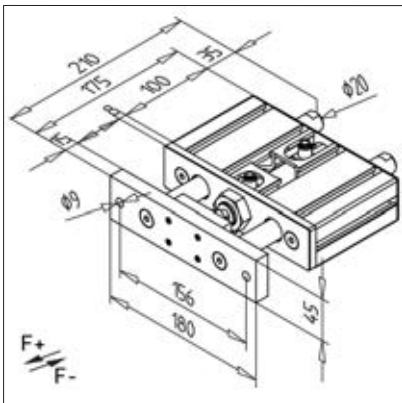
- Closing of chambers of profiles 90 x 90 for connection of pneumatic couplings

ASSEMBLY

- Insert sealing plate
- Screw in with fastening material from items supplied.

Pneumatic lifting unit 15

Part No. 24.1201/0



TECHN. DATA / ITEMS SUPPLIED

- Incorporated into profile 45 x 180
- Overall cylinder size \varnothing 25 mm
- Guide shafts \varnothing 20 mm
- Fully assembled with double acting pneumatic cylinder
- F+ at 6 bar = 256 N
- F- at 6 bar = 220 N
- Stroke = 15 mm
- Weight = 3.405 kg/piece

APPLICATIONS

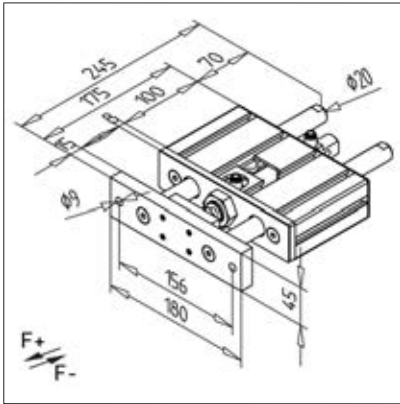
- Lifting and lowering of loads
- Attachment for grips or similar
- Positioning of parts

ASSEMBLY

- With mounting angle bracket on profile construction
- Other stroke lengths on request

Pneumatic lifting unit 50

Part No. 24.1205/0



TECHN. DATA / ITEMS SUPPLIED

- Incorporated into profile 45 x 180
- Overall cylinder size \varnothing 25 mm
- Guide shafts \varnothing 20 mm
- Fully assembled with double acting pneumatic cylinder
- F+ at 6 bar = 265 N
- F- at 6 bar = 220 N
- Stroke = 50 mm
- Weight = 3.452 kg/piece

APPLICATIONS

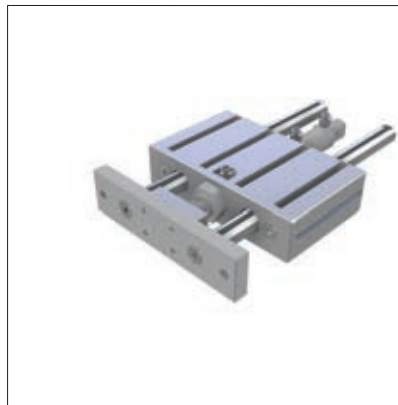
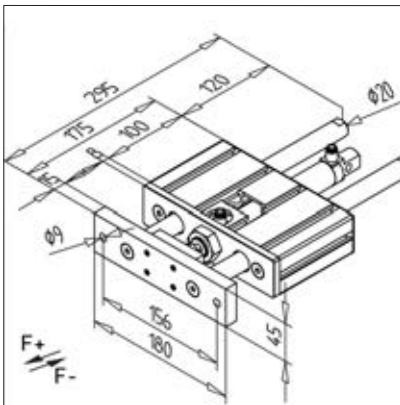
- Lifting and lowering of loads
- Attachment for grips or similar
- Positioning of parts

ASSEMBLY

- With mounting angle bracket on profile construction
- Other stroke lengths on request

Pneumatic lifting unit 100

Part No. 24.1210/0



TECHN. DATA / ITEMS SUPPLIED

- Incorporated into profile 45 x 180
- Overall cylinder size \varnothing 25 mm
- Guide shafts \varnothing 20 mm
- Fully assembled with double acting pneumatic cylinder
- F+ at 6 bar = 265 N
- F- at 6 bar = 220 N
- Stroke = 100 mm
- Weight = 3.507 kg/piece

APPLICATIONS

- Lifting and lowering of loads
- Attachment for grips or similar
- Positioning of parts

ASSEMBLY

- With mounting angle bracket on profile construction
- Other stroke lengths on request

Hydraulics

Items supplied

- Hydraulic pump for 1 to 6 cylinders
- Alternatively with hand crank or electric drive
- Add-on or built-in cylinders with 150 - 500 mm stroke length
- 5 mm stroke per crank revolution or 15mm/sec with electrical drive
- Hydraulic hoses PA 4 mm
- Cylinders are single-action
- Minimum load for retraction approx. 7 kg per cylinder
- Temperature range from -20°C to + 45°C

Application

- Lifting, lowering, tilting tables, worktops, desks, workbenches, fixtures, etc.

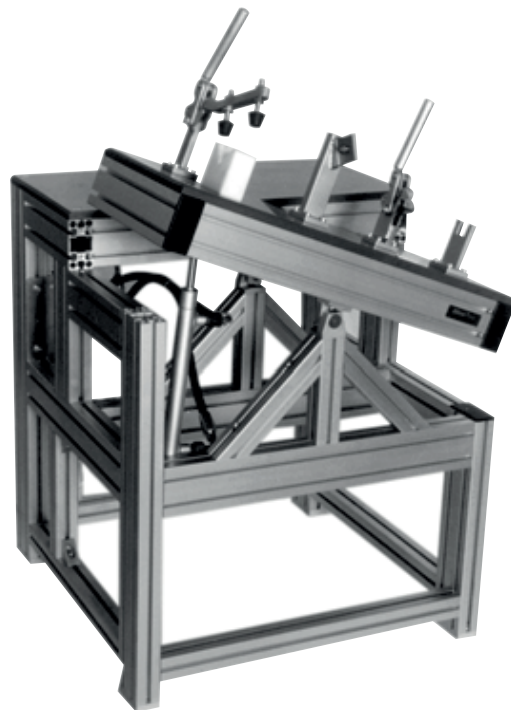
Assembly

- Use M6 screws to tightly screw the pump in a suitable place in the profile groove
- Install built-in cylinder in aluminium profile "S"
- Mount the add-on cylinder on the profile groove using the adapter plate

Available special versions and equipment

- Fasteners for pumps according to customer requirements
- Mounting parts for mounting cylinder according to customer requirements
- Fastening kit 45 for installation cylinder
part no. 27.0005/0 for all profiles with hollow chamber \varnothing 32 except for profile 90 x 90 S and 90 x 180 s.
 For these, please use the fixing kit 90
part no. 27.0006/0
- Service kit with oil, fittings, special wrench, tube cutter and filling syringe

When working on the hydraulics, great care should be taken. In order to prevent air bubbles from forming in the system, we recommend having this work carried out by us.



Complete system with add-on cylinder LA / Built-in cylinder LB

Complete system with add-on cylinder LA - manual



PUMP	PA	PA	PB	PB	PB	PB
System load	150 kg	300 kg	350 kg			
Number of cylinders	1	2	3	4	5	6
LA 150 man.	27.0118/1	27.0118/2	27.0118/3	27.0118/4	27.0118/5	27.0118/6
LA 200 man.	27.0122/1	27.0122/2	27.0122/3	27.0122/4	27.0122/5	27.0122/6
LA 300 man.	27.0126/1	27.0126/2	27.0126/3	27.0126/4	27.0126/5	27.0126/6
LA 400 man.	27.0130/1	27.0130/2	27.0130/3	27.0130/4	27.0130/5	27.0130/6
LA 500 man.	27.0134/1	27.0134/2	27.0134/3	27.0134/4	27.0134/5	27.0134/6

Complete system with add-on cylinder LA - electric

LA 150 elektr.	27.0119/1	27.0119/2	27.0119/3	27.0119/4	27.0119/5	27.0119/6
LA 200 elektr.	27.0123/1	27.0123/2	27.0123/3	27.0123/4	27.0123/5	27.0123/6
LA 300 elektr.	27.0127/1	27.0127/2	27.0127/3	27.0127/4	27.0127/5	27.0127/6
LA 400 elektr.	27.0131/1	27.0131/2	27.0131/3	27.0131/4	27.0131/5	27.0131/6
LA 500 elektr.	27.0135/1	27.0135/2	27.0135/3	27.0135/4	27.0135/5	27.0135/6



Complete system with built-in cylinder LB - manual

PUMP	PA	PA	PB	PB	PB	PB
System load	150 kg	300 kg	350 kg			
Number of cylinders	1	2	3	4	5	6
LB 150 man.	27.0120/1	27.0120/2	27.0120/3	27.0120/4	27.0120/5	27.0120/6
LB 200 man.	27.0124/1	27.0124/2	27.0124/3	27.0124/4	27.0124/5	27.0124/6
LB 300 man.	27.0128/1	27.0128/2	27.0128/3	27.0128/4	27.0128/5	27.0128/6
LB 400 man.	27.0132/1	27.0132/2	27.0132/3	27.0132/4	27.0132/5	27.0132/6
LB 500 man.	27.0136/1	27.0136/2	27.0136/3	27.0136/4	27.0136/5	27.0136/6

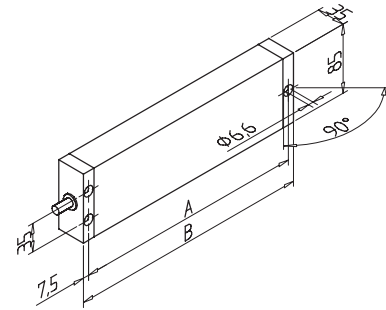
Complete system with built-in cylinder LB - electric

LB 150 elektr.	27.0121/1	27.0121/2	27.0121/3	27.0121/4	27.0121/5	27.0121/6
LB 200 elektr.	27.0125/1	27.0125/2	27.0125/3	27.0125/4	27.0125/5	27.0125/6
LB 300 elektr.	27.0129/1	27.0129/2	27.0129/3	27.0129/4	27.0129/5	27.0129/6
LB 400 elektr.	27.0133/1	27.0133/2	27.0133/3	27.0133/4	27.0133/5	27.0133/6
LB 500 elektr.	27.0137/1	27.0137/2	27.0137/3	27.0137/4	27.0137/5	27.0137/6

Hydraulics

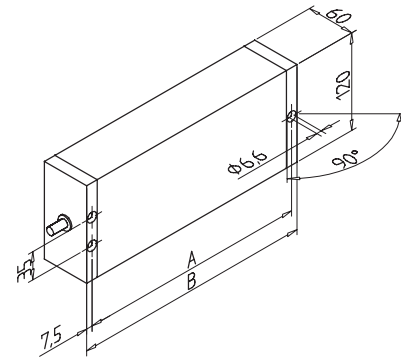
Hydraulic pumps PA for 1-2 cylinders

TYPE	Stroke H mm	Dimension A mm	Dimension B mm
PA 150	150	283,5	298,5
PA 200	200	343,5	358,5
PA 300	300	465,5	480,5
PA 400	400	585,5	600,5
PA 500	500	707,5	722,5



Hydraulic pumps PB for 3-6 cylinders

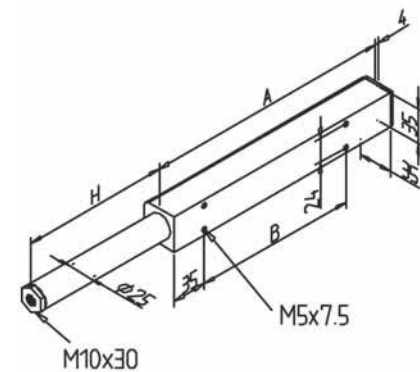
TYPE	Stroke H mm	Dimension A mm	Dimension B mm
PB 150	150	283,5	298,5
PB 200	200	343,5	358,5
PB 300	300	465,5	480,5
PB 400	400	585,5	600,5
PB 500	500	707,5	722,5



Add-on cylinder LA

TYPE	Stroke H mm	Length A mm	Length B mm	lateral load kg max.
LA 150	150	252	165	130
LA 200	200	317	240	97
LA 300	300	442	340	65
LA 400	400	542	340	48
LA 500	500	667	450	29

For attachment to a wide variety of constructions using adapter plates.

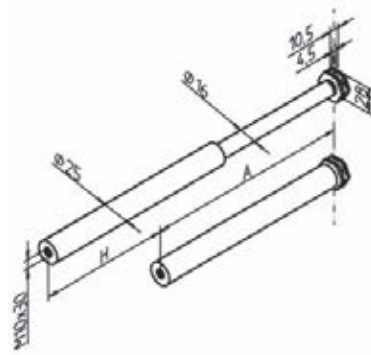


Hydraulics

Built-in cylinder LB, fastening kit 45 for built-in cylinder, fastening kit 90 for built-in cylinder

Add-on cylinder LB

TYPE	Stroke H mm	Length A mm	lateral load kg max.
LB 150	150	235	130
LB 200	200	300	97
LB 300	300	425	65
LB 400	400	525	48
LB 500	500	650	29

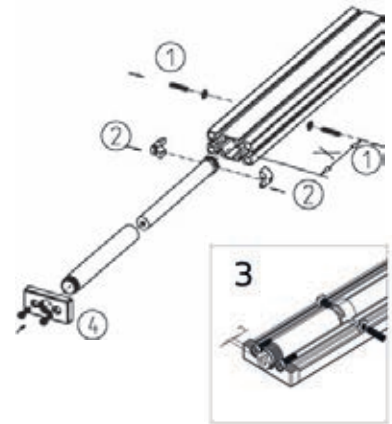


Fastening kit 45 for installation cylinder (Part No. 27.0005/0)

Suitable for all stroke lengths as well as for profile 45x90S, 45x135G and 45x180G

Assembly

1. Drill profile according to measurement table (dimension X) \varnothing 8,5 mm
2. Place 2 retainers on cylinder and push into profile chamber \varnothing 32 mm
3. Insert the centring hole into the retainers (through hole distance X), then fix with setscrew
4. Screw guide tube into base plate, push into profile and fasten

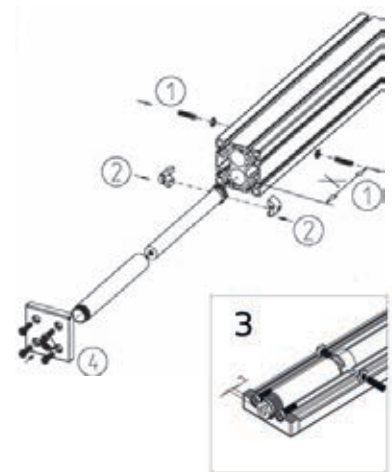


Fastening kit 90 for installation cylinder (Part No. 27.0006/0)

Suitable for all stroke lengths as well as for profile 90x90s, 90x180

Assembly

1. Drill profile according to measurement table (dimension X) \varnothing 8,5 mm
2. Place 2 holders on cylinder and insert in profile chamber \varnothing 32
3. Insert the centering hole into the mounting pieces (through hole distance X), then fix with threaded pin
4. Screw guide tube into connection plate, insert in profile and fasten



Measurements for fastening kit 45 and 90

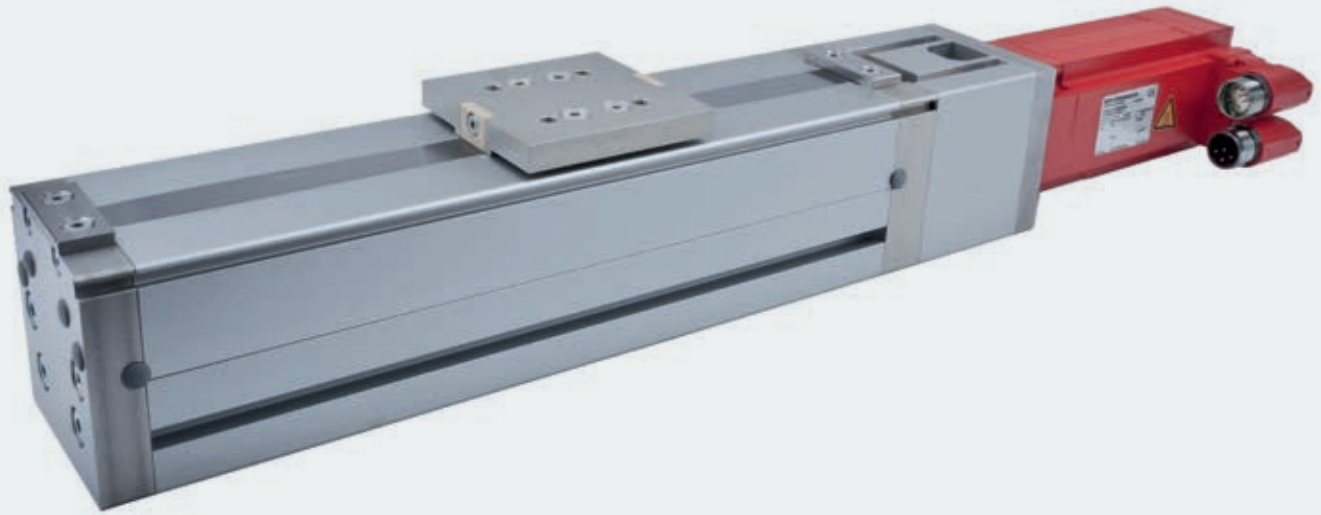
Cylinder	LB 150	LB 200	LB 300	LB 400	LB 500
Dimension X (mm)	224	289	414	514	639



LINEAR SYSTEM

2.1	Linear module LMS 90	270
2.2	Linear module LMZ 90	275
2.3	Linear system LR	277
2.4	Linear system LB	332
2.5	Adjusting units	346
2.6	Mini adjusting units	351
2.7	Sliding guides	356

Linear module LMS 90



Precision and strength combined as small as possible

The linear module LMS 90 was designed for high precision and loading capacity requirements with minimum installation space. It is designed for a traversing distance up to 2845 mm. The guide, with the standard grid dimension 90 x 90

mm of our modular system, is based on highly accurate rail guides which are integrated in a profile system. They are designed for a life of up to 10,000 km.

Specifications

- Compact support profile 90x90 with standard profile grooves, compatible with all MiniTec construction profiles
- Fully enclosed module, guide groove covered with stainless steel tape
- Guides and spindle easily accessible through removable cover profiles
- Special grooves for external mounting of position detection sensors
- Easy installation of external switches on lateral profile grooves
- Carriage made of aluminum, precision-machined on all sides, prepared for attachments with 4 or 6 connecting threads M8 at intervals of 45 mm
- Travel up to 2845 mm
- 2 bearing units with precision ball bearings, lubricated for life, with tenon \varnothing 10 mm
- Optional version with keyway or adapter plate machined according to engine specification

Guidance options

- Heavy-duty rail guides with permanent lubrication, versions S1 and S2
- Plastic sliding guides for very economical applications (version G)

Spindle options

- Ball screw tolerance class T7, right-handed, axial clearance max. 0.04 mm, repeatability 52 μ m / 300 mm
- Trapezoidal thread spindle 16x4, optional right-handed preloaded with increased accuracy

The spindle nuts in all units are designed for relubrication.

Technical data

Model series	Spindle	Execution	Number Linear slide	Part no.	max. Traversing	Car length WL	max. Stroke
LMS 90	T 16x4	G	4	28.1001/0	0,03 m/s	135 mm	1800 mm
LMS 90	K 16x5	S1	2	28.1000/0	0,25 m/s	90 mm	2845 mm
LMS 90	K 16x10	S1	2	28.1000/1	0,5 m/s	90 mm	2845 mm
LMS 90	K 16x16	S1	2	28.1000/2	0,8 m/s	90 mm	2845 mm
LMS 90	K 16x5	S2	4	28.1002/0	0,25 m/s	135 mm	2800 mm
LMS 90	K 16x10	S2	4	28.1002/1	0,5 m/s	135 mm	2800 mm
LMS 90	K 16x16	S2	4	28.1002/2	0,8 m/s	135 mm	2800 mm

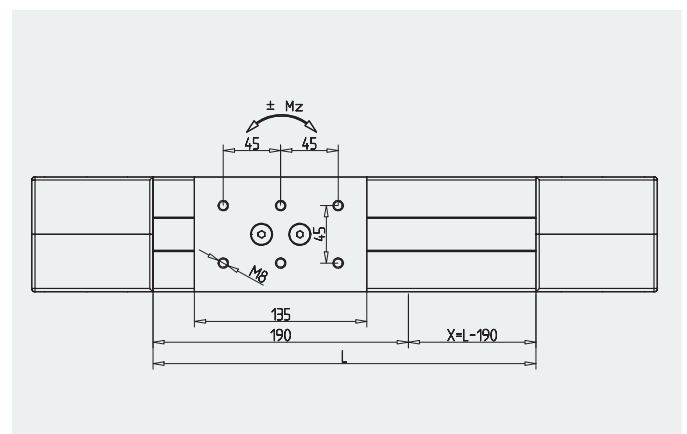
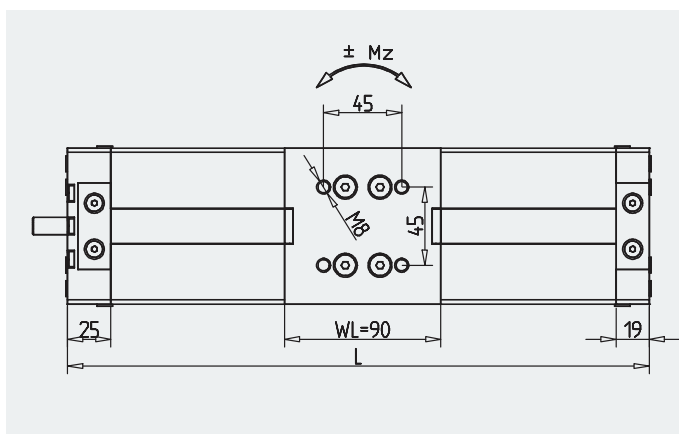
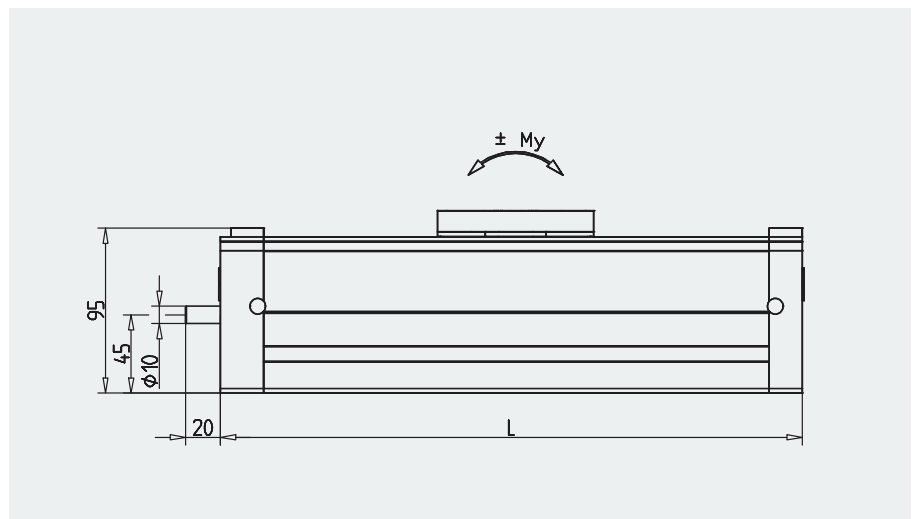
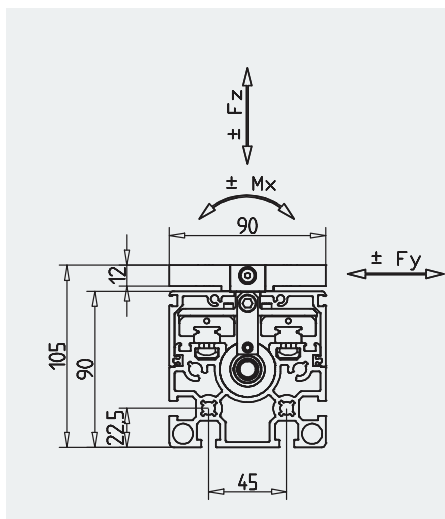
Execution	Load rating N		Permissible stat. tilting moments (Nm)		
	Cdyn	Cstat	Mx	My	Mz
S1	7620	11180	54	54	54
S2	15240	22360	108	108	108
G	2800	2800	22	22	22

Spindle

- Acme screw T
- Ballscrew K

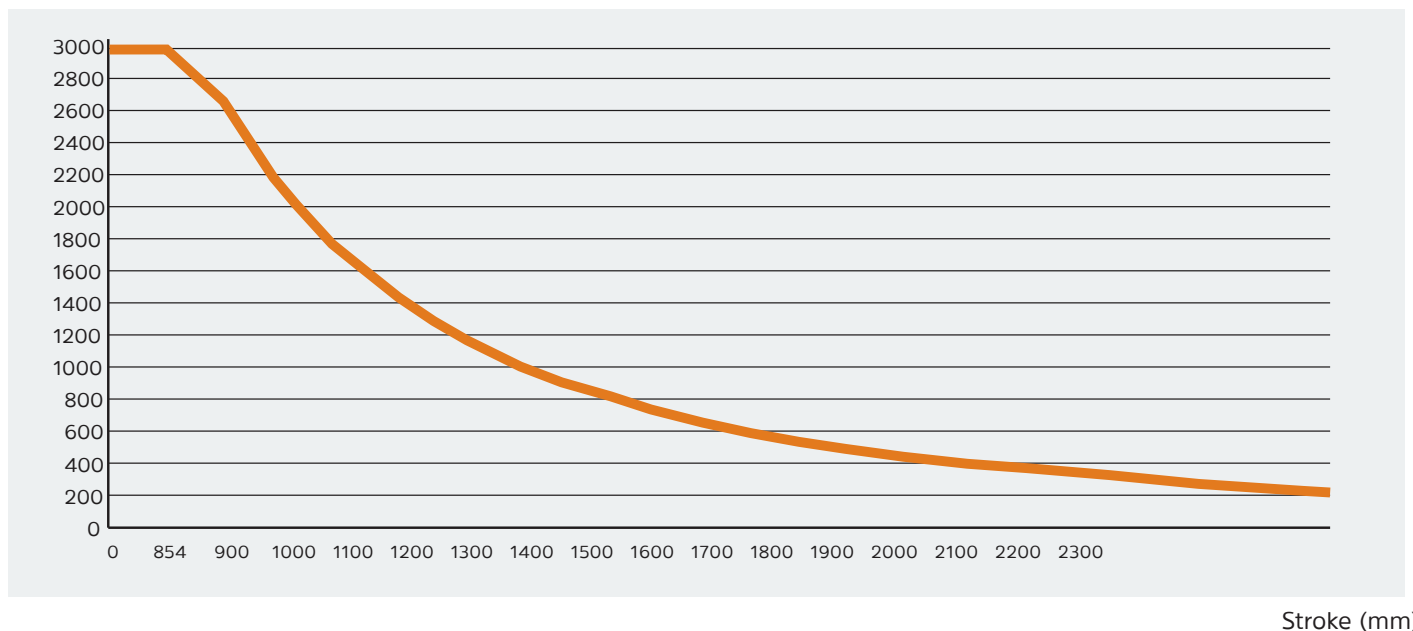
Guidance

- 2 sliding guides each with 2 linear slides Gr. 15 G
- 2 rail guides each with 1 linear slide Gr. 15 (S1)
- 2 rail guides with 2 linear slides Gr. 15 (S2)



Maximum speed depending on stroke

Speed (rpm.)



On request, the unit can also be equipped with an internal spindle support. As a result, the speed can be increased considerably with a corresponding stroke.

- The following can be used as a guide value:
- Single spindle support Part no. 28.1050/0:
 $n_{\max} \times 2$
- When using the single spindle support, the stroke is shortened by 25 mm
- Twin spindle support Part no. 28.1051/0:
 $n_{\max} \times 3$
- When using the twin spindle supports, the stroke is shortened by 60 mm.

Calculation of the maximum speed (n_{max}):

$$n_{\max} = \frac{1,963 \times 10^9}{(H-45)^2}$$

ORDERING

Please enter the article number plus the desired stroke length H or the total length L. (xx.xxxx / x + stroke length or total length)

- Overall length (L) = stroke length (H) + carriage length (WL) + 50 mm
- Stroke (H)
- Car length (WL)

Motor kits & Drive packages

ENGINE KITS FOR LMS 90

Motor mounting kit LMS 90 DRM

(MiniTec Part No: 28.1040/0)

Motor mounting kit LMS for three-phase motor (for drive package with three-phase asynchronous motor, MiniTec Part no. 33.1010/0 or 33.1020/0), without motor.

Items supplied

- Coupling housing made of profile incl. adapter plate
- Coupling
- Screws and accessories



Motor mounting kit LMS 90 SERVO

(MiniTec Part no: 28.1041/0)

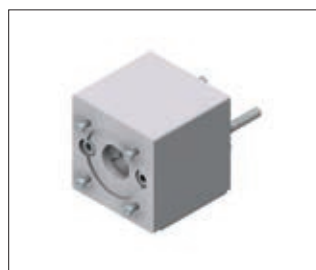
Motor mounting kit LMS for servomotors (for drive package with synchronous servomotor, MiniTec Part no. 33.1030/0), without motor.

Items supplied

- Coupling housing made of profile incl. adapter plate
- Coupling
- Screws and accessories

Options

- Adapted adapter plates and couplings for special motors



DRIVE PACKAGES FOR LMS 90

Drive package LMS 90 DRM-POSI

(MiniTec Part No: 33.1020/0)

Three-phase asynchronous motor with encoder feedback with drive inverter for table positioning

Items supplied

- Three-phase asynchronous motor 0.18kW; 1320 rpm at 50Hz, version with pulse generator and temperature sensor
- Motor cable, length 5m
- Encoder cable, length 5m
- Drive inverter MDX61B for table positioning via IO for customer installation in the control cabinet
- 2 inductive proximity switches for T-slot for axial end position (NC)
- 1 proximity switch for T-slot for axial end position (NO) including motor mounting kit LMS 90 DRM (Part No.: 28.1040/0)

Drive package LMS 90 DRM-ECO

(MiniTec Part no.: 33.1010/0)

Three-phase asynchronous motor without encoder feedback with frequency converter for easy positioning via switch

Items Supplied

- Three-phase asynchronous motor 0.18kW; 1320 rpm at 50Hz, version with temperature sensor
- Motor cable, length 5m
- Drive inverter MC07B, control via IO for customer installation in the control cabinet
- 2 inductive proximity switches for T-slot for axial end position (NC)
- 1 inductive proximity switch for T-slot for axial end position (NO)
- including motor mounting kit LMS 90 DRM (Part no.: 28.1040/0)

Drive package LMS 90 SERVO

(MiniTec Part no: 33.1030/0)

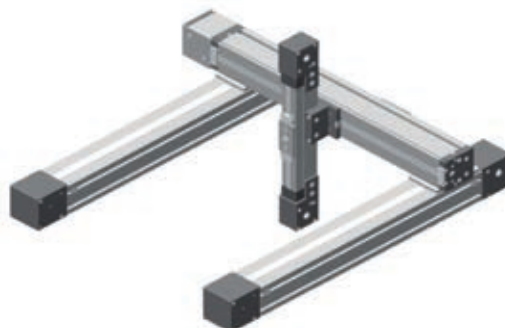
Synchronous servo motor with drive inverter for dynamic applications for table positioning.

Items supplied

- Synchronous servo motor with 2.4 Nm nominal torque, 3000 rpm, version with resolver and temperature sensor
- Motor cable, length 5 m
- Encoder cable, length 5m
- Drive inverter MDX61B for table positioning via IO for customer installation in the control cabinet
- 2 inductive proximity switches for T-slot for axial end position (NC)
- 1 inductive proximity switch for T-slot for axial end position (NO)
- Including motor mounting kit LMS 90 Servo (Part No: 28.1041/0)

Options

- Motor with holding brake
- Motor version with absolute encoder
- PROFIBus / PPOFIsafe / PROFINET / Ethercat Interface cards for the drive inverter°
- Additional sensors, e.g additional creep / stop positions

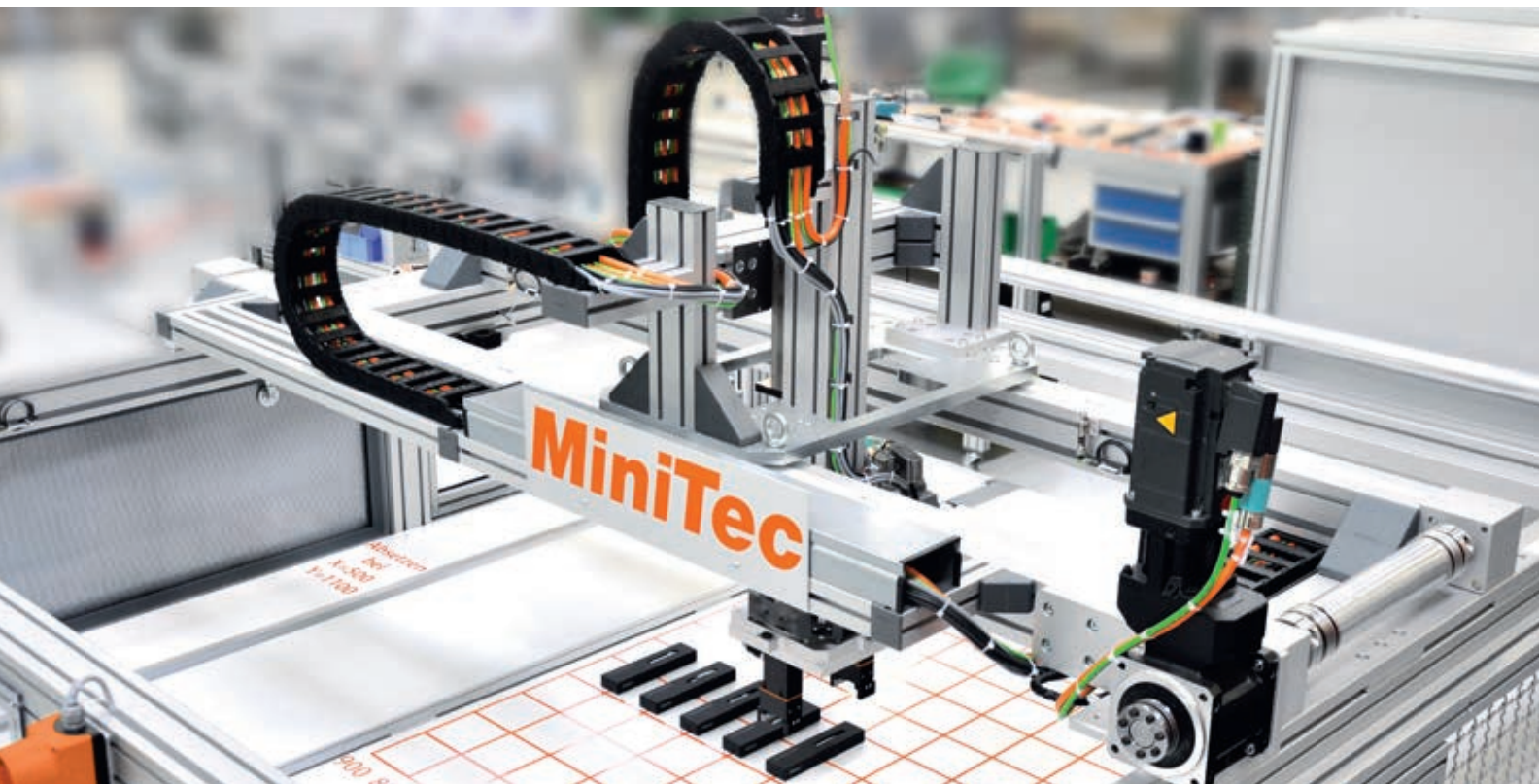


Ready to connect positioning systems

The new high-performance module LMS 90 is also available as a ready-to-install system with drive package and control unit. mA suitable complete package is available for every task - from the particularly economical ECO version to the highly dynamic servo drive. We also carry out the commissi-

oning and application programming for you on request. Thanks to the standardized profile geometry, the LMS axes can be variably combined with each other or with all other MiniTec linear modules to form multi-axis systems.

Linear module LMZ 90 with timing belt drive



Part no. 28.0400/0

The new dimension of dynamics

- Compact support profile, with standard profile grooves, compatible with MiniTec construction profiles
- Integrated rail guide size 20
- With 2 runner blocks, covered by the timing belt
- Permanent lubrication with front lubrication units for up to 10,000 km service life
- Slides made of aluminium, machined on all sides, with integrated timing belt tensioners, prepared for attachments with 6 connection threads M8
- 2 deflection units with precision ball bearings
- Mounted on support profile with MiniTec Power-lock fasteners
- Prepared for motor attachment with connection shaft \varnothing 17 mm with feather key
- Adapter plate is machined according to the required motor specification
- Other diameters for drive shafts on request
- Feed: 200 mm / revolution
- Max. allowable belt tensile force: 3,500 N
- Timing belt 25 AT 10, reinforced steel wire, pre-tensioned
- Assembled
- Max. travel X = 5,810 mm
- Attachment of switches on side profile grooves with standard components from the MiniTec profile system
Traversing speed: max. 3 m/s
- Basic weight: 5,200 g
- Weight per 100 mm travel: approx. 800 g

Delivery forms

- Fully assembled module with connection machining for the required drive;
- Fully assembled module with gearbox and motor to customer specification
- Fully assembled module with gearbox, motor and control to customer specification

Applications

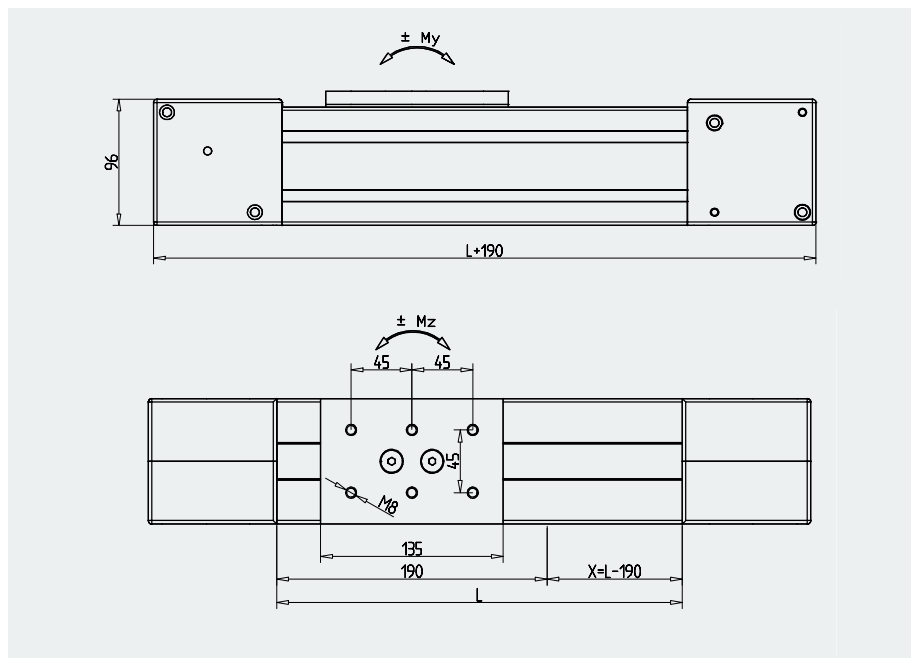
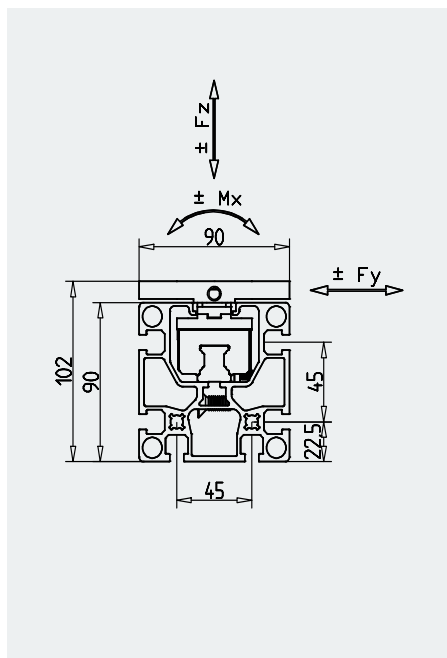
- Pick-and-Place
- Gantry robot
- Measuring equipment
- Feeds
- Handling facilities

Load rating N		Allowable static tilting moments Nm		
Cdyn	Cstat	Mx	My	Mz
18800	24400	128	240	128

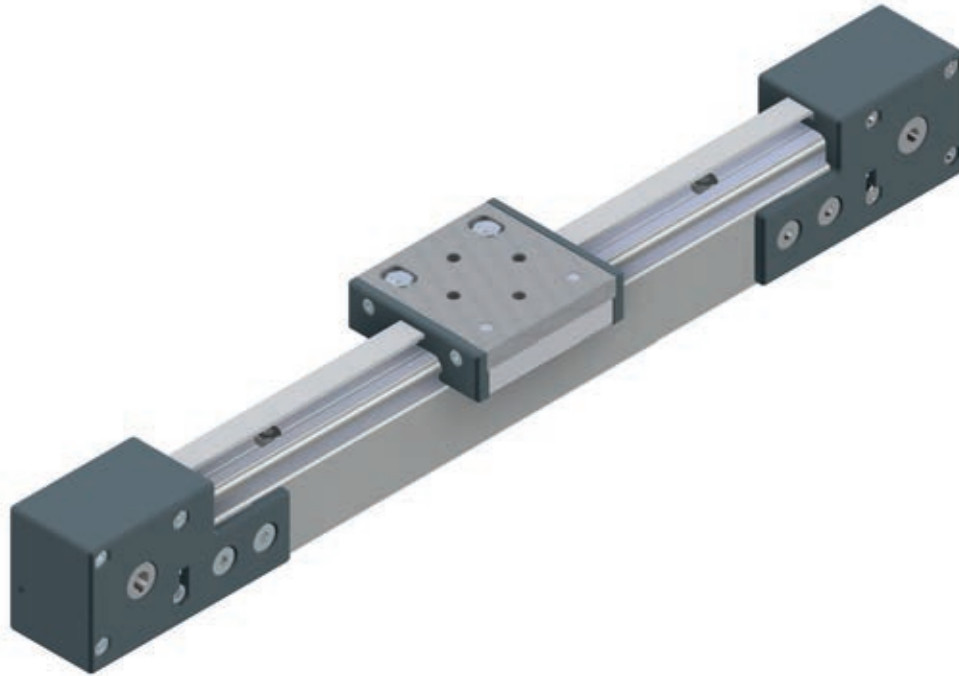
Operating conditions

For self-supporting installation, the maximum permissible deflection from approx 3.5 mm to 4000 mm must be observed. It is recommended - especially at high dynamic load - to support the module at a distance of 300 to 600 mm.

Description	Part no.	Bore for drive shaft	Keyway	Weight
Timing belt pulley LMZ closed	28.0411/0	without		2,350 kg
Timing belt pulley LMZ 14	28.0410/1	Ø 14 mm	5 mm	2,233 kg
Timing belt pulley LMZ 16	28.0410/2	Ø 16 mm	5 mm	2,233 kg
Timing belt pulley LMZ 17	28.0410/0	Ø 17 mm	5 mm	2,233 kg
Timing belt pulley LMZ 20	28.0410/3	Ø 20 mm	6 mm	2,233 kg



Linear System LR



Precise, easy running and reliable

The MiniTec linear technology forms the ideal addition to the profile system. You are particularly flexible if you opt for our LR linear system. As the name says, a whole family of linear components that are coordinated with each other are available to you. The range includes ready to install linear axes as well as slides, drives, pulleys, rails and extensive accessories. Each MiniTec Series 45 profile can be used as a profile rail guide. The LR linear system has long since proven its worth in practice. Thanks to its simple structure, it is predestined for your own designs, and it can also be easily maintained

and adjusted. On the following pages you will find our ready-to-install LR modules. For an order, only the stroke/ total length and the required deflection must be defined. From page 290 you will find individual components of the LR linear system.

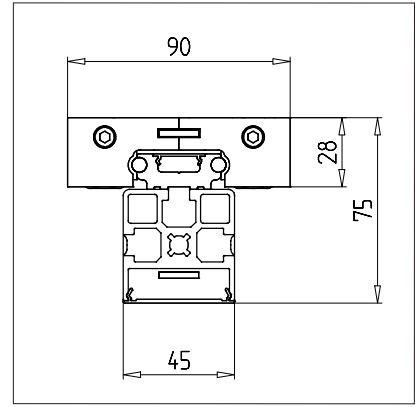
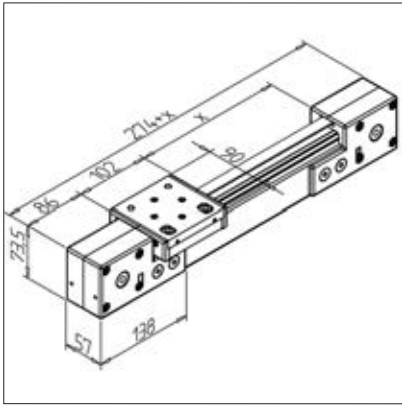
LR linear axis configuration

Further information is available at:
www.minitec.de/en/product/configuration-of-linear-axes



Linear axis LR 6 - 45 x 45 R

Part No. 28.0500/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
 - 1x rail LR 6 with precision steel shafts h6, Ø 6 mm, on carrier profile 45 x 45 R
 - **Please specify stroke length X and reverse unit**
 - Max. stroke length 5867 mm
 - Stainless version **part no. 28.0500/1**
 - 1x slide LR 6 Z with integrated timing belt retainer
 - 2x timing belt pulleys
 - 1x timing belt 16 AT 5, steel reinforced
 - Weight = (basic weight) 2.25 kg
 - Extra weight = 0.322 kg / 100 mm stroke

APPLICATIONS

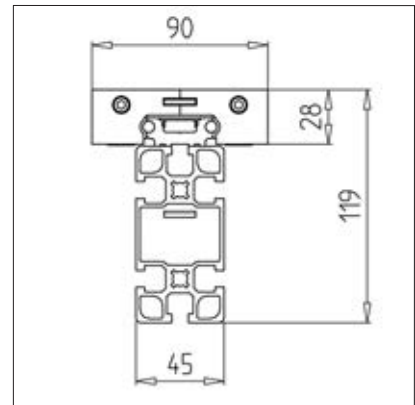
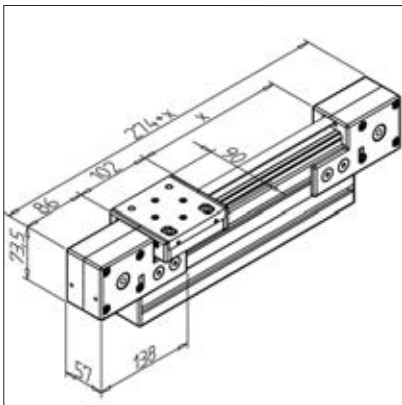
- Handling devices
- Measuring devices
- Calibration devices
- Precise guidance of doors or large extracts

ASSEMBLY

- Strap is tensioned over the reversing unit

Linear axis LR 6 - 45 x 90

Part No. 28.0501/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
 - 1x rail LR 6 S with precision steel shafts h6, Ø 6 mm, on carrier profile 45 x 90 F
 - 1x carriage LR 6 Z with integrated timing belt mounting
 - 2x timing belt deflectors
 - 1x timing belt 16 AT 5, steel reinforced
 - **Please specify stroke length X and reverse unit**
 - Max. stroke length 5867 mm
 - Stainless version **part no. 28.0501/1**
 - Weight = (basic weight) 2.25 kg
 - Extra weight = 0.453 kg / 100 mm stroke

APPLICATIONS

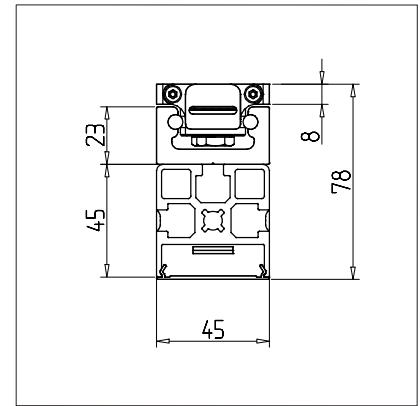
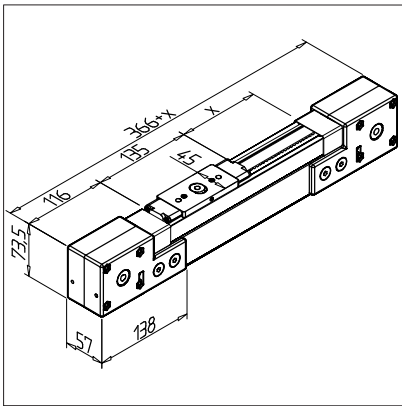
- Handling devices
- Measuring devices
- Calibration devices
- Precise guidance of doors or large extracts

ASSEMBLY

- Strap is tensioned over the reversing unit

Linear axis LR 6 compact 45 x 45 R

Part No. 28.0503/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
 - 1x rail LR 6 compact with precision steel shafts h6, Ø 6 mm, on support profile 45 x 45 R
- **Please specify stroke length X and reverse unit**
- Max. stroke length 5807 mm
- Stainless version **part no. 28.0503/1**
- 1x slide LR 6 Z compact with integrated timing belt retainer
- 2x timing belt pulleys
- 1x timing belt 16 AT 5, steel reinforced
- Weight = (basic weight) 2.977 kg
- Extra weight = 0.407 kg / 100 mm stroke

APPLICATIONS

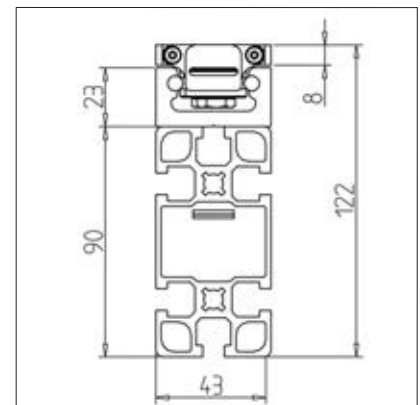
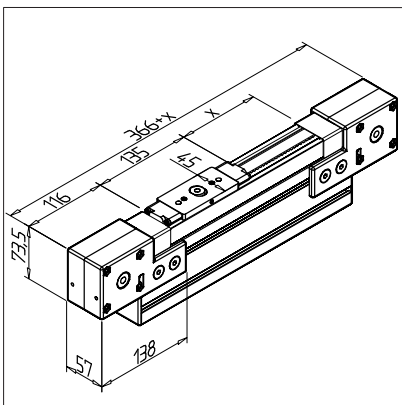
- Handling devices
- Measuring devices
- Calibration devices

ASSEMBLY

- Strap is tensioned over the reversing unit

Linear axis LR 6 compact 45 x 90

Part No. 28.0504/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
 - 1x rail LR 6 with precision steel shafts h6, Ø 6 mm, on carrier profile 45 x 90, 1 Slide LW 6 Z with integrated timing belt admission, 2x timing belt pulleys 1 tooth belt 16 AT 5, steel reinforced
- **Please specify stroke length X and reverse unit**
- Max. stroke length 5807 mm
- Stainless version **part no. 28.0504/1**
- Weight = (basic weight) 3.305 kg
- Extra weight = 0.547 kg / 100 mm stroke

APPLICATIONS

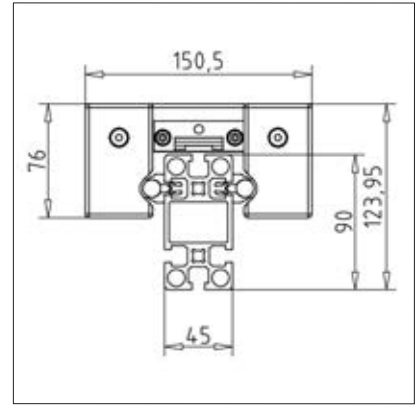
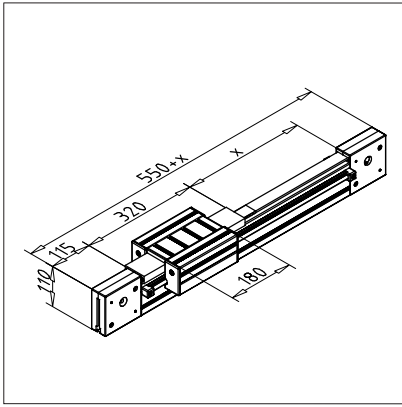
- Handling devices
- Measuring devices
- Calibration devices

ASSEMBLY

- Strap is tensioned over the reversing unit

Linear axis LR 12 - 45 x 90

Part No. 28.0600/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail 45 x 90 H with shaft fixation
- 2x timing belt pulley T45
- 2x timing belt tensioner
- 1x slide LW 45
- 1x timing belt 32AT10
- Please specify stroke length X and reverse unit
- Stainless version **part no. 28.0600/1**
- Weight = (basic weight) 7.37 kg
- Extra weight = 0.656 kg / 100 mm stroke

APPLICATIONS

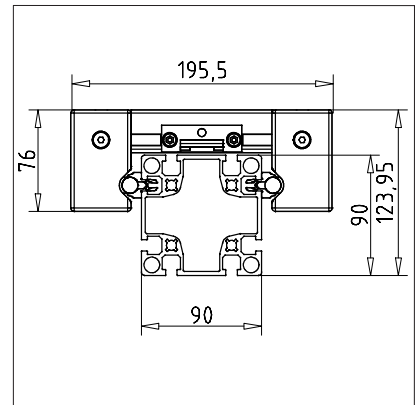
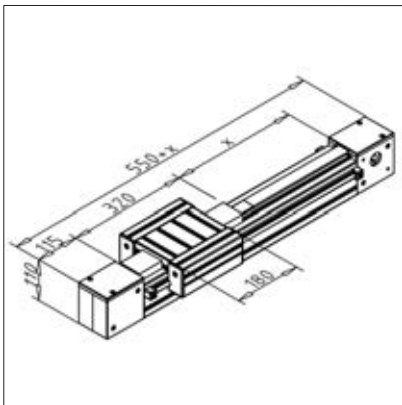
- Handling devices
- Measuring devices
- Calibration devices

ASSEMBLY

- Belt is fastened and tensioned with the aid of timing belt tensioner

Linear axis LR 12 - 90 x 90

Part No. 28.0601/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail LR 12 - 90 with shaft fixation
- 2x timing belt pulley T90
- 2x timing belt tensioner
- 1x slide LW 90
- 1x timing belt 32AT10
- Please specify stroke length X and reverse unit
- Stainless version **part no. 28.0601/1**
- Weight = (basic weight) 11.65 kg
- Extra weight = 0.827 kg / 100 mm stroke

APPLICATIONS

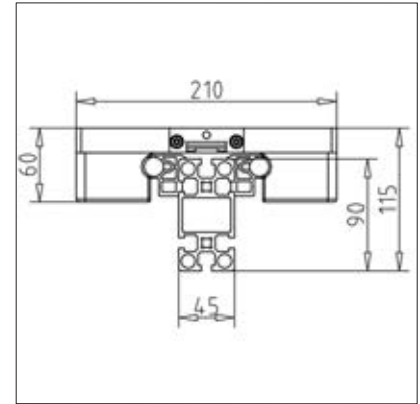
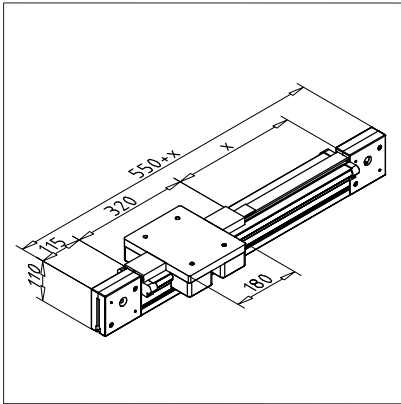
- Handling devices
- Measuring devices
- Calibration devices

ASSEMBLY

- Belt is fastened and tensioned with the aid of timing belt tensioner

Linear axis LR 16 - 45 x 90

Part No. 28.0802/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail LR 16 - 45x90 with shaft fixation
- 2x timing belt pulley T90
- 2x timing belt tensioner
- 1x slide LR16-45
- 1x timing belt 32AT10
- **Please specify stroke length X and reverse unit**
- Weight = (basic weight) 10.19 kg
- Extra weight = 0.908 kg / 100 mm stroke

APPLICATIONS

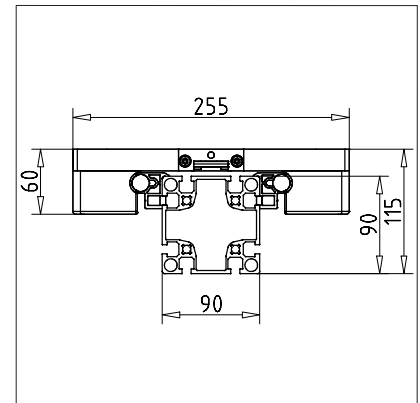
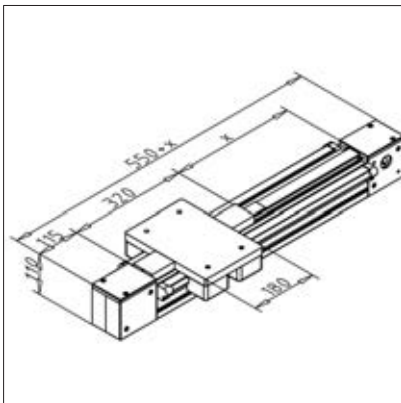
- Handling devices
- Measuring devices
- Calibration devices

ASSEMBLY

- Belt is fastened and tensioned with the aid of timing belt tensioner

Linear axis LR 16 - 90 x 90

Part No. 28.0800/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x rail LR 16 - 90 with shaft fixation
- 2x timing belt pulley T90
- 2x timing belt tensioner
- 1x slide LR16-90
- 1x timing belt 32AT10
- **Please specify stroke length X and reverse unit**
- Weight = (basic weight) 14.45 kg
- Extra weight = 1.08 kg / 100 mm stroke

APPLICATIONS

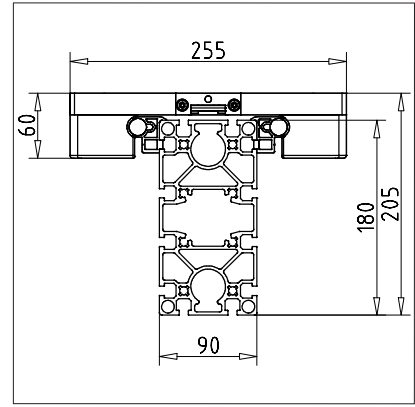
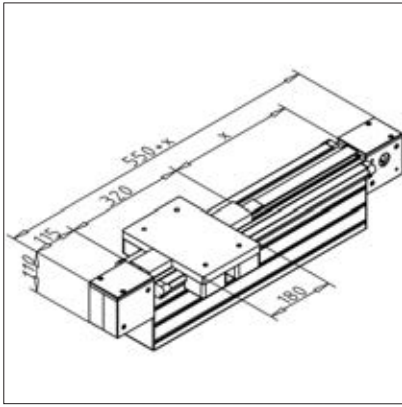
- Handling devices
- Measuring devices
- Calibration devices

ASSEMBLY

- Belt is fastened and tensioned with the aid of timing belt tensioner

Linear axis LR 16 - 90 x 180

Part No. 28.0801/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
 - 1x rail LR 16 - 90x180 with shaft fixation
 - 2x timing belt pulley T90
 - 2x timing belt tensioner
 - 1x slide LR16-90
 - 1x timing belt 32AT10
- Please specify stroke length X and reverse unit
- Weight = (basic weight) 17.51 kg
- Extra weight = 1.741 kg / 100 mm stroke

APPLICATIONS

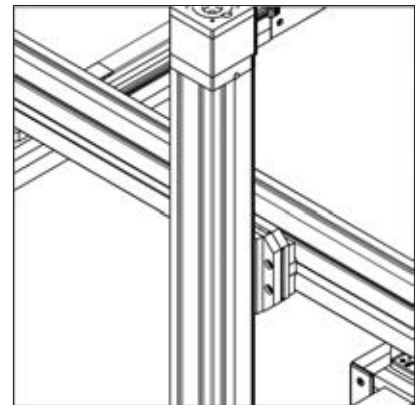
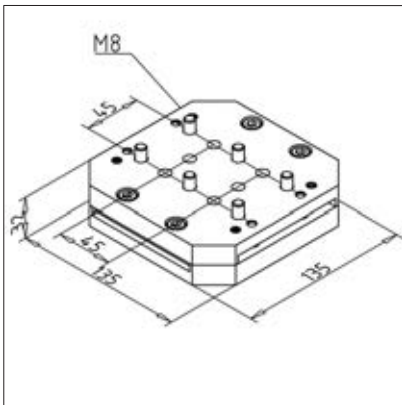
- Handling devices
- Measuring devices
- Calibration devices

ASSEMBLY

- Belt is fastened and tensioned with the aid of timing belt tensioner

Fastening kit 90 S-S

Part No. 28.0264/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 1.487 kg/piece

APPLICATIONS

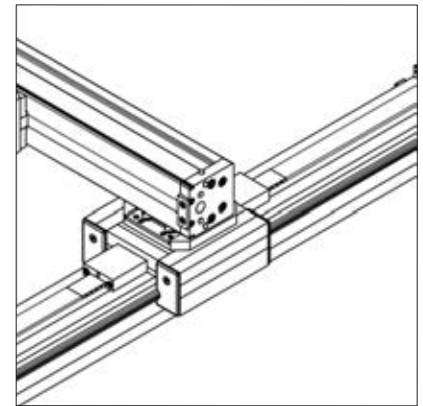
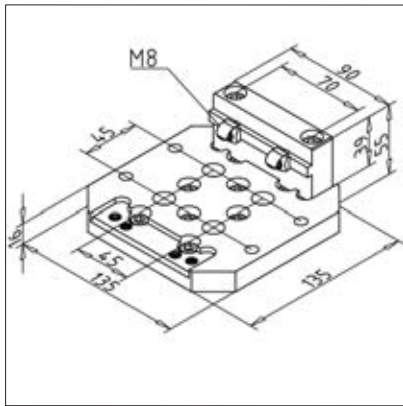
- For connection of 2 axes under 90°

ASSEMBLY

- Both slide-mounted plates are connected:
 - LMS with LMS / LMZ or
 - LMZ with LMZ / LMS or
 - LR12 with LMS / LMZ

Fastening kit 90 S-A 90°

Part No. 28.0173/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 1.039 kg/piece

APPLICATIONS

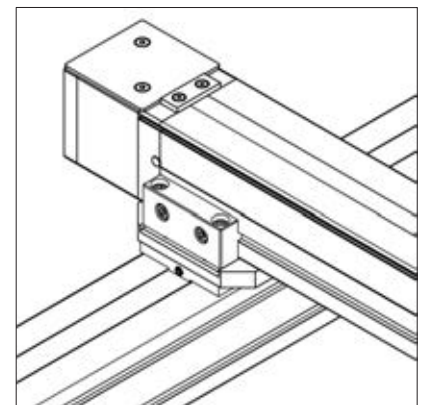
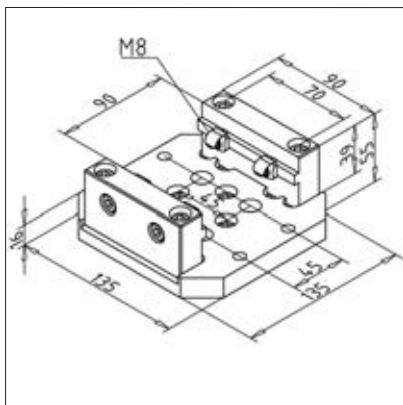
- For connection of 2 axes under 90°

ASSEMBLY

- Large plate is mounted on slide of:
 - LR6 or
 - LR6 compact or
 - LMS or- LMZ or
 - LR12 z.B. LW 45 / LW 90 or
 - slide of adjusting units
- No plate is mounted on: Carrier profile of the cross-sectional axis

Fastening kit 90 S-A 180°

Part No. 28.0265/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 1.359 kg/piece

APPLICATIONS

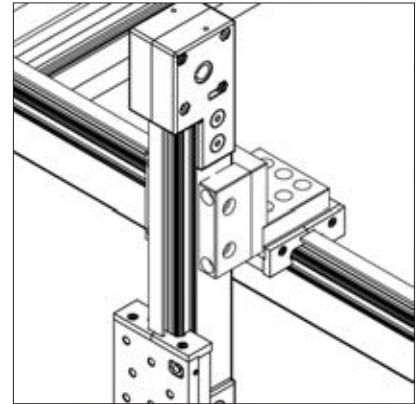
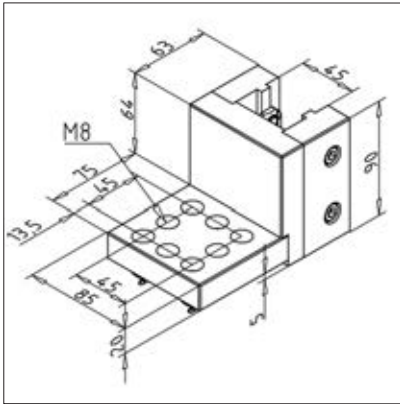
- For connection of 2 axes under 90°

ASSEMBLY

- Large plate is mounted on slide of:
 - LR6 or
 - LR6 compact or
 - LMS or- LMZ or
 - LR12 z.B. LW 45 / LW 90 or
 - slide of adjusting units
- Small plates are mounted on: Carrier profile of the cross-sectional axis

Fastening kit 45 S-A 90°

Part No. 28.0174/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 1.548 kg/piece

APPLICATIONS

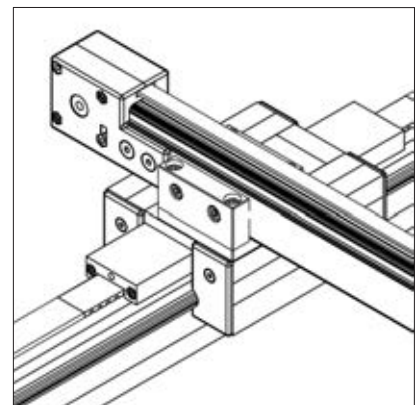
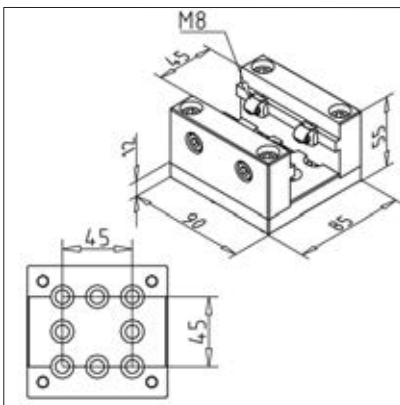
- For connection of 2 axes under 90°

ASSEMBLY

- Large plate is mounted on slides of:
 - LR6 or
 - LR6 compact
- Small plates are mounted on: Carrier profile of the cross-sectional axis

Fastening kit 45 S-A 180°

Part No. 28.0175/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Adapter plate 90
- With fastening material steel, zinc plated
- Weight = 0.938 kg/piece

APPLICATIONS

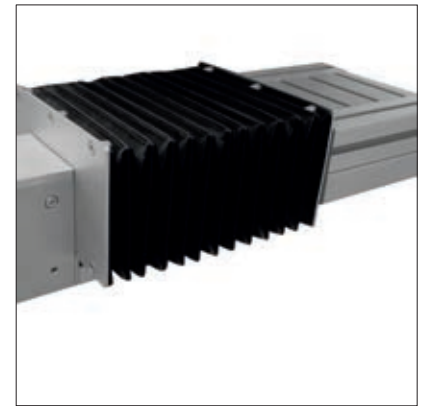
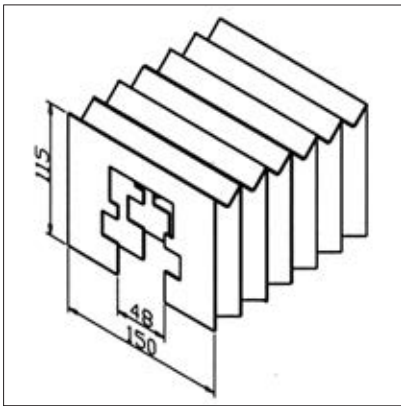
- For connection of 2 axes under 90°

ASSEMBLY

- Large plate is mounted on slide of:
 - LR6 or
 - LR6 compact or
 - LMS or- LMZ or
 - LR12 z.B. LW 45 / LW 90 or
 - slide of adjusting units
- Small plates are mounted on: Carrier profile of the cross-sectional axis

Bellows LR 45

Part No. 33.3007/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black with plastic frame
- Without fastening kit
- Max. length 6 m
- Length when pushed together for 1 m travel: - 130 mm
- Temperature resistant(-30° to +90°C)
- Resistant to most acids and oils
- Weight = 0.650 kg/m

APPLICATIONS

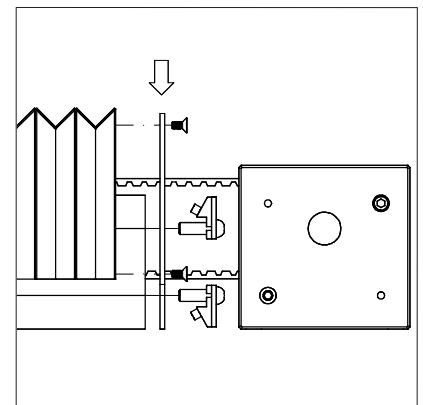
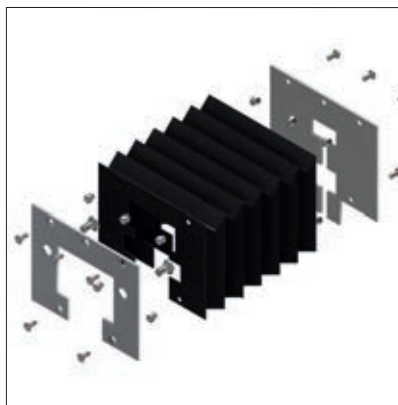
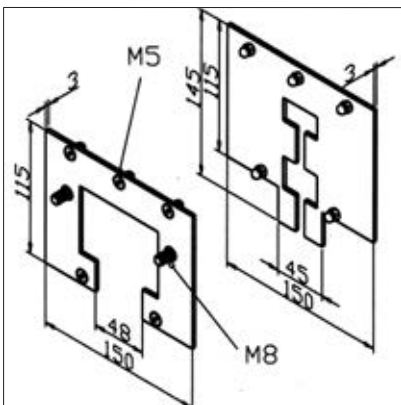
- Cover of MiniTec linear guides LR 45
- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail
- Fasten to slide or pulley with fastening kit for bellow **part no. 33.3010/0**
- Bellow is supplied without perforation
- Due to the bellows, the usable travel distance is reduced by approx. 22%
- Caution: Consider higher friction moment when dimensioning drive unit!

Fastening kit for bellows LR 45

Part No. 33.3010/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow
- Weight = 0.275 kg/piece

APPLICATIONS

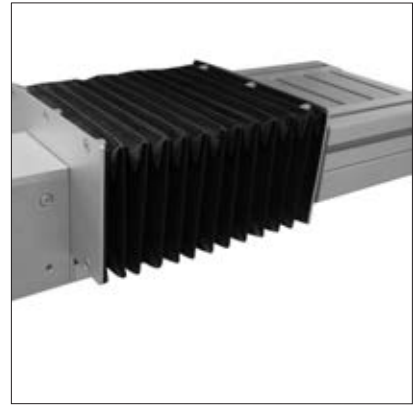
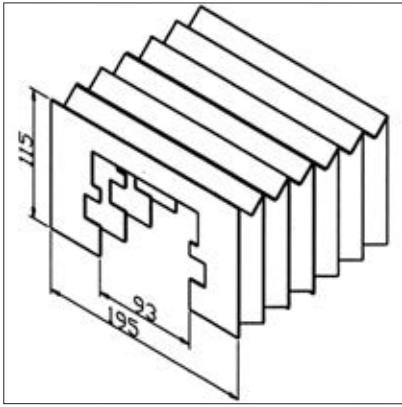
- Fastening bellows LR 45 to carriages LW 45
- Fastening bellows LR 45 to timing belt reversing unit LW 45

ASSEMBLY

- Fasten end frame on slide
- Push bellow onto rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

Bellows LR 90

Part No. 33.3008/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black with plastic frame
- Without fastening kit
- Length when pushed together for 1 m travel: - 130 mm
- Max. length 6 m
- Temperature resistant(-30° to +90°C)
- Resistant to most acids and oils
- Weight = 0.750 kg/m

APPLICATIONS

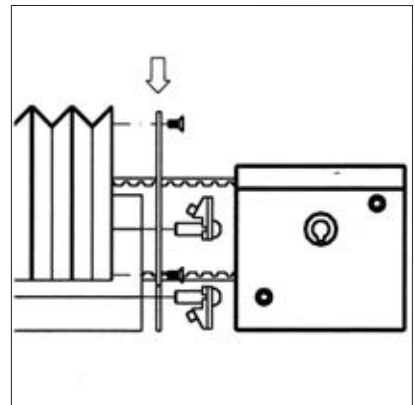
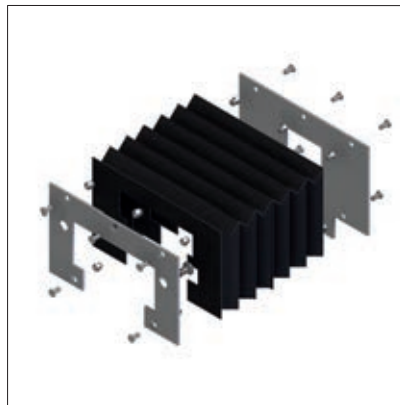
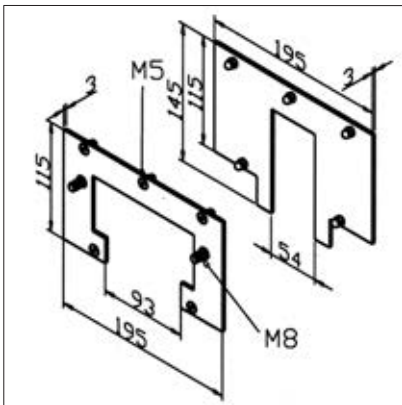
- Cover of MiniTec linear guides LR 90
- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail
- Fasten ends with attachment for bellows **part no. 33.3011/0** to carriages or reverse unit
- Bellow is supplied without perforation
- Due to the bellows, the usable travel distance is reduced by approx. 22%
- Caution: Consider higher friction moment when dimensioning drive unit!

Fastening kit for bellows LR 90

Part No. 33.3011/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow
- Weight = 0.750 kg/piece

APPLICATIONS

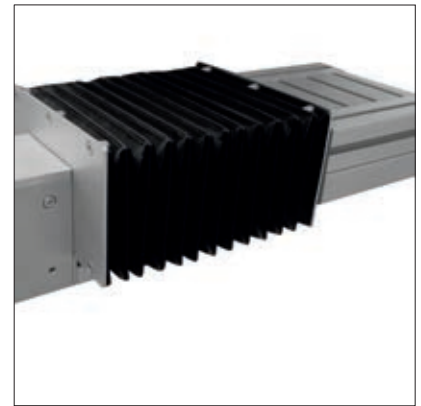
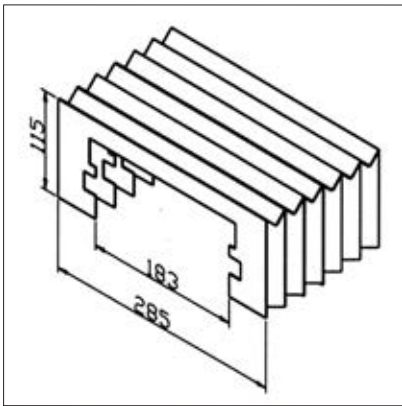
- Fastening bellows LR 90 to carriages LW 90
- Fastening bellows LR 90 to timing belt reversing unit LW 90

ASSEMBLY

- Fasten end frame on slide
- Push bellow onto rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

Bellows LR 180

Part No. 33.3009/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black with plastic frame
- Without fastening kit
- Length when pushed together for 1 m travel: - 130 mm
- Max. length 6 m
- Temperature resistant(-30° to +90°C)
- Resistant to most acids and oils
- Weight = 0.950 kg/m

APPLICATIONS

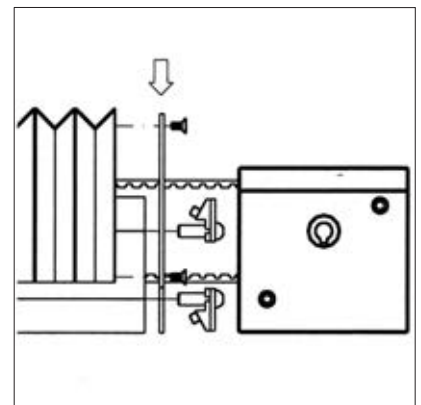
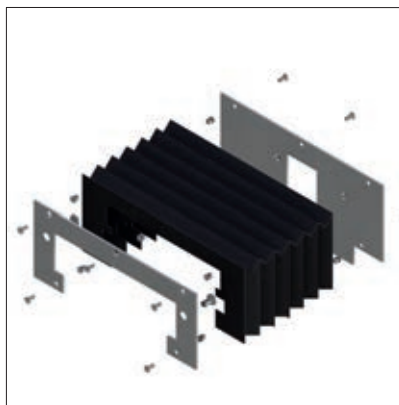
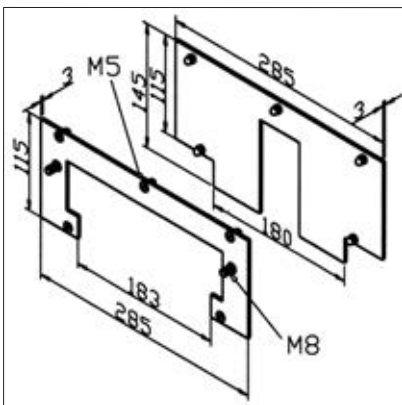
- Cover of MiniTec linear guides LR 180
- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail
- Fasten ends with attachment for bellows **part no. 33.3012/0** to carriage or reverse unit
- Bellow is supplied without perforation
- Due to the bellows, the usable travel distance is reduced by approx. 22%
- Caution: Consider higher friction moment when dimensioning drive unit!

Fastening kit for bellows LR 180

Part No. 33.3012/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow
- Weight = 0.463 kg/piece

APPLICATIONS

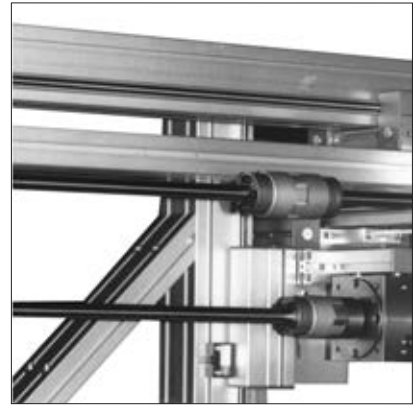
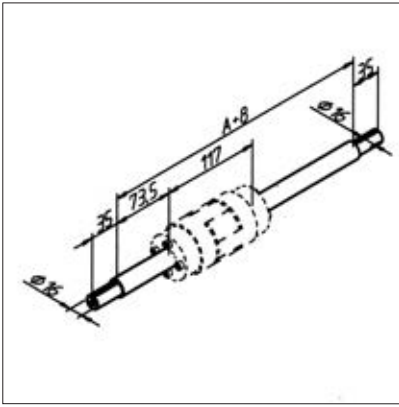
- Fastening bellows LR 180 to carriages LW 180

ASSEMBLY

- Fasten end frame on slide
- Push bellow onto rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

Connecting shaft 45

Part No. 17.1706/0



TECHN. DATA / ITEMS SUPPLIED

- Steel shaft \varnothing 20 mm
- 2 pieces, clutch not included
- With fastening material and feather key
- Length A = light distance between timing belt pulleys
- **Please indicate distance A**
- Other lengths and finishes available upon customer request
- Weight = 2,47 kg/m

APPLICATIONS

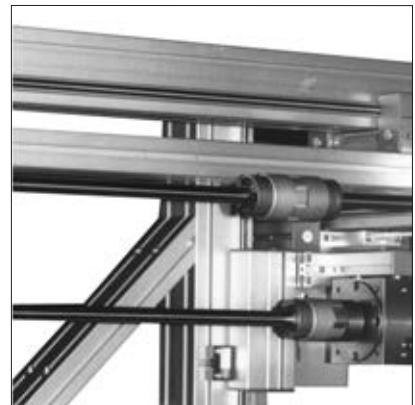
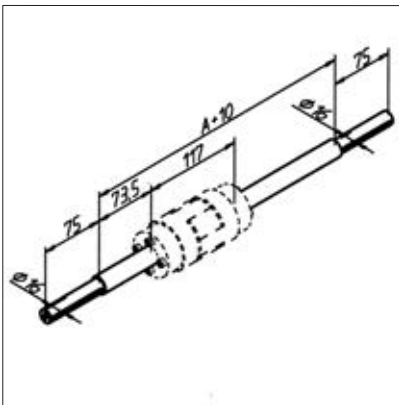
- Simultaneous transmission of 2 parallel linear guides
- Install support bearing for longer shafts

ASSEMBLY

- Push the shafts with the feather key and the pressure plate into the timing belt reverse unit and secure with the pressure plate and the countersunk screw included
- Connect both shaft pieces with clutch **part no. 28.0180/0**

Connecting shaft 90

Part No. 17.1706/1



TECHN. DATA / ITEMS SUPPLIED

- Steel shaft \varnothing 20 mm
- 2 pieces, clutch not included
- With fastening material and feather key
- Length A = light distance between timing belt pulleys
- **Please indicate distance A**
- Other lengths and finishes available upon customer request
- Weight = 2,47 kg/m

APPLICATIONS

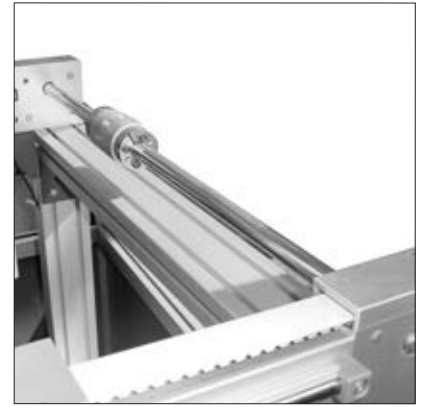
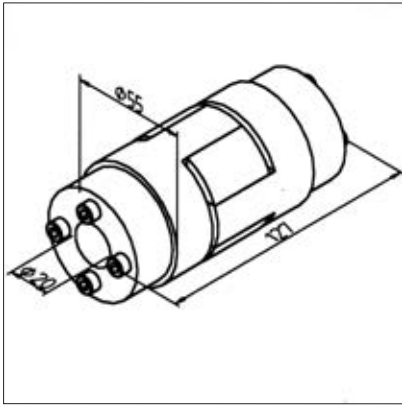
- Simultaneous transmission of 2 parallel linear guides
- Install support bearing for longer shafts

ASSEMBLY

- Push the shafts with the feather key and the pressure plate into the timing belt reverse unit and secure with the pressure plate and the countersunk screw included
- Connect both shaft pieces with clutch **part no. 28.0180/0**

Clutch 20

Part No. 28.0180/0



TECHN. DATA / ITEMS SUPPLIED

- Clutch, steel with plastic inlay
- 2 tensioning sets, steel
- Max. torque 30Nm
- Weight = 0.984 kg/piece

APPLICATIONS

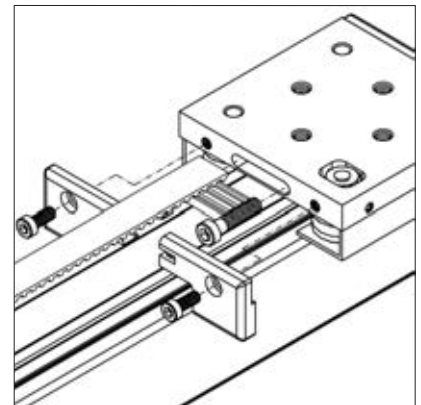
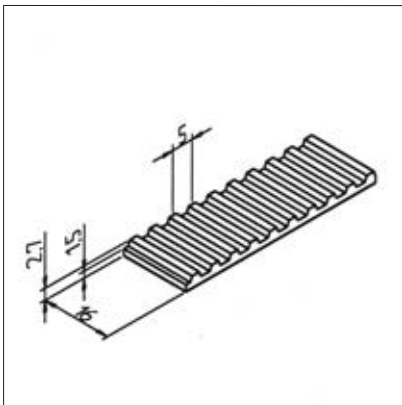
- Connection of motors to reverse unit
- Misalignment compensation with simultaneous drive of 2 parallel linear axes with connection shaft 45 **part no. 17.1706/0** or 90 **part no. 17.1706/1**

ASSEMBLY

- Attachment with integrated tensioning device
- Adjust the axes synchronously and fasten clamping sets

Timing belt 16 AT 5

Part No. 28.0502/0



TECHN. DATA / ITEMS SUPPLIED

- PUR white, steel-wire reinforced
- Type 16 AT 5
- Load capacity up to 1260 N
- Weight = 0.053 kg/m

APPLICATIONS

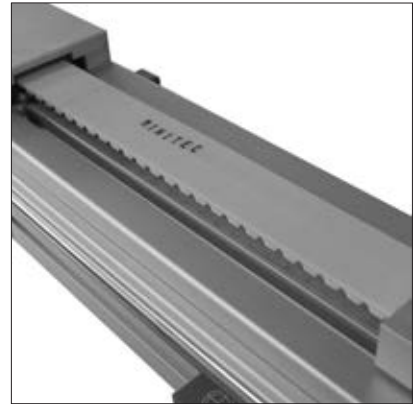
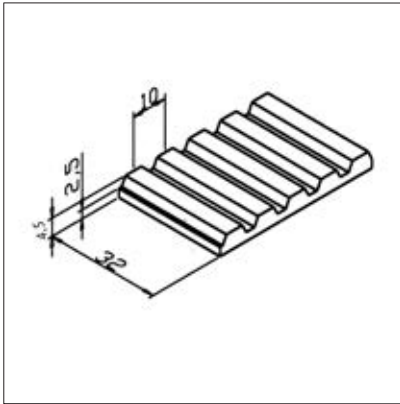
- For MiniTec linear guides LR 6 Z

ASSEMBLY

- Insert timing belt of corresponding length into the carriage LR 6 Z
- Length determination: 2x rail length + 260 mm

Timing belt 32 AT 10

Part No. 28.0093/0



TECHN. DATA / ITEMS SUPPLIED

- PUR white, steel-wire reinforced
- Type 32 AT 10
- Load capacity up to 4750 N
- Weight = 0.190 kg/m

APPLICATIONS

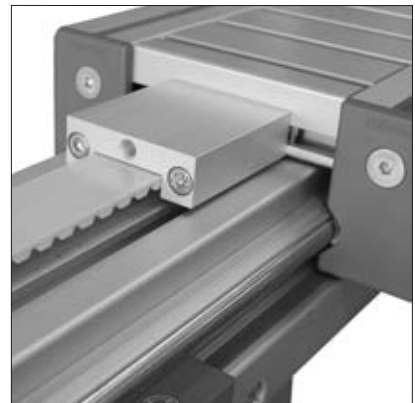
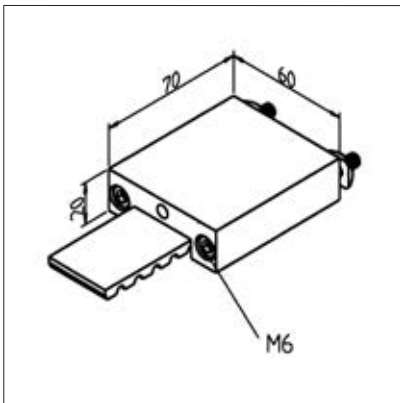
- For MiniTec-Linear guides LR 12 and LR 16
- Belt conveyors

ASSEMBLY

- Attach the timing belt in the appropriate length to the belt tensioner

Timing belt tensioner

Part No. 28.0090/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Housing Aluminum natural anodized
- Tension slide steel, galvanized, with inserted counterpart with 3 teeth
- For timing belt 32 AT 10
- Stainless version **part no. 28.0090/1**
- Weight = 0.244 kg/piece

APPLICATIONS

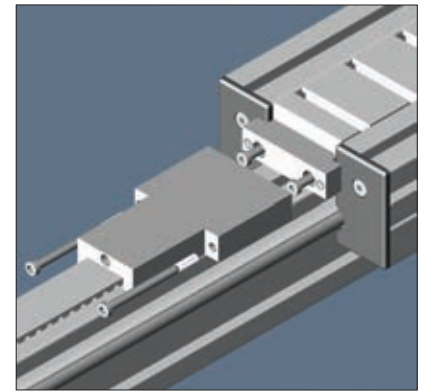
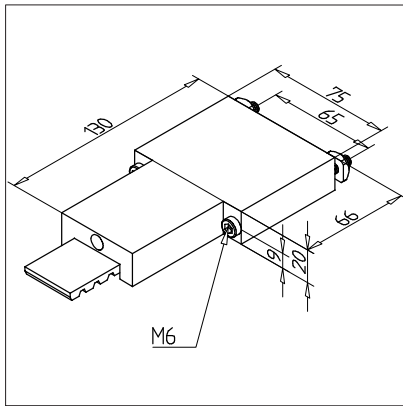
- For MiniTec-Linear guides LR 12 and LR 16
- For MiniTec belt drive

ASSEMBLY

- Screw tight on the front of the carriage with supplied hardware
- After fixing on slide face, tension the belt central tensioning screw M8, 5 A/F
- Recommended voltage: according to design
- 1 timing belt tensioner requested per belt end

Timing belt tensioner reinforced to slide LW90

Part No. 28.0386/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Cocking slide steel, galvanized, with inlaid counterpart with 9 teeth
- For attachment to carriage LW 45 please use the timing belt tensioner with adapter **part no. 28.0386/1**
- Weight = 0.473 kg/piece

APPLICATIONS

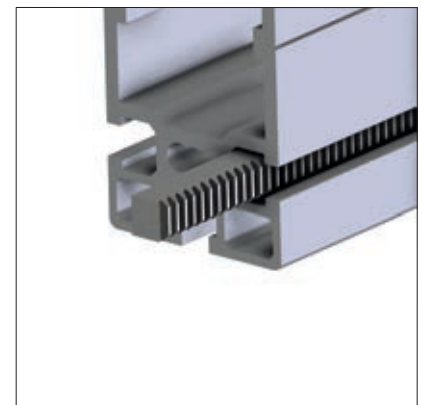
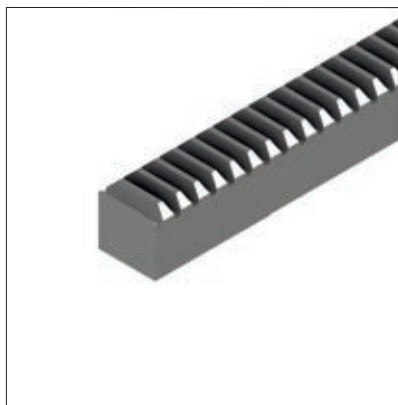
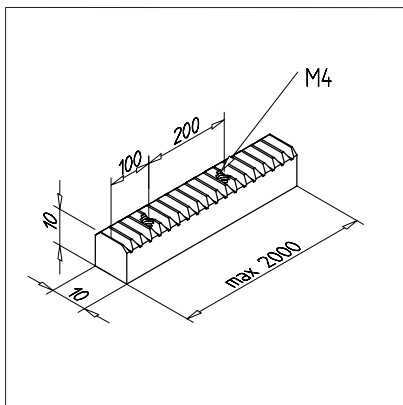
- For linear axes with higher safety requirements
- For vertically arranged axes (lifting axes) it is usually sufficient to use the upper timing belt tensioner in reinforced version

ASSEMBLY

- Screw tight on the front of the carriage with supplied hardware
- After fixing on slide face, tension the belt central tensioning screw M8, 5 A/F
- Recommended voltage: according to design

Toothed rack 8

Part No. 28.0051/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, bright
- Modul 1
- Weight = 0,785 kg/m
- Bar length = 2 m

APPLICATIONS

- Linear guides with very long travels
- Linear guides for short building room
- Repeated height and length settings in grid 3.14 mm (for ex. sorting frame)

ASSEMBLY

- Insert timing rack into profile groove
- Secure with setscrew from delivery scope - Grid 200 mm

Connection of motors

Timing belt pulley LR 6 & LR 6 compact

Three-phase, stepper or servo motors with drive pins up to a maximum \varnothing 14 mm are fastened directly to the deflection. The bore of the pulley with keyway and the adapter plate are also made to customer specification.

Timing belt pulley T 45

Three-phase, stepper or servo motors with drive pins up to a maximum \varnothing 16 mm are fastened directly to the deflection. The bore of the pulley with keyway and the adapter plate are also made to customer specification.

Timing belt pulley T 90

Three-phase, stepper or servo motors with drive pins up to a maximum \varnothing 24 mm are fastened directly to the deflection. The bore of the pulley with keyway and the adapter plate are also made to customer specification.

Determination of the timing belt length

When using T45 and T90

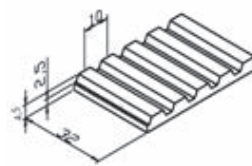
- $2 \times \text{rail length} + 2 \times 210 \text{ mm}$ (redirection)
- $-\text{Carriage length} - 2 \times 20 \text{ mm}$ (timing belt tensioner)
- $= 2 \times \text{rail length} - \text{carriage length} + 380 \text{ mm}$

When using LR6

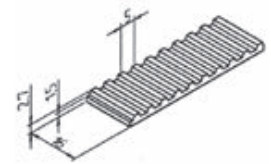
- $2 \times \text{rail length} + 260 \text{ mm}$

When using LR6 compact (timing belt 16 AT 5)

- $2 \times \text{rail length} + 220 \text{ mm}$



Timing belt 32 AT 10
Part no. 28.0093/0



Timing belt 16 AT 5
Part no. 28.0502/0

Specifications of the pulleys in the timing belt deflection

Timing belt-redirection	LR 6	T 45 (LR 12 & LR 16)	T 90 (LR 12 & LR 16)
Effective diameter	57,3 mm	60,48 mm	60,48 mm
Width of timing belt	16 mm	32 mm	32 mm
Number of teeth	36	19	19
Drill hole for drive shaft	10 mm	8 mm	8 mm
rillable to max.	14 mm	16 mm	30 mm
Travel distance (1 turn)	180 mm	190 mm	190 mm
Timing belt	16AT5	32AT10	32AT10
Belt length in deflection	160 mm	210 mm	210 mm
Maximum torque	30 Nm	70 Nm	130 Nm

Components - Linear system LR

This system is based on double-row profiled rollers made of ball bearing steel and hardened precision shafts made of material 1.1213 (CF 53). Guides of any length can be produced with this system.

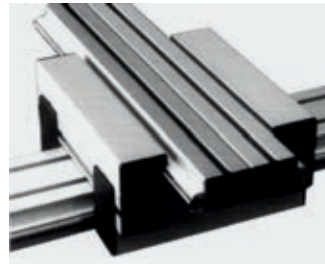
The carriages are equipped with 2-row profiled rollers whose shaft raceway is designed as a Gothic arch. For very high loads, the trolleys can be equipped with any number of track rollers. The profiled rollers are fastened directly to the carriage plate with steel strips. No special roller profiles are required for the construction of the trolleys. This gives the construction maximum rigidity. The backlash-free adjustment of the guides is carried out with eccentric bushes.

The carriages are completely encapsulated, scraper felts are integrated into the cover caps, which simultaneously remove coarse dirt from the shafts and supply them with lubricant. The felts can be replaced quickly and easily after loosening the lateral screw connection. This advantage has

an extremely positive effect, especially in dirty or rough operating conditions.

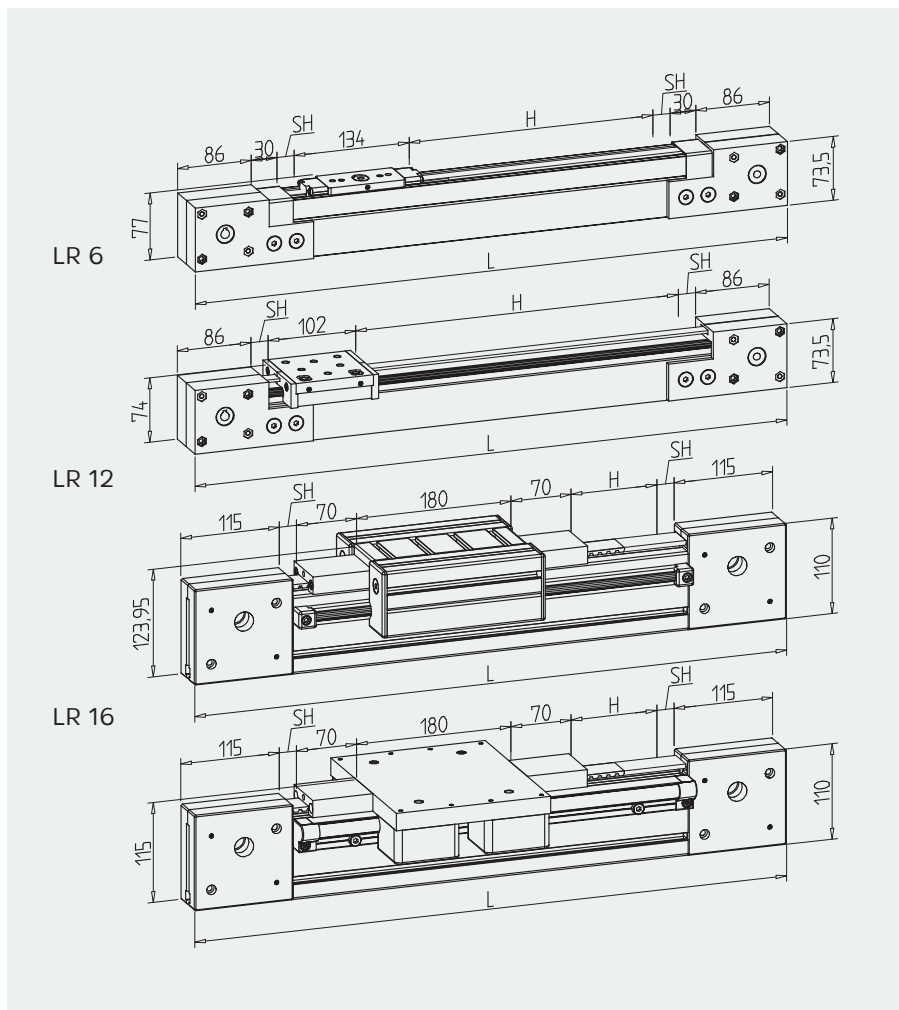
Both closed and open-frame trolleys in any length and width are possible. Please indicate the desired dimensions A and B when ordering. (see special versions on page XXX above).

X/Y tables can be produced simply by attaching 4 castors to the top of the trolley. In this configuration, the running rail of the Y-axis is made of profile 45 x 32. Cover caps LR and cover profile LR fit for the Y-axis.



X/Y-Table

LR 6 Z compact



Safety distances „SH“ if necessary, additionally calculate and specify!

LR 6 Z compact

Calculation of the total length L:

Required traverse H
 + Car length (134)
 + 2 x Timing belt pulley (172)
 + 2 x Trap guard (60)
 = Traverse + 366 mm *

LR 6

Calculation of the total length L:

Required traverse H
 + Car length (102)
 + 2 x Timing belt pulley (172)
 = Traverse + 274 mm*

LR 12 + LR 16

Calculation of the total length L:

Required traverse H
 + Car length (180)
 + 2 x Timing belt pulley (230)
 + 2 x Timing belt tensioner (140)
 = Traverse + 550 mm

*Since the belt tension is applied via the timing belt deflection, this is only an indication!

Rails



The MiniTec profile system is the ideal carrier for linear technology
 All MiniTec profiles (except UL) can be fitted with a shaft support and a shaft.



LR 6 compact

Part no. 28.0119/0



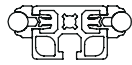
LR 6 S

Part no. 28.0525/0



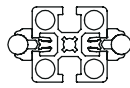
**LR 12
 Rail 19**

Part no. 28.0009/0



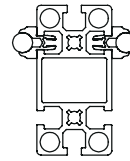
**LR 12
 Rail 32**

Part no. 28.0010/0



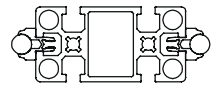
**LR 12
 Rail 45**

Part no. 28.0006/0



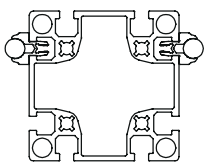
**LR 12
 Rail 45 x 90 H**

Part no. 28.0007/2



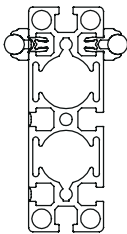
**LR 12
 Rail 45 x 90 F**

Part no. 28.0007/1



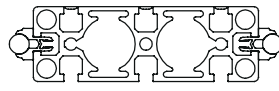
**LR 12
 Rail 90**

Part no. 28.0008/0



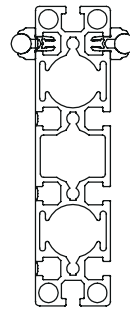
**LR 12
 Rail 135 H**

Part no. 28.0012/2



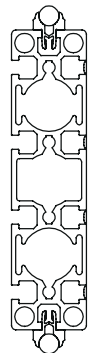
**LR 12
 Rail 135 F**

Part no. 28.0012/1



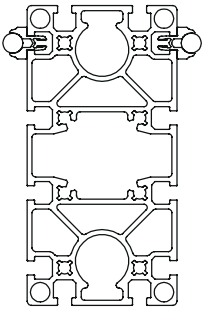
**LR 12
 Rail 45 x 180 H**

Part no. 28.0013/2



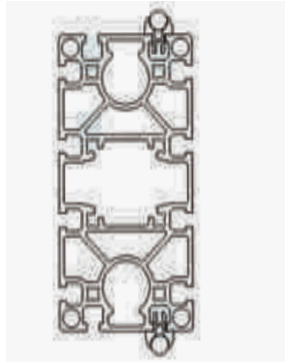
**LR 12
 Rail 45 x 180 F**

Part no. 28.0013/1



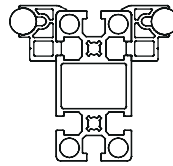
LR 12
Rail 180 H

Part no. 28.0011/2



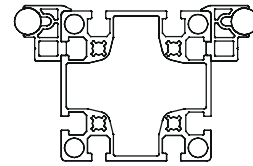
LR 12
Rail 180 F

Part no. 28.0011/1



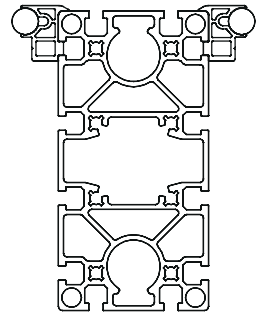
LR 16
Rail LR16 - 45 x 90H

Part no. 28.0820/0



LR 16
Rail LR16 - 90

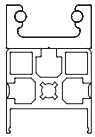
Part no. 28.0821/0



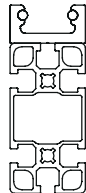
LR 16
Rail LR16 - 90 x 180H

Part no. 28.0822/0

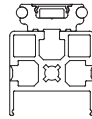
LR 6 compact and LR 6 S - further combination possibilities:



Profile 45 x 45 R
LR 6 compact



Profile 45 x 90 F
LR 6 compact

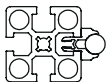


Profile 45 x 45 R
LR 6 S

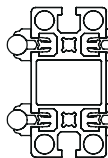


Profile 45 x 90 F
LR 6 S

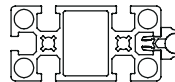
LR 12 - further combination possibilities:



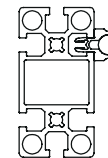
Rail of
Profile 45 x 45



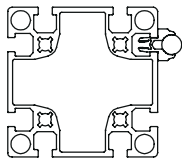
Rail of
Profile 45 x 90



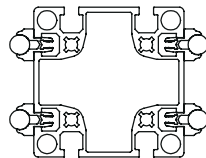
Rail of
Profile 45 x 90



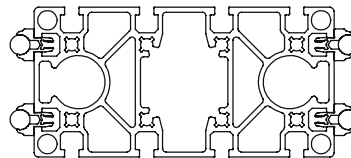
Rail of
Profile 45 x 90



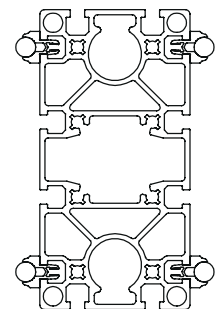
Rail of
Profile 90 x 90 L



Rail of
Profile 90 x 90 L

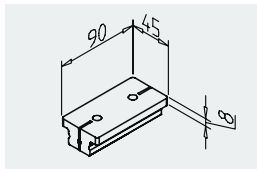
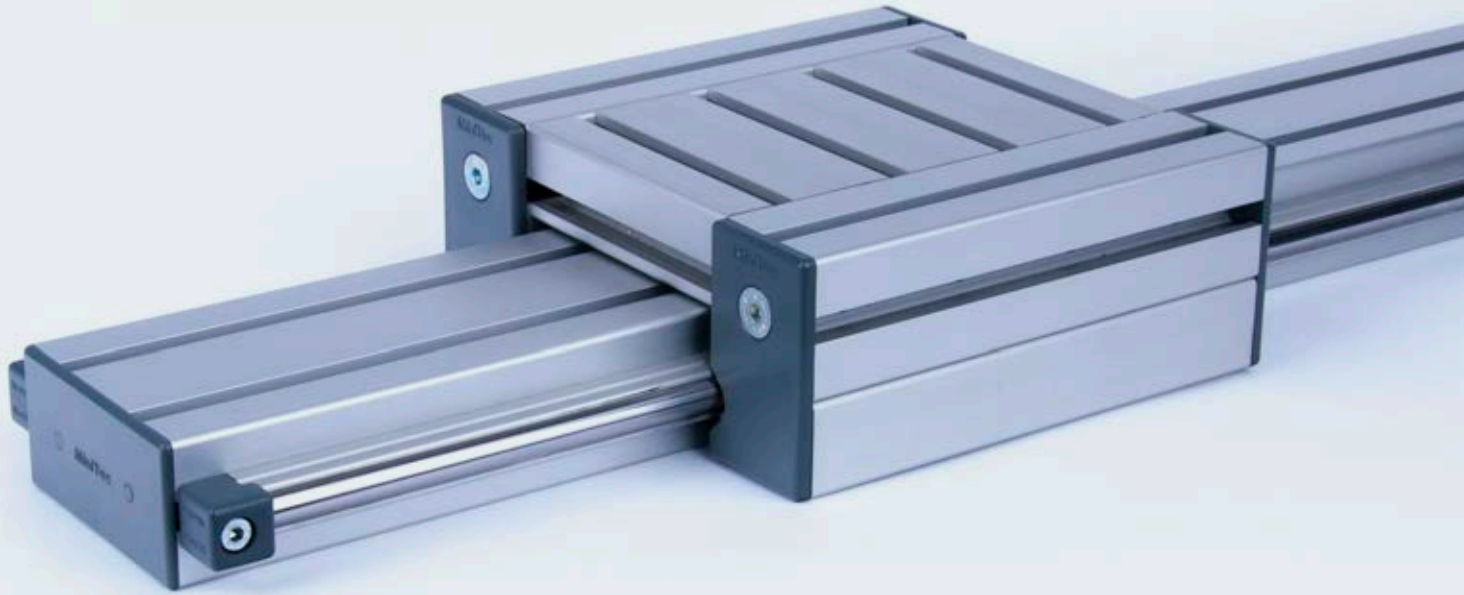


Rail of
Profile 90 x 180 S

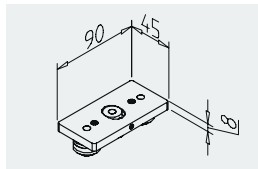


Rail of
Profile 90 x 180 S

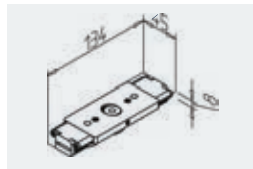
Slide types



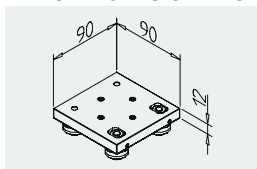
Sliding carriage
LR 6 compact
Part no. 28.0127/0



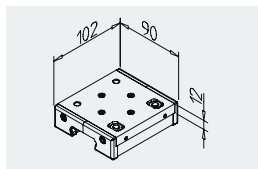
LR 6 compact
Part no. 28.0140/0



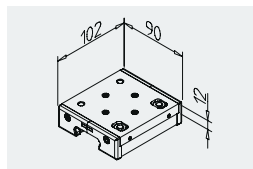
LR 6 Z compact
Part no. 28.0520/0



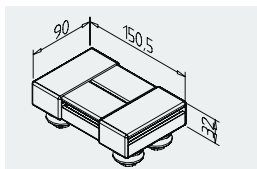
LR 6
Part no. 28.0138/0



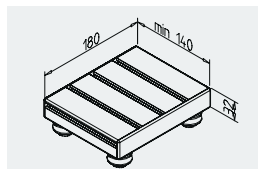
LR 6 with cover
Part no. 28.0138/1



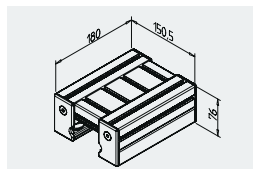
LR 6 Z
Part no. 28.0138/2



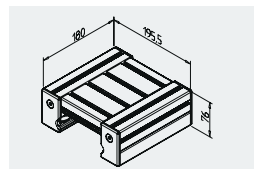
LW 32
Part no. 28.0088/0



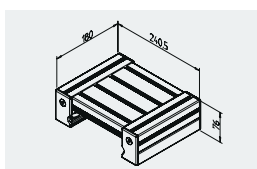
LW 32 E
Part no. 28.0089/0



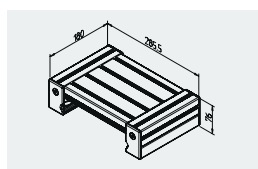
LW 45
Part no. 28.0091/0



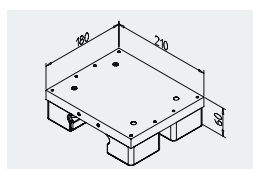
LW 90
Part no. 28.0092/0



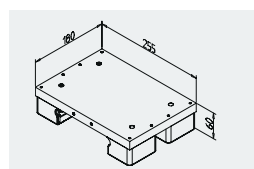
LW 135
Part no. 28.0084/0



LW 180
Part no. 28.0087/0

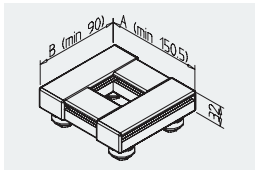


LR 16 - 45
Part no. 28.0810/0



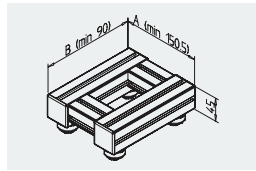
LR 16 - 90
Part no. 28.0811/0

Carriage special versions



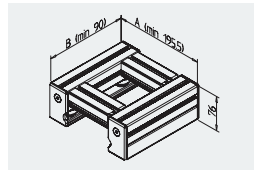
LW 32 Special version
(Open Frame)

Part no. 28.0089/2



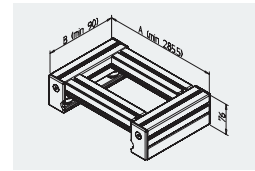
LW 45 Special version
(Open Frame)

Part no. 28.0091/4



LW 90 Special version
(Open Frame)

Part no. 28.0092/3



LW 180 Special version
(Open Frame)

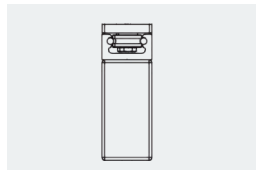
Part no. 28.0087/2

COMBINATION POSSIBILITIES CARRIAGES AND RAILS



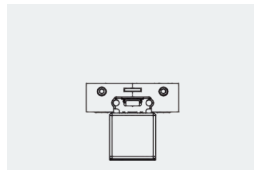
LW LR 6 compact

Rail LR 6 compact



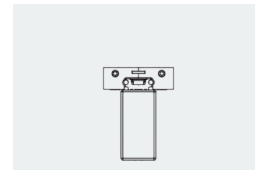
LW LR 6 compact

Rail made of profile
45 x 90 F



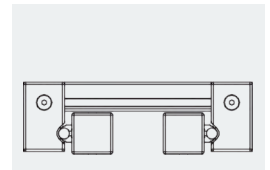
Carriage LR 6

Rail LR 6 S/45



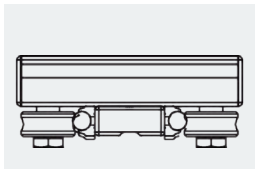
Carriage LR 6

Rail LR 6 S/90



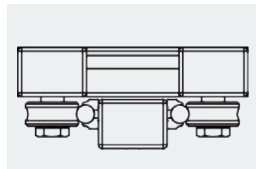
Carriage LW 135

2x Special rail made
of profile 45 x 45



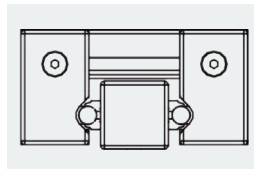
LW 32 E

Rail 19



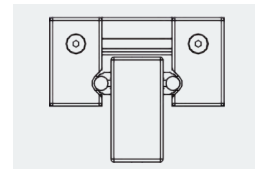
LW 32

Rail 32



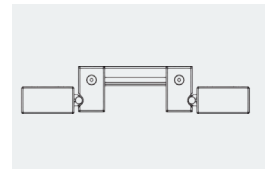
LW 45

Rail 45



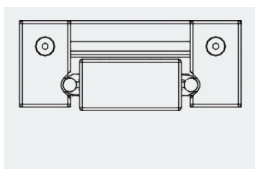
LW 45

Rail 45 x 90H



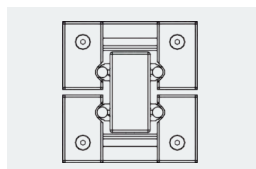
Special carriages

2x Special rail made
of profile 45 x 90



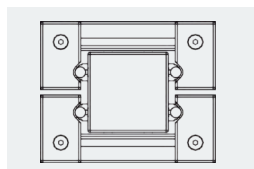
LW 90

Rail 45 x 90 F



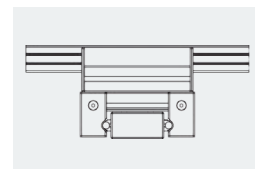
2x LW 45

Special rail made of
profile 45 x 90



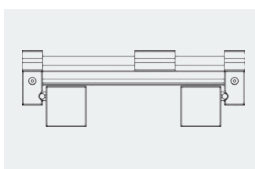
2x LW 90

Special rail made of
profile 90 x 90 L



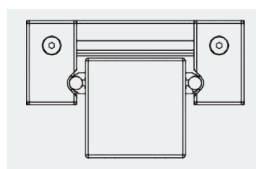
2x LW 90

Rail 45 x 90 F



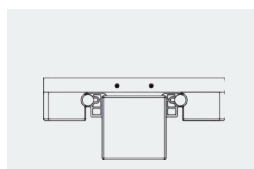
Special carriage

2x Special rail made of
profile 90 x 90 L



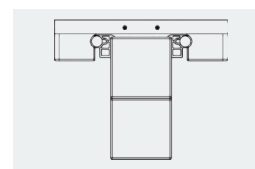
LW 90

Rail 90



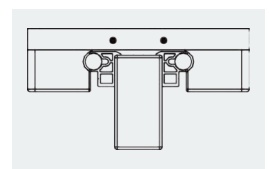
LR 16-90

Rail LR 16 - 90



LR 16 - 90

Rail LR 16 - 90 x 180H



LR 16 - 45

Rail LR 16 - 45

Permitted loads

Linear-system	LR 6		LR 12					LR 16	
Car	LR 6 Compact	Car LR 6 with 4 Bearing L = 90 mm	Car 45 with 4 Bearing L = 180 mm	Car 90 with 4 Bearing L = 180 mm	Car 135 with 4 Bearing L = 180 mm	Car 180 with 4 Bearing L = 180 mm	Car 180 with 8 Bearing L = 360 mm	Car LR 16-45	Car LR 16-90
Mx max.	40 Nm	30 Nm	79 Nm	107 Nm	130 Nm	165 Nm	240 Nm	158 Nm	214 Nm
My max.	40 Nm	75 Nm	120 Nm	120 Nm	120 Nm	120 Nm	275 Nm	288 Nm	288 Nm
Mz max.	40 Nm	40 Nm	202 Nm	202 Nm	202 Nm	202 Nm	470 Nm	323 Nm	323 Nm
Fy max.	700 N	800 N	3500 N	3500 N	3500 N	3500 N	7000 N	7000 N	7000 N
Fz max.	1100 N	640 N	1500 N	1500 N	1500 N	1500 N	3000 N	3000 N	3000 N

Maximum traverse

Car 45 - 180: 10 m/sec

Car LR 6: 5 m/sec

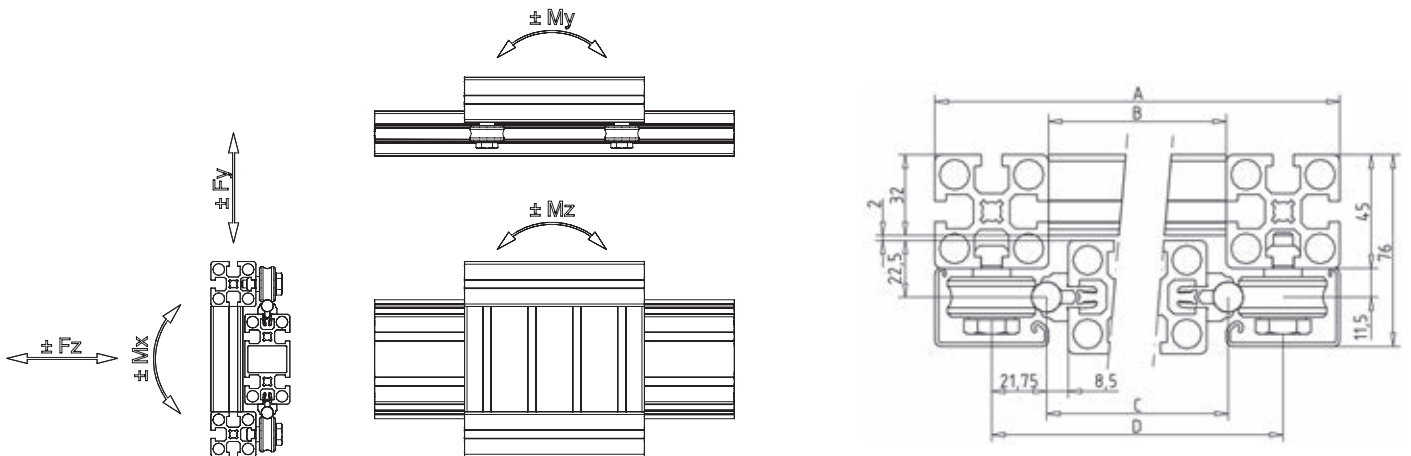
Calculation of the permissible moment load depending on the car length,

at 4 Bearing:

$$M_y \text{ max.} = 0,89 \times (L-45) \text{ Nm}$$

$$M_z \text{ max.} = 1,50 \times (L-45) \text{ Nm}$$

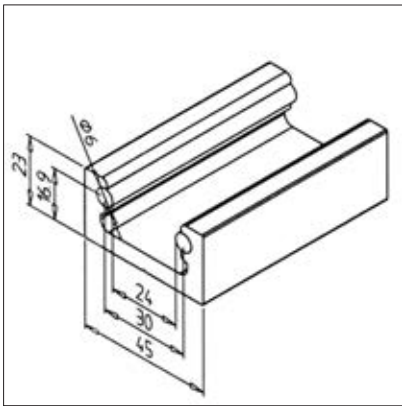
L = Car length



Slide dimensions

Measure	Car type	LR 6 compact	LR 6	LW 45	LW 90	LW 135	LW 180	LR 16-45	LR 16-90
	A		45	90	150,5	195,5	240,5	285,5	210
B		-	-	60,5	105,5	150,5	195,5	-	-
C		30	32	62	107	152	197	85	130
D		2	60	105,5	150,5	195,5	240,5	149,5	194,5

LR 6 compact track



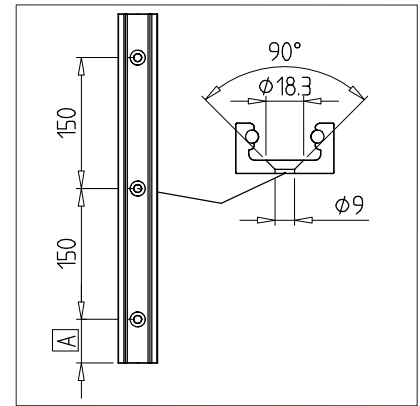
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 2 shafts \varnothing 6 mm h6 steel
- Drilled ready for assembly \varnothing 8 mm, Division 150 mm
- Stainless version **part no. 28.0149/0**
- Weight = 1.781 kg/m
- Bar length = 6 m



APPLICATIONS

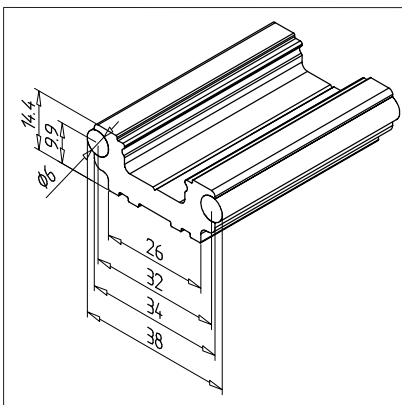
- Handling devices
- Guide large drawers
- Doors



ASSEMBLY

- Fasten the rail with the countersunk screw M8 x 20 and the square nut M8 to the MiniTec profile
- The hole pattern is cut to size centrally. If a different edge distance is required, please specify dimension A. Additional hole spacing is also possible

Rail LR 6 S



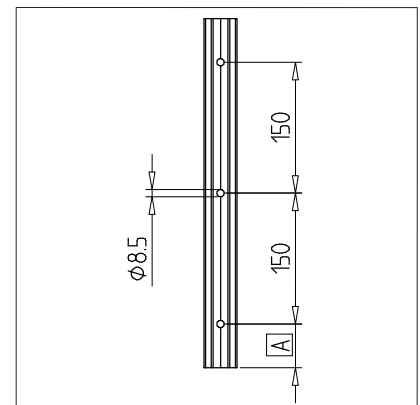
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 2 shafts \varnothing 6 mm h6 steel
- Drilled ready for assembly \varnothing 8 mm, Division 150 mm
- Stainless version **part no. 28.0526/0**
- Weight = 0.959 kg/m
- Bar length = 6 m



APPLICATIONS

- MiniTec linear guide systems LR 6
- Handling devices
- Guide large drawers
- Doors



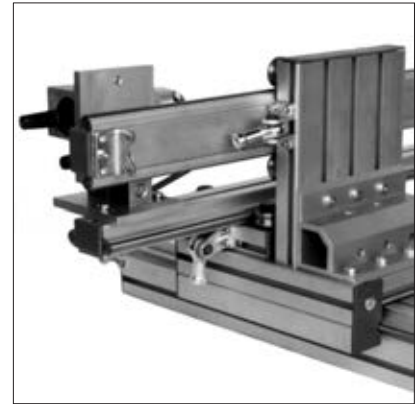
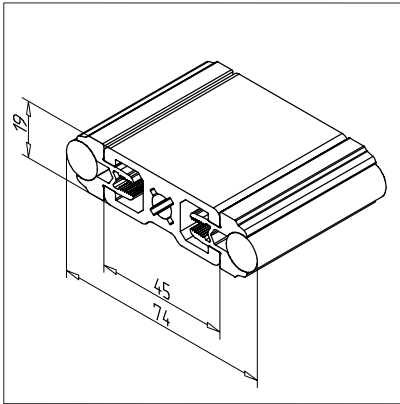
ASSEMBLY

- Fasten the rail with the countersunk screw M8 x 20 and the square nut M8 to the MiniTec profile
- Optional cover profile, **part no. 22.1160/0**
- The hole pattern is cut to size centrally. If a different edge distance is required, please specify dimension A. Additional hole spacing is also possible

Part No. 28.0119/0

Rail 19

Part No. 28.0009/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 19 x 45
- On both sides with shaft supporting profile and shafts $\varnothing 12$ h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0009/3**
- Weight = 3,666 kg/m
- Bar length = 6 m

APPLICATIONS

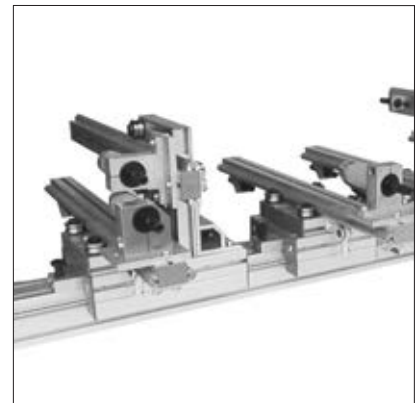
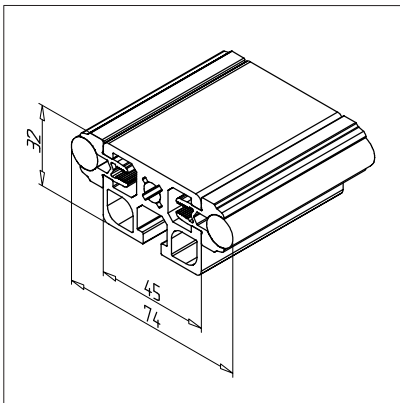
- Linear and column guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 32

Part No. 28.0010/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 32 F
- On both sides with shaft supporting profile and shafts $\varnothing 12$ h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0010/3**
- Weight = 4,161 kg/m
- Bar length = 6 m

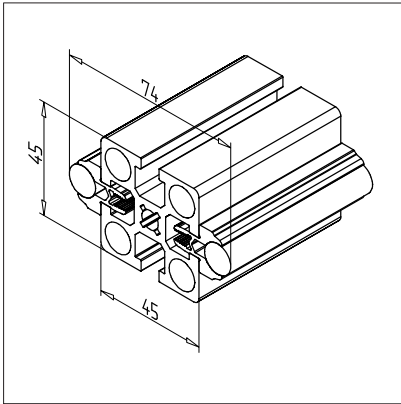
APPLICATIONS

- Linear and column guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 45



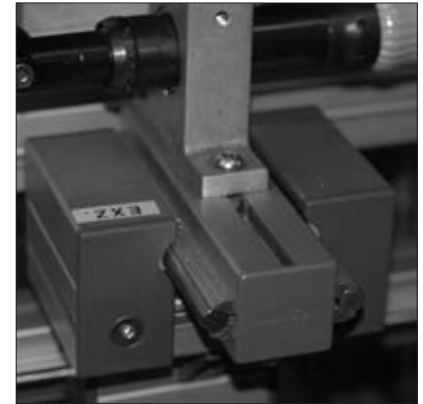
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- On both sides with shaft supporting profile and shafts $\varnothing 12$ h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0006/3**
- Weight = 4,796 kg/m
- Bar length = 6 m



APPLICATIONS

- Linear and column guides
- Longer rails with composite shafts possible

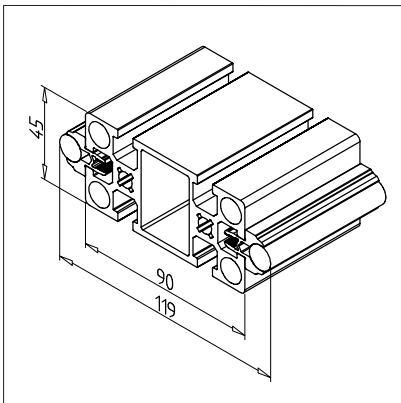


Part No. 28.0006/0

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 45 x 90 F



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 90
- On both sides with shaft supporting profile and shafts $\varnothing 12$ h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0007/3**
- Weight = 6,190 kg/m
- Bar length = 6 m



APPLICATIONS

- Linear and column guides
- Longer rails with composite shafts possible



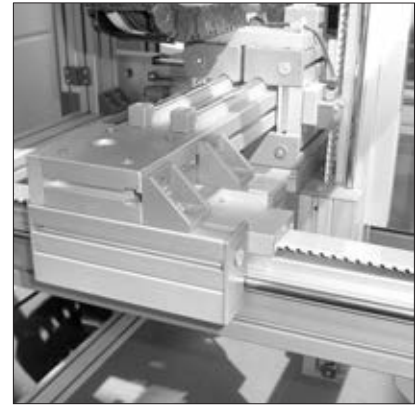
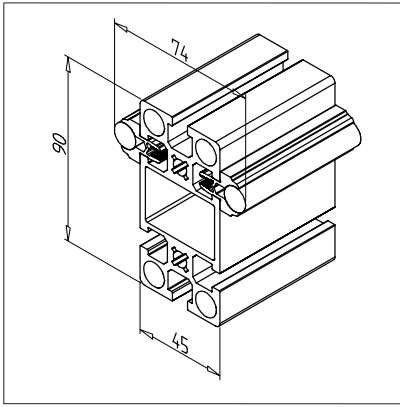
Part No. 28.0007/1

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 45 x 90 H

Part No. 28.0007/2



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 90
- On both sides with shaft supporting profile and shafts $\varnothing 12$ h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0007/4**
- Weight = 6,190 kg/m
- Bar length = 6 m

APPLICATIONS

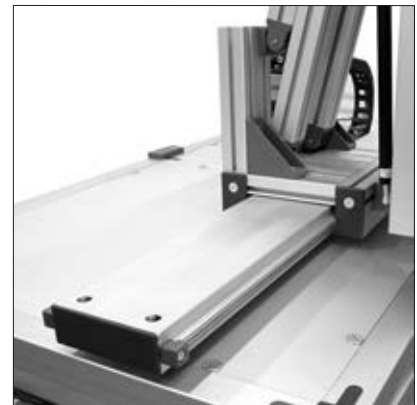
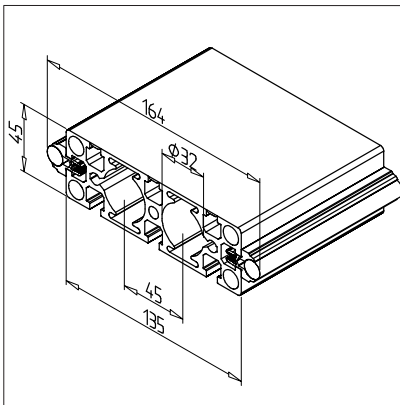
- Linear and column guides
- Belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 135 F

Part No. 28.0012/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 X 135 1G
- On both sides with shaft supporting profile and shafts $\varnothing 12$ h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0012/3**
- Weight = 8,09 kg/m
- Bar length = 6 m

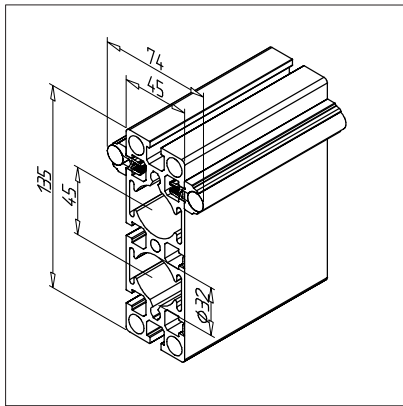
APPLICATIONS

- Linear and column guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 135 H



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 X 135 1G
- On both sides with shaft supporting profile and shafts Ø 12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0012/4**
- Weight = 8,09 kg/m
- Bar length = 6 m



APPLICATIONS

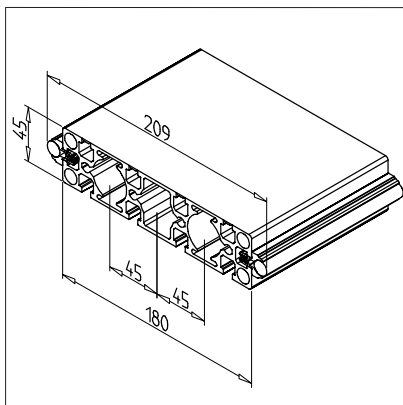
- Linear and column guides
- Longer rails with composite shafts possible



ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 45 x 180 F



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 X 180 1G
- On both sides with shaft supporting profile and shafts Ø 12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0013/3**
- Weight = 9,466 kg/m
- Bar length = 6 m



APPLICATIONS

- Linear and column guides
- Longer rails with composite shafts possible



ASSEMBLY

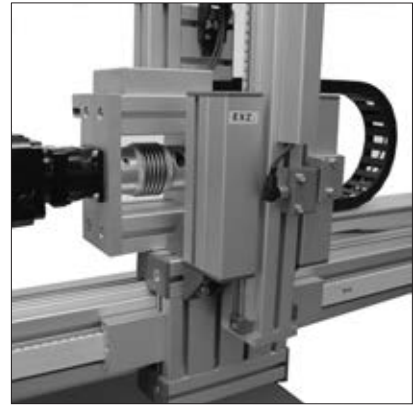
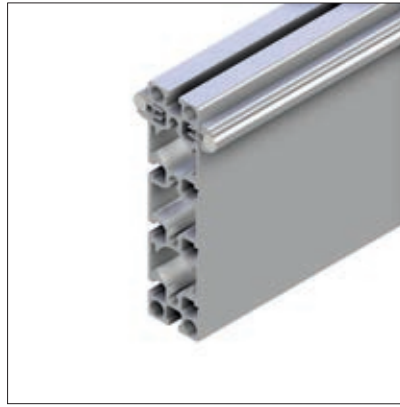
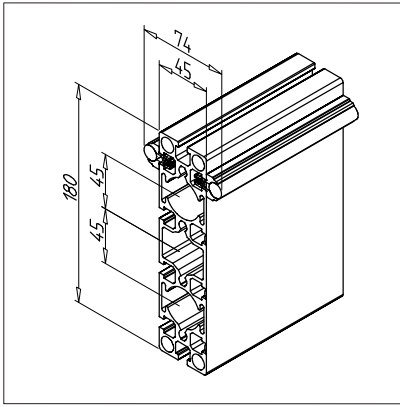
- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Part No. 28.0012/2

Part No. 28.0013/1

Rail 45 x 180 H

Part No. 28.0013/2



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 X 180 1G
- On both sides with shaft supporting profile and shafts Ø 12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0013/4**
- Weight = 9,466 kg/m
- Bar length = 6 m

APPLICATIONS

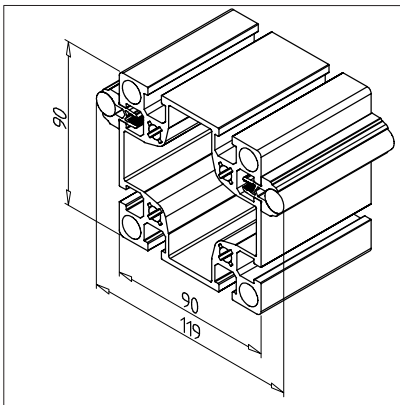
- Linear and column guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 90

Part No. 28.0008/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 x 90 L
- On both sides with shaft supporting profile and shafts Ø 12 h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0008/3**
- Weight = 7,88 kg/m
- Bar length = 6 m

APPLICATIONS

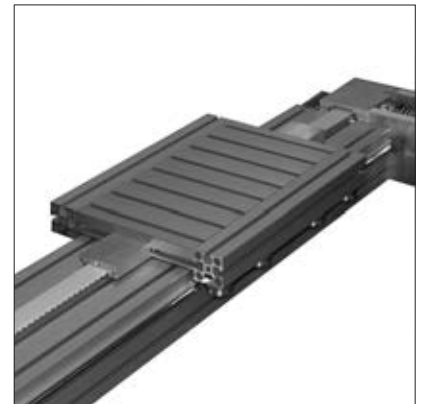
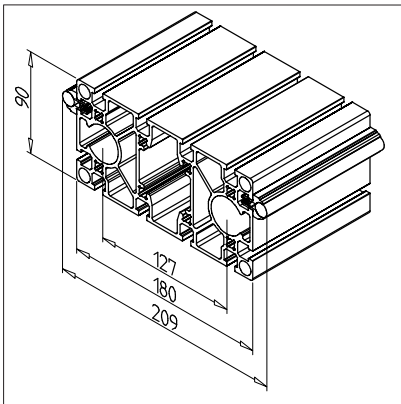
- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 180 F

Part No. 28.0011/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 180 S
- On both sides with shaft supporting profile and shafts $\varnothing 12$ h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0011/3**
- Weight = 14,516 kg/m
- Bar length = 6 m

APPLICATIONS

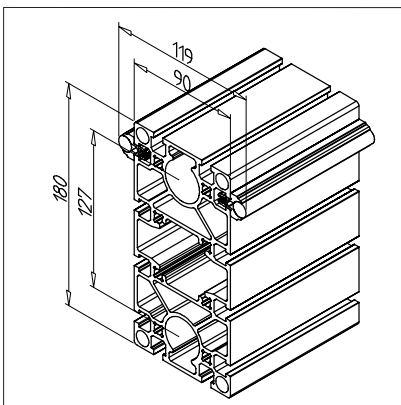
- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail 180 H

Part No. 28.0011/2



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 180 S
- On both sides with shaft supporting profile and shafts $\varnothing 12$ h6, pre-finished installed
- Without end caps
- Stainless version **part no. 28.0011/4**
- Weight = 14,516 kg/m
- Bar length = 6 m

APPLICATIONS

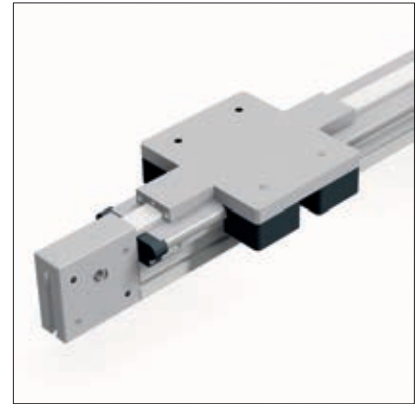
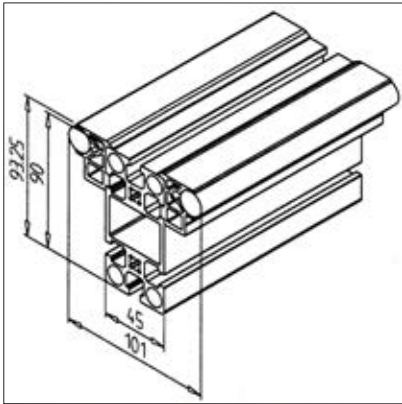
- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail LR16- 45 x 90 H

Part No. 28.0820/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 90
- On both sides with shaft carrier profile LR 16 and shafts \varnothing 16 h6, installed pre-assembled
- Without end caps
- Weight = 7,979 kg/m
- Bar length = 6 m

APPLICATIONS

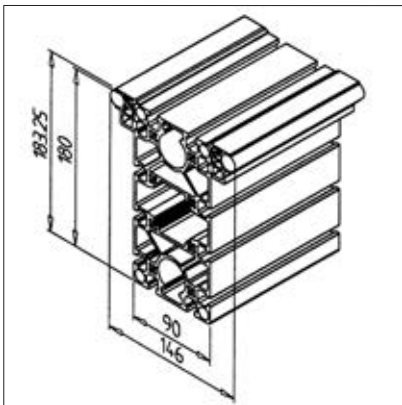
- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0** and **part no. 28.0809/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail LR16- 90 x 180 H

Part No. 28.0822/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 180 S
- On both sides with shaft carrier profile LR 16 and shafts \varnothing 16 h6, installed pre-assembled
- Without end caps
- Weight = 16,278 kg/m
- Bar length = 6 m

APPLICATIONS

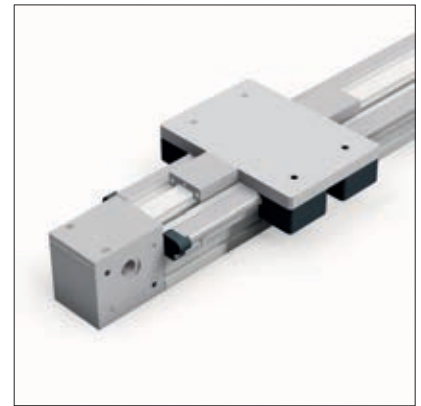
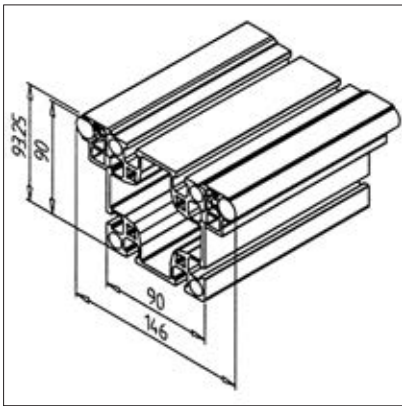
- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0** and **part no. 28.0809/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Rail LR16 - 90

Part No. 28.0821/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 x 90 L
- On both sides with shaft carrier profile LR 16 and shafts $\varnothing 16$ h6, installed pre-assembled
- Without end caps
- Weight = 10,067 kg/m
- Bar length = 6 m

APPLICATIONS

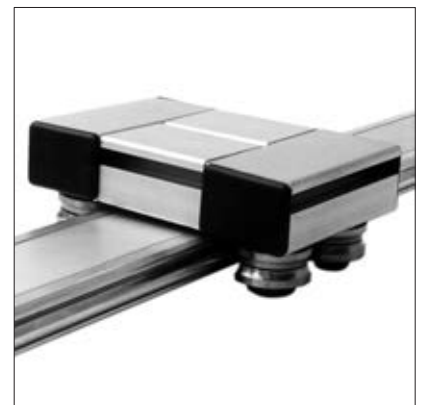
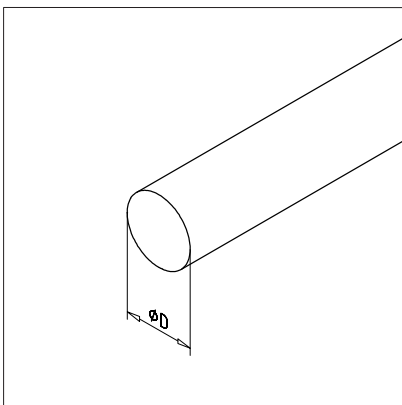
- Linear and column guides for high load
- Belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0** and **part no. 28.0809/0**
- To use shaft locking devices on both sides, the shaft and shaft carrier should be at least 30 mm shorter than the total length

Shaft D 12 mm, h6 CF 53

Part No. 17.1741/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, pulled, hardened, polished
- Cf.53, hardened to 62 ± 4 HRC, polished h6
- Stainless version **part no. 17.1741/1**
- Weight = 0.888 kg/m
- Bar length = 6 m

APPLICATIONS

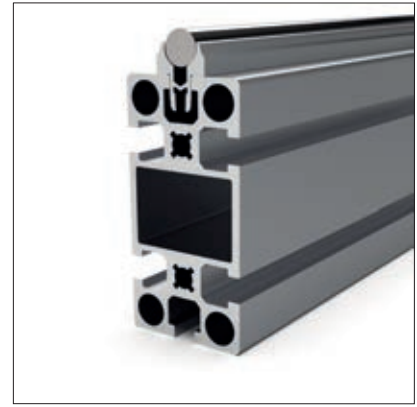
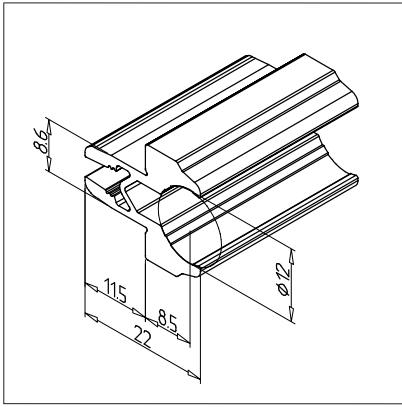
- All MiniTec-linear guides LR 12
- Linear guides with ball or sliding bushings
- Mechanical elements or drive elements

ASSEMBLY

- Press shaft into supporting profile with appropriate tool (plastic mallet)
- For guides $L > 6000$ mm assemble shaft with offset joints

Shaft supporting profile LR 12

Part No. 28.0002/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.370 kg/m
- Bar length = 6 m

APPLICATIONS

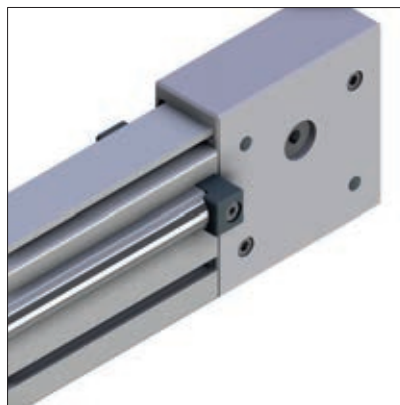
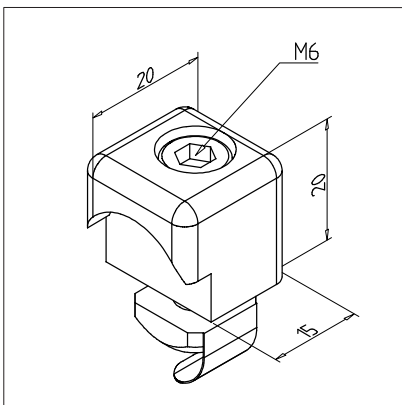
- MiniTec linear guides LR/LG

ASSEMBLY

- Press into the groove of rail profile
- If necessary clamp with set screw M5 x 10 in position
- Hammer the shaft into the rod holder profile with a plastic hammer

Shaft retention device

Part No. 28.0052/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Stainless version **part no. 28.0053/0**
- Weight = 0.026 kg/piece

APPLICATIONS

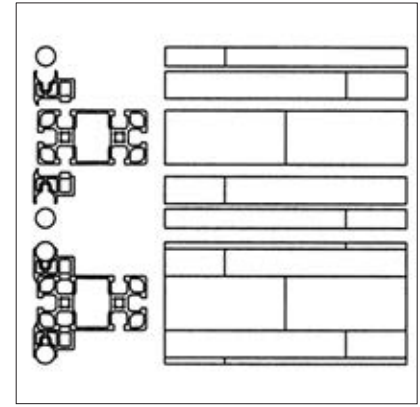
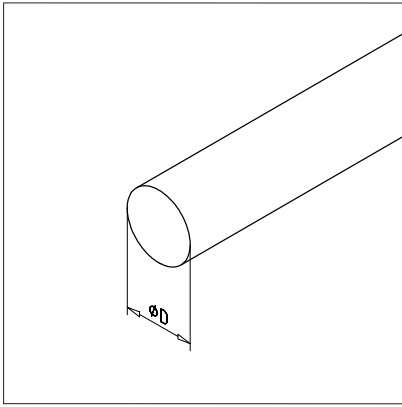
- Axial fastening of shafts in dynamically stressed linear guides

ASSEMBLY

- Fasten the retention device at both shaft ends with fastening kit
- No machining required
- The shaft carrier profile and shafts must be 15 mm shorter than the carrier profile

Shaft D 16 mm, h6 CF 53

Part No. 17.1743/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, pulled, hardened, polished
- Cf.53, hardened to 62 ± 4 HRC, polished h6
- Weight = 1.587 kg/m
- Bar length = 6 m

APPLICATIONS

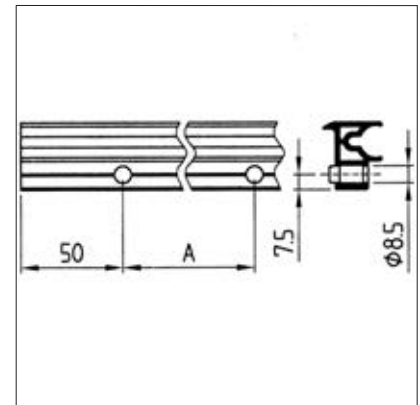
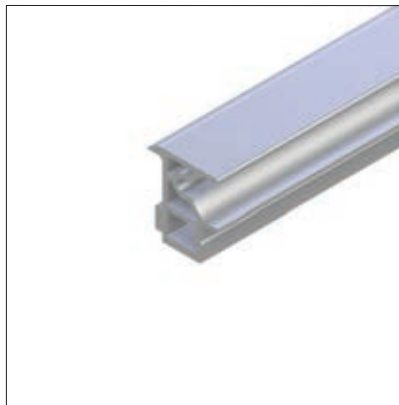
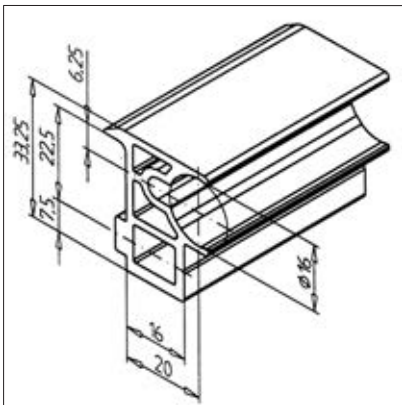
- MiniTec linear guide LR 16
- Linear guides with ball or sliding bushings
- Mechanical elements or drive elements

ASSEMBLY

- Press shaft into supporting profile with appropriate tool (plastic mallet)
- For guides $L > 6000$ mm assemble shaft with offset joints

Shaft supporting profile LR 16

Part No. 28.0019/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Please order design with bore at **part no. 28.0019/1**
grid dimension $A = 250$ mm
- Weight = 0.845 kg/m
- Bar length = 6 m

APPLICATIONS

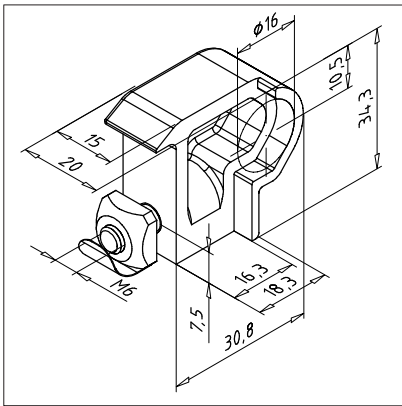
- MiniTec linear guide LR16

ASSEMBLY

- Bore $\phi 8.5$ in the shaft supporting profile
- Recommended distance: 50 mm from the edge, then approximately every 200 - 300 mm
- Fasten to the support profile using cylinder screw M8 x 30 and sliding nut M8
- Hammer the shaft into the rod holder profile with a plastic hammer

Shaft retention device left LR 16

Part No. 28.0809/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.037 kg/piece

APPLICATIONS

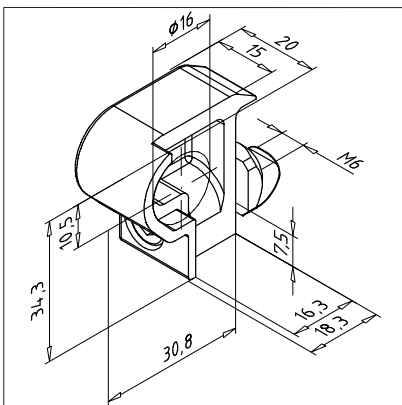
- Axial fastening of shafts in dynamically stressed linear guides

ASSEMBLY

- Fasten the retention device at both shaft ends with fastening kit
- No machining required
- The shaft carrier profile and shafts must be 15 mm shorter than the carrier profile

Shaft retention device right LR 16

Part No. 28.0808/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With fastening material steel, zinc plated
- Weight = 0.037 kg/piece

APPLICATIONS

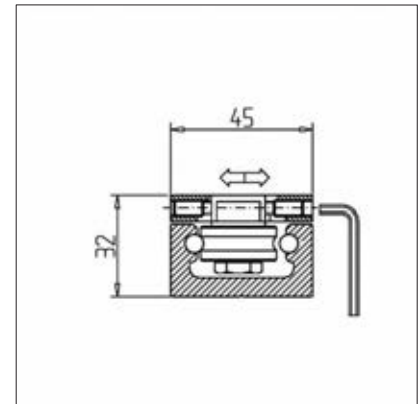
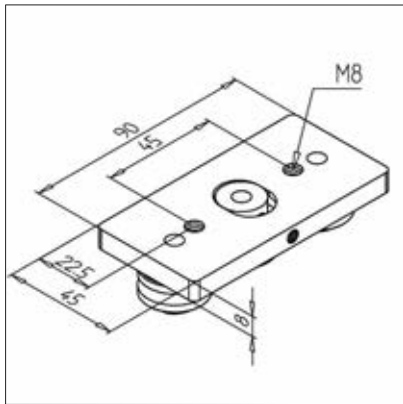
- Axial fastening of shafts in dynamically stressed linear guides

ASSEMBLY

- Fasten the retention device at both shaft ends with fastening kit
- No machining required
- The shaft carrier profile and shafts must be 15 mm shorter than the carrier profile

Slide LR 6 compact

Part No. 28.0140/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 3 double row casters LR 6
- Installed with concentric mounting bolts
-

Corrosion-resistant version Part no. 28.0148/0

- Weight = 0.194 kg/piece

APPLICATIONS

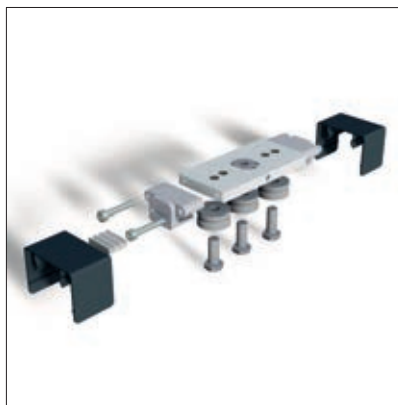
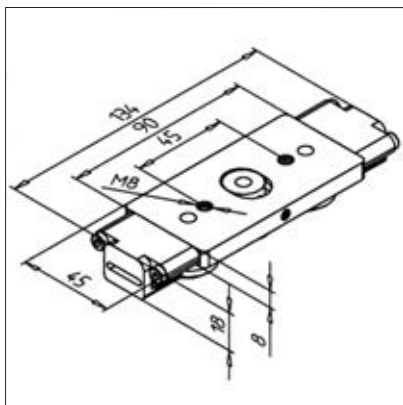
- MiniTec linear guide systems LR 6
- Handling devices
- Guide large drawers
- Doors
- Rail part no. 28.0119/0

ASSEMBLY

- Slip slide onto rail
- Adjust casters with an Allen wrench SW 2.5 free play

Slide LR 6 Z compact

Part No. 28.0520/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Aluminum carriage plate, machined on all sides
- 3 double row casters LR 6
- Installed with concentric mounting bolts
- Stainless version part no. 28.0524/0
- Weight = 0.192 kg/piece

APPLICATIONS

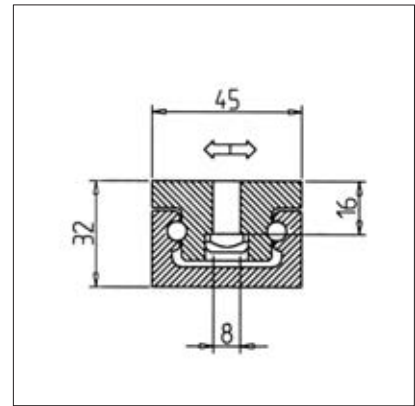
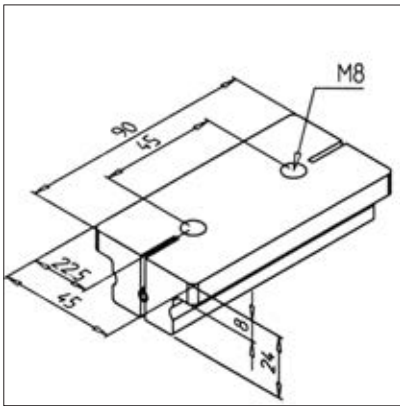
- MiniTec linear guide systems LR 6
- Material-handling in areas with shortage of space
- Fitting rail LR6 compact part no. 28.0119/0 and Timing belt pulley LR6

ASSEMBLY

- Slip slide onto rail
- Set the caster wheel with Allen wrench SW2 SW2.5 without play
- Set up the load to be carried on existing threads M8

Slide LR 6 compact

Part No. 28.0127/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- With square nut M8, steel zinc plated
- Weight = 0.068 kg/piece

APPLICATIONS

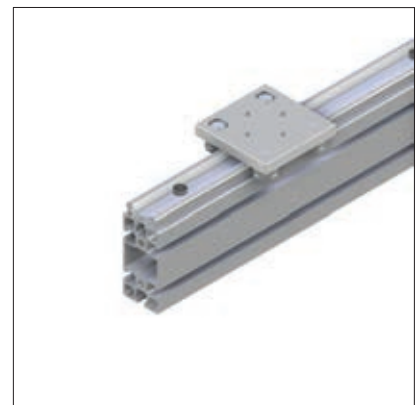
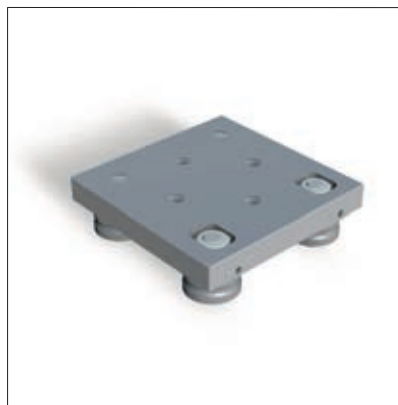
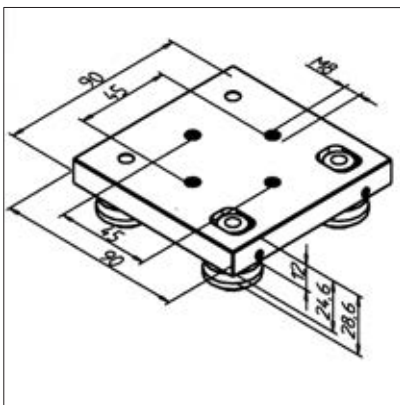
- Handling devices
- Guide large drawers
- Doors
- Rail **part no. 28.0119/0**

ASSEMBLY

- Slip slide onto rail
- Adjust slide clearance with hexagon key

Slide LR 6

Part No. 28.0138/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 4 double row casters LR 6
- Installed with concentric mounting bolts
- Stainless version **part no. 28.0139/0**
- Weight = 0.400 kg/piece

APPLICATIONS

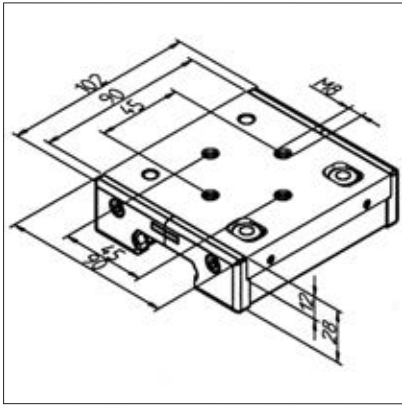
- MiniTec linear guide systems LR 6
- Handling devices
- Doors
- For rail **part no. 28.0525/0**

ASSEMBLY

- Slip slide onto rail
- Adjust casters with an Allen wrench SW 2.5 free play
- Tighten casters with 15 Nm
- When used in extreme environment, use slide LR6 with cover, **part no. 28.0138/1**

Slide LR 6 with cover

Part No. 28.0138/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 4 double row casters LR 6
- Installed with concentric mounting bolts
- Covers with lubricating felt
- Stainless version **part no. 28.0139/1**
- Weight = 0.458 kg/piece

APPLICATIONS

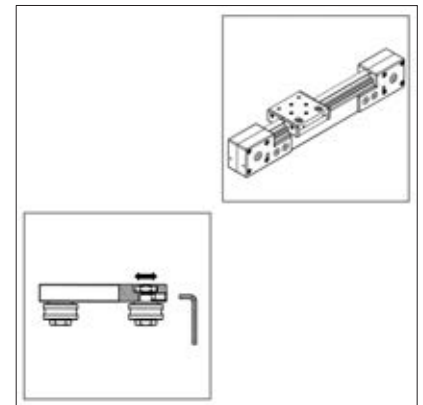
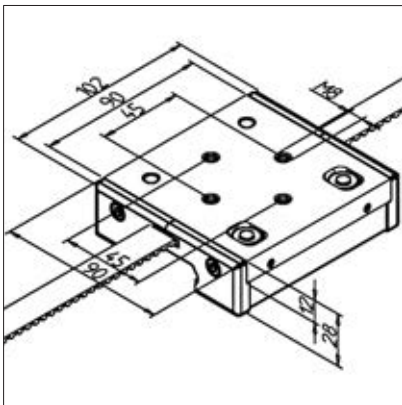
- MiniTec linear guide systems LR 6
- Handling devices
- Guide large drawers
- Doors
- For rail **part no. 28.0525/0**

ASSEMBLY

- Slip slide onto rail
- Adjust casters with an Allen wrench SW 2.5 free play
- Tighten casters with 15 Nm
- Saturate greasing felts with appropriate oil

Slide LR 6 Z

Part No. 28.0138/2



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 4 double row casters LR 6
- Installed with concentric mounting bolts
- Covers with lubricating felt
- Integrated admission for timing belts
- Stainless version **part no. 28.0139/2**
- Weight = 0.502 kg/piece

APPLICATIONS

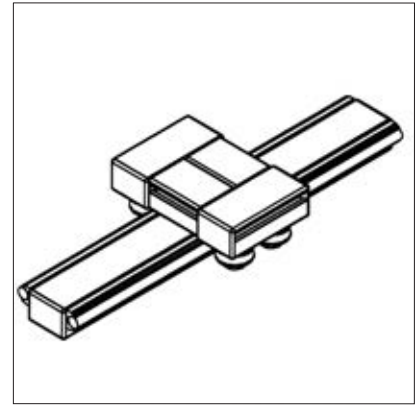
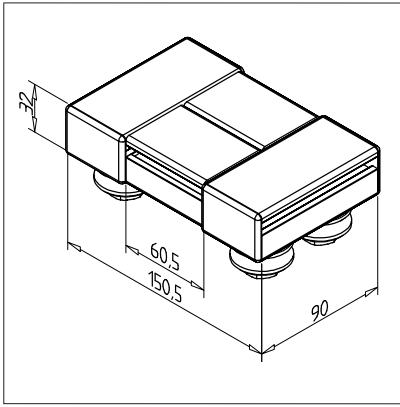
- MiniTec linear guide systems LR 6
- Handling devices
- For rail **part no. 28.0525/0**

ASSEMBLY

- Slip slide onto rail
- Adjust casters with an Allen wrench SW 2.5 free play
- Tighten casters with 15 Nm
- Insert the timing belt into the vehicle and fasten it
- Installed cover caps

Slide LW 32

Part No. 28.0088/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps
- Stainless version **part no. 28.0088/1**
- Weight = 1.060 kg/piece

APPLICATIONS

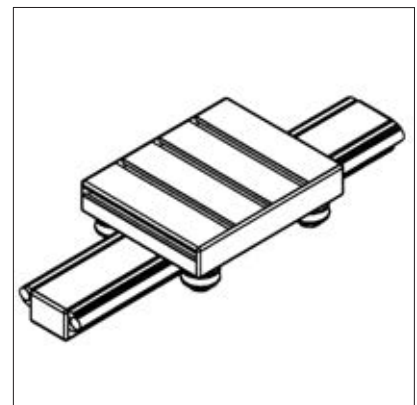
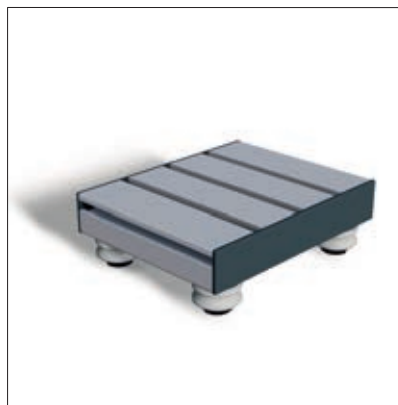
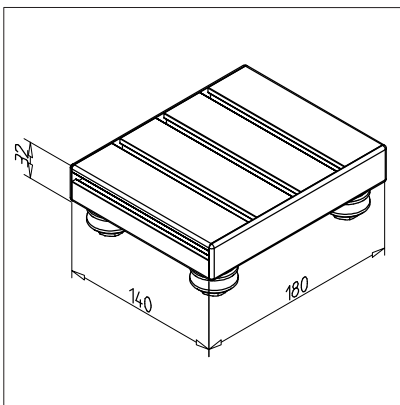
- Handling devices
- Measuring devices
- Slide units
- For rails 19 and 32

ASSEMBLY

- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

Slide LW 32-E

Part No. 28.0089/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps
- Stainless version **part no. 28.0089/1**
- Weight = 1.920 kg/piece

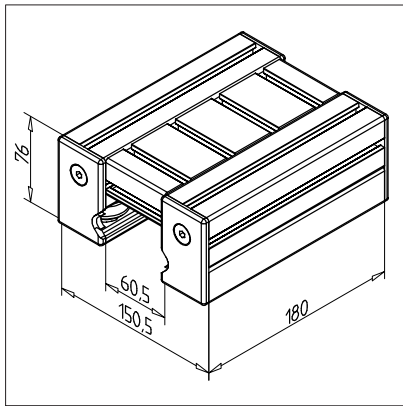
APPLICATIONS

- 1- or multi-axis guides
- Handling devices
- Measuring devices
- For rails 19 and 32

ASSEMBLY

- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

Slide LW 45



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps LR and 2 cover profiles LR
- Stainless version **part no. 28.0091/3**
- Weight = 2.260 kg/piece



APPLICATIONS

- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 45, 45 x 90 H, 45 x 180 H and 135 H

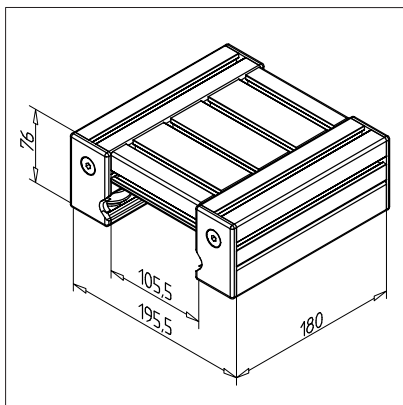
Part No. 28.0091/0



ASSEMBLY

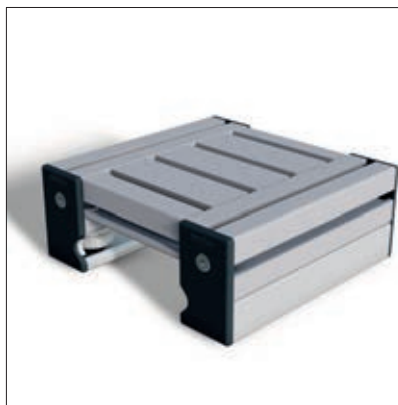
- Assemble slide on rail 45 or 45 x 90 H, adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

Slide LW 90



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Stainless version **part no. 28.0092/2**
- Weight = 2.720 kg/piece



APPLICATIONS

- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 45 x 90 F, 90 x 90, 90 x 180 H

Part No. 28.0092/0

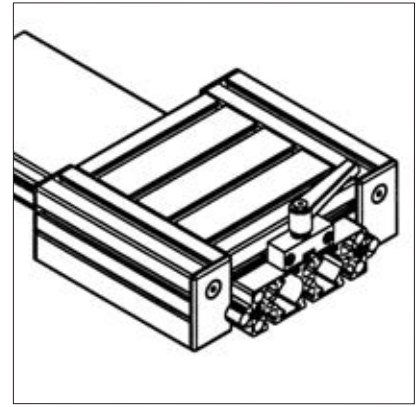
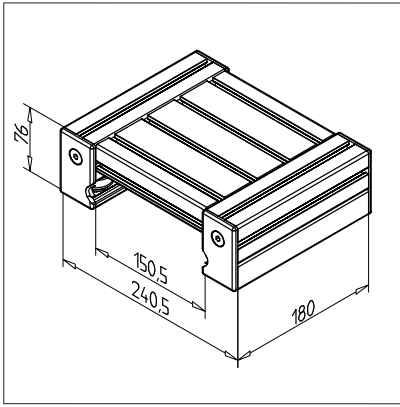


ASSEMBLY

- Assemble slide on rail 45 x 90 F, rail 90 or rail 90 x 180 H; adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

Slide LW 135

Part No. 28.0084/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Stainless version **part no. 28.0084/1**
- Weight = 3.150 kg/piece

APPLICATIONS

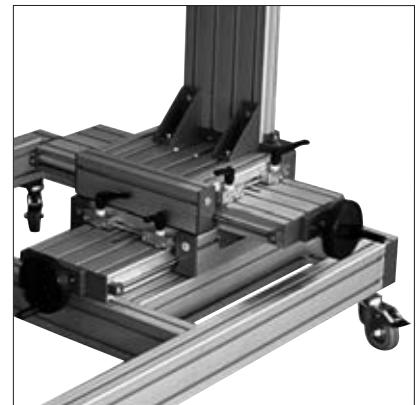
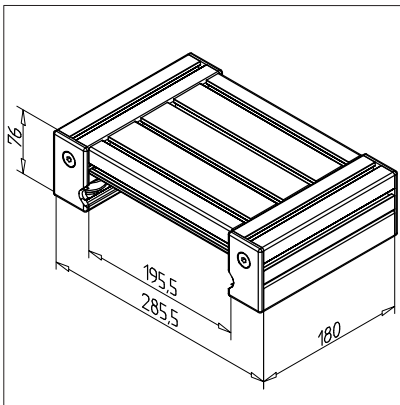
- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 135 F

ASSEMBLY

- Assemble slide on rail 45 x 135; adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

Slide LW 180

Part No. 28.0087/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Stainless version **part no. 28.0087/1**
- Weight = 3.590 kg/piece

APPLICATIONS

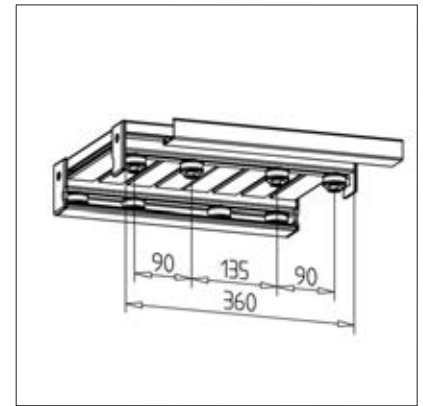
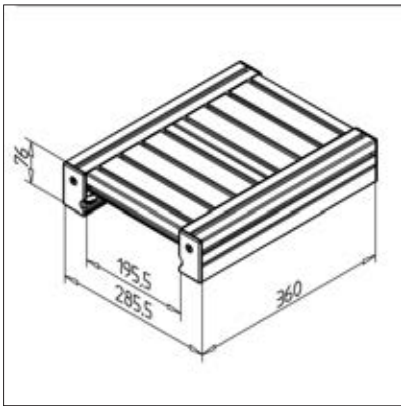
- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 45 x 180 F and 90 x 180 F

ASSEMBLY

- Assemble slide on rail 90 x 180; adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

Slide LW 180 with 8 bearings

Part No. 28.0087/3



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- With 8 concentric and 8 eccentric bearing units
- End caps LR and Cover profiles LR
- Stainless version **part no. 28.0087/1**
- Weight = 7.379 kg/piece

APPLICATIONS

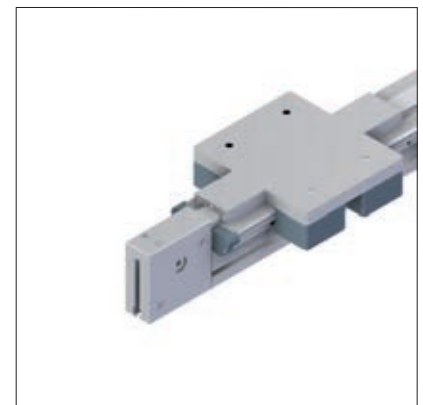
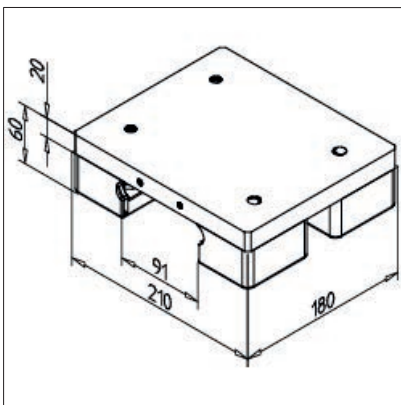
- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rails 45 x 180 F and 90 x 180 F

ASSEMBLY

- Assemble slide on rail 90 x 180; adjust clearance with eccentric bush
- Install the cover and lubrication system
- Slide clamping unit **part no. 28.0270/0**

Slide LR 16 - 45

Part No. 28.0810/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- 2 concentric and 2 eccentric bearing units
- Weight = 3.663 kg/piece

APPLICATIONS

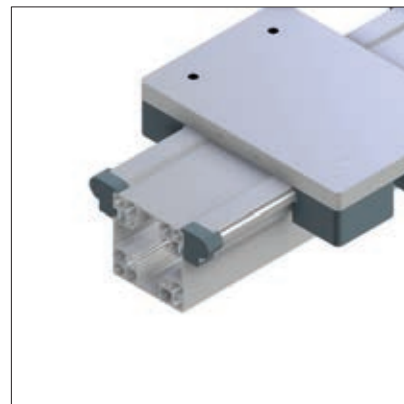
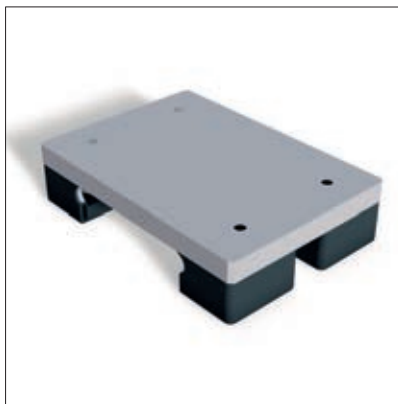
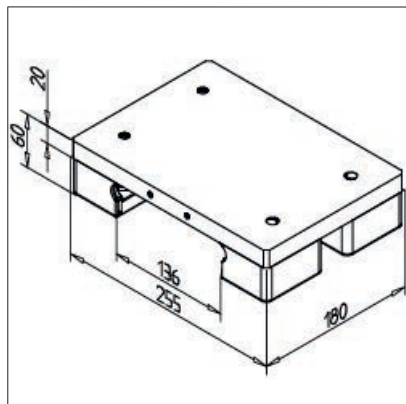
- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rail LR16 45 x 90 H

ASSEMBLY

- Push the trolley onto the rails, adjust for zero play with eccentric fastening set
- Install the cover and lubrication system

Slide LR 16 - 90

Part No. 28.0811/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 concentric and 2 eccentric bearing units
- Weight = 4.101 kg/piece

APPLICATIONS

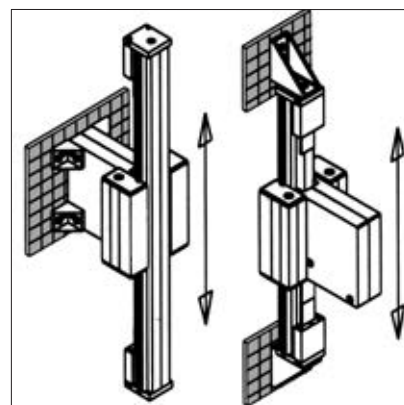
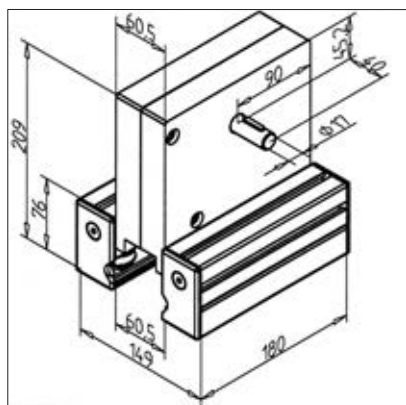
- 1- or multi-axis guides
- Linear robots
- Handling devices
- Measuring devices
- For rail LR16 90 and LR16 90x180 H

ASSEMBLY

- Push the trolley onto the rails, adjust for zero play with eccentric fastening set
- Install the cover and lubrication system

Belt drive 45

Part No. 28.0248/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Shaft end \varnothing 17 mm for motor connection
- 2 idler pulleys aluminium, integrated in linear slide LW 45
- Weight = 6.320 kg/piece

APPLICATIONS

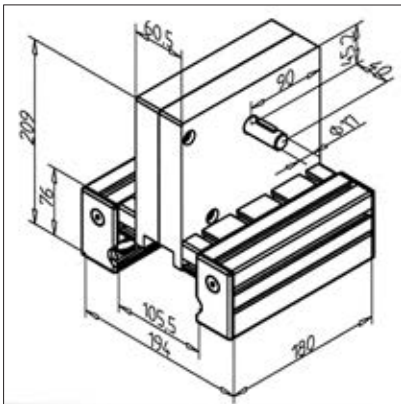
- MiniTec linear guides LR with extremely long travels, z-axis
- Use with rail 45, 45 x 90 H, 45 x 135 H and 45 x 180 H

ASSEMBLY

- Guide the timing belt through the timing belt drive, slide it onto the rail and adjust it without play
- Fix timing belt end to rail end with timing belt tensioner **part no. 28.0090/0** and fastening plate for rail 45 **part no. 28.0054/0** or for rail 45 x 90 H **part no. 28.0056/0**
- Tighten the timing belt
- Belt length: Rail length + 212 mm

Belt drive 90

Part No. 28.0249/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Shaft end \varnothing 17 mm for motor connection
- 2 idler pulleys aluminium, integrated in linear slide LW 90
- Weight = 6.789 kg/piece

APPLICATIONS

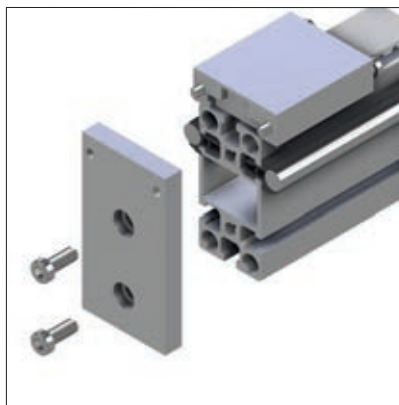
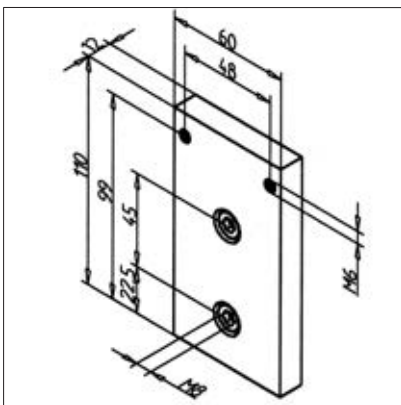
- MiniTec linear guides LR with extremely long travels, z-axis
- Use with rail 45 x 90 F, rail 90 or 90 x 180 H

ASSEMBLY

- Guide the timing belt through the timing belt drive, slide it onto the rail and adjust it without play
- Fix timing belt end to rail end with timing belt tensioner **part no. 28.0090/0** and fastening plate for rail 90 **part no. 28.0057/0** or for rail 45 x 90 F **part no. 28.0055/0**
- Tighten the timing belt
- Belt length: Rail length + 212 mm

Fastening kit 45/90H for timing belt tensioner

Part No. 28.0056/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.090 kg/piece

APPLICATIONS

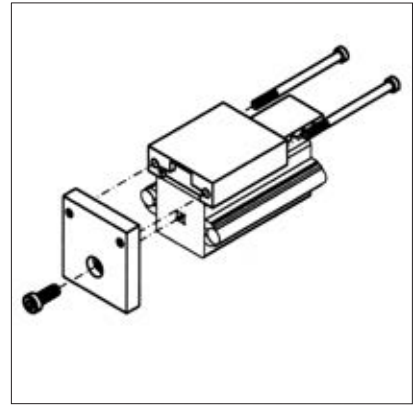
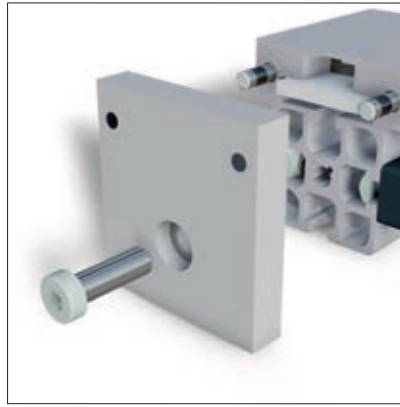
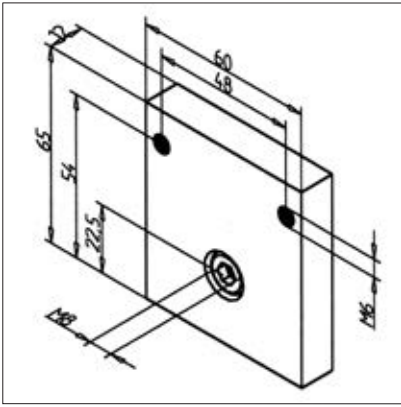
- For each timing belt tensioner one fastening kit is necessary
- Connection of timing belt tensioner to rail 45 x 90 H in connection with timing belt drive

ASSEMBLY

- Fasten with supplied hardware to the end of the rail, then introduce thread M8
- Install timing belt tensioner

Fastening kit 45 for timing belt tensioner

Part No. 28.0054/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.090 kg/piece

APPLICATIONS

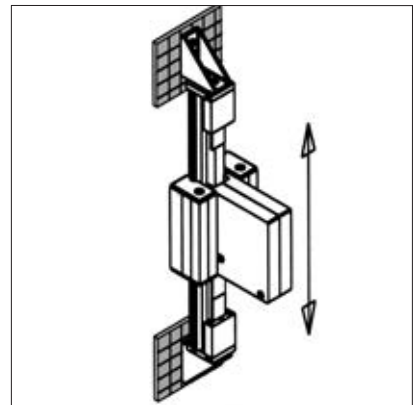
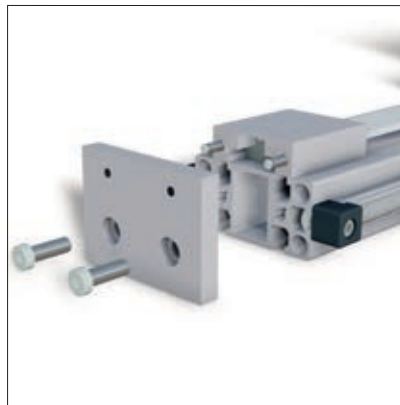
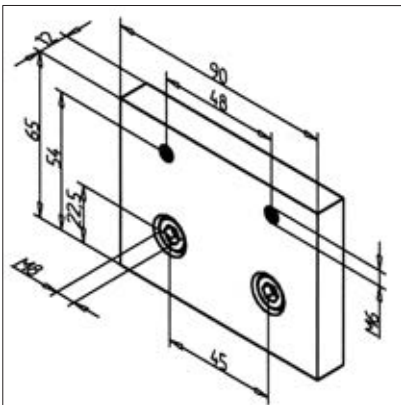
- In connection with belt drive
- For each timing belt tensioner one fastening kit is necessary
- Connection of timing belt tensioner to rail 45

ASSEMBLY

- Fasten with supplied hardware to the end of the rail, then introduce thread M8
- Install timing belt tensioner

Fastening kit 45/90F for timing belt tensioner

Part No. 28.0055/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.090 kg/piece

APPLICATIONS

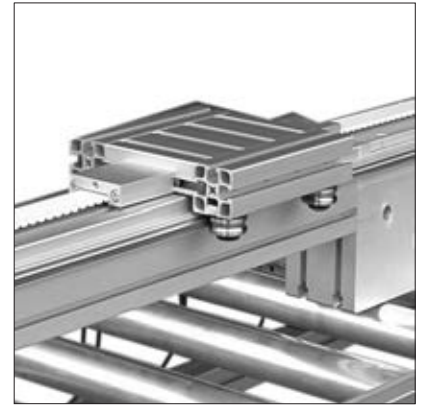
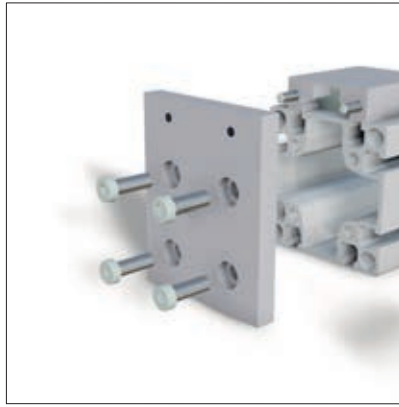
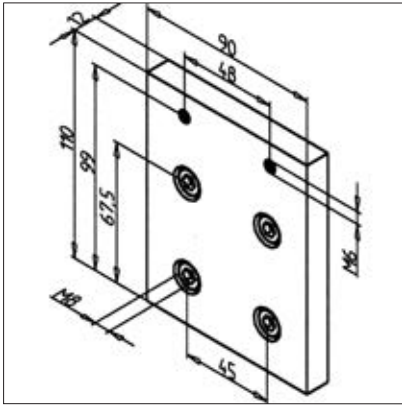
- For each timing belt tensioner one fastening kit is necessary
- Connection of timing belt tensioner to rail 45 x 90 F in conjunction with timing belt drive

ASSEMBLY

- Fasten with supplied hardware to the end of the rail, then introduce thread M8
- Install timing belt tensioner

Fastening kit 90 for timing belt tensioner

Part No. 28.0057/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With fastening material steel, zinc plated
- Weight = 0.090 kg/piece

APPLICATIONS

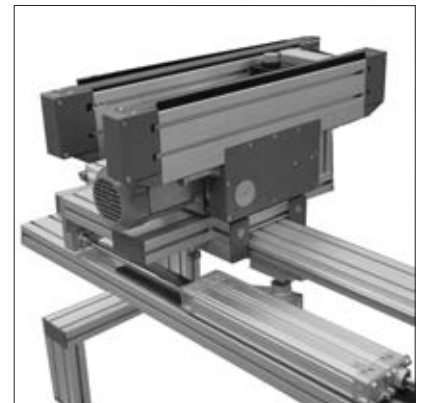
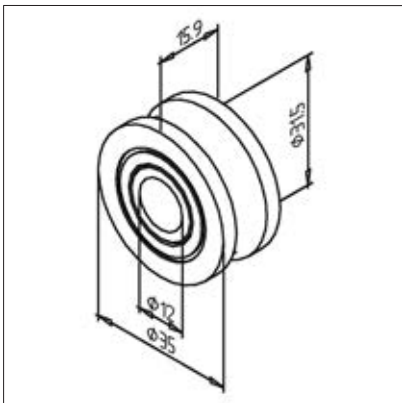
- For each timing belt tensioner one fastening kit is necessary
- Connection of timing belt tensioner to rail 90 in conjunction with timing belt drive

ASSEMBLY

- Fasten with supplied hardware to the end of the rail, then introduce thread M8
- Install timing belt tensioner

Ball bearing LR 12

Part No. 28.0001/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, hardened, polished
- 2-row angular ball bearing, wave groove executed as Gothic arch
- For shaft \varnothing 12 mm
- Rated loads:
dyn. C = 10.5 kN
stat. C₀ = 6.0 kN
- Stainless version **part no. 28.0001/1**
- Weight = 0.068 kg/piece

APPLICATIONS

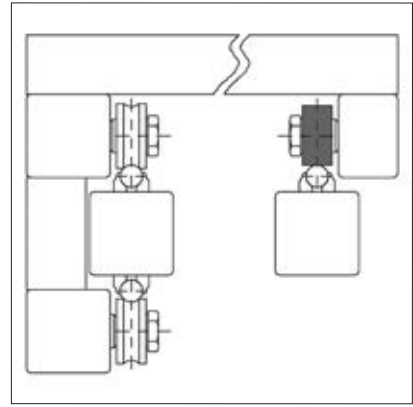
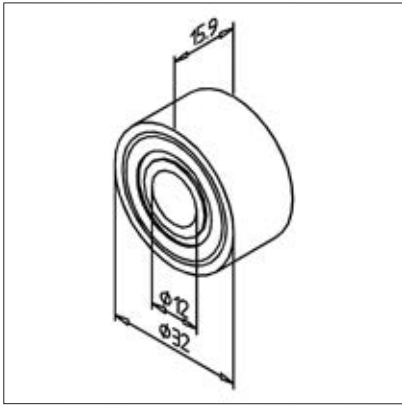
- All MiniTec-linear guides LR 12

ASSEMBLY

- Fastening kit LRK **part no. 28.0021/0** or LRE **part no. 28.0022/0**

Ball bearing LR 12 L

Part No. 28.0005/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, hardened, polished
- Double-row angular contact bearing
- Rated load:
dyn. C = 8.6 kN
stat. C₀ = 5.1 kN
- Weight = 0.053 kg/piece

APPLICATIONS

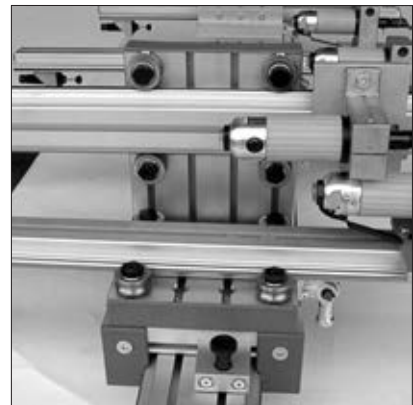
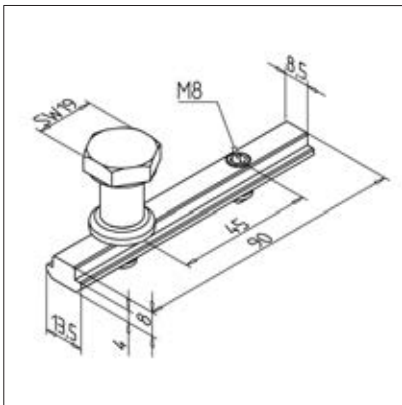
- Construction of MiniTec linear guidance systems with fixed and floating bearing block
- Compensation of distance deviations in parallel linear systems

ASSEMBLY

- Fastening kit LRK **part no. 28.0021/0** or LRE **part no. 28.0022/0**

Fastening kit LRK

Part No. 28.0021/0



TECHN. DATA / ITEMS SUPPLIED

- 1 T-slot bar, steel, zinc plated with set screw
- Bolt M8 concentric, steel, black bronze finish
- Spacer 3.5 mm, polished, steel, black bronze finish
- Stainless version **part no. 28.0021/1**
- Weight = 0.100 kg/piece

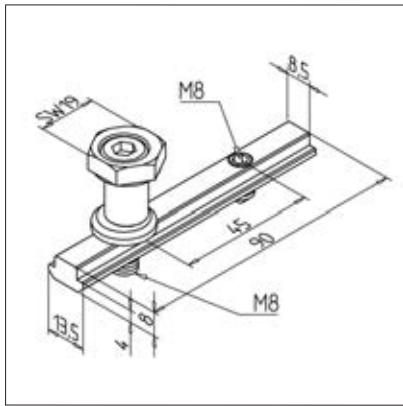
APPLICATIONS

- MiniTec-linear guides LR 12
- Concentric attachment of ball bearings LR 12

ASSEMBLY

- Fit the clamping strips into the underside of the profile of the carriage plate, the threaded pins being fastened into the center of the carriage
- The two threaded holes M8 without threaded pins are designed to receive the mounting bolts
- Pass the bolt through the bearing hole, place the spacer washer, and tighten with key SW 19 to the clamping strip
- Recommended torque: 25 Nm

Fastening kit LRE



TECHN. DATA / ITEMS SUPPLIED

- 1 T-slot bar, steel, zinc plated with set screw
- Eccentric bushing, steel, black bronze finish
- Bolt M8 concentric, steel, black bronze finish
- Spacer 3.5 mm, polished, steel, black bronze finish
- Stainless version **part no. 28.0022/1**
- Weight = 0.100 kg/piece



APPLICATIONS

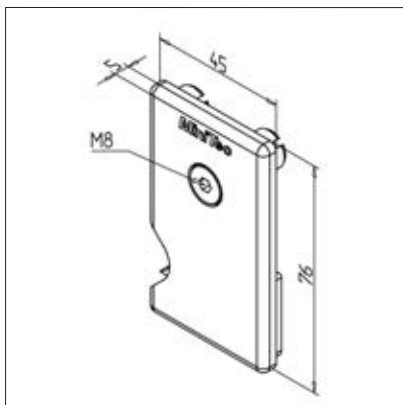
- MiniTec-linear guides LR 12
- Concentric attachment of ball bearings LR 12



ASSEMBLY

- Fit the clamping strip similar to LRK
- Insert bolt M8 into the eccentric bushing pre-installed in the bearing bore and place the spacer washer. Pre-tighten the bolt with the Allen wrench SW4 onto the clamping bar
- Adjust bush with ring spanner width 19 mm (turn for freedom from clearance with 0,9 - 1 Nm) and fix bolt
- Recommended torque: 25 Nm

End cap LR right grey



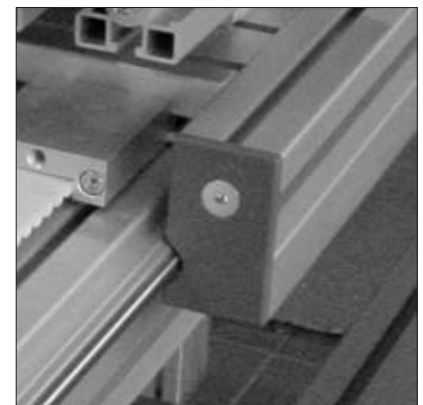
TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- With integrated, sprung wiping and lubrication felt
- Fastening kit
- Also available in black, **part no. 28.0004/0**
- Weight = 0.031 kg/piece



APPLICATIONS

- All MiniTec-linear guides LR 12

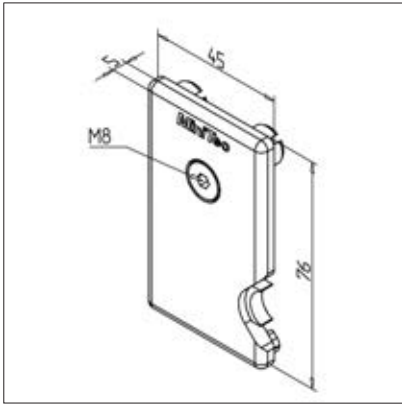


ASSEMBLY

- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate
- Fasten with supplied hardware
- Insert cover profile between the end caps
- Clean and soak felt according to implementation conditions or use a spare felt **part no. 28.0004/8**

End cap LR left grey

Part No. 28.0004/3



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- With integrated, sprung wiping and lubrication felt
- Fastening kit
- Also available in black, **part no. 28.0004/2**
- Weight = 0.031 kg/piece

APPLICATIONS

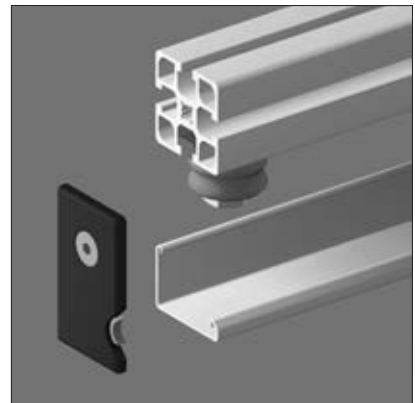
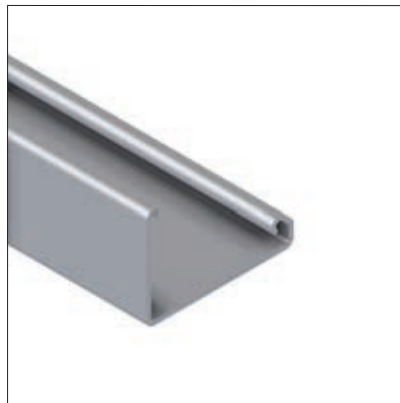
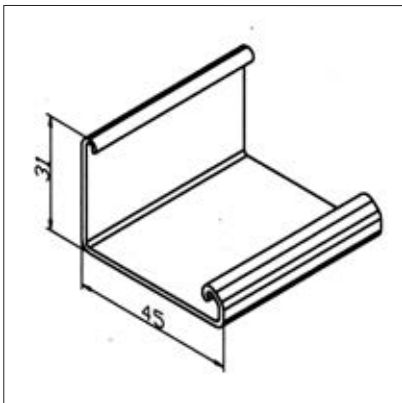
- All MiniTec-linear guides LR 12

ASSEMBLY

- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate
- Fasten with supplied hardware
- Insert cover profile between the end caps
- Clean and soak felt according to implementation conditions or use a spare felt **part no. 28.0004/8**

Cover profile LR

Part No. 28.0049/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Weight = 0.362 kg/m
- Bar length = 6 m

APPLICATIONS

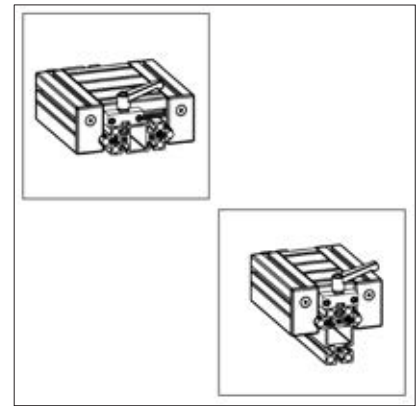
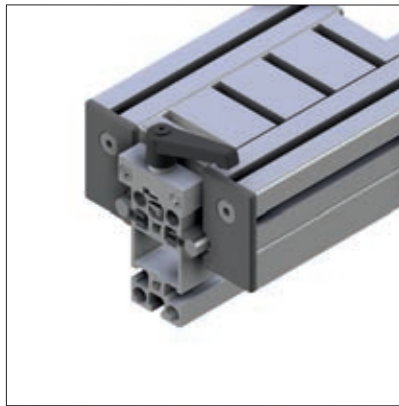
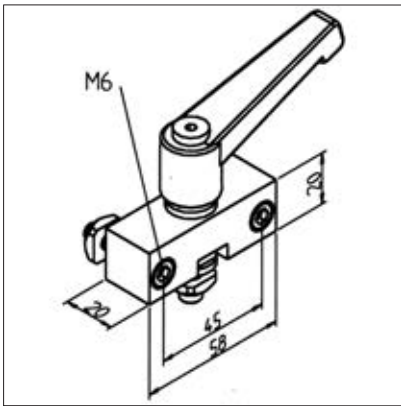
- MiniTec-linear guides LR 12

ASSEMBLY

- Cut profile according to the length of the slide
- Insert the cover profile between the end caps; insert the felts; fasten the end caps LR on the slide by means of the supplied screws

Slide clamping unit, top LWG / LWN / LW

Part No. 28.0270/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With clamping device
- With fastening material steel, zinc plated
- Weight = 0.199 kg/piece

APPLICATIONS

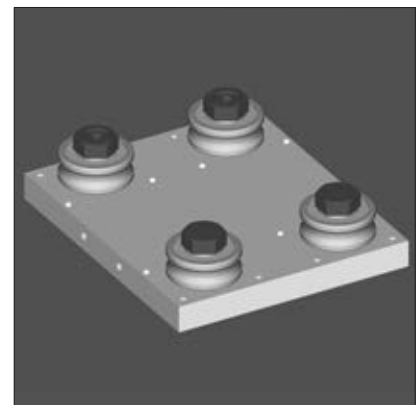
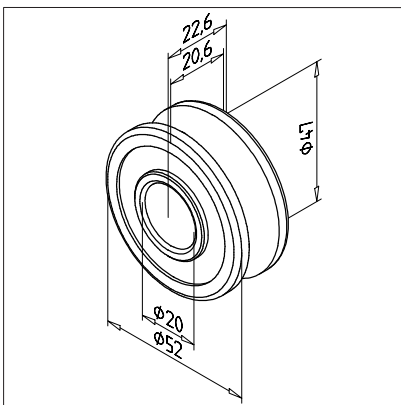
- Clamping of MiniTec slide LW and slides LWN / LWG on rail surface
- Clamping of MiniTec adjusting units

ASSEMBLY

- Preadjust clamping shaft and lead it in profile groove
- Insert plastic element
- Install the housing block
- Secure clamping lever with installation glue Loctite 243

Ball bearing LR 16

Part No. 50.1726/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, hardened, polished
- 2-row angular ball bearing, wave groove executed as Gothic arch
- For shaft $\varnothing 16$
- Rated load:
dyn. C = 13.75 kN
stat. C₀ = 9.05 kN
- Weight = 0.230 kg/piece

APPLICATIONS

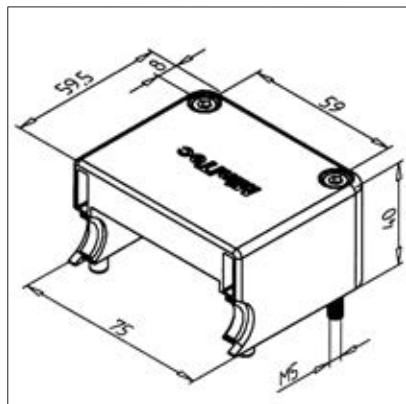
- MiniTec linear guide LR16

ASSEMBLY

- Fastening using concentric bolts, **part no. 28.0814/0** or adjustable with eccentric bushing **part no. 28.0813/0** and screw M 12x40 **part no. 21.1257/0**

End cap LR 16

Part No. 28.0815/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- With integrated, sprung wiping and lubrication felt
- With fastening material steel, zinc plated
- Weight = 0.075 kg/piece

APPLICATIONS

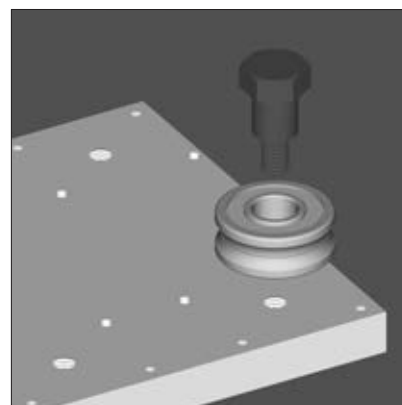
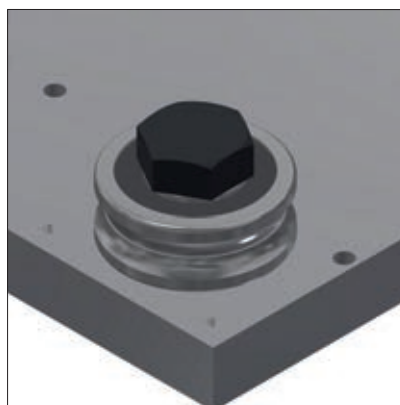
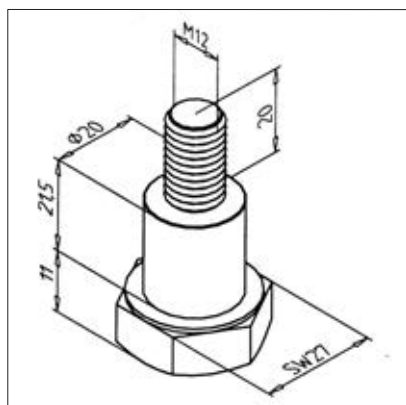
- MiniTec linear guide LR16

ASSEMBLY

- Fasten with supplied hardware
- Clean and soak fillet according to implementation conditions or spare fillet **part no. 28.0816/0**

Bolt concentric LR 16

Part No. 28.0814/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, burnished, black
- Bolt M12 concentric
- Weight = 0.121 kg/piece

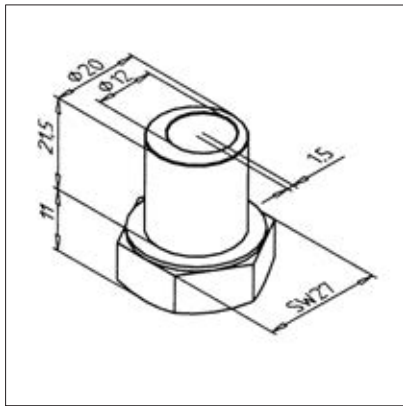
APPLICATIONS

- MiniTec linear guide LR16
- Concentric mounting of ball bearings LR 16

ASSEMBLY

- MiniTec linear guides LR 16
- Recommended torque: 50 Nm

Eccentric bushing LR 16



TECHN. DATA / ITEMS SUPPLIED

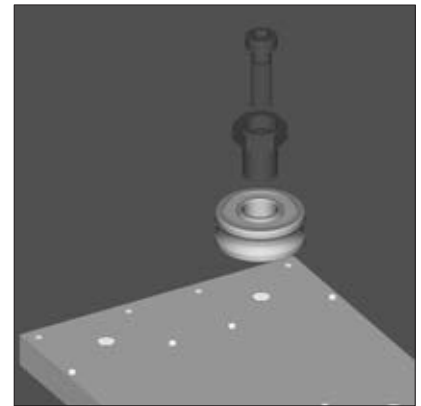
- Steel, burnished, black
- Weight = 0.059 kg/piece



APPLICATIONS

- MiniTec linear guide LR16
- Eccentric fastening of ball bearings LR 16

Part No. 28.0813/0

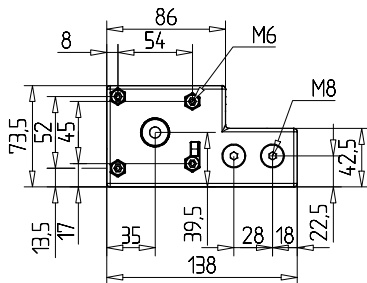
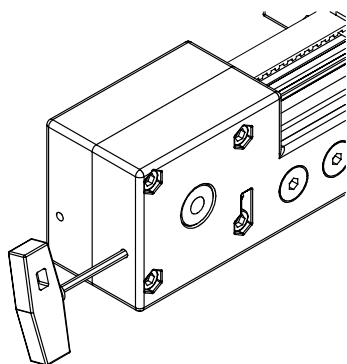
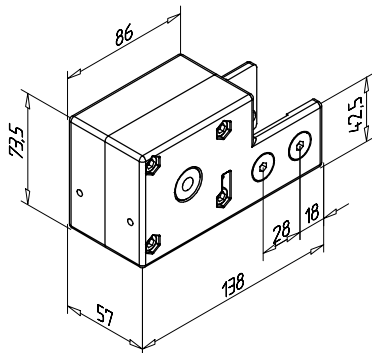


ASSEMBLY

- Screw M12 x 45 **part no. 21.1157/0** Insert in eccentric bushing and mount loose with bearing
- Adjust the bearing to achieve zero clearance by turning the eccentric bush with the spanner (size 27) (turn back to 0.9 - 1 Nm) and hold the eccentric bush in this position, tighten the bolt
- Recommended torque: 50 Nm

Timing belt pulley

LR 6 & LR 6 COMPACT



Techn. Data/Items supplied

- Aluminum GD, powder coated, grey
- Body complete with pulley

Application

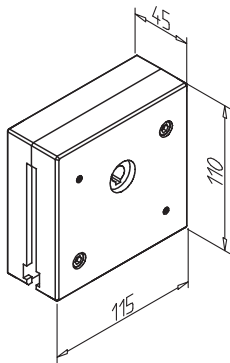
- For MiniTec linear guides LR 6 Z

Assembly

- Insert sliding nut M8 into rail and pre-position it
- Guide timing belt through deflection
- Slide the deflection onto the end of the rail
- Pre-assemble fastening screws
- Attach timing belt to slide with hexagon socket wrench SW3 to tension the deflection
- Tighten fixing screws

Drill hole for drive shaft	Keyway	Weight	Part no.	Part no. corrosion resistant design
Ø 8 mm		0,96 kg	28.0510/0	28.0509/0
Ø 10 mm	3 mm	0,96 kg	28.0510/1	28.0509/1
Ø 11 mm	4 mm	0,96 kg	28.0510/2	28.0509/2
Ø 12 mm	4 mm	0,96 kg	28.0510/4	28.0509/4
Ø 14 mm	5 mm	0,96 kg	28.0510/3	28.0509/3

T 45 (LR 12 + LR 16)



Technical Data/Items Supplied

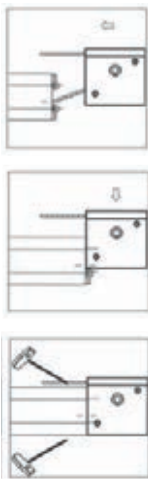
- Anodized aluminum E6/EV1
- Body complete with pulley
- 2 Precision ball bearings

Application

- For MiniTec Linear Guides LR 12 & LR 16, freely combinable

Assembly

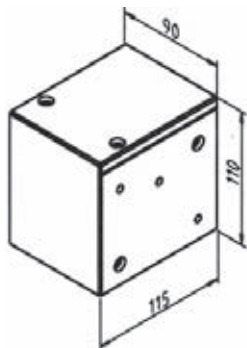
- Rail frontally provided at both ends with thread M8
- Power-lock Fastener Part no. 21.0818/0 screw in
- Guide timing belt through deflection
- Slide the deflector from above over the profile connector
- Tighten power-lock fastener
- Tighten timing belt
- For mounting use the corrosion resistant version power-lock fastener H Part no. 21.1018/1



Drill hole for drive shaft	Keyway	Weight	part no.	Part no. corrosion resistant design
without		1,170 kg	28.0614/0	28.0615/0
Ø 11 mm	4 mm	1,168 kg	28.0614/2	28.0615/2
Ø 12 mm	4 mm	1,168 kg	28.0614/6	28.0615/6
Ø 14 mm	5 mm	1,167 kg	28.0614/3	28.0615/3
Ø 15 mm	5 mm	1,165 kg	28.0614/5	28.0615/5
Ø 16 mm	5 mm	1,165 kg	28.0614/4	28.0615/4

For the connection of motors and encoders we can produce special adapter plates suitable for the application. Please refer part no. 28.0112/0

T 90 (LR 12 + LR 16)



Technical Data/Items Supplied

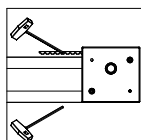
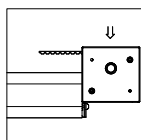
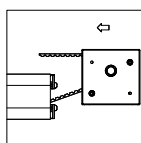
- Anodized aluminum E6/EV1
- Body complete with pulley
- 2 Precision ball bearings
- Top cover mounted

Application

- For MiniTec-linear guides LR 12, LR 16, LR 45 x 90 F, LR 90, LR 180,

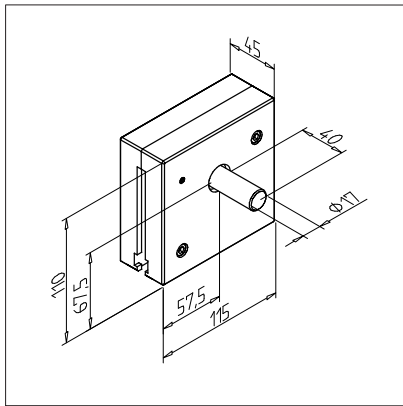
Assembly

- Rail frontally provided at both ends with thread M8
- Power-lock Fastener Part no. 21.0818/0 screw in
- Guide timing belt through deflection
- Slide the deflector from above over the profile connector
- Tighten profile connectors
- Tighten timing belt
- For mounting use the corrosion resistant version power-lock fastener H Part no. 21.1018/1



Drill hole for drive shaft	Keyway	Weight	part no.	Part no. corrosion resistant design
without		2,800 kg	28.0082/0	28.0045/0
Ø 11 mm	4 mm	2,798 kg	28.0082/2	28.0045/2
Ø 14 mm	5 mm	2,795 kg	28.0082/3	28.0045/3
Ø 16 mm	5 mm	2,789 kg	28.0082/4	28.0045/4
Ø 19 mm	6 mm	2,775 kg	28.0082/5	28.0045/5
Ø 20 mm	6 mm	2,773 kg	28.0082/7	28.0045/7
Ø 24 mm	8 mm	2,164 kg	28.0082/6	28.0045/6

Timing belt pulley T45 Z



TECHN. DATA / ITEMS SUPPLIED

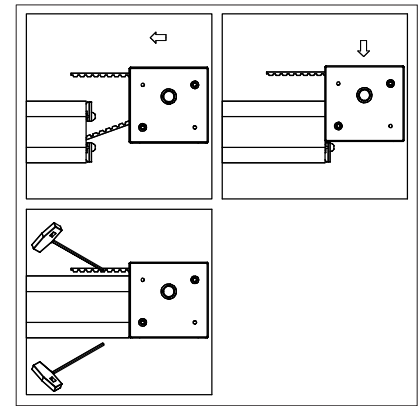
- Housing 2-piece, anodized aluminum
- Connection elements, steel, galvanised
- Aluminum pulley with stainless steel flanges for timing belt 32AT10 19 teeth, effective diameter 60.48 mm
Required toothed belt length within the deflection 210 mm
max. torque 70 Nm
- Base body complete with belt pulley and shaft stub
- Drive taps also available in different diameters, lengths and with keyways
- 2 ball-bearings
- Stainless version **part no. 28.0615/1**
- Weight = 1.369 kg/piece



APPLICATIONS

- All MiniTec linear guides

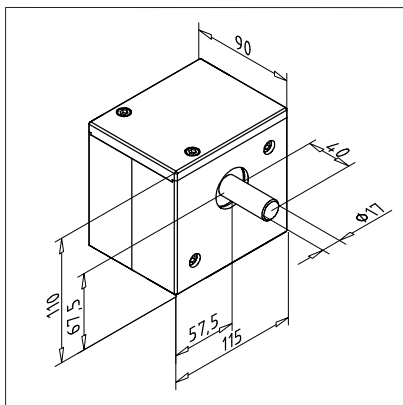
Part No. 28.0614/1



ASSEMBLY

- Provide rails with thread M8 at both sides, screw in Power lock fastener **part no. 21.1018/0**
- Guide the timing belt through the reverse unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt
- For mounting the corrosion-resistant version, use profile connector H **part no. 21.1018/1**

Timing belt pulley T90Z



TECHN. DATA / ITEMS SUPPLIED

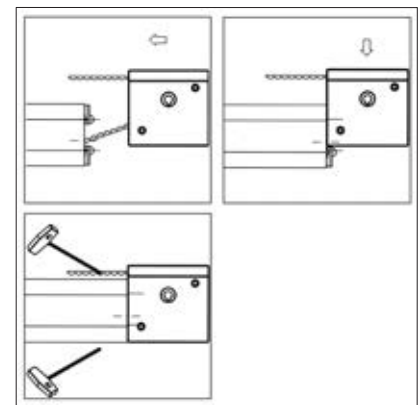
- Housing 3-piece, anodized aluminum
- Connection elements, steel, galvanised
- Aluminum pulley with stainless steel flanges for timing belt 32AT10 19 teeth, effective diameter 60.48 mm
Required toothed belt length within the deflection 210 mm
max. torque 130 Nm
- Base body complete with belt pulley and shaft stub
- Drive taps also available in different diameters, lengths and with keyways
- Stainless version **part no. 28.0045/1**
- 2 ball-bearings
- Weight = 2.850 kg/piece



APPLICATIONS

- All MiniTec linear guides

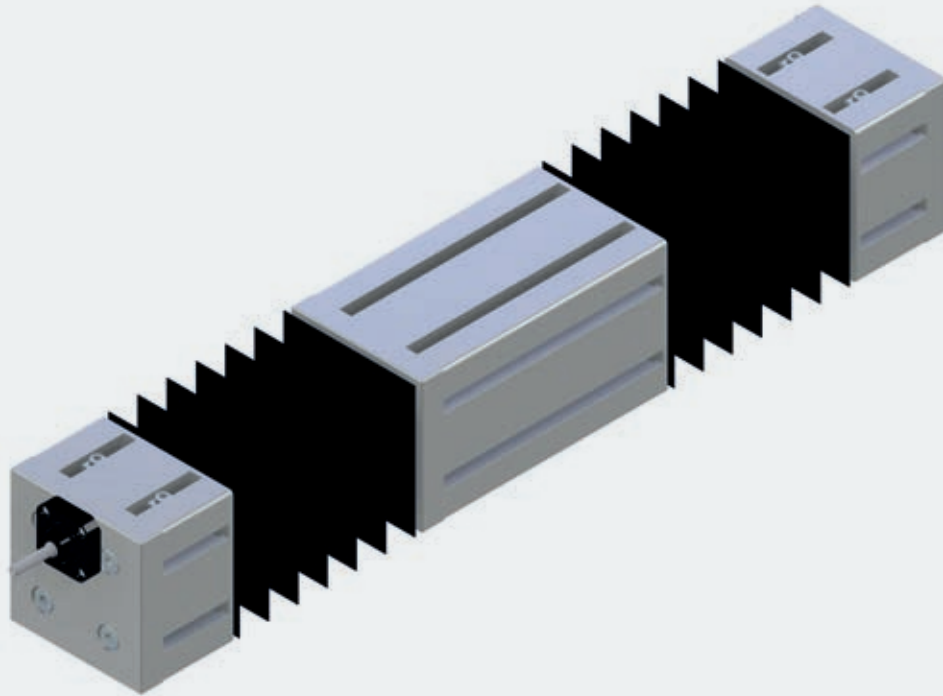
Part No. 28.0082/1



ASSEMBLY

- Provide rails with thread M8 at both sides, screw in Power lock fastener **part no. 21.1018/0**
- Guide the timing belt through the reverse unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt
- For mounting the corrosion-resistant version, use profile connector H **part no. 21.1018/1**

LB linear system



The solution for short traversing distances and high stroke frequency

The LB guide is based on LME 20 linear ball bearings, which are incorporated in specially designed holes in our construction profiles. Precision shafts D 20 mm give this guide high load capacity. Especially with short traversing distances and high stroke frequency, the LB guide has significant advantages. Particularly compact and economical guide elements based on our LME series of solid precision ball bearings with integrated sealing rings, which ensure high functional reliability under rough operating conditions.

The MiniTec guides of the LB series are particularly suitable for strokes up to 1000 mm. The modular design gives the designer complete design freedom in a small footprint. The ball bushings with solid outer sheath made of hardened ball bearing steel are directly mounted in the holes Ø 32 mm of the specially designed construction profiles 45 x 135, 45 x 180, 90 x 180, 90 x 45 S and 90 x 90 S.

The axial securing takes place with one-component housing adhesive. The solid ball bushes ensure extreme ease of movement, play-free guidance and low noise with a long service life. When designing LB guide systems, it must be ensured that the shaft deflection does not exceed 0.5 ° due to the load.

Further Technical Data can be found in the [MiniTec linear catalog](#). We also offer the linear guide LB complete with threaded or ball screw. All components are also available in stainless version.

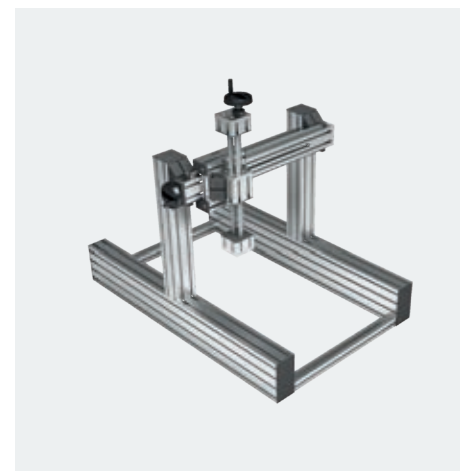
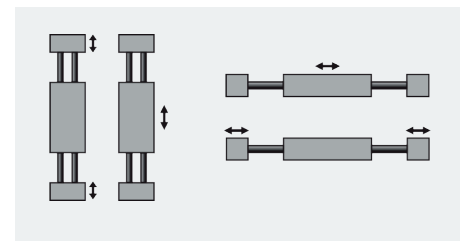
Calculation of the service life

$$L = \frac{C}{F} \cdot 10^5$$

L = Lifetime

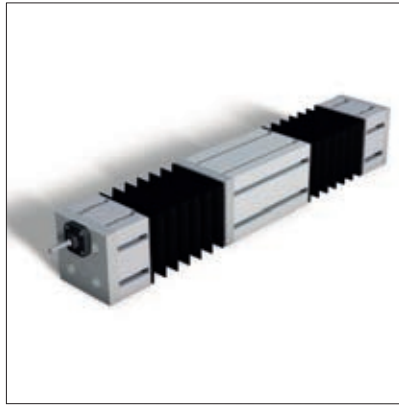
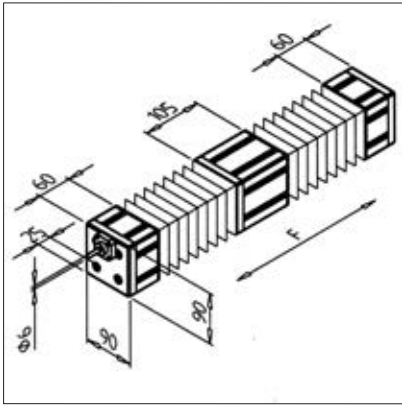
C = dyn. Load rating

F = resulting external forces



Linear module LB 90

Part No. 28.0178/0



TECHN. DATA / ITEMS SUPPLIED

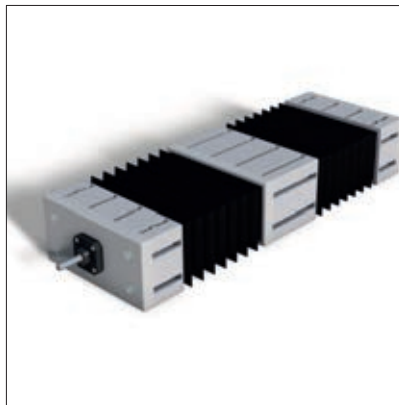
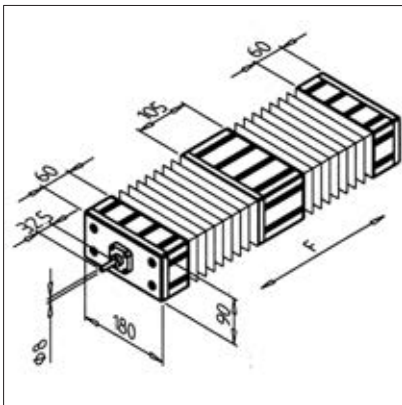
- Aluminium, anodized E6/EV1
 - Ready-to-mount linear module of profile 90 x 90
 - Drive unit with rolled circulating ball spindle $\varnothing 10$ mm, incline 3
 - Pitch error / 300 mm: 210 μm (class Ct10)
 - Slide guidance on 4 linear ball bearings with hardened ground precision shafts \varnothing
- 20 mm, total length max. 760 mm
 - Shaft end on the fixed side machined according to customer specifications for engine or crank connection
 - Shafts and spindles covered with protective bellows
 - Positioning accuracy: $\pm 0,1$ mm
 - Max. load [F] approx. 650 N

APPLICATIONS

- Handling systems
- Z-axis in portals
- Multiple axis systems
- Grabbing units

Linear module LB 180

Part No. 28.0179/0



TECHN. DATA / ITEMS SUPPLIED

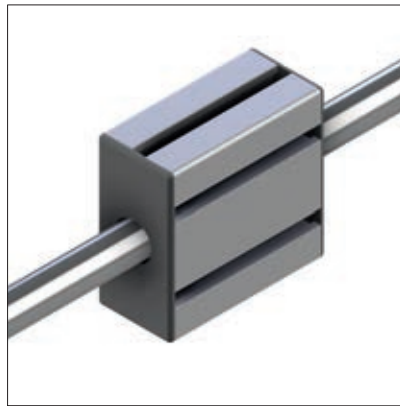
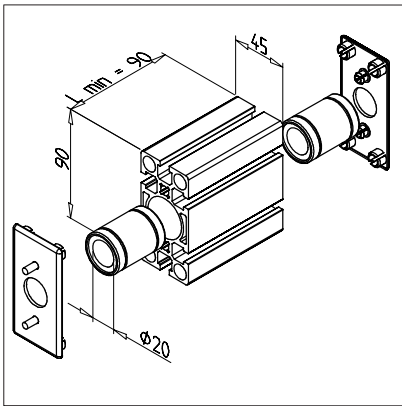
- Aluminium, anodized E6/EV1
 - Ready-to-mount linear module of profile 90 x 180
 - Drive unit with rolled circulated ball spindle $\varnothing 14$ mm, incline 4
 - Pitch error / 300 mm: 210 μm (class Ct10)
 - Slide guidance on 4 linear ball bearings with hardened ground precision shafts \varnothing
- 20 mm, total length max. 950 mm
 - Shaft end on the fixed side machined according to customer specifications for engine or crank connection
 - Shafts and spindles covered with protective bellows
 - Positioning accuracy: $\pm 0,1$ mm
 - Max. load [F] approx. 1,000 N

APPLICATIONS

- Handling systems
- Z-axis in portals
- Multiple axis systems
- Grabbing units

Slide LB 45

Part No. 28.0150/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 45 X 90 S
- Fully assembled with 2 ball bearing bushings LME 20 UU
- Profile closed on the front with cover plates LB 45
- **Other lengths on request**
- Weight = 0.550 kg/piece

APPLICATIONS

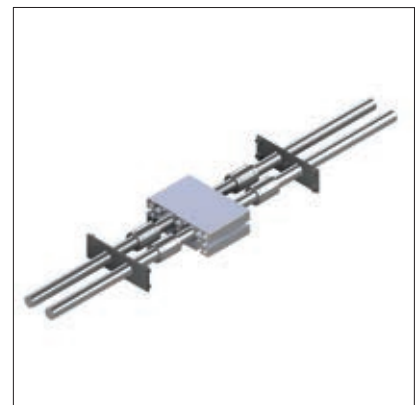
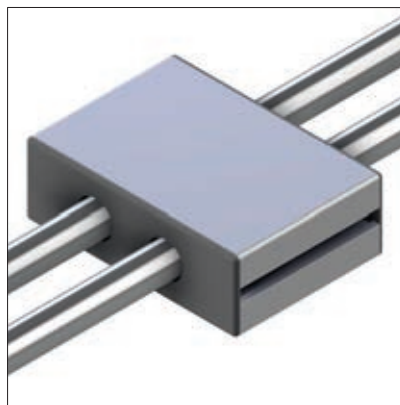
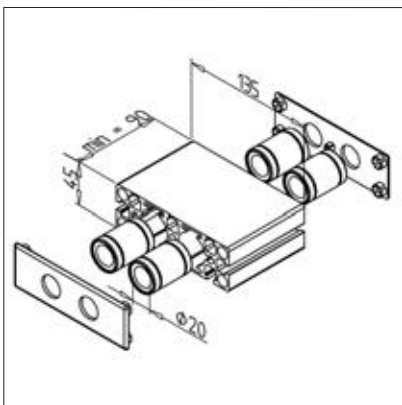
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

Slide LB 45 x 135

Part No. 28.0155/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 45 x 135
- Fully assembled with 2 ball bearing bushings LME 20 UU
- Profile face covered with end caps LB 45 x 135, grey
- **Other lengths on request**
- Weight = 0.865 kg/piece

APPLICATIONS

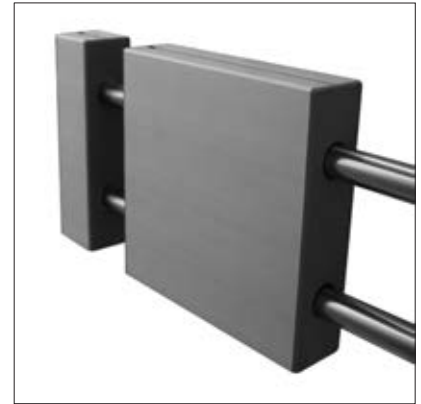
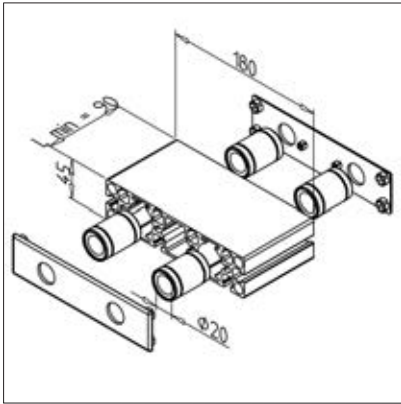
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

Slide LB 45 x 180

Part No. 28.0156/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 45 x 180
- Fully assembled with 2 ball bearing bushings LME 20 UU
- Profile face covered with end caps LB 45 x 180, grey
- **Other lengths on request**
- Weight = 1.007 kg/piece

APPLICATIONS

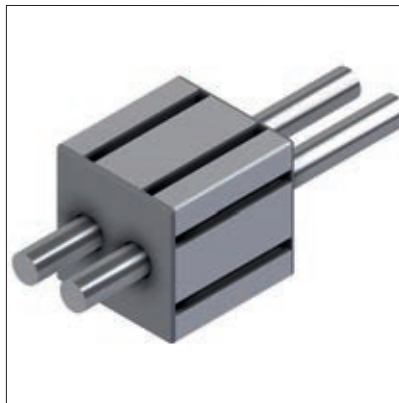
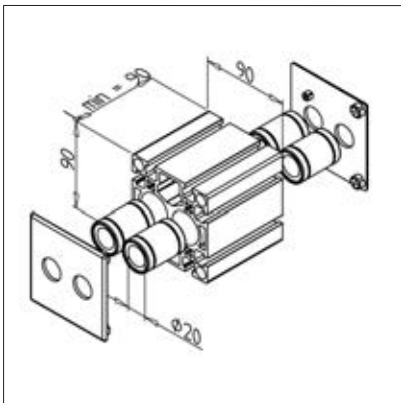
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

Slide LB 90

Part No. 28.0152/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 90 X 90 S
- Fully assembled with 4 ball bearing bushings LME 20 UU
- Profile face covered with end caps LB 90, grey
- **Other lengths on request**
- Weight = 1.070 kg/piece

APPLICATIONS

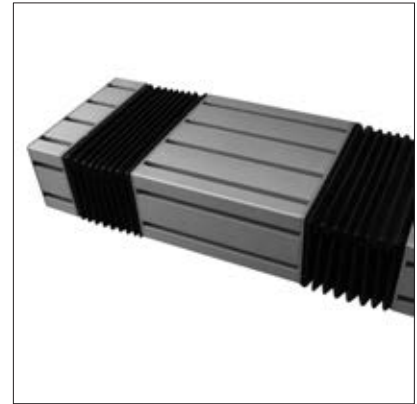
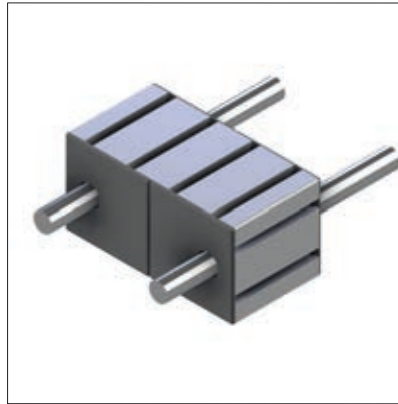
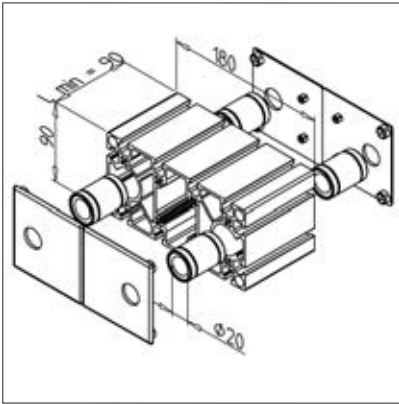
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

Slide LB 180

Part No. 28.0143/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Standard length (L) 90 mm
- Profile 90 X 180 S
- Fully assembled with 4 ball bearing bushings LME 20 UU
- Profile face covered with end caps LB 180, grey
- **Other lengths on request**
- Weight = 1.500 kg/piece

APPLICATIONS

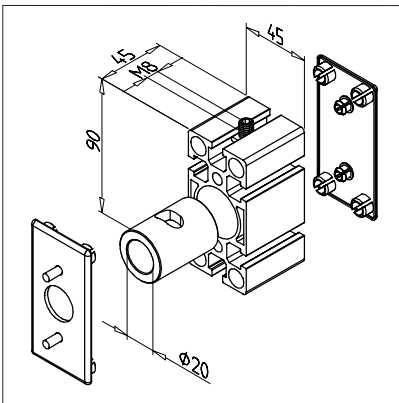
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

Shaft support block WB 45

Part No. 28.0151/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 X 90 S
- Fully assembled with centering bushing
- Shaft side with end cap LB 45, grey
- Outer side with end cap 45 x 90, grey
- Weight = 0.266 kg/piece

APPLICATIONS

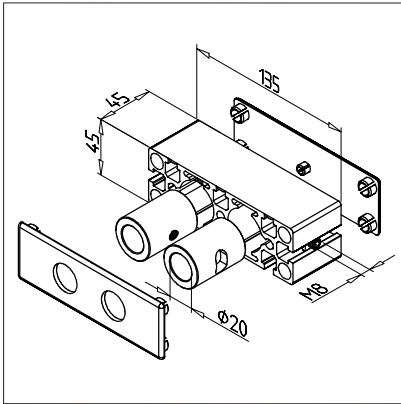
- Bearing and fastening of shaft Ø 20 mm in MiniTec-Linear systems LB 45

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

Shaft support block WB 45 x 135

Part No. 28.0157/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 135
- Fully assembled with centering bushing
- Shaft side with end cap LB 45 x 135, grey
- Outer side with end cap 45 x 135, grey
- Weight = 0.416 kg/piece

APPLICATIONS

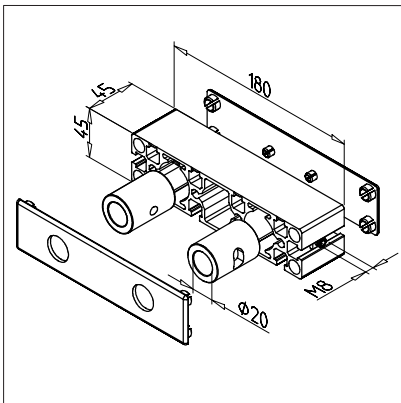
- Bearing and fastening of shaft Ø 20 mm in MiniTec-Linear systems LB 45 x 135

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

Shaft support block WB 45 x 180

Part No. 28.0159/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 180
- Fully assembled with centering bushing
- Shaft side with end cap LB 45 x 180, grey
- Outer side with end cap 45 x 180, grey
- Weight = 0.486 kg/piece

APPLICATIONS

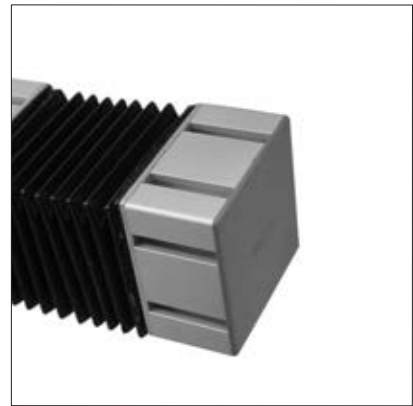
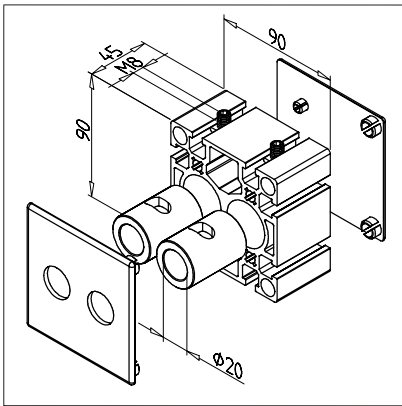
- Bearing and fastening of shaft Ø 20 mm in MiniTec-Linear systems LB 45 x 180

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

Shaft support block WB 90

Part No. 28.0153/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 90 S
- Fully assembled with 2 centring bushings
- Shaft side with end cap LB 90, grey
- Outer side with end cap 90 x 90, grey
- Weight = 0.521 kg/piece

APPLICATIONS

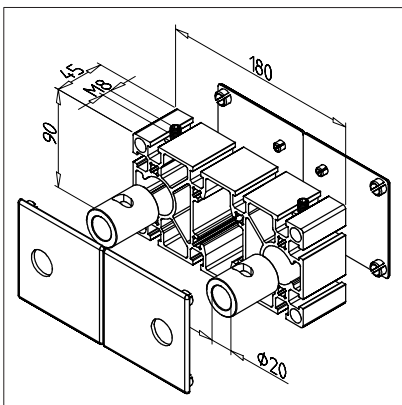
- Bearing and fastening of shaft Ø 20 mm in MiniTec-Linear systems LB 90

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

Shaft support block WB 180

Part No. 28.0144/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 90 X 180 S
- Fully assembled with 2 centring bushings
- Shaft side with end cap LB 180, grey
- External side with 2 end caps 90 x 90, grey
- Weight = 0.755 kg/piece

APPLICATIONS

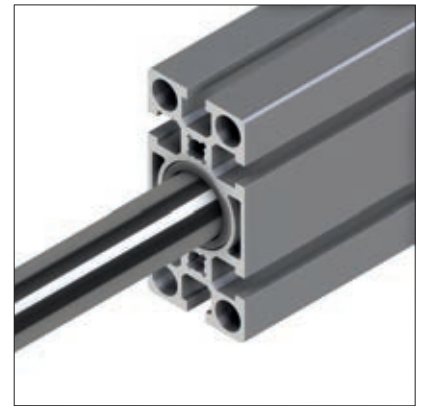
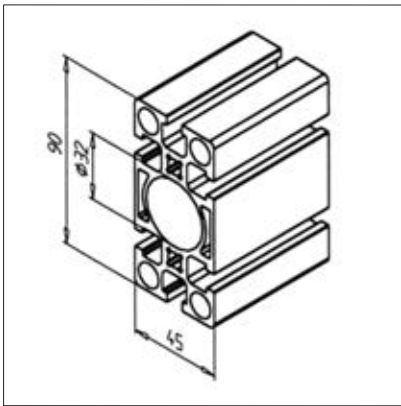
- Bearing and fastening of shaft Ø 20 mm in MiniTec-Linear systems LB 180

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

Profile 45 x 90 S

Part No. 20.1017/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 113.487 \text{ cm}^4$
- $I_y = 30.719 \text{ cm}^4$
- $w_x = 25.219 \text{ cm}^3$
- $w_y = 13.653 \text{ cm}^3$
- $IT = 70.893 \text{ cm}^4$
- Weight = 3.860 kg/m
- Bar length = 6 m
- Packing unit = 24 m

APPLICATIONS

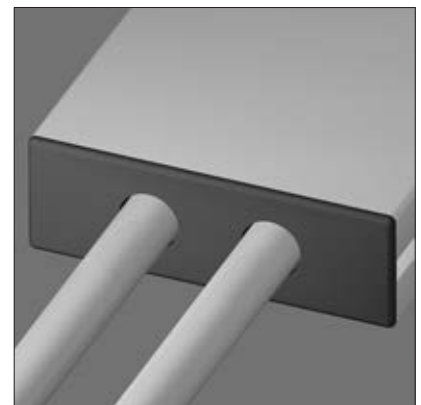
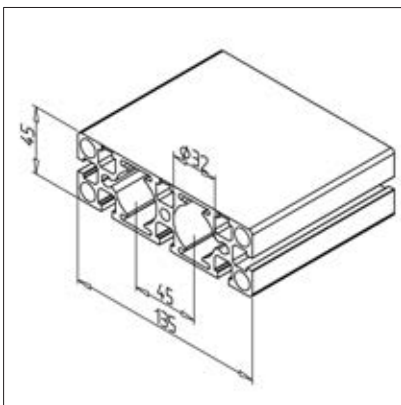
- All kinds of constructions
- Linear guides LB as slide
- Column guides
- Implementation as compressed air line with base and transport plate and sealing set
- Central bore $\varnothing 32 \text{ mm}$ for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

Profile 45 x 135 1G

Part No. 20.1078/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 47.064 \text{ cm}^4$
- $I_y = 359.242 \text{ cm}^4$
- $w_x = 20.618 \text{ cm}^3$
- $w_y = 53.221 \text{ cm}^3$
- $IT = 189.739 \text{ cm}^4$
- Weight = 5.570 kg/m
- Bar length = 6 m
- Packing unit = 12 m

APPLICATIONS

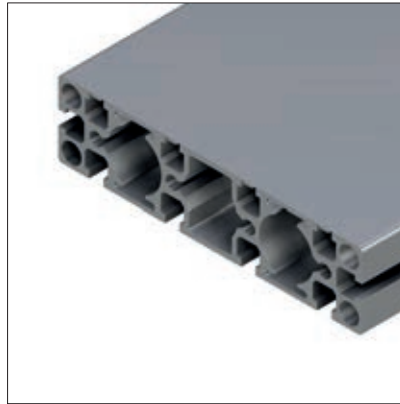
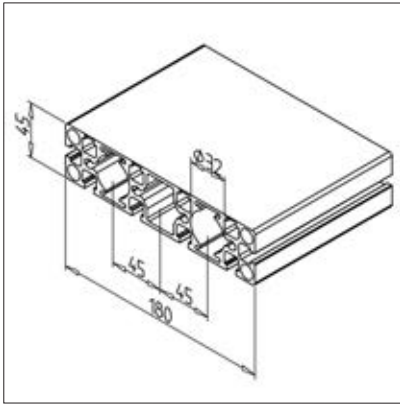
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Linear guides LB as slide
- Central bore $\varnothing 32 \text{ mm}$ for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 45 x 180 1G

Part No. 20.1079/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 61.015 \text{ cm}^4$
- $I_y = 810.885 \text{ cm}^4$
- $w_x = 26.704 \text{ cm}^3$
- $w_y = 90.097 \text{ cm}^3$
- $IT = 271.248 \text{ cm}^4$
- Weight = 6.950 kg/m
- Bar length = 6 m
- Packing unit = 12 m

APPLICATIONS

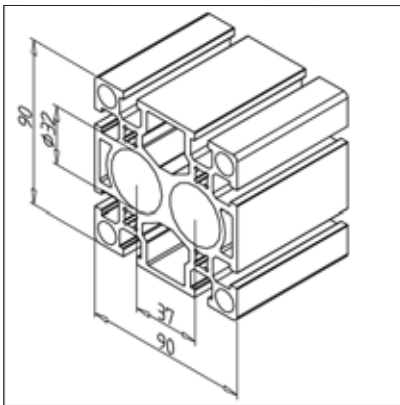
- All types of constructions, specifically for high hygiene requirements in the food industry, medical technology, bottling of beverages
- Linear guides LB as slide
- Central bore $\varnothing 32$ mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Closed grooves can be opened with the groove opener **part no. 26.0815/0** to the desired length

Profile 90 x 90 S

Part No. 20.1019/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 208.888 \text{ cm}^4$
- $I_y = 223.949 \text{ cm}^4$
- $w_x = 46.419 \text{ cm}^3$
- $w_y = 49.766 \text{ cm}^3$
- $IT = 569.423 \text{ cm}^4$
- Weight = 7.514 kg/m
- Bar length = 6 m
- Packing unit = 12 m

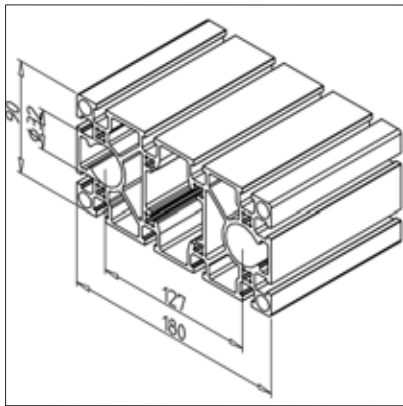
APPLICATIONS

- All types of heavy constructions
- Linear guides LB as slide
- Central bore $\varnothing 32$ mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

Profile 90 x 180 S



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 376.784 \text{ cm}^4$
- $I_y = 1421.865 \text{ cm}^4$
- $w_x = 83.729 \text{ cm}^3$
- $w_y = 157.983 \text{ cm}^3$
- $IT = 2023.299 \text{ cm}^4$
- Weight = 11.482 kg/m
- Bar length = 6 m
- Packing unit = 6 m



APPLICATIONS

- All types of heavy constructions
- Linear guides LB as slide
- Central bore $\varnothing 32 \text{ mm}$ for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

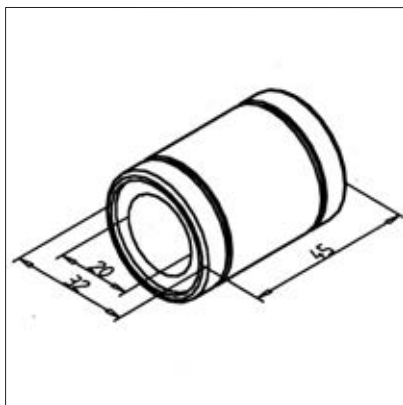
Part No. 20.1013/0



ASSEMBLY

- MiniTec power-lock fastener
- Mounting bracket 45 or 90
- Screw connection

Ball bushing LME 20 UU



TECHN. DATA / ITEMS SUPPLIED

- Precision ball bushing with massive external sheath of 100Cr6
- 2 integrated sealing rings, heat resistant up to 80°C
- Rated loads:
dyn. $C = 880 \text{ N}$
stat. $C_0 = 1400 \text{ N}$
- Weight = 0.090 kg/piece



APPLICATIONS

- Precision linear guides
- Linear slide system LB
- Lifting-tables
- Quattro-units

Part No. 10.1745/0

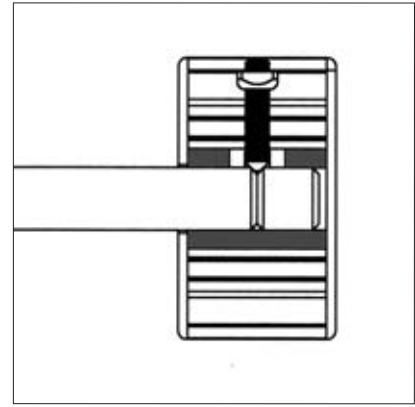
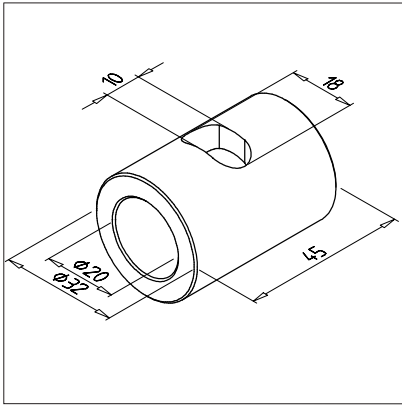


ASSEMBLY

- Press into bore $\varnothing 32 \text{ mm}$ of the profile
- Axial securing with single component adhesive for joining slide unit housing

Centring bushing

Part No. 28.0146/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, bright
- Weight = 0.056 kg/piece

APPLICATIONS

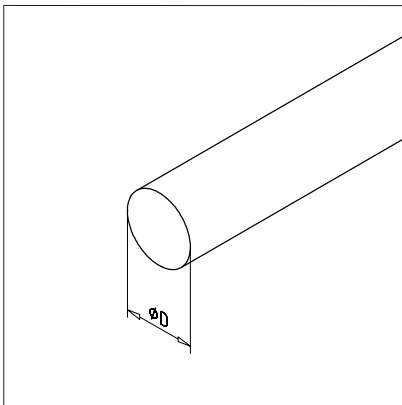
- Central shaft clamping in all shaft support blocks of the MiniTec linear systems LB

ASSEMBLY

- Insert centering bush in bore $\varnothing 32$ mm
- Insert shaft
- Clamps with threaded pin M8 x 35 **part no. 21.1304/1** and sliding nut **part no. 21.1351/0**

Shaft D 20 mm, h6 CF 53

Part No. 17.1744/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, pulled, hardened, polished
- Cf.53, hardened to 62 ± 4 HRC, polished h6
- Weight = 2.470 kg/m
- Bar length = 6 m

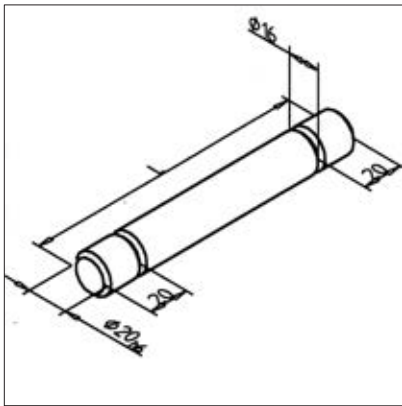
APPLICATIONS

- Linear guide system LB
- Linear guides with ball or sliding bushings
- Mechanical elements or drive elements

ASSEMBLY

- Secure with centering bushing into shaft support block

Shaft D 20 for linear guide LB



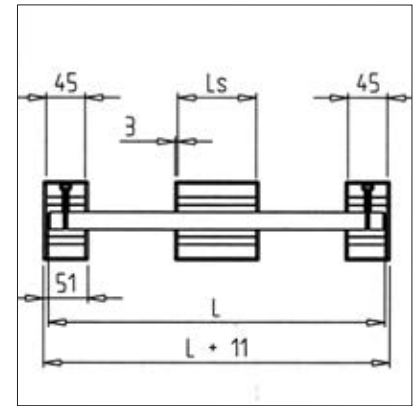
TECHN. DATA / ITEMS SUPPLIED

- Steel
- Cf53, surface-hardened to 60 + 5 HRC and pre-sharpened
- Tolerance h6
- Processed for shaft support block WB
- Please specify dimension L
- Weight = 2,470 kg/m



APPLICATIONS

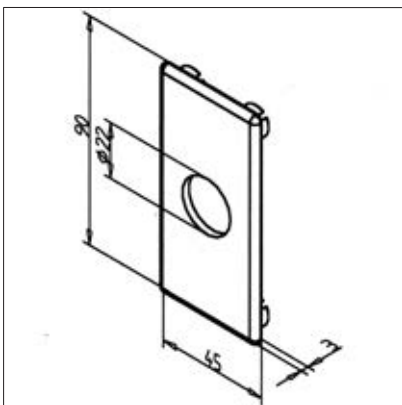
- All MiniTec linear systems LB
- Can be used in any direction



ASSEMBLY

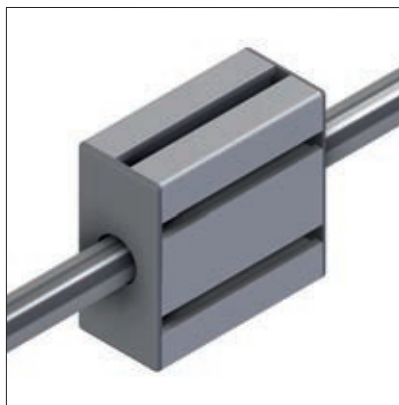
- Insert in shaft support blocks
- Clamps with threaded pin M8 x 35 **part no. 21.1304/1**

End cap LB 45



TECHN. DATA / ITEMS SUPPLIED

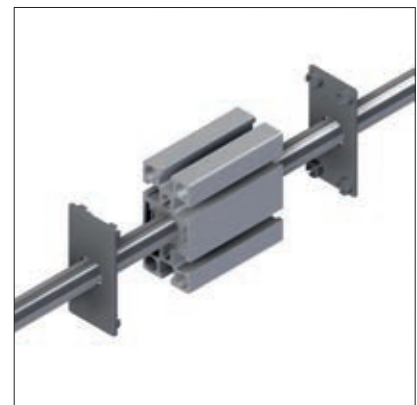
- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0094/0**
- 1 centric bore \varnothing 22 mm
- Weight = 0.010 kg/piece



APPLICATIONS

- Front slide cover LB 45
- Face covering of shaft support block WB 45 (shaft side)

Part No. 28.0094/1

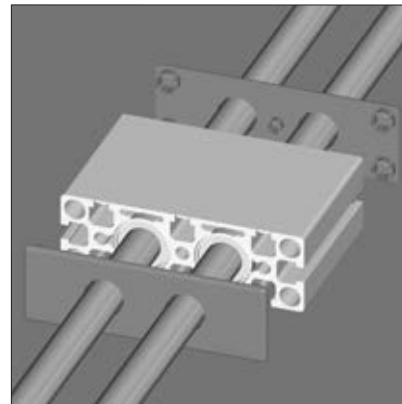
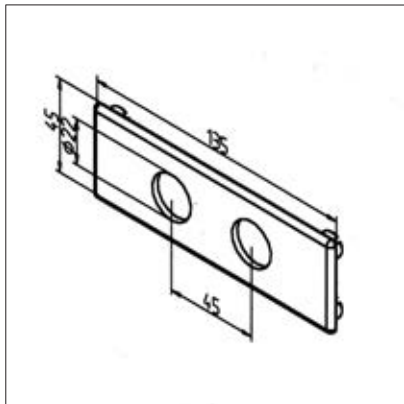


ASSEMBLY

- Press the fastening pins into the profile holes

End cap LB 45 x 135

Part No. 28.0101/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0101/0**
- 2 bores \varnothing 22 mm
- Weight = 0.010 kg/piece

APPLICATIONS

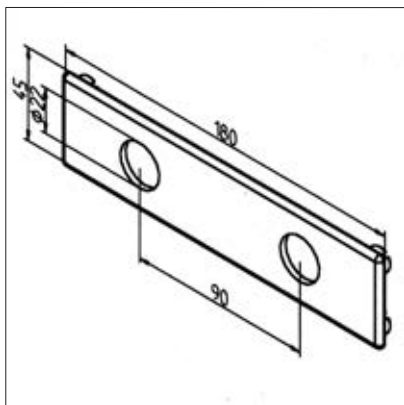
- Front slide cover LB 45 x 135
- Front cover of shaft support blocks WB 45 x 135

ASSEMBLY

- Press the fastening pins into the profile holes

End cap LB 45 x 180

Part No. 28.0102/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0102/0**
- 2 bores \varnothing 22 mm
- Weight = 0.010 kg/piece

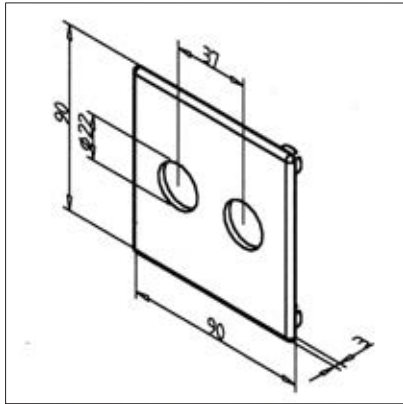
APPLICATIONS

- Front slide cover LB 45 x 180
- Front cover of shaft support blocks WB 45 x 180

ASSEMBLY

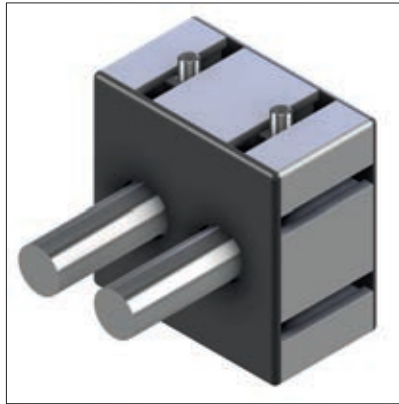
- Press the fastening pins into the profile holes

End cap LB 90



TECHN. DATA / ITEMS SUPPLIED

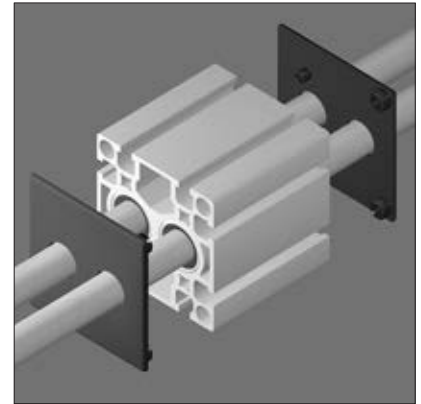
- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0095/0**
- 2 bores \varnothing 22 mm
- Weight = 0.018 kg/piece



APPLICATIONS

- Front slide cover LB 90
- Front cover of shaft support blocks WB 90

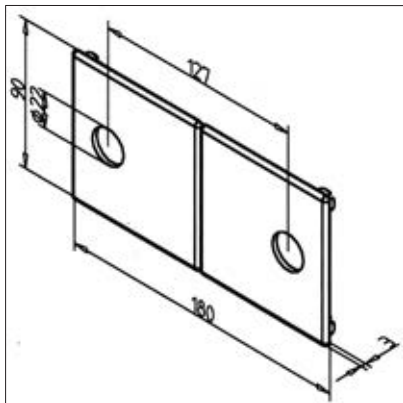
Part No. 28.0095/1



ASSEMBLY

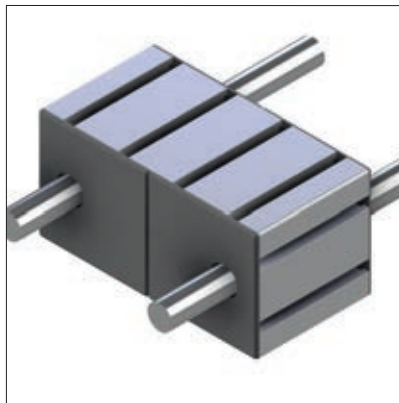
- Press the fastening pins into the profile holes

End cap LB 180



TECHN. DATA / ITEMS SUPPLIED

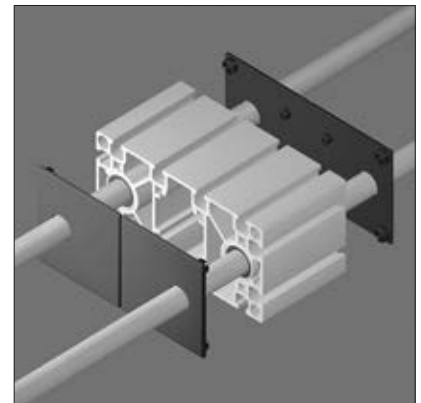
- ABS, Injection Mould, grey
- Aging and oil resistant
- On request also available in black, **part no. 28.0103/0**
- 2 bores \varnothing 22 mm
- Weight = 0.037 kg/piece



APPLICATIONS

- Front slide cover LB 180
- Front cover of shaft support blocks WB 180

Part No. 28.0103/1



ASSEMBLY

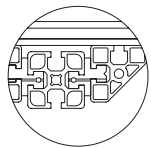
- Press the fastening pins into the profile holes

Adjusting units

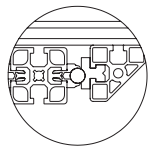
The modular structure of our adjusting units allows a large number of types with different cross-sections. Optionally also with slide clamp, spindle cover, angular gear or counter. To make your choice easier and to prevent misunderstandings, we have provided a selection program for you on our website. The selection program shows you the chosen option in a preview with short designation. To order, simply state the short designation with the required stroke length.

Versions

MiniTec-adjusting units are ready to install modules, which are assembled strictly according to the modular principle from standard elements of our profile system. They are used in mechanical engineering, packaging technology, in filling plants and in testing technology. The adjusting units are equipped with sliding elements made of heavy-duty PE-UHMW plastic. This material is resistant to most acids and alkaline. The coefficient of friction on ground steel shafts is 0.05μ , on anodised aluminium surfaces it is 0.1μ .



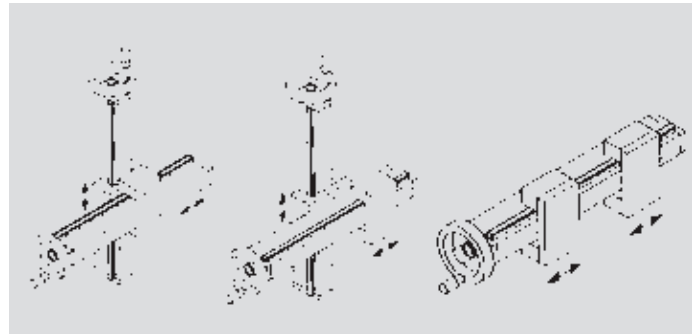
VEW series
Slide guide on ground,
hardened precision steel shafts
 $\varnothing 12 \text{ mm}$, h6, material
Stainless steel Cf 53, Mat. no. 1.1213



VEN series
Slide guide in profile grooves

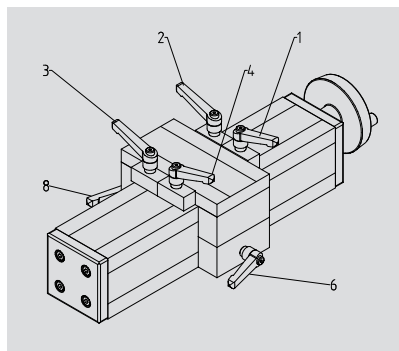
The selection program can be found at www.minitec.de in the online product catalogue under Linear system LG. We can also produce custom-made versions for you to your own specification.

Combination options

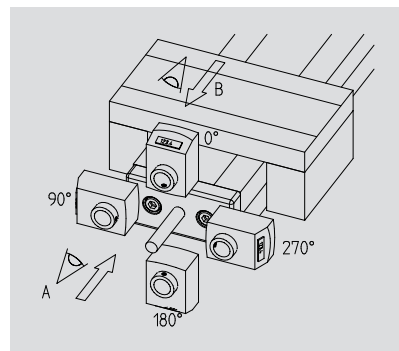


- Spindles: Trapezoidal thread spindle 16×4 , steel, with nut made of RG 7
- Traversed distance: 1000 mm (max.)

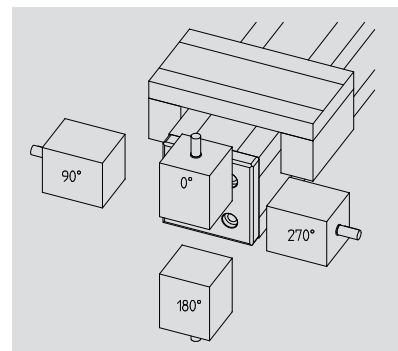
Clamping devices



Digital display



Angular gear

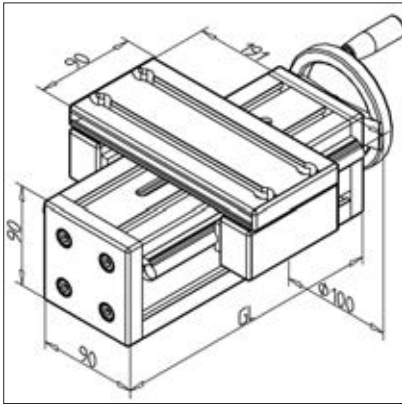


Adjusting unit configuration

Further information is available at:
www.minitec.de/en/product/configuration-of-adjusting-units

Adjusting unit VEW 90

Part No. 28.0183/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 3.03 kg
- Extra weight = 1.12 kg/100mm stroke

APPLICATIONS

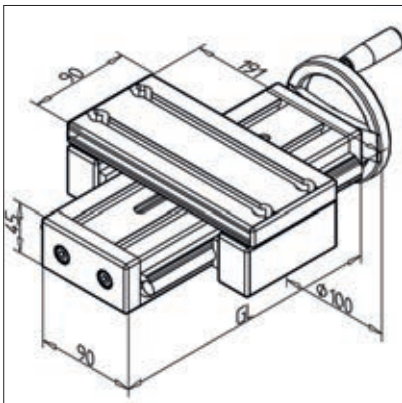
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Spindle cover
- Shafts stainless
- Options:
With carriage clamp up **part no. 28.0183/1**
With carriage clamping laterally **part no. 28.0183/2**

Adjusting unit VEW 45x90 F

Part No. 28.0181/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.31 kg
- Extra weight = 0.75 kg/100mm stroke

APPLICATIONS

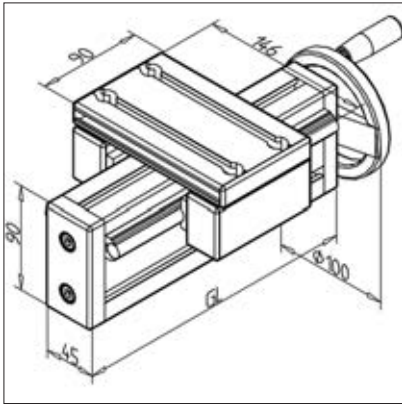
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Spindle cover
- Shafts stainless
- With slide clamping unit, top, Part no. **28.0181/1**

Adjusting unit VEW 45x90 H

Part No. 28.0182/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.109 kg
- Extra weight = 0.74 kg/100mm stroke

APPLICATIONS

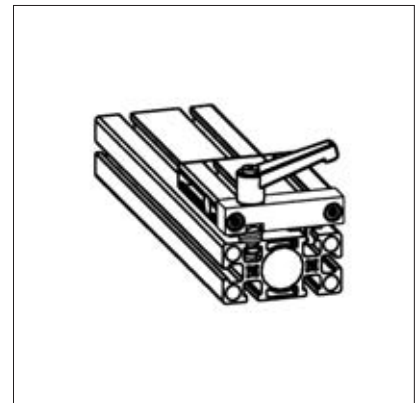
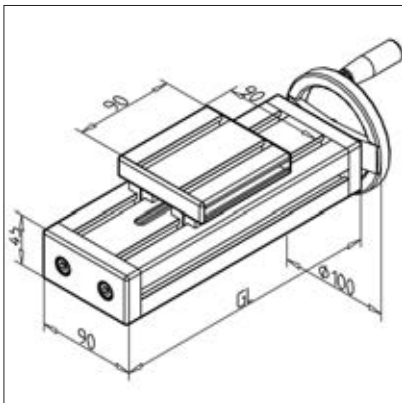
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Shafts stainless
- Options:
 - With carriage clamp up **part no. 28.0182/1**
 - With carriage clamping laterally **part no. 28.0182/2**

Adjusting unit VEN 45x90 S

Part No. 28.0187/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.280 kg
- Extra weight = 0.5 kg/100mm stroke

APPLICATIONS

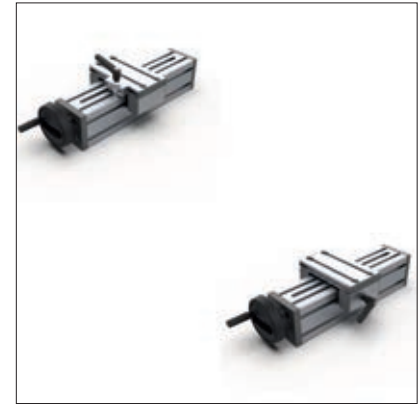
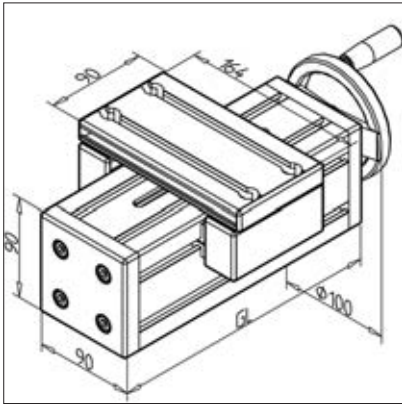
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Options:
 - With slide clamping unit (Top) **part no. 28.0187/1**

Adjusting unit VEN 90

Part No. 28.0186/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.75 kg
- Extra weight = 0.87 kg/100mm stroke

APPLICATIONS

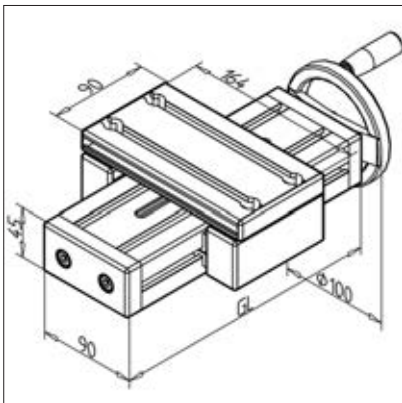
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Spindle cover
- Options:
 - With carriage clamp up **part no. 28.0186/1**
 - With carriage clamping laterally **part no. 28.0186/2**

Adjusting unit VEN 45x90

Part No. 28.0188/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 2.05 kg
- Extra weight = 0.5 kg/100mm stroke

APPLICATIONS

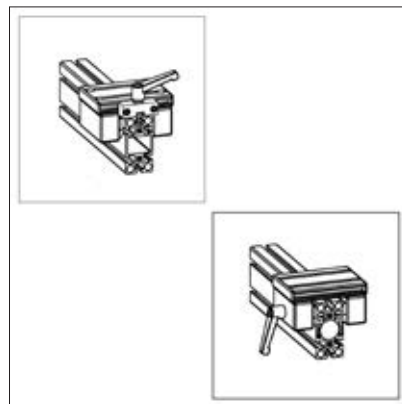
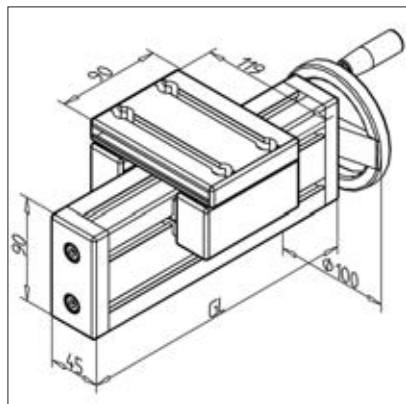
- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Spindle cover
- Options:
 - With carriage clamp up **part no. 28.0188/1**
 - With carriage clamping laterally **part no. 28.0188/2**

Adjusting unit VEN 45x90 H

Part No. 28.0185/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Slide plate of profile 19 x 90
- Spindle 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- **Please indicate desired length of stroke**
- Weight = (basic weight) 1.97 kg
- Extra weight = 0.49 kg/100mm stroke

APPLICATIONS

- Adjustment of conveyors
- Adjustment of feeders
- Adjustable devices

OTHER VERSIONS

- Slide plate made of profile 32 x 180
- Deviating wagon length
- Digital display
- Angular drive
- Options:
 - With carriage clamp up **part no. 28.0185/1**
 - With carriage clamping laterally **part no. 28.0185/2**

Mini adjusting units

Mini adjusting units are ready to install units, which are assembled according to the modular principle from standard elements of our profile system. They are used in mechanical engineering, packaging technology, conveying technology, in filling plants and in testing technology.



Mini adjusting unit installation kit



Mini adjusting unit with profile 19 x 32



Mini adjusting unit with handle profile 32



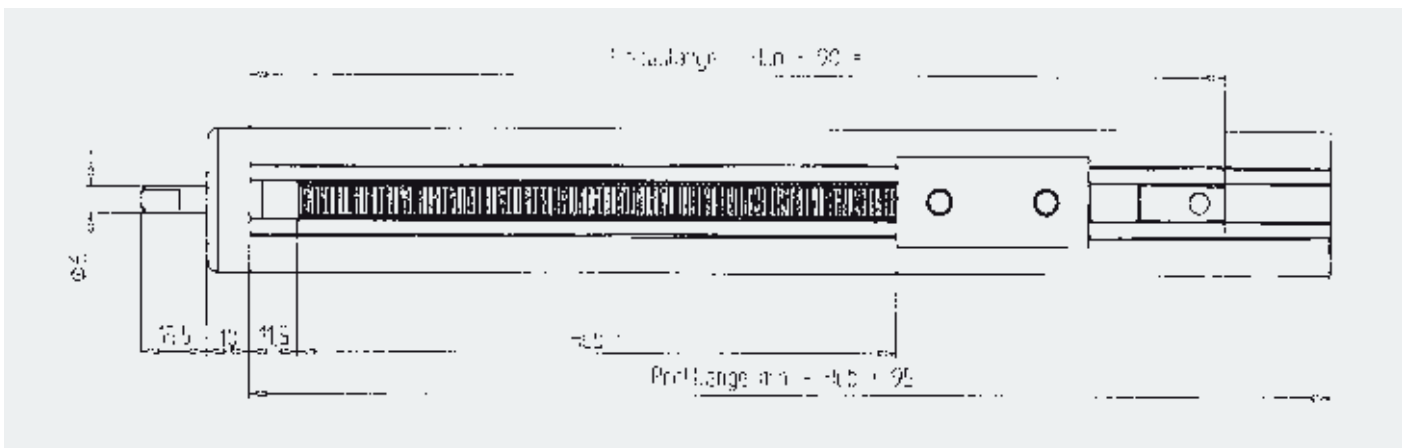
Mini adjusting unit with profile 45 x 19



Mini adjusting unit with profile 19 x 45



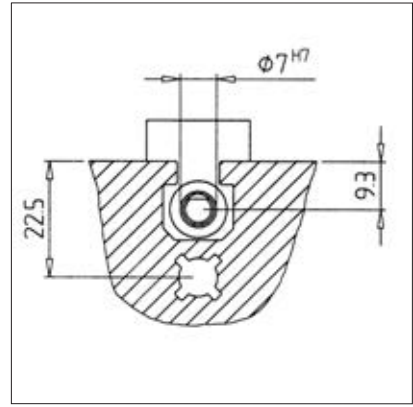
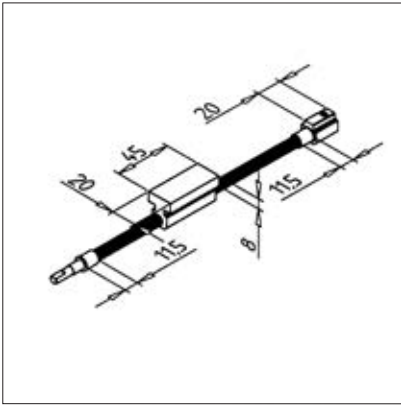
Mini adjusting unit with profile 45 x 45



- Spindles: VA metric thread M8x1.25
- Traversed distance: 895 mm (max.)
- Load capacity: 1000 g

Mini adjusting unit installation kit

Part No. 28.0350/0



TECHN. DATA / ITEMS SUPPLIED

- Without support profile, handwheel and bearing block for installation in existing fixture
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- Please indicate desired length of stroke

APPLICATIONS

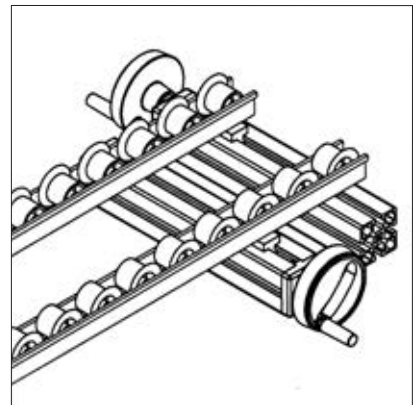
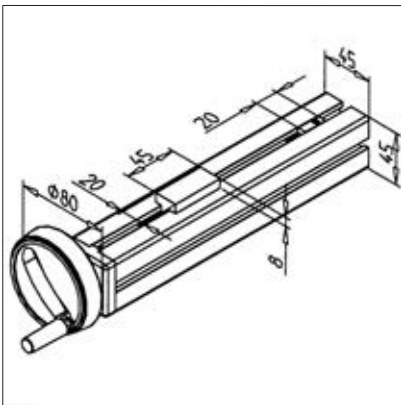
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- Make bearing block according to sketch
- Push into the profile groove and fasten the end block

Mini adjusting unit with profile 45x45

Part No. 28.0354/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 45 x 45 F
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- Please indicate desired length of stroke

APPLICATIONS

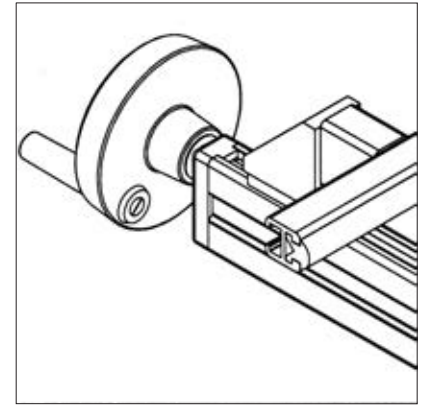
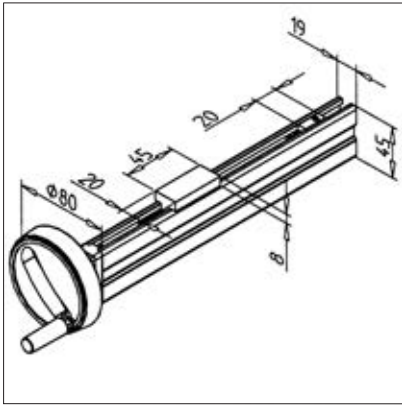
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0354/1**

Mini adjusting unit with profile 19x45

Part No. 28.0352/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 45
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- Please indicate desired length of stroke

APPLICATIONS

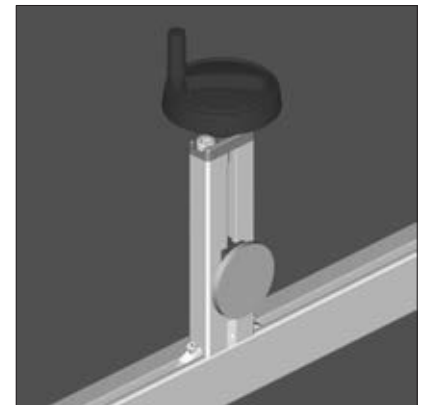
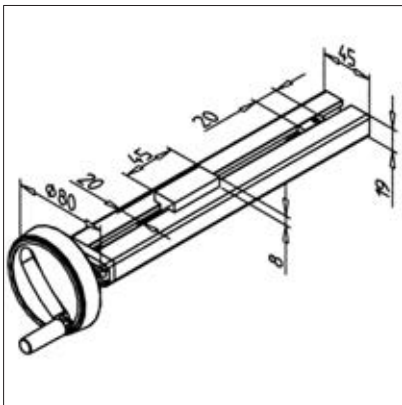
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0352/1**

Mini adjusting unit with profile 45x19

Part No. 28.0359/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 45 x 19
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- Please indicate desired length of stroke

APPLICATIONS

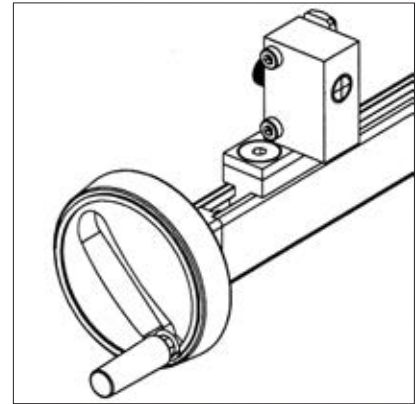
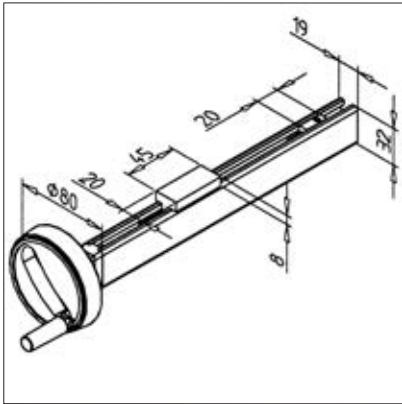
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0359/1**

Mini adjusting unit with profile 19x32

Part No. 28.0351/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 32
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- Please indicate desired length of stroke

APPLICATIONS

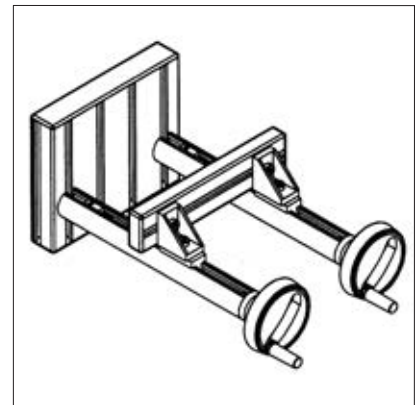
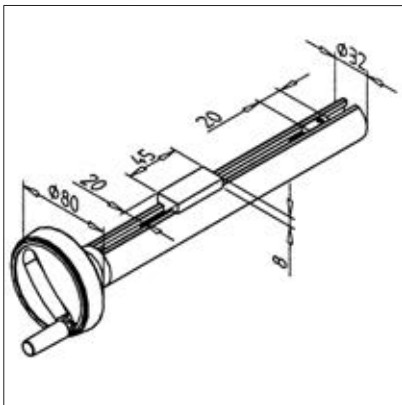
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0351/1**

Mini adjusting unit with handle profile 32

Part No. 28.0353/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile handle profile 32
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- Please indicate desired length of stroke

APPLICATIONS

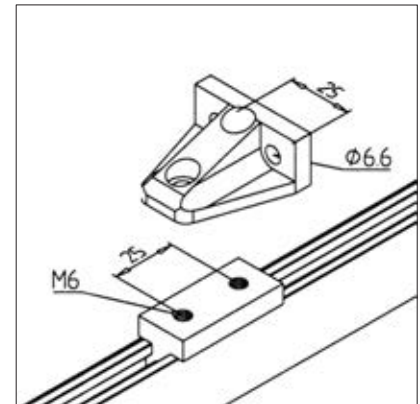
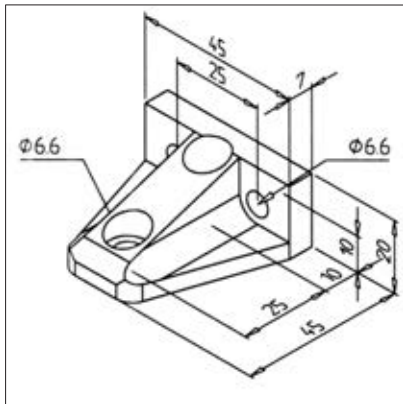
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Fasten handle profile 32 with clip, **part no. 22.1022/0**
- Also available without carrier profile, **part no. 28.0353/1**

Bracket console for miniature adjustment

Part No. 28.0371/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Without fastening kit
- Weight = 0.044 kg/piece

APPLICATIONS

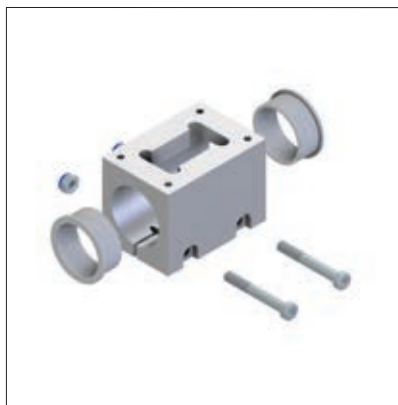
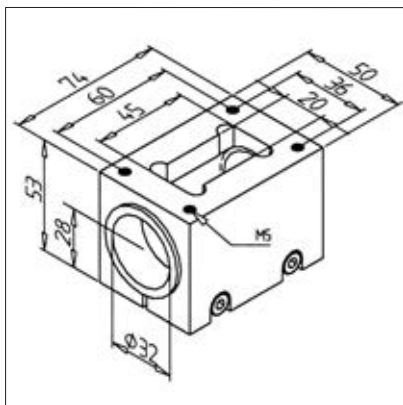
- For connection of two adjustment units **part no. 28.0351/0, 28.0352/0 and 28.0353/0**
- For adjusting small loads such as light barriers, sensors, etc.

ASSEMBLY

- Insert two M6 threads each, 10 mm deep with a clearance of 25 mm in the slide
- With cylinder head bolts M6 x 16 **part no. 21.1238/0** Connect adjustment units together

Slide G 32

Part No. 28.0355/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- With low-friction sliding bearing
- Without adjusting units
- Weight = 0.314 kg/piece

APPLICATIONS

- To adjust light barriers, reflectors, lateral guides etc.

ASSEMBLY

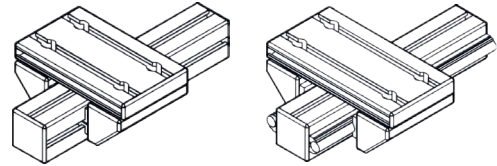
- Insert slide of mini-adjustment unit into sliding carriage and screw in the spindle
- Adjust with tensioning screws M6
- Fasten the spindle bearing to the handle profile 32

Sliding guides



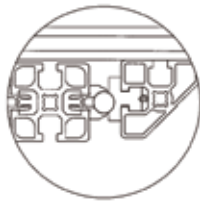
Master high loads easily

The LN and LG sliding guides were created for applications that do not set high requirements for guiding accuracy, but in which extreme operating conditions exist. These guides are especially suitable for wet operation, in case of large amounts of dust or poor lubrication. The running blocks of the LN/LG series are based on the same modular principle as the LR linear series.



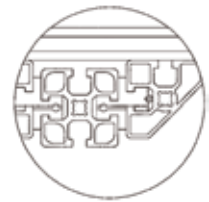
Series LN

Guide the carriages in profile groove or profile surface. This series is characterized by a small installation space.



Series LG

Guiding of carriages on ground and hardened shafts h6 made of material Cf53. Particularly advantageous is the use of guides LG in wet operation in conjunction with our stainless shafts.



Precision: $\pm 0,15$ mm (LG series) and $\pm 0,20$ mm (LN series).

The guides can be set with low clearance by providing the lateral guide rails.

Allowable loads: 50 N/cm load bearing slide strip (= carriage length)

Sliding friction: 0,05 μ on steel shaft (LG series), 0,1 μ on anodized profile surface (LN series).

This bearing can be operated without lubrication. However,

an increased slip-stick effect must be noted.

Traversing speed: 1 m/sec (max.)

Continuous temperature: 50°C (max.)

Short-term peak load: 70°C (max.)

The slide strip is resistant to organic acids, alkalis, aqueous solutions, inorganic salts, organic acids and alcohols. The material is only conditionally resistant to hydrocarbons and halogenated hydrocarbons.



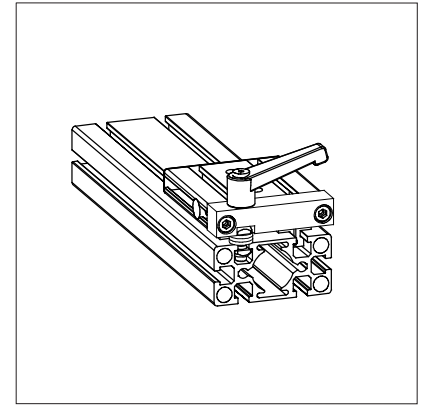
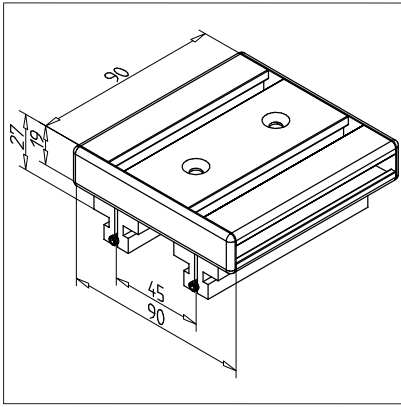
Sliding guides configuration

www.minitec.de/en/product/configuration-of-sliding-guides

Further information is available at:

Slide LWN-S

Part No. 28.0170/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN-S
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.260 kg/piece

APPLICATIONS

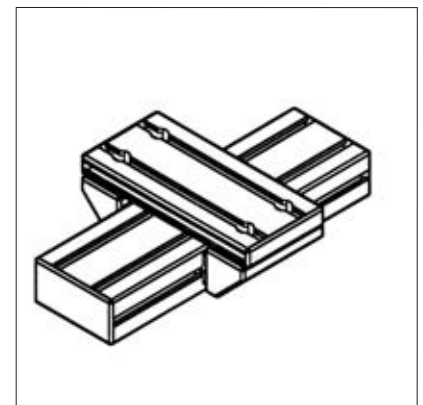
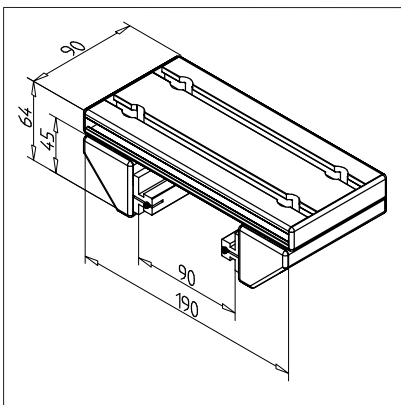
- Simple linear guides
- Slide units

OTHER VERSIONS

- With slide clamping device at top **part no. 28.0170/1**
- Different slide lengths

Slide LWN 45/45° - 90

Part No. 28.0197/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.783 kg/piece

APPLICATIONS

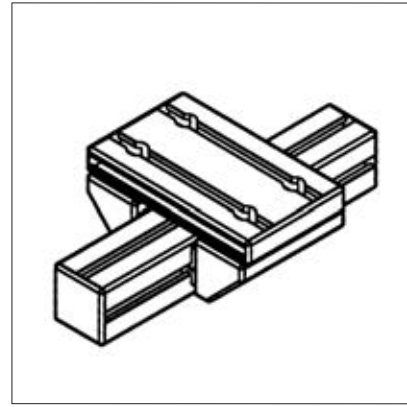
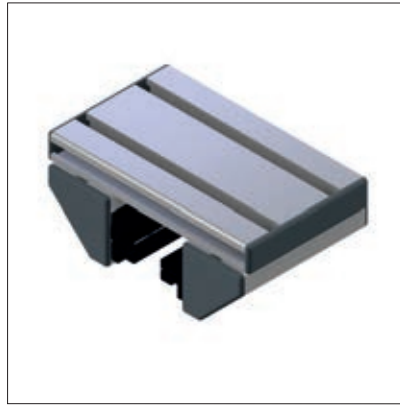
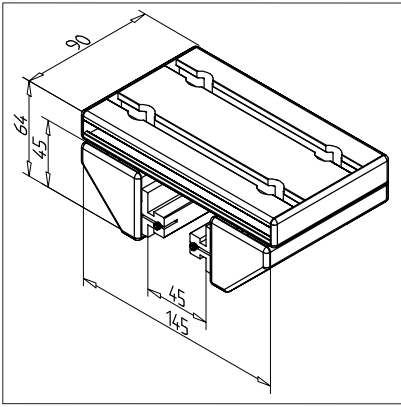
- Simple linear guides
- Slide units

OTHER VERSIONS

- With slide clamping device at top **part no. 28.0197/1**
- Different slide lengths

Slide LWN 45/45° - 45

Part No. 28.0196/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.699 kg/piece

APPLICATIONS

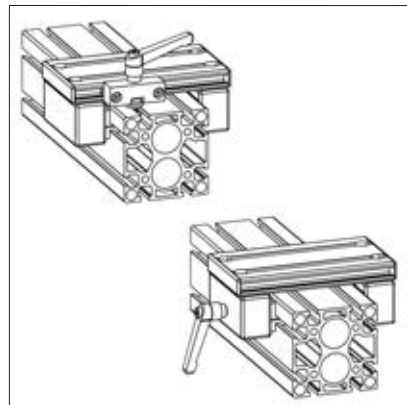
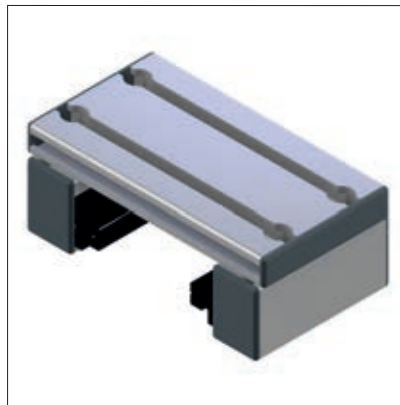
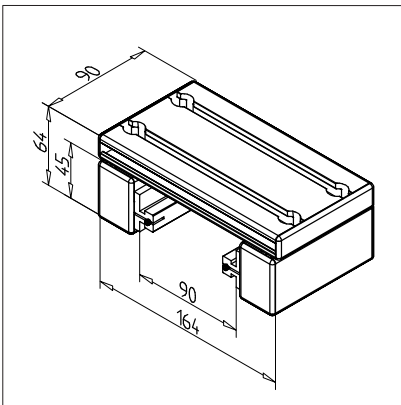
- Simple linear guides
- Slide units

OTHER VERSIONS

- With slide clamping device at top **part no. 28.0196/1**
- Different slide lengths

Slide LWN 32 x 45 - 90

Part No. 28.0193/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.762 kg/piece

APPLICATIONS

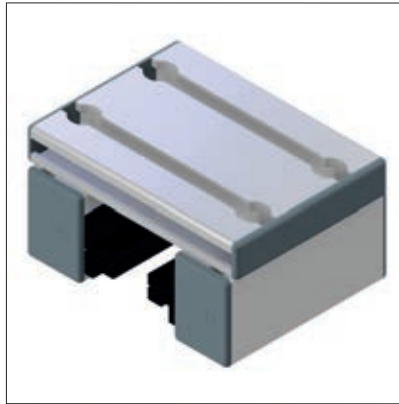
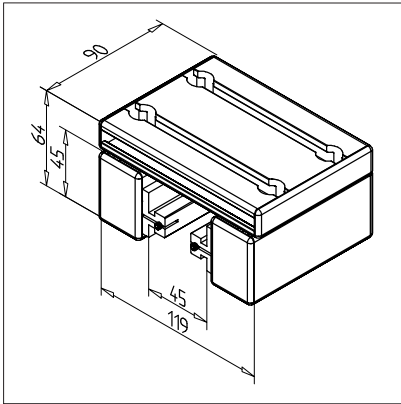
- Simple linear guides
- Slide units

OTHER VERSIONS

- With slide clamping device at top **part no. 28.0193/1**
- With slide clamping device lateral **part no. 28.0193/2**
- Different slide lengths

Slide LWN 32 x 45 - 45

Part No. 28.0192/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LN
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.678 kg/piece

APPLICATIONS

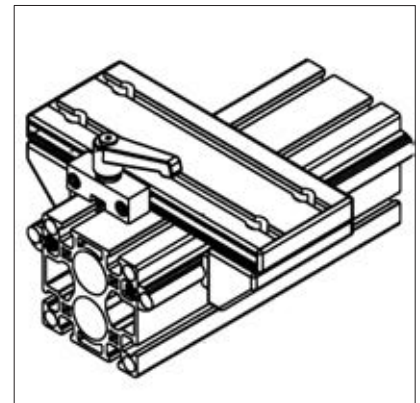
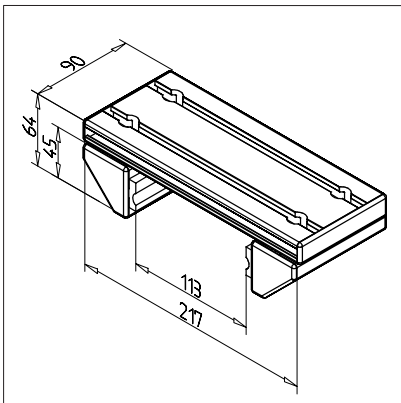
- Simple linear guides
- Slide units

OTHER VERSIONS

- With slide clamping device at top **part no. 28.0192/1**
- With slide clamping device lateral **part no. 28.0192/2**
- Different slide lengths

Slide LWG 45/45°-90

Part No. 28.0137/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LG
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.831 kg/piece

APPLICATIONS

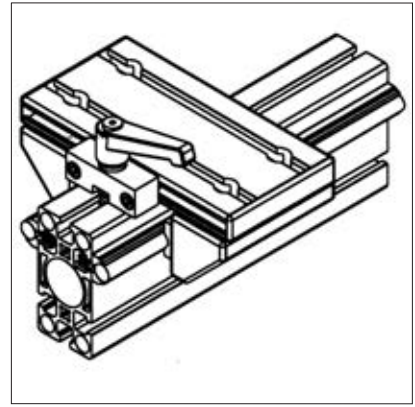
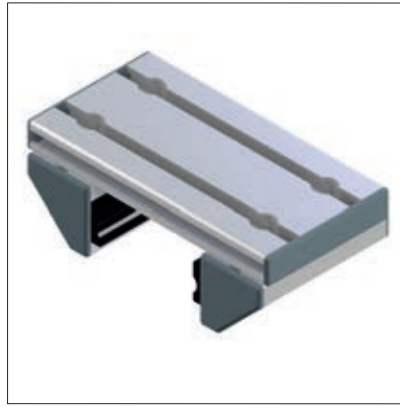
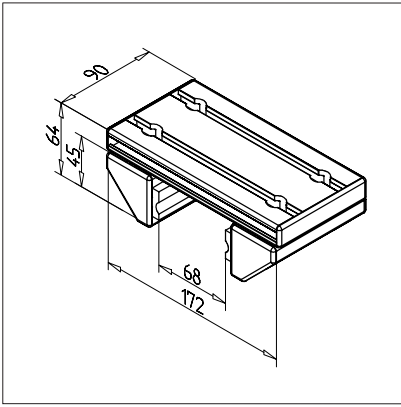
- Simple linear guides
- Slide units
- For rail 90 with shafts \varnothing 12 mm

OTHER VERSIONS

- With slide clamping at top **part no. 28.0137/1**
- Different slide lengths

Slide LWG 45/45° - 45

Part No. 28.0136/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LG
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.741 kg/piece

APPLICATIONS

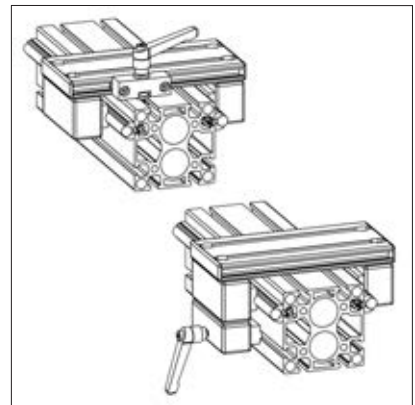
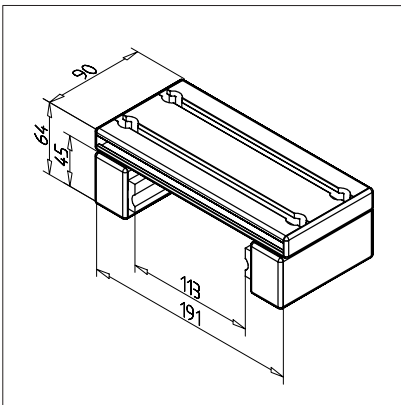
- Simple linear guides
- Slide units
- For rail 45 with shafts \varnothing 12 mm

OTHER VERSIONS

- With slide clamping at top **part no. 28.0136/1**
- Different slide lengths

Slide LWG 32 x 45 - 90

Part No. 28.0133/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LG
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.810 kg/piece

APPLICATIONS

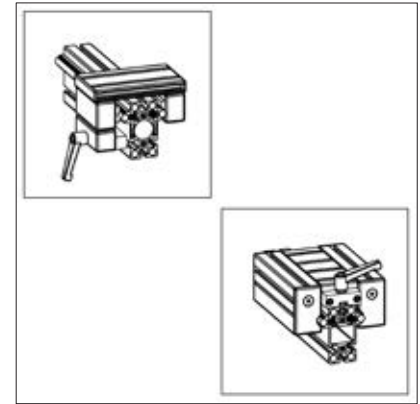
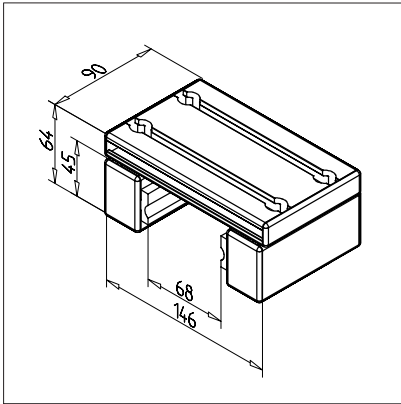
- Simple linear guides
- Slide units
- For rail 90 with shafts \varnothing 12 mm

OTHER VERSIONS

- With slide clamping at top **part no. 28.0133/1**
- With slide clamping lateral **part no. 28.0133/2**
- Different slide lengths

Slide LWG 32 x 45 - 45

Part No. 28.0132/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Fully mounted carriage
- 2 slide rails LG
- End caps
- Load capacity up to 450 N
- Clearance adjusted
- Weight = 0.726 kg/piece

APPLICATIONS

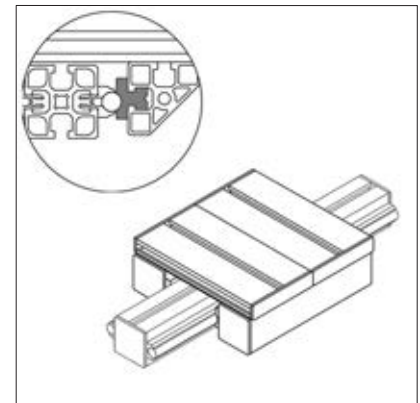
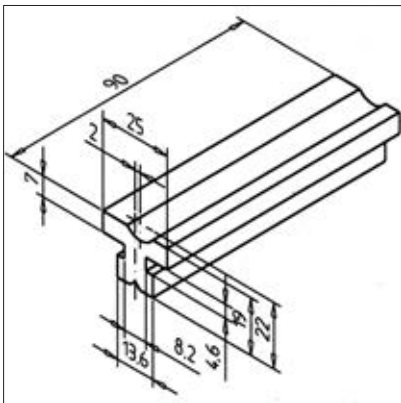
- Simple linear guides
- Slide units
- For rail 45 with shafts \varnothing 12 mm

OTHER VERSIONS

- With slide clamping at top **part no. 28.0132/1**
- With slide clamping lateral **part no. 28.0132/2**
- Different slide lengths

Slide rail LG

Part No. 22.1094/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Fastening kit
- Allowed panel pressure: max. 10 N/mm²
- Weight = 0.029 kg/piece

APPLICATIONS

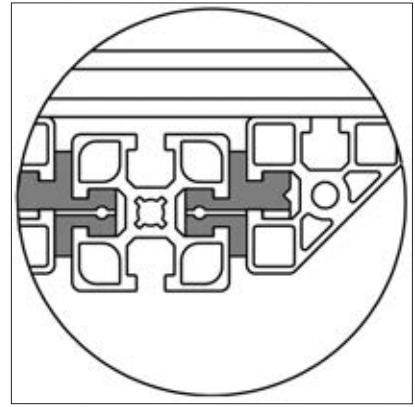
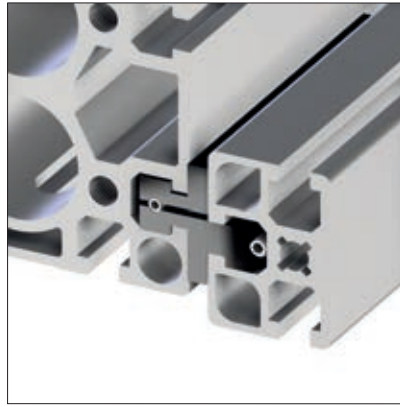
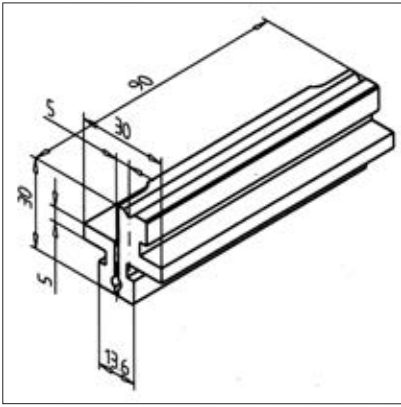
- Slide guides LG

ASSEMBLY

- Insert into groove of lateral guide profile
- Secure with fastening material

Slide rail LN

Part No. 22.1095/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Fastening kit
- Allowed panel pressure: max. 10 N/mm²
- Weight = 0.030 kg/piece

APPLICATIONS

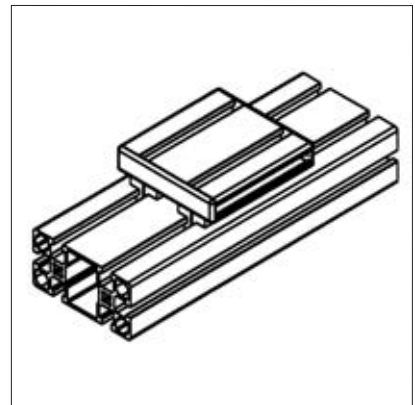
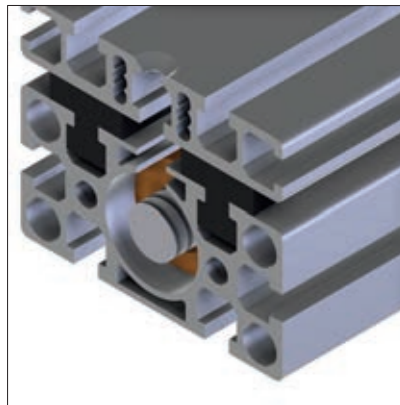
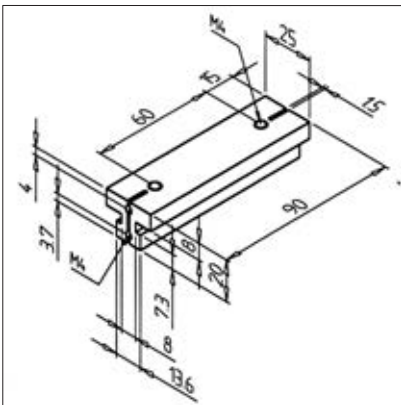
- Slide guides LN
- Adjusting units
- Heavy sliding doors
- Drawers

ASSEMBLY

- Connect with slide plate
- Insert into grooves of the guide profile
- Adjust without clearance, use fastening kit

Slide rail LN-S

Part No. 22.1096/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW, black
- Fastening kit
- Allowed panel pressure: max. 10 N/mm²
- Weight = 0.036 kg/piece

APPLICATIONS

- Slide guides LN-S
- Adjusting units
- Slide units
- Workpiece carrier

ASSEMBLY

- Insert into grooves of the guide profile
- Adjust sliding rails without clearance by screwing in the side setscrews (M4)
- Connect with slide plate



WORKPLACE SYSTEMS

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Workplace design

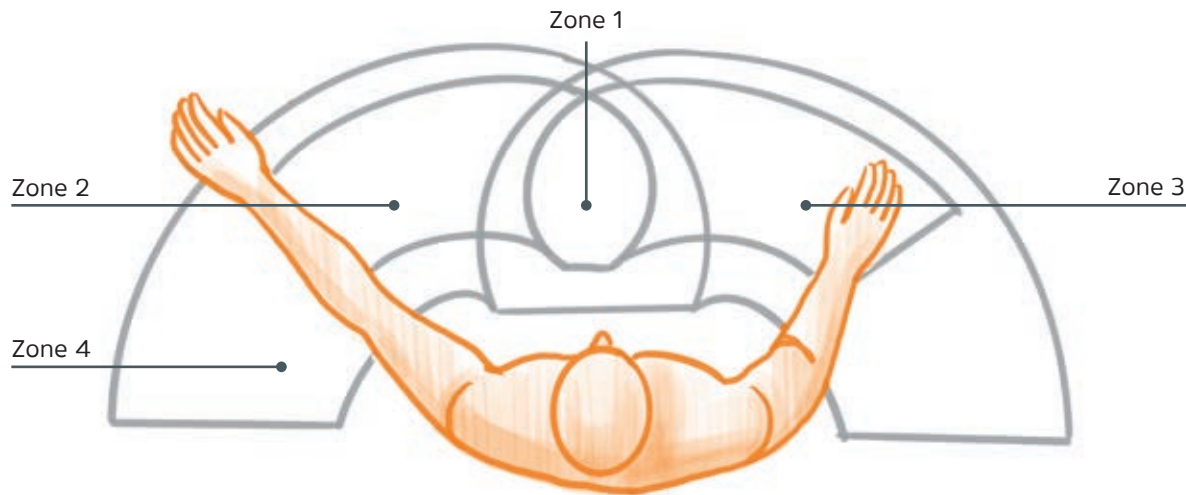


Individual workstations from the modular system

Correct design of the workplace has highly positive effects on the health, capability, staying power and concentration of employees. The MiniTec profile system and the MiniTec iCAD Assembler have been setting standards in the design of production flow, workstations, factory automation and machine protection for many years. Tailor-made workplaces avoid disadvantageous compromises. The MiniTec modular system with the corresponding software is the basis for economical and fast realization of the optimum solution to a problem. All system components are compatible and can be combined to form production systems. Flexibility and economy do not have to be competing goals. Manual workstations allow a highly flexible response to changing requirements or are ideal for individual pro-

duction. In combination with the many linking possibilities from the MiniTec range, even complex production systems can be designed economically. Manual components - such as roller conveyors, roller sections for Kanban solutions or material slides - are available for linking the workstations. Automatic linking is produced with linear axes, belt conveyors or the TSG flexible transfer system. Our MiniTec iCAD Assembler design software is freely available for the design of the workplaces. The software designs all kinds of different workstations, individually and in the shortest possible time. The system automatically creates the bill of materials and, if required, an assembly plan.

The design of the workstations is described according to ergonomic findings in DIN EN ISO 6385. The task of ergonomic design is, among other things, to adapt the workplace, work area, environment and lighting to the characteristics and abilities of the human being. The modular system for designing individual workstations enables optimum adaptation to the respective task and the individual employee.



Work area zone	Explanation
Zone 1 workspace:	Work centre / installation site both hands work near each other and are in the centre of the field of view
Zone 2 extended workspace:	both hands reach all points in this zone
Zone 3 one-hand zone:	Zone for storing parts and tools, which are reached for often with a hand -
Zone 4 extended one-hand zone:	outermost still usable zone, for example, for trays

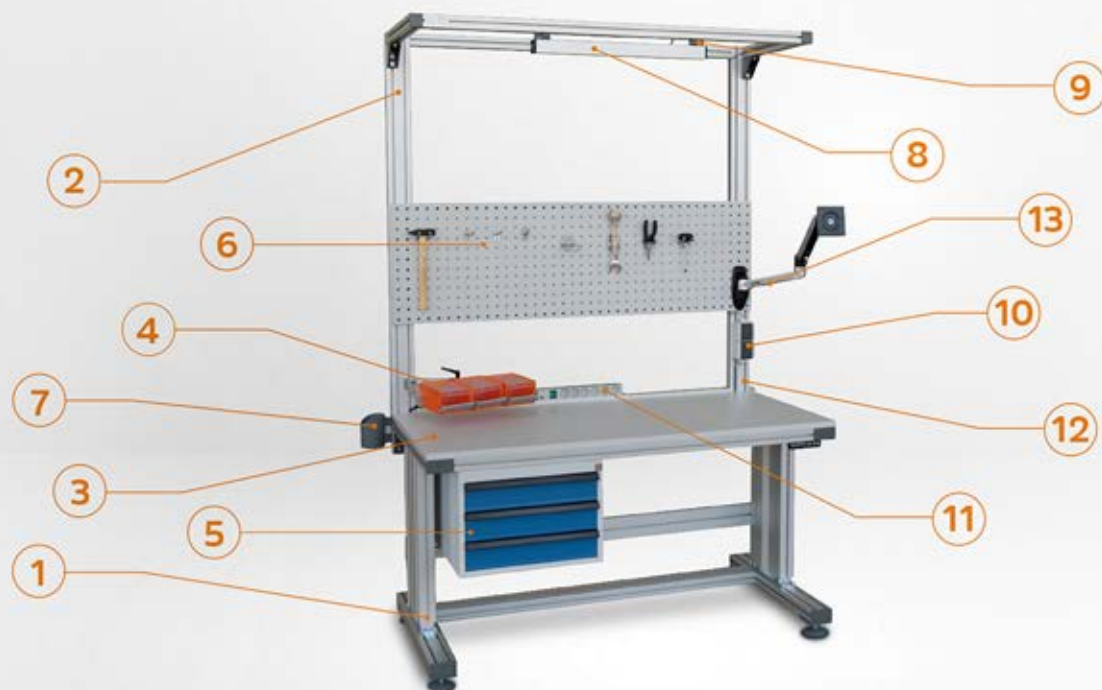
Worker guidance with MiniTec SmartAssist

Particularly with multi-variant production, companies are increasingly faced with the task of how to train their employees in the assembly of new products quickly on the job and support them during their work. This is where worker assistance systems can provide valuable help. With MiniTec SmartAssist, we offer an innovative solution, which safely guides the worker through the assembly process. To this end, it displays the individual work steps to them with the help of texts, diagrams, photos or videos on the screen and uses Pick2Light light strips, touch monitors, intervention sensors, scales and much more for additional Assistance. A special feature is the intuitively operable MiniTec SmartEdi editor, with which the customer can very easily create the respective work instructions themselves.

Further information is available at:
www.minitec.de/en/service/software/minitec-smartassist



Workplaces



Variable fitout options for workplaces

The workstation belongs to the standard equipment in the productive areas of many companies. Due to its flexible, ergonomic and goal-oriented Design is the basis for extremely economical flexible workstation systems. On the next pages we introduce the different worktable models.

- | | |
|--|--|
| 1. Table base frame 1500, electrically height adjustable
Part no. 32.0172/3 | 8. Profile luminaire M
Part no. 32.1170/0 |
| 2. Portal (gantry) structure
Part no. 32.0174/3 | 9. Fastening kit, adjustable angle
Part no. 32.1131/0 |
| 3. Melamine tabletop, light grey 22 mm
Part no. 32.4140/0 | 10. Toggle switch with socket
Part no. 32.0772/0 |
| 4. KanTainer swivel arm
Part no. 32.0877/0 | 11. Multiple socket outlet, aluminium, 6-way
Part no. 32.0705/0 |
| 5. Base cabinet with drawers
Part no. 32.0813/0 | 12. Pneumatic distributor
Part no. 32.0901/0 |
| 6. Toolboard 1500
Part no. 32.0675/0 | 13. Monitor support LX
Part no. 32.0622/0 |
| 7. Cup and bottle holder
Part no. 32.0547/0 | |

Basic workstations

Individual. The MiniTec workstations from the modular system.

MiniTec offers you different base frames with or without portal construction. You can either define the dimensions yourself or use standard variants with given dimensions.

Box table L



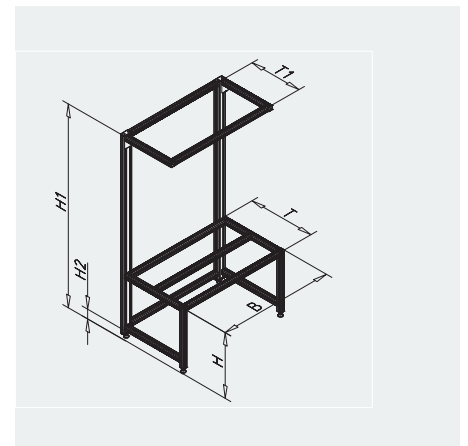
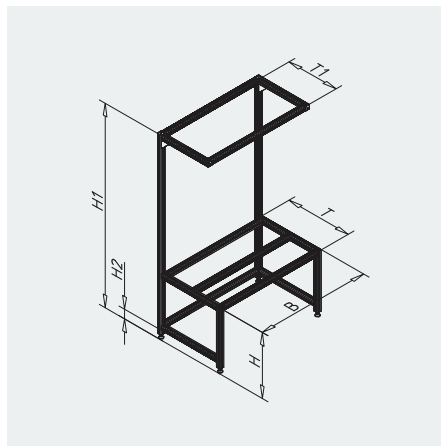
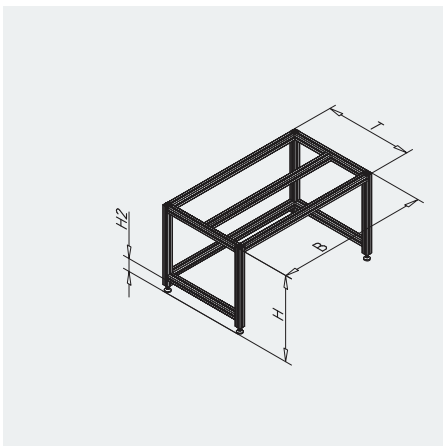
Box table L with portal structure



Workstation S with reinforced portal construction



Workstations		Preferred dimensions			
Width (B)	variable	1000	1200	1500	2000
Depth (T)	variable	700			
Depth (T1)	variable	555			
Height (H)	variable	678			
Height (H1)	variable	2100			
Height (H2)	variable	100			
max. load capacity [N] Type L/S	variable	1500	1000	800	800/1200
Box table L	32.0111/0	32.0111/1	32.0111/2	32.0111/3	32.0111/4
Box table L with portal	32.0112/0	32.0112/1	32.0112/2	32.0112/3	32.0112/4
Box table S with portal	32.0113/0	32.0113/1	32.0113/2	32.0113/3	32.0113/4



- Our basic workstations are available without a portal (gantry), with portal or with reinforced portal
- The base frame of our tables consists of the profile 45 x 45 F, anodised E6/EV1.
- The base frames are equipped with articulated feet PA, spindle M10 plate Ø 45 mm to level out unevenness in the floor.
- The frames are supplied without tabletops and the necessary mounting brackets for tabletops.
- The workstation S with portal has a reinforced portal structure and, can with a table width of 2000 mm, can be loaded more heavily
- The frame is assembled with the MiniTec Power-lock connectors and is electrically conductive

Height-adjustable workstations

Ergonomic design represents a particular challenge in workplace design, as it significantly influences the health, performance, endurance, concentration and not least the motivation of the workers.

The height-adjustable MiniTec workstations are also available with hydraulic and electric height adjustment. In addition to a

selection of standard tables with fixed dimensions, the tables can also be freely configured and easily supplemented with portal structures if required.

Hydraulically height-adjustable workstations



Example application - stroke 300 - hydraulic

- The base frame of the hydraulically height-adjustable tables consists of the profile 45 x 90 F and 45 x 45 F, anodised E6/EV1.
- The base frames are equipped with PA articulated feet, M10 spindle Ø 80 mm plate to compensate for uneven floors (+/- 10 mm).
- A large selection of tabletops can be found from page 379
- The height adjustment is available with either 300 or 400 mm stroke. Lifting speed: 5 mm / crank rotation.

Electrically height-adjustable workstations



Example application - stroke 400 (electrical)

Portal structures



Portal construction



Electrically height-adjustable workstation with portal structure

Thanks to the modular principle, both hydraulically and electrically height-adjustable worktables can be quickly and easily supplemented with portal structures if required.

Height-adjustable workstations

Hydraulically height adjustable workstations

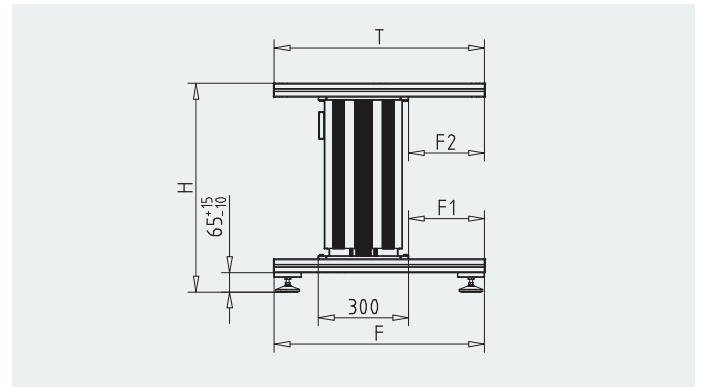
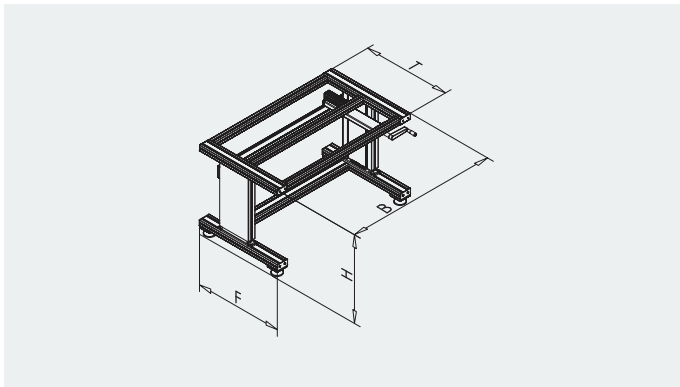


Table - stroke 300



Sample application

Hydraulically height adjustable tables					
Width (B)	variable	1000	Preferred widths in u/min.		
Depth (T)	variable		1200	1500 U/min	2000
Height (H)			700		
F	variable		695 (stroke 300) / 795 (stroke 400)		
F1	variable		700		
F2	variable		253		
max. Load [N]	variable	1500	1000	800	1200
Hydraulically height-adjustable table - stroke 300 mm	32.0170/0	32.0170/1	32.0170/2	32.0170/3	32.0170/4
Hydraulically height-adjustable table - stroke 400 mm	32.0171/0	32.0171/1	32.0171/2	32.0171/3	32.0171/4



- The base frame of the hydraulically height adjustable tables consists of the profile 45x90 F and 45x45 F, anodised E6/EV1
- To compensate for uneven floors (+/- 10 mm), the base frames are equipped with PA articulated feet, M10 spindle Ø80mm disc
- The racks are supplied without tabletops and the necessary mounting brackets for tabletops
- A large selection of Tabletops can be found
- The height adjustment is available with either 300 or 400 mm stroke. Lifting speed: 5 mm / crank rotation
- The hand pump with retractable hand crank is mounted under the Tabletop

Height-adjustable workstations

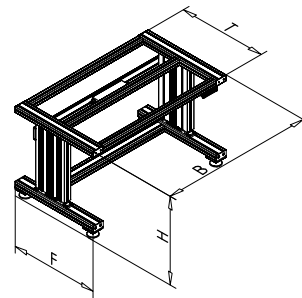
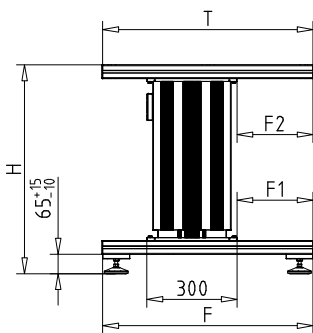
Electrically height adjustable workstations



Stroke 300 mm

Sample application

Electrically height-adjustable tables					
		Preferred widths in u/min.			
Width (B)	variable	1000	1200	1500	2000
Depth (T)	variable	700			
Height (H)		695 (stroke 300) / 795 (stroke 400)			
F	variable	700			
F1	variable	253			
F2	variable	253			
max. Load [N]	variable	1500	1000	800	1200
Electrically height-adjustable table - stroke 300 mm	32.0172/0	32.0172/1	32.0172/2	32.0172/3	32.0172/4
Electrically height-adjustable table - stroke 400 mm	32.0173/0	32.0173/1	32.0173/2	32.0173/3	32.0173/4



- The base frame of the electrically height-adjustable tables consists of the profile 45 x 90 F and 45 x 45 F, anodized E6/EV1
- The base frames are equipped with PA articulated feet, M10 spindle Ø 80 mm plate to compensate for uneven floors (+/- 10 mm)
- The frames are supplied without tabletops and the necessary mounting brackets for tabletops
- A large selection of tabletops can be found from page 379
- The height adjustment is available with either 300 or 400 mm stroke. The max. lifting speed is 9 mm/s
- Operation is via a manual switch with 3-digit display, two buttons for up and down function and four storable positions

Portal structures

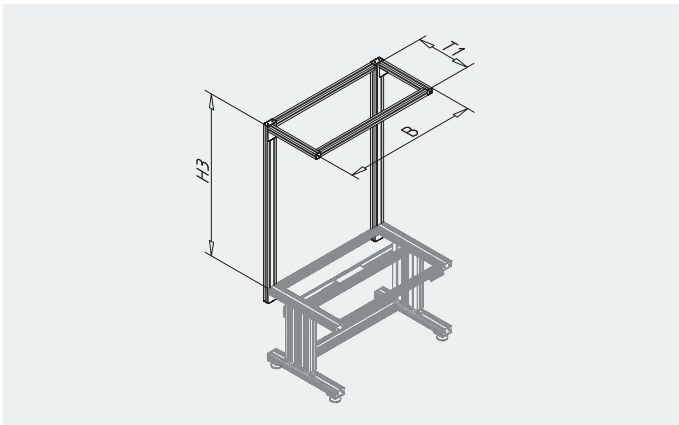


Portal construction



Sample application

		Portal constructions			
		Preferred widths in u/min.			
Width (B)	variable	1000	1200	1500	2000
Depth (T1) [mm]	variable	500			
Height (H3) [mm]	variable	1455			
Portal constructions	320174/0	320174/1	320174/2	320174/3	320174/4



- Thanks to the modular design principle, both the hydraulically and electrically height-adjustable worktables can be quickly and easily supplemented with portal structures if required
- The portal structures can either be freely configured or ordered in predefined standard dimensions

Hydraulic and electric lift systems

The ergonomically optimal working height for every application

The workers expect that their desks and the tools and objects to be gripped are adapted to their individual needs and arranged at the correct height. A fatigue or even damage to the body must be avoided from the outset. In order to meet this requirement - regardless of the respective ap-

plication - MiniTec offers three different flexible lift systems made of colourless anodized aluminum profiles with different lifting and installation heights at.



Hydraulic lift system „HLS 1G“



Electric lift system „ELS 1G“



Electric lift system “ELS”

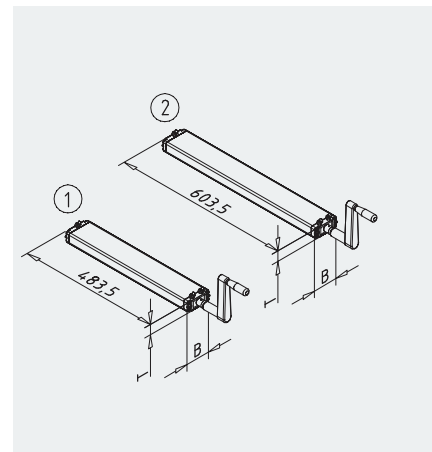
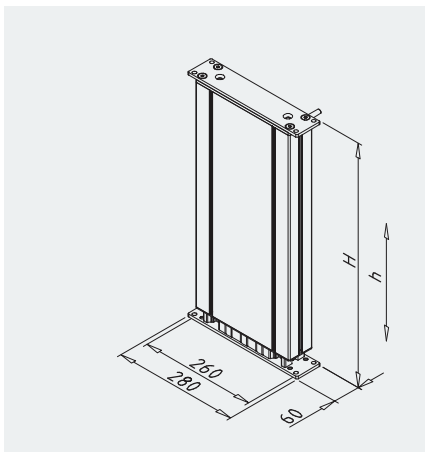
	HLS 1G		ELS 1G		ELS L		ELS S	
	Stroke 300	Stroke 400	Stroke 300	Stroke 400	Stroke 350	Stroke 400	Stroke 350	Stroke 400
Max. system load capacity [N] for 2-3 columns	3000		6000		4000		6400	
Pressure force per column [N]	1500		3000		2000		3200	
Tensile force dyn/stat [N]	0		50/500		1000		1600	
Installation height [mm]	540	640	540	640	542	592	542	592
Number of fixing grooves	4		4		6		6	
Suitable for mobile solutions	yes		no		no		no	
Lifting speed	5mm per turn of the crank		9 mm/s		9 mm/s		9 mm/s	
Synchronous operation possible up to max.	10 lifting columns		12 lifting columns		12 lifting columns		12 lifting columns	
Flexible number of columns by user	no		yes*		no		no	
Number of lifting columns is automatically detected by the controller	-		yes*		no		no	

APPLICATIONS

- Height adjustment of individual workplaces and complete packaging, assembly and production systems as well as office units and furniture in general, material provisioning, fixtures

Hydraulic lift systems

Hydraulic lift system „HLS 1G”



Hydraulic lift system HLS 1G							
Type	Stroke h	Installation height H	Pump type	Number of columns			
				1	2	3	4
HLS-300S-1G	300 mm	540 mm	1	HLS-300S/540-1000-1G-1	HLS-300S/540-3000-1G-2	HLS-300S/540-3000-1G-3	HLS-300S/540-3000-1G-4
				32.0182/1	32.0182/2	32.0182/3	32.0182/4
HLS-400S-1G	400 mm	640 mm	2	HLS-400S/640-1000-1G-1	HLS-400S/640-3000-1G-2	HLS-400S/640-3000-1G-3	HLS-400S/640-3000-1G-4
				32.0183/1	32.0183/2	32.0183/3	32.0183/4
Max. system load capacity				1000 N	3000 N	3000 N	3000 N
Pump width/depth				85/35 mm		120/60 mm	
Higher loads and more than 4 lifting columns on request							

Application

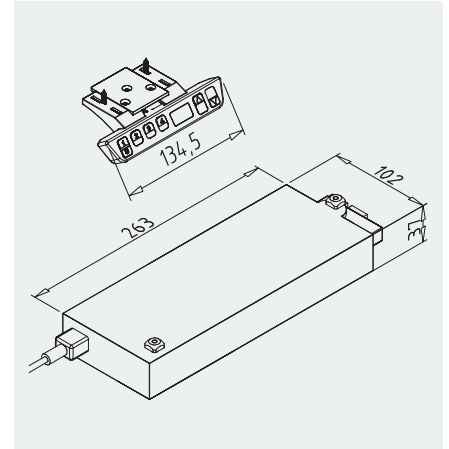
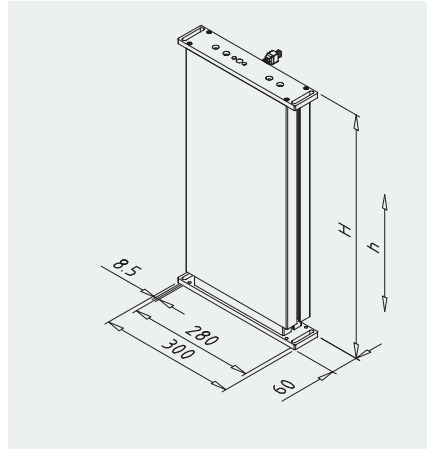
- Height adjustment of individual workplaces and complete packaging, assembly and production systems as well as office units and furniture in general, fixtures, material provisioning
- Particularly suitable for mobile applications (no power supply necessary)

Technical data

- Anodised aluminum profile E6 / EV1 with plastic glides
- 4 mounting grooves on 3 sides allow on total
- Column length attachment of trusses, clipboards as well as attachments and superstructures
- Lifting speed: 5 mm each turn of the crank
- Max. static bending moment: 1500 Nm
- Max. dynamic bending moment: 150 Nm Single-acting hydraulics: restoring force necessary!
- Restoring force = $[(1.5\text{kg} \times \text{hose length in m}) + 6\text{kg}] \times \text{number of columns}$
- Hose length per column: 4m
- Installation position: only pressing. The system must not be loaded with tension (if necessary, provide for transport lock)
- Synchronous operation: up to max. 10 columns possible
- Ambient temperature: + 10 ° to + 40 ° C
- IP 30

Electric lift systems

Electric lift system „ELS 1G”



Electric lift system ELS 1G					
Type	Stroke h	Installation height H	Anzahl der Säulen		
			1	2	3
ELS-300-1G	300 mm	540 mm	ELS-300/540-3000-1G-1	ELS-300/540-6000-1G-2	ELS-300/540-6000-1G-3
			32.0180/1	32.0180/2	32.0180/3
ELS-400-1G	400 mm	640 mm	ELS-400/640-3000-1G-1	ELS-400/640-6000-1G-2	ELS-400/640-6000-1G-3
			32.0181/1	32.0181/2	32.0181/3
Max. system load capacity			3000 N	6000 N	6000 N
Higher loads and more than 3 columns on request					

Application

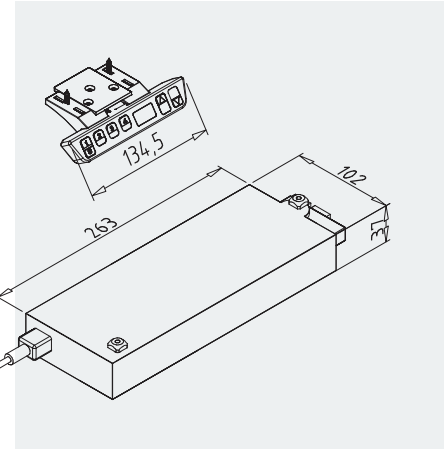
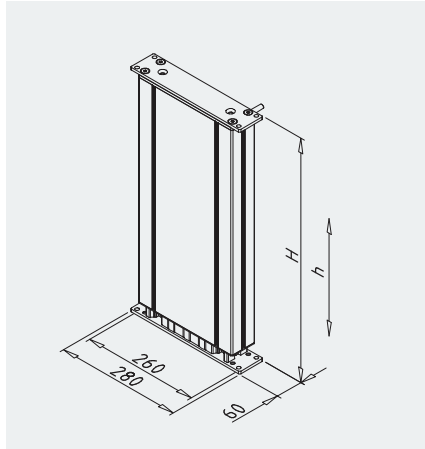
- Height adjustment of individual workplaces and complete packaging, assembly and production systems as well as office units and furniture in general - for ergonomically optimal working height

Technical data

- Anodised aluminum profile E6 / EV1 with plastic glides
- 4 mounting grooves on 3 sides make it possible to mount trusses, clipboards as well as attachments and super-structures over the entire leg length
- Lifting speed: 9mm/s
- Drive: Internal DC drive with built-in limit switches and 2 Hall sensors
- Max. Bending moments / column: in the longitudinal direction 1200 Nm static, 500 Nm dynamic; in the transverse direction 450 Nm static, 255Nm dynamic
- Max. tensile load/column: 500N static, 50N dynamic
- Cable supply per column: L=1200mm;
- Cable outlet on large profile on the inside
- IP 30 Duty cycle: 10% (S3) for periodic operation and max. Load (2 min. ON / 18 min. OFF)
- Installation position: preferably pushing
- Synchronous operation: up to max. 12 columns possible
- Ambient temperature: + 10 ° to + 40 ° C
- Control: Synchronous control for up to 3 columns „Plug & Play” (up to 12 on request)
- Handset: Handset with display and memory function
- Scope of delivery: Electric lifts with fixing material, synchronous control and handset
- Accessories: Motor extension cable, part no.: 32.0042/0
Handset extension cable, part no.: 27.0110/0

Electric lift systems

Electric lift system "ELS"



Electric lift system ELS L					
Type	Stroke h	Installation height H	ELS-350/545-1600-L-1 Part No.: 32.1540/1S		
			1	2	3
ELS-350 L	350 mm	542 mm	ELS-350/542-2000-L-1	ELS-350/542-4000-L-2	ELS-350/542-4000-L-3
			32.1540/1	32.1540/2	32.1540/3
ELS-400 L	400 mm	592 mm	ELS-400/592-2000-L-1	ELS-400/592-4000-L-2	ELS-400/592-4000-L-3
			32.1510/1	32.1510/2	32.1510/3
Max. system load capacity			2000 N	4000 N	4000 N
Higher loads and more than 3 columns on request					

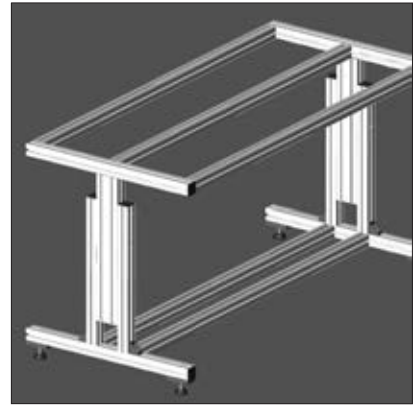
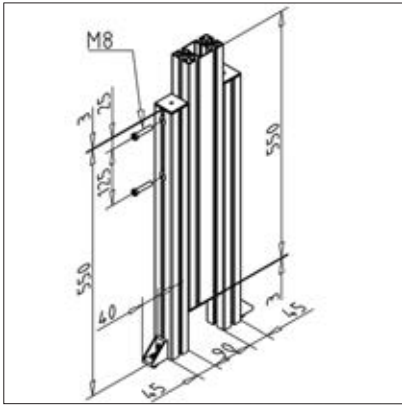
Electric lift system ELS S - for higher loads					
Type	Stroke h	Installation height H	ELS-350/545-1600-L-1 Part No.: 32.1540/1S		
			1	2	3
ELS-350 S	350 mm	542 mm	ELS-350/542-3200-S-1	ELS-350/542-6400-S-2	ELS-350/542-6400-S-3
			32.1530/1	32.1530/2	32.1530/3
ELS-400 S	400 mm	592 mm	ELS-400/592-3200-S-1	ELS-400/592-6400-S-2	ELS-400/592-6400-S-3
			32.1500/1	32.1500/2	32.1500/3
Max. system load capacity			3200 N	6400 N	6400 N
Higher loads and more than 3 columns on request					

Technical data

- Aluminium, anodised E6/EV1
- Efficient and low noise coax drive gear units
- Compatible with all common industrial profile systems
- Synchronous control for activating up to 3 lifting columns
- Manual switch with display and memory function
- Drive: Internal DC drive with built-in limit switches and 2 Hall sensors

Height adjustment for workstations

Part No. 32.0335/0



TECHN. DATA / ITEMS SUPPLIED

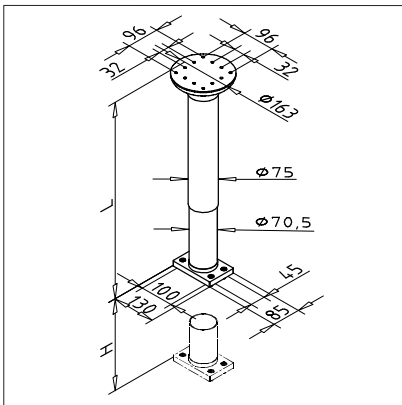
- From profile 45 x 45 F and 45 x 90 F, anodized E6/EV1
- Installation dimension: 553mm
- Adjustable range: 385mm
- ESD-compatible **part no. 32.0335/6**
- 1x height adjustment fully assembled
- Weight = 3.192 kg/piece

APPLICATIONS

- Simple height-adjustment through double profiles
- Adjustable through release of the screwed fastening

Pneumatic lift system PLS - 415

Part No. 32.0360/0



TECHN. DATA / ITEMS SUPPLIED

- With adapter plate at the bottom and fastening material
- Diameter 75 mm
- Lifting capacity: 120 N
- Max. all. load in blocked condition 1000 N
- Stroke (H): 415 mm
- Installation dimension (L) retracted: 640 mm
- Optionally also **part no. 32.0361/0**
Stroke (H): 225 mm
Installation dimension (L): 450 mm
- Weight = 5.383 kg/piece

APPLICATIONS

- For raising and lowering the work tables and other equipment
- Activation / release: Bowden cable L=280mm

ASSEMBLY

- Install to the profile groove with supplied hardware

Tabletops



For the different assembly tasks, a selection of Tabletops is available.

The maximum plate sizes can also be found on the following pages in the item description.

Within the listed dimensions we can realize every spe-

cial dimension.

The Tabletops are fixed to the base frame with mounting bracket 25 GD-Z and chipboard screws.

	Scratch	Abrasion	Stroke	Warmth	Humidity	Oil	Chemicals	ESD, antistatic	Light reflection	Layer thickness
Melamine	◐	◐	◑	◑	◑	◑	◑	○	●	0,2
Laminate	●	●	●	●	◐	●	◑	○	●	0,8
HPL	●	●	●	●	◐	●	◐	○	●	3
Multiplex	◐	●	◐	●	◐	◑	◑	○	●	-
Melamine conductive	◐	◐	◑	◑	◑	◑	◑	●	●	0,2
PE 500 R	◑	●	◑	◑	●	●	◐	○	○	-
HPL Compact tabletop	●	●	●	●	●	●	◐	○	●	-
HPL ESD Compact tabletop	●	●	●	●	●	●	◐	●	●	-

● Very suitable

◐ conditionally suitable

◑ little suitable

○ not suitable

part no.	Article	Color	Thickness (mm)	Width W (mm)	Depth D (mm)
32.0410/0	Tabletop melamine	Light grey RAL 7035	22 mm	B= (≤2760 mm)	T= (≤2060 mm)
32.4110/0	Tabletop melamine	Light grey RAL 7035	22 mm	1000 mm	700 mm
32.4120/0	Tabletop melamine	Light grey RAL 7035	22 mm	1200 mm	700 mm
32.4140/0	Tabletop melamine	Light grey RAL 7035	22 mm	1500 mm	700 mm
32.4160/0	Tabletop melamine	Light grey RAL 7035	22 mm	2000 mm	700 mm
32.4200/0	Tabletop hard laminate	Light grey RAL 7035	20 mm	B= (≤2750 mm)	T= (≤1250 mm)
32.4210/0	Tabletop hard laminate	Light grey RAL 7035	20 mm	1000 mm	700 mm
32.4220/0	Tabletop hard laminate	Light grey RAL 7035	20 mm	1200 mm	700 mm
32.4240/0	Tabletop hard laminate	Light grey RAL 7035	20 mm	1500 mm	700 mm
32.4260/0	Tabletop hard laminate	Light grey RAL 7035	20 mm	2000 mm	700 mm
32.4700/0	Tabletop hard laminate	Light grey RAL 7035	40 mm	B= (≤2750 mm)	T= (≤1250 mm)
32.4710/0	Tabletop hard laminate	Light grey RAL 7035	40 mm	1000 mm	700 mm
32.4720/0	Tabletop hard laminate	Light grey RAL 7035	40 mm	1200 mm	700 mm
32.4740/0	Tabletop hard laminate	Light grey RAL 7035	40 mm	1500 mm	700mm
32.4760/0	Tabletop hard laminate	Light grey RAL 7035	40 mm	2000 mm	700 mm
32.0440/0	Tabletop multiplex beech	Polished, natural	20 mm	B = (≤2460 mm)	T = (≤1460 mm)
32.4410/0	Tabletop multiplex beech	Polished, natural	20 mm	1000 mm	700 mm
32.4420/0	Tabletop multiplex beech	Polished, natural	20 mm	1200 mm	700 mm
32.4440/0	Tabletop multiplex beech	Polished, natural	20 mm	1500 mm	700 mm
32.4460/0	Tabletop multiplex beech	Polished, natural	20 mm	2000 mm	700 mm
32.0490/0	Tabletop multiplex beech	Polished, natural	40 mm	B = (≤2460 mm)	T = (≤1460 mm)
32.4910/0	Tabletop multiplex beech	Polished, natural	40 mm	1000 mm	700 mm
32.4920/0	Tabletop multiplex beech	Polished, natural	40 mm	1200 mm	700 mm
32.4940/0	Tabletop multiplex beech	Polished, natural	40 mm	1500 mm	700 mm
32.4960/0	Tabletop multiplex beech	Polished, natural	40mm	2000 mm	700 mm
Clearcoating or oiled on request					

part no.	Article	Color	Thickness (mm)	Width W (mm)	Depth D (mm)
32.0460/0	ESD-Tabletop melamine	Light grey RAL 7035	25 mm	B = (≤2760 mm)	T = (≤2060 mm)
32.4610/0	ESD-Tabletop melamine	Light grey RAL 7035	25 mm	1000 mm	700 mm
32.4620/0	ESD-Tabletop melamine	Light grey RAL 7035	25 mm	1200 mm	700 mm
32.4640/0	ESD-Tabletop melamine	Light grey RAL 7035	25 mm	1500 mm	700 mm
32.4660/0	ESD-Tabletop melamine	Light grey RAL 7035	25 mm	2000 mm	700 mm
32.6100/0	Tabletop PE 500 R	Confetti	25 mm	B= (≤3000 mm)	T= (≤1250 mm)
32.6110/0	Tabletop PE 500 R	Confetti	25 mm	1000 mm	700 mm
32.6120/0	Tabletop PE 500 R	Confetti	25 mm	1200 mm	700 mm
32.6140/0	Tabletop PE 500 R	Confetti	25 mm	1500 mm	700 mm
32.6160/0	Tabletop PE 500 R	Confetti	25 mm	2000 mm	700 mm
The colour spread may vary in shape, size and colour depending on the delivery.					
32.6000/0	Tabletop PE 500 R	black	25 mm	B= (≤3000 mm)	T= (≤1250 mm)
32.6010/0	Tabletop PE 500 R	black	25 mm	1000 mm	700 mm
32.6020/0	Tabletop PE 500 R	black	25 mm	1200 mm	700 mm
32.6040/0	Tabletop PE 500 R	black	25 mm	1500 mm	700 mm
32.6060/0	Tabletop PE 500 R	black	25 mm	2000 mm	700 mm
plate made of aluminium, PVC, stainless steel or requested material					
32.6204/0	HPL Compact tabletop	Light grey	20 mm	B= (≤2520 mm)	T= (≤1280 mm)
32.6208/0	HPL ESD Compact tabletop	Light grey	20 mm	B= (≤2520 mm)	T= (≤1280 mm)

Mounting angle for tabletops

Part no. 32.0401/6



Technical Data:

- Mounting angle 25; Chipboard screw with washer; Cylinder head screw with sliding nut
- For Tabletops from 22 mm
- Für EPA/ESD Anwendungen Part no. 32.0401/6
- Weight 0,058 kg

Application:

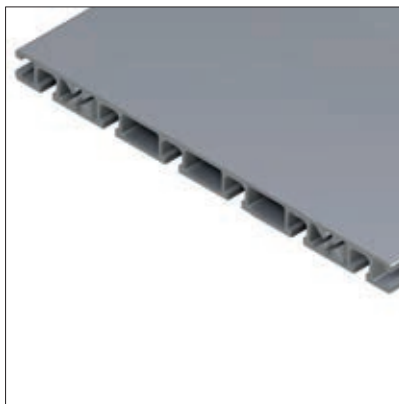
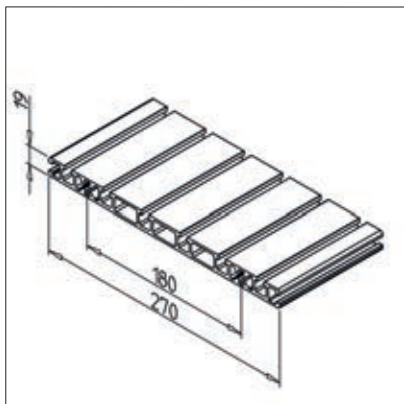
- Fixing Tabletops from 22 mm on the profile frame

Assembly:

- Fasten with fastening material from the scope of delivery to the profile groove
- For retrofitting to a vertical groove, preferably square nut M8 with groove fixing, Part no. 21.1351/2 use
- Screw chipboard screw with washer into Tabletop, if necessary pre-drill

Profile 270 x 19

Part No. 20.1077/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- $I_x = 10.348 \text{ cm}^4$
- $I_y = 1352.197 \text{ cm}^4$
- $w_x = 10.167 \text{ cm}^3$
- $w_y = 100.162 \text{ cm}^3$
- $IT = 18.378 \text{ cm}^4$
- Weight = 5.612 kg/m
- Bar length = 6 m
- Packing unit = 18 m

APPLICATIONS

- Mounting plates
- Workstations
- Training set-ups for training and further education with universal clamping socket **part no. P2.0060/0**
- Demonstration units

ASSEMBLY

- Angles
- Screw connection
- Bolt connector

Base cabinets and fastening kits



Drawer 50-100-150-200 mm



Base cabinet, large

Order in the workplace

The MiniTec drawer base cabinets and door base cabinets are made of stable painted steel. In industry, they are suitable for production lines and production islands or as part of an individual workplace. Available in several sizes, they are extremely stable and provide space for all necessary tools and other work materials. They therefore introduce order and structure into the workplace, thereby simplifying and optimising production processes. At the same time, the base cabinets protect work materials from dirt or chemicals in the industrial environment. That is not only convenient, but also economic, because it extends the life of your tools.

Storage space that is also visually convincing

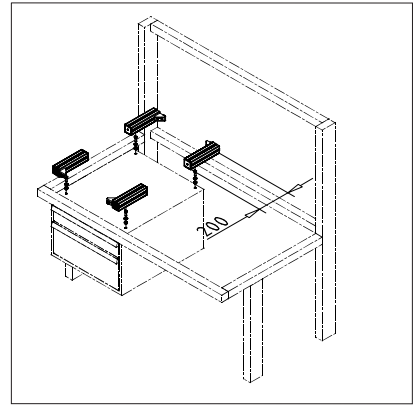
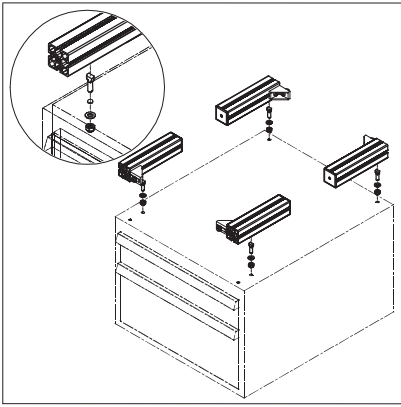
The standard MiniTec base cabinet for workplace systems is available in uniform light grey or with a light grey body and brilliant blue drawers or doors so that it also visually fits seamlessly. Alternatively, on request you can choose from these colours for the drawers and doors: grey-green, reseda green, light grey, light blue, ruby red, water blue, anthracite, red-orange, brilliant blue and aluminium silver. The MiniTec base cabinets not only impress with their functionality but also set visual accents in industry and in the workshop.

Convenient handling with full extension

The MiniTec telescopic runner with self-closing is precisely the right answer for maximum comfort and convenience. Areas of application are for pulling out drawers with ball-bearing track as well as pulling-out workpiece carriers. It is installed quickly and easily on the side of the drawer and profile. In line with the proven MiniTec modular principle, all base cabinets with the corresponding fastening kits are combinable with den MiniTec tables. Count on the MiniTec base cabinets including accessories to achieve order, convenience and safety in industry and supplement your workplace system with a high-quality and stable component.

Base cabinet fastening kit

Part No. 32.0806/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Composed of:
 - 4x Profile 45 x 45 - L=200 mm
 - 4x Mounting bracket 25 S
 - 4x Hammer head screw M8 with nut
- Suitable for ESD-designs
- Weight = 1.951 kg/piece

APPLICATIONS

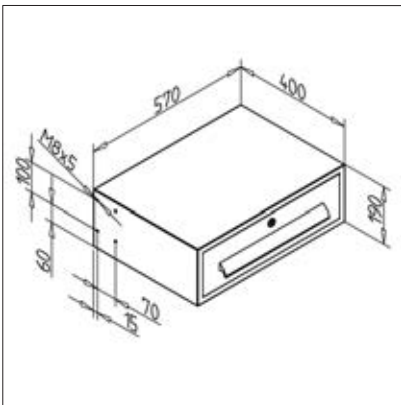
- For the attachment of floor cabinets on table frame

ASSEMBLY

- With fastening material included
- Screw fastening set on base frame
- Remove drawers from counter cabinet
- Place the hammer screws on the cabinet
- Swing in the cabinet with the hammer screws in the profile groove, tighten the nuts

Base cabinet with drawers 200

Part No. 32.0809/0



TECHN. DATA / ITEMS SUPPLIED

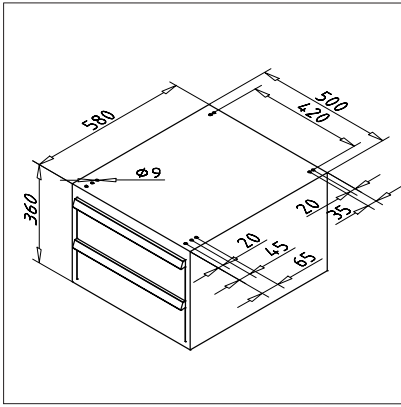
- Steel, lacquered
- Without fastening kit
- Color:
 - Corpus light grey RAL 7035
 - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys
- Max. load capacity: 35kg
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Weight = 10.410 kg/piece

ASSEMBLY

- Use side threads or drill your own holes
- Alternatively with mounting set for under counter cabinet **part no. 32.0806/0**
Insert 4 x 8.5 holes at the appropriate location

Base cabinet with drawers 150/150

Part No. 32.0810/0



TECHN. DATA / ITEMS SUPPLIED

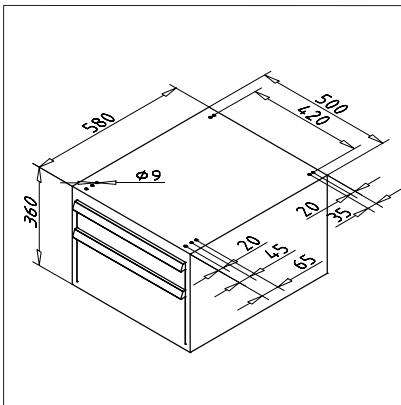
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
 - Corpus light grey RAL 7035
 - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 2 drawers, H = 150 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 22.570 kg/piece

ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0810/6**
- Optionally available in different colors **part no. 32.0810/2**

Base cabinet with drawers 100/200

Part No. 32.0811/0



TECHN. DATA / ITEMS SUPPLIED

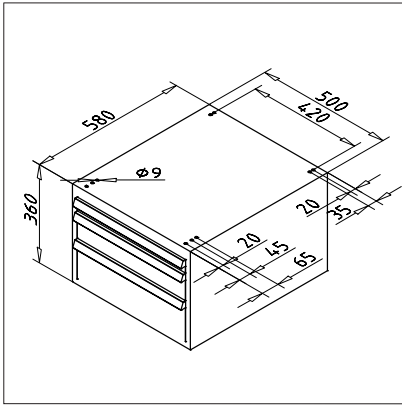
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
 - Corpus light grey RAL 7035
 - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 1 drawer H = 100 mm, 1 drawer H = 200 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 22.570 kg/piece

ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also available in ESD version **part no. 32.0811/6**
- Optionally available in different colors **part no. 32.0811/2**

Base cabinet with drawers 50/100/150

Part No. 32.0812/0



TECHN. DATA / ITEMS SUPPLIED

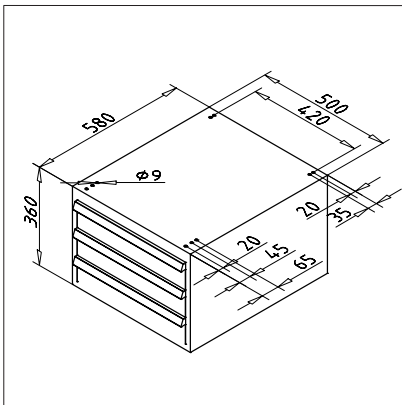
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
 - Corpus light grey RAL 7035
 - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 1 drawer H = 50 mm, 1 drawer H = 100 mm
- mm, 1 drawer H = 150 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 33.000 kg/piece

ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0812/6**
- Optionally available in different colors **part no. 32.0812/2**

Base cabinet with drawers 100/100/150

Part No. 32.0813/0



TECHN. DATA / ITEMS SUPPLIED

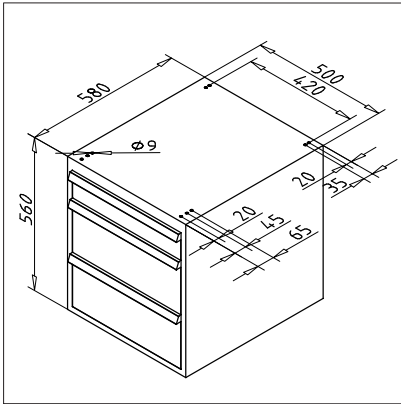
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
 - Corpus light grey RAL 7035
 - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 3 drawers H = 100 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 33.000 kg/piece

ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0813/6**
- Optionally available in different colors **part no. 32.0813/2**

Base cabinet with drawers 100/200/200

Part No. 32.0819/0



TECHN. DATA / ITEMS SUPPLIED

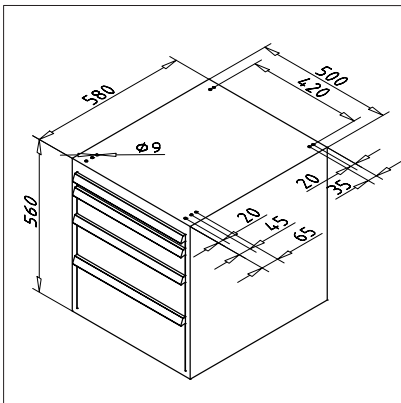
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
 - Corpus light grey RAL 7035
 - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 1 drawer H = 100 mm, 2 drawers H = 200 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 34.220 kg/piece

ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0819/6**
- Optionally available in different colors **part no. 32.0819/2**

Base cabinet with drawers 50/50/150/200

Part No. 32.0814/0



TECHN. DATA / ITEMS SUPPLIED

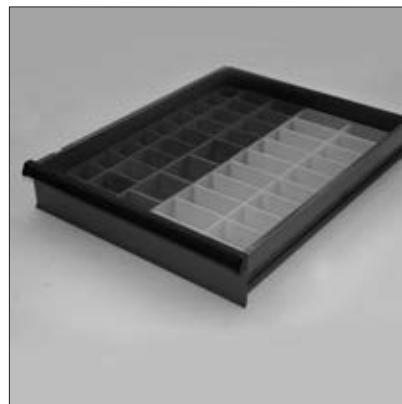
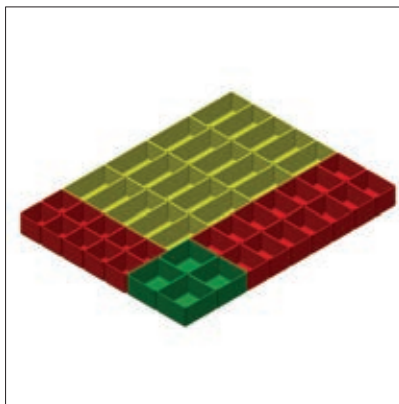
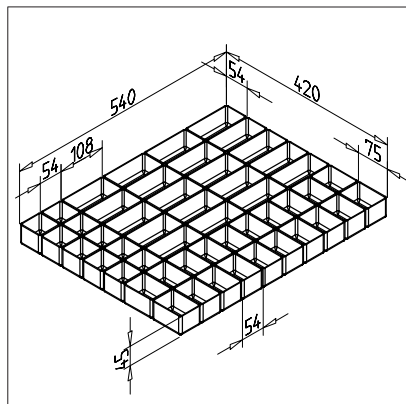
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
 - Corpus light grey RAL 7035
 - Drawer brilliant blue RAL 5007
- Cylinder lock with 2 keys, center locking for all drawers
- Individual drawer locking
- 1 drawer H = 50 mm, 1 drawer H = 100 mm, 1 drawer H = 150 mm, 1 drawer H = 200 mm, with perforated bottom
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Drawer inside W = 425 mm T = 550 mm, effective height = H-10 mm
- Max. load capacity per compartment 35kg
- Max. load capacity per cabinet: 200 kg
- Weight = 35.330 kg/piece

ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame
- Also in ESD version **part no. 32.0814/6**
- Optionally available in different colors **part no. 32.0814/2**

Drawer container set 1

Part No. 32.0807/0



TECHN. DATA / ITEMS SUPPLIED

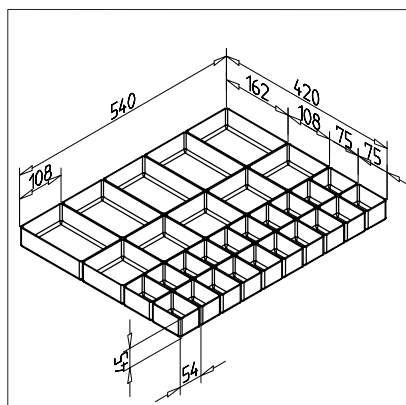
- Drawer inside dimensions
W x D 425 x 550 mm
- For panel height 100-300 mm
- 20 x Container yellow 54 x 108 x 45 mm
- 20 x red container 54 x 75 x 45 mm
- 10 x Container red 54 x 54 x 45 mm
- Other arrangements on request
- High impact polystyrene
- Weight = 1.060 kg/set

ASSEMBLY

- Easy to remove and reinstall

Drawer container set 2

Part No. 32.0808/0



TECHN. DATA / ITEMS SUPPLIED

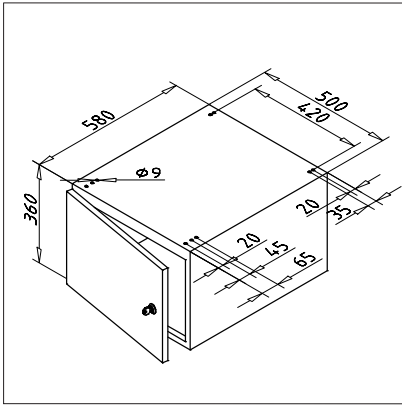
- Drawer inside dimensions
W x D 425 x 550 mm
- For panel height 100-300 mm
- 5 x Container green 108 x 162 x 45 mm
- 5 x case 108 x 108 x 45 mm
- 20 x Container red 54 x 75 x 45 mm
- Other arrangements on request
- High impact polystyrene
- Weight = 0.965 kg/set

ASSEMBLY

- Easy to remove and reinstall

Base cabinet with doors, small

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

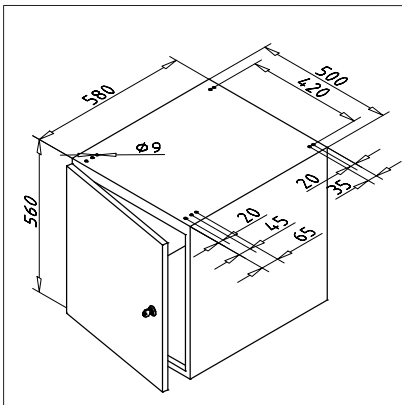
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
 - body light grey RAL 7035
 - door brilliant blue RAL 5007
- Cylinder lock with 2 keys, 1 shelf
- Max. load capacity per cabinet: 200 kg
- Left version (as shown) **part no. 32.0815/0**
- Right version **part no. 32.0815/1**
- Other colors:
 - left version under **part no. 32.0815/2**
 - Right version at **part no. 32.0815/3**
- Weight = 34.000 kg/piece

ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame

Base cabinet with doors, large

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

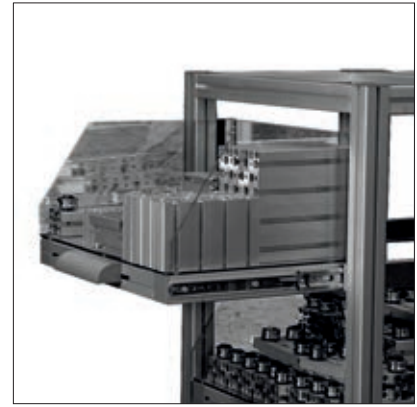
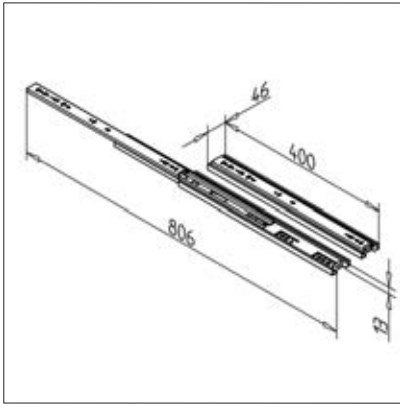
- Steel, lacquered
- With fastening material steel, zinc plated
- Color:
 - body light grey RAL 7035
 - door brilliant blue RAL 5007
- Cylinder lock with 2 keys, 1 shelf
- Max. load capacity per cabinet: 200 kg
- Left version (as shown) **part no. 32.0816/0**
- Right version **part no. 32.0816/1**
- Other colors:
 - left version under **part no. 32.0816/2**
 - Right-hand version at **part no. 32.0816/3**
- Weight = 43.500 kg/piece

ASSEMBLY

- Use fastening kit to fasten to base frame
- Alternatively attach with mounting set **part no. 32.0806/0** to strut profiles of the base frame

Telescopic runner, full extension 400

Part No. 32.0801/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Latching in retracted and extended position
- Max. load capacity per compartment 35kg
- Mounting length 400 mm, pull-out length 46 mm
- **Other lengths on request**
- Items supplied: 2 pieces
- Weight = 1.225 kg/pair

ASSEMBLY

- Fasten to the side of drawers and profile

Lighting at the assembly workstation



Workplace lighting for workshop and industry

For manual work, but also partially automated processes within interlinked workstations, proper lighting is an important factor for the quality of work and the well-being of employees. At MiniTec, you will find high-quality profile luminaires with which you can optimally illuminate your workstations. With the profile luminaire LED, the profile luminaire LED Mini or the LED system workstation luminaires, you will find the right lighting system for every workstation in our range - also dimmable if required.

High quality profile luminaires at MiniTec

At MiniTec you will find high-quality profile luminaires in different variations. The profile luminaire LED illuminates every workplace optimally. The long-lasting luminaire is almost maintenance-free with an LED service life of up to 50,000 hours. It is easily dimmable and has a high energy efficiency and is available in special lengths. The profile luminaire LED mini provides targeted and punctual light at the workplace. It is perfectly suited for illuminating manual workstations, workstations at machines, e.g. lathes and milling machines, as well as for measuring technology. The MiniTec system workplace luminaires convince with compact and robust luminaire housings made of self-supporting aluminium profile, natural anodized. The lamps are absolutely flicker-free due to DC operation of the LEDs.

Obvious advantages for your workplace system

Correct and adequate illumination of the workplace is a factor in workplace design that cannot be ignored. Light incidence has enormous effects on the well-being and health of your employees. If the workplace is too dark or illuminated too brightly, it can lead to long-term damage of vision. Whoever can see well can also carry out their tasks safely and tires more slowly. Therefore, opt for our LED workplace lighting and protect the eyesight of your workers.

System workplace luminaires LED-S | LED-M | LED-L

Flicker-free and energy-efficient: LED system workplace luminaires

The MiniTec system workplace luminaires convince with compact and robust luminaire housings made of self-supporting aluminium profile, natural anodized. The lamps are absolutely flicker-free due to the DC operation of the LEDs. The

LED service life of up to 50,000 hours makes the luminaires virtually maintenance-free. The smooth, closed surface makes the luminaires easy to clean and therefore suitable for demanding work environments.

	LED - S	LED - M	LED - L
Part No.	32.1160/0	32.1161/0	32.1162/0
Length x Width x Height	302 x 61 x 80 mm	587 x 61 x 80 mm	872 x 61 x 80 mm
Illuminance	1000 LUX at 750 mm distance	1000 LUX at 1000 mm distance	1350 LUX at 1000 mm distance
Rated luminous flux	1400lm	2500lm	3800lm
Light colour	5000 K		
Color rendering CRI	>80 (typ.84)		
Protection	IP20		
Supply voltage	220-240V, 0/50...60Hz		
Power (in watts)	8 W	13,6 W	20,4 W
Scope of delivery	integrated switch in the lamp, 3 m supply cable with Schuko (earthed) safety plug		

System workplace luminaires LED-M | LED-L dimmable

	LED - M Dimmable via Lamp switch	LED - L Dimmable via Lamp switch
Part No.	32.1163/0	32.1165/0
Length x Width x Height	587 x 61 x 80 mm	872 x 61 x 80 mm
Illuminance	1100 LUX at 1000 mm distance	1500 LUX at 1000 mm distance
Rated luminous flux	2800 lm	4250 lm
Light colour	5000K	
Color rendering CRI	>80(typ.84)	
Protection	IP20	
Supply voltage	220-240V, 0/50...60Hz	
Power (in watts)	16 W	24 W
Scope of delivery	incl. 3 m supply cable/Schuko safety plug integrated button	



	LED - M Dimmable via external pushbutton	LED - L Dimmable via external pushbutton
Part No.	32.1164/0	32.1166/0
Length x Width x Height	587 x 61 x 80 mm	872 x 61 x 80 mm
Illuminance	1100 LUX at 1000 mm distance	1500 LUX at 1000 mm distance
Rated luminous flux	2800lm	4250lm
Light colour	5000K	
Color rendering CRI	>80(typ.84) (CRI)	
Protection	IP20	
Supply voltage	220-240V, 0/50...60Hz	
Power (in watts)	16 W	24 W
Scope of delivery	incl. 4 m supply cable 4-pin without plug and without button	



Profile luminaires LED-S | LED-M | LED-L

Everything in view with the LED profile luminaire

The LED profile luminaire illuminates every workplace optimally. Whether at the workbench, on machines or in the office. With an LED service life of up to 50,000 hours, the durable luminaires are virtually maintenance-free. They are easily dimmable, so that the illuminance can be adjusted to the individual needs of employees and conditions at the workplace. In addition, the profile luminaires have a high energy efficiency and are available in special lengths. Thanks to the enormous luminosity and glare-free LED

bulbs, the profile luminaires on machines, workbenches, individual and team workstations provide optimal light for pleasant and energy-efficient lighting at the workplace. The profile luminaire is very easy to integrate into the profile frame construction. The profile luminaire also fits ideally into the proven MiniTec modular principle, as it can be integrated precisely into the 45 x 45 profile and can also be used directly as its own profile. Mounting is possible with all fastening elements from our modular profile system. The outdoor version can also be used on machines, for example, lathes and milling machines.



	PROFILE LUMINAIRE S indoor	PROFILE LUMINAIRE M indoor	PROFILE LUMINAIRE L indoor
Part No.	32.1169/0	32.1170/0	32.1171/0
Length x Width x Height	446 x 70 x 45 mm	646 x 70 x 45 mm	1016 x 70 x 45 mm
Rated luminous flux	3200 lm	4600 lm	7300 lm
Light colour	6000K		
Color rendering CRI	83 Ra		
Protection	IP50		
Supply voltage	220-240V, 0/50...60Hz		
Power (in watts)	24W	34W	54W
Scope of delivery	without supply cable and plug, electrical connection on site via terminals Power supply unit mounted at the rear, dimmable via control cable 0-10V		



	PROFILE LUMINAIRE S outdoor	PROFILE LUMINAIRE M outdoor	PROFILE LUMINAIRE L outdoor
Part No.	32.1172/0	32.1173/0	32.1174/0
Length x Width x Height	446 x 45 x 45 mm	646 x 45 x 45 mm	1016 x 45 x 45 mm
Rated luminous flux	3200lm	4600lm	7300lm
Light colour	6000K		
Color rendering CRI	83 Ra		
Protection	IP67		
Supply voltage	DC 24 V		
Power (in watts)	24W	34W	54W
Scope of delivery	5 m connection cable (open cable end)		

Profile luminaires MINI LED-XS | LED-S | LED-M | LED-XL

Our LED Mini profile luminaires are new in the MiniTec range. They impress the user with their efficiency and versatile use options. Whether in the workshop or as industrial lighting, the LED Mini profile luminaires provide targeted and spot

lighting in the workplace. They are perfectly suitable for the illumination of manual workplaces, workplaces at machines, e.g. lathes and milling machines as well as for trade fair technology.



- Luminous flux in lumen (lm) : the total visible radiant power emitted by a light source
- Illuminance in LUX (lx) : The light incident on a surface.
- Colour rendering CRI (Ra) : The value describing how well a colour illuminated by a light source is rendered

	PROFILE LUMINAIRE MINI LED XS	PROFILE LUMINAIRE MINI LED S	PROFILE LUMINAIRE MINI LED M	PROFILE LUMINAIRE MINI LED XL
Part No.	32.1175/0	32.1176/0	32.1177/0	32.1178/0
Length x Width x Height	130 x 23 x 23 mm	230 x 23 x 23 mm	330 x 23 x 23 mm	430 x 23 x 23 mm
Rated luminous flux	100lm	300lm	400lm	520lm
Light colour	4900K			
Color rendering CRI	85 Ra			
Protection	IP67			
Supply voltage	100-240 VAC, 50-60 Hz, 0,65 A			
Power (in watts)	2,7W	5,4W	8,1W	10,4W
Scope of delivery	Plug-in power supply with 1.85 m connection cable and M8 connection socket 3-pin			

Fastening options

Fastening kit
system workplace luminaire steel
part no. 32.1132/0



Fastening kit
system workplace luminaire PA
Part no. 32.1130/0



Fastening kit system workplace luminaire angle adjustable
Part no. 32.1131/0



Power supply

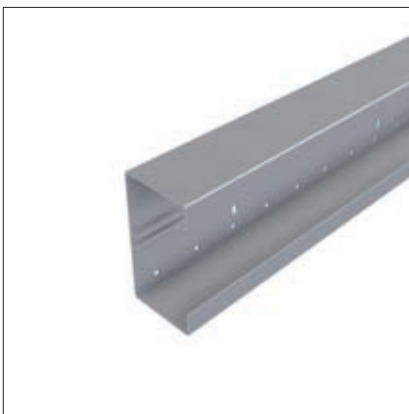


The MiniTec power supply duct for electrics and compressed air for individual arrangement of the installation elements

Cable ducts exactly equipped to your needs and completely wired simplify the installation of your workplace considerably. Our experienced skilled employees carry out the assembly for you. The cable channel with 4 m supply cable is equipped for immediate connection with Schuko or CEE plug. This eliminates the need for installation by certified qualified electricians on your premises.

Together with the cable duct equipped and installed by us,

you receive an informative test certificate. The cable duct and the cover are made of aluminium, natural anodised. Only high-quality branded products are used as built-in elements. The following overview simplifies the definition of the equipment you require. Subsequent installation of other elements is possible at any time by an authorized electrician.



Cable duct 130 AL

Part no. **32.0715/0**

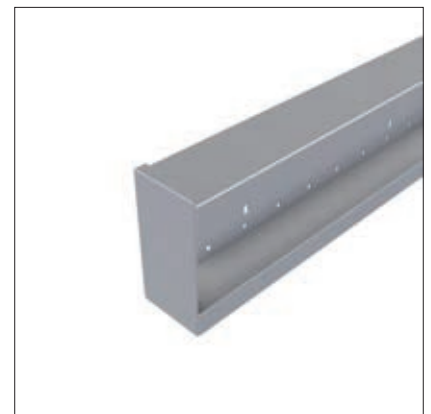
Manufacturing length 6m, power supply of sockets, switches, telecommunication connections, circuit breakers etc.



Cover for cable duct 130

Part no. **32.0716/0**

Manufacturing length 6m, Press cover on cable duct



End cab for cable duct 130

Part no. **32.0717/0**

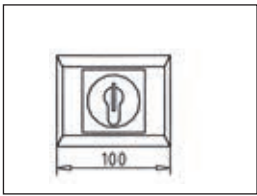
Plastic molding, painted aluminum color

Energy supply duct equipment

Key switch

Part no. 32.0720/0

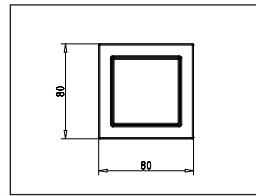
16 A, 2-pole



Toggle switch

Part no. 32.0725/0

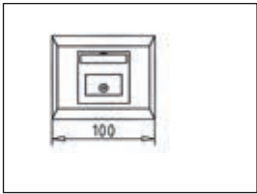
16 A, 1 -pin



Overvoltage protection

Part no. 32.0721/0

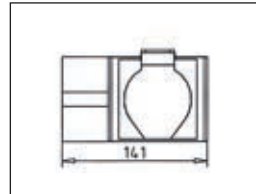
UN = 230V AC



Socket CEE 16A

Part no. 32.0724/0

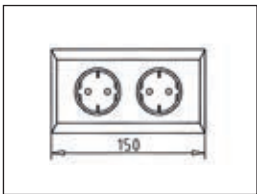
for plug DIN, 5-pin, 16 A



2-way duct socket

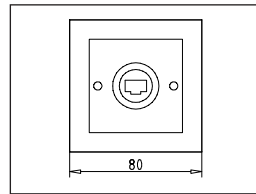
Part no. 32.0723/0

With earthing contact according to DIN



Data port CAT6

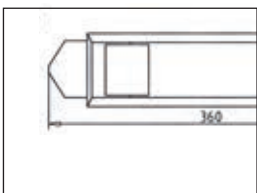
Part no. 32.0729/0



- RJ 45. link E, up to 250 MHz
- Complete junction box with output socket and frame for installation in cable duct
- Separate input socket required for free positioning
- (Hole 22,5 mm)
- Patch cable L = 2 m for connecting the two sockets

Installation distribution

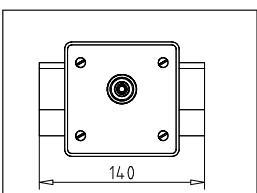
Part no. 32.0730/0



- Machine installation unit with 3 PLE
- Complete with installation cover, lock
- Can be equipped with automatic circuit breaker C10 with 1 PLE
- Automatic circuit breaker C 13 with 1 PLE
- Residual current device 1-pole 16 A/30 mA with 2 PLE

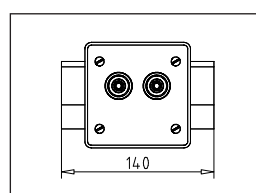
Pneumatic connection, single

Part no. 32.0740/0



Pneumatic connection, double

Part no. 32.0741/0


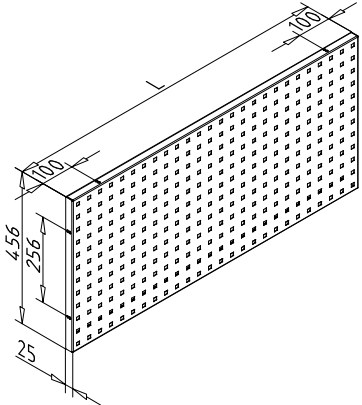


Accessories

For overview and order in the workplace

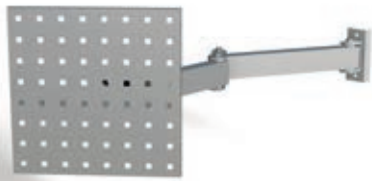
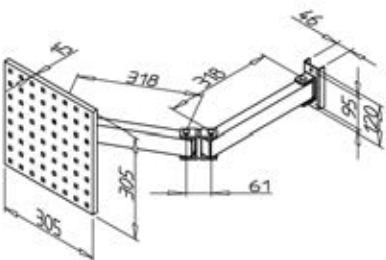
With the MiniTec assortment of tool holder plates, tool carriers and various tool holders, you can create an overview and order at your workplace. With this program, the operator has the right holder for every tool.

Tool holder plates

		Tool holder plates	
		Size 500:	L = 494 mm
		Part No.	32.0660/0
		Size 1000:	L = 988 mm
		Part No.	32.0665/0
		Size 1200:	L = 1178 mm
		Part No.	32.0670/0
		Size 1500:	L = 1482 mm
		Part No.	32.0675/0
		Size 2000:	L = 1976 mm
		Part No.	32.0680/0

- Steel, powder coated, grey, RAL 7035
- ESD capability
- Is simply attached to the portal structure
- Square perforation 10 x 10mm in grid 38mm
- Fixing material depending on application available on request


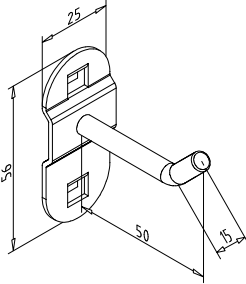

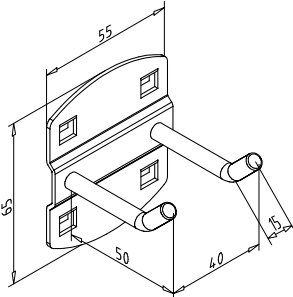

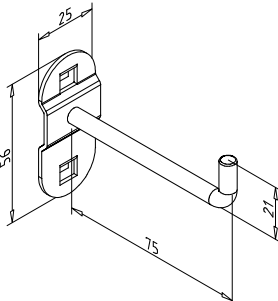

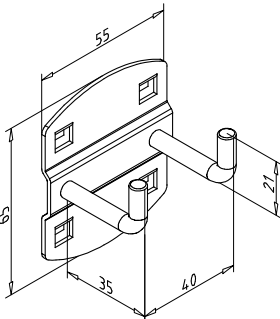

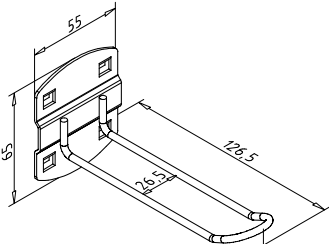
Tool carrier with double-joint swivel arm


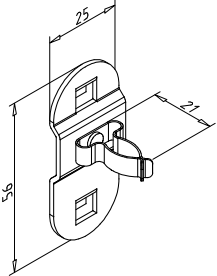

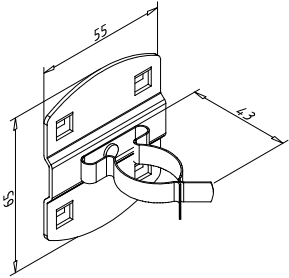

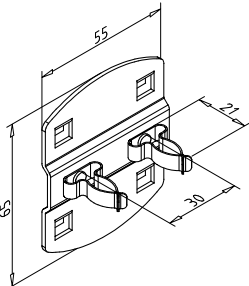

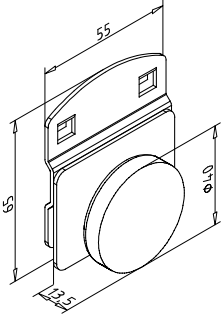

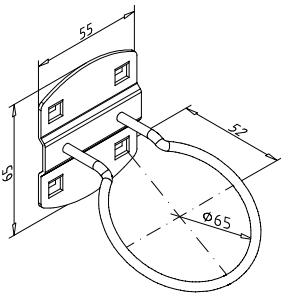
		Tool carrier with double joint swivel arm	
		Part no.	32.0510/0
		ESD tool carrier with double joint swivel arm	
		Part no.	32.0510/6


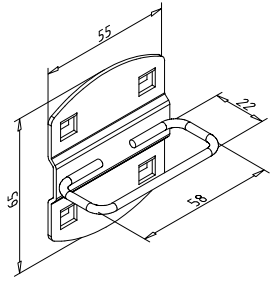

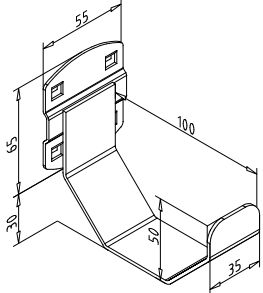

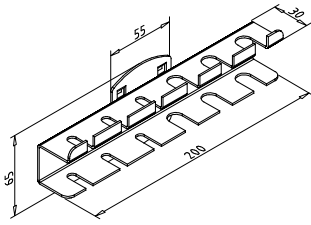

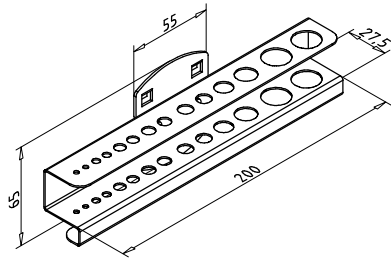

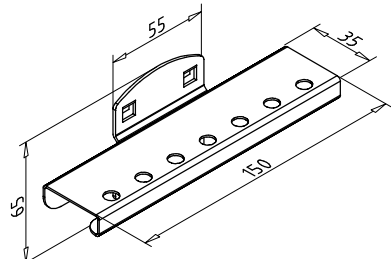
- Steel, painted light grey, RAL 7035
- Is simply attached to the portal structure
- Square perforation 10 x 10mm in grid 38mm
- Capacity 150 N


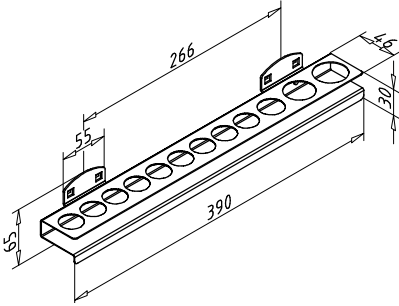

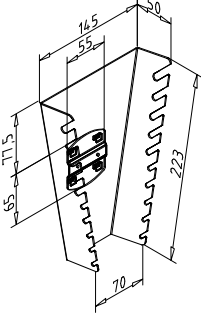

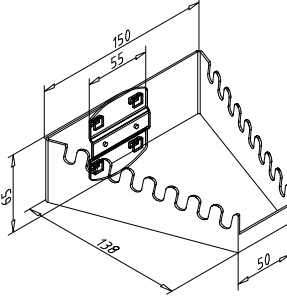

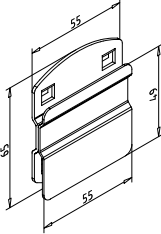

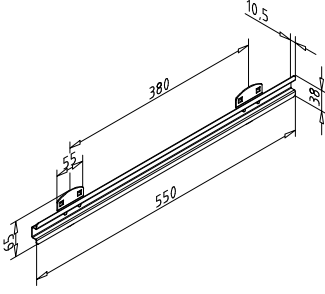
The aluminum-colored tool holders have a shock- and scratch-resistant plastic coating and a 1.5mm thick, embossed base plate. The holders are matched to the tool holder plates and the tool carrier.


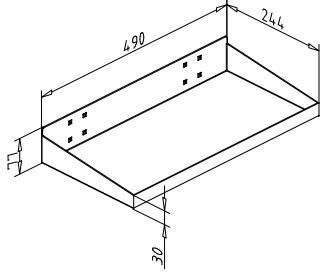

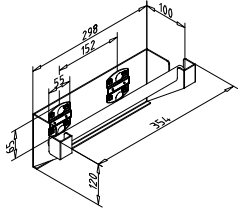

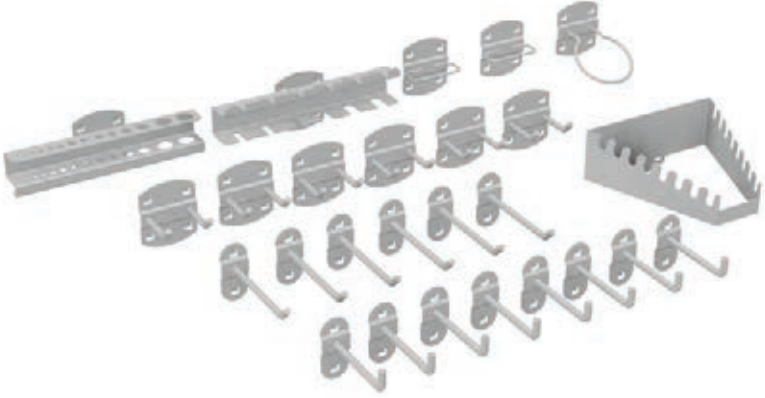
All products are also available in ESD version on request.

		<p>Tool holder with angled hook end</p> <p>Hook Ø 6,3 mm</p> <p>L= 50 mm Part No. 32.0527/0</p> <p>L=100 mm Part No. 32.0651/0</p>
		<p>Double tool holder with inclined hook end</p> <p>Hook Ø 6,3 mm</p> <p>L= 50 mm Part No. 32.0653/0</p> <p>L= 75 mm Part No. 32.0654/0</p>
		<p>Tool holder with vertical hook end</p> <p>Hook Ø 6,3 mm</p> <p>L= 75mm Part No. 32.0652/0</p>
		<p>Double tool holder with vertical hook end</p> <p>Hook Ø 6,3 mm</p> <p>L= 35 mm Part No. 32.0508/0</p> <p>L= 50 mm Part No. 32.0655/0</p> <p>L= 75 mm Part No. 32.0656/0</p>
		<p>Tool holder for self-service packaging</p> <p>Hanger Ø 3,7 mm</p> <p>L= 125mm, W= 30mm Part No. 32.0658/0</p>

		<p>Tool clamp simple, small base plate</p> <p>For clamping tools with \varnothing 7-10 mm</p> <p>Part No. 32.0529/0</p>
		<p>Tool clamp simple, large base plate</p> <p>For clamping tools with \varnothing 20-25 mm</p> <p>Part No. 32.0528/0</p>
		<p>Double tool clamp</p> <p>For clamping tools with \varnothing 7-10 mm</p> <p>Part No. 32.0506/0</p>
		<p>Magnetic holder</p> <p>Holding force approx. 5 kg</p> <p>Part No. 32.0515/0</p>
		<p>Machine holder</p> <p>For tools up to \varnothing 60 mm</p> <p>Part No. 32.0657/0</p>

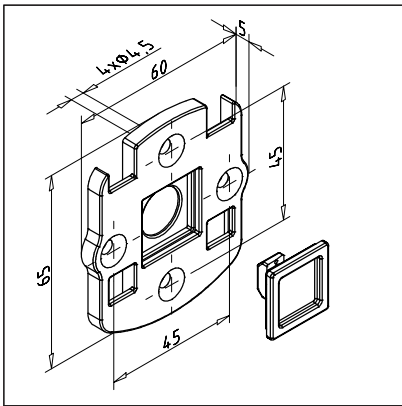
		<p>Chuck holder</p> <p>For tools with a cross section of up to 54 x 19 mm</p> <p>Part No. 32.0531/0</p>
		<p>Pipe holder, also for hoses, cables etc.</p> <p>For hoses and cables up to 100 mm in diameter</p> <p>Part No. 32.0564/0</p>
		<p>Screwdriver holder for 6 parts</p> <p>3 receiving slots 6.5 mm wide and 23 mm deep 3 receiving slots 12.5 mm wide and 23 mm deep</p> <p>Part No. 32.0649/0</p>
		<p>Drill / hex socket holder, for 14 parts</p> <p>Mounting holes</p> <p>2 x Ø 3,2 mm 2 x Ø 4,7 mm 2 x Ø 6,7 mm 2 x Ø 7,7 mm 2 x Ø 8,7 mm 1 x Ø 10,7 mm 1 x Ø 12,7 mm 2 x Ø 16,7 mm</p> <p>Part No. 32.0504/0</p>
		<p>Bit holder for 7 bits</p> <p>Mounting holes 7x Ø 7,2 mm</p> <p>Part No. 32.0503/0</p>

		<p style="text-align: center;">Nut holder for 12 nuts</p> <p style="text-align: center;">Mounting holes</p> <p>9 x Ø 24,7 mm 1 x Ø 27,3 mm 1 x Ø 31,7 mm 1 x Ø 34,7 mm</p> <p style="text-align: right;">Part No. 32.0519/0</p>
		<p style="text-align: center;">Wrench holder vertical for 10 keys</p> <p style="text-align: center;">Receiving slots</p> <p>1 x 7,5 x 30 mm 2 x 6,5 x 23 mm 2 x 5,5 x 20 mm 2 x 4,5 x 15 mm 3 x 4,0 x 10 mm</p> <p style="text-align: right;">Part No. 32.0521/0</p>
		<p style="text-align: center;">Wrench holder horizontally for 8 keys</p> <p style="text-align: center;">8 receiving slots 6.5 x 15 mm</p> <p style="text-align: right;">Part No. 32.0523/0</p>
		<p style="text-align: center;">View storage boxes for 1 box size 7 and 8</p> <p style="text-align: center;">Max. material thickness for hanging 4 mm</p> <p>B= 55 mm Part No. 32.0509/0</p>
		<p style="text-align: center;">View storage boxes for 5 boxes up to size 8</p> <p>L= 550 mm, H= 38 mm Part No. 32.0532/0</p>

		<p>Steel floor with roll-off edge</p>																								
		<p>Roll holder 295</p> <p>Roll axis Ø 22 mm Distance between roller axis and rear wall approx. 50 mm Max. roll width 295 mm</p> <p>Part No. 32.0611/0</p>																								
		<p>Tool holder assortment, 12 pieces Part no. 32.0607/0 consisting of:</p> <table border="0"> <tr> <td>4 x Toolholder</td> <td>Part No.</td> <td>32.0652/0</td> </tr> <tr> <td>3 x Toolholder</td> <td>Part No.</td> <td>32.0651/0</td> </tr> <tr> <td>3 x Double tool holder</td> <td>Part No.</td> <td>32.0653/0</td> </tr> <tr> <td>1 x Machine holder</td> <td>Part No.</td> <td>32.0657/0</td> </tr> <tr> <td>1 x Chuck holder</td> <td>Part No.</td> <td>32.0531/0</td> </tr> </table>	4 x Toolholder	Part No.	32.0652/0	3 x Toolholder	Part No.	32.0651/0	3 x Double tool holder	Part No.	32.0653/0	1 x Machine holder	Part No.	32.0657/0	1 x Chuck holder	Part No.	32.0531/0									
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1 x Chuck holder	Part No.	32.0531/0																								
		<p>Tool holder assortment, 26 pieces Part no. 32.0606/0 consisting of:</p> <table border="0"> <tr> <td>8 x Toolholder</td> <td>Part No.</td> <td>32.0652/0</td> </tr> <tr> <td>6 x Toolholder</td> <td>Part No.</td> <td>32.0651/0</td> </tr> <tr> <td>6 x Double tool holder</td> <td>Part No.</td> <td>32.0653/0</td> </tr> <tr> <td>1 x Machine holder</td> <td>Part No.</td> <td>32.0657/0</td> </tr> <tr> <td>2 x Chuck holder</td> <td>Part No.</td> <td>32.0531/0</td> </tr> <tr> <td>1 x Screwdriver holders</td> <td>Part No.</td> <td>32.0523/0</td> </tr> <tr> <td>1 x Drill / hex socket holder</td> <td>Part No.</td> <td>32.0504/0</td> </tr> <tr> <td>1 x Screwdriver holders</td> <td>Part No.</td> <td>32.0649/0</td> </tr> </table>	8 x Toolholder	Part No.	32.0652/0	6 x Toolholder	Part No.	32.0651/0	6 x Double tool holder	Part No.	32.0653/0	1 x Machine holder	Part No.	32.0657/0	2 x Chuck holder	Part No.	32.0531/0	1 x Screwdriver holders	Part No.	32.0523/0	1 x Drill / hex socket holder	Part No.	32.0504/0	1 x Screwdriver holders	Part No.	32.0649/0
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Adapter for tool holder

Part No. 32.0614/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Items supplied: Adapter plate with hammer head
- Weight = 0.013 kg/piece

APPLICATIONS

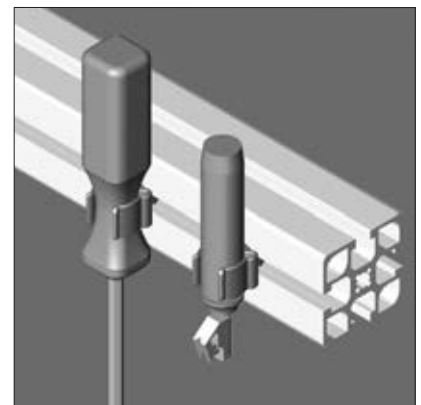
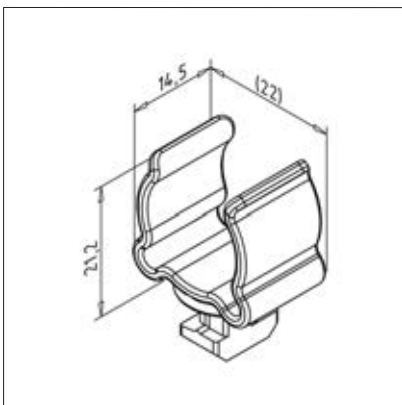
- For fixing tool holders directly in the profile grooves of profile series 45
- With this adapter, all components that can be used on our tool boards with square holes, can be attached to profile struts independently of the board
- Can be attached in vertically and in horizontally arranged grooves

ASSEMBLY

- Insert hammer head in the adapter plate, guide into the profile groove and turn the plate with hammer head in the profile groove by 90°
- Depending on the application, the adapter plate can also be fixed with countersunk screws
- The tool holders are then simply fitted on the adapter plate and locked with a fixing screw

Universal holder

Part No. 22.1175/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Polyamide, grey
- Weight = 0.003 kg/piece

APPLICATIONS

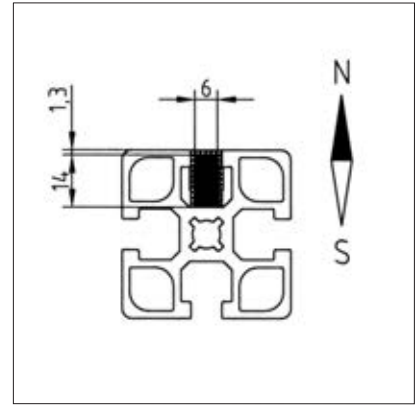
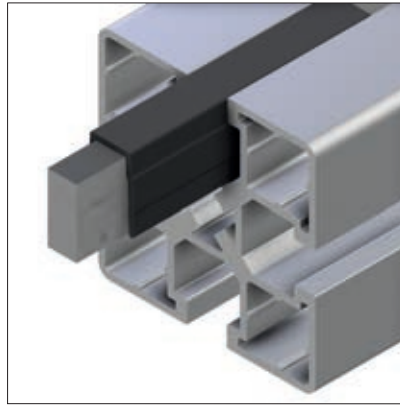
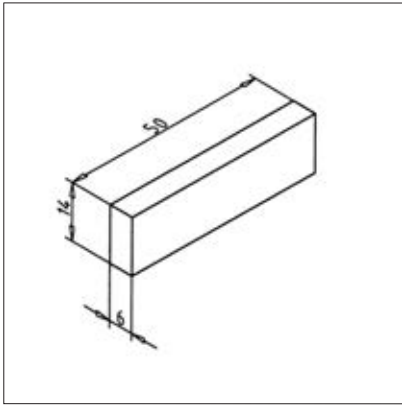
- Holding for all kinds of worktools
- Tools with a diameter of ca. 15 - 21 mm
- Max. weight 160 g

ASSEMBLY

- Insert in profile groove and turn 90°

Magnet 6 x 14 x 50 mm

Part No. 21.0032/0



TECHN. DATA / ITEMS SUPPLIED

- NeFeB N35, nickel-plated
- Without fastening kit
- Attention: Electric- and memory devices can be faulted by the magnet
- Power density, $BH_{mx} = 263 \text{ kJ/m}^3$
- Remanence, $B_r = 1170 \text{ mT}$
- Coercive field strength $H_{cj} = 955 \text{ kA/m}$
- Max. service temperature $+80 \text{ }^\circ\text{C}$
- Weight = 0.030 kg/piece

APPLICATIONS

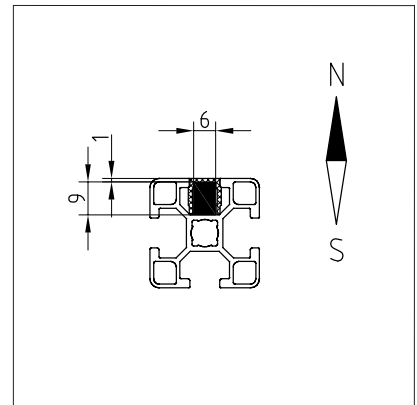
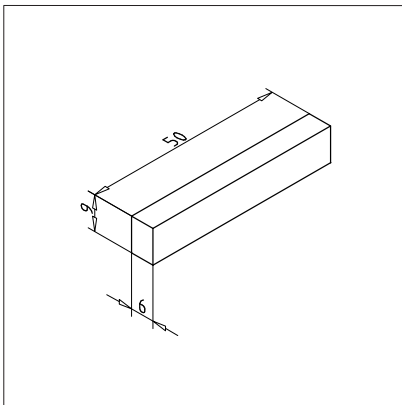
- Adhesive magnet for tools
- Use under conveyor belts as tracking, for magnetizable conveying products or at higher conveying speeds
- Fitting for all profiles of profile series 45

ASSEMBLY

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mighty recommended) Use end cap AL, set screw with square nut or t-slot bar

Magnet 6 x 9 x 50 mm

Part No. 21.0040/0



TECHN. DATA / ITEMS SUPPLIED

- NeFeB N45, nickel-plated
- Without fastening kit
- Attention: Electric- and memory devices can be faulted by the magnet
- Power density, $BH_{mx} = 342 \text{ kJ/m}^3$
- Remanence, $B_r = 1320 \text{ mT}$
- Coercive field strength $H_{cj} = 955 \text{ kA/m}$
- Max. service temperature $+80 \text{ }^\circ\text{C}$
- Weight = 0.023 kg/piece

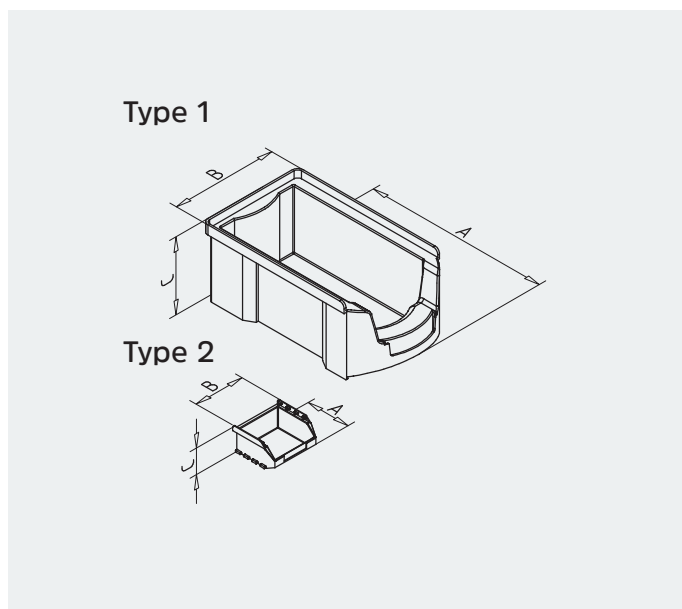
APPLICATIONS

- Adhesive magnet for tools
- Use under conveyor belts as tracking, for magnetizable conveying products or at higher conveying speeds
- Fitting for all profiles of profile series 30

ASSEMBLY

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mighty recommended) Use end cap AL, set screw with square nut or t-slot bar

Storage boxes



Technical data

- Optimal overview and convenient access to the content
- Large handles on the front and back for easy handling
- Dimensionally stable
- Resistant to most acids and oils
- Temperature resistance (-20° to +80°C)

Application

- Provision of small parts, screws, nuts etc. at assembly workstations
- Ergonomic workplace systems

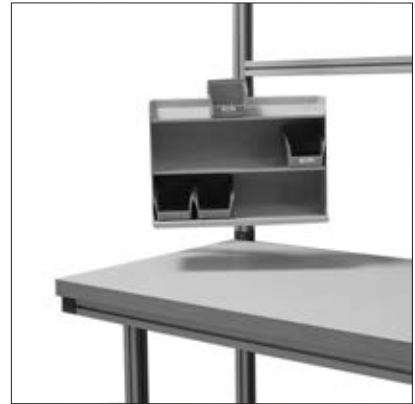
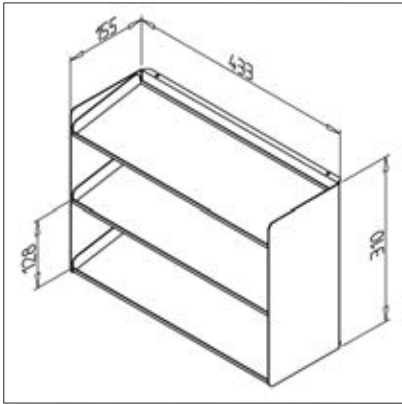
Assembly

- Mount storage boxes with storage box holder, 1-fold part no. 32.0509/0 or with multiple storage box holder part no. 32.0532/0 on tool holder plate or carrier

Type	Part no.	Measure A	Measure B	Dimension C	Color
1	32.0540/0	360	210	147	blue
	32.0540/5	350	200	145	black ESD
1	32.0541/0	229	148	122	blue
	32.0541/5	235	145	125	black ESD
1	32.0542/0	167	104	76	blue
	32.0542/5	175	100	75	black ESD
2	32.0543/0	85	100	50	blue
	32.0543/5	95	100	50	black ESD

Storage box shelf

Part No. 32.0514/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- 3 levels
- Weight = 3.800 kg/piece

APPLICATIONS

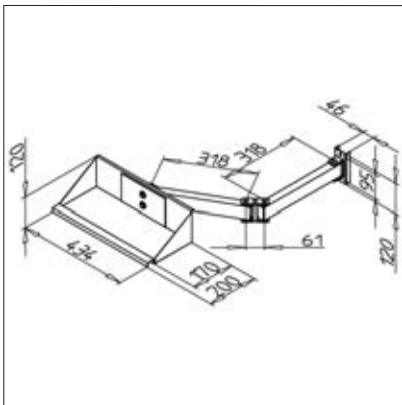
- For semi open front containers and small hardware
- For max. 12 semi open front containers, L= 165 mm, W= 105 mm, H= 75 mm

ASSEMBLY

- Fasten to the portal structure
- Freestanding or in combination with box holder **part no. 32.0516/0** swiveling
- Optional: in ESD-design **part no. 32.0514/6**

Storage box holder

Part No. 32.0516/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Fastening material
- Front handle bar
- With double articulated arm 700 mm long
- Load capacity 150 N
- Weight = 4.300 kg/piece

APPLICATIONS

- As storage area for semi open front containers and semi open front container racks

ASSEMBLY

- Installation on the vertical strut of the portal structure
- Optional: in ESD-design **part no. 32.0516/6**

KanTainer



The newly developed KanTainer offers the ideal prerequisite for implementing the principles of lean production in your company using Kanban control. In combination with the mounting solutions and the ergonomic designed working places of MiniTec, a complete, safe and economic all-round-package for your manual production is ensured. The Kantainer is designed for maximum space

utilization in the warehouse with optimal material provision at the workplace. The Kantainer offers all the prerequisites to make storage, order picking and assembly easier and safer. Thanks to the compatible system components of our extensive MiniTec modular system, we are able to optimally solve virtually every task in manual assembly.

Functions

- For continuous kanban system: no transfer - no error-prone refilling
- Total storage rack use by retractable grip plate
- Ergonomically optimized grip plate eases the removal
- Transparent cover against soiling and mixing of parts
- Cover as protection against unintentional opening or loss of parts
- Simple content control
- Transparent dosing disc: easy recognition of residual quantities
- Dosing disc prevents uncontrolled trickling out of small parts
- Secure stacking through locating pins and eyelets
- Double-sided labelling
- Retaining device at the back of the container
- Bottom guide rails for longitudinal and transverse transport

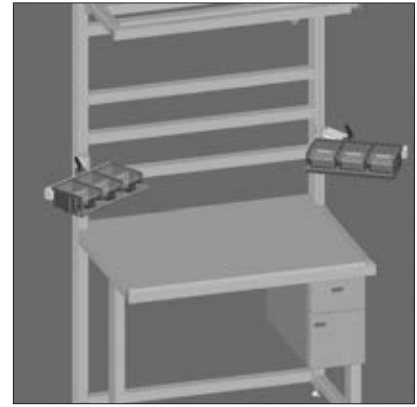
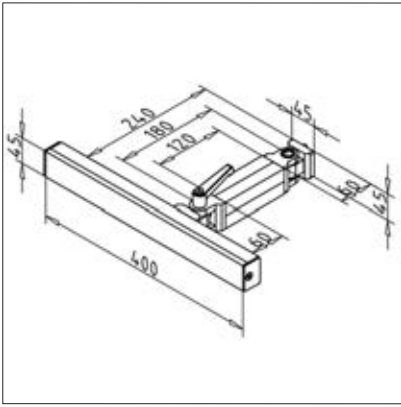
- Dimensions: 175x126x88 [mm]
- Superimposed load 50 kg
- Content load: 5 kg
- Temperature resistance: -20°C to +90°C
- Material: polypropylene, polystyrene
- Color:
 - Basalt grey (RAL 7012) [Part no.: 32.0870/0]
 - Orange (RAL 2004) [Part no.: 32.0870/1]
 - Black ESD conductive [Part no.: 32.0870/5]

The ESD-conductive Kantainer is the optimal and logical addition to our ESD workstation systems.



KanTainer swivel cantilever, 3-bin

Part No. 32.0877/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 32 F and 45 x 45 F
- heavy duty joint and swivel joint with clamping lever with supplied hardware
- Load capacity: max.= 100 N
- Weight = 1.916 kg/piece

APPLICATIONS

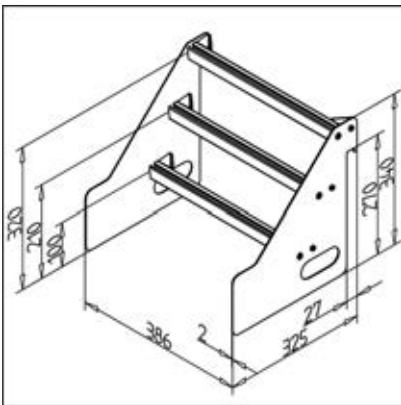
- Accepting 3 KanTainers

ASSEMBLY

- Mount the heavy load hinge on the table

KanTainer shelf, straight

Part No. 32.0876/0



TECHN. DATA / ITEMS SUPPLIED

- Side panels steel, powder coated, grey
- Intermediate struts of profile 23 x 30
- Delivery as construction set
- Fastening kit
- Weight = 3.400 kg/piece

APPLICATIONS

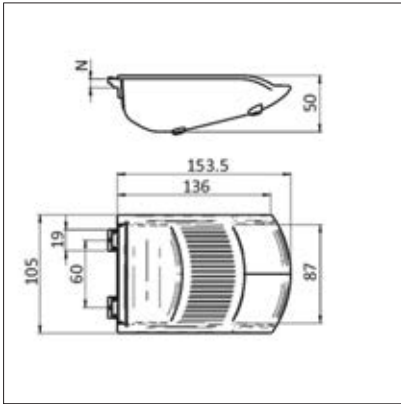
- Accepting 9 KanTainers
- Adjustable inclination
- With the hooks on the back, the shelf can also be hung in our profile grooves

ASSEMBLY

- Screw profiles to side panels with supplied mounting angles and mounting hardware

Open tray, grey

Part No. 32.0681/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, grey
- Max. load capacity up to 3 kg
- Scope of delivery set:
 - 1 grab container
 - 1 window
 - 1 label
 - 4 Elastic buffer, self-adhesive
- Also available in ESD version under **part no. 320682/1** available
- Weight = 0.120 kg/piece

APPLICATIONS

- Provision of small parts, screws, nuts ect. at assembly workstations
- Suitable for all 45er profiles

ASSEMBLY

- Can be easily mounted by swinging it into the profile groove.

Monitor support LX and LX HD



For more ergonomics in the workplace

The LX and LX HD monitor supports are suitable for a wide range of applications: suitable for large monitors, medium-sized televisions and all-in-one computers weighing up to 13.6 kg.

The LX offers a large range of motion and is suitable for both sedentary and standing users, allows vertical adjustment of up to 51 cm and lateral adjustment of 157 cm.

Advantages

- More freedom and flexibility through maximum ergonomic comfort
- Maximum comfort when positioning the monitor
- Integrated cable management
- Up to 51 cm stepless height adjustment, meets the ergonomic principles of more than 90% of all users
- Arm can be pulled back over the base plate and fold up; suitable for storage in shelves or cupboards in confined spaces
- Outstanding viewing comfort prevents health risks in the neck and back
- LCD range up to 88 cm. Simply slide the screen to the side if you are not using it



LX HD arm for wall mounting

LX arm for wall mounting

Part No.	32.0623/0	32.0622/0
Maximum screen size	46"	24"
Screen size may vary. Details refer to the screen diagonal.		
Load-bearing capacity	6,3-13,6 kg	3,2-9,1 kg monitor depth can be greater than 5 cm reduce capacity
Height adjustment	51 cm	33 cm
Tilt function	80°	75°
Swivel function	360°	360°
Rotation	90°	90°
VESA	75x75mm/100x100mm/200x100mm/200x200mm	75x75mm/100x100mm
Depth	Foldable to 12 cm	Foldable to 13.4 cm
Reach up	84 cm	64 cm
Weight	6,8 kg	3,7 kg
Transport dimensions	64 x 38 x 19 cm	53 x 29 x 19 cm

Accessories

Keyboard tray



Keyboard shelf made of sheet steel, powder-coated matt black for mounting on monitor carrier LX / LX HD.
Rear cable entry for mouse and keyboard. The distance to the monitor is adjustable.
For fastening the existing VESA holes are used.
When used, the arm is additionally loaded with 2.4kg.

32.0612/0

Monitor handle Kit



Can be attached to many different mounts with the help of a hole circle of 50 x 50mm, 100 x 100mm or 200 x 100mm.
Robust design ensures long life. Suitable for displays up to a size of 32 inches.
When used, the arm is additionally loaded with 1.6 kg.

32.0624/0

Dual monitor support for LX HD

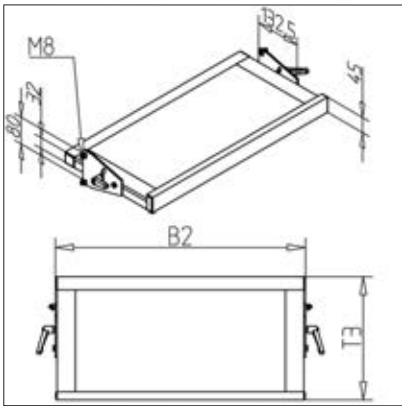


For holding 2 monitors with max. 24.5 " - incl. handle
- Load capacity: 2.7 kg - 8.2 kg per monitor
- Rotation: 360°
- VESA mounting standard: 75 x 75 mm, 100 x 100 mm
If attaching to monitor support LX HD, please note max. load of 13.6 kg, i.e. 10.9 kg should not be exceeded for attached monitors.

39.0118/0

Cantilever shelf with clamping lever

Part No. 32.0501/0



TECHN. DATA / ITEMS SUPPLIED

- Sturdy frame made of aluminum profiles anodized E6 / EV1
- Shelf for cabinet, chipboard, light grey
- Front edge 13 mm raised edges
- ESD on request
- Please state table width B2 and depth T3
- Dimension B2 = installation width between posts
- Load capacity: 400 N

APPLICATIONS

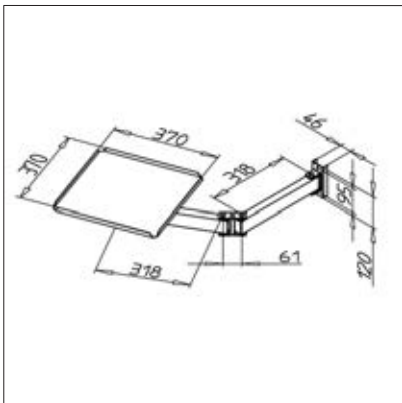
- Continuously inclinable from -30° to +30°
- Rack is adjustable

ASSEMBLY

- Fastening with 2 swivel plates to the portal structure
- Without clamp lever **part no. 32.0501/1**

Monitor shelf / support, rotating with double link

Part No. 32.0512/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- Double joint design, length 430 mm
- Monitor and keyboard panel rotatable
- Monitor panel: 370 x 370 mm
- Load capacity 150 N
- Weight = 4.200 kg/piece

APPLICATIONS

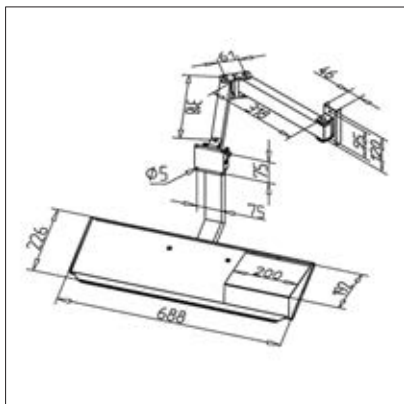
- Provision of IT data, guidelines, Internet connection

ASSEMBLY

- Screw onto the portal structure
- Optional as ESD version **Part no. 32.0512/6**

Monitor support with keyboard shelf 75

Part No. 32.0517/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Monitor and keyboard carrier with mouse rack
- With double-articulated swing boom
- Delivery as construction set
- ESD on request
- Load capacity 150 N
- Weight = 7.400 kg/piece

APPLICATIONS

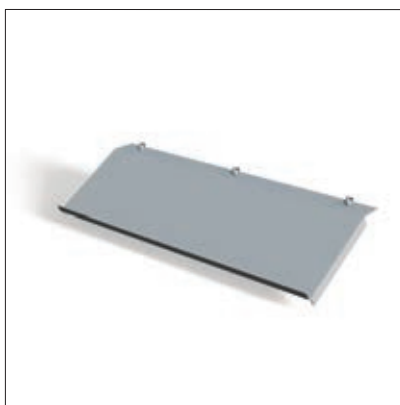
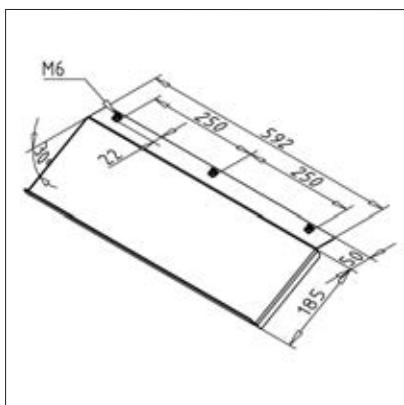
- The mouse rack is shiftable and therefore suitable for right and left-handers

OTHER VERSIONS

- Support with keyboard shelf with VESA connection adapter 75 mm **part no. 32.0517/0**
- Support with keyboard shelf with VESA connection adapter 100 mm **part no. 32.0517/1**
- Support without keyboard shelf with VESA connection adapter 75 mm **part no. 32.0525/0**
- Support without keyboard shelf with VESA connection adapter 100 mm **part no. 32.0526/0**

Keyboard shelf

Part No. 32.0518/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Stainless steel 2mm, grounded
- Rustproof
- For standard keyboards
- With slide nuts M6Z, ESD-compatible
- Fastening material
- Load capacity 150 N
- Weight = 2.477 kg/piece

APPLICATIONS

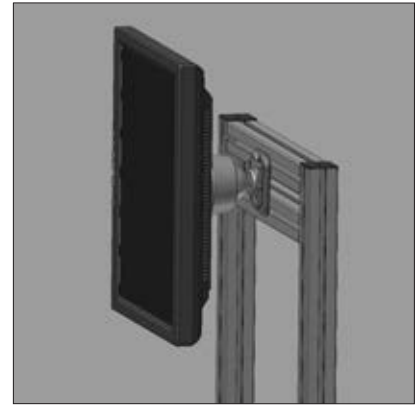
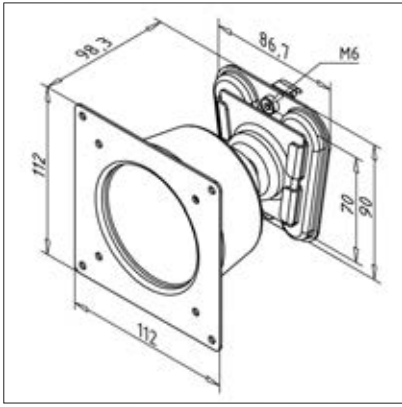
- For setting the keyboard on the workplace

ASSEMBLY

- Fasten to profile groove with supplied hardware

Monitor support with ball joint, VESA 100

Part No. 32.0053/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated black
- Load capacity 150 N
- Fastening kit
- Weight = 0.568 kg/piece

APPLICATIONS

- Swiveling with ball joint
- Monitor can be rotated through 180°
- For VESA standard 75 x 75 mm / 100 x 100 mm

ASSEMBLY

- Fasten to profile groove with supplied hardware

Document bar



TECHN. DATA / ITEMS SUPPLIED

- Aluminium anodized
- With clamping balls made of special glass
- Length: 505 mm
- Other dimensions upon request
- Weight = 0.300 kg/piece



APPLICATIONS

- Safe attachment of large drawings, instructions, plans
- Simply slip-in papers from below
- Attach to portal construction by screwing or gluing with double-faced adhesive tape

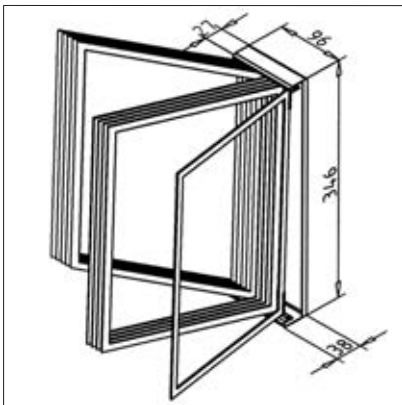
Part No. 32.0610/0



ASSEMBLY

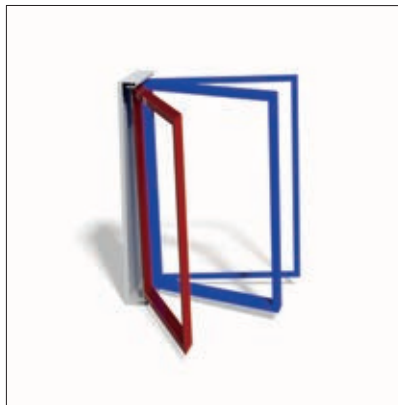
- Use the screws of fastening kit or fasten with adhesive tape on the back

Document holder



TECHN. DATA / ITEMS SUPPLIED

- Steel bracket, powder coated light grey
- 10 DIN A4 boards, transparent
- Border per 5 in blue and red
- 5 Slip-on tabs
- Weight = 1.240 kg/piece



APPLICATIONS

- Provision of job instructions, maintenance notes
- Control boards, general information
- Screw tight onto portal construction

Part No. 32.0605/0

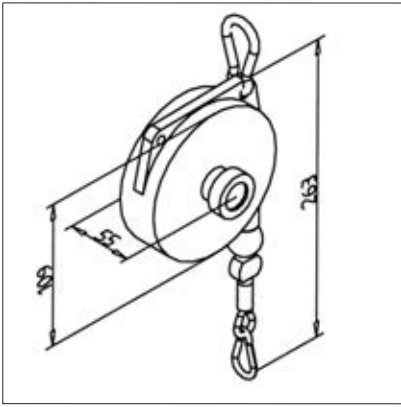


ASSEMBLY

- Fastening with 2 hex socket cap screws M 06 x 16, 2 square nut M6 into profile groove
- ESD-design **part no. 32.0605/6**

Balancer

Part No. 29.0111/0



TECHN. DATA / ITEMS SUPPLIED

- For tool weights 2-3 kg
- Cable pullout approx. 1600 mm
- For higher weights upon request
- Weight = 0.753 kg/piece

APPLICATIONS

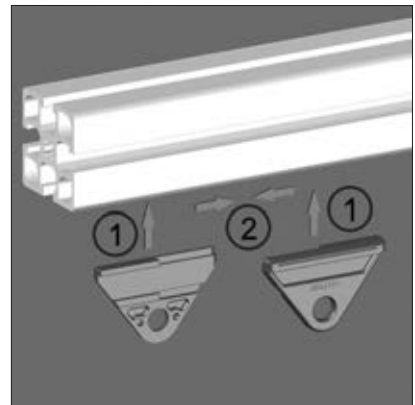
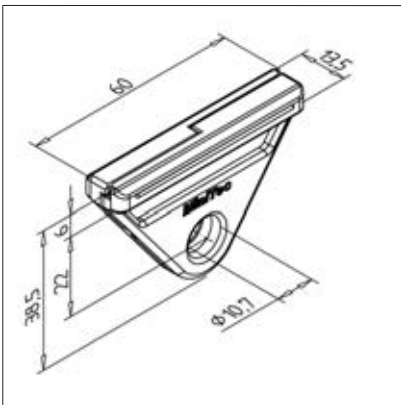
- Tools hung up ergonomically

ASSEMBLY

- Use snap hook supplied to hook into tool slider H **Part no. 22.1213/0** (suitable for all 45 and 30 profiles)

Tool slider H

Part No. 22.1213/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Load capacity up to 600 N, static
- Weight = 0.010 kg/piece

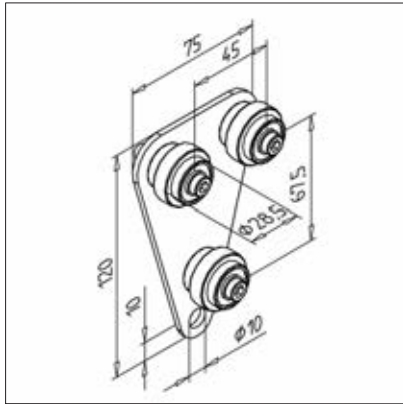
APPLICATIONS

- Tools hung up ergonomically
- Suitable for all 45er profiles
- Where jobs involve using handtools, a max. load of 20 kg should not be exceeded

ASSEMBLY

- Can be inserted later, an open profile end is not required
- insert both halves in profile groove and press together
- Optional: spring clip 60x6 **part no. 21.1699/0**

Tool slide



TECHN. DATA / ITEMS SUPPLIED

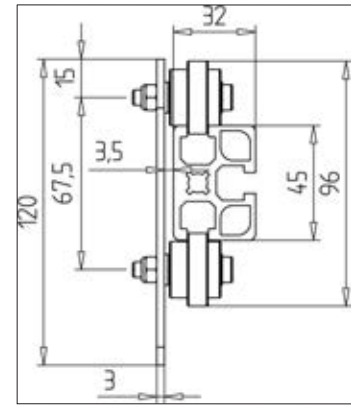
- Stainless steel
- Caster wheel ABS grey
- Load capacity F: 400 N
- Weight = 0.263 kg/piece



APPLICATIONS

- For guiding of tools on working tables

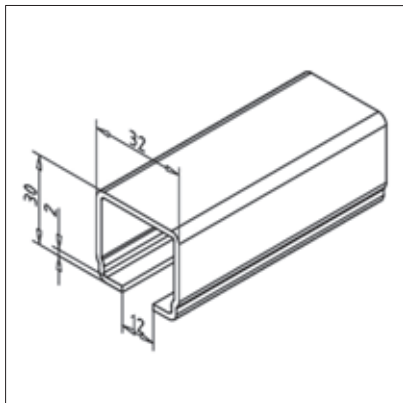
Part No. 32.0545/0



ASSEMBLY

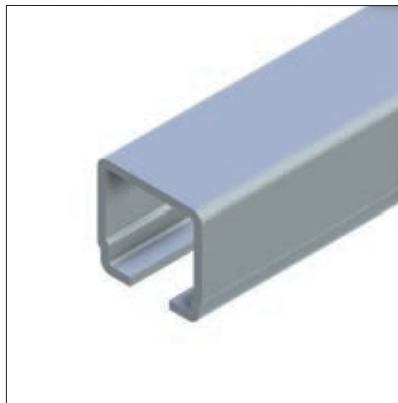
- Slide into profile end
- Possibly before disassembly of the lower roller
- Can be used in connection with balancer, part no. 29.0111/0

C-rail 30



TECHN. DATA / ITEMS SUPPLIED

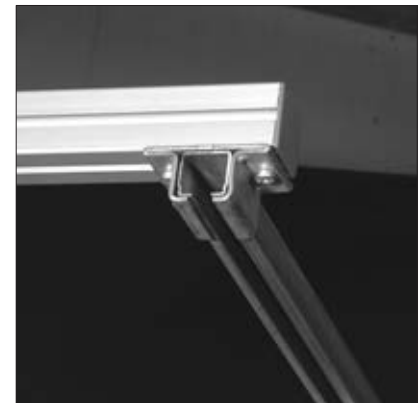
- Steel, galvanized
- $I_x = 2.42 \text{ cm}^4$
- $I_y = 1.45 \text{ cm}^4$
- $w_x = 3.802 \text{ cm}^3$
- $w_y = 2.821 \text{ cm}^3$
- $IT = 6.623 \text{ cm}^4$
- ESD-compatible
- Weight = 1.560 kg/m
- Bar length = 6 m



APPLICATIONS

- Reception and guide of cable trolleys
- Reception and guide of tool trolleys to provide heavy tools

Part No. 32.0220/0

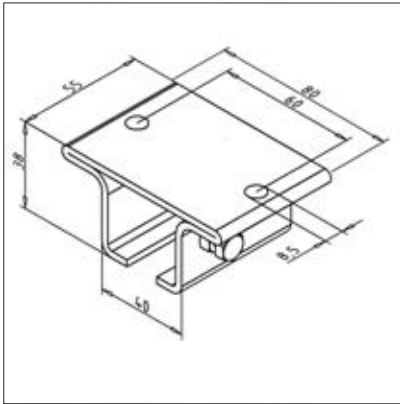


ASSEMBLY

- Attach to portal structure with rail holder part no. 32.0222/0

Rail holder

Part No. 32.0222/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Square nut Z, ESD capable
- Weight = 0.250 kg/piece

APPLICATIONS

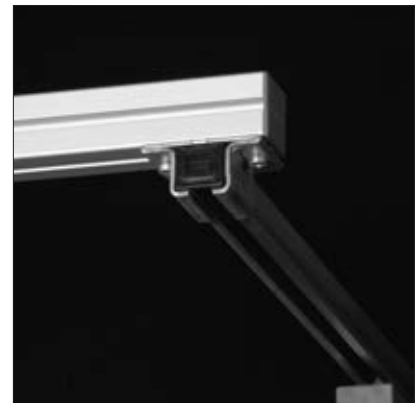
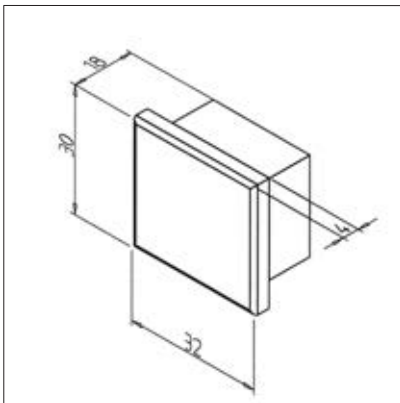
- Fastening the C-section rail onto the portal structure
- Fixation for C-rail 30 **part no. 32.0220/0**

ASSEMBLY

- Fasten to the portal construction with supplied hardware

End cap for C-rail

Part No. 32.0223/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- Weight = 0.006 kg/piece

APPLICATIONS

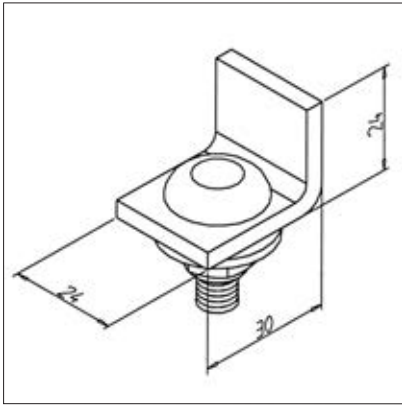
- Closing of both rail ends

ASSEMBLY

- Press onto C-profile rail

End stop, C-rail

Part No. 32.0226/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Fastening material
- ESD-compatible
- Weight = 0.060 kg/piece

APPLICATIONS

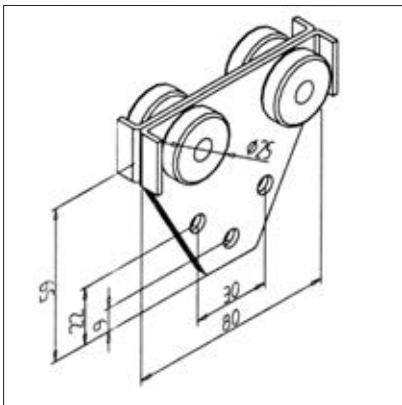
- Fasten the cable trolley **part no. 32.0225/0** and tool trolley **part no. 32.0224/0** at the end of the rail

ASSEMBLY

- Screw into end of C-section rail

Tool trolley

Part No. 32.0224/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 4 rollers, zinc plated, ball bearings sealed on both sides
- ESD-compatible
- Load capacity: 16 kg
- Weight = 0.210 kg/piece

APPLICATIONS

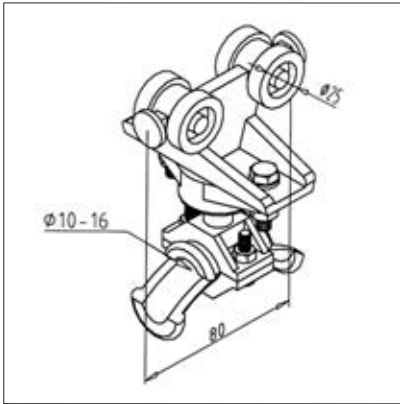
- Suspension of tools in the work area

ASSEMBLY

- Push into C-section rail, secure ends with limit stop

Cable trolley for round cables

Part No. 32.0225/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, yellow
- Supporting body: plastic, yellow
- 4 plastic rollers
- Load capacity: 8 kg
- Weight = 0.135 kg/piece

APPLICATIONS

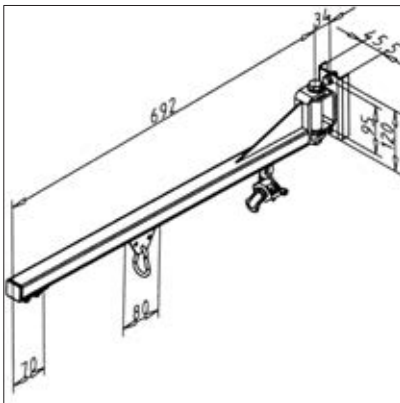
- Smooth running guidance of lines
- Suspension of hoses and pipes

ASSEMBLY

- Push into C-section rail, secure ends with limit stop

Swivel arm, C-rail 30

Part No. 32.0230/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- 180° swiveling
- Equipped with tool trolley, cable holder (10-16), end stop and end cap
- Fastening material
- Length: 692 mm
- Load capacity: 200 N
- Weight = 2.310 kg/piece

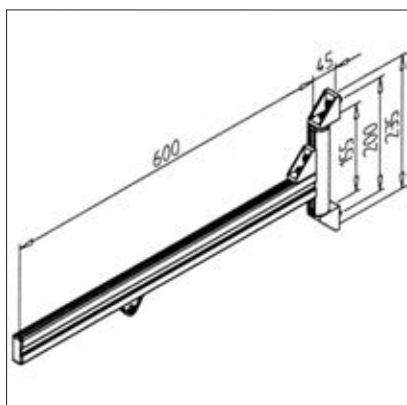
APPLICATIONS

- For compressed air and power tools

ASSEMBLY

- Slight slope to the rear, so that unused tool slides automatically from work area
- Fasten to the portal construction with supplied hardware
- Optional: as ESD design **part no. 32.0230/6**

Swivel arm, ECO



TECHN. DATA / ITEMS SUPPLIED

- Aluminium
- With inserted tool slider H
- Fastening material
- 200° swiveling
- Plain bearing
- Length: 600 mm
- Load capacity: max.= 100 N
- Weight = 1.100 kg/piece



APPLICATIONS

- For compressed air and power tools

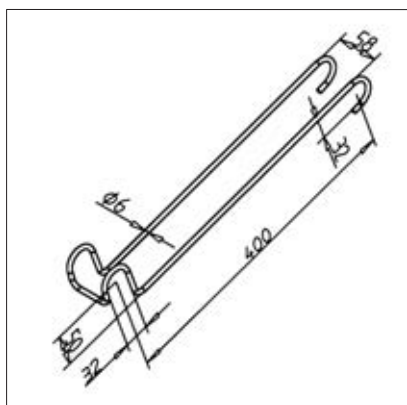
Part No. 32.0201/0



ASSEMBLY

- Fixing to portal with angle
- Fasten to the portal construction with supplied hardware

Box holder, 32-400



TECHN. DATA / ITEMS SUPPLIED

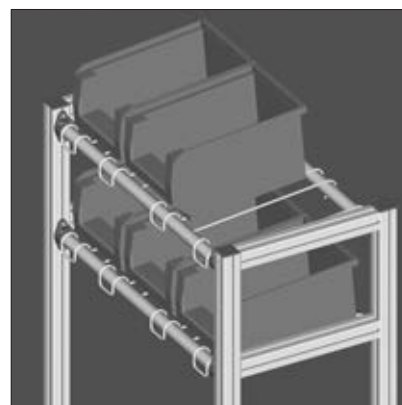
- Steel, galvanized
- Without fastening kit
- Weight = 0.268 kg/piece



APPLICATIONS

- As depositing rack for semi-open front containers and storage containers

Part No. 32.0306/0

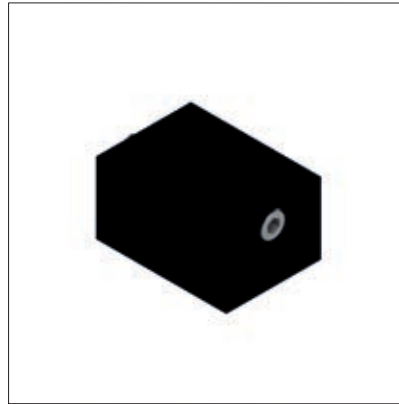
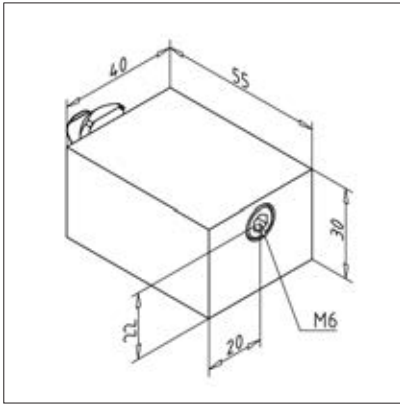


ASSEMBLY

- Simply hooked into handle profile 32 from both sides
- Recommended: If required, secure laterally against sliding of snap bolt 25 **part no. 21.1758/0**

Mounting block

Part No. 32.0539/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic
- Color: black
- Fastening kit
- Square nut Z, ESD capable
- Weight = 0.078 kg/piece

APPLICATION

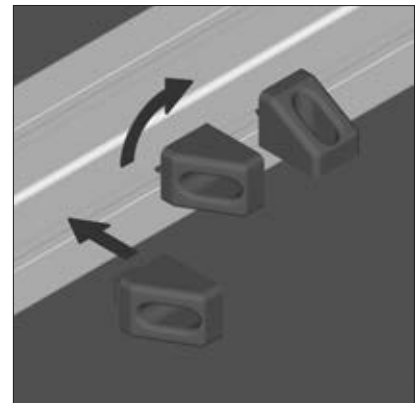
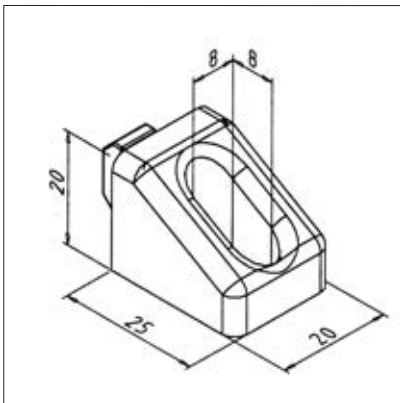
- For self drilling of individual hole patterns
- To provide tools etc.

ASSEMBLY

- Fasten into profile groove with fastening kit

Screwdriver holder

Part No. 32.0502/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Weight = 0.006 kg/piece

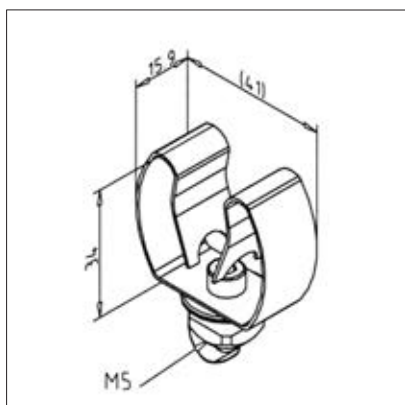
APPLICATIONS

- Ergonomic storage of screwdrivers at the workbench

ASSEMBLY

- Push into the groove and then turn 90°

Clip 16



TECHN. DATA / ITEMS SUPPLIED

- Steel
- Stainless steel 1.4319
- Attachment clip with fastening kit
- Square nut Z, ESD capable
- Weight = 0.028 kg/piece



APPLICATIONS

- Holder for various tools with \varnothing 16 - 25 mm

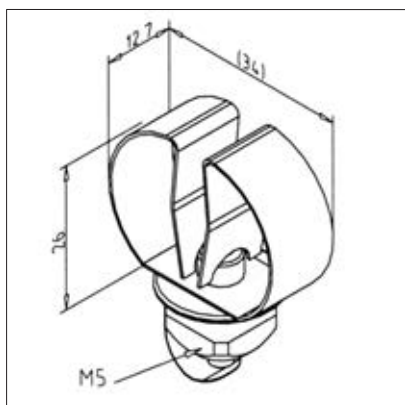


Part No. 32.0538/0

ASSEMBLY

- Fasten into the profile groove with supplied hardware and tighten the fastening screw

Clip 8



TECHN. DATA / ITEMS SUPPLIED

- Steel
- Stainless steel 1.4319
- Attachment clip with fastening kit
- Square nut Z, ESD capable
- Weight = 0.017 kg/piece



APPLICATIONS

- Holder for various tools with \varnothing 8 - 12 mm



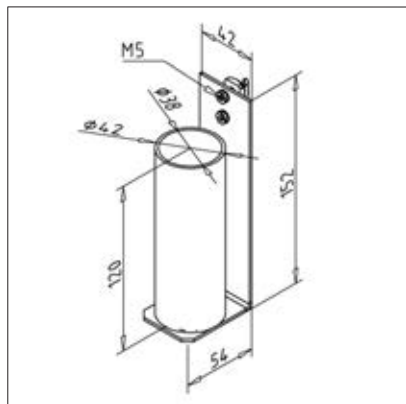
Part No. 32.0537/0

ASSEMBLY

- Fasten into the profile groove with supplied hardware and tighten the fastening screw

Round tool holder 38-120

Part No. 32.0536/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Material V2A, polished
- Fastening kit
- Square nut Z, ESD capable
- Weight = 0.402 kg/piece

APPLICATIONS

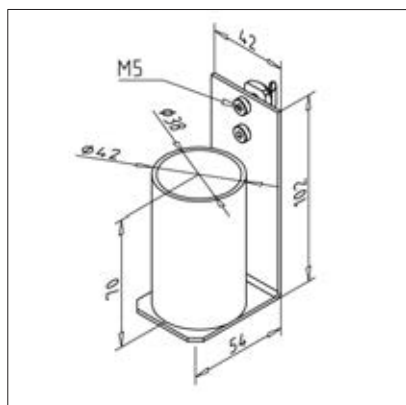
- Tool holder for storage of tools, pins, etc.
- Adjustable angle

ASSEMBLY

- Attach with fastening kit from items supplied to profile strut

Round tool holder 38-70

Part No. 32.0535/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Material V2A, polished
- Fastening kit
- Square nut Z, ESD capable
- Weight = 0.263 kg/piece

APPLICATIONS

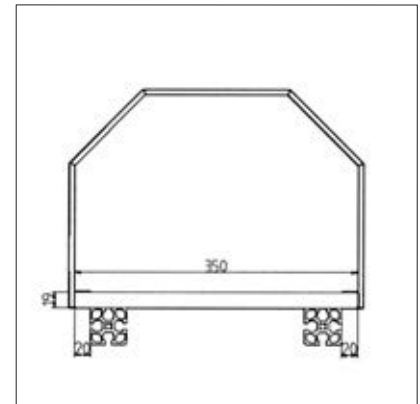
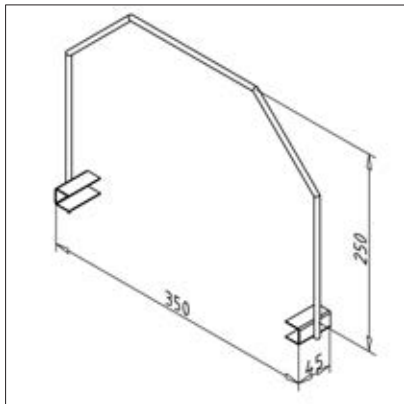
- Tool holder for storage of tools (files, marking tools, sharpening stones, etc.)
- Adjustable angle

ASSEMBLY

- Attach with fastening kit from items supplied to profile strut

Steel shelf divider 250

Part No. 32.0533/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With welded-on clamps for setting on a 19 mm chipboard, for example
- Clamped using pretensioning and can be secured additionally with wood screws
- Weight = 0.214 kg/piece

APPLICATIONS

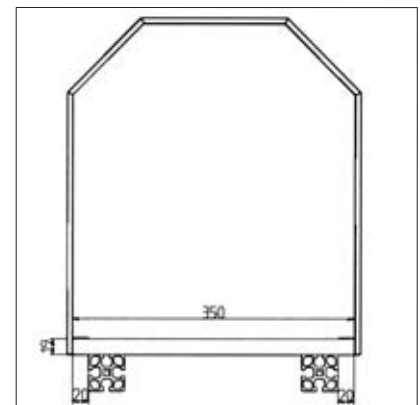
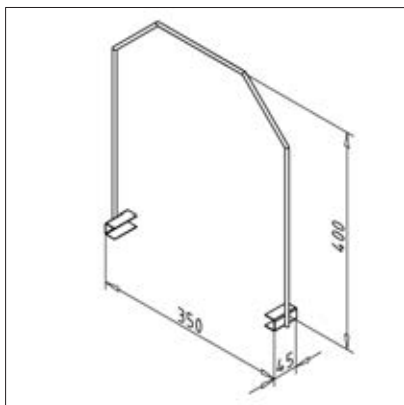
- As separating web for cartons
- Magazine for flat parts

ASSEMBLY

- Pull apart gently, stick on at the correct position and secure with suitable screw

Steel shelf divider 400

Part No. 32.0534/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- With welded-on clamps for setting on a 19 mm chipboard, for example
- Clamped using pretensioning and can be secured additionally with wood screws
- Weight = 0.278 kg/piece

APPLICATIONS

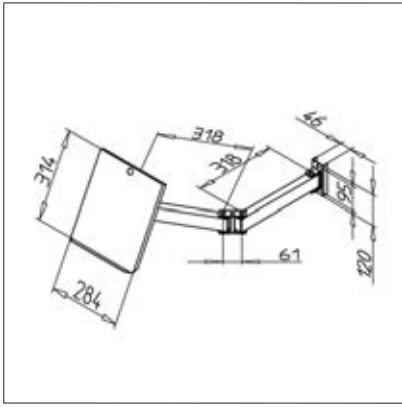
- As separating web for cartons
- Magazine for flat parts

ASSEMBLY

- Pull apart gently, stick on at the correct position and secure with suitable screw

Drawing holder

Part No. 32.0608/0



TECHN. DATA / ITEMS SUPPLIED

- Steel light grey, powder coated
- With double-articulated swing boom
- For DIN A4 format
- Load capacity 150 N
- Delivery as construction set
- ESD on request
- Weight = 4.000 kg/piece

APPLICATIONS

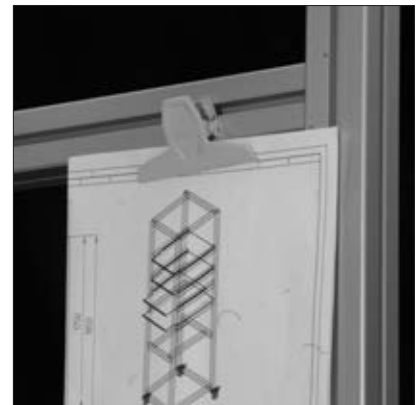
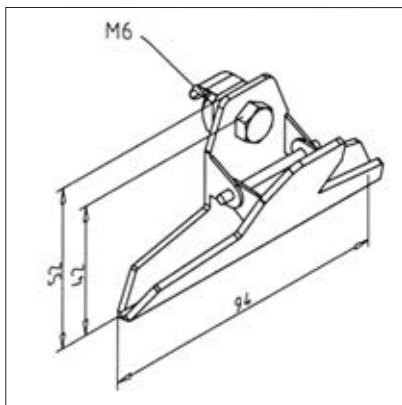
- For documents, control charts and drawings

ASSEMBLY

- Fasten to the portal structure

Document clip

Part No. 32.0609/0



TECHN. DATA / ITEMS SUPPLIED

- Steel light grey, powder coated
- With fastening bore \varnothing 6mm
- Width x height 94 x 52 mm
- Weight = 0.048 kg/piece

APPLICATIONS

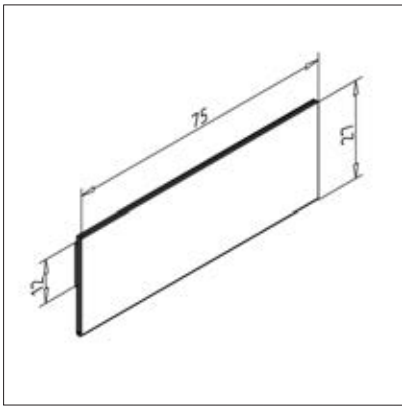
- To fastening work instructions, work plans or the like to workbenches or other profile constructions

ASSEMBLY

- Insert square nut M6 into profile groove and fasten with the screw

Quick label 27 x 75

Part No. 32.0601/0



TECHN. DATA / ITEMS SUPPLIED

- Front, transparent
- Back, self-adhesive
- Open at the sides and on top
- Weight = 0.003 kg/piece

APPLICATIONS

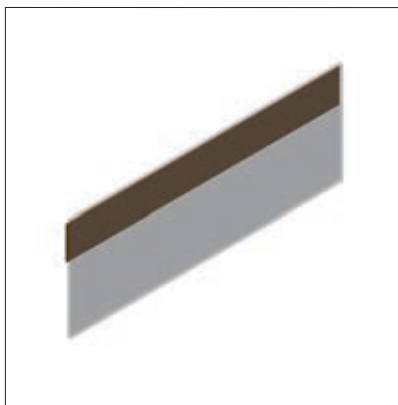
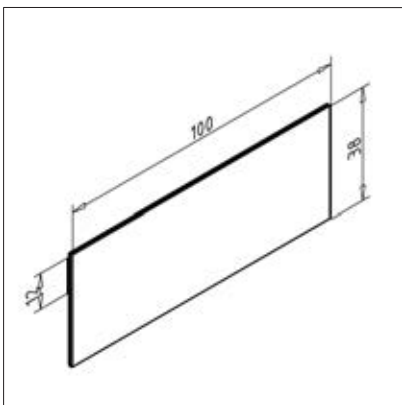
- Storage compartment identification
- Error-free scanning of barcodes
- For profile width 30 or larger
- If variable positioning is required, the Quick label can also be stuck on our signal profile, so that the sign can be fixed in any place in an open profile groove

ASSEMBLY

- Attach with self-adhesive back
- Push in carton insert
- Cardboard insert not included, Pack of 20 sheets **Part no. 32.0601/1** please order separately

Quick label 38 x 100

Part No. 32.0602/0



TECHN. DATA / ITEMS SUPPLIED

- Front, transparent
- Back, self-adhesive
- Open at the sides and on top
- Weight = 0.007 kg/piece

APPLICATIONS

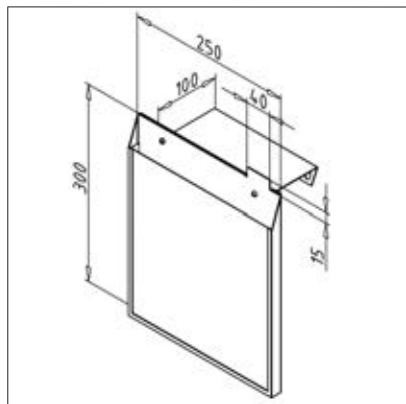
- Storage compartment identification
- Error-free scanning of barcodes
- For profile width 45
- If variable positioning is required, the Quick label can also be stuck on our signal profile, so that the sign can be fixed in any place in an open profile groove

ASSEMBLY

- Attach with self-adhesive back
- Push in carton insert
- Cardboard insert not included, Pack of 14 sheets **Part no. 32.0602/1** please order separately

Vertical document tray, base element

Part No. 32.0615/0



TECHN. DATA / ITEMS SUPPLIED

- Steel light grey, powder coated
- With fastening bores \varnothing 9, spacing 160 mm
- Optical edge 45 mm for optimum overview
- Filling capacity =15 mm, sufficient for approx. 120 sheets of paper
- With grey closing plate
- Transparent vertical document tray (front panel)
- Weight = 0.634 kg/piece

APPLICATIONS

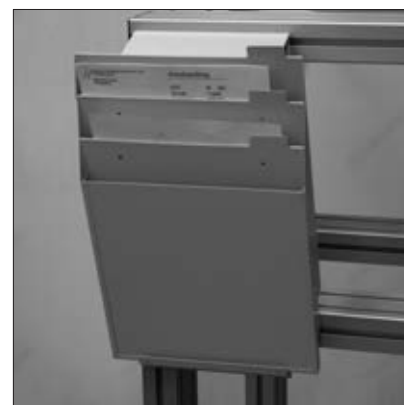
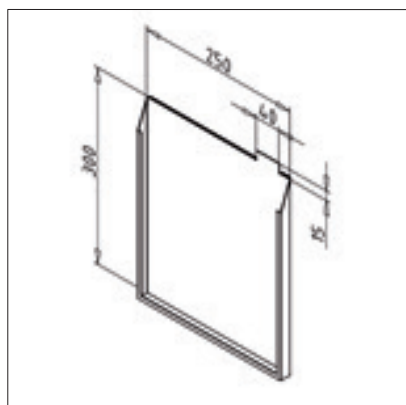
- For size DIN A4 documents

ASSEMBLY

- Fasten to the portal structure
- Any time expandable with **part no. 32.0616/0**
- Extract the front panel during extension and attach it to the last extension element again

Vertical document tray, add-on element

Part No. 32.0616/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- Filling capacity =15 mm, sufficient for approx. 120 sheets of paper
- Weight = 0.392 kg/piece

APPLICATIONS

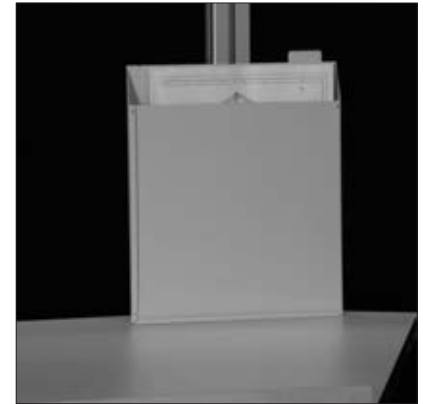
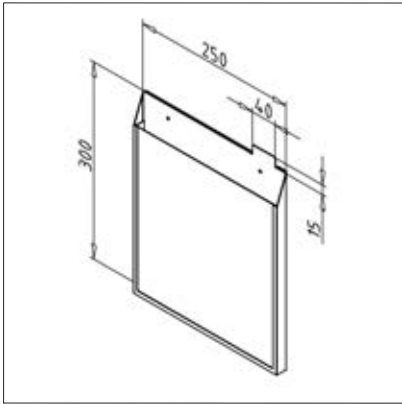
- For size DIN A4 documents

ASSEMBLY

- Place base element on compartment **part no. 32.0615/0**

Vertical document tray, single

Part No. 32.0617/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- With fastening bores \varnothing 4 mm, spacing approx. 16 mm
- With grey closing plate
- Weight = 0.500 kg/piece

APPLICATIONS

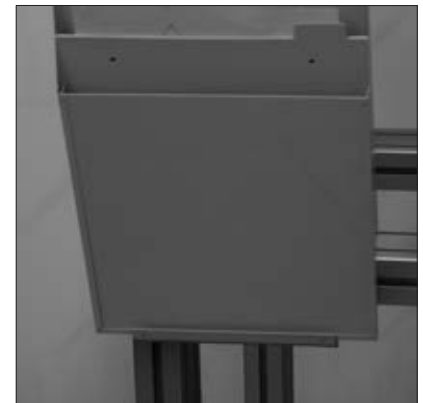
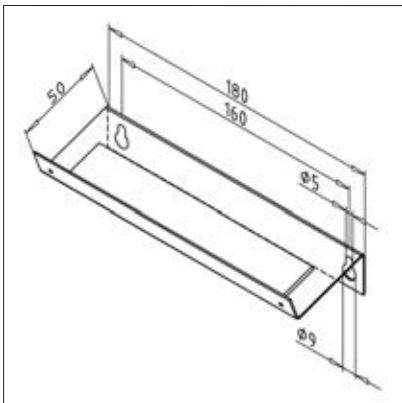
- For size DIN A4 documents
- Optional: vertical document tray, single element, DIN A4 portrait format with transparent end panel **Part no. 32.0619/0**

ASSEMBLY

- Attach to the portal structure or use as an extension element for the base element

Additional angle for vertical document tray

Part No. 32.0618/0



TECHN. DATA / ITEMS SUPPLIED

- Steel light grey, powder coated
- With magnet strips
- Weight = 0.123 kg/piece

APPLICATIONS

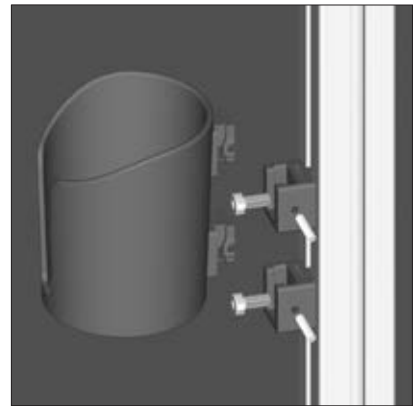
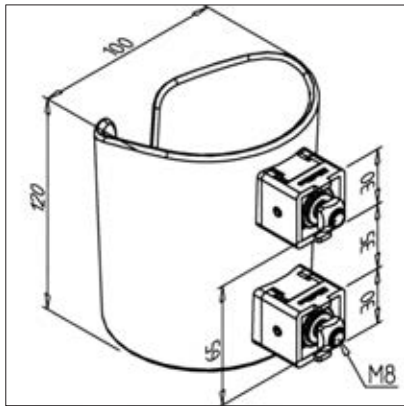
- For additional stabilisation on the bottom edge of the semi-open compartments

ASSEMBLY

- Fasten to the portal structure

Cup and bottle holder

Part No. 32.0547/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Fastening kit
- Weight = 0.213 kg/piece

APPLICATIONS

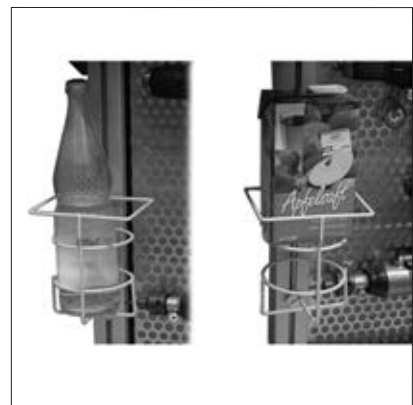
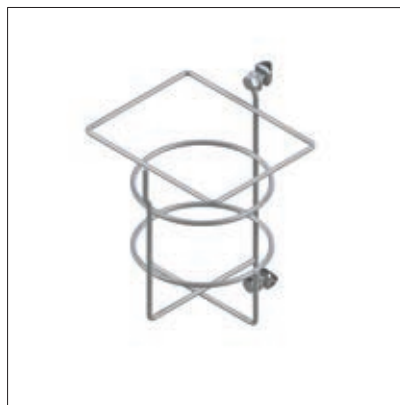
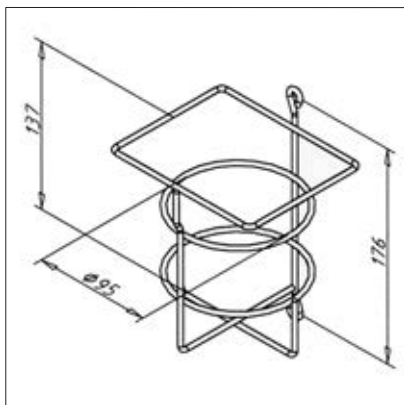
- Cup or bottle holder for workplace systems
- With cut-out for cup handle

ASSEMBLY

- Fasten rectangular connectors to post profile with supplied hardware at a distance of 35 mm
- Push the cup holder into the t-slot shaped recesses
- For adjustment use set screw M5

Bottle/drink carton holder

Part No. 32.0507/0



TECHN. DATA / ITEMS SUPPLIED

- Steel wire, coated light grey
- Inside \varnothing 95 mm
- 2 screws M6 x 16
- 2 square nuts M6 with spring plate
- Weight = 0.195 kg/piece

APPLICATIONS

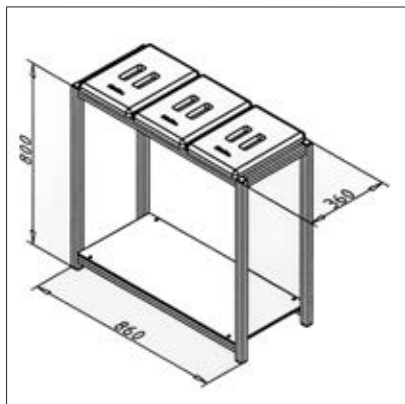
- Commercially available beverage bottles and beverage bags

ASSEMBLY

- Screw down with fastening material

Recycling bins

Part No. 29.0022/0



TECHN. DATA / ITEMS SUPPLIED

- Sturdy frame of profile 30 x 30, anodized E6 / EV1
- Delivery as construction set
- With shelf
- 3 covers ABS, grey
- Weight = 7.023 kg/piece



APPLICATIONS

- For separate collection of 3 kinds of recyclable materials
- Just put plastic bags over the screw heads
- Also suitable for use outdoors

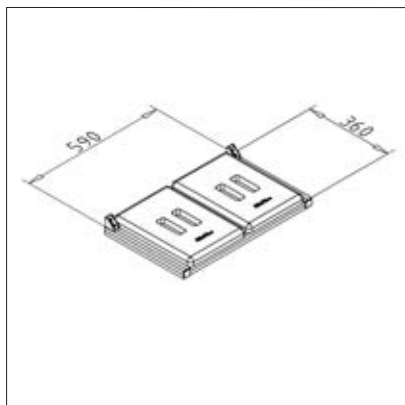


ASSEMBLY

- According to enclosed installation instructions

Recyclable material collector for attachment

Part No. 32.0024/0



TECHN. DATA / ITEMS SUPPLIED

- Frame made of profile 30 x 30, anodized E6 / EV1
- 2 covers ABS, grey
- 2 mounting angles 25
- Weight = 1.915 kg/piece



APPLICATIONS

- For separate collection of 2 kinds of recyclable materials
- Just put plastic bags over the screw heads

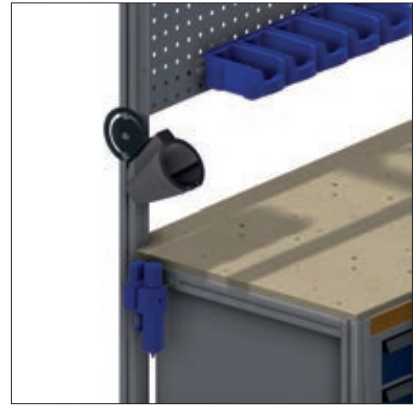
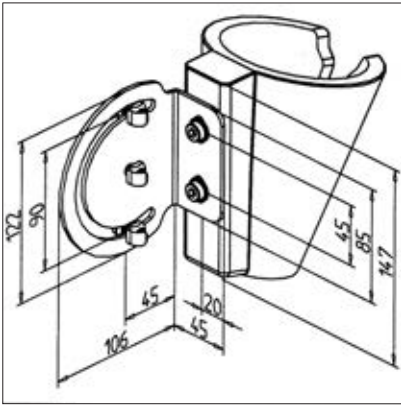


ASSEMBLY

- Attach to profile frame with fastening materials included

Tool case S as set

Part No. 26.3001/0



TECHN. DATA / ITEMS SUPPLIED

- Tool quiver, rubber, black
- Swivel bracket, steel, grey, powder-coated
- With fastening material steel, zinc plated
- Weight = 0.830 kg/piece

APPLICATIONS

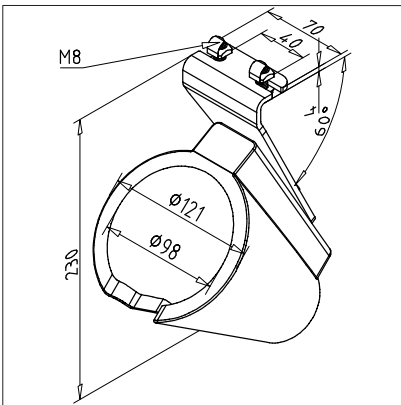
- For secure storage of drills, battery-operated screwdrivers and other tools
- Adjustable angle

ASSEMBLY

- Fasten to the profile brace with supplied hardware
- The swivel bracket is enclosed as a loose item, can be fixed in the left or right version on assembly

Base set tool case

Part No. 26.3004/0



TECHN. DATA / ITEMS SUPPLIED

- Tool quiver, rubber, black
- Holder, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.885 kg/piece

APPLICATIONS

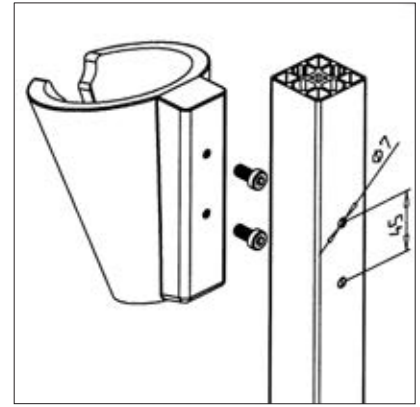
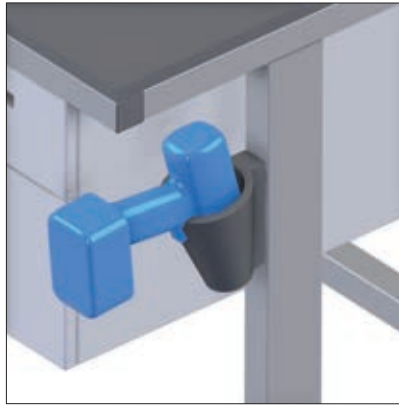
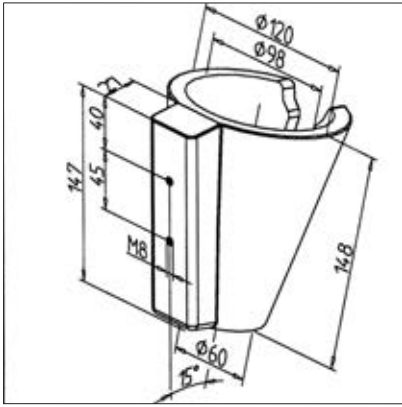
- For secure storage of drills, battery-operated screwdrivers and other tools
- For ergonomic provision of tools below the work surface

ASSEMBLY

- Fasten to the profile brace with supplied hardware

Tool case S

Part No. 26.3001/1



TECHN. DATA / ITEMS SUPPLIED

- Rubber, black
- Weight = 0.612 kg/piece

APPLICATIONS

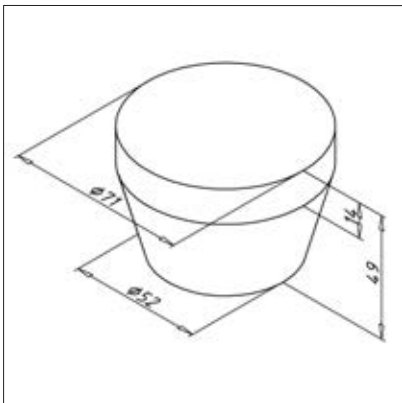
- For secure storage of drills, battery-operated screwdrivers and other tools

ASSEMBLY

- Drill 2 bores $\varnothing 7$ mm, distance of 45 into profile
- Fasten with screws M8 x 16

Adapter for tool case

Part No. 26.3002/0



TECHN. DATA / ITEMS SUPPLIED

- POM, white
- Standard: without machining
Optional: with machining, e.g. suitably drilled or milled for special tools
- Weight = 0.225 kg/piece

APPLICATIONS

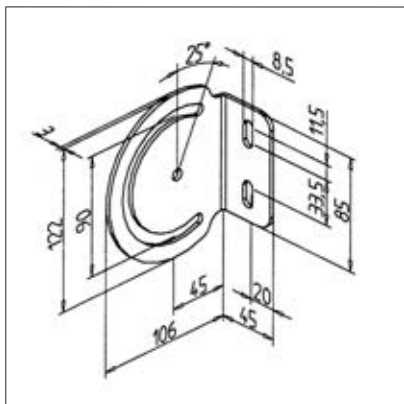
- Adapter for rod screwdrivers, special screwdrivers, pneumatic screwdrivers and smaller hand tools

ASSEMBLY

- Press into tool quiver

Swivel holder

Part No. 26.3001/2



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Powder coated RAL 7012
- Weight = 0.283 kg/piece

APPLICATIONS

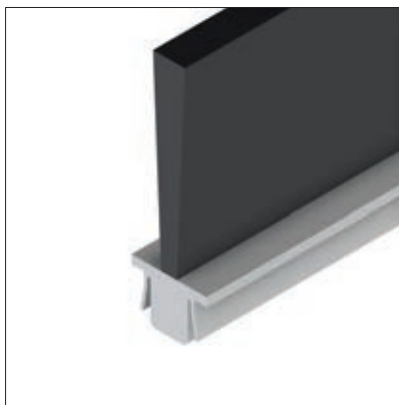
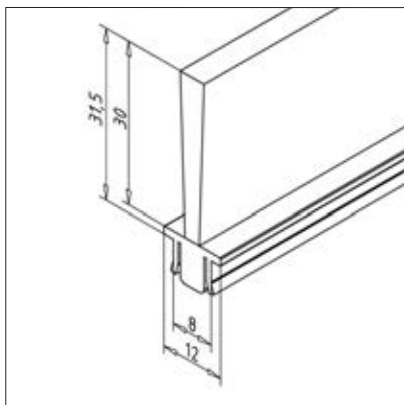
- For swiveling attachment of toolboxes, profiles or shelves

ASSEMBLY

- With screws M8 x 16 or clamping lever and M8 sliding nut

Brush strip 30/45

Part No. 22.1150/0



TECHN. DATA / ITEMS SUPPLIED

- PVC strip with brush
- Manufacturing length: 1000 mm
- Weight = 0.128 kg/m

APPLICATIONS

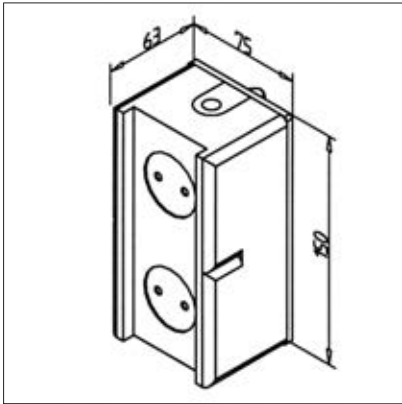
- Sealing of doors, lids
- Static belt cleaning in case of light soiling
- Guiding and carrying in conveyor technology

ASSEMBLY

- Insert or clip into profile groove
- Suitable for profile grooves of the profile series 30 and 45

Vertical double socket

Part No. 32.0773/0



TECHN. DATA / ITEMS SUPPLIED

- Schuko 10 / 16 A 250 V
- IP 44 shatter-proof
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plate and screws
- Weight = 0.389 kg/piece

APPLICATIONS

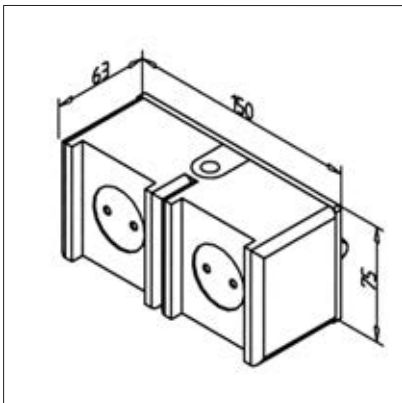
- For power supply at the workplace

ASSEMBLY

- Attach the adapter plate to the profile
- Fasten double outlet to the adapter plate

Horizontal double socket

Part No. 32.0774/0



TECHN. DATA / ITEMS SUPPLIED

- Schuko 10 / 16 A 250 V
- IP 44 shatter-proof
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plate and screws
- Weight = 0.389 kg/piece

APPLICATIONS

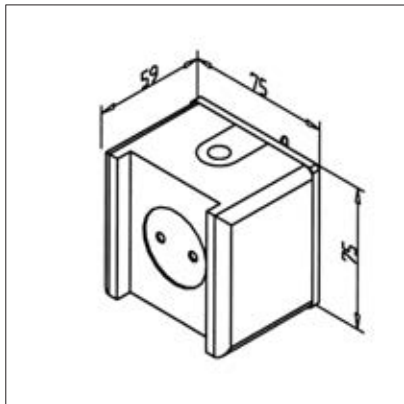
- For power supply at the workplace

ASSEMBLY

- Attach the adapter plate to the profile
- Fasten double outlet to the adapter plate

Socket

Part No. 32.0771/0



TECHN. DATA / ITEMS SUPPLIED

- Schuko 10 / 16 A 250 V
- IP 44 shatter-proof
- Housing 75 x 75 x 58 mm
- With adapter plate and screws
- Weight = 0.211 kg/piece

APPLICATIONS

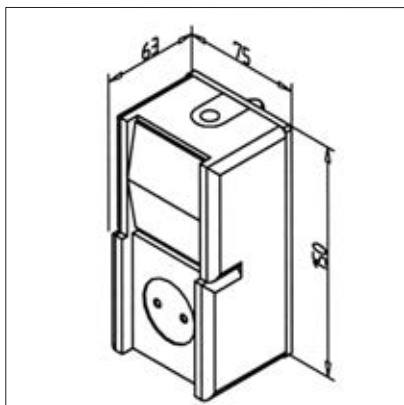
- For power supply at the workplace

ASSEMBLY

- Attach the adapter plate to the profile
- Fasten double outlet to the adapter plate

Toggle switch/socket

Part No. 32.0772/0



TECHN. DATA / ITEMS SUPPLIED

- OFF switch, 10A x 250V
- Schuko 10 / 16 A 250 V, IP 44 shatter-proofed
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plate
- Weight = 0.389 kg/piece

APPLICATIONS

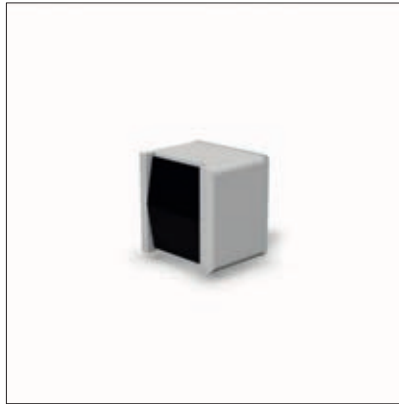
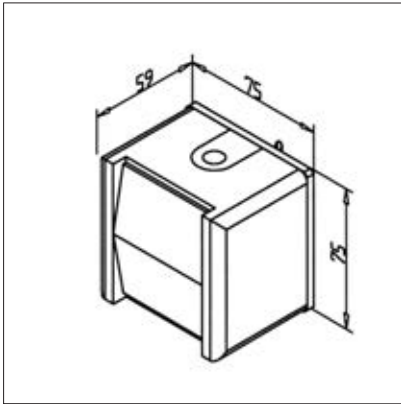
- For switching lights on and off

ASSEMBLY

- Attach the adapter plate to the profile
- Fasten the switch on the adapter plate

Toggle switch

Part No. 32.0770/0



TECHN. DATA / ITEMS SUPPLIED

- OFF switch
- 10A x 250V
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plate

- Weight = 0.211 kg/piece

APPLICATIONS

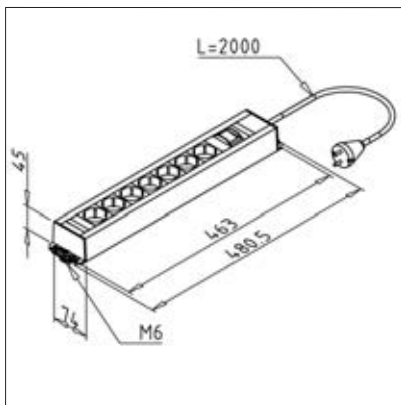
- For switching lights on and off

ASSEMBLY

- Attach the adapter plate to the profile
- Fasten the switch on the adapter plate

Multiple socket outlet, 7-way

Part No. 32.0703/0



TECHN. DATA / ITEMS SUPPLIED

- 7-fold with additional switch
- Rocker switch, illuminated
- Cable length 2 m
- Max. 3500W / 16A / 230V
- Weight = 0.858 kg/piece

APPLICATIONS

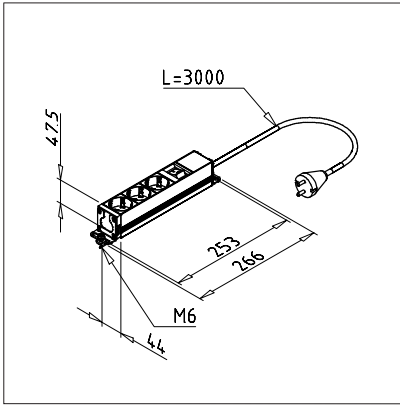
- Oblique socket arrangement

ASSEMBLY

- Fasten to profile groove with supplied hardware

Multiple socket outlet, aluminium, 3-way

Part No. 32.0704/0



TECHN. DATA / ITEMS SUPPLIED

- Housing Aluminum natural anodized
- Rocker switch, illuminated
- Max. 3500W / 16A / 230V
- Cable length 3 m
- Weight = 0.718 kg/piece

APPLICATIONS

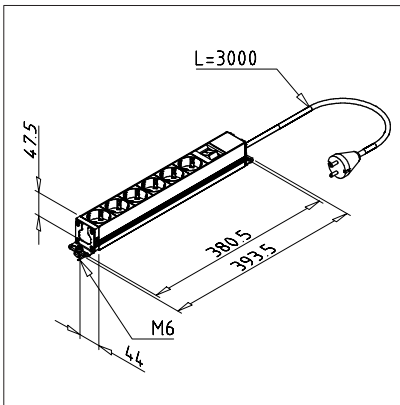
- Oblique socket arrangement

ASSEMBLY

- Fasten to profile groove with supplied hardware

Multiple socket outlet, aluminium, 6-way

Part No. 32.0705/0



TECHN. DATA / ITEMS SUPPLIED

- Housing Aluminum natural anodized
- Rocker switch, illuminated
- Max. 3500W / 16A / 230V
- Cable length 3 m
- Weight = 0.866 kg/piece

APPLICATIONS

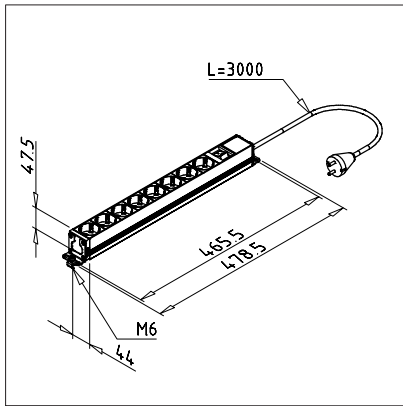
- Oblique socket arrangement

ASSEMBLY

- Fasten with fastening material to profile groove

Multiple socket outlet, aluminium, 8-way

Part No. 32.0706/0



TECHN. DATA / ITEMS SUPPLIED

- Housing Aluminum natural anodized
- Rocker switch, illuminated
- Max. 3500W / 16A / 230V
- Cable length 3 m
- Weight = 0.902 kg/piece

APPLICATIONS

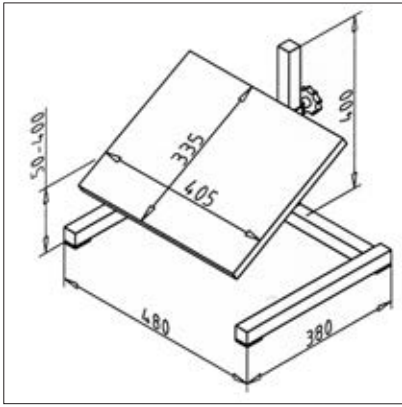
- Oblique socket arrangement

ASSEMBLY

- Fasten to profile groove with supplied hardware

ECO footrest

Part No. 32.0155/0



TECHN. DATA / ITEMS SUPPLIED

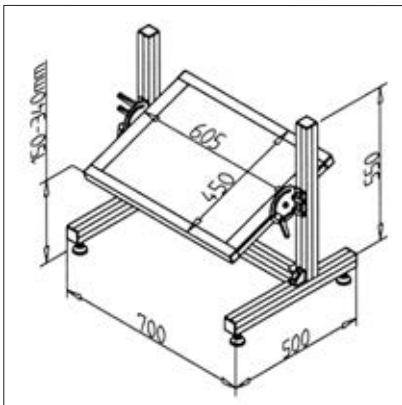
- Stable tubular steel frame made of 30 mm square tube
- Fully assembled
- Foot rest: Grooved anti skid rubber
- W x L x H= 400 x 330 x 410 mm
- ESD on request
- Height-adjustable and inclinable
- Inclination adjustable by foot
- Free-standing
- Weight = 5.700 kg/piece

APPLICATIONS

- Facilitates proper sitting at the table

Standard footrest

Part No. 32.0160/0



TECHN. DATA / ITEMS SUPPLIED

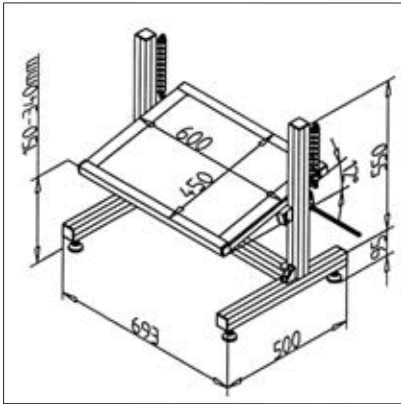
- Base construction profile 45x45 under tables, workstations
- Fully assembled
- Footrest: chipboard, coated, basalt grey, oil resistant
- ESD on request
- Height and inclination manually adjustable
- Free-standing
- Weight = 9.475 kg/piece

APPLICATIONS

- Facilitates proper sitting at the table

Comfort footrest

Part No. 32.0165/0



TECHN. DATA / ITEMS SUPPLIED

- Base construction profile 45x45 under tables, workstations
- Fully assembled
- Footrest: chipboard, coated, basalt grey, oil resistant
- ESD on request
- Spring-tensioned height adjustment, height adjustable from seating position
- Free-standing
- Weight = 10.200 kg/piece

APPLICATIONS

- Facilitates proper sitting at the table

Pneumatics



High-quality pneumatic components for workplace systems

The right pressure for every application

Use the MiniTec filter controller with manual start-up valve to reliably provide compressed air at the workstation. Contamination is removed from the compressed air and at the same time, the required and necessary working pressure can be set conveniently depending on the application. The compressed air maintenance module consists of a pneumatic valve with practical manual start-up function including vent via filter as well as a filter controller, a rotary knob including integrated lock and a pressure gauge for precise pressure measurement.

Precise and repeatable: Supply with oiled compressed air

The MiniTec oiler is ideally suitable for applications with oiled compressed air. It supplies pneumatic components reliably with a precise dose of oil. The proportional oiler is also called a micro oil-mist lubricator, as it ensures a constant ration of air-oil mixture. The oiler is fixed onto the filter controller using the enclosed coupling package. In this way the oil can pass through long compressed air lines and even complex highly-branched systems.

3-way flexibility due to the pneumatic distributor

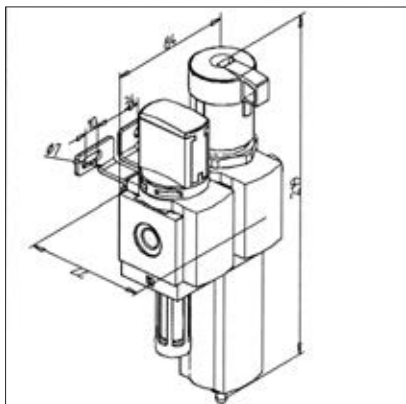
Use the MiniTec pneumatic distributor with 3-way quick-release coupling for flexible compressed air distribution in the workplace. It connects and separates compressed air lines, even if they are pressurised. Simply fix the pneumatic distributor on the profile using the accessories supplied. The pneumatic hose is then pushed on and secured with a suitable hose clamp.

Practical and automatic: the compressed air hose rewinder

The MiniTec automatic hose rewinder is a practical addition to your workplace system for storing compressed air hoses safely. It is made of stable plastic and is equipped with multiple latching per revolution. As soon as the hose is unwound via this latching, a release occurs and the hose continues to unroll automatically. The locking can be flexibly switched off. Benefit from our expertise in vacuum technology, compressed air conditioning, special pneumatics and hydraulics and equip your workplace system with high-quality pneumatic components, which provide exactly the right working pressure for every workplace.

Filter controller and manual start-up valve

Part No. 32.0580/0



TECHN. DATA / ITEMS SUPPLIED

- The compressed air service module consists of: Manual start-up valve with ventilation via filter, filter regulator, rotary knob with integrated lock and manometer
- Filter mesh 40 µm
- Condensate drain
- Pressure control range: 1-12 bar
- Connection inlet 1/4" thread
- Connection outlet connector system hose D=10 mm
- Standard nominal flow 800 - 1.400 l/min
- Weight = 0.575 kg/piece

APPLICATIONS

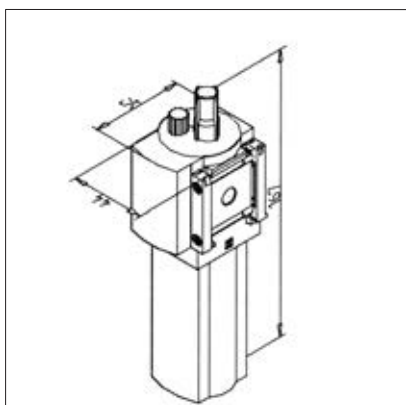
- Compressed air provision on the work table

ASSEMBLY

- 2x Cyl. Screw M6 x 12 **part no. 21.1143/0**
- 2x square nuts M6 x 13 with retaining plate **part no. 21.1330/2**

Oiler

Part No. 32.0581/0



TECHN. DATA / ITEMS SUPPLIED

- Proportional lubricator with precise oil dosing
- Easy and fast to refill
- Weight = 0.225 kg/piece

APPLICATIONS

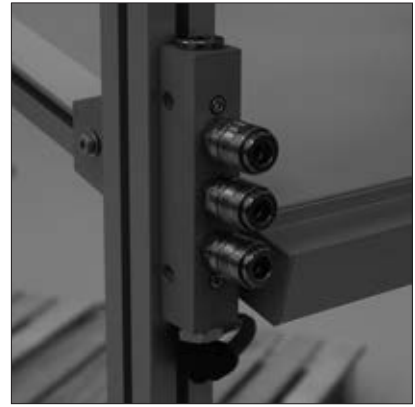
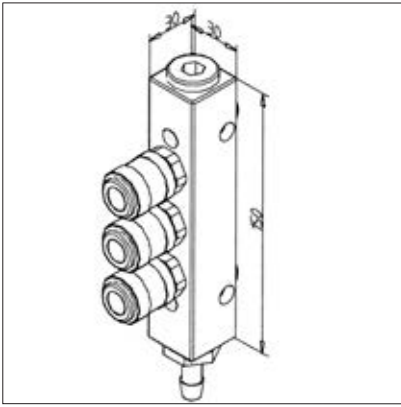
- Micro-mist oil for compressed air

ASSEMBLY

- Attach to the filter regulator with the enclosed coupling package

Pneumatic 3-way distributor

Part No. 32.0901/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium housing
- 1x connection hose nozzle for hose NW 9
- 3x quick-connect NW 7
- Operating range 0-10 bar
- Temperature range -10 to +70°C
- Connection with push-on fitting on request
- Weight = 0.665 kg/piece

APPLICATIONS

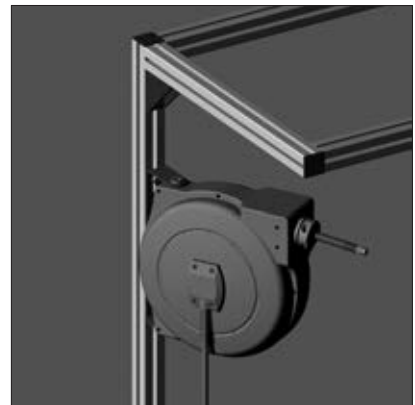
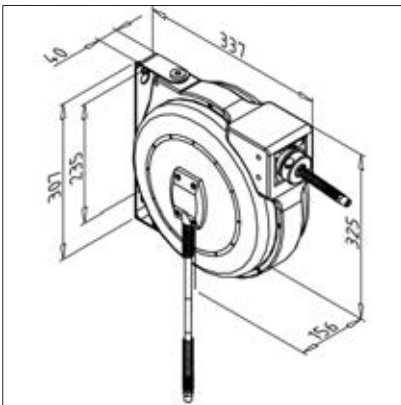
- Compressed air distribution at the work-place
- Fast connection and disconnection of pressurized compressed air lines
- Plug nipple rotatable in the coupling

ASSEMBLY

- Fasten to profile with supplied hardware
- Push on hose and secure with suitable hose clamp

Autom. hose rewriter

Part No. 32.0583/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, blue/ black
- Hose rewriter with PU-hose and stopper incl. 1 m connecting hose
- Dimensions (LxWxH) 325 x 275 x 185 mm
- Hose length 8 m
- Connection In/outlet 1/4"
- max. pressure 10 bar
- Weight = 3.433 kg/piece

APPLICATIONS

- Automatic hose reel made of plastic
- Multiple arrester per turn
- disengageable locking

ASSEMBLY

- Fasten to profile with supplied hardware

Components for kanban systems



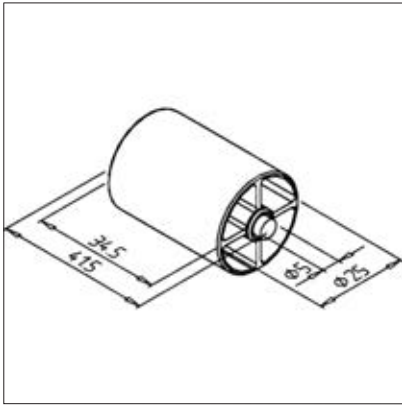
Consumption controlled to low stocks

Low stock levels and avoidance of waste are constant challenges in mass production. With consumption-based disposition procedures according to the kanban principle, these goals can be achieved with simple means. The required parts in production are requested by the consuming point in the production process with a simple kanban card from the upstream stage. The card is usually located on the material and triggers a production order when the minimum stock is reached. In order to ensure the consumption-controlled production and thus the minimization of stocks, no order may be started without this kanban card. The products are provided directly at the point of consumption in so-called kanban shelves. These shelves are equipped with inclined roller conveyors, which transport by gravity the containers or products to the collection point. The shelves are loaded from the back. The size of the shelves depends on the stock at the workplace determined according to kanban rules. So

that the containers are transported safely and gently on the shelf, the inclination of the roller tracks is easily adjustable. To avoid damage caused by impacts, brake plates or brake rollers are available which are easy to assemble. Especially with higher weights, the use of these brake plates may be required. All components required to build customized kanban shelves are available in our product range. Our Kantainer is especially suitable for the management of small parts according to the kanban principle is Part no.320870/0.

Idler roller D 25

Part No. 21.1701/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, blue
- Axe \varnothing 5, stainless steel
- Bearing capacity per roller 20 N
- For higher loads use Pulley D 25 compact **part no. 21.1703/0**
- Weight = 0.008 kg/piece

APPLICATIONS

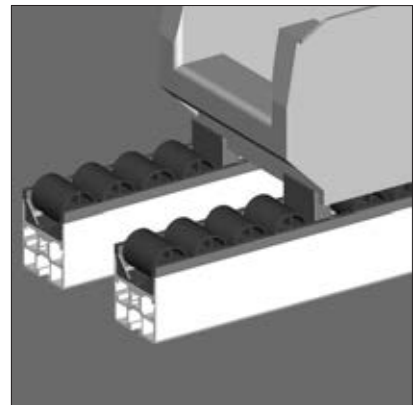
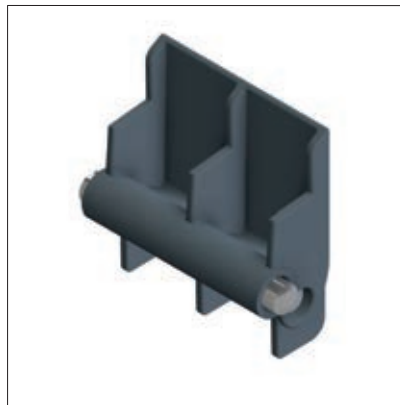
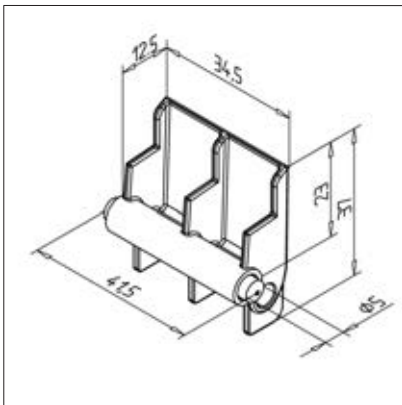
- Production of small roller conveyors in connection with profile 45 x 45 R, **part no. 20.1046/0**

ASSEMBLY

- Press rollers in desired number and pitch into roller carrier
Roller carrier 45 x 45 R with cover **part no. 22.1151/0**
Roller carrier 45 x 45 R with SF cover **part no. 22.1152/0**

Return stop

Part No. 32.0586/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Weight = 0.015 kg/piece

APPLICATIONS

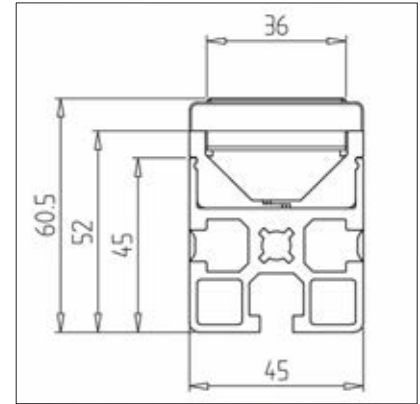
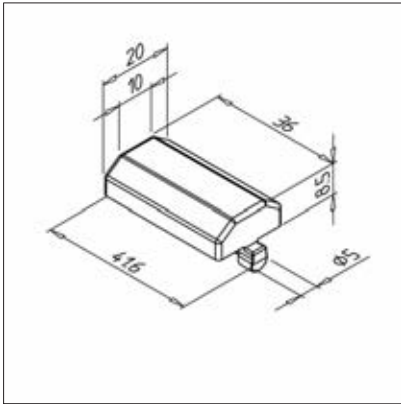
- used for decline-roller conveyors to prevent transported material from running back
- in combination with pulley carrier 45x45R

ASSEMBLY

- Clip into the roller carrier instead of a roller

Roller carrier backing pads

Part No. 21.0940/0



TECHN. DATA / ITEMS SUPPLIED

- POM, grey RAL 7012
- Suitable for roller carrier
- Weight = 0.004 kg/piece

APPLICATIONS

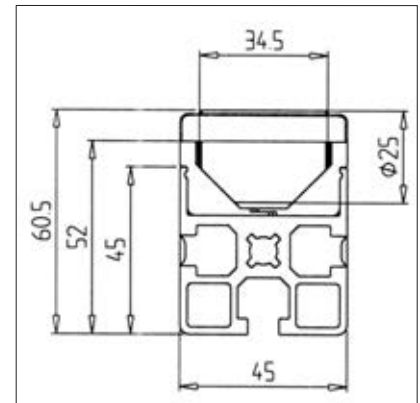
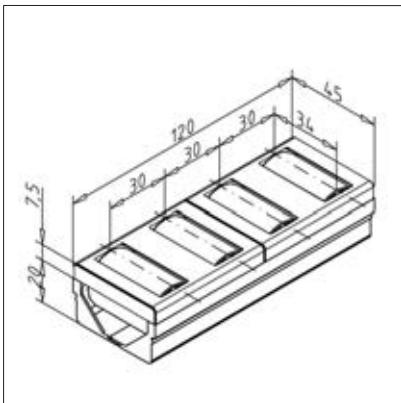
- For use in roller carriers instead of D25 roller for braking transport material
- To prevent rolling away on the installation site

ASSEMBLY

- Clip into the roller carrier instead of a roller

Roller carrier 45 x 45 R with cover

Part No. 22.1151/0



TECHN. DATA / ITEMS SUPPLIED

- POM, grey
- 2 x pulley carriers base part POM-RAL 7012, **part no. 22.1126/0**
- 1 x Cover POM-RAL 7012 - **part no. 22.1127/0**
- 4 x pulley carriers ABS blue, **part no. 21.1701/0**
- Length: 120 mm
- Weight = 0.076 kg/piece

APPLICATIONS

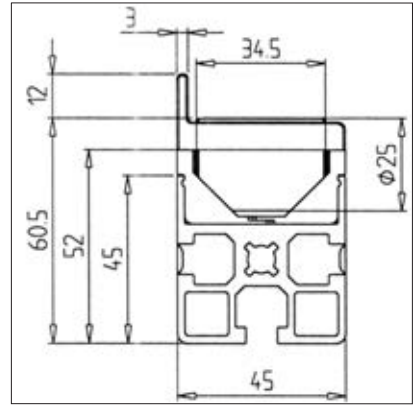
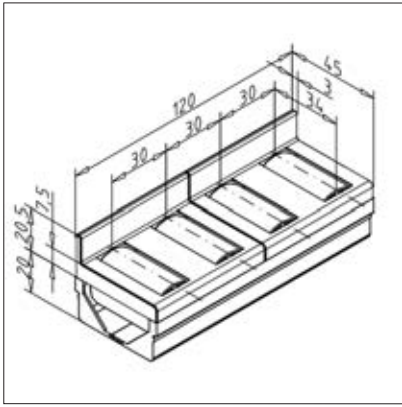
- Production of small roller conveyors in connection with profile 45 x 45 R, **part no. 20.1046/0**

ASSEMBLY

- Insert roller carrier in profile
- Insert conveyor rollers
- Clipoff cap

Roller carrier 45 x 45 R with SF cover

Part No. 22.1152/0



TECHN. DATA / ITEMS SUPPLIED

- POM, grey
- 2 x pulley carriers base part POM-RAL 7012, **part no. 22.1126/0**
- 1 x cover POM-RAL 7012, **part no. 22.1128/0**
- 4 x pulley carriers ABS blue, **part no. 21.1701/0**
- Length: 120 mm
- Weight = 0.083 kg/piece

APPLICATIONS

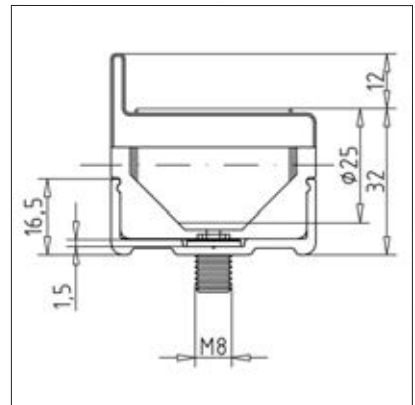
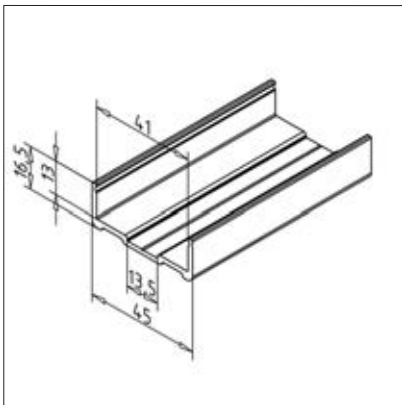
- Production of small roller conveyors in connection with profile 45 x 45 R, **part no. 20.1046/0**

ASSEMBLY

- Insert roller carrier in profile
- Insert conveyor rollers
- Clipoff cap

Carrier profile 45 R

Part No. 20.1133/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- $I_x = 0.289 \text{ cm}^4$
- $I_y = 0.428 \text{ cm}^4$
- $w_x = 0.128 \text{ cm}^3$
- $w_y = 0.966 \text{ cm}^3$
- $IT = 4.573 \text{ cm}^4$
- Weight = 0.414 kg/m
- Bar length = 6 m

APPLICATIONS

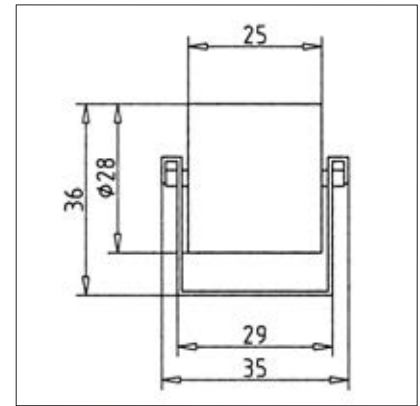
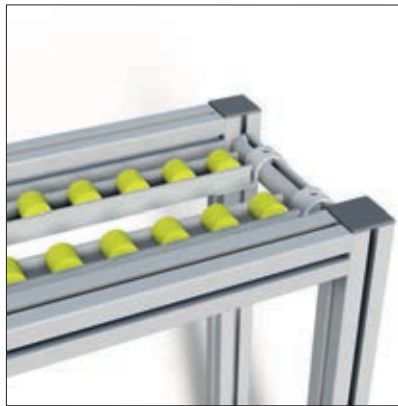
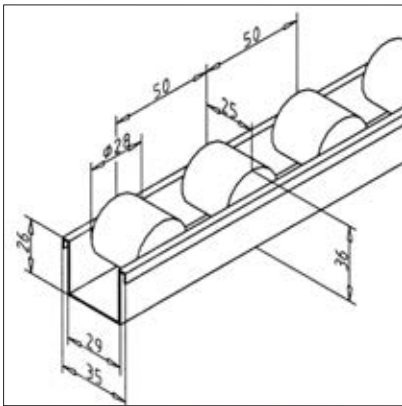
- For the manufacture of miniature roller tracks
- For use with the following roll carriers: roll carrier 45 x 45R with cover **part no. 22.1151/0**
Roller carrier 45 x 45R with SF cover **part no. 22.1152/0**

ASSEMBLY

- Bore $\phi 8,5$ bring in desired positions
- Assemble with pan head screw **part no. 21.1666/0** and sliding nut O8 with spring sheet **part no. 21.1351/2**
- Insert required roller carrier

Roller strip with cylindrical rollers

Part No. 32.0550/0



TECHN. DATA / ITEMS SUPPLIED

- Length according to costumers specification
- Max. length 6 m
- Division 50 mm
- Supporting profile: Steel, zinc plated
- Roller colour: yellow
- Weight = 0.595 kg/m

APPLICATIONS

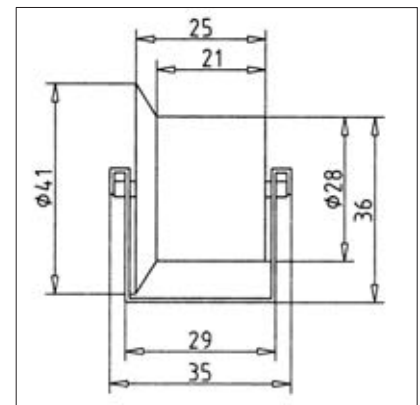
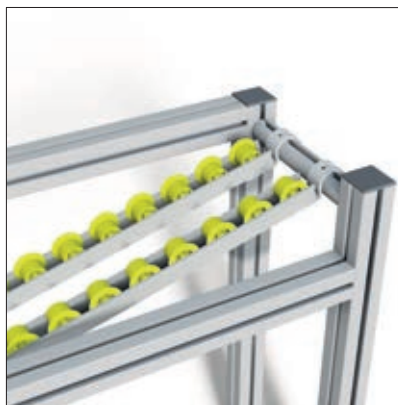
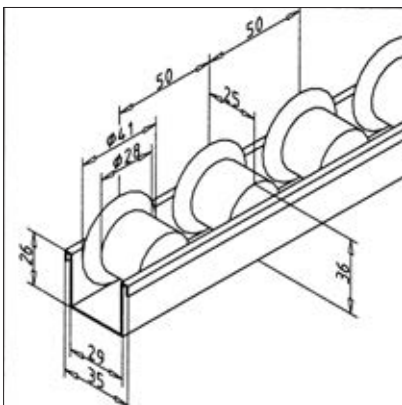
- The rollers can be used over a temperature range from -30°C up to $+100^{\circ}\text{C}$
- part no. 32.0555/0** highly conductive roller to avoid electrostatic charge. Roller colour: black
- For longer roller strips or higher load, we recommend:
 - inserting lengthwise or crosswise construction profiles underneath for support
 - inserting the roller strip into the 45 FRS profile **Part no. 20.1152/0** it is then also possible to cover the spaces between the rollers, a system height (SH) of 54 mm is then reached

ASSEMBLY

- Fasten with fastening **part no. 32.0574/0** and end stop **part no. 32.0569/0** onto profile
- With screws directly on the carrier profile

Roller strip with flanged rollers

Part No. 32.0560/0



TECHN. DATA / ITEMS SUPPLIED

- Length according to costumers specification
- Max. length 6 m
- Division 50 mm
- Supporting profile: Steel, zinc plated
- Roller colour: yellow
- Weight = 0.615 kg/m

APPLICATIONS

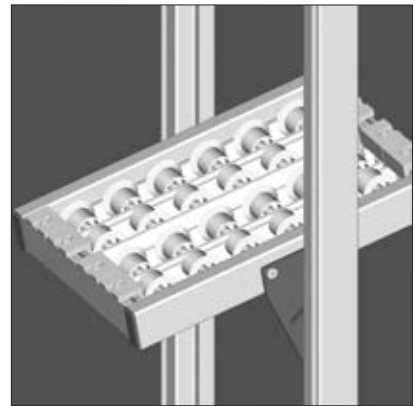
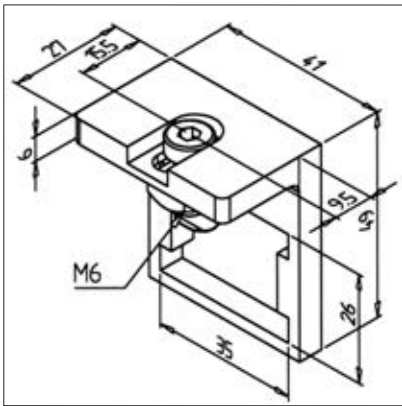
- The rollers can be used over a temperature range from -30°C up to $+100^{\circ}\text{C}$
- Part no. 32.0565/0** Highly conductive wheels to prevent static charges. Roller colour: black
- For longer roller strips or higher load, we recommend:
 - inserting lengthwise or crosswise construction profiles underneath for support
 - inserting the roller strip into the 45 FRS profile **Part no. 20.1152/0** it is then also possible to cover the spaces between the rollers, a system height (SH) of 54 mm is then reached

ASSEMBLY

- Fasten with fastening **part no. 32.0574/0** and end stop **part no. 32.0569/0** onto profile
- With screws directly on the carrier profile

Bracket for roller strip 19

Part No. 32.0575/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Fastening kit
- Thickness 6 mm
- Conductive
- Weight = 0.095 kg/piece

APPLICATIONS

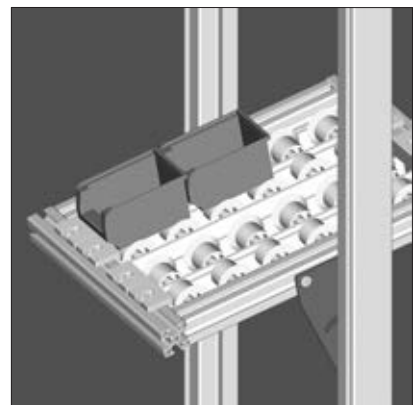
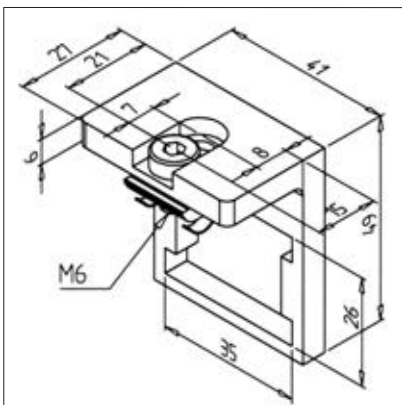
- For attaching roller strip to profiles 19 and 32
- Holder also serves as bedstop
- also available for profile 30 serie (see **part nr. 32.0575/1**)
- Fitting for all profiles of profile series 45
- Appropriate for ESD implementations

ASSEMBLY

- Cut out the roller strip
- Insert the roller strip into the holder and screw it to the profile using the fastening material included

Bracket for roller strip 30

Part No. 32.0575/1



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Fastening kit
- Thickness 6 mm
- Conductive
- Weight = 0.092 kg/piece

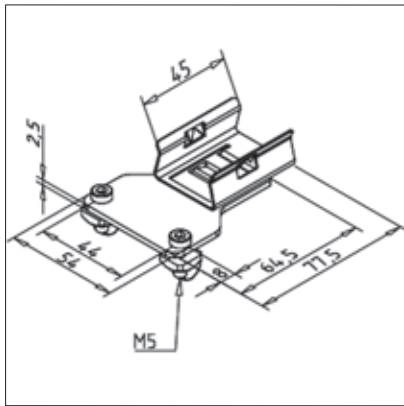
APPLICATIONS

- For fastening roller strip
- Fitting for all profiles of profile series 30
- Appropriate for ESD implementations

ASSEMBLY

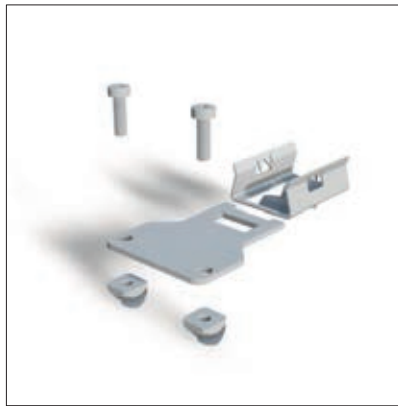
- Cut out the roller strip
- Insert the miniature roller strip into the bracket; screw it to the profile using the fastening material included

Roller strip fastening



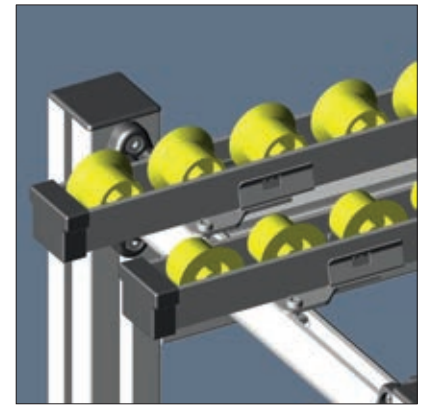
TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Thickness 3 mm
- With fastening material and spring clip for roller strip
- Conductive
- Weight = 0.091 kg/piece



APPLICATIONS

- For attaching roller strip without machining
- Fitting for all profiles of profile series 45
- Appropriate for ESD implementations

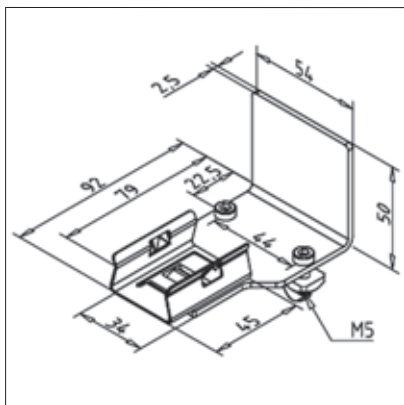


Part No. 32.0574/0

ASSEMBLY

- For roller conveyors use handle profile **part no. 20.1088/0** in connection with flange bearing 32 **part no. 22.1016/0** or clip 32 **part no. 22.1022/0**

End stop, roller strip



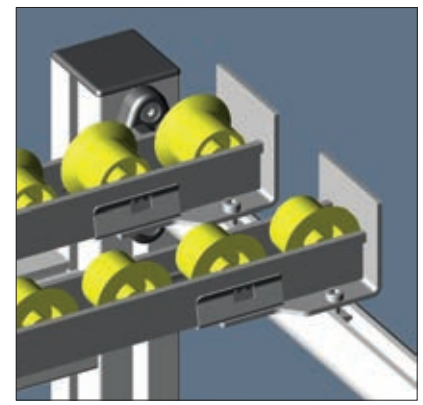
TECHN. DATA / ITEMS SUPPLIED

- Steel
- Stainless steel end stop
- Thickness 3 mm
- With fastening material and spring clip for roller strip
- Conductive
- Weight = 0.166 kg/piece



APPLICATIONS

- Use as end stop for roller strip
- Install without drilling
- Fitting for all profiles of profile series 45
- Appropriate for ESD implementations



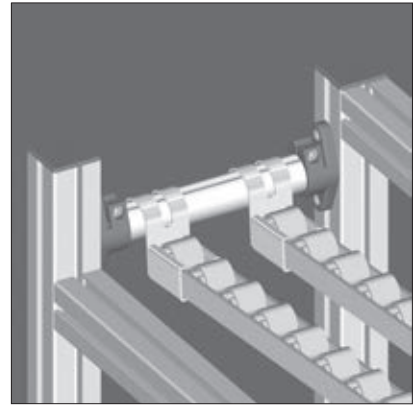
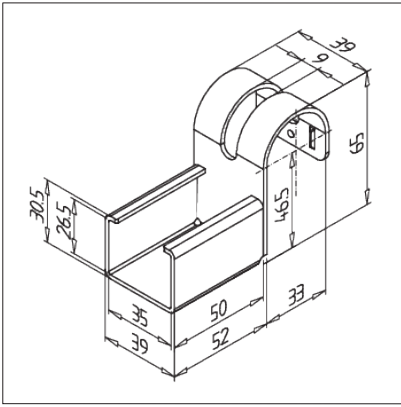
Part No. 32.0569/0

ASSEMBLY

- Fasten to any profile groove with the fastening material provided
- For roller conveyors use handle profile **part no. 20.1088/0** in connection with flange bearing 32 **part no. 22.1016/0** or clip 32 **part no. 22.1022/0**

Bracket, roller strip H

Part No. 32.0553/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Thickness: 2 mm
- Weight = 0.141 kg/piece

APPLICATIONS

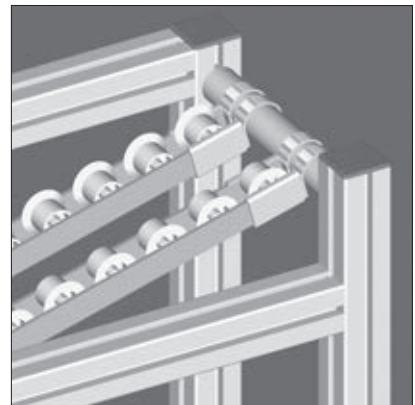
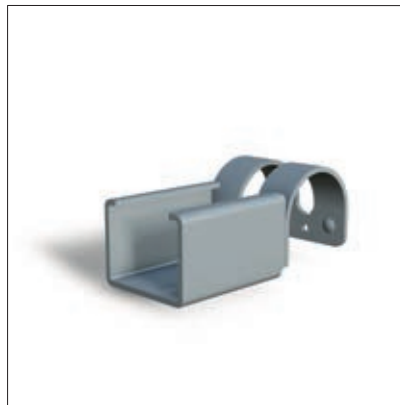
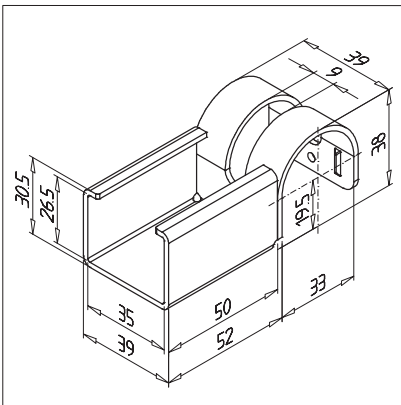
- For attaching roller strip to grip profile 32 part no.: 20.1088/0
- used as end stop for e.g. containers

ASSEMBLY

- Cut out the roller strip
- Attach bracket to the roller strip
- Hang over handle profile 32
- If necessary, the bracket can be secured with a setscrew

Bracket, roller strip F

Part No. 32.0554/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Thickness: 2 mm
- Weight = 0.124 kg/piece

APPLICATIONS

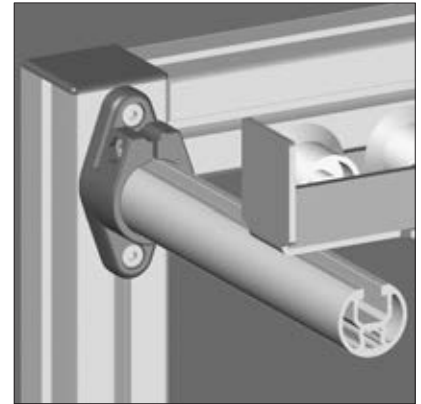
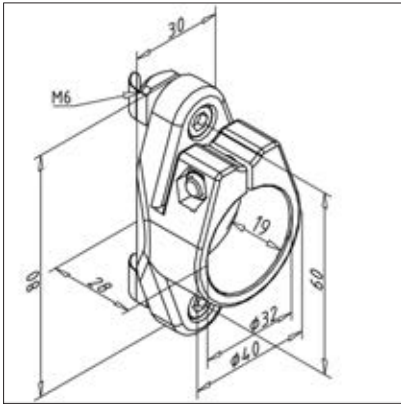
- For attaching roller strip to grip profile 32 part no.: 20.1088/0
- Height of edges on the bracket corresponds the travelling height of rollers

ASSEMBLY

- Cut out the roller strip
- Attach bracket to the roller strip
- Hang over handle profile 32
- If necessary, the bracket can be secured with a setscrew

Flange bearing 32

Part No. 22.1016/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Fastening kit
- Weight = 0.050 kg/piece

APPLICATIONS

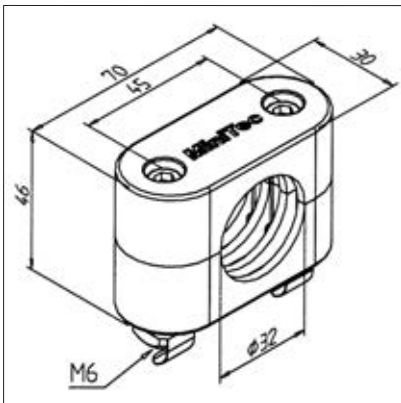
- For angle-adjustable assembly of handle profile 32 for roller strip **part no. 20.1088/0**

ASSEMBLY

- Use fastening kit to fasten to base frame
- Push in handle profile 32 and clamp using screws

Clamp for handle profile 32

Part No. 22.1022/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Fastening kit
- Weight = 0.036 kg/piece

APPLICATIONS

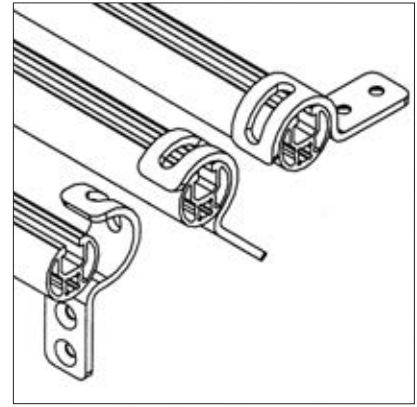
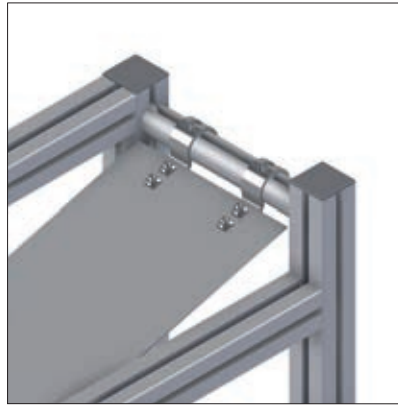
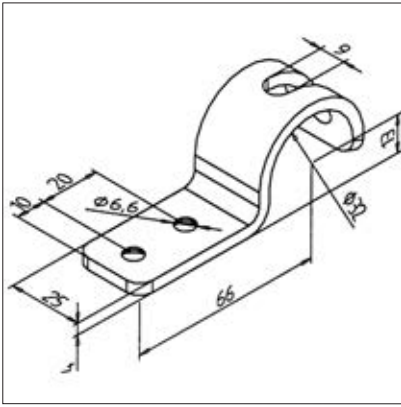
- For handle profile 32 **part no. 20.1088/0**
- Handle with adjustable angle
- Simple equipment and frames

ASSEMBLY

- Swivel the sliding nuts
- Insert handle profile into the 2 half-shells
- Fasten with screws

Catch 32 for handle profile

Part No. 21.0005/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- Countersunk screw M6 x 16
- With sliding nut M6
- Weight = 0.100 kg/piece

APPLICATIONS

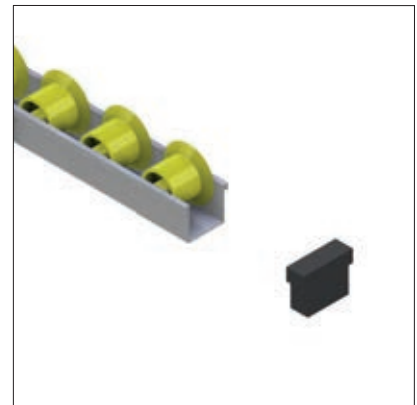
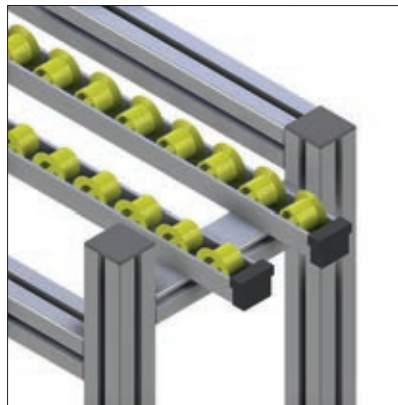
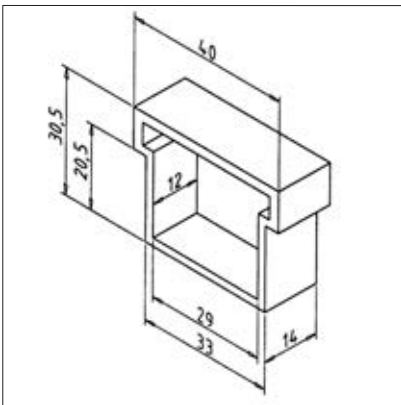
- Angle-independent attachment of roller strip, plates, shelves, etc. on the handle profile 32nd **part no. 20.1088/0**

ASSEMBLY

- Attach plates or similar with M6 counter-sunk screw
- Hang over handle profile 32
- If necessary, secure against dislocation with set screw M8 x 20 and sliding nut M8

Edge protection

Part No. 32.0572/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- ESD-compatible
- Weight = 0.004 kg/piece

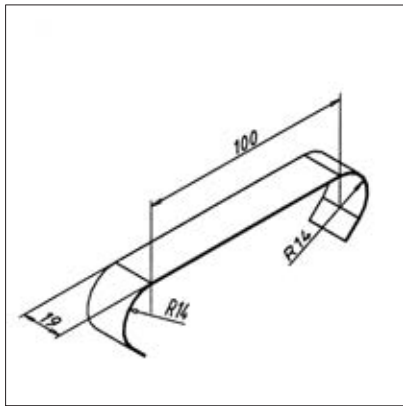
APPLICATIONS

- Protection against injury

ASSEMBLY

- Attach to the roller strip

Brake plate



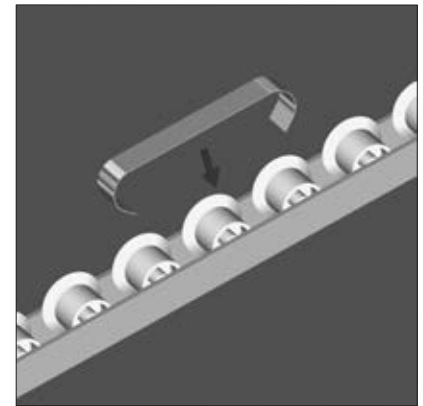
TECHN. DATA / ITEMS SUPPLIED

- Steel
- Brake plate on spring steel for 50 mm division
- In connection with conductive roller ESD conductive
- Weight = 0.017 kg/piece



APPLICATIONS

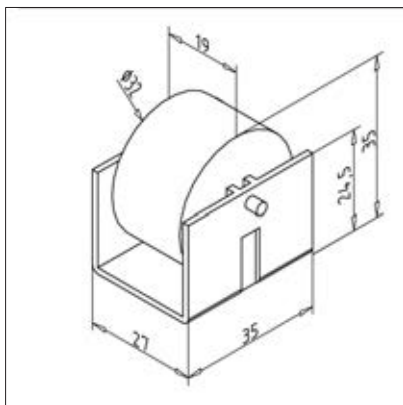
- The brake plate can be fastened at any desired location



ASSEMBLY

- Attach to the roller strip

Brake roller



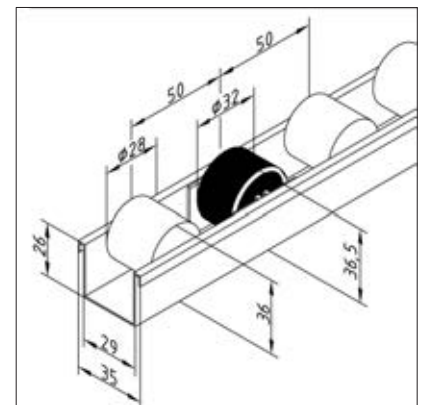
TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- Weight = 0.022 kg/set



APPLICATIONS

- For use with roller strip with a slope, for braking the conveyed material



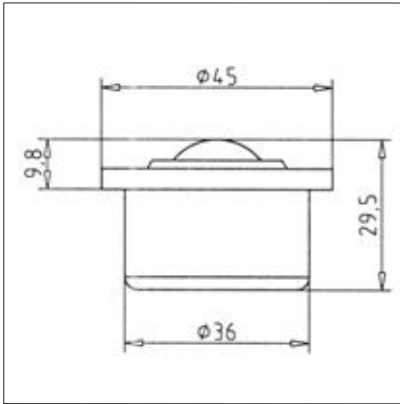
ASSEMBLY

- Remove the existing rollers from the roller strip
- insert support at the same place and clip brake-roller in
- When installing, pay attention to the direction of the bracket and the miniature rollers

Part No. 32.0562/0

Ball roller

Part No. 35.0041/0



TECHN. DATA / ITEMS SUPPLIED

- Housing made of steel sheet, galvanized, steel balls
- DW 22,2 mm
- Load factor C 1200 N
- Weight = 0.130 kg/piece

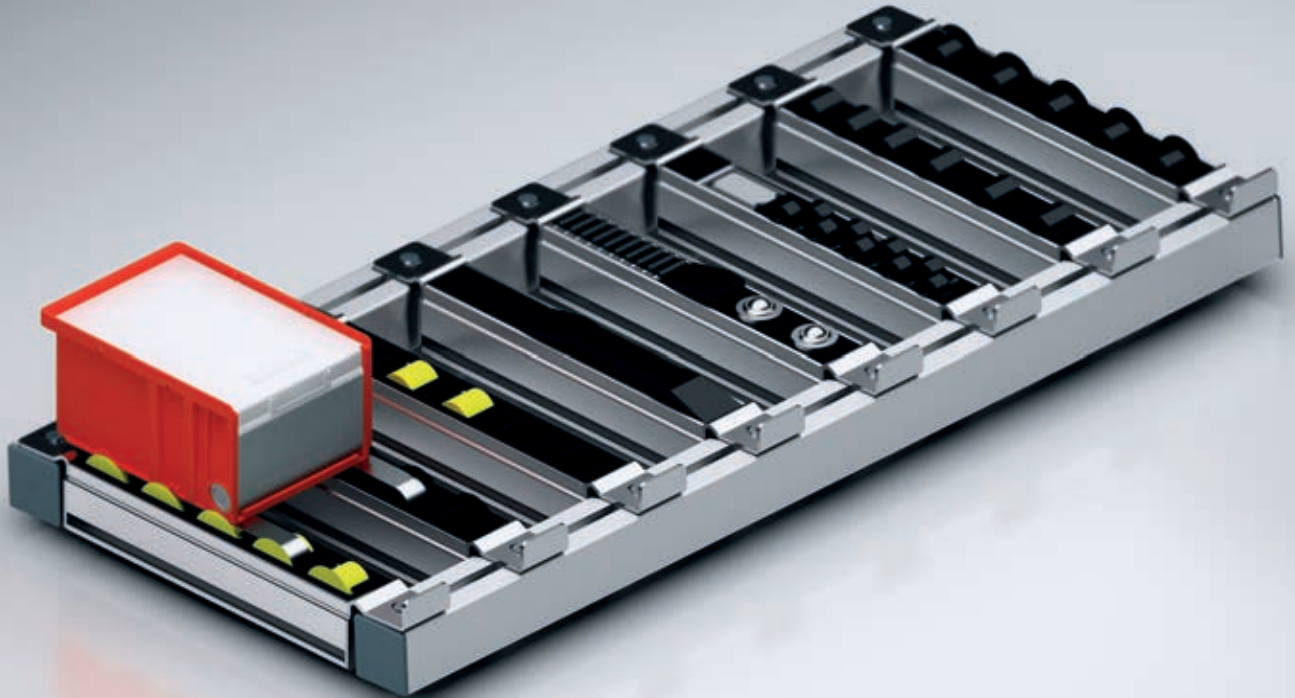
APPLICATIONS

- Ball rollers for conveyor systems and automation systems
- Enable a simultaneous longitudinal and transverse movement
- Installation in work tables or roller tracks
- Ball roller also as suspension for boxes, devices, furniture and appliances

ASSEMBLY

- Insert into prepared bore
- Or install with tolerance ring **part no. 35.0001/0**
- Caution: for mounting with tolerance ring of other bore diameter ($37.7 + 0.2$ mm)

The FRS flexible carrier system



Kanban, the way you need it

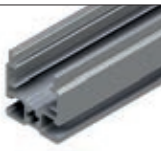








Kanban has established itself as a method of process control in many areas. Based on the pull principle, the process is oriented to the actual consumption of materials at the point of provision and consumption. It is based on self-controlling control loops and helps to significantly reduce inventories of preliminary products. MiniTec enables you to implement Kanban at the assembly workstation using various systems. A particularly variable solution is the FRS (Flexible Roll Support System). This is a modular system for the implementation of MiniTec designs for material supply via rollers.













One fits all: The FRS profile 45



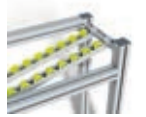

The basis is the special MiniTec FRS profile 45, which is compatible with the standard MiniTec profile series. It has a mounting device for different types of rollers. Accordingly, you can configure the material supply at the workplace individually according to your requirements - and adapt or convert it at any time should your needs change!

Put together your own individual system!

FRS also offers a wide range of accessories to match the broad spectrum of roller types - from covers to protect against contamination to transition pieces for height compensation and backstops. When combining the components, it should be noted that they have different heights (SH). Accordingly, only those elements should be combined which are compatible in terms of height. Differences can also be compensated for, for example by using a transition piece. It is also possible, for example, to adjust the installation position of the slide profile to the desired system height. As you can see, it has never been so easy to implement kanban in your assembly. We will be happy to answer any questions you may have about the right combination for your FRS system! system!

	Part no.	Description	System height (SH)				Features	ESD-com- patible / conductive
			49	51	54	58		
	201152/0	Profile 45 FRS					The basis of the FRS, that is, the base profile, which serves as a support for all roller variants. Aluminium, anodized	X
Rollers / Sliding elements								
	320683/0	Rollelement 50 D28-Z-FRS					Large roll for larger transport goods as well as heavy loads. Plastic PA; ø roller: 28 mm; L=50 mm; black. Load capacity: 125 N	X
	320684/0	Roller element 50 D28-S-FRS					Same type, but with side guide to prevent the transported goods from drifting or slipping. Plastic PA, carbon fibre reinforced; ø roller: 28 mm; with flange; L=50 mm; black; load capacity: 125 N	X
	320685/0	Roller element 33 D28-Z-FRS					Same type, but shorter. For even better load capacity and to prevent the transported goods from getting stuck in the intermediate spaces, being braked or tipping over. Plastic PA, carbon fibre reinforced; ø roller: 28 mm; with flange; L=33 mm; black; load capacity: 125 N	X
	320686/0	Roller element 50 D26-3R-FRS					Similar to 50 D28-Z (also 50mm long), but with three small wheels instead of one large one per element. Suitable for smaller transport goods - improves the rolling characteristics and prevents the transport goods from tipping over or stopping. Plastic PA, carbon fibre reinforced; ø wheel: 28 mm; L=50 mm; black; load capacity: 125 N	X
	320688/0	Roller element 50 D9-5R-FRS					Lower, closely spaced rollers for smaller transport goods. Plastic PA, carbon fibre reinforced; ø rollers: 9 mm; L=50 mm; black; load capacity 80 N	X
	320689/0	Ball roller element 50 D16-FRS					For making ball rollers Strips in combination with our profile 45 FRS Part no. 20.1152/0	X
	320691/0	FRS sliding profile					This is useful if goods are only to be pushed at certain points, or for braking goods that have previously been rolling towards you. Depending on installation position SH 49 or SH 58 Plastic PA, carbon fibre reinforced; L=2000 mm	X
	320692/0	FRS transition piece					For height compensation or as termination of a section after a sliding profile transition SH 49 to SH 85 or vice versa. Plastic PA, carbon fibre reinforced L= 50mm	X

	Part no.	Description	System height (SH)				Features	ESD-compatible / conductive
			49	51	54	58		
Accessories								
	320661/1	Cover 45 FRS-Z			■		Suitable for roller element 50 Z. Serves to prevent dust, dirt or similar from falling between the rollers. ABS; black; for cylindrical rollers;	X
	320661/0	Cover 45 FRS-S			■		Suitable for roller element 50 S. Serves to prevent dust, dirt or similar from falling between the rollers. ABS; black; for flanged rollers	X
	320661/2	Cover 45 FRS-G	■		■		If certain sections of the support profile are to be covered, e.g. for temporary storage / buffering. ABS; black; closed design	X
	320687/0	10-FRS end piece				■	Serves as end (left/right) for roller element 50D26-3R-FRS. Two parts are always required, even with several roller elements in a row. Plastic PA, carbon fibre reinforced; black; L=10 mm	X
	320690/0	50-FRS back-stop		■	■	■	When transport goods do not move downwards, but up an incline (Kanban reversed). Then this part serves to prevent the goods from slipping (the inner metal part automatically folds upwards after a feed). Plastic PA, carbon fibre reinforced; steel, galvanized	X
	221187/0	45 FRS end cap	■	■	■	■	Serves as termination of a 45 FRS profile system. Steel; with fastening material	X
	320662/0	45 FRS mounting bracket	■	■	■	■	Is attached to the end of a section. A slight slope is created by an angle of 3 degrees, the transported goods automatically move downwards on the rollers. Steel; with fastening material	X
	320663/0	45 FRS mounting bracket with stop	■	■	■	■	Forms the end of a downward slope, i.e. is attached to its bottom end. A slight slope is created by an angle of 3 degrees, the transported goods automatically move downwards on the rollers. Steel; with fastening material	X
	320666/0	Angle bracket 45 FRS -3°	■	■	■	■	This angle produces a horizontal conveying section. It is installed at the end of a section. Steel; with fixing material	
	320667/0	Angle bracket with stop 45 FRS -3°	■	■	■	■	This angle produces a horizontal conveying section. It is installed at the end of a section and has an end stop for the conveyed material. Steel; with fixing material	
	320693/0	FRS spacer with stop, short	■	■	■	■	Can be used to fix in position any components inserted into the profile. Stainless steel Weight = 0.062 kg/each	X
	320694/0	FRS spacer with stop, long	■	■	■	■	Can be used to fix any components inserted into the profile in position and also serves as a fixed stop steel, stainless Weight = 0.084 kg/each	X

	Part no.	Description	System height (SH)				Features	ESD-compatible / conductive
			49	51	54	58		
Roller strips for installation in FRS profile								
	320550/0	Roller bar D28-Z					Roller strip with cylindrical rollers ø Roller: 28 mm; Pitch 50 mm; yellow Load capacity: 60 N per roller	
	320555/0	Roller strip D28-Z ESD					Roller strip with cylindrical rollers ø Roller: 28 mm; Pitch 50 mm; black Load capacity: 60 N per roller	X
	320560/0	Roller bar D28-S					Roller strip with flanged rollers roller strip with side guide - to prevent the transported goods from drifting or slipping off. ø roller: 28 mm; with flange; pitch 50 mm; yellow Load capacity: 60 N per roller	
	320565/0	Roller strip D28-Z ESD					Roller strip with flanged rollers Roller strip with lateral guide - to prevent drifting away or slipping off of the transported goods. ø roller: 28 mm; with flange; pitch 50 mm; black Load capacity: 60 N per roller	X

The right roller for every task

Suitable roller inserts are available not only for large and heavy materials but also for smaller transport goods. Rollers with lateral guides are available if there is a risk of slipping off to the side. Is ESD capability important? You will then also find the right products for this issue. A special ball roller element is available if materials are also to be able to move sideways. Complete roller strips are available for bridging larger distances - you save having to string together individual roller elements. In our product range you will find all the components needed to put together your Kanban roller strips. Due to their simple design and space-saving dimensions, these are particularly suitable for lightweight conveyed goods. Use the extensive accessories to put together live storage racking, assembly aids and guide rails for conveyor systems or link multiple workstations together to ensure continuous material flow in group workplaces and production islands.

Lifter

Part no. 321559/0

The optimal working height - also with the material supply.

The lifter ensures ergonomic conditions in the workplace, because during loading and unloading the containers automatically remain in the optimum position and height for the respective worker. The working height can be adjusted continuously and remains the same even with different height containers. This is ensured by an easily adjustable precision reflex switch. A removable control panel as well as various loading options ensure flexibility and user-friendliness.

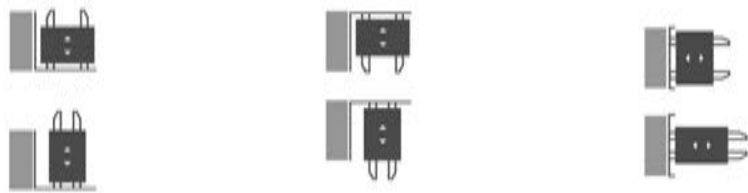
Example application with accessories - side loading**Technical data / versions**

- Electric geared motor with brake and chain drive
- Automatic height recognition
- Automatic loading and unloading mode
- Removable manual
- control panel ensures flexibility and user-friendliness
- Siemens logic module
- Surface powder-coated or galvanized
- Easily adjustable reflex button ensures optimum working height
- Small space requirements
- Quick adjustment of the required working height
- Simple connection to a 230V/50 Hz socket
- With toolless installation of the accessories, diverse loading options can be implemented quickly and easily
- ESD version
- Lifter for Euro pallets
- Versions for automated systems on request

Simple and flexible to the right configuration for your application.

Simply choose the lifter suitable for your needs, with the stroke height you require and equip it with the accessories necessary for your application.

Possible loading variants



Overview accessories

Due to the additional adjustment options - lateral and longitudinal - the lifter is suitable for the use of a wide variety of floor scooters and material trolleys.

Optional equipment for the lift is available:

- Increase for proximity switch
- Various adaptations for various floor rollers
- Different sensors for height detection
- Specially adapted fork pairs / load holders

Floor roller

The transport floor roller is made of thin sheet steel and has a double edge.

Load capacity up to 450 kg

Track width: 305 mm or 318 mm

- Floor roller 400 x 600, track width 305 mm
Part no. 32.1569/0
- Floor roller 400 x 600, track width 318 mm
Part no. 32.1570/0
- ESD version: floor roller 400 x 600, track width 305 mm
Part no. 32.1571/0

Boxes

- Box 600(L) x 400(W) x 150(H)
Part no. 32.1574/0
- Box 600(L) x 400(W) x 420(H)
Part no. 32.1576/0
- Box 600(L) x 400(W) x 236(H)
Part no. 32.1575/0

Assembly jigs and fixture



For secure and flexible installation

In the development of assembly devices it is important to not only reduce set-up times but also to increase reusability, i.e. flexibility. In combination with the Minitec profile system, adaptability to different workpieces is always guaranteed with minimal changeover effort and time.

Pneumatic components for your assembly

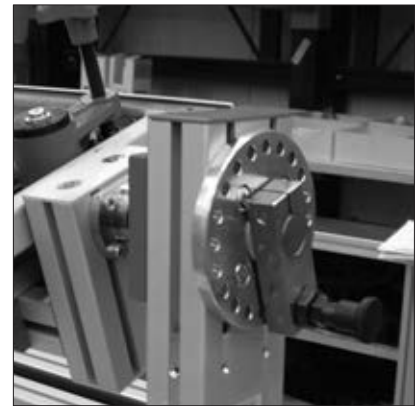
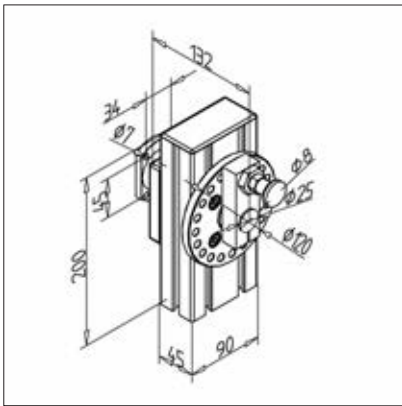
For pneumatically operated applications, the MiniTec universal clamping socket is an ideal addition to your workplace systems for manual production. It is suitable for fixing all kinds of pneumatic switches and the pneumatic valves of different manufacturers. The clamping socket is also used in a further area of use, namely in the setting up of pneumatic circuits for learning and practice purposes. With the two types of turning devices, components can be positioned with repeatability - for even more precision within your production processes. On request, it also ensures pneumatic locking via remote operation.

Movability and precision for assembly systems

Use the MiniTec indexing bolt adjustment with two versions of the corresponding guide profiles to adjust your workplace systems flexibly and precisely. This multi-talent ensures, for example, the height adjustment of tables, conveyor belts and other components, for the latchable adjustment of lateral guides and can be used for many other adjustable devices and clamps. Ideal fields of application are industry, as well as furniture and display building. Whether for use of special machines, in jigmaking and in assembly automation - with our assembly jigs you design your workplace systems in an individual way. Benefit from our proven modular profile system and let our experts advise you about the diverse combination options of our assembly jigs.

Turning device 45 x 90

Part No. 32.2011/0



TECHN. DATA / ITEMS SUPPLIED

- Fmax. 1500 N
- Mmax. 150 Nm
- Increments 18° / 20 Bohrungen
- Indexing bolt with lock
- Bearing over 2 sliding bushings
- Weight = 3.320 kg/piece

APPLICATIONS

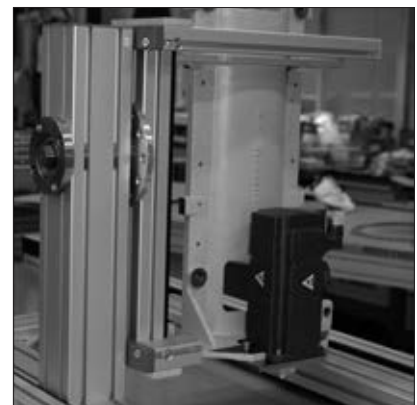
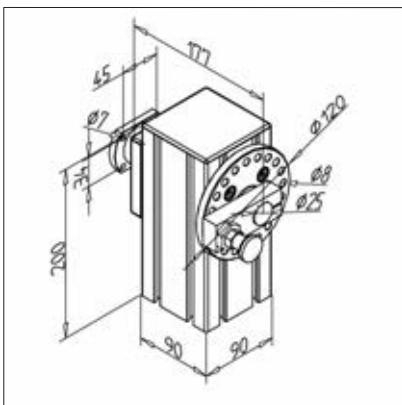
- Reproducibly accurate positioning of components for assembly purposes
- Remote controlled pneumatic locking on request

ASSEMBLY

- Fastening with clamping strip as profile extension or profile connector
- Clearance and turning position adjustable using clamp connection

Turning device 90 x 90

Part No. 32.2010/0



TECHN. DATA / ITEMS SUPPLIED

- Fmax. 1500 N
- Mmax. 150 Nm
- Increments 18° / 20 Bohrungen
- Indexing bolt with lock
- Bearing over 2 sliding bushings
- 4 T-slot bars for installation on profile construction
- Weight = 4.374 kg/piece

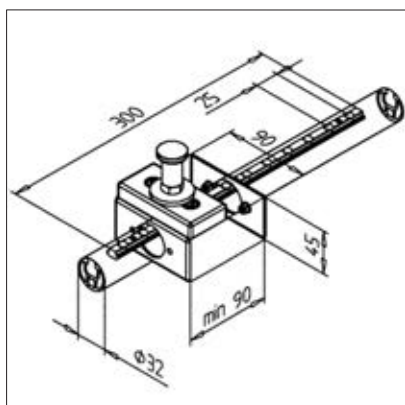
APPLICATIONS

- Reproducibly accurate positioning of components for assembly purposes
- Remote controlled pneumatic locking on request

ASSEMBLY

- Fastening with clamping strip as profile extension or profile connector
- Clearance and turning position adjustable using clamp connection

Locking bolt adjustment F



TECHN. DATA / ITEMS SUPPLIED

- Locking bolt with rest position
- Drilled clamping strip for detent with step 25 mm, length 300 mm
- End caps
- Connecting plate for receiving the locking bolt
- Profile 45 x 90S machined **part no. 29.0857/0** and handle profile 32 **part no. 20.1088/0** not included in delivery scope
- Weight = 0.460 kg/piece



APPLICATIONS

- for height-adjustable tables, conveyors etc.
- for lock in place adjustment of lateral guides
- for adjustable devices and clampings

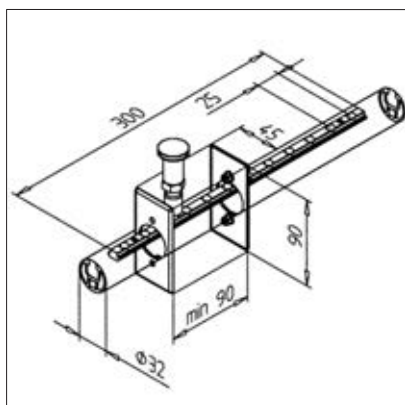
Part No. 29.0852/0



ASSEMBLY

- fasten perforated t-slot bar onto handle profile 32
- Insert the locking bolts in the connection plate and profile 45 x 90 S
- **please indicate length of handle profile 32 (min. 300 mm) and profile 45x90S (min. 90 mm)!**

Locking bolt adjustment H



TECHN. DATA / ITEMS SUPPLIED

- Locking bolt with rest position
- Drilled clamping strip for detent with step 25 mm, length 300 mm
- End caps
- Profile 45 x 90S machined **part no. 29.0858/0** and handle profile 32 **part no. 20.1088/0** not included in delivery scope
- Weight = 0.241 kg/piece



APPLICATIONS

- for height-adjustable tables, conveyors etc.
- for lock in place adjustment of lateral guides
- for adjustable devices and clampings

Part No. 29.0851/0

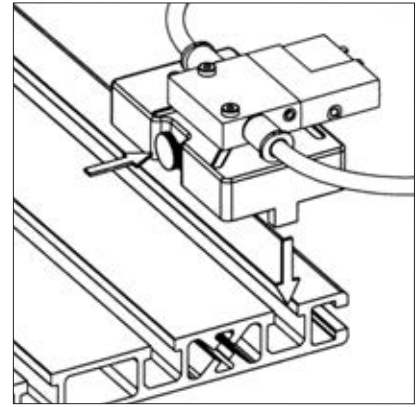
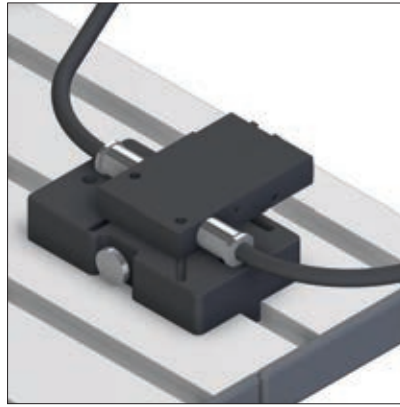
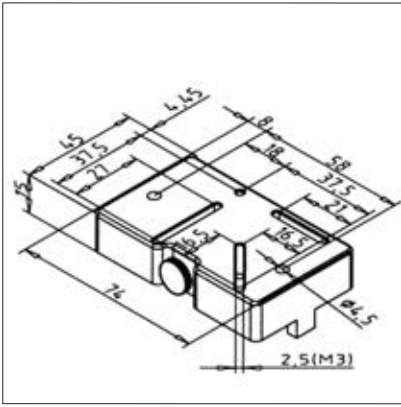


ASSEMBLY

- fasten perforated t-slot bar onto handle profile 32
- Screw in the locking bolts in profile 45 x 90 S
- **please indicate length of handle profile 32 (min. 300 mm) and profile 45x90S (min. 90 mm)!**

Universal clamping socket

Part No. P2.0060/0



TECHN. DATA / ITEMS SUPPLIED

- Housing PA 6 GF
- Actuator made of steel
- Weight = 0.037 kg/piece

APPLICATIONS

- For assembly of pneumatic switches for learning and training purposes
- To fasten diverse pneumatic switches
- Mounting of valves or similar from various manufacturers

ASSEMBLY

- Simple pneumatic accessories fastened with M3 screws (not in scope of delivery) onto the clamping socket
- By pressing the button, the clamping socket can be fit into the slot
- When released, an automatic locking takes place

ESD accessories



Protect effectively against ESD damage

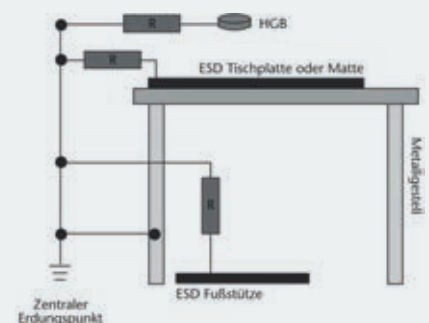
ESD (Electro Static Discharge) is the electrostatic discharge of charged objects or persons by direct contact or sparks. The cause of ESD are electrical charges which are generated by charge separations or as a result of influences in electrical fields. Sources of this charge may be people and their clothes

- workplace equipment including floors,
- packaging equipment and tools

To ensure safe protection of electrostatically sensitive components and devices in practice, all components must be conductively connected to one another and the entire construction must be earthed. The individual components are illustrated using the example of a MiniTec system workstation.

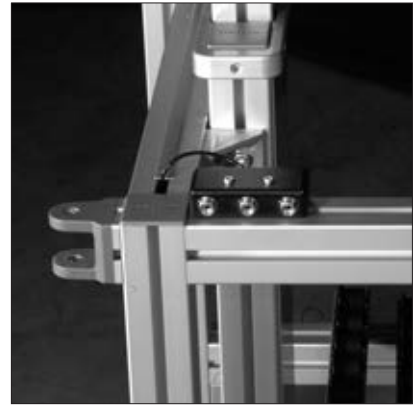
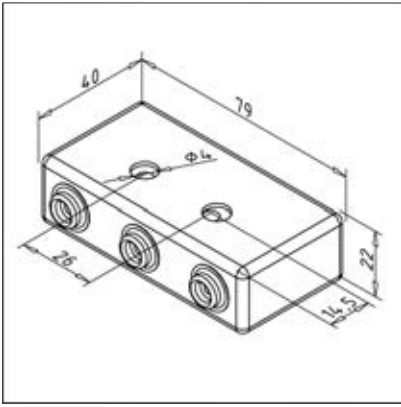


Electrostatically sensitive devices, especially semiconductor components
Protective measures for electrostatically sensitive components



Earthing box ESD

Part No. 32.1002/0



TECHN. DATA / ITEMS SUPPLIED

- Earthing cable 2 m length
- Connection type: 4mm eye
- 1 MOhm safety resistor per connection
- 3x 10 mm push button connection
- Weight = 0.061 kg/piece

APPLICATIONS

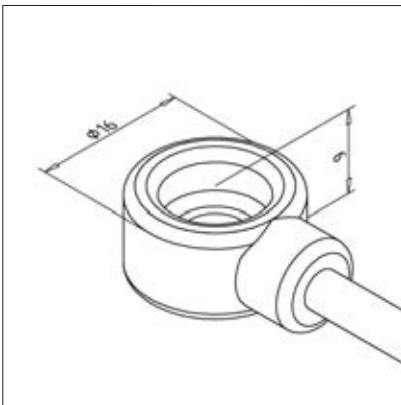
- Earth connection point EBP for personnel grounding

ASSEMBLY

- Tighten to table plate with chipboard screw $\varnothing 4 \times 30$
- Fix with cyl. screw M4 x 30 **part no. 21.1285/0** and 2x square nut M4 **part no. 21.1310/2** onto profile

Earthing conductor ESD

Part No. 32.1004/0



TECHN. DATA / ITEMS SUPPLIED

- 1 MOhm safety resistance
- 10 mm push button / 4 mm eye
- Length: 3 m
- Weight = 0.019 kg/piece

APPLICATIONS

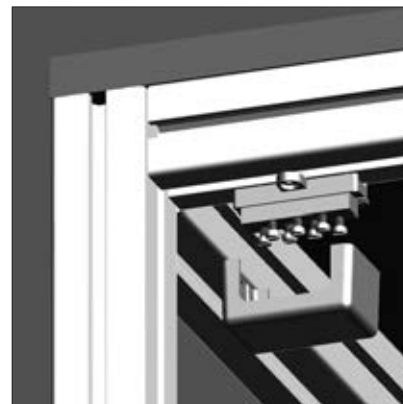
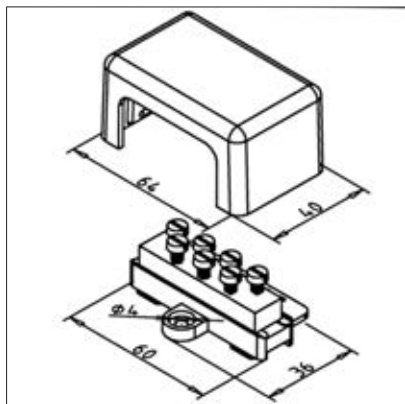
- For table and floor coverings

ASSEMBLY

- Connect as central grounding **part no. 32.1003/0** box ESD
- Clip onto table pad

Central earthing box ESD

Part No. 32.1003/0



TECHN. DATA / ITEMS SUPPLIED

- Terminal strip for connection of max. 7 earthing cables
- With screw connections for lugs with 4 mm eye
- Weight = 0.072 kg/piece

APPLICATIONS

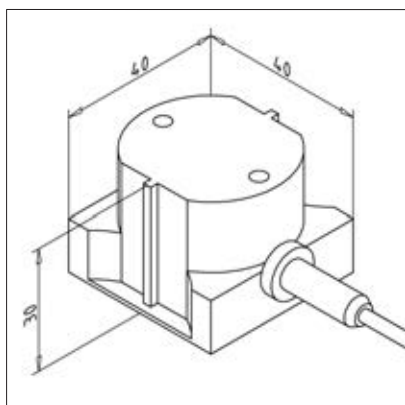
- Suitable for contacting earthing conductors to ESD or protective ground

ASSEMBLY

- Attach to the tabletop with accessories from scope of supply

Dummy plug without resistor

Part No. 32.1001/0



TECHN. DATA / ITEMS SUPPLIED

- Dummy plug for Schuko outlet
- With 2m smooth cable
- Connection type: 4mm eye
- Weight = 0.048 kg/piece

APPLICATIONS

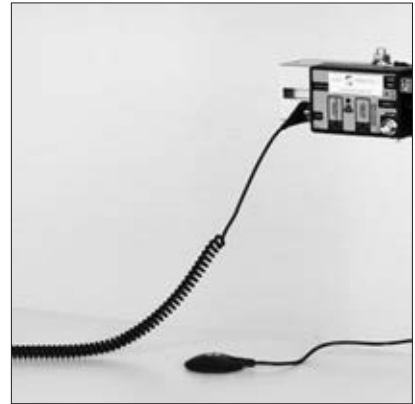
- For direct earthing of table tops and floor coverings or the central earthing strip

ASSEMBLY

- Connect to central grounding box **part no. 32.1003/0**
- Plug into suitable Schuko outlet

Spiral cable, highly elastic

Part No. 32.1017/0



TECHN. DATA / ITEMS SUPPLIED

- Spiral cable; highly elastic, black
- 10mm / 10mm pushbutton
- 1 MOhm
- Length: 1,80 m
- Weight = 0.041 kg/piece

APPLICATIONS

- For connecting wristlets onto earthing box

ASSEMBLY

- Fasten spircal cable with push button onto earthing box and wristlet

Elastic wrist strap

Part No. 32.1018/0



TECHN. DATA / ITEMS SUPPLIED

- Wristlet blue
- Push-button 10mm
- Weight = 0.013 kg/piece

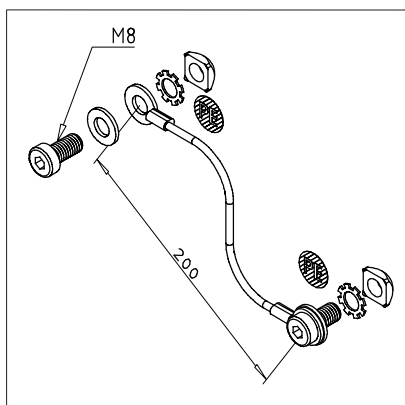
APPLICATIONS

- Earthing of humans

ASSEMBLY

- Attach to the wrist and connect to the grounding box via spiral cable

Earthing conductor for ESD areas



TECHN. DATA / ITEMS SUPPLIED

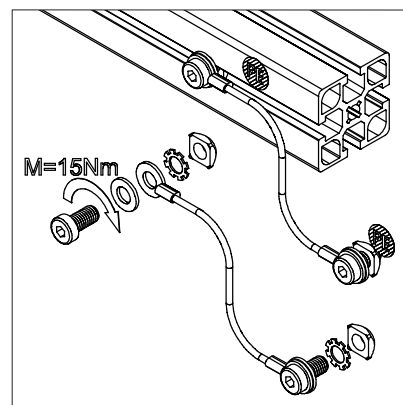
- Earthing cable for ESD areas
- Core H07V-K 4mm² Length: 200 mm
- Weight = 0.053 kg/piece



APPLICATIONS

- For earthing work tables and structures between profile and profile
- For earthing of work tables and constructions between profiles and panel element

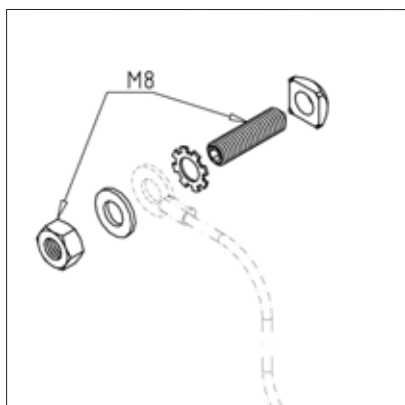
Part No. 32.1013/0



ASSEMBLY

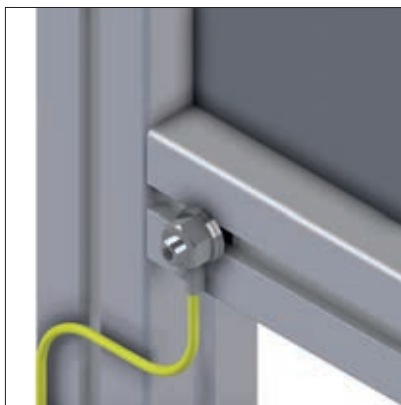
- Fasten both sides with M8
- Fasten to profile groove with supplied hardware

Earthing point



TECHN. DATA / ITEMS SUPPLIED

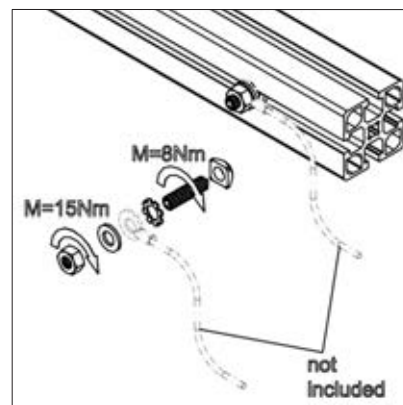
- Threaded pin M8x30
- Sliding nut - Z M8
- Tooth lock washer
- washer
- hexagon nut
- Weight = 0.022 kg/piece



APPLICATIONS

- For earthing workstations and constructions

Part No. 32.0769/0

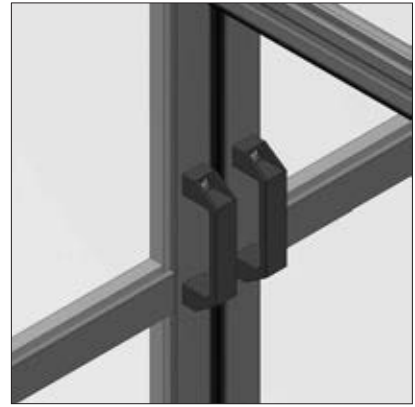
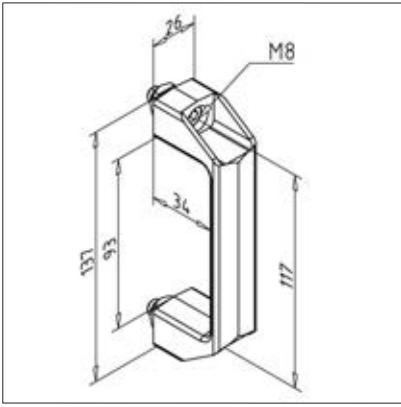


ASSEMBLY

- Mount in the profile groove according to the enclosed installation drawing

Handle 120 ESD black

Part No. 32.1007/0



TECHN. DATA / ITEMS SUPPLIED

- PA, black
- Fastening kit
- Weight = 0.073 kg/piece

APPLICATIONS

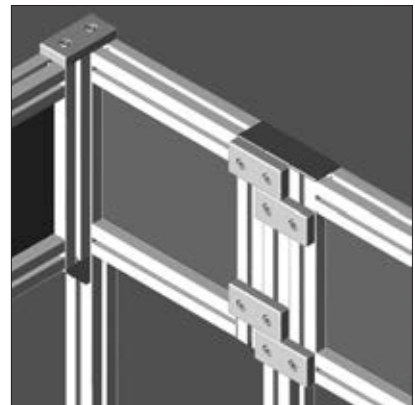
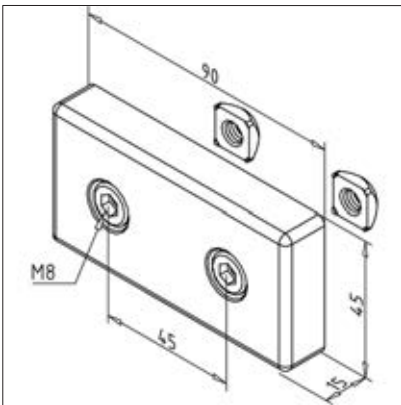
- Doors
- Lids
- Guard units

ASSEMBLY

- Fasten to profile groove with supplied hardware
- Directly on surface element with cylinder head screw M8
- Also assembly possible from rear side

Connecting plate 45x90, conductive

Part No. 21.1472/6



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, bright
- With fastening material steel, zinc plated
- Weight = 0.180 kg/piece

APPLICATIONS

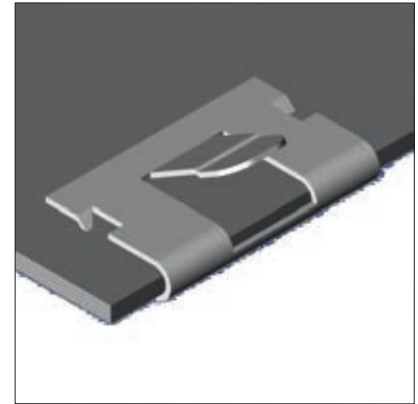
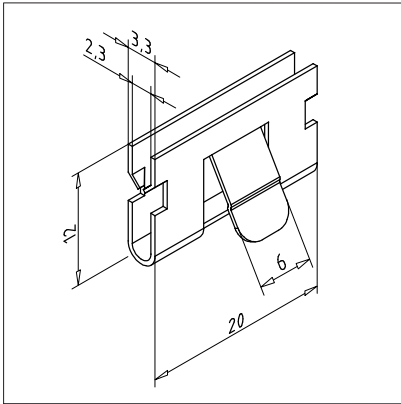
- Connection of two guards without gap
- Strengthening of guard units
- Connection of pre-assembled modules

ASSEMBLY

- Install to groove of guard unit and posts with supplied hardware

Earthing clamp

Part No. E9.0141/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, Pressed, galvanized
- Weight = 0.002 kg/piece

APPLICATIONS

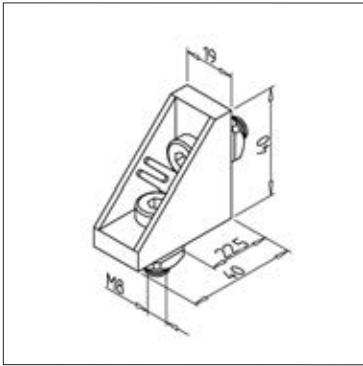
- For grounding sheet metal and thin-walled components with wall thickness of 0.7 - 2 mm
- Especially suitable for:
Cable duct AL **part no. 20.1051/0**
Cable duct 45 AL **part no. 20.1071/0**
Cable duct 90 AL **part no. 20.1056/0**

ASSEMBLY

- Attach to sheet metal edge
- Safe support and conductive connection is provided by claws
- For the connection of the earthing cable with 6 mm flat plug

Mounting angle 19 GD-Z conductive

Part No. 21.2078/6



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Aluminium GD-Z
- Weight = 0.055 kg/piece

APPLICATIONS

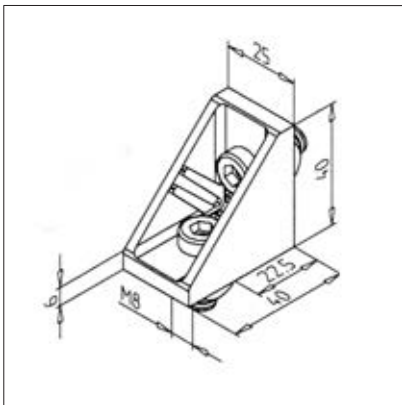
- Connection of profiles 19 and 32
- Subsequent insertion of profiles into existing constructions
- Attaching bearing surfaces
- Slidable in the groove direction

ASSEMBLY

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Recommended locking torque: 20 Nm

Mounting angle 25 GD-Z conductive

Part No. 21.0969/6



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Removable centering tabs
- Weight = 0.066 kg/piece

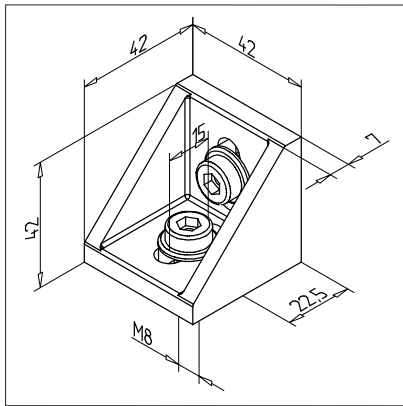
APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

ASSEMBLY

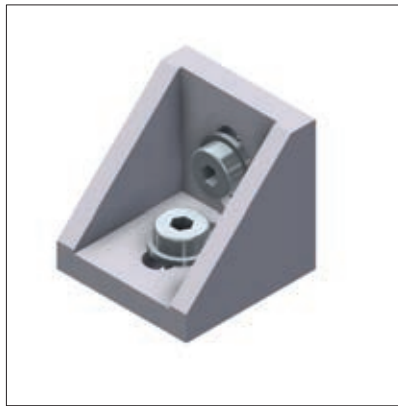
- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Recommended locking torque: 20 Nm

Mounting angle 45 GD conductive



TECHN. DATA / ITEMS SUPPLIED

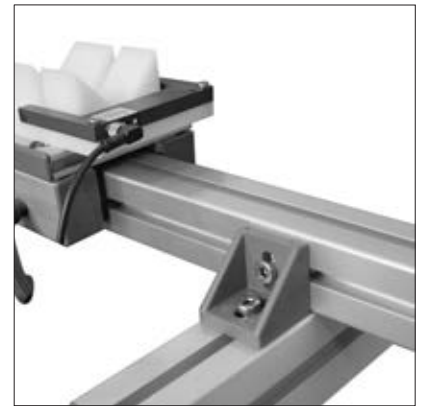
- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Mounting angle bracket with sliding nut Z with spring panel: **part no. 21.1133/8**
- Weight = 0.101 kg/piece



APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

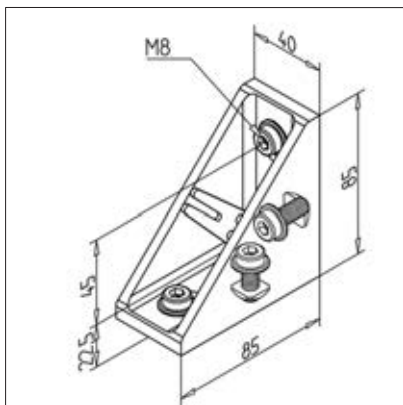
Part No. 21.1133/6



ASSEMBLY

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Hammer head screw **part no. 21.1370/0** can be used
- Recommended locking torque: 20 Nm

Mounting angle 45 x 90 GD-Z conductive



TECHN. DATA / ITEMS SUPPLIED

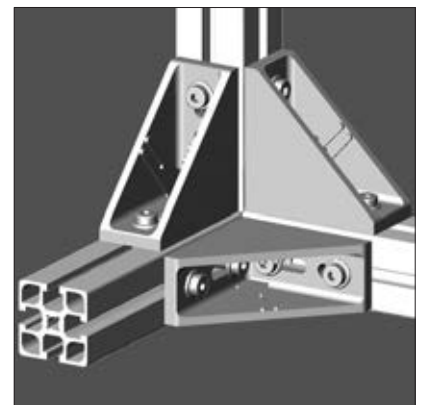
- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Angle with slide nut Z with spring steel sheet: **part no. 21.1397/8**
- Weight = 0.281 kg/piece



APPLICATIONS

- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

Part No. 21.1397/6

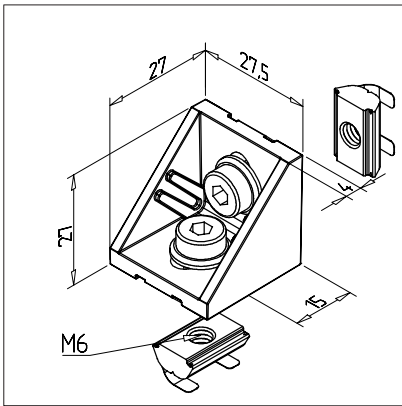


ASSEMBLY

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Recommended locking torque: 20 Nm

Mounting angle 30 GD-Z conductive

Part No. 21.0905/6



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Removable centering tabs
- Weight = 0.029 kg/piece

APPLICATIONS

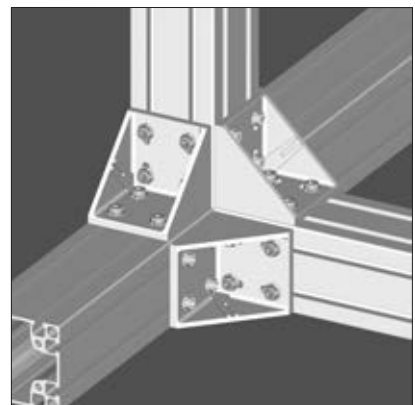
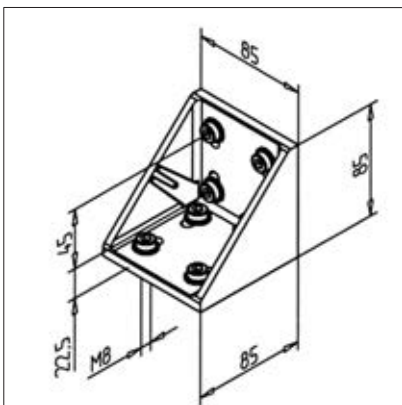
- Fastening of surface elements, table tops
- All types of constructions; specifically suited for the subsequent mounting of elements in existing constructions

ASSEMBLY

- Strengthening of profile constructions
- Recommended locking torque: 20 Nm
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Fasten to profile groove with supplied hardware

Mounting angle 90 GD-Z conductive

Part No. 21.0978/6



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Angle with slide nut Z with spring steel sheet: **part no. 21.0978/8**
- Weight = 0.497 kg/piece

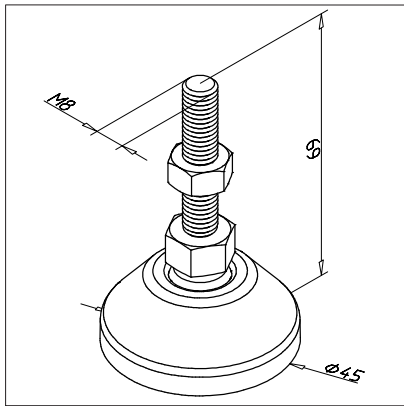
APPLICATIONS

- For profiles 90 and 180
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fastening of surface elements, table tops
- Strengthening of profile constructions

ASSEMBLY

- Fasten to profile groove with supplied hardware
- For subsequent mounting on vertical nut, a square nut M8 Z with nut fixation, **part no. 21.1390/2** is preferred
- Recommended locking torque: 20 Nm

Foot M08 D45 L=69 ESD



TECHN. DATA / ITEMS SUPPLIED

- Plate PA, black
- Anti-slip insert
- Spindle steel, galvanized
- Counter nut, steel, zinc plated
- Conductive
- Hinged foot ESD D=45 m with spindle M10
part no. 32.1012/0
- Max. load capacity: 900 kg
- Weight = 0.062 kg/piece



APPLICATIONS

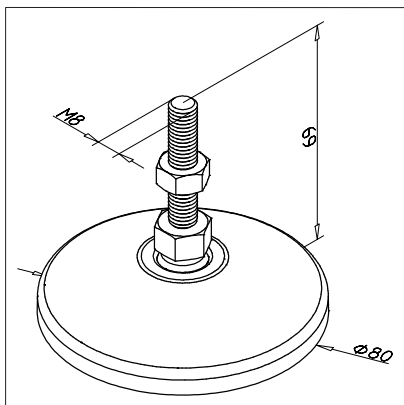
- Height adjustable heavy constructions of all types
- Guards, tables, show cases, Conveying systems, workstations



ASSEMBLY

- Directly in the central bore of the profile (can be drilled with thread up to M12)
- Larger threads in connection with connection plate
- For threads larger than M12, the hinged feet must be mounted in conjunction with the connection plate
- For profiles 45 x 90 und 90 x 90 a base and transport plate is required, if the feet are to be positioned centrally.

Foot M08 D80 L=69 ESD



TECHN. DATA / ITEMS SUPPLIED

- Plate PA, black
- Anti-slip insert
- Spindle steel, galvanized
- Counter nut, steel, zinc plated
- Conductive
- Hinged foot ESD D=80 m with spindle M10
part no. 32.1012/0
- Max. load capacity: 900 kg
- Weight = 0.108 kg/piece



APPLICATIONS

- Height adjustable heavy constructions of all types
- Guards, tables, show cases, Conveying systems, workstations

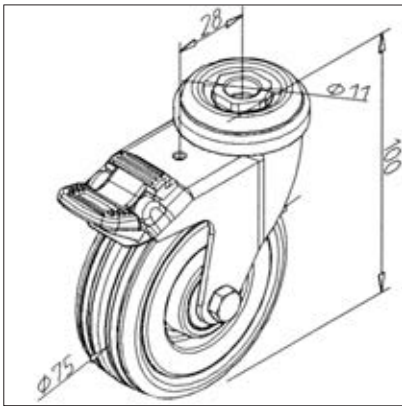


ASSEMBLY

- For profiles 45 x 90 und 90 x 90 a base and transport plate is required, if the feet are to be positioned centrally.
- Directly in the central bore of the profile (can be drilled with thread up to M12)
- Larger threads in connection with connection plate

Swivel castor with brake D75 x 100, ESD

Part No. 32.1030/0



TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.322 kg/piece

APPLICATIONS

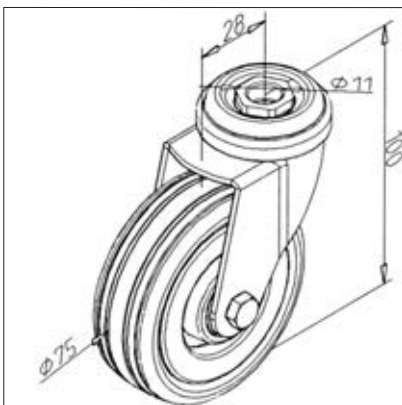
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Attach directly to the central bore of the vertical profile with fastening material, then drill and introduce thread M10
- If the roller is to be centrally positioned for profile cross sections greater than 45 x 45, a connection plate is required

Swivel castor without brake D75 x 100, ESD

Part No. 32.1031/0



TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 50 kg
- **Other versions upon request**
- Weight = 0.292 kg/piece

APPLICATIONS

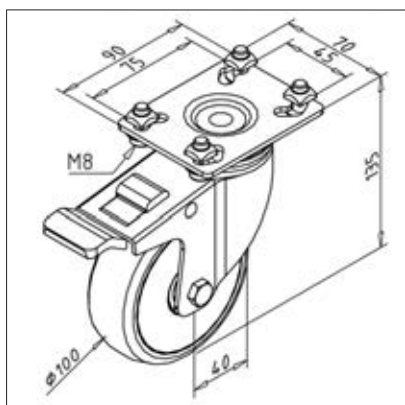
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Attach directly to the central bore of the vertical profile with fastening material, then drill and introduce thread M10
- If the roller is to be centrally positioned for profile cross sections greater than 45 x 45, a connection plate is required

Swivel castor with brake D100 x 135, ESD

Part No. 32.1034/0



TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 90 kg
- Weight = 0.881 kg/piece

APPLICATIONS

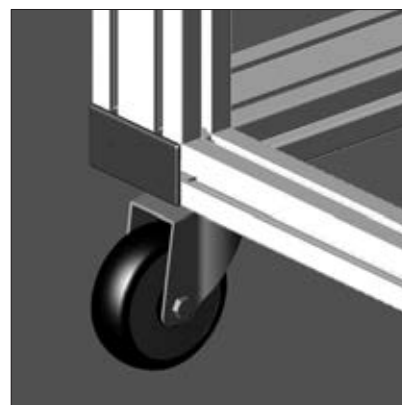
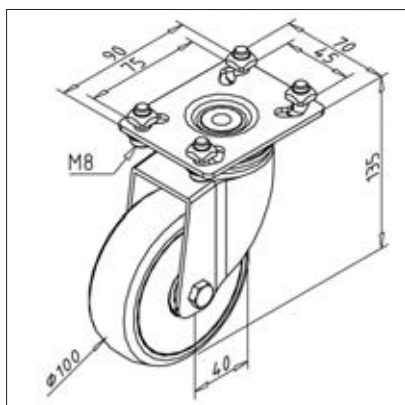
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Fasten mounting plate in the profile groove with supplied hardware

Swivel castor without brake D100 x 135, ESD

Part No. 32.1035/0



TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 90 kg
- Weight = 0.765 kg/piece

APPLICATIONS

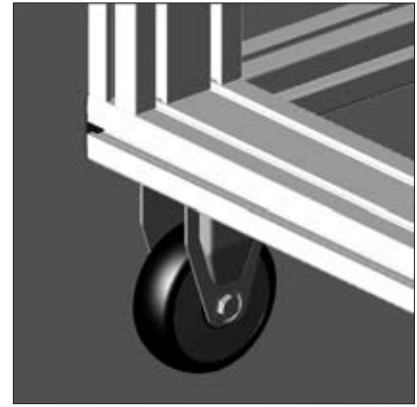
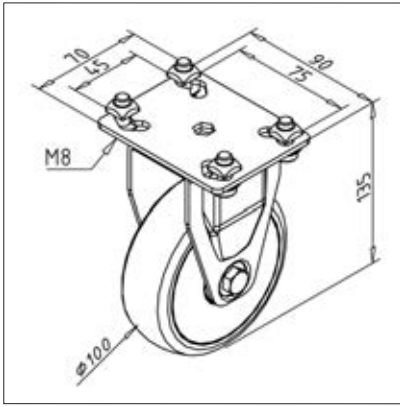
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Fasten mounting plate in the profile groove with supplied hardware

Fixed castor D100 x 135, ESD

Part No. 32.1036/0



TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Housing steel, galvanized
- Conductive
- Load capacity 90 kg
- Weight = 0.695 kg/piece

APPLICATIONS

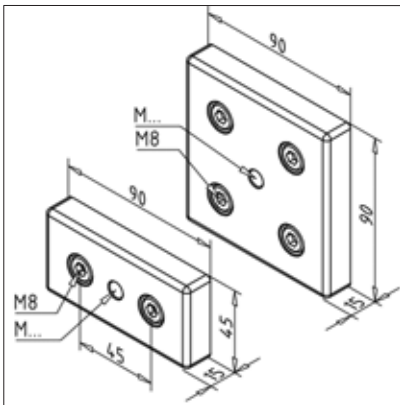
- Movable tables
- Work stands
- Display windows, showcases

ASSEMBLY

- Fasten mounting plate in the profile groove with supplied hardware

Base plate 45x90 M10, conductive

Part No. 21.1038/6



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, blasted
- With fastening material steel, zinc plated
- Weight = 0.172 kg/piece

APPLICATIONS

- Fixation of guide rollers
- Central fixation of support feet on profiles 45 x 90 or 90 x 90
- Centric attachment of hinged feet to profiles 45 x 90

ASSEMBLY

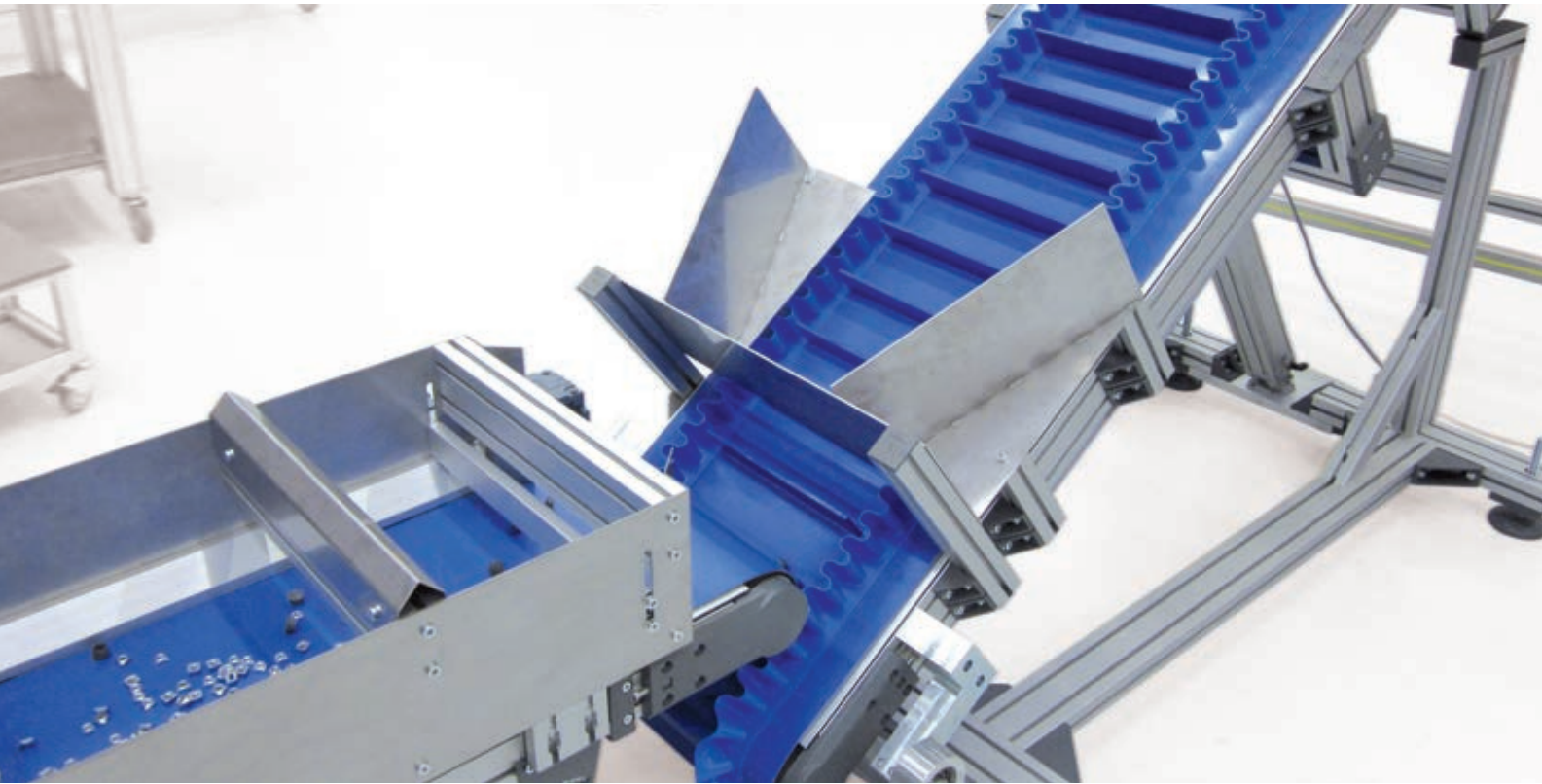
- Use fixing material supplied to fix to the end face of the profile



Conveyor technology

4.1	Belt conveyors	484
4.2	Roller conveyors	493
4.3	Timing belt conveyor	496
4.4	Components	497
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Industrial conveyor belts



Industrial conveyor belts - first-class belt conveyors from MiniTec

The MiniTec conveyor belts for industry are an important part of our conveyor technology. Reduce unproductive transport times in your production line with the high-quality belt conveyors. These are available in two series. Together with the extensive accessories made up of belt tension-

ing and driving cylinders, conveyor bearings, lateral guides, motors and other components, you can put together your conveyor belt system completely to your requirements.

Extensive components for your conveyor belt system

With the MiniTec conveyor belts you enjoy maximum flexibility due to the modular design. The conveyor belts are particularly suitable for light and medium-weight loads and are therefore ideal for linking machines as well as assembly stations and workstations. Belt conveyors are often a central element in the automation of production processes. Regardless of whether Series 45 or Series 90: with our wide range of MiniTec conveyor belts, high-quality transport solutions are created. Due to the modular design and perfectly coordinated components, we implement precise-fitting and

tailor-made applications and conveyor belt systems in the shortest possible time. Different drive options - plug-on motors, flanged motors with cover and middle drive - as well as diverse substructures - standard or height-adjustable - are available for you to choose from. On request, we will be pleased to implement special belts, for example, with corrugated edge, V-guide or welded on flights together with you.



Further information is available at:

www.minitec.de/en/solutions/conveyor-systems

Mini conveyor belts



Small parts transport with small space requirement

The mini conveyor sets itself apart due to the very small space required and it is used to transport small parts. The key component is a special size 45 aluminium profile (profile 45 FRS), which can be seamlessly installed in any MiniTec construction. It functions as a base and support profile for a 25 mm wide conveyor belt, which is available with the following options:

1. white, PU woven fabric, impregnated, antistatic
2. black, woven fabric, ESD compatible
3. light blue, PU cover, matt, antistatic.

The length of the conveyor belt can be between 250 mm and 2000 mm. Either a head drive or a middle drive is used, i.e. it can be positioned at the end of the conveyor section or within it. The head drive is equipped with a servomotor, an optional three-phase AC motor or a servomotor can be used for the middle drive. The choice of motor depends on the respective requirements. If the speed needs to be variable, servomotors are advisable since their speed can be changed continuously. In the case of the three-phase motor, on the other hand, the speed is fixed, however, it can be optionally varied by a frequency converter (accessory).

Diverse areas of use

The range of uses for the mini conveyor belt is enormous. Wherever small parts have to be transported, the solution can be integrated quickly and easily - and due to its simple structure, the customer can also do this themselves. And because the base is the size 45 FRS profile, mini conveyor belts can also be used to feed and remove materials in combination with the MiniTec kanban system.

Middle drive with servomotor



Technical data

Part no. 29.5400/0

- Small conveyor belt with 25 mm belt width.
- Servo drive with helical gear unit, 60 W
- Supply voltage:
 - 1/3 phase 200-240 VAC, 50/60 Hz
- Items supplied:
 - Motor
 - Driver with fixing material for installation in the control cabinet or external
 - 2m connection cable between the motor and the driver
- Counter clockwise / clockwise rotation can be switched over at the driver or via an external control (reversing mode)
- Conveyor speed continuously adjustable from 0.5 - 25 m/min

Middle drive with three-phase motor

Part no. 29.5400/1



Technical data

- Small conveyor belt with 25 mm belt width.
- Drive via three-phase motor with 90 W
- The following drives can be selected as a standard option:
 - Part no. 33.0015/0 with 3.4 m/min conveyor speed
 - Part no. 33.0016/0 with 4.3 m/min conveyor speed
 - Part no. 33.0017/0 with 6.6 m/min conveyor speed
- (others on request)
- Counter clockwise / clockwise rotation through corresponding connection assignment at the motor.
- By using a frequency converter, the speed can be controlled continuously and the rotational direction can also be switched over by external control (reversing mode).

Head drive with servomotor

Part no. 29.5401/0



Technical data

- Small conveyor belt with 25 mm belt width.
- Servo drive with helical gear unit, 60 W
- Items supplied:
 - Motor
 - Driver with fixing material for installation in the control cabinet or external
 - 2m connection cable between the motor and the driver
- Supply voltage:
 - 1/3 phase 200-240 VAC, 50/60 Hz
- Conveyor speed continuously adjustable from 0.4 - 20 m/min
- A centre-to-centre distance (A) within the range of 150 - 2,000 mm can be implemented

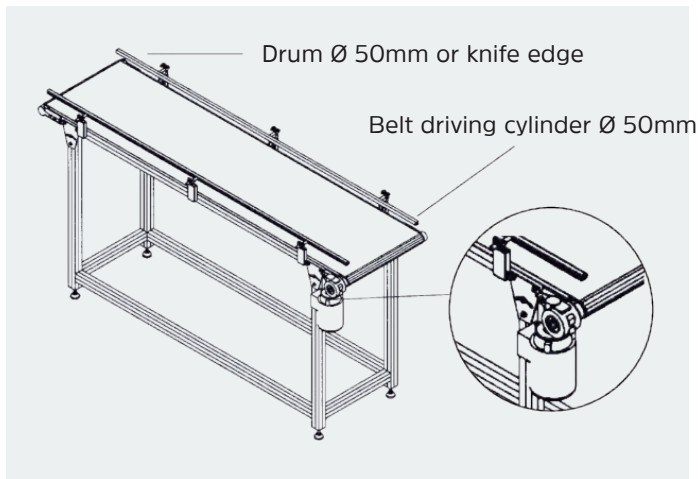
Series 45

The conveyor belt module in our MiniTec iCAD Assembler design software automatically designs your conveyor belt according to your specifications, calculates the deflection,

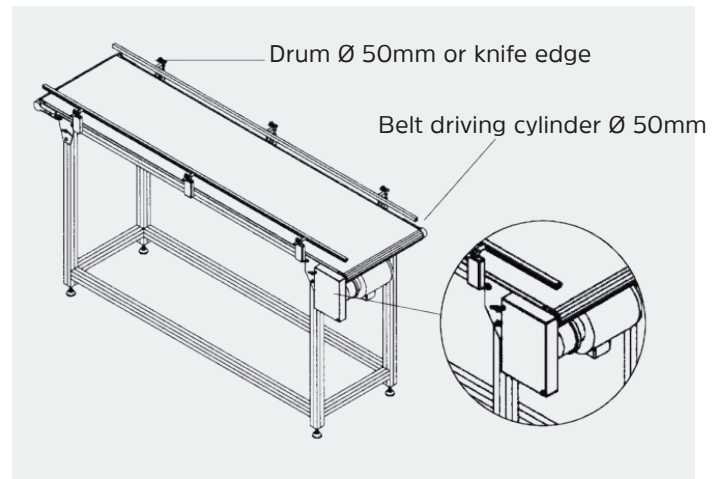
suggests the number of supports and generates the parts list. Within a few minutes. Assembly is just as quick and easy thanks to our tried-and-tested components.

Engine arrangement

Plug-on

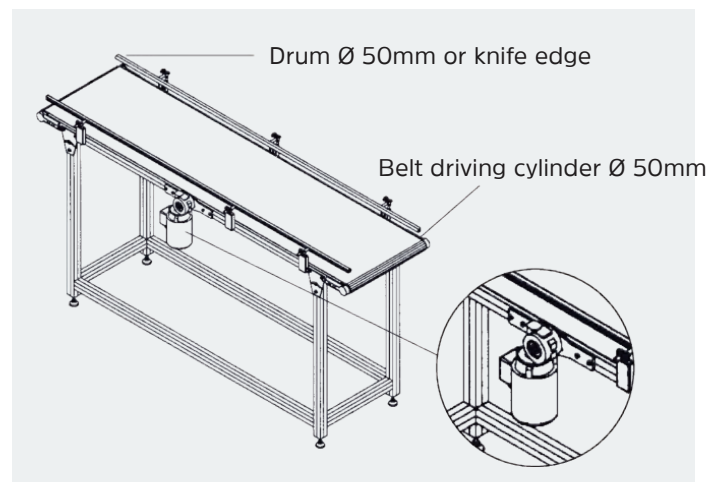


Flange motor with cover



Centre drive (direct drive)

- Belt width max. 300 mm at knife edge
- Belt width max. 800 mm with drum Ø 50



You are planning a new assembly line or would like to optimise and automate existing production processes?

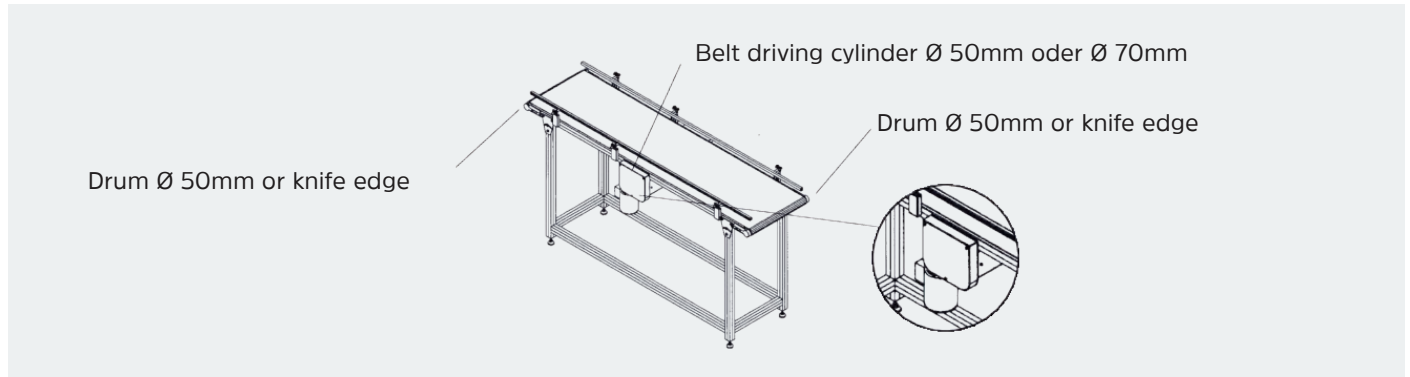
Our factory automation experts will be pleased to help you!

You are welcome to ask us questions by phone (+49 6373 / 81 27-0) or you can send us an email (info@minitec.de).

Series 45

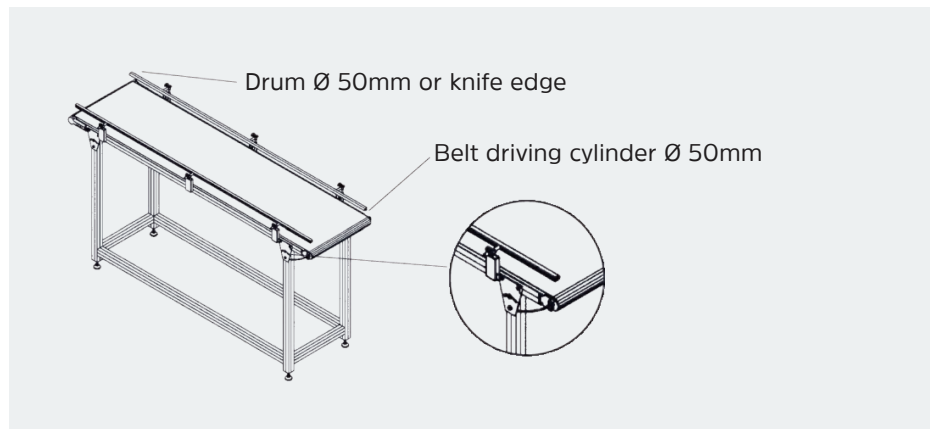
Center drive (direct drive)

- Belt width max. 800 mm

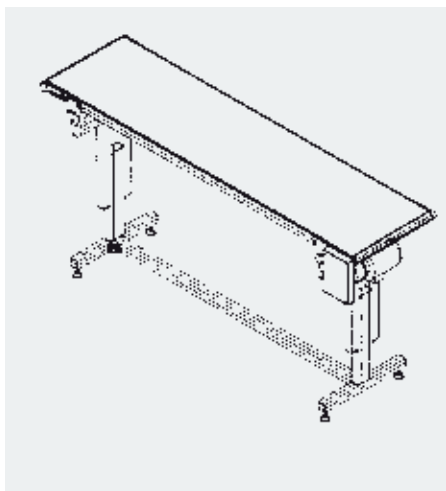


Drum motor

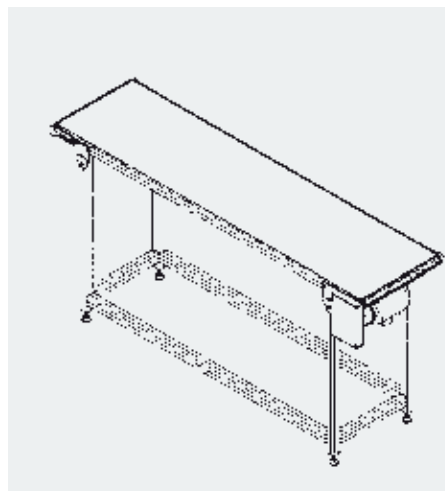
- Belt width min. 260 mm
- Belt width max. 500 mm
- max. length 2000 mm
- max. 20 kg total load



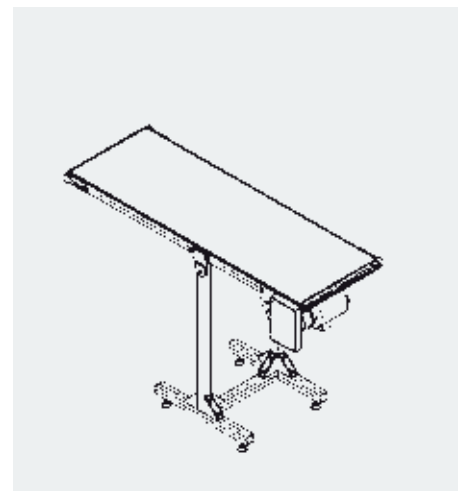
Subconstruction



Height adjustable



Standard



with stand

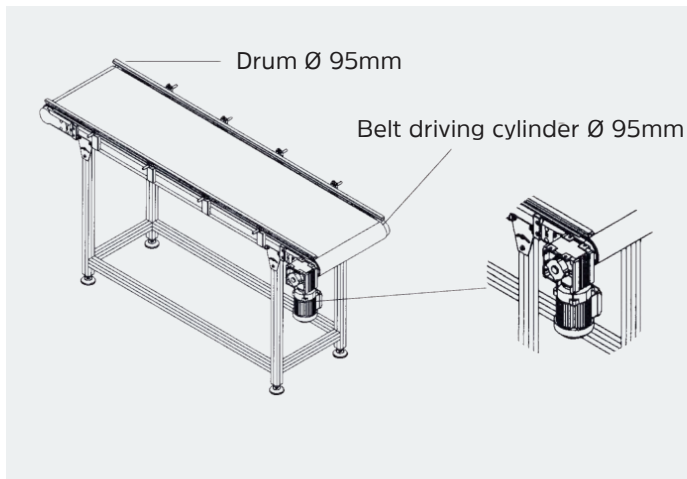
Conveyor belt - Series 90

Due to the modular design and perfectly coordinated components, the 90 series components can be used to design precise-fitting and tailor-made applications and conveyor belt systems in the shortest possible time. Different drive options are available to you, as well as diverse substructu-

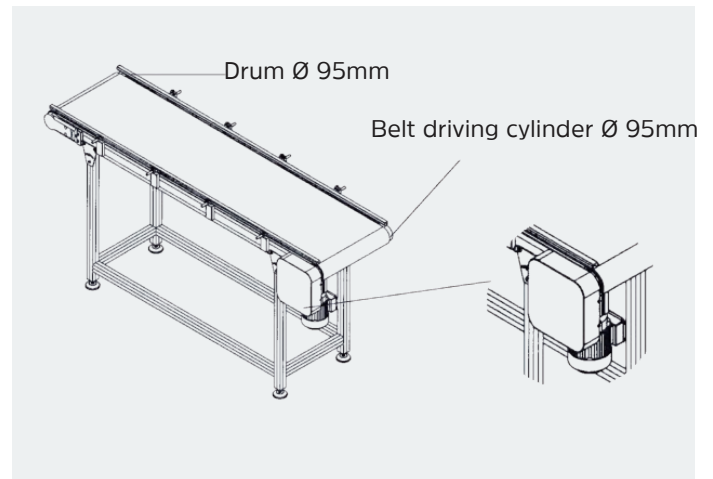
res. On request, we will be pleased to implement special belts, for example, with corrugated edge, V-guide or welded on flights together with you.

Engine arrangement

Plug-on



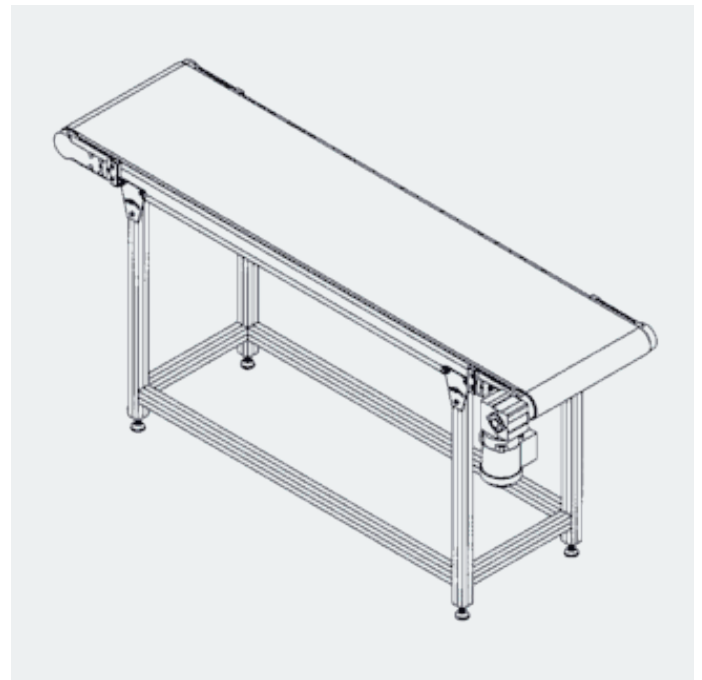
Flange



Subconstruction



Height adjustable

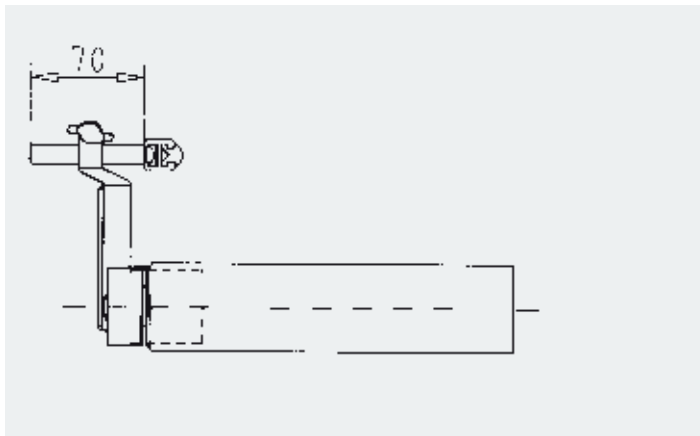


Standard

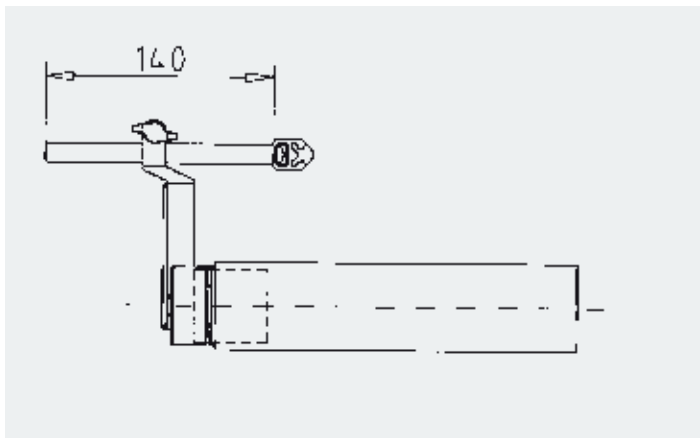
Overview side guidance

Conveyor belt 45 and 90

short

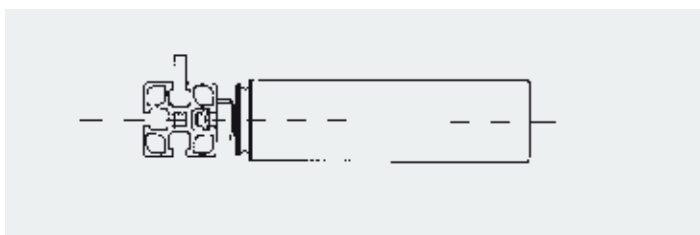


long

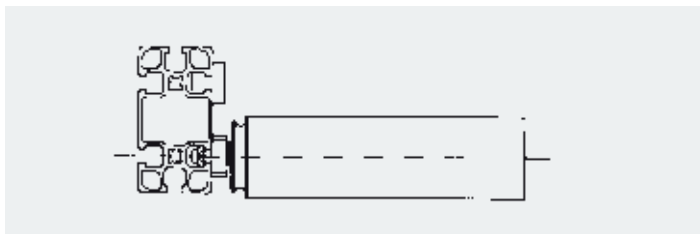


Roller conveyor without drive

LOW



HIGH



Conveyor belt

CONVEYOR BELT	Part no.
PVC, black, smooth, antistatic	29.5019/1
PVC, green, grip, antistatic	29.5019/2
PVC, green, checkered, adhesive, antistatic	29.5019/3
PVC, green, smooth, antistatic	29.5019/4
PU, blue, smooth	29.5019/5
PU, white, smooth, antistatic	29.5019/6
PVC, white, smooth	29.5019/7
PU, green, smooth, antistatic	29.5019/8
Fabric, white, antistatic	29.5019/9
Special belt on request	29.5019/0
PU, petrol smooth, antistatic	29.5057/0

Calculation of the endless length EL

For drum 45: $EL = 2 \times \text{Axle distance } A + 165 \text{ mm}$

For drum 90: $EL = 2 \times \text{Axle distance } A + 305 \text{ mm}$

EXAMPLES OF SPECIAL BELTS



Cuneiform ledge



welded cams



Well edge

Roller Conveyor



Conveying with roller conveyors

Roller conveyors and heavy-duty roller conveyors from the conveyor technology specialists. The MiniTec roller conveyors ensure reliable transport of conveyed goods. You can choose between roller conveyors with and without drive completely dependent on the circumstances in your company and the

type of goods to be transported. Whether for unit loads or heavy loads - with the extensive portfolio of diverse accessories, we design your roller conveyor specifically to your wishes.

Efficient conveyor technology on idler rollers

The roller conveyor consists of many idler rollers arranged in parallel, one after the other, on the roller rails, which are rotatable and have ball bearing supports. They therefore work with particularly low noise. Ideal areas for use of roller conveyors are closed rooms such as industrial halls. Thanks to the modular principle, the lane widths and lengths can

be designed completely according to the circumstances on site (e.g. curves, gradients). High-quality aluminium profiles from the proven MiniTec modular system function as lateral guides. Diverse fastening components complete our roller conveyor range and contribute to even more flexibility in the design of your roller conveyor systems.

Unlimited reliability with or without drive

The MiniTec roller conveyors are optionally equipped with or without drive technology. Roller conveyors with drive use robust drive belts from roller to roller via the bevel shaft for maximisation of performance. With the help of brake rollers, the running speed can be controlled in sloped situations, so that the roller conveyors are also suitable as part of production lines and equipping solutions.

Roller conveyors are the right choice for the transport of boxes, unit loads and for material provisioning in production lines. The roller conveyor systems therefore make a substan-

tial contribution to the optimisation of production processes and avoid protracted in-house transport routes.

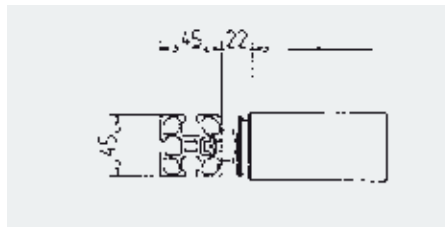
Benefit from us as a roller conveyor manufacturer and qualified partner and equip your company with roller conveyors for conveyor technology in industry, logistics and workshops. With MiniTec you acquire roller conveyor and high-quality components as well as a high level of expertise in the planning, design and assembly of complex conveyor systems from a single source.

Rollery conveyor without drive

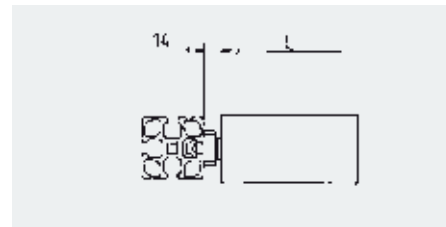
Carrier profile

45 x 45

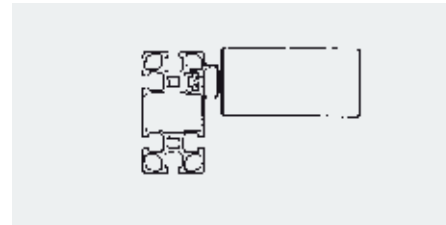
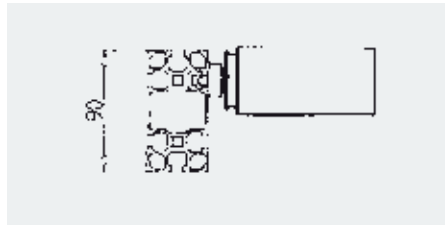
Conveyor roller with bearing



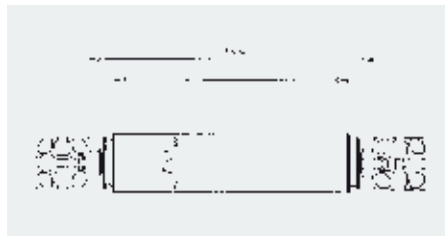
Conveyor rollers S with roller bearings



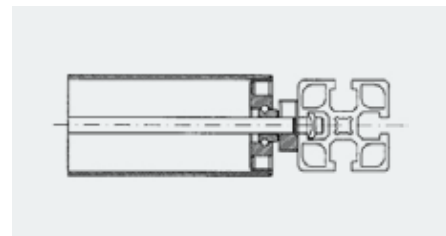
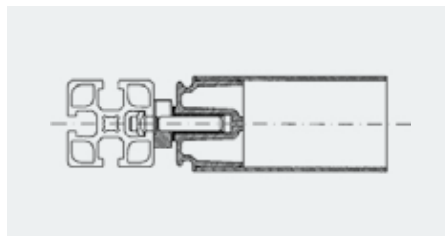
45 x 90



Conveyor rollers



Storage



Pipe lengths

Max. pipe lengths L

ABS tube 600 mm

AL tube 1000 mm

Steel tube 1000 mm

Subconstruction



Height adjustable

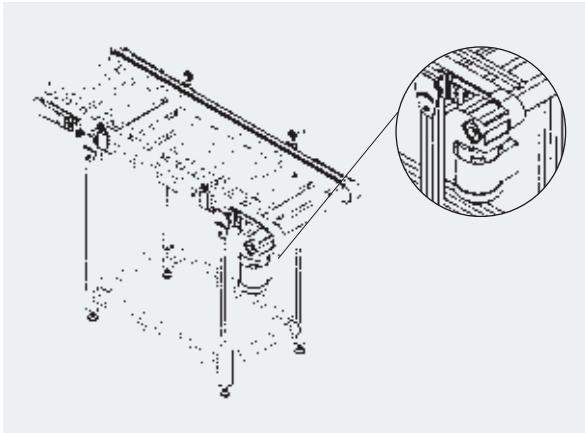


Standard

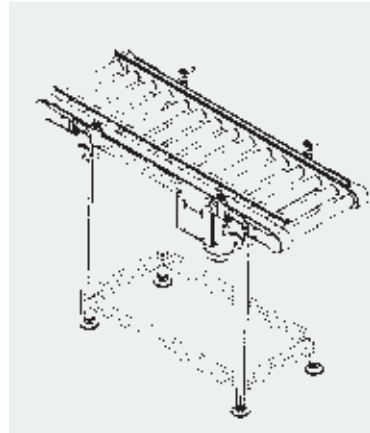
Roller conveyor with drive

Engine arrangement

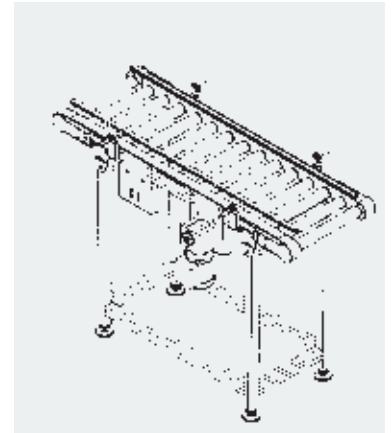
Plug-on



Engine inside



Motor outside, clamping station



Load capacity

- Max. 40 kg/Roll
- Max. 300 kg/Drive

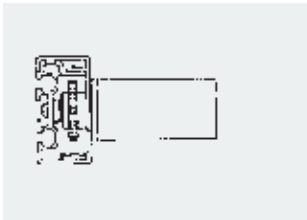
Pipe lengths

Max. pipe lengths L	PVC-Pipe	600 mm
	AL-Pipe	1000 mm
	Steel Pipe	1000 mm

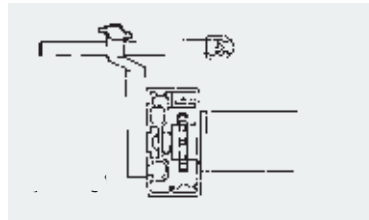
Roller design

firmly driven
 accumulating, accumulation pressure ad-justable

Side execution

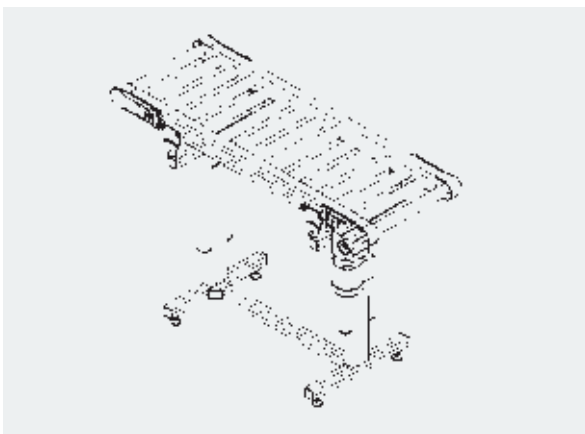


without

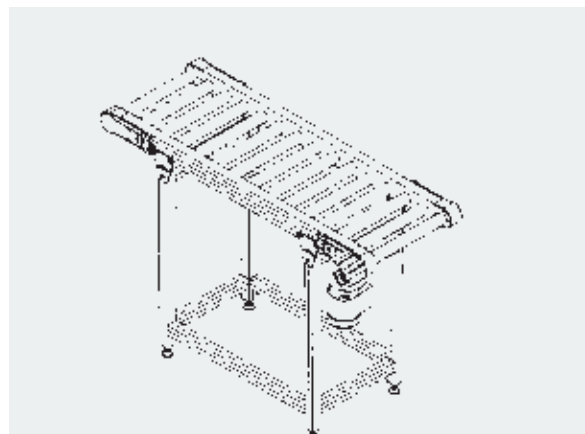


variably

Subconstruction



Height adjustable



Standard

Timing belt conveyors



MiniTec timing belt conveyor components

The timing belt conveyor is ideal for horizontal transport of unit loads and workpieces. The MiniTec belt conveyors are made of high-quality aluminium profiles and can be expanded by adding different components, completely in line with

the proven modular principle, and adapted to your conveyor systems. The timing belt conveyor is therefore also suitable for complex linking of conveyor solutions.

Ideal for high speeds and sensitive transported goods

Due to its high-quality workmanship and precise running, the timing belt conveyor is the right choice if sensitive goods are to be conveyed by clocking at high speed. Compared to roller conveyors, the transport is particularly gentle, so that the workpieces and transported goods are protected from

damage. Timing belt conveyors are used in industry and production as modular elements in production lines as well as in workplace systems for the provision and smooth transport of workpieces.

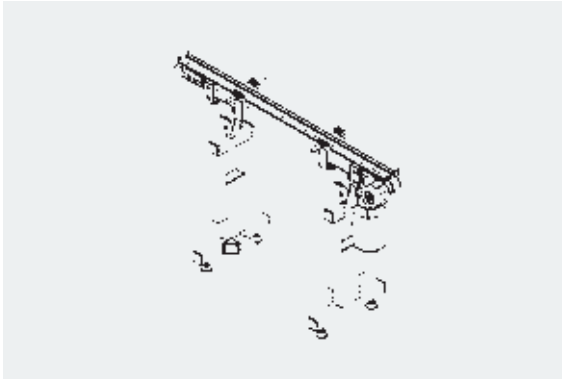
With extensive conveying technology accessories, can be used flexibly

With the help of different drive systems, conveyor bearings, lateral guides and slide bars, the timing belt conveyor can be configured completely to the customer's wishes and the use case. In line with the proven MiniTec modular system, the timing belt conveyor is also compatible with the components of the profile system, the linear technology, workplace systems and transfer systems. You can therefore design your

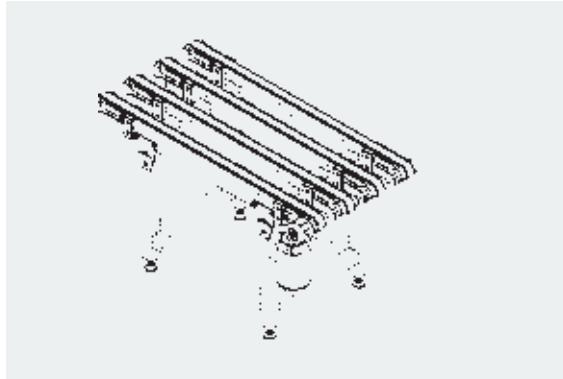
timing belt conveyor system specifically to your requirements in your company and the type of goods conveyed. Count on MiniTec with extensive know-how in conveyor technology in plant construction and optimise your processes with efficient and robust timing belt conveyors.

Timing belt conveyor 32

Example timing belt conveyor



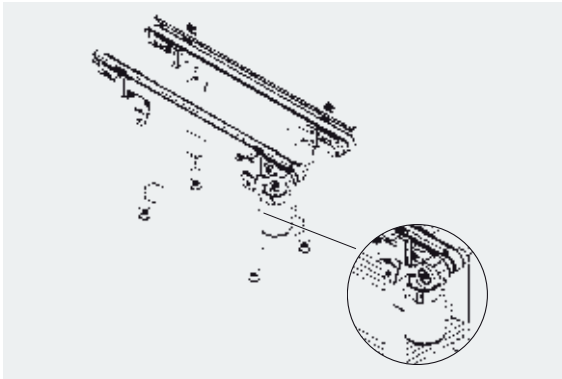
1 lane with variable support



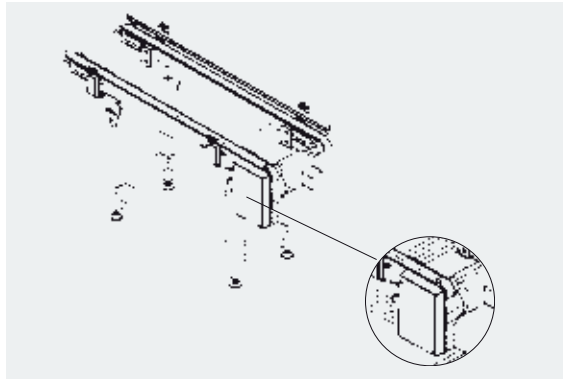
4 lanes with standard support

Engine arrangement

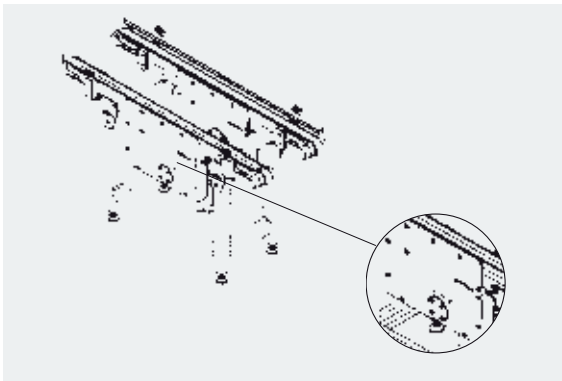
Plug-on



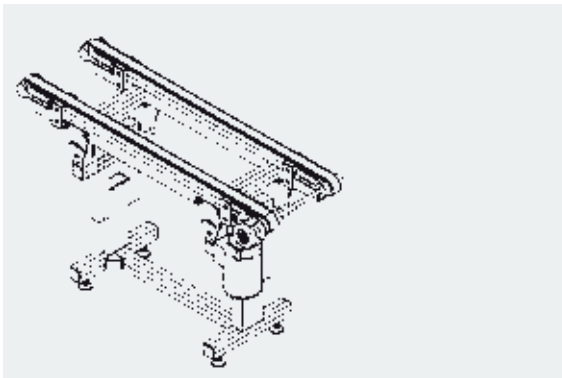
Flange



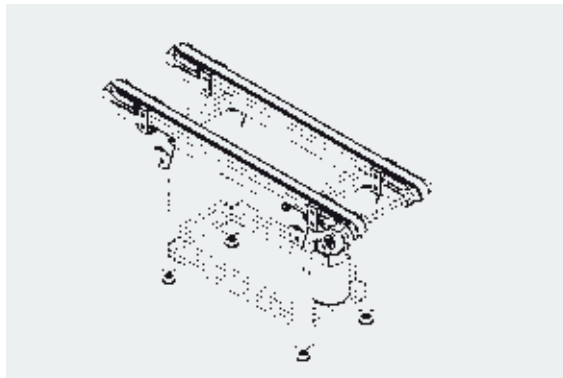
Center drive



Subconstruction



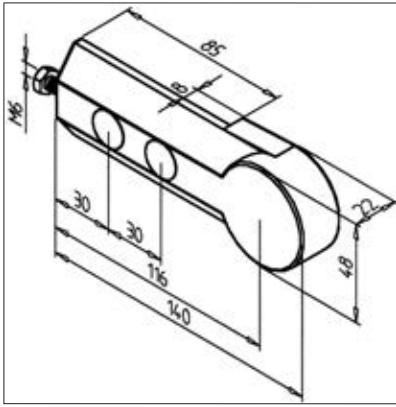
Height adjustable



Standard

Conveyor bearing 45 VA

Part No. 21.0993/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Self-aligning bearing with bore \varnothing 17 mm, sealed on both sides
- Version in aluminium GD, with stainless bearing and fastening kit, conveyor bearing 45 H, **part no. 21.0993/5**
- Stainless version, conveyor bearing 45 VA, **part no. 21.0979/0**
- Weight = 0.287 kg/piece

APPLICATIONS

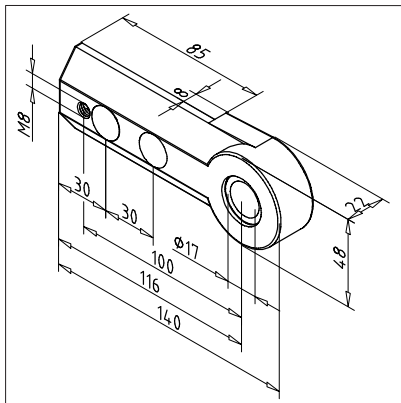
- Reversing unit and belt driving cylinder of conveyor belts
- Can be retrofitted with intervention protection **part no. 21.0909/9**

ASSEMBLY

- Pre-mount conveyor bearing to profile end
- When using swivel plates **part no. 29.5001/0** for mounting the substructure, these serve as counter-bearings for clamping, otherwise use multi-block or mounting angle bracket
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the conveyor bearing (recommended tightening torque: 25 Nm)

Conveyor bearing 45 with bore

Part No. 21.0993/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With bore for drive adapter
- Self-aligning bearing with bore \varnothing 17 mm, sealed on both sides
- Version in aluminium GD, with stainless bearing and fastening kit, conveyor bearing 45 H, **part no. 21.0993/6**
- Stainless version, conveyor bearing 45 VA with bore, **part no. 21.0980/0**
- Weight = 0.287 kg/piece

APPLICATIONS

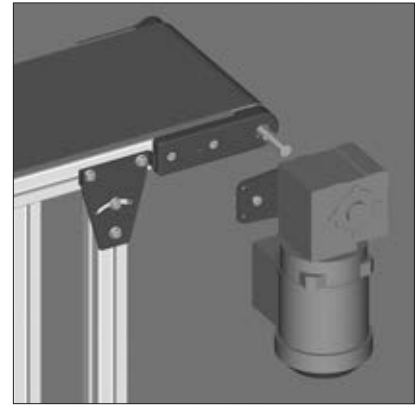
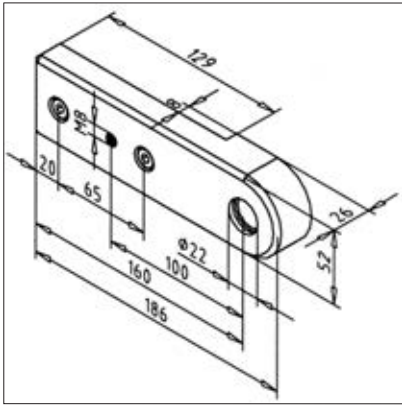
- Reversing unit and belt driving cylinder of conveyor belts
- Attachment of plug in motors or chain wheels to through shaft up to max. \varnothing 17 mm
- Can be retrofitted with intervention protection **part no. 21.0909/9**

ASSEMBLY

- Pre-mount conveyor bearing to profile end
- When using swivel plates **part no. 29.5001/0** for mounting the substructure, these serve as counter-bearings for clamping, otherwise use multi-block or mounting angle bracket
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the conveyor bearing (recommended tightening torque: 25 Nm)

Conveyor bearing 45 - 20

Part No. 21.0917/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder-coated, grey
- With fastening material steel, zinc plated
- Self-aligning bearing with hole \varnothing 20 mm, sealed on both sides
- Weight = 0.582 kg/piece

APPLICATIONS

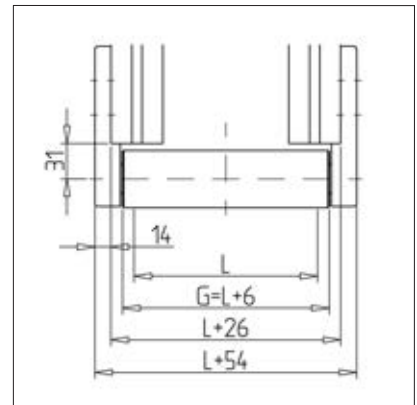
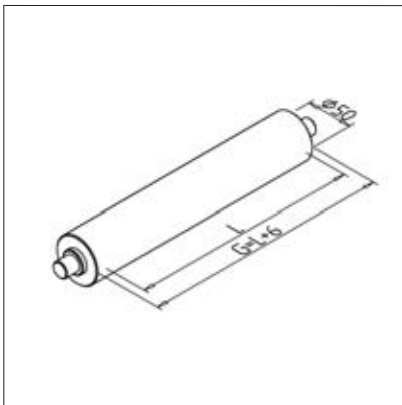
- MiniTec conveyor belts for plug-on motors with hollow shaft \varnothing 20 mm in conjunction with torque arms **part no. 29.5036/0** or **29.5037/0** and drum **part no. 29.5042/0**
- Can be retrofitted with intervention protection **part no. 21.0909/9**

ASSEMBLY

- Pre-mount conveyor bearing to profile end
- Firmly tighten the conveyor bearing (recommended tightening torque: 25 Nm)

Belt tensioning cylinder 45 ST

Part No. 21.0994/1



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Turned round
- Please specify dimension L (belt width)
- Attention: L is not the external dimensions(G) of the conveyor \varnothing 50
- Weight = (basic weight) 0.186 kg
- Extra weight = 1.541 kg/100mm belt width

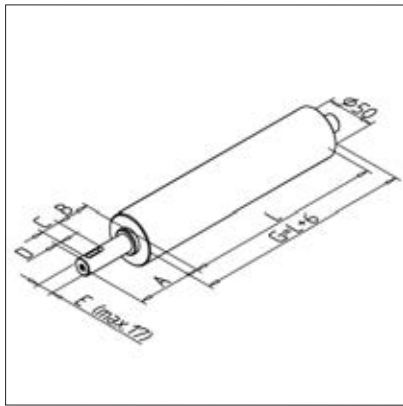
APPLICATIONS

- MiniTec belt conveyor system
- Suitable for conveyor bearing, e.g. **part no. 21.0993/0**
- On request we can deliver the conveyor with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following **part no. 21.0901/0** order.

ASSEMBLY

- Insert the axes into the bore of the conveyor bearing
- The drum is guided axially by the self-aligning bearing
- The self-aligning bearing compensates for small misalignments

Belt driving cylinder 45



TECHN. DATA / ITEMS SUPPLIED

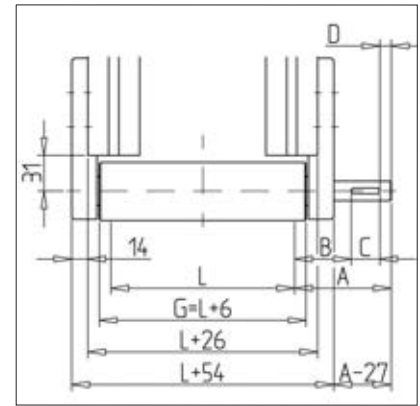
- Stainless steel
- Turned round
- Shaft journal max. \varnothing 17 mm
- Please indicate belt width as dimensions A, B, C, D and E (if \varnothing 17 mm)
- If end face fixing thread is required, please state under F: (thread diameter and length)
- Attention: L is not the external dimensions(G) of the conveyor \varnothing 50
- Weight = (basic weight) approx. 0.3 kg
- Extra weight = 1.541 kg/100mm belt width



APPLICATIONS

- MiniTec belt conveyor system
- Suitable for conveyor bearing, e.g. **part no. 21.0993/0**
- On request we can deliver the conveyor with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following **part no. 21.0900/0** order.

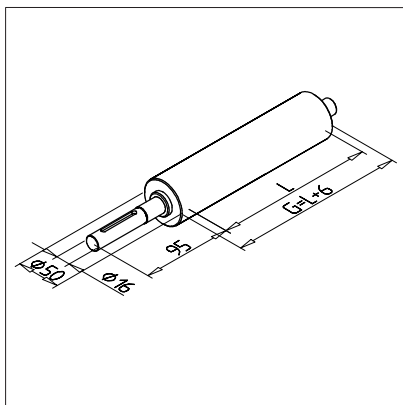
Part No. 21.0995/0



ASSEMBLY

- Belt driving cylinder in conveyor bearing with bore e.g. **part no. 21.0993/1** insert
- On the opposite side conveyor bearing e.g. **part no. 21.0993/0** mount
- The drum is sealed between the inner rings of the self-aligning bearing and the drum bearing

Belt driving cylinder 45 ST for plug-on motor D16



TECHN. DATA / ITEMS SUPPLIED

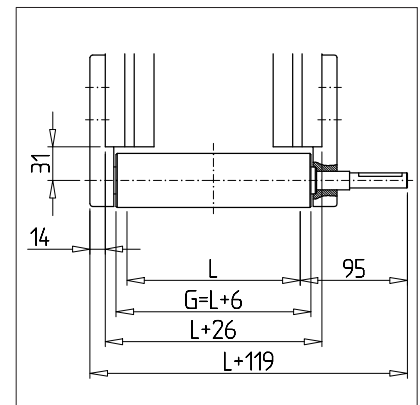
- Stainless steel
- Turned round
- Shaft pin \varnothing 16 mm, drive side machined for mounting of plug-on motor
- Please specify dimension L (belt width)
- Attention: L is not the external dimensions(G) of the conveyor \varnothing 50
- Weight = (basic weight) approx. 0.3 kg
- Extra weight = 1.541 kg/100mm belt width



APPLICATIONS

- Suitable for MiniTec motor with torque arm of series 45
- On request we can deliver the conveyor with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following **part no. 21.0900/0** order.

Part No. 29.5023/1

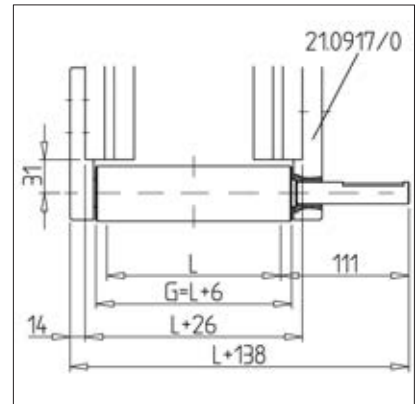
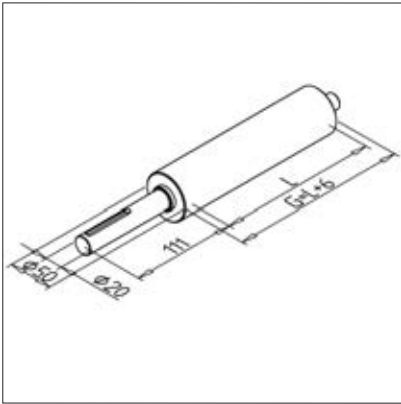


ASSEMBLY

- Belt driving cylinder in conveyor bearing for slip-on motor e.g. **part no. 21.0993/1** insert
- On the opposite side conveyor bearing e.g. **part no. 21.0993/0** mount

Belt driving cylinder 45 ST for plug-on motor D20

Part No. 29.5042/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Turned round
- Shaft journal \varnothing 20 mm, drive side machined for installing the chain wheel from kit engine
- Please specify dimension L (belt width)
- Attention: L is not the external dimensions(G) of the conveyor \varnothing 50
- Weight = (basic weight) approx. 0.3 kg
- Extra weight = 1.541 kg/100mm belt width

APPLICATIONS

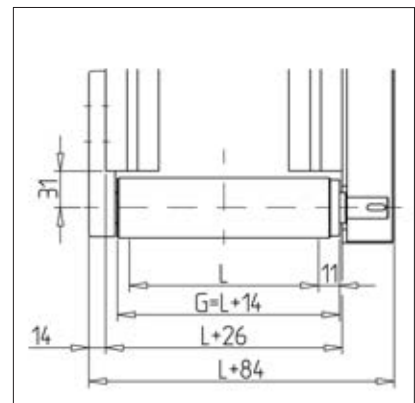
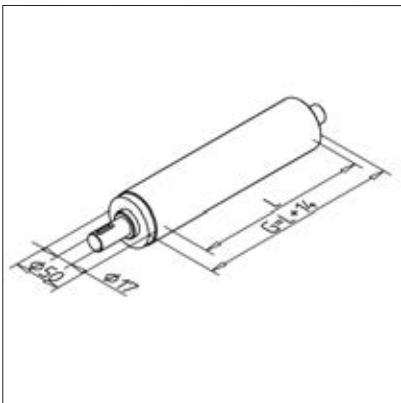
- MiniTec belt conveyor systems DSGM with torque support Wa 20 and WA 30
- Suitable for MiniTec motor with torque arm of series 90
- On request we can deliver the conveyor with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following part no. 21.0900/0 order.

ASSEMBLY

- Insert the belt driving cylinder in the conveyor bearing for plug-on motor 45-20 **Part-N° 21.0917/0**
- On the opposite side conveyor bearing e.g. **part no. 21.0993/0** mount

Belt driving cylinder 45 ST for motor attachment KIT 45

Part No. 29.5022/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Turned round
- Shaft journal \varnothing 17 mm, drive side machined for installing the chain wheel from kit engine
- Please specify dimension L (belt width)
- Attention: L is not the external dimensions(G) of the conveyor \varnothing 50
- Weight = (basic weight) approx. 0.3 kg
- Extra weight = 1.541 kg/100mm belt width

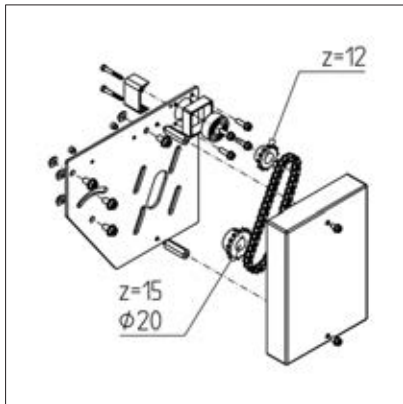
APPLICATIONS

- Can only be used with the MiniTec belt conveyor kit 45
- On request we can deliver the conveyor with mounted ball bearings. The bearings are gentle on material, hot pressed. Please additionally following part no. 21.0900/0 order.

ASSEMBLY

- Insert the belt driving cylinder in the bearing housing on the motor side
- On the opposite side conveyor bearing e.g. **part no. 21.0993/0** mount
- The drum is sealed between the inner rings of the pendulums

Motor mounting KIT 45 Ø 20 mm



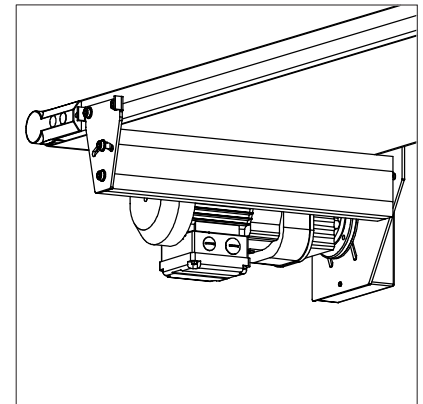
TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Motor plate and cover, steel, powder coated, grey
- Bearing housing with self-aligning bearing
- 2 sprockets with drive chain, 1 sprocket drilled for motor shaft diameter $\varnothing 20$ mm
- Weight = 3.344 kg/piece



APPLICATIONS

- Belt-conveyors made of MiniTec aluminium profiles
- Suitable for mounting spur gear motors with flange diameter $\varnothing 120$ mm
- Fitting belt driving cylinder **part no. 29.5022/0** and belt tensioning cylinder **part no. 21.0994/0**

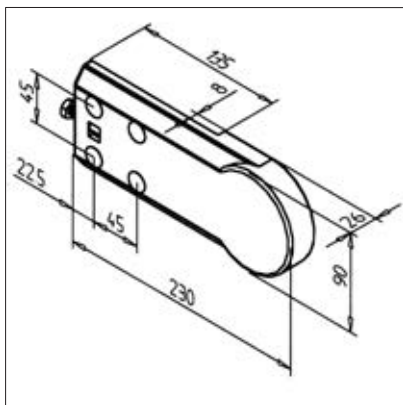


Part No. 29.5031/0

ASSEMBLY

- Screw the flange plate to the base frame, install the bearing housing with the self-aligning bearing
- Insert belt driving cylinder, on the opposite side, eg. conveyor bearing **part no. 21.0993/0** use
- Mount engine, install chain wheels and tighten the chain
- Fit the cover
- Please note our design suggestion if the conveyor belt is to be used without base frame

Conveyor bearing 90 VA



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- Self-aligning bearing with bore $\varnothing 25$ mm, sealed on both sides
- Weight = 0.830 kg/piece



APPLICATIONS

- Reversing unit and belt driving cylinder of conveyor belts



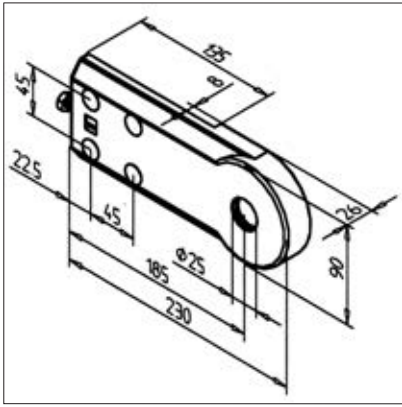
Part No. 21.0985/0

ASSEMBLY

- Pre-mount conveyor bearing to profile end
- As counter bearing for tightening of connection plate 45 x 90
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the conveyor bearing (recommended tightening torque: 25 Nm)

Conveyor bearing 90 with bore

Part No. 21.0985/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, Pressure die-casting, powder-coated, grey
- With bore for drive adapter
- Self-aligning bearing with bore $\varnothing 25$ mm, sealed on both sides
- Weight = 0.830 kg/piece

APPLICATIONS

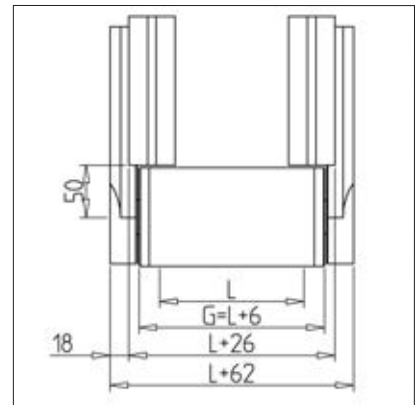
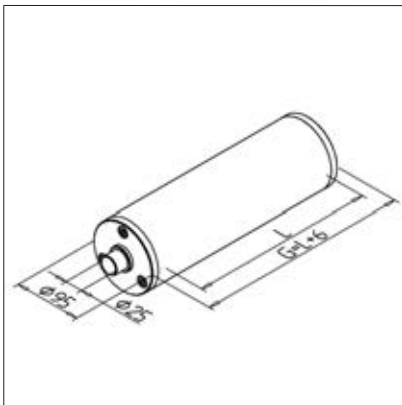
- Reversing unit and belt driving cylinder of conveyor belts
- Attachment of motors or chain wheels, or belt pulleys on shaft; max. $\varnothing 25$ mm

ASSEMBLY

- Pre-mount conveyor bearing to profile end
- As counter bearing for tightening of connection plate 32 x 90 or 45 x 90
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the conveyor bearing (recommended tightening torque: 25 Nm)

Belt tensioning cylinder 90

Part No. 21.0982/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium with shaft made of steel
- Turned round
- Shaft journal $\varnothing 25$ mm
- Please specify dimension L (belt width)
- Attention: L is not the outer diameter of the conveyor $\varnothing 95$
- Weight = (basic weight) 0.465 kg
- Extra weight = 1.506 kg/100 mm belt width

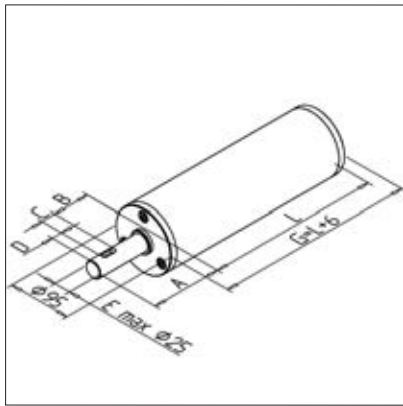
APPLICATIONS

- MiniTec belt conveyor system
- Fitting conveyor bearing **part no. 21.0985/0**
- Upon request, we can supply the conveyor with mounted ball bearings. The bearings are hot pressed in a material-friendly manner. In addition, please order the following **part no. 21.0903/0**

ASSEMBLY

- Insert axes in the bore of the self-aligning bearings of the conveyor bearing
- The drum is guided axially by the self-aligning bearing
- The self-aligning bearing compensates for small misalignments

Belt driving cylinder 90



TECHN. DATA / ITEMS SUPPLIED

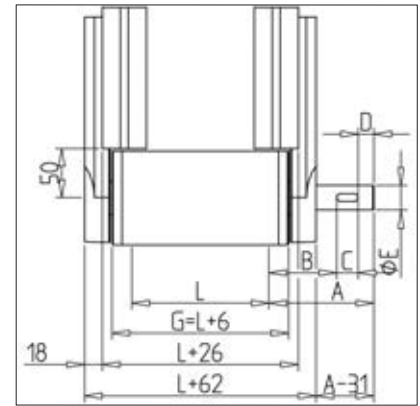
- Aluminium with shaft made of steel
- Turned round
- Shaft journal max. \varnothing 25 mm
- Please specify dimension L (belt width) as well as dimensions A, B, C, D and E (if $> \varnothing$ 25 mm)
- If end face fixing thread is required, please state under F: (thread diameter and length)
- Attention: L is not the outer diameter of the conveyor \varnothing 95
- Weight = (basic weight) approx. 0.7 kg
- Extra weight = 1.506 kg/100 mm belt width



APPLICATIONS

- MiniTec belt conveyor system
- Use fitting conveyor bearing **part no. 21.0985/0** and **part no. 21.0985/1**
- Upon request, we can supply the conveyor with mounted ball bearings. The bearings are hot pressed in a material-friendly manner. In addition, please order the following **part no. 21.0902/0**.

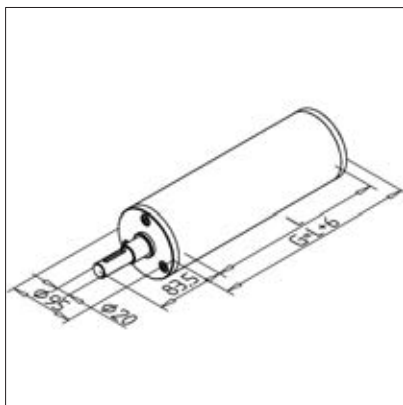
Part No. 21.0981/0



ASSEMBLY

- Insert belt driving cylinder in conveyor bearing with bore **part no. 21.0985/1**
- Mount conveyor bearing at opposite part **part no. 21.0985/0**
- The drum is sealed between the inner rings of the self-aligning bearing and the drum bearing

Belt driving cylinder 90 for motor attachment KIT 90



TECHN. DATA / ITEMS SUPPLIED

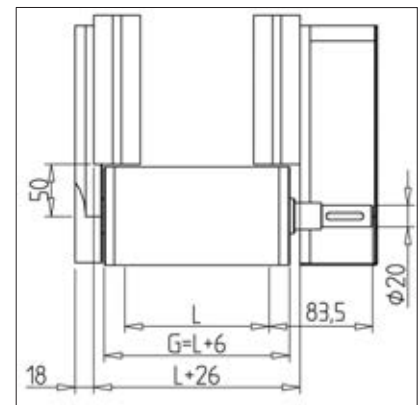
- Aluminium with shaft made of steel
- Turned round
- Shaft journal \varnothing 20 mm
- Please specify dimension L (belt width)
- Attention: L is not the outer diameter of the conveyor \varnothing 95
- Weight = (basic weight) approx. 0.7 kg
- Extra weight = 1.506 kg/100 mm belt width



APPLICATIONS

- MiniTec belt conveyor system with motor kit 90 **part no. 29.5031/0** and conveyor bearing **part no. 21.0985/0**
- Upon request, we can supply the conveyor with mounted ball bearings. The bearings are hot pressed in a material-friendly manner. In addition, please order the following **part no. 21.0902/0**.

Part No. 29.5069/0

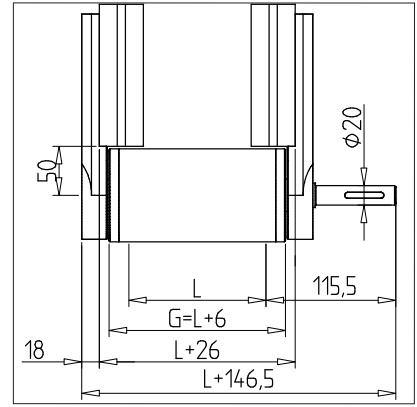
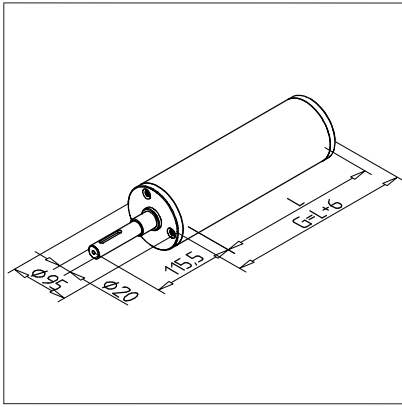


ASSEMBLY

- Insert the belt driving cylinder in the bearing housing on the motor side
- Mount conveyor bearing at opposite part **part no. 21.0985/0**

Belt driving cylinder 90 ST for plug-on motor D20

Part No. 29.5035/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium with shaft made of steel
- Turned round
- Shaft journal $\varnothing 20$ mm
- Please specify dimension **L (belt width)**
- Attention: **L is not the outer diameter of the conveyor $\varnothing 95$**
- Weight = (basic weight) approx. 0.7 kg
- Extra weight = 1.506 kg/100 mm belt width

APPLICATIONS

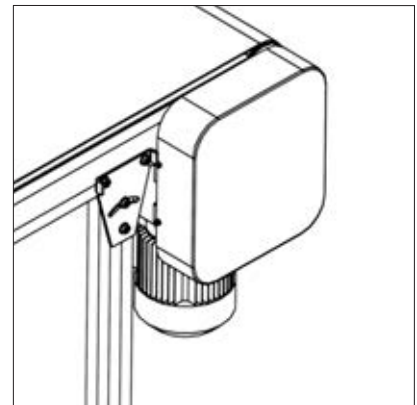
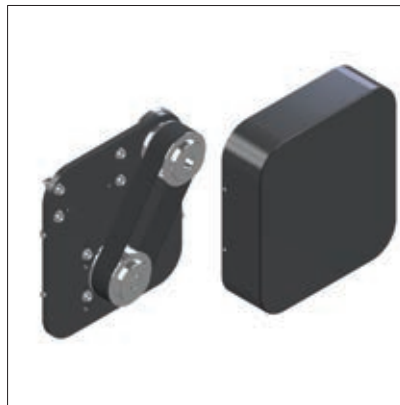
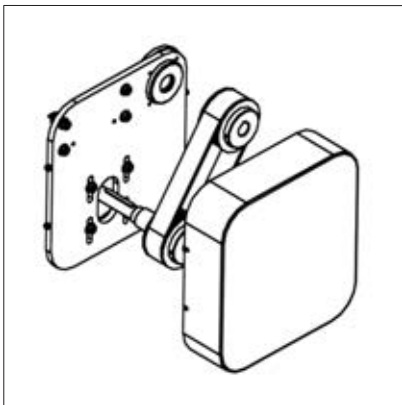
- MiniTec belt conveyor system with motor kit 90 **part no. 29.5031/0** and conveyor bearing **part no. 21.0985/0**
- Upon request, we can supply the conveyor with mounted ball bearings. The bearings are hot pressed in a material-friendly manner. In addition, please order the following **part no. 21.0902/0**.

ASSEMBLY

- Insert the belt driving cylinder in the bearing housing on the motor side
- Mount conveyor bearing at opposite part **part no. 21.0985/0**

Motor attachment KIT 90

Part No. 29.5060/0



TECHN. DATA / ITEMS SUPPLIED

- Motor plate and cover, steel, powder coated, grey
- Bearing housing with self-aligning bearing
- Belt driving cylinder $\varnothing 20$ mm
- Timing belt 32 AT 10
- Fastening kit
- Weight = 5.973 kg/piece

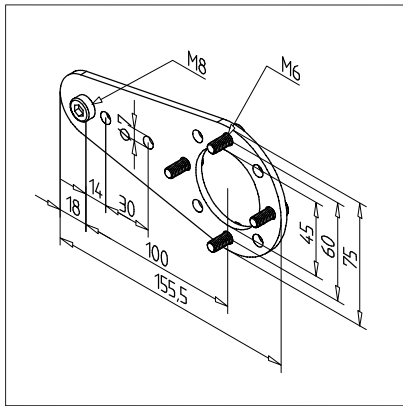
APPLICATIONS

- Belt-conveyors made of MiniTec aluminium profiles 90
- Suitable for mounting spur gear motors with hollow shaft $\varnothing 20$ mm flange $\varnothing 120$ mm

ASSEMBLY

- Screw the flange plate to the base frame, install the bearing housing with the self-aligning bearing
- Install and tension the motor and timing belt drive
- Insert belt driving cylinder, use conveyor bearing at opposite side **part no. 21.0985/0**
- Fit the cover

Torque support WA 10



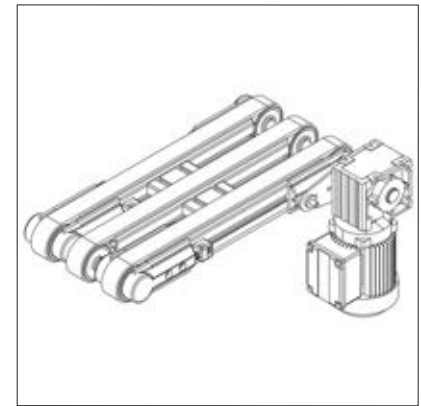
TECHN. DATA / ITEMS SUPPLIED

- Stainless steel, blasted
- with fastening material for Series 45
- Weight = 0.341 kg/piece



APPLICATIONS

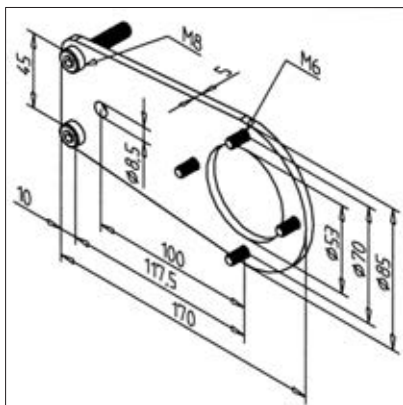
- Belt-conveyors made of MiniTec aluminium profiles
- Attachment of plug-on motor DSGM 370 and DSGM 550 for MiniTec belt conveyors 90
- Type 90: Use suitable belt driving cylinder **part no. 29.5035/0** and conveyor bearing **part no. 21.0985/1**
- Type 45: Use suitable belt driving cylinder **part no. 29.5042/0** and conveyor bearing **part no. 21.0917/0**



ASSEMBLY

- Fasten torque support onto motor
- Attach motor on belt driving cylinder
- Fasten torque support
- Type 45: use screw M8 x 20 (not in scope of delivery)

Torque support WA 20



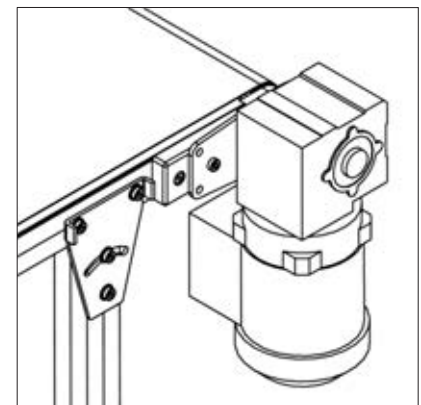
TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Fastening kit for type 90
- Weight = 0.430 kg/piece



APPLICATIONS

- Belt-conveyors made of MiniTec aluminium profiles
- Attachment of plug-on motor DSGM 180 and DSGM 250 for MiniTec belt conveyors 45 and 90
- Type 90: Use suitable belt driving cylinder **part no. 29.5035/0** and conveyor bearing **part no. 21.0985/1**
- Type 45: Use suitable belt driving cylinder **part no. 29.5042/0** and conveyor bearing **part no. 21.0917/0**



ASSEMBLY

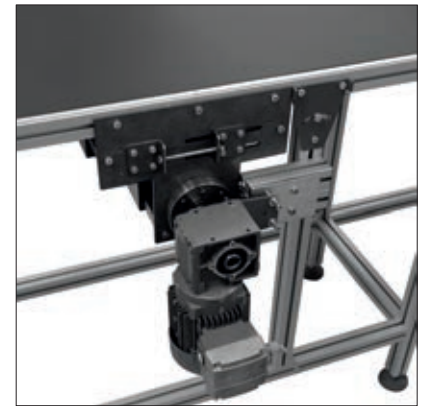
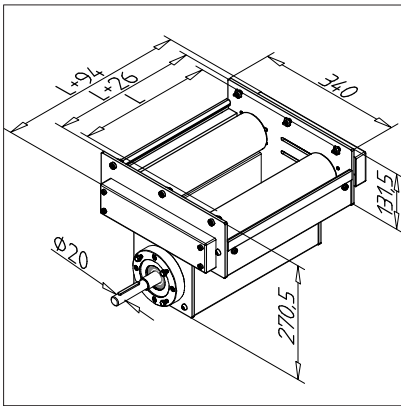
- Fasten torque support onto motor
- Attach motor on belt driving cylinder
- Fasten torque support
- Type 45: use screw M8 x 20 (not in scope of delivery)

Part No. 29.5040/0

Part No. 29.5036/0

Centre drive, belt conveyor

Part No. 29.5280/0



TECHN. DATA / ITEMS SUPPLIED

- 2 belt tensioning cylinder and 1 belt driving cylinder
- Ball bearings on both sides
- With complete mounting material, without motor
- Weight = (basic weight) 15.643 kg
- Extra weight = 10.966 kg/100 mm belt width

APPLICATIONS

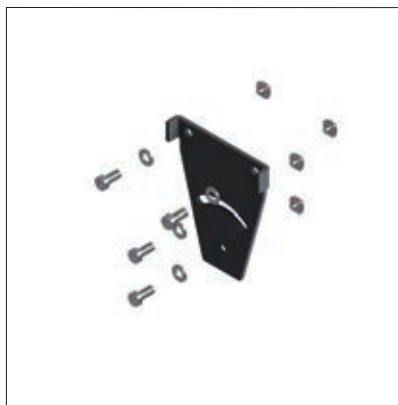
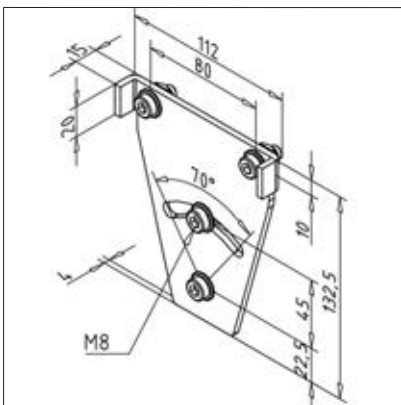
- Space saving drive
- Motor below conveyor
- Suitable for nosebar on both ends

ASSEMBLY

- Pre-assemble the side plates
- Install belt driving cylinder and belt tensioning cylinder with bearing housing
- Install engine, then adjust belt tension and track!
- A selection of suitable motors:
Please refer **Chapter 1.9 Drive & control**

Swivel plate

Part No. 29.5001/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder-coated, grey
- Stainless version **part no. 29.5012/0**
- Weight = 0.377 kg/piece

APPLICATIONS

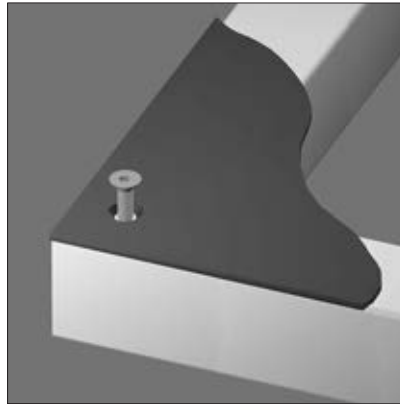
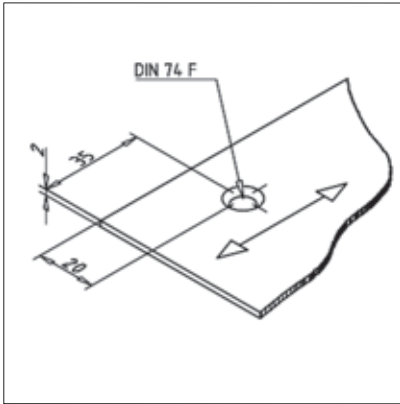
- Connection of the substructure to the MiniTec conveyor belt
- Also suitable for inclined conveyor belts
- The swivel plate simultaneously serves as a counter-bearing for tensioning the belt
- Range $\pm 35^\circ$

ASSEMBLY

- Fasten to the side walls of the conveyor belt and to the substructure with supplied hardware

Intermediate plate

Part No. 29.5010/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Thickness: 2 mm
- Drilled ready for installation
- Stainless version **part no. 29.5010/1**
- Bar length = 2 m

APPLICATIONS

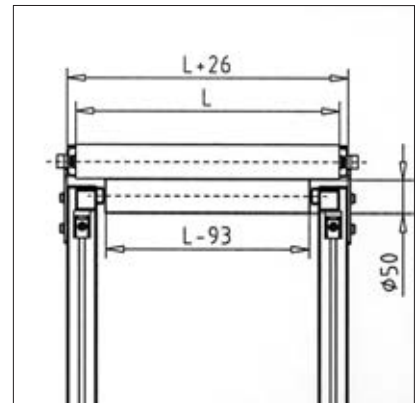
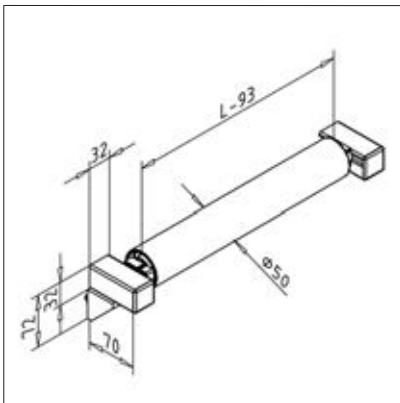
- Sliding support for conveyor belts
- For MiniTec conveyor systems

ASSEMBLY

- Screw onto the profile using countersunk screws M5 x 16 and sliding nut M5

Support roller, belt conveyor

Part No. 29.5002/0



TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Support roller made of ABS tube
- Ball bearings on both sides
- Two holders from profile
- 2 mounting angles
- Max. tightening torque: 5 Nm
- Please specify dimension L (belt width)

APPLICATIONS

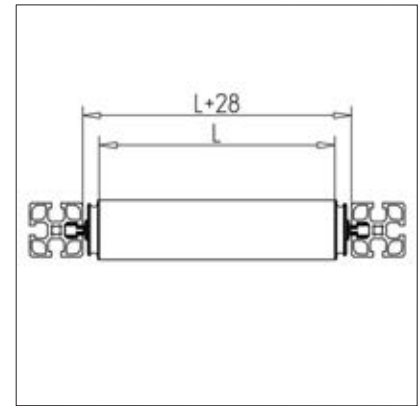
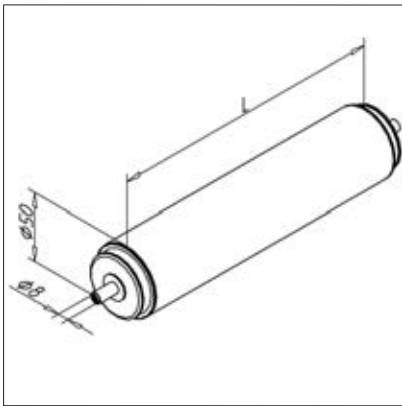
- MiniTec belt conveyor system
- As a support for the lower side of long belt conveyors
- We recommend to install one support roller for each intermediate support on the belt conveyor
- Use this support roller kit only with belt width > 115 mm

ASSEMBLY

- Reassemble the roller mount from the profile to the conveyor supports
- Clip support roller into fastening kit
- Slide the roller in appropriate position and tighten the screws

Transport roller 50-25

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

- Completely assembled conveyor roller optionally with PVC pipe in grey or Al-tube mill finished
- Load/roller max. 20 kg
- **Please specify dimension L** (pipe length)
- Conveyor roller PVC **part no. 21.0890/0**
- Conveyor roller Al **part no. 21.0892/0**
- On request also available with anodized aluminum tube or stainless steel tube

APPLICATIONS

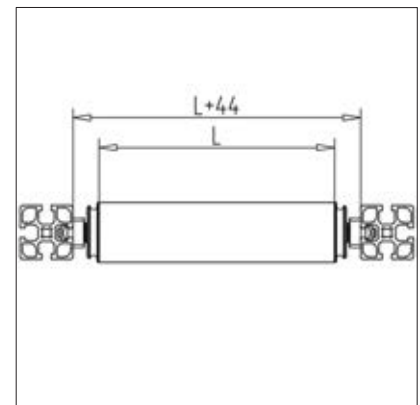
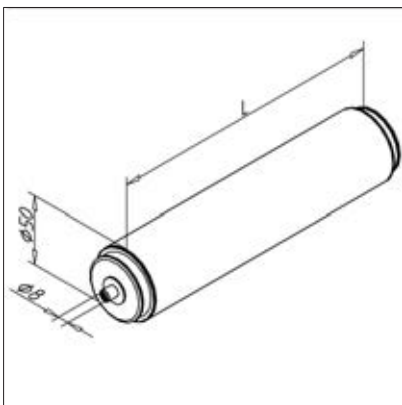
- Production of roller conveyors with or without drive
- When requesting high concentricity, the conveyor roller AL is to be preferred

ASSEMBLY

- Simply attach roller carrier and insert in profile groove
- Use with roller carrier 25 **part no. 22.1196/0**

Transport roller 50-36

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

- Completely assembled conveyor roller optionally with PVC pipe in grey or Al-tube mill finished
- Load/roller max. 20 kg
- **Please specify dimension L** (pipe length)
- Conveyor roller ABS **part no. 21.1717/0**
- Conveyor roller Al **part no. 21.1716/0**
- On request also available with anodized aluminum tube or stainless steel tube

APPLICATIONS

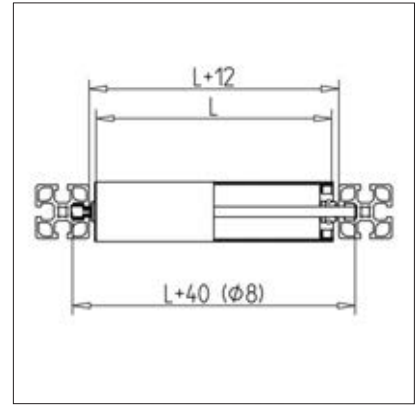
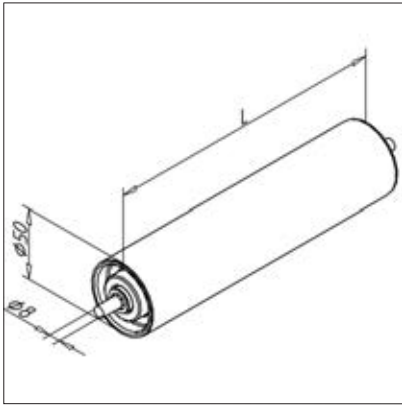
- Production of roller conveyors with or without drive
- When requesting high concentricity, the conveyor roller AL is to be preferred

ASSEMBLY

- Clip in roller support
- Use with roller carrier 36 **part no. 22.1190/0**

Transport roller S 50-25

Part No. ---,----/-



TECHN. DATA / ITEMS SUPPLIED

- Completely assembled conveyor roller optionally with PVC pipe in grey or Al-tube mill finished
- with ball bearing sets and continuous shaft
- Load/roller max. 33 kg
- **Please specify dimension L** (pipe length)
- Conveyor roller ABS **part no. 21.0891/0**
- Conveyor roller Al **part no. 21.0895/0**
- On request also available with anodized aluminum tube or stainless steel tube

APPLICATIONS

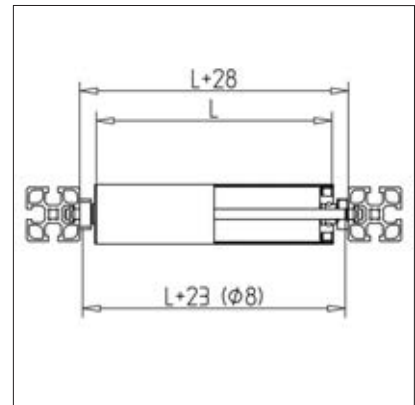
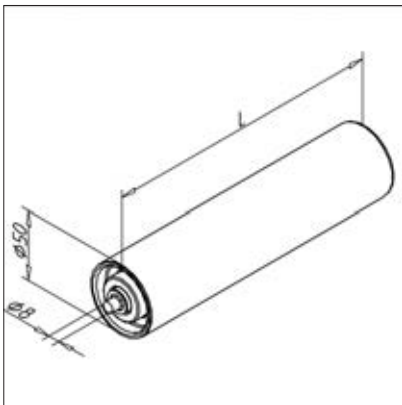
- Production of roller conveyors without drive
- When requesting high concentricity, the conveyor roller AL is to be preferred

ASSEMBLY

- Simply attach roller carrier and insert in profile groove
- Use with roller carrier 25 **part no. 22.1196/0**

Transport roller S 50-36

Part No. ---,----/-



TECHN. DATA / ITEMS SUPPLIED

- Completely assembled conveyor roller optionally with PVC pipe in grey or Al-tube mill finished
- with ball bearing sets and continuous shaft
- Load/roller max. 33 kg
- **Please specify dimension L** (pipe length)
- Conveyor roller ABS **part no. 21.1719/0**
- Conveyor roller Al **part no. 21.1718/0**
- On request also available with anodized aluminum tube or stainless steel tube

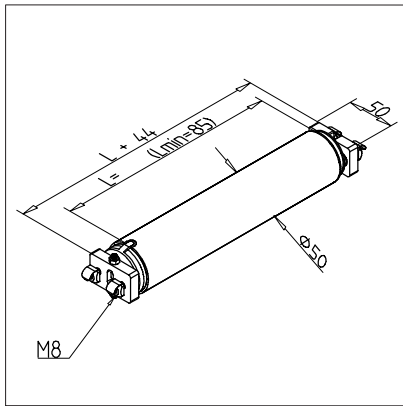
APPLICATIONS

- Production of roller conveyors without drive
- When requesting high concentricity, the conveyor roller AL is to be preferred

ASSEMBLY

- Clip in roller support
- Use with roller carrier 36 **part no. 22.1190/0**

Brake roller PVC 50



TECHN. DATA / ITEMS SUPPLIED

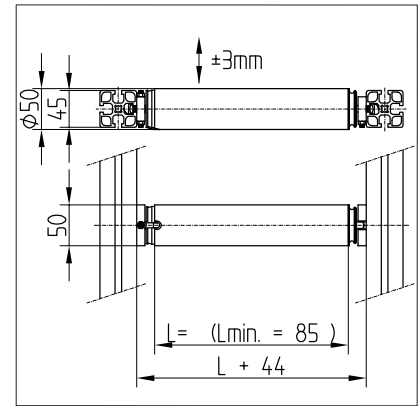
- With fastening material steel, zinc plated
- ABS, grey
- **Please specify dimension L** (pipe length)
- On request also available with tube in aluminum mill finished, anodized or stainless steel
- Weight = (basic weight) 0.295 kg
- Extra weight = 0.45 kg/m tube length



APPLICATIONS

- To decelerate transport boxes on sloped roller conveyors
- When it comes to the requirement for high concentricity, a tube made of aluminum or stainless steel is to be preferred

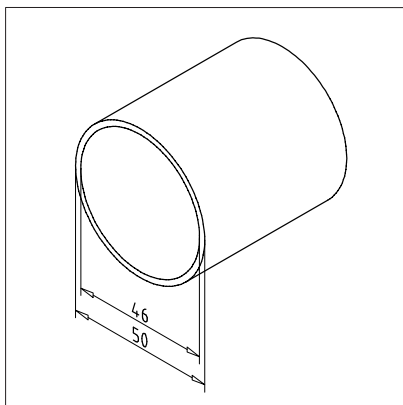
Part No. 21.2250/0



ASSEMBLY

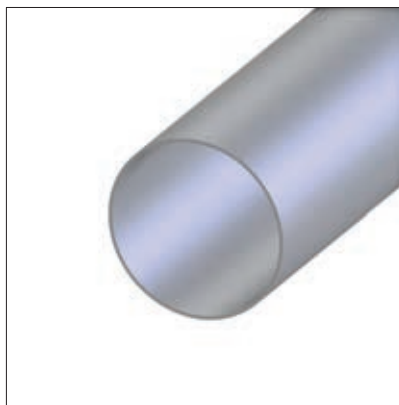
- Mount lateral support on frame of roller conveyor
- Clamp the roller and adjust the height above the lower studs
- The brake-roller can be adjusted in height +/- 3 mm

Tube 50 x 2



TECHN. DATA / ITEMS SUPPLIED

- PVC, grey **part no. 20.0992/0**
Weight: 0,45 kg/m, bar length 3 m
- Alu, bright rolled **part no. 20.1041/0**
Weight: 0,83 kg/m, bar length 6 m
- Alu, anodized **part no. 20.1041/1**
Weight: 0,83 kg/m, bar length 6 m
- SST **part no. 20.1089/0**
Weight: 2,37 kg/m, bar length 6 m



APPLICATIONS

- Production of conveyor rollers in any length for roller tracks with or without drive

Part No. ---,----/-

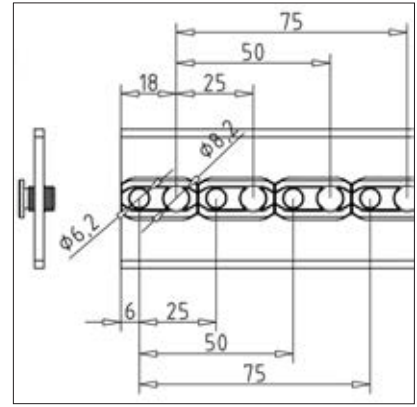
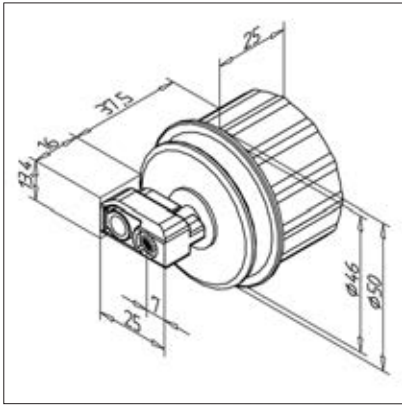


ASSEMBLY

- Exemplary application see conveyor rollers 50 and conveyor rollers S 50

Set of bearings for transport roller 25

Part No. 21.0894/0



TECHN. DATA / ITEMS SUPPLIED

- Bearing bushing, PA 6
- Axle bolt, steel
- Roller carrier, ABS grey
- For conveyor rollers from 60 - 1000 mm
- Load/roller max. 20 kg
- Weight = 0.044 kg/piece

APPLICATIONS

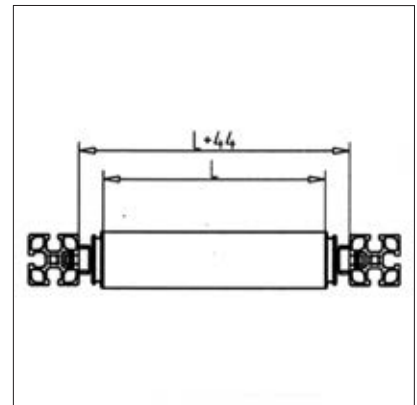
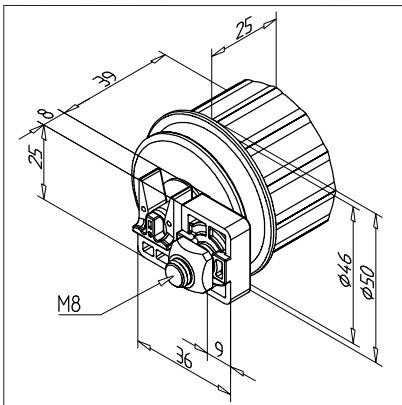
- Roller tracks of unlimited length
- Drive via round belt \varnothing 5 mm possible
- The following is needed to make a conveyor roller:
2x bearing set, ABS
1x tube ABS, aluminium or stainless steel with appropriate length
(For tube lengths, see Part no. 21.0890/0 or 21.0892/0)

ASSEMBLY

- Assembly of the roller carrier on all profiles of profile series 45 possible
- Press bearing bush into the tube (deburr the inside of the tube generously for improved assembly)
- Insert axle bolt in bearing bush
- Place roller carrier on axle and insert in profile groove
- For axial securing of the roller carriers, we recommend fixing the T-slot bars or square nuts in the profile groove with setscrews or close off the profile end with an end cap AL

Set of bearings for transport roller 36

Part No. 21.1056/0



TECHN. DATA / ITEMS SUPPLIED

- With fastening material steel, zinc plated
- Bearing bushing, PA 6
- Axle bolt, steel
- Roller carrier, PP grey
- For conveyor rollers from 60 - 1000 mm
- Load/roller max. 20 kg
- Max. tightening torque: 5 Nm
- Weight = 0.057 kg/piece

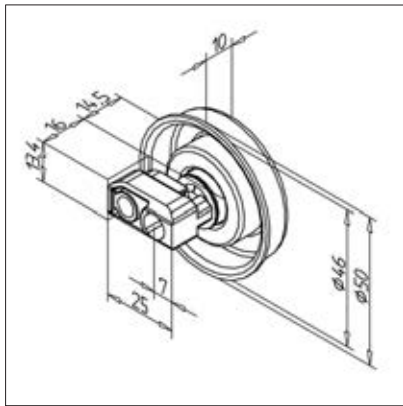
APPLICATIONS

- Roller tracks of unlimited length
- Drive via round belt \varnothing 5 mm possible
- Roles are individually interchangeable
- The following is needed to make a conveyor roller:
2x bearing set, ABS
1x tube ABS, aluminium or stainless steel with appropriate length

ASSEMBLY

- Assembly of the roller carrier on all profiles of profile series 45 possible
- Mount roller carrier to the profile
- Press bearing bush into the tube (deburr the inside of the tube generously for improved assembly)
- Insert axle bolt in bearing bush
- Clip in transport roller

Set of bearings S 25



TECHN. DATA / ITEMS SUPPLIED

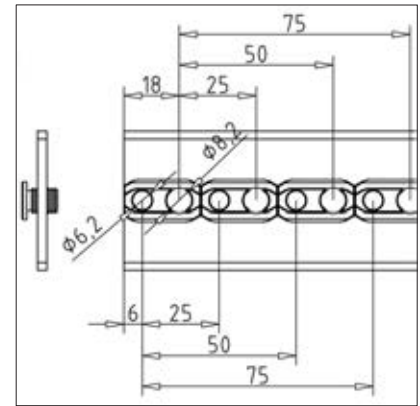
- Bearing bushing, steel, with ball bearing
- Locking clip, steel
- Roller carrier, ABS grey
- For conveyor rollers from 60 - 1000 mm
- Load/roller max. 33 kg
- Weight = 0.056 kg/piece



APPLICATIONS

- Roller tracks of unlimited length
- The production of a conveyor roller requires:
2x ABS bearing set
1x tube ABS, aluminium or stainless steel in appropriate length
1x steel shaft with \varnothing 8 mm **Part no. 171840/0** in appropriate length
(For length data of tube and shaft, see Part no. 21.0891/0 or 21.0895/0)

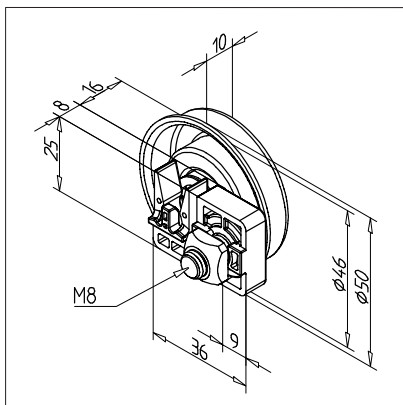
Part No. 21.0893/0



ASSEMBLY

- Assembly of the roller carrier on all profiles of profile series 45 possible
- Press bearing bush into the tube (deburr the inside of the tube generously for improved assembly)
- Install shaft \varnothing 8 mm and secure with locking clip
- Place roller carrier on axle and insert in profile groove
- For axial securing of the roller carriers, we recommend fixing the T-slot bars or square nuts in the profile groove with setscrews or close off the profile end with an end cap AL

Set of bearings S 36



TECHN. DATA / ITEMS SUPPLIED

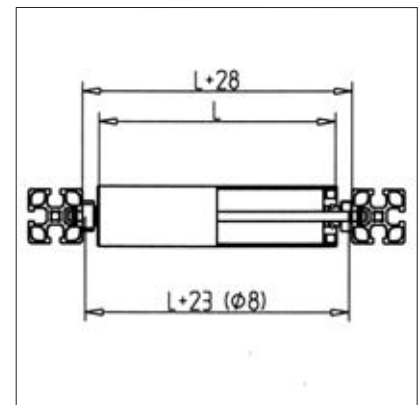
- With fastening material steel, zinc plated
- Bearing bushing, steel, with ball bearing
- Locking clip, steel
- Roller carrier, PP grey
- For conveyor rollers from 60 - 1000 mm
- Load/roller max. 33 kg
- Max. tightening torque: 5 Nm
- Weight = 0.070 kg/piece



APPLICATIONS

- Roller tracks of unlimited length
- Roles are individually interchangeable
- The following is needed to make a conveyor roller:
2x bearing set, ABS
1x tube ABS, aluminium or stainless steel with appropriate length
1x steel shaft with \varnothing 8 mm
Part no. 171840/0 in appropriate length

Part No. 21.1722/0

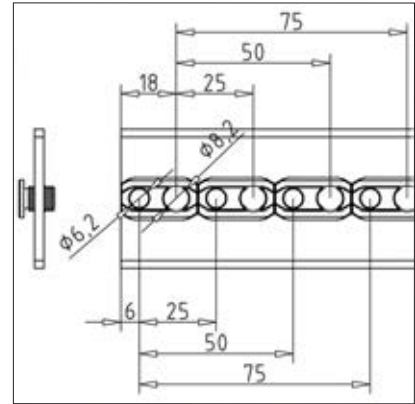
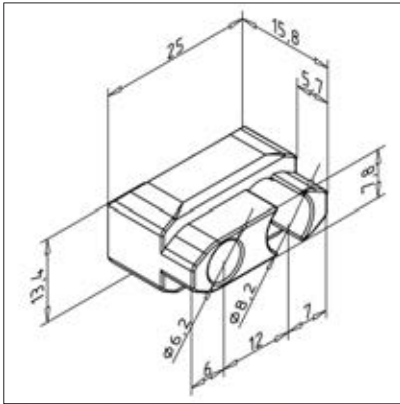


ASSEMBLY

- Assembly of the roller carrier on all profiles of profile series 45 possible
- Mount roller carrier to the profile
- Press bearing bush into the tube (deburr the inside of the tube generously for improved assembly)
- Install shaft \varnothing 8 mm and secure with locking clip
- Clip in transport roller

Roller carrier 25

Part No. 22.1196/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, Injection Mould, grey
- Load capacity 15 kg/carrier
- Weight = 0.003 kg/piece

APPLICATIONS

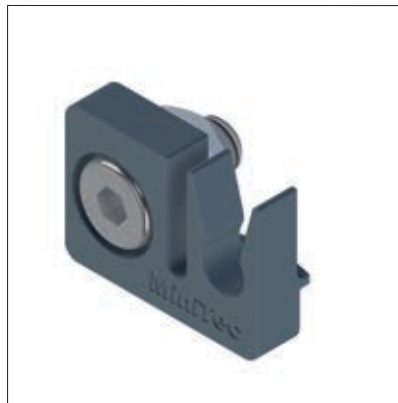
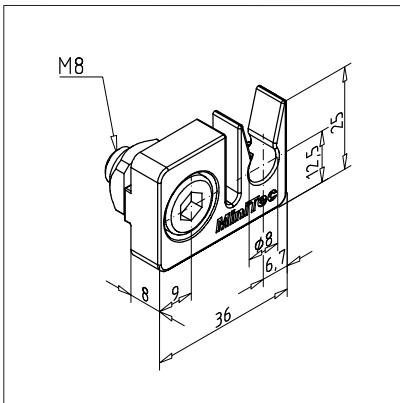
- For producing roller tracks with any roller division
- Minimum possible roll pitch 25 mm
- Roller axis \varnothing 8 mm, alternatively \varnothing 6 mm
- Design notes on frame widths and roller lengths for rollers with ball bearing under **Part no. 21.0891/0** or **21.0895/0** for rollers with plain bearing under **Part no. 21.0890/0** or **21.0892/0**

ASSEMBLY

- Place pulley carrier left and right onto the transport roller
- Insert transport roller with the pulley carrier into the profile grooves
- For axial securing of the roller carriers, we recommend fixing the T-slot bars or square nuts in the profile groove with setscrews or close off the profile end with an end cap AL

Roller carrier 36

Part No. 22.1190/0



TECHN. DATA / ITEMS SUPPLIED

- PA, Injection Mould, grey
- Fastening material steel, galvanized
- Load capacity 15 kg/carrier
- Max. tightening torque: 5 Nm
- Weight = 0.017 kg/piece

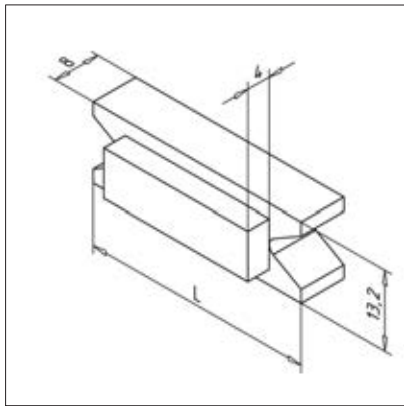
APPLICATIONS

- For producing roller tracks with any roller division
- Smallest possible division of roles 36 mm
- Roller axis \varnothing 8 mm
- Design notes on frame widths and roller lengths for rollers with ball bearing under **Part no. 21.1722/0** for rollers with plain bearing under **Part no. 21.1056/0**

ASSEMBLY

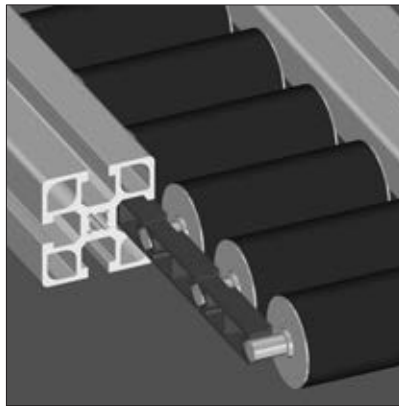
- Attach the roller carrier to the profile at the desired distance
- Insert axle of transport roller into pulley carrier

Spacer



TECHN. DATA / ITEMS SUPPLIED

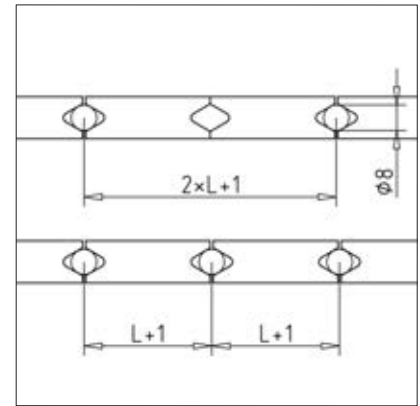
- PP, black
- Different versions:
Spacer 39, PP black, **part no. 22.1197/0**
Spacer 44, PP black, **part no. 22.1198/0**
- Spacer 39 - L = 39 mm
Spacer 44 - L = 44 mm
- For shaft \varnothing 8 mm



APPLICATIONS

- For manufacturing roller conveyors with same or different pitch distances
- Suitable for all system grooves
- A large number of different pitches can be implemented, particularly by combining spacer 39 and spacer 44
- For use with our conveyor rollers 50-25 or conveyor rollers S 50-25
- If smaller roller diameters are used, the max. smallest roller pitch achievable is 40 or 45 mm

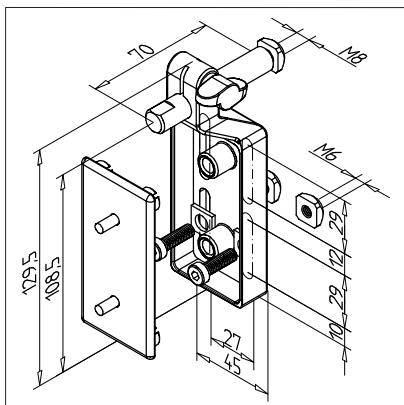
Part No. ---,----/-



ASSEMBLY

- Alternately push the spacer and conveyor roller into the groove
- Clamp the first and the last spacer

Lateral guide 70 support



TECHN. DATA / ITEMS SUPPLIED

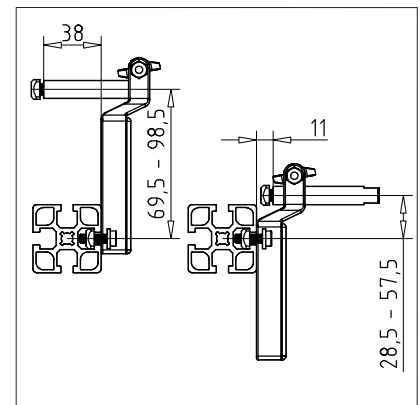
- PA, grey
- Distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.162 kg/piece



APPLICATIONS

- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance from single holder approx. 500 mm

Part No. 29.5025/0

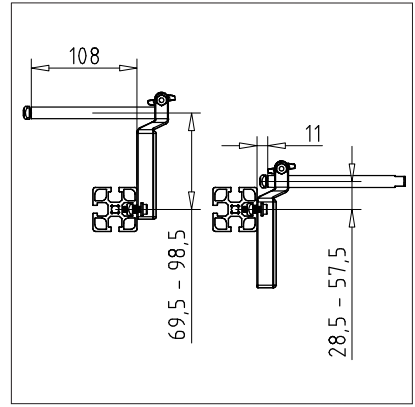
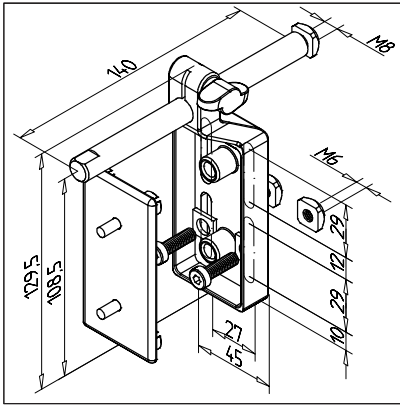


ASSEMBLY

- Set the height and tighten the screws
- Install lateral guidance, lateral guidance F or lateral guidance 40F
- Adjust lateral distance bolt

Lateral guide 140 support

Part No. 29.5028/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.223 kg/piece

APPLICATIONS

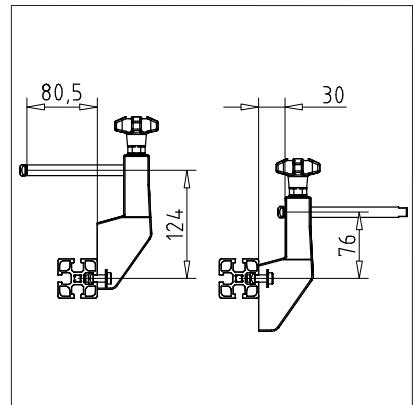
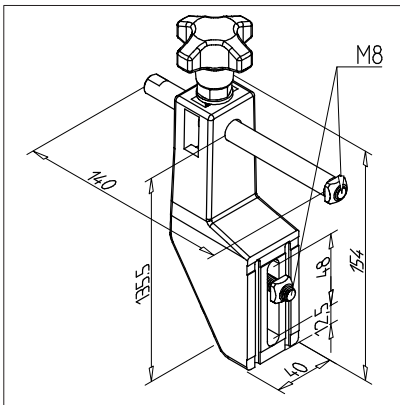
- Adjustable side guide on MiniTec roller tracks
- Recommended distance from single holder approx. 500 mm

ASSEMBLY

- Set the height and tighten the screws
- Install lateral guidance, lateral guidance F or lateral guidance 40F
- Adjust lateral distance bolt

Lateral guide S 140 support

Part No. 29.5055/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- Distance bolt, stainless steel
- Weight = 0.350 kg/piece

APPLICATIONS

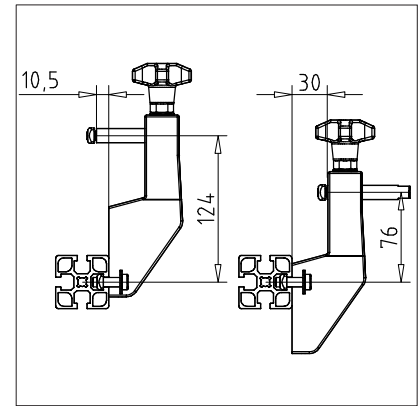
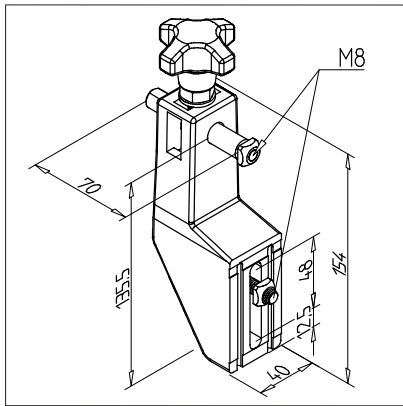
- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance from single holder approx. 500 mm

ASSEMBLY

- Set the height and tighten the screws
- Install lateral guidance, lateral guidance F or lateral guidance 40F
- Adjust lateral distance bolt

Lateral guide S 70 support

Part No. 29.5056/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- With fastening material steel, zinc plated
- Distance bolt, stainless steel
- Weight = 0.288 kg/piece

APPLICATIONS

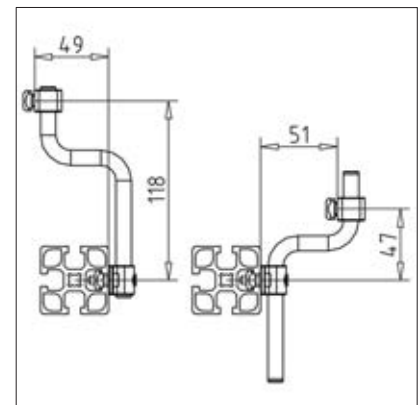
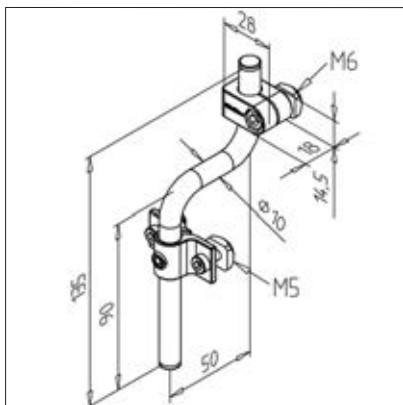
- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance from single holder approx. 500 mm

ASSEMBLY

- Set the height and tighten the screws
- Install lateral guidance, lateral guidance F or lateral guidance 40F
- Adjust lateral distance bolt

Lateral guide support, short

Part No. 29.5046/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Holder on top, ABS, grey
- Adjusting rod and holder at the bottom, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.097 kg/piece

APPLICATIONS

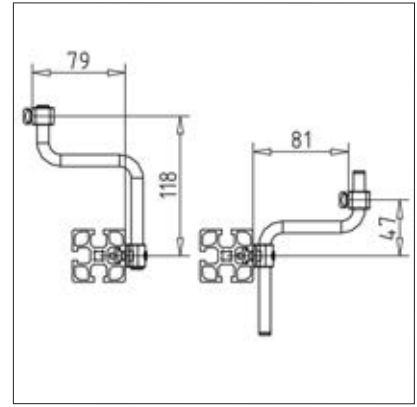
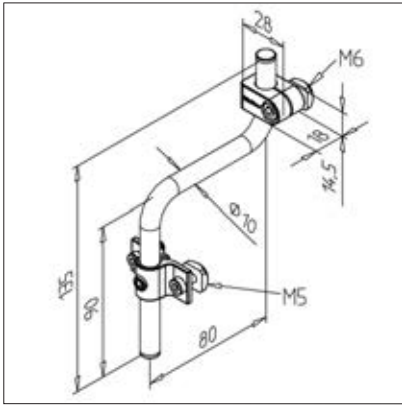
- Adjustable lateral guide for MiniTec roller conveyor, conveyor belt etc.
- we recommend approx. 300 mm distance between the supports

ASSEMBLY

- slide square nut into base frame of conveyor and adjust the support
- adjust height and distance
- Install lateral guidance, lateral guidance F or lateral guidance 40F

Lateral guide support, long

Part No. 29.5047/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Holder on top, ABS, grey
- Adjusting rod and holder at the bottom, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.104 kg/piece

APPLICATIONS

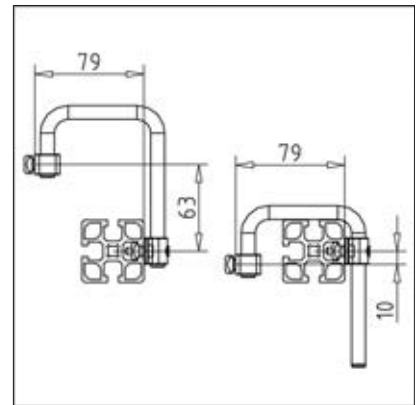
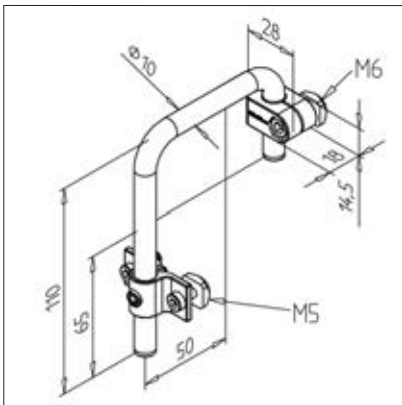
- Adjustable lateral guide for MiniTec roller conveyor, conveyor belt etc.
- we recommend approx. 300 mm distance between the supports
- Larger adjustment ranges possible than with the lateral guide **Part no 29.5046/0**

ASSEMBLY

- slide square nut into base frame of conveyor and adjust the support
- adjust height and distance
- Install lateral guidance, lateral guidance F or lateral guidance 40F

Lateral guide support, U-shape

Part No. 29.5048/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Holder on top, ABS, grey
- Adjusting rod and holder at the bottom, stainless steel
- With fastening material steel, zinc plated
- Weight = 0.108 kg/piece

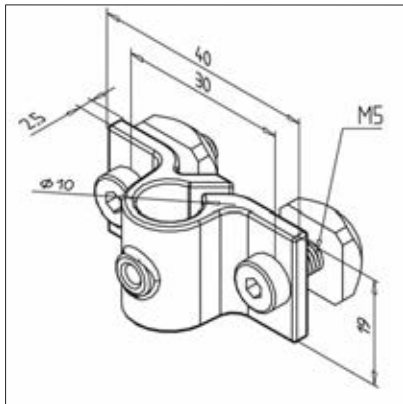
APPLICATIONS

- Adjustable lateral guide for MiniTec roller conveyor, conveyor belt etc.
- we recommend approx. 300 mm distance between the supports
- Lateral guide can be completely pushed down onto the roller conveyor or belt conveyor, for flat goods to be conveyed

ASSEMBLY

- slide square nut into base frame of conveyor and adjust the support
- adjust height and distance
- Install lateral guidance, lateral guidance F or lateral guidance 40F

Clamp holder 10



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel, blasted
- 1.4301 / steel zinc plated
- With fastening material steel, zinc plated
- Weight = 0.043 kg/piece



APPLICATIONS

- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance from single holder approx. 500 mm

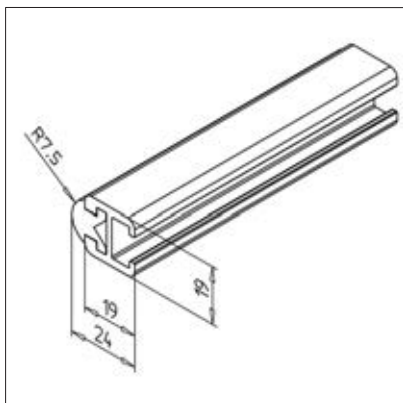


Part No. 29.5052/0

ASSEMBLY

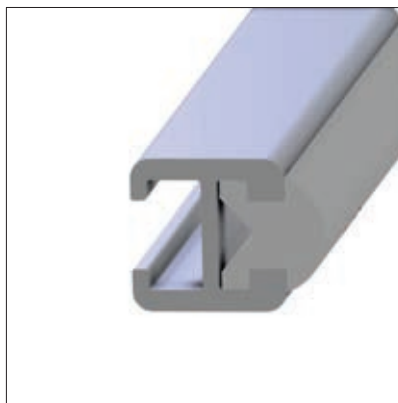
- Fasten on profile groove

Lateral guide, belt conveyor



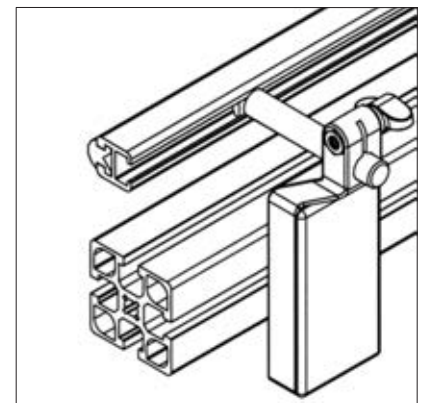
TECHN. DATA / ITEMS SUPPLIED

- Aluminium, E6/EV1
- Slide profile, PE, natural
- Bar length = 6 m



APPLICATIONS

- Recommended length: axial distance A + 40 mm
- Adjustable lateral guides for MiniTec belt conveyors



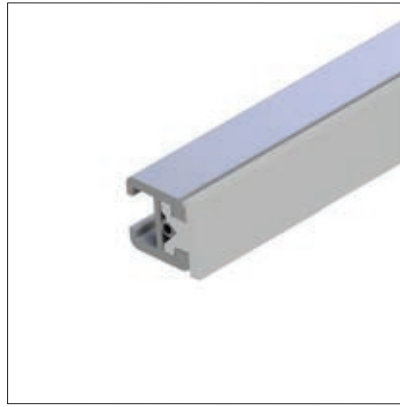
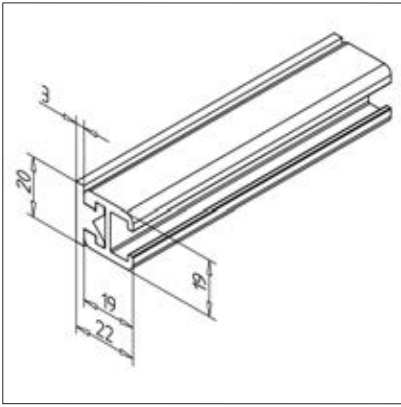
Part No. 29.5034/0

ASSEMBLY

- Square nut M8 from mounting kit for holder side guide into receiving groove
- Screw the lateral guide on the distance bolt
- suitable end cap **part no. 22.1180/0**

Lateral guide F

Part No. 29.5049/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, E6/EV1
- Slide profile, PE, natural
- Bar length = 6 m

APPLICATIONS

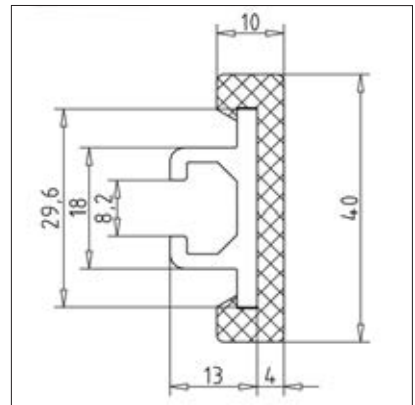
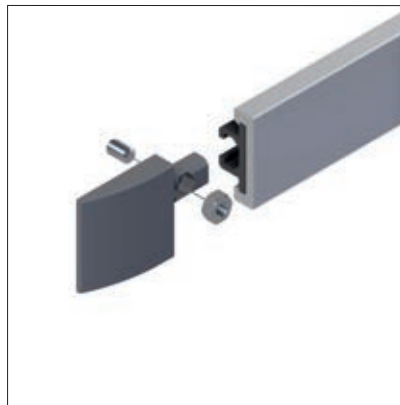
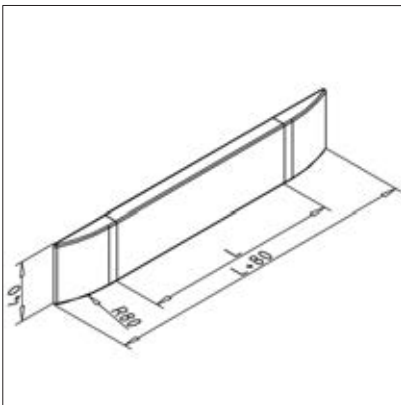
- adjustable lateral guidance for MiniTec chain conveyors, belt conveyors and roller conveyors

ASSEMBLY

- Square nut M8 from mounting kit for holder side guide into receiving groove
- Fix the holder to the side guide and adjust it
- suitable end cap **part no. 22.1180/0**

Lateral guide 40 F white

Part No. 29.5051/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, E6/EV1
- Sliding profile PE, white
- 2 x slide PA, grey
- Other colours and versions of the slide rail on request, e.g. green, black, grey, black antistatic
- Bar length = 6 m

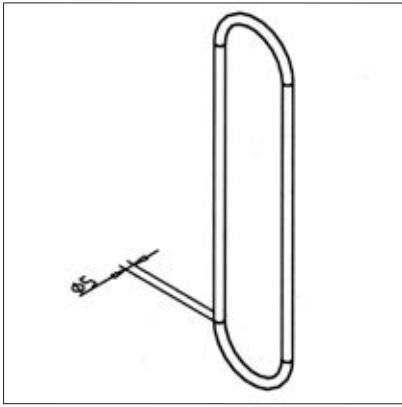
APPLICATIONS

- adjustable lateral guidance for MiniTec chain conveyors, belt conveyors and roller conveyors

ASSEMBLY

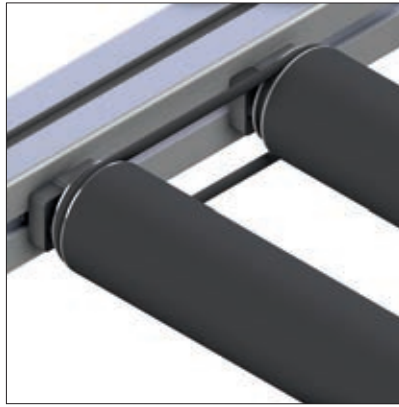
- Square nut M8 from mounting kit for holder side guide into receiving groove
- Fix the holder to the side guide and adjust it

Drive belt NBR



TECHN. DATA / ITEMS SUPPLIED

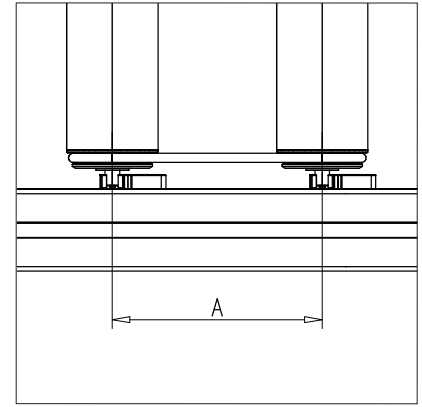
- NBR, black
- Ø 5 mm
- Available lengths:
part no.. 21.1050/1 for A = 66 mm
part no.. 21.1050/2 for A = 90 mm
part no.. 21.1050/3 for A = 121 mm
part no.. 21.1050/4 for A = 149 mm
part no.. 21.1050/5 for A = 176 mm
part no.. 21.1050/6 for A = 215 mm
 other lengths and designs on request



APPLICATIONS

- Drive the rollers with each other via the groove in the bearing sets. Preferably realize inaccessible places

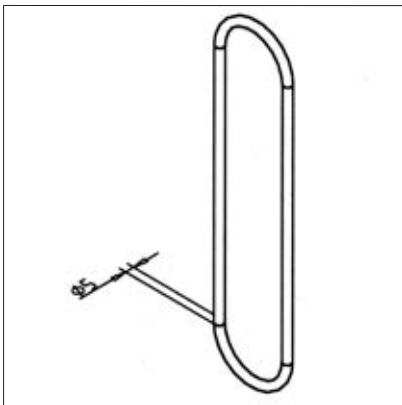
Part No. --,----/-



ASSEMBLY

- Insert the belt into the groove of the first roller and clip the roller into the bearing set
- Strap the belt over the second roller and, under tension, clip the roller into the bearing set

Drive belt PU



TECHN. DATA / ITEMS SUPPLIED

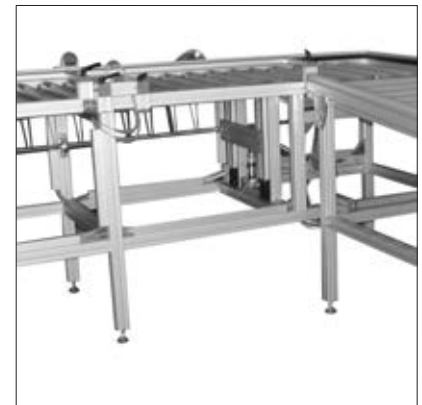
- PU, green
- Ø 5 mm
- Endless length 550 mm
- Weight = 0.050 kg/piece



APPLICATIONS

- Drive of conveyor rollers via king shaft
- When driving roller pairs, one obtains a center distance A = 207 mm

Part No. 21.1050/7

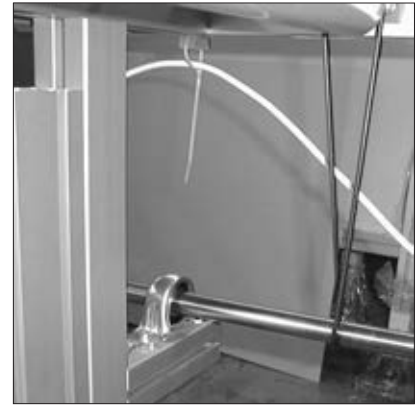
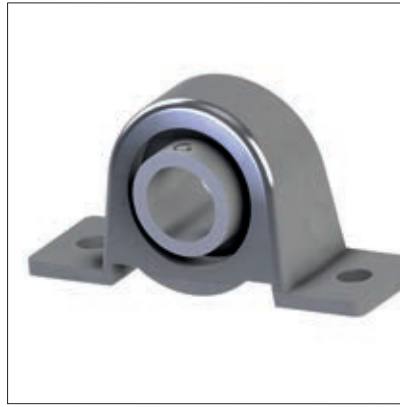
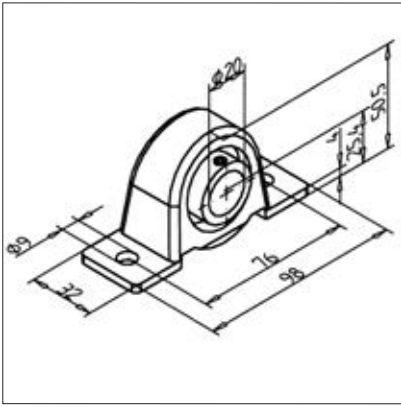


ASSEMBLY

- Strip driving belt over driving shaft
- Strap the belt over individual rollers and clip
- Rolls in inaccessible places with drive belt NBR **part no. 21.1050/1** bis **part no. 21.1050/6** connect

Support bearing 20

Part No. 50.0128/0



TECHN. DATA / ITEMS SUPPLIED

- Pedestal bearing steel, galvanized
- Bore \varnothing 20 mm
- stat. C0 = 6350 N
- dyn. C = 13000 N
- With fastening material steel, zinc plated
- Weight = 0.210 kg/piece

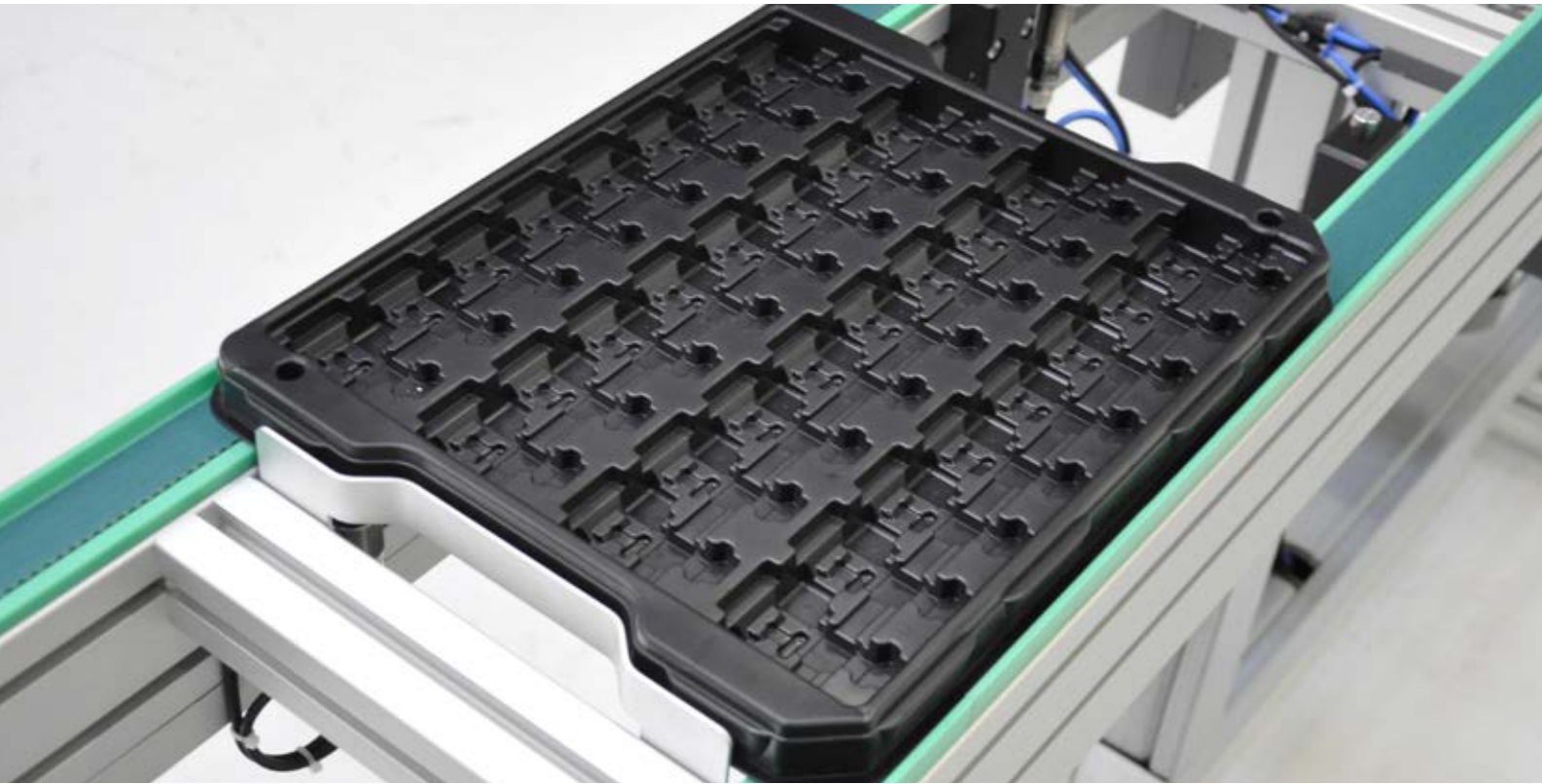
APPLICATIONS

- Production of roller tracks with drive in any length
- Drive of conveyor rollers via king shaft

ASSEMBLY

- With fastening material included
- Lead shaft trough bearing and secure with set screw

TSG transfer system



Modular, economical, robust

Flexibility in production is becoming increasingly important. Quick and easy adaptation to product development or changed market requirements are a decisive factor for success. The TSG transfer system corresponds to this trend. All advantages of our modular system for mechanical engineering and the precision of our linear system are used in this system. TSG is fully compatible with the proven MiniTec profile system with workstations, protective equipment, conveyor systems, handling equipment etc. Manual stations and complex automated processes can be realized economically with the TSG transfer system. It is a particularly economical solution for low unit weights. The

TSG transfer system consists of standardized modules that can be combined as required to form customized systems. Robust timing belts 25 T5 with steel reinforcement ensure continuous operation without re-tensioning. The TSG transfer systems are available as modules for installation by the customer or as ready-to-operate systems, including commissioning. Planning and layout of the plant can also be carried out by us according to customer specifications. For simple requirements, checklists can be used in the appendix of this catalogue.

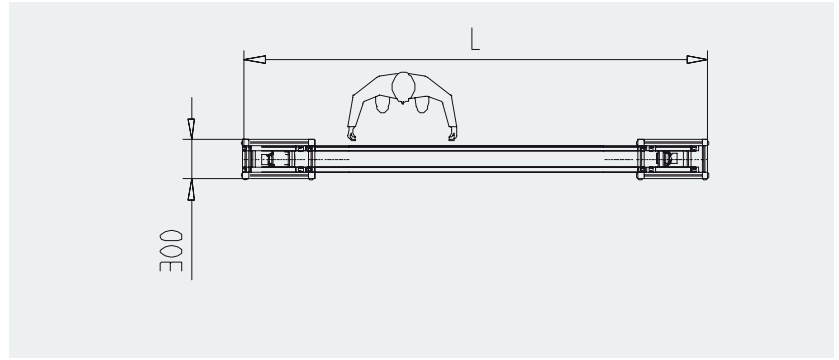
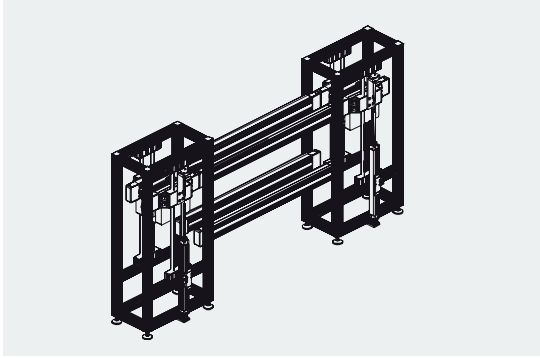
Technical Data

- Travel Speed: 11m/min*
- Motor Rated Power: 120 W
- Rated voltage (without frequency converter): 400 V/50 Hz
- Rated voltage (with frequency converter): 230 V/50 Hz-
Rated current: 0,29 A
- Output speed: 64 1/min
- Output torque: 13 Nm
- Line load: 1710 N
- Ambient temperature: 0° to 50°C

*Further travel speeds are available in the range 5.5 to 21 m/min. The maximum line load is 1710 N. At speeds greater than 11 m/min, the maximum line load is reduced.

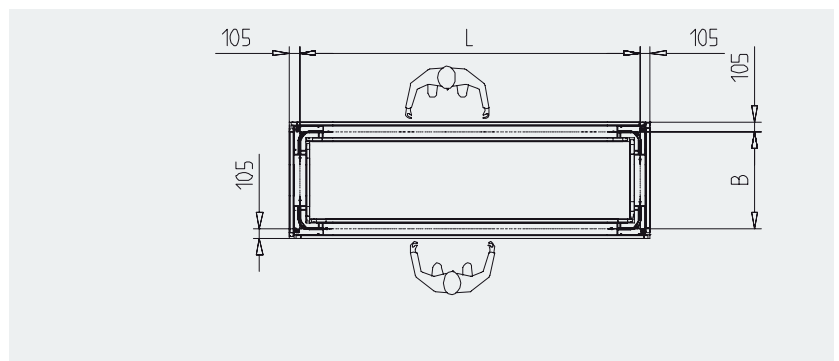
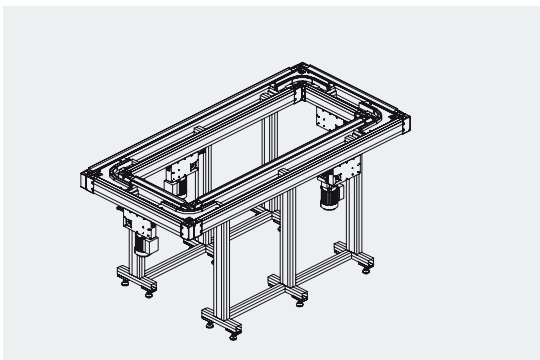
POSSIBLE CONSTRUCTIONS & VERSIONS

Vertical circulation



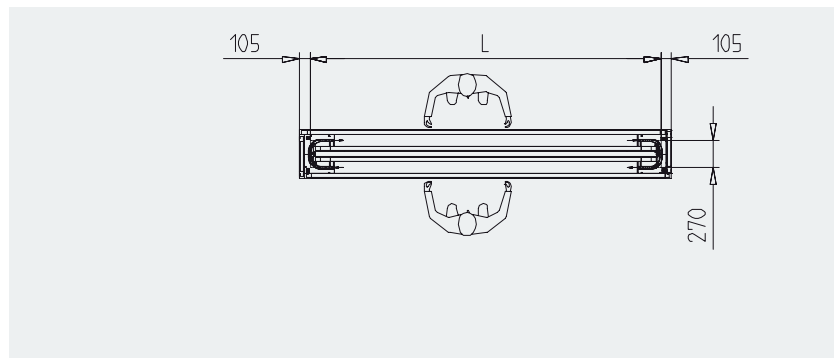
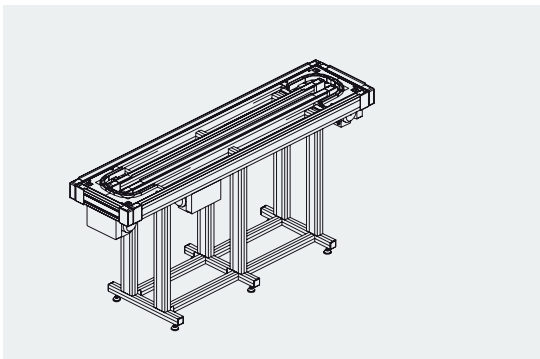
Advantage: low space requirement

Base circulation 90°



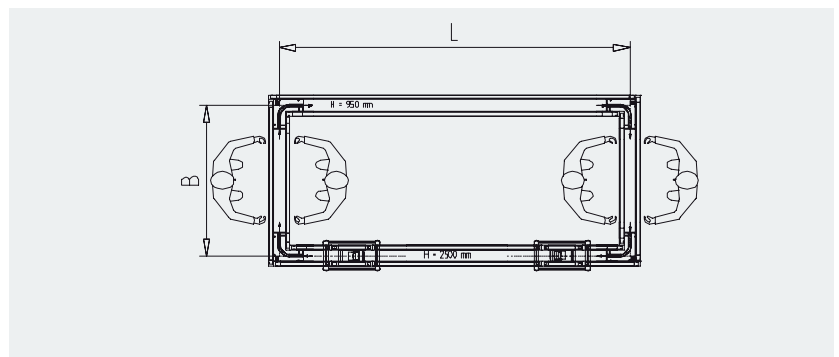
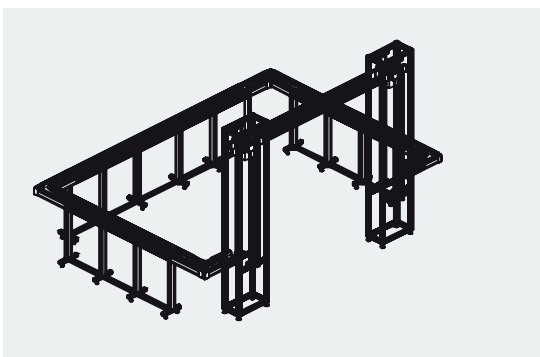
Advantages: low investment, simple installation, minimal control effort

Compact Circulating 180°



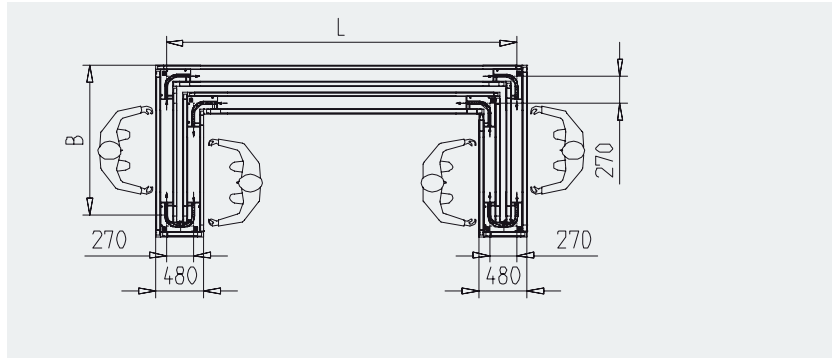
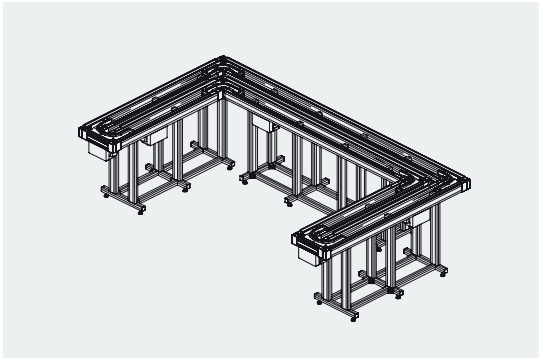
Advantage: low space requirement and capital expenditure, simple installation, minimal control effort

U-Circulation with lifting station



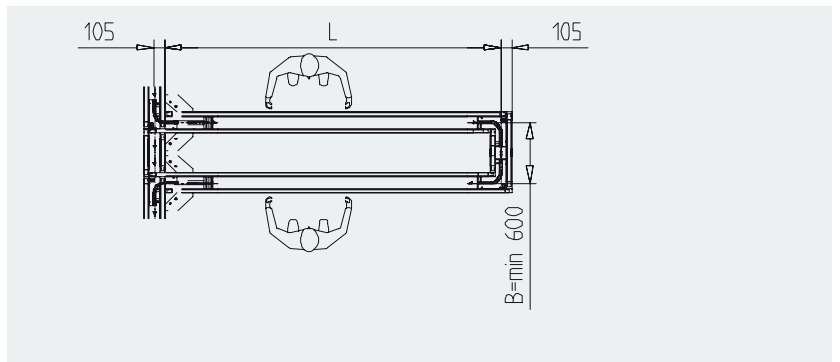
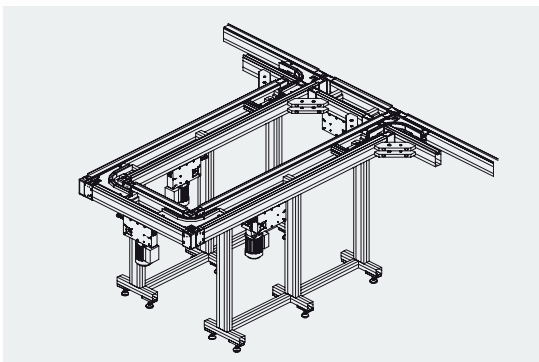
Advantage: great accessibility and optimal land use

Double U-circulation



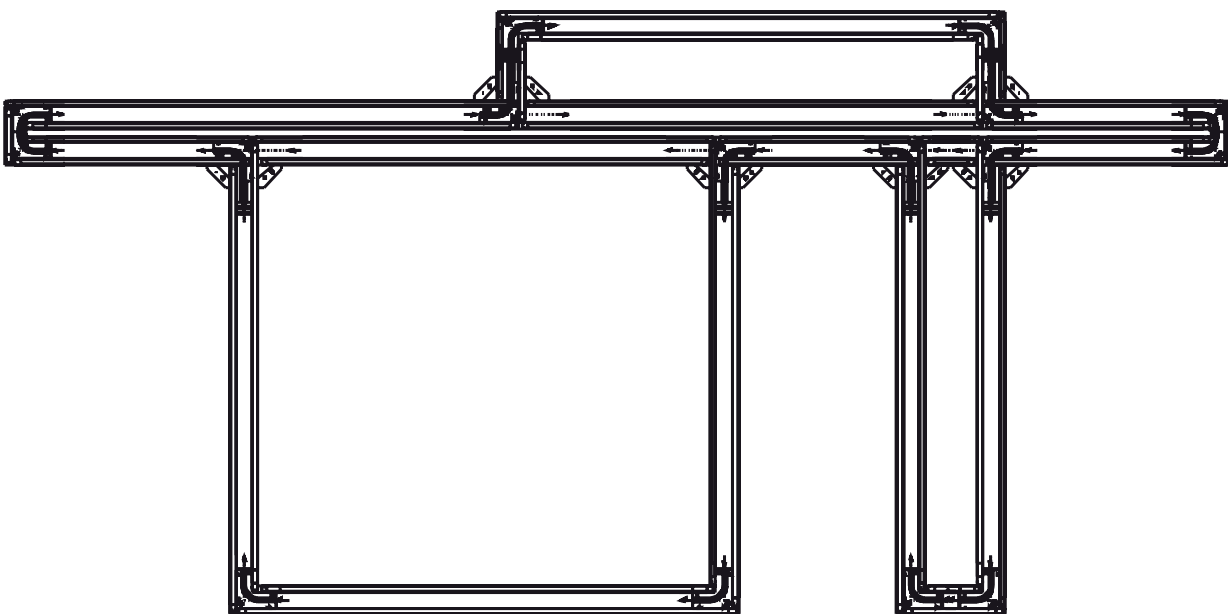
Advantage: optimal use of space, availability of the entire conveyor line

Inquiry Sub-Enclosure

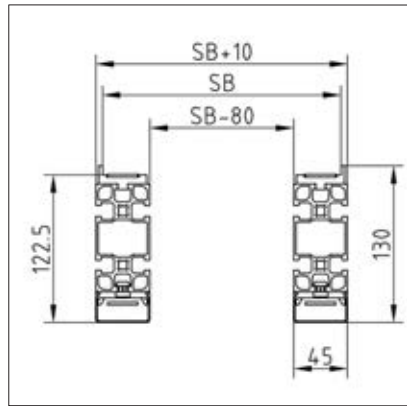


Advantage: Cycle-decoupled production, high conversion and quantity flexibility

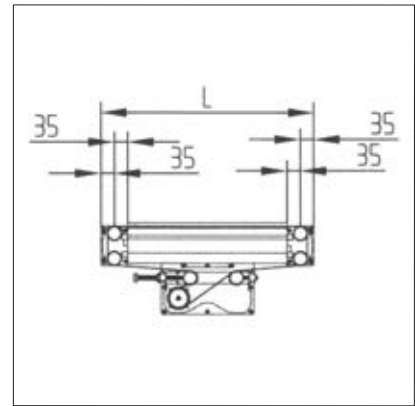
Combination of different variants



Basic line



Part No. 43.0020/0



TECHN. DATA / ITEMS SUPPLIED

- $I_x = 112.823 \text{ cm}^4$
- $I_y = 28.526 \text{ cm}^4$
- Profile 45 x 90F, anodized, E6/EV1
- Sliding strip made of PE, black, extremely abrasion resistant, L max: 2 m
- Cover profile for belt return with clip fastening
- Timing belt for drive
- Spreading width (SB): universal
- Route length = L-140 mm
- Track length min. 270 mm
- Track length min. 4000 mm

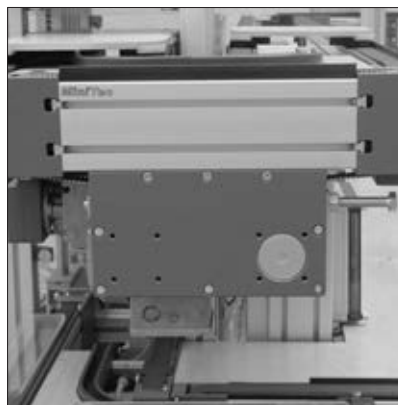
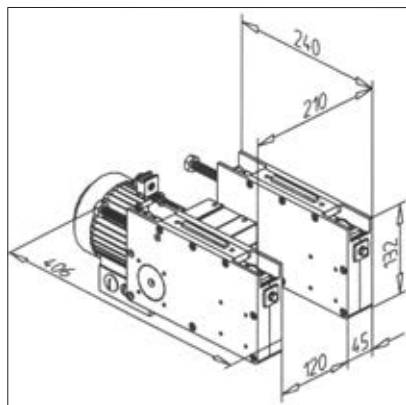
APPLICATIONS

- Implementation in all TSG transfer systems
- Max. track load depending on drive concept (see table Technical data)
- When exceeding the total load per section, please divide into several sections
- Timing belt length calculation formula:
Length of timing belt = $(L - 70) \times 2 + 473$ mm round up to 5 mm pitch

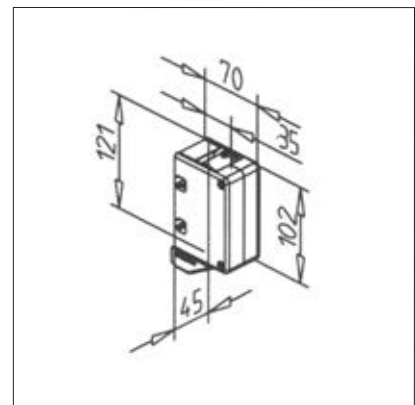
ASSEMBLY

- Screw the basic distance with supports
- After attachment of drive unit, diversions and timing belts, clip cover profile onto underside of profile
- Free profile grooves for attaching stoppers, sensors, switches, ect. With standard screws

Basic module 200



Part No. 43.0010/0



TECHN. DATA / ITEMS SUPPLIED

- Drive unit with integrated belt tensioners comprising 2 belt drives with connecting shaft and 1 motor
- 4 timing belt reverse units for 25 T5 timing belt
- Track width: 200 mm

APPLICATIONS

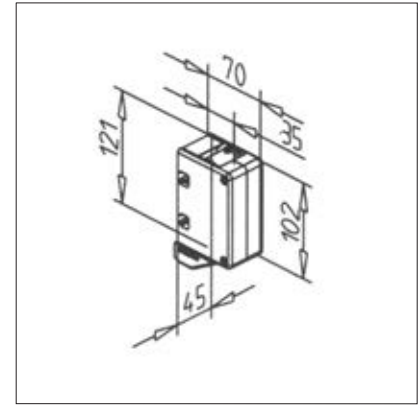
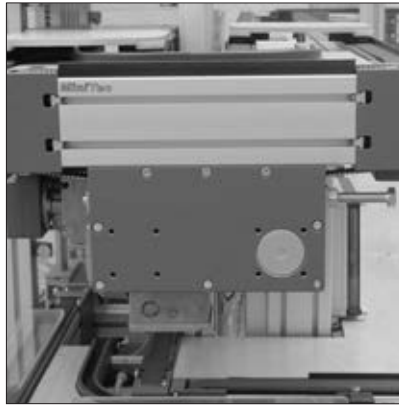
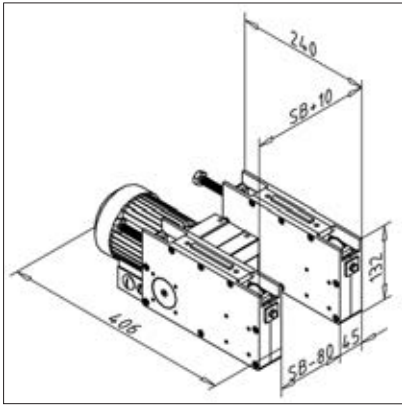
- All TSG transfer systems with 25 T5 timing belt

ASSEMBLY

- Remove drive unit cover
- Screw drive unit securely with attachment set centrally on the bottom of the basic line
- Remove covers from reverse units
- Fasten reverse units with profile connectors at the ends of the base section
- Insert timing belt
- Install cover of drive units and reverse units
- Tighten the timing belt
- Easy re-tightening of timing belt at drive unit, without prior disassembly, also during operation

Basic module, variable

Part No. 43.0011/0



TECHN. DATA / ITEMS SUPPLIED

- Drive unit with integrated belt tensioners comprising 2 belt drives with connecting shaft and 1 motor
- 4 timing belt reverse units for 25 T5 timing belt
- Please specify the desired track width

APPLICATIONS

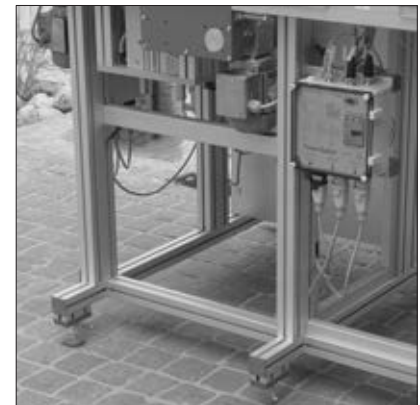
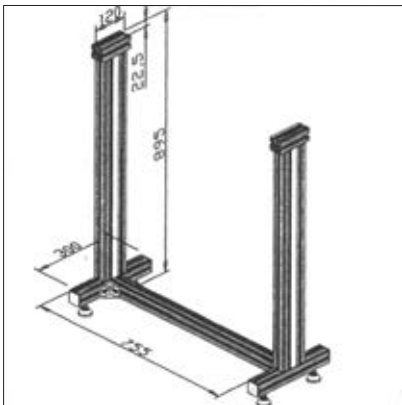
- Transfer systems with deviant track width
- Width according to dimension L of basic line

ASSEMBLY

- Remove drive unit cover
- Screw drive unit securely with attachment set centrally on the bottom of the basic line
- Remove covers from reverse units
- Fasten reverse units with profile connectors at the ends of the base section
- Insert timing belt
- Install cover of drive units and reverse units
- Tighten the timing belt
- Easy re-tightening of timing belt at drive unit, without prior disassembly, also during operation
- Base frames, corner transfer and workpiece carrier upon request

Base frame 200

Part No. 43.0030/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 45 F, completely assembled
- with fastening material for connecting to the base section
- 4 height adjustable feet
- Create longer lines with additional add-on supports
- Height 895 mm for standard working height of 950 mm
- Length 755 mm for line length of 1000 mm

APPLICATIONS

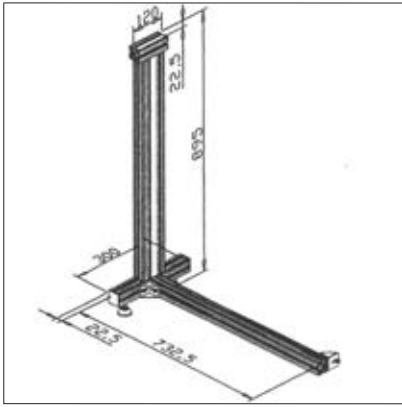
- Subframe for transfer system with standard work height of 950 mm
- Suitable for track width 200

ASSEMBLY

- Install transverse profiles with mounting brackets on the lower profile groove between the base section.
- Secure to floor with angles and floor anchors

Extended base frame 200

Part No. 43.0040/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Profile 45 x 45 F, completely assembled
- with fixation material for the connection with the base track and base support
- 2 adjustable feet
- Height 895 mm for standard working height of 950 mm

APPLICATIONS

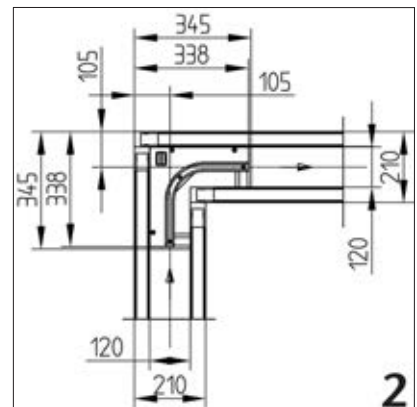
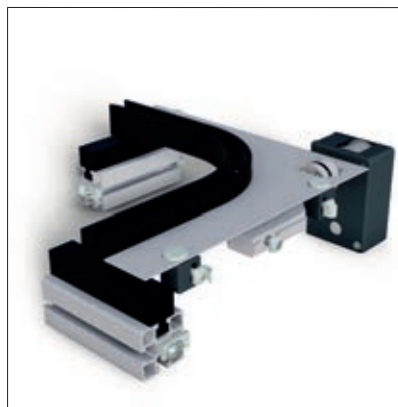
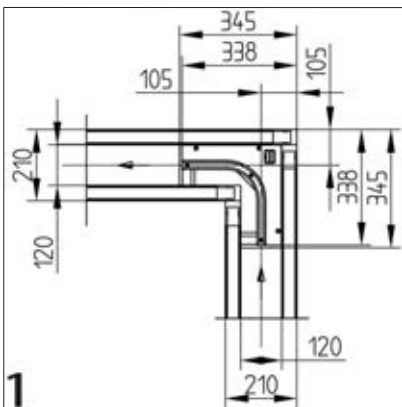
- Substructure for transfer systems with standard working height of 950 mm
- Suitable for track width 200

ASSEMBLY

- Create lengthwise connection with base support
- Install transverse profile L = 120 mm with mounting angles on the lower profile groove between the base section
- Secure to floor with angles and floor anchors

Curve 200 - 90° right / left

Part No. 43.0050/0



TECHN. DATA / ITEMS SUPPLIED

- 1 Traverse
- Friction wheel with drive roller
- Curved guide made of PE
- Cover AL
- Fastening material

APPLICATIONS

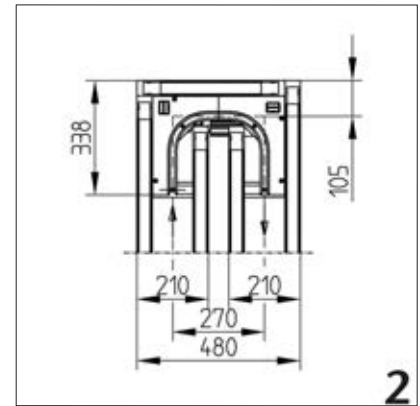
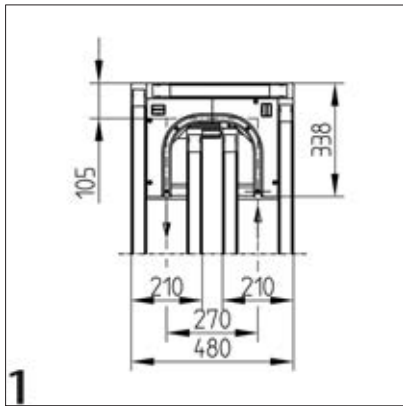
- No separation before curve required
- Production of compact transfer systems, auxiliary connections or combined system concepts
- Suitable for track width 200

ASSEMBLY

- Place the friction wheel on the reverse unit (on the inlet side in the conveying direction)
- Assemble corners with curvilinear guide
- Screw on cover
- Through appropriate assembly design 1, alternative design 2 can be produced

Curve 200 - 180° right / left

Part No. 43.0060/0



TECHN. DATA / ITEMS SUPPLIED

- 1 transverse section with drive module, motor mounted
- Beams with curve guidance made of PE
- 2-part cover
- Friction wheel with drive roller
- Fastening material
- Weight = 13.860 kg/piece

APPLICATIONS

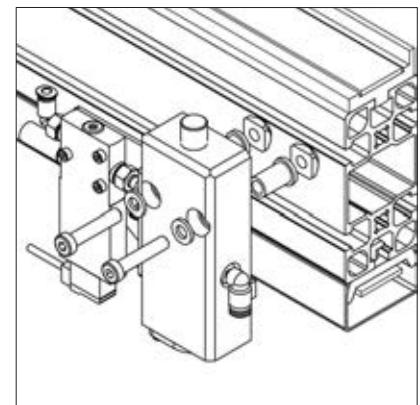
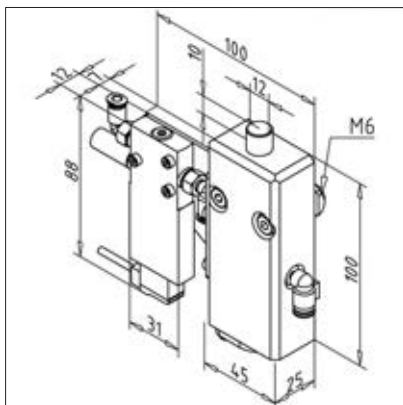
- No separation before curve required
- Production of compact transfer systems, auxiliary connections or combined system concepts
- Suitable for track width 200

ASSEMBLY

- Place the friction wheel on the reverse unit (on the inlet side in the conveying direction)
- Assemble corners with curvilinear guide
- Install transverse transport with assembled drive module
- Screw on cover

Stop

Part No. 43.1510/0



TECHN. DATA / ITEMS SUPPLIED

- Pneumatically actuated
- Housing PE, black
- Fixing pins \varnothing 12 mm made of stainless steel, hardened
- Prepared for connection to internal air supply
- Cylinder and valves integrated
- Fastening kit
- Weight = 0.482 kg/piece

APPLICATIONS

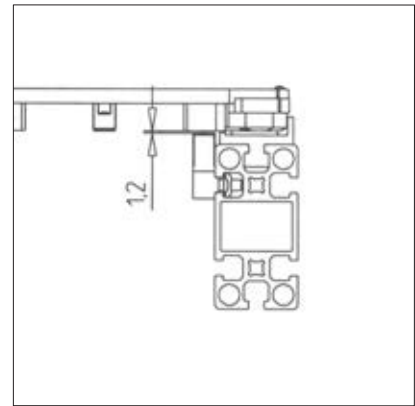
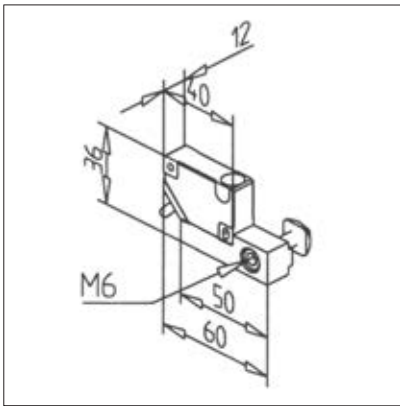
- Separation of workpiece trays before infeed and discharge, lift or lift stations
- Control of priorities in WT flow

ASSEMBLY

- Tighten on the inner side of the conveyor line at the top profile groove
- Make connection to air supply
- Position can be adjusted horizontally
- Separation of tray's by combination of 2 stoppers

Proximity switch

Part No. 43.0090/0



TECHN. DATA / ITEMS SUPPLIED

- Inductive proximity switch PNP type "NO contact"
- Operating distance 4 mm
- Cubic, plastic PBTp
- Operating voltage (V) Oct 36 DC
- Continuous current load 250 mA
- Protection type IP 67
- Fastening kit
- Weight = 0.047 kg/piece

APPLICATIONS

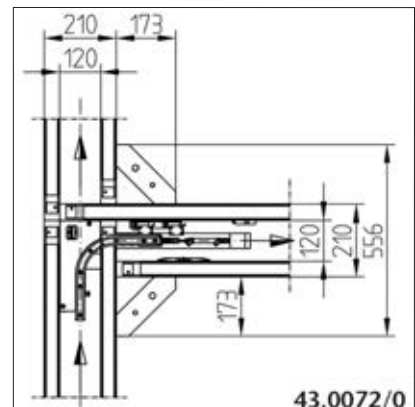
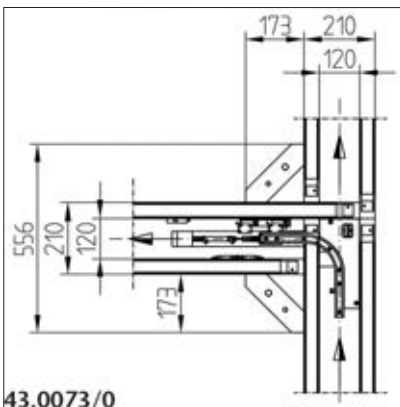
- Switching operations
- Control of system in front of locks, lifting stations and stoppers

ASSEMBLY

- Tighten on the inner side of the conveyor line at the top profile groove
- Position can be adjusted horizontally

Outward transfer 200 left

Part No. 43.0073/0



TECHN. DATA / ITEMS SUPPLIED

- Pneumatically actuated
- Carrier profile 45 x 90
- WT-guide 2 parts, PE
- Cover PE
- Friction wheel with drive roller
- 2 Pneumatic cylinders
- 4 beams
- Fastening material

APPLICATIONS

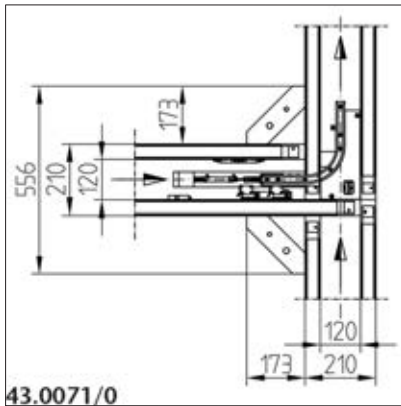
- Deflect WT's from secondary sections into the base circuit
- Separation of work procedures from machine cycle
- Inserting further processing stations
- Forming storage units
- With active outward transfer, the WT is swung out at 90° from the track in transverse transport. The orientation of the WT is not changed.
- If the chute is inactive, the WT remains in the basic circuit
- Status query of the chute via the sensor
- Suitable for track width 200

ASSEMBLY

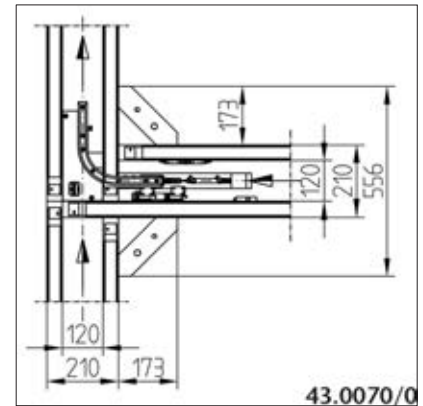
- Outflow on the left **part no. 43.0073/0**
- Mount friction wheel on pulley (in conveyor direction, at the longer conveyor side)
- Install pneumatic cylinder
- Install the guide curve
- Screw on cover
- Connect and align the transverse transport with beams
- Connect pneumatic cylinder to compressed air supply

Inward transfer 200 left

Part No. 43.0071/0



43.0071/0



43.0070/0

TECHN. DATA / ITEMS SUPPLIED

- Pneumatically actuated
- Carrier profile 45 x 90
- WT-guide 2 parts, PE
- Cover PE
- Friction wheel with drive roller
- 2 Pneumatic cylinders
- 4 beams
- Fastening material

APPLICATIONS

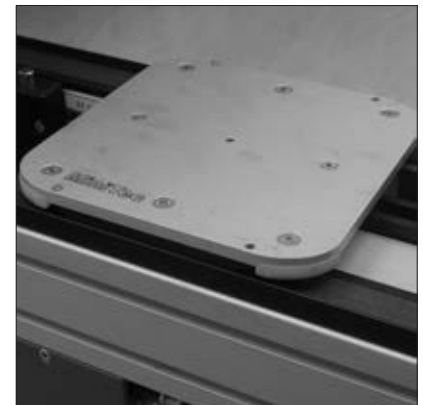
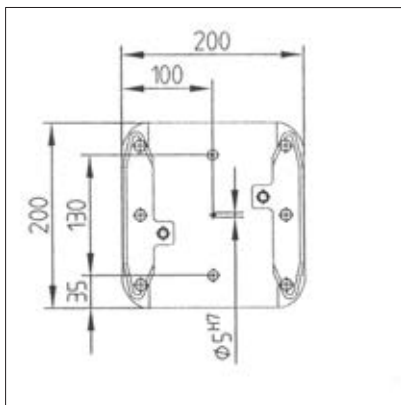
- Return WT's from secondary sections into the base circuit
- Separation of work procedures from machine cycle
- Inserting further processing stations
- Forming storage units
- When the inlet is active, the WT is deflected from the secondary section into the base circuit
- The orientation of the WT is not changed. Status request of transfer with sensor
- Suitable for track width 200

ASSEMBLY

- Inward transfer left **part no. 43.0070/0**
- Mount friction wheel on pulley (in conveyor direction, at the longer conveyor side)
- Install pneumatic cylinder
- Install the guide curve
- Screw on cover
- Connect and align the transverse transport with beams
- Connect pneumatic cylinder to compressed air supply

Workpiece carrier 200

Part No. 43.1000/0



TECHN. DATA / ITEMS SUPPLIED

- Carrier plate Al, progressed on all sides and anodized with centering hole 5H7
- 4 positioning pins, st
- Sliding shoe made of extremely abrasion-resistant PE, with integrated stop for brake
- 2 damping pins, St, for proximity switches
- dimensions 200 x 200 mm
- Max. load capacity: 100 N
- Weight = 1.152 kg/piece

APPLICATIONS

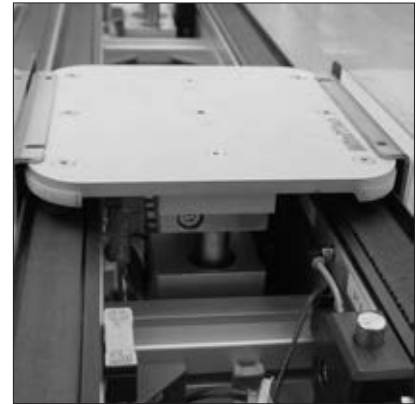
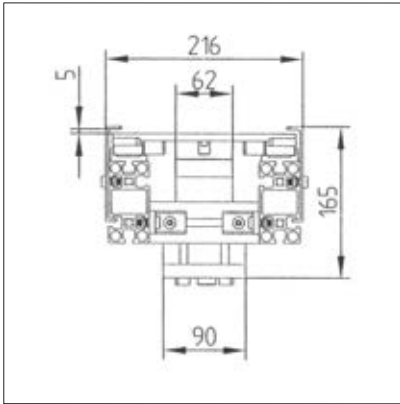
- Recording of workpieces, devices, identification and data storage systems

ASSEMBLY

- Standard-WTs are delivered without holder holes
- Mounting holes for workpieces, devices or identification systems are manufactured according to customer specifications

Positioner

Part No. 43.0110/0



TECHN. DATA / ITEMS SUPPLIED

- Ready-to-install module with double-acting pneumatic cylinder and valve
- WT mount
- 2 override strips, galvanized steel
- Max. load capacity: 100 Kg
- Positioning accuracy: $\pm 0,03$ mm
- Lifting height over conveyor 5 mm
- Weight = 7.693 kg/piece

APPLICATIONS

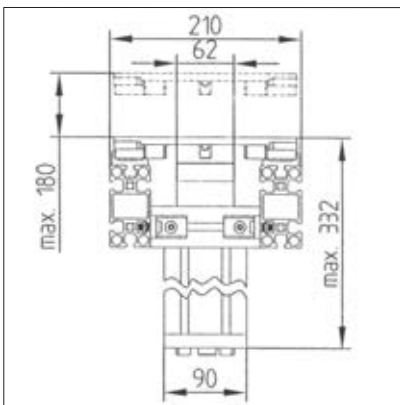
- Exact positioning of workpieces on the workpiece tray for processing or inspection

ASSEMBLY

- Fasten lifting unit to profile section with supplied hardware
- Screw the override strips on the outside of the track, align exactly with the positioner
- Make connection to internal compressed air supply
- Suitable stopper **part no. 43.1510/0** and proximity switch **part no. 43.0090/0**

Lift station 200

Part No. 43.0100/0



TECHN. DATA / ITEMS SUPPLIED

- Ready-to-install module with double-acting pneumatic cylinder and valve
- WT mount
- Lift height: Can be set from 5 mm to 180 mm above belt
- Weight = 6.900 kg/piece

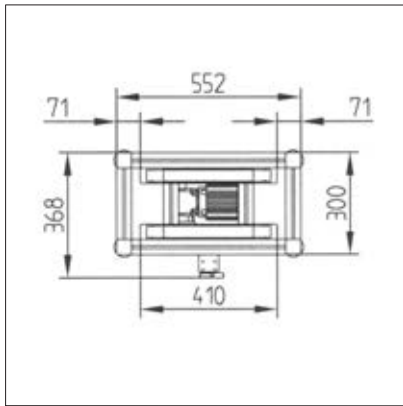
APPLICATIONS

- Exact positioning of workpieces on the workpiece tray for processing or inspection

ASSEMBLY

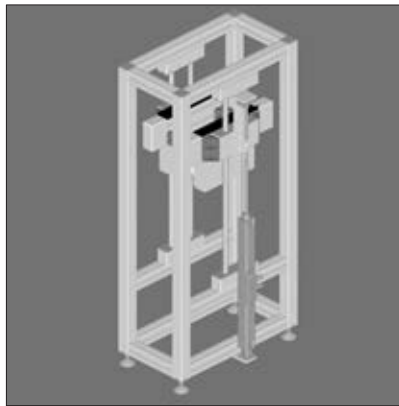
- Fasten lifting station to profile section with supplied hardware
- Make connection to internal compressed air supply
- Suitable stopper **part no. 43.1510/0** and proximity switch **part no. 43.0090/0**

Lift station



TECHN. DATA / ITEMS SUPPLIED

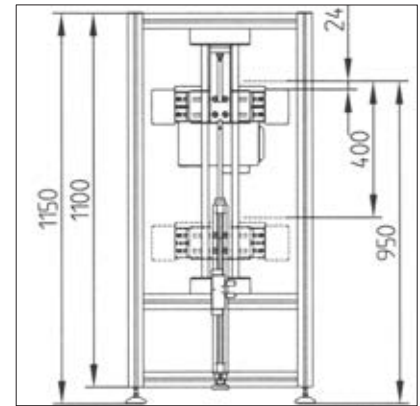
- Aluminium
- Ready assembled module according to customer specification
- Frame structure from construction profiles 45 x 45
- installed on lifting carriages, driven double-track line
- Lift carriage with dual-functioning pneumatic cylinder
- sturdy guidance of the lifting carriage with precision shafts Ø 20 mm and linear units LB series
- Lift height variable according to customer specification
- Max. load capacity: 480 N



APPLICATIONS

- Production of conveyor rollers in any length for roller tracks with or without drive

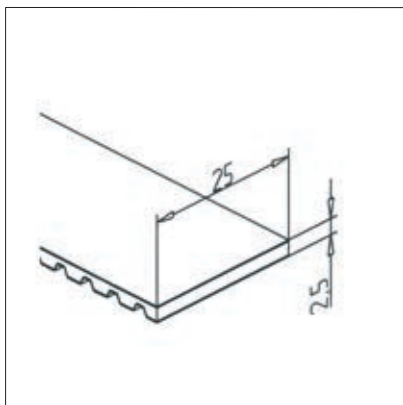
Part No. 43.0080/0



ASSEMBLY

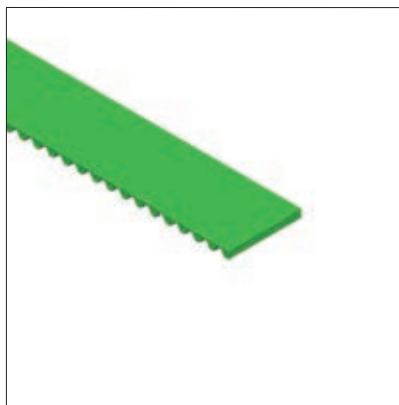
- Align lift station with transport levels

Timing belt TSG



TECHN. DATA / ITEMS SUPPLIED

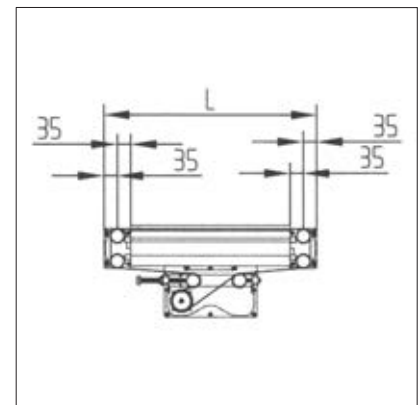
- Endless belts, reinforced with steel inlay
- Covered with plastic fabric on both sides to improve sliding characteristics and reduce friction
- Colour: green
- **When ordering spare parts, specify total length**
- Weight = 0.055 kg/m



APPLICATIONS

- All transfer systems TSG
- Timing belt length calculation formula:
Length of timing belt = $(L - 70) \times 2 + 473$ mm round up to 5 mm pitch

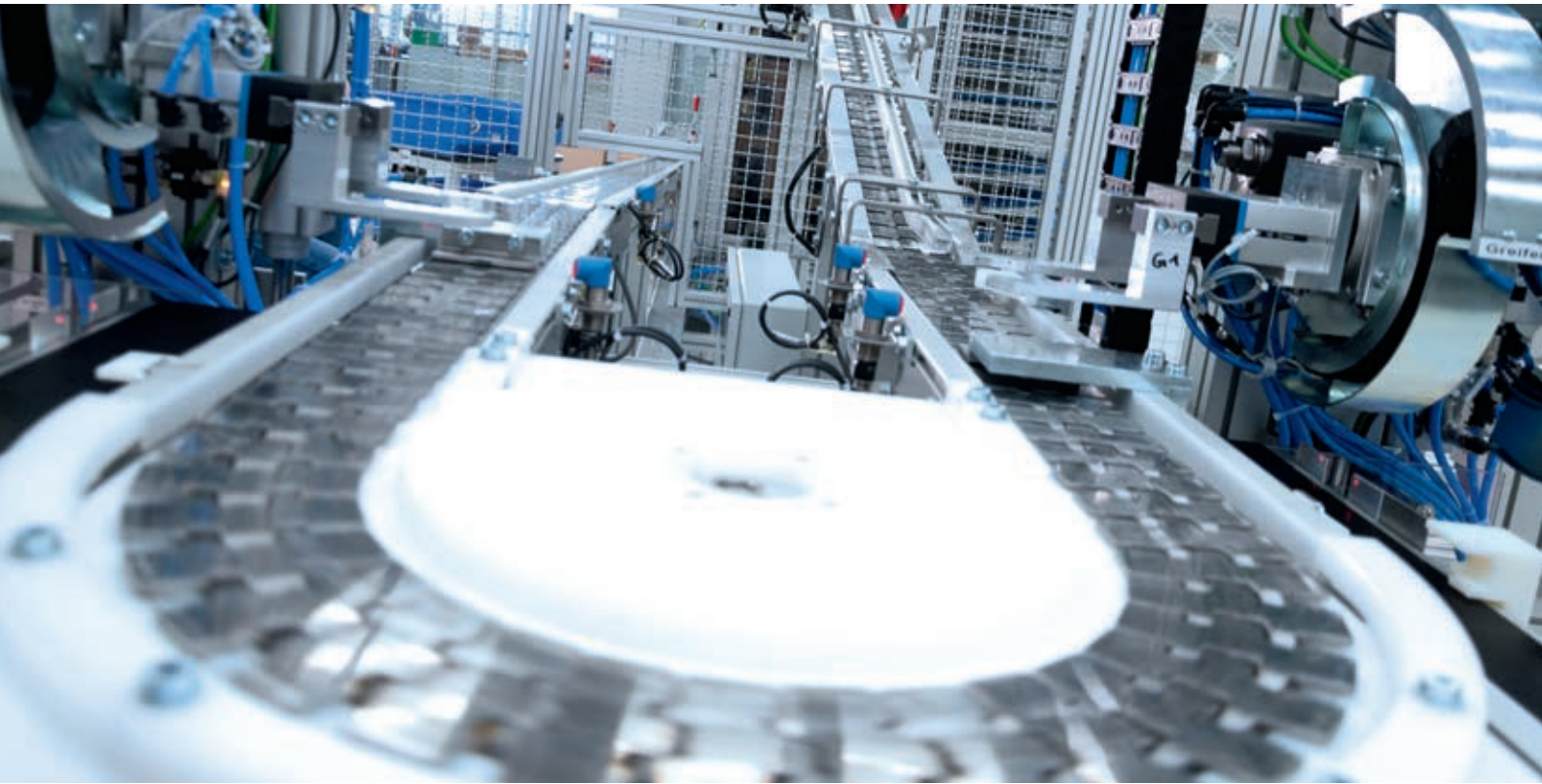
Part No. 43.1411/0



ASSEMBLY

- Remove belt cover (clip lock)
- Remove cover of drive unit and timing belt reverse units
- Insert belt
- Mount cover and belt cover
- Tighten the timing belt

GKF segmented chain conveyors



Turning the corner more easily

The segmented chain conveyor GKF has already proven its reliability in numerous applications. Due to the different requirements, the series has been expanded to include field-tested components. At the same time, the highest level of energy efficiency and utmost flexibility were accorded great importance by our proven modular design. Like all MiniTec constructions, the GKF series is based on the proven MiniTec profile system. The new route profile was constructed according to the same principles, so that the modular system was fully retained. All components are suitable for extensions, attachments or any necessary protective devices. The new conveyor system can be perfectly combined with the proven solutions of MiniTec in the areas of material handling, image processing, labelling, workplace design. The link chain made of plastic or corrosion-resistant stainless steel allows straightforward and curved horizontal and vertical movements. The flexible routing allows space-saving constructions, whereby vertical curve guidance or lifting devices allow the use in several levels.

Application examples segmented chain conveyor GKF

Transport in test facilities. Combination of individual and repackaging systems, labelling, shipping logistics, connection of workstations, assembly lines

Car parts

Filters, gears, fuel pumps, ball bearings, castings, lamps

Cosmetics + Pharmaceuticals

Pharmaceutical packages, gauze bandages, paper rolls, spray cans, body care products, shampoo, toothpaste and toothbrushes, dental instruments.

Food

Trays with fruit, beverage cans, food cans, packaged textiles, coffee tins, coffee packs, plastic bottles, yoghurt, animal feed

Electronics

Electronic components, audio and video equipment, accessories, batteries, mobile phones, computer parts, Note Not suitable for bulk material!

System selection 90 to 314 mm

The systems are available with 8 different plastic chains made of modified acetal and 3 stainless steel versions 1.4016

Chain pins for all chains made of stainless steel 1.4305

Chain pitch uniform: 38.1 mm

The almost gap-free surface also allows the transport of small components!

- Product width 0-428 mm
- Maximum conveyed weight during horizontal transport 10 kg/m °
- Maximum transported goods weight for vertical transport 2 kg/m
- Maximum load on the conveyor 150 kg °
- Max. straight distance of the conveyor section 40 m

	m/min	dB-A
VA-Chain	10	57,3
	30	73,2
Acetal Chain	10	62,8
	30	77,9

Depending on conveyed material, routing and chain, the system is suitable for high conveying speeds of up to 30 m / min. All motors used are provided with overload protection. Optionally, variable frequency drives are available.

Temperature limits

- Plastic chain (dry) -20°C to +80°C
- Plastic chain (wet) 0 ° C to + 60 ° C
- Stainless steel chain -3 ° C to +130 ° C

Integrated solutions

The system is available in assemblies for you to install, or as a ready-to-use system. On request, we undertake the complete design and installation, as well as the commissioning in your company. Our services also include the ergonomic design of workplaces for which we supply the material and information.



Note: Not suitable for bulk material!

All chains are suitable for direct transport of products or pallet transport.

For reasons of energy savings and lower maintenance intensity, we recommend the use of cam wheels instead of horizontal curves. Cam wheels are available with a minimum radius of 200 mm.

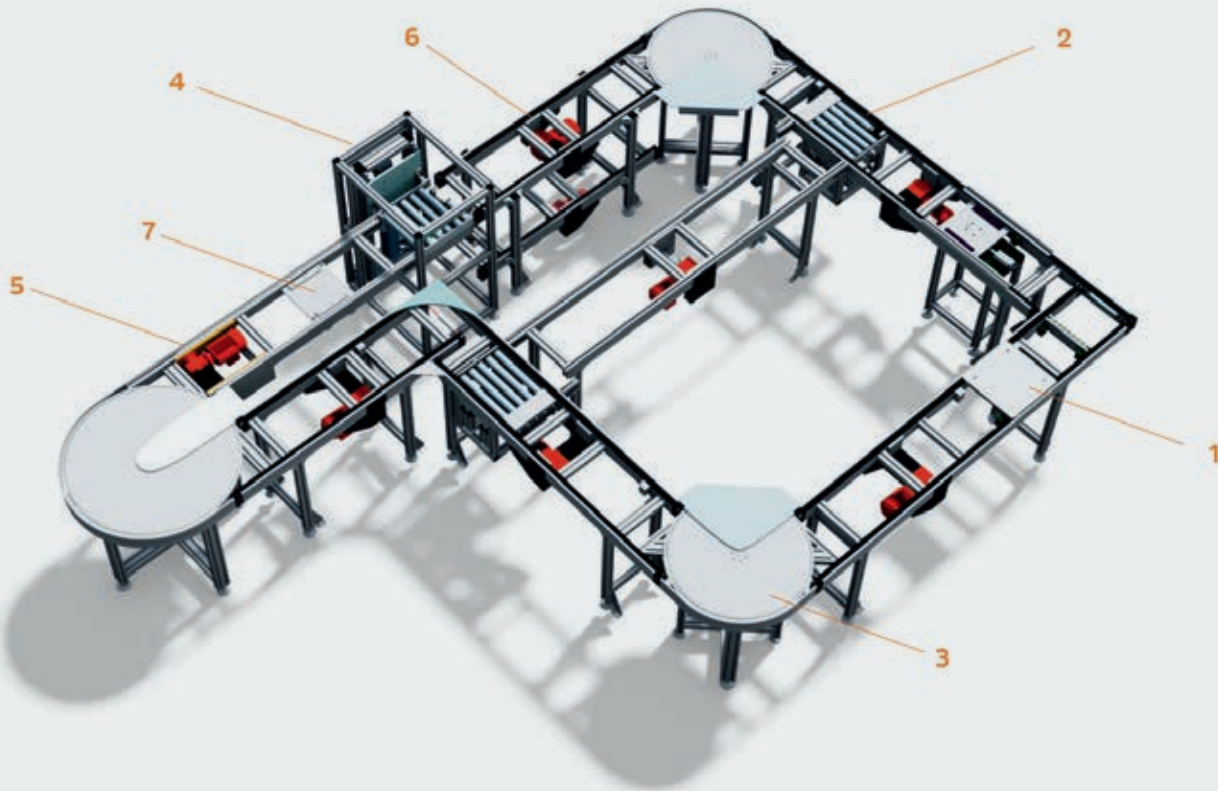
Noise development as a function of the conveying speed, measured according to DIN 45 635 T1 on the motor side

Further information is available at:

www.minitec.de/produkte/foerdertechnik/gliederkettenfoerderer



Flexible assembly lines FMS



Modular structure for a large number of system concepts

FMS is a flexible assembly system with workpiece carriers that are transported on accumulation roller chains, special belts or chains. Standardized modules for exact positioning, lifting or turning enable the very fast realization of complete

Modular assembly lines

A complete transport and positioning system for workpiece carriers. Thanks to the modular design and structure and planning based on aluminium profiles, complete systems are calculated in a very short time.

1. Workpiece carrier

- Precision-milled carrier plate
- Accessible from all sides, also from the underside
- Anti-static polyethylene sliding strips
- Wheels in the corners reduce lateral friction and improve guiding properties
- Exact position detection with centring bushes

2. Cross transport

- Infeed and outfeed, direction change
- Very small space requirement
- Easy to integrate into the system

3. Turntable

- Without control elements
- Virtually maintenance free
- Consistent orientation

assembly lines. Numerous installations at renowned automotive suppliers have proven the reliability and economy of this system for years. The patented deflection technology reduces the control effort for the entire system to a minimum.

- Vertical method with pneumatic or electric drive
- Precise guidance with linear units

5. Belt and chain conveyor

- Variations: double belt, chain drive or combination
- Suitable for accumulation mode
- Structure made of aluminium profiles
- Easy to expand and reusable

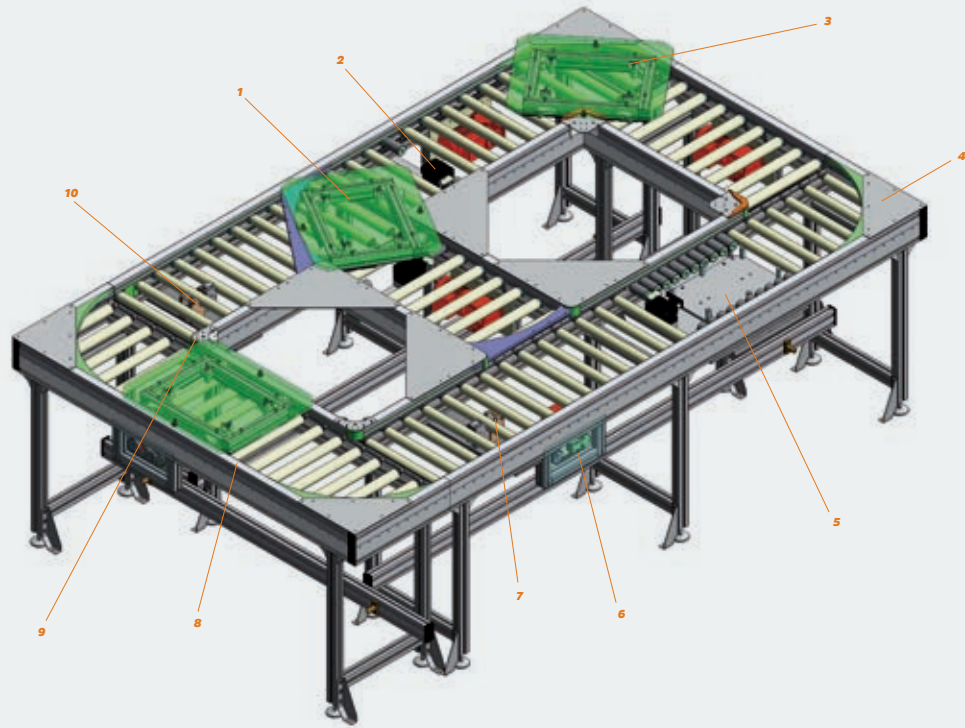
6. Separating

- Separator: with or without damping from 3 to 220 kg
- Switch holder: Various holders for M12 inductive proximity switches ensure the absence and passage control of the workpiece carriers

7. Lifting and positioning device

- Exact positioning of the workpiece carrier for machining operations
- max. load 100 kg
- Optionally with turning device for changing direction

RMS roller conveyor system



The flexible solution for heavy workpieces

RMS is a pallet transfer system based on friction rollers and designed for very high loads. Among other things, transmissions, vehicle seats or engines are assembled on these systems. The workpiece carriers are moved over highly precise accumulator rollers, which are driven by means of a continuous tangential steel chain. The RMS specific workpiece carriers are guided by side-attached guide rollers into the line. Due to the special shape of the workpiece carrier in

combination with the patented DELTA -offset, the direction changes are realised with a minimum of control and drive effort. Special covers between the rollers make the transport system accessible for service work from the interior of the system.

System description

- Flexible modular concept
- Precise rollers with adjustable friction
- Load per pallet holder: up to 250 kg
- Standard WT widths: 400 and 500 mm
- Transport speeds: up to 15m/min
- Ingeniously simple and patented bypass
- Newly developed robust workpiece carriers
- Delta" deflection system

1. Bypass

- Driven turnout for diversion from main to branch line

2. Rolles

- Steel pipe 3 mm
- Nitrided surface

- Adjustable friction

3. Workpiece carrier

- Base frame made of aluminium profile
- Sliding elements made of antistatic polyethylene
- Plate carriers according to customer specification

4. Deflection 90°

- WT deflection without additional drive

5. Stroke index unit

- Loadable up to 300 kg

6. Drive unit

- Reversible running direction
- Up to 9 m distance per drive
- Automatic chain tension

7. Separating stop

- Adjustable damping

8. Structure

- Anodised aluminium profile

9. Deflection system

- The "Delta" deflector system is a standardized and universally applicable system that enables all deflector variants in 3 versions:
- Delta 1 fixed for simple 90° deflections
- Delta 2 spring-mounted for inward transfer into a main or secondary route
- Delta 3 controllable and pneumatically operated for use at junctions with changing deflections

10. hydraulically damped separating stops

- The specially developed separating stop allows the use of continuous rollers instead of stub rollers
- High flexibility through simple change of the installation position

Pallet circulation systems UMS



Convey economically in the smallest space

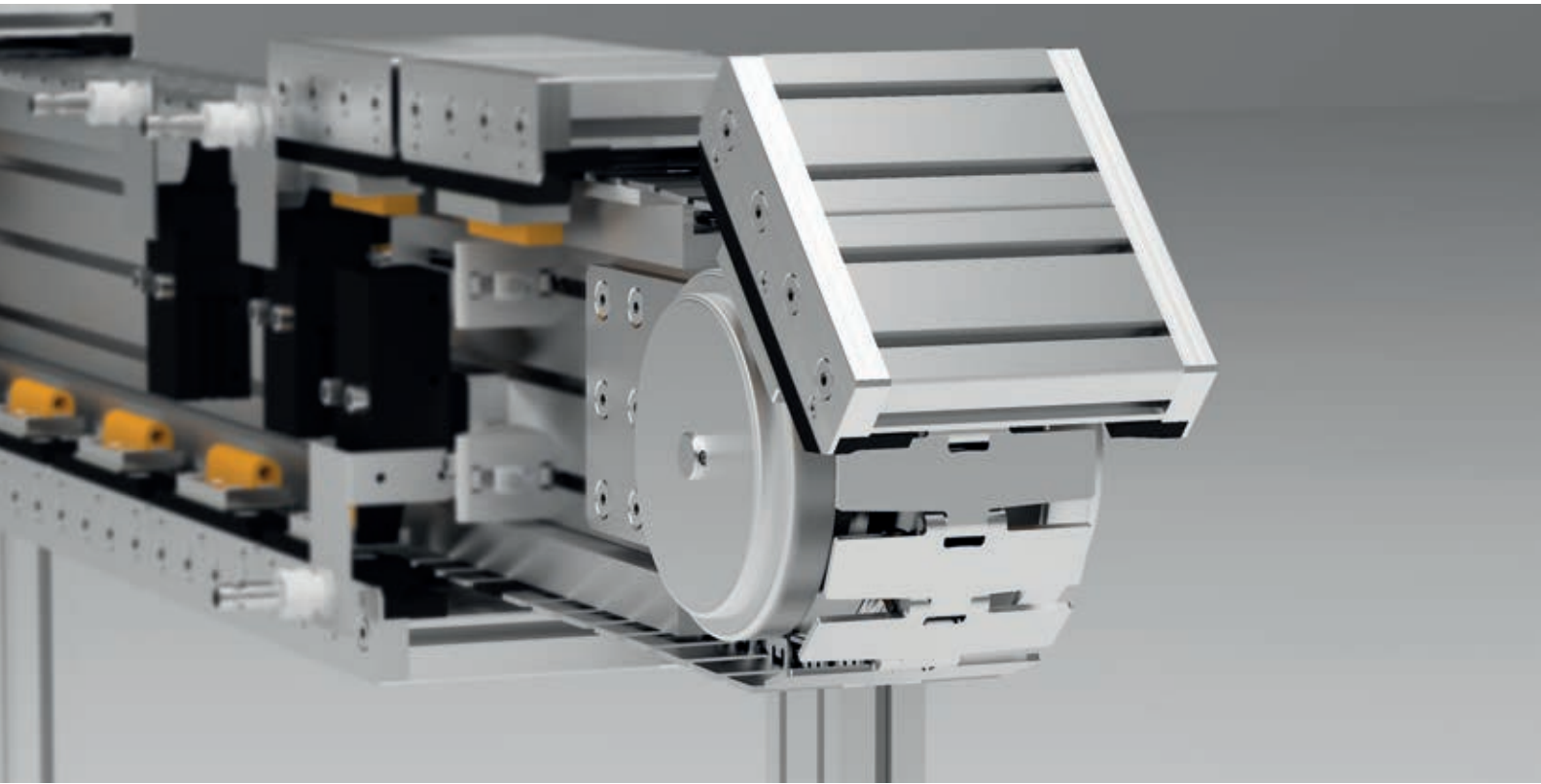
In the field of pallet conveyor technology, we offer our UMS series, a double-track roller chain conveyor that returns the empty pallets below the conveyor level: At the end of the conveyor section, the unloaded pallets are vertically deflected by a positive gripper and transported back in a suspended position. The pallets can be accumulated not only on the conveyor level, but also during the return transport of the unloaded workpiece carriers. The system can even be used as an overhead conveyor in which the pallet return takes place on the top side. A characteristic feature of the UMS series is the constantly rotating chain, which serves both as a carrier and as a drive for the system. The control effort is kept to a minimum, as no complex programming is required

for deflections or infeed and outfeed.

The UMS system is suitable for workpiece carriers from 400 to 600 millimeters wide and 100 to 300 millimeters long. The total length of a system is 20 meters with a maximum load per pallet of 100 kilograms. The maximum permissible load for the entire system is 1,200 kilograms at a conveying speed of six meters per minute, and 800 kilograms at a conveying speed of twelve meters per minute.

- Max. length: 15 m
- Load on pallet: max. 100 kg
- Workpiece carrier width: 400 mm to 1000 mm
- Workpiece carrier length: 270 mm (several individual WTs can be interlinked)
Speeds: 6, 9, 12 m/min
- Positioning accuracy of ± 0.15 mm
- Other dimensions, speed, weights on request

UMSL pallet circulation system



The lightweight version

The UMSL, a light version of the pallet circulation system, is a very cost-effective solution with minimum space requirement for linking machine tools, workstations, handling equipment or robot feeders. Flexible: Very compact solution; with a track width of 165 mm, the UMSL conveyor offers maximum flexibility in the smallest space. It is possible to accumulate the pallets on both the upper and the lower level. The UMSL can even be used as an overhead conveyor. Economical: The UMSL offers attractive value for money. Only one motor - energy consumption is reduced significantly.

Minimum wear with little maintenance work! Easy to control - the control effort is very low and does not need any time-consuming programming. The UMSL unites a sophisticated machine combination of 2 conveyors (transport and return) + 2 lift units in a single conveyor.

Modular structure

The UMSL construction is based on the high-quality standard components of the MiniTec modular system. The pallet circulation system is therefore compatible with all the components of our modular system. Additions such as test stations, assembly or unloading stations can be integrated seamlessly. We and our experienced engineers will be pleased to help you to plan and implement your conveyor systems, as well as their adaptation to your special tasks.

Transport trolleys and mobile container racks



The modular mobile container rack system

While a few years ago, replenishments of operations equipment had to be taken from shelves and laboriously loaded onto lorries, today one or two persons can load a logistics vehicle with material and equipment as required within a few minutes. Fire service mobile container racks have increased operational efficiency and have long since become indispensable in the emergency services. With the MiniTec fire service modular mobile container rack system, you can assemble individual solutions from standardised modules and a portfolio of accessory components, through to load restraint.

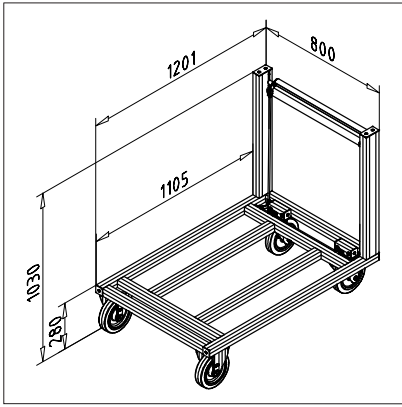
Perfectly coordinated

Due to the modular design, the MiniTec mobile container rack is easily and flexibly configured according to your individual requirements. Platform trolley with 1; 2; 3 or 4 levels or a mobile container rack cage can be conveniently assembled so that the equipment can be positioned perfectly on the mobile container rack. The MiniTec profile system - with the clever connection technology - ensures maximum flexibility without machining. Subsequent modification with minimum time and effort is therefore possible. Mobile container racks can be delivered either completely assembled or as a kit for self-assembly. Assembling a basic module takes less than 90 minutes and is suitable for everyone.

- Basic dimensions 1200 x 800 x 1030 mm
- Height of top of platform 280 mm
- Wheel diameter 200 mm
- Maximum payload 450 kg
- Handles with thermal Softgrip coating
- Swivel castors with drum brakes
- No Bowden cable for opening the brake
- Tested to the AGBF professional recommendation
- As a kit or already assembled

Roll container Basic LR2 mounted

Part No. 29.0861/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Basic frame, profile 45 x 45 F and 45 x 90 F, anodized E6/EV1
- 2x unbraked front fixed castor (opposite handle side).
- 2x swivel castors at the back (handle side)
- With integrated drum and dead man's brake
- Tested according to AGFB technical recommendation
- Basic dimensions (LxWxH): 1200 x 800 x 1030 mm
- Maximum load: 460 kg
- Weight = 40.784 kg/piece

APPLICATIONS

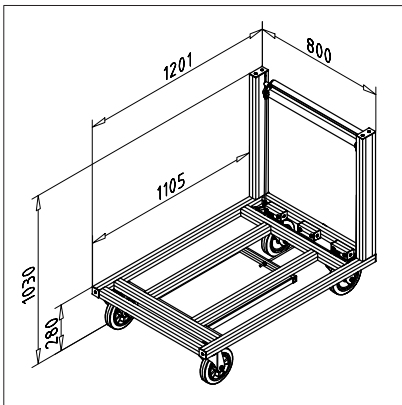
- Wide range of applications as a transport trolley

ASSEMBLY

- Completely assembled
- Alternatively, mobile container rack as kit **Part. no. 29.861/1**

Roll container Basic LR4-2 mounted

Part No. 29.0862/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Basic frame, profile 45 x 45 F and 45 x 90 F, anodized E6/EV1
- 4 swivel castors, 2 of which (handle side) are braked
- With integrated drum and dead man's brake
- Tested according to AGFB technical recommendation
- Basic dimensions (LxWxH): 1200 x 800 x 1030 mm
- Maximum load: 460 kg
- Weight = 45.476 kg/piece

APPLICATIONS

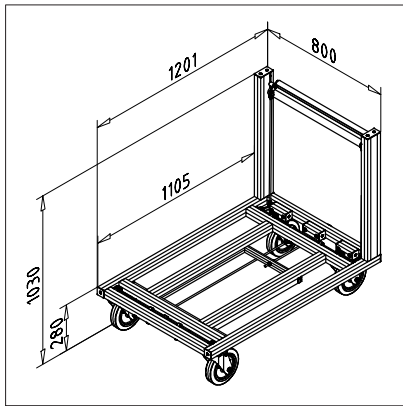
- Wide range of applications as a transport trolley

ASSEMBLY

- Completely assembled
- Alternatively roller container as a kit **Part. no. 29.0862/1**

Roll container Basic LR4-4 mounted

Part No. 29.0863/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Basic frame, profile 45 x 45 F and 45 x 90 F, anodized E6/EV1
- 4 braked swivel castors
- With integrated drum and dead man's brake
- Tested according to AGFB technical recommendation
- Basic dimensions (LxWxH): 1200 x 800 x 1030 mm
- Maximum load: 460 kg
- Weight = 54.024 kg/piece

APPLICATIONS

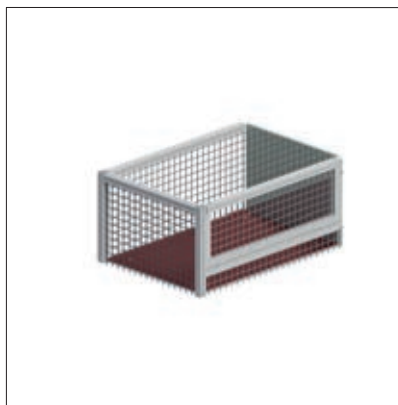
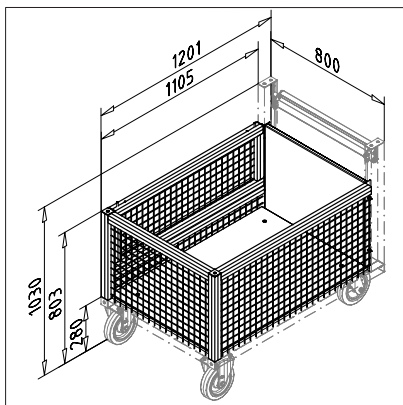
- Wide range of applications as a transport trolley

ASSEMBLY

- Completely assembled
- Alternatively roller container as a kit **Part no. 290863/1**

Structure box pallet

Part No. 29.0882/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Base frame made of profile 45 x 45, anodized E6 / EV1
- The right-hand side panel can be folded down at half-height for loading and unloading on one side
- Basic dimensions (LxWxH) 1200 x 800 x 800 mm
- Weight = 29.960 kg/piece

APPLICATIONS

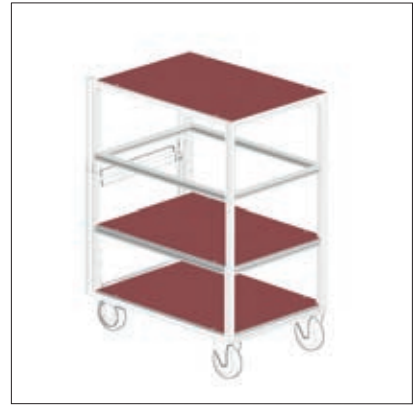
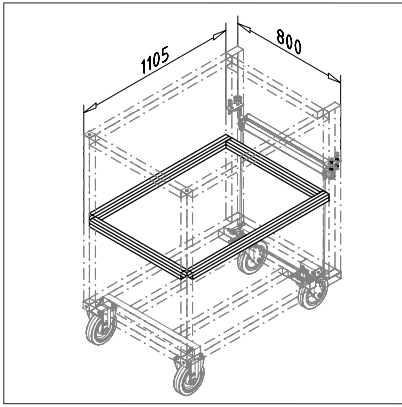
- Structure for universal uses

ASSEMBLY

- Completely assembled
- Alternatively as a kit **Part no.. 290882/1**

Basic level mounted

Part No. 29.0887/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Dimensions (LxW) 1105 x 800 mm
-
-
- Weight = 7.230 kg/piece

APPLICATIONS

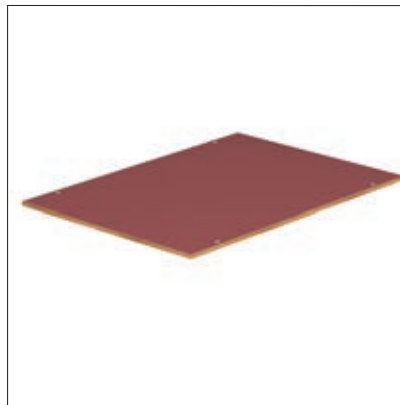
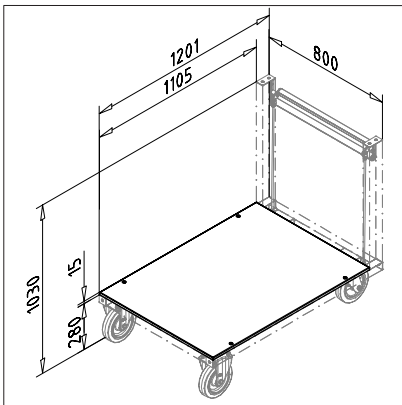
- The base frame is used to hold surface elements (e.g. textured coated boards) or individual storage of operational equipment
- The base frame is an extension of the modular mobile container rack system and can only be used in combination with the Basic LR2 / LR4 mobile container rack incl. box body

ASSEMBLY

- With MiniTec power-lock fastener
- Alternatively as a kit **Part no. 20887/1**

Printing plate

Part No. 29.0888/0



TECHN. DATA / ITEMS SUPPLIED

- Wood
- 15 mm textured coated board for universal accommodation of storage units
- Dimensions (LxW) 1105 x 800 mm
- Weight = 6.030 kg/piece

APPLICATIONS

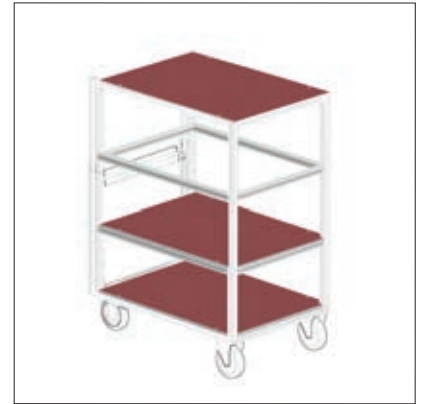
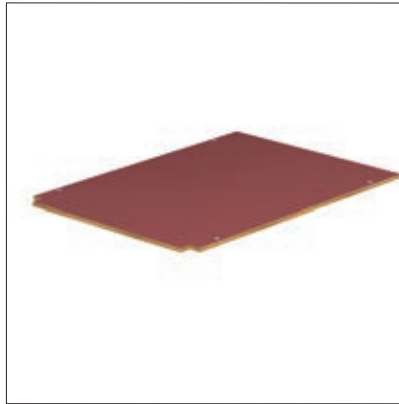
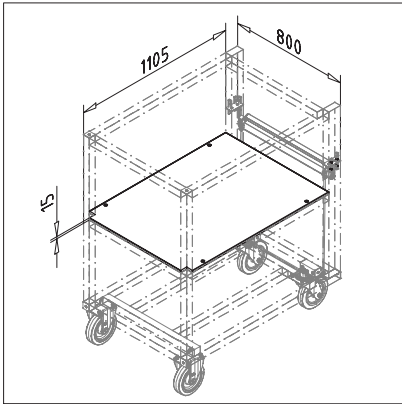
- It can be mounted as a base plate directly on a basic mobile container rack or used as an end board for a box body

ASSEMBLY

- Fasten with fastening material to profile groove

Printing plate with corner notch

Part No. 29.0889/0



TECHN. DATA / ITEMS SUPPLIED

- Wood
- 15 mm textured coated board with corner notches
- Dimensions (LxW) 1105 x 800 mm
- Weight = 6.000 kg/piece

APPLICATIONS

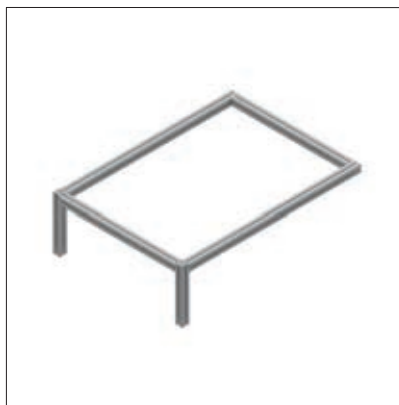
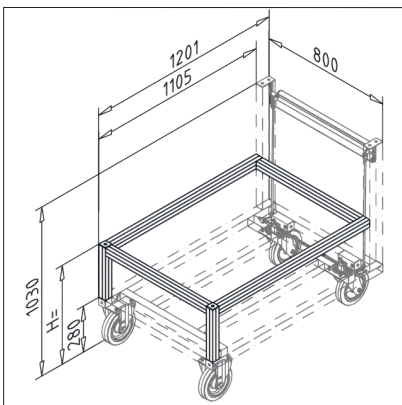
- If a box body is used, it can be inserted as a carrier board of a level

ASSEMBLY

- Fasten with fastening material to profile groove

Box construction low

Part No. ---/--/--



TECHN. DATA / ITEMS SUPPLIED

- Base frame made of profile 45 x 45 and 45 x 90, anodised E6 / EV1
- Versions:
H600 Part no. 290875/0
H800 Part no. 290876/0
H1030 Part no. 290877/0

APPLICATIONS

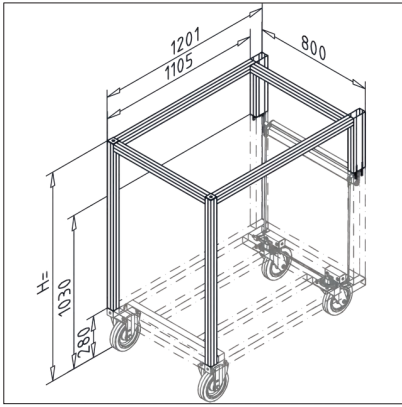
- Basic rack for holding levels

ASSEMBLY

- Completely assembled
- Alternatively as a kit:
H600 article no. 290875/1
H800 article no. 290876/1
H1030 article no. 290877/1

Box construction high

Part No. --,----/-



TECHN. DATA / ITEMS SUPPLIED

- Base frame made of profile 45 x 45 and 45 x 90, anodised E6 / EV1
- Versions:
 - H1200 Part no. 290878/0
 - H1400 Part no. 290879/0
 - H1600 Part no. 290880/0
 - H1800 Part no. 290881/0

APPLICATIONS

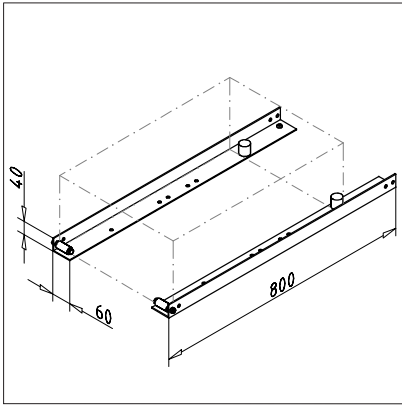
- Basic rack for holding levels

ASSEMBLY

- Completely assembled

Storing boxes RC-EB

Part No. 29.0890/0



TECHN. DATA / ITEMS SUPPLIED

- 2x aluminium angular rails
- Rail length 800 mm
- 2x guide rollers
- 2x end stop
- Continuously adjustable width
- Load capacity 30 kg / higher load capacity possible by installing profiles underneath
-
- Weight = 1.527 kg/pair

APPLICATIONS

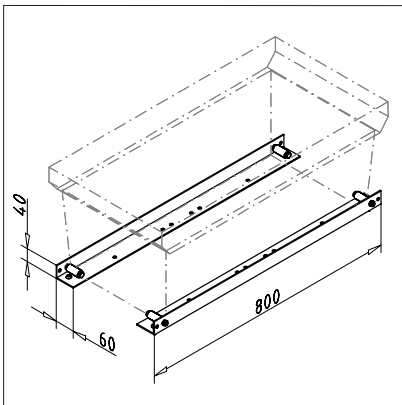
- For the storage of Euro boxes
-

ASSEMBLY

- Mount with supplied hardware

Storing boxes RC-MB

Part No. 29.0965/0



TECHN. DATA / ITEMS SUPPLIED

- 2x aluminium angular rails
- Rail length 800 mm
- 4x guide rollers
- Continuously adjustable width
- Load capacity 30 kg / higher load capacity possible by installing profiles underneath
- Weight = 1.505 kg/pair

APPLICATIONS

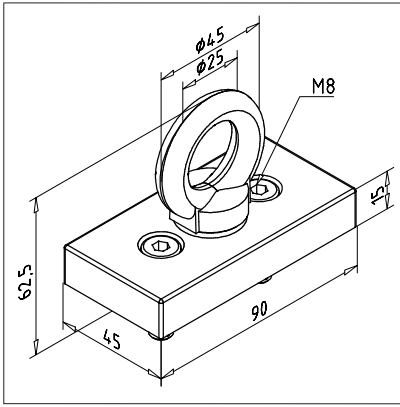
- For storage of a returnable container Part no. 290385/0
-

ASSEMBLY

- Mount with supplied hardware

Lifting eye for mobile container rack

Part No. 29.0943/0



TECHN. DATA / ITEMS SUPPLIED

- Base plate 45x90 made of die cast aluminium with eyebolt M10 - steel galvanised
- Max. load under vertical tension 200 kg
- Weight = 0.323 kg/piece

APPLICATIONS

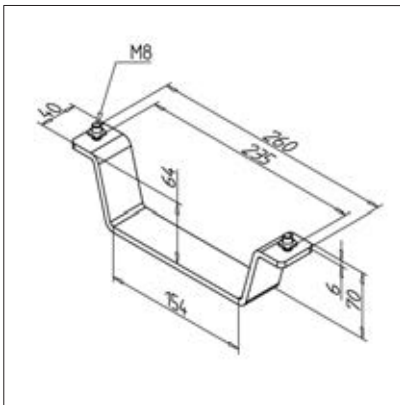
- If 4 crane eyes are installed, a mobile container rack can be lifted and loaded with a crane.

ASSEMBLY

- Screw in with fastening material from items supplied.
- It is either installed on the end face in a profile 45 x 90 or in a profile groove

Transport aid

Part No. 26.1101/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanised
- With fastening material steel, zinc plated
- Weight = 0.708 kg/piece

APPLICATIONS

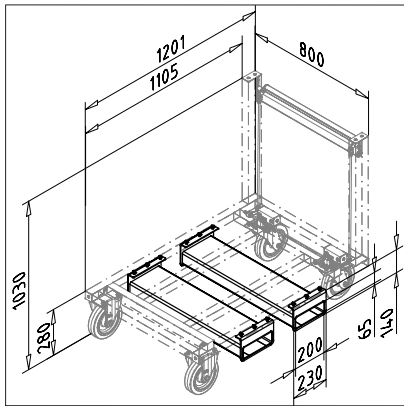
- Securing of constructions when transported by forklift truck

ASSEMBLY

- Mount under construction with fastening material from the scope of supply to the profile groove
- Use always in pairs

Forklift pocket, one pair for mobile container rack

Part No. 29.0946/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, bright
- Material thickness 5 mm
- Suitable for all MiniTec mobile container rack basic modules!

APPLICATIONS

- For safe transport of a mobile container rack with a forklift truck

ASSEMBLY

- 1 pair incl. assembly accessories
- Attach to profile frame with fastening materials included



Protection systems

5.1	Safety fences and partitions	552
5.2	Protection system safe guard	561
5.3	Noise protection	563
5.4	Hygiene protection	570

Safety fences and partitions



Individual protective devices in mechanical engineering

MiniTec offers a large number of solutions for optimum protection in modern production facilities. Use our safety fences in standard sizes or made to measure, access controls, lifting doors and vertically traversable protective hoods as well as office modules and protect the machines, plants and employees in your company. Components for effective noise control are also available to you.

The modular MiniTec protection systems are based on the tried and tested modular profile system. With the MiniTec iCAD Assembler design software, guards can be designed in the shortest possible time. Our standardised modules are particularly cost-effective solutions, taking into consideration the current standards and the Machinery Directive. Accordingly, guards must prevent access to the source of danger and at the same protect against ejected parts, moving machine parts or escaping liquids. At the same times, the guard must also be designed so that it cannot be removed without tools.

With the MiniTec protection system, protection panels made of aluminium and stainless steel with diverse dimensions, and a portfolio of high-quality accessories are available to you for protection of your production facilities. With posts, doors and robust fastening kits, you can flexibly design protective devices such as guards for machines and plants. With MiniTec, you can count on an experienced manufacturer of protection systems for plant and machine protection. Benefit from maximum design freedom and flexibility, whereby machinery and product safety directives and guidelines as well as the highest safety standards are met.

High safety standards

Individually arranged protection devices are a frequent application of the MiniTec profile system. With our free iCAD Assembler design tool, guard systems can be designed in the shortest possible time, which exactly meet customer requirements. They are also adapted to high safety standards and visual standards. Our standardized modules are particularly cost-effective solutions, developed taking into account the current standards and the Machinery Directive. Guards must prevent access to the hazard and at the same time

protect against ejected parts, moving machine parts or escaping liquids. The device must be designed so that it cannot be removed without tools. However, the design must also always be preceded by a risk assessment to EN ISO 12100-1 by the plant manufacturer.

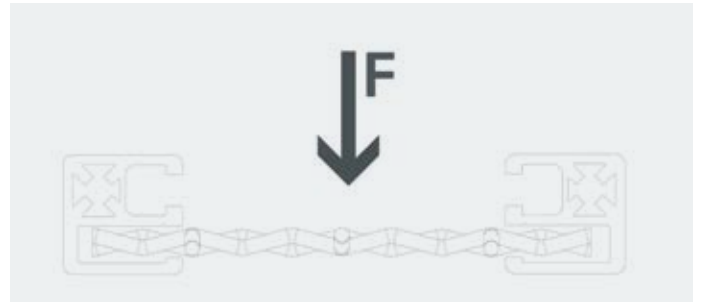
Safety distances

“Guards are usually used to safeguard danger zones. The EN 13857 standard defines safety distances to prevent hazard zones being reached by upper and lower limbs.

If corrugated mesh panels are used (as surface elements), the choice of mesh size (clear width) may have a considerable influence on the required safety distance between the safety fence element and the hazard. Therefore, note the requirements of EN 13857 in relation to your application.”

Load-bearing capacity

The load capacity of the standard guard units was determined in empirical tests. In the middle of the field, a plate 200x200 mm was loaded statically until the wavy grid is pressed out of the clamping profile. The specified values apply to guard units made of clamping profile 32x32 with corrugated grid, galvanized steel, 40x40x4 mm.



Field height HS mm	Field size B mm	Weight F N
1820	500	1200
1820	750	1200
1820	1000	1000
1820	1250	1000
1820	1500	1200
1820	1750	1100
1820	2000	1000

The dynamic load capacity of the guard units was tested in pendulum impact tests with a mass of 100 kg by TÜV Saarland. All required parameters of the EC Machinery Directive 2006/42 / EC have been met.

Grid system

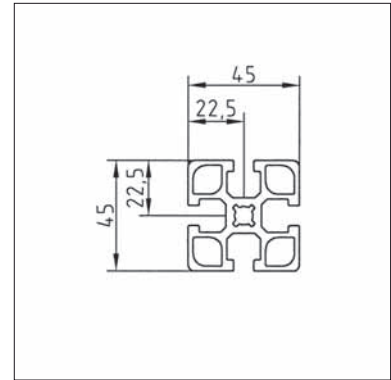
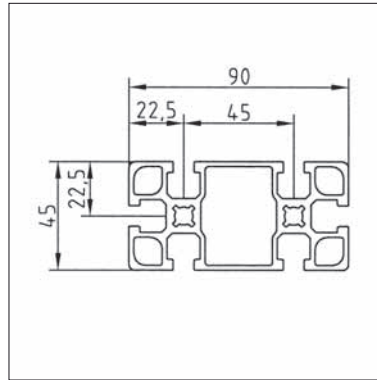
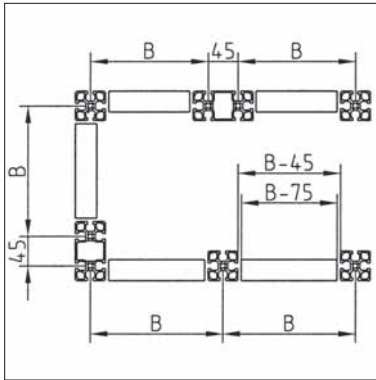
The standardised system is an especially economic and quick solution for most applications. Individual heights, panel sizes, special designs for noise control or splash water protection and optional fastening types are available for special tasks. Other compatible components are also available in our modular system.



Protection fields

Field widths

Groove center distance of posts „B”



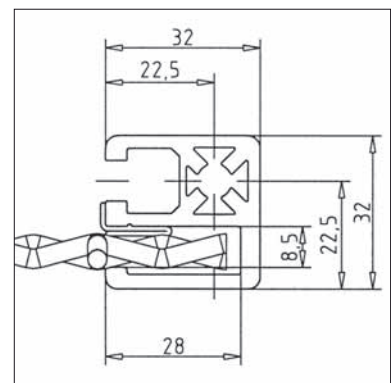
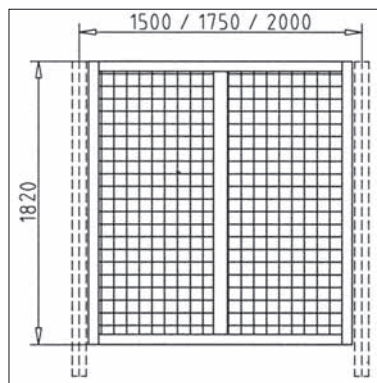
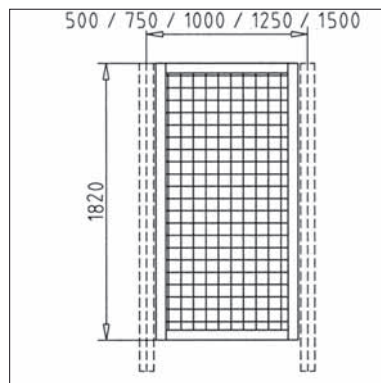
Standard widths

500, 750, 1000, 1250, 1500 mm

1500, 1750, 2000 mm with additional vertical center strut

The guard frames consist of specially designed clamping profiles 32 x 32 mm. Due to the large depth of the retaining groove for the surface elements in conjunction with the securing by distance profile, great stability is achieved.

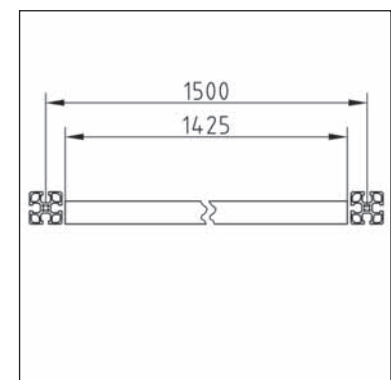
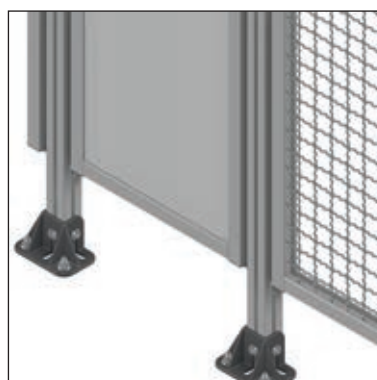
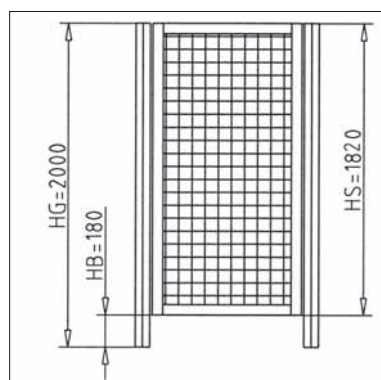
All components of the MiniTec profile system can be used for fastening attachments.



Height

Standard overall height HG= 2000 mm,

Guard panel height HS 1820 mm, 180 mm ground clearance for obstacle-free cleaning



Panel SG 500/750/1000/1250/1500 (without middle strut)

Technical Data / Items Supplied

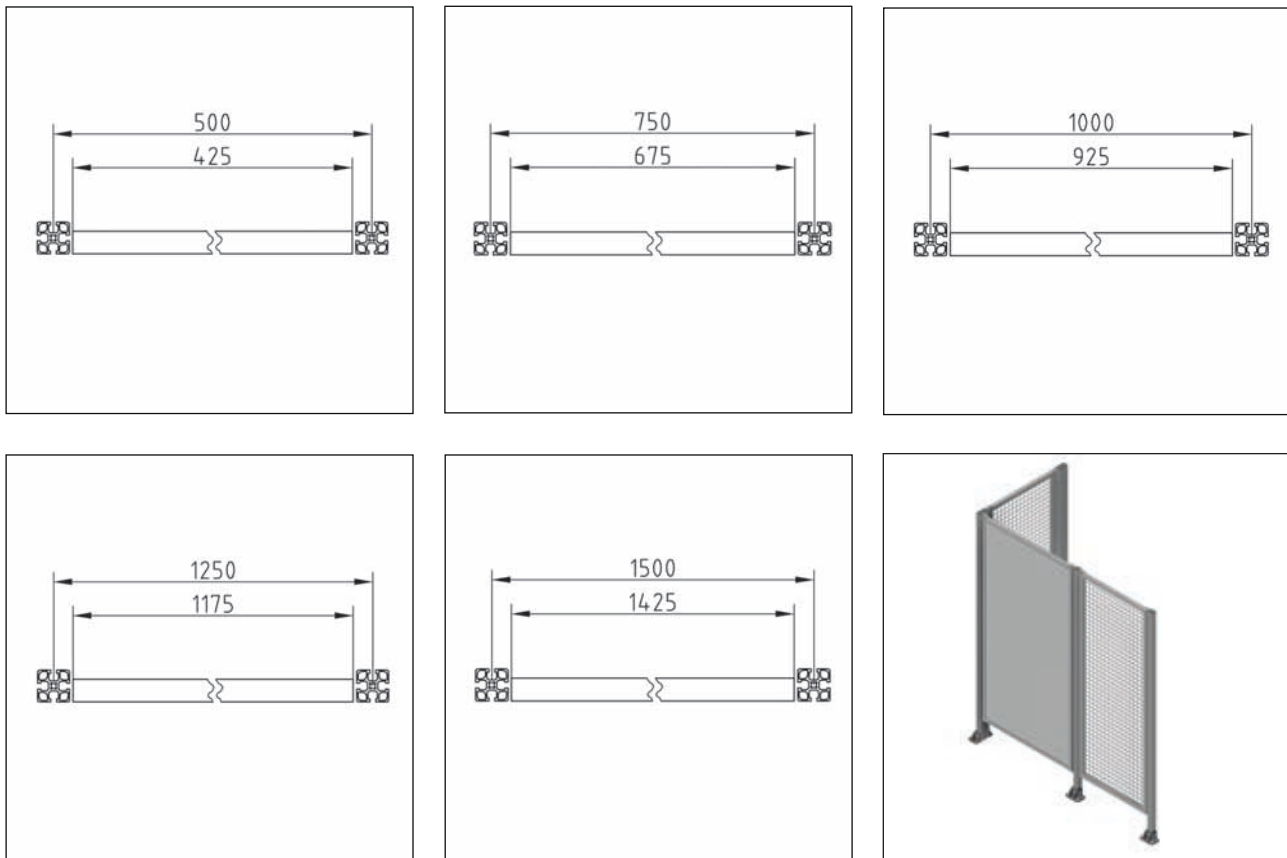
- made of clamping profile 32 x 32 UL, completely pre-assembled
- with corrugated mesh 40 x 40 x 4 mm, galvanized steel or with polycarbonate 5
- Standard height HS: 1820 mm

Application

- for separation of danger zones
- as machine protection

Assembly

- Install guard panel on guard panel posts using fastening kit 19 Part no. 23.0010/0 or fastening kit for SG panels Part no. 23.0011/0



Field size B mm	Corrugated mesh Part no.	Polycarbonate 5 Part no.
500	23.0102/0	23.0112/0
750	23.0103/0	23.0113/0
1000	23.0104/0	23.0114/0
1250	23.0105/0	23.0115/0
1500	23.0109/0	23.0119/0

Panel SG 1500/1750/2000 (with middle strut)

Technical Data / Items Supplied

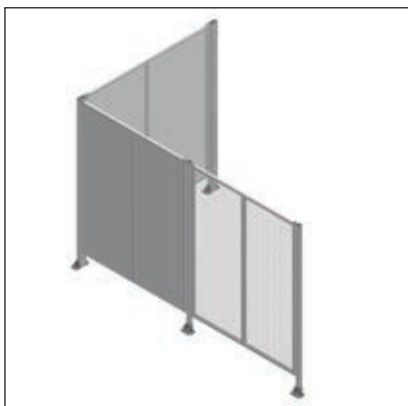
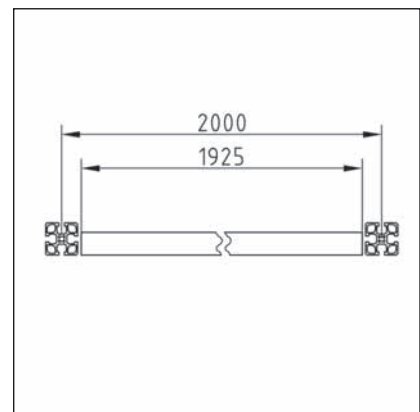
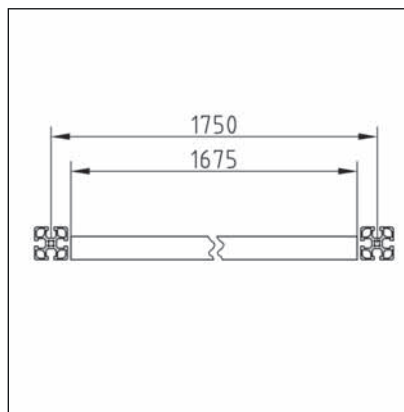
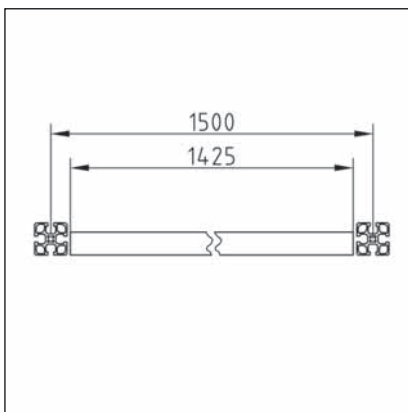
- made of clamping profile 32 x 32 UL, completely pre-assembled
- with corrugated mesh 40 x 40 x 4 mm, galvanized steel or with polycarbonate 5
- Standard height HS: 1820 mm
- Vertical middle strut made of clamping profile 45 x 32
- Additional vertical intermediate strut

Application

- for separation of danger zones
- as machine protection

Assembly

- Install guard panel on guard panel posts using fastening set 19 Part no. 23.0010/0
- or fastening kit for SG panels Part no. 23.0011/0



Field size B mm	Corrugated mesh Part no.	Polycarbonate 5 Part no.
1500	23.0106/0	23.0116/0
1750	23.0107/0	23.0117/0
2000	23.0108/0	23.0118/0

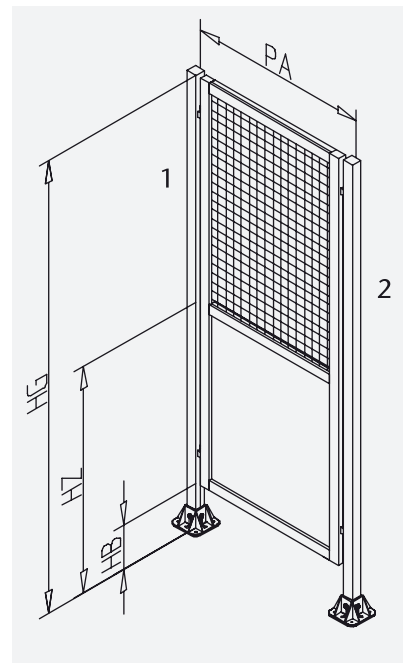
The assembly of the pre-assembled fields in place can be carried out by one person. With sturdy feet, the posts are attached to the ground with heavy-duty dowels. The posts are provided with angles, in which the guard units are hung and screwed. The fields can be aligned arbitrarily, by means of oblong holes in the angles can be compensated distance tolerances of the posts.

Protective and partition wall element with fixed frame

Items Supplied

- 1 Pillar
- 2 Crossbars
- 1 Surface element mounted:
- Wave grid, mesh size 40 mm, wire gauge 4 mm, galvanized

The profile column 2 is included in the delivery of the next field. For single installation order additional profile column.

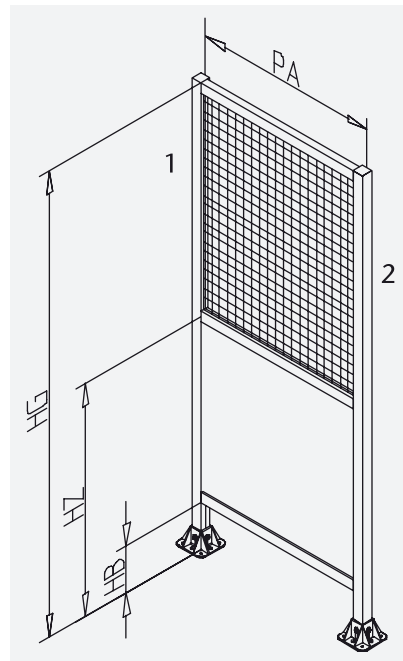


Protective and partition wall element with removable frame

Items Supplied:

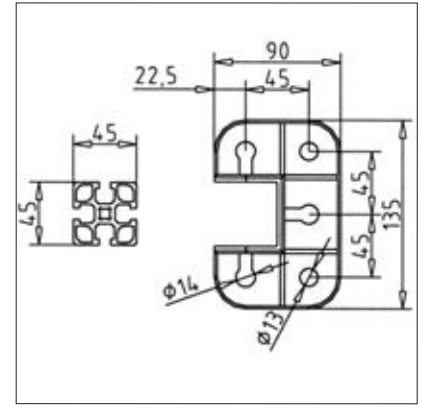
- 1 Guard unit mounted: wave mesh, mesh size 40 mm, wire gauge 4 mm, galvanized
- 1 Profile column with floor mounting and 2 guard unit fixing angle

The profile column 2 is included in the delivery of the next field. For single installation order additional profile column.



Post SG 45 x 45 L = 2000

Part No. 23.0030/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1
- Made of profile 45 x 45 F
- Foot 45 GD preassembled
- Without ground anchor
- Weight = 4.370 kg/piece

APPLICATIONS

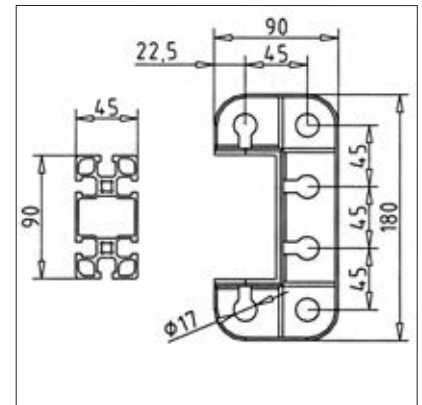
- Use as post for guard units, doors

ASSEMBLY

- Position foot as appropriate
- Mark the position of the drillings on the ground
- Install and tighten the ground anchor

Post SG 45x90F L=2000

Part No. 23.0060/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Made of profile 45 x 90 F
- Foot 90 GD preassembled
- Without ground anchor
- Weight = 6.740 kg/piece

APPLICATIONS

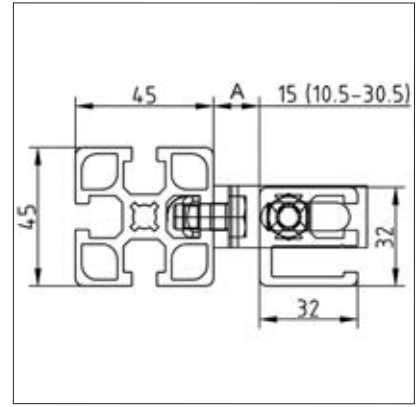
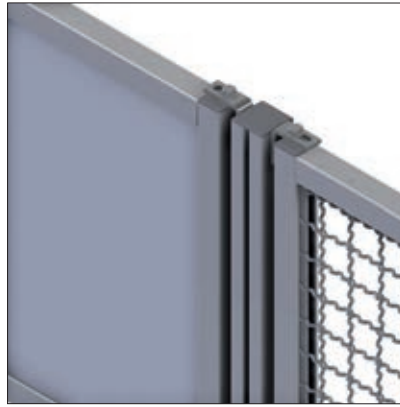
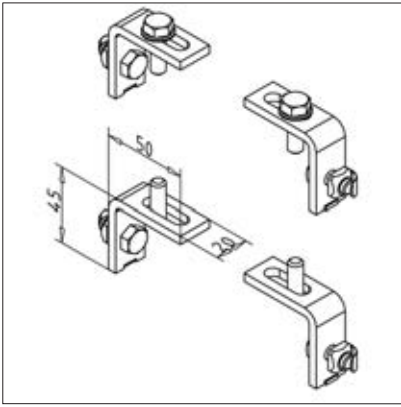
- Use as corner posts for guard units or for higher lateral loads of normal units

ASSEMBLY

- Position foot as appropriate
- Mark the position of the drillings on the ground
- Install and tighten the ground anchor

Fastening kit 19 for guard panels

Part No. 23.0010/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 4 protection field suspensions
- With fastening material steel, zinc plated
- Weight = 0.500 kg/set

APPLICATIONS

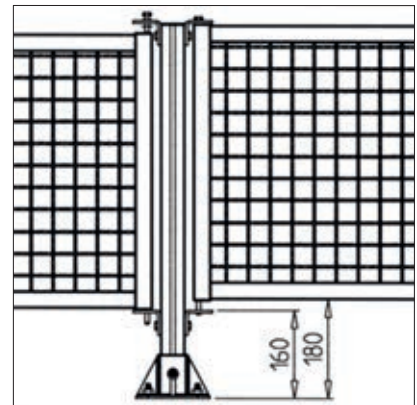
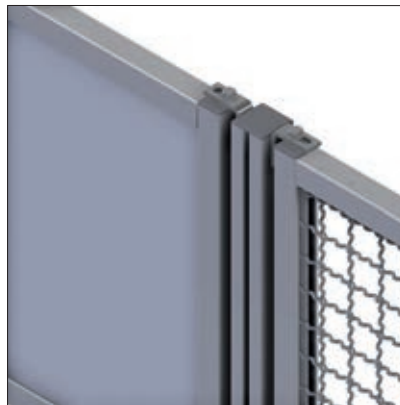
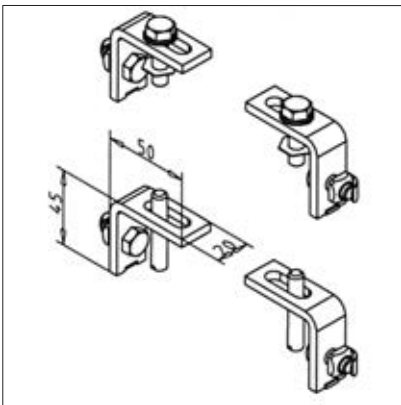
- Fastening guard units from clamping profile 32 x 32, 45 x 32 or standard profiles
- Attachment of guard units at any angle

ASSEMBLY

- Insert guard unit in pre-assembled lower fixing angle, tighten with screws from the scope of delivery above
- A = 10,5 mm - 30,5 mm

Fastening kit for SG guard units with captive screw

Part No. 23.0011/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, galvanized
- 4 protection field suspensions
- With label: Maintenance panel
- Top screws in non-detachable design
- With fastening material steel, zinc plated
- Weight = 0.366 kg/set

APPLICATIONS

- Fastening guard units which are removed for servicing purposes. The screws to be loosened here are in a captive design.
- For clamping profile 32 x 32 and 45 x 32
- Fastening of protection fields at any angle

ASSEMBLY

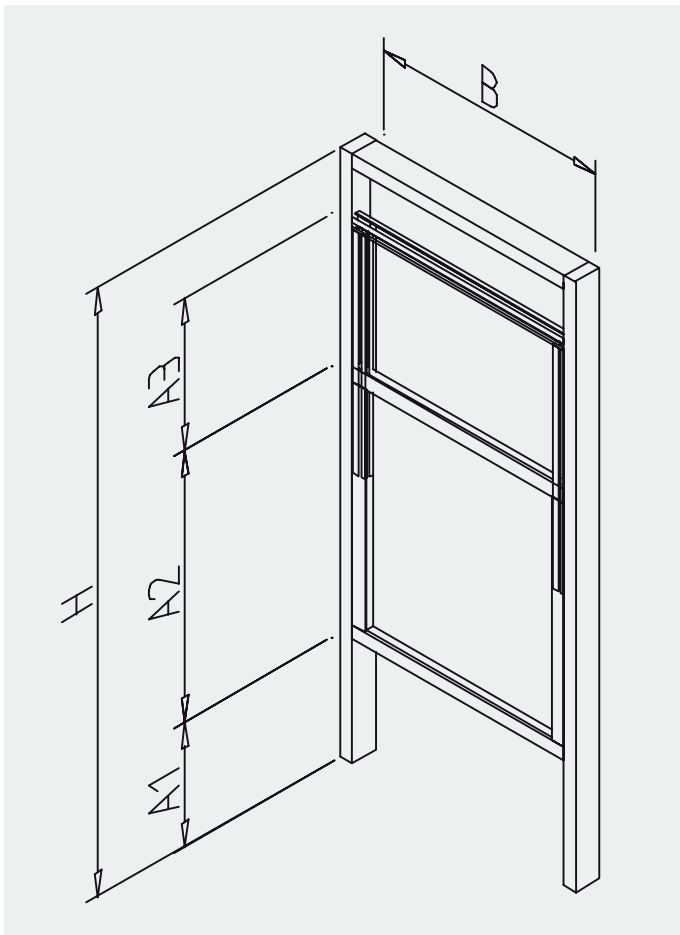
- Insert guard unit in pre-assembled lower fixing angle, tighten with screws from the scope of delivery above
- A = 10,5 mm - 30,5 mm

Doors

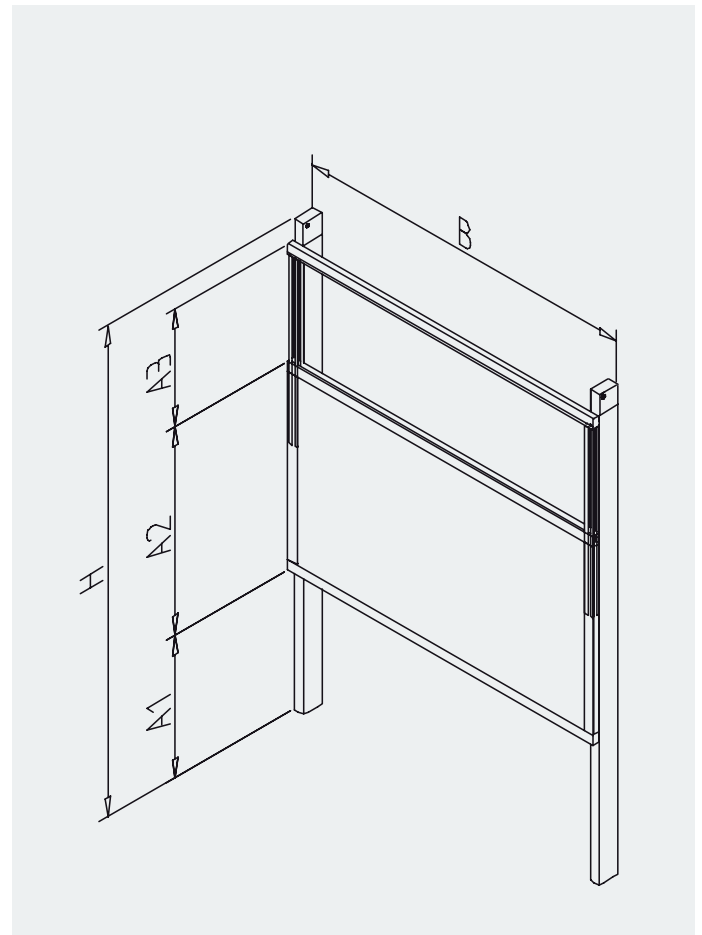
Guard doors as access to enclosures

Our guard doors are also based on the MiniTec profile system. We offer lifting doors and classic swing doors (double side-hinged doors) according to your individual requirements. Equipped with the features requested by you, our guard doors provide safe access to enclosures, for example, for maintenance work."

Table protection lifting door



Machine protection lifting door



Completely assembled and prepared for final assembly. Aluminum profile construction with internal counterweights and a selection of different surface elements.

Lifting door with fall protection

Part no.: 23.0200/0

Modular lift door system with fall protection for manually operated doors up to a sash weight of 35 kg.

The lifting door is made individually from profiles of the 45 series.

With our lift doors you can choose between different surface elements - depending on the task and requirements.

In contrast to the standard MiniTec lifting doors, which are guided laterally via sliding elements in a groove, the lifting door with fall arrest is guided over two ground steel shafts.

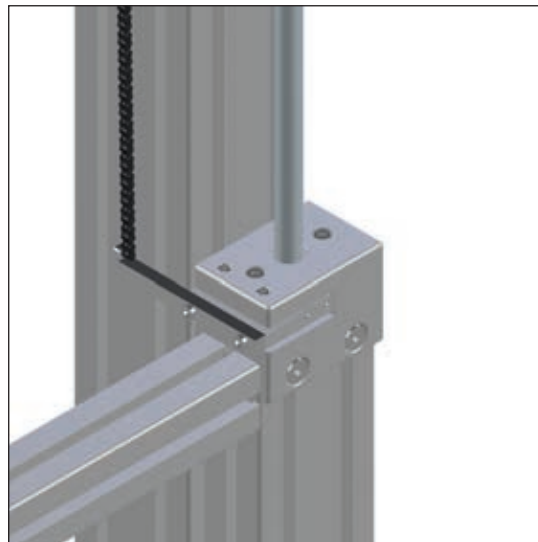
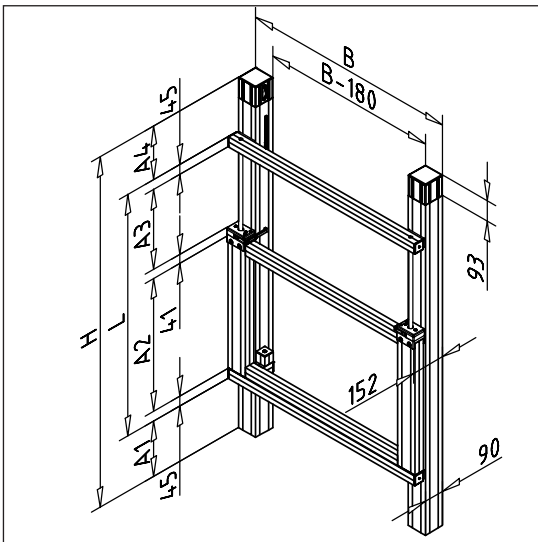
To counterbalance weight, two counterweights serve as a

balancer for the movable sash.

These counterweights run over a chain deflection in the central hollow chamber of a 90 x 90 L or 90 x 90 UL profile.

This MiniTec ensures an absolutely uniform and virtually power-free run.

Should a chain of the lift door break, the fall arrest will be activated, i.e. the lifting door is immediately braked by a clamping bush by the frictional resistance on the steel shaft.



Please provide the following dimensions:

- Outside dimension B mm
- Floor clearance A1 (≥ 0) mm
- Lifting panel height A2 mm
- Stroke A3 mm
- Overhang, top A4 (≥ 93) mm
- Required surface element: clear width = B-180 mm
- Total height H = (A1+A2+A3+A4+134) mm

Use

- Modular lifting system with fall protection
- Sash weight up to 35 kg
- Surface element selectable
- Weight balancing via counterweights with chain pulley

Noise protection



Active sound insulation in the workplace

To protect workers, the European Health and Safety Directive on noise (2033/10 / EC) was transposed into national law on 6 March 2007. The new ordinance will reduce intervention levels by 5 dB (A) to 80 dB (A) for preventive measures. Passive noise protection through the provision of suitable hearing protectors is a way of prevention. The disadvantage here is the complicated communication, the poorer recognizability of alarm and warning signals or uncomfortable protective equipment. Better is active noise protection by reducing the noise emission or housing the noise sources. There are relevant legal requirements for the avoidance of noise pollution, which oblige the entrepreneur to take suitable measures in accordance with the

respective state of the art. In cooperation with the company Scharenberg in Tarmstedt, which specializes in noise protection, the new modular system for protective cabins and noise-reducing enclosures was developed. The kit is based on the tried-and-tested MiniTec profile system combined with 20 mm noise protection mats or 34 mm noise protection cassettes. In the design of the kit, the simplest installation and maximum accessibility to the machine special attention was paid. Noise reduction of 25 dB (A) is achieved on a regular basis if the housing is designed properly in p34.

Depending on the intensity and duration of the exposure to noise, there may be acute and long-term adverse effects on the health, performance and well-being of employees.

- Psychosocial effects such as decreasing concentration, nervousness, irritability, aggressiveness
- Physiological and vegetative reactions such as hearing damage, constriction of the blood vessels, high blood pressure, heart and circulatory diseases, headache
- Reduced performance and increased risk of accidents, impaired communication, wrong decisions due to misunderstandings, increased error rate, reduced motivation

Rising health costs and the resulting loss of production make noise control so important. By reducing the noise level, the performance increases.



Advantages of the MiniTec noise protection solutions

- Safe noise reduction
- Economical by using the modular system
- Easy installation and construction with standard cassettes
- Optimum accessibility with doors, lifting doors, control windows
- Easy to dismantle walls
- Optionally with heat dissipation



Components & Versions

Versions „p20”

Basic construction with MiniTec aluminium profiles

Surface element

Sound absorption panel, PU foam 20 mm thick, black, part no. 21.1879/0, For bonding to surface elements Weight approx. 650 g / m², temperature resistance: -40 to + 100 ° C

Selection of surface elements

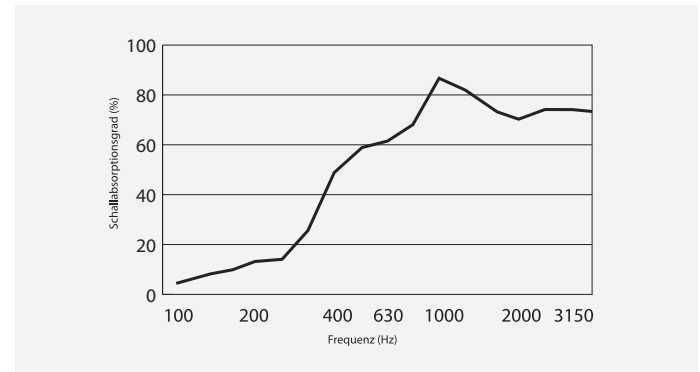
Aluminium sheet 2 mm, anodized, part no. 21.1011/0, installed with insert seal 2, part no. 22.1083/0

Sheet steel 1 to 2 mm, painted or galvanized, installed with insert seal 2, part no. 22.1083/0

Chipboard 8 mm, both sides coated white, part no. 21.1815/2

Chipboard 8 mm, light grey coated on both sides, part no. 21.1855/0

Sound absorption level measurement to EN ISO 103534-2



Versions „p34”

Basic construction with MiniTec aluminium profiles

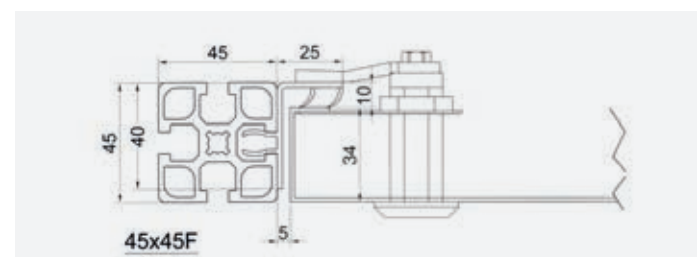
Noise protection bar, Part no. 22.1130/1

Noise protection cassettes 34 mm thick

Inside perforated sheet, filling made of high-quality mineral wool, with glass fleece as trickle protection, non-flammable according to DIN 4102, building material class A2

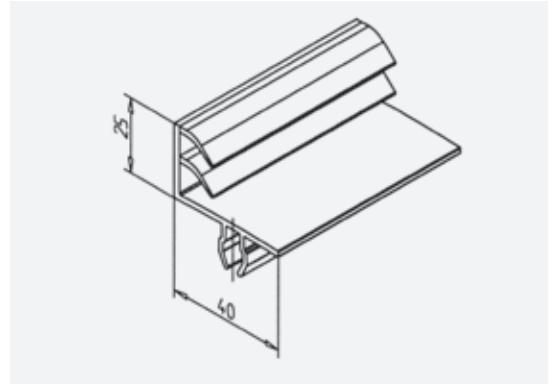
Outside galvanized steel sheet, optionally painted according to RAL

Cassette size (B / H) = clear width of frame construction - 8 mm



Noise protection bar (Part no. 22.1130/1)

Material: ABS grey
with two molded sealing lips
Weight 0,232 kg/m
Tool-free installation of the strip, no screws required
Suitable for retrofitting
Easy to edit, easy to replace
Low installation times
Sealing of removable walls, door hinges
no miter cut required



Noise protection cassette p34

Thickness 34 mm
1.5 mm galvanized sheet steel, optionally painted to RAL
Insulating material mineral fiber laminated, approx. 90 kg / m³
1.0 mm perforated sheet inside, galvanized, approx. 35% perforation
Sound insulation according to ISO 140-3 acc. Certificate
Cassette weight 27 kg/m²

Versions

Cassette firmly screwed
Cassette detachable with sash lock
Door with latch handle



Hinged with sash lock



Cassette firmly screwed

Options

Window 1-fold or 2-fold
Paint according to RAL
Plate silencer
Channel sound absorbers
Fan with thermostat
Sliding doors
Rain cover



Door with latch handle

Example of a basic setup

1. Design

When designing the carrier frame, work with standard groove centre distance N from 250 - 2000 mm where possible

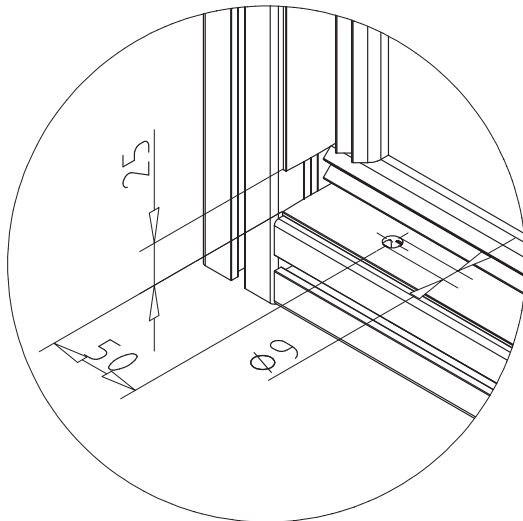
2. Insertion of the noise reduction strip

Determination of the length of the noise protection strip

Horizontal N - 45mm, Vertical N - 95mm

Cut strips to size and insert

For demountable elements, additionally make 2 holes $\varnothing 9$ mm and insert retaining pins 25, Part no. 21.1758/0, assemble with nuts



3. Inserting and fastening of the noise protection elements

firmly screwed elements are bolted from the back

Insert removable elements in the bottom of the retaining pins 25, then swing into the carrier frame and lock

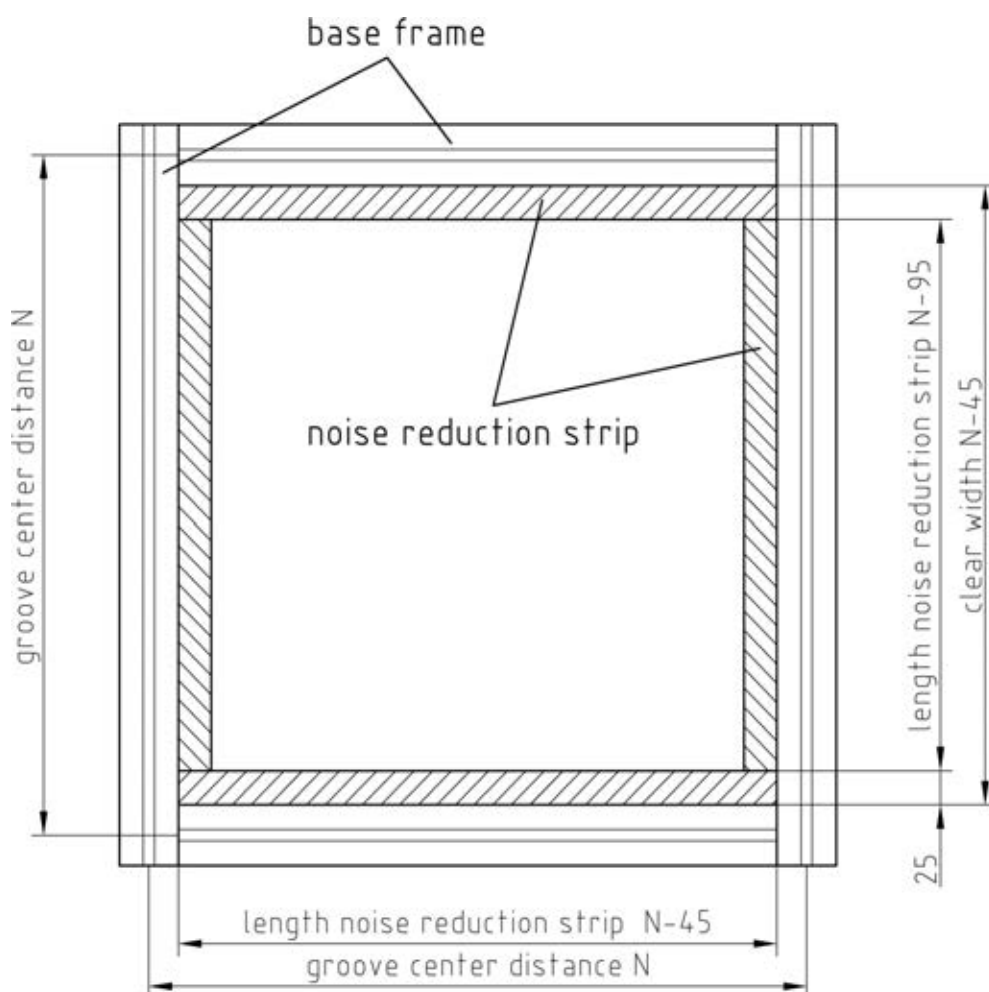
Secure door elements or flaps to the front



Preferred cassette sizes noise protection p34

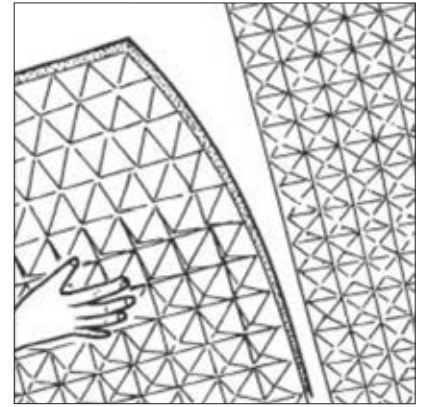
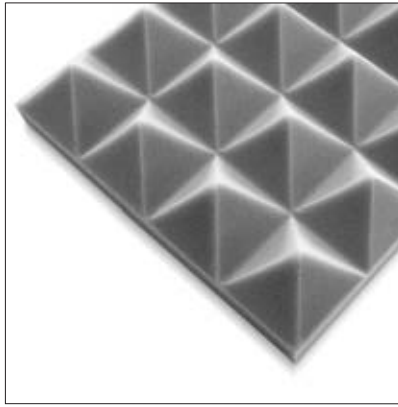
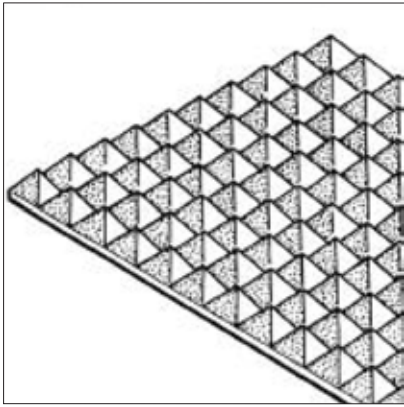
Groove center distance N mm	Cassette size mm	Cassette firmly screwed Part no.	Cassette can be hung up Part no.	Door Part no.
250 x 250	197 x 197	56.0011/0	56.0012/0	56.0013/0
500 x 250	447 x 197	56.0021/0	56.0022/0	56.0023/0
1000 x 250	947 x 197	56.0031/0	56.0032/0	56.0033/0
250 x 500	197 x 447	56.0041/0	56.0042/0	56.0043/0
500 x 500	447 x 447	56.0051/0	56.0052/0	56.0053/0
1000 x 500	947 x 447	56.0061/0	56.0062/0	56.0063/0
250 x 1000	197 x 947	56.0071/0	56.0072/0	56.0073/0
500 x 1000	447 x 947	56.0081/0	56.0082/0	56.0083/0
1000 x 1000	947 x 947	56.0091/0	56.0092/0	56.0093/0
250 x 2000	197 x 1947	56.0101/0	56.0102/0	56.0103/0
500 x 2000	447 x 1947	56.0111/0	56.0112/0	56.0113/0
1000 x 2000	947 x 1947	56.0121/0	56.0122/0	56.0123/0

Calculation of length for the noise protection strip and the panel size



Sound absorption panel, pyramid

Part No. 21.1819/0



TECHN. DATA / ITEMS SUPPLIED

- Board size max. 1000 x 1000 mm
- Pyramid height 50 mm, Total board thickness 70 mm, Pyramid pitch 100 mm
- Material: PUR-foam, anthracite, 70mm
- coefficient of thermal conductivity at 0°C 0,032 W/mK
- Fire protection classification 3
- **Other strenghts and performances on request**
- Weight = 1.500 kg/piece

APPLICATIONS

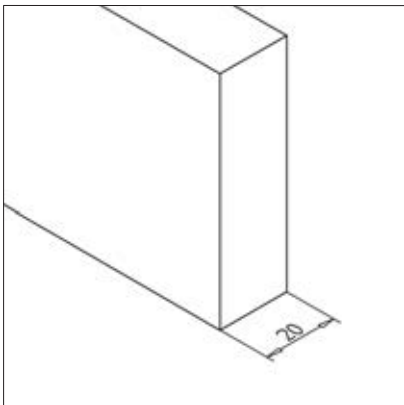
- Primary noise protection by enclosing noise sources
- Secondary sound insulation in lounges, master offices, etc.

ASSEMBLY

- Fixing by gluing to the substrate
- Depending on the substrate, suitable adhesives are available upon request

Sound absorption panel 20mm

Part No. 21.1879/0



TECHN. DATA / ITEMS SUPPLIED

- Material: Pu-foam, 20mm, black, adhesive
- **Board size max.: 1000 x 2000 mm**
- Temperature resistant -40 to +100°C
- Weight = 0.650 kg/m²

APPLICATIONS

- Through the black PU-skin immune to pollution

ASSEMBLY

- Lamination sheet pull down and glue on

Hygiene protection



Protect yourself and others!

Regardless of whether at the point-of-sale, in the doctor's practice or in an open-plan office, protection against infections plays an enormous role in all our lives. With MiniTec hygiene protection, we offer you a fast and effective solution. The protective screen is simply positioned between the interlocutors and thus reduces the direct transmission path substantially. The virus can be transmitted directly via the mucous membranes of the respiratory passages (sneezing, coughing,

saliva) or via the hands, with which people later touch their face and therefore the pathogen comes into contact with the mucous membranes. With the cough and sneeze guard you therefore not only protect yourself and your employees, but also your customers. We also offer you the possibility of mounting the sneeze guard on a counter or to install a mobile hygiene partition with counter.

Particularly hygienic

Our "sneeze guards" are made of aluminium. Thanks to its smooth surface, aluminium is very easy to clean and disinfect and is significantly more hygienic than other materials such as wood.

Quickly assembled

Our aluminium profiles and the Plexiglas panel(s) can also be joined with only a few tools to form an effective protection against droplet infections and can be positioned in the required location.

Flexible dimensions

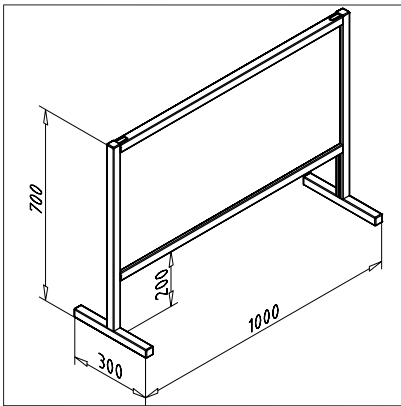
Here you will find the different standard protective screens for the most common requirements. Other dimensions and types can also be implemented easily - simply tell us your wishes!

Available at short notice

All the necessary items, whether as counter top screen or as mobile hygiene partition, are available directly ex warehouse in Schöenberg-Kübelberg.

Hygienic protection counter top small

Part No. 29.0129/0



TECHN. DATA / ITEMS SUPPLIED

- Made of aluminium profile 30 x 30 3G, with 3 closed sides, anodised E6/EV1
- All assembly parts in steel, galvanised
- Protective pane made of 4 mm polycarbonate (impact resistant and shatter-proof)
- Width: 1000 mm
Height: 700 mm
Base width: 300 mm
Floor clearance: 200 mm
- Weight = 5.118 kg/piece

APPLICATIONS

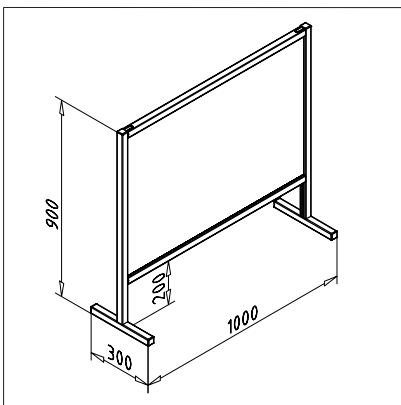
- Hygiene partition for separation on counters, in till areas and in many other locations
- Can also be used as a screen on tables
- Reduces the direct transmission path of droplet infections significantly
- Due to its smooth surface, aluminium is very easy to disinfect

ASSEMBLY

- Completely assembled

Hygienic protection counter top large

Part No. 29.0130/0



TECHN. DATA / ITEMS SUPPLIED

- Made of aluminium profile 30 x 30 3G, with 3 closed sides, anodised E6/EV1
- All assembly parts in steel, galvanised
- Protective pane made of 4 mm polycarbonate (impact resistant and shatter-proof)
- Width: 1000 mm
Height: 900 mm
Base width: 300 mm
Floor clearance: 200 mm
- Weight = 6.321 kg/piece

APPLICATIONS

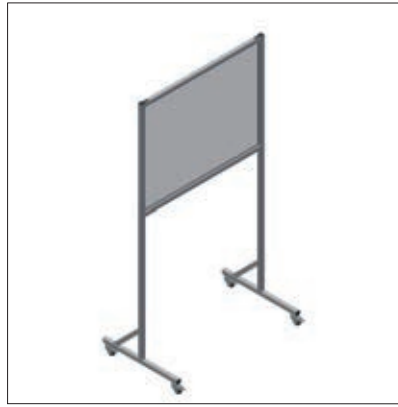
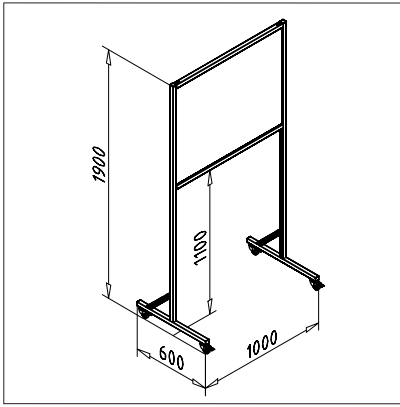
- Hygiene partition for separation on counters, in till areas and in many other locations
- Can also be used as a screen on tables
- Reduces the direct transmission path of droplet infections significantly
- Due to its smooth surface, aluminium is very easy to disinfect

ASSEMBLY

- Completely assembled

Mobile hygiene protection screen

Part No. 29.0131/0



TECHN. DATA / ITEMS SUPPLIED

- Made of aluminium profile 30 x 30 3G, with 3 closed sides, anodised E6/EV1
- All assembly parts in steel, galvanised
- Protective pane made of 4 mm polycarbonate (impact resistant and shatter-proof)
- 4 swivel castors with 50 mm wheel diameter, on ball bearing mounted, Steel housing, galvanised, with brake Roller with grey rubber wrapping
- Width: 1000 mm
Height: 1900 mm
Base width: 600 mm
Floor clearance: 1100 mm
- Weight = 9.956 kg/piece

APPLICATIONS

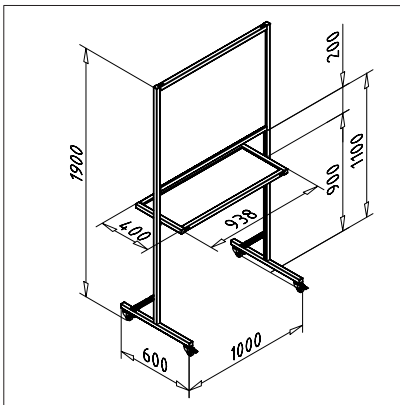
- Reduces the direct transmission path of droplet infections significantly
- Due to its smooth surface, aluminium is very easy to disinfect
- The protective screen is mobile and due to the 4 smooth running swivel castors, can easily be moved to another location, the braking/locking device on the rollers ensures that the protective screen is always stood securely in its intended location

ASSEMBLY

- Completely assembled

Mobile hygiene protection wall

Part No. 29.0132/0



TECHN. DATA / ITEMS SUPPLIED

- Made of aluminium profile 30 x 30 3G, with 3 closed sides, anodised E6/EV1
- All assembly parts in steel, galvanised
- Protective pane made of 4 mm polycarbonate (impact resistant and shatter-proof)
- 4 swivel castors with 50 mm wheel diameter, on ball bearing mounted, Steel housing, galvanised, with brake Roller with grey rubber wrapping
- Shelf made of 2 mm anodised aluminium sheet, edged in profile frame
- Width: 1000 mm
Height: 1900 mm
Base width: 600 mm
Floor clearance up to protective pane: 1100 mm
Counter height from floor: 900 mm
Depth of the counter: 400 mm
- Weight = 13.640 kg/piece

APPLICATIONS

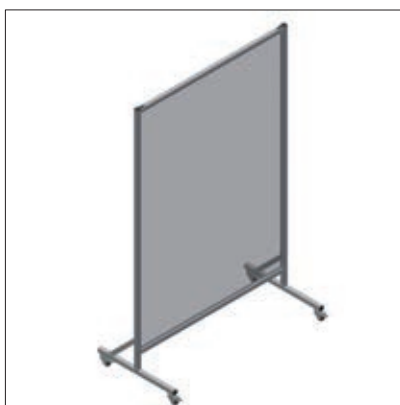
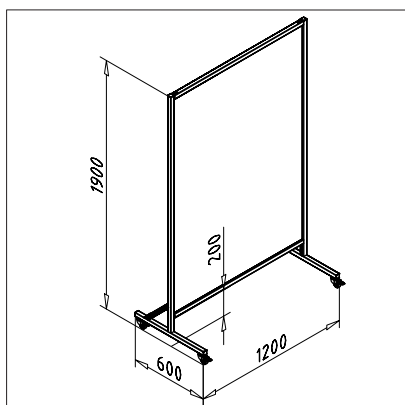
- Reduces the direct transmission path of droplet infections significantly
- Due to its smooth surface, aluminium is very easy to disinfect
- The protective screen is mobile and due to the 4 smooth running swivel castors, can easily be moved to another location, the braking/locking device on the rollers ensures that the protective screen is always stood securely in its intended location
- Due to the all-round profiles on the counter prevent objects from easily falling or rolling.

ASSEMBLY

- Completely assembled
- The height of the counter can be individually adjusted with a minimum technical skill

Mobile hygiene partition

Part No. 29.0133/0



TECHN. DATA / ITEMS SUPPLIED

- Made of aluminium profile 30 x 30 3G, with 3 closed sides, anodised E6/EV1
- All assembly parts in steel, galvanised
- Protective pane made of 4 mm polycarbonate (impact resistant and shatter-proof)
- 4 swivel castors with 50 mm wheel diameter, on ball bearing mounted, Steel housing, galvanised, with brake Roller with grey rubber wrapping
- Width: 1200 mm
Height: 1900 mm
Base width: 600 mm
Floor clearance: 200 mm
- Weight = 16.038 kg/piece

APPLICATIONS

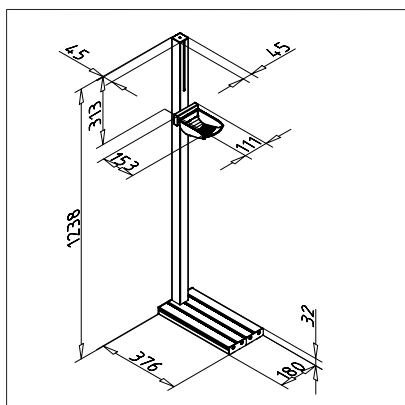
- Reduces the direct transmission path of droplet infections significantly
- Due to its smooth surface, aluminium is very easy to disinfect
- The protective screen is mobile and due to the 4 smooth running swivel castors, can easily be moved to another location, the braking/locking device on the rollers ensures that the protective screen is always stood securely in its intended location

ASSEMBLY

- Completely assembled

Hygiene stand with drip tray

Part No. 29.0136/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, extruded, anodized E6/EV1
- Made of aluminium profile 45 x 45 G, with closed sides
- All assembly parts in steel, galvanised
- Anti-slip license NBR, black
- Drip tray made of plastic, grey
- Supporting foot width: 180 mm
- Height: 1238 mm
- Depth: 376 mm
- **NOTE:** Supplied without disinfectant and disinfectant dispenser
- Weight = 6.776 kg/piece

APPLICATIONS

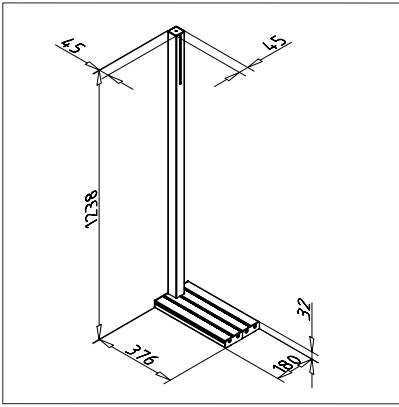
- The upright hygiene stand is the optimal solution for providing disinfectant hygienically - in public areas, offices, medical practices, care facilities, etc.

ASSEMBLY

- Fix the accessories on the profile- screws are included

Hygiene stand without drip tray

Part No. 29.0137/0



TECHN. DATA / ITEMS SUPPLIED

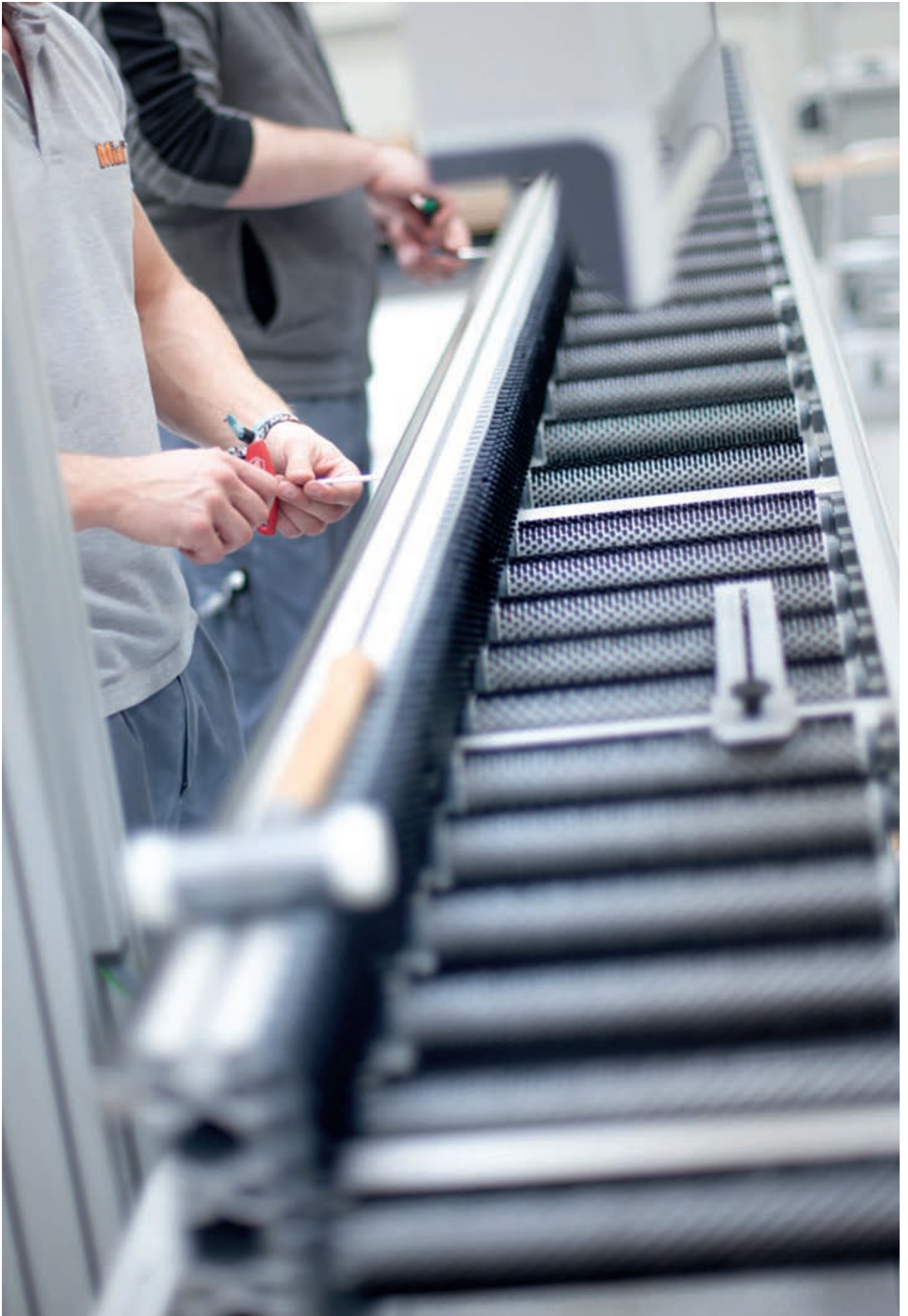
- Aluminium + steel, extruded, anodized E6/EV1
- Made of aluminium profile 45 x 45 G, with closed sides
- All assembly parts in steel, galvanised
- Anti-slip license NBR, black
- Supporting foot width: 180 mm
- Height: 1238 mm
- Depth: 376 mm
- **NOTE:** Supplied without disinfectant and disinfectant dispenser
- Weight = 6.551 kg/piece

APPLICATIONS

- The upright hygiene stand is the optimal solution for providing disinfectant hygienically - in public areas, offices, medical practices, care facilities, etc.

ASSEMBLY

- Fix the accessories on the profile- screws are included



Tools and Machining

6.1	Tools	578
6.2	Longitudinal stops	587
6.3	Processing	588

Magnetic bit holder, Torx

Part No. 26.1820/0



TECHN. DATA / ITEMS SUPPLIED

- Automatic holder with strong permanent magnet
- Inclusive Torx Bit T 40 x 25 **part no. 26.1822/0**
- Weight = 0.046 kg/piece

APPLICATIONS

- Holder of Bits Torx 40 for self-tapping screws M8 for mounting profile connectors

ASSEMBLY

- Retains the screws optimal on the tool in every position even at high revolution speed

Torx wrench T40

Part No. 26.1814/0



TECHN. DATA / ITEMS SUPPLIED

- Tool, chromium plated
- Plastic T-handle, black
- Weight = 0.085 kg/piece

APPLICATIONS

- Fastening of MiniTec power-lock fastener SF

T-handle key SW 4

Part No. 26.1810/0



TECHN. DATA / ITEMS SUPPLIED

- Tool, chromium plated
- Plastic T-handle, black
- Weight = 0.032 kg/piece

APPLICATIONS

- Fixation of Minitec power lock fastener and all kinds of screws

T-handle key

Part No. --,----/-



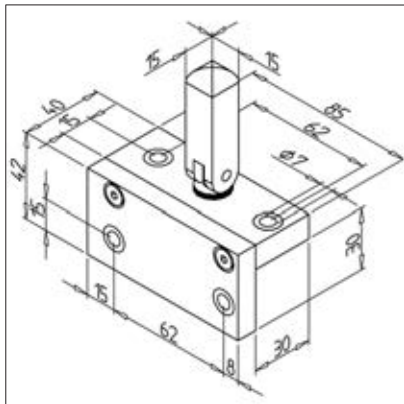
TECHN. DATA / ITEMS SUPPLIED

- Tool, chromium plated
- Green plastic handle
- SW 4 part no. 26.1817/0
Weight 0,038 kg
- SW 5 part no. 26.1084/0
weight 0.056 kg

APPLICATIONS

- Fixation of Minitec power lock fastener and all kinds of screws

Drilling jig 30



TECHN. DATA / ITEMS SUPPLIED

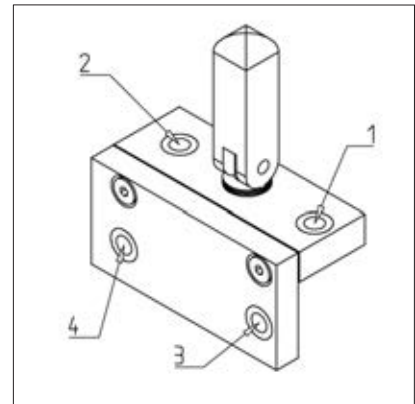
- Steel drill bushes \varnothing 7 mm
- Eccentric clamp device
-
- Weight = 0.282 kg/piece



APPLICATIONS

- 1) Positioning of step drilling for screw-connection
- 2) Connection bore on profile panel for pneumatic screw connections
- 3) Pre-drilling for step drilling for screw connection of profile 32 x 32
- Fitting for all profiles of profile series 30

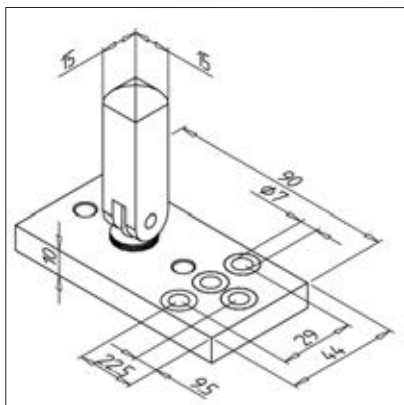
Part No. 26.1065/0



ASSEMBLY

- Tighten the drilling jig to the profile groove and drill with a suitable drill through the provided bushing
- The bore \varnothing 7 mm can be closed with plug 7 **part no. 22.1215/1**, should be used with our closed t-slot profiles

Drilling jig 45



TECHN. DATA / ITEMS SUPPLIED

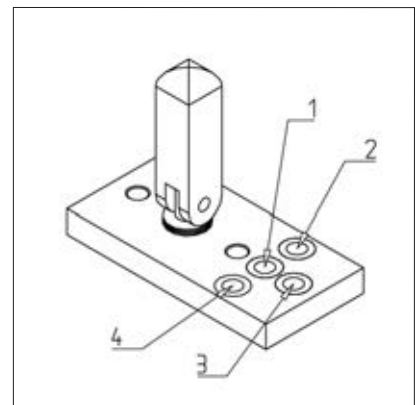
- Steel drill bushes \varnothing 7 mm
- Eccentric clamp device
-
- Weight = 0.220 kg/piece



APPLICATIONS

- 1) Positioning of step drilling for screw-connection
- 2) Connection bore on profile panel for pneumatic screw connections
- 3) Pre-drilling for step drilling for screw connection of profile 32 x 32
- Fitting for all profiles of profile series 45

Part No. 26.1092/0

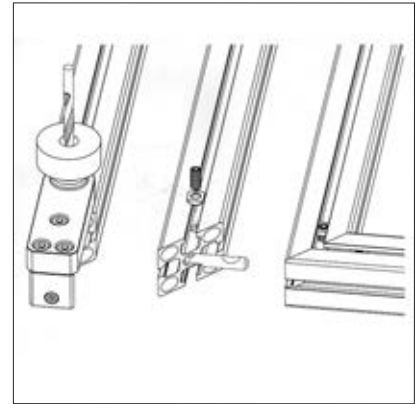
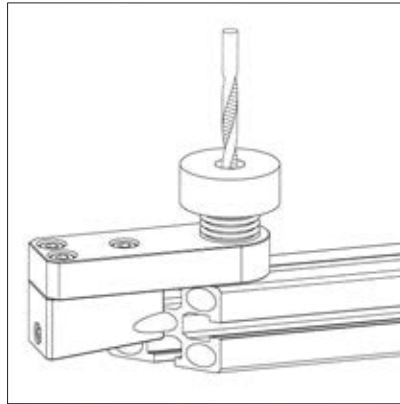
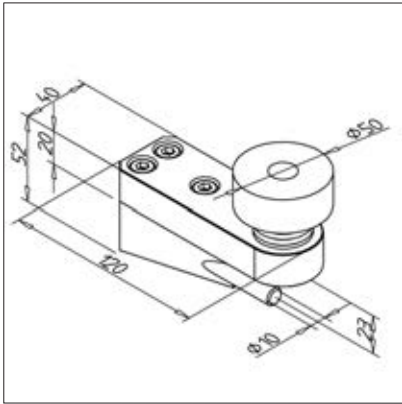


ASSEMBLY

- Tighten the drilling jig to the profile groove and drill with a suitable drill through the provided bushing
- The bore \varnothing 7 mm can be closed with plug 7 **part no. 22.1215/1**, should be used with our closed t-slot profiles

Drilling jig for mitre connector 45

Part No. 26.1050/0



TECHN. DATA / ITEMS SUPPLIED

-
- Centering pin: steel
- Fixation screw: Plastic with steel bore bushing
- Weight = 0.450 kg/piece

APPLICATIONS

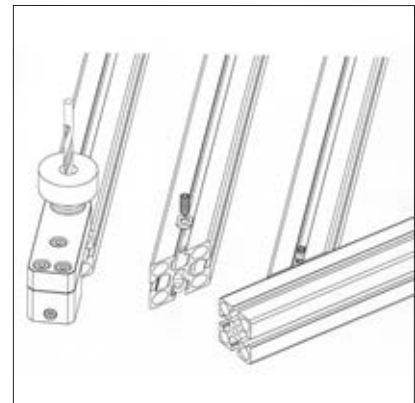
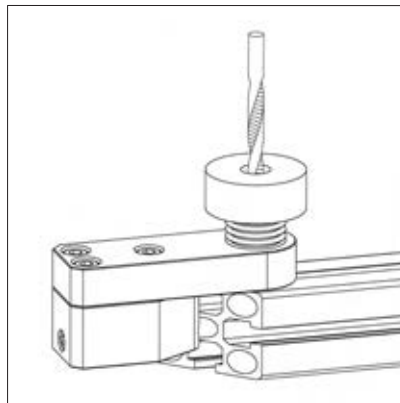
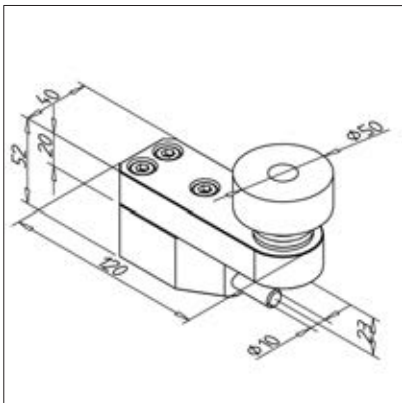
- Production of the fastening bore for miter connectors 45 depending on the miter angle.
- Fitting for all profiles of profile series 45

ASSEMBLY

- Cut profile in desired angle, rebore the center-bore $\varnothing 10,1$ mm with twist drill **part no. 26.1816/0**
- Insert the plug gauge until the stop, tighten the plastic locking screw
- Insert bore $\varnothing 8.0$ mm into profile at corresponding depth through drill bush
- Insert mitre-connector

Drilling jig for mitre connector N 45

Part No. 26.1060/0



TECHN. DATA / ITEMS SUPPLIED

-
- Centering pin: steel
- Fixation screw: Plastic with steel bore bushing
- Weight = 0.556 kg/piece

APPLICATIONS

- Production of the fastening bore for miter connectors N45 depending on the miter angle.
- Fitting for all profiles of profile series 45

ASSEMBLY

- Cut profile in desired angle, rebore the center-bore $\varnothing 10,1$ mm with twist drill **part no. 26.1816/0**
- Insert the plug gauge until the stop, tighten the plastic locking screw
- Insert bore $\varnothing 8.0$ mm into profile at corresponding depth through drill bush
- Insert mitre-connector

Machine thread former M8

Part No. 26.1082/0



TECHN. DATA / ITEMS SUPPLIED

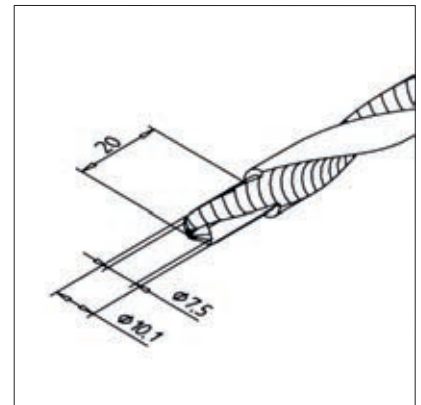
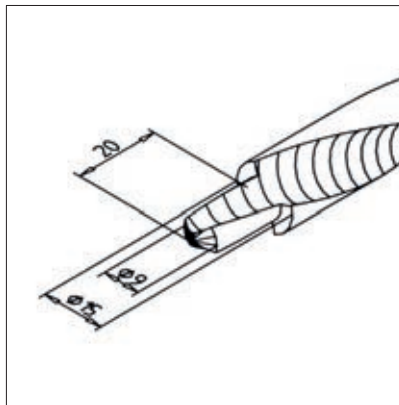
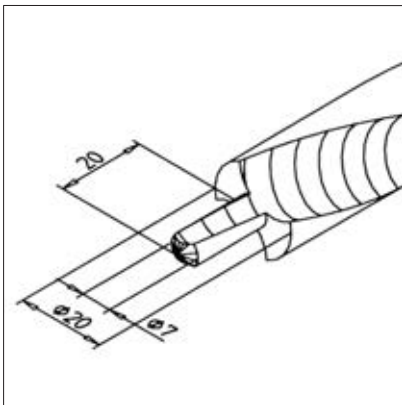
- HSS-tool steel
- Weight = 0.031 kg/piece

APPLICATIONS

- Chipless production of central thread M8 in all profiles

Step drill

Part No. --.----/-



TECHN. DATA / ITEMS SUPPLIED

- HSS-tool steel
- Step drills 20 **part no. 26.1813/0**
Steps: \varnothing 7 mm / \varnothing 20 mm
Shaft: MK 2
Weight: 0,2650 kg
- Step drills 15 **part no. 26.1815/0**
Steps: \varnothing 9 mm / \varnothing 15 mm
Shaft: cylindrical \varnothing 15 mm
Weight: 0,1350 kg

- Step drills 10,1 **part no. 26.1816/0**
Steps: \varnothing 7,5 mm / \varnothing 10,1 mm
Shaft: cylindrical \varnothing 10,1 mm
Weight: 0,0520 kg

APPLICATIONS

- Step drill 20
Preparation of step bores for bolt and butt connector 20 in profiles of the series 45
- Step drill 15
Preparation of step bores for bolt and butt connector 15 in profiles of the series 45, narrow sides 19 and 32
- Step drill 10.1
Drilling of central bore in profiles of series 45 for mitre-connectors

Gun type impulse wrench

Part No. 26.0800/0



TECHN. DATA / ITEMS SUPPLIED

- Pneumatically driven impulse wrench
- Quick-change chuck 1/4"
- Connection with 1/4 amp;#8220 quick coupling
- Magnetic bit holder with Torx bit T40
- Air consumption ca. 0,4 m³/min
- Speed at idle ca. 7000 Rpm
- Torque ca. 20 Nm
(without torque shutdown)
- Weight = 0.991 kg/piece

APPLICATIONS

- For screwing in self-tapping screws for MiniTec power-lock fasteners
- By pre-switching a hydraulic element, a soft shock is generated, thus particularly gentle joint work

Thread forming machine

Part No. 26.1910/0



TECHN. DATA / ITEMS SUPPLIED

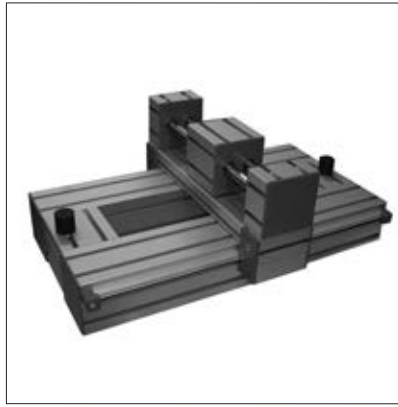
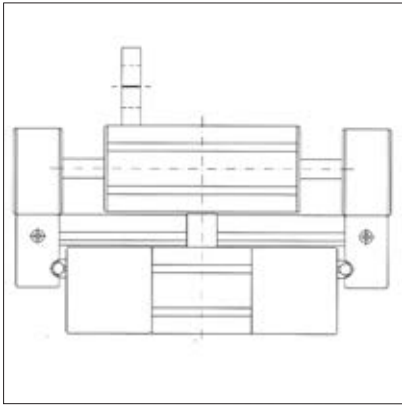
- Automatic change of direction, rapid return, 230 V, 280 W
- For threads up to M10
- Complete with chuck
- Spindle neck Ø 43 mm
- Weight = 1.700 kg/piece

APPLICATIONS

- Efficient thread production in conjunction with the tapping device

Thread forming jig

Part No. 26.1970/0



TECHN. DATA / ITEMS SUPPLIED

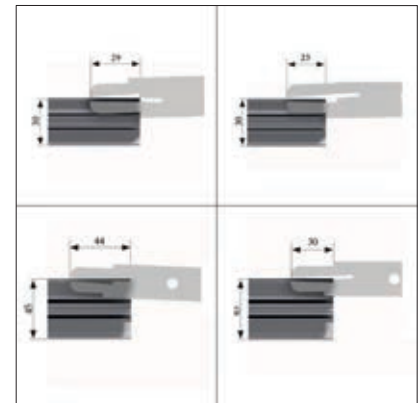
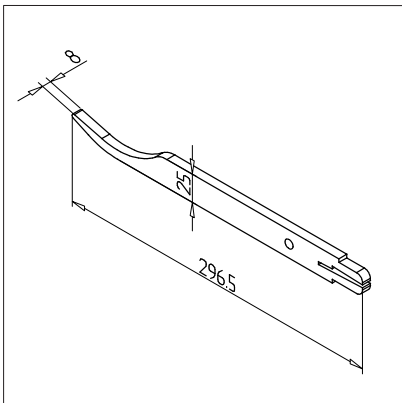
- Made of MiniTec aluminium profiles
- Two-axis slides with machine holder for thread cutting or drilling machines with spindle neck \varnothing 43 mm
- Complete with underframe
- Without machine
- Weight = 16.000 kg/piece

APPLICATIONS

- Rational thread production
- Efficient counter-boring or drilling of the central bore
- Can be delivered with 1 - 4 slides for up to 4 machines

Groove opener

Part No. 26.0815/0



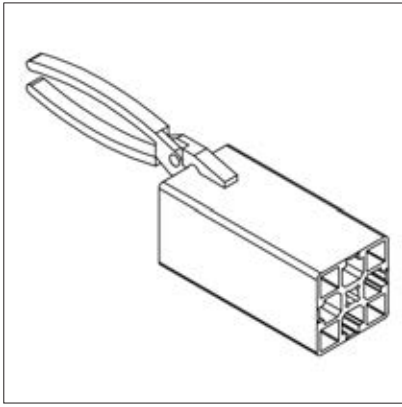
TECHN. DATA / ITEMS SUPPLIED

- Stainless steel, blasted
- Operating instructions
- Weight = 0.356 kg/piece

APPLICATIONS

- Rational tearing off of closed grooves in MiniTec aluminium profiles, for ex. for the mounting of surface elements, attachment of linear guides, etc.
- Efficient breaking out of the groove cover for the assembly of MiniTec profile connectors
- Suitable for all profiles of series 30
- Suitable for profile series 45

Flat pliers



TECHN. DATA / ITEMS SUPPLIED

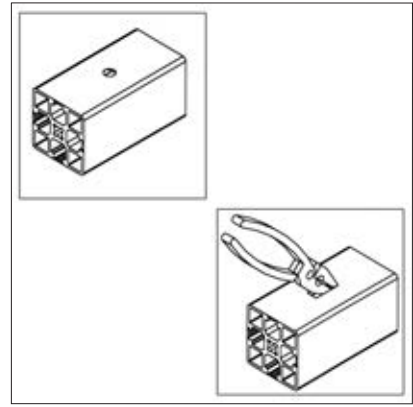
- Metal pliers with plastic handle
- Weight = 0.150 kg/piece



APPLICATIONS

- For breaking the profile groove in case of closed profiles

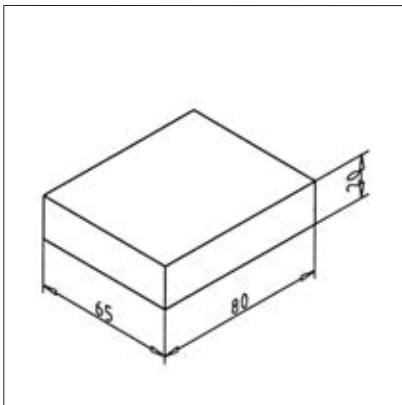
Part No. 26.0814/0



ASSEMBLY

- Fit the flat pliers to the closed groove and break the groove by repeated swiveling

Anodising polisher



TECHN. DATA / ITEMS SUPPLIED

- Elastic bonded abrasive
- Weight = 0.138 kg/piece

APPLICATIONS

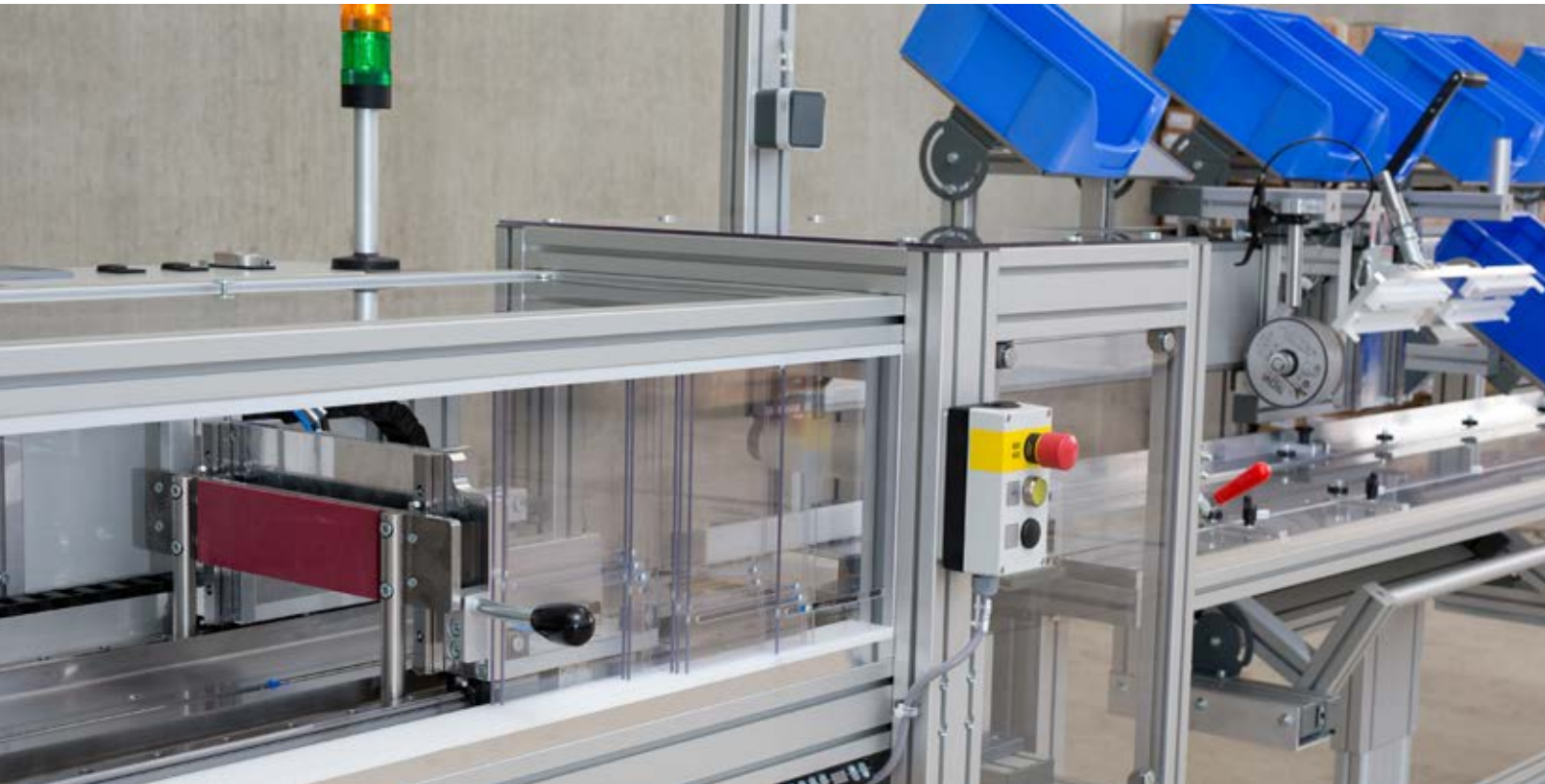
- To remove minor scratches on anodic coating
- To equal "shades" on anodic coating

Part No. 26.0811/0

ASSEMBLY

- Also suitable for hard-to-reach positions (eraser can be cut to size)
- Dry and wet implementation – Water reinforces the functioning
- Even polished sections without physical effort
- Water- and oil-resistant
- Ecofriendly, no detergents necessary
- Long life cycle

Longitudinal stops



Exact positioning made easy

MiniTec longitudinal stops are proven complete key solutions based on standard elements of the MiniTec profile system. The modular structure of these stops enables the optimum solution for any application. All length stops are equipped with a height-adjustable supporting foot with holes for floor mounting. An adapter plate with fixing holes is provided for

Standard lengths up to 6000 mm (measured length:5500 mm), longer lengths on request

- Bearing roller width: 200-600 mm
- Bearing roller spacing: 200 mm
- Height adjustment: ± 100 mm
- Standard height: 850 mm
- Standard connection: Right
- Length measurement: magnetic tape
- Measurement accuracy: ± 0.15 mm
- Measuring display: LCD, two lines

connection to the machine. The digital measurement display is attached directly to the machine at visible height. Simple dimension corrections can be made using the display, e.g. for saw blade thicknesses or changing the distances distance between stop and tool.

Slide guide

Linear guide LR with 4 precision rollers, adjusted without clearance, on hardened precision shafts $\varnothing 12$ mm Material 1.1213 (CF 53).

Slide clamping

With motor drive automatically (electric) on reaching the stop position, with manual drive via switch (pneumatic) or via clamping lever

Motor drive

AC motor with positioning control, installed in housing. Traversing speed: 0.6 m / s

Dimension input for motor drive

Input terminal with membrane keypad and LED display, mounted at working height directly next to the machine

Bending the profiles



New applications with bent profiles

Technical features

For standard applications, anodized profiles are used. Small cracks in the anodized layer may occur in the bent area. Subsequent anodization is only required for small radius or high optical demands. The profile cross-section is not changed during the bending process. All components can be used further. A minimum radius of 400 mm must be observed when using the MiniTec profile connector. G profiles with closed grooves and UL profiles are not suitable for the bending process. The bending process is CNC-controlled and controlled. With this bending technology different radius can be realized on the same profile bar.

Advantages

- Decorative designs for trade show or office
- Functional design for swivelling constructions
- Machine cover
- Safety devices in machine contour
- Curved roller conveyors
- Ergonomic design of workplaces

profile	POSITION	MINUTE RADIUS
19 X 45	┆	250
19 X 32	┆ ┆	200 500
32 X 32 F		300
45 X 32 F	┆ ┆	350 600
45 X 45 F 45 X 45		500
45 X 90 S	┆	750

Thread M8 x 20

Part no. 25.1087/0
end face in central bore

Insertion pocket

Part no. 25.0315/0
on profile surface for subsequent installation of power-lock fasteners

Thread M10 x 50

Part no. 25.1088/0
end face in central bore for adjustable feet

Stepped bore $\varnothing 9 / \varnothing 15$

Part no. 25.1085/0
for bolt connector 15
Part no. 25.1085/1

Thread G 1/4

Part no. 25.1089/0
on profile surface for pneumatic connection

Stepped bore $\varnothing 7 / \varnothing 20$

Part no. 25.1097/0
for bolt and butt connector

Thread G 1/8

Part no. 25.1090/0
on profile surface for pneumatic connection

Machining, mitred joint

Part no. 25.1072/0
for mitre connector (without cut)

Thread G 1/4

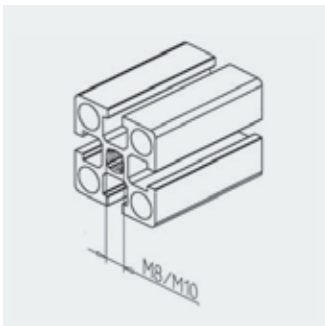
Part no. 25.1091/0
end face in bore $\varnothing 11.7$ mm for screw plug
Pneumatic connection

Mitre cut

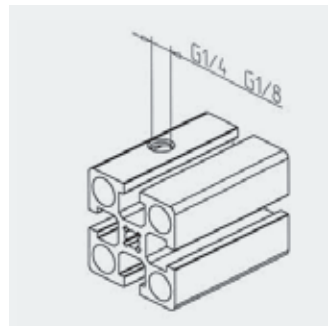
Part no. 25.1072/1
for mitre connector (See Connection elements/mitre connector chapter)

Pneumatic connection

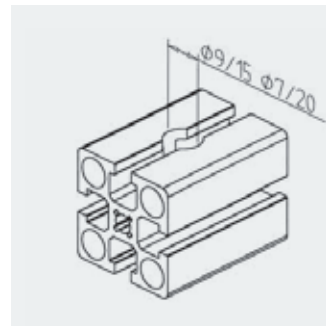
through-bore $\varnothing 7$ mm Part no. 25.1092/0 for screw connection



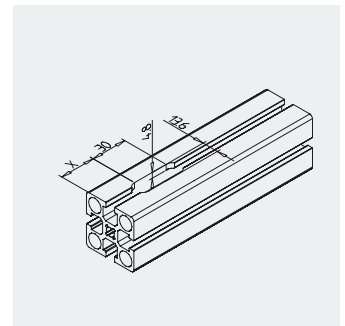
Thread M8 / M10



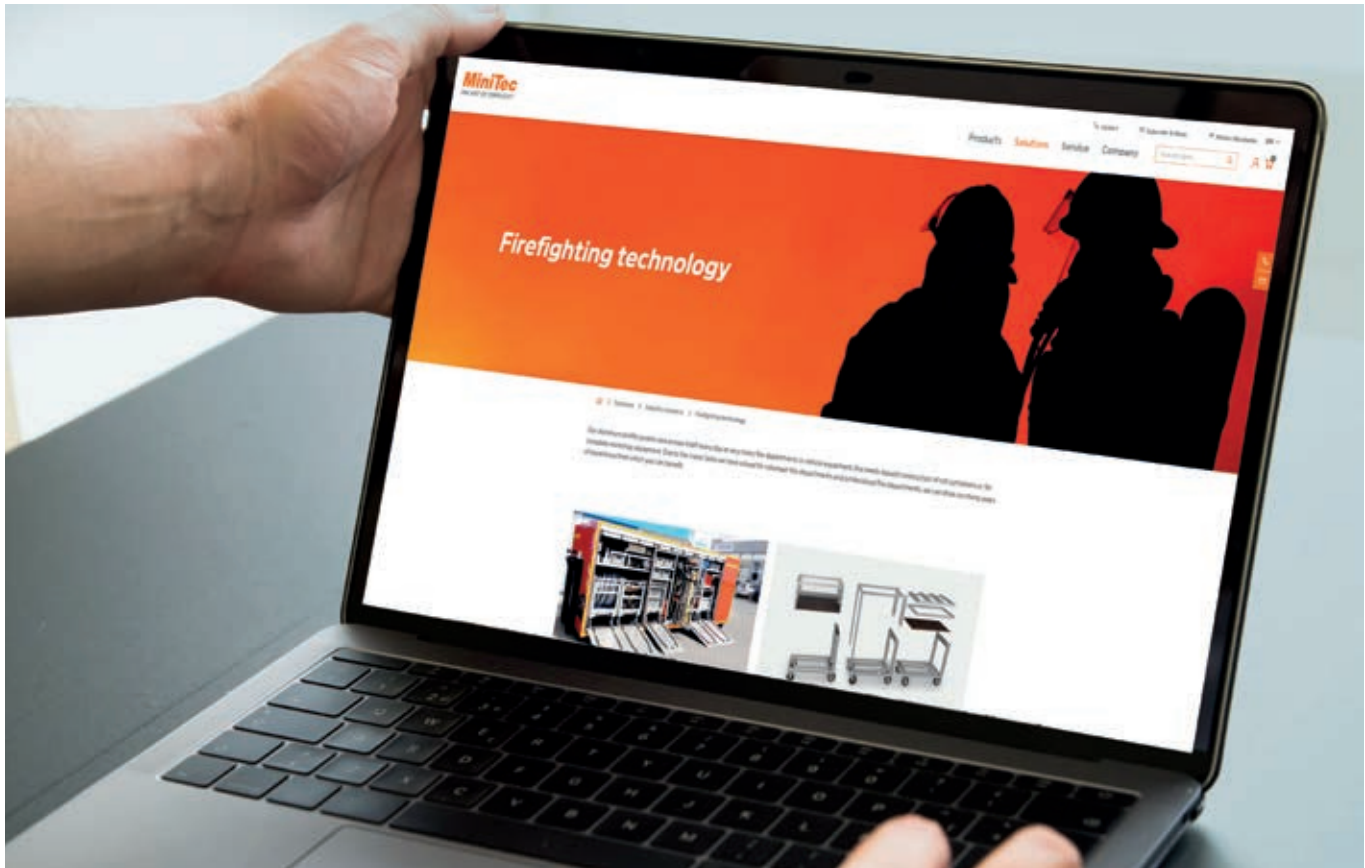
Thread G1/4 G1/8



Stepped bore



Processing insertion pocket



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on social media?



Industry solutions



Particular requirements need special concepts

Many user groups of the MiniTec profile system have particular designs and plants typical for the respective group. Against this background, our engineers produce specific industry solutions for an increasing number of industrial sectors.

For example, fire services: Here we offer a broad portfolio of products and solutions, from mobile container racks to vehicle fitouts and breathing apparatus workshops through to equipment storage. However, there are also completely different areas of use, especially for vehicle fitout. Especially for campers, the profile series 30 and 45 form the ideal base for tailor-made interiors. Due to the growing demand, we are therefore developing an increasing number of special components for camping vehicles.

MiniTec has also offered perfected industry solutions for the renewable energy sector for many years, such as for photovoltaic module production lines. Many manufacturers trust our expertise. The same also applies to solar thermal power, i.e. the conversion of solar energy into usable thermal energy. With our worldwide leading laser welding system (LSA), our customers are able to produce high-quality and durable connections with optimum heat transfer. We also supply highly efficient solutions for the assembly, handling, conveying and testing processes for battery production facilities.

May other application branches now benefit from solutions especially developed for them. The range of industry solutions based on the MiniTec profile system is expanded permanently.



Further information is available at:

<https://www.minitec.de/en/solutions/industry-solutions>



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