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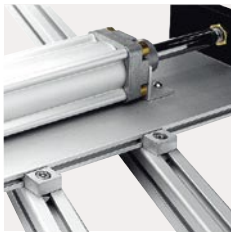

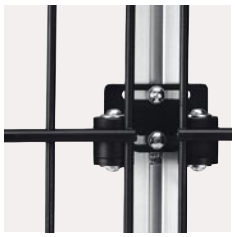

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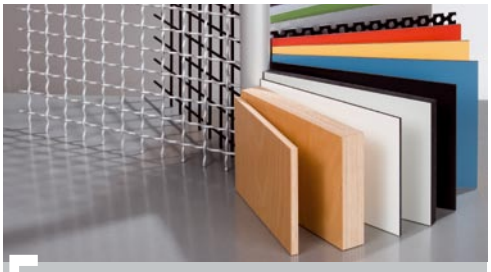

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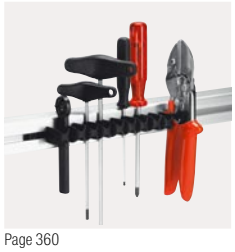
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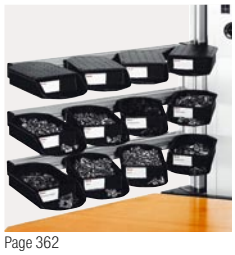
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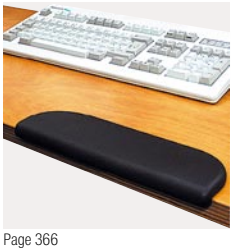
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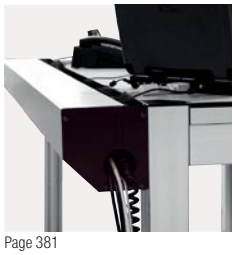
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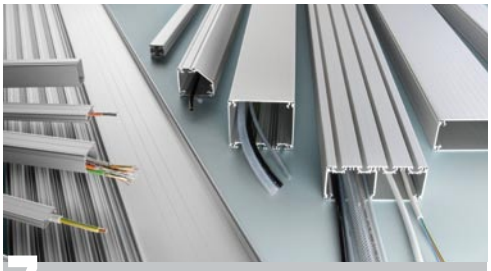

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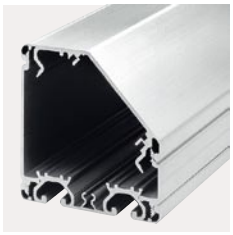
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The Company

item international

Product Philosophy

Scope of Service and Sales

International Sales

item international

When item Industrietechnik GmbH was established in 1976 in Solingen, its initial areas of operation were the design and construction of customised machines and assembly equipment.

From the very outset, item set itself a prime goal - to reduce the cost of building machines in our own company by rationalising machining and assembly operations and by standardising components.

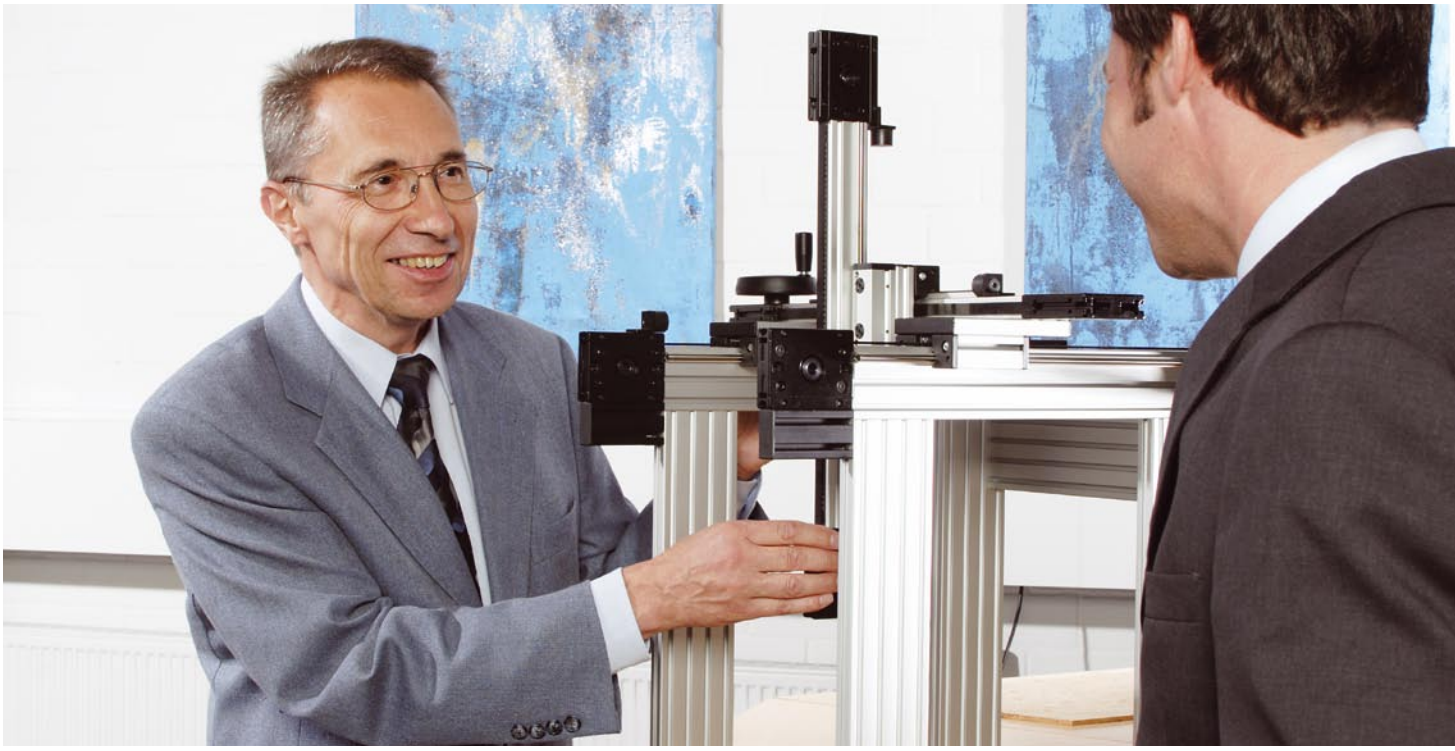
This resulted directly in the item MB Building Kit System, a machine-building kit for labour-saving and cost-cutting constructions of various kinds, from assembly work benches and facilities to automated production equipment.

Functional, economic and flexible in use - these are just some of the many requirements which need to be met by an industrial building kit system covering the wide spectrum of modern plant and production installations.

The modular design of the MB Building Kit System ensures that the elements of the individual product groups can be combined at will.

Over the years, item has become the market leader on the market for modular building kit systems. The standard values which item defined, for example modular dimensions and system grooves, are now accepted worldwide and are often copied.

By constantly developing the MB Building Kit System and its range of products, we are ensuring that item will maintain its technological lead in the years ahead.



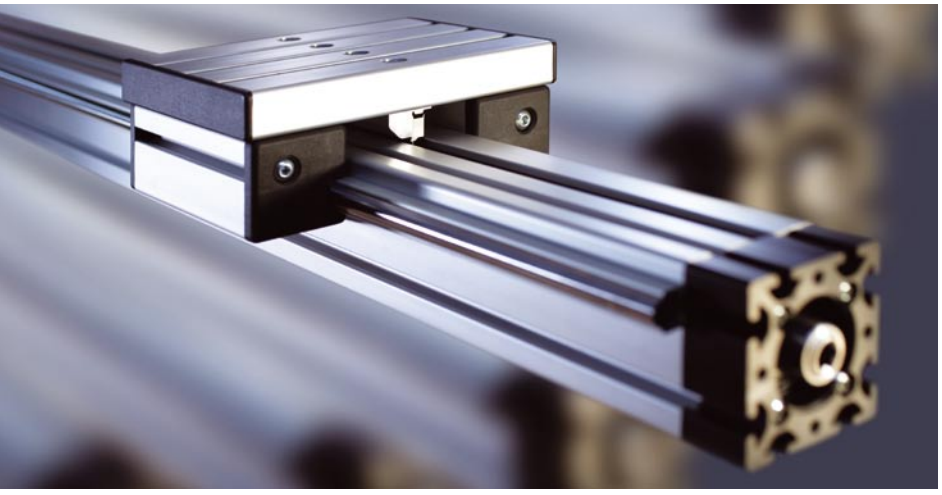
Product Philosophy

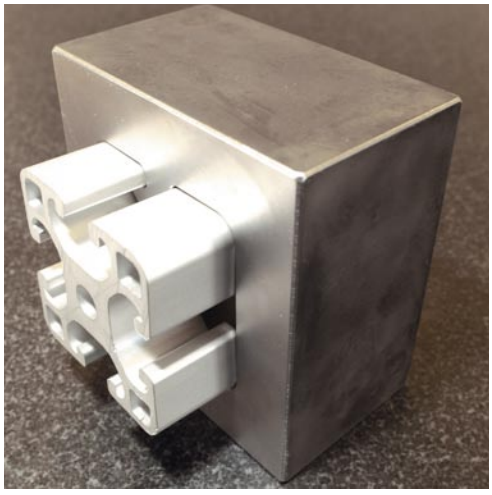
All products in the MB Building Kit System are developed, manufactured and supplied using the strictest quality criteria.

The permissible production tolerances are extremely tight and in some cases lie well below industry standard tolerance levels. By using physical principles to best effect, item has optimized the relationship between material usage and system element stability. Systematic quality management ensures complete compliance with agreed standard values. And our high quality naturally also extends to the service portfolio of each individual item sales partner.

In developing the MB Building Kit System, item pays particular attention to ensuring the environmental compatibility of all products. The system elements can be reused – environmentally speaking, reuse is far better than recycling. Where the technology allows, they are produced from only single materials. This means that the individual components of the various units can be disassembled later for recycling. All aluminium profiles can be recycled using procedures which are entirely eco-friendly. Plastic and metal parts all bear details of the materials used.

Details of all materials can be found under the individual product descriptions.

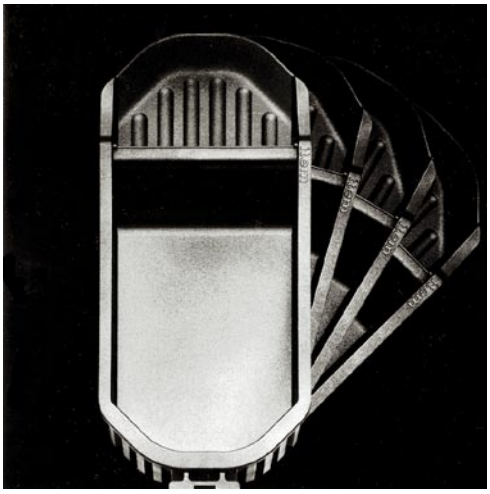




RoHS 2002/95/EC

item made a voluntary undertaking at an early date not to use hazardous materials as defined by Directive 2002/95/EC ("RoHS") in the products it sells. We decided to apply this irrespective of the applications our products would eventually be used in, and despite the fact that most of these applications lie outside the scope of this Directive. As a result, apart from a few well-founded exceptions, the products listed in this catalogue comply with Directive 2002/95/EC.

Such exceptions are only pemitted in rare cases where no suitable technical alternative is available. The products to which these exceptions relate are set out in an up-to-date list that is available to customers on request.



The extremely high level of innovation is reflected in the numerous patented products in the MB Building Kit System.

When developing new products, particular emphasis is placed on innovation and design. The products in the MB Building Kit System have received many international design awards over the years.

item's design credentials do not stop with the development and design of industrial components, but also include highly successful design products for the consumer goods market.

INDUSTRIE FORUM DESIGN HANNOVER

Design Innovationen
Auszeichnung
für hohe Design Qualität
Design Zentrum
Nordrhein-Westfalen

reddot design award
winner 2004

Scope of Service and Sales

Numerous local service centres provide users with a broad spectrum of services:

- User support in resolving special needs
- CAD-assisted project engineering, tendering and design of installations and equipment
- Fast delivery of all system elements
- Elements machined ready for assembly
- Provision of construction kits
- Turnkey solutions with system elements
- CAD software for project management
- Provision of technical documentation
- Internal and external training courses

item has a decentralised sales structure in Germany. Local sales and service centres provide customers with a full range of services to provide optimum support in all situations.

1 item Hamburg
Bültbek 27-29
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Phone +49/4107/9083-0
Fax +49/4107/9083-22

2 item Solingen
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D-42699 Solingen
Phone +49/212/6580-0
Fax +49/212/6580-222

3 Pressluft Klefinghaus GmbH
Kerkhagen 7
D-58469 Lüdenscheid
Phone +49/2351/9547-0
Fax +49/2351/9547-38

4 item Mühlhausen
Zu den Katzentreppen 13
D-99974 Mühlhausen
Phone +49/3601/40684-0
Fax +49/3601/40684-11

5 item Nossen
Gewerbestr. 15
D-01683 Nossen
Phone +49/35242/433-0
Fax +49/35242/433-65

6 item Freiburg
Mitscherlichstr. 5
D-79108 Freiburg
Phone +49/761/51587-0
Fax +49/761/51587-20

7 item Ulm
August-Nagel-Str. 22
D-89079 Ulm-Einsingen
Phone +49/7305/9611-0
Fax +49/7305/9611-11

8 item Bayern GmbH
Kronwiedstr. 3
D-85088 Vohburg a.d. Donau
Phone +49/8457/9291-0
Fax +49/8457/9291-11

International Sales

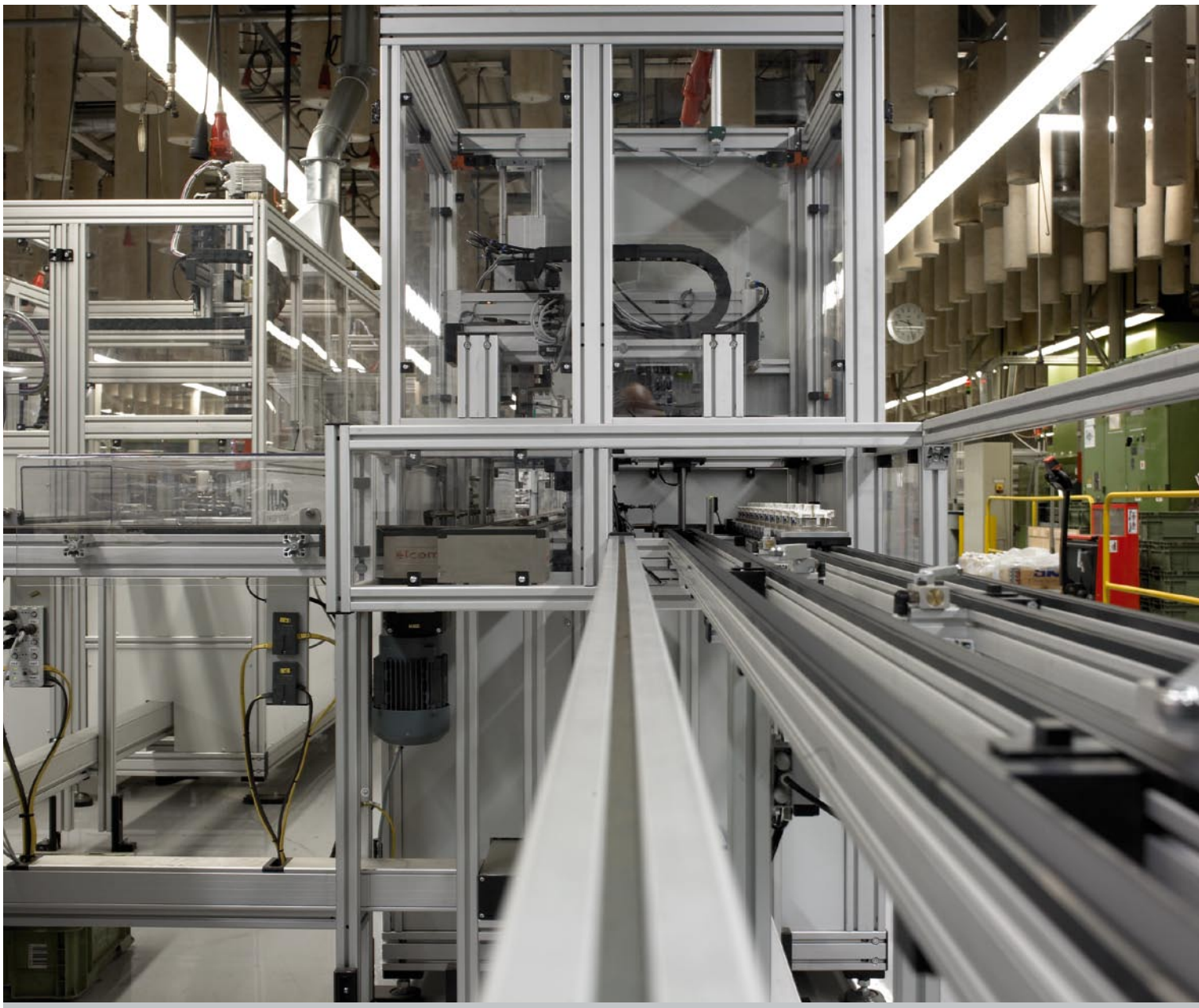
With branches, sales partners and a comprehensive network of service centres worldwide, item can assure users of continuous support and rapid availability of products in their direct vicinity.

For details of where to find your local service partner, refer to our web site at **www.item.info**

item has sales partners or branches in the following countries.

Australia	Czech Republic	Ireland	Norway	South Africa
Austria	Denmark	Israel	Poland	Spain
Begium	Finland	Italy	Portugal	Sweden
Brazil	France	Japan	Romania	Switzerland
Bulgaria	Greece	Lithuania	Russia	Turkey
Canada	Hungary	Netherlands	Singapore	United Kingdom
China	Iran	New Zealand	Slovenia	USA

item



Applications for MB Building Kit System

Mechanical and factory equipment engineering

Modular components from the MB Building Kit System provide a wide variety of solutions for mechanical engineering.

System elements are used in a wide range of combinations for constructing machines, jigs and equipment. The various components are grouped together in this catalogue according to their function.

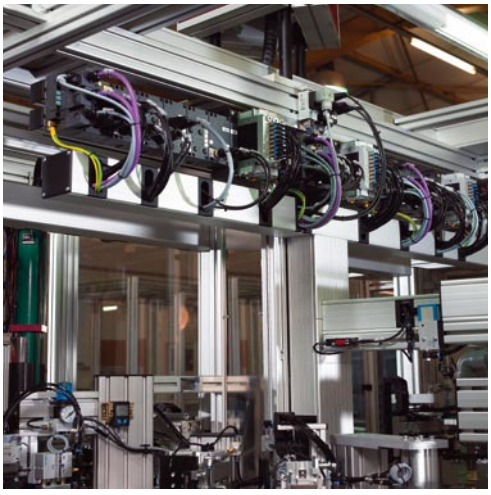
The frame structures for mechanical engineering applications are essentially built using components from the Basic Elements product group. Profiles of different product lines and sizes can be combined into basic frames with the aid of special connectors. As well as withstanding applied forces, these basic frames can also be used for the direct attachment of panels or safety guards / enclosures from the Panel Elements product group in order to provide passive protection against unauthorised access or moving components.
The panel elements making up the machine frame can also take the form of swing, sliding or lifting doors.

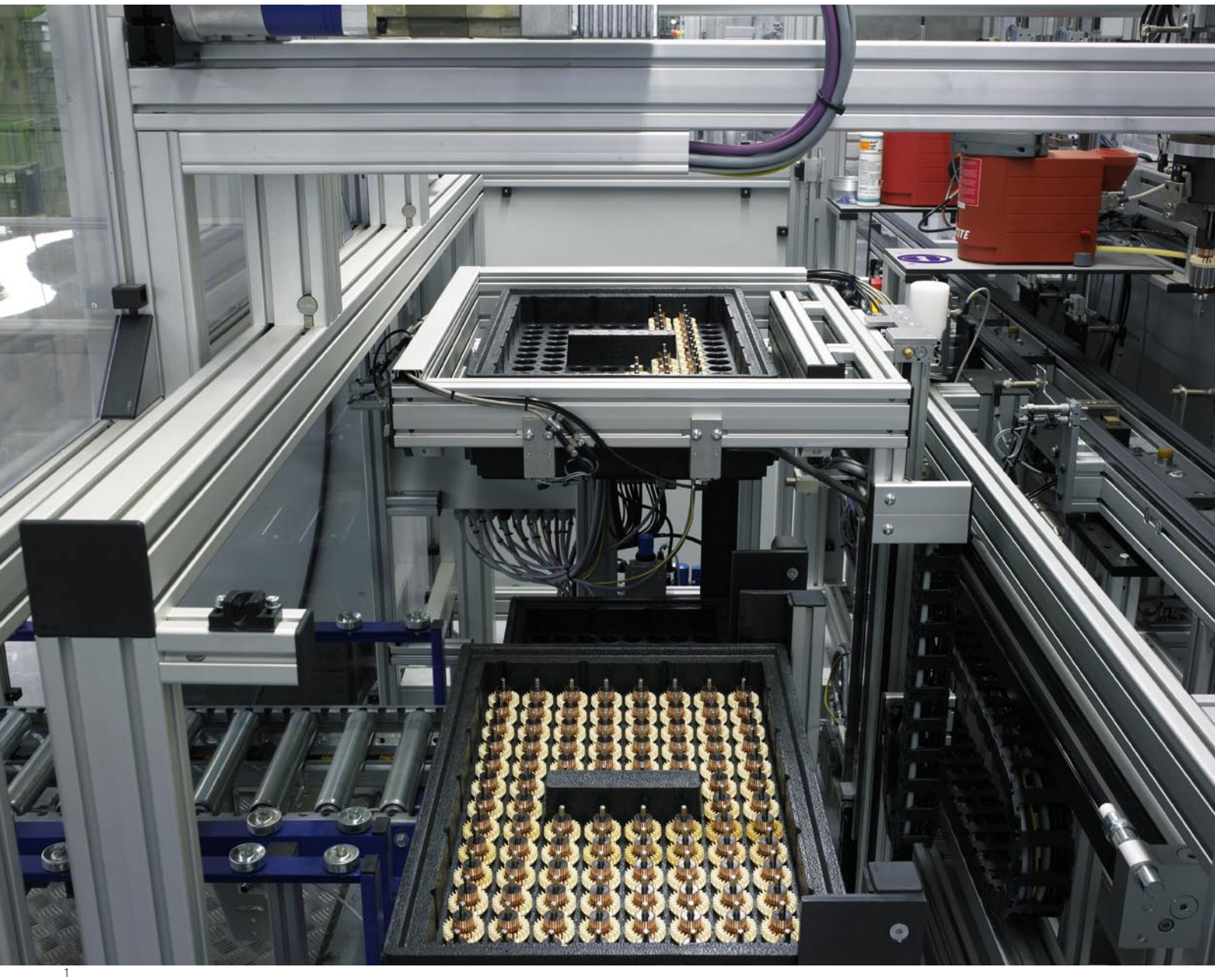
Stable adjustable feet from the Floor Elements product group provide a safe and reliable support capable of accommodating the loads which arise and also provide a means of compensating for uneven floors.

The structures can then be combined into fully functional, automated units using dynamic components created from elements in fhe Dynamic Elements product group.

The MB Building Kit System is a cost-effective and flexible solution for producing a whole range of fixtures and equipment up to and including automated handling systems. The MB System components can be used not only for building laboratory equipment, electronic manufacturing systems or packaging machinery, but also in highly demanding construction applications such as clean room areas etc.

The products of the MB Building Kit System are the perfect solution for everything from simple basic frames and testing stations to complex handling units.





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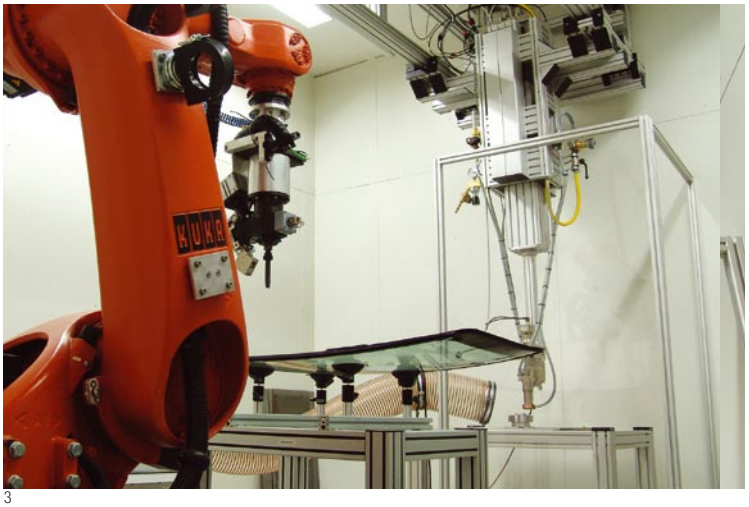

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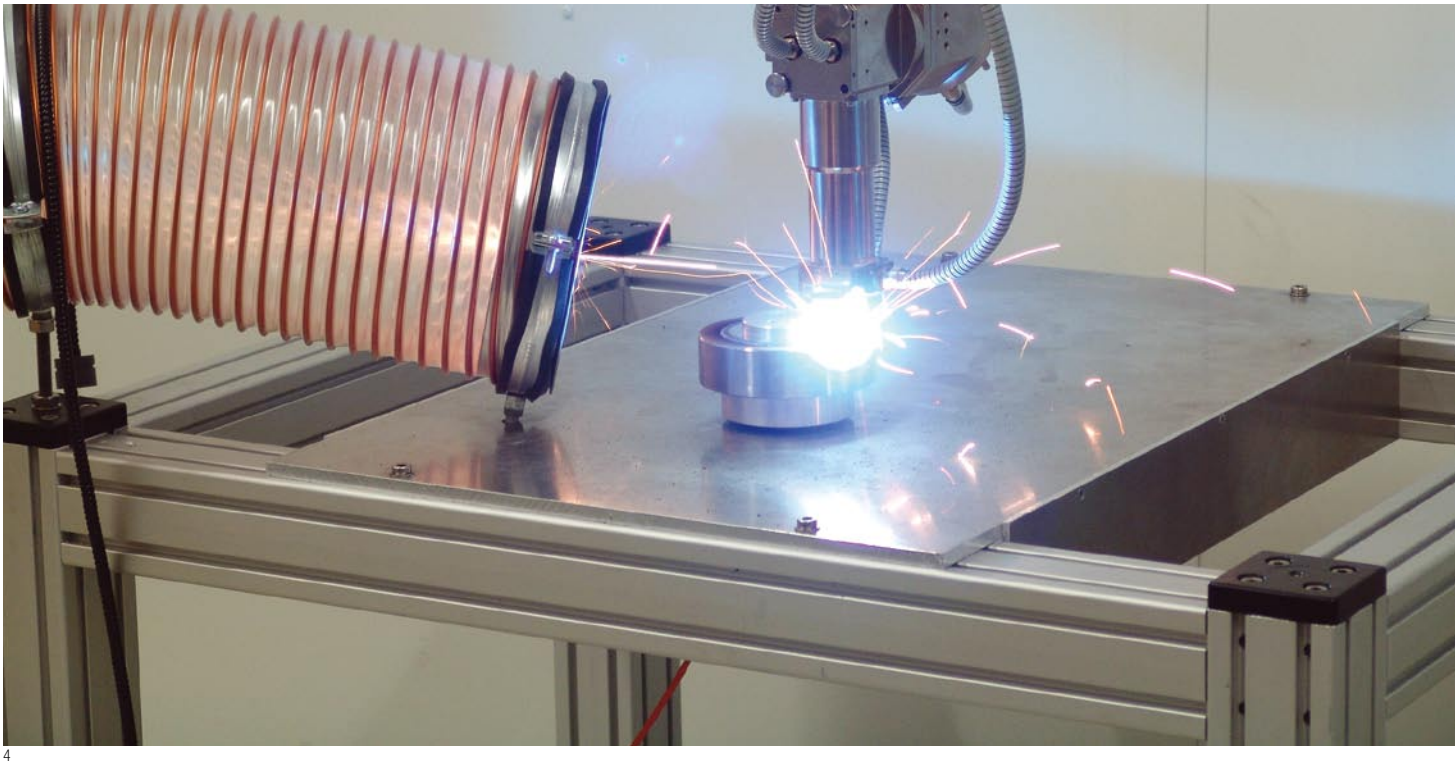

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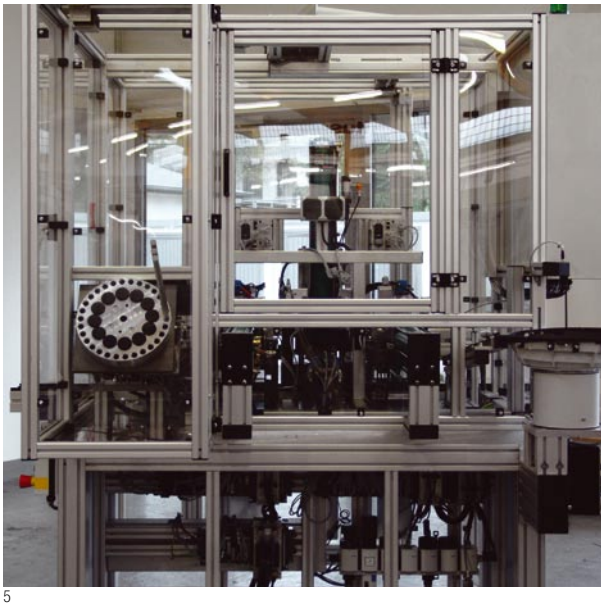

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1 Automatic palletiser
2 Multiple automatic assembly unit
3 Plasma welding robot
4 Welding head with extractor (detail)
5 Ball-bearing assembly machine

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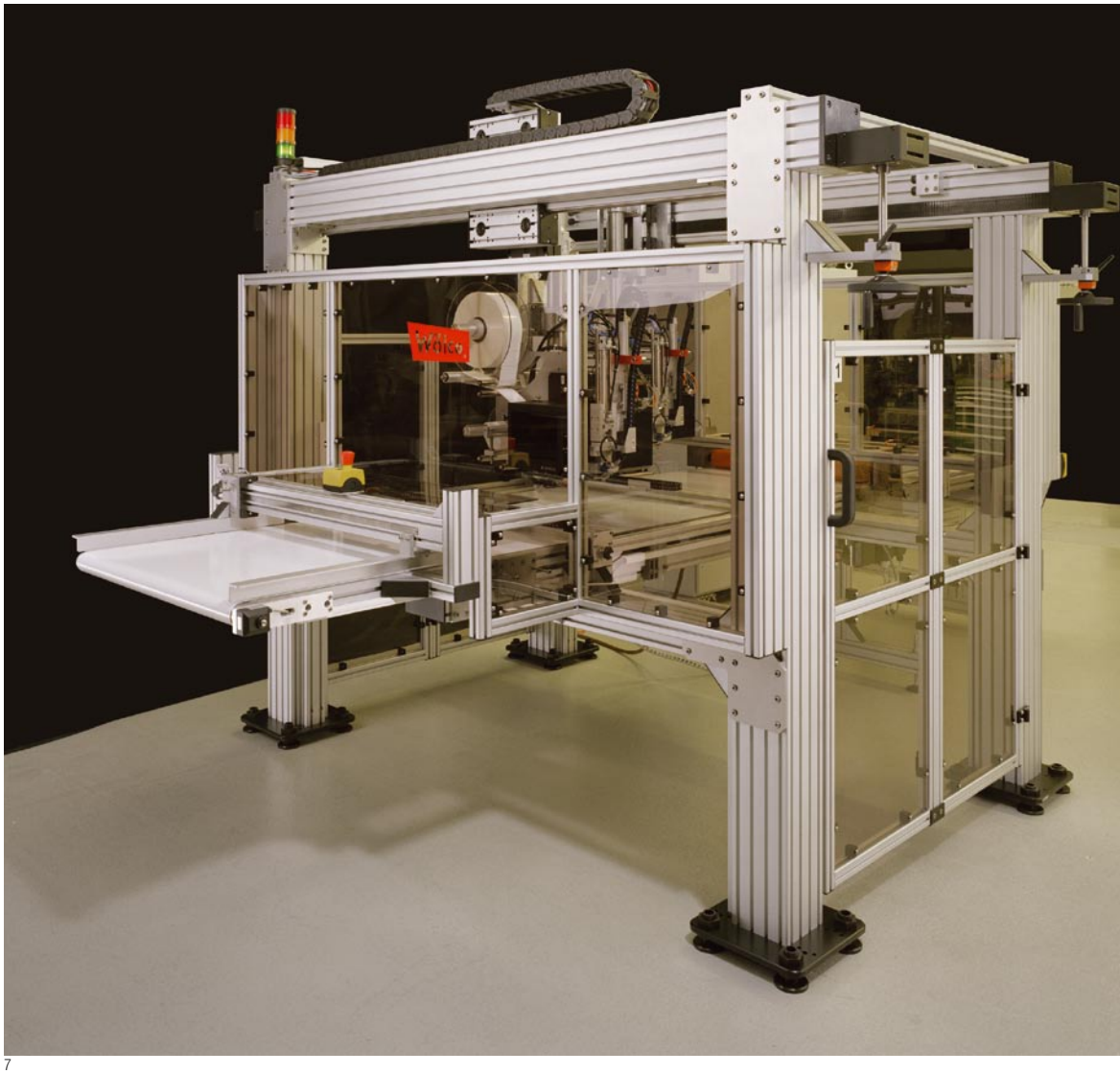

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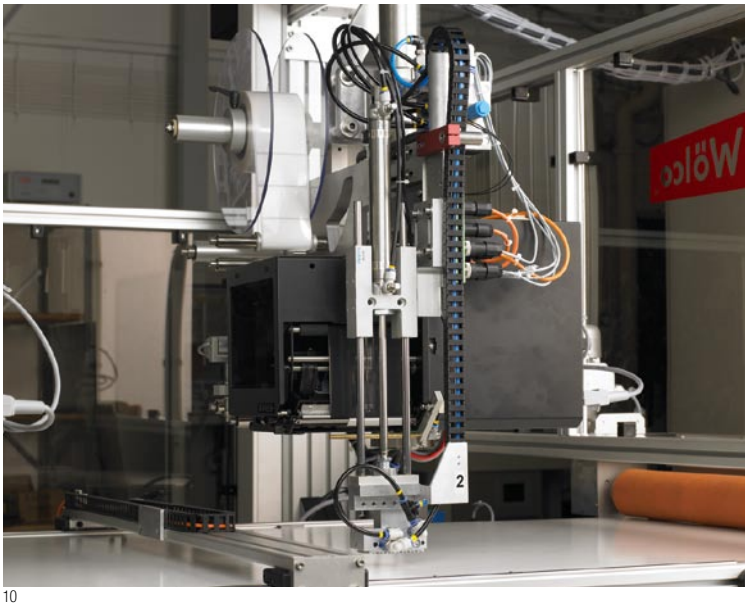

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6 Workpiece carrier transport system for feeding workstations

7 Fully automatic labelling station

8 Interlinked modules of an assembly facility

9 Order-picking system for kitchen furniture

10 Labelling station

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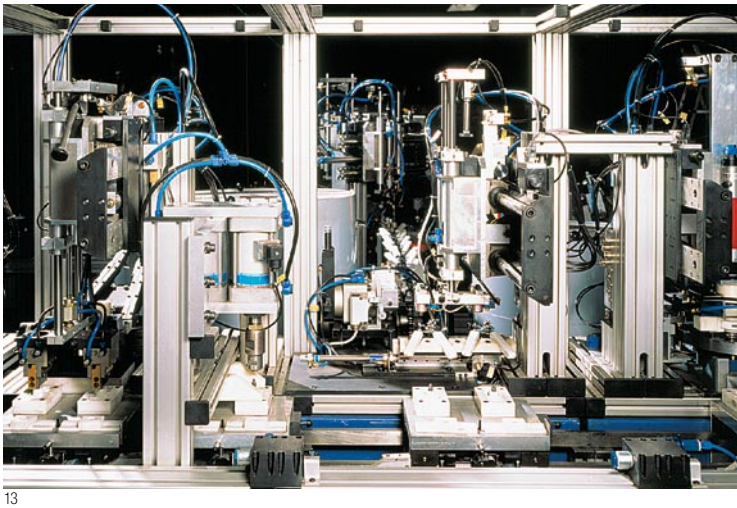

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11 Assembly area for solar modules

12 Test equipment for monitoring the quality of car production

13 Fully automatic assembly system for kitchen appliances

14 Engine assembly line

15 Automatic assembly facility for sensor production

15

Applications for MB Building Kit System

Enclosure and Guard Systems

Modular components from the MB Building Kit System provide a wide variety of solutions for enclosure and guard systems.

MB Enclosure and guard system elements cover a broad spectrum of frames and frame constructions to prevent unauthorised access by personnel to an ongoing production process or contact with moving components. They also prevent unauthorised access to products etc.

Enclosures and guards are constructed from system elements of various product groups. By combining basic elements, floor elements and, in particular, elements for rigid and movable panel fasteners or panel elements themselves, it is possible to create enclosure and guard systems which comply with relevant safety standards and can also be customised to the user's specific needs.

A whole range of components facilitate the process of connecting panels to frame structures, constructing lifting, sliding and swing doors and providing electrical security for these doors. The complete compatibility of the products in the MB Building Kit System is reflected in the functionality of the actual handling system merging seamlessly with the enclosure and guard function.

Machine safety systems employ the profiles of the machine base as support for the panels and frames which are either fixed or suspended or are attached by normal or heavy-duty hinges.

In contrast, guard systems which are installed at a specific distance from the particular production facility (e.g. cell guarding) or are used as room partitioning elements use independent stand profiles for attaching panels and frames. Special components are available for these guard units.

Both guard units for machine and production equipment, and room partitioning elements in offices and sales areas, can be created quickly and cheaply using the MB Building Kit System.

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1 Machine frame used as a protective enclosure for a counting and packaging plant

2 Free standing machine guard for securing a transport system

3 Large area enclosure for a storage facility

4 Fencing off the danger zones on a robot assembly line

5 Protection of a production facility against unauthorised access and contamination

6 Transfer section with protective enclosure

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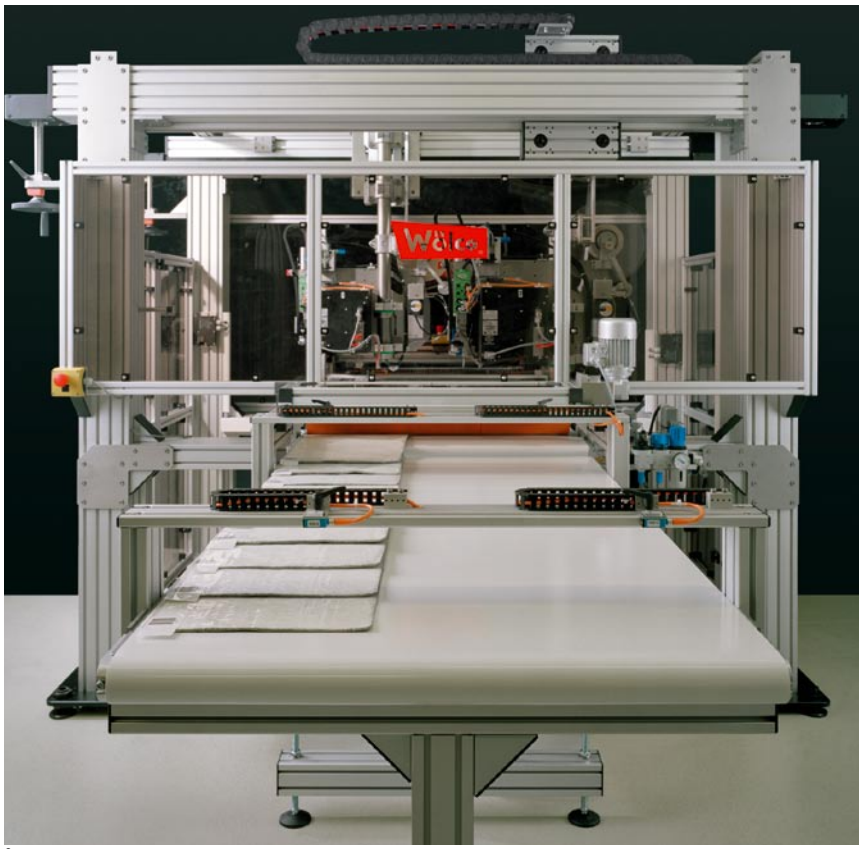

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7 Integrated guard for an automatic drill

8 Machine guard for a labelling station

9 Decorative display case with real glass panel segments

10 Display case with transparent panels

11 Protective enclosure for an automatic lathe

Applications for MB Building Kit System

Work Bench Systems

Modular components from the MB Building Kit System provide a wide variety of solutions for work bench systems.

The item MB System provides the ideal basis for constructing state-of-the-art work benches. The MB Building Kit System can be used to design a whole range of work benches - from simple standard benches to special ergonomic solutions to meet specific requirements.

The design requirements for ergonomic working environments in manufacturing, assembly and administrative areas range from provision of a simple working surface to a semi-automated production environment where the work bench is integrated into a production facility.

The special elements for work bench design enable the production of cost effective, adjustable work areas, ergonomically matched to the users‘ requirements.

The item MB Building Kit System can also be used to provide flexible, cost-effective solutions in non-production areas. Special elements are used for designing work benches for offices and storage areas, but also in material flow processes.

The compatibility of all products in the MB Building Kit System supports a whole range of solutions with different requirements and degrees of automation.

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1 Hanging system for work overalls in clean room environments

2 Test station in production facility for precision components

3 Combined assembly and testing station in final assembly section

4 Hight adjustable work bench for standing operation

5 Mobile order-picking bench with integrated scales in a small parts warehouse

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6 Flexible assembly tables used in a pump production facility

7 Test tables in a cleanroom environment

8 Work benches in an assembly cell

9 Laptop assembly line

10 Work bench with pull-out drawer at a CNC milling machine

1 Basic Elements

Profiles
Accessories for Profiles
Fasteners

The basic elements of the MB Building Kit System consist of profiles, connecting elements and caps.
They are fundamental to the MB Building Kit System.

All frame structures are built up based on components from the Basic Elements product group.

In some cases, profiles from different Lines and of different sizes can be combined using special fastening elements in order to construct basic frames.

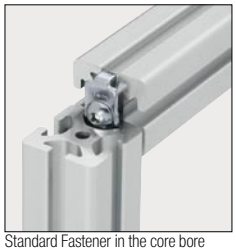
1.1 Profiles

The extruded aluminium construction profiles are provided with grooves which can be used in conjunction with connecting elements and can also perform a whole range of additional functions.

The aluminium alloy is resistant to weathering and many chemicals.

The surface of the profiles has been specially treated to make it permanently scratch-proof and has also been corrosion-protected.
All profiles have been designed to deliver maximum strength for the materials used.

Core Bore and Groove System

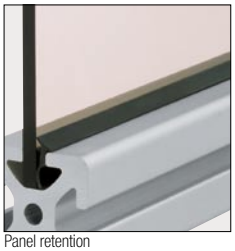

Standard Fastener in the core bore


Mounting an Adjustable Foot


Mounting with Multiblock


T-Slot Nut in the profile groove


Groove cover with Cover Profile AI


Panel retention


Guiding shaft assembly


Guiding movable elements

Using high-tensile aluminium profiles, any type of structure can be assembled cleanly and rapidly without further surface processing. All profiles are anodized and are produced with modular dimensions to ensure that they are compatible with specific Lines. In practice, they are re-usable and the material is suitable for recycling.

The MB Building Kit System contains construction profiles with very small sections from only 20x10 mm and weights of 0.35 kg/m up to profiles with external dimensions and weights of up to 320x160 mm and 34 kg/m respectively.
Profiles are also available for special applications. You can find details of these in the corresponding sections of the catalogue.

The aluminium profiles are produced in four Lines of different sizes, the width of groove being used for the designation:

Line 5: Groove width = 5 mm; Modular dim. 20 mm
Line 6: Groove width = 6 mm; Modular dim. 30 mm
Line 8: Groove width = 8 mm; Modular dim. 40 mm
Line 12:Groove width = 12 mm; Modular dim. 60 mm

Within the Lines, uniform modular dimensions mean that the accessory elements and combinations of profiles are fully interchangeable.

All the profiles feature longitudinal grooves to accommodate connecting elements and for attaching accessories at any position. The profile grooves are also suitable for holding cables or hoses.

The profiles are also characterised by through core bores for use with standard fastening elements and to accommodate accessory components. All the core bores and profile cavities can also be used as compressed air ducts.

Selection of Profile Line


Profiles of Line 5


Profiles of Line 6


Profiles of Line 8


Profiles of Line 12

When selecting the appropriate profile Line, you need to consider the maximum profile load anticipated.
The correct size of profile can be found from a calculation of the stress due to bending and material strain, taking into account appropriate safety reserves.

For areas with lower loads, “light duty” profiles are available in Line 6 and Line 12 and “light duty” and “E” (Economy) profiles in Line 8. This ensures that all components can still be used throughout, and that the construction is not only cost-effective, but can also accommodate the appropriate stresses.

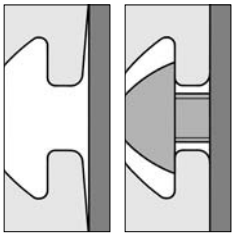
Technical Data

Extruded Profile
Symbol Al Mg Si 0.5 F 25
Material number 3.3206.72
Status: Artificially aged

Mechanical details (apply only in press direction)

Tensile strength Rm	min. 245 N/mm^2
0.2 limit Rp 0.2	min. 195 N/mm^2
Density	2.7 kg/dm^3
Ductile yield A_5	min.10 %
Ductile yield A_{10}	min. 8 %
Linear coefficient of expansion	23.6x10-6 1/K
Mod. of elasticity	approx. 70,000 N/mm^2
Modulus of rigidity	approx. 25,000 N/mm^2
Hardness	approx. 75 HB-2.5/187.5

Tolerances
Deformations such as straightness and flatness tolerance to DIN EN 12020 Part 2.
Profiles not cut to size and supplied in packs may be slightly longer than specified, due to manufacturing methods. Profile stock lengths may exceed stated usable lengths by up to 100 mm.

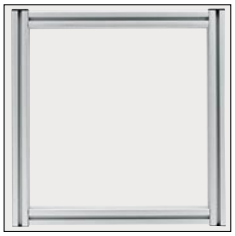


Surface
The aluminium profiles are natural (C0) or black (C35) anodized and are therefore permanently resistant to scratching and corrosion. On request, profiles can be provided in other natural anodized colours (C31 to C34). Surface with matt finish (E 6), anodized and compressed oxidation. Minimum layer thickness 10 µm, layer hardness 250 - 350 HV.
This all-round hard anodized surface covering makes the saw cut virtually burr-free, so that it does not require remachining.

All standard Profiles, Profiles light and Profiles E of all Lines feature defined points of support on the profile exterior and inclined groove flanks.
The defined points of support ensure a firm and stable connection with all other components. The controlled elastic deformation of the groove flanks pre-tensions the fastening screw in all operating states and protects the connection against vibration.

Recommended Assembly Configurations

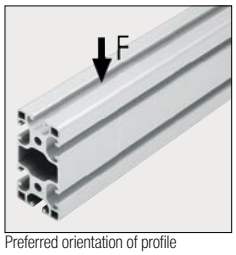
Vertical through profiles



Where possible, the vertical profiles should extend through the entire height; this simplifies connection of the floor elements and improves the overall appearance.

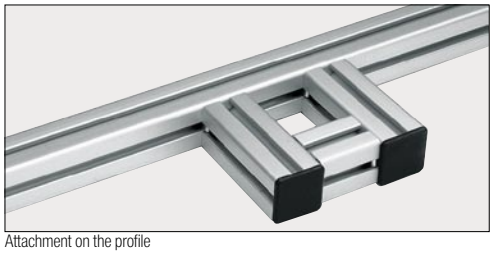
Load-resistant support

Structures should be designed to withstand the loads likely to be placed on them, i.e. by avoiding torsional stress at the connection points and by giving preference to positive locking over friction resistance in the direction of applied force in all the connections.



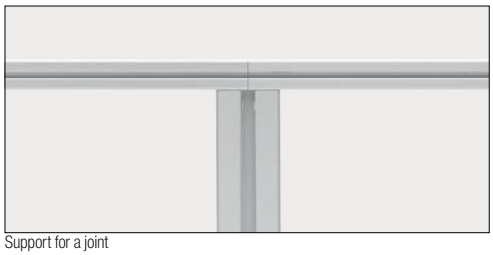
Preferred orientation of profile

Where possible, profiles should be installed so that the largest section dimension opposes the load in order to achieve the maximum flexural strength.



Attachment on the profile

Avoid breaks in the supporting profile when installing additional attachments; the benefits include greater stability, fewer cuts, fewer connections and reduced assembly time.

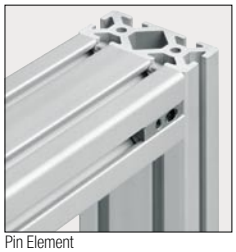


Support for a joint

Extend the profiles only with the aid of the corresponding fastening elements and, where possible, support them at the joints.

Anodized surfaces in contact

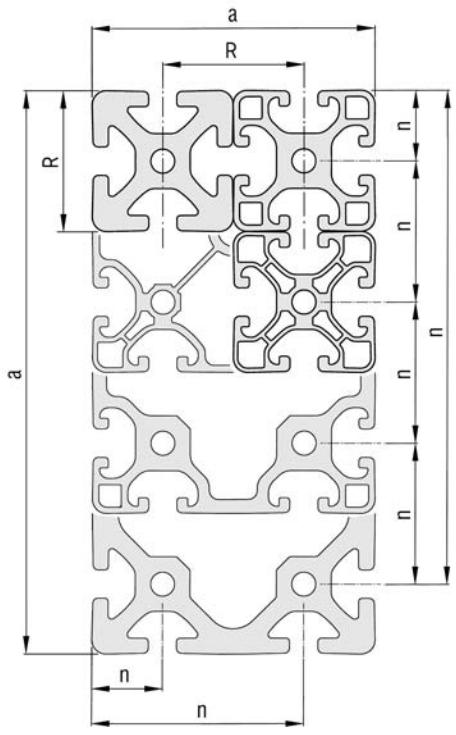
If it is not possible to avoid anodized surfaces being in direct contact with one another, the contact points must be greased. This will help to avoid any noise which might result from movement.



Pin Element

If profile-based structures are likely to be exposed to extremes of stress, e.g. impact loads, which might cause displacement at the points of attachment, pin elements should be installed in order to provide additional support.

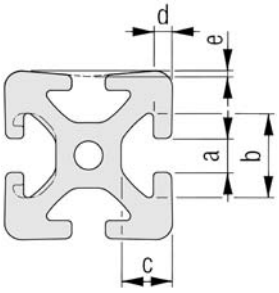
Groove position, external dimensions and modular dimensions



Modular dimensions R [mm]			
5	6	8	12
20	30	40	60

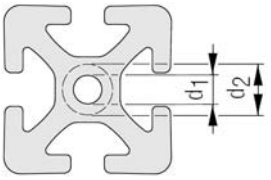
Profil edge length a [mm] from	up to	Tolerances of external dimensions a and groove position n ± [mm]
0	10	0.10
10	20	0.15
20	40	0.20
40	60	0.30
60	80	0.40
80	100	0.45
100	120	0.50
120	160	0.60
160	240	0.80
240	320	1.50

Groove Dimensions

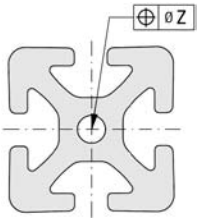


	5	6	8	12
a	5.0 $^{+0.3}$	6.2 $^{+0.3}$	8.0 $^{+0.4}$	12.0 $^{+0.4}$
b	11.5 $^{+0.3}$	16.3 $^{+0.3}$	20.0 $^{+0.4}$	30.0 $^{+0.3}$
c	6.35 $^{\pm 0.15}$	9.75 $^{+0.2}$	12.25 $^{+0.3}$	18.3 $^{+0.3}$
d	1.8 $^{\pm 0.1}$	3.0 $_{-0.25}$	4.5 $^{+0.3}$	6.6 $^{+0.3}$
e	0.15 $^{\pm 0.1}$	0.15 $^{\pm 0.1}$	0.2 $^{\pm 0.1}$	0.3 $^{\pm 0.1}$

Core Bore



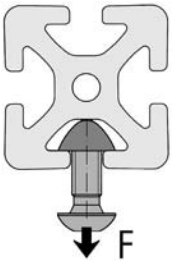
	5	6	8	12
Hole d_1	Ø 4.3$^{\pm 0.1}$ mm for M5	Ø 5$^{+0.2}$ mm for M6	Ø 6.8$_{-0.2}$ mm for M8	Ø 10.2$_{-0.2}$ mm for M12
reborable up to d_2	Ø 6 mm or M6	Ø 8 mm or M8	Ø 13 mm or M12 (not Profile E)	Ø 20 mm or M20



The hole position tolerance depends on the number of core bores and the profile contour.

Profiles with Open Grooves		Closed Grooves	
Number of Holes	z [mm]	Number of Holes	z [mm]
1	0.4	1	0.6
2 to 4	0.6	> 1	0.8
> 4	0.8		

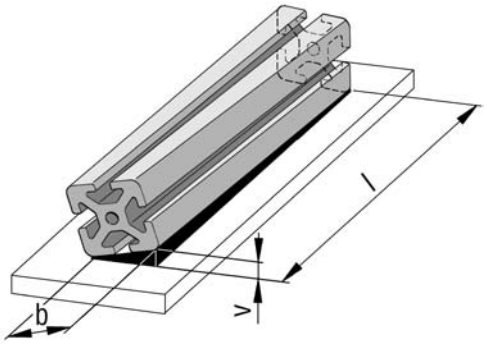
Tensile Loading



The allowable tensile forces on the groove flanks. These nominal loads include safety factors (S > 2) against plastic deformation.

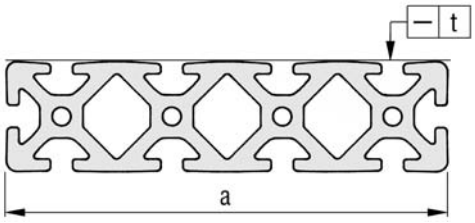
Groove form	5	6	8	12
normal	500 N	1,750 N	5,000 N	10,000 N
light		500 N	2,500 N	5,000 N
E			1,750 N	

Torsion



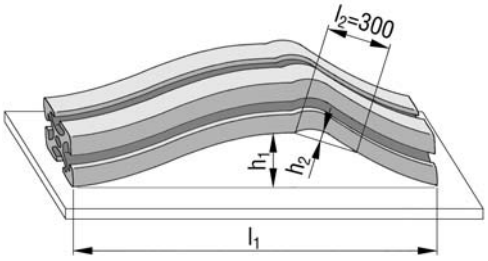
b [mm] from	b [mm] up to	Torsion tolerance v for Length l [mm] up to 1,000	up to 2,000	up to 3,000	up to 4,000	up to 5,000	up to 6,000
-	25	1.0	1.5	1.5	2.0	2.0	2.0
25	50	1.0	1.2	1.5	1.8	2.0	2.0
50	75	1.0	1.2	1.2	1.5	2.0	2.0
75	100	1.0	1.5	1.8	2.2	2.5	3.0
100	125	1.2	1.5	1.8	2.2	2.5	3.0
125	150	1.2	1.5	1.8	2.2	2.5	3.0
150	200	1.5	1.8	2.2	2.6	3.0	3.5
200	300	1.8	2.5	3.0	3.5	4.0	4.5
300	320	2.0	2.0	3.5	4.0	4.5	5.0

Straightness Tolerance transverse



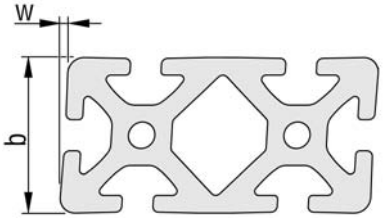
Width a [mm] from	Width a [mm] up to	Straightness Tolerance t [mm]
0	80	0.3
80	120	0.4
120	160	0.5
160	240	0.7
240	320	1.0

Straightness Tolerance longitudinal



Length l_1 [mm]	Tolerances h_1 [mm]	h_2
up to 1,000	0.7	For every length section of l_2 = 300 mm, a maximum deviation of 0.3 mm is allowed
up to 2,000	1.3	
up to 3,000	1.8	
up to 4,000	2.2	
up to 5,000	2.6	
up to 6,000	3.0	

Angular Tolerance



Width b [mm] from	Width b [mm] up to	Angular Tolerance w ± [mm]
0	20	0.2
20	40	0.4
40	80	0.6
80	120	0.8
120	200	1.2
200		1.5

Profiles 5

Determination of the Profile Deflection

The following equations apply for calculating deflection f:

Example load 1

$$f = \frac{F \times l^3}{3 \times E \times I \times 10^4}$$

Example load 2

$$f = \frac{F \times l^3}{48 \times E \times I \times 10^4}$$

Example load 3

$$f = \frac{F \times l^3}{192 \times E \times I \times 10^4}$$

The following equations are to be used for calculating the deflection caused by the dead weight:

As example load 1

$$f = \frac{F \times l^3}{8 \times E \times I \times 10^4}$$

As example load 2

$$f = \frac{5 \times F \times l^3}{384 \times E \times I \times 10^4}$$

As example load 3

$$f = \frac{F \times l^3}{384 \times E \times I \times 10^4}$$

F = Load in N
l = Free profile length in mm
I = Moment of inertia in cm^4
E = Modulus of elasticity in N/mm^2
E_{Al} = 70,000 N/mm^2

Based on the given allowable maximum deflection, the nomogram calculation procedure can be reversed in order to determine the required profile sizes or maximum permissible loads.

An approximate calculation of the deflection is possible with the help of the nomogram shown on the right.
The example shown is worked through in the direction of the arrow to determine the deflection.

Example:

Given:
F = 1,000 N
l = 500 mm
I_y = 5,14 cm^4 (Profil 5 40x20, hochkant)

Find:
f = Deflection in mm

Results:
Example load 1
f = 11.6 mm

Example load 2
f = 0.72 mm

Example load 3
f = 0.18 mm

The bending values that are either calculated or determined using graphs must be added to the deflection caused by the dead weight of the profiles.
For an approximate calculation of the deflection caused by the dead weight, the dead weight is entered as F in the nomogram and the resulting values should be halved.

Check of the bending stress

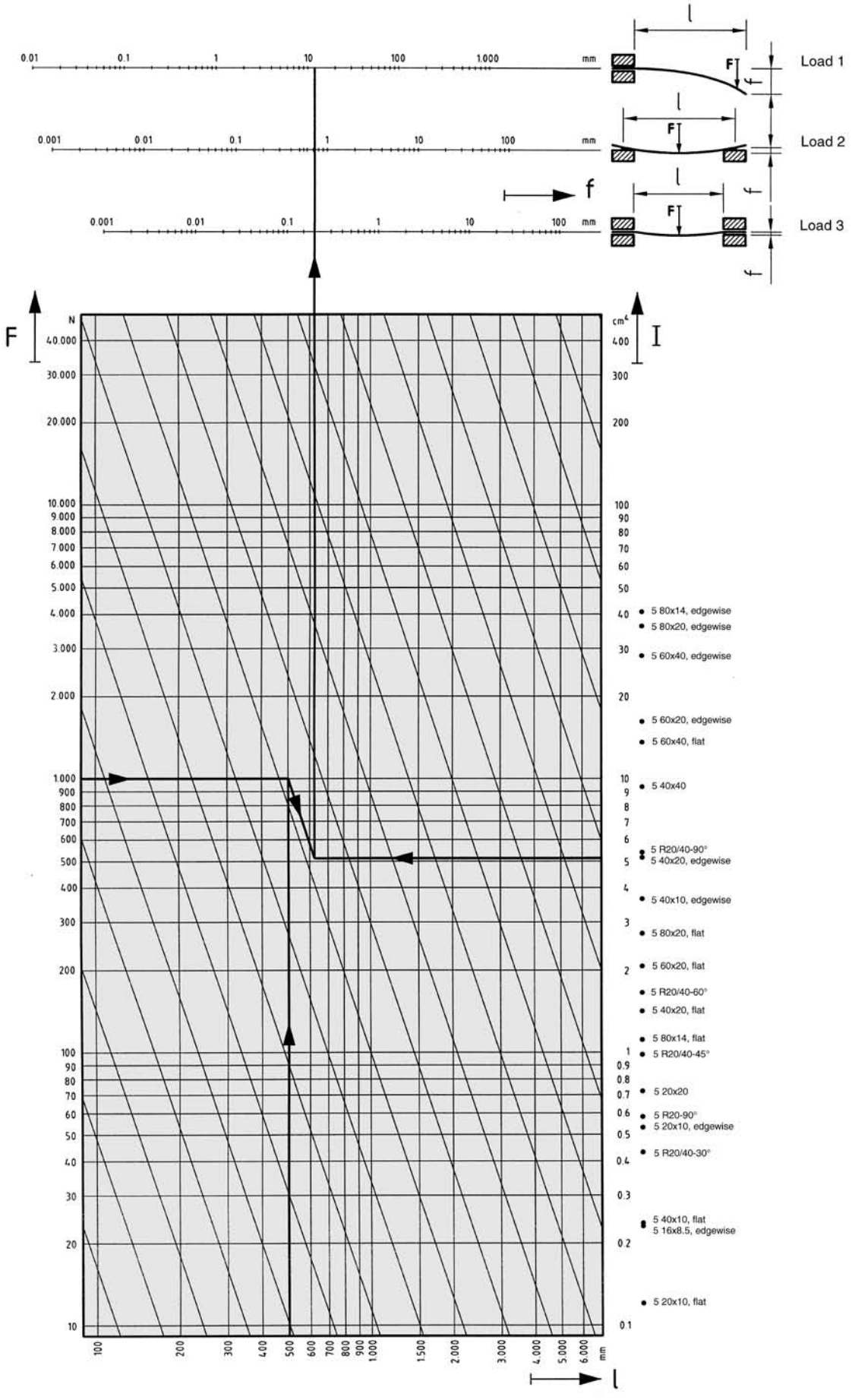
$$\sigma = \frac{M_b}{W \times 10^3}$$

σ = Bending stress in N/mm^2
M_b = Max. bending moment in Nmm
W = Resistance moment in cm^3
$Rp_{0,2\ Al}$ = 195 N/mm^2

The calculated bending stress σ must be compared with the permissible bending stress σ_{perm}.

$$\sigma_{perm} = \frac{Rp_{0.2}}{S}$$

The safety factor S must be selected depending on the required application conditions.


Load 1
Load 2
Load 3
F
f
l
I
N
cm⁴
mm
5 80x14, edgewise
5 80x20, edgewise
5 60x40, edgewise
5 60x20, edgewise
5 60x40, flat
5 40x40
5 R20/40-90°
5 40x20, edgewise
5 40x10, edgewise
5 80x20, flat
5 60x20, flat
5 R20/40-60°
5 40x20, flat
5 80x14, flat
5 R20/40-45°
5 20x20
5 R20-90°
5 20x10, edgewise
5 R20/40-30°
5 40x10, flat
5 16x8.5, edgewise
5 20x10, flat

Profiles 5

Determination of the Torsion Angle

The following equations apply for calculating the torsion angle ϑ :

Example load 1

$$\vartheta = \frac{180° \times M_t \times l}{\pi \times G \times I_t \times 10}$$

Example load 2

$$\vartheta = \frac{180° \times M_t \times l}{\pi \times 4 \times G \times I_t \times 10}$$

Where:

M_t = Torsional moment in Nm
l = Free profile length in mm
I_t = Moment of inertia in cm^4
G = Modulus of rigidity in N/mm^2
$G_{Al} = 25{,}000\ N/mm^2$
ϑ = Torsion angle in decimal degrees

The values for the profiles' torsional moments of inertia were determined experimentally or through an approximate calculation. Component tolerances and simplifying assumptions mean the actual torsion angles can differ from the calculated value by up to 15%.

The example shown on the nomogram opposite is based on the free profile length and a given torsional moment. The result is the torsion angle as a deformation of Profile 5 40x40.

It is naturally also possible to use the nomogram in reverse and begin with a maximum permissible torsion to calculate the required profile sizes or the maximum loading moments for a specified profile length.

Example:

Given:
$M_t = 20$ Nm
$l = 500$ mm
$I_t = 5.42\ cm^4$ (Profile 5 40x40)

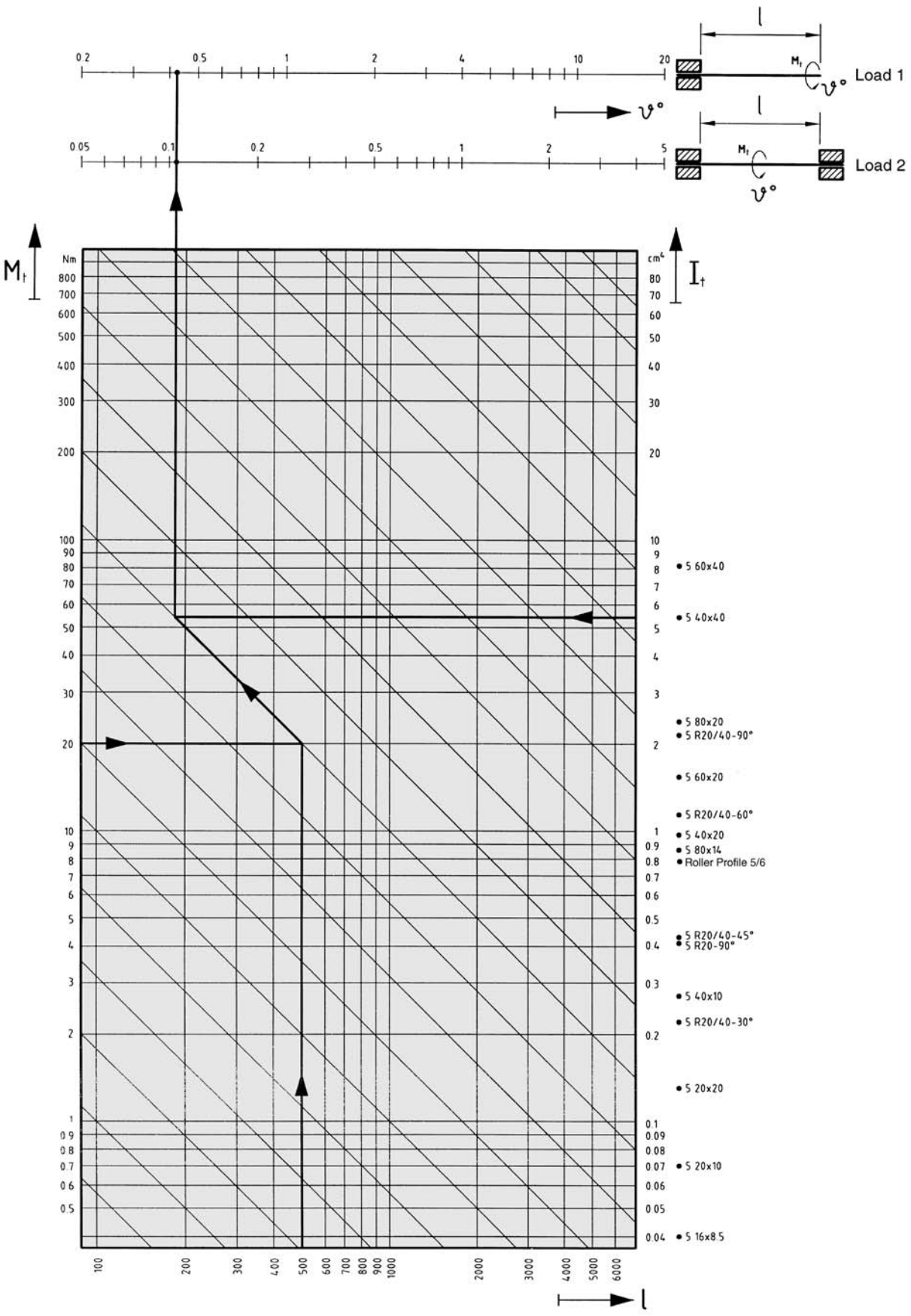
Find:
ϑ = Torsion angle in decimal degrees

Results:
Example load 1
$\vartheta = 0.42°$

Example load 2
$\vartheta = 0.11°$

Check of the torsional stress

In practice, the criterion for a profile to fail under a torsional load is less the fact that the permissible torsional stress is exceeded, but rather the presence of excessive twist (torsion angle) even though it is still within the elastic limit. This deformation greatly impairs correct functioning of the components. Consequently, a more torsionally rigid profile must be selected long before the permissible stress values are reached.


l
Load 1
Load 2
M_t
$\vartheta°$
I_t
Nm
cm⁴
l
• 5 60x40
• 5 40x40
• 5 80x20
• 5 R20/40-90°
• 5 60x20
• 5 R20/40-60°
• 5 40x20
• 5 80x14
• Roller Profile 5/6
• 5 R20/40-45°
• 5 R20-90°
• 5 40x10
• 5 R20/40-30°
• 5 20x20
• 5 20x10
• 5 16x8.5

Profiles 6

Determination of the Profile Deflection

The following equations apply for calculating deflection f:

Example load 1

$$f = \frac{F \times l^3}{3 \times E \times I \times 10^4}$$

Example load 2

$$f = \frac{F \times l^3}{48 \times E \times I \times 10^4}$$

Example load 3

$$f = \frac{F \times l^3}{192 \times E \times I \times 10^4}$$

The following equations are to be used for calculating the deflection caused by the dead weight:

As example load 1

$$f = \frac{F \times l^3}{8 \times E \times I \times 10^4}$$

As example load 2

$$f = \frac{5 \times F \times l^3}{384 \times E \times I \times 10^4}$$

As example load 3

$$f = \frac{F \times l^3}{384 \times E \times I \times 10^4}$$

F = Load in N
l = Free profile length in mm
I = Moment of inertia in cm^4
E = Modulus of elasticity in N/mm^2
E_{Al} = 70,000 N/mm^2

Based on the given allowable maximum deflection, the nomogram calculation procedure can be reversed in order to determine the required profile sizes or maximum permissible loads.

An approximate calculation of the deflection is possible with the help of the nomogram shown on the right.
The example shown is worked through in the direction of the arrow to determine the deflection.

Example:

Given:
F = 4,500 N
l = 500 mm
I_y = 21,22 cm^4 (Profile 6 60x30 light, edgewise)

Find:
f = Deflection in mm

Results:
Example load 1
f = 12.6mm

Example load 2
f = 0.79 mm

Example load 3
f = 0.20 mm

The bending values that are either calculated or determined using graphs must be added to the deflection caused by the dead weight of the profiles.
For an approximate calculation of the deflection caused by the dead weight, the dead weight is entered as F in the nomogram and the resulting values should be halved.

Check of the bending stress

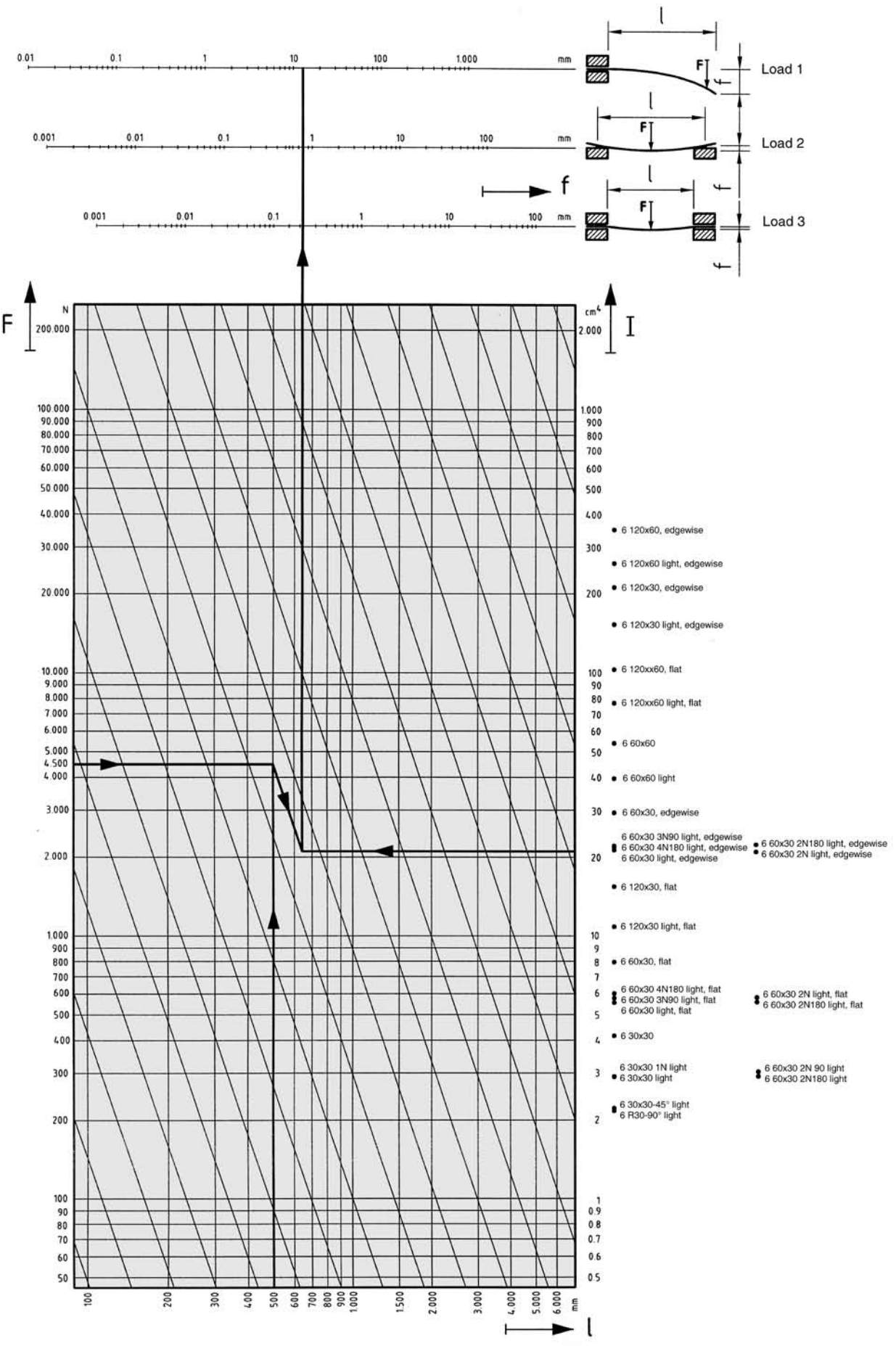
$$\sigma = \frac{M_b}{W \times 10^3}$$

σ = Bending stress in N/mm^2
M_b = Max. bending moment in Nmm
W = Resistance moment in cm^3
$Rp_{0,2\ Al}$ = 195 N/mm^2

The calculated bending stress σ must be compared with the permissible bending stress σ_{perm}.

$$\sigma_{perm} = \frac{Rp_{0.2}}{S}$$

The safety factor S must be selected depending on the required application conditions.


Load 1
Load 2
Load 3
F
f
l
I
N
cm⁴
mm
• 6 120x60, edgewise
• 6 120x60 light, edgewise
• 6 120x30, edgewise
• 6 120x30 light, edgewise
• 6 120xx60, flat
• 6 120xx60 light, flat
• 6 60x60
• 6 60x60 light
• 6 60x30, edgewise
6 60x30 3N90 light, edgewise
6 60x30 4N180 light, edgewise
6 60x30 light, edgewise
• 6 60x30 2N180 light, edgewise
• 6 60x30 2N light, edgewise
• 6 120x30, flat
• 6 120x30 light, flat
• 6 60x30, flat
6 60x30 4N180 light, flat
6 60x30 3N90 light, flat
6 60x30 light, flat
6 60x30 2N light, flat
6 60x30 2N180 light, flat
• 6 30x30
6 30x30 1N light
• 6 30x30 light
6 60x30 2N 90 light
6 60x30 2N180 light
6 30x30-45° light
6 R30-90° light

Profiles 6

Determination of the Torsion Angle

The following equations apply for calculating the torsion angle ϑ :

Example load 1

$$\vartheta = \frac{180° \times M_t \times l}{\pi \times G \times I_t \times 10}$$

Example load 2

$$\vartheta = \frac{180° \times M_t \times l}{\pi \times 4 \times G \times I_t \times 10}$$

Where:

M_t = Torsional moment in Nm
l = Free profile length in mm
I_t = Moment of inertia in cm^4
G = Modulus of rigidity in N/mm^2
$G_{Al} = 25{,}000\ N/mm^2$
ϑ = Torsion angle in decimal degrees

The values for the profiles' torsional moments of inertia were determined experimentally or through an approximate calculation. Component tolerances and simplifying assumptions mean the actual torsion angles can differ from the calculated value by up to 15%.

The example shown on the nomogram opposite is based on the free profile length and a given torsional moment. The result is the torsion angle as a deformation of Profile 6 120x30.

It is naturally also possible to use the nomogram in reverse and begin with a maximum permissible torsion to calculate the required profile sizes or the maximum loading moments for a specified profile length.

Example:

Given:
$M_t = 5$ Nm
$l = 1{,}000$ mm
$I_t = 12.23\ cm^4$ (Profile 6 120x30)

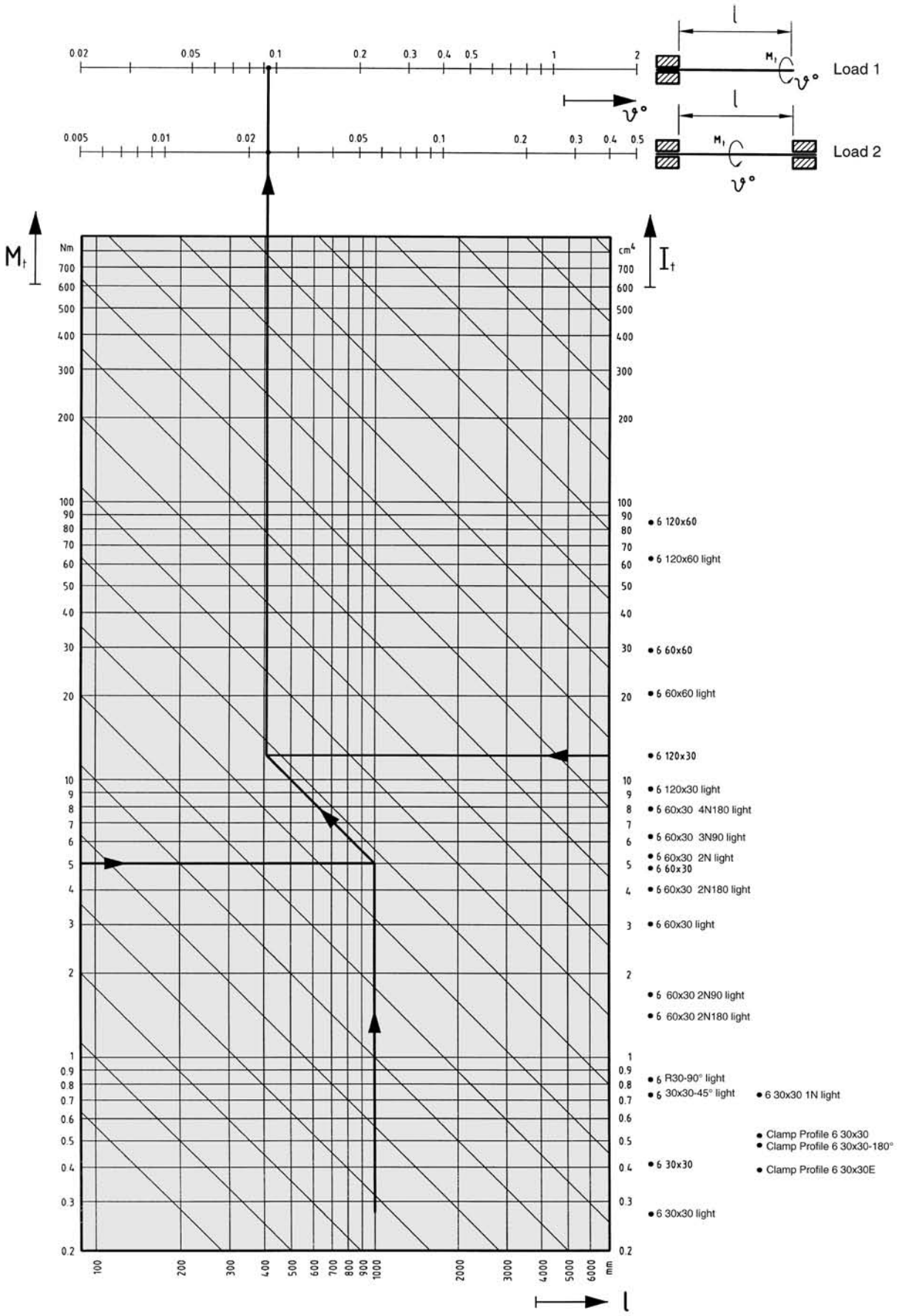
Find:
ϑ = Torsion angle in decimal degrees

Results:
Example load 1
$\vartheta = 0.09°$

Example load 2
$\vartheta = 0.02°$

Check of the torsional stress

In practice, the criterion for a profile to fail under a torsional load is less the fact that the permissible torsional stress is exceeded, but rather the presence of excessive twist (torsion angle) even though it is still within the elastic limit. This deformation greatly impairs correct functioning of the components. Consequently, a more torsionally rigid profile must be selected long before the permissible stress values are reached.


Load 1
Load 2
M_t
I_t
Nm
cm⁴
mm
l
v°
• 6 120x60
• 6 120x60 light
• 6 60x60
• 6 60x60 light
• 6 120x30
• 6 120x30 light
• 6 60x30 4N180 light
• 6 60x30 3N90 light
• 6 60x30 2N light
• 6 60x30
• 6 60x30 2N180 light
• 6 60x30 light
• 6 60x30 2N90 light
• 6 60x30 2N180 light
• 6 R30-90° light
• 6 30x30-45° light
• 6 30x30 1N light
• Clamp Profile 6 30x30
• Clamp Profile 6 30x30-180°
• 6 30x30
• Clamp Profile 6 30x30E
• 6 30x30 light

Profiles 8

Determination of the Profile Deflection

The following equations apply for calculating deflection f:

Example load 1

$$f = \frac{F \times l^3}{3 \times E \times I \times 10^4}$$

Example load 2

$$f = \frac{F \times l^3}{48 \times E \times I \times 10^4}$$

Example load 3

$$f = \frac{F \times l^3}{192 \times E \times I \times 10^4}$$

The following equations are to be used for calculating the deflection caused by the dead weight:

As example load 1

$$f = \frac{F \times l^3}{8 \times E \times I \times 10^4}$$

As example load 2

$$f = \frac{5 \times F \times l^3}{384 \times E \times I \times 10^4}$$

As example load 3

$$f = \frac{F \times l^3}{384 \times E \times I \times 10^4}$$

F = Load in N
l = Free profile length in mm
I = Moment of inertia in cm^4
E = Modulus of elasticity in N/mm^2
$E_{Al} = 70{,}000\ N/mm^2$

Based on the given allowable maximum deflection, the nomogram calculation procedure can be reversed in order to determine the required profile sizes or maximum permissible loads.

An approximate calculation of the deflection is possible with the help of the nomogram shown on the right.
The example shown is worked through in the direction of the arrow to determine the deflection.

Example:

Given:
F = 10,000 N
l = 500 mm
$I_y = 69.44\ cm^4$ (Profile 8 80x40 light, edgewise)

Find:
f = Deflection in mm

Results:
Example load 1
f = 8.56 mm

Example load 2
f = 0.53 mm

Example load 3
f = 0.13 mm

The bending values that are either calculated or determined using graphs must be added to the deflection caused by the dead weight of the profiles.
For an approximate calculation of the deflection caused by the dead weight, the dead weight is entered as F in the nomogram and the resulting values should be halved.

Check of the bending stress

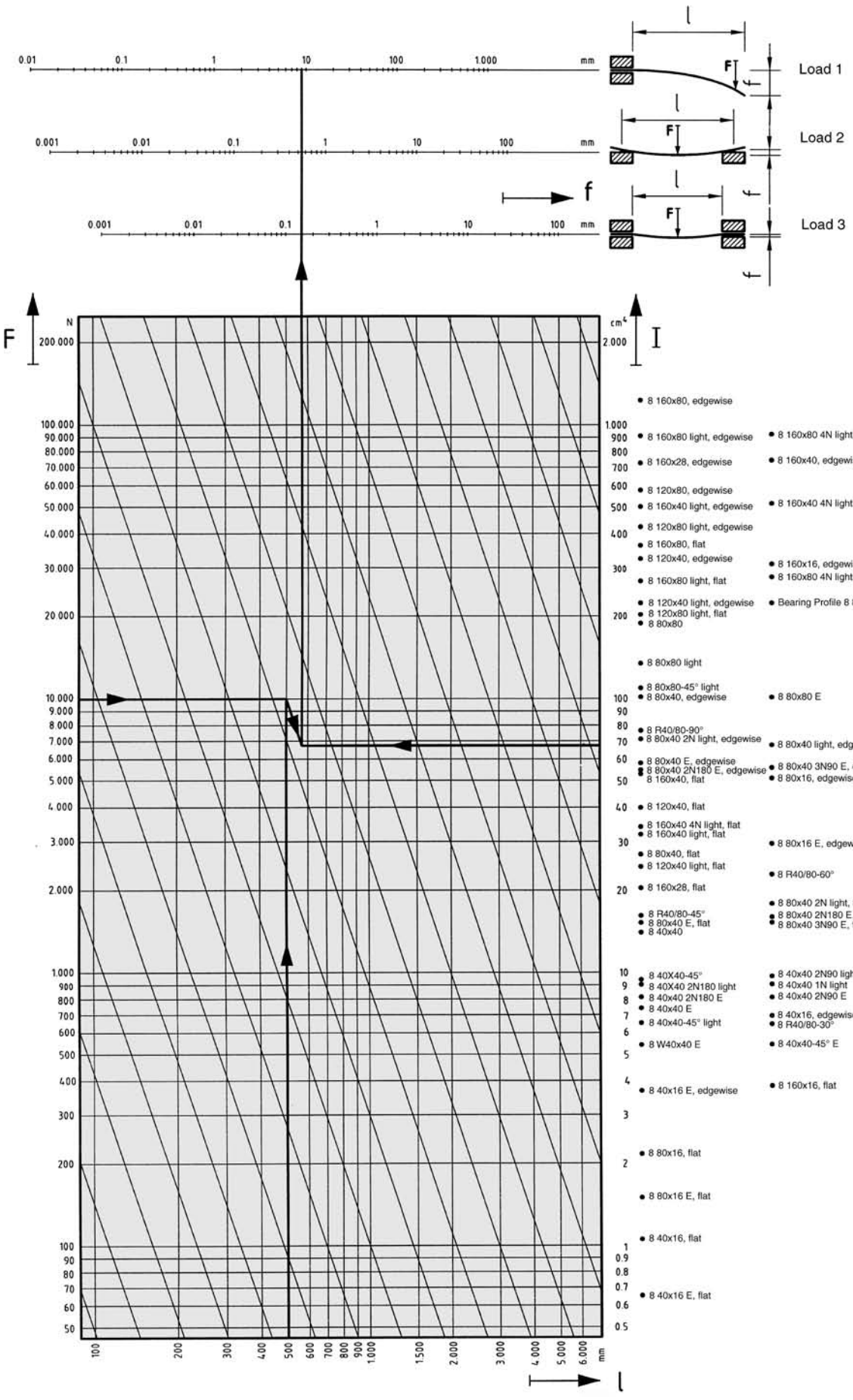
$$\sigma = \frac{M_b}{W \times 10^3}$$

σ = Bending stress in N/mm^2
M_b = Max. bending moment in Nmm
W = Resistance moment in cm^3
$Rp_{0,2\ Al}$ = $195\ N/mm^2$

The calculated bending stress σ must be compared with the permissible bending stress σ_{perm}.

$$\sigma_{perm} = \frac{Rp_{0.2}}{S}$$

The safety factor S must be selected depending on the required application conditions.


l
F
f
Load 1
Load 2
Load 3
0.01 0.1 1 10 100 1.000 mm
0.001 0.01 0.1 1 10 100 mm
F N 200.000 100.000 90.000 80.000 70.000 60.000 50.000 40.000 30.000 20.000 10.000 9.000 8.000 7.000 6.000 5.000 4.000 3.000 2.000 1.000 900 800 700 600 500 400 300 200 100 90 80 70 60 50
I cm⁴ 2.000 1.000 900 800 700 600 500 400 300 200 100 90 80 70 60 50 40 30 20 10 9 8 7 6 5 4 3 2 1 0.9 0.8 0.7 0.6 0.5
100 200 300 400 500 600 700 800 900 1.000 1.500 2.000 3.000 4.000 5.000 6.000 mm
l
8 160x80, edgewise
8 160x80 light, edgewise
8 160x80 4N light, edgewise
8 160x28, edgewise
8 160x40, edgewise
8 120x80, edgewise
8 160x40 light, edgewise
8 160x40 4N light, edgewise
8 120x80 light, edgewise
8 160x80, flat
8 120x40, edgewise
8 160x16, edgewise
8 160x80 4N light, flat
8 120x80, flat
8 160x80 light, flat
8 120x40 light, edgewise
Bearing Profile 8 80x80
8 120x80 light, flat
8 80x80
8 80x80 light
8 80x80-45° light
8 80x40, edgewise
8 80x80 E
8 80x80-45° 4N90 light
8 R40/80-90°
8 80x40 2N light, edgewise
8 80x40 light, edgewise
8 80x40 E, edgewise
8 80x40 2N180 E, edgewise
8 80x40 3N90 E, edgewise
8 80x40 4N180 E, edgewise
8 160x40, flat
8 80x16, edgewise
8 W80x80 E
8 120x40, flat
8 160x40 4N light, flat
8 160x40 light, flat
8 80x16 E, edgewise
8 80x40, flat
8 120x40 light, flat
8 R40/80-60°
8 160x28, flat
8 80x40 2N light, flat
8 80x40 light, flat
8 R40/80-45°
8 80x40 E, flat
8 40x40
8 80x40 2N180 E, flat
8 80x40 3N90 E, flat
8 80x40 4N180 E, flat
8 40X40-45°
8 40x40 2N90 light
8 40X40 2N180 light
8 40x40 1N light
8 40x40 light
8 40x40 2N180 E
8 40x40 2N90 E
8 40x40 E
8 40x16, edgewise
8 R40-90° light
8 40x40-45° light
8 R40/80-30°
8 W40x40 E
8 40x40-45° E
8 40x16 E, edgewise
8 160x16, flat
8 80x16, flat
8 80x16 E, flat
8 40x16, flat
8 40x16 E, flat

Profiles 8

Determination of the Torsion Angle

The following equations apply for calculating the torsion angle ϑ :

Example load 1

$$\vartheta = \frac{180° \times M_t \times l}{\pi \times G \times I_t \times 10}$$

Example load 2

$$\vartheta = \frac{180° \times M_t \times l}{\pi \times 4 \times G \times I_t \times 10}$$

Where:

M_t = Torsional moment in Nm
l = Free profile length in mm
I_t = Moment of inertia in cm^4
G = Modulus of rigidity in N/mm^2
$G_{Al} = 25{,}000\ N/mm^2$
ϑ = Torsion angle in decimal degrees

The values for the profiles' torsional moments of inertia were determined experimentally or through an approximate calculation. Component tolerances and simplifying assumptions mean the actual torsion angles can differ from the calculated value by up to 15%.

The example shown on the nomogram opposite is based on the free profile length and a given torsional moment. The result is the torsion angle as a deformation of Profile 8 80x80.

It is naturally also possible to use the nomogram in reverse and begin with a maximum permissible torsion to calculate the required profile sizes or the maximum loading moments for a specified profile length.

Example:

Given:
$M_t = 20Nm$
$l = 2{,}000$ mm
$I_t = 136.98\ cm^4$ (Profile 8 80x80)

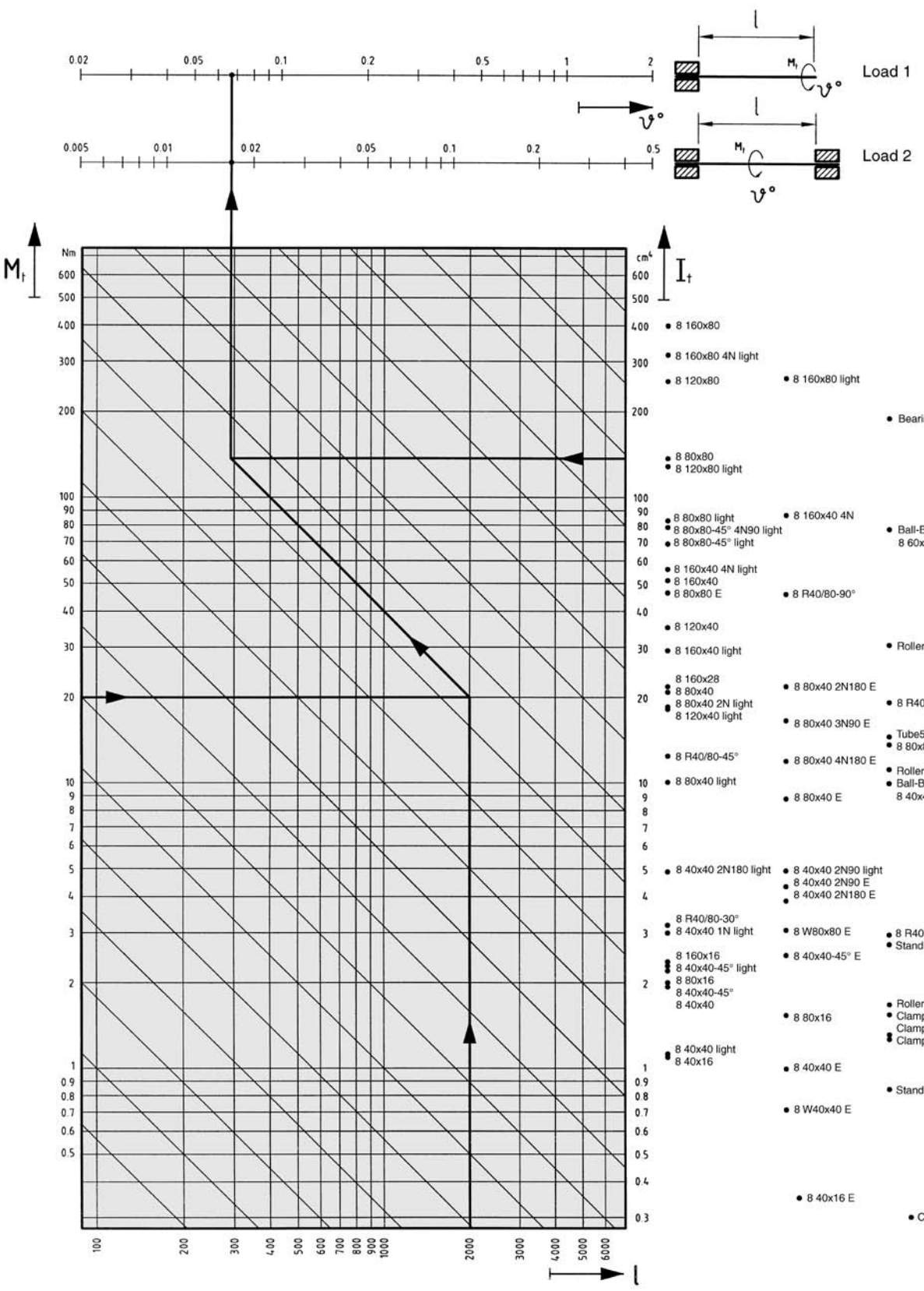
Find:
ϑ = Torsion angle in decimal degrees

Results:
Example load 1
$\vartheta = 0.07°$

Example load 2
$\vartheta = 0.02°$

Check of the torsional stress

In practice, the criterion for a profile to fail under a torsional load is less the fact that the permissible torsional stress is exceeded, but rather the presence of excessive twist (torsion angle) even though it is still within the elastic limit. This deformation greatly impairs correct functioning of the components. Consequently, a more torsionally rigid profile must be selected long before the permissible stress values are reached.


8
l
Load 1
Load 2
M_t
$\vartheta°$
0.02 0.05 0.1 0.2 0.5 1 2
0.005 0.01 0.02 0.05 0.1 0.2 0.5
Nm
cm⁴
I_t
100 200 300 400 500 600 700 800 900 1000 2000 3000 4000 5000 6000
8 160x80
8 160x80 4N light
8 120x80
8 160x80 light
Bearing Profile 80x80
8 80x80
8 120x80 light
8 80x80 light
8 80x80-45° 4N90 light
8 80x80-45° light
8 160x40 4N
Ball-Bush Block Profile 8 60x60
8 160x40 4N light
8 160x40
8 80x80 E
8 R40/80-90°
8 120x40
8 160x40 light
Roller Profile
8 160x28
8 80x40
8 80x40 2N light
8 120x40 light
8 80x40 2N180 E
8 R40/80-60°
8 80x40 3N90 E
Tube50 Al
8 80x80 KGT
8 R40/80-45°
8 80x40 4N180 E
Roller Profile 14
8 80x40 light
8 80x40 E
Ball-Bush Block Profile 8 40x40
8 40x40 2N180 light
8 40x40 2N90 light
8 40x40 2N90 E
8 40x40 2N180 E
8 R40/80-30°
8 40x40 1N light
8 W80x80 E
8 R40-90° light
Stand Profile 8 80x40 K60
8 160x16
8 40x40-45° light
8 80x16
8 40x40-45°
8 40x40
8 40x40-45° E
8 80x16
Roller Profile 8/6
Clamp Profile 8 40x40
Clamp Profile 8 40x40-180°
Clamp Profile 8 40x40 E
8 40x40 light
8 40x16
8 40x40 E
Stand Profile 8 80x40
8 W40x40 E
8 40x16 E
Clamp Profile 8 32x18

Profiles 12

Determination of the Profile Deflection

The following equations apply for calculating deflection f:

Example load 1

$$f = \frac{F \times l^3}{3 \times E \times I \times 10^4}$$

Example load 2

$$f = \frac{F \times l^3}{48 \times E \times I \times 10^4}$$

Example load 3

$$f = \frac{F \times l^3}{192 \times E \times I \times 10^4}$$

The following equations are to be used for calculating the deflection caused by the dead weight:

As example load 1

$$f = \frac{F \times l^3}{8 \times E \times I \times 10^4}$$

As example load 2

$$f = \frac{5 \times F \times l^3}{384 \times E \times I \times 10^4}$$

As example load 3

$$f = \frac{F \times l^3}{384 \times E \times I \times 10^4}$$

F = Load in N
l = Free profile length in mm
I = Moment of inertia in cm^4
E = Modulus of elasticity in N/mm^2
E_{Al} = 70,000 N/mm^2

Based on the given allowable maximum deflection, the nomogram calculation procedure can be reversed in order to determine the required profile sizes or maximum permissible loads.

An approximate calculation of the deflection is possible with the help of the nomogram shown on the right.
The example shown is worked through in the direction of the arrow to determine the deflection.

Example:

Given:
F = 10,000 N
l = 1,000 mm
I_y = 509.70 cm^4 (Profile 12 120x60, edgewise)

Find:
f = Deflection in mm

Results:
Example load 1
f = 9.34 mm

Example load 2
f = 0.58 mm

Example load 3
f = 0.15 mm

The bending values that are either calculated or determined using graphs must be added to the deflection caused by the dead weight of the profiles.
For an approximate calculation of the deflection caused by the dead weight, the dead weight is entered as F in the nomogram and the resulting values should be halved.

Check of the bending stress

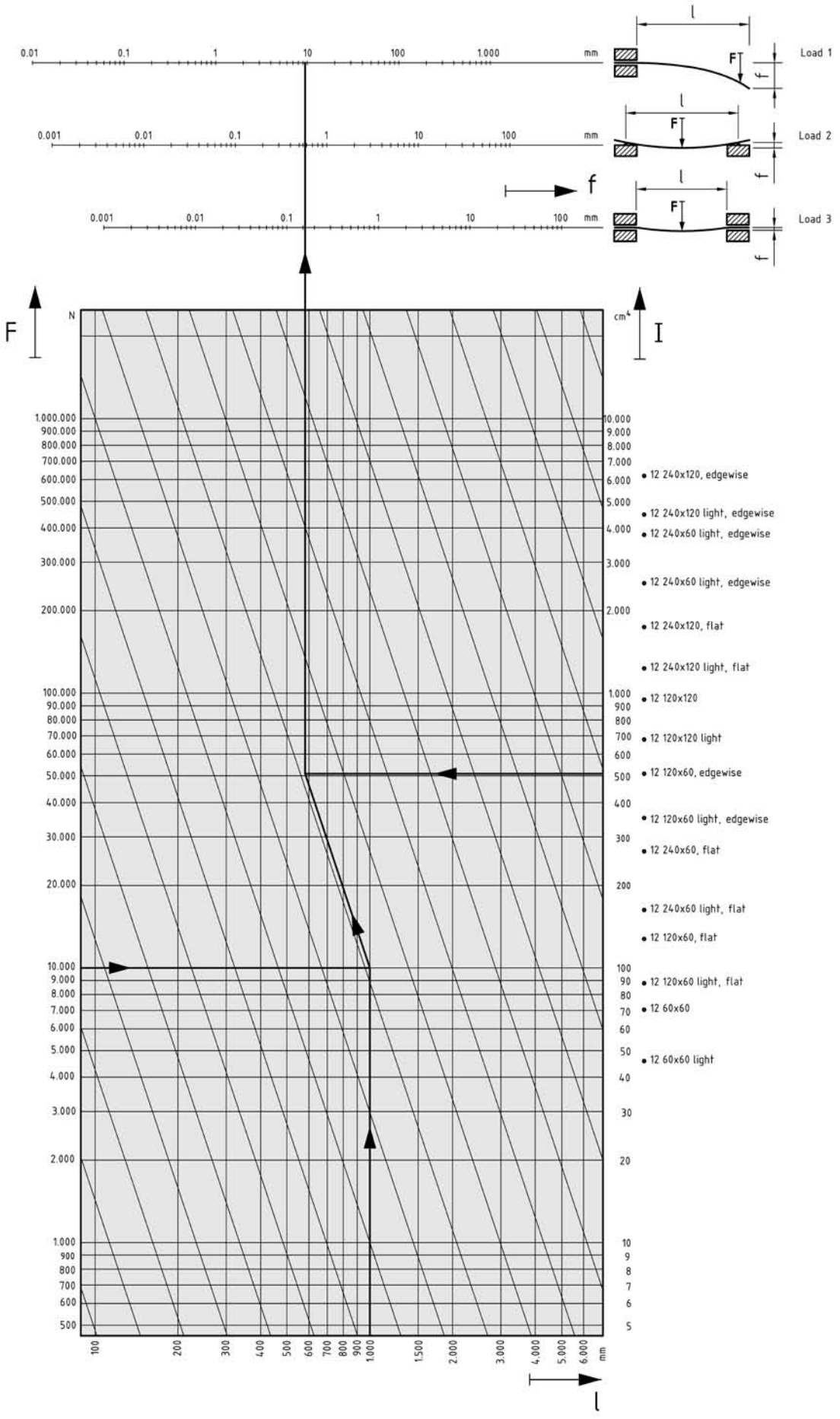
$$\sigma = \frac{M_b}{W \times 10^3}$$

σ = Bending stress in N/mm^2
M_b = Max. bending moment in Nmm
W = Resistance moment in cm^3
$Rp_{0,2\ Al}$ = 195 N/mm^2

The calculated bending stress σ must be compared with the permissible bending stress σ_{perm}.

$$\sigma_{perm} = \frac{Rp_{0.2}}{S}$$

The safety factor S must be selected depending on the required application conditions.


l
F
f
Load 1
Load 2
Load 3
0.01 0.1 1 10 100 1.000 mm
0.001 0.01 0.1 1 10 100 mm
F N
I cm⁴
1.000.000 900.000 800.000 700.000 600.000 500.000 400.000 300.000 200.000 100.000 90.000 80.000 70.000 60.000 50.000 40.000 30.000 20.000 10.000 9.000 8.000 7.000 6.000 5.000 4.000 3.000 2.000 1.000 900 800 700 600 500
10.000 9.000 8.000 7.000 6.000 5.000 4.000 3.000 2.000 1.000 900 800 700 600 500 400 300 200 100 90 80 70 60 50 40 30 20 10 9 8 7 6 5
100 200 300 400 500 600 700 800 900 1.000 1.500 2.000 3.000 4.000 5.000 6.000 mm
l
• 12 240x120, edgewise
• 12 240x120 light, edgewise
• 12 240x60 light, edgewise
• 12 240x60 light, edgewise
• 12 240x120, flat
• 12 240x120 light, flat
• 12 120x120
• 12 120x120 light
• 12 120x60, edgewise
• 12 120x60 light, edgewise
• 12 240x60, flat
• 12 240x60 light, flat
• 12 120x60, flat
• 12 120x60 light, flat
• 12 60x60
• 12 60x60 light

1.1.1 Profiles 5

Modular Dimensions (Basis 20 mm), Open and Closed Grooves

Profiles 5 are ideal for lightweight constructions of all kinds. The small exterior dimensions ensure particularly compact jigs, covers and handling equipment. The full functionality of the building kit is retained.

Profiles with closed grooves are suitable for constructions where particular emphasis is placed on appearance and ease of cleaning, which is particularly attractive for clean-room applications.

Profile 5 20x20
Al, anodized

A =	1.80 cm²	I =	0.72 cm⁴		
		I_t =	0.13 cm⁴		
m =	0.48 kg/m	W =	0.72 cm³		

natural, cut-off max. 3000 mm	0.0.370.03
black, cut-off max. 3000 mm	0.0.370.15

Profile 5 20x20 1N
Al, anodized

A =	1.85 cm²	I_x =	0.74 cm⁴	I_y =	0.77 cm⁴
		I_t =	0.20 cm⁴		
m =	0.50 kg/m	W_x =	0.74 cm³	W_y =	0.74 cm³

natural, cut-off max. 3000 mm	0.0.437.74

Profile 5 20x20 2N90
Al, anodized

A =	1.91 cm²	I_x =	0.78 cm⁴	I_y =	0.78 cm⁴
		I_t =	0.42 cm⁴		
m =	0.51 kg/m	W_x =	0.76 cm³	W_y =	0.76 cm³

natural, cut-off max. 3000 mm	0.0.437.66

Profile 5 20x20 2N180
Al, anodized

A =	1.90 cm²	I_x =	0.74 cm⁴	I_y =	0.82 cm⁴
		I_t =	0.32 cm⁴		
m =	0.51 kg/m	W_x =	0.74 cm³	W_y =	0.82 cm³

natural, cut-off max. 3000 mm	0.0.437.67

Profile 5 20x20 3N
Al, anodized

A =	1.92 cm²	I_x =	0.80 cm⁴	I_y =	0.77 cm⁴
		I_t =	0.64 cm⁴		
m =	0.52 kg/m	W_x =	0.80 cm³	W_y =	0.76 cm³

natural, cut-off max. 3000 mm	0.0.464.83

Profile 5 40x20
Al, anodized

A =	3.32 cm²	I_x =	1.41 cm⁴	I_y =	5.14 cm⁴		
		I_t =	0.97 cm⁴				
m =	0.89 kg/m	W_x =	1.41 cm³	W_y =	2.57 cm³		

natural, cut-off max. 3000 mm **0.0.370.04**

black, cut-off max. 3000 mm **0.0.370.16**

Profile 5 40x20 2N
Al, anodized

A =	3.38 cm²	I_x =	1.47 cm⁴	I_y =	5.21 cm⁴		
		I_t =	1.41 cm⁴				
m =	0.91 kg/m	W_x =	1.44 cm³	W_y =	2.61 cm³		

natural, cut-off max. 3000 mm **0.0.437.75**

Profile 5 40x20 2N180
Al, anodized

A =	3.38 cm²	I_x =	1.40 cm⁴	I_y =	5.46 cm⁴		
		I_t =	1.11 cm⁴				
m =	0.91 kg/m	W_x =	1.40 cm³	W_y =	2.73 cm³		

natural, cut-off max. 3000 mm **0.0.437.76**

Profile 5 40x20 3N90
Al, anodized

A =	3.42 cm²	I_x =	1.48 cm⁴	I_y =	5.37 cm⁴		
		I_t =	1.64 cm⁴				
m =	0.92 kg/m	W_x =	1.44 cm³	W_y =	2.66 cm³		

natural, cut-off max. 3000 mm **0.0.437.77**

Profile 5 40x20 4N180
Al, anodized

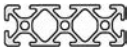
A =	3.46 cm²	I_x =	1.56 cm⁴	I_y =	5.30 cm⁴		
		I_t =	2.17 cm⁴				
m =	0.93 kg/m	W_x =	1.56 cm³	W_y =	2.65 cm³		

natural, cut-off max. 3000 mm **0.0.437.78**

Profile 5 40x40
Al, anodized

A =	5.14 cm²	I =	9.30 cm⁴				
		I_t =	5.42 cm⁴				
m =	1.39 kg/m	W =	4.65 cm³				

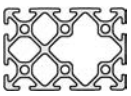
natural, cut-off max. 6000 mm **0.0.370.05**



Profile 5 60x20
Al, anodized

A =	4.76 cm²	I_x =	2.06 cm⁴	I_y =	16.09 cm⁴		
		I_t =	1.54 cm⁴				
m =	1.28 kg/m	W_x =	2.06 cm³	W_y =	5.36 cm³		

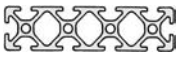
natural, cut-off max. 3000 mm **0.0.425.44**



Profile 5 60x40
Al, anodized

A =	7.67 cm²	I_x =	13.52 cm⁴	I_y =	28.14 cm⁴		
		I_t =	8.15 cm⁴				
m =	2.07 kg/m	W_x =	6.76 cm³	W_y =	9.09 cm³		

natural, cut-off max. 6000 mm **0.0.425.45**



Profile 5 80x20
Al, anodized

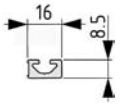
A =	6.19 cm²	I_x =	2.72 cm⁴	I_y =	36.08 cm⁴		
		I_t =	2.38 cm⁴				
m =	1.67 kg/m	W_x =	2.72 cm³	W_y =	9.02 cm³		

natural, cut-off max. 3000 mm **0.0.370.86**

Profiles 5

Flat Cross-Sections

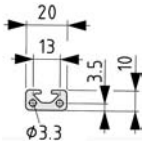
Profile 5 20x10 can be used as a grip rail or edge strip. Profile 5 40x10 and 80x14 can be used as a lightweight clamping and mounting surface or as a supporting profile for the Bearing Units of linear slides.



Profile 5 16x8,5
Al, anodized

A =	0.82 cm²	I_x =	0.06 cm⁴	I_y =	0.23 cm⁴		
		I_t =	0.04 cm⁴				
m =	0.22 kg/m	W_x =	0.12 cm³	W_y =	0.28 cm³		

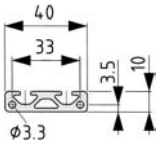
natural, cut-off max. 3000 mm — 0.0.265.91



Profile 5 20x10
Al, anodized

A =	1.29 cm²	I_x =	0.12 cm⁴	I_y =	0.53 cm⁴		
		I_t =	0.07 cm⁴				
m =	0.35 kg/m	W_x =	0.22 cm³	W_y =	0.53 cm³		

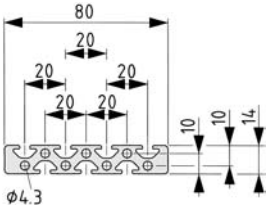
natural, cut-off max. 3000 mm — 0.0.391.02



Profile 5 40x10
Al, anodized

A =	2.39 cm²	I_x =	0.24 cm⁴	I_y =	3.63 cm⁴		
		I_t =	0.27 cm⁴				
m =	0.65 kg/m	W_x =	0.44 cm³	W_y =	1.81 cm³		

natural, cut-off max. 3000 mm — 0.0.391.06



Profile 5 80x14
Al, anodized

A =	6.64 cm²	I_x =	1.11 cm⁴	I_y =	40.69 cm⁴		
		I_t =	0.86 cm⁴				
m =	1.79 kg/m	W_x =	1.54 cm³	W_y =	10.17 cm³		

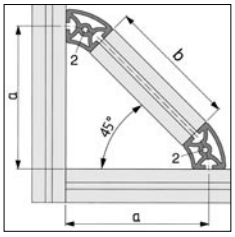
natural, cut-off max. 3000 mm — 0.0.370.85

Profiles 5 R

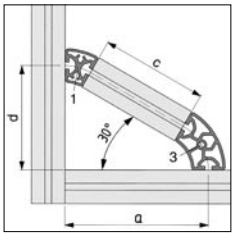
Closed, Radiused Outside Surface

These profiles are ideal for constructing angled protective hoods, frames or other fixtures.
The closed outside surface is particularly attractive and easy to clean.

Profiles R also offer a simple means of fitting bracing struts in profile constructions.
The length of the strut is calculated as follows based on the R Profiles used:

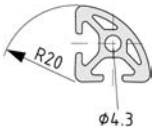


Connection at 45°	
Profile 2	Profile 5 R20/40-45°
b	$(a - 30)\cdot\sqrt{2}$

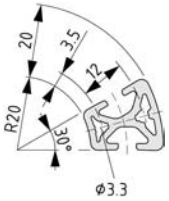


Connection at 30°	
Profile 1	Profile 5 R20/40-30°
Profile 3	Profile 5 R20/40-60°
c	$2(a - 30)/\sqrt{3}$
d	$(a - 30)/\sqrt{3} + 30$

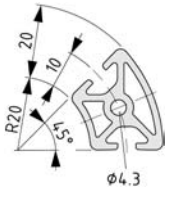
5 6 8 12



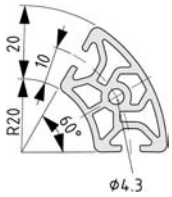
Profile 5 R20-90°
Al, anodized
A = 1.71 cm² I = 0.58 cm⁴
I_t = 0.41 cm⁴
m = 0.46 kg/m W = 0.53 cm³
natural, cut-off max. 3000 mm **0.0.425.43**



Profile 5 R20/40-30°
Al, anodized
A = 1.68 cm² I_x = 0.43 cm⁴ I_y = 0.68 cm⁴
I_t = 0.22 cm⁴
m = 0.45 kg/m W_x = 0.38 cm³ W_y = 0.57 cm³
natural, cut-off max. 3000 mm **0.0.425.39**



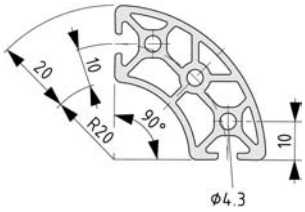
Profile 5 R20/40-45°
Al, anodized
A = 2.38 cm² I_x = 1.26 cm⁴ I_y = 0.98 cm⁴
I_t = 0.43 cm⁴
m = 0.64 kg/m W_x = 0.79 cm³ W_y = 0.75 cm³
natural, cut-off max. 3000 mm **0.0.425.40**



Profile 5 R20/40-60°
Al, anodized

A =	3.16 cm²	I_x =	2.48 cm⁴	I_y =	1.65 cm⁴		
		I_t =	1.14 cm⁴				
m =	0.85 kg/m	W_x =	1.31 cm³	W_y =	1.09 cm³		

natural, cut-off max. 3000 mm **0.0.425.41**



Profile 5 R20/40-90°
Al, anodized

A =	4.38 cm²	I =	5.38 cm⁴				
		I_t =	2.14 cm⁴				
m =	1.18 kg/m	W =	2.68 cm³				

natural, cut-off max. 3000 mm **0.0.425.42**

1.1.2 Profiles 6

Modular Dimensions (Basis 30 mm), Open and Closed Grooves

Profiles 6 are suitable for weight-optimised constructions of all kinds. With the choice of either Profiles 6 or Profiles 6 light the most suitable material for a given construction task can be selected.

Profiles with closed grooves are suitable for constructions where special emphasis is placed on appearance and ease of cleaning.

Profile 6 30x30 light
Al, anodized

A =	3.43 cm²	I =	2.90 cm⁴		
		I_t =	0.27 cm⁴		
m =	0.93 kg/m	W =	1.94 cm³		

natural, cut-off max. 6000 mm **0.0.419.06**

Profile 6 30x30
Al, anodized

A =	4.67 cm²	I =	4.15 cm⁴		
		I_t =	0.40 cm⁴		
m =	1.26 kg/m	W =	2.77 cm³		

natural, cut-off max. 6000 mm **0.0.419.01**

Profile 6 30x30 1N light
Al, anodized

A =	3.49 cm²	I_x =	2.91 cm⁴	I_y =	3.01 cm⁴
		I_t =	0.73 cm⁴		
m =	0.94 kg/m	W_x =	1.94 cm³	W_y =	1.98 cm³

natural, cut-off max. 6000 mm **0.0.439.43**

Profile 6 30x30 2N90 light
Al, anodized

A =	3.54 cm²	I =	3.02 cm⁴		
		I_t =	1.68 cm⁴		
m =	0.96 kg/m	W =	1.98 cm³		

natural, cut-off max. 6000 mm **0.0.439.45**

Profile 6 30x30 2N180 light
Al, anodized

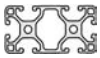
A =	3.54 cm²	I_x =	2.90 cm⁴	I_y =	3.14 cm⁴
		I_t =	1.41 cm⁴		
m =	0.96 kg/m	W_x =	1.93 cm³	W_y =	2.09 cm³

natural, cut-off max. 6000 mm **0.0.439.44**

Profile 6 30x30 3N light
Al, anodized

A =	3.60 cm²	I_x =	3.14 cm⁴	I_y =	3.02 cm⁴
		I_t =	2.40 cm⁴		
m =	1.00 kg/m	W_x =	2.09 cm³	W_y =	1.98 cm³

natural, cut-off max. 6000 mm **0.0.478.27**



Profile 6 60x30 light
Al, anodized

A =	6.13 cm²	I_x =	5.54 cm⁴	I_y =	21.22 cm⁴		
		I_t =	3.02 cm⁴				
m =	1.65 kg/m	W_x =	3.69 cm³	W_y =	7.07 cm³		

natural, cut-off max. 6000 mm — 0.0.419.07

Profile 6 60x30
Al, anodized

A =	8.47 cm²	I_x =	7.92 cm⁴	I_y =	29.30 cm⁴		
		I_t =	4.81 cm⁴				
m =	2.29 kg/m	W_x =	5.28 cm³	W_y =	9.77 cm³		

natural, cut-off max. 6000 mm — 0.0.419.02

Profile 6 60x30 2N light
Al, anodized

A =	6.24 cm²	I_x =	5.77 cm⁴	I_y =	21.47 cm⁴		
		I_t =	5.32 cm⁴				
m =	1.68 kg/m	W_x =	3.78 cm³	W_y =	7.16 cm³		

natural, cut-off max. 6000 mm — 0.0.439.46

Profile 6 60x30 2N180 light
Al, anodized

A =	6.24 cm²	I_x =	5.54 cm⁴	I_y =	22.21 cm⁴		
		I_t =	4.03 cm⁴				
m =	1.69 kg/m	W_x =	3.69 cm³	W_y =	7.40 cm³		

natural, cut-off max. 6000 mm — 0.0.439.49

Profile 6 60x30 3N90 light
Al, anodized

A =	6.30 cm²	I_x =	5.77 cm⁴	I_y =	21.97 cm⁴		
		I_t =	6.26 cm⁴				
m =	1.70 kg/m	W_x =	3.78 cm³	W_y =	7.26 cm³		

natural, cut-off max. 6000 mm — 0.0.439.48

Profile 6 60x30 4N180 light
Al, anodized

A =	6.36 cm²	I_x =	6.01 cm⁴	I_y =	21.74 cm⁴		
		I_t =	7.88 cm⁴				
m =	1.72 kg/m	W_x =	4.00 cm³	W_y =	7.25 cm³		

natural, cut-off max. 6000 mm — 0.0.439.47

Profile 6 60x60 light
Al, anodized

A =	10.01 cm²	I =	39.47 cm⁴				
		I_t =	20.43 cm⁴				
m =	2.70 kg/m	W =	13.16 cm³				

natural, cut-off max. 6000 mm — 0.0.419.09

Profile 6 60x60
Al, anodized

A =	13.33 cm²	I =	53.77 cm⁴				
		I_t =	29.27 cm⁴				
m =	3.60 kg/m	W =	17.92 cm³				

natural, cut-off max. 6000 mm — 0.0.419.03

New in catalogue

Profile 6 60x60 4N90 light
Al, anodized

A =	10.24 cm²	I =	40.71 cm⁴				
		I_t =	30.18 cm⁴				
m =	2.76 kg/m	W =	13.43 cm³				

natural, cut-off max. 6000 mm — 0.0.491.31

Profile 6 120x30 light
Al, anodized

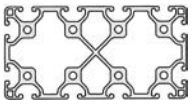
A =	11.53 cm²	I_x =	10.82 cm⁴	I_y =	152.65 cm⁴	
		I_t =	9.29 cm⁴			
m =	3.11 kg/m	W_x =	7.21 cm³	W_y =	25.44 cm³	

natural, cut-off max. 6000 mm **0.0.419.08**

Profile 6 120x30
Al, anodized

A =	16.00 cm²	I_x =	15.42 cm⁴	I_y =	210.94 cm⁴	
		I_t =	12.23 cm⁴			
m =	4.32 kg/m	W_x =	10.28 cm³	W_y =	35.16 cm³	

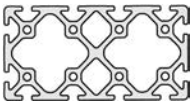
natural, cut-off max. 6000 mm **0.0.419.04**



Profile 6 120x60 light
Al, anodized

A =	18.70 cm²	I_x =	76.61 cm⁴	I_y =	259.65 cm⁴	
		I_t =	62.87 cm⁴			
m =	5.05 kg/m	W_x =	25.54 cm³	W_y =	43.27 cm³	

natural, cut-off max. 6000 mm **0.0.419.10**



Profile 6 120x60
Al, anodized

A =	24.84 cm²	I_x =	102.71 cm⁴	I_y =	347.62 cm⁴	
		I_t =	84.85 cm⁴			
m =	6.71 kg/m	W_x =	34.24 cm³	W_y =	57.94 cm³	

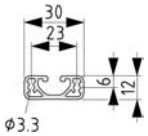
natural, cut-off max. 6000 mm **0.0.419.05**

Profiles 6

Flat Cross-Sections

Slimline Line 6 Profiles for fastening lightweight attachments.

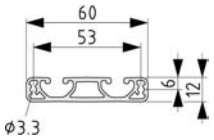
Automatic Fastening Set 6 is recommended for fastening these Profiles at right-angles.



Profile 6 30x12 light
Al, anodized

A =	1.58 cm²	I_x =	0.25 cm⁴	I_y =	1.46 cm⁴	
		I_t =	0.11 cm⁴			
m =	0.43 kg/m	W_x =	0.39 cm³	W_y =	0.98 cm³	

natural, cut-off max. 3000 mm **0.0.478.05**



Profile 6 60x12 light
Al, anodized

A =	2.98 cm²	I_x =	0.53 cm⁴	I_y =	10.00 cm⁴
		I_t =	0.48 cm⁴		
m =	0.81 kg/m	W_x =	0.83 cm³	W_y =	3.34 cm³

natural, cut-off max. 3000 mm 0.0.478.07

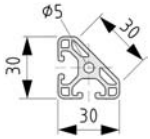
Profiles 6

45° Angle

Universal profiles for constructing attractive tables, cover hoods, display cases or other fixtures.

Fastening Set 6 30x30-45° (Section 1.3 Fasteners) can be used to connect two or three profiles at angles of 90°.

5 6 8 12



Profile 6 30x30-45° light
Al, anodized

A =	3.12 cm²	I =	2.21 cm⁴		
		I_t =	0.72 cm⁴		
m =	0.84 kg/m	W =	1.33 cm³		

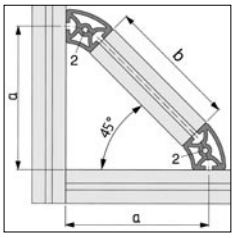
natural, cut-off max. 3000 mm 0.0.434.72

Profiles 6 R

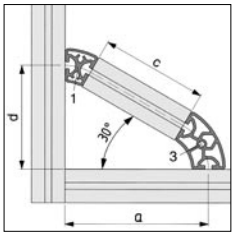
Closed, Radiused Outside Surface

Profiles 6 R are ideal for constructing angled protective hoods, racks, tables or other fixtures from Line 6 Profiles.

Profiles R also offer a simple means of fitting bracing struts in profile constructions.
The length of the strut is calculated as follows based on the R Profiles used:

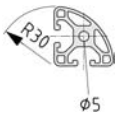


Connection at 45°	
Profile 2	Profile 6 R30/60-45°
b	$(a-45)\cdot\sqrt{2}$



Connection at 30°	
Profile 1	Profile 6 R30/60-30°
Profile 3	Profile 6 R30/60-60°
c	$2(a-45)/\sqrt{3}$
d	$(a-45)/\sqrt{3}+45$

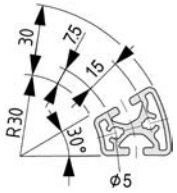
5 **6** 8 12



Profile 6 R30-90° light
Al, anodized

A =	3.07 cm²	I =	2.16 cm⁴		
		I_t =	0.83 cm⁴		
m =	0.83 kg/m	W =	1.32 cm³		

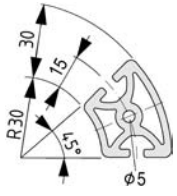
natural, cut-off max. 3000 mm **0.0.434.73**



Profile 6 R30/60-30°
Al, anodized

A =	3.27 cm²	I_x =	1.95 cm⁴	I_y =	2.77 cm⁴		
		I_t =	1.01 cm⁴				
m =	0.88 kg/m	W_x =	1.16 cm³	W_y =	1.57 cm³		

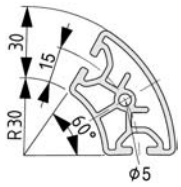
natural, cut-off max. 6000 mm **0.0.459.54**



Profile 6 R30/60-45°
Al, anodized

A =	4.52 cm²	I_x =	5.81 cm⁴	I_y =	4.15 cm⁴		
		I_t =	3.93 cm⁴				
m =	1.22 kg/m	W_x =	2.42 cm³	W_y =	2.31 cm³		

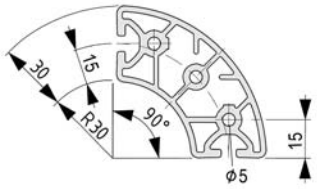
natural, cut-off max. 6000 mm **0.0.459.57**



Profile 6 R30/60-60°
Al, anodized

A =	5.28 cm²	I_x	=	10.01 cm⁴	I_y	=	6.34 cm⁴
		I_t	=	6.07 cm⁴			
m =	1.43 kg/m	W_x	=	3.48 cm³	W_y	=	2.86 cm³

natural, cut-off max. 6000 mm — **0.0.459.35**



Profile 6 R30/60-90°
Al, anodized

A =	8.06 cm²	I	=	22.94 cm⁴			
		I_t	=	14.51 cm⁴			
m =	2.18 kg/m	W	=	7.57 cm³			

natural, cut-off max. 6000 mm — **0.0.459.38**

1.1.3 Profiles 8

Modular Dimensions (Basis 40 mm), Open and Closed Groove

Profiles 8 are suitable for constructions of all kinds. The choice of Profiles 8, Profiles 8 light and Profiles 8 E enable the most suitable material to be selected for a given construction task.

Profiles with closed grooves are suitable for constructions where particular emphasis is placed on appearance and ease of cleaning, which is particularly attractive for clean-room applications, when used in combination with Radius Seals.

The covering over the grooves of the Profiles 8 40x40 4N, 80x40 6N and 80x80 8N can be removed easily for fitting accessories or use of profile connections. Profiles with closed grooves can be combined with conventional profiles.

Exposing the groove: It is advisable to mark the start and end of the opening with a hole of diameter 9.2 mm. The groove covering can them be removed easily by levering with a screwdriver.

Profile 8 40x40 E
Al, anodized

A =	5.07 cm²	I	=	7.38 cm⁴	
		I_t	=	0.99 cm⁴	
m =	1.37 kg/m	W	=	3.69 cm³	

natural, cut-off max. 6000 mm	7.0.000.09

Profile 8 40x40 light
Al, anodized

A =	6.46 cm²	I	=	9.00 cm⁴	
		I_t	=	1.12 cm⁴	
m =	1.74 kg/m	W	=	4.50 cm³	

natural, cut-off max. 6000 mm	0.0.026.33
black, cut-off max. 6000 mm	0.0.026.35

Profile 8 40x40
Al, anodized

A =	9.16 cm²	I	=	13.96 cm⁴	
		I_t	=	1.93 cm⁴	
m =	2.47 kg/m	W	=	6.98 cm³	

natural, cut-off max. 6000 mm	0.0.026.03

Profile 8 40x40 1N light
Al, anodized
A = 6.61 cm² I_x = 9.54 cm⁴ I_y = 9.01 cm⁴
I_t = 2.99 cm⁴
m = 1.78 kg/m W_x = 4.66 cm³ W_y = 4.50 cm³

natural, cut-off max. 6000 mm	0.0.422.72

Profile 8 40x40 2N90 E
Al, anodized
A = 4.83 cm² I = 8.06 cm⁴
I_t = 4.33 cm⁴
m = 1.30 kg/m W = 3.87 cm³

natural, cut-off max. 6000 mm	7.0.000.06

Profile 8 40x40 2N90 light
Al, anodized
A = 6.80 cm² I = 9.64 cm⁴
I_t = 4.91 cm⁴
m = 1.84 kg/m W = 4.70 cm³

natural, cut-off max. 6000 mm	0.0.404.50
black, cut-off max. 6000 mm	0.0.406.43

Profile 8 40x40 2N180 E
Al, anodized
A = 4.95 cm² I_x = 8.40 cm⁴ I_y = 8.10 cm⁴
I_t = 3.86 cm⁴
m = 1.33 kg/m W_x = 4.30 cm³ W_y = 4.05 cm³

natural, cut-off max. 6000 mm	7.0.000.03

Profile 8 40x40 2N180 light
Al, anodized
A = 6.77 cm² I_x = 9.02 cm⁴ I_y = 10.11 cm⁴
I_t = 4.88 cm⁴
m = 1.83 kg/m W_x = 4.51 cm³ W_y = 5.05 cm³

natural, cut-off max. 6000 mm	0.0.404.51

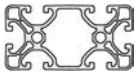
Profile 8 40x40 3N light
Al, anodized
A = 6.96 cm² I_x = 9.62 cm⁴ I_y = 10.22 cm⁴
I_t = 6.95 cm⁴
m = 1.90 kg/m W_x = 4.70 cm³ W_y = 5.11 cm³

natural, cut-off max. 6000 mm	0.0.480.26

New in catalogue

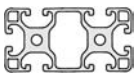
Profile 8 40x40 4N light
Al, anodized
Profile feature easy-to-open groove
A = 6.86 cm² I = 9.79 cm⁴
I_t = 1.12 cm⁴
m = 1.86 kg/m W = 4.89 cm³

natural, cut-off max. 6000 mm	0.0.489.11



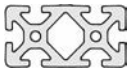
Profile 8 80x40 E
Al, anodized
A = 8.93 cm² I_x = 15.15 cm⁴ I_y = 57.81 cm⁴
I_t = 8.77 cm⁴
m = 2.42 kg/m W_x = 7.58 cm³ W_y = 14.45 cm³

natural, cut-off max. 6000 mm	7.0.000.26

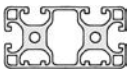


Profile 8 80x40 light
Al, anodized
A = 11.38 cm² I_x = 16.60 cm⁴ I_y = 69.54 cm⁴
I_t = 10.05 cm⁴
m = 3.04 kg/m W_x = 8.30 cm³ W_y = 17.38 cm³

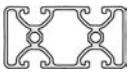
natural, cut-off max. 6000 mm	0.0.026.34
black, cut-off max. 6000 mm	0.0.026.36



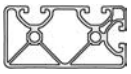
Profile 8 80x40
Al, anodized
A = 16.76 cm² I_x = 26.87 cm⁴ I_y = 101.19 cm⁴
I_t = 20.84 cm⁴
m = 4.53 kg/m W_x = 13.44 cm³ W_y = 25.29 cm³
natural, cut-off max. 6000 mm **0.0.026.04**



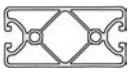
Profile 8 80x40 2N light
Al, anodized
A = 11.60 cm² I_x = 17.73 cm⁴ I_y = 70.87 cm⁴
I_t = 18.51 cm⁴
m = 3.13 kg/m W_x = 8.63 cm³ W_y = 17.72 cm³
natural, cut-off max. 6000 mm **0.0.422.75**



Profile 8 80x40 2N180 E
Al, anodized
A = 8.44 cm² I_x = 15.85 cm⁴ I_y = 54.51 cm⁴
I_t = 21.82 cm⁴
m = 2.28 kg/m W_x = 7.93 cm³ W_y = 13.63 cm³
natural, cut-off max. 6000 mm **7.0.000.23**

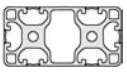


Profile 8 80x40 3N90 E
Al, anodized
A = 8.24 cm² I_x = 15.32 cm⁴ I_y = 54.69 cm⁴
I_t = 16.53 cm⁴
m = 2.22 kg/m W_x = 7.51 cm³ W_y = 13.40 cm³
natural, cut-off max. 6000 mm **7.0.000.20**

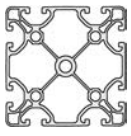


Profile 8 80x40 4N180 E
Al, anodized
A = 8.04 cm² I_x = 15.12 cm⁴ I_y = 55.41 cm⁴
I_t = 11.89 cm⁴
m = 2.17 kg/m W_x = 7.56 cm³ W_y = 13.85 cm³
natural, cut-off max. 6000 mm **7.0.000.17**

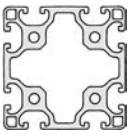
New in catalogue



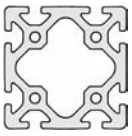
Profile 8 80x40 6N light
Al, anodized
Profile feature easy-to-open groove
A = 11.87 cm² I_x = 18.09 cm⁴ I_y = 74.31 cm⁴
I_t = 10.05 cm⁴
m = 3.20 kg/m W_x = 9.04 cm³ W_y = 18.58 cm³
natural, cut-off max. 6000 mm **0.0.489.18**



Profile 8 80x80 E
Al, anodized
A = 14.86 cm² I = 100.69 cm⁴
I_t = 46.35 cm⁴
m = 4.01 kg/m W = 25.17 cm³
natural, cut-off max. 6000 mm **7.0.000.29**



Profile 8 80x80 light
Al, anodized
A = 19.75 cm² I = 134.06 cm⁴
I_t = 82.91 cm⁴
m = 5.33 kg/m W = 33.51 cm³
natural, cut-off max. 6000 mm **0.0.265.80**



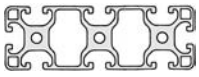
Profile 8 80x80
Al, anodized
A = 26.66 cm² I = 187.70 cm⁴
I_t = 136.98 cm⁴
m = 7.19 kg/m W = 46.92 cm³
natural, cut-off max. 6000 mm **0.0.026.27**

Profile 8 80x80 2N light
Al, anodized
A = 20.08 cm² I_x = 139.00 cm⁴ I_y = 135.00 cm⁴
I_t = 104.97 cm⁴
m = 5.42 kg/m W_x = 34.25 cm³ W_y = 33.68 cm³
natural, cut-off max. 6000 mm **0.0.457.52**

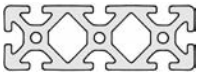
Profile 8 80x80 4N90 light
Al, anodized
A = 20.39 cm² I = 140.00 cm⁴
I_t = 122.46 cm⁴
m = 5.50 kg/m W = 34.48 cm³
natural, cut-off max. 6000 mm **0.0.457.59**

New
in catalogue

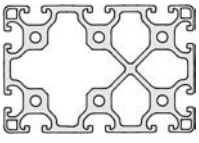
Profile 8 80x80 8N light
Al, anodized
Profile feature easy-to-open groove
A = 19.43 cm² I = 134.24 cm⁴
I_t = 82.91 cm⁴
m = 5.25 kg/m W = 33.56 cm³
natural, cut-off max. 6000 mm **0.0.489.19**



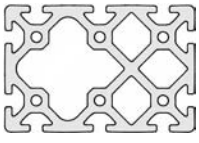
Profile 8 120x40 light
Al, anodized
A = 16.12 cm² I_x = 24.22 cm⁴ I_y = 220.54 cm⁴
I_t = 18.14 cm⁴
m = 4.35 kg/m W_x = 12.11 cm³ W_y = 36.76 cm³
natural, cut-off max. 6000 mm **0.0.416.66**



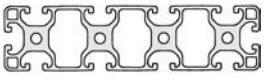
Profile 8 120x40
Al, anodized
A = 24.38 cm² I_x = 39.80 cm⁴ I_y = 322.66 cm⁴
I_t = 35.15 cm⁴
m = 6.58 kg/m W_x = 19.90 cm³ W_y = 53.77 cm³
natural, cut-off max. 6000 mm **0.0.416.29**



Profile 8 120x80 light
Al, anodized
A = 30.13 cm² I_x = 201.89 cm⁴ I_y = 421.67 cm⁴
I_t = 128.39 cm⁴
m = 8.13 kg/m W_x = 50.47 cm³ W_y = 68.34 cm³
natural, cut-off max. 6000 mm **0.0.416.65**

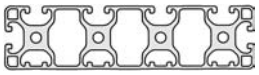


Profile 8 120x80
Al, anodized
A = 40.05 cm² I_x = 274.86 cm⁴ I_y = 574.86 cm⁴
I_t = 255.63 cm⁴
m = 10.81 kg/m W_x = 68.71 cm³ W_y = 92.72 cm³
natural, cut-off max. 6000 mm **0.0.416.30**

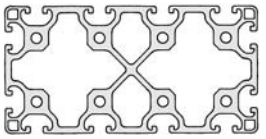


Profile 8 160x40 light
Al, anodized
A = 20.90 cm² I_x = 31.81 cm⁴ I_y = 500.32 cm⁴
I_t = 29.19 cm⁴
m = 5.64 kg/m W_x = 15.90 cm³ W_y = 62.54 cm³
natural, cut-off max. 6000 mm **0.0.418.35**

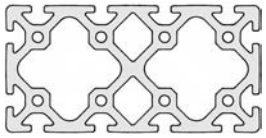
Profile 8 160x40
Al, anodized
A = 32.00 cm² I_x = 52.72 cm⁴ I_y = 739.62 cm⁴
I_t = 51.34 cm⁴
m = 8.64 kg/m W_x = 26.36 cm³ W_y = 92.45 cm³
natural, cut-off max. 6000 mm **0.0.265.23**



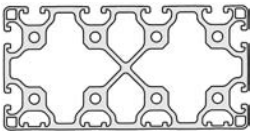
Profile 8 160x40 4N light
Al, anodized
A = 21.50 cm² I_x = 33.90 cm⁴ I_y = 512.66 cm⁴
I_t = 55.98 cm⁴
m = 5.80 kg/m W_x = 16.52 cm³ W_y = 64.08 cm³
natural, cut-off max. 6000 mm **0.0.429.04**



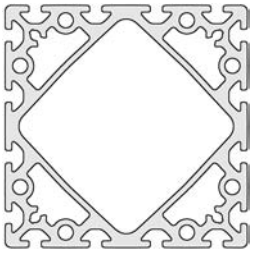
Profile 8 160x80 light
Al, anodized
A = 37.80 cm² I_x = 267.07 cm⁴ I_y = 907.88 cm⁴
I_t = 261.72 cm⁴
m = 10.21 kg/m W_x = 66.77 cm³ W_y = 113.48 cm³
natural, cut-off max. 6000 mm **0.0.411.18**



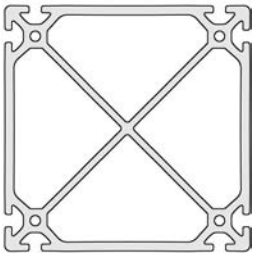
Profile 8 160x80
Al, anodized
A = 50.07 cm² I_x = 360.89 cm⁴ I_y = 1,228.33 cm⁴
I_t = 398.58 cm⁴
m = 13.52 kg/m W_x = 90.22 cm³ W_y = 153.54 cm³
natural, cut-off max. 6000 mm **0.0.265.26**



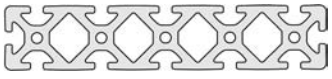
Profile 8 160x80 4N light
Al, anodized
A = 38.34 cm² I_x = 275.91 cm⁴ I_y = 919.80 cm⁴
I_t = 315.79 cm⁴
m = 10.35 kg/m W_x = 68.97 cm³ W_y = 114.97 cm³
natural, cut-off max. 6000 mm **0.0.429.05**



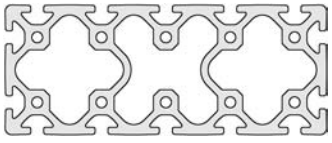
Profile 8 160x160
Al, anodized
A = 74.20 cm² I = 2,355.00 cm⁴
I_t = 2,500.00 cm⁴
m = 20.04 kg/m W = 294.40 cm³
natural, cut-off max. 6000 mm **0.0.411.08**



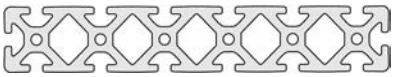
Profile 8 160x160 8EN
Al, anodized
A = 59.34 cm² I = 1,876.10 cm⁴
I_t = 2,000.00 cm⁴
m = 16.05 kg/m W = 234.51 cm³
natural, cut-off max. 6000 mm **0.0.474.58**



Profile 8 200x40
Al, anodized
A = 39.60 cm² I_x = 65.62 cm⁴ I_y = 1,411.47 cm⁴
I_t = 65.00 cm⁴
m = 10.69 kg/m W_x = 32.81 cm³ W_y = 141.14 cm³
natural, cut-off max. 6000 mm **0.0.473.82**

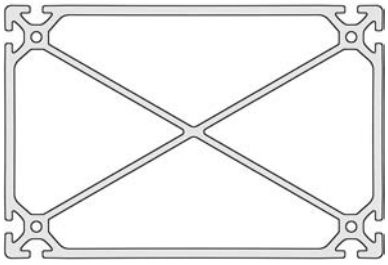


Profile 8 200x80
Al, anodized
A = 55.74 cm² I_x = 427.59 cm⁴ I_y = 2,181.99 cm⁴
I_t = 470.00 cm⁴
m = 15.05 kg/m W_x = 106.90 cm³ W_y = 218.20 cm³
natural, cut-off max. 6000 mm **0.0.483.35**



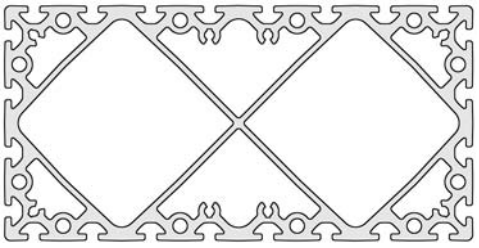
Profile 8 240x40
Al, anodized
A = 47.21 cm² I_x = 78.54 cm⁴ I_y = 2,400.72 cm⁴
I_t = 80.00 cm⁴
m = 12.69 kg/m W_x = 39.27 cm³ W_y = 200.22 cm³

natural, cut-off max. 6000 mm	0.0.473.84



Profile 8 240x160 8EN
Al, anodized
A = 74.00 cm² I_x = 2,492.10 cm⁴ I_y = 5,177.20 cm⁴
I_t = 3,950.00 cm⁴
m = 19.98 kg/m W_x = 310.60 cm³ W_y = 436.70 cm³

natural, cut-off max. 6000 mm	0.0.474.57



Profile 8 320x160
Al, anodized
A = 125.55 cm² I_x = 4,398.20 cm⁴ I_y = 14,194.10 cm⁴
I_t = 6,900.00 cm⁴
m = 33.90 kg/m W_x = 549.80 cm³ W_y = 887.30 cm³

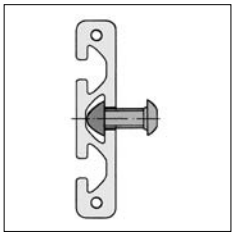
natural, cut-off max. 6000 mm	0.0.480.78

Profiles 8

Flat Cross-Sections

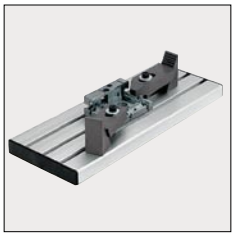
Profiles 8 40x16 and 40x16 E are ideal for attaching elements such as valves or limit switches.

Profile 8 40x16 E can be used in conjunction with Hand Grip Element 8 (Section 4.2 Grip Systems) to construct grip rails and handles.

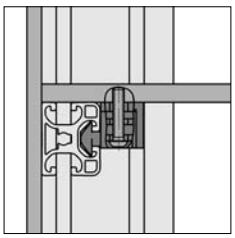


Profiles 8 80x16 and 160x28 are perfect for constructing linear slides of Roller Guides 8 D6 or D14 (Section 8.1.1).

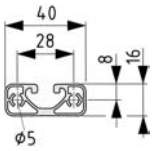
When using the centre groove of Profile 8 80x16, an access hole must be provided at the envisaged fastening position.



Profile 8 160x28 can also be used as a clamping and mounting surface or edgewise as a heavy-duty supporting profile.



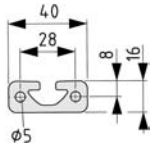
Profiles 8 40x32 and 80x32 light are particularly suitable for use as frames and struts in table, shelving and cabinet constructions. They are then used to connect profiles of modular dimension 40 mm.



Profile 8 40x16 E
Al, anodized

A =	2.24 cm²	I_x =	0.64 cm⁴	I_y =	3.34 cm⁴		
		I_t =	0.35 cm⁴				
m =	0.60 kg/m	W_x =	0.78 cm³	W_y =	1.67 cm³		

natural, cut-off max. 3000 mm **7.0.000.01**



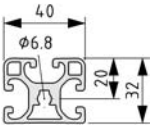
Profile 8 40x16
Al, anodized

A =	4.24 cm²	I_x =	1.05 cm⁴	I_y =	6.89 cm⁴		
		I_t =	1.09 cm⁴				
m =	1.13 kg/m	W_x =	1.22 cm³	W_y =	3.45 cm³		

natural, cut-off max. 6000 mm **0.0.026.84**

black, cut-off max. 3000 mm **0.0.026.25**

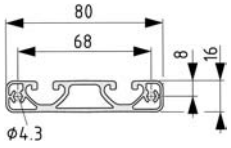
New in catalogue



Profile 8 40x32 light
Al, anodized

A =	4.97 cm²	I_x =	5.06 cm⁴	I_y =	7.19 cm⁴		
		I_t =	0.81 cm⁴				
m =	1.34 kg/m	W_x =	3.14 cm³	W_y =	3.14 cm³		

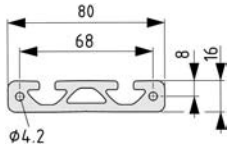
natural, cut-off max. 6000 mm **0.0.494.97**



Profile 8 80x16 E
Al, anodized

A =	4.86 cm²	I_x =	1.49 cm⁴	I_y =	29.28 cm⁴		
		I_t =	1.53 cm⁴				
m =	1.31 kg/m	W_x =	1.78 cm³	W_y =	7.32 cm³		

natural, cut-off max. 3000 mm **7.0.000.15**

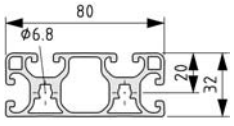


Profile 8 80x16
Al, anodized

A =	8.13 cm²	I_x =	2.15 cm⁴	I_y =	50.76 cm⁴		
		I_t =	2.20 cm⁴				
m =	2.20 kg/m	W_x =	2.69 cm³	W_y =	12.69 cm³		

natural, cut-off max. 3000 mm **0.0.364.72**

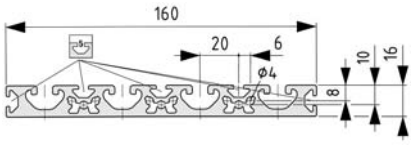
New in catalogue



Profile 8 80x32 light
Al, anodized

A =	8.65 cm²	I_x =	9.27 cm⁴	I_y =	53.73 cm⁴		
		I_t =	8.20 cm⁴				
m =	2.33 kg/m	W_x =	5.76 cm³	W_y =	13.43 cm³		

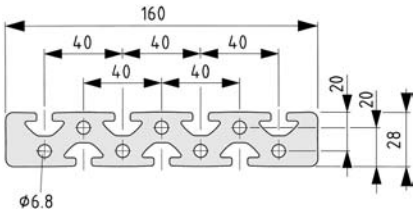
natural, cut-off max. 6000 mm **0.0.494.98**



Profile 8 160x16
Al, anodized

A =	13.88 cm²	I_x =	3.80 cm⁴	I_y =	307.83 cm⁴		
		I_t =	2.37 cm⁴				
m =	3.75 kg/m	W_x =	4.25 cm³	W_y =	38.48 cm³		

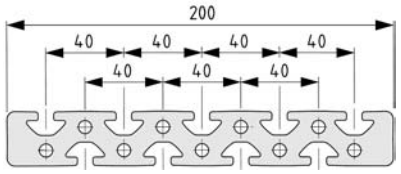
natural, cut-off max. 3000 mm **0.0.265.90**



Profile 8 160x28
Al, anodized

A =	30.93 cm²	I_x =	20.27 cm⁴	I_y =	723.74 cm⁴		
		I_t =	21.81 cm⁴				
m =	8.35 kg/m	W_x =	14.16 cm³	W_y =	90.47 cm³		

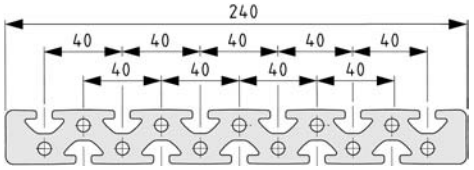
natural, cut-off max. 6000 mm **0.0.026.85**



Profile 8 200x28
Al, anodized

A =	38.22 cm²	I_x =	25.11 cm⁴	I_y =	1,377.41 cm⁴		
		I_t =	25.00 cm⁴				
m =	10.32 kg/m	W_x =	18.35 cm³	W_y =	137.74 cm³		

natural, cut-off max. 6000 mm **0.0.473.86**



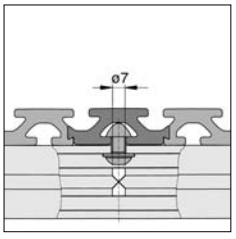
Profile 8 240x28
Al, anodized

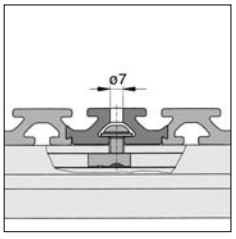
A =	45.50 cm²	I_x =	29.95 cm⁴	I_y =	2,336.86 cm⁴		
		I_t =	30.00 cm⁴				
m =	12.29 kg/m	W_x =	21.71 cm³	W_y =	194.74 cm³		

natural, cut-off max. 6000 mm **0.0.473.88**

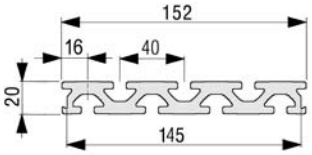
Bed Plate Profile 8

Bed Plate Profiles 8 for producing areas of any size with groove 8 and modular dimension 40 mm.
The Bed Plate Profile can be secured to all types of substructures.





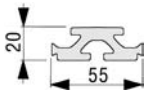
Options for connecting the plate to the frame structure (using Button-Head Screw M8x16, washer DIN 125-8.4 and T-Slot Nut 8 St M8).



Bed Plate Profile 8 152x20
Al, anodized

A =	18.39 cm²	I_x =	7.39 cm⁴	I_y =	350.50 cm⁴		
m =	4.97 kg/m	W_x =	7.20 cm³	W_y =	46.12 cm³		

natural, cut-off max. 6000 mm **0.0.465.79**



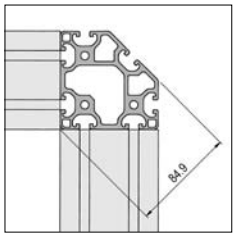
Bed Plate Connection Profile 8 55x20
Al, anodized

A =	5.71 cm²	I_x =	2.12 cm⁴	I_y =	11.30 cm⁴
m =	1.54 kg/m	W_x =	1.98 cm³	W_y =	4.10 cm³

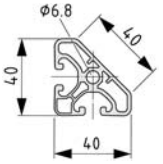
natural, cut-off max. 6000 mm	0.0.465.80

Profiles 8
45° Angle

Universal profiles for constructing attractive tables, cover hoods, display cases or other fixtures.



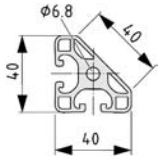
Fastening Set 8 40x40-45° (Section 1.3 Fasteners) can be used to connect two or three profiles at angles of 90°.



Profile 8 40x40-45° E
Al, anodized

A =	4.35 cm²	I =	5.70 cm⁴		
		I_t =	2.49 cm⁴		
m =	1.17 kg/m	W =	2.51 cm³		

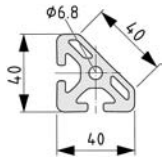
natural, cut-off max. 6000 mm	7.0.000.12



Profile 8 40x40-45° light
Al, anodized

A =	5.58 cm²	I =	6.50 cm⁴		
		I_t =	2.59 cm⁴		
m =	1.50 kg/m	W =	2.90 cm³		

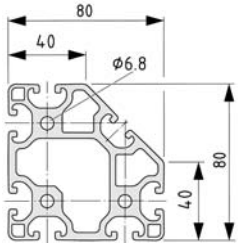
natural, cut-off max. 6000 mm	0.0.404.52
black, cut-off max. 6000 mm	0.0.406.45



Profile 8 40x40-45°
Al, anodized

A =	7.30 cm²	I	=	9.39 cm⁴	
		I_t	=	2.70 cm⁴	
m =	1.97 kg/m	W	=	4.08 cm³	

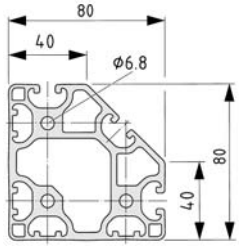
natural, cut-off max. 6000 mm **0.0.373.45**



Profile 8 80x80-45° light
Al, anodized

A =	18.86 cm²	I	=	109.11 cm⁴	
		I_t	=	68.71 cm⁴	
m =	5.09 kg/m	W	=	24.97 cm³	

natural, cut-off max. 6000 mm **0.0.416.89**



Profile 8 80x80-45° 4N90 light
Al, anodized

A =	19.48 cm²	I	=	106.20 cm⁴	
		I_t	=	78.54 cm⁴	
m =	5.25 kg/m	W	=	24.69 cm³	

natural, cut-off max. 6000 mm **0.0.422.54**

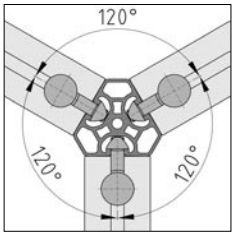
Profiles 8

120° Angle

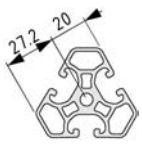
New in catalogue

Lightweight profile with 3 grooves for all types of constructions.

Profile 8 3x40-120° is particularly suitable as a stand profile for constructing partition systems running at angles of 120°.
This profile also offers interesting possibilities for designing machine housings.



Grooves 8 are positioned at angles of 120° to each other. The relevant side faces have a width of modular dimension 40 mm for attaching Line 8 profiles and accessories.



Profile 8 3x40-120° light
Al, anodized

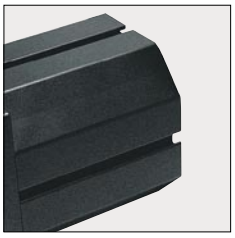
A =	6.59 cm²	I_x	=	10.65 cm⁴	I_y	=	10.71 cm⁴
		I_t	=	6.92 cm⁴			
m =	1.73 kg/m	W_x	=	3.98 cm³	W_y	=	5.33 cm³

natural, cut-off max. 6000 mm **0.0.480.59**

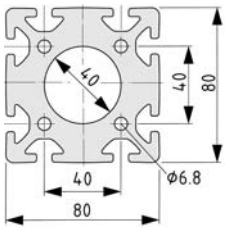
Profiles 8 D

with Internal Diameter

Profile 8 80x80 D40 is ideal for mounting bearings or for accommodating shafts, spindles, axles and similar components.



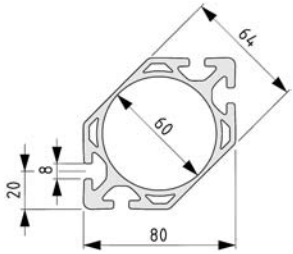
Profile 8 80x80-45° D60 is the basis for Coupling Housings 8 D30 and 8 D55, Profile 8 120x120-45° D87 is used for Coupling Housing 8 D80. The profiles can be used to produce Coupling Housings of special lengths or housings for synchronising shafts between mechanical drive elements.



Profile 8 80x80 D40
Al, anodized

A =	37.20 cm²	I =	222.00 cm⁴
		I_t =	189.65 cm⁴
m =	10.04 kg/m	W =	55.50 cm³

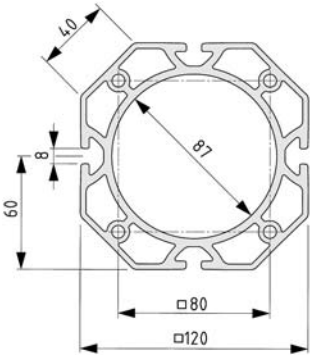
natural, cut-off max. 3000 mm **0.0.408.28**



Profile 8 80x80-45° D60
Al, anodized

A =	15.26 cm²	I =	109.56 cm⁴
		I_t =	98.17 cm⁴
m =	4.12 kg/m	W =	27.39 cm³

natural, cut-off max. 6000 mm **0.0.463.24**



Profile 8 120x120-45° D87
Al, anodized

A =	31.29 cm²	I =	465.86 cm⁴
		I_t =	647.23 cm⁴
m =	8.45 kg/m	W =	77.64 cm³

natural, cut-off max. 6000 mm **0.0.463.25**

Profiles 8 R

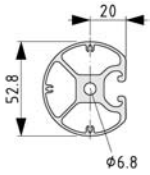
Closed, Radiused Outside Surface

Profile with round outer surface closed on three sides, with a Profile 8 light duty groove.

This is particularly useful as a table leg attached to one corner of a table structure. The Profile 8 groove can be used to connect the profile with any desired table support structure made of standard system elements. The fact that its exterior surface is closed on three sides makes it both stylish and easy to clean. The Cap 8 R26-270° (Section 1.2 Accessories for Profiles) can also be fitted at the bottom of the profile to protect the floor.

There are also many other possible uses, e.g. as a hand rail for installation on walls and profile structures.

The profile groove on one side can be closed off by means of a Cover Profile 8 R40 (Section 1.2 Accessories for Profiles) in order to produce a round profile contour without grooves.

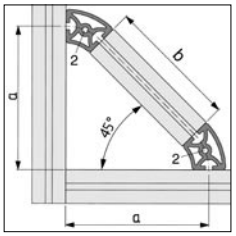


Profile 8 R26-270°
Al, anodized

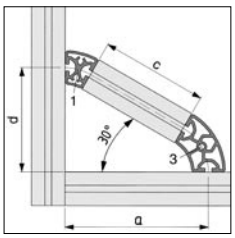
A =	6.45 cm²	I_x =	12.08 cm⁴	I_y =	10.96 cm⁴
		I_t =	12.41 cm⁴		
m =	1.75 kg/m	W_x =	4.62 cm³	W_y =	5.40 cm³

natural, cut-off max. 6000 mm	0.0.474.48

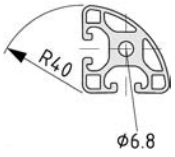
These profiles are ideal for constructing angled protective hoods, frames, tables or other fixtures. They are both attractive and easy to clean.



Connection at 45°	
Profile 2	Profile 8 R40/80-45°
b	$(a - 60)\cdot\sqrt{2}$



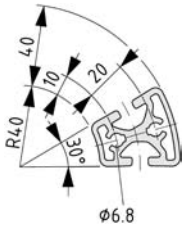
Connection at 30°	
Profile 1	Profile 8 R40/80-30°
Profile 3	Profile 8 R 40/80-60°
c	$2(a - 60)/\sqrt{3}$
d	$(a - 60)/\sqrt{3} + 60$



Profile 8 R40-90° light
Al, anodized

A =	5.72 cm²	I =	6.65 cm⁴		
		I_t =	2.93 cm⁴		
m =	1.54 kg/m	W =	3.04 cm³		

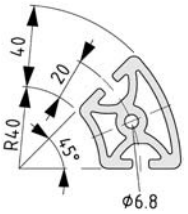
natural, cut-off max. 6000 mm **0.0.436.33**



Profile 8 R40/80-30°
Al, anodized

A =	6.20 cm²	I_x =	6.42 cm⁴	I_y =	8.90 cm⁴		
		I_t =	3.18 cm⁴				
m =	1.67 kg/m	W_x =	2.84 cm³	W_y =	3.80 cm³		

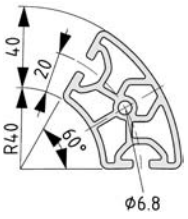
natural, cut-off max. 6000 mm **0.0.427.66**



Profile 8 R40/80-45°
Al, anodized

A =	10.23 cm²	I_x =	21.33 cm⁴	I_y =	16.06 cm⁴		
		I_t =	12.41 cm⁴				
m =	2.76 kg/m	W_x =	6.74 cm³	W_y =	6.14 cm³		

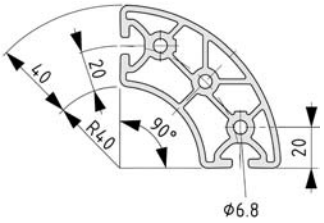
natural, cut-off max. 6000 mm **0.0.409.14**



Profile 8 R40/80-60°
Al, anodized

A =	10.50 cm²	I_x =	22.64 cm⁴	I_y =	34.92 cm⁴		
		I_t =	19.18 cm⁴				
m =	2.83 kg/m	W_x =	5.96 cm³	W_y =	11.56 cm³		

natural, cut-off max. 6000 mm **0.0.427.67**



Profile 8 R40/80-90°
Al, anodized

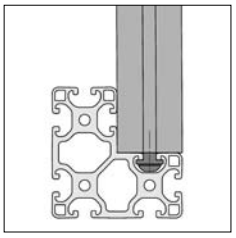
A =	15.00 cm²	I =	76.25 cm⁴		
		I_t =	45.84 cm⁴		
m =	4.05 kg/m	W =	18.69 cm³		

natural, cut-off max. 6000 mm **0.0.427.68**

Profiles 8 W

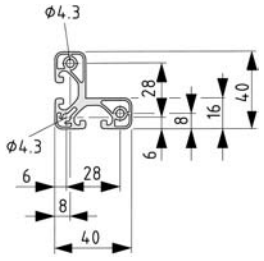
Angle Geometry

Angled profiles for supporting shelves, as simple panel-fixing strips or simple guides and similar applications.



The inside corner of the angled profiles is provided with an undercut. Attachments with sharp edges can therefore be screwed flush with the surface on both sides.

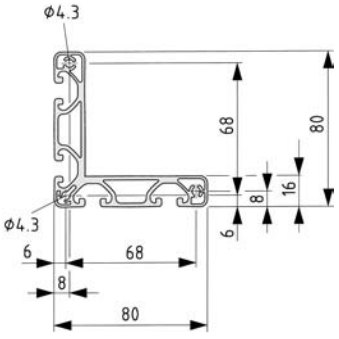
5 6 **8** 12



Profile 8 W40x40 E
Al, anodized

A =	4.09 cm²	I	=	5.40 cm⁴
		I_t	=	0.71 cm⁴
m =	1.10 kg/m	W	=	2.22 cm³

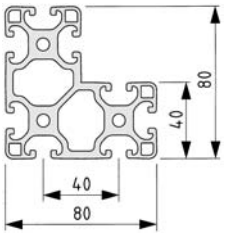
natural, cut-off max. 3000 mm — **7.0.001.10**



Profile 8 W80x80 E
Al, anodized

A =	8.60 cm²	I	=	48.52 cm⁴
		I_t	=	3.05 cm⁴
m =	2.32 kg/m	W	=	8.92 cm³

natural, cut-off max. 3000 mm — **7.0.001.12**



Profile 8 W80x80x40 light
Al, anodized

A =	17.77 cm²	I	=	95.32 cm⁴
		I_t	=	31.41 cm⁴
m =	4.79 kg/m	W	=	20.54 cm³

natural, cut-off max. 6000 mm — **0.0.458.92**

Profiles 8 D40
Open and Closed Grooves

New in catalogue

Profiles 8 D40 have a round cross-section of diameter 40 mm. The 4 grooves of Profile 8 D40 are arranged 90° apart. The grooves can be used for holding panel elements and attachments (as with rectangular profile cross-sections) as well as for fasteners.

Profiles with a round cross-section are particularly suitable for constructing fixtures for holding materials ready for use, e.g. shelves and table structures, or for auxiliary fixtures such as signage and handrails.

Profiles 8 D40 are available with both open and closed grooves. Profiles with closed grooves are ideal where aesthetic considerations are important. They are also particularly suitable for clean rooms due to their ease of cleaning and streamlined design.

The profile grooves can be used to connect accessories designed for securing to grooves of Profile 8. The profiles may be connected to each other, to rectangular profiles of Line 8, or to other components using Adapter 8 D40.

Clamping jaws D40 are recommended when clamping round cross-section profiles in a vice as these protect the profiles from marking or damage.

5 6 **8** 12

Profile 8 D40
Al, anodized
A = 5.45 cm² I = 5.63 cm⁴
I_t = 1.08 cm⁴
m = 1.47 kg/m W = 2.88 cm³

natural, cut-off max. 6000 mm	0.0.493.36

Profile 8 D40 1N
Al, anodized
A = 5.51 cm² I_x = 5.87 cm⁴ I_y = 5.63 cm⁴
I_t = 1.08 cm⁴
m = 1.48 kg/m W_x = 3.00 cm³ W_y = 2.80 cm³

natural, cut-off max. 6000 mm	0.0.493.39

Profile 8 D40 2N90
Al, anodized
A = 5.58 cm² I = 5.88 cm⁴
I_t = 1.08 cm⁴
m = 1.50 kg/m W = 2.90 cm³

natural, cut-off max. 6000 mm	0.0.489.40

Profile 8 D40 2N180
Al, anodized

A =	5.58 cm²	I_x =	6.13 cm⁴	I_y =	5.63 cm⁴		
		I_t =	1.08 cm⁴				
m =	1.50 kg/m	W_x =	3.07 cm³	W_y =	2.92 cm³		

natural, cut-off max. 6000 mm — 0.0.493.42

Profile 8 D40 3N
Al, anodized

A =	5.64 cm²	I_x =	5.88 cm⁴	I_y =	6.13 cm⁴		
		I_t =	1.08 cm⁴				
m =	1.53 kg/m	W_x =	2.97 cm³	W_y =	3.07 cm³		

natural, cut-off max. 6000 mm — 0.0.493.45

Profile 8 D40 4N
Al, anodized

A =	5.71 cm²	I =	6.13 cm⁴				
		I_t =	1.08 cm⁴				
m =	1.54 kg/m	W =	3.07 cm³				

natural, cut-off max. 6000 mm — 0.0.493.48

1.1.4 Profiles 12

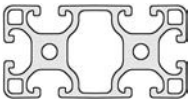
Modular Dimensions (Basis 60 mm), Open Grooves

Line 12 Profiles are particularly suitable for stable frame constructions carrying high loads. The rigidity of the profile flanks enables tensile loading of up to 10,000 N per screw connection. Their inclination towards the groove produces a high degree of security against loss of pre-tensioning.

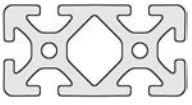
Areas of the basic frame which are subject to less load can be constructed from Profiles 12 light in order to save material.

Profile 12 60x60 light
Al, anodized
A = 14.50 cm² I = 46.02 cm⁴
I_t = 5.00 cm⁴
m = 3.91 kg/m W = 15.36 cm³
natural, cut-off max. 6000 mm **0.0.001.16**

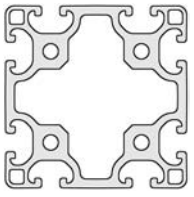
Profile 12 60x60
Al, anodized
A = 20.60 cm² I = 70.50 cm⁴
I_t = 10.00 cm⁴
m = 5.55 kg/m W = 23.50 cm³
natural, cut-off max. 6000 mm **0.0.001.11**



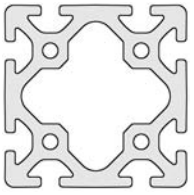
Profile 12 120x60 light
Al, anodized
A = 26.15 cm² I_x = 88.15 cm⁴ I_y = 355.50 cm⁴
I_t = 50.00 cm⁴
m = 7.10 kg/m W_x = 29.40 cm³ W_y = 59.40 cm³
natural, cut-off max. 6000 mm **0.0.001.17**



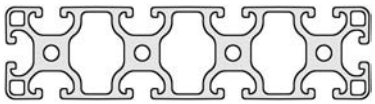
Profile 12 120x60
Al, anodized
A = 37.58 cm² I_x = 135.40 cm⁴ I_y = 509.70 cm⁴
I_t = 105.00 cm⁴
m = 10.15 kg/m W_x = 45.10 cm³ W_y = 85.10 cm³
natural, cut-off max. 6000 mm **0.0.001.12**



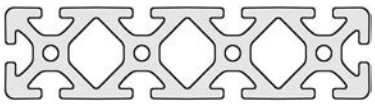
Profile 12 120x120 light
Al, anodized
A = 44.45 cm² I = 679.60 cm⁴
I_t = 410.00 cm⁴
m = 12.00 kg/m W = 113.50 cm³
natural, cut-off max. 6000 mm **0.0.001.18**



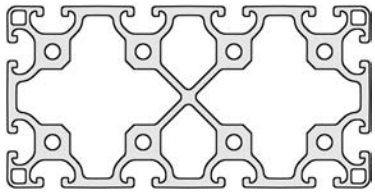
Profile 12 120x120
Al, anodized
A = 60.40 cm² I = 948.00 cm⁴
I_t = 690.00 cm⁴
m = 16.30 kg/m W = 159.00 cm³
natural, cut-off max. 6000 mm **0.0.001.13**



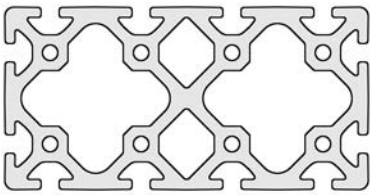
Profile 12 240x60 light
Al, anodized
A = 49.10 cm² I_x = 170.65 cm⁴ I_y = 2,585.50 cm⁴
I_t = 140.00 cm⁴
m = 13.25 kg/m W_x = 57.02 cm³ W_y = 215.90 cm³
natural, cut-off max. 6000 mm 0.0.001.20



Profile 12 240x60
Al, anodized
A = 72.60 cm² I_x = 269.38 cm⁴ I_y = 3,777.20 cm⁴
I_t = 250.00 cm⁴
m = 19.60 kg/m W_x = 89.60 cm³ W_y = 314.80 cm³
natural, cut-off max. 6000 mm 0.0.001.15



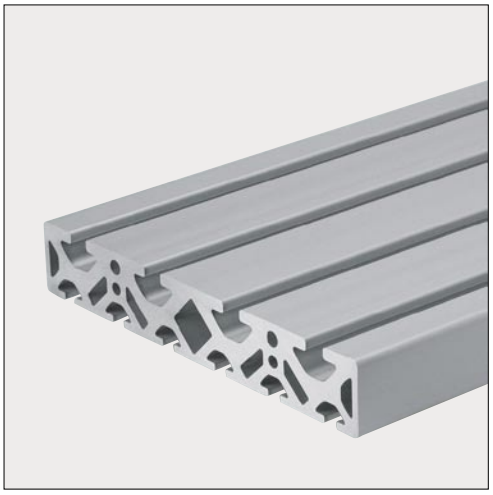
Profile 12 240x120 light
Al, anodized
A = 83.60 cm² I_x = 1,329.50 cm⁴ I_y = 4,529.80 cm⁴
I_t = 1,320.00 cm⁴
m = 22.60 kg/m W_x = 221.80 cm³ W_y = 378.10 cm³
natural, cut-off max. 6000 mm 0.0.001.19



Profile 12 240x120
Al, anodized
A = 112.00 cm² I_x = 1,815.20 cm⁴ I_y = 6,168.90 cm⁴
I_t = 2,010.00 cm⁴
m = 30.24 kg/m W_x = 302.00 cm³ W_y = 514.10 cm³
natural, cut-off max. 6000 mm 0.0.001.14

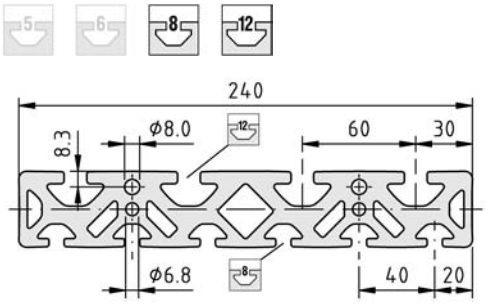
Profile 12/8 240x40

New in catalogue



Profile 12/8 240x40 is a special profile for constructing carriage plates for slides of linear guides 12. Its underside features grooves of Line 8 Profiles in 40 mm modular dimension, while its top has grooves of Line 12 profiles in 60 mm modular dimension. This design ensures that structures subsequently mounted on the carriage can be made from Line 12.

Profile 12/8 240x40 is screwed into the end face of Slide Adapters 12/8 480 or Slide-Adapter Profiles 12/8 118x60 with Screws DIN 7984-M8x30. M8 threaded holes are tapped into the core bores diameter 6.8 mm of the Profiles for this purpose.



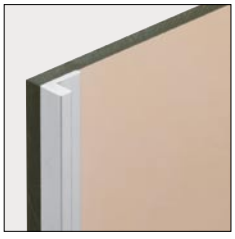
Profile 12/8 240x40
Al, anodized
A = 57.94 cm² I_x = 83.90 cm⁴ I_y = 2,904.15 cm⁴
I_t = 57.22 cm⁴
m = 15.70 kg/m W_x = 41.60 cm³ W_y = 242.15 cm³
natural, cut-off max. 6000 mm 0.0.001.04

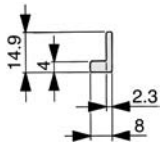
1.1.5 Angled and Flat Profiles

In order to mount a wide variety of bought-in components to the profile frame, some elements which can be easily adapted to suit them are often required.
For this purpose angled and flat aluminium profiles, anodized, in system dimensions of the MB Building Kit System for customised processing are available.

Profile Edgings

Can be used as a grip rail or edging and for stabilising panel elements.

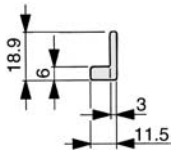




Profile Edging 15x8
Al, anodized

A =	0.56 cm²	I_x =	0.09 cm⁴	I_y =	0.16 cm⁴
m =	0.15 kg/m	W_x =	0.16 cm³	W_y =	0.17 cm³

natural, cut-off max. 6000 mm **0.0.431.16**



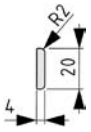
Profile Edging 19x11.5
Al, anodized

A =	1.14 cm²	I_x =	0.41 cm⁴	I_y =	0.13 cm⁴
m =	0.30 kg/m	W_x =	0.30 cm³	W_y =	0.17 cm³

natural, cut-off max. 6000 mm **0.0.196.30**

Profiles M and M W

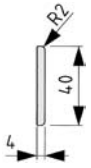
Highly versatile, e.g. can be used for edging any panel elements, as a terminating strip or support strip, as a special construction without profile grooves or as a guide strip etc.



Profile M 20x4 E
Al, anodized

A =	0.78 cm²	I_x =	0.24 cm⁴	I_y =	0.01 cm⁴
m =	0.21 kg/m	W_x =	0.24 cm³	W_y =	0.05 cm³

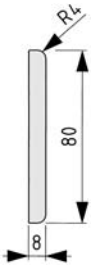
natural, 1 pce., length 2000 mm — 7.0.002.62



Profile M 40x4 E
Al, anodized

A =	1.57 cm²	I_x =	2.06 cm⁴	I_y =	0.02 cm⁴
m =	0.42 kg/m	W_x =	1.03 cm³	W_y =	0.10 cm³

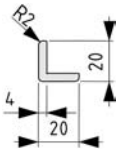
natural, 1 pce., length 2000 mm — 7.0.002.66



Profile M 80x8 E
Al, anodized

A =	6.32 cm²	I_x =	33.05 cm⁴	I_y =	0.33 cm⁴
m =	1.70 kg/m	W_x =	8.26 cm³	W_y =	0.81 cm³

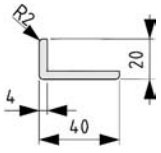
natural, 1 pce., length 2000 mm — 7.0.002.67



Profile M W20x20x4 E
Al, anodized

A =	1.41 cm²	I =	0.48 cm⁴		
m =	0.38 kg/m	W =	0.35 cm³		

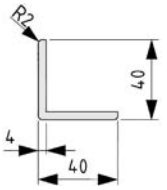
natural, 1 pce., length 2000 mm — 7.0.002.68



Profile M W40x20x4 E
Al, anodized

A =	2.21 cm²	I_x =	0.59 cm⁴	I_y =	3.52 cm⁴
m =	0.59 kg/m	W_x =	0.38 cm³	W_y =	1.40 cm³

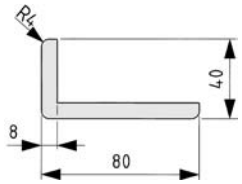
natural, 1 pce., length 2000 mm — 7.0.002.69



Profile M W40x40x4 E
Al, anodized

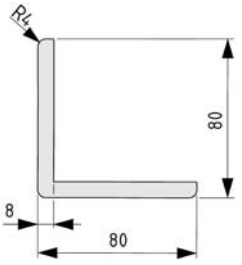
A =	3.01 cm²	I =	4.51 cm⁴		
m =	0.81 kg/m	W =	1.58 cm³		

natural, 1 pce., length 2000 mm — 7.0.002.70



Profile M W80x40x8 E
Al, anodized
A = 8.85 cm² I_x = 9.48 cm⁴ I_y = 56.54 cm⁴
m = 2.39 kg/m W_x = 3.12 cm³ W_y = 11.25 cm³

natural, 1 pce., length 2000 mm	7.0.002.71



Profile M W80x80x8 E
Al, anodized
A = 12.05 cm² I = 72.27 cm⁴
m = 3.25 kg/m W = 12.66 cm³

natural, 1 pce., length 2000 mm	7.0.002.72

1.1.6 Special Profiles

Other profiles, for special applications, have been developed for the MB System.

These profiles are found within the particular product group for the relevant application.

Section 1.3.5 Basic Elements
Connecting Profiles
Page 158

Section 3.1.2 Fastening Elements
T-Slot Nut Profiles
Page 201

Section 3.3.3 Fastening Elements
Clamp Profiles
Page 246

Section 6.5 Special Elements
Work Bench Profiles
Page 374

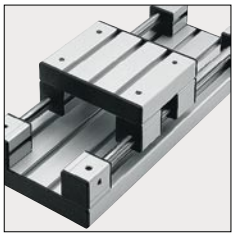
Section 7.1 Installation Elements
Installation Conduits
Page 401

Section 7.2 Installation Elements
Profiles with Integrated Conduit
Page 417

Section 8.1.1 Dynamic Elements
Shaft Clamp Profiles
Page 433

Section 8.1.1 Dynamic Elements
Roller Profiles
Page 443

Section 8.1.2 Dynamic Elements
C-Rail Profiles
Page 454



Section 8.1.5 Dynamic Elements
Ball-Bush Block Profiles
Page 471

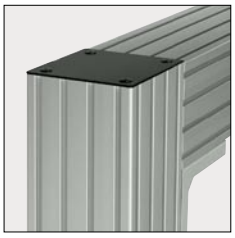
1.2 Accessories for Profiles

The profile accessories consist of caps and cover profiles which are ideal for sealing side/end faces and bores/ holes.

1.2.1 Caps for Profile End Faces

Rounded Caps for the end face of the various profile geometries; the cut edge does not need to be deburred.

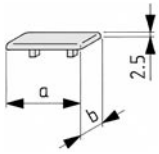
Plastic Caps are secured by pressing/tapping them into the core bores. The special dome geometry suppresses vibrations and is resistant to temperature changes.



Caps Zn and St must be secured with screws into the profile core bore. Plastic caps can also be secured in this way if desired.

Caps 5

For Profiles 5 Modular Dimensions (Basis 20 mm)



Cap 5 20x20
PA-GF
m = 1.2 g

black, 1 pce.	0.0.370.09

Cap 5 40x20
PA-GF
m = 2.2 g

black, 1 pce.	0.0.370.11

Cap 5 40x40
PA-GF
m = 5.0 g

black, 1 pce.	0.0.370.13

Cap 5 60x20
PA-GF
m = 3.3 g

black, 1 pce.	0.0.425.53

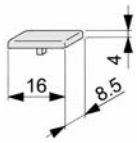
Cap 5 60x40
PA-GF
m = 7.0 g

black, 1 pce.	0.0.425.56

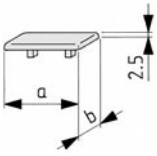
Cap 5 80x20
PA-GF
m = 4.4 g
black, 1 pce. 0.0.370.92

Caps 5

for Profiles 5 Flat Cross-Sections



Cap 5 16x8.5
PA-GF
m = 0.7 g
black, 1 pce. 0.0.364.60



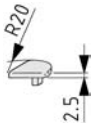
Cap 5 20x10
PA-GF
m = 0.6 g
black, 1 pce. 0.0.391.12

Cap 5 40x10
PA-GF
m = 1.0 g
black, 1 pce. 0.0.391.14

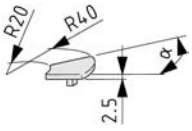
Cap 5 80x14
PA-GF
m = 3.4 g
black, 1 pce. 0.0.370.91

Caps 5

Radiused Outside Surface



Cap 5 R20-90°
PA-GF
m = 0.9 g
black, 1 pce. 0.0.425.71



Cap 5 R20/40-30°
PA-GF
α = 30° m = 0.7 g
black, 1 pce. 0.0.425.59

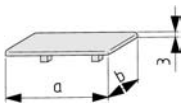
Cap 5 R20/40-45°
PA-GF
α = 45° m = 1.2 g
black, 1 pce. 0.0.425.62

Cap 5 R20/40-60°
PA-GF
α = 60° m = 1.5 g
black, 1 pce. 0.0.425.65

Cap 5 R20/40-90°
PA-GF
α = 90° m = 2.7 g
black, 1 pce. 0.0.425.68

Caps 6

for Profiles 6 Modular Dimensions (Basis 30 mm)



Cap 6 30x30
PA-GF
m = 2.6 g
black, 1 pce. 0.0.419.22

Cap 6 60x30
PA-GF
m = 5.2 g
black, 1 pce. 0.0.419.23

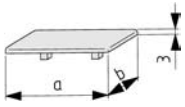
Cap 6 60x60
PA-GF
m = 9.4 g
black, 1 pce. 0.0.419.24

Cap 6 120x30
PA-GF
m = 10.2 g
black, 1 pce. 0.0.419.25

Cap 6 120x60
PA-GF
m = 20.8 g
black, 1 pce. 0.0.419.26

Caps 6

for Profiles 6 Flat Cross-Sections

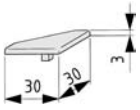


Cap 6 30x12
PA-GF
m = 1.0 g
black, 1 pce. 0.0.478.09

Cap 6 60x12
PA-GF
m = 2.0 g
black, 1 pce. 0.0.478.11

Caps 6

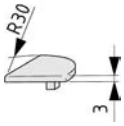
45° Angle



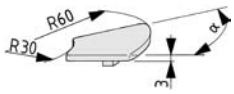
Cap 6 30x30-45°
PA-GF
m = 1.9 g
black, 1 pce. 0.0.434.74

Caps 6

Radiused Outside Surface



Cap 6 R30-90°
PA-GF
m = 2.0 g
black, 1 pce. 0.0.434.75



Cap 6 R30/60-30°
PA-GF
α = 30° m = 2.0 g
black, 1 pce. 0.0.459.39

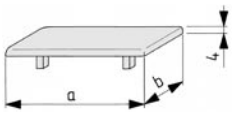
Cap 6 R30/60-45°
PA-GF
α = 45° m = 3.0 g
black, 1 pce. 0.0.459.40

Cap 6 R30/60-60°
PA-GF
α = 60° m = 4.0 g
black, 1 pce. 0.0.459.41

Cap 6 R30/60-90°
PA-GF
α = 90° m = 6.0 g
black, 1 pce. 0.0.459.42

Caps 8

for Profiles 8 Modular Dimensions (Basis 40 mm)



Cap 8 40x40
PA-GF
m = 4.8 g
black, 1 pce. 0.0.026.01

Cap 8 80x40
PA-GF
m = 9.6 g
black, 1 pce. 0.0.026.02

Cap 8 80x80
PA-GF
m = 19.4 g
black, 1 pce. 0.0.026.37

Cap 8 120x40
PA-GF
m = 15.2 g
black, 1 pce. 0.0.418.54

Cap 8 120x80
PA-GF
m = 30.4 g
black, 1 pce. 0.0.418.57

Cap 8 160x40
PA-GF
m = 21.4 g
black, 1 pce. 0.0.265.39

New in catalogue

Cap 8 160x80
PA-GF
m = 37.0 g
black, 1 pce. 0.0.265.40

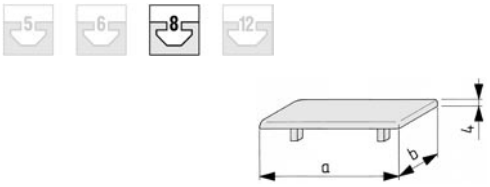
Cap 8 200x40
PA-GF
m = 29.0 g
black, 1 pce. 0.0.474.01

Cap 8 200x80
PA-GF
m = 60.0 g
black, 1 pce. 0.0.485.94

Cap 8 240x40
PA-GF
m = 36.0 g
black, 1 pce. 0.0.474.04

Caps 8

for Profiles 8 Flat Cross-Sections



Cap 8 40x16
PA-GF
m = 2.5 g
black, 1 pce. 0.0.026.79

Cap 8 80x16
PA-GF
m = 4.6 g
black, 1 pce. 0.0.265.98

Cap 8 160x16
PA-GF
m = 8.6 g
black, 1 pce. 0.0.373.00

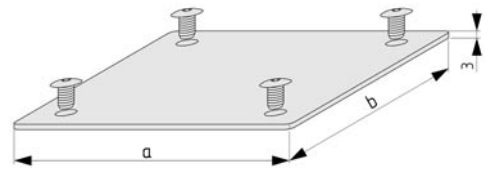
Cap 8 160x28
PA-GF
m = 16.1 g
black, 1 pce. 0.0.026.80

Cap 8 200x28
PA-GF
m = 22.0 g
black, 1 pce. 0.0.474.07

Cap 8 240x28
PA-GF
m = 27.0 g
black, 1 pce. 0.0.474.10

Caps 8 St

for Profiles 8 Modular Dimensions (Basis 40 mm)



Cap 8 160x160
St
4 dome-head screws M8x14, St
m = 624.0 g

black, 1 set	0.0.475.15

Cap 8 240x160
St
4 dome-head screws M8x14, St
m = 907.0 g

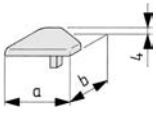
black, 1 set	0.0.475.16

Cap 8 320x160
St
4 dome-head screws M8x14, St
m = 1.2 kg

black, 1 set	0.0.476.64

Caps 8

45° Angle



Cap 8 40x40-45°
PA-GF
m = 4.5 g

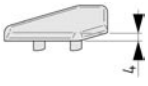
black, 1 pce.	0.0.373.48

Cap 8 80x80-45°
PA-GF
m = 17.6 g

black, 1 pce.	0.0.418.36

Caps 8

120° Angle

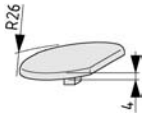


Cap 8 3x40-120°
PA-GF
m = 5.0 g

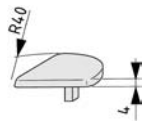
black, 1 pce.	0.0.482.39

Caps 8

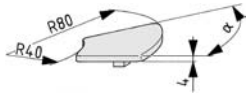
Radiused Outside Surface



Cap 8 R26-270°
PA-GF
m = 5.6 g
black, 1 pce. 0.0.474.46



Cap 8 R40-90°
PA-GF
m = 4.4 g
black, 1 pce. 0.0.436.34



Cap 8 R40/80-30°
PA-GF
α = 30° m = 4.2 g
black, 1 pce. 0.0.427.69

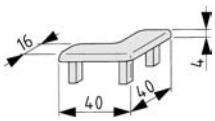
Cap 8 R40/80-45°
PA-GF
α = 45° m = 5.8 g
black, 1 pce. 0.0.409.15

Cap 8 R40/80-60°
PA-GF
α = 60° m = 7.8 g
black, 1 pce. 0.0.427.70

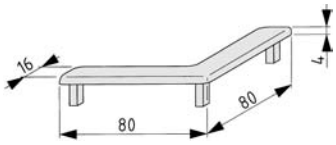
Cap 8 R40/80-90°
PA-GF
α = 90° m = 11.0 g
black, 1 pce. 0.0.427.71

Caps 8

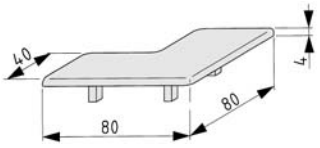
for Profiles 8 W Angle Geometry



Cap 8 W40x40 E
PA-GF
m = 4.2 g
black, 1 pce. 0.0.429.51



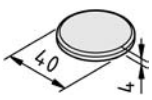
Cap 8 W80x80 E
PA-GF
m = 9.2 g
black, 1 pce. 0.0.429.54



Cap 8 W80x80x40
PA-GF
m = 14.0 g
black, 1 pce. 0.0.465.50

Cap 8 D40

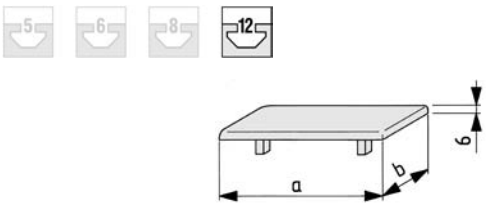
New in catalogue



Cap 8 D40
PA-GF
m = 4.3 g
black, 1 pce. 0.0.489.53

Caps 12

for Profiles 12
Modular Dimensions (Basis 60 mm)



Cap 12 60x60
PA-GF
m = 14.7 g

black, 1 pce.	0.0.005.01

Cap 12 120x60
PA-GF
m = 28.0 g

black, 1 pce.	0.0.005.02

Cap 12 120x120
PA-GF
m = 54.0 g

black, 1 pce.	0.0.005.03

Cap 12 240x60
PA-GF
m = 54.0 g

black, 1 pce.	0.0.005.05

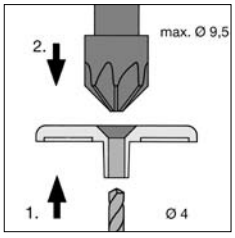
Cap 12 240x120
PA-GF
m = 106.0 g

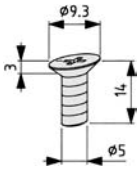
black, 1 pce.	0.0.005.04

Fastening Screw

Screw for reinforcing the retention force of Caps 8 (PA-GF) in the core bores of Profiles 8.

The machining required is limited to counter boring and countersinking of the Caps.





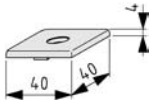
Fastening Screw 8 5x14
St
m = 160 g/100

black, 1 PU = 100 pce.	0.0.422.22

Caps 8 Zn

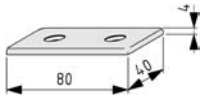
for Profiles 8 Modular Dimensions (Basis 40 mm)

Zinc Caps are screwed into the core bores. These Caps are particularly resistant to mechanical loading and changes in temperature. They can be unscrewed and screwed back on any number of times.
They must be secured in the core bores in the profiles using countersunk screws 8 SF M7,1. No threads need to be tapped to do this.



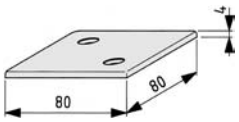
Cap 8 40x40 Zn
Die-cast zinc
m = 26.0 g

black, 1 pce.	0.0.427.09



Cap 8 80x40 Zn
Die-cast zinc
m = 49.0 g

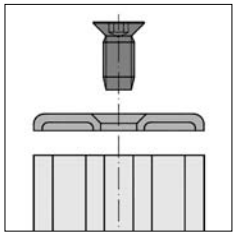
black, 1 pce.	0.0.427.11

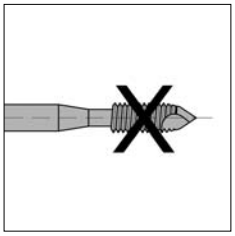


Cap 8 80x80 Zn
Die-cast zinc
m = 96.0 g

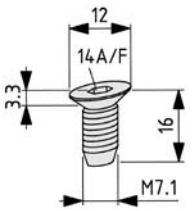
black, 1 pce.	0.0.427.13

Countersunk Screw SF





Self-threading screw for securing Caps Zn in the core bore of Profiles 8.



Countersunk Screw 8 SF M7.1
St
slide-coating
Head shape to DIN 7991 (M6)
m = 430 g/100

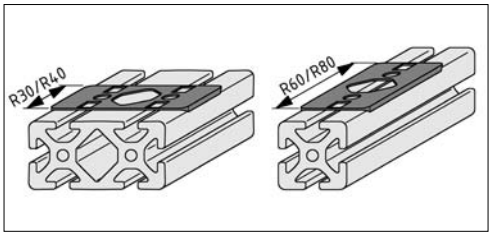
black, 1 PU = 100 pce.	0.0.428.06

Radius Seals

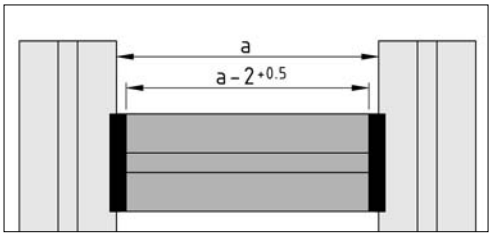
The plastic Radius Seals ensure a continuous transition for the external contour of 90° profile connections. The gap between the straight end-face saw cut of the profile and the profile edge radius is filled by the seal.
This simplifies cleaning and prevents dirt from entering the profile cavities. Radius Seals can therefore be used particularly effectively in clean-room conditions.

The Radius Seals can be used in combination with all MB System connecting elements.

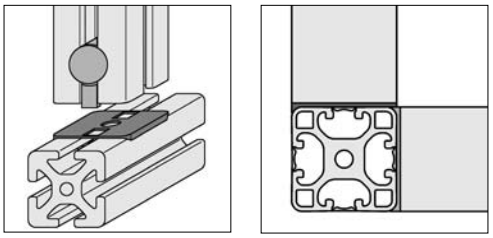
Important:
When using the Radius Seal with Standard, Universal and Automatic Fasteners the power-look connection is affected by an interlying plastic element which reduces the load that the connnection will bear. It is advisable to use an additional safety factor of 2 at the design stage.



The designations R30, R40, R60 and R80 refer to the length of the side of the seal facing the profile radius.



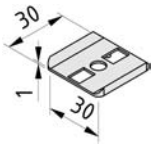
In calculating the length of the cross profiles between two profiles, the thickness of the Radius Seals on each side must be taken into account.



The outward-facing gap towards the edge of the profile is filled in using Radius Seal 1R. The inward-facing gap is filled using a second Radius Seal.

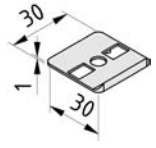
5 **6** 8 12

New in catalogue



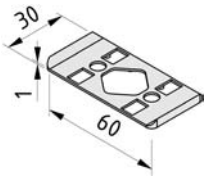
Radius Seal 6 30x30
PA
m = 1.1 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.478.76**

New in catalogue



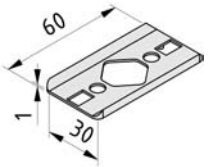
Radius Seal 6 30x30 1R
PA
m = 1.0 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.491.38**

New in catalogue



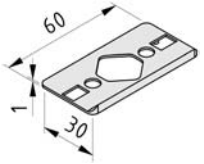
Radius Seal 6 60x30 R30
PA
m = 1.7 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.478.78**

New in catalogue



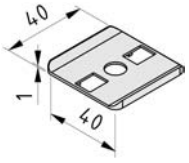
Radius Seal 6 60x30 R60
PA
m = 2.1 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.478.77**

New in catalogue



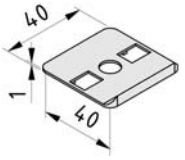
Radius Seal 6 60x30 1R60
PA
m = 2.0 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.491.41**

5 6 **8** 12

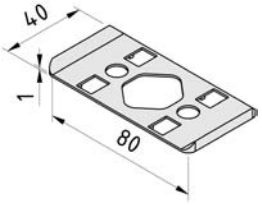


Radius Seal 8 40x40
PA
m = 2.0 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.480.39**

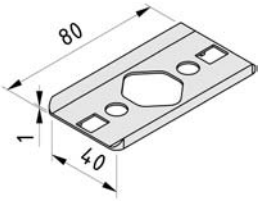
New in catalogue



Radius Seal 8 40x40 1R
PA
m = 2.0 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.494.47**

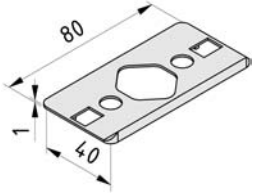


Radius Seal 8 80x40 R40
PA
m = 4.0 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.480.41**



Radius Seal 8 80x40 R80
PA
m = 4.0 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.480.95**

New in catalogue



Radius Seal 8 80x40 1R80
PA
m = 4.0 g/each
grey, similar to RAL 7042, 1 PU = 10 pce. **0.0.494.50**

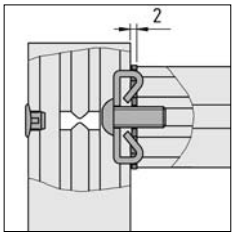
Adapter 8 D40

New in catalogue

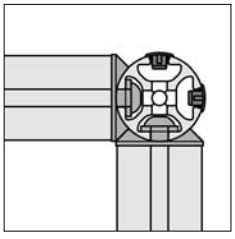
Profiles 8 D40 can be connected with other Profiles 8 D40 or with Profiles 8 40x40 or 80x40 using Line 8 fastening elements. In contrast to connecting two profiles with rectangular cross-sections, suitable adapters must be used for Profiles 8 D40.

Standard-Fastening Set 8 and the Automatic-Fastening Set 8 N D40 are well suited for right-angled profile connections. When calculating the cut-off length of the profiles, the 2 mm wall thickness of Adapters 8 D40 must be taken into account.

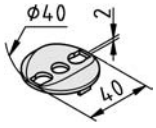
Universal-Fastening Set 8 can also be used when connecting a Profile 8 of rectangular cross-section to the end face of Profiles 8 D40. It is important to ensure that, due to the wall thickness of the adapter, the distance from the centre of the 20 mm dia. mounting bores of the Universal Fastener to the end of the profile must not exceed 18 mm. In addition, the anti-torsion feature of Universal Fastener 8 must be removed.



The gap that would result when connecting the rounded outer surface of Profiles 8 D40 and the straight profile end faces (or any other flat components) is closed off completely by Adapter 8 D40. A smooth transition is made from the outer contour of the profile to the connecting face of the second profile.

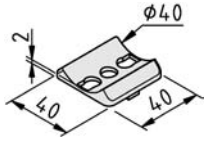


Adapters 8 D40 also serve as radial seals. In completely covering the end face of the profile, they seal the openings of the profile cross-section.



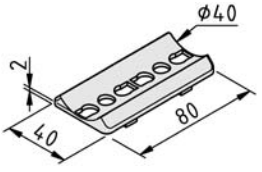
Adapter 8 D40/D40
Die-cast zinc
m = 28.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.489.88



Adapter 8 40x40/D40
Die-cast zinc
m = 42.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.489.86



Adapter 8 80x40/D40
Die-cast zinc
m = 84.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.489.87

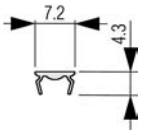
1.2.2 Cover for Profile Groove

The profile groove is an important feature for many functions and ensures the versatility of the MB Building Kit System. It may be necessary when finishing off production of fixtures and equipment to cover this profile groove for various functional and optical reasons and / or to maintain cleanliness.

Cover Profiles Al

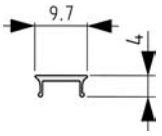
Cover Profile Al seals the grooves in the profile sides against dust and makes cleaning easier. This enables electric cables or pipes to be installed out of sight and protected in the grooves of Profiles 8 and 12

Cover Profiles can also be printed or engraved for labeling modules.



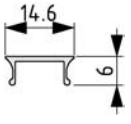
Cover Profile 6 Al
Al, anodized
m = 30 g/m

natural, 1 PU = 10 pce., length 2000 mm	0.0.439.71



Cover Profile 8 Al
Al, anodized
m = 32 g/m

natural, 1 PU = 10 pce., length 2000 mm	0.0.265.50
black, 1 PU = 10 pce., length 2000 mm	0.0.265.60



Cover Profile 12 Al
Al, anodized
m = 62 g/m

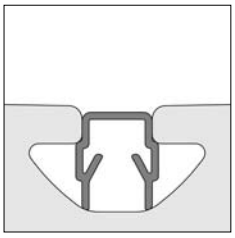
natural, 1 PU = 10 pce., length 2000 mm	0.0.003.73

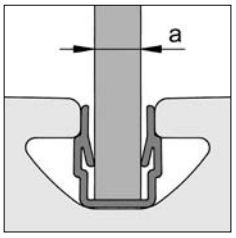
Cover Profiles PP

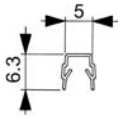
Profile made from flexible plastic for two different applications:

As a cover profile it seals the profile grooves against dirt. With the open side facing outwards, it serves as a panel-fixing profile. These can then be held securely in the wide profile groove.

Use of coloured Cover Profiles not only provides a means of covering profile grooves, but also of adding colour to profile structures.

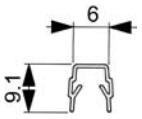






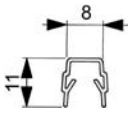
Cover Profile 5
PP/TPE
a = 1.5 - 2.0 mm
m = 13.5 g/m

natural, 1 PU = 10 pce., length 2000 mm	0.0.370.79
black, 1 PU = 10 pce., length 2000 mm	0.0.370.80



Cover Profile 6
PP/TPE
a = 2.0 - 3.5 mm
m = 20.4 g/m

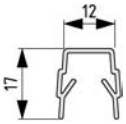
natural, 1 PU = 10 pce., length 2000 mm	0.0.431.03
black, 1 PU = 10 pce., length 2000 mm	0.0.431.02



Cover Profile 8
PP/TPE
a = 4.0 - 5.5 mm
m = 26 g/m

natural, 1 PU = 10 pce., length 2000 mm	0.0.422.24
black, 1 PU = 10 pce., length 2000 mm	0.0.422.27
green, similar to RAL 6016, 1 PU = 10 pce., length 2000 mm	0.0.489.69
red, similar to RAL 3003, 1 PU = 10 pce., length 2000 mm	0.0.489.75
yellow, similar to RAL 1018, 1 PU = 10 pce., length 2000 mm	0.0.489.66
blue, similar to RAL 5010, 1 PU = 10 pce., length 2000 mm	0.0.489.63
grey, similar to RAL 7042, 1 PU = 10 pce., length 2000 mm	0.0.489.72

New in catalogue



Cover Profile 12
PP/TPE
a = 6.0 - 9.5 mm
m = 58 g/m

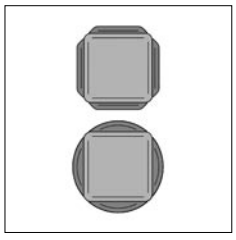
natural, 1 PU = 10 pce., length 2000 mm	0.0.005.16
black, 1 PU = 10 pce., length 2000 mm	0.0.005.30

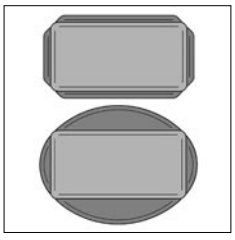
Cover Profiles R, WR and F

Cover Profiles R, WR and F for side faces, both round and flat, ensure particularly attractive styling.

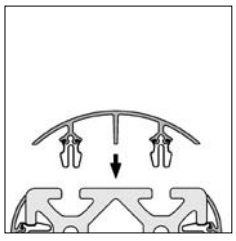
They can be retrofitted to all accessible profile side faces.

Cover Profile WR creates a uniformly wavy pattern around the main profile, neatly integrating the four corners.

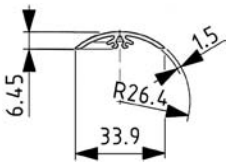




Cover Caps R and F integrate the cap of the basic profile.

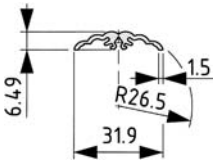


The round and flat Cover Profiles R, W and F are inserted into the grooves of Profiles 8 in conjunction with Clip 8 St.



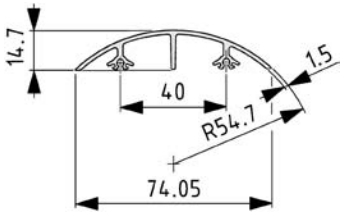
Cover Profile 8 R40 Al
Al, anodized
m = 190 g/m

natural, cut-off max. 3000 mm	0.0.422.76



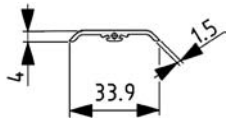
Cover Profile 8 WR40 Al
Al, anodized
m = 200 g/m

natural, cut-off max. 3000 mm	0.0.457.72



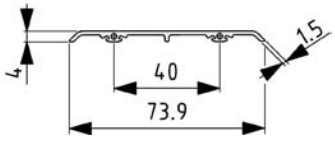
Cover Profile 8 R80 Al
Al, anodized
m = 550 g/m

natural, cut-off max. 3000 mm	0.0.422.77



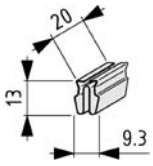
Cover Profile 8 F40 Al
Al, anodized
m = 170 g/m

natural, cut-off max. 3000 mm	0.0.428.95



Cover Profile 8 F80 Al
Al, anodized
m = 370 g/m

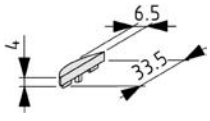
natural, cut-off max. 3000 mm	0.0.428.96



Clip 8 St
St
Recommended amount: 5 pce. on 1 m
m = 2.5 g

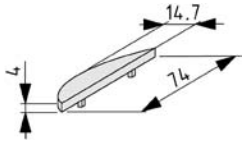
bright zinc-plated, 1 pce.	0.0.428.97

Caps R and F



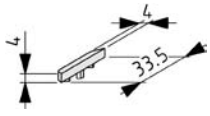
Cap 8 R40
PA-GF
m = 0.6 g

black, 1 pce.	0.0.429.60



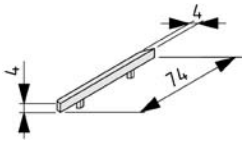
Cap 8 R80
PA-GF
m = 2.3 g

black, 1 pce.	0.0.429.61



Cap 8 F40
PA-GF
m = 0.4 g

black, 1 pce.	0.0.429.62



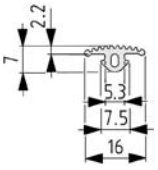
Cap 8 F80
PA-GF
m = 0.8 g

black, 1 pce.	0.0.429.63

Cover Profiles NBR

Cover Profiles NBR provide an elastic cover for the profile groove or profile side faces. Ideal for non-slip surfaces e.g. steps, buffer strip for sliding doors etc.

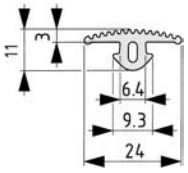
5 6 8 12



Cover Profile 5 16x3
NBR
Hardness 80° Shore A, oil and water resisting
m = 57 g/m

black, cut-off max. 20 m	0.0.425.23

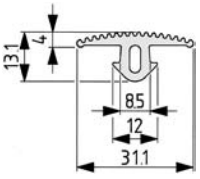
5 6 8 12



Cover Profile 6 24x3
NBR
Hardness 80° Shore A, oil and water resisting
m = 119 g/m

black, cut-off max. 20 m	0.0.439.34

5 6 8 12

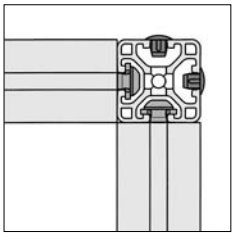


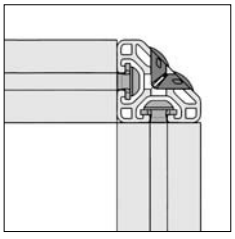
Cover Profile 8 32x4
NBR
Hardness 80° Shore A, oil and water resisting
m = 180 g/m

black, cut-off max. 20 m	0.0.429.02

1.2.3 Covers for Bores/Holes

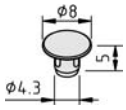
Cap for closing bores/holes ∅ 4.3 mm, ∅ 5.5 mm and ∅ 7 mm.
Ideal for covering connection processing for standard connections in profiles with closed grooves.





Grey Caps can be used to seal the holes in the sides of profiles with closed grooves. The grey blends in well with the aluminium.

5 6 8 12

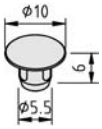


Cap 5 D4.3
PA-GF
m = 8 g/100

black, 1 PU = 100 pce.	0.0.437.90
grey, similar to RAL 7042, 1 PU = 100 pce.	0.0.484.35

New in catalogue

5 6 8 12



Cap 6 D5.5
PA-GF
m = 14 g/100

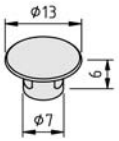
black, 1 PU = 100 pce.	0.0.439.88
grey, similar to RAL 7042, 1 PU = 100 pce.	0.0.491.01

New in catalogue

Cap 6 D5.5-45°
PA-GF
m = 18 g/100

black, 1 PU = 100 pce.	0.0.439.90
grey, similar to RAL 7042, 1 PU = 100 pce.	0.0.491.04

New in catalogue



New in catalogue

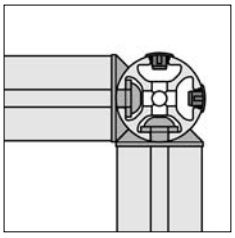
Cap 8 D7
PA-GF
m = 27 g/100

black, 1 PU = 100 pce.	0.0.429.65
grey, similar to RAL 7042, 1 PU = 100 pce.	0.0.489.48

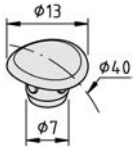
New in catalogue

Cap 8 D7-45°
PA-GF
m = 36 g/100

black, 1 PU = 100 pce.	0.0.436.98
grey, similar to RAL 7042, 1 PU = 100 pce.	0.0.489.51



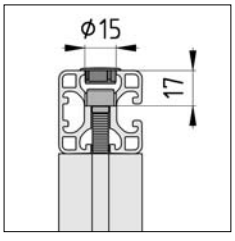
Cap 8 D7-D40 can be used to seal the 7 mm dia. through hole for the Standard Fastener 8 tool in Profiles 8 D40 with closed grooves. The grey colour is matched to the surface of the natural anodized profiles.



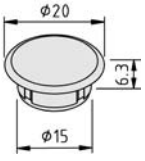
New in catalogue

Cap 8 D7-D40
PA
m = 30 g/100

grey, similar to RAL 7042, 1 PU = 100 pce.	0.0.493.93



Cap 8 D15 covers Countersink 8 DIN 974 T1 - Row 1 (e.g. connection of Clamp Profiles 8).



New in catalogue

Cap 8 D15
PA
m = 83 g/100

grey, similar to RAL 7042, 1 PU = 100 pce.	0.0.492.56

1.3 Fasteners

The elements in the “Fasteners” product group provide power-locking profile connections of extreme rigidity.

The flexible screw attachment principle of all the fastening elements is of particular benefit when making modifications to the structure at a later date, easily allowing enlargements or reductions in size.

item fastening elements are characterised by:

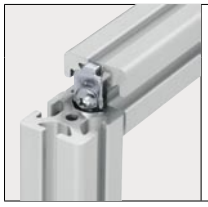
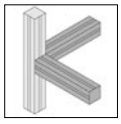
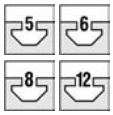
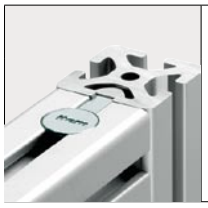
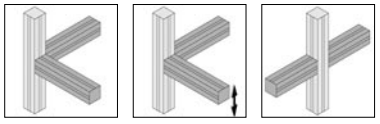
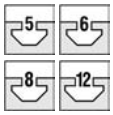
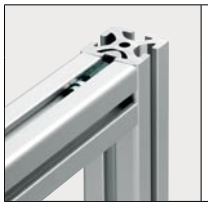
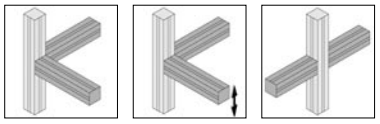
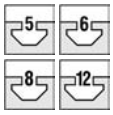
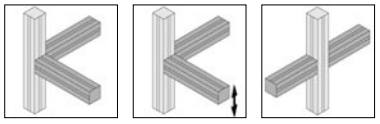
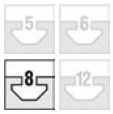
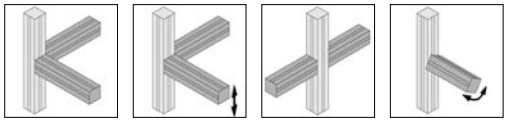
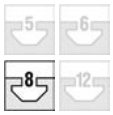
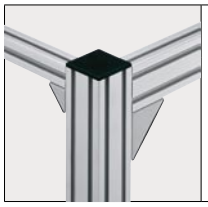
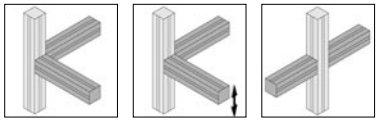
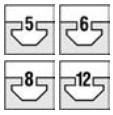
> Screw connections secured by means of the pre-tensioning effect in the flexible area of the groove flanks
> The only tools required for assembly are standard hexagon keys
> Several fastening elements can be used when larger profile cross-sections are employed

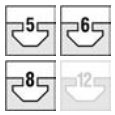
How to choose the correct fastener

The following table lists key features that will enable you to make the right choice when selecting from the large range of fastening elements available from item.

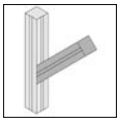
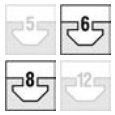
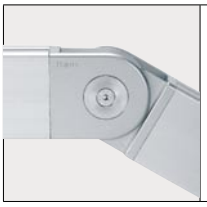
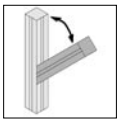
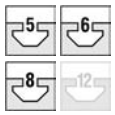
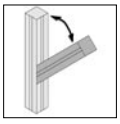
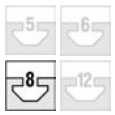
Classified based by how the profiles fit together, it provides details of the load-bearing capacity, any machining that is needed, and possible applications for each profile connection.

Right-Angled Connections

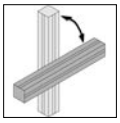
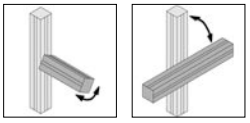
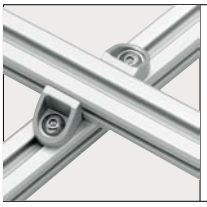
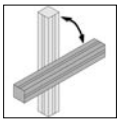
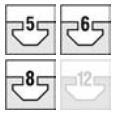
	Standard-Fastener page 117 	High load-bearing capacity - Displacement - Torsion	Moderate machining - 1 drill hole - 1 tapped hole	- Fixed in position	
	Universal-Fastener page 120 	High load-bearing capacity - Displacement - Torsion - Deflection	Little machining - 1 drill hole	- Can be retro-fitted - Can be moved	
	Automatic-Fastener page 123 	High load-bearing capacity - Displacement - Torsion - Deflection	No profile machining	- Can be retro-fitted - Can be moved	
	Central-Fastener page 128 	Medium load-bearing capacity - Displacement	Moderate machining - 2 drill holes	- Can be moved	
	Direct-Fastener 90° page 129 	Medium load-bearing capacity - Displacement	Little machining - 1 tapped hole	- Can be moved	
	Angle Bracket Zn page 130 	High load-bearing capacity - Displacement - Torsion - Deflection	No profile machining	- Can be retro-fitted - Can be moved	

	Corner Fastening Set  page 137	Medium load-bearing capacity - Displacement	Little machining - 1 tapped hole	- Fixed in position	

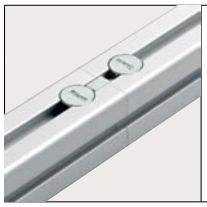
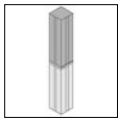
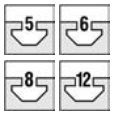
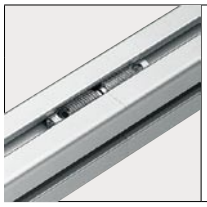
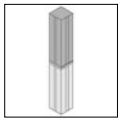
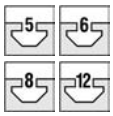
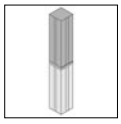
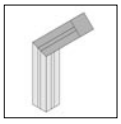
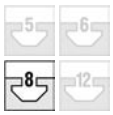
Angled Connections

	Angle Elements  page 140	High load-bearing capacity - Displacement - Torsion - Deflection	No profile machining	- Can be retro-fitted - Can be moved	
	Hinges, heavy-duty  page 143	Medium load-bearing capacity - Displacement	Little machining - 1 tapped hole	- Can be retro-fitted - Can be moved	
	Mitre-Fastener  page 145	Medium load-bearing capacity - Displacement	Moderate machining - 2 drill holes	- Can be retro-fitted - Can be moved	

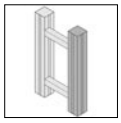
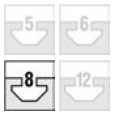
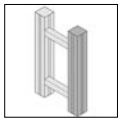
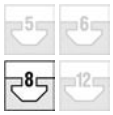
Cross-Profile Connections

	Direct-Fastener  page 147	Low load-bearing capacity - Displacement	No profile machining	- Can be moved	
	Face Fastener  page 148	Low load-bearing capacity - Displacement - Torsion - Deflection	Moderate machining - 1 drill hole	- Fixed in position	
	Angle Hinge Brackets, Angle Clamp Brackets  page 149	High load-bearing capacity - Displacement - Torsion - Deflection	No profile machining	- Can be retro-fitted - Can be moved	

Butt Connections

	Universal-Butt-Fastener page 152 	Medium load-bearing capacity - Displacement	Moderate machining - 2 drill holes	- Fixed in position	
	Automatic Butt-Fastener page 153 	Medium load-bearing capacity - Displacement	No profile machining	- Fixed in position	
	Mitre-Butt-Fastener page 156  	Low load-bearing capacity - Displacement	Considerable machining - 4 drill holes	- Fixed in position	

Parallel-Profile Connections

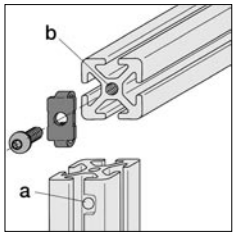
	Parallel Fastener page 157 	Low load-bearing capacity - Displacement	No profile machining	- Can be retro-fitted - Can be moved	
	Connection Profiles page 158 	High load-bearing capacity - Displacement - Torsion - Deflection	No profile machining	- Can be retro-fitted - Can be moved	

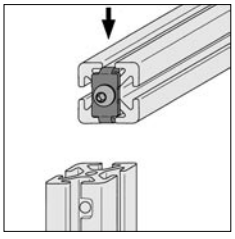
1.3.1 Right-Angled Connections

High-load fastening elements for basic frame profiles.

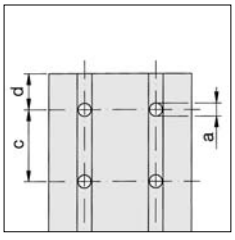
Standard-Fastening Sets

Right-angled, power-locking profile connections with high-strength and minimum processing requirement. The standard connecting plate ensures optimum load application, with the profiles being correctly fixed relative to each other.



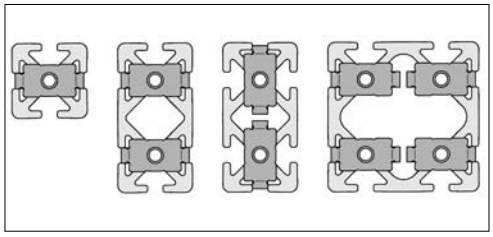


The required thread can be cut directly into the core bore of the profiles.

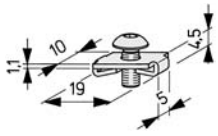


Position of the through holes for the key.

	Standard-Fastening Set				
	5	6	8	8 E	12
a	∅ 4.3 mm	∅ 5.5 mm	∅ 7 mm	∅ 7 mm	∅ 11.5 mm
b	M5, 12 mm deep	M6, 15 mm deep	M8, 16 mm deep	-	M12, 30 mm deep
c	20 mm	30 mm	40 mm	40 mm	60 mm
d	10 mm	15 mm	20 mm	20 mm	30 mm



The standard connecting plates can be arranged in the required direction to match the way in which the profiles are fitted.
Large profiles with high load-bearing capabilities can be connected using a larger number of Standard Fasteners.

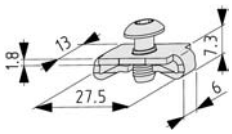


Standard-Fastening Set 5
Standard connecting plate 5, St
Special Button-Head Screw similar to ISO 7380-M5x12, St
$M_{bzp.}$ = 4.5 Nm
m = 4.0 g

bright zinc-plated, 1 set	0.0.370.08

Standard-Fastening Set 5
Standard connecting plate 5, St
Special Button-Head Screw similar to ISO 7380-M5x12, St
$M_{stainl.}$ = 3.6 Nm
m = 4.0 g

stainless, 1 set	0.0.437.49

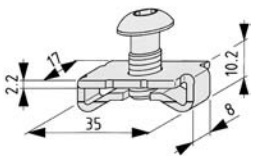


Standard-Fastening Set 6
Standard connecting plate 6, St
Special Button-Head Screw similar to ISO 7380-M6x14, St
$M_{bzp.}$ = 10 Nm
m = 9.0 g

bright zinc-plated, 1 set	0.0.419.14

Standard-Fastening Set 6
Standard connecting plate 6, St
Special Button-Head Screw similar to ISO 7380-M6x14, St
$M_{stainl.}$ = 8 Nm
m = 9.0 g

stainless, 1 set	0.0.439.10

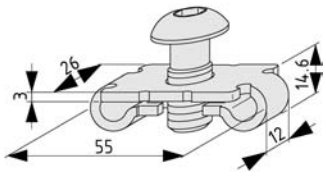


Standard-Fastening Set 8
Standard connecting plate 8, St
Special Button-Head Screw similar to ISO 7380-M8x20, St
$M_{bzp.}$ = 25 Nm
m = 21.0 g

bright zinc-plated, 1 set	0.0.026.07

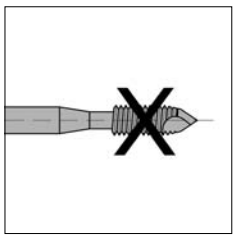
Standard-Fastening Set 8
Standard connecting plate 8, St
Special Button-Head Screw similar to ISO 7380-M8x20, St
$M_{stainl.}$ = 20 Nm
m = 21.0 g

stainless, 1 set	0.0.388.79

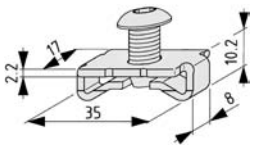


Standard-Fastening Set 12
Standard connecting plate 12, St
Special Button-Head Screw similar to ISO 7380-M12x30, St
$M_{bzp.}$ = 80 Nm
m = 70.0 g

bright zinc-plated, 1 set	0.0.003.35



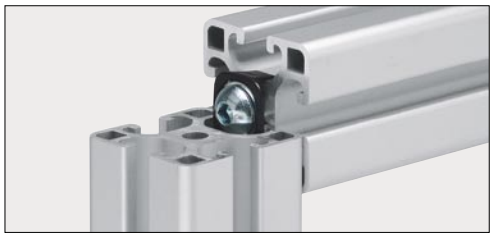
For connections with slightly reduced loading, Line 8 features Standard-Fastening Set 8 E with a self-threading special screw which further reduces the machining requirement.



Standard-Fastening Set 8 E
Standard connecting plate 8, St
Self-threading, Button-Head Screw, head shape similar to ISO 7380-M7,3x20, St
$M_{bzp.}$ = 20 Nm
m = 20.0 g

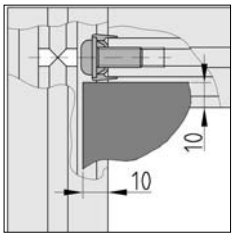
bright zinc-plated, 1 set	0.0.421.75

New in catalogue

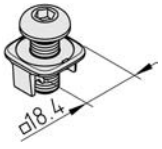


Standard-Fastening Set 8 K is a special version of the proven Standard-Fastening Set. It is employed for right-angled connection of Line 8 Profiles in which the profile grooves are used for holding panel elements.

Panel elements can be slid into the profile groove without needing cutouts in the corners.



The recommended depth for inserting the panel elements in the profile groove is 10 mm.



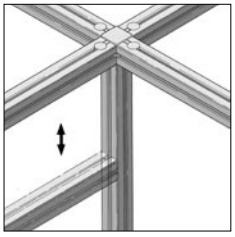
Standard-Fastening Set 8 K
Spacer, POM, black
Washer ISO 7089-8, St, bright zinc-plated
Button-Head Screw ISO 7380-M8x20, St, bright zinc-plated
M = 25 Nm
m = 11.0 g

1 set	0.0.488.07

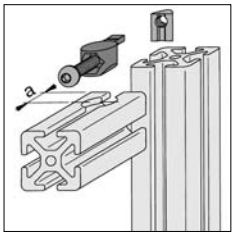
Universal-Fastening Sets

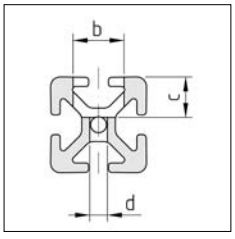
For universal power-lock connection of all profiles of one Line. Suitable for profiles which need to be moved subsequently, since only one profile is processed. The profile attached using the Universal-Fastening Set can be moved along the profile groove. These Fastening Sets can be installed easily into existing constructions. For connecting profiles used as compressed air conduits, the Universal Fastener is also available in a special version (Section 6.2 Pneumatic Applications).

The reinforced version of Universal-Fastening Set 8 with a Universal Fastener made from cast stainless steel is particularly suitable for profile connections that are subject to vibration or temperature fluctuations.
A fully stainless steel version (screw and T-Slot Nut) is also available for use outdoors or in clean-room areas.

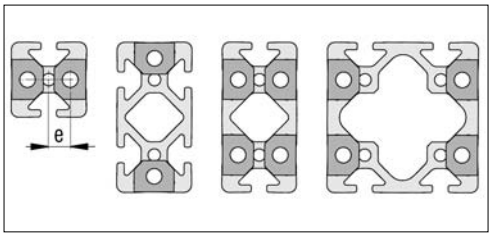


Where required, the anti-torsion pin of the Universal Fastener can be broken off at a specified breakpoint. This Universal-Fastening Set can thus also be used to secure profiles to e.g. panels.

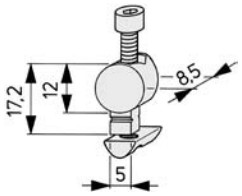




	Universal-Fastening Set			
	5	6	8	12
a	10.0 mm	15.0 mm	20.0 mm	30.0 mm
b	∅ 12.0 mm	∅ 16.0 mm	∅ 20.0 mm	∅ 30.0 mm
c	8.5 mm	12.7 mm	16.0 mm	24.0 mm
d	∅ 4.3 mm	∅ 5.5 mm	∅ 7.0 mm	∅ 12.0 mm
e	5.8 mm	8.7 mm	12.0 mm	17.8 mm



Universal-Fastening Sets should always be used in pairs.

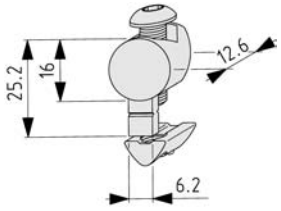


Universal-Fastening Set 5
Universal Fastener 5, die-cast zinc
Hexigon Socket Head Cap Screw DIN 912-M4x14, St
T-Slot Nut St M4
$M_{bzp.}$ = 3 Nm
m = 7.0 g

bright zinc-plated, 1 set 0.0.370.27

Universal-Fastening Set 5
Universal Fastener 5, die-cast zinc
Hexigon Socket Head Cap Screw DIN 912-M4x14, St
T-Slot Nut St M4
$M_{stainl.}$ = 2.4 Nm
m = 7.0 g

stainless, 1 set 0.0.437.52

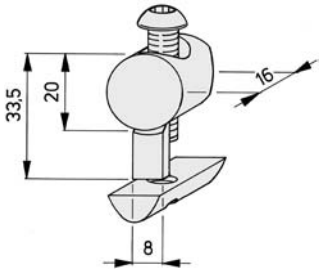


Universal-Fastening Set 6
Universal Fastener 6, die-cast zinc
Button-Head Screw ISO 7380-M6x22, St
T-Slot Nut 6 St M6
$M_{bzp.}$ = 8 Nm
m = 18.0 g

bright zinc-plated, 1 set 0.0.419.52

Universal-Fastening Set 6
Universal Fastener 6, die-cast zinc
Button-Head Screw ISO 7380-M6x22, St
T-Slot Nut 6 St M6
$M_{stainl.}$ = 6.5 Nm
m = 18.0 g

stainless, 1 set 0.0.441.74



Universal-Fastening Set 8
Universal Fastener 8, die-cast zinc
Button-Head Screw ISO 7380-M8x30, St
T-Slot Nut 8 St M8
$M_{bzp.}$ = 25 Nm
m = 41.0 g

bright zinc-plated, 1 set 0.0.026.92

Universal-Fastening Set 8
Universal Fastener 8, die-cast zinc
Button-Head Screw ISO 7380-M8x30, St
T-Slot Nut 8 St M8
$M_{stainl.}$ = 20 Nm
m = 41.0 g

stainless, 1 set 0.0.444.18

New in catalogue

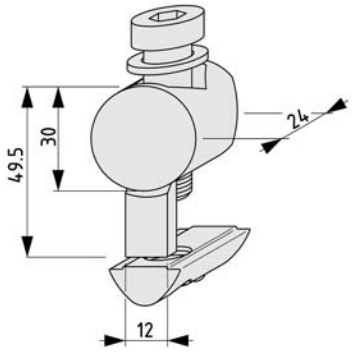
Universal-Fastening Set 8 St
Universal Fastener 8 St, G-St
Button-Head Screw ISO 7380-M8x30, St
T-Slot Nut 8 St M8
$M_{bzp.}$ = 25 Nm
m = 45.0 g

bright zinc-plated, 1 set 0.0.488.60

New in catalogue

Universal-Fastening Set 8 St
Universal Fastener 8 St, G-St
Button-Head Screw ISO 7380-M8x30, St
T-Slot Nut 8 St M8
$M_{stainl.}$ = 20 Nm
m = 45.0 g

stainless, 1 set	0.0.488.51

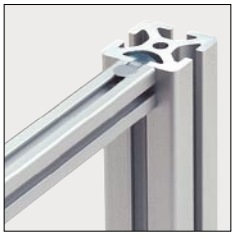


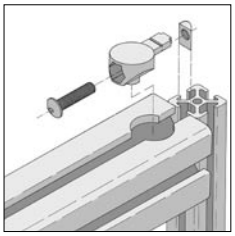
Universal-Fastening Set 12
Universal Fastener 12, die-cast zinc
Hexagon Socket Head Cap Screw DIN 7984-M12x45, St
Washer DIN 433-13, St
T-Slot Nut 12 St M12
$M_{bzp.}$ = 60 Nm
m = 155.0 g

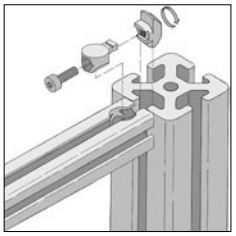
bright zinc-plated, 1 set	0.0.003.57

Universal-Fastening Sets 5/8 and 8/5

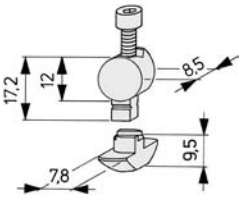
For universal power-lock interconnection of Profiles 5 and Profiles 8. Suitable for profiles which need to be moved subsequently, since only one profile is processed. These Fastening Sets can be installed easily into existing constructions.
Connection processing of the profiles is the same as for the Universal-Fastening Sets.





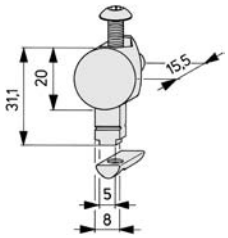


Universal-Fastening Sets should always be used in pairs. Where required, the anti-torsion pin of the Universal Fastener can be broken off at a specified breakpoint.



Universal-Fastening Set 5/8
Universal Fastener 5, die-cast zinc
Hexagon Socket Head Cap Screw DIN 912-M4x18, St
Special T-Slot Nut 8 Zn M4
$M_{bzp.}$ = 3 Nm
m = 9.0 g

bright zinc-plated, 1 set	0.0.370.34



Universal-Fastening Set 8/5
Universal Fastener 8/5, die-cast zinc
Button-Head Screw ISO 7380-M5x25, St
T-Slot Nut 5 St M5
$M_{bzp.}$ = 3 Nm
m = 18.0 g

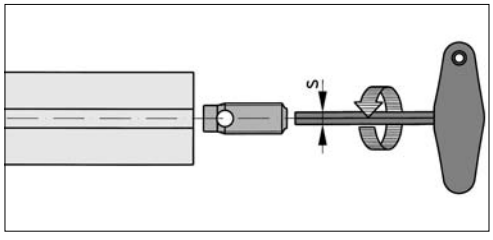
bright zinc-plated, 1 set	0.0.370.25

Automatic-Fastening Sets

www.item.info

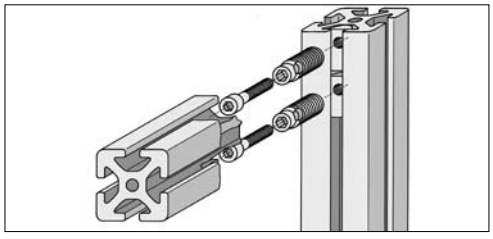
item Innovation
German patent
and foreign patents
EP 0 458 069

For universal power-lock connection of all profiles of one Line. Suitable for profiles which need to be moved subsequently, since the Fasteners are only screwed into one profile. These Fastening Sets can be installed easily into existing constructions. The profiles do not need to be machined in order to use the Automatic-Fastening Sets.

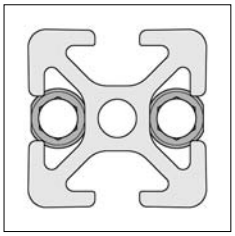


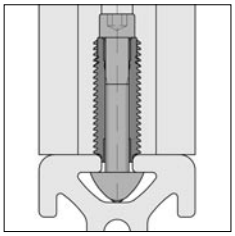
The Fastener is screwed into a profile groove in the end face, the thread being cut automatically. Use of a lubricant is recommended.

Note: All Fasteners with a through bore for the fastening screw have a counter-clockwise thread on the outside in order to prevent the Fastener twisting when the screw is tightened.



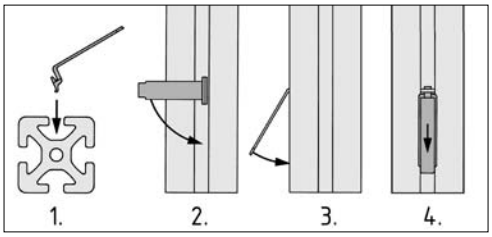
An L-Key is available for tightening the screws of the Automatic-Fastening Sets (tightening torque M) (Section 9.2 Jigs and Tools).



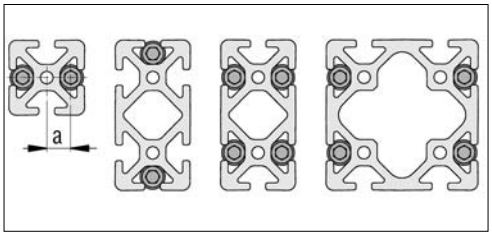


Automatic-Fastening Set 5 should be inserted so that the flattening on the thread is flush with the outer edge of the profile.

With Automatic-Fastening Sets 6, 8 and 12, twisting can be prevented by screwing out the Fastener (after the profile has been assembled) until the head of the Fastener projects into the other profile groove.

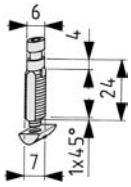


Automatic-Fastening Set 8 also contains a Cap which can be fitted subsequently over the Fastener.



Automatic-Fastening Sets should always be used in pairs.

5 6 8 12

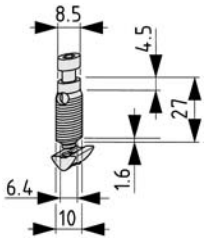


Automatic-Fastening Set 5
Automatic Fastener 5, St
Screw M4x30, St
T-Slot Nut 5 St M4
s = 4 A/F
a = 6.8 mm
$M_{bzp.}$ = 2.5 Nm
m = 8.0 g

bright zinc-plated, 1 set	0.0.391.60

Automatic-Fastening Set 5
Automatic Fastener 5, St
Screw M4x30, St
T-Slot Nut 5 St M4
s = 4 A/F
a = 6.8 mm
$M_{stainl.}$ = 2.5 Nm
m = 8.0 g

stainless, 1 set	0.0.437.46

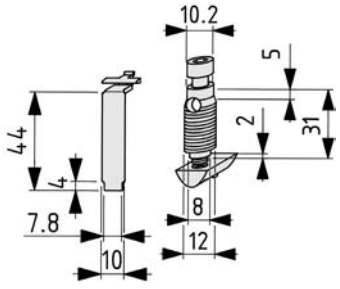


Automatic-Fastening Set 6
Automatic Fastener 6, St
Hexagon Socket Head Cap Screw DIN 912-M5x35, St
T-Slot Nut 6 St M5
s = 5 A/F
a = 9.5 mm
$M_{bzp.}$ = 8.0 Nm
m = 18.0 g

bright zinc-plated, 1 set	0.0.419.71

Automatic-Fastening Set 6
Automatic Fastener 6, St
Hexagon Socket Head Cap Screw DIN 912-M5x35, St
T-Slot Nut 6 St M5
s = 5 A/F
a = 9.5 mm
$M_{stainl.}$ = 6.5 Nm
m = 18.0 g

stainless, 1 set	0.0.441.67

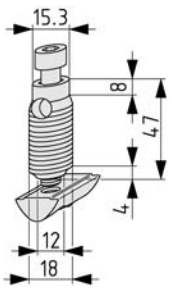


Automatic-Fastening Set 8
Automatic Fastener 8, St
Hexagon Socket Head Cap Screw DIN 912-M6x40, St
T-Slot Nut 8 St M6
Cap, PA-GF, black
s = 6 A/F
a = 13.2 mm
$M_{bzp.}$ = 14 Nm
m = 35.0 g

bright zinc-plated, 1 set	0.0.388.08

Automatic-Fastening Set 8
Automatic Fastener 8, St
Hexagon Socket Head Cap Screw DIN 912-M6x40, St
T-Slot Nut 8 St M6
Cap, PA-GF, black
s = 6 A/F
a = 13.2 mm
$M_{stainl.}$ = 11 Nm
m = 35.0 g

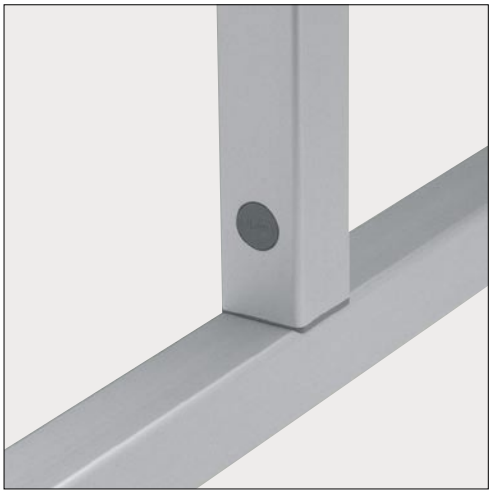
stainless, 1 set	0.0.440.58



Automatic-Fastening Set 12
Automatic Fastener 12, St
Hexagon Socket Head Cap Screw DIN 912-M8x60, St
T-Slot Nut 12 St M8
s = 8 A/F
a = 19.5 mm
$M_{bzp.}$ = 34 Nm
m = 125.0 g

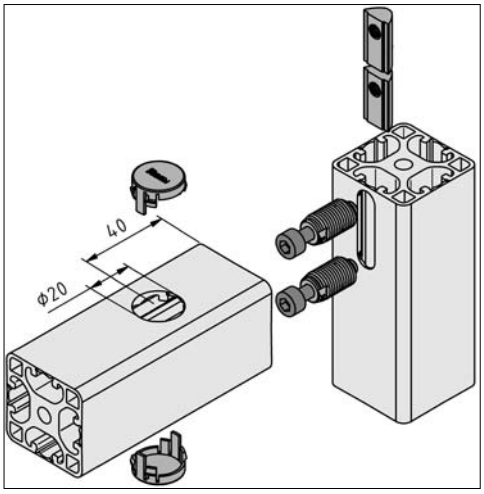
bright zinc-plated, 1 set	0.0.003.50

New in catalogue



Special form of the Automatic-Fastening Set for installation in profiles with closed grooves. The groove is opened as shown below.

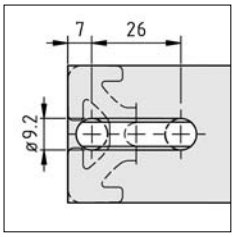
item Innovation
German patent
and foreign patents
EP 0 458 069

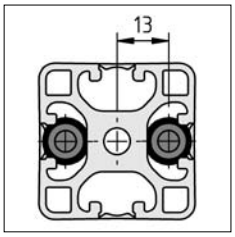


The fastener is located inside the profile cavity. To access the fastening screw just drill a hole into the profile. The grey Cap is used to close the hole.

A T-Slot Nut is inserted into the groove in the second profile and forms the counterpart for the Automatic Fastener screw.
If this groove in the second profile is also closed, the T-Slot Nut must be inserted from either the profile's end face or through a larger opening in the groove cover created beforehand.

A special L-Key 5 A/F N is used for the Automatic-Fastening Sets 8 N.

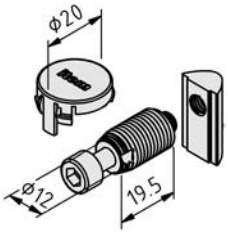




Opening the closed groove of a Line 8 Profile in order to insert the T-Slot Nuts of two Automatic-Fastening Sets 8 N.

Automatic-Fastening Sets should always be used in pairs.

5 6 **8** 12



Automatic-Fastening Set 8 N
Automatic Fastener 8 N, St, black
Cap, PA grey
Hex. Socket Head Cap Screw M6x30, St, bright zinc-pl.
T-Slot Nut V 8 St M6, bright zinc-plated
s = 6 A/F
M = 14 Nm
m = 27.0 g

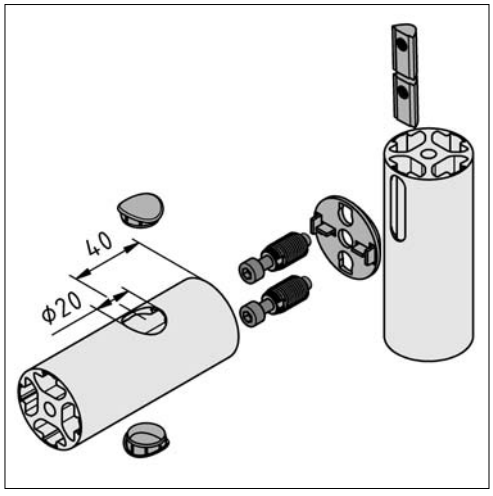
1 set 0.0.489.96

New in catalogue

Automatic-Fastening Set 8 N D40 can be used for connecting Profiles 8 D40 with other Profiles 8 D40, or for connecting Profiles 8 with rectangular cross-sections if an Adapter 8 D40 (Section 1.2 Accessories for Profiles) is used. When using this Automatic-Fastening Set with open-groove profiles, the profiles require no processing - the self-tapping Automatic Fastener is simply screwed into the profile groove from the end face.

When using Profiles 8 with closed grooves, a 20 mm dia. mounting bore must be drilled at a distance of 40 mm from the end face in order to access the fastening screw.

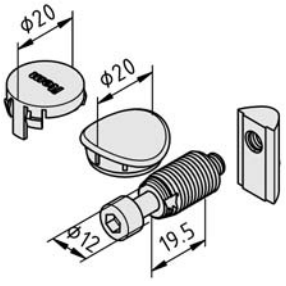
item Innovation
German patent
and foreign patents
EP 0 458 069



Automatic-Fastening Set 8 N D40 can be used to connect Profiles 8 with both open and closed grooves (where designed for opening). To cover the mounting bore in the side face of profiles with closed grooves, Automatic-Fastening Set 8 N D40 contains Caps for Profiles 8 with rectangular and round cross-sections. Depending on the profile attached, the Cap with a rounded or flat outer contour will be used. In the case of Profiles 8 with open grooves, no bore is needed. Consequently, the Caps are not required in this instance.

The length of the screw in Automatic-Fastening Set 8 N D40 is matched to the thickness of Adapter 8 D40. The full length of the thread is therefore available in order to ensure that the maximum fastening force is applied.

5 6 **8** 12



Automatic-Fastening Set 8 N D40
1 Automatic Fastener 8 N, St, black
2 Caps, PA grey
1 Hex. Socket Head Cap Screw M6x32, St, bright zinc-pl.
1 T-Slot Nut V 8 St M6, bright zinc-plated
s = 6 A/F
M = 14 Nm
m = 28.5 g

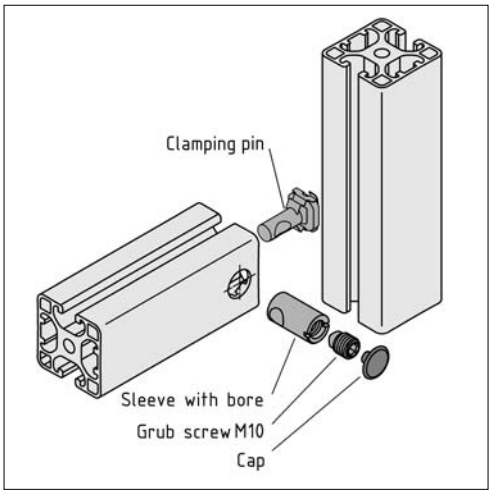
1 set	0.0.493.91

Central-Fastening Set

New in catalogue

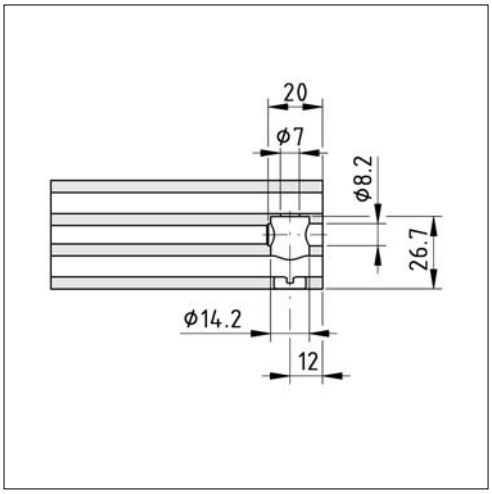
Central-Fastening Set 8 is useful if the profile grooves of a construction facing each other are to accommodate a panel element. Since the groove area remains free with this fastening set, no special machining of the panel element in the corner area is required.

Central-Fastening Set 8 is thus a particularly cost-effective means of making a profile connection.

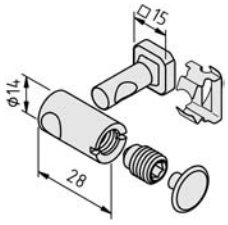


Due to the reduced clamping force and the lack of any anti-torsion feature between the profiles, this fastening set should only be used in combination with panel elements in the profile groove and only for profile connections subject to low loads. Where more stringent requirements need to be satisfied and parts are important for safety considerations, it is advisable to use the proven fastening techniques for basic constructions (Standard-Fastening, Universal-Fastening or Automatic-Fastening Sets).

Note: When using Radius Seals in combination with Central-Fastening Set 8, the distance between the hole centre and the end face of the profile should be reduced from 12 mm to 11 mm.



The profile branching off requires machining in order to use Central-Fastening Set 8.
The hole should be drilled with Step Drill D14,2 (Art. No. 0.0.492.60).



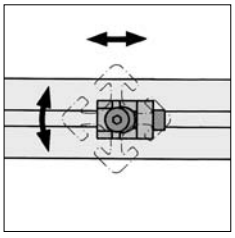
Central-Fastening Set 8
Clamping pin, St, bright zinc-plated
Clamping spring, St, stainless
Sleeve with bore, St, bright zinc-plated
Grub screw M10, St, bright zinc-plated
Cap, PA grey
M = 15 Nm
m = 35.0 g

1 set 0.0.494.15

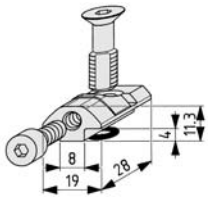
Direct-Fastening Set 8 90°

item Innovation
German patent
and foreign patent
EP 0 490 086

Direct-Fastening Set 8 90° is used for right-angled connection of Profiles 8. The profile can be secured at the end face and at any angle. The core bore must have an M8x16 thread.



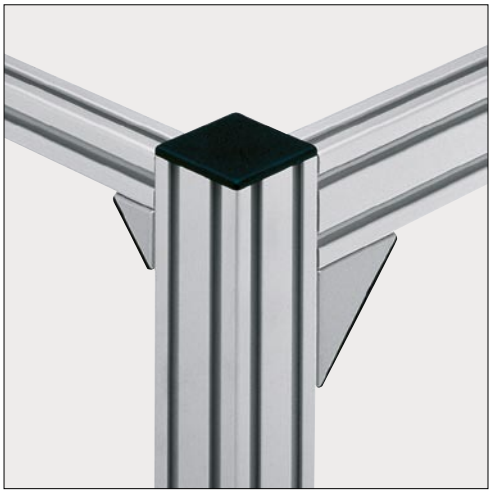
Direct-Fastening Set 8 90° is particularly suitable for movable fastening of profiles, with in part closed grooves, where Universal or Automatic Fasteners cannot be used.



Direct-Fastening Set 8 90°
Fastener, G-St
Countersunk Screw M8x27, St
O-ring, NBR, black
Hexagon Socket Head Cap Screw DIN 7984-M6x14, St
$M_{stainl.}$ = 5.5 Nm
m = 30.0 g

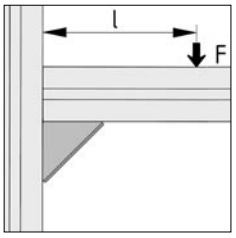
stainless, 1 set 0.0.388.67

Angle Bracket Zn



For power-lock connection (without machining) between profiles, reinforcing profile connections or for fastening a range of components to profiles.

The Angle Bracket is ideal for connecting installation conduits (Section 7.1 Conduits). The rounding of the inside edge prevents damage to the cable.



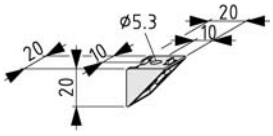
When used to reinforce the joints of large profiles or conduits, several Angle Brackets can be used in parallel.

Note: Ensure the maximum permissible tensile load on the Profile Groove is not exceeded!

Note: For Angle Brackets of Lines 6, 8 and 12, special square washers are used due to the length of the screws and to improve the application of the clamping force.

Angle Bracket 5	20x20 Zn	F < 250 N ∧ F x l <	5 Nm
Angle Bracket 5	40x40 Zn	F < 500 N ∧ F x l <	25 Nm
Angle Bracket 6	30x30 Zn	F < 500 N ∧ F x l <	12 Nm
Angle Bracket 6	60x60 Zn	F < 1,000 N ∧ F x l <	36 Nm
Angle Bracket 8	40x40 Zn	F < 1,000 N ∧ F x l <	50 Nm
Angle Bracket 8	80x80 Zn	F < 2,000 N ∧ F x l <	150 Nm
Angle Bracket 8	160x80 Zn	F < 2,000 N ∧ F x l <	150 Nm
Angle Bracket 12	60x60 Zn	F < 2,000 N ∧ F x l <	100 Nm
Angle Bracket 12	120x120 Zn	F < 4,000 N ∧ F x l <	250 Nm

The load-carrying capacity is to be checked based on both conditions.



Angle Bracket 5 20x20 Zn
Die-cast zinc
m = 14.0 g

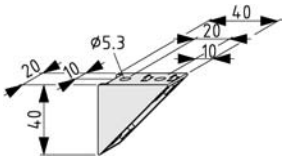
white aluminium, similar to RAL 9006, 1 pce.	0.0.425.03

Angle Bracket Cap 5 20x20
PA-GF
m = 1.0 g

black, 1 pce.	0.0.425.04

Angle Bracket Set 5 20x20
Angle Bracket 5 20x20 Zn
Angle Bracket Cap 5 20x20
2 Cap Screws DIN 6912-M5x8, St, bright zinc-plated
2 T-Slot Nuts 5 St M5, bright zinc-plated
m = 23.0 g

1 set	0.0.425.02

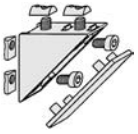


Angle Bracket 5 40x40 Zn
Die-cast zinc
m = 39.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.425.06

Angle Bracket Cap 5 40x40
PA-GF
m = 3.0 g

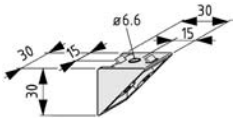
black, 1 pce.	0.0.425.07



Angle Bracket Set 5 40x40
Angle Bracket 5 40x40 Zn
Angle Bracket Cap 5 40x40
4 Cap Screws DIN 6912-M5x8, St, bright zinc-plated
4 T-Slot Nuts 5 St M5, bright zinc-plated
m = 58.0 g

1 set	0.0.425.05

5 **6** 8 12



Angle Bracket 6 30x30 Zn
Die-cast zinc
m = 47.0 g

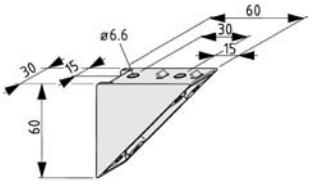
white aluminium, similar to RAL 9006, 1 pce.	0.0.419.63

Angle Bracket Cap 6 30x30
PA-GF
m = 4.0 g

black, 1 pce.	0.0.419.64

Angle Bracket Set 6 30x30
Angle Bracket 6 30x30 Zn
Angle Bracket Cap 6 30x30
2 Button-Head Screws ISO 7380-M6x14, St, bright zinc-pl.
2 Washers 10.5x10.5x1.3, St, bright zinc-plated
2 T-Slot Nuts 6 St M6, bright zinc-plated
m = 66.0 g

1 set	0.0.419.67

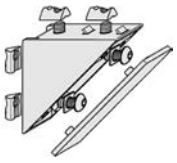


Angle Bracket 6 60x60 Zn
Die-cast zinc
m = 130.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.419.65

Angle Bracket Cap 6 60x60
PA-GF
m = 7.0 g

black, 1 pce.	0.0.419.66



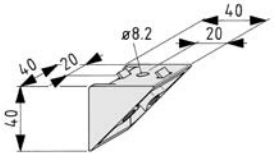
Angle Bracket Set 6 60x60
Angle Bracket 6 60x60 Zn
Angle Bracket Cap 6 60x60
4 Button-Head Screws ISO 7380- M6x14, St, bright zinc-pl.
4 Washers 10.5x10.5x1.3, St, bright zinc-plated
4 T-Slot Nuts 6 St M6, bright zinc-plated
m = 166.0 g

1 set	0.0.419.68

Washer 10.5x10.5x1.3
St
m = 60 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.491.44

5 6 **8** 12

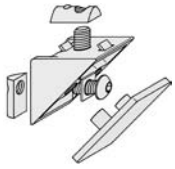


Angle Bracket 8 40x40 Zn
Die-cast zinc
m = 119.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.411.24

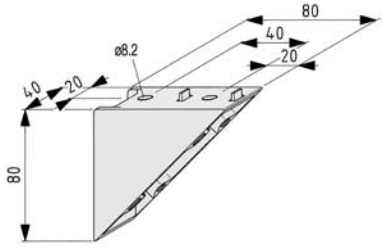
Angle Bracket Cap 8 40x40
PA-GF
m = 6.0 g

black, 1 pce.	0.0.411.26



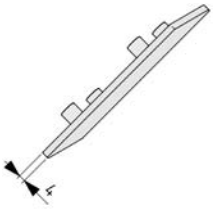
Angle Bracket Set 8 40x40
Angle Bracket 8 40x40 Zn
Angle Bracket Cap 8 40x40
2 Button-Head Screws ISO 7380-M8x18, St, bright zinc-pl.
2 Washers 13.9x13.9x2, St, bright zinc-plated
2 T-Slot Nuts 8 St M8, bright zinc-plated
m = 163.0 g

1 set	0.0.411.15



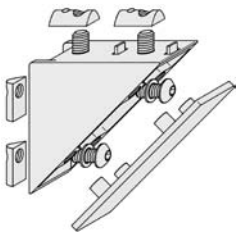
Angle Bracket 8 80x80 Zn
Die-cast zinc
m = 270.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.411.23



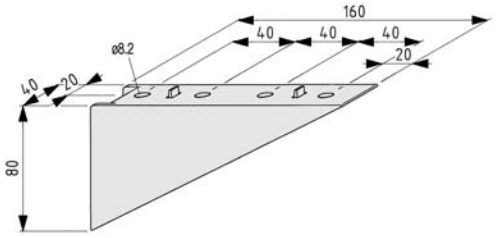
Angle Bracket Cap 8 80x80
PA-GF
m = 13.0 g

black, 1 pce.	0.0.411.25



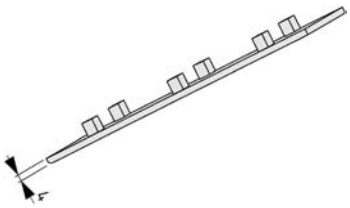
Angle Bracket Set 8 80x80
Angle Bracket 8 80x80 Zn
Angle Bracket Cap 8 80x80
4 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
4 Washers 13.5x9x1 St, bright zinc-plated
4 T-Slot Nuts 8 St M8, bright zinc-plated
m = 360.0 g

1 set	0.0.411.32



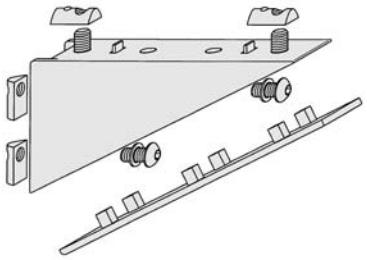
Angle Bracket 8 160x80 Zn
Die-cast zinc
m = 530.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.436.23



Angle Bracket Cap 8 160x80
PA-GF
m = 23.0 g

black, 1 pce.	0.0.436.25



Angle Bracket Set 8 160x80
Angle Bracket 8 160x80 Zn
Angle Bracket Cap 8 160x80
4 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
4 Washers 13.5x9x1 St, bright zinc-plated
4 T-Slot Nuts 8 St M8, bright zinc-plated
m = 662.0 g

1 set	0.0.436.24

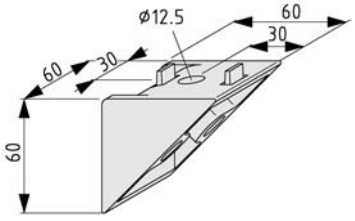
Washer 13.5x9x1
St
m = 60 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.429.11

Washer 13.9x13.9x2
St
m = 175 g/100

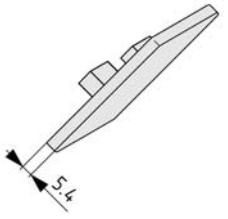
bright zinc-plated, 1 PU = 100 pce.	0.0.495.61

5 6 8 12



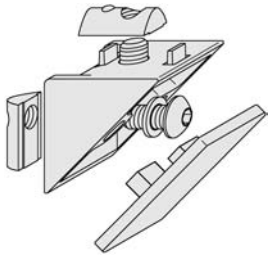
Angle Bracket 12 60x60 Zn
Die-cast zinc
m = 350.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.003.20



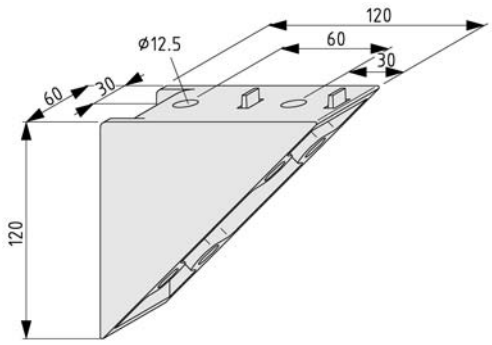
Angle Bracket Cap 12 60x60
PA-GF
m = 20.0 g

black, 1 pce.	0.0.005.06



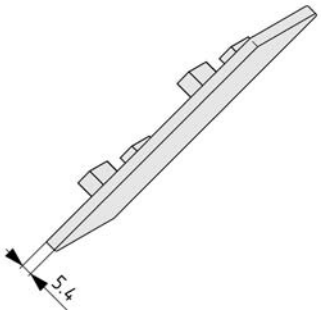
Angle Bracket Set 12 60x60
Angle Bracket 12 60x60 Zn
Angle Bracket Cap 12 60x60
2 Button-Head Screws ISO 7380-M12x25, St, bright zinc-pl.
2 Washers DIN 433-13, St, bright zinc-plated
2 T-Slot Nuts 12 St M12, bright zinc-plated
m = 520.0 g

1 set	0.0.003.53



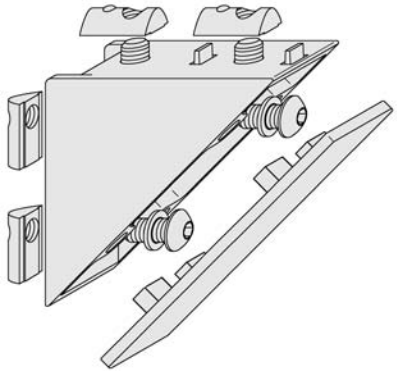
Angle Bracket 12 120x120 Zn
Die-cast zinc
m = 900.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.003.21



Angle Bracket Cap 12 120x120
PA-GF
m = 40.0 g

black, 1 pce.	0.0.005.07



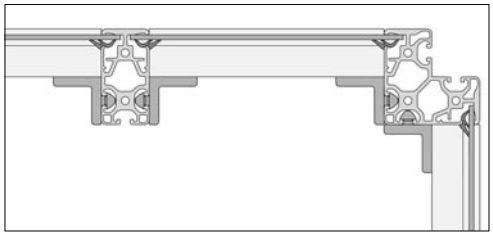
Angle Bracket Set 12 120x120
Angle Bracket 12 120x120 Zn
Angle Bracket Cap 12 120x120
4 Button-Head Screws ISO 7380-M12x25, St, bright zinc-pl.
4 Washers DIN 433-13, St, bright zinc-plated
4 T-Slot Nuts 12 St M12, bright zinc-plated
m = 1.2 kg

1 set	0.0.003.54

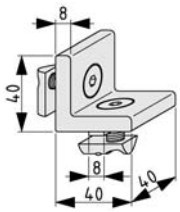
Angle Bracket V 8 40 Zn

New in catalogue

Angle Bracket V 8 40 Zn is particularly suitable for simple connections between horizontal profiles (e.g. Clamp Profile 8 40x40 E) and Stand Profiles (e.g. Clamp Profile 8 80x40-180° light). The profiles do not need to be machined in any way. The Angle Bracket has an anti-torsion device on its rear side to position it correctly in the profile groove. Because Angle Bracket V 8 40 Zn is keyed to the profile groove, it is particularly stable. It can also be used to secure other components to Line 8 profiles.



The Clamp Profiles light are connected using Angle Bracket V 8 40 Zn.



Angle Bracket V 8 40 Zn
Die-cast zinc
Angle Bracket, die-cast zinc, RAL9006 white aluminium
2 T-Slot Nuts 8 St M8, St, bright zinc-plated
2 Counters. Screws DIN 7991-M8x18, St, bright zinc-pl.
m = 167.0 g

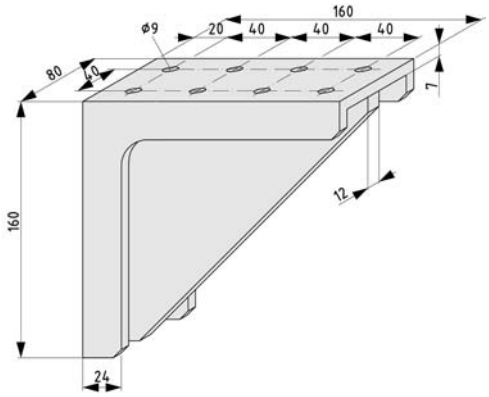
1 set	0.0.486.28

Angle Bracket 8 St

Angle Bracket 8 St are heavy-duty fastening elements for power-lock, non-machined connection of large Profiles 8 320x160 or Profiles 8 160x160 with innovative screw technology. They can also be used for screwing profiles to floors and walls and for fastening heavy parts that are not part of the MB Building Kit System.

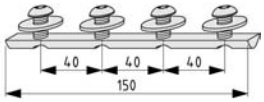
Angle Bracket 8 160x160 St M8 is fastened to the profile with the Fastening Set. Depending on the combination of profiles, up to 4 Fastening Sets may be required for each Angle Bracket.

Angle Bracket 8 160x160 St M12 is used for screw attachment with Fasteners 8 M12 (Section 3.2 Screws and Universal-Elements). A particulary heavy-duty connection is possible for the profiles by using an M12 bolt with Profile 8 grooves. Alternatively, Angle Bracket 8 St M12 can also be screw attached using bolts and T-Slot Nuts 8 St M8.



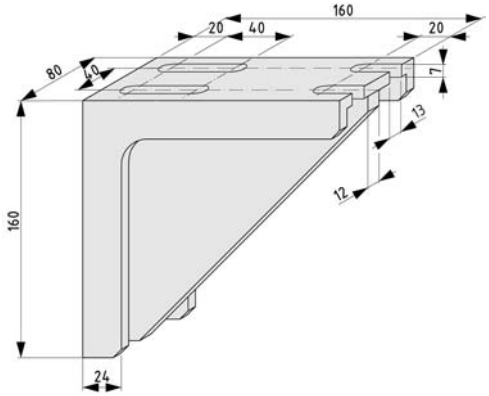
Angle Bracket 8 160x160 St M8
High-strength cast iron
m = 2.4 kg

white aluminium, similar to RAL 9006, 1 pce.	0.0.475.21



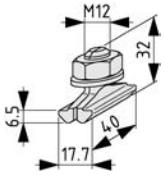
Fastening Set for Angle Bracket 8 160x160 St M8
1 Profile Bar 8 St M8-40, bright zinc-plated
4 Button-Head Screws M8x20, St, bright zinc-plated
4 washers DIN 1441-9.0, St, bright zinc-plated
m = 132.0 g

1 set	0.0.479.96



Angle Bracket 8 160x160 St M12
High-strength cast iron
m = 2.2 kg

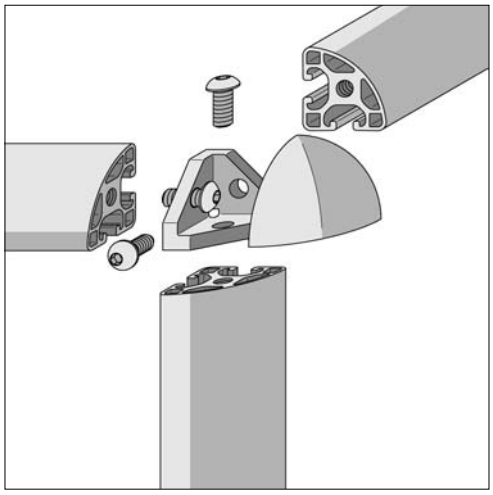
white aluminium, similar to RAL 9006, 1 pce.	0.0.475.20



Fastener 8 M12
1 fastener half, cast steel, stainless
1 fastener half with spring ball, cast steel, stainless
1 nut DIN 934-M12, St, bright zinc-plated
1 washer DIN 125-12, St, bright zinc-plated
m = 70.0 g

1 set	0.0.473.02

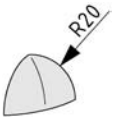
Corner Fastening Sets



5 6 8 12

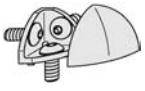
Fastening Sets can be used to construct a corner unit with three profiles or one corner angle with two profiles ensuring a continuous profile geometry.

Fastening Sets are ideal for constructing attractive display cases, tables, cover hoods etc.
The profiles must be provided with threads in the core bores.



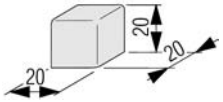
Fastener Cap 5 R20-90°
PA-GF
m = 0.7 g

black, 1 pce.	0.0.425.94



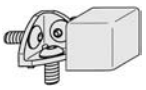
Fastening Set 5 R20-90°
Fastener 5 20x20, Die-cast zinc, black
Fastener Cap 5 R20-90°
3 Button-Head Screws ISO 7380-M5x12, St, bright zinc-pl.
m = 21.0 g

1 set	0.0.425.97



Fastener Cap 5 20x20x20
PA-GF
m = 1.0 g

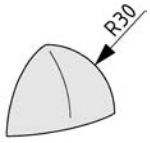
black, 1 pce.	0.0.437.73



Fastening Set 5 20x20x20
Fastener 5 20x20, Die-cast zinc, black
Fastener Cap 5 20x20x20
3 Button-Head Screws ISO 7380-M5x12, St, bright zinc-pl.
m = 22.0 g

1 set	0.0.437.96

5 **6** 8 12

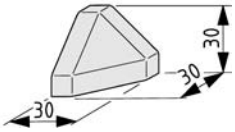


Fastener Cap 6 R30-90°
PA-GF
m = 3.0 g

black, 1 pce.	0.0.434.83

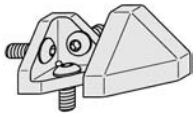
Fastening Set 6 R30-90°
Fastener 6 30x30, Die-cast zinc, black
Fastener Cap 6 R30-90°
3 Button-Head Screws ISO 7380-M6x16, St, bright zinc-pl.
m = 54.0 g

1 set	0.0.434.87



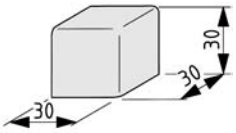
Fastener Cap 6 30x30-45°
PA-GF
m = 3.0 g

black, 1 pce.	0.0.434.85



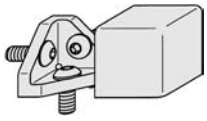
Fastening Set 6 30x30-45°
Fastener 6 30x30, Die-cast zinc, black
Fastener Cap 6 30x30-45°
3 Button-Head Screws ISO 7380-M6x16, St, bright zinc-pl.
m = 54.0 g

1 set	0.0.434.86



Fastener Cap 6 30x30x30
PA-GF
m = 8.0 g

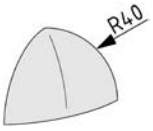
black, 1 pce.	0.0.434.84



Fastening Set 6 30x30x30
Fastener 6 30x30, Die-cast zinc, black
Fastener Cap 6 30x30x30
3 Button-Head Screws ISO 7380-M6x16, St, bright zinc-pl.
m = 59.0 g

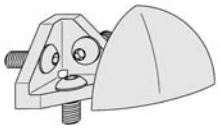
1 set	0.0.434.88

5 6 **8** 12



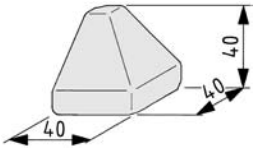
Fastener Cap 8 R40-90°
PA-GF
m = 8.0 g

black, 1 pce.	0.0.436.32



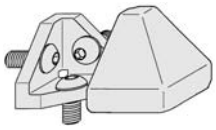
Fastening Set 8 R40-90°
Fastener 8 40x40, Die-cast zinc, black
Fastener Cap 8 R40-90°
3 Button-Head Screws ISO 7380-M8x20, St, bright zinc-pl.
m = 120.0 g

1 set	0.0.436.35



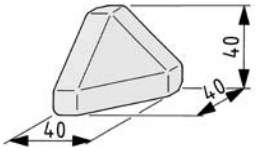
Fastener Cap 8 40x40-2x45°
PA-GF
m = 10.0 g

black, 1 pce.	0.0.436.62



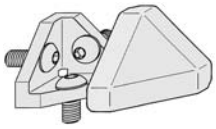
Fastening Set 8 40x40-2x45°
Fastener 8 40x40, Die-cast zinc, black
Fastener Cap 8 40x40-2x45°
3 Button-Head Screws ISO 7380-M8x20, St, bright zinc-pl.
m = 128.0 g

1 set	0.0.436.63



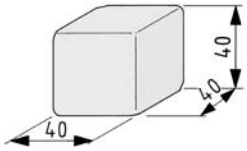
Fastener Cap 8 40x40-45°
PA-GF
m = 9.0 g

black, 1 pce.	0.0.373.52



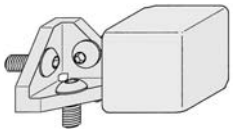
Fastening Set 8 40x40-45°
Fastener 8 40x40, Die-cast zinc, black
Fastener Cap 8 40x40-45°
3 Button-Head Screws ISO 7380-M8x20, St, bright zinc-pl.
m = 127.0 g

1 set	0.0.388.68



Fastener Cap 8 40x40x40
PA-GF
m = 16.0 g

black, 1 pce.	0.0.415.97



Fastening Set 8 40x40x40
Fastener 8 40x40, Die-cast zinc, black
Fastener Cap 8 40x40x40
3 Button-Head Screws ISO 7380-M8x20, St, bright zinc-pl.
m = 133.0 g

1 set	0.0.416.08

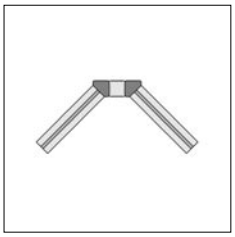
1.3.2 Angled Connections

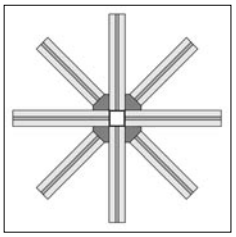
Components for connecting profiles at fixed, freely selectable or adjustable angles.

Angle Elements T1

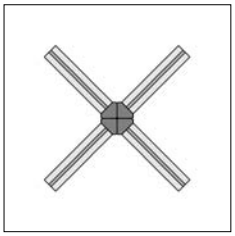
Connection elements for fastening a profile at an angle of 45° when working with bracing and latticework.

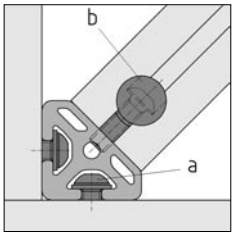
Covering of the profile ends with Caps 6 30x30-45° or 8 40x40-45° (Section 1.2 Accessories for Profiles).





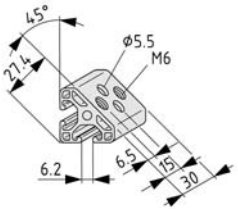
The Angle Elements are screw-connected with Button-Head Screws ISO 7380 (Section 3.2 Screws and Universal-Elements) and washers DIN 125.
The profile to be connected can be attached using two Universal Fasteners (without anti-torsion pins) and Button-Head Screws ISO 7380.





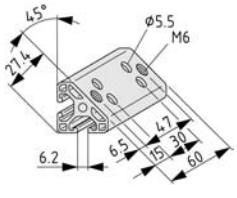
6	a	Button Head Screws ISO 7380-M6x12 Washers DIN 125-6.4
	b	Universal Fasteners 6 Button Head Screws ISO 7380-M6x20
8	a	Button Head Screws ISO 7380-M8x16 Washers DIN 125-8.4
	b	Universal Fasteners 8 Button Head Screws ISO 7380-M8x25

5 **6** 8 12



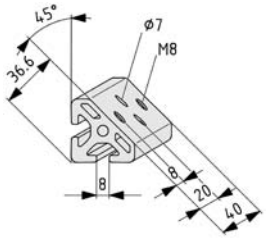
Angle Element 6 T1-30
Al, anodized
m = 23.0 g

natural, 1 pce.	0.0.459.70



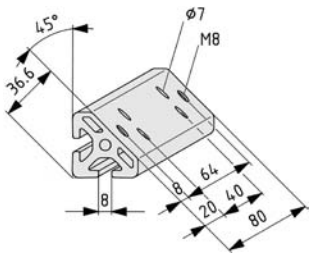
Angle Element 6 T1-60
Al, anodized
m = 40.0 g

natural, 1 pce.	0.0.459.74



Angle Element 8 T1-40
Al, anodized
m = 73.0 g

natural, 1 pce.	0.0.388.00



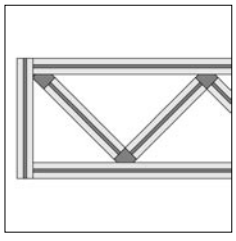
Angle Element 8 T1-80
Al, anodized
m = 148.0 g

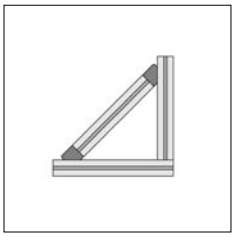
natural, 1 pce.	0.0.388.01

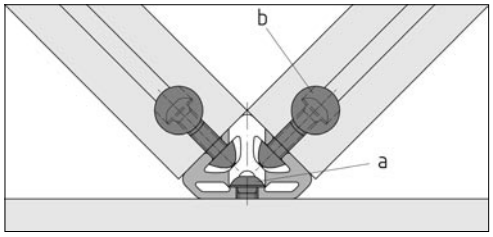
Angle Elements T2

Connection elements for fastening two profiles at an angle of 45° when working with bracing and latticework.

Covering of the profile ends with Caps 6 30x30-45° or 8 40x40-45° (Section 1.2 Accessories for Profiles).



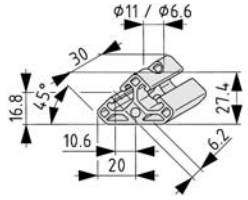




Angle Elements T2 are fastened with Button-Head Screws, Universal Fasteners or Automatic Fasteners and a special T-Slot Nut (see table).

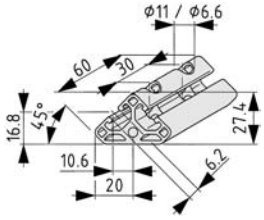
6	a	Button-Head Screws ISO 7380-M6x16
	b	Universal Fastener 6 Button-Head Screws ISO 7380-M6x22 T-Slot Nut 6 St 2xM6-28 or 6 St 2x M6-58
		Automatic Fastener 6; Hexagon Socket Head Cap Screws DIN 912-M5x35 T-Slot Nut 6 St 2xM5-28 or 6 St 2x M5-58
8	a	Button-Head Screws ISO 7380-M8x16
	b	Universal Fastener 8 Button-Head Screws ISO 7380-M8x30 T-Slot Nut 8 St 2xM8-36 or 8 St 2x M8-76
		Automatic Fastener 8; Hexagon Socket Head Cap Screws DIN 912-M6x40 T-Slot Nut 8 St 2xM6-36 or 8 St 2x M6-76

5 **6** 8 12



Angle Element 6 T2-30
Al, anodized
m = 23.0 g

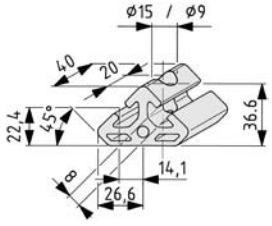
natural, 1 pce.	0.0.459.72



Angle Element 6 T2-60
Al, anodized
m = 44.0 g

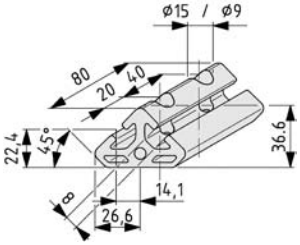
natural, 1 pce.	0.0.459.76

5 6 **8** 12



Angle Element 8 T2-40
Al, anodized
m = 67.0 g

natural, 1 pce.	0.0.388.02



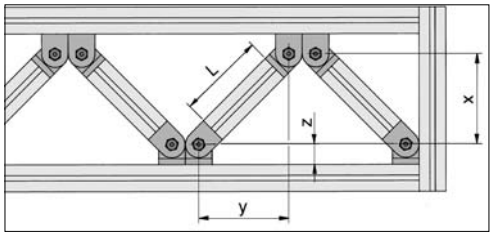
Angle Element 8 T2-80
Al, anodized
m = 135.0 g

natural, 1 pce.	0.0.388.03

Hinges, heavy-duty

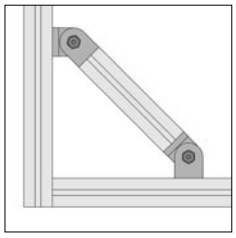
For connecting profiles at various angles up to 180° and for use as heavy-duty hinges (adjustment range ± 90°). When used in conjunction with the spacer rings, they can be used as freely movable hinges. If the spacer rings are removed, they can be used as rigid angle elements, e.g. bracing, and can also be pinned.

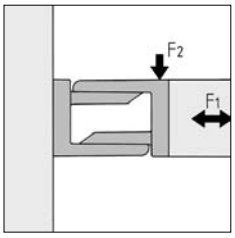
The Hinges with Clamp Lever can be locked in position or released. Particularly suitable for adjustable holders, swivel-type arms for Parts Containers and other similar equipment.

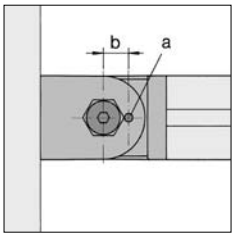


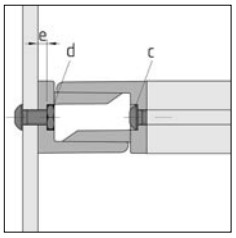
Calculation of the strut length L:

$$L = \sqrt{x^2 + y^2} - 2z$$

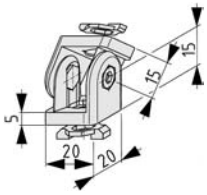








Hinge, heavy-duty	Dowel DIN 6325 a	b	Screw c	Nut d	e	Connection rigid F1	rigid F2	movable F1	movable F2
5 20x20	2m6x20	7 mm	Hex. Socket Head Cap Screw DIN 912-M5	DIN 557 M5	3.3 mm	500 N	200 N	200 N	100 N
6 30x30	4m6x30	10 mm	Button-Head Screw ISO 7380-M6x14	DIN 439 M6	3.5 mm	1,750 N	500 N	500 N	500 N
8 40x40	4m6x40	12 mm	Button-Head Screw ISO 7380-M8x16	DIN 439 M8	5.0 mm	5,000 N	1,000N	750 N	750 N
8 80x40	6m6x40	24 mm	Button-Head Screw ISO 7380-M8x16	DIN 439 M8	5.0 mm	10,000 N	2,000N	1,500 N	1,500 N

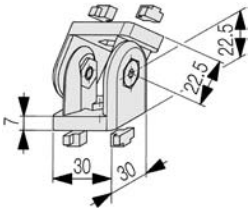


Hinge 5 20x20, heavy-duty
2 hinge halves, die-cast zinc, RAL9006 white aluminium
2 fixing elements, PA-GF, black
2 thread bushes M4, St, bright zinc-plated
2 spacer rings, St, stainless
2 hexagon screws, St
m = 39.0 g

1 pce. 0.0.464.39

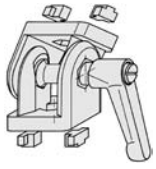
Hinge 5 20x20, heavy-duty with Clamp Lever
2 hinge halves, die-cast zinc, RAL9006 white aluminium
2 fixing elements, PA-GF, black
1 thread bush M4, St, bright zinc-plated
Bush liner, St, bright zinc-plated
Spacer collar, St
Clamp lever M4x20, black
Max. holding torque = 5 Nm
m = 81.0 g

1 pce. 0.0.464.43



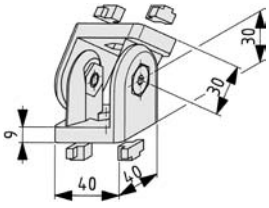
Hinge 6 30x30, heavy-duty
2 hinge halves, die-cast zinc, RAL9006 white aluminium
4 fixing elements, die-cast zinc, bright zinc-plated
2 thread bushes M5, St, zinc-plated
2 spacer rings, St, stainless
2 Countersunk Screws DIN 7991-M5x8, St
m = 125.0 g

1 pce. 0.0.419.80



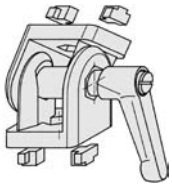
Hinge 6 30x30, heavy-duty with Clamp Lever
2 hinge halves, die-cast zinc, RAL9006 white aluminium
4 fixing elements, die-cast zinc, bright zinc-plated
Thread bush M5, St, zinc-plated
Bush liner, St, zinc-plated
Spacer collar, St
Clamp lever M5x30, black
Max. holding torque = 10 Nm
m = 163.0 g

1 pce. 0.0.419.85



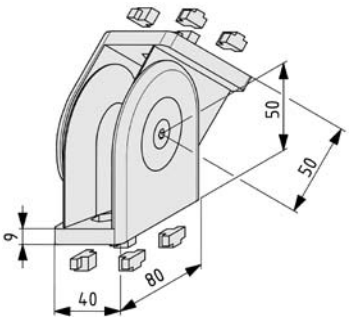
Hinge 8 40x40, heavy-duty
2 hinge halves, die-cast zinc, RAL9006 white aluminium
4 fixing elements, die-cast zinc, bright zinc-plated
2 thread bushes M8, St, zinc-plated
2 spacer rings, St, stainless
2 Countersunk Screws DIN 7991-M8x12, St
m = 320.0 g

1 pce. 0.0.265.31



Hinge 8 40x40, heavy-duty with Clamp Lever
2 hinge halves, die-cast zinc, RAL9006 white aluminium
4 fixing elements, die-cast zinc, bright zinc-plated
Thread bush M8, St, zinc-plated
Bush liner, St, zinc-plated
Spacer collar, St
Clamp lever M8x40, black
Max. holding torque = 20 Nm
m = 410.0 g

1 pce. 0.0.373.93



Hinge 8 80x40, heavy-duty
2 hinge halves, die-cast zinc, RAL9006 white aluminium
8 fixing elements, die-cast zinc, bright zinc-plated
2 collared bushes, St, zinc-plated
2 spacer rings, St, stainless
2 Countersunk Screws DIN 7991-M8x16, St
m = 1.0 kg

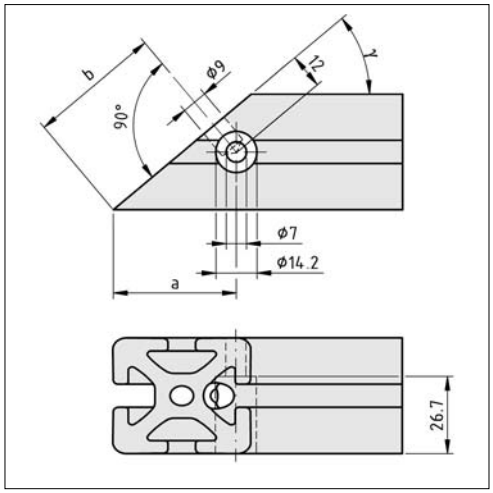
1 pce. 0.0.373.91

Mitre-Fastening Set 8

New in catalogue

item Service

www.item.info



Mitre-Fastening Sets are suitable for connecting two profiles at an angle. They are frequently used when constructing frame elements and panel edging. The profile grooves facing each other inside the frame remain unobstructed so they can be used for holding panel elements.
A mitre-sawn Profile 8 (at any angle γ from 30° to 90°) is screwed to the side face of a Profile 8. Mitre-Butt-Fastening Set 8 must be used to interconnect two mitre-sawn profiles.

The position of the clamping pins at right angles to the cut profile edge generates particularly high clamping forces on the fastening elements. The clamping screws are accessed from the side of the profile frame.

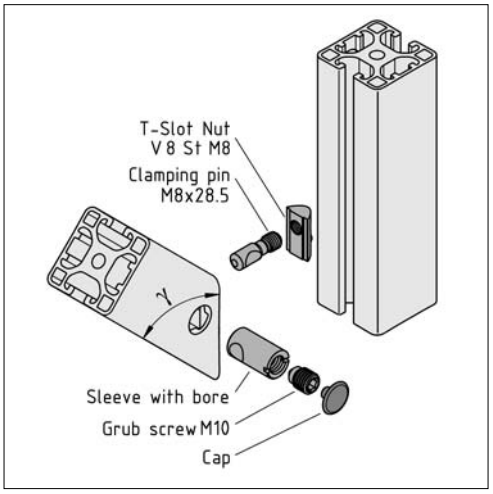
Note: Despite the optimized design, the flow of forces across the inclined contact faces of the profiles is such that only part of the pretension of the screw connection is utilized. Mitre connections therefore have a lower load bearing capacity than other, right-angled profile connections (Standard-Fastening, Universal-Fastening or Automatic-Fastening Set). Mitre-Fastening Sets should therefore not be used for constructing basic frames and safety-related parts that are subject to high loads.

Your item dealer can provide the required mitre cuts and profile processing as a service.

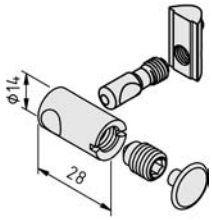
Distances a and b can also be calculated as a function of angle γ:

$$a = \frac{12 + 20 \cos \gamma}{\sin \gamma}$$

$$b = \frac{20 + 12 \cos \gamma}{\sin \gamma}$$



Using Mitre-Fastening Set 8:
1. Mitre the profile at an angle γ.
2. Drill a counterbore of diameter 14.2 mm (Step Drill Art. No. 0.0.492.60) for the fastener sleeve in the side of the mitred profile (use of a drilling jig (Art. No. 0.0.493.72, Section 9.2 Jigs and Tools) is recommended).
3. Drill a 9 mm dia. hole in the end face of the mitred profile (use of a drilling jig (Art. No. 0.0.493.71, Section 9.2 Jigs and Tools) is recommended). The minimum drilling depth is 12 mm.
4. Insert the T-Slot Nut into the profile groove of the continuous profile to which the mitred profile is connected and screw in the clamping pin until the mark around the perimeter is level with the profile surface.
5. Insert the fastener sleeve into the mitred profile and fit the assembly over the clamping pin.
6. Drive the grub screw M10 into the fastener sleeve and tighten the profile connection (M = 15 Nm).
7. Fit the Cap onto the fastener sleeve.



Mitre-Fastening Set 8
1 clamping pin M8x28.5, St, bright zinc-plated
1 sleeve with bore, St, bright zinc-plated
1 Grub screw M10, St, bright zinc-plated
T-Slot Nut V 8 St M8, bright zinc-plated
1 Cap, PA grey
m = 40.0 g

1 set	0.0.492.30

1.3.3 Cross-Profile Connections

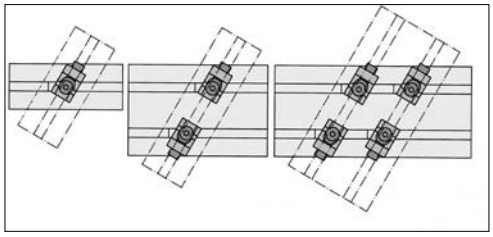
Suitable for connecting profiles which cross at any angle. The connection is made by power-locking the profile side faces.

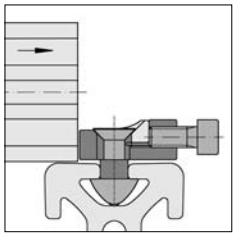
Direct-Fastening Set 8

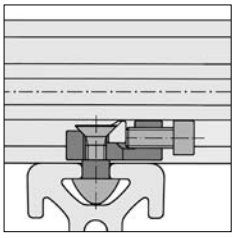
Power-lock connection (without machining) of two Profiles 8 that touch along their flanks. The profiles can also run parallel to each other for a short distance.
Both profiles can be moved in the direction of the groove. Neither profile needs to be machined, thereby ensuring that the profiles can be moved in both grooves. The Direct-Fastening Set is particularly suitable for connecting the profiles of ball-bush guide blocks (Section 8.1 Linear Slides) with other profiles, so that the profiles can be moved and no machining is required.

Note: Where anodized surfaces are to be fitted together, we recommend greasing the contact points. This minimises the level of noise generated.

item Innovation
German patent
and foreign patent
EP 0 490 086

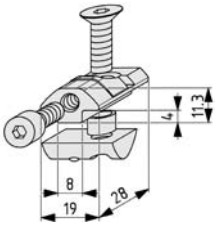






Installation note:
Slightly loosen the Hexagon Socket Head Cap Screw so that the small wedge (figure on far left) is seated so as to ensure the maximum travel distance, then slightly tighten the Countersunk Screw, so that the profiles can only just be moved by hand.

After positioning both profiles, tension the Direct-Fastening Set by tightening the Hex. Socket Head Cap Screw.



Direct-Fastening Set 8
Fastener, cast steel
Countersunk Screw DIN 7991-M6x20, St
Hexagon Socket Head Cap Screw DIN 7984-M6x14, St
Spacer sleeve, POM, black
T-Slot Nut 8 St M6
$M_{bzp.}$ = 5.5 Nm
m = 37.0 g

bright zinc-plated, 1 set	0.0.388.63

Direct-Fastening Set 8
Fastener, cast steel
Countersunk Screw DIN 7991-M6x20, St
Hexagon Socket Head Cap Screw DIN 7984-M6x14, St
Spacer sleeve, POM, black
T-Slot Nut 8 St M6
$M_{stainl.}$ = 4.5 Nm
m = 37.0 g

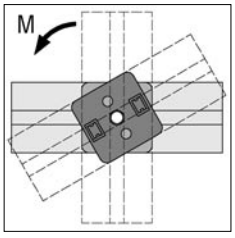
stainless, 1 set	0.0.440.65

Face Fastening Set 8

Face Fastening Set 8 is used to create a rigid angular connection between two profiles whose grooved sides face each other.
It can also be used to connect the end face of one profile to the grooved side of another profile.

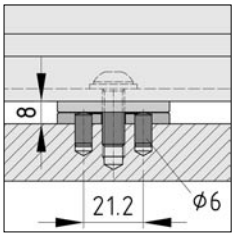
The two halves of the Face Fastening Set are located between the profiles being connected.

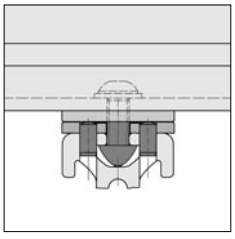
A clamp lever extending all the way through may be used with Face Fastening Set 8. This alternative facilitates adjustment.



The angle between the profiles can be selected in 5° increments. The toothing ensures that the two halves fit together securely at the correct angle.

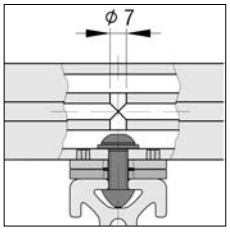
The two halves must be pinned together if a moment of M > 10 Nm is applied to the Face Fastening Set. The permissible load is $M_{max.}$ = 20 Nm.



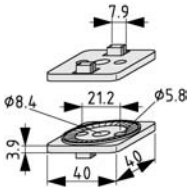


The anti-torsion blocks must be removed when attaching to panel elements.

Position of the fixing bores in the panel elements and profiles.
These fixing bores are predrilled in the fastener (∅ 5.8 mm).



Two Line 8 Profiles are screw-connected using screw ISO 7380-M8x25, Washer DIN 125-8,4 and T-Slot Nut 8 St M8.
An access hole must be made in one of the profiles to accommodate the Allen key.

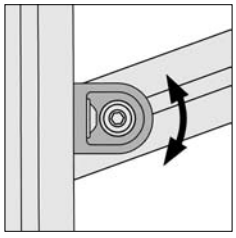


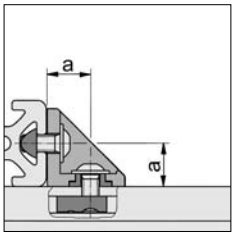
Face Fastening Set 8
Die-cast zinc
m = 71.0 g

black, 1 set	0.0.474.44

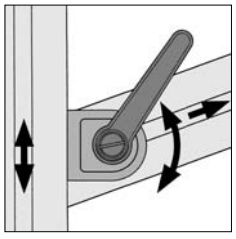
Angle Hinge Brackets, Angle Clamp Brackets

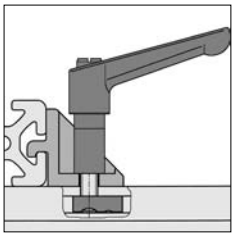
The Angle Hinge Brackets and Angle Clamp Brackets are used for connecting two profiles of the same Line whose side faces are in contact and which cross at an angle.





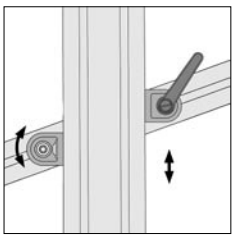
The Angle Hinge Bracket serves as a fixed point of rotation for profiles crossing each other. When the screws are tight, the rotational position around the bearing bush can still be selected at will.

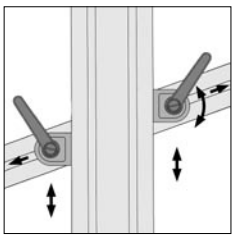




The Angle Clamp Bracket can be used in combination with an Angle Hinge Bracket or a second Angle Clamp Bracket to provide a simple connection between two crossing profiles.

Loosening the screw or clamp lever releases the tension in the two profile grooves and allows rotation at any angle and movement along the grooves.

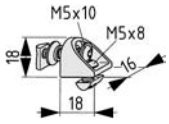




Combination of Angle Hinge Bracket and Angle Clamp Bracket, e.g. for adjusting the angle of a shelf around a fixed point of rotation.

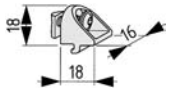
Combination of two Angle Clamp Brackets, e.g. for adjusting a rest (in terms of height, lateral location and angle).

5 6 8 12



Angle Hinge Bracket 5
Die-cast zinc, RAL9006 white aluminium
1 bearing bush, St, bright zinc-plated
2 T-Slot Nuts 5 St M5, bright zinc-plated
1 Button-Head Screw ISO 7380-M5x8, St, bright zinc-plated
1 dome-head screw M5x10, St, bright zinc-plated
a = 10 mm
m = 20.0 g

1 set 0.0.437.83



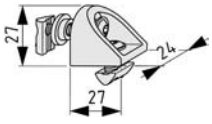
Angle Clamp Bracket 5
Die-cast zinc, RAL9006 white aluminium
1 T-Slot Nut 5 St M5, bright zinc-plated
1 dome-head screw M5x8, St, bright zinc-plated
m = 19.0 g

1 set 0.0.437.84

Angle Clamp Bracket 5 with Clamp Lever
Die-cast zinc, RAL9006 white aluminium
1 T-Slot Nut 5 St M5, bright zinc-plated
1 clamp lever M5x20, black
1 sleeve, St, bright zinc-plated
m = 51.0 g

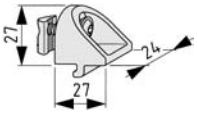
1 set 0.0.437.85

5 6 8 12



Angle Hinge Bracket 6
Die-cast zinc, RAL9006 white aluminium
1 bearing bush, St, bright zinc-plated
2 T-Slot Nuts 6 St M6, bright zinc-plated
2 dome-head screws M6x14, St, bright zinc-plated
a = 15 mm
m = 65.0 g

1 set 0.0.441.97

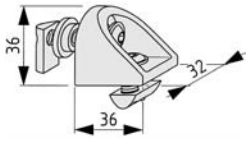


Angle Clamp Bracket 6
Die-cast zinc, RAL9006 white aluminium
1 T-Slot Nut 6 St M6, bright zinc-plated
1 dome-head screw M6x14, St, bright zinc-plated
m = 66.0 g

1 set 0.0.441.98

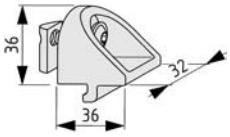
Angle Clamp Bracket 6 with Clamp Lever
Die-cast zinc, RAL9006 white aluminium
1 T-Slot Nut 6 St M6, bright zinc-plated
1 clamp lever M6x32, black
1 sleeve, St, bright zinc-plated
m = 103.0 g

1 set 0.0.441.99



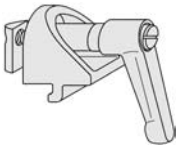
Angle Hinge Bracket 8
Die-cast zinc, RAL9006 white aluminium
1 bearing bush, St, bright zinc-plated
2 T-Slot Nuts 8 St M8, bright zinc-plated
2 dome-head screws M8x18, St, bright zinc-plated
a = 20 mm
m = 135.0 g

1 set	0.0.457.76



Angle Clamp Bracket 8
Die-cast zinc, RAL9006 white aluminium
1 T-Slot Nut 8 St M8, bright zinc-plated
1 dome-head screw M8x18, St, bright zinc-plated
m = 130.0 g

1 set	0.0.457.77



Angle Clamp Bracket 8 with Clamp Lever
Die-cast zinc, RAL9006 white aluminium
1 T-Slot Nut 8 St M8, bright zinc-plated
1 clamp lever M8x40, black
1 sleeve, St, bright zinc-plated
m = 225.0 g

1 set	0.0.457.78

1.3.4 Butt Connections

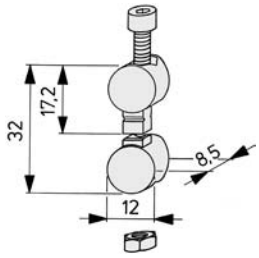
Connection of profiles end face to end face in order to extend constructions: can also be retrofitted in some cases.

Universal-Butt-Fastening Sets

The Universal-Butt-Fastening Sets can be used to connect the end faces of two profiles from the same Line. Universal-Butt-Fasfening Sets should always be used in pairs.

Depending on the profile size and load, several pairs may be necessary. Connection processing of the profiles is the same as for the Universal-Fastening Sets.

5 6 8 12



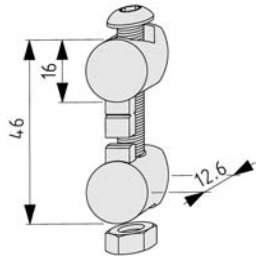
Universal-Butt-Fastening Set 5
2 Universal Fasteners 5, die-cast zinc
Hexagon Socket Head Cap Screw DIN 912-M4x20, St
Hexagon Nut DIN 934-M4, St
$M_{bzp.}$ = 3.0 Nm
m = 10.0 g

bright zinc-plated, 1 set	0.0.370.32

Universal-Butt-Fastening Set 5
2 Universal Fasteners 5, die-cast zinc
Hexagon Socket Head Cap Screw DIN 912-M4x20, St
Hexagon Nut DIN 934-M4, St
$M_{stainl.}$ = 2.5 Nm
m = 10.0 g

stainless, 1 set	0.0.437.55

5 6 8 12

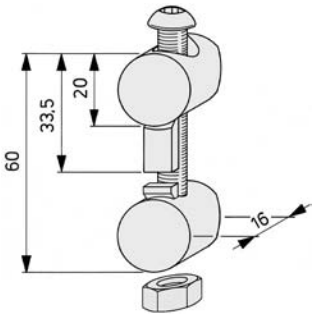


Universal-Butt-Fastening Set 6
2 Universal Fasteners 6, die-cast zinc
Button-Head Screw ISO 7380-M6x35, St
Hexagon Nut DIN 934-M6, St
$M_{bzp.}$ = 8.0 Nm
m = 27.0 g

bright zinc-plated, 1 set	0.0.419.53

Universal-Butt-Fastening Set 6
2 Universal Fasteners 6, die-cast zinc
Button-Head Screw ISO 7380-M6x35, St
Hexagon Nut DIN 934-M6, St
$M_{stainl.}$ = 6.5 Nm
m = 27.0 g

stainless, 1 set	0.0.441.77

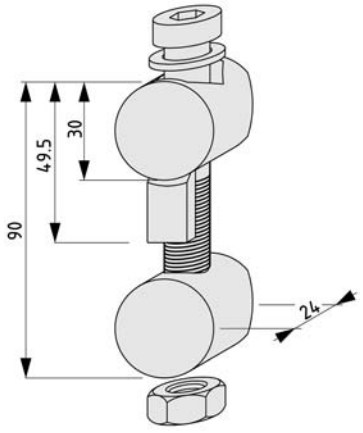


Universal-Butt-Fastening Set 8
2 Universal Fastener 8, die-cast zinc
Button-Head Screw ISO 7380-M8x45, St
Hexagon Nut DIN 934-M8, St
$M_{bzp.}$ = 25 Nm
m = 60.0 g

bright zinc-plated, 1 set	0.0.265.46

Universal-Butt-Fastening Set 8
2 Universal Fastener 8, die-cast zinc
Button-Head Screw ISO 7380-M8x45, St
Hexagon Nut DIN 934-M8, St
$M_{stainl.}$ = 20 Nm
m = 60.0 g

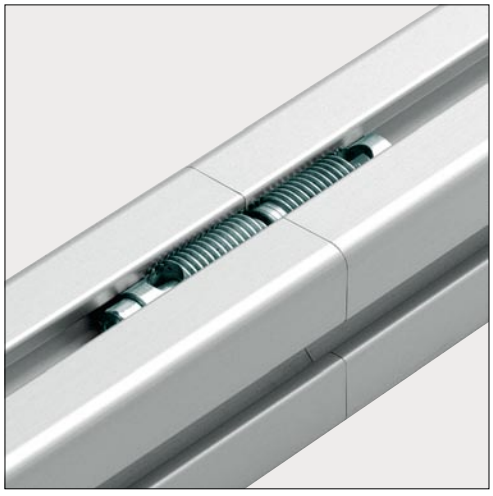
stainless, 1 set	0.0.440.94



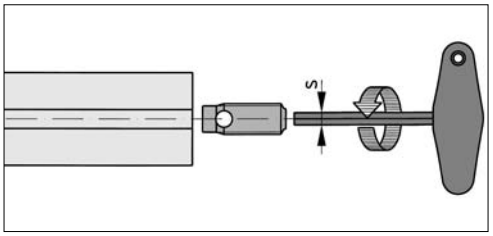
Universal-Butt-Fastening Set 12
2 Universal Fastener 12, die-cast zinc
1 Hexagon Socket Head Cap Screw DIN 7984-M12x70, St
1 washer DIN 433-13, St
1 Hexagon Nut DIN 934-M12, St
$M_{bzp.}$ = 60 Nm
m = 200.0 g

bright zinc-plated, 1 set	0.0.003.61

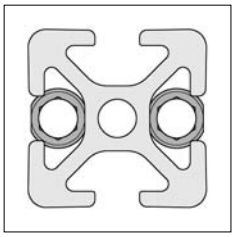
Automatic Butt-Fastening Sets



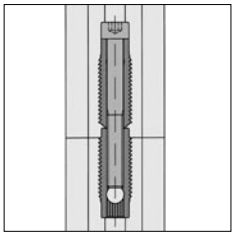
The Automatic Butt-Fastening Sets can be used to connect the end faces of two profiles from the same Line without mechanical processing.
Automatic Butt-Fastening Sets should always be used in pairs. Depending on the profile size and load, several pairs may be necessary.



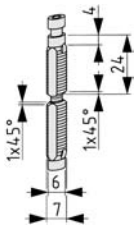
The Fastener is screwed into a profile groove in the end face, the thread being cut automatically. Use of a lubricant is recommended.
Note: All Fasteners with a through bore for the fastening screw have a counter-clockwise thread on the outside in order to prevent the Fastener twisting when the screw is tightened. The Fasteners with internal threads have a clockwise thread on the outside.



Automatic-Fastening Set 5 should be inserted so that the flattening on the thread is flush with the outer edge of the profile.



Additional anti-torsion protection can be provided by ensuring that the Fastener with internal thread is twisted into the profile only so far till the end of the Fastener projects into the groove opposite. The Fastener with through bore must be screwed in the appropriate distance.
Automatic Butt-Fastening Set 8 also contains two Caps which can be fitted subsequently over the Fastening Set.

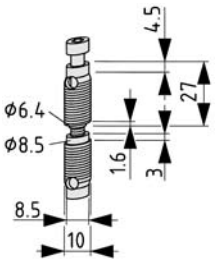


Automatic Butt-Fastening Set 5
1 Automatic Fastener 5 with through bore, St
1 Automatic Fastener 5 with threaded bore, St
Screw M4x40, St
s = 4 A/F
$M_{bzp.}$ = 2.5 Nm
m = 11.0 g

bright zinc-plated, 1 set	0.0.464.19

Automatic Butt-Fastening Set 5
1 Automatic Fastener 5 with through bore, St
1 Automatic Fastener 5 with threaded bore, St
Screw M4x40, St
s = 4 A/F
$M_{stainl.}$ = 2.5 Nm
m = 11.0 g

stainless, 1 set	0.0.464.18

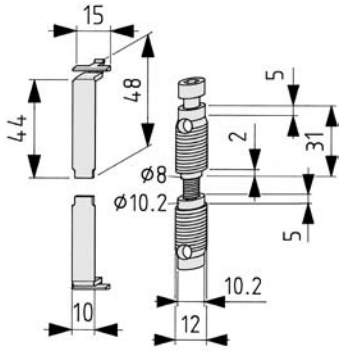


Automatic Butt-Fastening Set 6
1 Automatic Fastener 6 with through bore, St
1 Automatic Fastener 6 with threaded bore, St
Hex. Socket Head Cap Screw DIN 912-M5x45, St
s = 5 A/F
$M_{bzp.}$ = 8.0 Nm
m = 23.0 g

bright zinc-plated, 1 set **0.0.419.74**

Automatic Butt-Fastening Set 6
1 Automatic Fastener 6 with through bore, St
1 Automatic Fastener 6 with threaded bore, St
Hex. Socket Head Cap Screw DIN 912-M5x45, St
s = 5 A/F
$M_{stainl.}$ = 6.5 Nm
m = 23.0 g

stainless, 1 set **0.0.441.71**

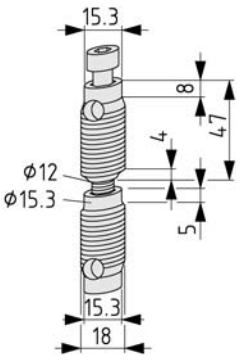


Automatic Butt-Fastening Set 8
1 Automatic Fastener 8 with through bore, St
1 Automatic Fastener 8 with threaded bore, St
Hex. Socket Head Cap Screw DIN 912-M6x50, St
2 Caps, PA-GF, black
s = 6 A/F
$M_{bzp.}$ = 14 Nm
m = 43.0 g

bright zinc-plated, 1 set **0.0.406.80**

Automatic Butt-Fastening Set 8
1 Automatic Fastener 8 with through bore, St
1 Automatic Fastener 8 with threaded bore, St
Hex. Socket Head Cap Screw DIN 912-M6x50, St
2 Caps, PA-GF, black
s = 6 A/F
$M_{stainl.}$ = 11 Nm
m = 43.0 g

stainless, 1 set **0.0.444.15**



Automatic Butt-Fastening Set 12
1 Automatic Fastener 12 with through bore, St
1 Automatic Fastener 12 with threaded bore, St
1 Hexagon Socket Head Cap Screw DIN 912-M8x80, St
s = 8 A/F
$M_{bzp.}$ = 34 Nm
m = 140.0 g

bright zinc-plated, 1 set **0.0.003.51**

Mitre-Butt-Fastening Set 8

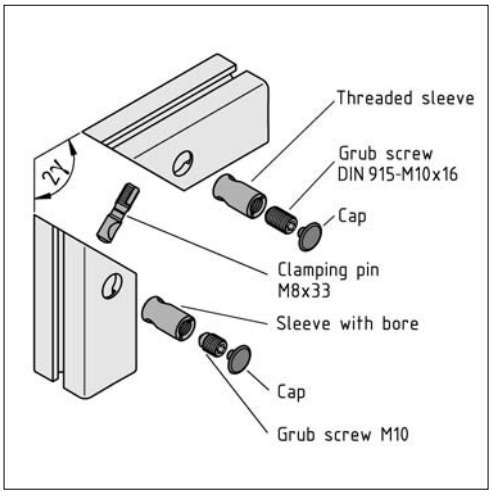
New in catalogue

Mitre-Butt-Fastening Sets are suitable for connecting two profiles at an angle. They are used primarily when constructing frame elements and panel edging. The profile grooves facing each other inside the frame remain unobstructed so they can be used for holding panel elements.
Two mitred profiles (each with an identical angle γ between 30° and 90°) are connected together. This gives a possible angle between the profiles of (2γ) between 60° and 180°.

The position of the clamping pins at right angles to the cut profile edge generates particularly high clamping forces on the fastening elements. The clamping screws are accessed from the side of the profile frame.

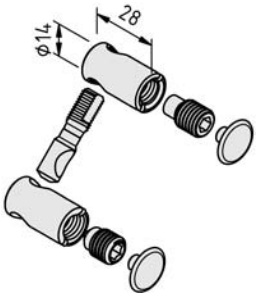
Note:
Despite the optimized design, the flow of forces across the inclined contact faces of the profiles is such that only part of the pretension of the screw connection is utilized. Mitre connections therefore have a lower load bearing capacity than other, right-angled profile connections (Standard-Fastening, Universal-Fastening or Automatic-Fastening Set).
Mitre-Fastening Sets should therefore not be used for constructing basic frames and safety-related parts that are subject to high loads.

Connection processing of the profiles is the same as for the Mitre-Fastening Set 8.
Your item dealer can provide the required mitre cuts and profile processing as a service.



Using Mitre-Butt-Fastening Set 8:
1. Mitre both profiles at an angle γ.
2. Drill counterbores of diameter 14.2 mm for the fastener sleeve in the side of the profile (use of a drilling jig is recommended).
3. Drill a 9 mm dia. hole into the mitred face of both profiles (use of a drilling jig is recommended). The minimum drilling depth is 12 mm.
4. Insert the threaded fastener sleeve into the counterbore of one of the profiles and screw in the clamping pin until the mark around the perimeter is level with the cut profile edge.
5. Secure the clamping pin in the threaded fastener sleeve using grub screw DIN 915 (M = 15 Nm).
6. Insert the fastener sleeve with bore into the second profile and fit the assemblies together.
7. Drive the special grub screw M10 into the fastener sleeve and tighten the profile connection (M = 15 Nm).
8. Fit the Caps onto the fastener sleeves.

5 6 **8** 12



Mitre-Butt-Fastening Set 8
1 clamping pin M8x33, St, bright zinc-plated
1 sleeve with bore, St, bright zinc-plated
1 threaded sleeve, St, bright zinc-plated
1 Grub screw M10, St, bright zinc-plated
1 Grub screw DIN 915-M10x16, St, bright zinc-plated
2 Caps, PA grey
m = 58.0 g

1 set	0.0.492.25

1.3.5 Parallel-Profile Connections

Connection Elements for the continuous connection of several profiles in longitudinal direction.
The Connection Profiles allow the user to create "composite profiles" with large external dimensions and corresponding tolerances, but with the small tolerances needed in the area of the groove geometry or the core bores. These small tolerances allow the use of all components in the MB Building Kit System, in particular fasteners, dynamic elements etc.

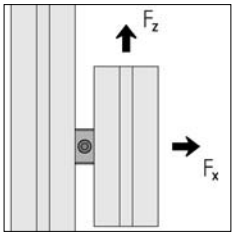
The load-carrying capacity of the attached composite profiles depends on the construction design and must be determined for each case individually.

Parallel Fastener 8

item Innovation
German
utility model
202 12 811

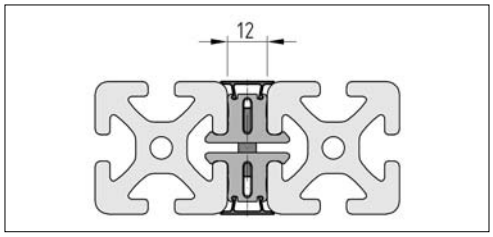
Element for fastening two parallel Line 8 Profiles at a distance of 12 mm.

Parallel Fastener 8 is very easy to use: Both halves of the spring loaded fastener engage in the profile grooves facing each other. This fixes the profiles in position. The fastener is then clamped by tightening an internal screw.



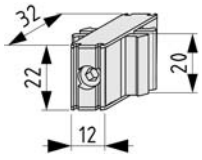
Max. torque for the tensioning screw:
M = 2.5 Nm

Permissible loading force per Fastener:
F_x = 1,000 N
F_z = 100 N



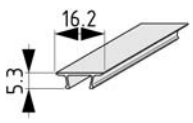
Using the Parallel Fastener 8 Cover Profile:
The gap (12 mm wide) between the profiles which is generated when Parallel Fastener 8 is used can be covered in full using this profile.
The Cover Profile can be fitted over at least 2 Parallel Fasteners 8.
Parallel Fastener 8 Cover Profile Cap covers the end-face gap between the profiles when using Parallel Fastener 8 Cover Profiles.

5 6 **8** 12



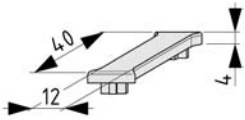
Parallel Fastener 8
2 clamping elements, Al, anodized natural
Housing, PA-GF, black
Compression spring
Tensioning screw, St, bright zinc-plated
m = 21.0 g

1 set	0.0.476.58



Parallel Fastener 8 Cover Profile
Al, anodized
m = 50 g/m

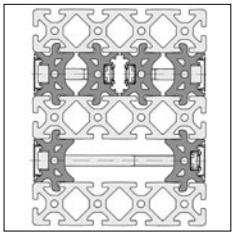
natural, 1 pce., length 2000 mm	0.0.476.59

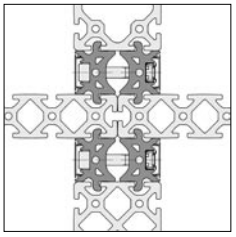


Parallel Fastener 8 Cover Profile End Cap
PA-GF
m = 2.5 g

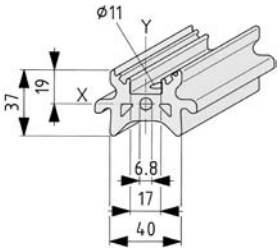
black, 1 pce.	0.0.476.60

Connection Profiles





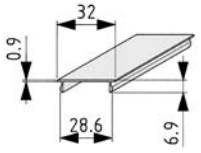
Connection Profile 8 40 is supplied in pairs and machined with ∅ 11 mm bores (bore spacing 200 mm) for the fastening screws.
Use of Captive Nuts (designed to fix positions and prevent torsion) allows the Connection Profile to be secured from one side. Hexagon Socket Head Cap Screws (tightening torque M = 34 Nm) DIN 912-M10x60, M10x100 or M10x140 (Section 3.2 Screws and Universal-Elements) of the corresponding lengths are used to join Connection Profiles.
The joint or screw heads and Captive Nuts can be fitted with a dust-tight Cover Profile 32.



Connection Profile 8 40
Al, anodized
(The values apply for an individual profile section and not for a pair)

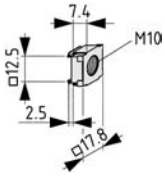
A =	8.97 cm²	I_x =	5.73 cm⁴	I_y =	19.85 cm⁴		
		I_t =	4.53 cm⁴				
m =	2.42 kg/m	W_x =	2.90 cm³	W_y =	6.96 cm³		

natural, cut-off max. 6000 mm, 1 pair	0.0.422.35



Cover Profile 32
Al, anodized
A = 0.41 cm²
m = 0.11 kg/m

natural, cut-off max. 3000 mm	0.0.420.43



Captive Nut M10
Cage and square nut, St
m = 8.0 g

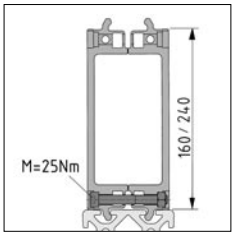
bright zinc-plated, 1 pce.	8.0.004.02

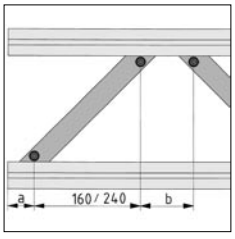
Connection Profiles 8 160 and 8 240 are supplied in pairs and machined with bores for the fastening screws DIN 912-M8x60 (Section 3.2 Screws and Universal-Elements) and Hexagon Nuts DIN 934-M8.

The Connection Profile Braces 8 are ready-to-install kits complete with screws and nuts.

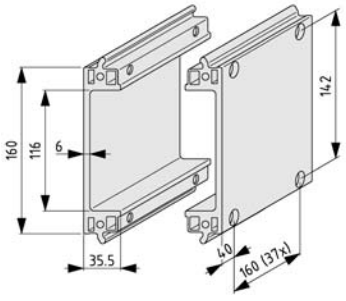
www.item.info

item Innovation
German patent
199 49 650



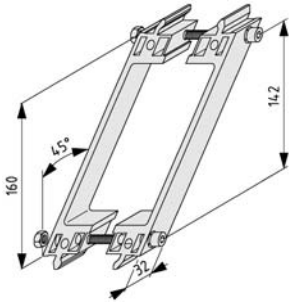


The Connection Profile Braces (45° sections of the Connection Profiles) are suitable for constructing lightweight, open “composite profiles”. These Connection Profile Braces consist of left and right diagonal sections together with the corresponding nuts and bolts. They can be retrofitted at any point and any distance (dimension a / b) along the profiles which are being joined. With a fixed spacing of 160 or 240 mm, the Connection Profiles Braces represent an inexpensive alternative to the latticework construction.



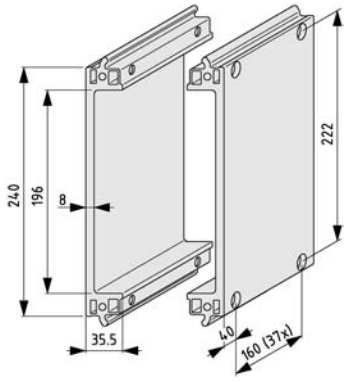
Connection Profile 8 160
Al, anodized
(The values apply for an individual profile section and not for a pair)
A = 17.80 cm² I_x = 16.70 cm⁴ I_y = 606.30 cm⁴
m = 4.76 kg/m W_x = 6.70 cm³ W_y = 67.80 cm³

natural, cut-off max. 6000 mm, 1 pair	0.0.458.03



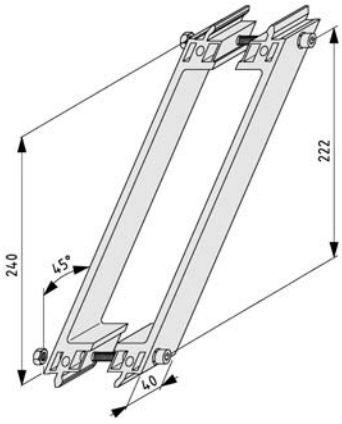
Connection Profile Brace 8 160-45°
Al, anodized, natural
1 Brace right
1 Brace left
2 Hexagon Socket Head Cap Screws DIN 912-M8x60, St, bright zinc-plated
2 Hexagon Nuts DIN 934-M8, St, bright zinc-plated
$a_{min.}$ = 33 mm (recommended 40 mm)
$b_{min.}$ = 65 mm (recommended 80 mm)
m = 488.0 g

1 set	0.0.458.18



Connection Profile 8 240
Al, anodized
(The values apply for an individual profile section and not for a pair)
A = 26.00 cm² I_x = 19.20 cm⁴ I_y = 1,804.00 cm⁴
m = 6.97 kg/m W_x = 7.10 cm³ W_y = 139.30 cm³

natural, cut-off max. 6000 mm, 1 pair	0.0.458.17



Connection Profile Brace 8 240-45°
Al, anodized, natural
1 Brace right
1 Brace left
2 Hexagon Socket Head Cap Screws DIN 912-M8x60, St, bright zinc-plated
2 Hexagon Nuts DIN 934-M8, St, bright zinc-plated
$a_{min.}$ = 38 mm (recommended 40 mm)
$b_{min.}$ = 76 mm (recommended 80 mm)
m = 846.0 g

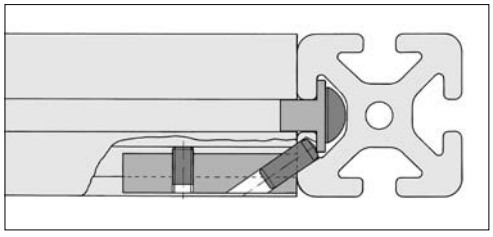
1 set	0.0.458.21

1.3.6 Secure Connections

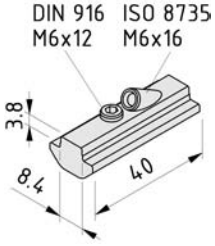
To reinforce power-lock profile connections, additional, positive-lock devices must be provided under certain loads (e.g. impact).

Pin Elements

The Pin Element is used for positive locking of power-lock connections, e.g. for horizontal braces of continuous vertical profiles which are subject to heavy load. The Pin Element can be used, preferably in pairs, to provide additional support for Standard, Universal and Automatic Fasteners.



The Pin Element is inserted into the profile groove in the end face and, after applying the Standard, Universal or Automatic Fasteners, is then pushed against the end of the profile and fixed in position. A hole (Line 8: ∅ 5.9 mm; Line 12: ∅ 9.9 mm) is drilled in the profile to accommodate the dowel. The resistance of the fastener to moving increases per element to max. 3,000 N (Line 8) to max. 6,000 N (Line 12).



Pin Element 8
Body, St, bright zinc-plated
Grub screw DIN 916-M6x12, St, bright zinc-plated
Dowel DIN 7979-6m6x16, St, hardened
m = 34.0 g

1 pce.	0.0.265.37

New in catalogue

Pin Element 12
Body, St, bright zinc-plated
Grub screw DIN 913-M10x16, St, bright zinc-plated
Dowel DIN 7979-10m6x24, St, hardened
m = 100.0 g

1 pce.	0.0.010.06

2

Floor Elements

Adjustable Feet
Castors
Accessories for Floor Elements

The Floor Elements product group comprises:
> Adjustable Feet for jigs, machines and enclosures
> Castors for apparatus, containers and other mobile applications
> Special elements for securing constructions to the floor or wall
> Transport and base plates for connecting adjustable feet and castors to various applications

When selecting floor elements, it is important to take into account the dynamic forces which are anticipated.
Floor elements are also used to compensate the height and angle relative to the fastening face.

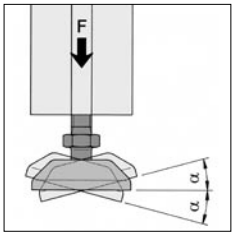
2.1 Adjustable Feet

2.1.1 Knuckle Feet

The infinitely adjustable feet are suitable for structures of all kinds.
Depending on the particular application, the adjustable feet can be fitted in the core bores of profiles or used in combination with Base Plates / Transport Plates. The range of applications can be extended by appropriate inserts and foot clamps.
The minimum foot height is obtained by removing the counter nut.

Knuckle feet in stainless steel for use in areas that are at risk of corrosion. The fact that they are electrically conductive means that they can also be used for desks and devices in areas that are susceptible to ESD.

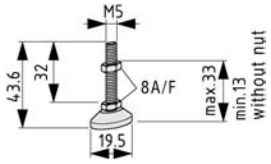
Note:
The protective conductor of a machine or device must not be connected via a conductive knuckle foot. An additional Earthing Terminal (Section 6.1 Electrical Discharge) with a separate cable is required for this purpose.



Slope compensation is by means of ball and socket.

Adjustable Foot	Load F (vertical)	Slope α
D20, M5x45	750 N	15°
D20, M5x45 stainless	1,500 N	7°
D30, M6x45	900 N	15°
D30, M6x45 stainless	1,500 N	7°
D30, M6x60	900 N	15°
D40, M8x60	1,500 N	15°
D40, M8x60 stainless	10,000 N	7°
D40, M8x80	1,500 N	15°
D40, M10x80	1,500 N	15°

Adjustable Foot	Load F (vertical)	Slope α
D60, M10x75	5,000 N	7°
D60, M12x75	5,000 N	7°
D60, M12x75 stainless	15,000 N	7°
D60, M10x120	5,000 N	7°
D60, M12x120	5,000 N	7°
D80, M10x80	10,000 N	7°
D80, M12x100	10,000 N	7°
D80, M16x100	10,000 N	7°
D80, M16x100 stainless	20,000 N	7°
D80, M12x160	10,000 N	7°
D80, M16x160	10,000 N	7°

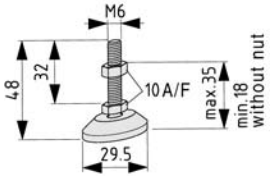


Knuckle Foot D20, M5x45
Spindle, St, bright zinc-plated
Foot plate, PA, black
Hexagon nut DIN 934-M5, St, bright zinc-plated
m = 7.0 g

1 pce.	0.0.464.75

Knuckle Foot D20, M5x45
Spindle, St
Foot plate, St
Hexagon nut DIN 934-M5, St
m = 19.0 g

stainless, 1 pce.	0.0.464.81

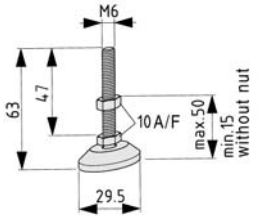


Knuckle Foot D30, M6x45
Spindle, St, bright zinc-plated
Foot plate, PA, black
Hexagon nut DIN 934-M6, St, bright zinc-plated
m = 16.0 g

1 pce.	0.0.434.52

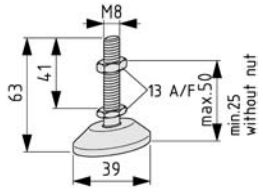
Knuckle Foot D30, M6x45
Spindle, St
Foot plate, St
Hexagon nut DIN 934-M6, St
m = 47.0 g

stainless, 1 pce.	0.0.478.22



Knuckle Foot D30, M6x60
Spindle, St, bright zinc-plated
Foot plate, PA, black
Hexagon nut DIN 934-M6, St, bright zinc-plated
m = 17.0 g

1 pce.	0.0.434.51

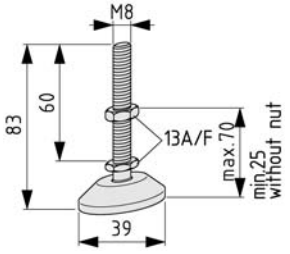


Knuckle Foot D40, M8x60
Spindle, St, bright zinc-plated
Foot plate, PA, black
Hexagon nut DIN 934-M8, St, bright zinc-plated
m = 37.0 g

1 pce.	0.0.364.68

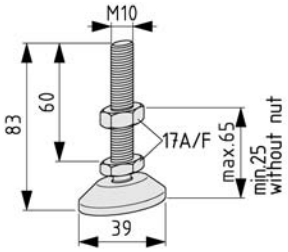
Knuckle Foot D40, M8x60
Spindle, St
Foot plate, St
Hexagon nut DIN 934-M8, St
m = 107.0 g

stainless, 1 pce.	0.0.475.41



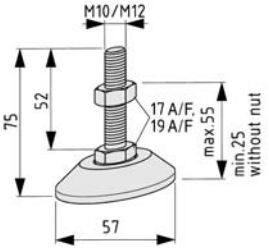
Knuckle Foot D40, M8x80
Spindle, St, bright zinc-plated
Foot plate, PA, black
Hexagon nut DIN 934-M8, St, bright zinc-plated
m = 43.0 g

1 pce.	0.0.265.69



Knuckle Foot D40, M10x80
Spindle, St, bright zinc-plated
Foot plate, PA, black
Hexagon nut DIN 934-M10, St, bright zinc-plated
m = 65.0 g

1 pce.	0.0.265.74



Knuckle Foot D60, M10x75
Spindle, St, bright zinc-plated
foot plate, die-cast zinc, black
Hexagon nut DIN 934-M10, St, bright zinc-plated
m = 140.0 g

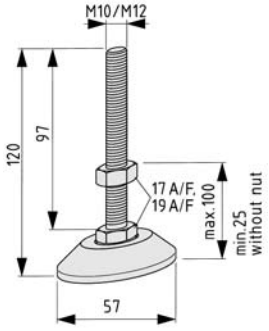
1 pce.	0.0.439.29

Knuckle Foot D60, M12x75
Spindle, St, bright zinc-plated
foot plate, die-cast zinc, black
Hexagon nut DIN 934-M12, St, bright zinc-plated
m = 162.0 g

1 pce.	0.0.439.22

Knuckle Foot D60, M12x75
Spindle, St
Foot plate, St
Hexagon nut DIN 934-M12, St
m = 185.0 g

stainless, 1 pce.	0.0.478.13

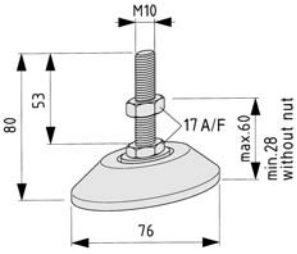


Knuckle Foot D60, M10x120
Spindle, St, bright zinc-plated
Foot plate, die-cast zinc, black
Hexagon nut DIN 934-M10, St, bright zinc-plated
m = 163.0 g

1 pce.	0.0.439.30

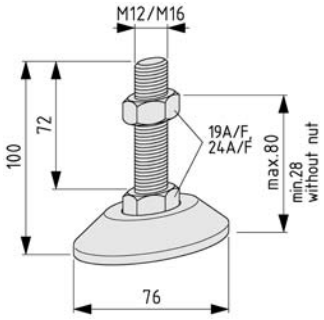
Knuckle Foot D60, M12x120
Spindle, St, bright zinc-plated
Foot plate, die-cast zinc, black
Hexagon nut DIN 934-M12, St, bright zinc-plated
m = 193.0 g

1 pce.	0.0.439.23



Knuckle Foot D80, M10x80
Spindle, St, bright zinc-plated
Foot plate, die-cast zinc, black
Hexagon nut DIN 934-M10, St, bright zinc-plated
m = 263.0 g

1 pce.	0.0.432.84



Knuckle Foot D80, M12x100
Spindle, St, bright zinc-plated
Foot plate, die-cast zinc, black
Hexagon nut DIN 934-M12, St, bright zinc-plated
m = 300.0 g

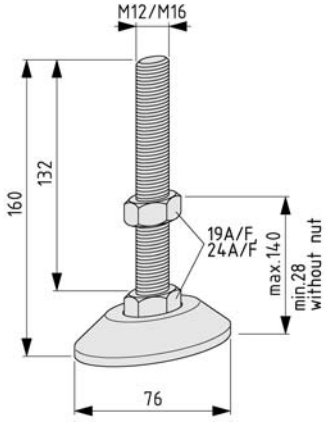
1 pce.	0.0.265.67

Knuckle Foot D80, M16x100
Spindle, St, bright zinc-plated
Foot plate, die-cast zinc, black
Hexagon nut DIN 934-M16, St, bright zinc-plated
m = 366.0 g

1 pce.	0.0.265.29

Knuckle Foot D80, M16x100
Spindle, St
Foot plate, St
Hexagon nut DIN 934-M16, St
m = 435.0 g

stainless, 1 pce.	0.0.476.39



Knuckle Foot D80, M12x160
Spindle, St, bright zinc-plated
Foot plate, die-cast zinc, black
Hexagon nut DIN 934-M12, St, bright zinc-plated
m = 340.0 g

1 pce.	0.0.265.68

Knuckle Foot D80, M16x160
Spindle, St, bright zinc-plated
Foot plate, die-cast zinc, black
Hexagon nut DIN 934-M16, St, bright zinc-plated
m = 450.0 g

1 pce.	0.0.265.66

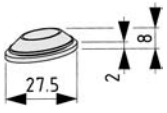
2.1.2 Accessories for Knuckle Feet

The accessories extend the range of applications for Levelling feet.

Rubber Inserts

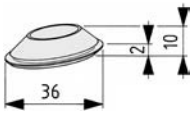
The Rubber Inserts are suitable for use as anti-slip devices and floor protectors.
They can be retrofitted to Knuckle Feet D30 and D40 (not the stainless models) and D60 and D80.

Rubber Insert D80 can also be used in combination with Adjustable Foot 8 PA.This increases the overall height of the Adjustable Foot by 12 mm.



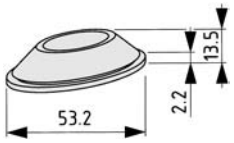
Rubber Insert D30
NBR
hardness 80 Sh A, oil and water resisting
m = 3.0 g

black, 1 pce.	0.0.434.50



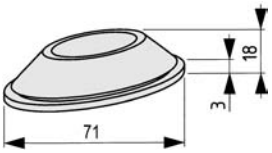
Rubber Insert D40
NBR
hardness 80 Sh A, oil and water resisting
m = 6.0 g

black, 1 pce.	0.0.265.70



Rubber Insert D60
NBR
hardness 80 Sh A, oil and water resisting
m = 18.0 g

black, 1 pce.	0.0.439.33



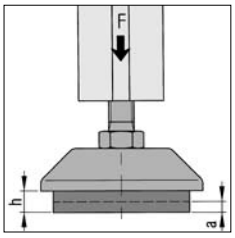
Rubber Insert D80
NBR
hardness 80 Sh A, oil and water resisting
m = 42.0 g

black, 1 pce.	0.0.265.61

Anti-Vibration Insert

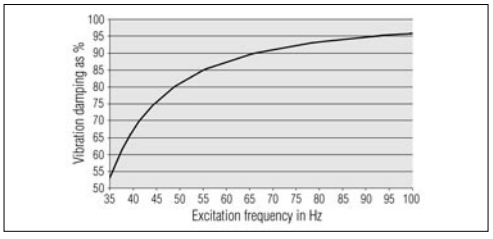
The Anti-Vibration Insert can be inserted into Knuckle Foot D80 to absorb shocks and vibrations by internal friction.
The material is resistant to aging and corrosion as well as to oils, greases, acids and solvents.

Using the Anti-Vibration Insert in Knuckle Foot D80 stainless enables electrostatic charge to be discharged through it.

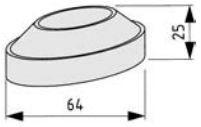


F	a
2,000 N	4 mm
10,000 N	6 mm

The effective height (h) when not under load is 9 mm. The value of h decreases by the spring distance a as a function of the force F.



The degree of vibration damping depends on the excitation frequency. Shocks (excitation below the natural frequency) will be reduced by the self-damping.

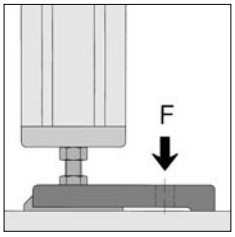


Anti-Vibration Insert D80
St
Self-damping: Approx. 15%
Natural frequency: 20-25 Hz
Resonance ratio: Approx. 3.3
Static load F_{stat}: 2,000 N
Max. dynamic pressure loading F_{dyn}: 10,000 N
m = 115.0 g

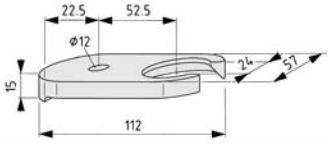
stainless, 1 pce.	0.0.458.93

Foot Clamps

Foot Clamps are used, particularly in conjunction with the Floor-Fastening Sets, for floor or wall mounting of Knuckle Feet D60 and D80.
Floor-Fastening Sets (Section 2.3 Accessories for Floor Elements) should be used for mounting.

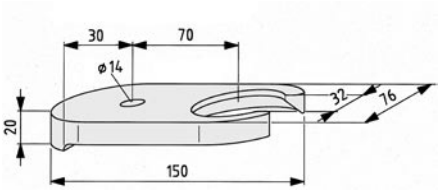


The permissible load for the Foot Clamps at the fastening point is $F_{perm.}$ = 5,000 N.



Foot Clamp D60
Die-cast zinc
m = 223.0 g

black, 1 pce.	0.0.439.37



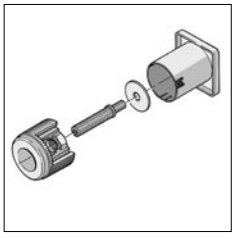
Foot Clamp D80
Die-cast zinc
m = 492.0 g

black, 1 pce.	0.0.265.30

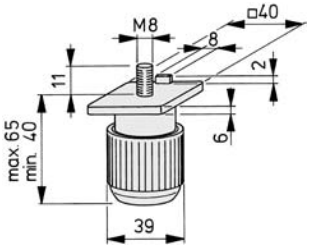
2.1.3 Special Adjustable Feet

These Adjustable Feet and fastenings are designed for special applications such as furniture building and protective walls for conveyor equipment and heavy-duty machinery.

Adjustable Foot PA



5 6 **8** 12



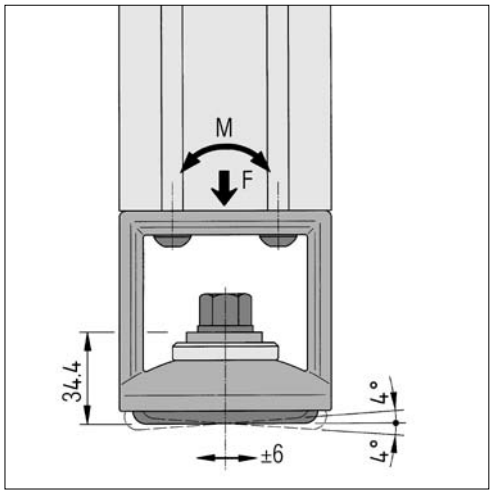
Adjustable Foot 8 PA is a height-adjustable foot for tables and light equipment.
The height can be adjusted without the need for tools by simply turning the lower part of the foot.

Adjustable Foot 8 PA
Housing, PA-GF, black
Spindle, nut and washer, St, bright zinc-plated
F = 1,500 N
m = 71.0 g

1 pce.	0.0.196.64

Adjustable Ball Foot 8 80x40

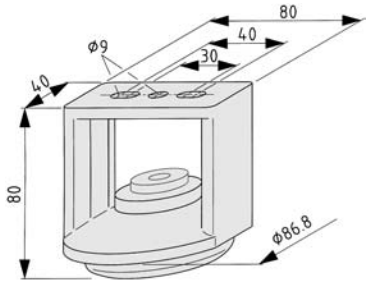
Adjustable Ball Foot 8 80x40 is suitable for securing the Stand Profiles of cell guarding to the floor. It does not protrude beyond the face of the protective fence's Stand Profile at any point.
The integrated ball joint enables the adjustable foot to be inclined by ±4° and moved horizontally by ±6 mm.
Profiles can be secured to the floor by using a central Floor Fastening Set M12x150 (Section 2.3 Accessories for Floor Elements) or suitable Chemical Fixing Bolt.
The connection holes can be used for securing Profiles of Lines 8 and 6 to the body of the Adjustable Ball Foot.



The ball socket and ring adjust to uneven floors. The Adjustable Ball Foot can also be moved horizontally.

F =10,000 N
M = 150 Nm

5 6 8 12

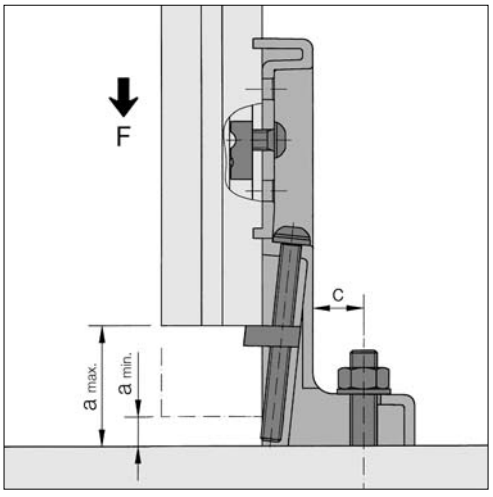


Adjustable Ball Foot 8 80x40
Body die-cast zinc, black
2 washers St, bright zinc-plated
Ring St, bright zinc-plated
m = 850.0 g

1 pce.	0.0.458.57

L-Based Feet

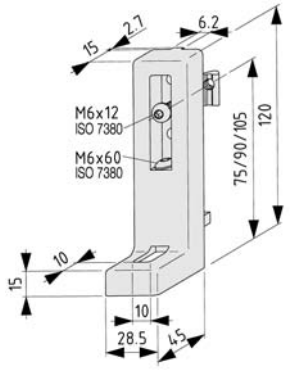
L-Based Feet are ideal for wall and floor mounting of light-duty and floor mounting of heavy-duty equipment.
They are secured to the profile by a Fastening Screw and T-Slot Nut.
Floor Fastening Set M8x95 (Section 2.3 Accessories for Floor Elements) should be used for wall or floor mounting.



The adjustable L-Based Foot provides an easy means of compensating for any unevenness of the floor or for height adjustment.
The foot is adjusted by turning the setting screw. The selected height should be fixed in position by tightening the lateral Fastening Screw.

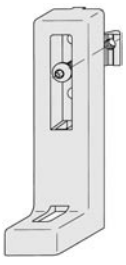
L-Based Feet	a [mm] max.	a [mm] min	c [mm]	$F_{max.}$
6	53.5	8.5	8 - 16	3,000 N
8	75.0	10.0	13 - 25	6,000 N

5 6 8 12



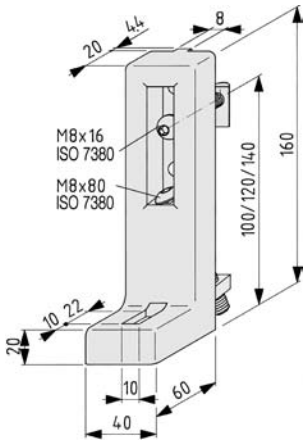
L-Based Foot 6 adjustable
Housing, die-cast aluminium, black
T-Slot Nut 6 St M6, bright zinc-plated
Button-Head Screw ISO 7380-M6x12, St, bright zinc-plated
Button-Head Screw ISO 7380-M6x60, St, bright zinc-plated and slide-coated
Square nut M6, St, bright zinc-plated
m = 111.0 g

1 pce. 0.0.434.71



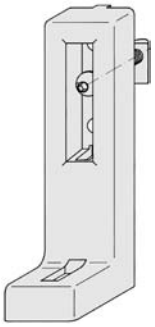
L-Based Foot 6 non-adjustable
Housing, die-cast aluminium, black
T-Slot Nut 6 St M6, bright zinc-plated
Button-Head Screw ISO 7380-M6x12, St, bright zinc-plated
m = 91.0 g

1 pce. 0.0.434.70



L-Based Foot 8 adjustable
Housing, die-cast aluminium, black
T-Slot Nut 8 St M8, bright zinc-plated
Button-Head Screw ISO 7380-M8x16, St, bright zinc-plated
Button-Head Screw ISO 7380-M8x80, St, bright zinc-plated and slide-coated
Square nut M8, St, bright zinc-plated
m = 272.0 g

1 pce.	0.0.196.45



L-Based Foot 8 non-adjustable
Housing, die-cast aluminium, black
T-Slot Nut 8 St M8, bright zinc-plated
Button-Head Screw ISO 7380-M8x16, St, bright zinc-plated
m = 223.0 g

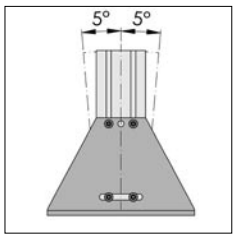
1 pce.	0.0.265.44

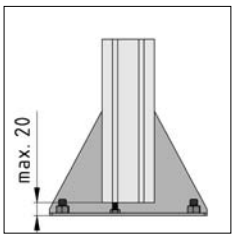
Stand Foot 8 240x160

New in catalogue

Stand Feet 8 240x160 are a particularly cost-effective and sturdy means of securing the stand profiles of free-standing enclosures and guards to the floor.
The Stand Feet are secured to the stand profiles by screwing them to the profile grooves. Line 8 Profiles, preferably with a cross-section of 80x40 mm or larger, are used for the stand profiles.
The diameter 18 mm through holes for securing the Stand Feet to the floor can also be accessed after the feet have been installed and enable subsequent drilling of the anchoring holes.

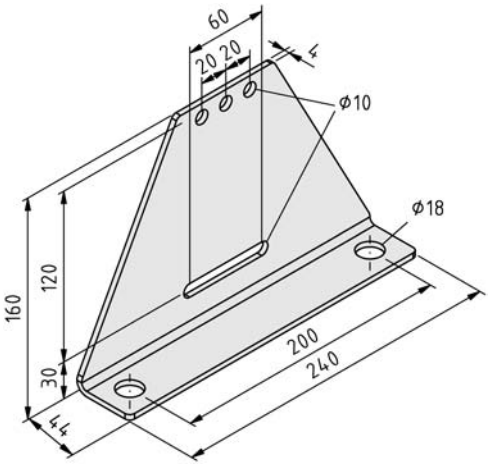
To ensure that high loads are directed into the floor, use of Floor-Fastening Sets M12x150 or Chemical Fixing Bolts M12x220 is recommended.





The slot fastening feature near the bottom of the Stand Foot can be used to adjust the angle in order to compensate for uneven floors (± 5°).

The height can be adjusted by means of a screw inserted into a thread in the core bore in the end face of the stand profile.



Stand Foot 8 240x160
St
m = 1.07 kg

black, 1 pce.	0.0.492.47

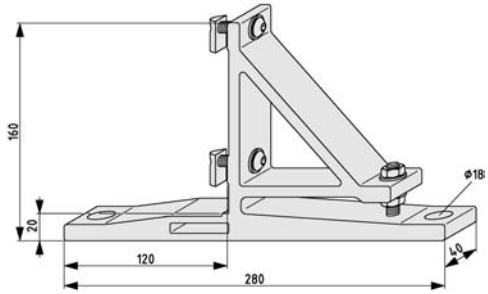
Adjustable Stand Foot 8

New in catalogue

Adjustable Stand Foot 8 can be universally used to provide Stand Profiles of partitions, tables and shelving systems with a stable connection to the floor. Various adjustment options mean that the Adjustable Stand Foot can be adapted to the properties of the floor (height, flatness). The Stand Profile can be tilted as necessary using the hexagon nuts and screw (±3°). The Stand Profile is adjusted in vertical direction by moving it along the profile groove. Lateral alignment on the floor is facilitated by the large diameters of the holes for the Floor Fastening Sets.

The through holes for securing to the floor can be accessed when the Adjustable Stand Foot has already been fitted, so that the anchoring holes can be drilled subsequently.

item Innovation
German patent
and foreign patents
EP 1 477 624



Adjustable Stand Foot 8
Adjustable Stand Foot, Al, anodized, natural
2 T-Slot Nuts 8 St M8, St, bright zinc-plated
2 Button-Head Screws ISO 7380-M8x20, St, bright zinc-plated
2 Hexagon Nuts DIN 934-M8, St, bright zinc-plated
4 Washers DIN 125-8,4, St, bright zinc-plated
1 Button-Head Screw ISO 7380-M8x45, St, bright zinc-plated
m = 795.0 g

1 set	0.0.486.17

Adjustable Stand Foot Side Brace 8

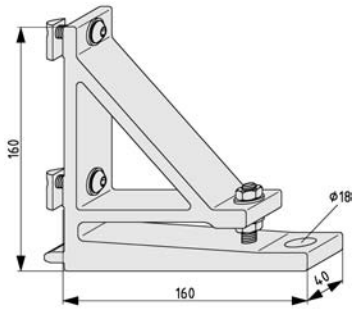
New in catalogue

item Innovation
German patent
and foreign patents
EP 1 477 624

Adjustable Stand Foot Side Brace 8 is used to provide lateral support to an enclosure erected using Adjustable Stand Foot 8. It is inserted into Adjustable Stand Foot 8 and is also screwed to the Stand Profile.

The inclination is set in the same way as the Adjustable Stand Foot, using a setscrew. Used in conjunction with Adjustable Stand Foot 8, the Stand Profile can then be aligned in all planes.

5 6 **8** 12

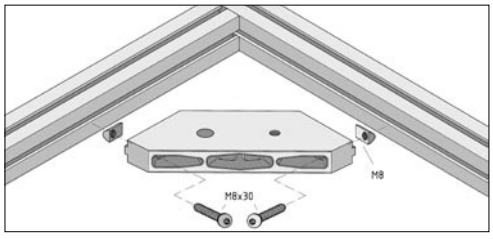


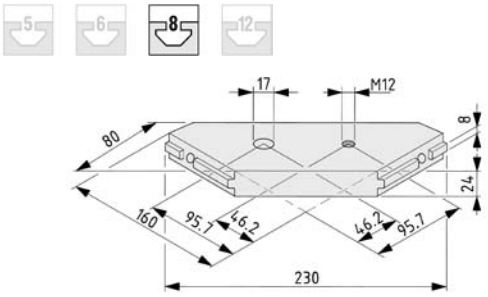
Adjustable Stand Foot Side Brace 8
Adjustable Stand Foot Side Brace, Al, anodized, natural
2 T-Slot Nuts 8 St M8, St, bright zinc-plated
2 Button-Head Screws ISO 7380-M8x20, St, bright zinc-plated
2 Hexagon Nuts DIN 934-M8, St, bright zinc-plated
4 Washers DIN 125-8,4, St, bright zinc-plated
1 Button-Head Screw ISO 7380-M8x45, St, bright zinc-plated
m = 655.0 g

1 set 0.0.486.18

Floor-Fixing Plate

The Floor-Fixing Plate is used for floor mounting and levelling of machine frames.





Floor-Fixing Plate 8
Die-cast aluminium
$F_{max.}$ = 10,000 N
m = 610.0 g

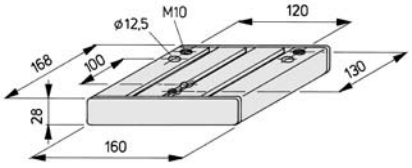
black, 1 pce.	0.0.388.12

Fastening Set 8 on profile side for Floor-Fixing Plate 8
2 Button-Head Screws ISO 7380-M8x30, St, bright zinc-plated
2 T-Slot Nuts 8 St M8, bright zinc-plated
m = 44.0 g

1 set	0.0.404.19

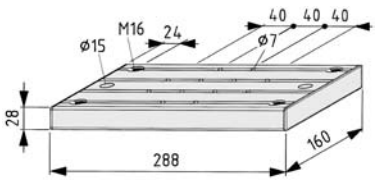
Base Plates

The Base Plates are used for attaching Stand Profiles to the floor and levelling them.



Base Plate 8 160
Base plate, Al, anodized, natural
2 Caps 8 160x28, PA, black
3 grub screws DIN 915-M10x30, St, bright zinc-plated
3 Floor-Fastening Sets M10x135
m = 1.6 kg

1 pce.	0.0.026.17



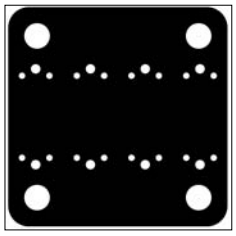
Base Plate 8 280
Base plate, Al, anodized, natural
2 Caps 8 160x28, PA, black
m = 2.3 kg

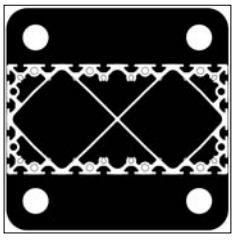
1 pce.	0.0.388.69

Base Plate 8 320x320 St

Stable Base Plate, suitable as heavy-duty machine base or for anchoring heavy frames.
The hole pattern for the countersinks can be used for end-face connection to Profiles 8 160x160, 160x160 8EN, 240x160 8EN and 320x160.
The Base Plate can be fastened to the floor in two ways - either by bolting it directly to the floor or by also using Levelling Feet. These compensate for slight unevenness of the floor in the area of the Base Plate as well as possible height differences.

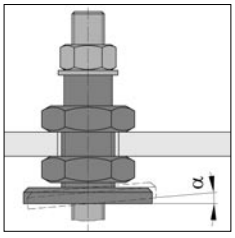
The Floor-Fastening Sets (Section 2.3 Accessories for Floor Elements) are fed through the bores in the Levelling Feet. When these are tightened the Levelling Feet are fixed in their preset position.





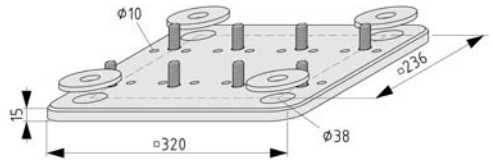
Base Plate 8 320x320 St II has been prepared for screwing into the core bores of the profiles (8 countersinks for Hexagon Socket Head Cap Screws DIN 7984-M12 in Profiles 8 320x160 and 8 160x160, and countersinks for Hexagon Socket Head Cap Screws DIN 912-M8 in Profiles 8 160x160 8EN or 8 240x160 8EN).

It is fastened to the floor using bores ∅ 38 mm and washers DIN 440.



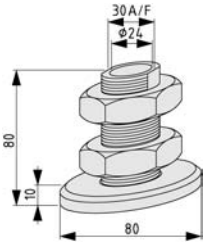
The lower hexagon nut (50 A/F) is adjusted to set the height of the Levelling Feet. The hollow stud must be prevented from twisting (30 A/F).
Any unevenness is compensated for by means of a ball socket in the base plate (α = ± 2.5°).

5 6 **8** 12



Base Plate 8 320x320 St
St, painted
8 Cap Screws DIN 7984-M12x45, St, bright zinc-plated
4 washers DIN 440-R22, St, black
m = 11.6 kg

1 set	0.0.476.70



Levelling Feet D80, M33x80
4 base plates, St, bright zinc-plated
4 hollow studs, St, bright zinc-plated
8 hexagon nuts DIN439-M33x2, St, bright zinc-plated
m = 3.5 kg

1 set	0.0.480.91

2.2 Castors

Castors, Swivel and Fixed

Castors are available in a range of sizes, in the form of Swivel Castors, Swivel Castors with double brake (brake for wheel axis and swivelling axis) and Fixed Castors.

The castors feature easy movement and high load-bearing capacity. They are capable of withstanding the majority of adverse environmental conditions.

The castors are also available with anti-static properties, with tyres and fully-conductive wheels or housings, for use in electronics environments. The discharge resistance of the antistatic version is 10^5 Ω.

The specified carrying capacities are maximum values under ideal operating conditions, at walking speed (max. 4 km/h) and over smooth and flat surfaces. If the floor is uneven or the weight is distributed unevenly, the load is calculated separately for each Castor using the following formula:

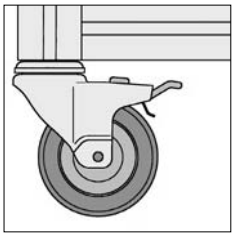
$$F = \frac{\text{dead weight + load}}{3}$$

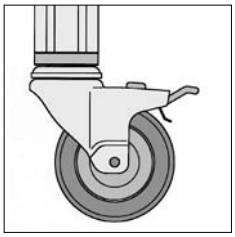
Castor line D65 (castor diameter 65 mm) consists of the variants: Swivel Castor and Swivel Castor with brake (brake for wheel axis).

Castor lines D75 and D125 consist of the variants: Swivel Castor, Swivel Castor with double-brake (brake for wheel axis and swivelling axis) and Fixed Castor.

Due to its special design and the materials used Castor Line D125 heavy duty can accommodate particularly high wheel loads. The permissible load on one D125 Castor heavy duty is 4,500 N.
To maximise ease of running, these cast-iron castors are fitted with sealed ball bearings and coated with a layer of cast polyurethane.
Fastening is by means of the Castor Adapter Plates.

Unlike Castor D125 swivel with double-brake heavy duty, the N version allows the lock to be actuated from the trailing side. The combination of two Castors D125 swivel with double-brake and two Castors D125 swivel with double-brake N thus enables a heavy structure on swivel castors to be locked at all four castors, since the locks can always be reached easily. This prevents the structure from being moved or rolling away.

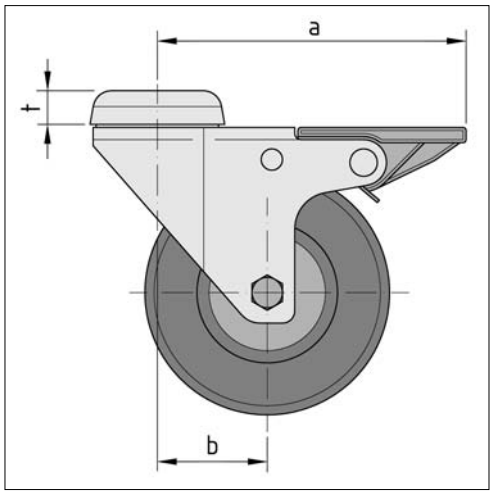




The castors can be secured in the end faces of all Profile Lines by means of a thread in the core bore (counter boring and tapping may be required) or by using Base Plates/Transport Plates (Section 2.3 Accessories for Floor Elements).

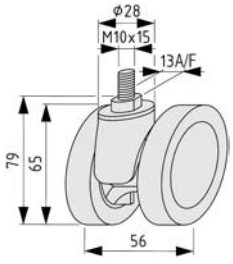
The castors can be fitted to the groove side of the profiles using appropriate Base Plates/Transport Plates (thread lengths may need to be compensated by washers DIN 125). A combination with Floor-Fastening Plate 8 (Section 2.1 Adjustable Feet) is also possible for specific applications.

Resistance of tyring (x = yes; - = no)	Castor Line D65		Castor Line D75		Castor Line D80		Castor Line D125		Castor Line D125 heavy-duty
	PU		TPE		TPE		TPE		PU
Water	x	x	x	x	x	x	x	x	x
Salt water	x	x	x	x	x	x	x	x	x
Road-salt solution	x	x	x	x	x	x	x	x	x
Oils	x	x	x	x	-	-	-	x	x
Animal and vegetable fats	x	x	x	x	-	-	-	x	x
Diesel oil	x	x	x	x	-	-	x	-	x
Petrol	-	-	-	-	-	-	-	-	-
Cleansing agents	x	x	x	x	-	-	x	-	x
Soap solutions up to approx. 50° C	x	x	x	x	-	-	-	x	x



	Radius of Swivel (a)	Offset (b)	Thick-ness (t)
Castor D65 swivel	57.0 mm	20.0 mm	-
Castor D65 swivel with brake	68.0 mm	20.0 mm	-
Castor D75 swivel	70.0 mm	30.5 mm	5 mm
Castor D75 swivel with double-brake	85.0 mm	30.5 mm	5 mm
Castor D75 fixed	-	-	2 mm
Castor D80 swivel	70.0 mm	29.0 mm	12 mm
Castor D80 swivel with brake	95.5 mm	29.0 mm	12 mm
Castor D125 swivel	102.5 mm	40.0 mm	9 mm
Castor D125 swivel with double-brake	130.0 mm	40.0 mm	9 mm
Castor D125 fixed	-	-	14 mm
Castor D125 swivel heavy-duty	108.0 mm	45.0 mm	6 mm
Castor D125 swivel with double-brake heavy-duty	108.0 mm	45.0 mm	6 mm
Castor D125 swivel with double-brake N heavy-duty	136.0 mm	45.0 mm	6 mm
Castor D125 fixed heavy-duty	-	-	6 mm

Castor Line D65

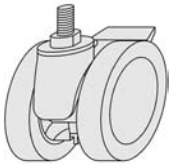


Castor D65 swivel
Housing PA, black
Swivelling axis with ball bearing, wheel axis with slide bearing, threaded pin, adhesive coated, dust shield,
carrying capacity 50 kg/castor
Twin tyres PU, 80 Sh A, black
m = 167.0 g

1 pce. 0.0.444.94

Castor D65 swivel antistatic
Housing PA, black
Swivelling axis with ball bearing,
wheel axis with slide bearing,
threaded pin, adhesive coated,
dust shield,
carrying capacity 50 kg/castor
Twin tyres PU, 80 Sh A, black
m = 172.0 g

1 pce. 0.0.444.92



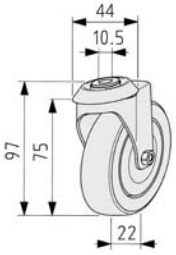
Castor D65 swivel with brake
Housing PA, black
Swivelling axis with ball bearing,
wheel axis with slide bearing,
threaded pin, adhesive coated,
dust shield,
carrying capacity 50 kg/castor
Twin tyres PU, 80 Sh A, black
m = 178.0 g

1 pce. 0.0.444.95

Castor D65 swivel with brake antistatic
Housing PA, black
Swivelling axis with ball bearing,
wheel axis with slide bearing,
threaded pin, adhesive coated,
dust shield,
carrying capacity 50 kg/castor
Twin tyres PU, 80 Sh A, black
m = 183.0 g

1 pce. 0.0.444.93

Castor Line D75



Castor D75 swivel
Sheet-metal housing, bright zinc-plated, black
Swivelling axis with ball bearing,
wheel axis with ball bearing,
dust shield,
carrying capacity 60 kg/castor
Tyres TPE, 80 Sh A, grey
m = 306.0 g

1 pce. 0.0.420.14

Castor D75 swivel antistatic
Sheet-metal housing, bright zinc-plated, black
Swivelling axis with ball bearing,
wheel axis with ball bearing,
dust shield,
carrying capacity 60 kg/castor
Tyres TPE, 80 Sh A, grey
m = 285.0 g

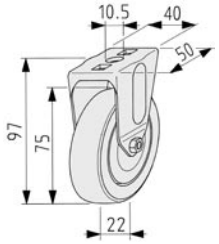
1 pce. 0.0.420.15

Castor D75 swivel with double-brake
Sheet-metal housing, bright zinc-plated, black
Swivelling axis with ball bearing,
wheel axis with ball bearing,
dust shield,
carrying capacity 60 kg/castor
Tyres TPE, 80 Sh A, grey
m = 340.0 g

1 pce. 0.0.420.16

Castor D75 swivel with double-brake antistatic
Sheet-metal housing, bright zinc-plated, black
Swivelling axis with ball bearing,
wheel axis with ball bearing,
dust shield,
carrying capacity 60 kg/castor
Tyres TPE, 80 Sh A, grey
m = 317.0 g

1 pce. 0.0.420.17



Castor D75 fixed
Sheet-metal housing, bright zinc-plated, black
wheel axis with ball bearing,
Anti-torsion block,
dust shield, carrying capacity 60 kg/castor
Tyres TPE, 80 Sh A, grey
m = 260.0 g

1 pce. 0.0.420.12

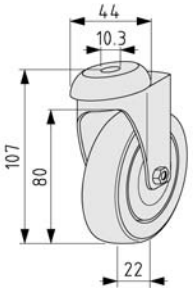
Castor D75 fixed antistatic
Sheet-metal housing, bright zinc-plated, black
wheel axis with ball bearing,
Anti-torsion block,
dust shield, carrying capacity 60 kg/castor
Tyres TPE, 80 Sh A, grey
m = 240.0 g

1 pce. 0.0.420.13

Castor Line D80

5 6 8 12

New in catalogue



Castor D80 swivel
Sheet-metal housing, stainless
Swivelling axis with ball bearing,
wheel axis with plain bearing,
dust shield,carrying capacity 90 kg/castor
Tyres TPE, 85 Sh A, grey
m = 330.0 g

stainless, 1 pce. 1.0.001.08

Castor D80 swivel, antistatic
Sheet-metal housing, stainless
Swivelling axis with ball bearing,
wheel axis with plain bearing,
dust shield, carrying capacity 90 kg/castor
Tyres TPE, 85 Sh A, black
m = 310.0 g

stainless, 1 pce. 1.0.001.97

New in catalogue

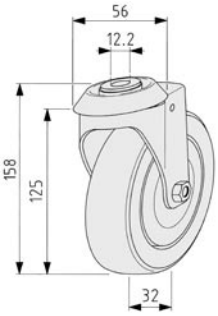
Castor D80 swivel with double-brake
Sheet-metal housing, stainless
Swivelling axis with ball bearing,
wheel axis with plain bearing,
dust shield,carrying capacity 90 kg/castor
Tyres TPE, 85 Sh A, grey
m = 375.0 g

stainless, 1 pce. 1.0.001.09

Castor D80 swivel with double-brake, antistatic
Sheet-metal housing, stainless
Swivelling axis with ball bearing,
wheel axis with plain bearing,
dust shield, carrying capacity 90 kg/castor
Tyres TPE, 85 Sh A, black
m = 355.0 g

stainless, 1 pce. 1.0.001.98

Castor Line D125

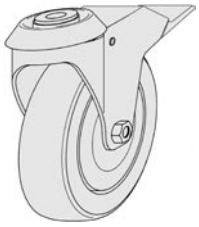


Castor D125 swivel
Sheet-metal casing, bright zinc-plated, black
Swivelling axis with ball bearing,
wheel axis with ball bearing,
dust shield,
carrying capacity 100 kg/castor
Tyres TPE, 80 Sh A, grey
m = 710.0 g

1 pce. 0.0.418.08

Castor D125 swivel antistatic
Sheet-metal casing, bright zinc-plated, black
Swivelling axis with ball bearing,
wheel axis with ball bearing,
dust shield,
carrying capacity 100 kg/castor
Tyres TPE, 80 Sh A, grey
m = 960.0 g

1 pce. 0.0.418.09

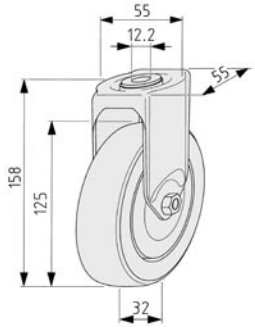


Castor D125 swivel with double-brake
Sheet-metal casing, bright zinc-plated, black
Swivelling axis with ball bearing,
wheel axis with ball bearing,
dust shield,
carrying capacity 100 kg/castor
Tyres TPE, 80 Sh A, grey
m = 860.0 g

1 pce. 0.0.418.10

Castor D125 swivel with double-brake antistatic
Sheet-metal casing, bright zinc-plated, black
Swivelling axis with ball bearing,
wheel axis with ball bearing,
dust shield,
carrying capacity 100 kg/castor
Tyres TPE, 80 Sh A, grey
m = 1.1 kg

1 pce. 0.0.418.11



Castor D125 fixed
Sheet-metal casing, bright zinc-plated, black
wheel axis with ball bearing,
Anti-torsion block
Dust shield, carrying capacity 100 kg/castor
Tyres TPE, 80 Sh A, grey
m = 550.0 g

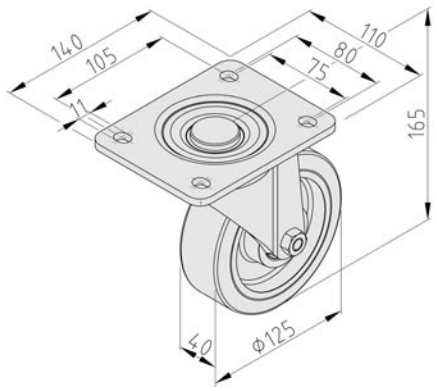
1 pce. 0.0.418.06

Castor D125 fixed antistatic
Sheet-metal casing, bright zinc-plated, black
wheel axis with ball bearing,
Anti-torsion block
Dust shield, carrying capacity 100 kg/castor
Tyres TPE, 80 Sh A, grey
m = 780.0 g

1 pce. 0.0.418.07

Castor Line D125 heavy-duty

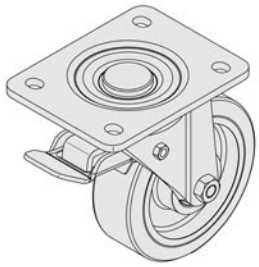
New in catalogue



Castor D125 swivel, heavy-duty
Sheet-metal casing, bright zinc-plated, black
Swivelling axis with ball bearing and rotating track seal
wheel axis with ball bearing
carrying capacity 450 kg/castor
Tyres PU, 92 Sh A, yellow
m = 3.2 kg

1 pce. 0.0.488.38

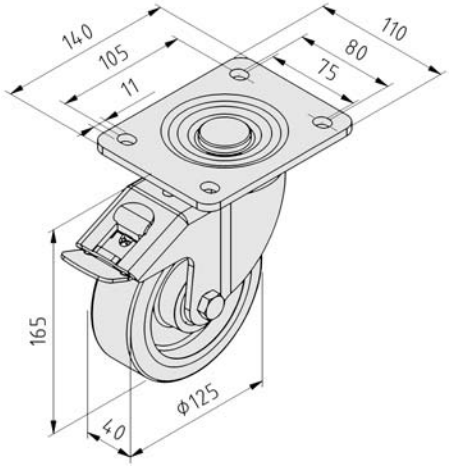
New in catalogue



Castor D125 swivel with double-brake, heavy-duty
Sheet-metal casing, bright zinc-plated, black
Swivelling axis with ball bearing and rotating track seal
wheel axis with ball bearing
carrying capacity 450 kg/castor
Tyres PU, 92 Sh A, yellow
m = 3.5 kg

1 pce. 0.0.488.39

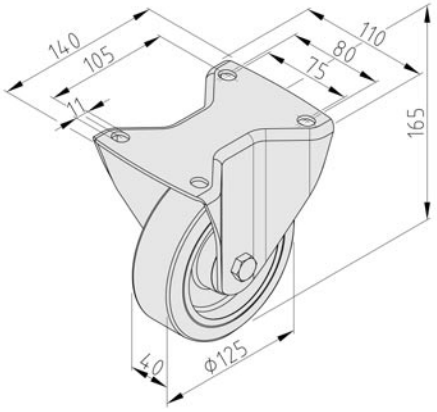
New in catalogue



Castor D125 swivel with double-break N heavy duty
Sheet-metal casing, bright zinc-plated, black
Swivelling axis with ball bearing and rotating track seal
wheel axis with ball bearing
carrying capacity 450 kg/castor
Tyres PU, 92 Sh A, yellow
m = 3.5 kg

1 pce. 0.0.492.18

New in catalogue



Castor D125 fixed, heavy-duty
Sheet-metal casing, bright zinc-plated, black
wheel axis with ball bearing
carrying capacity 450 kg/castor
Tyres PU, 92 Sh A, yellow
m = 2.3 kg

1 pce. 0.0.488.40

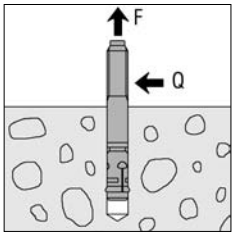
2.3 Accessories for Floor Elements

Accessories for connecting floor elements to profiles or for wall and floor mounting.

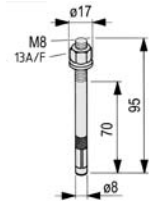
2.3.1 Floor-Fastening Sets

The Floor-Fastening Sets are used for floor and wall fastening of Adjustable Feet, Base Plates, Floor-Fixing Plates, Foot Clamps and other components.

They are very suitable for use in concrete and can also be used in natural stone (dense structure).

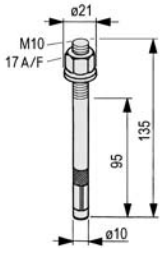


Floor-Fastening Set	$F_{max.}$	$Q_{max.}$
M8x95	1,650 N	4,250 N
M10x135	3,570 N	9,520 N
M12x150	4,760 N	14,290 N



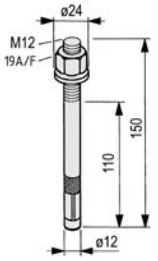
Floor-Fastening Set M8x95
St
M = 20 Nm
m = 38.0 g

bright zinc-plated, 1 pce.	0.0.432.97



Floor-Fastening Set M10x135
St
M = 45 Nm
m = 82.0 g

bright zinc-plated, 1 pce.	0.0.485.82



Floor-Fastening Set M12x150
St
M = 60 Nm
m = 128.0 g

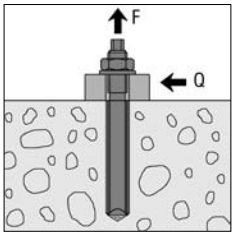
bright zinc-plated, 1 pce.	0.0.485.83

Floor Fastening Sets – Chemical Fixing Bolts

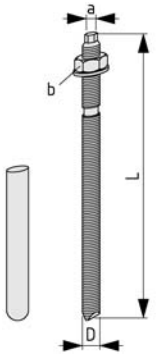
New in catalogue

Fastening systems which function using the principle of hardening plastic resins to provide stress-free anchoring (no high forces are exerted on the surrounding concrete). These Floor Fastening Sets are particularly recommended for anchoring holes drilled close to the edge of a foundation plate when the compressive strength of the foundation material is uncertain.

The time required for the chemicals to harden depends on the temperature. At room temperature, it is around 20 minutes (for precise details, refer to the leaflet enclosed with the package).
Loads may only be applied to the Chemical Fixing Bolt after the reaction time has expired.



Floor Fastening Set	$F_{max.}$	$Q_{max.}$
M8x150	4,000 N	4,230 N
M10x165	6,600 N	8,570 N
M12x220	9,900 N	10,290 N
M16x250	16,400 N	23,030 N



Chemical Floor Fastening Set M8x150
St
a = 5 A/F b = 13 A/F
D = M8 L = 150 mm
M = 10 Nm
m = 60.0 g
bright zinc-plated, 1 PU = 10 pce. **0.0.486.09**

Chemical Floor Fastening Set M10x165
St
a = 7 A/F b = 17 A/F
D = M10 L = 165 mm
M = 20 Nm
m = 103.0 g
bright zinc-plated, 1 PU = 10 pce. **0.0.486.10**

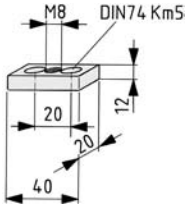
Chemical Floor Fastening Set M12x220
St
a = 8 A/F b = 19 A/F
D = M12 L = 220 mm
M = 40 Nm
m = 190.0 g
bright zinc-plated, 1 PU = 10 pce. **0.0.486.11**

Chemical Floor Fastening Set M16x250
St
a = 12 A/F b = 24 A/F
D = M16 L = 250 mm
M = 60 Nm
m = 386.0 g
bright zinc-plated, 1 PU = 10 pce. **0.0.486.12**

2.3.2 Base Plates/Transport Plates

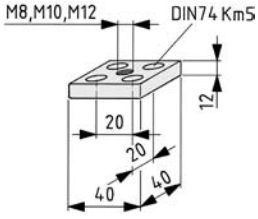
Stable fastening plates for accommodating Adjustable Feet, Castors, ring bolts and other elements.
The Base Plates/Transport Plates can be screwed into the core bores in the end faces of the profiles or onto the sides of the profiles.

5 6 8 12



Base Plate/Transport Plate 5 40x20, M8
Die-cast zinc
m = 56.0 g

black, 1 pce.	0.0.437.58



Base Plate/Transport Plate 5 40x40, M8
Die-cast zinc
m = 112.0 g

black, 1 pce.	0.0.437.59

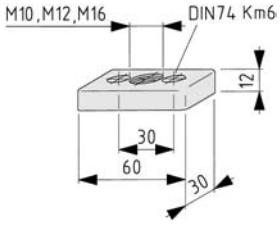
Base Plate/Transport Plate 5 40x40, M10
Die-cast zinc
m = 109.0 g

black, 1 pce.	0.0.437.60

Base Plate/Transport Plate 5 40x40, M12
Die-cast zinc
m = 107.0 g

black, 1 pce.	0.0.437.61

5 6 8 12



Base Plate/Transport Plate 6 60x30, M10
Die-cast zinc
m = 102.0 g

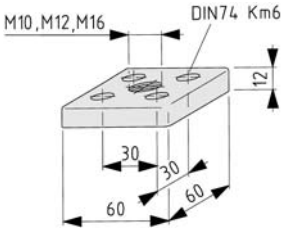
black, 1 pce.	0.0.439.16

Base Plate/Transport Plate 6 60x30, M12
Die-cast zinc
m = 101.0 g

black, 1 pce.	0.0.431.06

Base Plate/Transport Plate 6 60x30, M16
Die-cast zinc
m = 95.0 g

black, 1 pce.	0.0.431.07



Base Plate/Transport Plate 6 60x60, M10
Die-cast zinc
m = 193.0 g

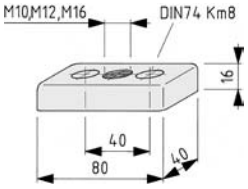
black, 1 pce.	0.0.439.15

Base Plate/Transport Plate 6 60x60, M12
Die-cast zinc
m = 192.0 g

black, 1 pce.	0.0.431.08

Base Plate/Transport Plate 6 60x60, M16
Die-cast zinc
m = 186.0 g

black, 1 pce.	0.0.431.09



Base Plate/Transport Plate 8 80x40, M10
Die-cast zinc
m = 253.0 g

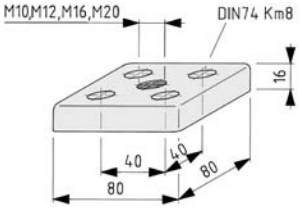
black, 1 pce.	0.0.440.71

Base Plate/Transport Plate 8 80x40, M12
Die-cast zinc
m = 251.0 g

black, 1 pce.	0.0.406.32

Base Plate/Transport Plate 8 80x40, M16
Die-cast zinc
m = 241.0 g

black, 1 pce.	0.0.406.33



Base Plate/Transport Plate 8 80x80, M10
Die-cast zinc
m = 461.0 g

black, 1 pce.	0.0.440.72

Base Plate/Transport Plate 8 80x80, M12
Die-cast zinc
m = 459.0 g

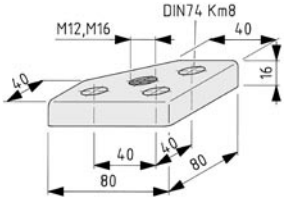
black, 1 pce.	0.0.406.22

Base Plate/Transport Plate 8 80x80, M16
Die-cast zinc
m = 449.0 g

black, 1 pce.	0.0.406.23

Base Plate/Transport Plate 8 80x80, M20
Die-cast zinc
m = 440.0 g

black, 1 pce.	0.0.406.24

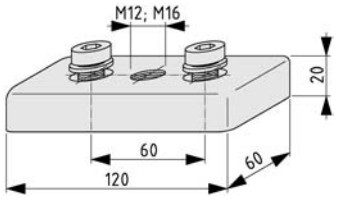


Base Plate/Transport Plate 8 80x80-45°, M12
Die-cast zinc
m = 427.0 g

black, 1 pce.	0.0.409.50

Base Plate/Transport Plate 8 80x80-45°, M16
Die-cast zinc
m = 412.0 g

black, 1 pce.	0.0.409.51

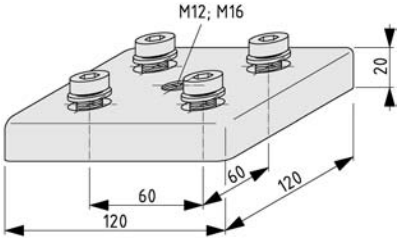


Base Plate/Transport Plate 12 120x60, M12
Die-cast zinc, black
2 Cap Screws DIN 7984-M12x30, St, bright zinc-plated
2 washers DIN 433-13, St, bright zinc-plated
m = 800.0 g

1 set	0.0.007.34

Base Plate/Transport Plate 12 120x60, M16
Die-cast zinc, black
2 Cap Screws DIN 7984-M12x30, St, bright zinc-plated
2 washers DIN 433-13, St, bright zinc-plated
m = 800.0 g

1 set	0.0.007.37



Base Plate/Transport Plate 12 120x120, M12
Die-cast zinc, black
4 Cap Screws DIN 7984-M12x30, St, bright zinc-plated
4 washers DIN 433-13, St, bright zinc-plated
m = 1.5 kg

1 set	0.0.007.40

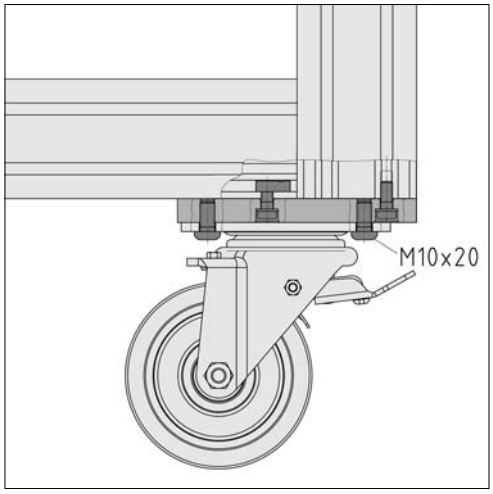
Base Plate/Transport Plate 12 120x120, M16
Die-cast zinc, black
4 Cap Screws DIN 7984-M12x30, St, bright zinc-plated
4 washers DIN 433-13, St, bright zinc-plated
m = 1.5 kg

1 set	0.0.007.43

Castor Adapter Plates

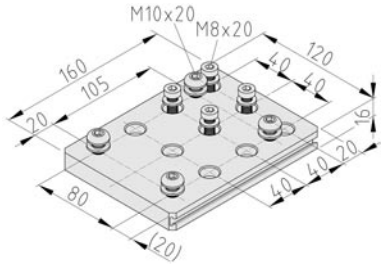
New in catalogue

The Castor Adapter Plates for the Castor Line D125 heavy duty have the necessary through-holes in the modular dimensions of Line 8 and 12 Profiles. They also have four fastening threads M10 for castor back-plates in bore dimensions standardised to DIN 8458 - size 3.



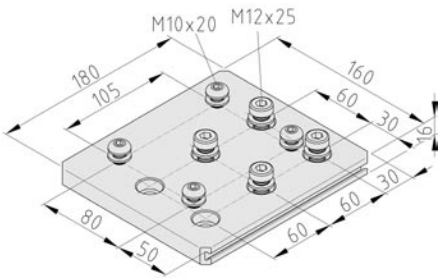
The stable back-plate with standard mounting bores provides a reliable means of securing the castors to profile frames using special Castor Adapter Plates.
It is screwed in the prepared threads by means of four M10x20 screws per plate.

The Castor Adapter Plates are secured in the core bore using the enclosed Hexagon Socket Head Cap Screws or in the profile groove using T-Slot Nuts of the relevant profile line.



Castor Adapter Plate 8 M10-105x80
Plate, Al, black
4 Cap Screws DIN 6912-M8x20, St, bright zinc-pl.
4 Washers DIN 433-8.4, St, bright zinc-plated
4 Button-Hd. Screws ISO 7380-M10x20, St, bright zinc-pl.
4 Washers DIN 433-10.5, St, bright zinc-plated
m = 0.8 kg

1 set	0.0.489.21



Castor Adapter Plate 12 M10-105x80
Plate, Al, black
4 Cap Screws DIN 7984-M12x25, St, bright zinc-pl.
4 Washers DIN 433-13, St, bright zinc-plated
4 Button-Hd. Screws ISO 7380-M10x20, St, bright zinc-pl.
4 Washers DIN 433-10.5, St, bright zinc-plated
m = 1.3 kg

1 set	0.0.007.76

3 Fastening Elements

The Fastening Elements product group contains:
> Screws and T-Slot Nuts for securing components to the profile groove
> System elements for securing panels rigidly to profile structures
> Clamping profiles for holding panel elements in profile frames

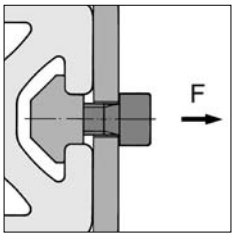
> Securing profile frames rigidly to machinery and guard units
> Movable panel fastenings for swivelling, sliding and lifting doors, flaps, profile frames and shutters

3.1.1 T-Slot Nuts

Special fastening elements are inserted into the profile grooves to connect one profile to another or to secure components to profile structures. Different types of T-Slot Nuts with threads and groove profiles for customised processing generate a counter-bearing for the screw in the groove.

The T-Slot Nuts have different load-bearing capacities depending on their design. These range from light-duty applications such as fastening signs to highly stable profile connections capable of withstanding even high dynamic loading.

Where vibration resistance is required, use of T-Slot Nuts St is recommended.
The profiles of the basic frame must only be connected using T-Slot Nuts St.



The decision which T-Slot Nut to use depends on the loads occurring during operation.

	T-Slot Nut	Order No.	Recommended tightening torque	Permissible operating load F
	5 St M5	0.0.370.01	4.5 Nm	500 N
	5 St M5, stainless	0.0.425.11	3.6 Nm	400 N
	5 St M4	0.0.370.06	3.0 Nm	500 N
	5 St M4, stainless	0.0.425.10	2.4 Nm	400 N
	5 St M3	0.0.437.19	1.5 Nm	500 N
	5 Zn M3	0.0.391.20	1.0 Nm	50 N
	6 St M6	0.0.419.40	14.0 Nm	1,750 N *
	6 St M6, stainless	0.0.439.75	11.0 Nm	1,400 N *
	6 St M5	0.0.419.43	8.0 Nm	1,750 N *
	6 St M5, stainless	0.0.439.72	6.5 Nm	1,400 N *
	6 St M4	0.0.419.46	4.0 Nm	1,750 N *
	6 St M3	0.0.459.44	1.5 Nm	500 N
	6 Zn M4	0.0.441.45	1.5 Nm	150 N

	T-Slot Nuts	Order No.	Recommended tightening torque	Permissible operating load
	8 St M8 heavy	0.0.420.83	34.0 Nm	5,000 N *
	8 St M6 heavy	0.0.427.75	14.0 Nm	3,500 N *
	V 8 St M8	0.0.480.48	20,0 Nm	4,000 N *
	V 8 St M6	0.0.480.50	14,0 Nm	3,500 N *
	V 8 St M5	0.0.480.54	8,0 Nm	2,500 N *
	V 8 St M4	0.0.480.57	4,0 Nm	2,500 N *
	8 St M8 8 St M8, stainless	0.0.026.18 0.0.388.49	25.0 Nm 20.0 Nm	5,000 N * 4,000 N *
	8 St M6 8 St M6, stainless	0.0.026.23 0.0.388.51	14.0 Nm 11.0 Nm	3,500 N * 2,800 N *
	8 St M5 8 St M5, stainless	0.0.420.05 0.0.428.55	8.0 Nm 6.5 Nm	2,500 N * 2,000 N *
	8 St M4 8 St M4, stainless	0.0.420.06 0.0.428.54	4.0 Nm 3.2 Nm	2,500 N * 2,000 N *
	8 St/PA M6	0.0.416.17	8.0 Nm	1,000 N
	8 St/PA M5	0.0.416.20	4.5 Nm	1,000 N
	8 St/PA M4	0.0.416.23	2.0 Nm	500 N
	8 St/PA M3	0.0.416.26	1.0 Nm	500 N
	8 Zn M5	0.0.373.44	1.5 Nm	250 N
	8 Zn M4	0.0.373.58	1.5 Nm	250 N
	8 Zn M3	0.0.373.59	1.0 Nm	250 N
	8 PA	0.0.436.52	1.5 Nm	150 N
	12 St M12, heavy	0.0.003.68	100 Nm	10,000 N *
	12 St M10, heavy	0.0.003.67	65 Nm	10,000 N *
	12 St M8, heavy	0.0.003.66	34 Nm	6,000 N *
	12 St M12	0.0.003.65	80 Nm	10,000 N *
	12 St M10	0.0.003.64	46 Nm	10,000 N *
	12 St M8	0.0.003.63	34 Nm	6,000 N *
	12 St M6	0.0.003.72	14 Nm	3,500 N

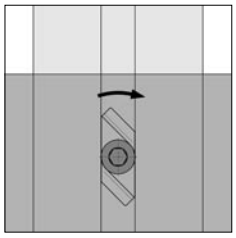
* Maximum load achievable in standard Profile only. Check profile properties if using e.g. Profile Light or Profile E.

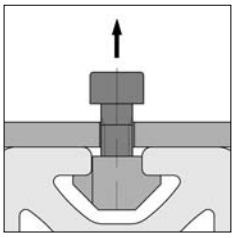
The total load of a screw connection comprises the sum of the pre-tensioning force and the operating load!

The permissible operating load is based on a safety factor of 1.5!

T-Slot Nuts Zn

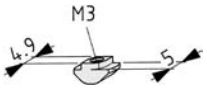
Fastening elements for securing components to the profile groove with particular ease. When locked in the groove, this produces a fixed thread.
The T-Slot Nuts Zn are not suitable for connecting profiles to other profiles.





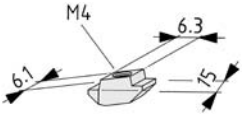
T-Slot Nuts Zn can, if required, be prefitted (with the screw) to the component to be secured and are inserted at any position in the profile groove.

Tightening the screw automatically locks the T-Slot Nut in the groove.
Pulling the screw fixes T-Slot Nuts 6 Zn and 8 Zn in the groove by means of the conical flanks.



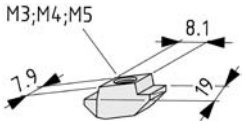
T-Slot Nut 5 Zn M3
Die-cast zinc
m = 1.0 g

bright zinc-plated, 1 pce.	0.0.391.20



T-Slot Nut 6 Zn M4
Die-cast zinc
m = 2.2 g

bright zinc-plated, 1 pce.	0.0.441.45



T-Slot Nut 8 Zn M3
Die-cast zinc
m = 5.0 g

bright zinc-plated, 1 pce.	0.0.373.59

T-Slot Nut 8 Zn M4
Die-cast zinc
m = 5.0 g

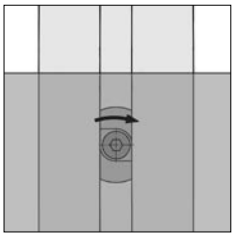
bright zinc-plated, 1 pce.	0.0.373.58

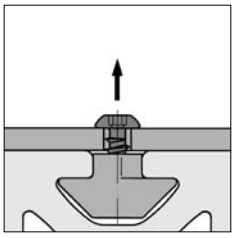
T-Slot Nut 8 Zn M5
Die-cast zinc
m = 5.0 g

bright zinc-plated, 1 pce.	0.0.373.44

T-Slot Nut PA

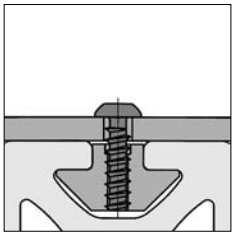
Lightweight T-Slot Nut for securing light parts (e.g. Roller Elements 8 80 or signs) or when low loads are involved.



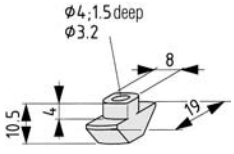


T-Slot Nut PA can, if required, be prefitted (using the screw) to the component to be secured and is inserted at any position in the profile groove.

Tightening the screw automatically locks the T-Slot Nut in the groove.



Fastening of components to T-Slot Nut 8 PA using self-tapping Button-Head Screws T4 (Section 3.2 Screws and Universal Elements).



T-Slot Nut 8 PA
PA-GF
m = 1.0 g

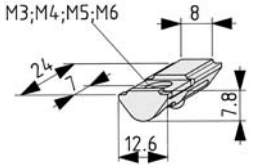
black, 1 pce.	0.0.436.52

T-Slot Nuts St/PA

T-Slot Nut for low strength requirements with steel insert nut. The PA body enables positioning in the groove.

T-Slot Nuts St/PA are not designed for connecting one profile to another.

item Innovation
German patent
and foreign patent
EP 0 641 943



T-Slot Nut 8 St/PA M3
Body PA-GF
Square nut insert St
m = 2.0 g

black, 1 pce.	0.0.416.26

T-Slot Nut 8 St/PA M4
Body PA-GF
Square nut insert St
m = 2.0 g

black, 1 pce.	0.0.416.23

T-Slot Nut 8 St/PA M5
Body PA-GF
Square nut insert St
m = 2.0 g

black, 1 pce.	0.0.416.20

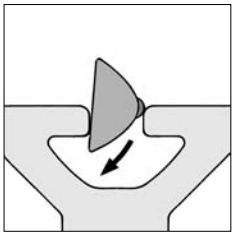
T-Slot Nut 8 St/PA M6
Body PA-GF
Square nut insert St
m = 2.0 g

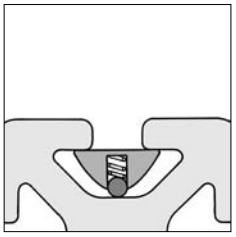
black, 1 pce.	0.0.416.17

T-Slot Nuts St

T-Slot Nuts St for securing heavy components or for use in fastening applications.

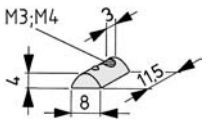
The T-Slot Nuts V 8 St have an additional anti-torsion device that centres the T-Slot Nut in the profile groove. This effectively prevents the T-Slot Nut slipping out of the groove unintentionally.
Note: The M8 version of this V-Nut has a load-bearing capacity approximately 20 % lower than T-Slot Nut 8 St M8 (max. tightening torque of T-Slot Nut V 8 St M8: 20Nm). So it should not be used for profile connections in combination with fastening elements.





T-Slot Nuts St are inserted into the profile groove where they are secured in position by means of thrust fingers.

5 6 8 12

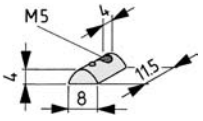


T-Slot Nut 5 St M3
St
m = 2.0 g

bright zinc-plated, 1 pce.	0.0.437.19

T-Slot Nut 5 St M4
St
m = 2.0 g

bright zinc-plated, 1 pce.	0.0.370.06
stainless, 1 pce.	0.0.425.10

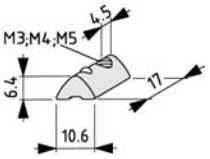


T-Slot Nut 5 St M5
St
m = 2.0 g

bright zinc-plated, 1 pce.	0.0.370.01
stainless, 1 pce.	0.0.425.11

5 6 8 12

New in catalogue



T-Slot Nut 6 St M3
St
m = 4.0 g

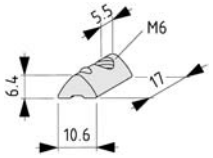
bright zinc-plated, 1 pce.	0.0.459.44

T-Slot Nut 6 St M4
St
m = 4.0 g

bright zinc-plated, 1 pce.	0.0.419.46

T-Slot Nut 6 St M5
St
m = 4.0 g

bright zinc-plated, 1 pce.	0.0.419.43
stainless, 1 pce.	0.0.439.72

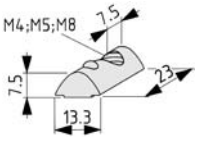


T-Slot Nut 6 St M6
St
m = 4.0 g

bright zinc-plated, 1 pce.	0.0.419.40
stainless, 1 pce.	0.0.439.75

5 6 **8** 12

New in catalogue



T-Slot Nut V 8 St M4
St
m = 11.1 g

bright zinc-plated, 1 pce.	0.0.480.57

New in catalogue

T-Slot Nut V 8 St M5
St
m = 10.6 g

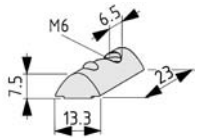
bright zinc-plated, 1 pce.	0.0.480.54

New in catalogue

T-Slot Nut V 8 St M8
St
m = 9.3 g

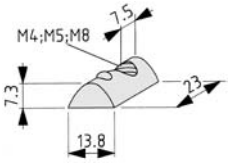
bright zinc-plated, 1 pce.	0.0.480.48

New in catalogue



T-Slot Nut V 8 St M6
St
m = 10.3 g

bright zinc-plated, 1 pce.	0.0.480.50



T-Slot Nut 8 St M4
St
m = 11.0 g

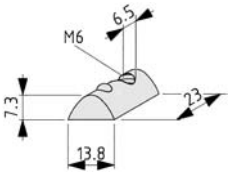
bright zinc-plated, 1 pce.	0.0.420.06
stainless, 1 pce.	0.0.428.54

T-Slot Nut 8 St M5
St
m = 11.0 g

bright zinc-plated, 1 pce.	0.0.420.05
stainless, 1 pce.	0.0.428.55

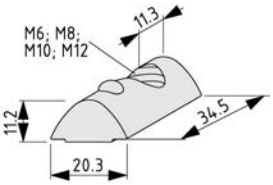
T-Slot Nut 8 St M8
St
m = 10.0 g

bright zinc-plated, 1 pce.	0.0.026.18
stainless, 1 pce.	0.0.388.49



T-Slot Nut 8 St M6
St
m = 10.0 g

bright zinc-plated, 1 pce.	0.0.026.23
stainless, 1 pce.	0.0.388.51



T-Slot Nut 12 St M6
St
m = 38.0 g

bright zinc-plated, 1 pce.	0.0.003.72

T-Slot Nut 12 St M8
St
m = 35.0 g

bright zinc-plated, 1 pce.	0.0.003.63

T-Slot Nut 12 St M10
St
m = 33.0 g

bright zinc-plated, 1 pce.	0.0.003.64

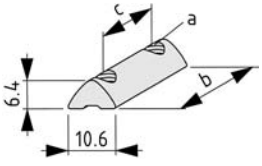
T-Slot Nut 12 St M12
St
m = 31.0 g

bright zinc-plated, 1 pce.	0.0.003.65

T-Slot Nuts St with 2 Threads

T-Slot Nuts St with 2 threads are best used in conjunction with Angle Elements T2 and Universal Fasteners or Automatic Fasteners (Section 1.3 Fasteners) for securing profiles at 45°, but can also be used for all other profile connections.

With a suitable grub screw in a threaded bore, these T-Slot Nuts create a non-slip thread in the profile groove.



T-Slot Nut 6 St 2xM5-28
St
a = M5 b = 28.0 mm
c = 19.0 mm
m = 8.0 g

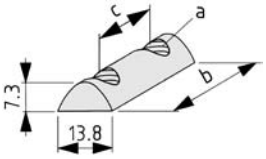
bright zinc-plated, 1 pce.	0.0.459.78

T-Slot Nut 6 St 2xM5-58
St
a = M5 b = 58.0 mm
c = 49.0 mm
m = 17.0 g

bright zinc-plated, 1 pce.	0.0.459.82

T-Slot Nut 6 St 2xM6-28
St
a = M6 b = 28.0 mm
c = 17.0 mm
m = 7.0 g
bright zinc-plated, 1 pce. 0.0.459.80

T-Slot Nut 6 St 2xM6-58
St
a = M6 b = 58.0 mm
c = 47.0 mm
m = 16.0 g
bright zinc-plated, 1 pce. 0.0.459.84



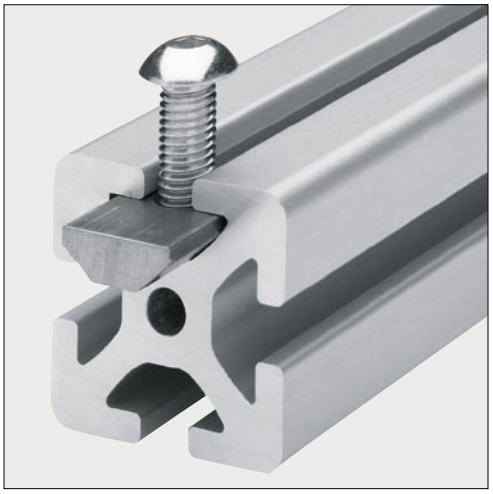
T-Slot Nut 8 St 2xM6-36
St
a = M6 b = 36.0 mm
c = 26.4 mm
m = 16.0 g
bright zinc-plated, 1 pce. 0.0.406.77

T-Slot Nut 8 St 2xM6-76
St
a = M6 b = 76.0 mm
c = 66.4 mm
m = 38.0 g
bright zinc-plated, 1 pce. 0.0.406.78

T-Slot Nut 8 St 2xM8-36
St
a = M8 b = 36.0 mm
c = 24.0 mm
m = 14.0 g
bright zinc-plated, 1 pce. 0.0.404.21

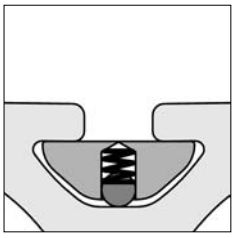
T-Slot Nut 8 St 2xM8-76
St
a = M8 b = 76.0 mm
c = 64.0 mm
m = 36.0 g
bright zinc-plated, 1 pce. 0.0.404.23

T-Slot Nuts St, heavy-duty



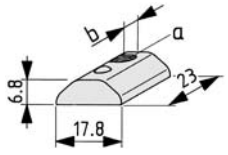
T-Slot Nuts St, heavy-duty, can be used for very heavy-duty fastening applications.

Since their cross-section is adapted to the groove shape, tensile forces are guided into the aluminium profile. They also have more supporting threads than the turn-to-insert T-Slot Nuts and thus allow greater screw tightening torques.



T-Slot Nuts St, heavy-duty are inserted into the profile groove in the end face where they are secured in position by means of a thrust finger.

5 6 **8** 12



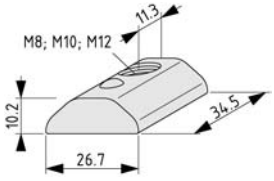
T-Slot Nut 8 St M6, heavy-duty
St
a = M6 b = 6.5 mm
m = 17.0 g

bright zinc-plated, 1 pce.	0.0.427.75

T-Slot Nut 8 St M8, heavy-duty
St
a = M8 b = 7.5 mm
m = 16.0 g

bright zinc-plated, 1 pce.	0.0.420.83

5 6 8 **12**



T-Slot Nut 12 St M8, heavy-duty
St
m = 50.0 g

bright zinc-plated, 1 pce.	0.0.003.66

T-Slot Nut 12 St M10, heavy-duty
St
m = 47.0 g

bright zinc-plated, 1 pce.	0.0.003.67

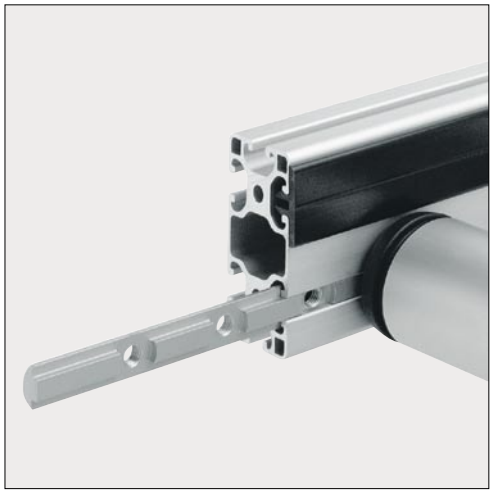
T-Slot Nut 12 St M12, heavy-duty
St
m = 45.0 g

bright zinc-plated, 1 pce.	0.0.003.68

3.1.2 T-Slot Nut Profiles

Fastening elements for easy unit assembly, e.g. valves and limit switches, or heavy-duty units with modular dimensions which can be customised with bores and corresponding threads as required.

Profile Bars and Groove Profiles

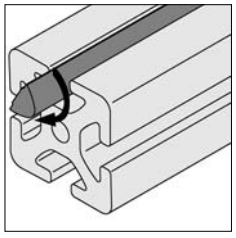


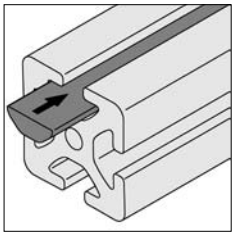
Groove Profiles and Profile Bars for special applications, e.g. assembling complete modules.

Special Groove Profiles with holes and threads for securing conveyor rollers are found in Section 6.4 (Conveyors and Material Flow).

Locating Profile 8 can be used to produce keys of any length for aligning grooves of Line 8 Profiles in parallel. These are used, for example, to facilitate attachment of dynamic elements or to provide a secure fit for power-lock profile connections.

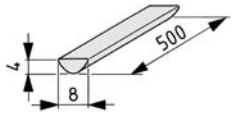
The ability to customise the Profile Bars and Groove Profiles mean that fastening elements can be produced which are geared to the needs of specific applications.





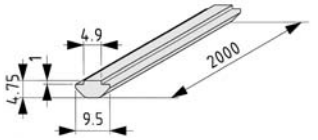
Profile Bars St are swivelled into the profile groove.

Profile Bars St, heavy-duty and Groove Profiles are slid into the profile groove .



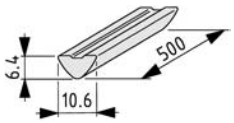
Profile Bar 5 St
St
Threaded bore max. M5
m = 89.0 g

bright zinc-plated, 1 pce., length 500 mm	0.0.370.56
stainless, 1 pce., length 500 mm	0.0.425.18



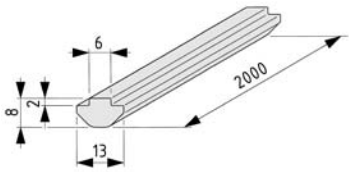
Groove Profile 5 Al
Al, anodized
Threaded bore max. M5
m = 89 g/m

natural, 1 pce., length 2000 mm	0.0.425.82



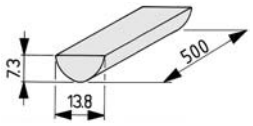
Profile Bar 6 St
St
Threaded bore max. M6
m = 170.0 g

bright zinc-plated, 1 pce., length 500 mm	0.0.431.04
stainless, 1 pce., length 500 mm	0.0.439.03



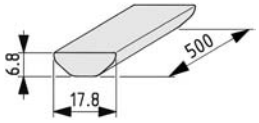
Groove Profile 6 Al
Al, anodized
Threaded bore max. M6
m = 200 g/m

natural, 1 pce., length 2000 mm	0.0.434.29



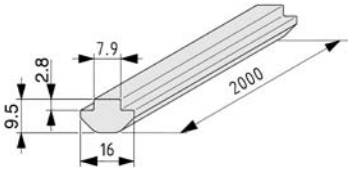
Profile Bar 8 St
St
Threaded bore max. M8
m = 270.0 g

bright zinc-plated, 1 pce., length 500 mm	0.0.026.70
stainless, 1 pce., length 500 mm	0.0.388.48



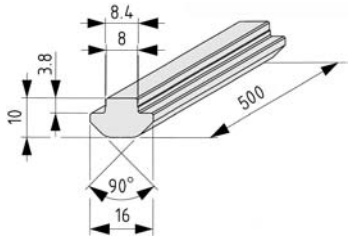
Profile Bar 8 St, heavy-duty
St
Threaded bore max. M8
m = 410.0 g

bright zinc-plated, 1 pce., length 500 mm	0.0.427.23



Groove Profile 8 Al
Al, anodized
Threaded bore max. M8
m = 290 g/m

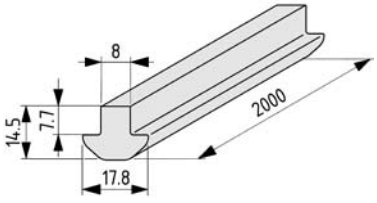
natural, 1 pce., length 2000 mm	0.0.427.39



Groove Profile 8 St
St
Threaded bore max. M8
m = 440.0 g

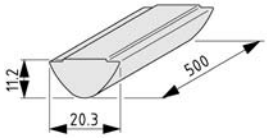
bright zinc-plated, 1 pce., length 500 mm	0.0.444.32

New in catalogue



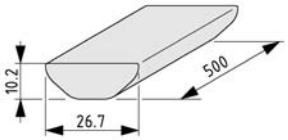
Locating Profile 8 Al
Al, anodized
m = 900.0 g

natural, 1 pce., length 2000 mm	0.0.009.20



Profile Bar 12 St
St
Threaded bore max. M12
m = 600.0 g

bright zinc-plated, 1 pce., length 500 mm	0.0.003.74

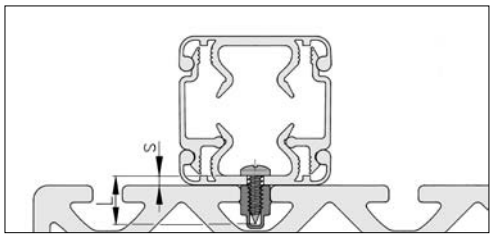


Profile Bar 12 St, heavy-duty
St
Threaded bore max. M12
m = 840.0 g

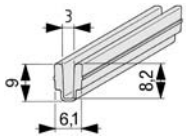
bright zinc-plated, 1 pce., length 500 mm	0.0.003.75

Screw Strips Al

Screw Strips Al are fastening elements which are particularly suitable for retrofitting into existing constructions. The Screw Strips are pressed into the profile groove from above and provide Self-Tapping Screws 4.2 mm with a screw channel along their entire length.

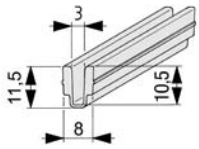


Example of how a cable conduit is secured with Screw Strip 8 Al and Self-Tapping Screws DIN 7981 St 4.2x13. The required screw length L must be selected to match the workpiece thickness s.



Screw Strip 6 Al
Al, anodized
m = 70 g/m

natural, cut-off max. 2000 mm	0.0.439.17



Screw Strip 8 Al
Al, anodized
m = 130 g/m

natural, cut-off max. 2000 mm	0.0.411.44

3.2 Screws and Universal Elements

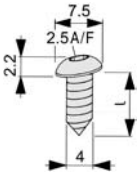
3.2.1 Screws

Button-Head Screws, Self-Tapping Screws, Hexagon Socket Head Cap Screws and Countersunk Screws are available in different diameters and lengths.

Note: The galvanic treatment of the surfaces can result in hydrogen induction in high-strength fastening elements. Despite meticulous thermal post-treatment it is not possible to totally rule out brittle fractures. This should be taken into account in the design phase.

Button-Head Screws T4

Button-Head Screws T4 are thread-cutting screws for screw connections in thremoplastics (for core bores of ∅ 3.2 mm), in particular for T-Slot Nut PA.



Button-Head Screw T4x12
St
l = 12 mm m = 100 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.440.11

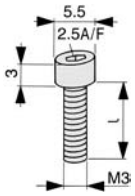
Button-Head Screw T4x14
St
l = 14 mm m = 110 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.440.12

Button-Head Screw T4x16
St
l = 16 mm m = 120 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.440.13

Button-Head Screw T4x18
St
l = 18 mm m = 130 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.440.14

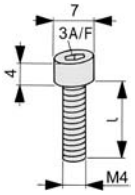
Button-Head Screw T4x25
St
l = 25 mm m = 160 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.440.15

Hexagon Socket Head Cap Screws



Hexagon Socket Head Cap Screw DIN 912 M3x50
St
property class 10.9
l = 50 mm m = 2.9 g
black, 1 pce. 8.0.004.61

Hexagon Socket Head Cap Screw DIN 912 M3x60
St
property class 10.9
l = 60 mm m = 3.3 g
black, 1 pce. 8.0.004.83

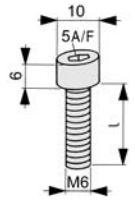


Hexagon Socket Head Cap Screw DIN 912 M4x14
St
property class 10.9
l = 14 mm m = 200 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.370.60

Hexagon Socket Head Cap Screw DIN 912 M4x16
St
property class 10.9
l = 16 mm m = 215 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.406.75

Hexagon Socket Head Cap Screw DIN 912 M4x18
St
property class 10.9
l = 18 mm m = 226 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.370.61

Hexagon Socket Head Cap Screw DIN 912 M4x20
St
property class 10.9
l = 20 mm m = 244 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.370.62



Hexagon Socket Head Cap Screw DIN 912 M6x12
St
property class 10.9
l = 12 mm m = 507 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.007.18

Hexagon Socket Head Cap Screw DIN 912 M6x14
St
property class 10.9
l = 14 mm m = 544 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.007.98

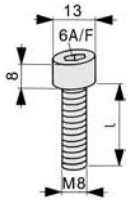
Hexagon Socket Head Cap Screw DIN 912 M6x20
St
property class 10.9
l = 20 mm m = 604 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.004.78

Hexagon Socket Head Cap Screw DIN 912 M6x28
St
property class 10.9
l = 28 mm m = 755 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.411.60

Hexagon Socket Head Cap Screw DIN 912 M6x100
St
property class 10.9
l = 100 mm m = 23.0 g
bright zinc-plated, 1 pce. 8.0.004.70

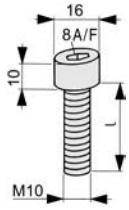
Hexagon Socket Head Cap Screw DIN 912 M6x140
St
property class 10.9
l = 140 mm m = 31.5 g
bright zinc-plated, 1 pce. 8.0.004.74

New
in catalogue



Hexagon Socket Head Cap Screw DIN 912 M8x60
St
property class 10.9
l = 60 mm m = 2900 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.006.37

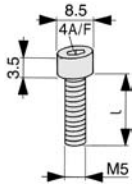
Hexagon Socket Head Cap Screw DIN 912 M8x180
St
property class 10.9
l = 180 mm m = 66.5 g
bright zinc-plated, 1 pce. 8.0.008.88



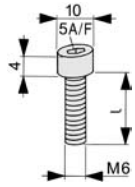
Hexagon Socket Head Cap Screw DIN 912 M10x60
St
property class 10.9
l = 60 mm m = 44.0 g
bright zinc-plated, 1 pce. 8.0.003.98

Hexagon Socket Head Cap Screw DIN 912 M10x100
St
property class 10.9
l = 100 mm m = 68.5 g
bright zinc-plated, 1 pce. 8.0.004.47

Hexagon Socket Head Cap Screw DIN 912 M10x140
St
property class 10.9
l = 140 mm m = 92.5 g
bright zinc-plated, 1 pce. 8.0.004.50

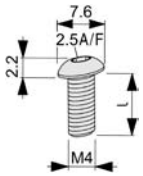


Hexagon Socket Head Cap Screw DIN 6912 M5x8
St
property class 10.9
l = 8 mm m = 260 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.004.89



Hexagon Socket Head Cap Screw DIN 6912 M6x40
St
property class 10.9
l = 40 mm m = 950 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.007.44

Button-Head Screws ISO 7380



Button-Head Screw M4x8
St
property class 10.9
l = 8 mm m = 113 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.001.99

Button-Head Screw M4x10
St
property class 10.9
l = 10 mm m = 131 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.02

Button-Head Screw M4x12
St
property class 10.9
l = 12 mm m = 150 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.05

Button-Head Screw M4x14
St
property class 10.9
l = 14 mm m = 168 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.08

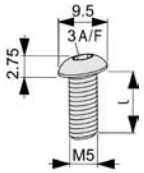
Button-Head Screw M4x16
St
property class 10.9
l = 16 mm m = 187 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.391.33

Button-Head Screw M4x18
St
property class 10.9
l = 18 mm m = 206 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.11

Button-Head Screw M4x20
St
property class 10.9
l = 20 mm m = 224 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.14

Button-Head Screw M4x22
St
property class 10.9
l = 22 mm m = 242 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.17

Button-Head Screw M4x25
St
property class 10.9
l = 25 mm m = 271 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.20



Button-Head Screw M4x30
St
property class 10.9
l = 30 mm m = 317 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.23**

Button-Head Screw M5x8
St
property class 10.9
l = 8 mm m = 185 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.370.63**

Button-Head Screw M5x10
St
property class 10.9
l = 10 mm m = 209 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.196.68**

Button-Head Screw M5x12
St
property class 10.9
l = 12 mm m = 233 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.364.25**

Button-Head Screw M5x14
St
property class 10.9
l = 14 mm m = 260 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.417.29**

Button-Head Screw M5x16
St
property class 10.9
l = 16 mm m = 280 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.196.69**

Button-Head Screw M5x18
St
property class 10.9
l = 18 mm m = 304 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.26**

Button-Head Screw M5x20
St
property class 10.9
l = 20 mm m = 328 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.404.12**

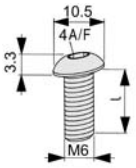
Button-Head Screw M5x25
St
property class 10.9
l = 25 mm m = 388 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.370.67**

Button-Head Screw M5x30
St
property class 10.9
l = 30 mm m = 448 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.32**

Button-Head Screw M5x35
St
property class 10.9
l = 35 mm m = 508 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.35**

Button-Head Screw M5x40
St
property class 10.9
l = 40 mm m = 560 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.391.27**

Button-Head Screw M5x45
St
property class 10.9
l = 45 mm m = 628 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.005.25**



Button-Head Screw M6x10
St
property class 10.9
l = 10 mm m = 286 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.38**

Button-Head Screw M6x12
St
property class 10.9
l = 12 mm m = 320 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.41**

Button-Head Screw M6x14
St
property class 10.9
l = 14 mm m = 360 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.417.28**

Button-Head Screw M6x16
St
property class 10.9
l = 16 mm m = 388 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.43**

Button-Head Screw M6x18
St
property class 10.9
l = 18 mm m = 422 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.46**

Button-Head Screw M6x20
St
property class 10.9
l = 20 mm m = 456 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.196.70**

Button-Head Screw M6x22
St
property class 10.9
l = 22 mm m = 490 g/100
bright zinc-plated, 1 PU = 100 pce. **8.0.002.49**

Button-Head Screw M6x22
St
property class 10.9
l = 22 mm m = 490 g/100
stainless, 1 PU = 100 pce. **8.0.005.57**

Button-Head Screw M6x25
St
property class 10.9
l = 25 mm m = 541 g/100
bright zinc-plated, 1 PU = 100 pce. **0.0.196.71**

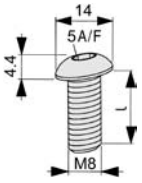
Button-Head Screw M6x30
St
property class 10.9
l = 30 mm m = 627 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.364.26

Button-Head Screw M6x35
St
property class 10.9
l = 35 mm m = 712 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.364.27

Button-Head Screw M6x40
St
property class 10.9
l = 40 mm m = 799 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.51

Button-Head Screw M6x45
St
property class 10.9
l = 45 mm m = 883 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.54

Button-Head Screw M6x50
St
property class 10.9
l = 50 mm m = 960 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.57



Button-Head Screw M8x10
St
property class 10.9
l = 10 mm m = 440 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.364.28

Button-Head Screw M8x12
St
property class 10.9
l = 12 mm m = 516 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.002.60

Button-Head Screw M8x14
St
property class 10.9
l = 14 mm m = 610 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.364.29

Button-Head Screw M8x16
St
property class 10.9
l = 16 mm m = 720 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.364.30

Button-Head Screw M8x18
St
property class 10.9
l = 18 mm m = 744 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.196.72

Button-Head Screw M8x20
St
property class 10.9
l = 20 mm m = 860 g/100
bright zinc-plated, 1 PU = 100 pce. 0.0.196.73

Button-Head Screw M8x20
St
property class 10.9
l = 20 mm m = 860 g/100

stainless, 1 PU = 100 pce.	0.0.388.95

Button-Head Screw M8x25
St
property class 10.9
l = 25 mm m = 1010 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.196.74

Button-Head Screw M8x30
St
property class 10.9
l = 30 mm m = 1200 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.196.75

Button-Head Screw M8x35
St
property class 10.9
l = 35 mm m = 1390 g/100

bright zinc-plated, 1 PU = 100 pce.	8.0.002.66

Button-Head Screw M8x40
St
property class 10.9
l = 40 mm m = 1580 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.196.76

Button-Head Screw M8x45
St
property class 10.9
l = 45 mm m = 1790 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.364.31

Button-Head Screw M8x50
St
property class 10.9
l = 50 mm m = 1960 g/100

bright zinc-plated, 1 PU = 100 pce.	8.0.002.69

Button-Head Screw M8x55
St
property class 10.9
l = 55 mm m = 2150 g/100

bright zinc-plated, 1 PU = 100 pce.	8.0.002.72

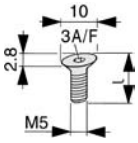
Button-Head Screw M8x60
St
property class 10.9
l = 60 mm m = 2350 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.196.77

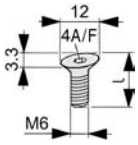
Button-Head Screw M8x80
St
property class 10.9
l = 80 mm m = 2775 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.196.78

Countersunk Screws DIN 7991

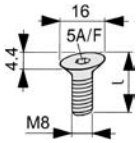


Countersunk Screw DIN 7991 M5x10
St
property class 10.9
l = 10 mm m = 180 g/100
black, 1 PU = 100 pce. 8.0.005.64



Countersunk Screw DIN 7991 M6x10
St
property class 10.9
l = 10 mm m = 270 g/100
black, 1 PU = 100 pce. 8.0.008.33

Countersunk Screw DIN 7991 M6x14
St
property class 10.9
l = 14 mm m = 329 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.005.22



Countersunk Screw DIN 7991 M8x14
St
property class 10.9
l = 14 mm m = 715 g/100
black, 1 PU = 100 pce. 0.0.480.14

Countersunk Screw DIN 7991 M8x16
St
property class 10.9
l = 16 mm m = 745 g/100
bright zinc-plated, 1 PU = 100 pce. 8.0.006.16

Countersunk Screw DIN 7991 M8x18
St
property class 10.9
l = 18 mm m = 775 g/100
black, 1 PU = 100 pce. 8.0.006.18

3.2.2 Special Fastening Elements

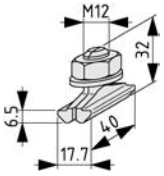
Components for fastening parts to the profile groove.

Fastener 8 M12

item Innovation
German patent
and foreign patents
EP 1 167 782

Two-part Fastener for heavy-duty securing of parts to the Profile 8 groove.
The two halves of the Fastener are fitted into the groove at any point where they are then slid together. The integrated spring ball holds the Fastener in place and facilitates screw attachment.

The tightening torque for the nut of Fastener 8 M12 is M = 80 Nm.

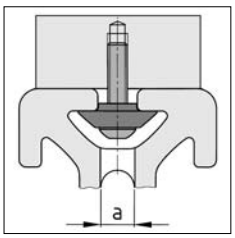


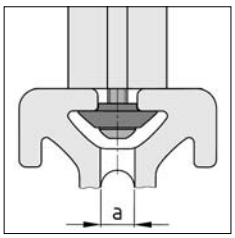
Fastener 8 M12
1 fastener half, cast steel, stainless
1 fastener half with spring ball, cast steel, stainless
1 nut DIN 934-M12, St, bright zinc-plated
1 washer DIN 125-12, St, bright zinc-plated
m = 70.0 g

1 set	0.0.473.02

Locating Washers

Locating Washers for optimising the application of screw forces when using screws in profile grooves which are wider than the screw's nominal diameter (suitable for Button-Head Screws DIN ISO 7380). The screw can be tightened through a mounting bore (similar to Standard Profile Connection).

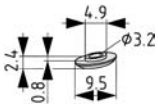




Locating Washers can be used to conceal the component securing mechanism (screw head in profile groove, thread in component).

In addition, the Locating Washers allow Standard Connections (without anti-torsion element) between profiles of different Lines or they may be used simply to center attachments.

5 6 8 12



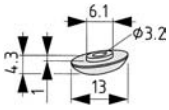
Locating Washer 5 D3
St
$a_{min.}$ = Ø 3 mm
m = 66 g/100

bright zinc-plated, 1 PU = 10 pce.	0.0.464.88

Locating Washer 5 D4
St
$a_{min.}$ = Ø 3.5 mm
m = 63 g/100

bright zinc-plated, 1 PU = 10 pce.	0.0.464.89

5 6 8 12



Locating Washer 6 D3
St
$a_{min.}$ = Ø 3 mm
m = 236 g/100

bright zinc-plated, 1 PU = 10 pce.	0.0.478.28

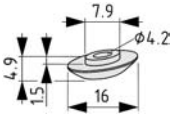
Locating Washer 6 D4
St
$a_{min.}$ = Ø 3.5 mm
m = 232 g/100

bright zinc-plated, 1 PU = 10 pce.	0.0.478.29

Locating Washer 6 D5
St
$a_{min.}$ = Ø 4 mm
m = 240 g/100

bright zinc-plated, 1 PU = 10 pce.	0.0.478.30

5 6 8 12



Locating Washer 8 D4
St
$a_{min.}$ = Ø 3.5 mm
m = 374 g/100

bright zinc-plated, 1 PU = 10 pce.	0.0.482.10

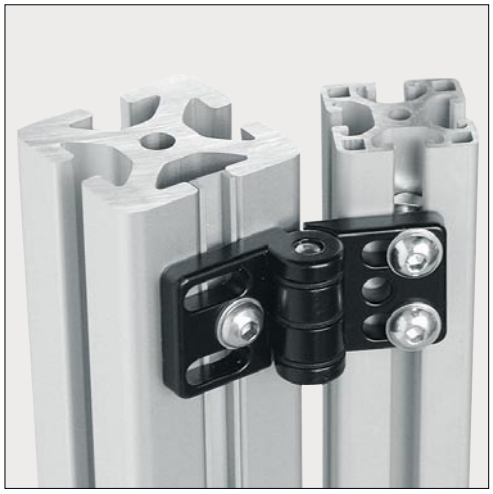
Locating Washer 8 D5
St
$a_{min.}$ = Ø 4 mm
m = 384 g/100

bright zinc-plated, 1 PU = 10 pce.	0.0.482.11

Locating Washer 8 D6
St
$a_{min.}$ = Ø 5 mm
m = 380 g/100

bright zinc-plated, 1 PU = 10 pce.	0.0.482.12

Adapter Profile 12/8

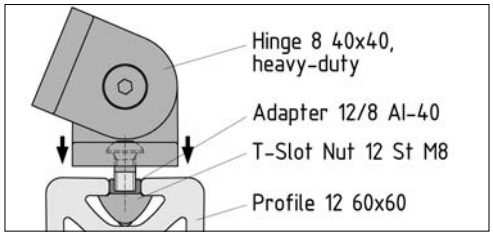


Adapter Profile with and without drilled holes for fastening various attachments from Line 8 onto Profile 12 grooves.

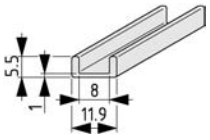
Hinges, heavy-duty hinges, multiblocks and many other elements are equipped with anti-torsion elements and centring aids that are oriented to the Profile 8 groove. These can also be attached to Line 12 profiles using Adapters 12/8 without losing the centring effect.

Adapters 12/8 already have through holes in the modular dimensions of Line 8. Further machining is not required.

Application example:
Connecting a Hinge 8 40x40, heavy duty with Profile 12 using Adapter 12/8 Al-40. The anti-torsion elements of the heavy duty Hinge in the groove remain effective.

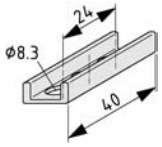


5 6 8 **12**



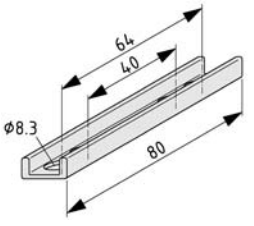
Adapter Profile 12/8 Al
Al, anodized
m = 75 g/m

natural, 1 pce., length 2000 mm	0.0.003.24



Adapter 12/8 Al-40
Al, anodized
m = 3.0 g

natural, 1 pce.	0.0.003.92



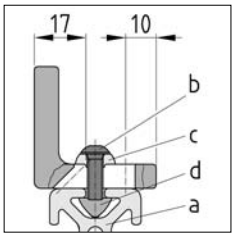
Adapter 12/8 Al-80
Al, anodized
m = 6.0 g

natural, 1 pce.	0.0.003.93

Angle Bracket Zn

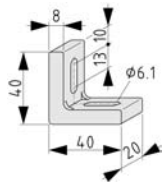
Brackets Zn are very versatile and can be used for securing various components in variable positions on MB Building Kit System profiles and panel elements.

The slots can be used to adjust the position and angle of the Bracket over a broad range and have been designed for screws up to size M6. Locating Washers 6 D5 or 6 D4 are recommended for smaller screws



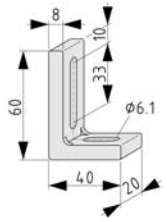
Profil a	5	6	8	12
Screw b ISO 7380	M5x16	M5x20	M6x20	M6x25
c	Locating Washer 6 D5		Washer DIN 9021-6.4	
T-Slot Nut d	5 St M5	6 St M5	8 St M6	12 St M6

5 6 8 12



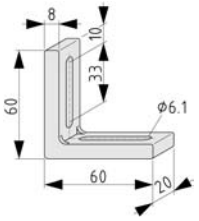
Bracket 40x40x20 Zn
Die-cast zinc
m = 63.0 g

black, 1 pce.	0.0.474.60



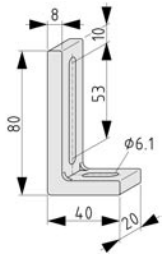
Bracket 60x40x20 Zn
Die-cast zinc
m = 77.0 g

black, 1 pce.	0.0.474.61



Bracket 60x60x20 Zn
Die-cast zinc
m = 92.0 g

black, 1 pce.	0.0.474.62



Bracket 80x40x20 Zn
Die-cast zinc
m = 92.0 g

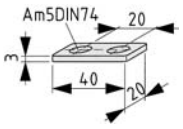
black, 1 pce.	0.0.474.63

Bracket flat and Angle Bracket right-angled

Fastening elements suitable for connecting and attaching cable conduits, Support and Wall Profiles, panel elements or any other components.
When connecting Bracket flat and Angle Bracket right-angled to components without profile grooves, these must be provided with appropriate through bores or threads.

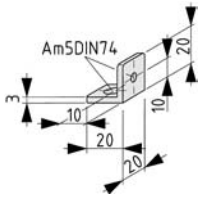
Angle Bracket 8 40 right-angled is used to support a table top on a profile structure.

5 6 8 12



Bracket 5 20 flat
St
m = 25.0 g

black, 1 pce.	0.0.464.23



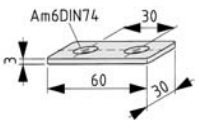
Angle Bracket 5 20 right-angled
St
m = 24.0 g

black, 1 pce.	0.0.464.22

Fastening Set 5 for Bracket / Angle Bracket 5 20 / profile side for Hinge 5 PA
1 Countersunk Screw DIN 7991-M5x8, St, black
1 T-Slot Nut 5 St M5, bright zinc-plated
m = 2.5 g

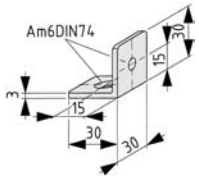
1 set	0.0.370.70

5 6 8 12



Bracket 6 30 flat
St
m = 38.0 g

black, 1 pce.	0.0.459.11

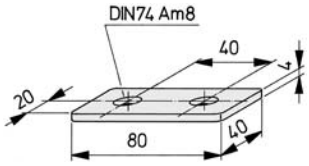


Angle Bracket 6 30 right-angled
St
m = 37.0 g

black, 1 pce.	0.0.459.12

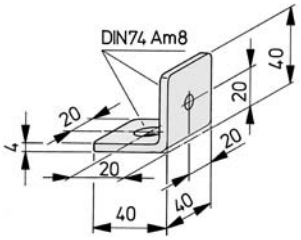
Fastening Set 6 for Bracket / Angle Bracket 6 30
1 Countersunk Screw DIN 7991-M6x10, St, black
1 T-Slot Nut 6 St M6, bright zinc-plated
m = 7.0 g

black, 1 set	0.0.459.26



Bracket 8 40 flat
St
m = 90.0 g

black, 1 pce.	0.0.196.86



Angle Bracket 8 40 right-angled
St
m = 85.0 g

black, 1 pce.	0.0.196.87

Fastening Set 8 for Bracket 8 40 / Angle Bracket 8 40
1 Countersunk Screw DIN 7991-M8x14, St, black
1 T-Slot Nut 8 St M8, bright zinc-plated
m = 16.0 g

1 set	0.0.350.17

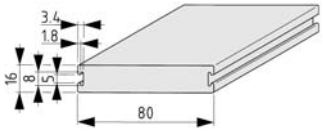
Adapter Plate System

Universal mounting plates are made by cutting Adapter Plate to length. The plates may then be machined to suit any component being attached. The plates can be secured by bolts and T-Slot Nuts or by laterally located clamping elements which allow subsequent adjustment.

Highly stressed units can also be pinned in position.

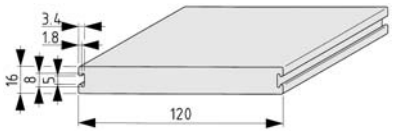
Adapter Plate Profiles

For producing adapter plates and mounting plates of any length.



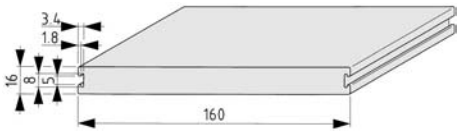
Adapter Plate Profile 80x16 N5
Al, anodized
A = 12.36 cm²
m = 3.34 kg/m

natural, 1 pce., length 2000 mm	0.0.444.06



Adapter Plate Profile 120x16 N5
Al, anodized
A = 18.76 cm²
m = 5.07 kg/m

natural, 1 pce., length 2000 mm	0.0.444.07



Adapter Plate Profile 160x16 N5
Al, anodized
A = 25.16 cm²
m = 6.79 kg/m

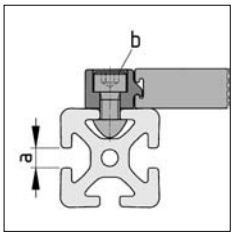
natural, 1 pce., length 2000 mm	0.0.444.08

Adapter Plate Clamps

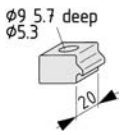
The Adapter Plate Clamps can be used for fastening sections of the Adapter Plate Profile without any need for machining.

By making the attachment in the lateral groove of the Adapter Plate and the groove of the profile construction, the plate can be moved and aligned freely relative to the profile construction. This ensures that the attached machine elements can be adapted and adjusted with ease.

The Adapter Plate Clamps should always be used in pairs opposing each other.

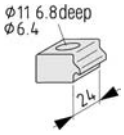


a	b Hexagon Socket Head Cap Screw	Torque M
5	DIN 912 M5x14	4.5 Nm
6	DIN 912 M6x16	10.0 Nm
8	DIN 912 M8x16	25.0 Nm



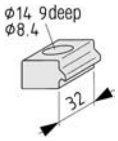
Adapter Plate Clamp 5 N5
Al, anodized
m = 15.0 g

natural, 1 pce.	0.0.444.03



Adapter Plate Clamp 6 N5
Al, anodized
m = 17.0 g

natural, 1 pce.	0.0.444.04

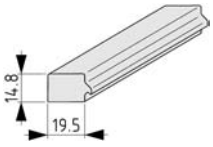


Adapter Plate Clamp 8 N5
Al, anodized
m = 22.0 g

natural, 1 pce.	0.0.444.05

Adapter Plate Clamping Profile N5

The Adapter Plate Clamping Profile is used to construct clamps of any length for Adapter Plates 8 or any sections of the Adapter Plate Profiles.



Adapter Plate Clamping Profile N5
Al, anodized
A = 3.03 cm²
m = 0.82 kg/m

natural, 1 pce., length 2000 mm	0.0.444.09

Fastening Elements for Constructing Enclosures and Guards

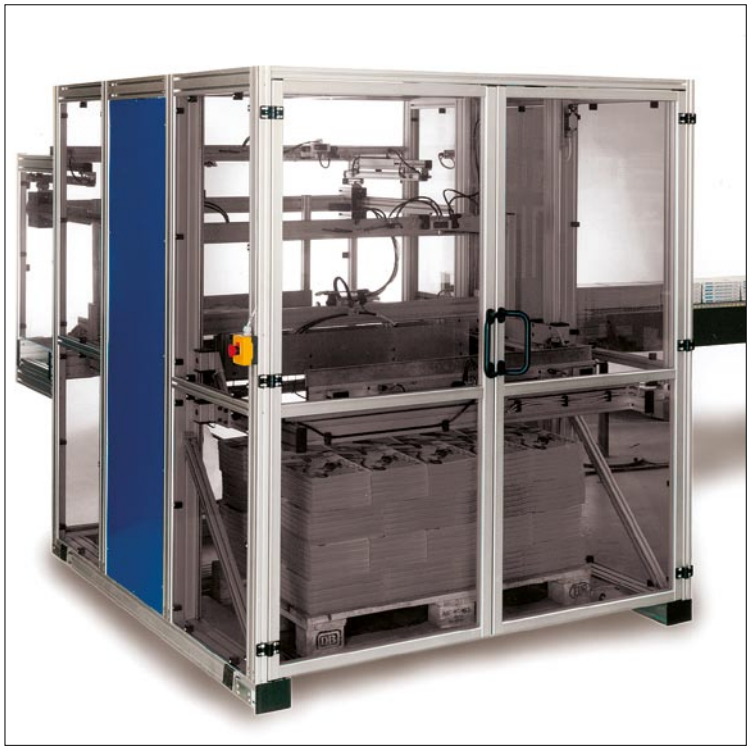
The fastening elements of the MB Building Kit System have to satisfy particularly high requirements for the construction of enclosures and guards. The large variety of special components guarantees a suitable fastening method whatever the application:
> It is possible to secure many different types of panel.
> Doors and gates secure the entry to protected areas.

Factory environments require enclosures and guards for machines and production areas, but office and sales areas also need room dividing and partition elements. In all cases, these can be produced using the fastening elements of the MB Building Kit System.

Panel Fasteners

There are numerous applications using the MB Building Kit System where the securing of panel elements to a profile construction is required:
> Construction of enclosures and guard units
> Panelling of casings
> Shelves, working surfaces, steps
> Swing, sliding and lifting doors

The diverse range of functions where rigid and movable panels are used is made possible by panel fastening elements.



3.3 Rigid Fastening Elements

In conjunction with standard profiles, panel elements can either be mounted in the profile groove or they can be attached offset from the groove with the aid of appropriate components, e.g. Double Panel Profiles or Multiblocks. For example the profiles can form a self-contained frame for the panel element as in the case of machine doors, or the panels can be fitted directly into the basic frame.

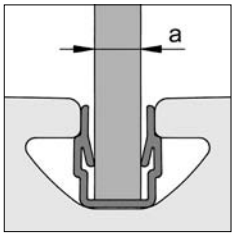
Rigid panels can be formed using profiles or special clamping profiles.

3.3.1 Fastenings for Panels in the Groove

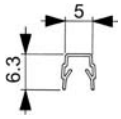
Panel elements are secured in the profile groove using Cover Profile or the Lip Seal.

Cover Profiles PP

Cover Profile can be used as a cover for the profile groove or as a panel-fixing profile for panel elements.



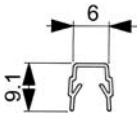
5 6 8 12



Cover Profile 5
PP/TPE
a = 1.5 - 2.0 mm
m = 13.5 g/m

natural, 1 PU = 10 pce., length 2000 mm	0.0.370.79
black, 1 PU = 10 pce., length 2000 mm	0.0.370.80

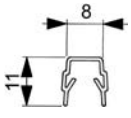
5 6 8 12



Cover Profile 6
PP/TPE
a = 2.0 - 3.5 mm
m = 20.4 g/m

natural, 1 PU = 10 pce., length 2000 mm	0.0.431.03
black, 1 PU = 10 pce., length 2000 mm	0.0.431.02

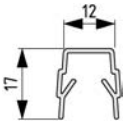
5 6 8 12



Cover Profile 8
PP/TPE
a = 4.0 - 5.5 mm
m = 26 g/m

natural, 1 PU = 10 pce., length 2000 mm	0.0.422.24
black, 1 PU = 10 pce., length 2000 mm	0.0.422.27
green, similar to RAL 6016, 1 PU = 10 pce., length 2000	0.0.489.69
red, similar to RAL 3003, 1 PU = 10 pce., length 2000 mm	0.0.489.75
yellow, similar to RAL 1018, 1 PU = 10 pce., length 2000	0.0.489.66
blue, similar to RAL 5010, 1 PU = 10 pce., length 2000 mm	0.0.489.63
grey, similar to RAL 7042, 1 PU = 10 pce., length 2000 mm	0.0.489.72

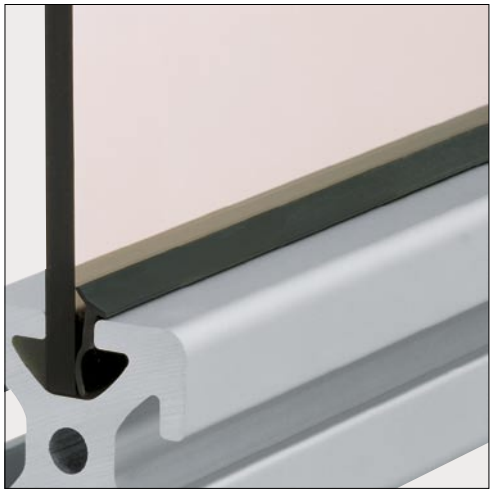
New in catalogue



Cover Profile 12
PP/TPE
a = 6.0 - 9.5 mm
m = 58 g/m

natural, 1 PU = 10 pce., length 2000 mm	0.0.005.16
black, 1 PU = 10 pce., length 2000 mm	0.0.005.30

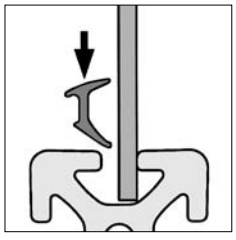
Lip Seals

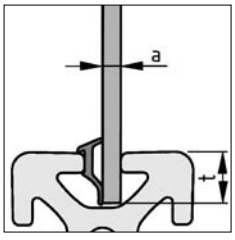


For fastening and sealing panel elements of differing thickness which are inserted into profile grooves 5, 6, 8 and 12.

The version in grey blends in well with the natural anodized surface of the profile.

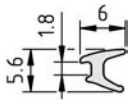
The elastic material is resistant to cleaning agents and mineral oil.





The Lip Seals are best wetted with soapy water prior to assembly to ensure they are fitted easily and correctly. Careful pressure must be applied to lock them into the profile groove.

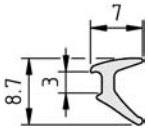
The Assembly Tool (Section 9.2 Jigs and Tools) facilitates the process of pressing the Lip Seal into the profile groove in the right orientation.



Lip Seal 5 2-3mm
TPE
a = 2 - 3 mm
t = 5.3 mm
m = 13 g/m

black, 1 roll length 20 m	0.0.437.12
grey, similar to RAL 7040, 1 roll length 20 m	0.0.484.39

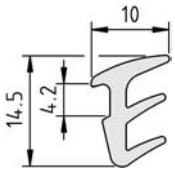
New in catalogue



Lip Seal 6 2-4mm
TPE
a = 2 - 4 mm
t = 8.7 mm
m = 20 g/m

black, 1 roll length 20 m	0.0.439.20
grey, similar to RAL 7040, 1 roll length 20 m	0.0.491.08

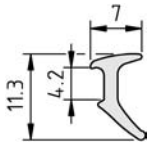
New in catalogue



Lip Seal 8 2-4mm
TPE
a = 2 - 4 mm
t = 11.2 mm
m = 52 g/m

black, 1 roll length 20 m	0.0.436.85
grey, similar to RAL 7040, 1 roll length 20 m	0.0.489.91

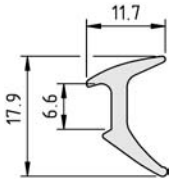
New in catalogue



Lip Seal 8 4-6mm
TPE
a = 4 - 6 mm
t = 11.2 mm
m = 26 g/m

black, 1 roll length 20 m	0.0.436.88
grey, similar to RAL 7040, 1 roll length 20 m	0.0.489.94

New in catalogue



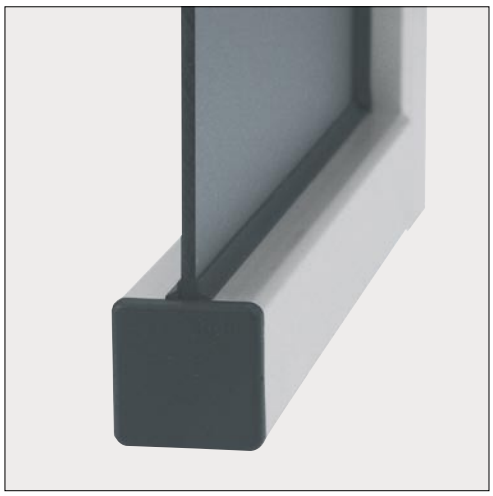
Lip Seal 12 6-8mm
TPE
a = 6 - 8 mm
t = 17.3 mm
m = 58 g/m

black, 1 roll length 20 m	0.0.005.33
grey, similar to RAL 7040, 1 roll length 20 m	0.0.005.37

New in catalogue

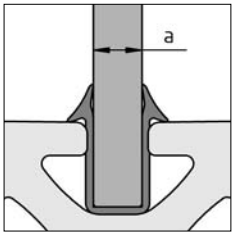
Double-Lip Seal 8 4-6mm

New in catalogue

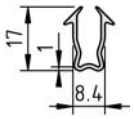


Double-Lip Seal 8 is used for fitting panel elements directly into grooves of Profiles 8. It provides a sealing function and prevents direct contact with the aluminium profile. Double-Lip Seal 8 completely encloses panel elements of thickness 4 to 6 mm in the profile groove.

Double-Lip Seal 8 4-6mm is ideal for all types of panel elements – including those made of plastic or safety glass.



Double-Lip Seal 8 is best installed using soapy water. It is then slipped onto the panel element and pushed into the profile groove. The profile frame is closed around the panel element.



Double-Lip Seal 8 4-6mm
TPE
a = 4.0 - 6.0 mm
m = 50 g/m

black, 1 roll length 20 m	0.0.495.08

3.3.2 Fastenings for Panels on the Groove

Subsequent fastening of panel elements onto the profile groove of an existing frame is made possible by means of Multiblocks, Clamp Multiblocks, Screw Strips and Panel Clamps etc.

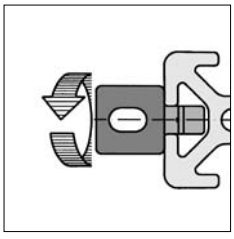
Multiblocks

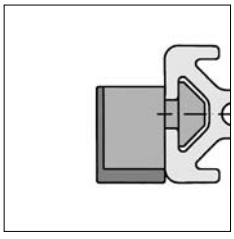
The Multiblocks can be used to provide a secure method of fastening any panel elements to the groove:
> Rapid and secure assembly or disassembly at a later stage
> Fastening at any position on the profile groove and the panel element
> Suitable for various loads
> Option of screwless or screw-type fastener
> Can be adapted for use with different panel element thicknesses

Multiblocks PA

Multiblock PA is inserted into the profile groove at any position. Light cladding panels and panel elements made from Acrylic Glass, Plastic or Compound Material must be provided with a bore at the appropriate location and screwed to the Multiblock.

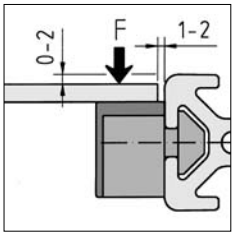
Multiblock PA has two mounting locations plus a height adjuster which combine to give four offset positions from the edge of the profile. This allows different distances to be set to the edge of the profile so that panel elements of varying thicknesses can be screwed on flush.
The panels are secured by screw connection with the square nut inserted in the Multiblock. This nut can be moved within a slot, a fact that allows a considerable degree of tolerance for the position of the bores in the panel element.





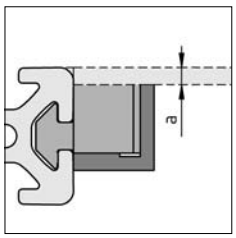
Twisting the Multiblock PA into the profile groove.
The Multiblocks can be moved within the groove in order to align them with the bore in the panel element.

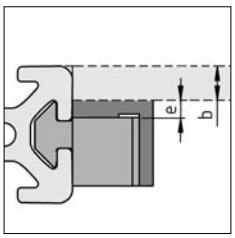
The contact face can be varied through two different mounting locations and movable height adjuster.

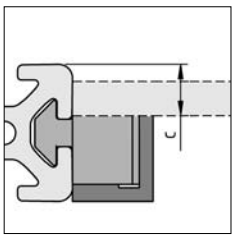


	F
5 PA	100 N
6 PA	150 N
8 PA	250 N

Recommendation for mounting the panel element and permissible loading forces for Multiblocks PA.

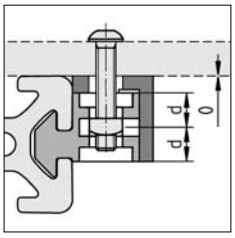






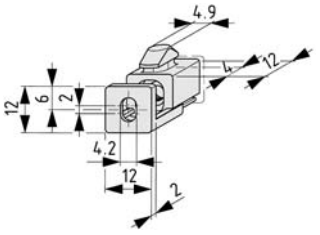
	5	6	8
a [mm]	2	3	5
b [mm]	4	6	10
c [mm]	6	9	15
d [mm]	8	9	10
e [mm]	2	3	5

Possible offset distances between the mounting locations and the edge of the profile.



The length of the fastening screw depends on the thickness of the panel element and use of the height adjuster.

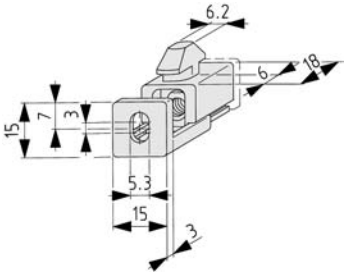
5 6 8 12



Multiblock 5 PA
Basic unit and height adjuster, PA-GF, black
Square nut DIN 562-M4, St, bright zinc-plated
m = 2.0 g

1 pce.	0.0.370.71

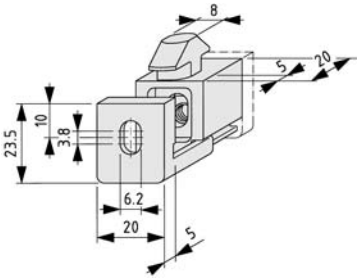
5 6 8 12



Multiblock 6 PA
Basic unit and height adjuster, PA-GF, black
Square nut DIN 557-M5, St, bright zinc-plated
m = 6.0 g

1 pce.	0.0.419.58

5 6 8 12

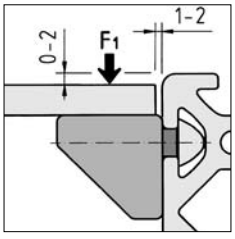


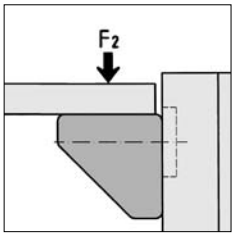
Multiblock 8 PA
Basic unit and height adjuster, PA-GF, black
Square nut DIN 557-M6, St, bright zinc-plated
Leaf spring, St, bright zinc-plated
m = 14.0 g

1 pce.	0.0.026.72

Multiblocks Zn

For fixing panel elements to profile grooves, particularly where heavy loads are involved.
Multiblock Zn is screwed to the profile groove with a screw and T-Slot Nut. The anti-torsion pin, which is adjustable in millimetre increments, ensures flush attachment for panels of different thicknesses. The panel elements must be drilled in the appropriate position to line up with either the through bore or the square nut (which is secured against falling out by a leaf spring) incorporated in the Multiblock.

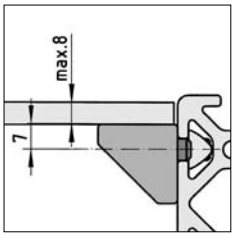


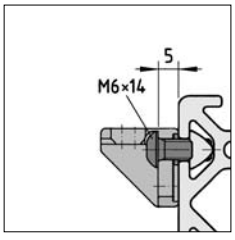


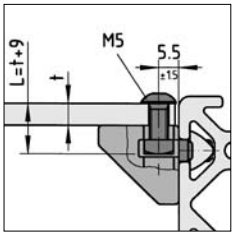
	F_1	F_2
6	1,000 N	500 N
8	2,000 N	1,000 N

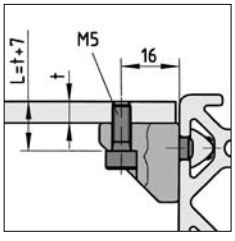
Recommended mounting arrangement and load data across and along the groove.

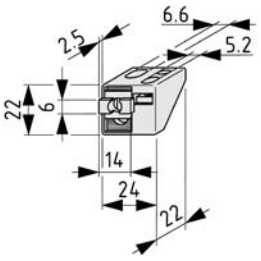
Multiblock 6 Zn







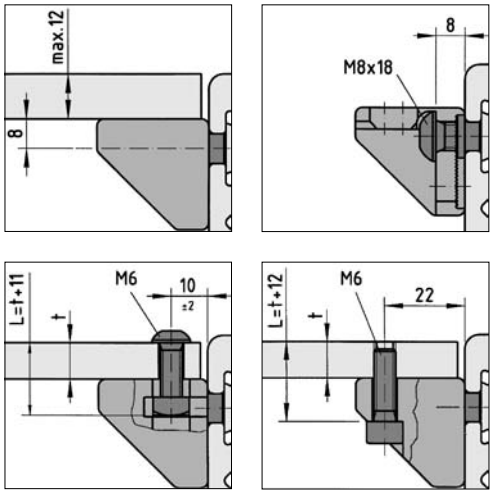


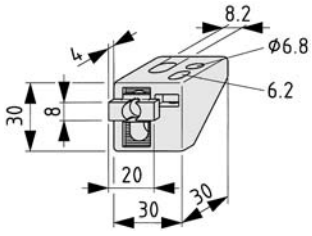


Multiblock 6 Zn
Basic unit and locating lug, die-cast zinc, black
Square nut DIN 557-M5, St, bright zinc-plated
Leaf spring, St, stainless
m = 44.0 g

1 pce. 0.0.439.85

Multiblock 8 Zn





Multiblock 8 Zn
Basic unit and locating lug, die-cast zinc, black
Square nut DIN 557-M6, St, bright zinc-plated
Leaf spring, St, stainless
m = 66.0 g

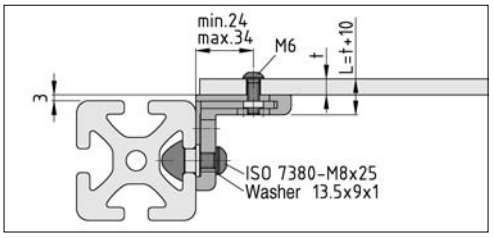
1 pce. 0.0.373.23

Multi Bracket 12 Zn

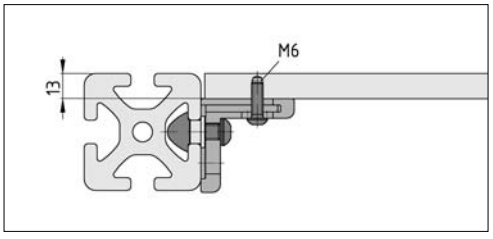
New in catalogue

Universal element for fastening panels to Line 12 profiles. Since the location lug can be adjusted in varius positions within the bracket across the profile groove, panels can be positioned virtually flush with the outer face of the profile irrespective of their thickness.

Multi Bracket 12 can be moved along the profile groove so that they can be easily aligned with the hole in the panel element.

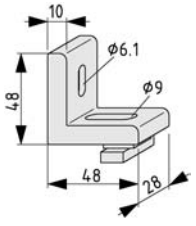


The panel element with through hole is secured by means of an M6 bolt fitted into the square nut of Multi Bracket 12 Zn.



If the panel element is of sufficient thickness, Multi Bracket 12 can also be secured internally so that the fastening is not visible and cannot be detached.

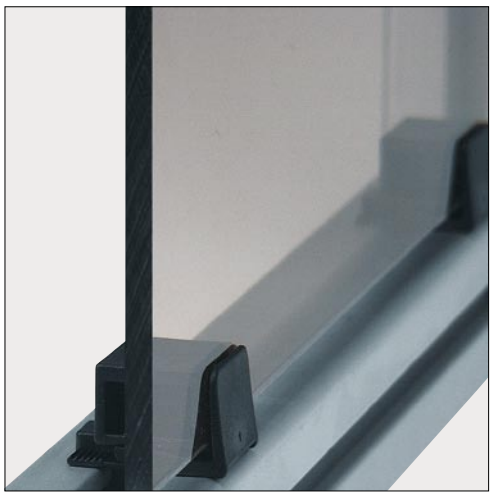
5 6 8 **12**



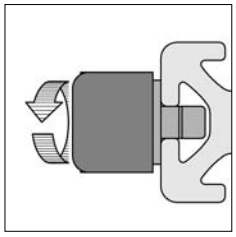
Multi Bracket 12 Zn
Bracket, die-cast zinc, RAL9006 white aluminium
Locating lug, die-cast zinc, RAL9006 white aluminium
Square nut DIN 562-M6, St, bright zinc-plated
Retaining plate, St
m = 120.0 g

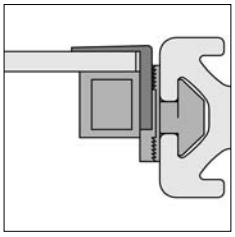
1 set	0.0.007.18

Clamp Multiblocks PA



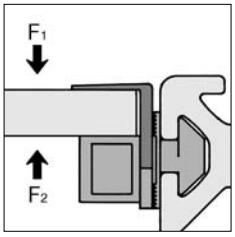
Clamp Multiblocks secure panel elements in profile frames without need for further machining.
Clamp Multiblock PA is inserted into the profile groove; a locating lug secures lightweight panel elements of different thicknesses, such as cladding panels, panel elements made from Acrylic Glass, etc.





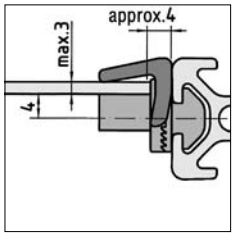
The basic unit is twisted into the groove, the panel element fitted and clamped in position by means of the locating lug.

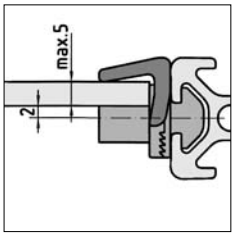
The locating lug can be detached again by means of a screwdriver.



Clamp Multiblock	F_1	F_2
5	100 N	20 N
6	150 N	30 N
8	250 N	50 N

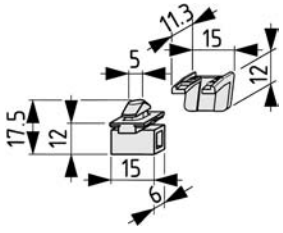
Clamp Multiblock 5 PA





Mounting dimensions can be varied through repositioning the contact faces.

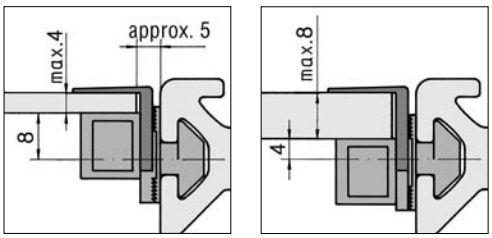
5 6 8 12



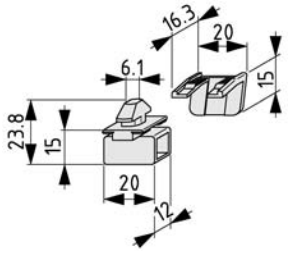
Clamp-Multiblock 5 PA
PA-GF
Basic unit and locating lug
m = 2.0 g

black, 1 pce.	0.0.437.24

Clamp Multi-block 6 PA



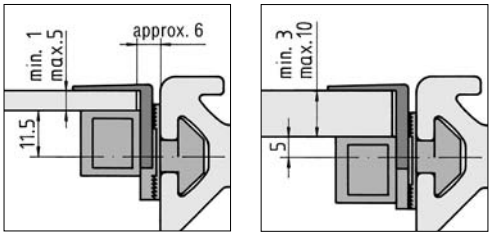
Mounting dimensions can be varied through repositioning the contact faces.



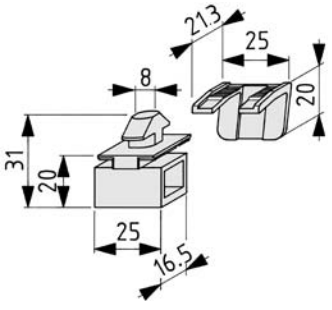
Clamp-Multiblock 6 PA
PA-GF
Basic unit and locating lug
m = 4.0 g

black, 1 pce.	0.0.439.66

Clamp Multi-block 8 PA



Mounting dimensions can be varied through repositioning the contact faces.



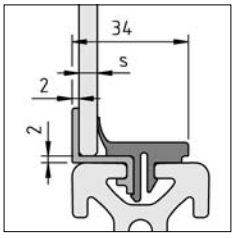
Clamp-Multiblock 8 PA
PA-GF
Basic unit and locating lug
m = 10.0 g

black, 1 pce.	0.0.196.63

Panel-Clamping Strips

New in catalogue

Panel-Clamping Strips 8 are ideal for retrofitting panel elements (preferably made of Acrylic Glass, PET-G or Polycarbonate) into a closed profile frame. Apart from straight saw cuts, no further machining of the panel element or Panel-Clamping Strips is required if the profile frame is connected with Central-Fastening Sets 8.

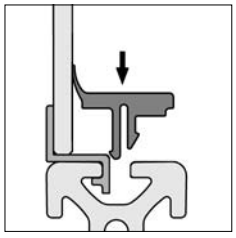


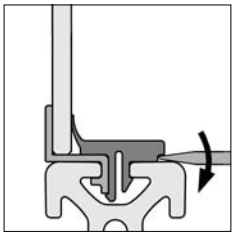
Panel-Clamping Strips 8 consist of two components. The first of these, a aluminium strip, fits into the profile groove and holds the panel element in place. A second strip, of flexible plastic, is then used to secure the panel element and the aluminium strip in the groove. If necessary, the plastic strip can be levered out in order to remove the panel element from the frame.

The Panel-Clamping Strips secure the panel element so that there is an offset of 2 mm to the outer edge of the profile. This produces a smooth outer wall for protective enclosures and helps reduce turbulence caused by air flows.

The choice of Panel-Clamping Strip depends on the thickness of the panel element (s):

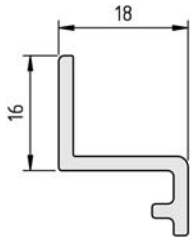
s = 2 - 4 / 4 - 6 / 6 - 8 mm





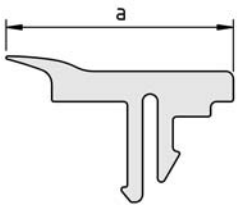
A screwdriver is used to lever out the Panel-Clamping Strip so as to enable removal of the panel element from the frame.

5 6 **8** 12



Panel-Clamping Strip 8 Al
Al
m = 238 g/m

natural, cut-off max. 3000 mm	0.0.495.05



Panel-Clamping Strip 8 2-4mm
PP/TPE
a = 30 mm
m = 151 g/m

grey, similar to RAL 7042, 1 pce., length 3000 mm	0.0.493.75

Panel-Clamping Strip 8 4-6mm
PP/TPE
a = 28.2 mm
m = 142 g/m

grey, similar to RAL 7042, 1 pce., length 3000 mm	0.0.494.64

Panel-Clamping Strip 8 6-8mm
PP/TPE
a = 27 mm
m = 127 g/m

grey, similar to RAL 7042, 1 pce., length 3000 mm	0.0.493.73

Double Panel Profiles

Double Panel Profiles for retrofitting panel elements into existing frame constructions using Self-Tapping Screws DIN 7981 St 4.2.
The facing screw channels allow the construction of double-walled frame elements, e.g. for noise dampening and insulation.

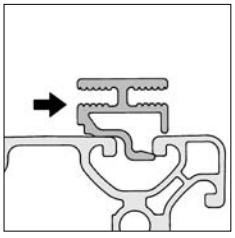
Used in conjunction with Sound-Insulating Material 20 (Section 5.4 Accessories Panel Elements) and Sealing Strip 6x3 sk, it is possible to construct elements which are air-tight and noise-reducing.

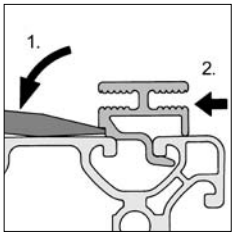
Double Panel Profile 8 Al E

Double Panel Profile 8 Al E can be locked into the groove of Profiles 8 without need for screw connections.

Panel elements can be secured to both sides of the Double Panel Profile using screws.

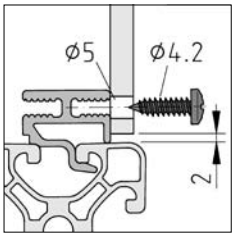
item Innovation
German patent
195 04 593

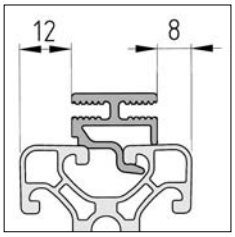


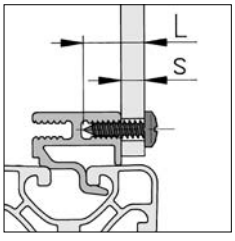


Assembling Double Panel Profile 8 Al E.

Disassembling Double Panel Profile 8 Al E.

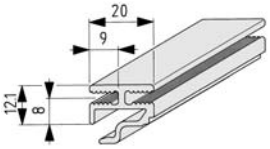






s	L
< 3	4.2 x 9.5
3 - 6	4.2 x 13
6 - 9	4.2 x 16
9 - 12	4.2 x 19
12 - 15	4.2 x 22
15 - 18	4.2 x 25

The length of the screws for fixing the panel elements depends on the element's thickness.



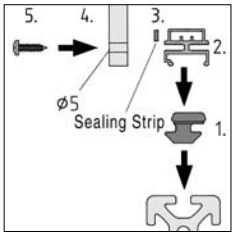
Double Panel Profile 8 Al E
Al, anodized
A = 1.35 cm²
m = 0.36 kg/m

natural, cut-off max. 3000 mm	7.0.001.65

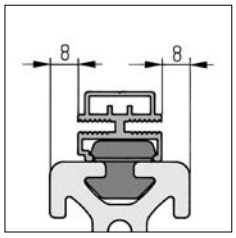
Double Panel Profile 8 AI

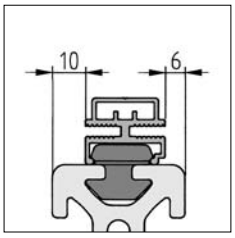
Double Panel Profile 8 AI is ideal for profile constructions in which the groove cannot be used along its entire length.

Fastening to the profile groove is via Clip 8 PA.

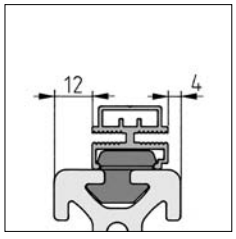


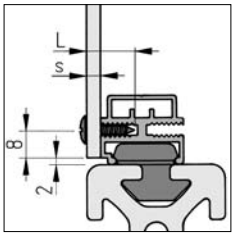
item Innovation
German patent
195 04 454



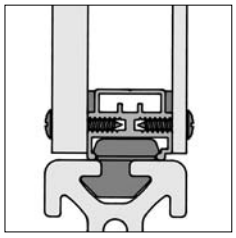


Matching to the wall thickness of the Panel Element by adjusting the positions of Double Panel Profil 8 AI and Clip 8 PA.

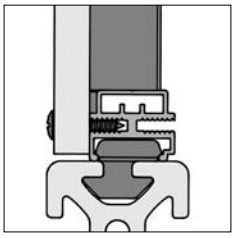




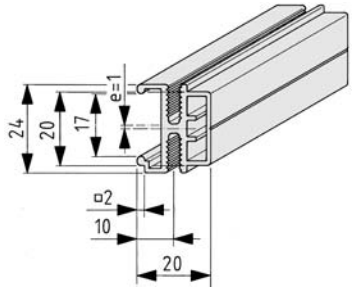
s	L
< 3	4.2 x 9.5
3 - 6	4.2 x 13
6 - 9	4.2 x 16
9 - 12	4.2 x 19
12 - 15	4.2 x 22
15 - 18	4.2 x 25



Double Panel Profile in conjunction with Lip Seal 6x3 sk when used for double-walled constructions.

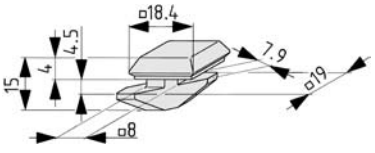


Double Panel Profile in conjunction with Lip Seal 6x3 sk and Sound-Insulating Material 20 mm.



Double Panel Profile 8 AI
Al, anodized
A = 1.62 cm²
m = 0.44 kg/m

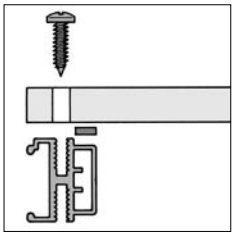
natural, cut-off max. 3000 mm	0.0.420.99

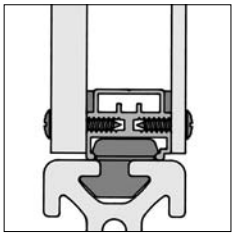


Clip 8 PA
PA-GF
Recommended number: 4 pce./m
m = 3.0 g

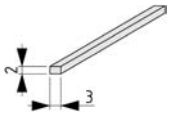
black, 1 pce.	0.0.422.38

Sealing Strip



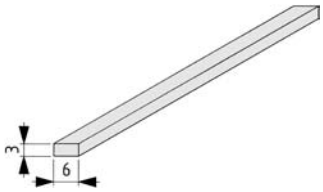


Sealing Strip, self-adhesive on one side, for sealing frame elements. Can also be used as a damping element on mating surfaces, particularly in combination with Double Panel Profile 8 Al.



Sealing Strip 3x2 sk
Cellular rubber
closed-cell, self-adhesive on one side
Temperature range: -30°C to +110°C
Resistant to many oils, fuels, acids and alkaline solutions
m = 1.6 g/m

black, 1 pce., length 1000 mm	0.0.479.98

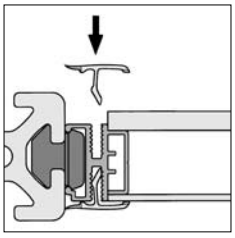


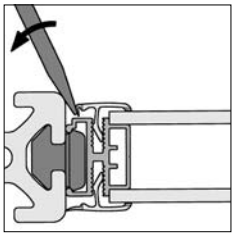
Sealing Strip 6x3 sk
Cellular rubber
closed-cell, self-adhesive on one side
Temperature range: -30°C to +110°C
Resistant to many oils, fuels, acids and alkaline solutions
m = 3 g/m

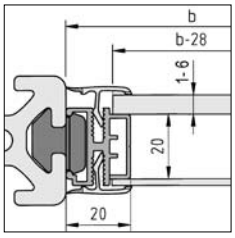
black, 1 roll length 10 m	0.0.422.66

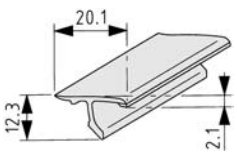
Panel-Fixing Strip

Used in conjunction with Double Panel Profile 8 Al and Clip 8 PA, the Panel-Fixing Strip is ideal for retrofitting essentially air-tight panel elements into existing frame constructions.
Apart from the cut-off, no additional machining is required for the panel element.







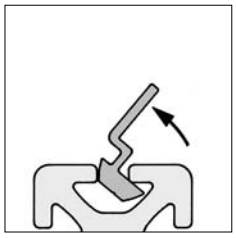


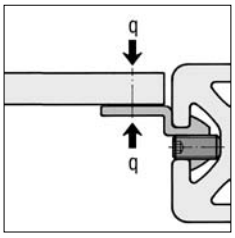
Panel-Fixing Strip 8
PVC
m = 55 g/m

black, 1 pce., length 2000 mm	0.0.429.64

Rebate Profiles

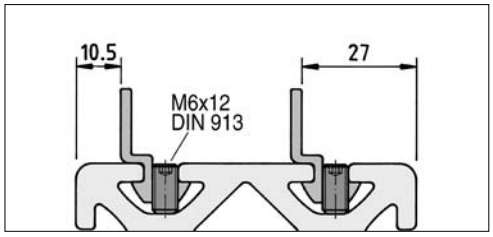
Rebate Profile for universal fastening of various elements to Profiles 8. Suitable as a continuous screw strip for practically dust and dirt-tight constructions, in combination with panel elements and Sealing Strips, or as a rebate strip for doors.





The Rebate Profile is inserted into the groove and fixed in position with grub screws M6.

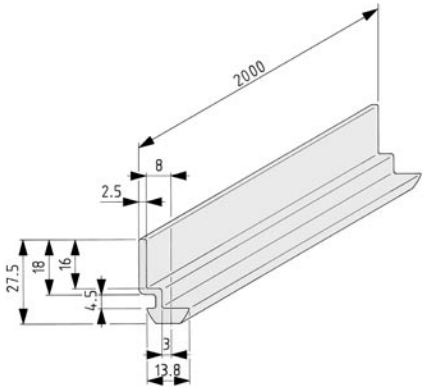
Permissible linear load for Rebate Profile 8 Al:
q_{max} = 1,000 N/m



Connection dimensions for the Rebate Profile 8 Al to Profiles 8.

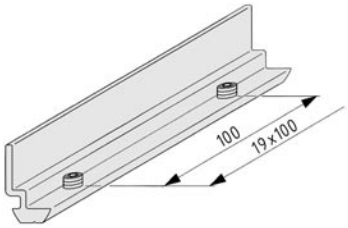
Rebate Profile 8 Al 19″ is used for fixing 19″ front plates or 19″ housings or other panel elements. These are secured by Captive Nuts which can be inserted in the square openings of the Rebate Profile.
1 height unit (HU) corresponds to a length of 44.45 mm

5 6 **8** 12



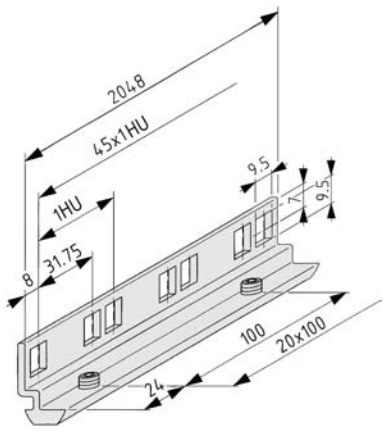
Rebate Profile 8 Al
Al, anodized
m = 310 g/m

natural, 1 pce., length 2000 mm	0.0.411.14



Rebate Profile 8 Al M6
Al, anodized, natural
Fully machined with 20 threads M6
incl. grub screws DIN 913-M6x12, St, bright zinc-plated
m = 540.0 g

1 pce., length 2000 mm	0.0.444.89

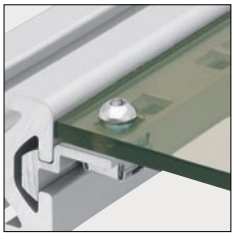


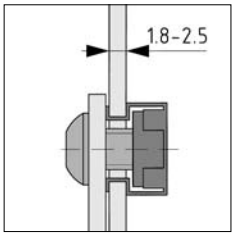
Rebate Profile 8 Al 19″
Al, anodized, natural
Fully machined with 91 openings and 21 M6 threads
incl. grub screws DIN 913-M6x12, St, bright zinc-plated
m = 630.0 g

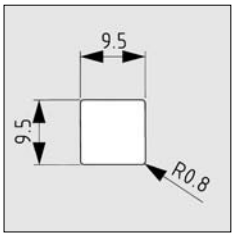
1 pce., length 2048 mm	0.0.398.19

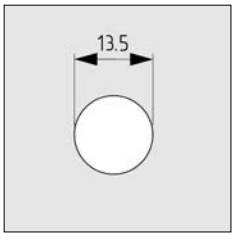
Captive Nuts

Universal usage for installation in Rebate Profile 8 Al 19″ or in panel elements. The Captive Nuts can be installed by snapping the latch springs into the corresponding recess.

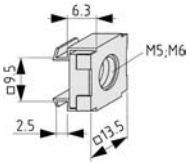








The recesses can be either:
> Square - with anti-torsion feature
> Round - no anti-torsion feature



Captive Nut M5
St
Cage and square nut
m = 500 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.411.65

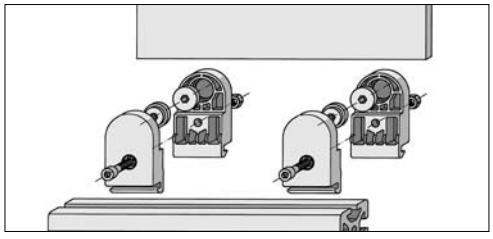
Captive Nut M6
St
Cage and square nut
m = 500 g/100

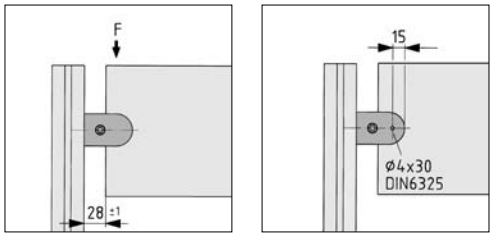
bright zinc-plated, 1 PU = 100 pce.	0.0.411.66

Panel Clamp

For securing panel elements to Profiles 8 without the need for additional machining. Tightening the clamping screw fixes the Panel Clamp to both the panel element and the profile.

Particularly suitable for attachment of unframed panels etc. Not suitable for mesh and corrugated mesh.
The panel elements of thickness 4 - 10 mm can be clamped in position by the asymmetrical spacer washers. Depending on the particular application, it may be necessary to invert the spacer washers in the housing.

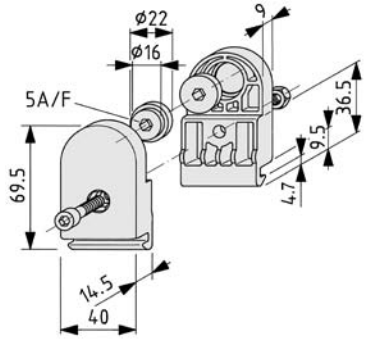




Max. loading for each Panel Clamp without pinning.
F_{max} = 100 N

Possible pinning position for securing the panel element against movement.

5 6 **8** 12



Panel Clamp 8
2 housing halves, PA-GF, black
1 Hexagon Socket Head Cap Screw DIN 912-M6x20, St, bright zinc-plated
1 Hexagon Nut DIN 934-M6, St, bright zinc-plated
2 spacer washers, NBR, black
m = 56.0 g

1 set	0.0.388.91

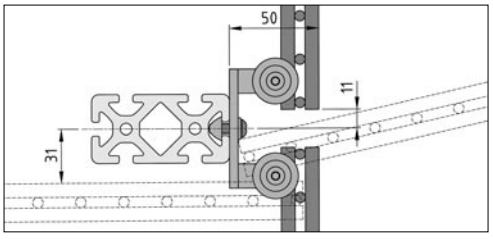
Dual-Rod Mesh System

Protective fence system for freestanding machine guarding. The Dual-Rod Mesh, made of welded high-strength steel wire, is screwed at any angle to the profile groove of Line 8 Stand Profiles using Dual-Rod Mesh Hangers. This creates a customisable and stable protective fence into which swing door elements can also be integrated, if required.
The inherently stable dual-rod mesh elements are used for constructing free-standing protective fence structures. Available in two different mesh widths (25 and 50 mm) (Section 5.2 Mesh Panels).

Dual-Rod Mesh Hanger

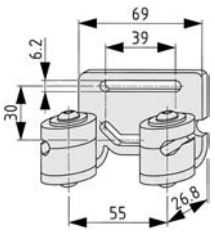
The Dual-Rod Mesh Hanger accommodates the Dual-Rod Mesh elements on the cross-rods (∅ 8 mm) at any angle between 0° - 270° to the Stand Profile.
Even after the fastening screws have been tightened, the fastening can still be rotated. This also forms a hinge for a swing door.

The Dual-Rod Mesh is first hung from a preassembled Dual-Rod Mesh Hanger, and then screwed into position with further Hangers. Recommended spacing of Hangers: 3 section heights, corresponding to 600 mm.
The slotted hole fastening on the Stand Profile enables adjustment of the position and angle. The ability to move the mesh horizontally (depending on the mesh width) in the Dual-Rod Mesh Hanger helps compensate for minor assembly errors.



Average dimensions for connecting the Dual-Rod Mesh to the Stand Profile.

Corner zones at any angle can easily be constructed thanks to the Dual-Rod Mesh Hanger's ability to tilt.



Dual-Rod Mesh Hanger
Body, St, black
Clamping elements, die-cast zinc, black
2 Button-Hd. Screws ISO 7380-M6x10, St, bright zinc-pl.
2 Button-Hd. Screws ISO 7380-M6x22, St, bright zinc-pl.
4 Washers DIN 9021-6.4, St, bright zinc-plated
m = 279.0 g

1 set	0.0.446.04

3.3.3 Fastenings for Panels in Special Profiles

When constructing guards for machines, especially for inherently stable enclosures and partitions, the use of panel elements in special frames of Clamp Profiles is recommended.

These panels, when hung in vertical supports, create a customised protective fence appropriate to the situation. Individual panels can be integrated as fixed, removable or movable doors within the security fence.

The appropriate Clamp Profiles can be selected according to the required panel elements (Section 5 Panel Elements).

Frame Profile	Panel Element: Acrylic Glas / Polycarbonate	Sheet Metal Al	Compound Material	Plastic	Corrug. Mesh Al	Corrug. Mesh St	Steel Mesh	Perforated Sheet
Clamp Profile	+	+	+	+	0	+	+	+
Clamp Profile E	+	+	+	+	+	0	+	+
Clamp Profile 8 32x18	+	+	+	+	-	-	-	0
Profiles (Line 8)	0	0	0	0	-	-	-	0

+ well suited o assembly possible - not recommended

In addition to the information in the table, note that the inherent strength of an enclosure is also dependent on the panel elements being securely clamped in the profile hangers.

Here the special Clamp Profiles with a deep groove offer distinct advantages over standard profiles, especially in connection with non-inherently stable panels (such as corrugated mesh, thin sheet metal or similar). There are significant advantages over traditional constructions, epecially in the case of free-standing large-area guards in production facilities, and room dividers in offices, store rooms and sales areas. Clamping the panel elements in profile frames results in an increased static stability, with less material weight.

In this way construction, dismantling and later modification are simplified.
The special hangers for frame elements level out any mounting tolerances and facilitate the removal or fastening of elements.

Alternatively, guards and enclosures can also be constructed from inherently stable panel elements (for example Dual-Rod Mesh System, (Section 5 Panel Elements) which can be hung directly on Stand Profiles without using a frame of special Clamp Profiles.

Special profiles

Special profiles are available for constructing dividing wall systems such as area guarding or cell guarding. Room dividers etc. can also be constructed from these elements.

Special Clamp Profiles secure the particular panel elements in different ways in the frame.

A special Textile Clamp Profile is available for fixing textile panels (textile mesh, fabric webs). It enables the construction of frame elements for areas without safety requirements.

Clamp Profile 8 32x18:

The panel element is held in a special groove of the profile with the help of Clamping Springs.
This increases the resistance against the enclosed panel being pressed out. This resistance depends on the number of Clamping Springs used.

Clamp Profiles E:

An inserted spring steel strip presses along the length of the clamped panel element.
With panels made from materials with little surface hardness (for example Polycarbonate, Corrugated Mesh Al) this results in a particularly high inherent strength.

Clamp Profile:

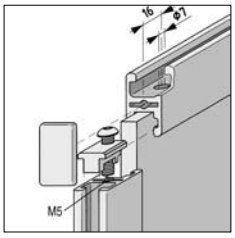
A pre-tensioned clamp strip presses directly on the panel element and holds it secure and rattle free in the clamp groove of this profile. The best support effect is achieved with enclosed panels and inherently stable steel mesh

Clamp Profile 8 32x8

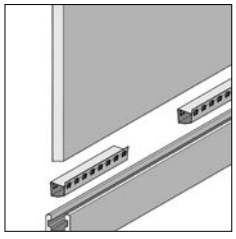
Particularly suitable for constructing light guards and enclosures, sliding doors and other panelling structures.

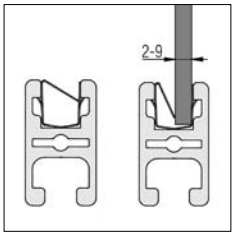
The panel element is secured in the groove by a Clamp Spring.

Instead of Clamping Spring 8, a Lip Seal 8 can also be used for securing inherently stable panel elements.



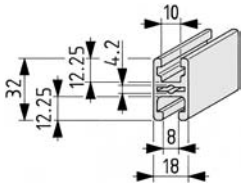
Clamp-Profile Fastening Set 8 32x18 ensures a correctly positioned corner connection for the profiles.





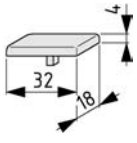
The number of Clamping Springs required depends on the load, the inherent stability and the size of the panel element.

10 mm thick panel elements can be fitted into the groove without using Clamping Springs.



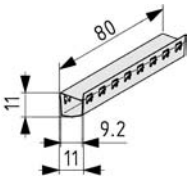
Clamp Profile 8 32x18
Al, anodized
A = 2.49 cm² I_x = 1.88 cm⁴ I_y = 1.10 cm⁴
m = 0.67 kg/m W_x = 1.16 cm³ W_y = 1.23 cm³

natural, cut-off max. 3000 mm	0.0.373.67



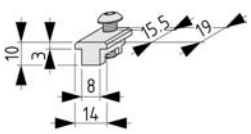
Cap 8 32x18
PA-GF
m = 2.2 g

black, 1 pce.	0.0.388.87



Clamping Spring 8
St
m = 5.0 g

stainless, 1 pce.	0.0.406.21



Clamp-Profile Fastening Set 8 32x18
Fastener, die-cast zinc, bright zinc-plated
Button-Head Screw ISO 7380-M5x20, St, bright zinc-plated
$M_{bzp.}$ = 4.5 Nm
m = 11.0 g

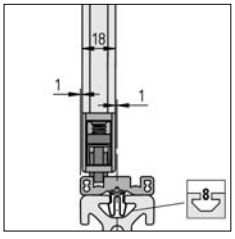
1 set	0.0.404.09

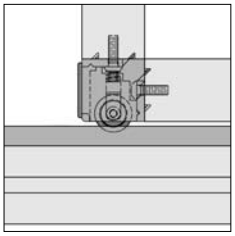
Corner-Fastening Set Clamp-Profile 8 32x18

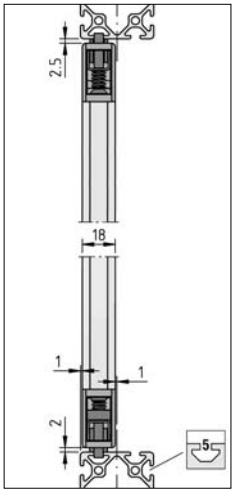
New in catalogue

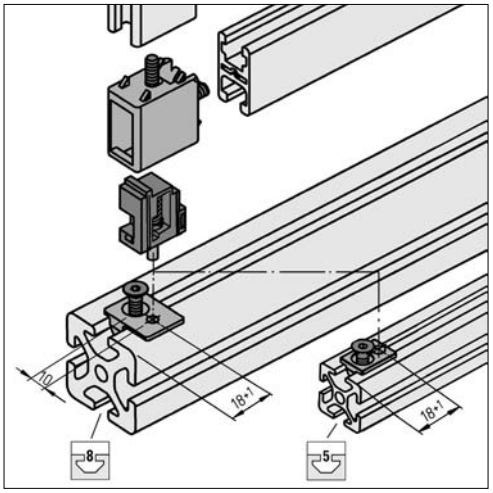
item Service

www.item.info









Corner-Fastening Set Clamp-Profile 8 32x18 is used for stable profile connections.
The rigid screw fastening to the end faces of the profiles being connected produces a frame that is ideal for use within lightweight enclosures and for door frames.

Corner-Fastening Set Clamp-Profile 8 32x18 contains all components required for a profile connection. An M5 thread must be tapped into the core bore of each of Clamp Profiles 8 32x18.
The Corner-Fastening Sets are multifunctional. They can be used in a variety of ways when used with special add-on elements:
- Roller Set 32x18 can be fitted directly into the corner fastener. This turns the frame into smooth-running sliding door elements that can be employed e.g. in the Sliding-Door Guide Profile 8 40x10.
- Hinge Sets 32x18 come with an insert for the corner fastener which forms a door hinge in conjunction with a hinge bearing in the frame of the surrounding construction. This provides an easy means of constructing a stylish, lightweight swing door with a particularly low door gap and without need for fitting additional hinges.

Sliding-Door Guide Profile 8 40x10 is fitted with Clip 8 St at the top and bottom of the surrounding profile frame. It forms the guide for two door leaves of Clamp Profile 8 32x18.

Spring-loaded Roller Set 32x18 is fitted into the corner fasteners of the previously constructed clamp profile frames. A Roller Set must be installed in each fastener so as to guide the sliding door leaf.

A limit stop can be installed to prevent the roller insert from springing. The corner fasteners at the bottom of a sliding door frame are always installed with rigid rollers. Spring-loaded rollers in the corner fasteners at the top enable the door leaves to be fitted into a profile frame which has already been built.

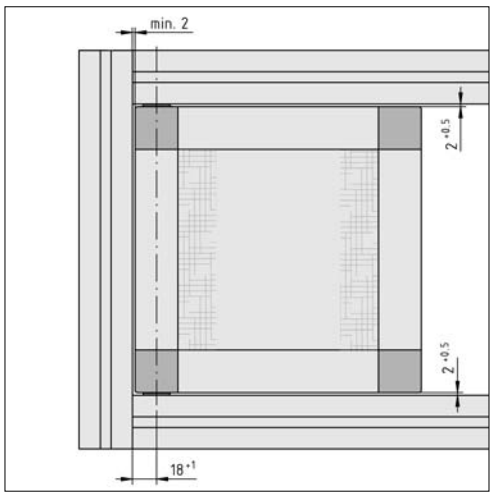
If required, all four roller inserts may be blocked by limit stop inserts and the outer profile frame finished after the sliding door leaves have been fitted. This effectively prevents the doors from being removed without dismantling the frame.

After the rollers have been fitted, an end cap of plastic closes the fastener at the side and serves as a door stop in the terminal positions.

The sliding doors can also be run directly in the grooves of a Line 5 profile. This produces a particularly compact frame construction.

The hinge inserts are also fitted into the corner fasteners after the clamp profile frame has been closed.

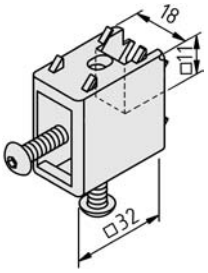
A hinge bearing is attached to both the upper and the lower frame profile and functions as a rotary bearing for a door. During installation, the spring-loaded Hinge Pin engages in the bearing plate, whose position in the groove can be adjusted when the swing door is open. This provides an effective means of preventing a closed door from being dismantled.



The Hinge Sets for installing swing doors in frame constructions of Line 5 or 8 contain all the parts required for one hinge.

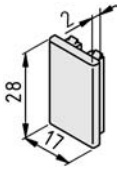
The maximum permissible weight of a door is 10 kg.

5 6 **8** 12



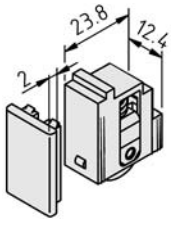
Corner-Fastening Set Clamp-Profile 8 32x18
Die-cast zinc, white aluminium similar RAL 9006
2 Button-Head Screws ISO 7380-M5x16, St, bright zinc-plated
m = 54.5 g

1 set **0.0.494.73**



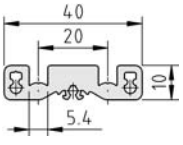
Cap for Corner-Fastener 8 32x18
PP
m = 1.3 g

grey, similar to RAL 7042, 1 pce. **0.0.494.71**



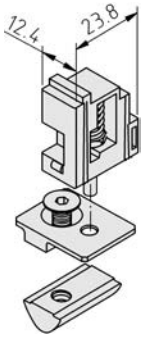
Roller for Corner-Fastener 8 32x18
1 roller insert
1 compression spring
1 limit stop
1 cap, PP grey
Notes on Use and Installation
m = 10.5 g

1 set **0.0.494.74**



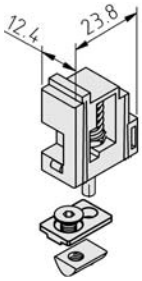
Sliding-Door Guide Profile 8 40x10
Al, anodized
A = 2.48 cm²
m = 0.67 kg/m

natural, cut-off max. 3000 mm **0.0.495.13**



Hinge 8 for Corner-Fastener 8 32x18
Hinge insert
Bearing plate 8
T-Slot Nut V 8 St M5, bright zinc-plated
Countersunk Screw DIN 7991-M5x12, St, bright zinc-plated
Notes on Use and Installation
m = 23.0 g

1 set **0.0.494.76**



Hinge 5 for Corner-Fastener 8 32x18
Hinge insert
Bearing plate 5
T-Slot Nut 5 St M4, bright zinc-plated
Countersunk Screw DIN 7991-M4x6, St, bright zinc-plated
Notes on Use and Installation
m = 11.5 g

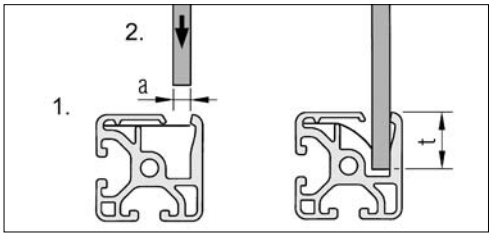
1 set	0.0.495.33

Clamp-Profiles E

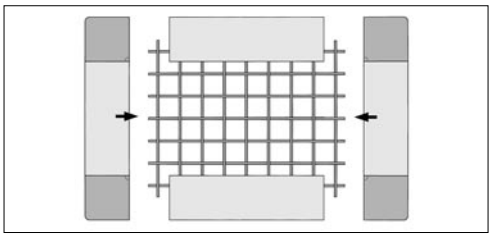
item Innovation
German patent
and foreign patent
EP 0 968 339

Clamp-Profile System E is ideal for easy and fast construction of frame elements for enclosure and guard systems. A stainless steel strip is inserted into the weight-optimised profiles to protect the various panel elements from becoming dislodged from the groove.
Securing and clamping the panels increases the overall strength of the frame elements.

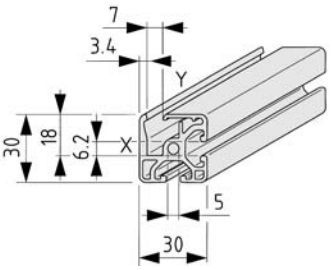
Profiles are connected using Clamp-Profile Fasteners. The frame elements of Clamp Profiles E are hung using Clamp-Profile Hangers E, which engage in the Clamp-Profile Fastener.
In conjunction with the Clamp-Profile Hinge E (Section 3.4 Movable Fastening Elements) the frame element can easily be used as a swing door.

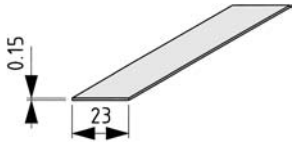


Installation sequence:
1. Insert the Clamp-Profile Strip into the spring cavity in the Clamp Profile.
2. Press in the panel element.



Producing frames:
1. Cut-off of panel element = inside frame dimension + 2 x insertion depth (t).
2. Fit the Clamp-Profile Fastener loosely onto the upright frame profiles.
3. Place the horizontal frame profiles centrally onto the panel element so as to ensure initial gentle clamping by the steel strip. The panel element must not yet be pressed all the way into the groove.
4. Assemble the frame and tighten the bolts. The panel element will be pressed into the groove by varying amounts (depending on the tolerance position) when the bolts are tightened.





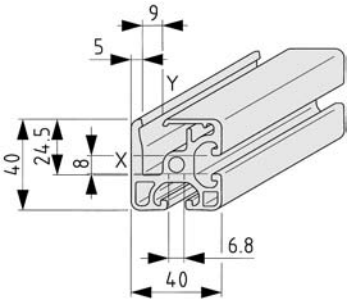
Clamp Profile 6 30x30 E
Al, anodized
a = 2 - 6 mm
t = 16 mm

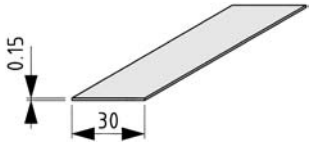
A =	3.58 cm²	I_x =	2.77 cm⁴	I_y =	3.24 cm⁴
m =	0.97 kg/m	W_x =	1.81 cm³	W_y =	2.14 cm³

natural, cut-off max. 6000 mm **0.0.439.42**

Clamp-Profile Strip 6 23x0.15 E
St
m = 27 g/m

stainless, 1 roll length 20 m **0.0.441.52**





Clamp Profile 8 40x40 E
Al, anodized
a = 2 - 8.5 mm
t = 21 mm

A =	6.50 cm²	I_x =	8.79 cm⁴	I_y =	10.67 cm⁴
m =	1.76 kg/m	W_x =	4.29 cm³	W_y =	5.25 cm³

natural, cut-off max. 6000 mm **0.0.436.92**

Clamp-Profile Strip 8 30x0.15 E
St
m = 35 g/m

stainless, 1 roll length 20 m **0.0.440.48**

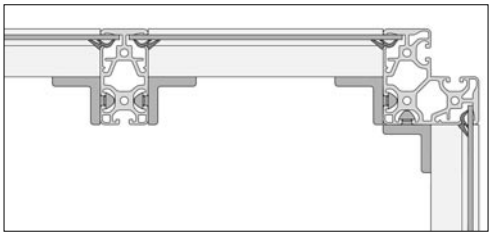
Clamp Profiles light

New in catalogue

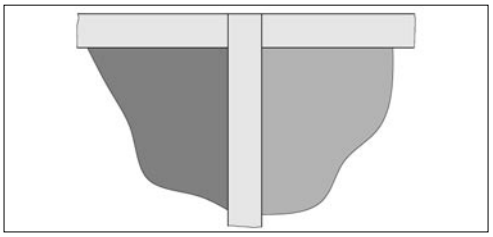
When combined, Clamp Profiles 8 80x40-180° light and W80x80x40 light function as both a Stand Profile and a Clamp Profile. This allows particularly cost-effective constructions. These profiles are also available in a special optimised cut-off length (4800 mm) for Stand Profiles.

Enclosed panels of thickness 4 to 6 mm (e.g. Polycarbonate 4 mm) are recommended for the panel elements. The panels are secured with Lip Seals 8 to ensure they do not rattle in the groove.

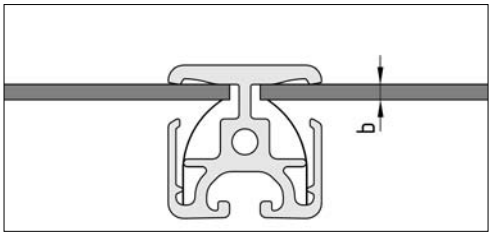
The clamping groove of Profiles light corresponds with the groove of Clamp Profiles 8 40x40 E.
These Clamp Profiles can therefore be combined at will with Clamp Profiles 8 40x40 E.



The Clamp Profiles light are connected using Angle Bracket V 8 40 Zn.

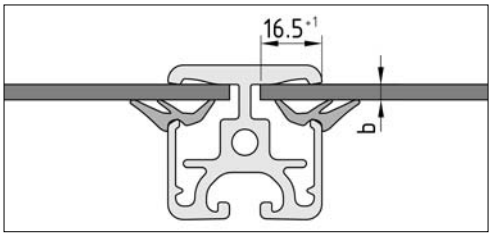


Using a Clamp Profile as a stand allows you to construct protective enclosures without gaps.



Clamp-Profile Strip 8 30x0.15 E ensures particularly effective clamping.
Clamp Profiles must first be pushed onto the panel element. The frame is then connected using Angle Brackets V 8 40 Zn.

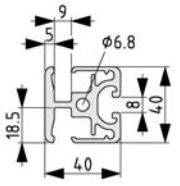
b = max. 6 mm



Lip Seals 8 ensure inherently stable panel elements are secured firmly without rattling.

b = max. 6 mm

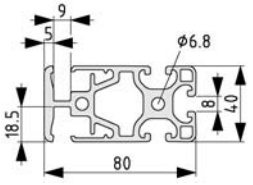
5 6 **8** 12



Clamp Profile 8 40x40-180° light
Al, anodized

A =	6.51 cm²	I_x =	8.57 cm⁴	I_y =	11.20 cm⁴
m =	1.77 kg/m	W_x =	4.29 cm³	W_y =	5.51 cm³

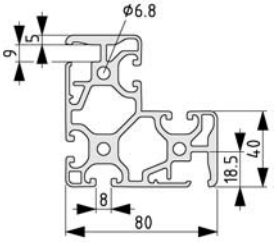
natural, cut-off max. 6000 mm — 0.0.483.36



Clamp Profile 8 80x40-180° light
Al, anodized

A =	11.77 cm²	I_x =	17.37 cm⁴	I_y =	70.29 cm⁴
m =	3.18 kg/m	W_x =	8.69 cm³	W_y =	17.41 cm³

natural, cut-off max. 4800 mm — 0.0.480.44

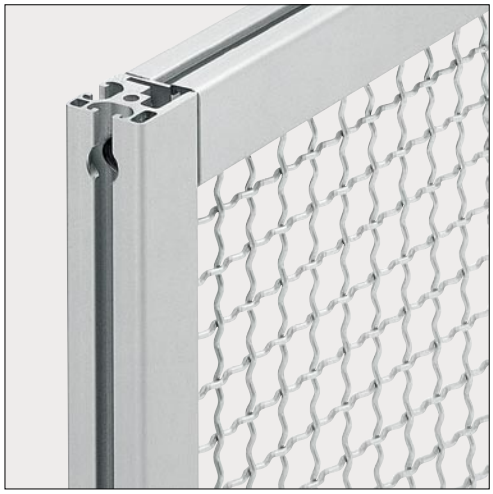


Clamp Profile 8 W80x80x40 light
Al, anodized

A =	17.51 cm²	I =	97.40 cm⁴		
m =	4.73 kg/m	W =	21.18 cm³		

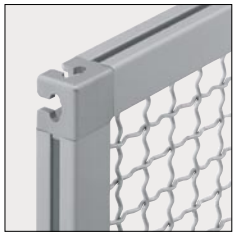
natural, cut-off max. 4800 mm — 0.0.483.57

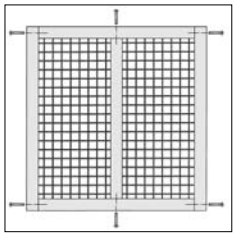
Clamp Profiles

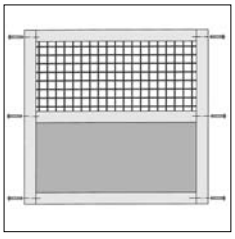


The Clamp Profiles are particularly suitable for constructing and subdividing large-area guards and enclosures as well as swing and sliding doors.
Corrugated mesh, sheet material, panels and plastic panel elements can be clamped into position.
The secure clamping of the panel elements reinforces the high rigidity of the frame element.

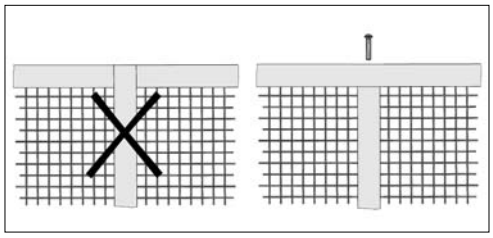
Clamp Profiles can be connected together in different ways:
> direct screw attachment of the profiles
> using the Clamp-Profile Fasteners



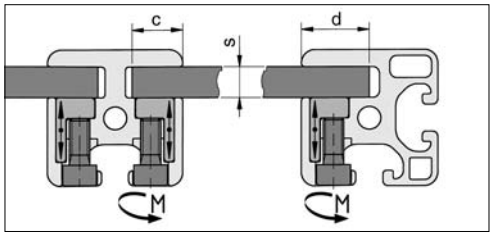


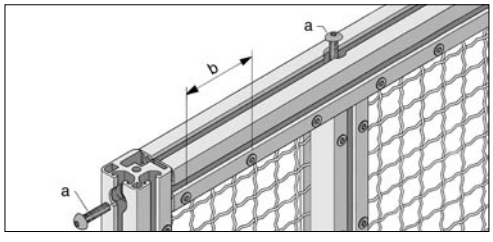


When designing panel frames it is important to ensure that the vertical profiles are the through profiles, i.e. that the horizontal struts run between them. (Section 9.3.2 Connection Processing).

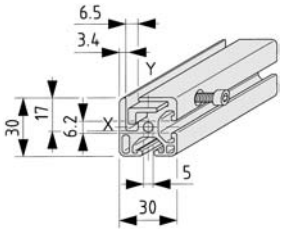


Where the panels are to be divided by a central strut (Clamp Profile 180°), this should always be tapped at the ends and bolted between the outer frame profiles.
The Profile Edging (i.e. clamping strip) will need to be interrupted accordingly.





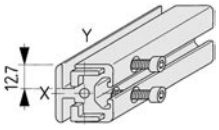
	Clamp Profile 6		Clamp Profile 8	
	30x30	30x30-180°	40x40	40x40-180°
c	-	12^{-1} mm	-	15^{+1} mm
d	15^{+1} mm	-	20^{+2} mm	-
$M_{max.}$	2 Nm		8 Nm	
a	Button-Head Screw ISO 7380 M6x30		Button-Head Screw ISO 7380 M8x40	
b	150 mm		200 mm	
s	2-6 mm		2-8.5 mm	



Clamp Profile 6 30x30
Al, anodized
Cap Screws DIN 912-M4x12, St, bright zinc-plated

A =	4.14 cm²	I_x =	3.20 cm⁴	I_y =	3.54 cm⁴
m =	1.12 kg/m	W_x =	2.04 cm³	W_y =	2.34 cm³

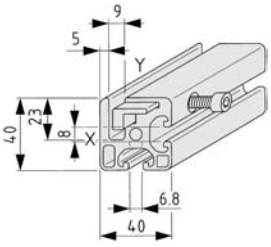
natural, cut-off max. 6000 mm 0.0.431.11



Clamp Profile 6 30x30-180°
Al, anodized
Cap Screws DIN 912-M4x12, St, bright zinc-plated

A =	4.64 cm²	I_x =	3.88 cm⁴	I_y =	3.53 cm⁴
m =	1.25 kg/m	W_x =	2.54 cm³	W_y =	2.35 cm³

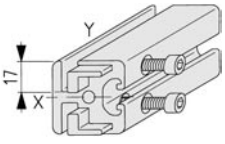
natural, cut-off max. 6000 mm 0.0.431.14



Clamp Profile 8 40x40
Al, anodized
Cap Screws DIN 912-M6x16, St, bright zinc-plated

A =	7.49 cm²	I_x =	9.58 cm⁴	I_y =	11.96 cm⁴
m =	2.02 kg/m	W_x =	4.55 cm³	W_y =	5.93 cm³

natural, cut-off max. 6000 mm 0.0.196.50



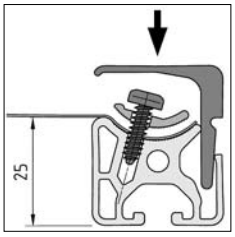
Clamp Profile 8 40x40-180°
Al, anodized
Cap Screws DIN 912-M6x16, St, bright zinc-plated

A =	8.38 cm²	I_x =	11.40 cm⁴	I_y =	13.00 cm⁴
m =	2.26 kg/m	W_x =	5.70 cm³	W_y =	6.20 cm³

natural, cut-off max. 6000 mm 0.0.429.95

Textile Clamp Profile

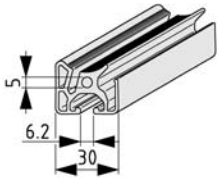
Special profiles for clamping thin (max. 1.5 mm) panel elements that are not inherently stable such as textile grids, fabric webs, paper webs and films.
The textile clamp profiles are combined into a profile frame using Clamp-Profile Fastener 6 30x30 E; the whole assembly can then be suspended on stand profiles.
Textile Clamp Profiles comprise the Clamp Profile, the Clamp Strip and a Lid Profile. Using the Button-Head Screw St 4x12 TX 20, the textile panel element is clamped between the Clamp Profile and the Clamp Strip, and cut to size after clamping.
Finally, the Lid Profile provides an easy-clean closure for the clamped area.



The Button-Head Screw St 4x12 TX 20 is self-threading in the Clamp Profile's screw channel.
The Clamp Strips already feature through holes. The textile panel element must be pierced with the screw if necessary.
The maximum thickness of the panel element is 1.5 mm.

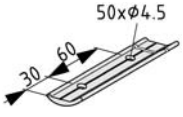
Assembly sequence for a Panel Segment:
> Join the Clamp Profiles using Clamp-Profile Fastener 6 30x30 E (Art. No. 0.0.441.80)
> Position the textile panel element (which is not yet cut to size)
> Screw-fit the Clamp Strips while the panel element is clamped
> Cut off the overhanging textile edge
> Fit the Lid Profiles

5 **6** 8 12



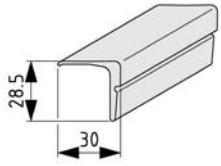
Textile Clamp Profile 6 30x30
Al, anodized
A = 2.76 cm² I_x = 1.28 cm⁴ I_y = 2.18 cm⁴
m = 0.74 kg/m W_x = 0.93 cm³ W_y = 1.33 cm³

natural, cut-off max. 6000 mm	0.0.459.62



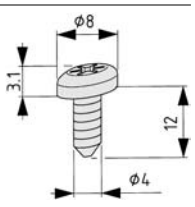
Textile Clamp Profile, Clamp Strip
Al, anodized
A = 0.37 cm²
m = 0.10 kg/m

natural, cut-off max. 3000 mm	0.0.459.64



Textile Clamp Profile, Lid Profile
Al, anodized
A = 1.51 cm²
m = 0.40 kg/m

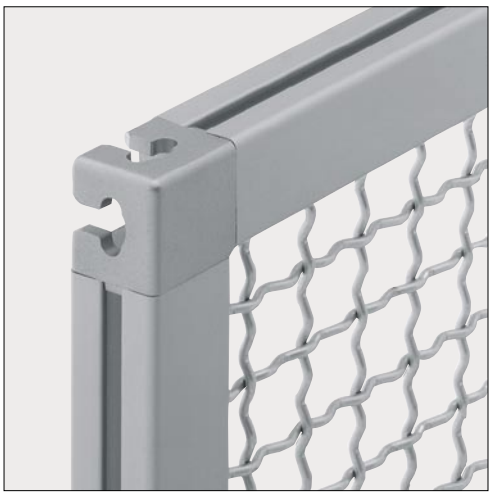
natural, cut-off max. 6000 mm	0.0.459.63



Button-Head Screw, self-threading St 4x12, TX 20
St
m = 145 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.473.69

Clamp-Profile Fastener E

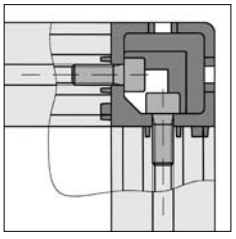


Clamp-Profile Fasteners are special fastening elements which, at the same time, allow easy hanging of protective-fence panels.

item Innovation
German
utility model
297 06 040

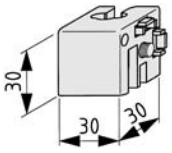
Suspended frame elements can also be locked if required by subsequently moving the lower Clamp-Profile Hanger.

By drilling the Clamp-Profile Fastener at a prepared point and pressing in a grooved pin, the Fastener and Clamp-Profile Hinge E can also be used for attaching swing doors.



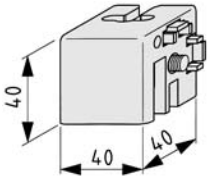
The Clamp-Profile Fastener can be combined with any desired Profiles 6 30x30 or 8 40x40 and also with the existing Clamp Profiles 6 30x30 or 8 40x40. The fact that the Clamp-Profile Fastener has a special cavity means that the panels to be fitted in the profile grooves do not need to be notched.

Connection of Clamp-Profiles E with Clamp-Profile Fasteners E.



Clamp-Profile Fastener 6 30x30 E
Die-cast zinc, white aluminium similar RAL 9006
2 Cap Screws DIN 912-M6x16, St, bright zinc-plated
m = 78.0 g

1 set	0.0.441.80

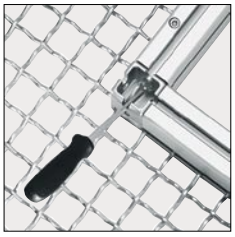


Clamp-Profile Fastener 8 40x40 E
Die-cast zinc, white aluminium similar RAL 9006
2 Cap Screws DIN 912-M8x20, St, bright zinc-plated
m = 187.0 g

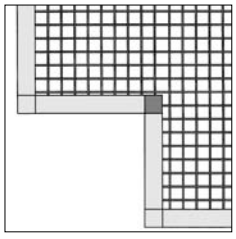
1 set	0.0.444.76

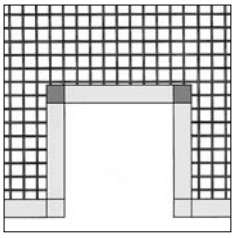
Clamp-Profile Cross Connector

The Clamp-Profile Cross Connector is designed for connecting Clamp Profiles / Clamp Profiles E of Lines 6 and 8.
It can be used for the construction of framed panel elements for enclosures and guards which feature inside corners, cut-outs or internal apertures.
In addition, up to 4 Clamp Profiles can be secured at a single intersection point.



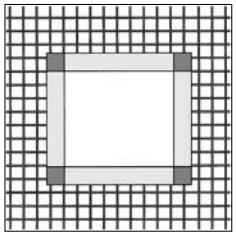
Installation note:
The following screws are required for securing the Clamp-Profile Cross Connectors to the Clamp Profiles:
> Clamp Profile 6 30x30: Screw ISO 7380 M6x14
> Clamp Profile 8 40x40: Screw ISO 7380 M8x20

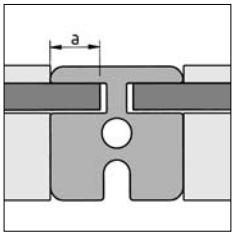




Inside corner with a Clamp-Profile Cross Connector and two Clamp Profile Connectors.

Cut-out with two Clamp Profile Cross Connectors and two Clamp Profile Connectors.

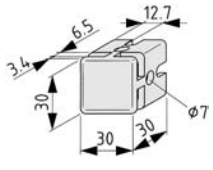




Central aperture with four Clamp Profile Cross Connectors.

When planning panel element cut-outs, the penetration depth (a) specified here must be taken into account irrespective of the penetration depth specified for the Clamp Profiles.

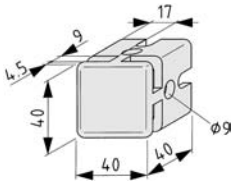
5 **6** 8 12



Clamp-Profile Cross Connector 6 30x30
St
a = 12 $^{-1}$ mm
m = 74.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.459.09

5 6 **8** 12



Clamp-Profile Cross Connector 8 40x40
St
a = 15 $^{+1}$ mm
m = 168.0 g

white aluminium, similar to RAL 9006, 1 pce.	0.0.457.92

Fastening Frame Elements

Several versions of hangers are available to provide an easy, safe and detachable solution for fastening frames in enclosures and guards. They differ from one another as regards clearance, carrying capacity and tolerence compensation.

Furthermore, Hangers 6-8 and 8 can also be used in such a way that a loose or missing screw attachment on the frame elements cannot go unnoticed.

Clamp-Profile Hanger E:

to be used with Clamp-Profile Fasteners E.

> clearance between frame profile and Stand Profile 12 mm

> medium load-carrying capacity

> lateral tolerance adjustment 6 mm

Hanger 6-8:

rigid hanging of profiles from either Line 6 or 8.

> clearance between frame profile and Stand Profile 12 mm

> medium load-carrying capacity

> concealed protection against removal

> lateral tolerance adjustment 1 mm

> may be mounted in such a way that a loose or missing screw results in the frame element slipping.

Hanger 8:

rigid hanging of profiles from Line 8, particularly robust version.

> clearance between frame profile and Stand Profile 25 mm

> high load-carrying capacity

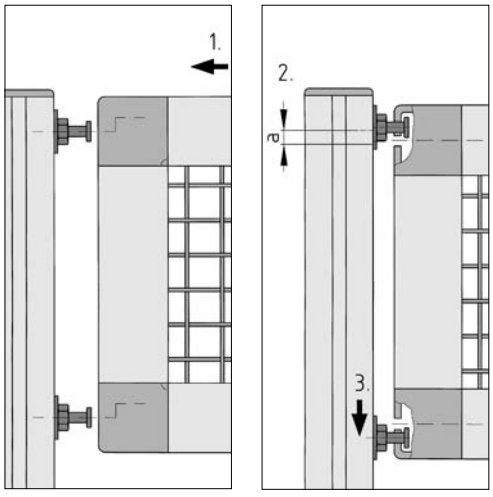
> concealed protection against removal

> lateral tolerance adjustment 10 mm

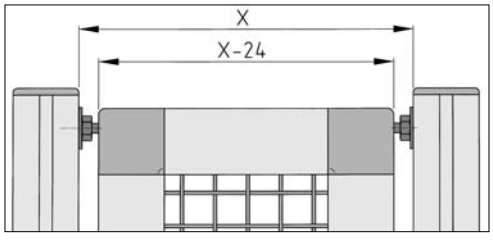
> may be mounted in such a way that a loose or missing screw results in the frame element slipping

Clamp-Profile Hangers E

Clamp-Profile Hangers E can be used to hang frame elements into any desired construction with Clamp-Profile Fasteners E. By integrating the suspension facility into the corner areas of the frame element, it is possible to achieve a very narrow gap (12 mm) between the frame element and the stand.

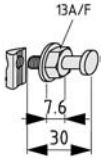


Installation sequence:
1. Hook the frame element into the existing construction.
2. Fix the height of the frame element using the upper hangers (a).
3. Move the lower Clamp-Profile Hangers to lock the frame element in position (if required).



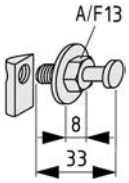
The clearance dimension between frame and Stand Profile is 12 mm. Dimensional tolerances of ± 3 mm can be accommodated by the Clamp-Profile Hanger E.

5 **6** 8 12



Clamp-Profile Hanger 6 E
a = 4.75 mm
4 bolts, St, black
4 washers DIN 9021-6.4, St, black
4 T-Slot Nuts 6 St M6, bright zinc-plated
m = 76.0 g

1 set	0.0.441.11



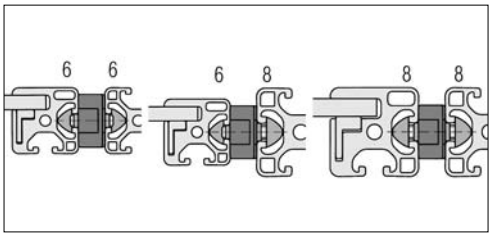
Clamp-Profile Hanger 8 E
a = 8.25 mm
4 bolts, St, black
4 washers DIN 9021-8.4, St, black
4 T-Slot Nuts 8 St M8, bright zinc-plated
m = 112.0 g

1 set	0.0.440.05

Hanger 6-8

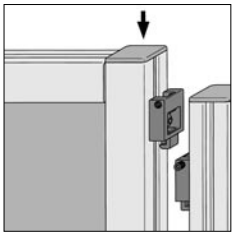
Compact hanger for especially rigid fastening of frame elements to Stand Profiles. Profiles from Lines 6 and 8 can be connected together as required.

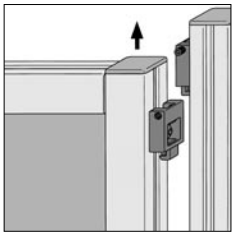
If required, the Hangers can be screwed together front and rear using the supplied grub screw in order to prevent lifting.



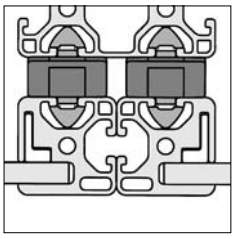
Profiles 6 and 8 can be combined by turning around the anti-torsion block.

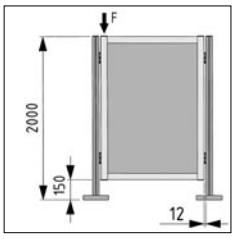
Fastening to Profile 6 using Button-Head Screw ISO 7380-M6x14 and T-Slot Nut 6 St M6.
Fastening to Profile 8 using Button-Head Screw ISO 7380-M6x16 and T-Slot Nut 8 St M6.





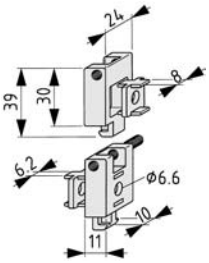
Hanger 6-8 allows two variations of frame assembly:
1. Very easy 1-man assembly: the frame element is lowered from above onto the hangers on the Stand Profiles, lugs on the hangers engaging to ensure stability. They are then secured by the grub screws provided.
2. The frame element is slid into the hanger on the Stand Profile from below and secured with the grub screw. Removal of the grub screws results in the frame element dropping down.





Attaching the Hanger from the front ensures that the frame and panel elements can be fitted without space.

Hanger 6-8 can be used to maintain very small gaps (12 mm) between the frame and the Stand Profile.
F = approx. 400 N

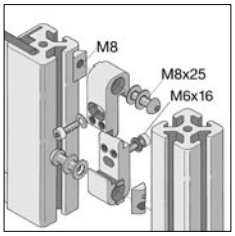


Hanger 6-8
2 hangers, die-cast zinc, black
2 anti-torsion blocks, die-cast zinc, black
1 grub screw DIN 913-M5x10, black
m = 70.0 g

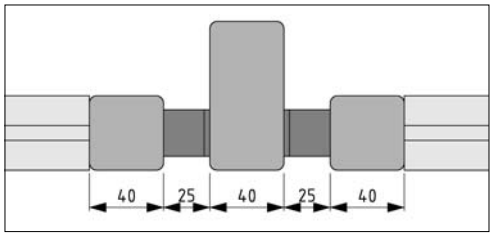
1 set	0.0.441.33

Hanger 8

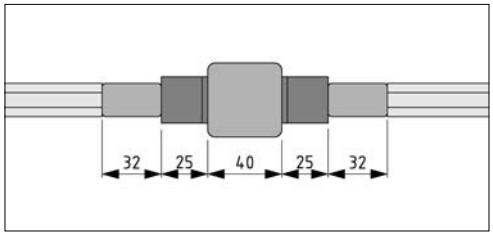
The particularly robust design of Hanger 8 enables frame elements to be frequently attached and secured to Stand Profiles 8.
If required, the Hangers 8 can be screwed together from the front or rear (for safety reasons).
Two Hangers 8 and appropriate Fastening Sets are required for each attachment point.



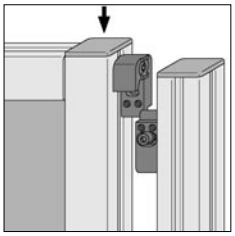
If the upper Hanger 8 is fitted to the Stand Profile and the lower Hanger 8 to the frame element, removal of Hexagon Socket Head Cap Screw M6 will result in the frame element being released.

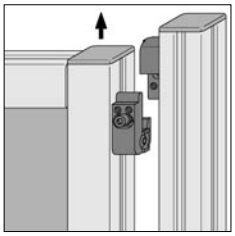


Hanger 8 in conjunction with Clamp Profile 8 40x40.

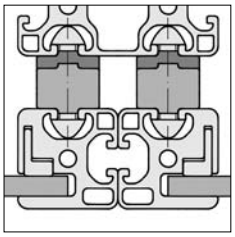


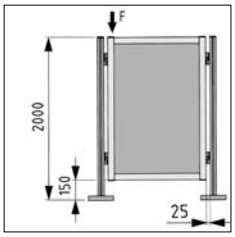
Hanger 8 in conjunction with Clamp Profile 8 32x18.





Hanger 8 allows two variations of frame assembly:
1. Very easy 1-man assembly: the frame element is lowered from above onto the hangers on the Stand Profiles, lugs on the hangers engaging to ensure stability. They are then secured by the Cap Screws provided.
2. The frame element is slid into the hanger on the Stand Profile from below and secured with the Cap Screw. Removal of the screw results in the frame element dropping down.



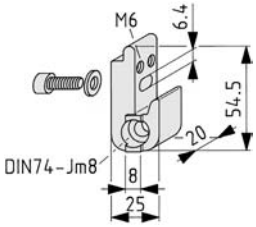


Attaching the Hanger from the front ensures that the frame and panel elements can be fitted without space.

F = approx. 750 N

The clearance dimension between frame and Stand Profile is 25 mm. Dimensional tolerances of ± 5 mm can be adjusted through Hanger 8.

5 6 **8** 12



Hanger 8
1 Hanger, die-cast zinc, black
1 Hexagon Socket Head Cap Screw DIN 912-M6x16, St, bright zinc-plated
1 washer DIN 125-6.4 St, bright zinc-plated
m = 87.0 g

1 set	0.0.196.44

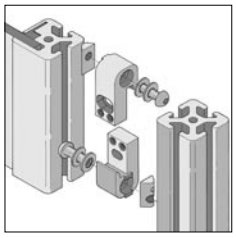
Fastening Set 8 for Hanger 8
1 Button-Head Screw ISO 7380-M8x25, St, bright zinc-pl.
2 spring washers, St, bright zinc-plated
1 T-Slot Nut 8 St M8, bright zinc-plated
m = 21.0 g

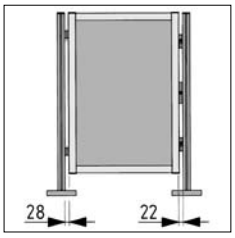
1 set	0.0.265.05

Door Rabbet 8

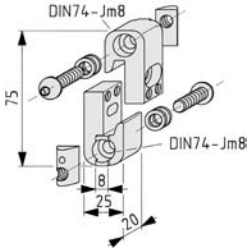
Screw-connected rabbet for swing doors.
Door Rabbets can also be used as fasteners for frame elements if, for safety reasons, a hanger is not allowed.

The frame element cannot be hung without a securing screw and therefore removal of the screw will be detected immediately.





Example application for door construction:
Clearance on left 28 mm with Hinges 8 40 Zn (Section 3.4 Movable Fastening Elements) and on right 22 mm with Door Rabbets 8, in combination with Door Lock 8 (Section 4.3 Locks and Catches).



Door Rabbet 8
2 Door Rabbets, die-cast zinc, black
2 Button-Head Screws ISO 7380-M8x25, St, bright zinc-plated
4 spring washers, St, bright zinc-plated
2 T-Slot Nuts 8 St M8, bright zinc-plated
m = 190.0 g

1 set	0.0.265.15

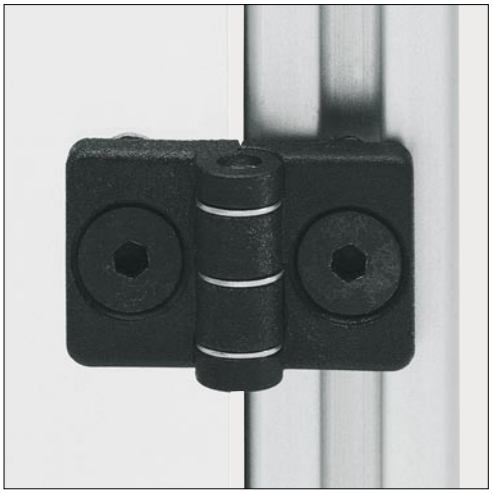
3.4 Movable Fastening Elements

Swing, sliding or lifting doors can be produced with the aid of movable panel fasteners. In this arrangement, the doors can be in the form of either inherently stable panels without frames or frame elements with integral panels.

3.4.1 Hinges

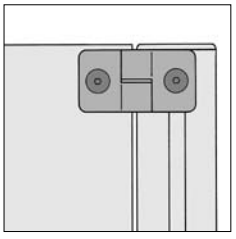
The Hinges can be used for direct attachment of frameless panel elements, for a movable fastening between two profiles and for attachment of framed panels to the basic frame. They can also be mounted in front of the profile or panel and even in the space between the panel frame and the main frame or door post.

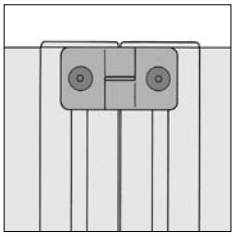
Hinges PA



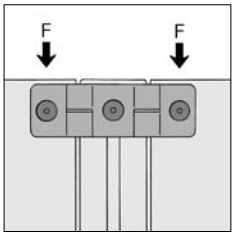
Hinges PA are simple components for lightweight doors and lids. They are provided with an anti-torsion element which engages on the profile grooves.

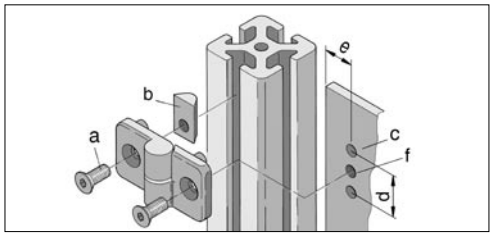
Panel elements secured with Hinges PA must be machined with the appropriate holes.





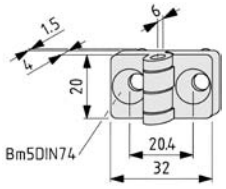
Double Hinges PA can only be used on 20 mm wide profiles in Line 5, on 30 mm wide profiles in Line 6 and on 40 mm wide profiles in Line 8.





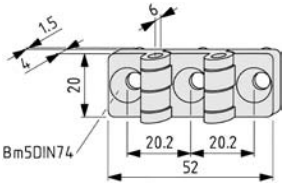
		Hinge / Double Hinge		
		5	6	8
Screw DIN 7991	a	M5x8	M5x14	M6x16
T-Slot Nut	b	5 St M5	6 St M5	8 St M6
	c	∅ 5 mm	∅ 6.3 mm	∅ 8.2 mm
	d	15 mm	22 mm	24 mm
	e	9 mm	14 mm	18 mm
	f	M5	M5	M6
	F	50 N	75 N	100 N

5 6 8 12



Hinge 5 PA
PA-GF
cannot be lifted out
m = 6.0 g

black, 1 pce. **0.0.370.18**

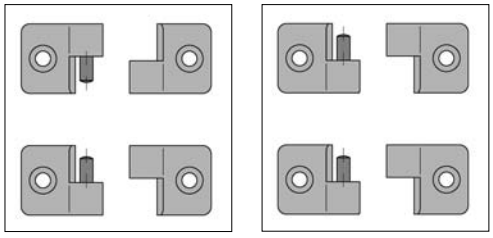


Double Hinge 5 PA
PA-GF
cannot be lifted out
m = 10.0 g

black, 1 pce. **0.0.437.33**

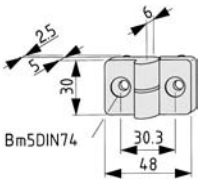
Fastening Set 5 for Bracket / Angle Bracket 5 20 / profile side for Hinge 5 PA
1 Countersunk Screw DIN 7991-M5x8, St, black
1 T-Slot Nut 5 St M5, bright zinc-plated
m = 2.5 g

1 set **0.0.370.70**



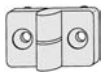
Door elements of Lines 6 and 8 can be fitted so that they can either be lifted off subsequently or remain fitted permanently.
With the lift-off version, the door must be fitted with the appropriate right-hand or left-hand hinges.
For the non-lift version, right-hand and left-hand hinges must be combined in each case.

5 6 8 12



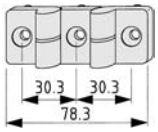
Hinge 6 PA, right
Hinge halves, PA-GF, black
Dowel, St, bright zinc-plated
Washer, PA, black
m = 14.0 g

1 pce. **0.0.431.23**



Hinge 6 PA, left
Hinge halves, PA-GF, black
Dowel, St, bright zinc-plated
Washer, PA, black
m = 14.0 g

1 pce.	0.0.431.25



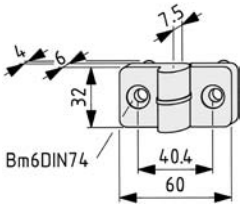
Double Hinge 6 PA
Hinge halves, PA-GF, black
Dowel, St, bright zinc-plated
Washer, PA, black
m = 25.0 g

1 pce.	0.0.431.27

Fastening Set 6 profile side for Hinge 6 PA
T-Slot Nut 6 St M5, bright zinc-plated
Countersunk Screw DIN 7991-M5x14, St, black
m = 7.0 g

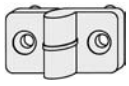
1 set	0.0.434.65

5 6 **8** 12



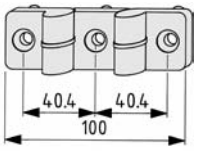
Hinge 8 PA, right
Hinge halves, PA-GF, black
Dowel, St, bright zinc-plated
Washer, PA, black
m = 21.0 g

1 pce.	0.0.026.12



Hinge 8 PA, left
Hinge halves, PA-GF, black
Dowel, St, bright zinc-plated
Washer, PA, black
m = 21.0 g

1 pce.	0.0.026.10



Double Hinge 8 PA
Hinge halves, PA-GF, black
Dowel, St, bright zinc-plated
Washer, PA, black
m = 40.0 g

1 pce.	0.0.373.42

Fastening Set 8 profile side for Hinge 8 PA
T-Slot Nut 8 St M6, bright zinc-plated
Countersunk Screw DIN 7991-M6x16, St, black
m = 14.0 g

1 set	0.0.026.28

Hinges Al

New in catalogue

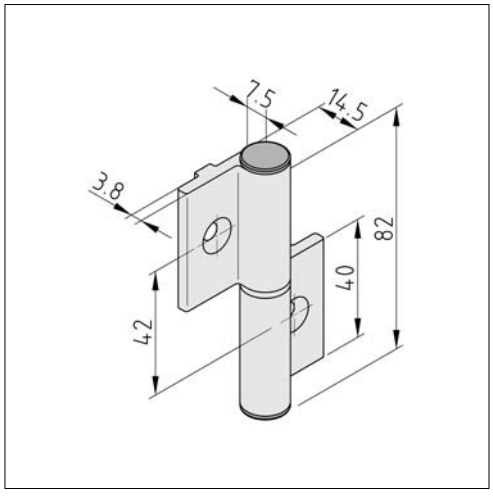
www.item.info

Hinges Al, are suitable for use with swivel doors and lids designed using either profiles or solid panels.

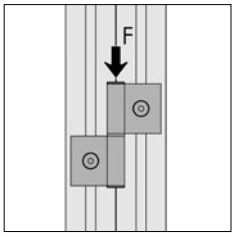
Hinges Al, can be surface-mounted. This enables doors to be fitted to the fixed outer frame with virtually no door gap (designation “0”).
When fitting Hinges Al, in the 4 mm door gap between the door and the fixed door frame (designation “4”), the fastening screws are concealed so as to be inaccessible when the door is closed.

The many possible combinations enable doors to be fitted in Line 6 and 8 frames and allow different profile sizes to be combined with each other.

Hinges Al, are available as complete sets for all popular combinations of profiles and for combinations of profiles and panel elements.

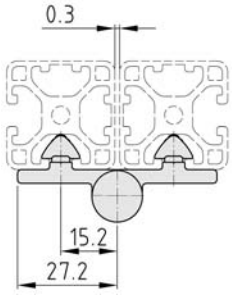


Irrespective of line or version, all Hinges Al, have the connection dimensions shown opposite.



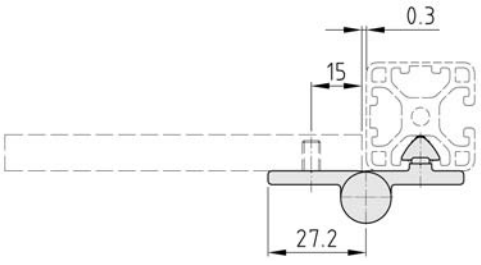
F = 500 N

5 **6** 8 12



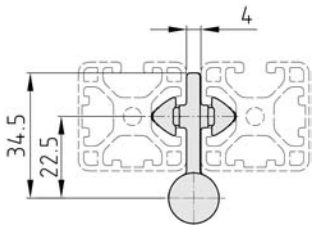
Hinge 6 Al PP0, light duty
Hinge Leaf, Al, anodized, natural
2 T-Slot Nuts 6 St M5, bright zinc-plated
2 Countersunk Screws DIN 7991-M5x12, bright zinc-plated
Notes on Use and Installation
m = 84.0 g

1 set 0.0.488.98



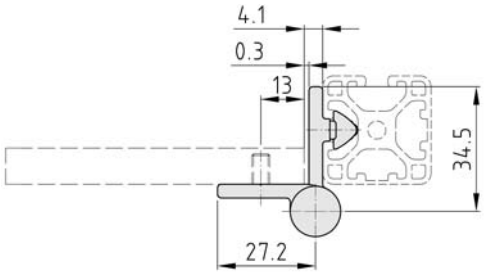
Hinge 6 Al FP0, light duty
Hinge Leaf, Al, anodized, natural
1 T-Slot Nut 6 St M5, bright zinc-plated
1 Countersunk Screw DIN 7991-M5x12, bright zinc-plated
Notes on Use and Installation
m = 78.0 g

1 set 0.0.489.01



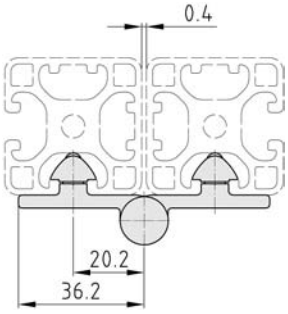
Hinge 6 Al PP4, light duty
Hinge Leaf, Al, anodized, natural
2 T-Slot Nuts 6 St M5, bright zinc-plated
2 Countersunk Screws DIN 7991-M5x12, bright zinc-plated
Notes on Use and Installation
m = 86.0 g

1 set	0.0.489.03



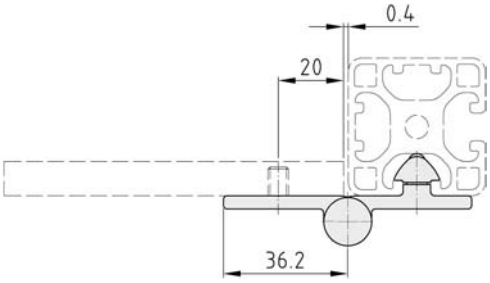
Hinge 6 Al FP4, light duty
Hinge Leaf, Al, anodized, natural
1 T-Slot Nut 6 St M5, bright zinc-plated
1 Countersunk Screw DIN 7991-M5x12, bright zinc-plated
Notes on Use and Installation
m = 79.0 g

1 set	0.0.489.05



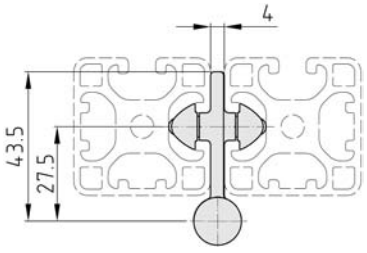
Hinge 8 Al PP0, light duty
Hinge Leaf, Al, anodized, natural
2 T-Slot Nuts V 8 St M6, bright zinc-plated
2 Countersunk Screws DIN 7991-M6x14, bright zinc-plated
Notes on Use and Installation
m = 110.0 g

1 set	0.0.488.90



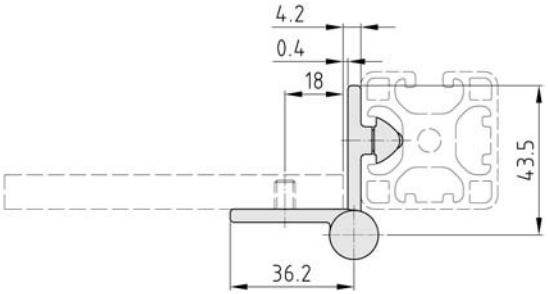
Hinge 8 Al FP0, light duty
Hinge Leaf, Al, anodized, natural
1 T-Slot Nut V 8 St M6, bright zinc-plated
1 Countersunk Screw DIN 7991-M6x14, bright zinc-plated
Notes on Use and Installation
m = 94.0 g

1 set	0.0.488.92



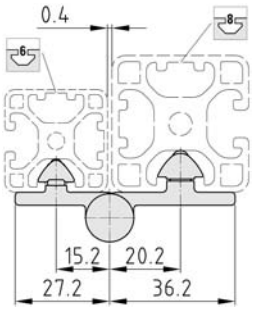
Hinge 8 Al PP4, light duty
Hinge Leaf, Al, anodized, natural
2 T-Slot Nuts V 8 St M6, bright zinc-plated
2 Countersunk Screws DIN 7991-M6x14, bright zinc-plated
Notes on Use and Installation
m = 113.0 g

1 set	0.0.488.94



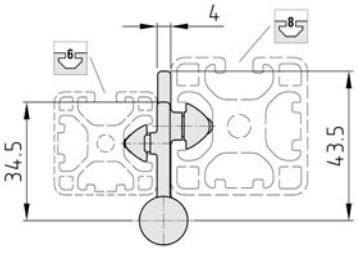
Hinge 8 Al FP4, light duty
Hinge Leaf, Al, anodized, natural
1 T-Slot Nut V 8 St M6, bright zinc-plated
1 Countersunk Screw DIN 7991-M6x14, bright zinc-plated
Notes on Use and Installation
m = 96.0 g

1 set	0.0.488.96



Hinge 6/8 Al PP0, light duty
Hinge Leaf, Al, anodized, natural
1 T-Slot Nut 6 St M5, bright zinc-plated
1 Countersunk Screw DIN 7991-M5x12, bright zinc-plated
1 T-Slot Nut V 8 St M6, bright zinc-plated
1 Countersunk Screw DIN 7991-M6x14, bright zinc-plated
Notes on Use and Installation
m = 98.0 g

1 set	0.0.489.07

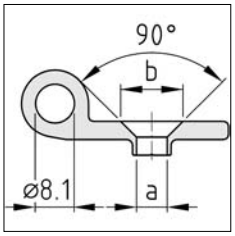


Hinge 6/8 Al PP4, light duty
Hinge Leaf, Al, anodized, natural
1 T-Slot Nut 6 St M5, bright zinc-plated
1 Countersunk Screw DIN 7991-M5x12, bright zinc-plated
1 T-Slot Nut V 8 St M6, bright zinc-plated
1 Countersunk Screw DIN 7991-M6x14, bright zinc-plated
Notes on Use and Installation
m = 101.0 g

1 set	0.0.489.09

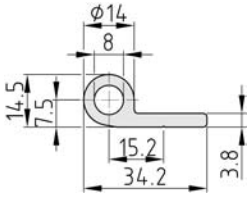
The Hinge Leaf Profiles and Hinge Pins which are available separately can be combined to produce made-to-measure hinges that are perfectly tailored to the given requirements.

Three different Hinge Leaf Profiles are available in the modular dimensions of Line 6 (or 8) Profiles:
- Hinge Leaf Profile 6 (or 8) e light, with offset point of rotation
- Hinge Leaf Profile V 6 (or 8) z light, with anti-torsion feature and centric point of rotation
- Hinge Leaf Profile V 6 (or 8) e light, with anti-torsion feature and offset point of rotation



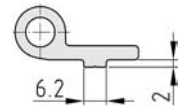
	a	b +0.2
6	∅ 5.4	∅ 11
8	∅ 6.4	∅ 13

The Hinge Leaf Profiles can be given a drilled hole or countersink for screw fastening. The correct position of the hole is identified by a marking notch on the rear of the hinge.
It is advisable to widen the ∅ 8 mm profile bore to ∅ 8.1 mm before fitting the Hinge Pin. The Hinge Pin must be greased prior to use.



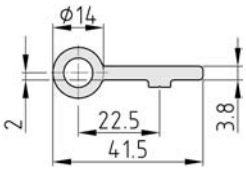
Hinge Leaf Profile 6 e light
Al, anodized
m = 0.54 kg/m

natural, 1 pce., length 3000 mm	0.0.451.80



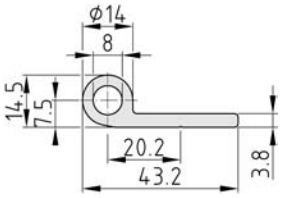
Hinge Leaf Profile V 6 e light
Al, anodized
m = 0.57 kg/m

natural, 1 pce., length 3000 mm	0.0.451.78



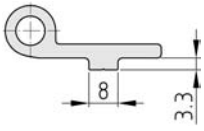
Hinge Leaf Profile V 6 z light
Al, anodized
m = 0.60 kg/m

natural, 1 pce., length 3000 mm	0.0.451.76



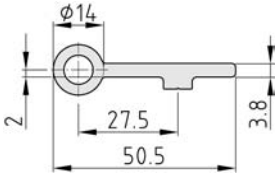
Hinge Leaf Profile 8 e light
Al, anodized
m = 0.64 kg/m

natural, 1 pce., length 3000 mm	0.0.454.58



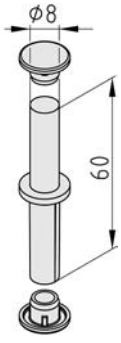
Hinge Leaf Profile V 8 e light
Al, anodized
m = 0.71 kg/m

natural, 1 pce., length 3000 mm	0.0.454.56



Hinge Leaf Profile V 8 z light
Al, anodized
m = 0.73 kg/m

natural, 1 pce., length 3000 mm	0.0.454.54

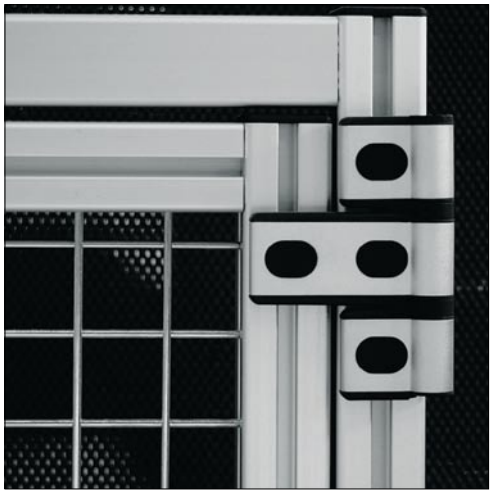


Hinge Pin D8x60 light
Grooved pin, St, bright zinc-plated
Washer, PA, grey
2 Caps, PA, grey
m = 30.0 g

1 set	0.0.488.44

Modular Hinge System 8

New in catalogue

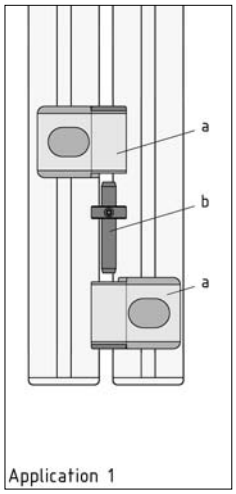


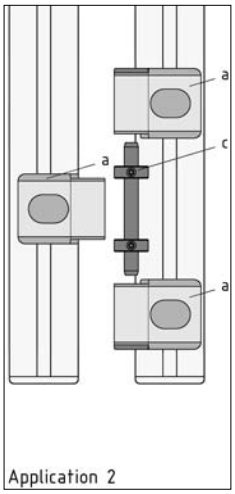
Modular Hinge System for high-strength aluminium hinges. Suitable for heavy doors, lids and swivel-type devices.
Hinge Leaves of various heights and widths support heavy-duty hinges of virtually any length which the user can adapt to the specific situation. Hinges with an opening angle of up to 270° can be achieved using a suitable combination of sets.

A hinge consists of at least two Hinge Leaves and a suitable Hinge Pin. The Hinge Leaves and Pin are available in different lengths. When selecting these components, the minimum depth which the pin is inserted into the eye of the Hinge Leaf must always be taken into account.

Defined sets always contain all components necessary for a complete Hinge Leaf or Hinge Pin.

The use of slots and stepped locating lugs for screwing the Hinge Leaves facilitates the process of aligning the doors in the surrounding door frame. The locating lugs also serve as an anti-torsion device in the groove, thus preventing the hinges from becoming displaced under load.
Fastening is also possible to the end face of the profile. The slots are sealed with the enclosed Caps after installation has been completed, as are the drill holes of the hinge eyes.





The required hinge can be assembled easily from the following sets:

a = Hinge Leaf 8 40x40

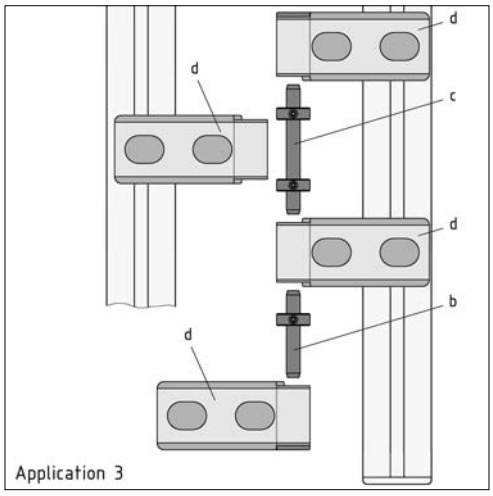
b = Hinge Pin D8x51

c = Hinge Pin D8x76

d = Hinge Leaf 8 80x40

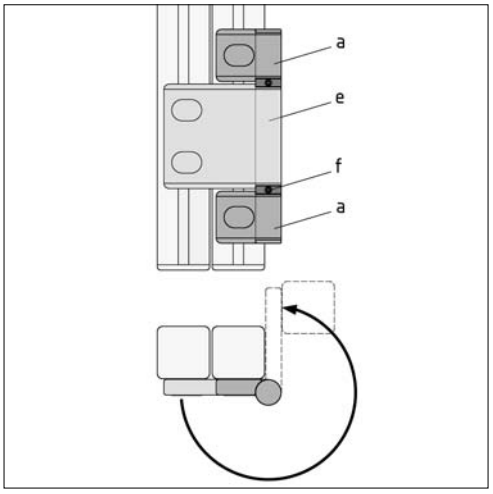
e = Hinge Leaf 80x80

f = Hinge Pin D8x116



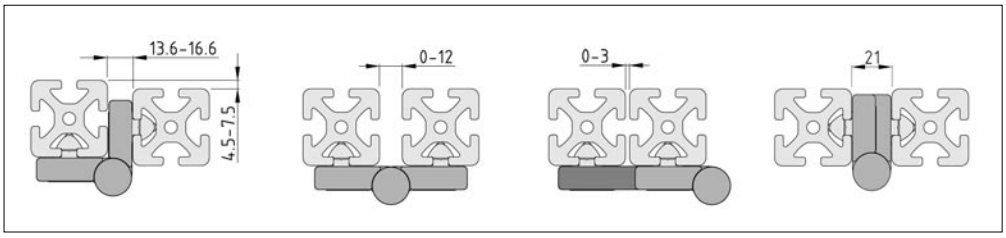
Various Hinge Leaves and Hinge Pins can be combined to construct hinge strips.

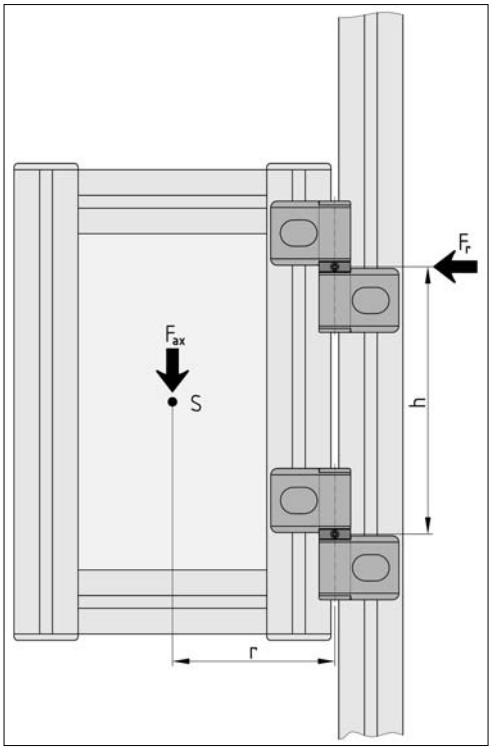
For example: Constructing a hinge strip with Hinge Leaves 8 80x40.



Example of a hinge opening around 270°.

The combination of Hinge Leaf 8 80x80 and two Hinge Leaves 8 40x40 (using a Hinge Pin D8x116) can be used to construct a hinge with a 270° angle of swing. This may be required, first and foremost, when constructing wide-opening doors in machine paneling.

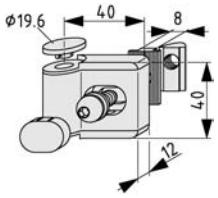




Application	$F_{r\,perm.}$	$F_{ax\,perm.}$
1	150 N	750 N
2	350 N	750 N
3	350 N	450 N

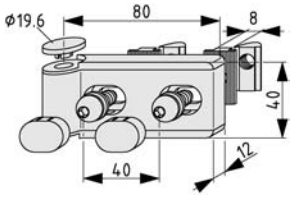
$F_{ax} \times r = F_r \times h$

The data apply for at least two hinges per door - one hinge assumed to be supporting.



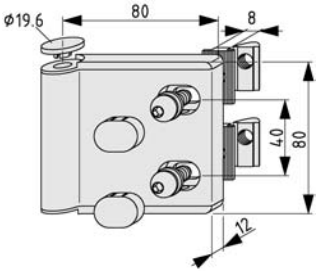
Hinge Leaf 8 40x40
1 Hinge Leaf, Al, anodized, natural
1 Locating lug, Al, anodized, natural
1 Button-Head Screw ISO 7380-M8x18, St, bright zinc-pl.
1 Washer DIN 433-8,4, St, bright zinc-plated
1 T-Slot Nut V 8 St M8, St, bright zinc-plated
Caps, PA-GF, black
m = 68.0 g

1 set 0.0.483.60



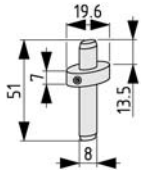
Hinge Leaf 8 80x40
1 Hinge Leaf, Al, anodized, natural
2 Locating lugs, Al, anodized, natural
2 Button-Head Screws ISO 7380-M8x18, St, bright zinc-pl.
2 Washers DIN 433-8,4, St, bright zinc-plated
2 T-Slot Nuts V 8 St M8, St, bright zinc-plated
Caps, PA-GF, black
m = 125.0 g

1 set 0.0.483.59



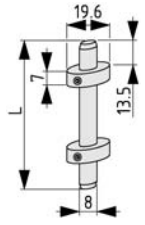
Hinge Leaf 8 80x80
1 Hinge Leaf, Al, anodized, natural
2 Locating lugs, Al, anodized, natural
2 Button-Head Screws ISO 7380-M8x18, St, bright zinc-pl.
2 Washers DIN 433-8,4, St, bright zinc-plated
2 T-Slot Nuts V 8 St M8, St, bright zinc-plated
Caps, PA-GF, black
m = 225.0 g

1 set 0.0.485.22



Hinge Pin D8x51
1 pin, St, stainless
1 locking ring, St, black
1 grub screw DIN 916-M4x4, St, black
m = 32.0 g

1 set 0.0.483.62



Hinge Pin D8x76
1 pin, St, stainless
2 locking rings, St, black
2 grub screws DIN 916-M4x4, St, black
L = 76 mm
m = 55.0 g

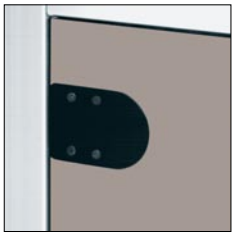
1 set 0.0.483.61

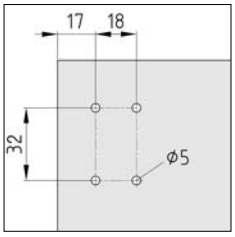
Hinge Pin D8x116
1 pin, St, stainless
2 locking rings, St, black
2 grub screws DIN 916-M4x4, St, black
L = 116 mm
m = 70.0 g

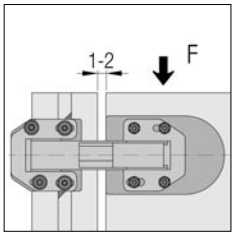
1 set 0.0.486.16

Hinge St, light duty

Spring-loaded internal hinge for 90° opening of frameless doors. The way the hinge works enables the doors to be swung out of the door opening without the panel element striking against the door post.



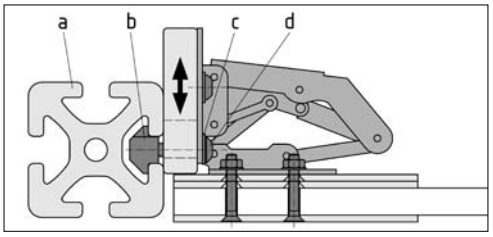




Machining specifications for the panel element

The door height/width ratio should be greater than 1.5 to ensure easy operation of Hinge, St.

Permissible load: F = 50 N



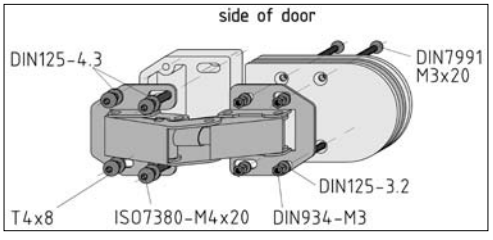
Option for fastening the Hinge to the frame.

The door / panel elements can be aligned flush to the frame using the spacer plates and the slot in the adapter plate:

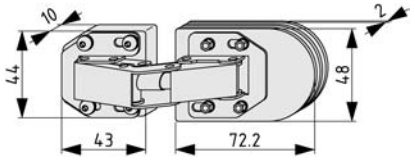
> Line 5 Profile: Max. 4 mm thickness
> Line 6 Profile: Max. 8 mm thickness
> Line 8 Profile: Max. 10 mm thickness

a Profile	b T-Slot Nut	c Washer DIN 125	d Screw ISO 7380
5	5 St M4*	4.3	M4x16*
6	6 Zn M4*	4.3	M4x20
8	8 Zn M4*	4.3	M4x20

The adapter plate can be used to attach Hinge, St, light duty to all profile lines.
Choose the fastening elements that match the profile lines used for the surrounding frame.
The components marked with an * are not included in the scope of supply for Hinge, St, light duty.



Tightening torque for the fastening screws:
M = 1.5 Nm



Hinge St, light duty
Hinge, St, black
Adapter plate, PA-GF, black
3 spacer plates, PA-GF, black
Fastening elements
m = 125.0 g

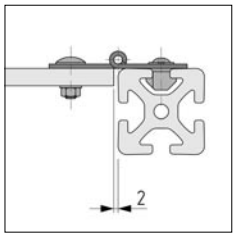
1 set	0.0.474.38

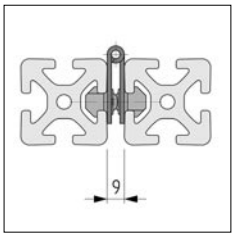
Hinge St

Universal lightweight hinge for doors and lids.
Can be mounted on the inside or outside of the door (when mounted on the inside it cannot be unscrewed).

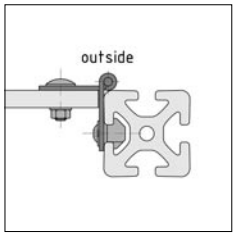
The panel element (door) can be swung around 180°.

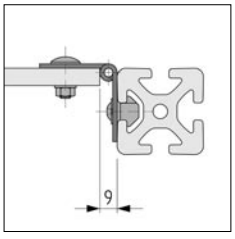
The slots allow the hinge to be adjusted and used for Lines 5 to 8.



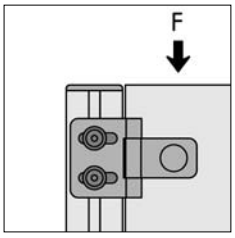


Note: T-Slot Nuts 8 Zn M5 is recommended for screwing Hinge St to the Line 8 Profile.

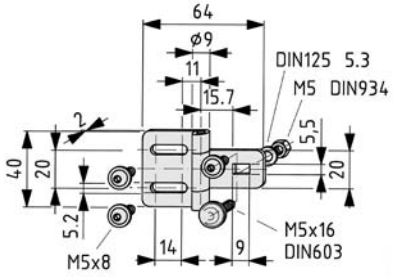




These attachment versions of Hinge St cannot be unscrewed from the outside.



F = 250 N



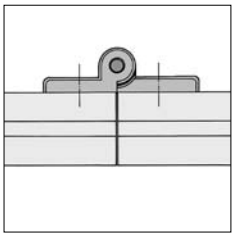
Hinge St
Hinge halves, St, black
3 dome-head screws M5x8, St, black
Hexagon Nut DIN 934-M5, St, black
Washer DIN 125-5,3, St, black
Cup square bolt DIN 603-M5x16, St, black
m = 51.0 g

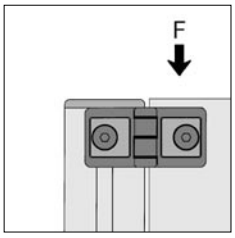
1 set	0.0.373.82

Hinges 6 Zn

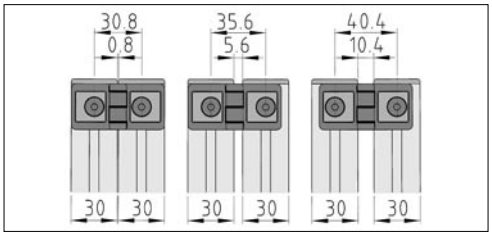
Hinge 6 Zn can be used to construct swing doors with Profiles 6, Profiles 8 or any desired panel elements.

The basic unit of the Hinge used in conjunction with asymmetric anti-torsion blocks allows a whole range of combinations and mounting dimensions in Lines 6 and 8. The anti-torsion blocks can be removed for making screw-connections to panel elements.

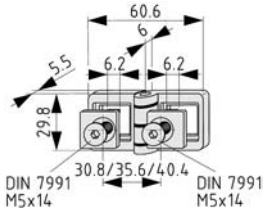




F = 300 N

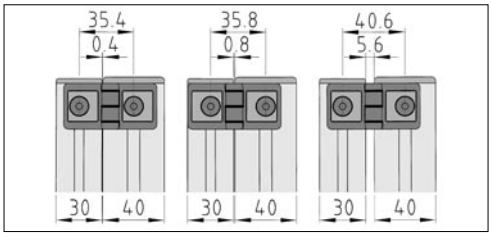


Hinge 6 30 Zn 6/6
Possibilities for mounting the anti-torsion block with a gap width of 6.2 mm.

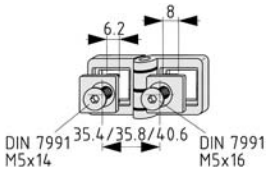


Hinge 6 30 Zn 6/6
Hinge, die-cast zinc, black
2 anti-torsion blocks 6, die-cast zinc, black
2 Countersunk Screws DIN 7991-M5x14, St, black
m = 62.0 g

1 set	0.0.441.58

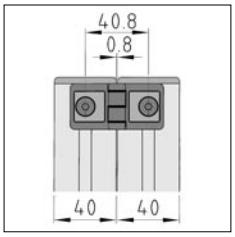


Hinge 6 30 Zn 6/8
Possibilities for mounting the anti-torsion block with a gap width of 6.2 mm and 8 mm.

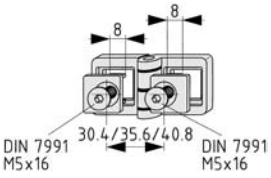


Hinge 6 30 Zn 6/8
Hinge, die-cast zinc, black
1 anti-torsion block 6, die-cast zinc, black
1 anti-torsion block 8, die-cast zinc, black
1 Countersunk Screw DIN 7991-M5x14, St, black
1 Countersunk Screw DIN 7991-M5x16, St, black
m = 63.0 g

1 set 0.0.441.61



Hinge 6 30 Zn 8/8
Possibilities for mounting the anti-torsion block with a gap width of 8 mm.



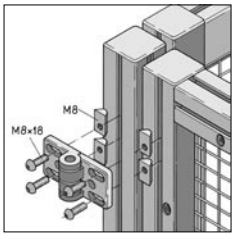
Hinge 6 30 Zn 8/8
Hinge, die-cast zinc, black
2 anti-torsion blocks 8, die-cast zinc, black
2 Countersunk Screws DIN 7991-M5x16, St, black
m = 63.0 g

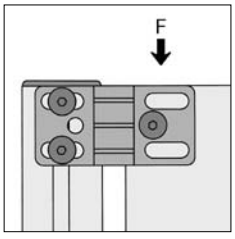
1 set 0.0.441.81

Hinge 8 Zn

Suitable for higher loads, e.g. large machine doors and doors for guard units, and as compact connecting element for profiles positioned at various angles. Hinges 8 Zn are suitable for right-hand and left-hand application. Fastening is possible on the outer surfaces or end faces of profiles (using either slots or ∅ 8 mm centre hole). Integrated anti-torsion pins to provide additional stability in the groove.

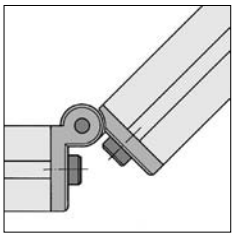
If required, e.g. when fitting to a panel element, the anti-torsion pin should be removed with a screwdriver.

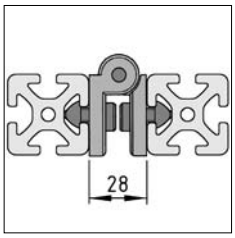




Attaching Hinge 8 40 Zn to the profile grooves of Line 8.

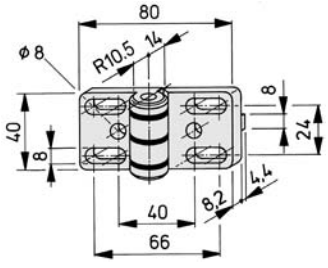
F = 750 N





Hinge 8 40 Zn can be screw-connected to the end face or to the profile groove.

5 6 **8** 12

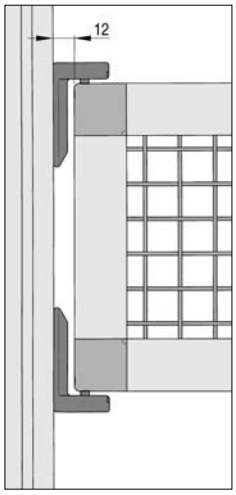


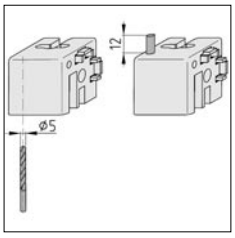
Hinge 8 40 Zn
Hinge halves, die-cast zinc, black
m = 180.0 g

1 pce.	0.0.196.36

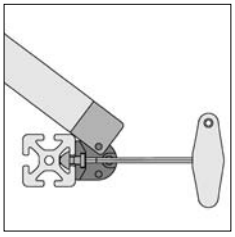
Clamp-Profile Hinges E

Clamp-Profile Hinge E enables frame elements with Clamp-Profile Fasteners to be used as swing doors. Clamp-Profile Hinge E can be used in combination with Clamp-Profile Fasteners 6 30x30 E and 8 40x40 E (Section 3.3 Rigid Fastening Elements).



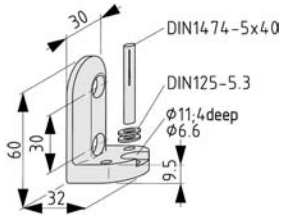


The Clamp-Profile Fasteners are prepared by drilling the pre-cast hole to ∅ 5 mm and then pressing in grooved pin DIN 1474.



The fastening screws for the two halves of the hinge can be reached easily when the door is open and allow the door to be fitted by sliding together the two halves of the hinge.

The doors can be fitted left or right by using the appropriate hole.



Clamp-Profile Hinge E
2 hinge halves, die-cast zinc, black
4 washers DIN 125-5.3, St, black
2 grooved pins DIN 1474-5x40, St
m = 202.0 g

1 set	0.0.444.12

Clamp-Profile Hinge Fastening Set 6
4 Hex. Socket Head Cap Screws DIN 6912-M6x12, St, black
4 T-Slot Nuts 6 St M6, bright zinc-plated
m = 36.0 g

1 set	0.0.441.66

Clamp-Profile Hinge Fastening Set 8
4 Hex. Socket Head Cap Screws DIN 6912-M6x14, St, black
4 T-Slot Nuts 8 St M6, bright zinc-plated
m = 58.0 g

1 set	0.0.444.11

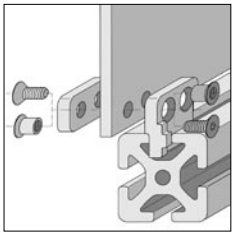
3.4.2 Movable Fastenings

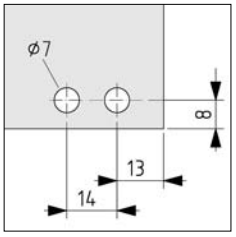
The Movable Fasteners product group comprises components which are used for constructing sliding, lifting and folding doors.
In addition to slide and rolling elements, a complete Roller Shutter System is also provided for a movable secured panel.

Heavy sliding doors can be made to move particularly easily using C-Rail profiles.
These products can be found in Section 8.1 Linear Slides.

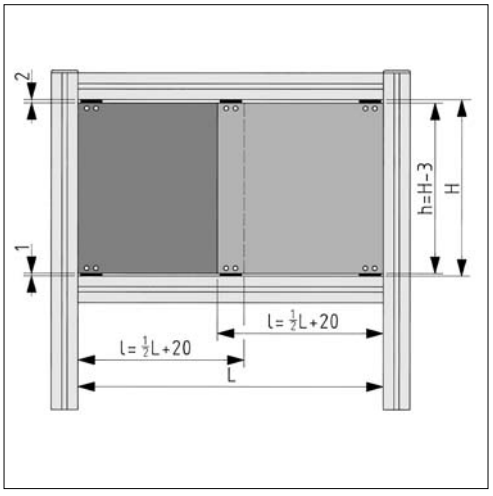
Sliding-Door Guide Set 8

Sliding Door Guide Set 8 is used in the construction of sliding doors from frameless panel elements, with the Profile 8 groove serving as a guide. There can be up to 2 sliding doors in a single groove.
One Sliding Door Guide Set 8 is required for each sliding door. Each slide piece is secured in position by means of two Countersunk Screws DIN 7991-M5x12. Panel elements thicker than 5 mm must be secured with Countersunk Screws DIN 7991-M5x16.
The slide pieces can be fitted from either side to suit the application.

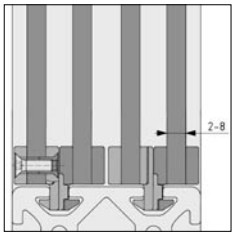


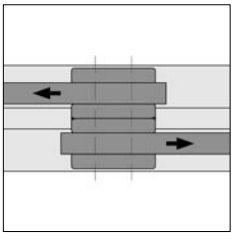


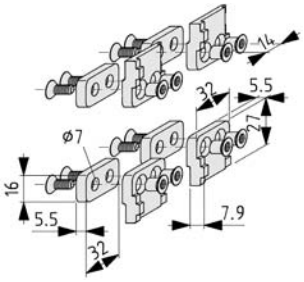
The maximum permissible weight of one door is 10 kg.



There can be either 1 or 2 sliding doors in a single Profile 8 groove.
The slide pieces function as stops or catches for the second door at the terminal position.





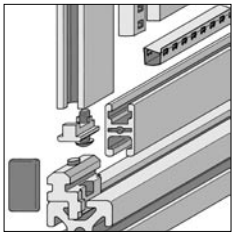


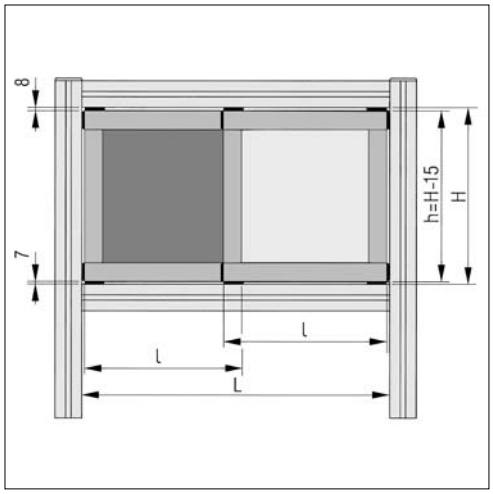
Sliding-Door Guide Set 8
4 slide pieces (2xright, 2xleft), POM, black
4 spacer pieces, POM, black
8 Countersunk Screws DIN 7991-M5x12, St, bright zinc-plated
8 threaded bushings, St, bright zinc-plated
m = 58.0 g

1 set	0.0.406.66

Sliding-Door Guide Set 8/8

For the construction of sliding doors in conjunction with Clamp Profile 8 32x18.
One Sliding-Door Guide Set 8/8 is required for each sliding door. Fastening is by means of a spring bolt locking into the ∅ 7 mm mounting bore of Clamp-Profile Fastening Set 8 32x18.
Should fastening elements in the guide groove cause obstruction, the slide piece can be fixed at an alternative position by drilling an additional ∅ 7 mm hole in the door profile.



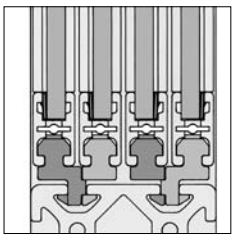


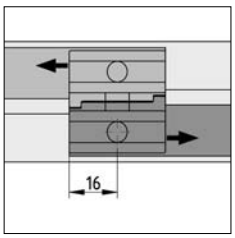
For sliding door constructions with n door elements of the same size, the following equation can be used to calculate the profile length l:

$$l = \frac{L + 32\,(n-1) - 8}{n}$$

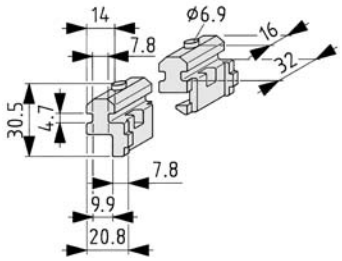
A side overlap of Caps 8 32x18 of 4 mm is taken into account.

The maximum permissible weight of one door is 10 kg.





There can be either 1 or 2 sliding doors in a single Profile 8 groove.
The slide pieces function as stops or catches for the second door at the terminal position.

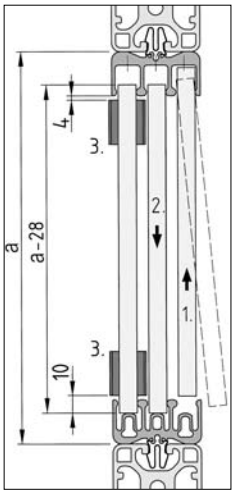


Sliding-Door Guide Set 8/8
4 slide pieces (2xright, 2xleft), POM, black
Spring bolt, St, bright zinc-plated
Spring, St, stainless
m = 49.0 g

1 set	0.0.404.87

Sliding-Door Guide Profile

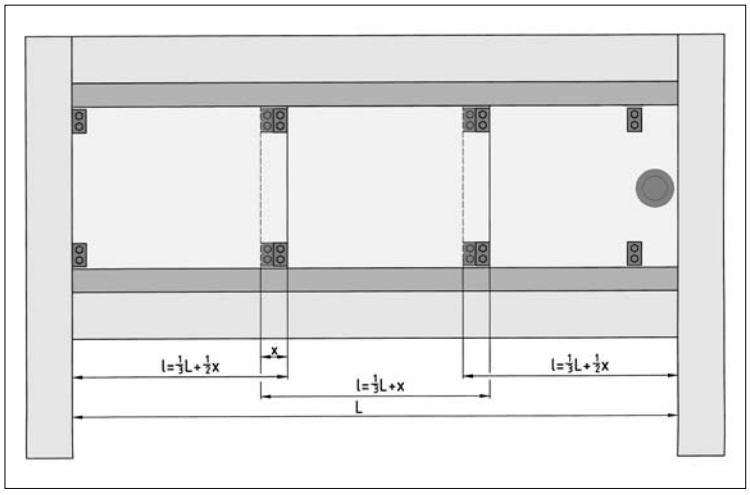
The Sliding-Door Guide Profile is retrofitted into a profile frame.
Frameless, inherently stable panel elements made of plastic (thickness 8 mm) can be used as sliding doors.
The weight of the panel element, its inherent stability and the friction on the aluminium profile must all be taken into account in such cases.



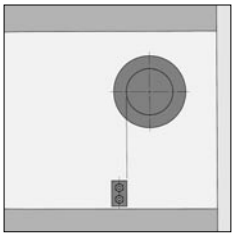
Clip 8 St (Section 1.2 Accessories for Profiles) snaps the top and bottom of the Sliding-Door Guide Profile into the surrounding frame profiles.
1. The panel element is first lifted into the required track at the top of the Sliding-Door Guide Profile.
2. It is then placed in the corresponding guide track at the bottom of the Sliding-Door Guide Profile.
3. Positioning the catch correctly and securely at the top will avoid the doors from being pulled out accidentally.

The sliding-door catches are attached directly to the panel element if two or three sliding-door panels are to be moved together. Their position can be selected individually, in order to determine the required opening path of the accompanying door panels and the overlap of the doors x ($x_{min.}$ = 25 mm).

Rubber rings are mounted on the catches as shock absorbers.

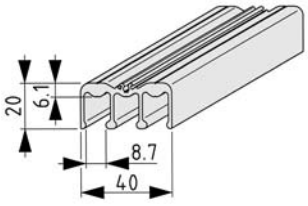


Typical arrangement of a 3-part sliding door with equal-sized door segments.



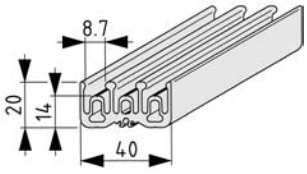
The sliding-door catches must be fitted correctly, so as to ensure that hands cannot become trapped in handles or recessed grips (Section 4.1 Handles).

5 6 8 12



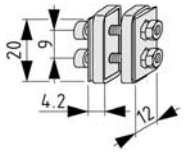
Sliding-Door Guide Profile 8 40x20, Top
Al, anodized
A = 2.76 cm²
m = 0.75 kg/m

natural, cut-off max. 3000 mm	0.0.473.75



Sliding-Door Guide Profile 8 40x20, Bottom
Al, anodized
A = 3.43 cm²
m = 0.93 kg/m

natural, cut-off max. 3000 mm	0.0.473.74

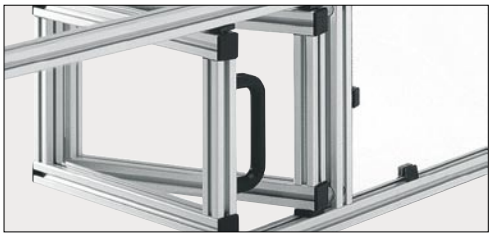


Sliding-Door Catch Set
PA-GF
2 Cap Screws DIN 912-M3x12, St, bright zinc-plated
2 nuts DIN 934-M3, St, bright zinc-plated
2 Damping rings, NBR, black
m = 4.0 g

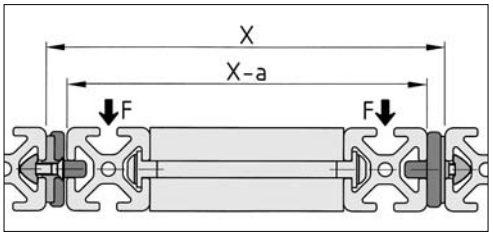
1 set	0.0.473.81

T-Slot Slider

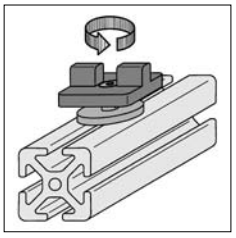
The T-Slot Slider enables elements to slide in the profile grooves while simultaneously rotating around the fastening point.
It can be used to construct simple guides for various components, e.g. keyboard pull-outs, panels for operating instructions, or simple lifting, folding and sliding doors in Line 5 or Line 6 profile grooves.



Construction of a folding door with T-Slot Sliders 6.

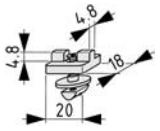


	a	F
5	11 mm	30 N
6	13 mm	40 N



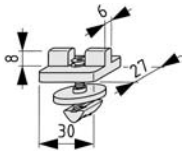
Unrestricted rotation of the T-Slot Slider around the hub also compensates for possible alignment errors.

5 6 8 12



T-Slot Slider 5
T-Slot Slider, POM, black
T-Slot Slider hub, St, bright zinc-plated
T-Slot Nut 5 St M3
Countersunk Screw DIN 7991-M3x10, St, bright zinc-plated
m = 6.0 g

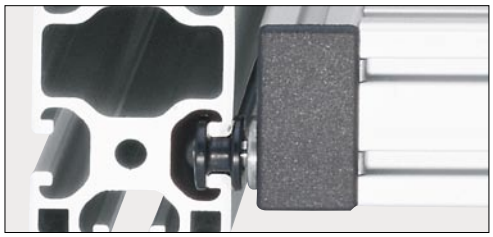
1 set	0.0.437.98



T-Slot Slider 6
T-Slot Slider, POM, black
T-Slot Slider hub, St, bright zinc-plated
T-Slot Nut 6 St M4
Countersunk Screw DIN 7991-M4x14, St, bright zinc-plated
m = 21.0 g

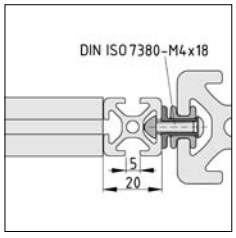
1 set	0.0.459.07

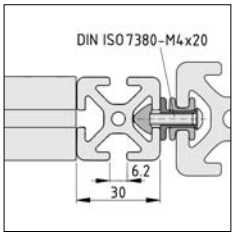
T-Slot Roller

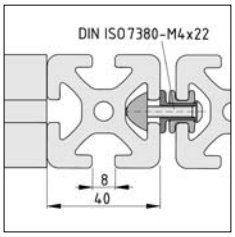


T-Slot Roller 8 can be used to construct a simple guide for various components, e.g. keyboard pull-out, panels for operating manuals or simple lifting doors in Profile 8 grooves.

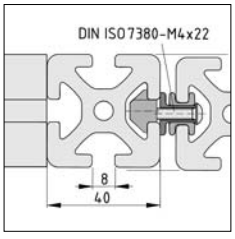
T-Slot Roller 8 F corresponds to a fixed bearing end and can absorb radial forces and small axial forces. To prevent strains resulting from saw tolerances, etc., T-Slot Roller 8 L offers a solution which transfers only radial forces in the direction of the groove flanks. As a rule, the two types of roller must be used in combination (e.g. T-Slot Roller 8 F for a keyboard pull-out at the fixed bearing end, T-Slot Roller 8 L as a radial support in the groove at the opposite end).



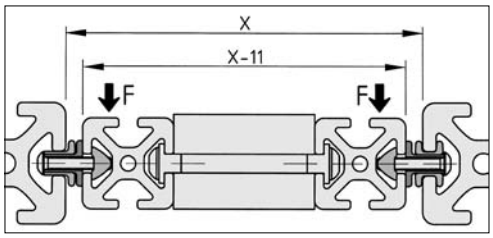




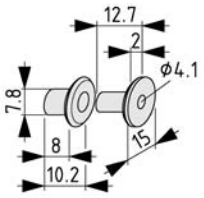
The T-Slot Rollers connect Profile 8 with the moving component without any central offset.



Special T-Slot Nut 8 Zn M4e with a central offset of 1 mm is available for moving elements made of Line 8 components. This ensures no collisions can occur during movement.

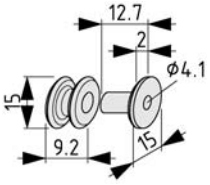


	F
T-Slot Roller 8L	50 N
T-Slot Roller 8F	50 N



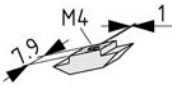
T-Slot Roller 8 L
1 floating bearing roller, POM, black
1 bearing hub, St, bright zinc-plated
m = 4.0 g

1 set	0.0.457.60



T-Slot Roller 8 F
1 fixed bearing roller, POM, black
1 bearing hub, St, bright zinc-plated
m = 5.0 g

1 set	0.0.457.51

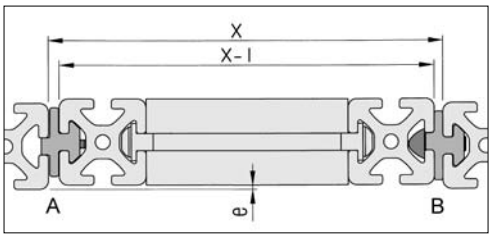


T-Slot Nut 8 Zn M4e
Die-cast zinc
m = 5.0 g

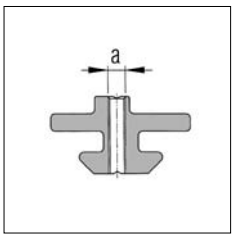
black, 1 pce.	0.0.457.47

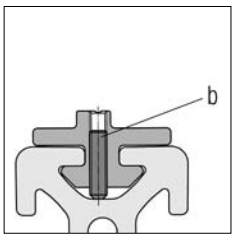
Slide Guide Strips

The Slide Guide Strip can be mounted directly in the profile groove to create simple slide mechanisms. It can be screw-connected to the profiles of the surrounding frames or to moving modules.
Slide Guides L and F are only suitable for installation on moving profiles.
The offset “e” prevents the moving components from colliding with the fixed frame elements.



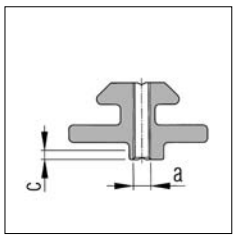
Slide Guide L (A = floating bearing) and Slide Guide F (B = fixed bearing) as guide elements, secured to a moving component.

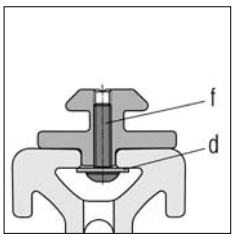




Required machining and fastening elements for fixing a Slide Guide Strip of any required length at the floating bearing end.

The distance between the fastening elements should be chosen to reflect the load.



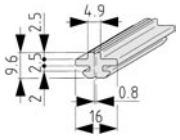


Required machining and fastening elements for fixing the Slide Guide Strip at the fixed bearing end.

Slide Guide Strip 5/5e must be counterbored by c = 2 mm in the area of the screw head.

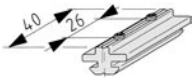
	Slide Guide Strip		
	5	6	8
a	M2.5	M3	M4
b	M2.5x8 DIN 916	M3x12 DIN 916	M4x16 DIN 916
c	2.0 mm	-	-
d	DIN 9021-2.7	DIN 9021-3.2	DIN 9021-4.3
e	0.8 mm	1.0 mm	2.0 mm
f	M2.5x8 DIN 912	M3x12 ISO 7380	M4x16 ISO 7380
l	$5.5^{+0.5}$ mm	$7.0^{+0.5}$ mm	$9.5^{+0.5}$ mm

5 6 8 12



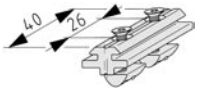
Slide Guide Strip 5/5e
PE-UHMW
m = 80 g/m

black, 1 pce., length 2000 mm	0.0.464.24



Slide Guide 5/5e L
PE-UHMW
with threaded bores
2 grub screws DIN 916-M2.5x8, St, bright zinc-plated
m = 5.0 g

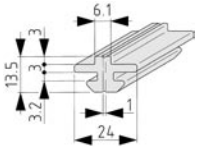
1 set	0.0.464.29



Slide Guide 5/5e F
PE-UHMW
with through bores
2 T-Slot Nuts 5 St M3, stainless
2 Countersunk Screws DIN 7991-M3x14, St, bright zinc-pl.
2 O-rings 3x1
m = 8.0 g

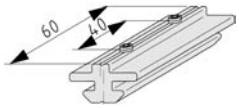
1 set	0.0.464.27

5 6 8 12



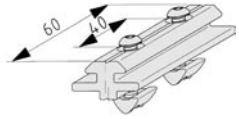
Slide Guide Strip 6/6e
PE-UHMW
m = 150 g/m

black, 1 pce., length 2000 mm	0.0.459.27



Slide Guide 6/6e L
PE-UHMW
with threaded bores
2 grub screws DIN 916-M3x12, St, bright zinc-plated
m = 11.0 g

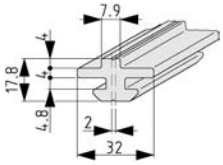
1 set	0.0.459.32



Slide Guide 6/6e F
PE-UHMW
with through bores
2 T-Slot Nuts 6 St M3, bright zinc-plated
2 Button-Head Screws M3x18, St, bright zinc-plated
2 O-rings 3x1
m = 19.0 g

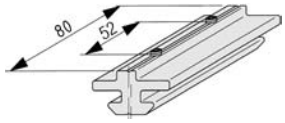
1 set	0.0.459.30

5 6 **8** 12



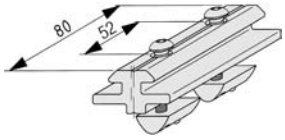
Slide Guide Strip 8/8e
PE-UHMW
m = 260 g/m

black, 1 pce., length 2000 mm	0.0.458.58



Slide Guide 8/8e L
PE-UHMW
with threaded bores
2 grub screws DIN 916-M4x16, St, bright zinc-plated
m = 22.0 g

1 set	0.0.465.26



Slide Guide 8/8e F
PE-UHMW
with through bores
2 T-Slot Nuts 8 St M4, bright zinc-plated
2 Button-Head Screws M4x25, St, bright zinc-plated
2 O-rings 4x1.5
m = 44.0 g

1 set	0.0.465.24

Lifting-Door-System

New in catalogue

www.item.info

Modular system for constructing lifting doors in enclosures and guards, consisting of vertical guides, door hanging system, counterweight, drive and arrester.

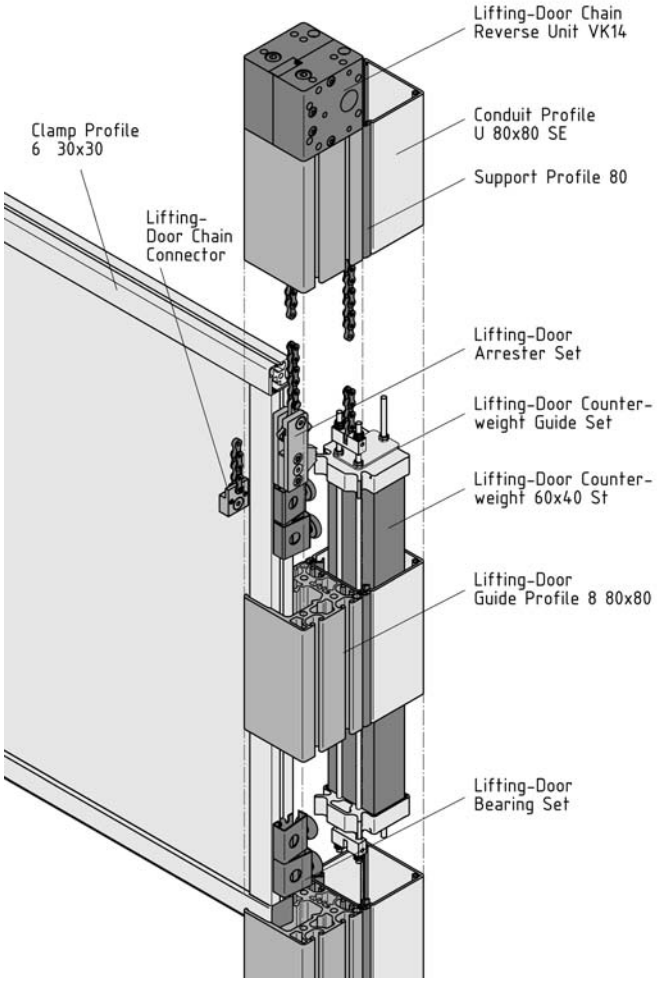
The Chain Reverse Units are designed to permit the lifting door to be driven automatically.

This can be done using the mechanical drive elements (Section 8.2). Couplings and Synchroniser Shafts can be connected to Lifting-Door Chain Reverse Unit VK14.

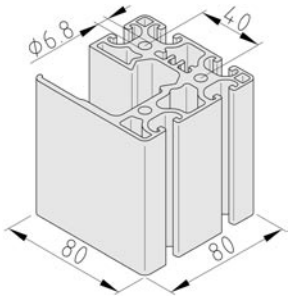
The counterweight is completely covered along its travel path, thereby ensuring there is no risk of injury from moving parts.

An arrester mechanism prevents the lifting door falling down the guide if the door hanging system fails.

The lifting door is constructed to the user's needs from a frame made from Line 6 profiles (Clamp Profiles preferred) which encloses any chosen panel element. Lifting doors should be a maximum of 2 m wide and not weigh more than 35 kg in total.

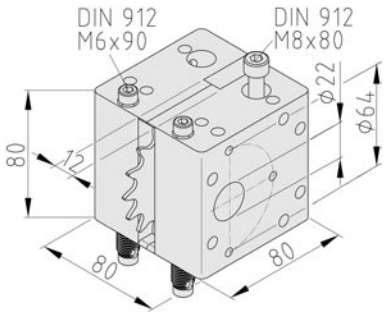


item sales partners provide a project planning service for lifting doors and/or can make you a detailed offer.
In addition to the individual components, they will also be able to supply you with complete lifting doors or building kits.



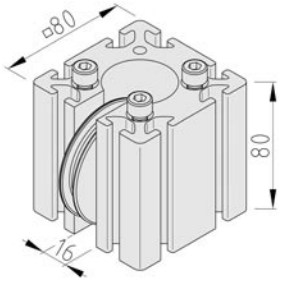
Lifting-Door Guide Profile 8 80x80
Al, anodized
m = 5.51 kg/m

natural, cut-off max. 6000 mm	0.0.485.10



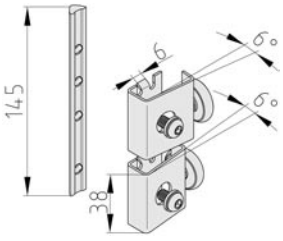
Lifting-Door Chain Reverse Unit VK14
Chain Reverse Unit, Al, coated, white aluminium (RAL9005)
Ball-bearing sprocket wheel, z = 16 (z = number of teeth)
One revolution corresponds to 203.2 mm
Hub with multi-spline DIN ISO 14-6x11x14,
hub length 30 mm, Max. load M_D = 20 Nm
Chain length in Reverse Unit 182.3 mm
1 Cap Screw DIN 912-M8x80, St, bright zinc-plated
2 Cap Screws DIN 912-M6x90, St, bright zinc-plated
2 Automatic Fasteners 8, threaded bore, St, bright zinc-pl.
Notes on Use and Installation
m = 1.3 kg

1 set	0.0.485.18



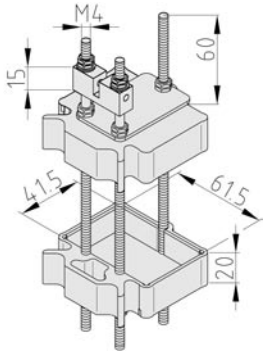
Lifting-Door Chain Reverse Unit E
Chain Reverse Unit, Al, anodized
Reversing wheel, slide bearing, PA
Chain length in Reverse Unit 182.3 mm
3 Hexagon Socket Head Cap Screws DIN 912-M8x80, St, bright zinc-plated
Notes on Use and Installation
m = 1.0 kg

1 set	0.0.487.14



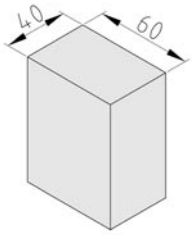
Lifting-Door Bearing Set
2 Castor units, with ball bearing
Special T-slot nut 6 St
2 Washers DIN 125-6.4, St, bright zinc-plated
2 Button-Head Screws ISO 7380-M6x12, St, bright zinc-plated
m = 129.0 g

1 set	0.0.487.07



Lifting-Door Counterweight Guide Set
2 Slide Guides, POM, black
3 Threaded rods DIN 975-M4x1000, St
1 Chain fastener, St, bright zinc-plated
2 Retaining plates, St, bright zinc-plated
Nuts and washers, St, bright zinc-plated
m = 442.0 g

1 set	0.0.485.19

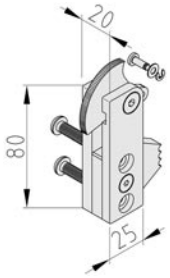


Lifting-Door Counterweight 60x40 St
Bar steel DIN 1017-60x40, cold-rolled
m = 18.84 kg/m

bright, cut-off max. 3000 mm	0.0.487.59

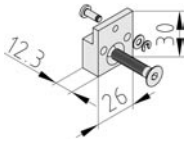
Saw Cut for Steel, Medium Cross-Sections

1 pce.	0.0.487.60



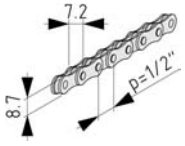
Lifting-Door Arrester Set
Housing and brake lever, St, bright zinc-plated
Chain pin with lock washer, St, bright zinc-plated
Washers, St, bright zinc-plated
1 Button-Head Screw ISO 7380-M6x25, St, bright zinc-plated
1 Button-Head Screw ISO 7380-M6x35, St, bright zinc-plated
m = 307.0 g

1 set	0.0.487.08



Lifting-Door Chain Connector
Chain fastening, St, bright zinc-plated
Washers, St, bright zinc-plated
Chain pin with lock washer, St, bright zinc-plated
1 Countersunk Screw DIN 7991-M6x30, bright zinc-plated
m = 65.0 g

1 set	0.0.487.18

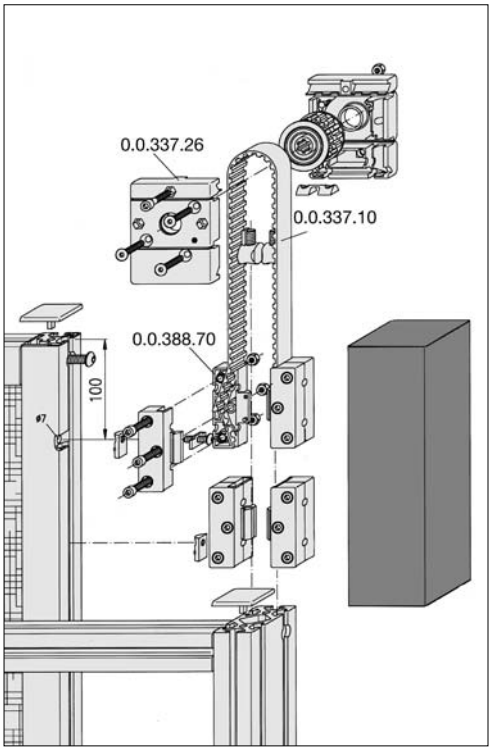


Chain ½″
St, nickel-plated
Pitch p = 12.7 mm corresponding to ½″
Operating load = max. 1.400 N
Elongation at 1,400 N = 2.5 - 3 ‰
m = 215 g/m

cut-off max. 25 m in 1″ intervals	0.0.465.17

Lifting-Door Guide Set

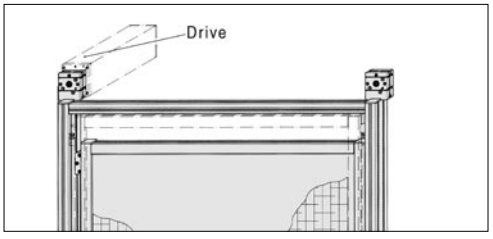
Lifting-Door Guide Set 8 facilitates the construction of lifting doors consisting of frame elements with various panel elements which are located between two vertical profiles. Between the lifting door and the profile, there must be a space of 25 mm on each side.



One or two counter-weights which are connected to the lifting door using Timing-Belt Reverse Units and Timing Belts (Section 8.2 Mechanical Drive Elements) compensate for the weight of the door. The lifting door and counter-weights are guided in the grooves of the Stand Profiles by means of Guide Sets.

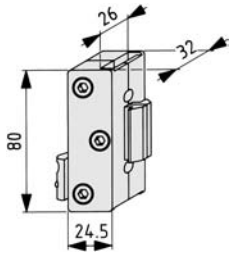
In addition, the Guide Sets connect the Timing Belt to the lifting door and counter-weight. As a rule, four Lifting Door Guide Sets are required for the lifting door and two for each counter- weight. The size of the counter-weight is determined by the weight of the lifting door. Whether one or two counter-weights are installed depends on the door weight and the ratio between the door width and door height, i.e. the aspect ratio.

Any suitable mass can be used as a counter-weight, (for example square steel bar or filled conduit elements). The counter-weights are screw attached to the Lifting-Door Guide Set which guides them along the profile groove.



The use of Timing-Belt Reverse Units is a basic requirement for using drive units. The process of opening and closing lifting doors can thus be automated and integrated into manufacturing systems or transport sequences.

5 6 **8** 12

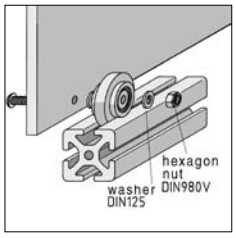


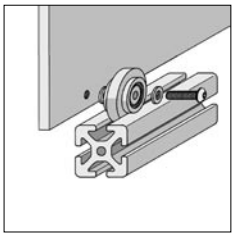
Lifting-Door Guide Set 8
Housing halves, POM, black
Steel insert, St, bright zinc-plated
Button-Head Screw ISO 7380-M6x25, St, bright zinc-plated
T-Slot Nut 8 St M6, bright zinc-plated
3 Cap Screws DIN 912-M6x25, St, bright zinc-plated
3 Hexagon Nuts DIN 934-M6, St, bright zinc-plated
m = 94.0 g

1 set	0.0.388.70

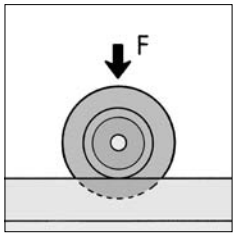
Castors

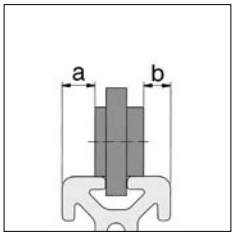
Versatile Castors which can be mounted in the profile grooves.
Using screws M5 (Line 5) and M6 (Lines 6 and 8), the Castors can be secured to any chosen components in order to move these along the profile groove.





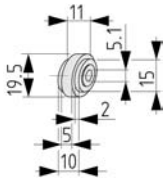
Light, intrinsically stable panel elements can be used as sliding doors in conjunction with the Castors.





Castor	5	6	8
F	50 N	100 N	150 N
a	5.0 mm	8.5 mm	12.0 mm
b	4.0 mm	5.5 mm	10.0 mm

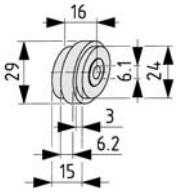
5 6 8 12



Castor 5
Castor, POM, black
Bearing hub, St, black
Washer DIN 125-5.3, St, bright zinc-plated
m = 4.0 g

1 pce. **0.0.370.97**

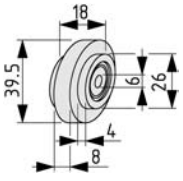
5 6 8 12



Castor 6
Castor, POM, black
Bearing hub, St, black
Washer DIN 125-6.4, St, bright zinc-plated
m = 16.0 g

1 pce. **0.0.419.79**

5 6 8 12

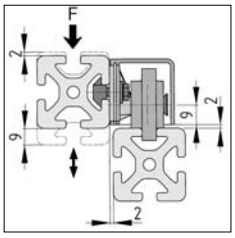


Castor 8
Castor, PA-GF, black
2 deep-groove ball bearings, sealed
m = 32.0 g

1 pce. **0.0.026.83**

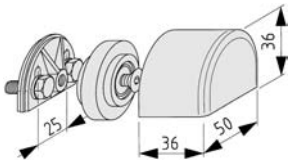
Castor Unit 8 PA

Fully covered Castor running in profile groove 8.
The Castor Unit can be secured to Profiles 5, 6 and 8 as well as directly to any chosen surfaces.



The mounting slots in the flange can be used to adjust the height of the Castor Unit.
Castor 8 is asymmetrical. This means that the offset between the profiles can be altered (0 or 2 mm) depending on how it is installed.

F = max. 75 N



Castor Unit 8 PA
Flange, PA-GF, black
Cap, PA-GF, black
Castor 8, PA-GF, black
1 Counters. Screw DIN 7991-M6x30, St, bright zinc-plated
2 hexagon screws DIN 933-M5x16, St, bright zinc-plated
2 washers, St, bright zinc-plated
m = 66.0 g

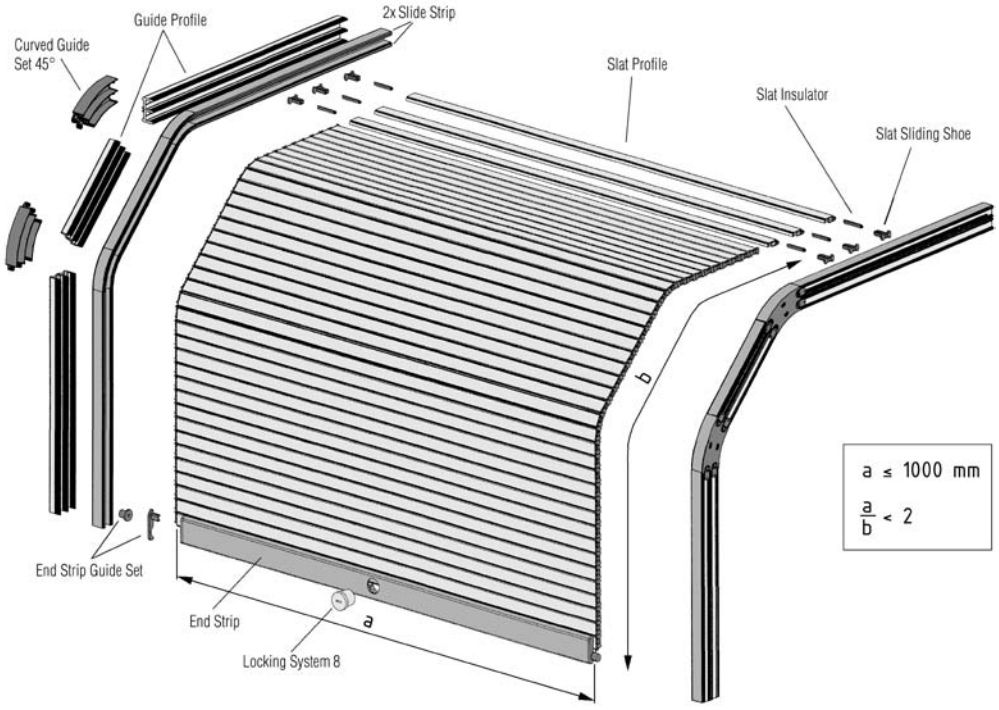
1 set	0.0.458.85

Roller Shutter System

Roller Shutters can be used primarily as moving panel elements for locking cabinet systems, control panels and operating consoles etc. The major advantage of the system is its flexibility, allowing it to be housed within the cabinet, and requiring far less space than swing or sliding doors.

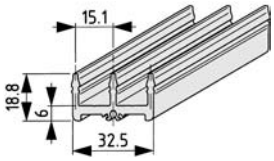
The Roller Shutter System is suitable for constructing manually-operated vertical and horizontal roller shutters on frames built from Profiles 8. The system consists of the Roller Shutter Guide and the Roller Shutter itself, both of which are of modular design. The Roller Shutter is available in aluminium or plastic.

www.item.info



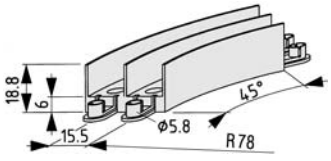
Roller Shutter Guide

5 6 **8** 12



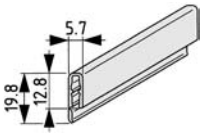
RS Guide Profile 8
Al, anodized
A = 2.28 cm²
m = 0.61 kg/m

natural, cut-off max. 3000 mm	0.0.465.63



RS Curved Guide Set 45°
2 Curved Guide 45°, PA, black
4 Countersunk Screws DIN 965-M2.5x5, St, bright zinc-pl.
Notes on Use and Installation
m = 135.0 g

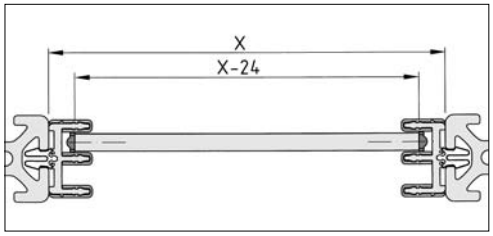
1 set	0.0.465.70



RS Slide Strip
PE-HD
A = 0.45 cm²
m = 44.0 g/m

black, 1 roll length 20 m	0.0.458.64

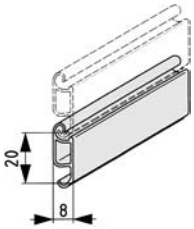
Aluminium Roller Shutters



Aluminium Roller Shutters are constructed as Slat Profiles Al with Slat Insulators between them. Each slat must be provided with Slat Sliding Shoes at each end. Weight of aluminium Roller Shutter: 8 kg/m²

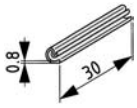
Length of aluminium Roller Shutter Slats:

l = X - 24 mm



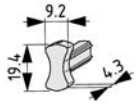
RS Slat Profile Al
Al, anodized
A = 0.58 cm²
m = 0.16 kg/m

natural, cut-off max. 3000 mm	0.0.465.69



RS Slat Insulator
PA
Recommended usage: 4 per 1m
m = 40 g/100

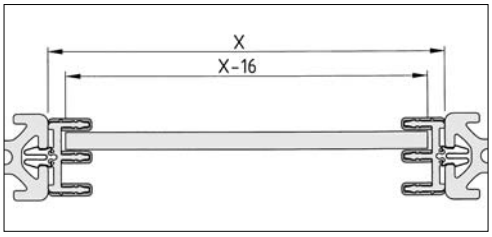
transparent, 1 PU = 100 pce.	0.0.465.68



RS Slat Sliding Shoe
PA
m = 60 g/100

black, 1 PU = 100 pce.	0.0.465.62

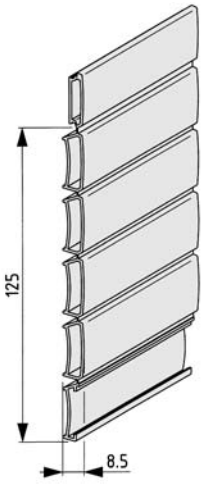
Plastic Roller Shutters



Roller Shutter Slat Profile K is connected to a Roller Shutter by means of the integrated locking segments.
No Slat Insulators or Slat Sliding Shoes are required.
Weight of plastic Roller Shutter: 3.7 kg/m²

Length of plastic Roller Shutter Slats:

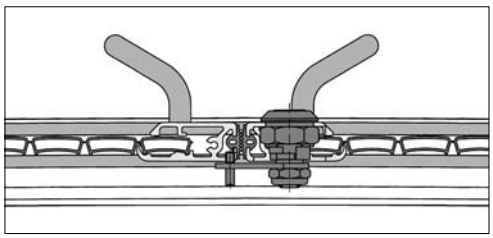
l = X - 16 mm



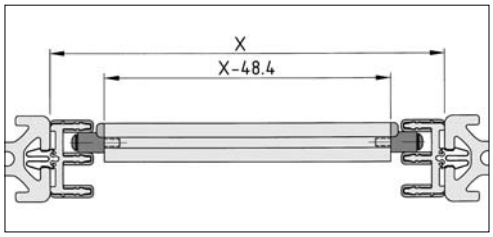
RS Slat Profile K
PVC
grey, aluminium-coloured coating
m = 465 g/m

1 pce., length 2000 mm	0.0.458.91

Roller Shutter End Strip



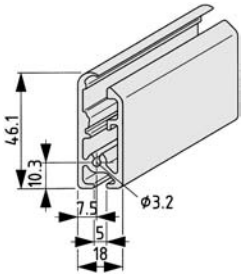
The Roller Shutter End Strip is used to terminate the Roller Shutter.
Handles or a Grip System can be secured to it. Roller Shutter Locking System 8 is inserted into a drill hole in the Roller Shutter End Strip.
The Roller Shutter Curved Guide Set 45° is accompanied by detailed installation instructions.



Length l of the Roller Shutter End Strip:

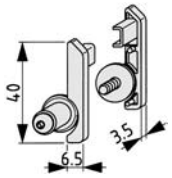
l = X - 48.4 mm

5 6 **8** 12



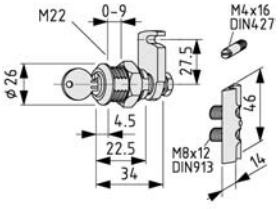
RS End Strip
Al, anodized
A = 2.95 cm²
m = 0.79 kg/m

natural, cut-off max. 3000 mm	0.0.465.66



RS End Strip Guide Set
1 End Strip cap, left, PA, black
1 End Strip cap, right, PA, black
2 End Strip rollers, POM/St, black
m = 8.0 g

1 set	0.0.465.58



RS Locking System 8
Cylinder Lock, all keys identical
Key, locking bar, nab
Headless screw
m = 105.0 g

1 set	0.0.465.57

4 Handles and Locks

Handles
Grip Systems
Locks and Catches

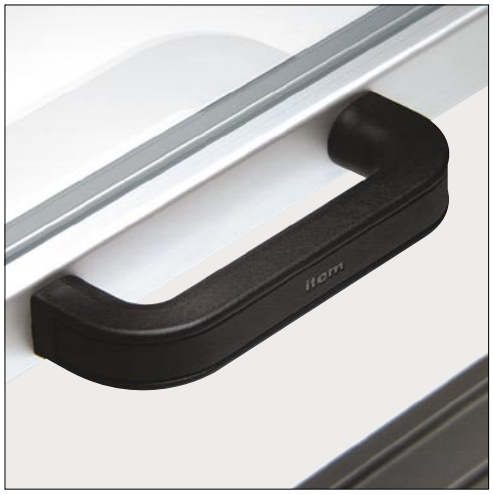
The Handles and Locks product group contains:
> Handles
> Grip systems
> Locks and door locks

They are used together with Hinges, Castors and sliding guides (Section 3.4 Movable Fastening Elements) for constructing guards and enclosures. Grip systems can also be used for constructing handling and transport devices.

4.1 Handles

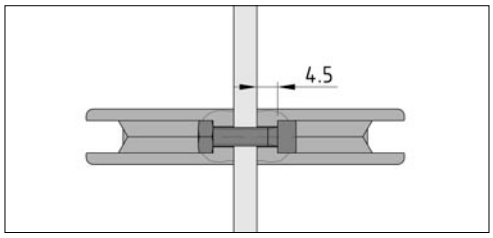
Swing, sliding and lifting doors are operated with handles or grip systems. The grips are either screwed directly into an inherently stable panel element or they are attached to the profile of the panel frame.

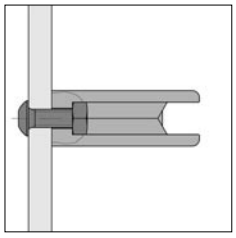
Handles PA

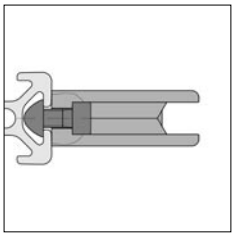


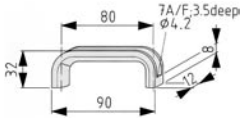
Handles PA for highly versatile application; they can be attached from the front or rear (concealed) and are particularly suitable for sliding and swing doors.

The Cap fills out the cavity in Handle PA 160 to ensure the Handle is comfortable in use. It is fitted after the Handle has been installed.



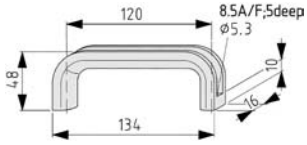






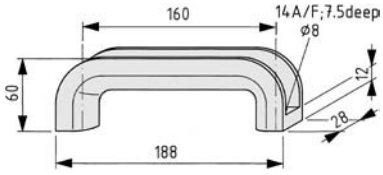
Handle PA 80
PA-GF
m = 9.0 g

black, 1 pce.	0.0.391.34



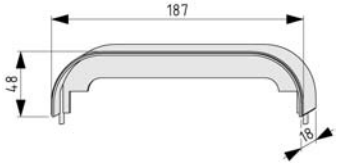
Handle PA 120
PA-GF
m = 30.0 g

black, 1 pce.	0.0.391.35



Handle PA 160
PA-GF
m = 93.0 g

black, 1 pce.	0.0.196.57

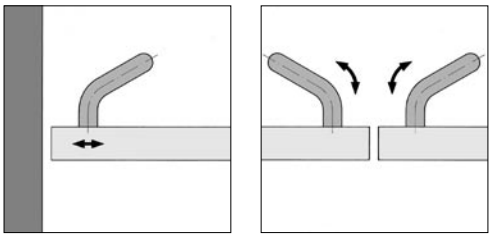


Cap for Handle PA 160
PA-GF
m = 20.0 g

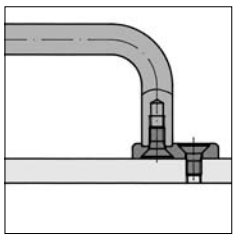
black, 1 pce.	0.0.475.38

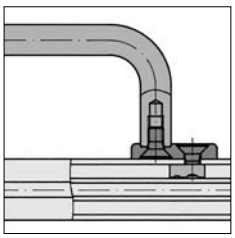
Handles Al

Stable, coated aluminium Handles of straight and angled design.

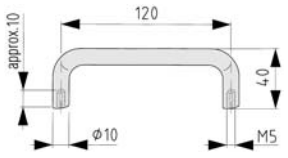


The cranked Handles are particularly suitable for sliding and swing doors to reduce the risk of fingers being crushed.



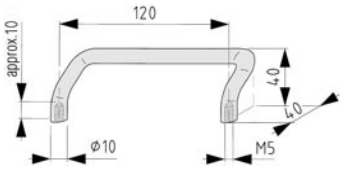


Handles Al can be secured from the rear (concealed).
They can also be fitted from the front when used with the Fastening Sets.



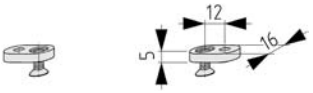
Handle Al 120
Al
m = 37.0 g

black, 1 pce.	0.0.416.85



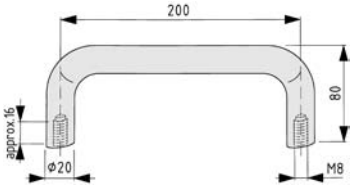
Handle Al 120 cranked
Al
m = 43.0 g

black, 1 pce.	0.0.416.87



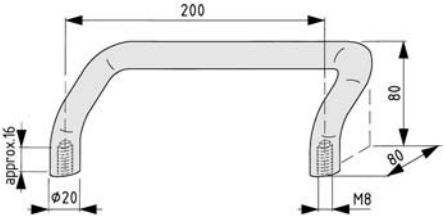
Fastening Set for Handle Al 120
2 connection elements 120, die-cast zinc, black
2 Countersunk Screws DIN 7991-M5x10, St, black
m = 21.0 g

1 set	0.0.418.81



Handle Al 200
Al
m = 261.0 g

black, 1 pce.	0.0.416.81



Handle Al 200 cranked
Al
m = 312.0 g

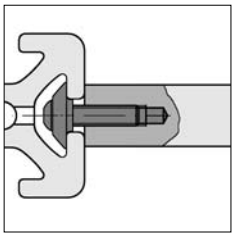
black, 1 pce.	0.0.416.83

Fastening Set for Handle Al 200
2 connection elements 200, die-cast zinc, black
2 Countersunk Screws DIN 7991-M8x18, St, black
m = 130.0 g

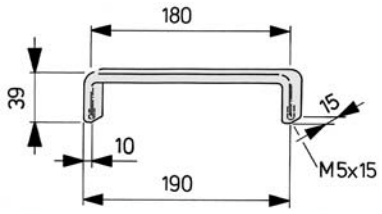
1 set	0.0.418.82

Handle, light duty

Lightweight handle for universal application.



The Handle is secured from the rear with M5 screws. Locating Washers (Section 3.2 Screws and Universal Elements) can be used to adapt to profiles of different Lines.

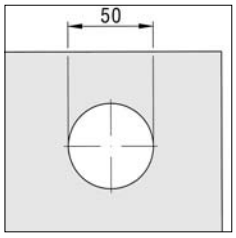


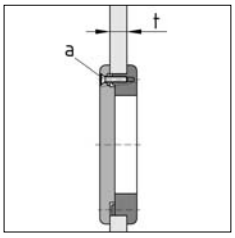
Handle, light duty
Al, anodized
m = 87.0 g

natural, 1 pce.	0.0.026.44

Recessed Grip D50

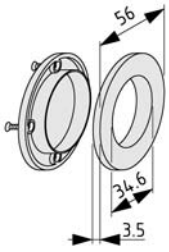
Recessed Grip D50 is particularly suitable for sliding doors (door thickness of 5 - 8 mm). It is inserted into a hole in the panel element.
The closed rear wall of the Recessed Grip prevents the operator's fingers from extending all the way through and possibly being injured.





Required hole size in panel element to fit the Recessed Grip D50.

a	t
Self-Tapping Screw DIN 7982-2.2x9.5	5 - 6 mm
Self-Tapping Screw DIN 7982-2.2x13	7 - 8 mm



Recessed Grip D50
PA-GF
4 Self-Tapping Screws DIN 7982-2.2x9.5, St, black
4 Self-Tapping Screws DIN 7982-2.2x13, St, black
m = 16.0 g

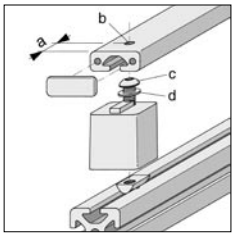
1 set	0.0.479.59

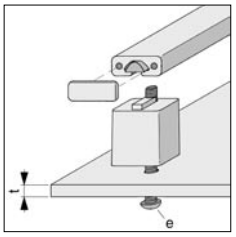
4.2 Grip Systems

Grip systems or grip rails help stabilise frameless panel elements and allows doors etc. to be grasped at a convenient height for the user.

Hand-Grip Elements

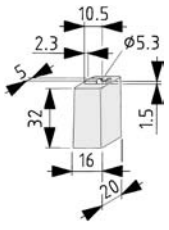
Hand-Grip Elements, in conjunction with profiles and Caps, can be used to construct handles which when attached to the panel elements, have a supplementary stabilising effect.





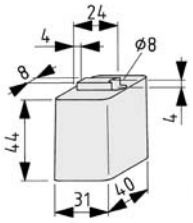
		Hand-Grip Element 5	Hand-Grip Element 8
	a	10.0 mm	20.0 mm
	b	∅ 4.3 mm	∅ 7.0 mm
Screw ISO 7380	c	M5x40	M8x60
Washer DIN 125	d	∅ 5.3 mm	∅ 8.4 mm
Screw ISO 7380	e	M5x(t+38 mm)	M8x(t+56 mm)

5 6 8 12



Hand-Grip Element 5
PA-GF
m = 7.0 g

black, 1 pce.	0.0.391.19

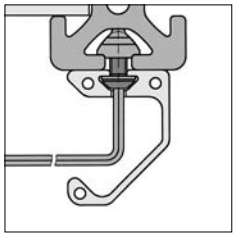


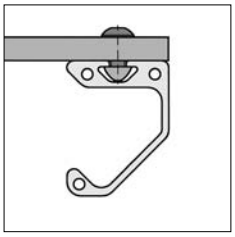
Hand-Grip Element 8
PA-GF
m = 28.0 g

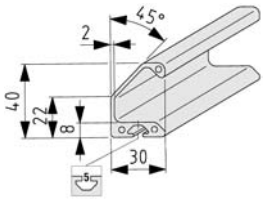
black, 1 pce.	0.0.196.60

Grip Rail Profile

Grip Rail Profile for universal application on swing and sliding doors, drawers etc.
Particularly suitable for applications where injuries may otherwise occur.
When attached to panel elements, the Grip Rail Profile also has a stabilizing effect.

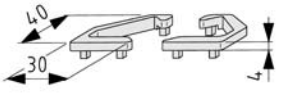






Grip Rail Profile
Al, anodized
A = 2.80 cm²
m = 0.76 kg/m

natural, cut-off max. 3000 mm	0.0.432.09



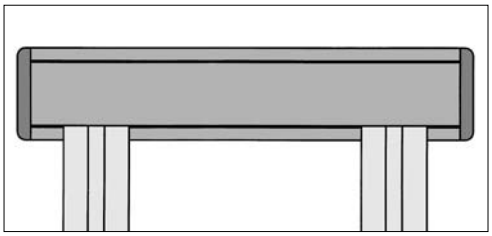
Grip Rail Cap Set
Grip Rail Cap, right, PA-GF, black
Grip Rail Cap, left, PA-GF, black
m = 3.5 g

1 set	0.0.432.28

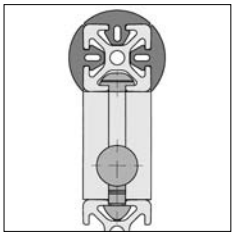
Grip System

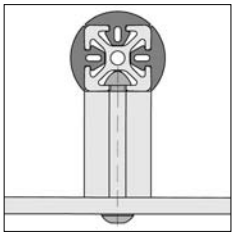
The Grip Cover Profiles can be used to construct Handles of any size from Profiles 5 or 6.
The Grip End Caps are screwed into the profile's core bore using Countersunk ScrewsDIN 7991 .

Grip system 6 is ideal for heavy doors etc .



Discontinuation of the Grip Cover Profile for right-angled profile connections.

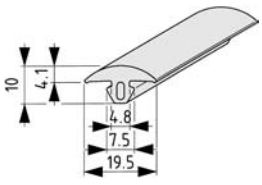




Can be connected using Standard or Universal Fastening Set.

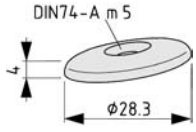
Can be connected from the inside of the door using T-Slot Nut St and Button-Head Screw ISO 7380.

5 6 8 12



Grip Cover Profile 5 20x4
TPE
Hardness 73 Sh A
Oil, UV and water resisting
m = 78.2 g/m

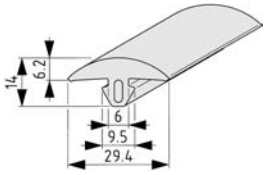
black, cut-off max. 20 m	0.0.437.03



Grip End Cap 5 D28
PA-GF
m = 1.9 g

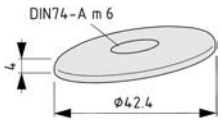
black, 1 pce.	0.0.437.06

5 6 8 12



Grip Cover Profile 6 30x6
TPE
Hardness 65 Sh A
Oil, UV and water resisting
m = 170 g/m

black, cut-off max. 20 m	0.0.441.84



Grip End Cap 6 D42
PA-GF
m = 4.0 g

black, 1 pce.	0.0.441.87

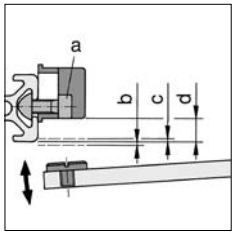
4.3 Locks and Catches

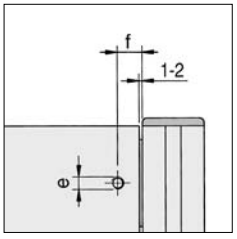
Locks and catches for moving machine elements, primarily doors and lids on guards and enclosures. In addition to quick-action catches which are used solely for latching the door, Door Locks are also available with custom-made locking devices.

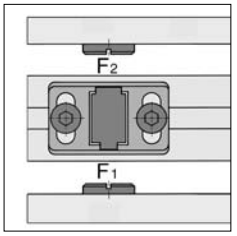
4.3.1 Door Catches

Magnetic Catches

Magnetic Catches are particularly suitable for latching swing and sliding doors.
They can be adjusted to the thickness of the panel elements by means of mounting slots. The Magnetic Catch can be rotated around 180° for different holding strengths.
In conjunction with Catch Mounting Brackets, Magnetic Catches can also be used on doors with profile frames.

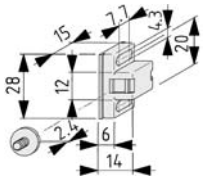






		Magnetic Catch 5	Magnetic Catch 8
Screw DIN 912	a	M4x12	M6x20
	b	1 mm	-
	c	-	1 mm
	d	7 mm	14 mm
	e	M4	M5
	f	8 mm	10 mm
	F1	3 N	10 N
	F2	5 N	20 N

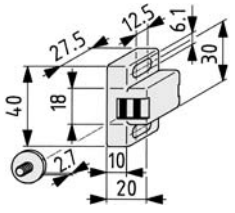
5 6 8 12



Magnetic Catch 5
PA-GF
Flat head screw DIN 921-M4x5, St, bright zinc-plated as holding plate
m = 9.0 g

1 pce. 0.0.391.32

5 6 8 12



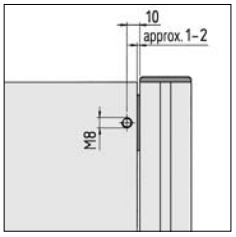
Magnetic Catch 8
PA-GF
Flat head screw DIN 921-M5x6, St, bright zinc-plated as holding plate
m = 34.0 g

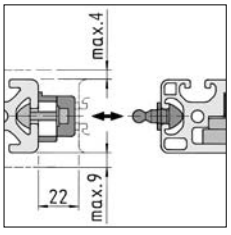
1 pce. 0.0.196.48

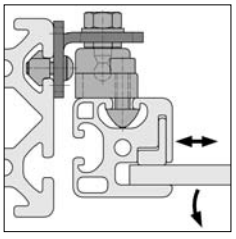
Ball Latch

Quick-action latch for sliding and swing doors. Can be adjusted to the thickness of the panel element by means of the mounting slots.
It can be set as a stop for both sliding and swing doors.

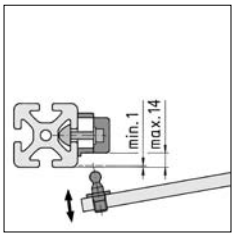
Low-wear design with increased holding force.

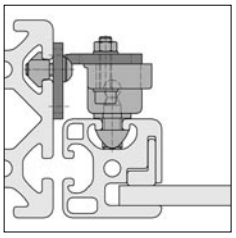




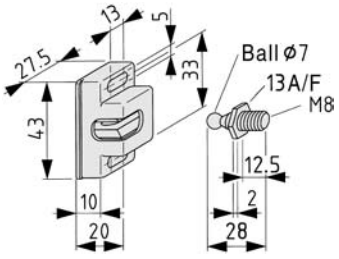


The mounting slots in the Ball Latch casing means that the sliding door and Stand Profile can be offset. Recommended fastening to the profile: Hexagon Socket Head Cap Screw DIN 912-M5 and Washer DIN 125-5.3.





Use of Catch Mounting Bracket permits narrow door gap.



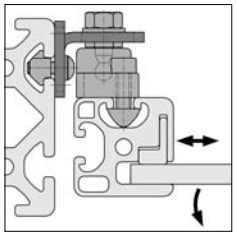
Ball Latch 8 PA
PA-GF, black
Ball pin St, bright zinc-plated
Holding force$_{max.}$ = 75 N
m = 25.0 g

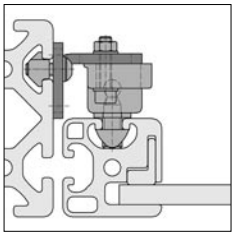
1 pce.	0.0.388.20

Catch Mounting Bracket

The Catch Mounting Bracket offers a simple means for securing Ball Latches and magnetic latches to profiles of all lines. The catch housing and ball pin can be set to the precise position by means of the slots.

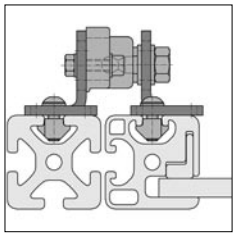
The Catch Mounting Bracket minimises the gap between the doors and the outer frame.

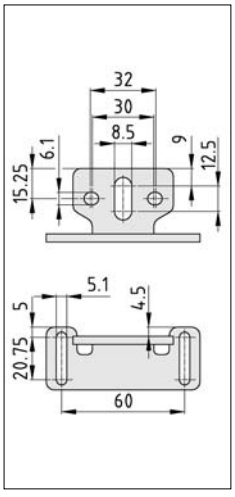




Application examples of a Catch Mounting Bracket with Ball Latch 8 for swing and sliding doors.

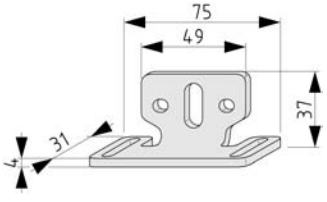
Depending on the particular application, either the ball pin (Ball Latch 8 PA), the holding plate (magnetic catch) or the housings of the relevant latches can be secured to the Catch Mounting Bracket.





By combining two Catch Mounting Brackets it is also possible to use latches to lock together profiles of the same size, minimising the gap between them.
If the Catch Mounting Bracket is adjusted to the extreme of the slots, it may be necessary to use an appropriate washer between it and the profile to prevent tilting.

The connection is made on the profile side using M5 screws fitted into slots. DIN 125 washers must be used.



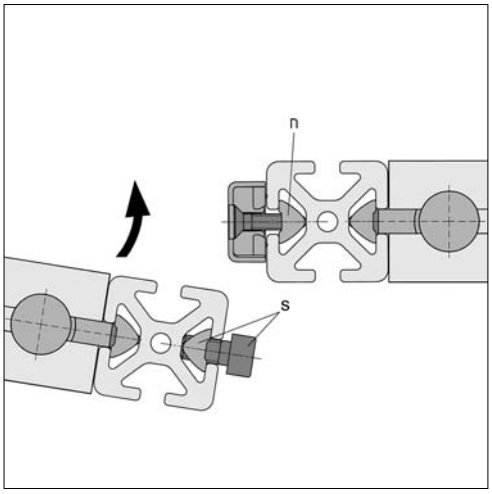
Catch Mounting Bracket
St
m = 88.0 g

black, 1 pce.	0.0.475.06

Door Latch

Slimline Door Latch for swing doors for fitting in the door gap between the Stand Profile and the door. Thanks to its slim design, a door gap of 12 mm is possible.

The Door Latch locks onto the head of a Hexagon Socket Head Cap Screw DIN 912-M6, which is screwed into the opposite groove against the T-Slot using a T- Slot Nut.

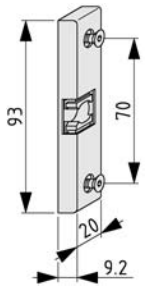


The Door Latch Zn can be attached to any combination of Line 6 and 8 Profiles.

The length of the Hexagon Socket Head Cap Screw (s) depends on the profile range.

The T-Slot Nuts (n) with thread M4 for fastening the Door Latch Zn should be selected according to the profile range.

Profile	n	s
6	T-Slot Nut 6 St M4	Screw DIN 912-M6x12 T-Slot Nut 6 St M6
8	T-Slot Nut 8 Zn M4	Screw DIN 912-M6x14 T-Slot Nut 8 St M6



Door Latch Zn
Die-cast zinc, bright zinc-plated
Cap PA-GF, black
2 Countersunk Screws DIN 7991-M4x16, bright zinc-plated
m = 66.0 g

1 set	0.0.473.62

4.3.2 Locking Systems

As well as having a latching function, Locking Systems also provide security against unauthorised entry via swing or sliding doors constructed from inherently stable, frameless panel elements.

Locking Systems 5 and 6 can be used for right-hand or left-hand application (the figure shows right-handed application).
Locking Systems 8 are equally suitable for left-hung and right-hung doors.

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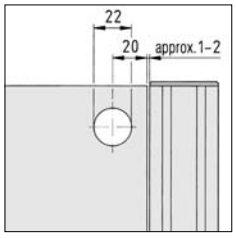
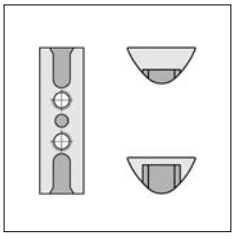
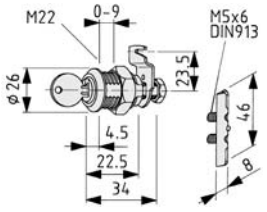




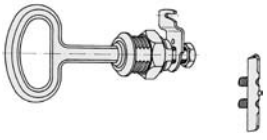
Processing the panel element for installing the Locking Systems.

5 6 8 12



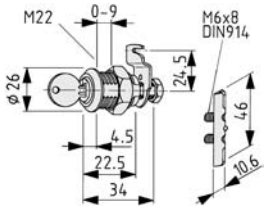
Locking System 5, Cylinder Lock
Key, locking bar, nab
Cylinder lock (all keys identical)
Notes on Use and Installation
m = 91.0 g

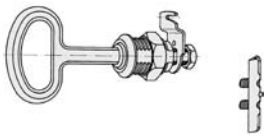
right-hand application, 1 set	0.0.391.16
left-hand application, 1 set	0.0.464.50



Locking System 5, Double-Beard Lock
Double-beard insert
Key, locking bar, nab
Notes on Use and Installation
m = 120.0 g

right-hand application, 1 set	0.0.391.17
left-hand application, 1 set	0.0.464.51



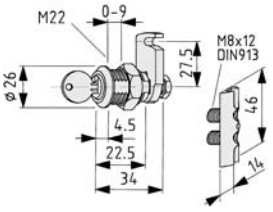


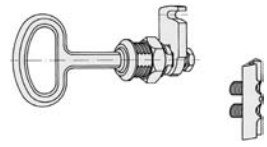
Locking System 6, Cylinder Lock
Key, locking bar, nab
Cylinder lock (all keys identical)
Notes on Use and Installation
m = 89.0 g

right-hand application, 1 set	0.0.459.21
left-hand application, 1 set	0.0.459.22

Locking System 6, Double-Beard Lock
Double-beard insert
Key, locking bar, nab
Notes on Use and Installation
m = 118.0 g

right-hand application, 1 set	0.0.459.23
left-hand application, 1 set	0.0.459.24





Locking System 8, Cylinder Lock
Cylinder lock (all keys identical)
Key, locking bar, nab
Notes on Use and Installation
m = 116.0 g

1 set	0.0.196.61

Locking System 8, Double-Beard Lock
Double-beard insert
Key, locking bar, nab
Notes on Use and Installation
m = 143.0 g

1 set	0.0.196.62

4.3.3 Door Locks

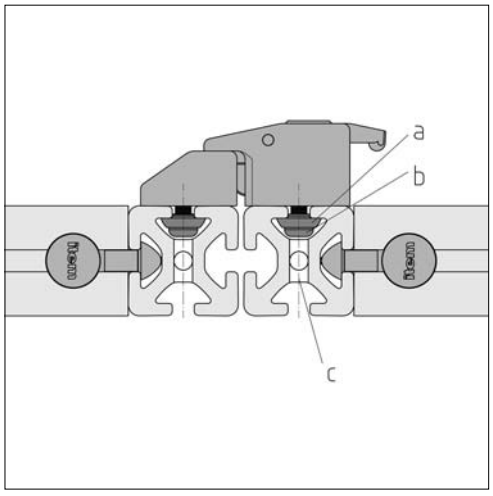
Door Lock 6-8 Zn

New in catalogue

Door Lock 6-8 Zn is a lock system for swing doors that can be screwed onto door frames and fixed door frames constructed from Line 6 or 8 Profiles.

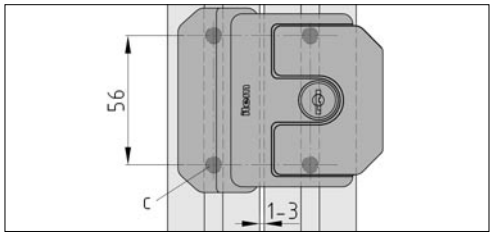
Fitted with an ergonomic swivel handle, Door Lock 6-8 Zn is the perfect solution for doors that are opened and closed frequently. The spring-loaded latch engages in the lock case secured to the outer frame.

An integrated cylinder lock can be used to lock the latch in position.



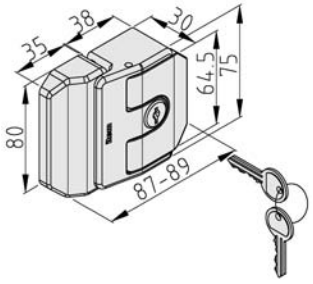
Door Lock 6-8 Zn screwed to profile door frame and fixed outer frame

	6	8
a	Washer DIN 125-6.4	Locating Washer 8 D6 (Art. No. 0.0.482.12)
b	Button Head Screw DIN ISO 7380-M6x10	Button Head Screw DIN ISO 7380-M6x16
c	∅ 6	∅ 7



Profile bore grids for attaching Door Lock 6-8 Zn

5 6 8 12

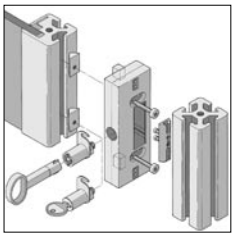


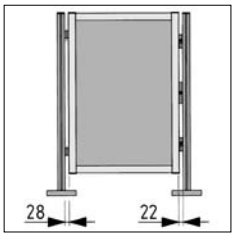
Door Lock 6-8 Zn
Cylinder lock (all keys identical)
Lock housing, die-cast zinc, black
Lock case, die-cast zinc, black
4 Square nut inserts M6, St, bright zinc-plated
m = 560.0 g

1 pce. 0.0.488.45

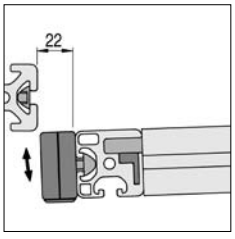
Door Locks 8

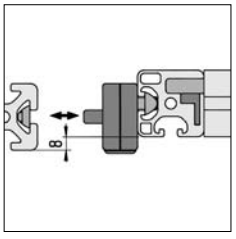
For locking and securing sliding and swing doors. Frame and Stand Profiles do not need to be machined.





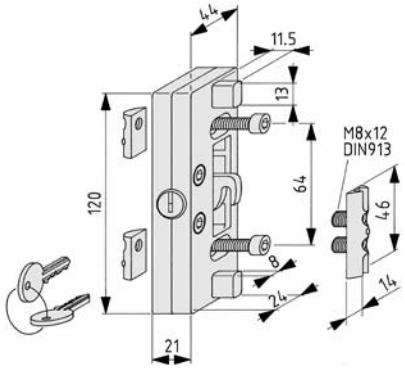
Application example for door construction:
Clearance on left 28 mm with Hinges 8 40 Zn (Section 3.4 Movable Fastening Elements) and on right 22 mm with Door Rabbets 8, in combination with Door Lock 8.





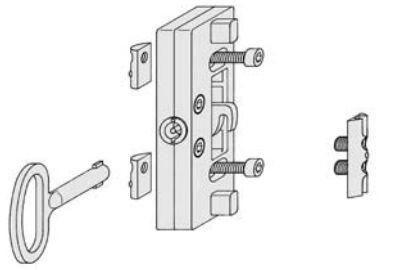
Depending on the application, the anti-torsion blocks in the housing can be repositioned.
The nabs have two different mounting positions for sliding and swing doors.

5 6 **8** 12



Door Lock 8 with Cylinder Lock
Cylinder lock (all keys identical)
Housing and anti-torsion blocks, PA-GF, black
2 Hexagon Socket Head Cap Screws DIN 912-M6x25, St, bright zinc-plated
2 T-Slot Nuts 8 St M6, bright zinc-plated
Key, locking bar, nab
m = 204.0 g

1 set	0.0.265.08



Door Lock 8 with Double-Beard Insert
Double-beard insert
Housing and anti-torsion blocks, PA-GF, black
2 Hexagon Socket Head Cap Screws DIN 912-M6x25, St, bright zinc-plated
2 T-Slot Nuts 8 St M6, bright zinc-plated
Key, locking bar, nab
m = 237.0 g

1 set	0.0.265.09

Integrated Lock System 8

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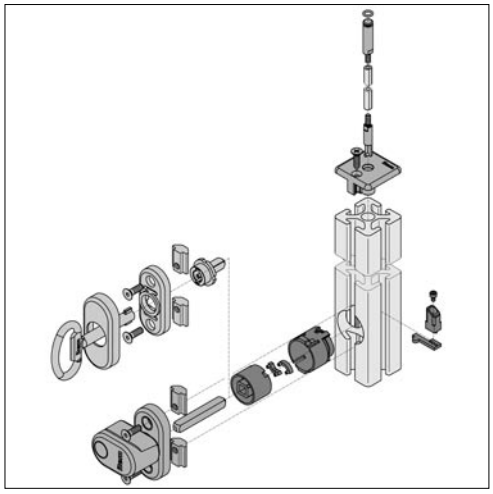
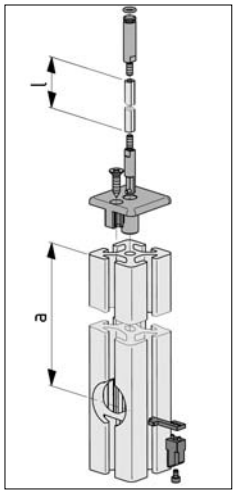
Integrated Lock System 8 is a modular door lock for guards and enclosures. The various configurations using pawl latches or rods enable doors to be locked in up to three directions.

The lock is fully integrated into Profile 8 or Profile 8 light (not clamp profiles) - the rotating pawl latch swings into the lateral profile groove and the rods are concealed in the profile core bore.

The system can be operated from either one side or both sides of the door (i.e. inside/outside). There is also the option of locking the door from one side by using the lockable Door Knob.



The basic version of the door lock with Integrated Lock System 8 consists of Rotating Pawl Latch 8 and at least one Door Knob.
A Rod Latch 8 is required for the rod for both the upper and lower ends of the door.

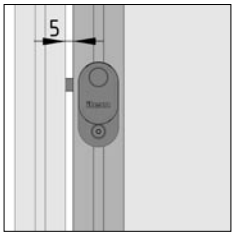


Tube D6.3x1.6 5.5 A/F forms the connection between the Rotating Pawl Latch and the Rod Latch.
The length l of the tube for actuating the Rod Latch is:

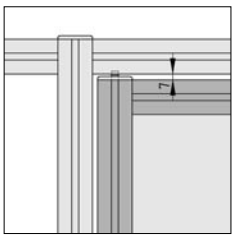
l = a - 60 mm

A counterbore of diameter 30 mm must be drilled into the door profile for holding the Integrated Lock System. A commercially available counterboring drill (3-cutter with guide pin ∅ 11 mm or larger) or Step Drill, Universal Connection 12 (Section 9.2 Jigs and Tools) is required for this purpose. The counterbore ∅ 30 mm must be 25 mm deep.

The pawl latch engages into the Profile 8 groove of the door frame adjacent.

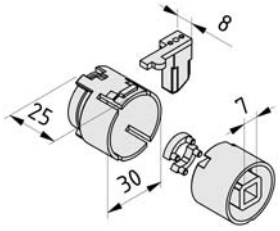


The gap between the door profile and the lateral door frame must not exceed 5 mm.



The rods of the Rod Latches move out of the core bore in the door profile and engage in the Profile 8 groove of the door frame profile adjacent.

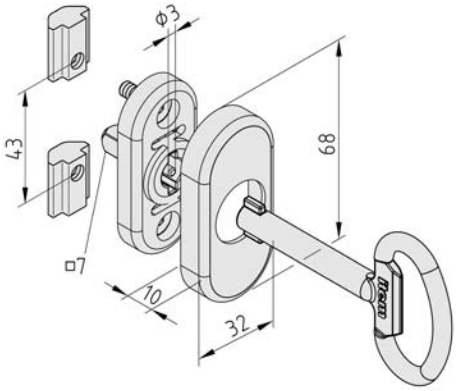
The gap between the door profile and the upper door frame must not exceed 7 mm.



Rotating Pawl Latch 8
1 pawl, die-cast zinc, bright zinc-plated
2 alternating stops, die-cast zinc, bright zinc-plated
1 crank, die-cast zinc, bright zinc-plated
1 connecting plate, St
1 glide bush, POM, black
1 Cap Screw DIN 912-M3x5, St, bright zinc-plated
Notes on Use and Installation
m = 50.0 g

1 set	0.0.476.96

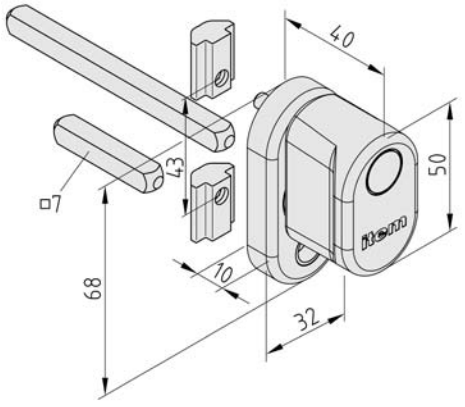
New in catalogue



Double-Beard Insert
1 double-beard key insert, PA-GF, black
1 double-beard key, GD-Zn, bright zinc-plated
2 T-Slot Nuts 8 Al M5
2 Countersunk Screws DIN 7991-M5x16, St, bright zinc-plated
1 lock body, POM, black
1 lock body cover, PA, black
m = 80.0 g

1 set	0.0.486.48

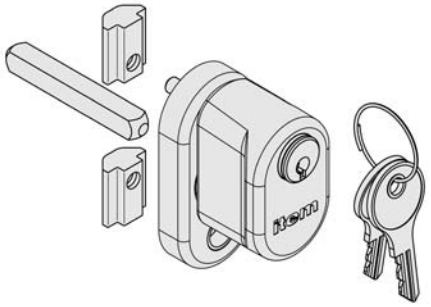
New in catalogue



Door Knob
1 Door Knob, PA, black
1 square pin 56 mm long, St, bright zinc-plated
1 square pin 112 mm long, St, bright zinc-plated
2 T-Slot Nuts 8 Al M5
2 Countersunk Screws DIN 7991-M5x16, St, bright zinc-plated
m = 128.0 g

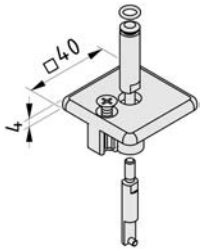
1 set	0.0.486.79

New in catalogue



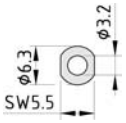
Door Knob, Lockable
1 Door Knob, PA, black, with lock insert
2 keys
1 square pin 56 mm long, St, bright zinc-plated
2 T-Slot Nuts 8 Al M5
2 Countersunk Screws DIN 7991-M5x16, St, bright zinc-plated
m = 131.0 g

1 set	0.0.486.80



Rod Latch 8
1 cap, PA-GF, schwarz
1 locking pin, St, stainless
1 rod actuator pin, St
1 O-ring DIN 3771 5.5x1.5, NBR, black
1 self-tapping screw DIN 7982-4.2x16, St, black
m = 30.0 g

1 set	0.0.476.98



Tube D6.3x1.6 5.5 A/F
Al, anodized
m= 58 g/m

natural, cut-off max. 2000 mm	0.0.476.72

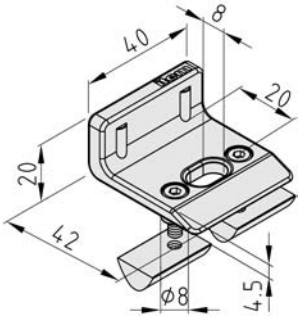
Door Stop 8

New in catalogue

The Door Stop is an additional system element for limiting the movement of framed doors in enclosures etc. The slot of the central through bore is designed to take the pin of Rod Latch 8. Once the door has been swung against the Door Stop, this secures the door in position without scratching or damaging the profiles.

The Door Stop is designed to work with a modular 40 mm door and fastens to the outer frame providing a lead-in edge to guide the door. When designing the size of the door, the thickness of Door Stop 8 (4.5 mm) should be taken into account.

The Door Stop is fitted with 2 elastomer inserts to dampen the contact between the door and the Door Stop.



Door Stop 8
2 Door Stops, PA-GF, black
4 Hex. Socket Head Cap Screw DIN 6912-M4x12, St, bright zinc-plated
4 T-Slot Nuts 8 St M4, bright zinc-plated
m = 76.0 g

1 set	0.0.486.72

Lock System 6-8

Lock System 6-8 enables the use of commercially available mortise locks to DIN 18251 (pin dimension 65 mm) and profile cylinders of locking systems. It is suitable for locking swing and sliding doors from Profiles 6 or 8 and a combination of both Lines. The profile frame does not need to be machined for holding the Lock System.
The screws concealed when the door is locked prevent the Lock System from being dismantled by unauthorised persons.

Its versatile fastening options mean that Lock System 6-8 can be fitted to both right-opening and left-opening doors and to the inside and outside of doors. The lock can be chosen to suit the specific function.

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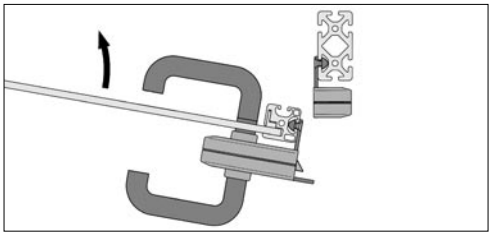
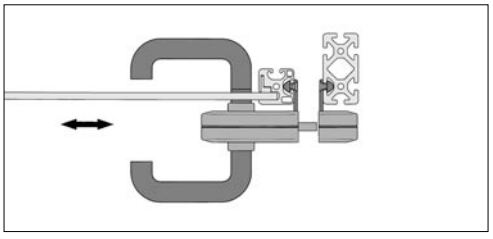
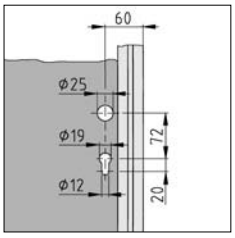
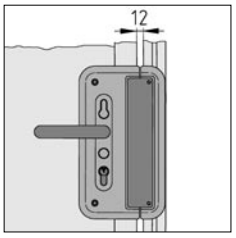


Swing door with inner-mounted lock, stop provided by the lock housing rabbet.



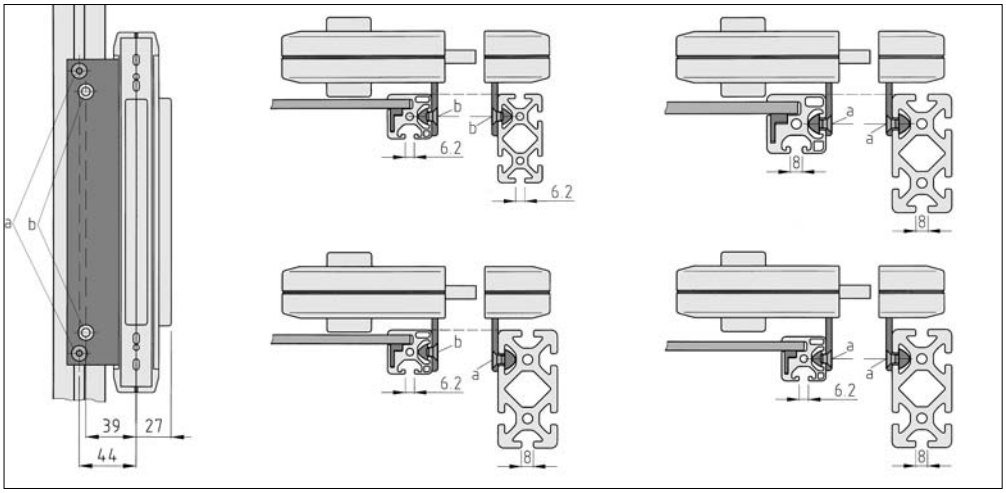
Lock System 6-8 fitted to a sliding door.



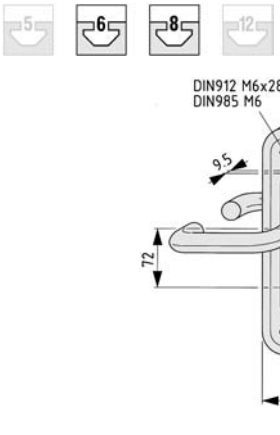


The panel element may need to be drilled for fitting door handles and standard cylinder locks. The lock housing contains the preformed openings for the holes.
The distance to the edge of the door determines the position of the through holes in the panel element which are required for the door handle and profile cylinder.

The door gap does not depend on the Profile Line used.

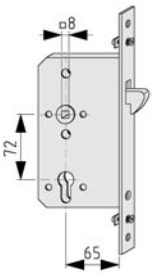


Depending on the thickness of the panel element and frame profile used, it may be necessary to select a longer standard profile cylinder than the one in this catalogue (0.0.458.42).



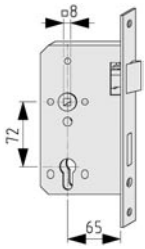
Lock System 6-8
Lock housing, PA-GF, black
Lock case, PA-GF, black with nab, St
Lock housing rabbet, St, black
2 angle brackets, Al, anodized
2 door handles, PA, black
1 spacer sleeve, PA, black
2 flange nuts M4, St, black
2 Countersunk Screws DIN 7991-M4x12, St, bright zinc-pl.
4 sleeves, St, bright zinc-plated
Notes on Use and Installation
m = 1.3 kg

1 set 0.0.458.33



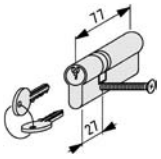
Sliding-Door Lock
Lock insert, St, suitable for standard cylinder locks
2 drive nuts M4, St, black
2 Countersunk Screws DIN 7991-M4x12, St, bright zinc-plated
m = 812.0 g

1 set 0.0.458.34



Swing-Door Lock
Lock insert with movable latch, St, suitable for standard cylinder locks
m = 850.0 g

1 pce. 0.0.458.35



Profile Cylinder
Cylinder matt nickel-plated, all keys identical
1 Countersunk Screw M5x80, St
3 keys
m = 250.0 g

1 pce. 0.0.458.42

Fastening Set 6 for Lock System 6-8
2 T-Slot Nuts 6 St M6, bright zinc-plated
2 Counters. Screws DIN 7991-M6x12, St, bright zinc-plated
m = 15.0 g

1 set 0.0.459.05

Fastening Set 8 for Lock System 6-8
2 T-Slot Nuts 8 St M6, bright zinc-plated
2 Counters. Screws DIN 7991-M6x14, St, bright zinc-plated
m = 27.0 g

1 set 0.0.458.36

Dual-Rod Mesh Lock System

The Dual-Rod Mesh Lock System is used to construct doors in dual-rod mesh protective fences.
The lock housing is screwed in position to the swing door, and the lock case is screw-connected to a rigid mesh element. The lock housing rabbet also serves as a door rabbet and a lock cover. The lock housing can be used with mortise locks that meet DIN 18251 with pin dimension 65 mm (e. g. Swing-Door Lock Order No. 0.0.458.35 with Profile Cylinder 0.0.458.42).

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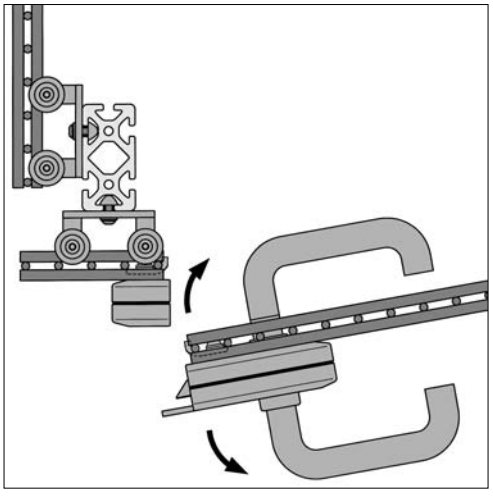
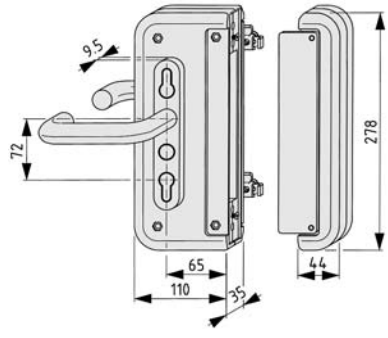


Thanks to its multiple fastening options, the Dual-Rod Mesh Lock System allows left-handed or right-handed fitting. A hole may need to be made in the Dual-Rod Mesh to allow the door handle to be fed through.
The Dual-Rod Mesh Lock System includes all required fixing elements. Pressed steel plates and Clamping Elements enable secure mounting on all types of dual rod mesh (Section 5.2 Mesh Panels).

5 6 8 12



Dual-Rod Mesh Lock System
Lock housing, PA-GF, black
Lock case, PA-GF, black with nab, St
Lock housing rabbet, St, black
2 door handles, PA, black
4 Dual-Rod Mesh Clamping Elements, St, black
4 Dual-Rod pressed steel plates, St, black
4 sleeves, St, bright zinc-plated
Fastening elements
Notes on Use and Installation
m = 1.7 kg

1 set	0.0.446.09

Sliding-Door Pin Lock

Integrated lock system for sliding doors which is inserted into the panel element of the door.
When operated a projecting pin locks the door against the one immediately behind it.

The Sliding-Door Pin Lock can be used on sliding doors created with Sliding-Door Guide Sets or Sliding-Door Guide Profiles (Section 3.4 Movable Fastening Elements).

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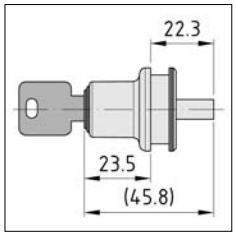
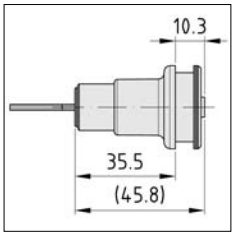
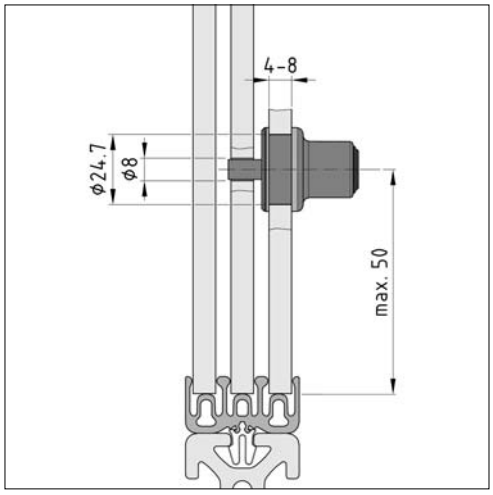




Mounting dimensions, locked and unlocked.

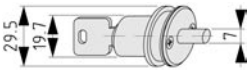


Processing the panel elements for accommodating the Sliding-Door Pin Lock and pin.

To lock a sliding-door system with n door elements, n-1 Sliding-Door Pin Locks will be required.

The Sliding-Door Pin Lock should be installed in close proximity to the guide profiles in order to offer maximum protection against the door being opened by force.

The different thicknesses of panel element (from 4 to 8 mm) can be compensated by using Spacers (2 and 0.7 mm thick).



Sliding-Door Pin Lock
Die-cast zinc/St, black
2 Washers, PA, black
2 keys, identical
Notes on Use and Installation
m = 86.0 g

1 set	0.0.474.59

5

Panel Elements

This product group comprises panel elements of various materials. These panel elements are ideal for producing machine casings, guards, enclosures and housings as well as for constructing workplaces.

The specified maximum panel dimensions apply for unmachined panel edges as delivered.
The maximum cut-off dimensions in each case are 30 mm smaller.

Because of the production methods used for manufacturing plastic panel elements, tolerances in material thicknesses are unavoidable.

The Roller Shutter System is a further variable panel element. It can be found in Section 3.4 Movable Fastening Elements.

5.1 Closed Panels

Acrylic glass, clear or tinted; suitable for translucent casings or doors, with wear-resistant surface.

Polycarbonate, clear or tinted; particularly suitable for transparent casings or doors, to satisfy demanding fracture-resistance requirements.

Plastic (resin-bonded, hot-pressed cellulose); suitable for heavy-duty working surfaces and casings.

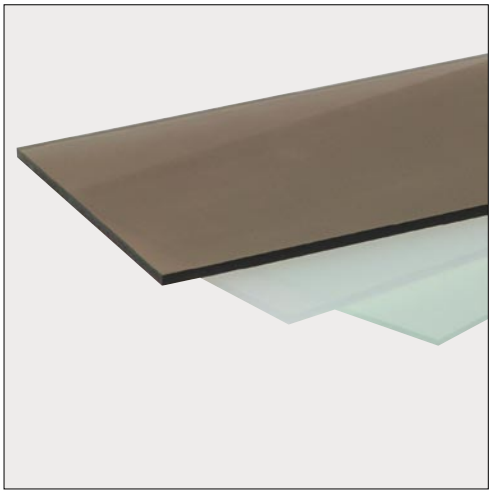
Composite material (plastic, coated on both sides with natural-finish anodized aluminium); particularly suitable for inherently stable lightweight doors and casings.

Aluminium sheet, polished or colour-coated, used as a panel element for machine casings; can be painted.

The aluminium chequer sheet is particularly suitable for walk-on platforms or steps.

5.1.1 Transparent Panels

Acrylic Glass



Cast acrylic glass with scratch-resistant surface is suitable for doors and casings. The panels can be polished to a high gloss.

Acrylic Glass XT in extruded quality has slightly lower mechanical and thermal load bearing capabilities and optical characteristics than cast panels. But in many applications, it can represent a cost-effective alternative.

Acrylic Glass, double-frosted, in the colours tinted, opal-white and glass-look is well-suited for translucent partitions designed to restrict visibility and for the stylish design of wall and ceiling elements. It exhibits excellent dimensional stability at higher temperatures coupled with good light diffusion and transmission characteristics, which also makes it ideal for light boxes and backlit advertising areas.

Property	Value	Test Standard
Density	1.19 g/cm^3	ISO 1183
Water absorption	30 mg	ISO 62
Tensile strength	82 N/mm^2	ISO 527
Elongation at tear	5,6 %	ISO 527
Modulus of elasticity in extension	3300 N/mm^2	ISO 527
Impact resistance (without notch)	2 kJ/m^2	ISO 179
Vicat softening temperature	110 C°	ISO 306
Coefficient of thermal expansion	70 x10^{-6} K^{-1}	DIN 52612
Construction material class	B 2	DIN 4102
Refractive index	1.49 n_D20	ISO 489
Luminous transmission index clear / tinted	93,7% / 41%	DIN 5036-T3
Surface resistance	10^{14} Ohm	DIN 53482

New in catalogue

Acrylic Glass 4mm XT
PMMA
Thickness tolerance ± 5%
Panel dimensions approx. 3050x2050 mm
m = 4.60 kg/m^2

clear, cut-off max. 3020x2020 mm	0.0.492.09

New in catalogue

Acrylic Glass 5mm XT
PMMA
Thickness tolerance ± 5%
Panel dimensions approx. 3050x2050 mm
m = 5.75 kg/m^2

clear, cut-off max. 3020x2020 mm	0.0.492.16

Acrylic Glass 2mm
PMMA
Panel dimensions approx. 3050x2030 mm
Thickness tolerance ± 10%
m = 2.30 kg/m^2

clear, cut-off max. 3020x2000 mm	0.0.476.21

Acrylic Glass 5mm
PMMA
Panel dimensions approx. 3050x2030 mm
Thickness tolerance ± 10%
m = 5.90 kg/m²

clear, cut-off max. 3020x2000 mm	0.0.428.21
tinted, cut-off max. 3020x2000 mm	0.0.388.97

Acrylic Glass 8mm
PMMA
Panel dimensions approx. 3000x2000 mm
Thickness tolerance ± 10%
m = 9.44 kg/m²

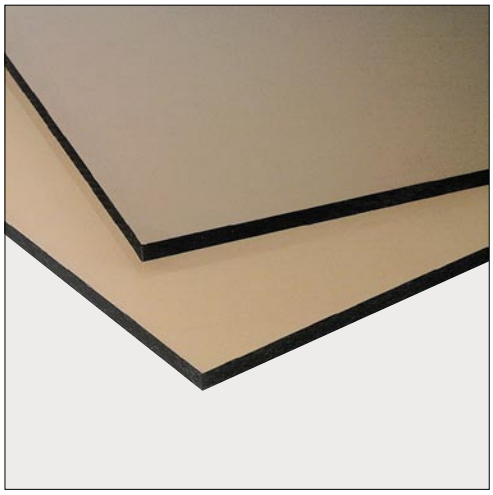
clear, cut-off max. 2970x1970 mm	0.0.428.22
tinted, cut-off max. 2970x1970 mm	0.0.026.46

New in catalogue

Acrylic Glass 4mm double-frosted
PMMA
Thickness tolerance ± 10%
Panel dimensions approx. 3050x2030 mm
m = 4.60 kg/m²

opal-white, cut-off max. 3020x2000 mm	0.0.492.36
tinted, cut-off max. 3020x2000 mm	0.0.492.40
glass-look, cut-off max. 3020x2000 mm	0.0.492.38

Polycarbonate



Polycarbonate is knock-resistant and is therefore ideal for use as a panel element for cost-effective enclosures, even in relatively small thicknesses. Its high strength and transparency mean that the material is particularly suitable for applications where it is important both to be able to monitor processes and yet provide adequate protection for personnel.

Property	Value	Test Standard
Density	1.2 g/cm³	ISO 1183
Water absorption	8 mg	ISO 62
Tensile strength	60 N/mm²	ISO 527
Elongation at tear	80 %	ISO 527
Modulus of elasticity in extension	2200 N/mm²	ISO 527
Impact resistance (without notch)	No break	ISO 179
Vicat softening temperature	145 C°	ISO 306
Coefficient of thermal expansion	65 x10^{-6} K^{-1}	DIN 52612
Construction material class	B 2	DIN 4102
Refractive index	1.585 n_D20	ISO 489
Luminous transmission index clear / tinted	86% / 51%	DIN 5036-T3
Surface resistance	10^{14} Ohm	DIN 53482

New
in catalogue

Polycarbonate 2mm
PC
Panel dimensions approx. 3050x2050 mm
Thickness tolerance ± 5%
m = 2.40 kg/m²

clear, cut-off max. 3020x2020 mm	0.0.479.61

Polycarbonate 4mm
PC
Thickness tolerance ± 5%
Panel dimensions approx. 3050x2050 mm
m = 4.80 kg/m²

clear, cut-off max. 3020x2020 mm	0.0.483.50

Polycarbonate 5mm
PC
Panel dimensions approx. 3050x2050 mm
Thickness tolerance ± 5%
m = 6.00 kg/m²

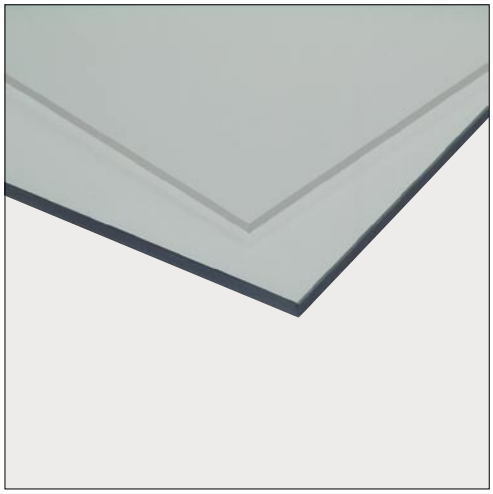
clear, cut-off max. 3020x2020 mm	0.0.428.23
tinted, cut-off max. 3020x2020 mm	0.0.428.24

Polycarbonate 8mm
PC
Panel dimensions approx. 3050x2050 mm
Thickness tolerance ± 5%
m = 9.60 kg/m²

clear, cut-off max. 3020x2020 mm	0.0.428.25
tinted, cut-off max. 3020x2020 mm	0.0.428.26

PET-G

New in catalogue



PET-G (glycol-modified polyethylene terephthalate) is an impact-resistant, clear plastic used for constructing machine casings, protective housings and partitions, and is suitable for both indoor and outdoor use.

This highly transparent material exhibits a far higher resistance to impact than acrylic glass and is also easier to work with. It displays better optical characteristics than polycarbonates and is more resistant to chemicals.

Property	Value	Test standard
Density	1.27 g/cm^3	D 1505
Tensile strength	50 N/mm^2	DIN 53455
Elongation at tear	54 %	DIN 53455
Modulus of elasticity in extension	2200 N/mm^2	DIN 53455
Impact resistance (without notch)	No break	DIN 53453
Vicat softening temperature	82 C°	DIN 53460
Coefficient of thermal expansion	6.8 10^{-5} x K^{-1}	DIN 53752
Construction material class	B 1	DIN 4102
Refractive index	1.57 n_D20	DIN 53491
Luminous transmission index clear / tinted	88%	DIN 5036
Surface resistance	≥10^{16} Ohm	D 257

PET-G 4mm
PET
Thickness tolerance ± 4%
Panel dimensions approx. 3050x2050 mm
m = 5.13 kg/m²

clear, cut-off max. 3020x2020 mm	0.0.492.07

PET-G 5mm
PET
Thickness tolerance ± 4%
Panel dimensions approx. 3050x2050 mm
m = 6.40 kg/m²

clear, cut-off max. 3020x2020 mm	0.0.493.77

PET-G 6mm
PET
Thickness tolerance ± 4%
Panel dimensions approx. 3050x2050 mm
m = 7.70 kg/m²

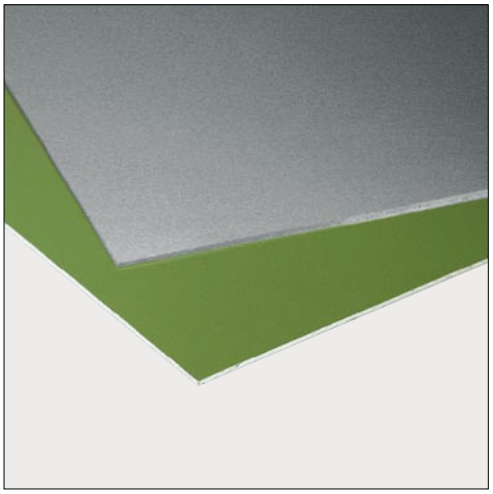
clear, cut-off max. 3020x2020 mm	0.0.492.81

PET-G 7mm
PET
Thickness tolerance ± 4%
Panel dimensions approx. 3050x2050 mm
m = 8.98 kg/m²

clear, cut-off max. 3020x2020 mm	0.0.492.08

5.1.2. Non-Transperent Panels

Sheet Material



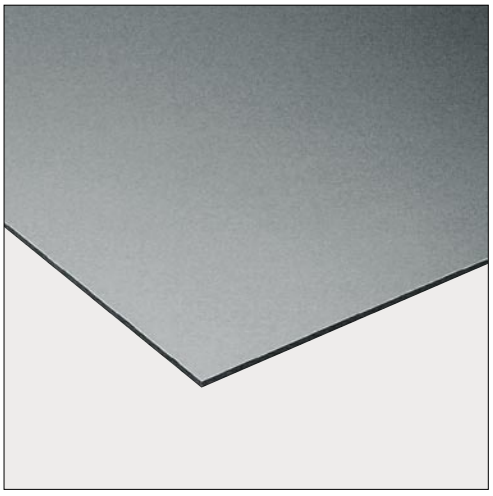
Sheet Material Al is suitable for machine casings of all types.

Property	Value
Density	2.7 g/cm³
Modulus of elasticity	70,000 N/mm²
Tensile strength	120 N/mm²
Ductile yield A5	5%
Anodized natural	E6/EV1
Min. layer thickness	10 µm
Layer hardness	250 - 350HV

Sheet Material Al 2mm
AlMg1
Panel dimensions approx. 3000x1500 mm
m = 5.40 kg/m²

cold rolled (not degreased), cut-off max. 2970x1470 mm	0.0.428.27
polyester coated, green, similar to RAL6011, cut-off max. 2970x1470 mm	0.0.364.36
natural anodized, cut-off max. 2970x1470 mm	0.0.473.08

Compound Material



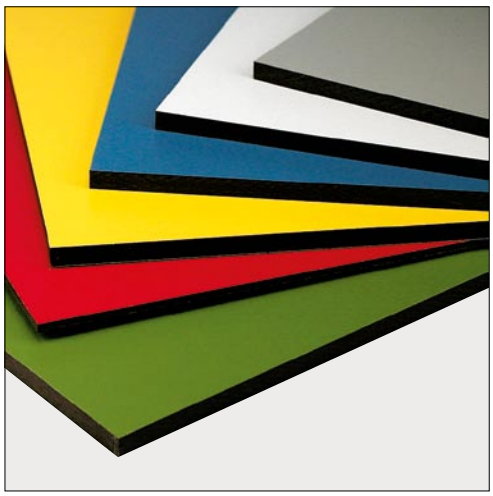
Compound Material consists of two anodized aluminium outer layers which are bonded together by means of a PE core. It is ideal for lightweight doors and panelling.

Property	Value
Tensile strength R_m	> 130 N/mm²
0.2 limit $R_{p0,2}$	> 90 N/mm²
0.2 limit $R_{p0,2}$	> 8 %
Modulus of elasticity E	70,000 N/mm²
Flexural strength	53 N/mm²
Temperature resistance	- 50°C bis + 80°C
Coefficient of thermal expansion	$23x10^{-6}$ K^{-1}
Construction material class in accordance with DIN 4102	B2

Compound Material 4mm
Al-PE compound
Panel dimensions approx. 3000x1500 mm
m = 5.80 kg/m²

natural anodized, cut-off max. 2960x1470 mm	0.0.026.73

Plastics



Plastic is particularly suitable for highly stressed working surfaces and panelling.

The surfaces are antistatic.

Note: RAL numbers for colour shades apply to paint colours. Due to differing manufacturing methods, the colours of laminated plastic panels may vary significantly in brilliance and colour depth.
In case of doubt, a comparison should always be made with original master charts held by item sales partners.

Property	Value	Test standard
Density	1.4 g/cm³	
Wearing resistance	450 min^{-1}	EN 438 T2
Scratch resistance	3.0 N	EN 438
Flexural strength	110 N/mm²	EN 438 T2
Modulus of elasticity	12,000 N/mm²	EN 438 T2
Tensile strength	80 N/mm²	EN 438 T2
Coefficient of thermal expansion	20 x10^{-6} K^{-1}	DIN 52612
Construction material class	B 2	DIN 4102
Surface resistance	<10^{11} Ohm	DIN 53482

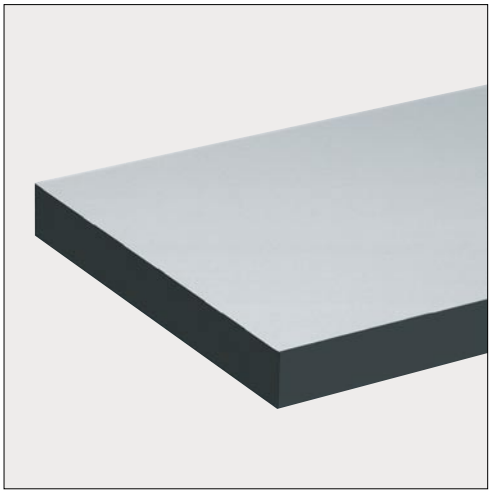
Plastic 4mm
Resin-bonded cellulose laminate
similar to RAL colour code
Thickness tolerance ± 8%
Panel dimensions approx. 2800x1850 mm
m = 5.72 kg/m²

white, similar to RAL 9016, cut-off max. 2770x1820 mm	0.0.473.04
green, similar to RAL 6011, cut-off max. 2770x1820 mm	0.0.428.41
red, similar to RAL 3000, cut-off max. 2770x1820 mm	0.0.428.43
yellow, similar to RAL 1034, cut-off max. 2770x1820 mm	0.0.428.44
blue, similar to RAL 5024, cut-off max. 2770x1820 mm	0.0.428.45
grey, similar to RAL 7035, cut-off max. 2770x1820 mm	0.0.428.46
grey, similar to RAL 7030, cut-off max. 2770x1820 mm	0.0.428.47
black, similar to RAL 9017, cut-off max. 2770x1820 mm	0.0.474.37

Plastic 10mm
Resin-bonded cellulose laminate
similar to RAL colour code
Thickness tolerance ± 8%
Panel dimensions approx. 2800x1850 mm
m = 14.60 kg/m²

white, similar to RAL 9016, cut-off max. 2770x1820 mm	0.0.473.06
green, similar to RAL 6011, cut-off max. 2770x1820 mm	0.0.364.32
red, similar to RAL 3000, cut-off max. 2770x1820 mm	0.0.428.89
yellow, similar to RAL 1034, cut-off max. 2770x1820 mm	0.0.428.90
blue, similar to RAL 5024, cut-off max. 2770x1820 mm	0.0.428.91
grey, similar to RAL 7035, cut-off max. 2770x1820 mm	0.0.428.92
grey, similar to RAL 7030, cut-off max. 2770x1820 mm	0.0.428.93
black, similar to RAL 9017, cut-off max. 2770x1820 mm	0.0.474.36

Plastic ESD



The Plastic ESD plate is specifically designed for use in workplaces where the handling of electronic components makes special safety precautions necessary (EPA = **E**lectrostatic **P**rotected **A**rea).

The low discharge resistance ($7.5x10^5\ \Omega < R < 10^9\ \Omega$) on the surface of the plate and in the core of the material allows it to be used as a tabletop without need for an additional conductive edge strip, or to be used in workpiece carriers with milling or drilled holes whose cut edges have the same discharge properties as the surface.

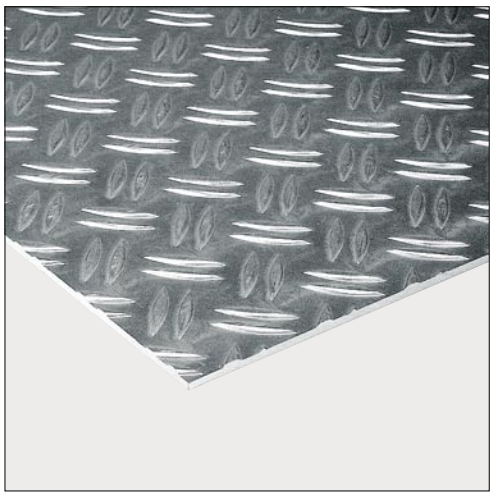
It has the same resistance to mechanical, thermal and chemical loading as the standard antistatic design. The presence of additives to facilitate electrostatic discharge can result in slight deviations in colour in the surface layer and core material.

New in catalogue

Plastic 16mm, ESD
Resin-bonded cellulose laminate
Plate dimensions approx. 2440x1220 mm
m = 24.25 kg/m²

grey, similar to RAL 7035, cut-off max. 2410x1190 mm	0.0.487.65

Chequer Sheet



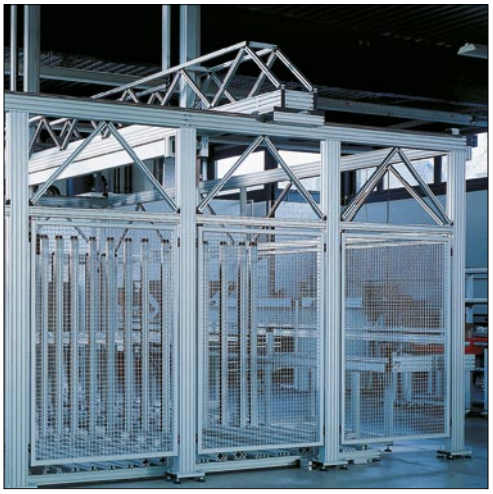
Aluminium chequer sheet is used for walk-on surfaces or steps.

Property	Value
Density	2.7 g/cm³
Modulus of elasticity	70,000 N/mm²
Tensile strength	200 N/mm²
Ductile yield A5	5%

Chequer Sheet Al 5mm
AlMg3
„Duett“ chequering DIN EN 1386
Sheet Thickness 3.5 mm
Panel dimensions approx. 3000x1500mm
m = 9.90 kg/m²

cold rolled (not degreased), cut-off max. 2970x1470 mm	**0.0.428.53**

5.2 Mesh Panels

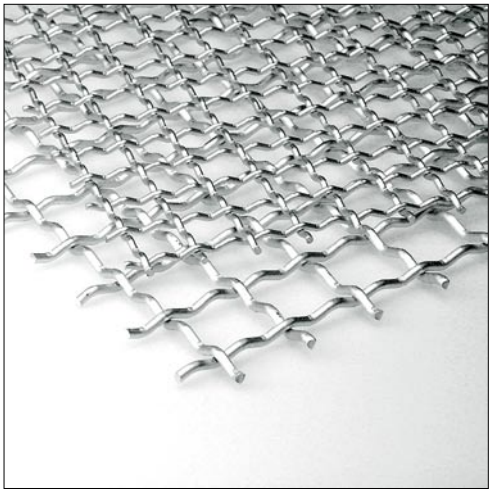


Corrugated Mesh and Steel Mesh are suitable for guards, enclosures and partitioning, particularly when combined with Clamp Profiles (Section 3.3 Rigid Fastening Elements).
Note on installation: Twice the value of the wire thickness must be used for the thickness of the mesh panel!

The aluminium Perforated Sheet is an ideal panel element for air-permeable machine panelling.

Due to its high inherent stability, Dual-Rod Mesh requires no surrounding profile frame. It is attached with the appropriate hangers (Section 3.3 Rigid Panel Fasteners) directly to the Stand Profiles of the guards and enclosures.

Corrugated Mesh Al



Property	Value
Density	2.7 g/cm³
Modulus of elasticity	70,000 N/mm²
Tensile strength	120 N/mm²
Ductile yield A5	5%
Anodized natural	E6/EV1
Min. layer thickness	10 µm
Layer hardness	250 - 350HV

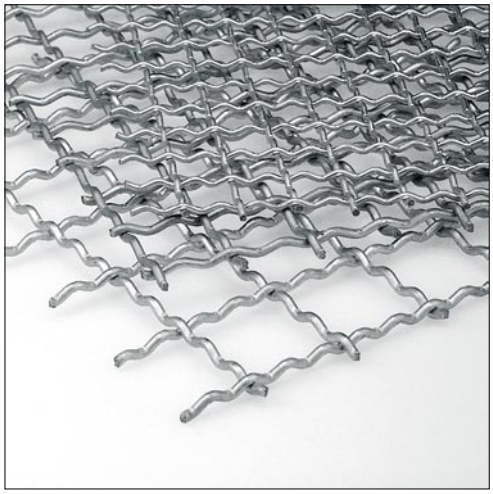
Corrugated Mesh Al 3mm 20x20
Al, anodized
Panel dimensions approx. 3000x1810 mm
Minimum cut-off width 150 mm
Mesh: 20 mm
Wire thickness: 3 mm
m = 1.80 kg/m²

natural anodized, cut-off max. 2970x1780 mm	0.0.196.66

Corrugated Mesh Al 4mm 30x30
Al, anodized
Panel dimensions approx. 3000x1810 mm
Minimum cut-off width 150 mm
Mesh: 30 mm
Wire thickness: 4 mm
m = 2.10 kg/m²

natural anodized, cut-off max. 2970x1780 mm	0.0.265.13

Corrugated Mesh St



Property	Value
Density	7.85 g/cm³
Modulus of elasticity	210,000 N/mm²
Tensile strength	350 N/mm²
Galvanizing	DIN 50960 – Fe/Zn 12A

Corrugated Mesh St 3mm 20x20
St
Panel dimensions approx. 3000x1810 mm
Minimum cut-off width 150 mm
Mesh: 20 mm
Wire thickness: 3 mm
m = 5.00 kg/m²

bright zinc-plated, cut-off max. 2970x1780 mm	0.0.428.32

Corrugated Mesh St 4mm 30x30
St
Panel dimensions approx. 3000x1810 mm
Minimum cut-off width 150 mm
Mesh: 30 mm
Wire thickness: 4 mm
m = 6.20 kg/m²

bright zinc-plated, cut-off max. 2970x1780 mm	0.0.428.34

Corrugated Mesh St 4mm 40x40
St
Panel dimensions approx. 3000x1810 mm
Minimum cut-off width 150 mm
Mesh: 40 mm
Wire thickness: 4 mm
m = 4.50 kg/m²

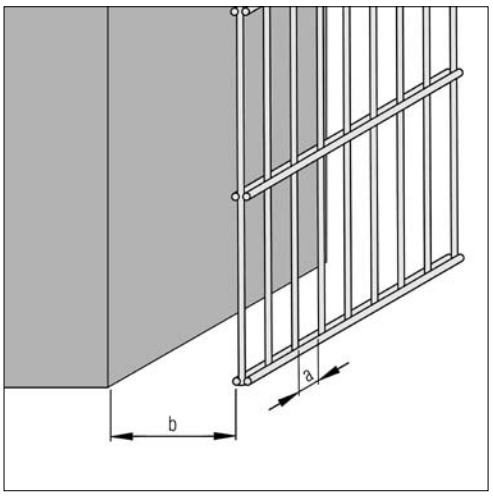
bright zinc-plated, cut-off max. 2970x1780 mm	0.0.428.36

Dual-Rod Mesh

Inherently stable panel element for constructing free-standing protective fence structures. Available in two different mesh widths (25 and 50 mm).

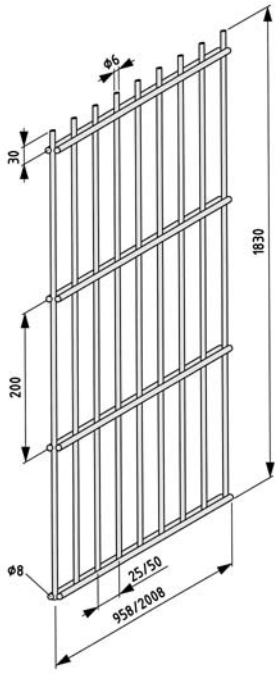
The Dual-Rod Meshes are hot-dip galvanized to protect against corrosion. They can also be painted to suit customers‘ individual needs.
Black Dual-Rod Meshes are supplied powder coated from the factory.

Property	Value
Density	7.85 g/cm³
Modulus of elasticity	210,000 N/mm²
Tensile strength	350 N/mm²
Hot-dip galvanizing	Min. layer thickness 70 µm
Powder coating	Black RAL9005 Min. layer thickness 70 µm



The narrow openings of the mesh prevent people from reaching through (as required by EN 294).

Property	Value	
Mesh width	25	50
Opening dimension a	19	44
Distance to danger zone b	> 120	> 850



Dual-Rod Mesh 25x200, 1830x958
St
Wire diameter: 6/8 mm
Mesh width: 25x200 mm
Height: 1830 mm
Width: 958 mm
m = 20.5 kg

bright zinc-plated, 1 pce. 0.0.476.47

Dual-Rod Mesh 25x200, 1830x958
St
Wire diameter: 6/8 mm
Mesh width: 25x200 mm
Height: 1830 mm
Width: 958 mm
m = 22.0 kg

black, 1 pce. 0.0.446.08

Dual-Rod Mesh 25x200, 1830x2008
St
Wire diameter: 6/8 mm
Mesh width: 25x200 mm
Height: 1830 mm
Width: 2008 mm
m = 42.3 kg

bright zinc-plated, 1 pce. 0.0.476.46

Dual-Rod Mesh 25x200, 1830x2008
St
Wire diameter: 6/8 mm
Mesh width: 25x200 mm
Height: 1830 mm
Width: 2008 mm
m = 45.0 kg

black, 1 pce. 0.0.446.07

Dual-Rod Mesh 50x200, 1830x958
St
Wire diameter: 6/8 mm
Mesh width: 50x200 mm
Height: 1830 mm
Width: 958 mm
m = 13.8 kg

bright zinc-plated, 1 pce. 0.0.476.49

Dual-Rod Mesh 50x200, 1830x958
St
Wire diameter: 6/8 mm
Mesh width: 50x200 mm
Height: 1830 mm
Width: 958 mm
m = 14.5 kg

black, 1 pce.	0.0.446.06

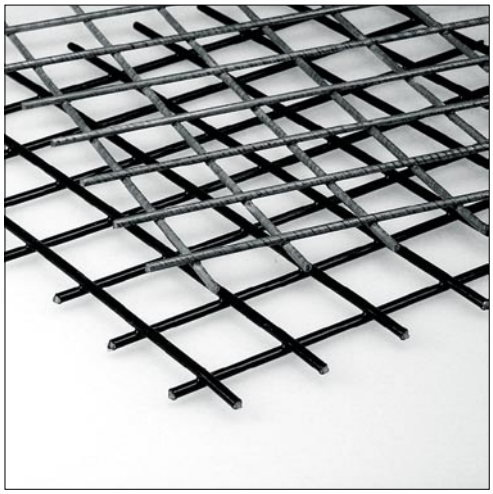
Dual-Rod Mesh 50x200, 1830x2008
St
Wire diameter: 6/8 mm
Mesh width: 50x200 mm
Height: 1830 mm
Width: 2008 mm
m = 28.6 kg

bright zinc-plated, 1 pce.	0.0.476.48

Dual-Rod Mesh 50x200, 1830x2008
St
Wire diameter: 6/8 mm
Mesh width: 50x200 mm
Height: 1830 mm
Width: 2008 mm
m = 30.0 kg

black, 1 pce.	0.0.446.05

Steel Mesh



Due to the high inherent stability of the Steel Mesh (straight wires, welded), it is also hightly suitable for direct use in the profile groove.

Property	Value
Density	7.85 g/cm³
Modulus of elasticity	210,000 N/mm²
Tensile strength	350 N/mm²
Galvanizing	60 g/m²
Powder coating	Black RAL 9005, min. layer thickness 70 µm

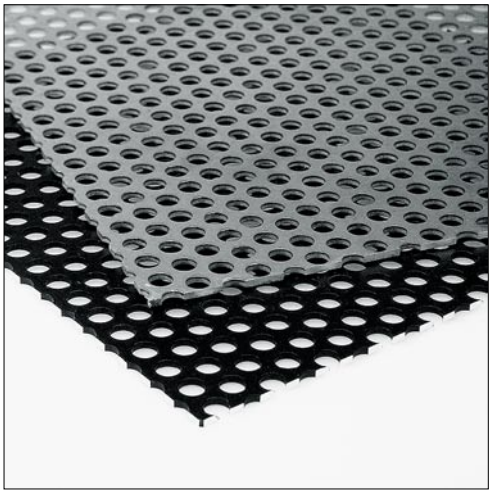
Steel Mesh 3.8mm 40x40
Steel wire (straight wires)
welded, electrogalvanized
Approx. 2500x1000 mm
Mesh: 40 mm Wire thickness: 3.8 mm
m = 5.10 kg/m²

bright zinc-plated, cut-off max. 2470x970 mm	0.0.428.38

Steel Mesh 3.8mm 40x40
Steel wire (straight wires)
welded, Hot-dip galvanized and powder coated
Approx. 2000x1000 mm
Mesh: 40 mm Wire thickness: 3.8 mm
m = 5.30 kg/m²

black, cut-off max. 1970x970 mm	0.0.428.39

Perforated Sheet



Aluminium Perforated Sheet has a wide range of applications. It can be used to provide screening, for floors and ceilings that permit the passage of air or dust, for storage surfaces or for decorative wall panelling.
The powder-coated version is weather-proof.

Property	Value
Density	2.7 g/cm³
Modulus of elasticity	70,000 N/mm²
Tensile strength	200 N/mm²
Powder coating	Black RAL 9005, min. layer thickness 70 µm

Perforated Sheet Al 3mm
AlMg3
cold rolled (not degreased) or coated
Hole diameter = 10 mm in offset rows
DIN 24041; residual area approx. 60%
Panel dimensions approx. 3000x1500 mm
m = 4.80 kg/m²

bright, cut-off max. 2970x1470 mm	0.0.428.29
black, cut-off max. 2970x1470 mm	0.0.428.30

5.3 Panels for Work Bench Design

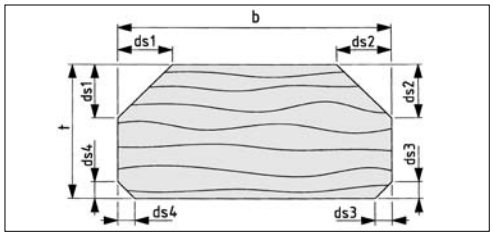
Panel Elements for the construction of shelves, benches and other fixtures.
> Beech Multi-Ply, available in different thicknesses for use on robust table tops or as construction material for all applications

In many cases, panel elements for machine casings are used in work bench design:
> Plastic, used as a load-bearing durable table top or side panel
> Aluminium Perforated Sheet, used as a leg screen or as a rack for tools
> Sheet Materials and Composite Materials used as side panels
> Aluminium Chequer Sheets in the vicinity of the footrest

Beech Multi-Ply

Beech Multi-Ply panels, 20 and 30 mm, with moisture-resistant adhesive (AW to DIN 68705-T2), for sturdy, impact-resistant and vibration-damping work surfaces, and 8 mm thickness for side panels and shelving in workshops and office areas.

Since wood is a natural product, the panel veneer can exhibit differences in wood grain and colour tone. These are unavoidable but do not influence suitability for use. Environmental influences (warmth, humidty,) can result in dimensional variations.
Wood tone: reddish, grain in longitudinal direction (2500 mm).
Clear coated on both sides with, oil-resistant, water-repellant.
Panel dimensions approx. 2500x1300 mm



A diagonal corner section (45°) is also available which allows the use of uninterrupted table columns on work benches.
When ordering, the size of the cut-off b x t, the direction of the grain, any required machining of cut edges, and the position and size of possible diagonal sections ds must be specified.

Beech Multi-Ply 8mm
m = 5.90 kg/m²

cut-off max. 2470x1270 mm	0.0.433.35

Beech Multi-Ply 20mm
m = 14.70 kg/m²

cut-off max. 2470x1270 mm	0.0.483.65

Beech Multi-Ply 30mm
m = 22.10 kg/m²

cut-off max. 2470x1270 mm	0.0.433.36

Diagonal Section ds-45° (for Panel Elements)

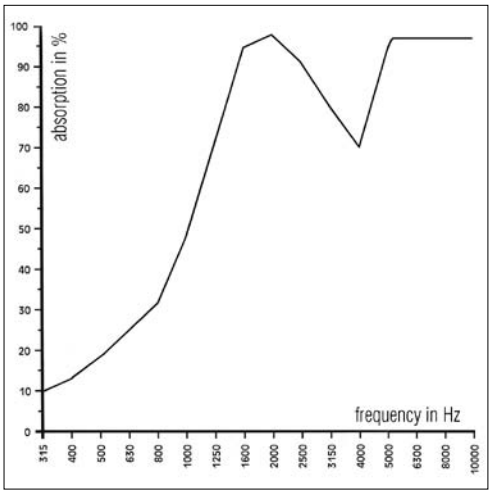
1 pce.	0.2.000.82

5.4 Accessories for Panel Elements

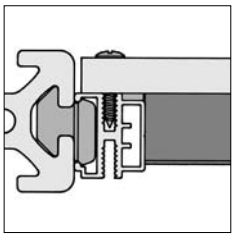
The Accessories for Panel Elements are used when the design needs to meet special requirements:
> Noise-damping casings or noise-dampened devices can be produced very easily using Sound-Insulating Material.
> Edge Profile S3 Al is particularly suitable for covering sharp cut edges on thin-wall panel elements.

Sound-Insulating Material

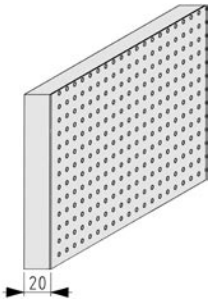
Sound-Insulating Material for reducing the effect of sound emission to the environment can be used for both complete encapsulation and individual partitions. It is self-adhesive on one side (rubber-based adhesive).



The sound-insulating effect depends on the excitation frequency.



Sound-Insulating Material in a typical application, bonded onto a panel element secured with Double Panel Profile 8 Al (Section 3.3 Rigid Fastening Elements).



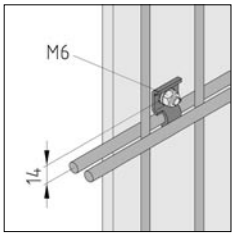
Sound-Insulating Material 20mm
PUR-ester special foam
coated with PVC film perforated, easy to wash down,
Sound absorption as per DIN 52215-63
Temperature resistance: -40°C to +100°C
Thermal conductivity: 0.033 W/mK, DIN 52612
Fire characteristics: self-extinguishing to FMVSS 302, DIN 75200
Panel dimensions 480x480 mm
m = 253.0 g

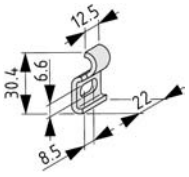
anthracite, 1 pce.	0.0.440.75

Dual-Rod Mesh Clamping Element

Dual-Rod Mesh Clamping Elements for universal fastening of any components to Dual-Rod Mesh elements.

Also suitable for fastening cylindrical components (∅ 8 mm) to profiles or panel elements.

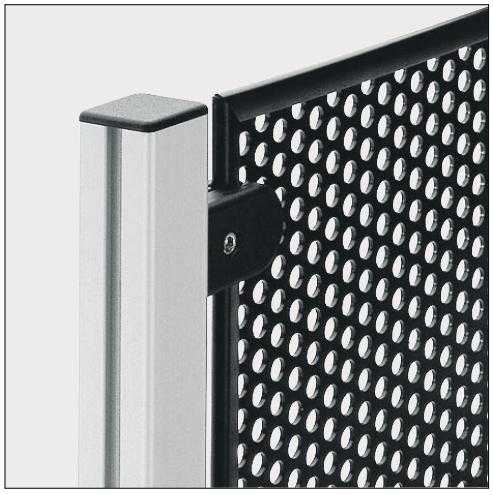




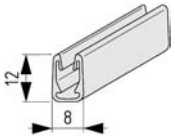
Dual-Rod Mesh Clamping Element
St
m = 11.0 g

black, 1 pce.	0.0.446.10

Edge Profile S3 Al



Edge Profile as edging for 3 mm thick panel elements whose cut edges require covering, e.g. Perforated Sheet Al etc.
The Edge Profile can be machined to provide a right-angled butt joint or a 45° mitre cut.



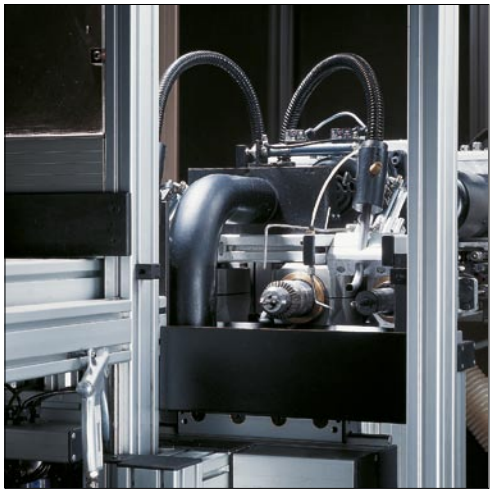
Edge Profile S3 Al
Al, anodized
A = 0.33 cm²
m = 89 g/m

natural, 1 pce., length 2000 mm	0.0.457.45
black, 1 pce., length 2000 mm	0.0.440.56

6

Special Elements

The Special Elements product group contains special components for:
> Discharging electrical potential
> Using the profiles as pneumatic lines, and their connections
> Safeguarding doors, guards and enclosures of all kinds
> Material flow (conveyor technology)
> Designing work benches
> Lighting
> General accessories for special tasks

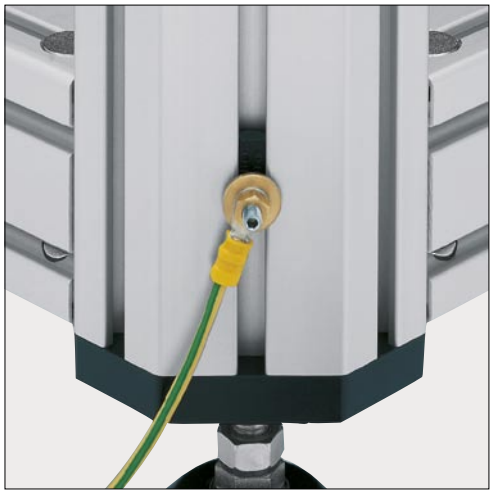


6.1 Electrical Discharge

Unlike conventionally processed, welded steel frames and steel racks, the components of an aluminium profile structure do not fundamentally form a continuous electrically conductive entity.
The visually attractive and scratchproof anodized surface covering, which is also resistant to a variety of environmental effects, provides electrical insulation. For this reason, the majority of connections between the electrically conductive profile end face and an insulating profile side face are not necessarily electrically conductive.

Special components are needed to ensure reliable and uninterrupted electrical conductivity.

Earthing Terminals



Terminals for earthing profile constructions and for interconnecting the profiles when the latter are incorporated into a protective circuit.
Contact is made by partially destroying the anodized layer in the T-slot and on the groove flanks.
The Earthing Terminal is installed by twisting the grub screw into the T-slot (M_1 = 4 Nm) and screwing in the hexagon nut (M_2 = 4 Nm) with the earthing line in place. The cable lug must lie between the washer and the special washer.

Earthing Terminal 5
T-Slot Nut 5 St M5, bright zinc-plated
Grub screw DIN 916-M5x16, St, bright zinc-pl.
Hexagon Nut DIN 934-M5, brass
Washer DIN 9021-5.3, brass
Washer DIN 6798-A 5.3, St, bright zinc-plated
m = 6.0 g

1 set	0.3.001.80

Earthing Terminal 6
T-Slot Nut 6 St M6, bright zinc-plated
Grub screw DIN 916-M6x25, St, bright zinc-pl.
Hexagon Nut DIN 934-M6, brass
Washer DIN 9021-6.4, brass
Washer DIN 6798-A 6.4, St, bright zinc-plated
m = 13.0 g

1 set	0.3.004.62

Earthing Terminal 8
T-Slot Nut 8 St/PA M6
Grub screw DIN 916-M6x25, St, bright zinc-pl.
Hexagon Nut DIN 934-M6, brass
Washer DIN 9021-6.4, brass
Washer DIN 6798-A 6.4, St, bright zinc-plated
m = 12.0 g

1 set	0.3.001.81

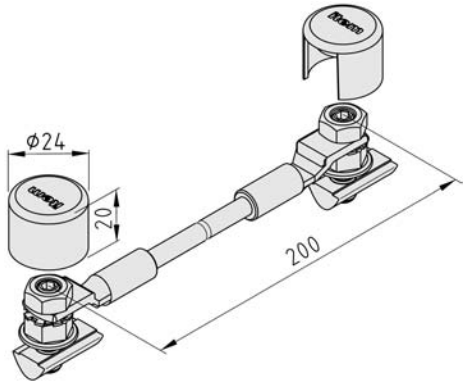
Earthing Connection

Ready made electrical connection for system elements that need to be grounded to a construction frame. The flexible wire is also suitable for machine parts that move often.

The correct installation sequence must be observed when installing Earthing Connection 8:
first the grub screw is inserted into the T-Slot Nut and driven into the base of the T-slot (M = 10 Nm). Then lock nut M8 is screwed against the side face of the profile with a torque of M = 34 Nm to ensure secure contact with the profile. The earthing wire is then fastened on using a special washer and a hexagon nut (tightening torque M = 25 Nm).

The maximum current-bearing capability of Earthing Connection 8 is 120 A.

New in catalogue



Earthing Connection 8
2 T-Slot Nuts 8 St M8, bright zinc-plated
2 caps for Earthing Connection 8, PA-GF, black
1 earthing wire, Cu, tin-plated
2 hexagon nuts DIN936-M8, St, black
2 grub screws DIN 916-M8x30, St, bright zinc-plated
2 special washers DIN 6798-8,4, St, bright zinc-plated
2 lock nuts M8, St, black
m = 125.0 g

1 set	0.0.486.95

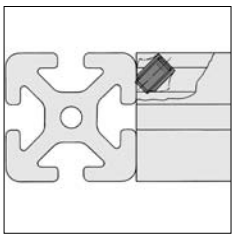
Potential Equaliser

The Potential Equaliser ensures that possible charge buildups are balanced out between the individual profiles of a construction. It can be retrofitted to the profile groove. Fitted at joints, it destroys the insulating anodized layer and creates an electrically conductive connection.

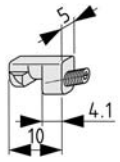
The Potential Equaliser cannot be considered an electrical connection suitable for forming part of a safety circuit.

Potential Equalisers 5 and 6 are swivelled into the Profile Groove and then pushed against the joint.

The grub screw must be screwed in with light pressure on the key, until it rests against both profiles and nudges the Pontential Equaliser out of its original position.

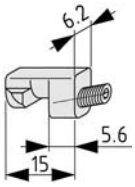


Potential Equaliser 8 is twisted into the profile groove, tilted to an angle of 45°, and the grub screw driven in so as to bite jointly where the two profiles meet, thus making contact between them.



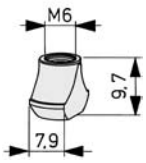
Potential Equaliser 5
Die-cast zinc
Grub screw DIN 916-M3x12, St, bright zinc-pl.
m = 1.0 g

bright zinc-plated, 1 pce.	0.0.464.45



Potential Equaliser 6
Die-cast zinc
Grub screw DIN 916-M4x16, St, bright zinc-pl.
m = 4.0 g

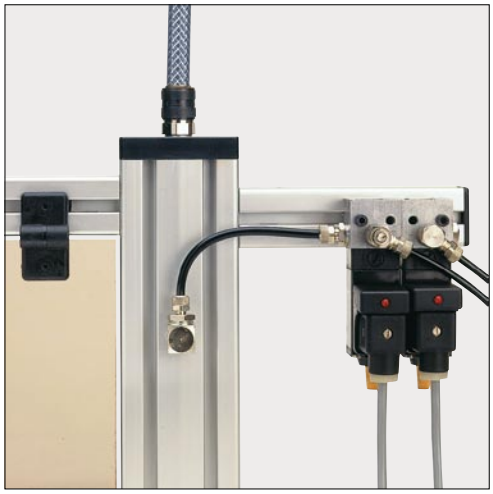
bright zinc-plated, 1 pce.	0.0.459.65



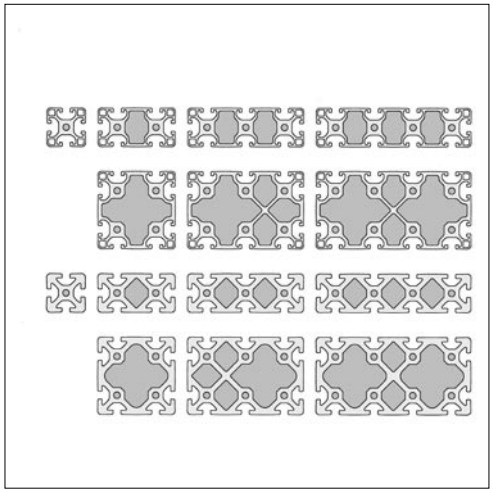
Potential Equaliser 8
St
Grub screw DIN 915-M6x12, St, bright zinc-pl.
m = 4.7 g

bright zinc-plated, 1 pce.	0.0.265.77

6.2 Pneumatic Applications



In addition to their normal use as support and functional elements, profiles from Line 8 of the MB Building Kit System used for mechanical assemblies can also be employed as compressed air lines (max. system pressure 10 bar) as follows:
> Compressed air inlet and outlet lines can be attached by the end face or side of the profile.
> Profiles can be tapped at any position by fitting the Pneumatic Connecting Sets or Pneumatic Connecting Plates.
> Airtight, right-angled connections between the compressed-air conducting profiles can be made using with the Pneumatic Universal Fastener.
> Airtight extension of the profiles is possible with a special Pneumatic Universal-Butt Fastener.
> Seals for the various applications are available, the seals must be inserted between all the joints of profile end faces and Pneumatic Connecting Plates.
> Different pressures may be used in the separate chambers of a single profile.



Appropriate fastening elements such as Pneumatic Universal Fasteners are needed in order to use the profile cavities as pneumatic lines.
The Automatic-Fastening Set (Section 1.3 Fasteners) is also suitable for connecting profiles used as pneumatic lines.

Practical examples of profiles conducting compressed air.

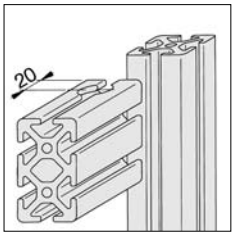
Pneumatic Universal-Fastening Sets

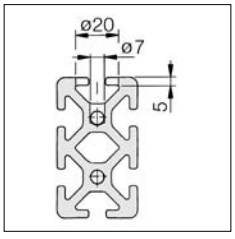
Pneumatic Universal-Fastening Set 8 can be used for connecting two profiles at 90° if the Profile 8 cavities are to be used as compressed-air lines. Pneumatic Fastening Sets should always be used in pairs.

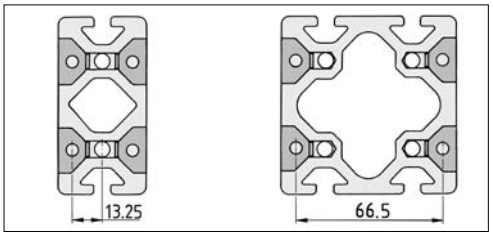
Alternatively, Automatic-Fastening Sets 8 (Section 1.3 Fasteners) can also be used.

Pneumatic Universal-Butt-Fastening Sets 8 are used to connect the end faces of two profiles, e.g. where profile segments need to be extended.

Alternatively, Automatic Butt-Fastening Sets 8 can also be used.

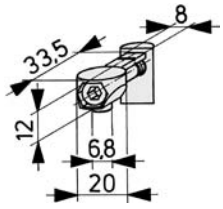






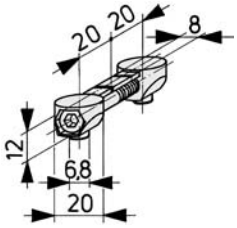
Depending on the profile size and load, several pairs of Fastening Sets may be required.
When using the Pneumatic Universal-Fastening Sets ensure that the pilot drill does not penetrate the main chamber.

5 6 **8** 12



Pneumatic Universal-Fastening Set 8
Pneumatic Universal Fastener 8, die-cast zinc
Hexagon Socket Head Cap Screw DIN 912-M6x30, St
T-Slot Nut 8 St M6
$M_{bzp.}$ = 14 Nm
m = 34.0 g

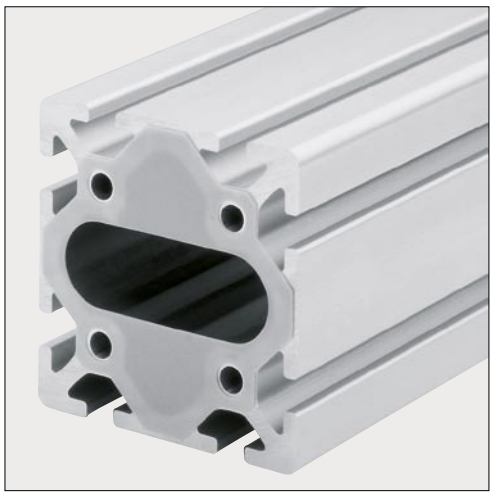
bright zinc-plated, 1 set	0.0.364.45



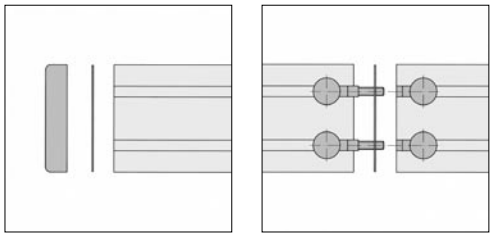
Pneumatic Universal-Butt-Fastening Set 8
2 Pneumatic Universal Fasteners 8, die-cast zinc
Hexagon Socket Head Cap Screw DIN 912-M6x50, St
Hexagon Nut DIN 934-M6, St
$M_{bzp.}$ = 14 Nm
m = 45.0 g

bright zinc-plated, 1 set	0.0.364.46

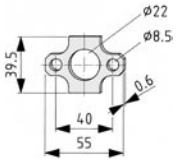
Seals PE



Seals PE must be located at every connection point between components functioning as pneumatic lines. The settlement of the Seal PE material can result in an initial reduction in the screw pretension. The screws must therefore be tightened after 24 hours.
Self-adhesive versions facilitate assembly and eliminate pronounced unevenness (saw cuts, butt joints etc.).

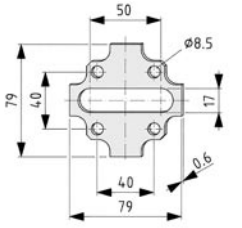


Seals PE must be used between all joints.



Seal 8 80x40 PE
PE-LD
self-adhesive on one side
m = 1.0 g

natural, 1 pce.	0.0.420.80

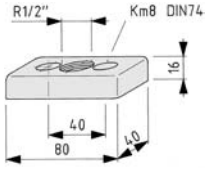


Seal 8 80x80 PE
PE-LD
self-adhesive on one side
m = 2.0 g

natural, 1 pce.	0.0.420.79

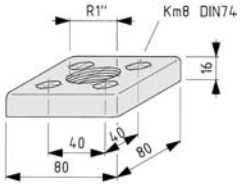
Pneumatic Connecting Plates

Pneumatic Connecting Plates are employed for connecting compressed-air supply systems or compressed-air consumers to Profiles 8 80x40 and 80x80. The Connecting Plate is attached by means of Button-Head Screws ISO 7380-M8x20 (M = 25 Nm) fitted into the core bores in the end faces of the profile.
Pneumatic Universal-Fastening Sets are employed for connecting profiles used as compressed-air conduits.



Pneumatic Connecting Plate 8 80x40 R½″
Die-cast zinc
m = 230.0 g

black, 1 pce.	0.0.406.34

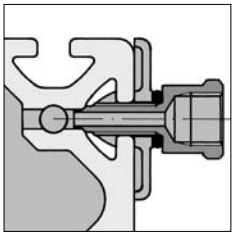


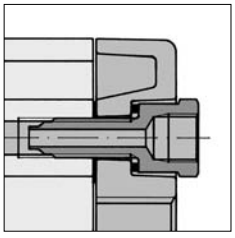
Pneumatic Connecting Plate 8 80x80 R1″
Die-cast zinc
m = 390.0 g

black, 1 pce.	0.0.406.25

Pneumatic Connections

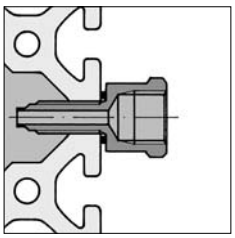
For connecting core bores and profile cavities which are to be used as compressed-air conduits.
Suitable for connections G1/8 and G1/4.



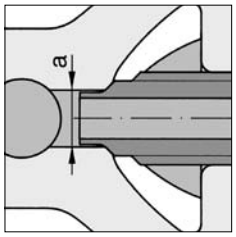


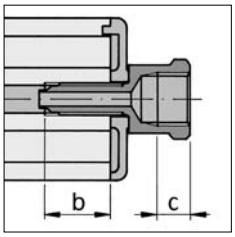
Supply of compressed air to the profile cavity by means of a central bore in the T-slot in conjunction with a Pneumatic Connecting Set. The seal is provided at the taper seat of the Pneumatic Connector.

Supply of compressed air to a central bore by means of a Pneumatic Connecting Plate with Pneumatic Connection fitted to the end face.



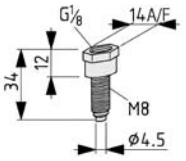
Depending on the type of application, the profile may need to be machined. When using a Pneumatic Connector outside the core bores, a standard seal must be used.





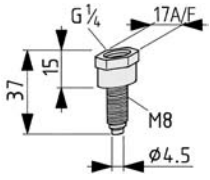
When using the Pneumatic Connector (with inner thread c) in conjunction with the core bore, an appropriate thread of length (b) or, in the case of connections made at 90°, bores of diameter (a) must be provided, and a T-Slot Nut St to retain the fitting.

Pneumatic-Connector	a	b	c
8 G$^1/_8$	∅ 4.9 mm	M8x16	6 mm
8 G$^1/_4$	∅ 4.9 mm	M8x16	8 mm



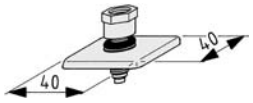
Pneumatic Connector 8 G1/8
St
M = 12 Nm
m = 15.0 g

black, 1 pce.	0.0.411.69



Pneumatic Connector 8 G1/4
St
M = 12 Nm
m = 18.0 g

black, 1 pce.	0.0.411.68



Pneumatic Connecting Set 8 G1/8
St
Pneumatic Connector, St
Cap, PA-GF
Seal, NBR
m = 19.0 g

black, 1 set	0.0.411.73

Pneumatic Connecting Set 8 G1/4
St
Pneumatic Connector, St
Cap, PA-GF
Seal, NBR
m = 24.0 g

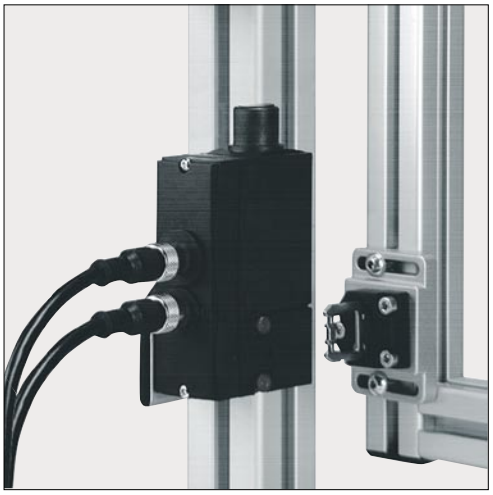
black, 1 set	0.0.411.72

6.3 Door Security

Sliding, swing and lifting doors which are integrated in basic frames or are used as guards and enclosures around machinery (cell guarding) can be monitored and safeguarded to prevent injury or unauthorised access.

Security Locks combine a switching function and a latching function that enables higher-level security categories.

Security Limit Switch / Lock compact



Compact Security Limit Switch and Security Lock for electrical and mechanical securing of swing, lifting and sliding doors.

When the actuator is pressed in, the contact is closed. The Security Lock, working on the zero-current principle, also locks the actuator at the same time when appropriately wired. This mechanically prevents the doors from being opened even in the event of a power failure or impermissible operating states. In the event of an emergency, the Security Lock can be opened without power using the supplied triangular socket wrench.

The 2NC models are equipped with two electrically isolated, positive-break NC (normally closed) contacts.

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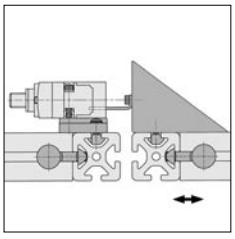
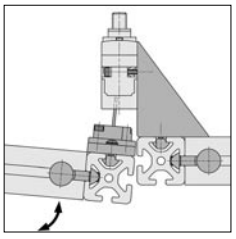




Fastening Set 6-8 is suitable for universal fastening of the Security Limit Switch, Security Lock compact and the actuator to Profiles 6 and/or 8. The slots allow customised adaptation to the direction of actuation and the position of the elements in relation to each other.

The actuator is available in two models: The fixed design is suitable for medium-sized sliding and swing doors (door width greater than 500 mm and smaller than 1000 mm), while the movable actuator is recommended for swing doors of width < 500 mm and for particularly large doors (increases operating tolerance).

Both switching units are equipped with screw-secured plug connectors, which make the electrical connection particularly easy. In the case of Security Limit Switch compact, this is done using Proximity Switch Connecting Cable Code A, Art. No. 0.0.473.25. In the case of Security Lock compact, the Proximity Switch Connecting Cable Code B, Art. No. 0.0.473.93 is also required.

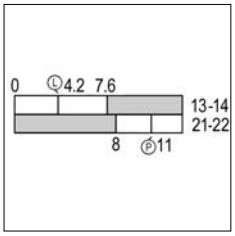
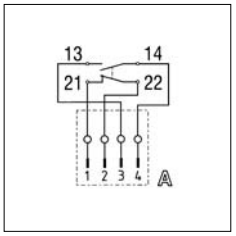
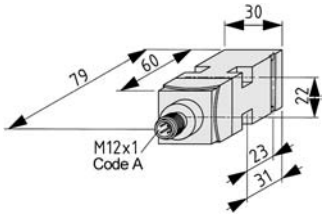


Illustration of circuits
Security Limit Switch compact

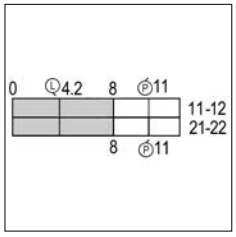


Wiring diagram:
Security Limit Switch compact



Security Limit Switch compact
Casing, PA-GF, black
Positive break
Rated voltage: 24 V AC/DC / 230 V AC, 4A
Protection: IP 67, EN 60529
Test certification to BG-GS-ET-15
Washers
m = 80.0 g

1 pce. 0.0.473.90



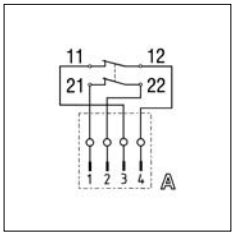
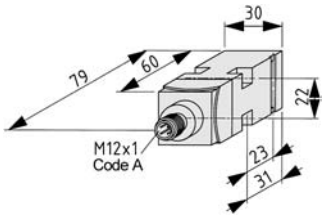


Illustration of circuits:
Security Limit Switch compact 2NC

Wiring diagram:
Security Limit Switch compact 2NC

New in catalogue



Security Limit Switch compact 2NC
Casing, PA-GF, black
Positive break
Rated voltage: 24 V AC/DC / 230 V AC, 4A
Protection: IP 67, EN 60529
Test certification to BG-GS-ET-15
Washers
m = 80.0 g

1 pce. 0.0.489.85

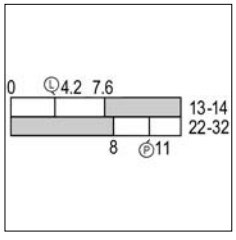
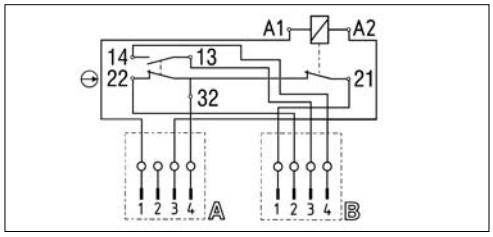
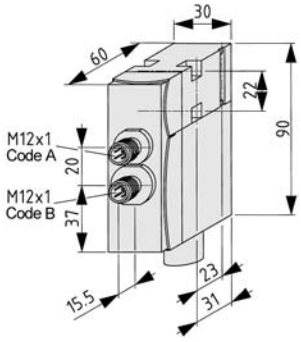


Illustration of circuits:
Security Lock compact



Wiring diagram:
Security Lock compact



Security Lock compact, 230 V AC
Casing, PA-GF, black
Positive break
Rated control supply voltage: 230 V AC
Protection: IP 67, EN 60529
Test certification to BG-GS-ET-19
1 triangular socket wrench DIN 22417 M5
m = 305.0 g

1 set	0.0.473.27

Security Lock compact, 24 V AC/DC
Casing, PA-GF, black
Positive break
Rated control supply voltage: 24 V AC/DC
Protection: IP 67, EN 60529
Test certification to BG-GS-ET-19
1 triangular socket wrench DIN 22417 M5
m = 305.0 g

1 set	0.0.473.26

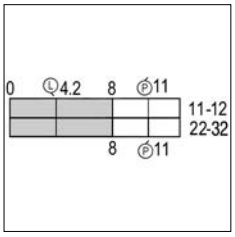
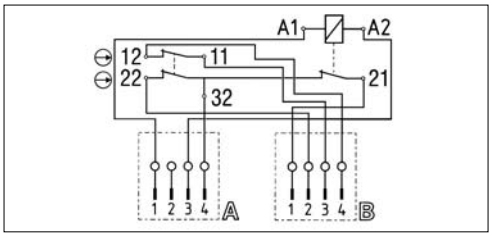
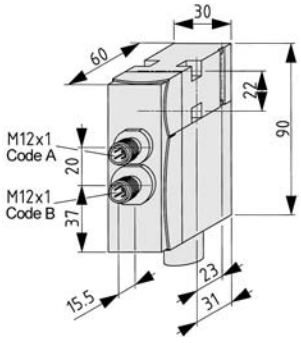


Illustration of circuits:
Security Lock compact 2NC



Wiring diagram:
Security Lock compact 2NC

New in catalogue



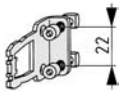
Security Lock compact 2NC, 230 V AC
Casing, PA-GF, black
Positive break
Rated control supply voltage: 230 V AC
Protection: IP 67, EN 60529
Test certification to BG-GS-ET-19
1 triangular socket wrench DIN 22417 M5
m = 305.0 g

1 set	0.0.489.83

New in catalogue

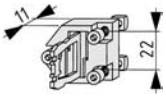
Security Lock compact 2NC, 24 V AC/DC
Casing, PA-GF, black
Positive break
Rated control supply voltage: 24 V AC/DC
Protection: IP 67, EN 60529
Test certification to BG-GS-ET-19
1 triangular socket wrench DIN 22417 M5
m = 305.0 g

1 set	0.0.489.82



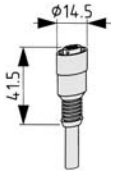
Fixed Actuator for Security Limit Switch / Lock compact
St, corrosion-resistant
2 Cap Screws DIN 912 M4x10, St, bright zinc-plated
2 square nuts similar to DIN 557-M4-5, St, bright zinc-plated
m = 16.0 g

1 set	0.0.473.23



Movable Actuator for Security Limit Switch / Lock compact
PA-GF / St, corrosion-resistant
3 Cap Screws DIN 912-M4x14, St, bright zinc-plated
3 square nuts similar to DIN 557-M4-5, St, bright zinc-pl.
m = 22.0 g

1 set	0.0.473.24

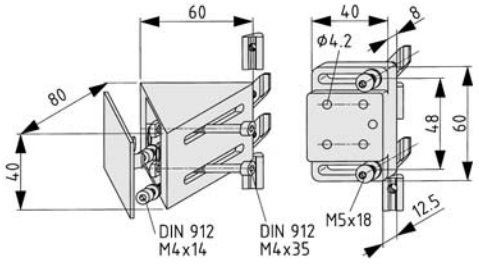


Security Switch Connecting Cable M12x1 Code A
Connecting cable 4x0.75 mm² l = 5 m d = 6 mm
m = 317.0 g

1 pce.	0.0.473.25

Security Switch Connecting Cable M12x1 Code B
Connecting cable 4x0.75 mm² l = 5 m d = 6 mm
m = 317.0 g

1 pce.	0.0.473.93



Fastening Set 6-8 for Security Limit Switch / Lock compact
Angle bracket 6-8, die-cast zinc, similar to RAL9006
Angle bracket, cap 6-8, PA-GF, black
Fastening plate 6-8, die-cast zinc, similar to RAL9006
Fastening elements
m = 349.0 g

1 set	0.0.473.22

6.4 Conveyors and Material Flow

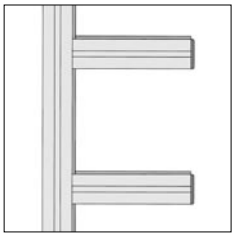
Conveying operations can be incorporated into the profile structure with the aid of specialised accessories.

> Slide Strips made of PE-UHMW, Slide Strip Wedge used as a lead-in piece for the Slide Strip
> Roller elements with and without side guide
> Conveyor Rollers made of plastic or aluminium
> Driven Conveyor Rollers which, in conjunction with the chain drive (Section 8.2 Mechanical Drive Units), create a conveyor unit
> Chain transfer for continuous transport of goods or workpiece carriers.

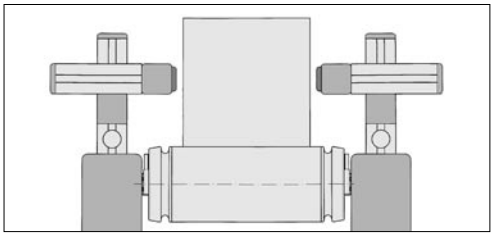
Slide Strips

The Slide Strips serve as slide elements when transporting goods or workpiece carriers, for example.
They can be fitted into the profile grooves, are hard-wearing and have a low coefficient of sliding friction.
The Slide Strips have a permissible load of 2 N/mm^2.

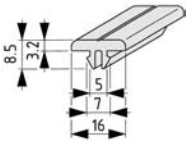
The antistatic feature of the Slide Strips prevents electrostatic charging of transported goods due to friction.



They can also be used as rebate strips and guide rails or can be employed as a support base, e.g. in shelves to protect sensitive products.

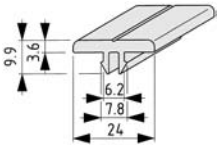


Slide Strip 8 can be combined with Slide Strip Wedge 8 (this functions as an end and lead-in piece).



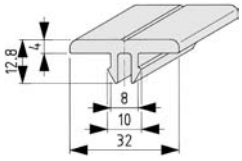
Slide Strip 5 antistatic
PE-UHMW
m = 57 g/m

black, 1 pce., length 2000 mm	0.0.437.27



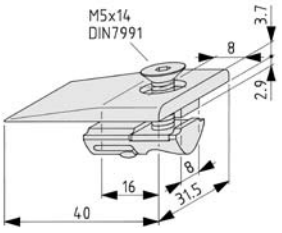
Slide Strip 6 antistatic
PE-UHMW
m = 90 g/m

black, 1 pce., length 2000 mm	0.0.441.08



Slide Strip 8 antistatic
PE-UHMW
m = 150 g/m

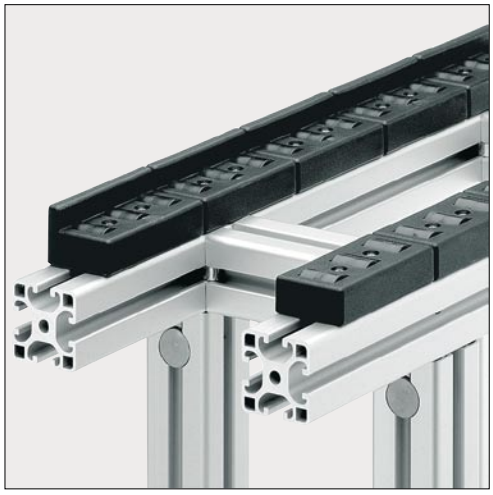
black, 1 pce., length 2000 mm	0.0.457.99



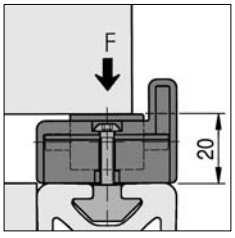
Slide Strip Wedge 8
PA
T-Slot Nut 8 St/PA M5
Countersunk Screw DIN 7991-M5x14, St, black
m = 11.0 g

black, 1 set	0.0.422.04

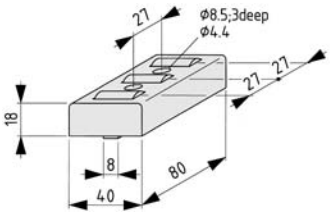
Roller Elements



For constructing roller conveyors with and without side guide, in any width and length, with a variable number of Roller Elements.
Can be fastened to Profiles 8 using T-Slot Nuts 8 PA (Art. No. 0.0.436.52) and Button-Head Screws T4x25 (Art. No. 0.0.440.15 Section 3.2 Screws and Universal-Elements).

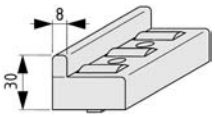


F = 50 N (per element)



Roller Element 8 80
Lid element, PA-GF, black
Base element, PA-GF, black
3 rollers, POM, black
m = 45.0 g

1 pce.	0.0.436.58

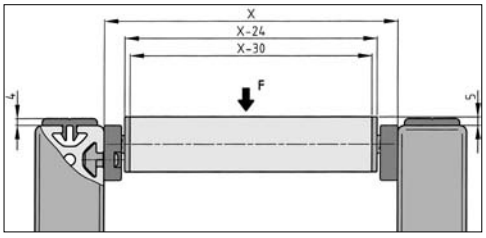


Roller Element 8 80 with side guide
Lid element with side guide, PA-GF, black
Base element, PA-GF, black
3 rollers, POM, black
m = 50.0 g

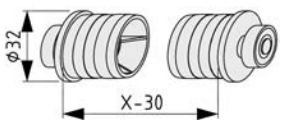
1 pce.	0.0.436.59

Conveyor Roller TR32

Multifunctional Conveyor Roller ideal for interlinking manual working stations where slim diameter rollers are an advantage. The ball bearing Conveyor Rollers TR32 are simply pushed on and engage in the Bearing Blocks which are screw fitted in the groove of Profiles 8. The distance between the rollers can be selected as a function of the load. A Conveyor Roller TR32 of any required length can be customized using a Bearing Set and a Tube D32. (Please note load specifications in the table below).

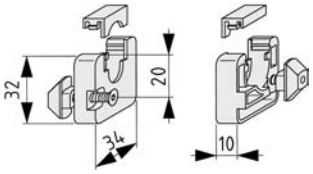


	F	$X_{min.}$	$X_{max.}$
Tube D32 Al	100 N	50 mm	600 mm
Tube D32 KU	50 N	50 mm	400 mm



Conveyor Roller TR32, Bearing Set
PA-GF
ball-bearing support, sealed
2 bearing flanges
m = 16.0 g

black, 1 set	0.0.472.08



Conveyor Roller TR32, Bearing Block Set 8
2 bearing blocks, PA, black
2 bearing clamps, PA, black
2 Countersunk Screws DIN 7991-M3x20, St, black
2 T-Slot Nuts 8 Zn M3, bright zinc-plated
m = 18.0 g

1 set	0.0.472.04

Tubes D32

Tube D32 Al
Al, anodized
I = 1.50 cm⁴
W = 0.94 cm³
m = 0.34 kg/m

natural, cut-off max. 3000 mm	0.0.472.22

Tube D32 KU
PVC
Temperature range 0 - 60°C
I = 2.00 cm⁴
W = 1.22 cm³
m = 0.27 kg/m

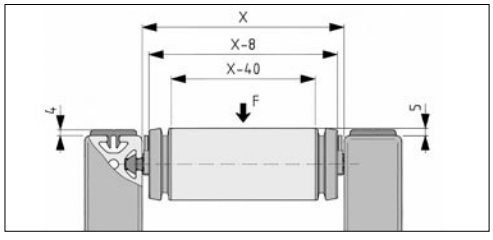
black, cut-off max. 3000 mm	0.0.472.25

Conveyor Rollers TR50

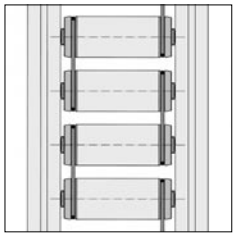
Multi-functional Conveyor Roller for transport tasks of all kinds.

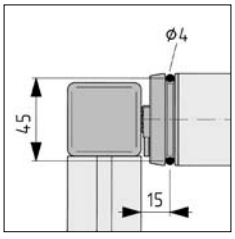
The ball-bearing Conveyor Rollers with aluminium or plastic Tube D50 can be removed from or retrofitted and screwed into existing structures by means of spring-loaded threaded axle pins.
The axial position of the roller is maintained by two centring clips.

When fitting the Conveyor Rollers onto the frame profile, this is best done using the Groove Profile 8 Al M8-40, since this provides an easy means of ensuring consistent axis spacing.

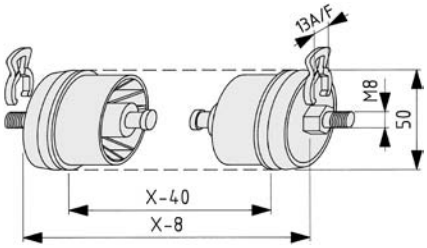


	F	$X_{min.}$	$X_{max.}$
Tube D50 Al	1000 N	160 mm	800 mm
Tube D50 KU	400 N	160 mm	500 mm





The circumferential groove in the bearing flanges also prepare the Conveyor Rollers to be driven by a round belt ∅ 4 mm.



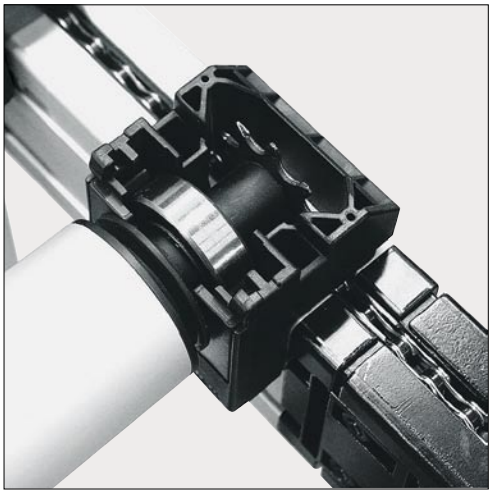
Conveyor Roller TR50, Bearing Set
2 bearing flanges, PA-GF, black
Ball-bearing support
Bolt, St, bright zinc-plated
2 centring clips, PA-GF, black
m = 250.0 g

1 set	0.0.422.63

Chain-Driven Conveyor Rollers

A conveyor with chain-driven rollers is ideal for a whole range of automated conveyor and transport operations. It is constructed using a chain drive (8.2.2 Chain Drives). The special Conveyor Rollers are driven on one side by a completely covered chain in the frame profile grooves. The driven roller conveyor should not exceed 6 m in length. The distance between the individual rollers can be selected at will.
A roller can be up to 800 mm wide. Conveyor Rollers are produced from Tubes D50 Al or D50 KU and the relevant Bearing Set.

A Bearing Set consists of two complete bearing flanges, one of which is equipped with a sprocket wheel which engages with the chain drive. Roller Bearing Sets are available in driven and non-driven versions. Non-driven versions can be used, for example, to incorporate accumulating rollers into a driven roller conveyor.

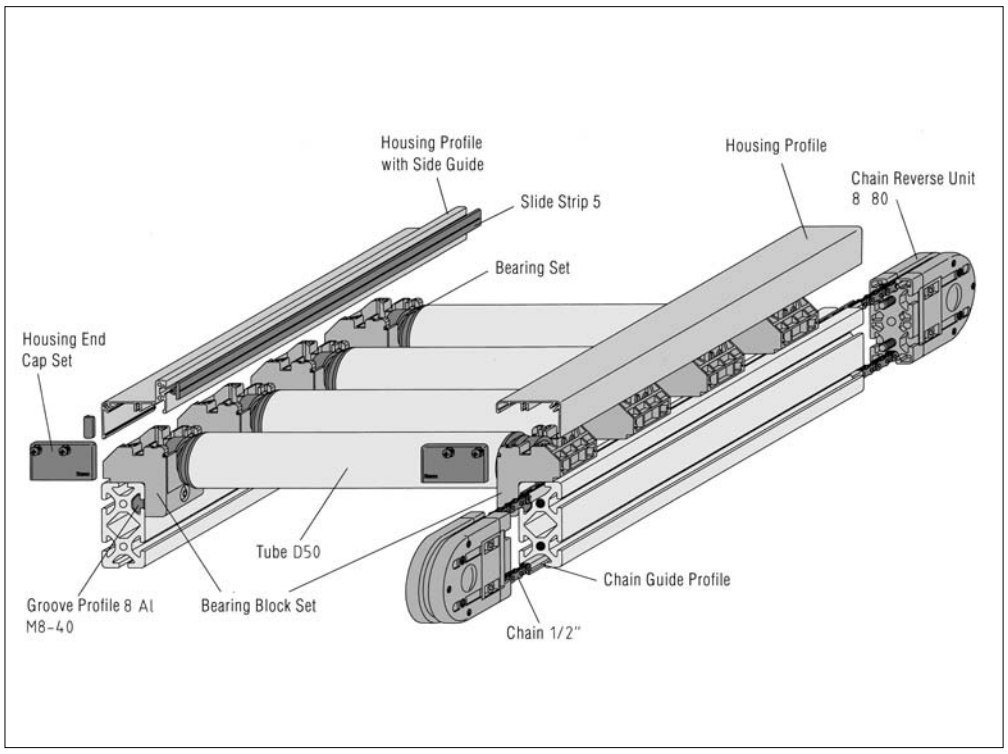


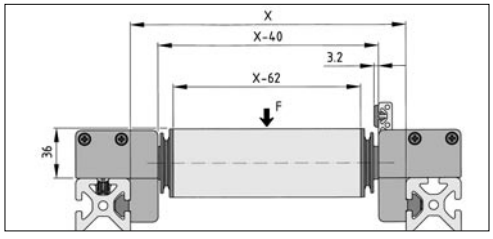
The Bearing Blocks are bolted onto the frame profile. The assembled Conveyor Rollers are then simply pushed down onto the Bearing Blocks where they are securely retained by a spring finger.

The Bearing Block Set consists of a fixed bearing and a floating bearing. The fixed bearing must be positioned on the drive side of the Conveyor Roller.
When fitting the Bearing Blocks onto the frame profile, this is best done using the Groove Profile 8 Al M8-40 since this provides an easy means of ensuring consistent axis spacing.

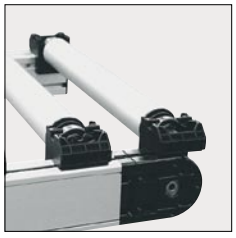
After installation, the Bearing Blocks are closed by means of the Housing Profile, which is run over the entire length of the roller conveyor. The Housing Profile with Side Guide guides the goods on the conveyor. A Slide Strip 5 or other guide elements can be fitted into the integrated groove 5 in the Side Guide.

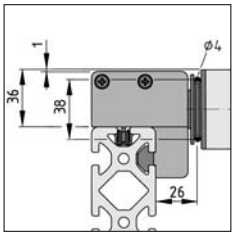
item Innovation
German patent
199 31 365





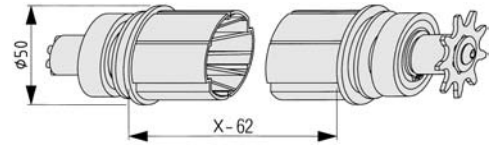
	F	$X_{min.}$	$X_{max.}$
Tube D50 Al	1000 N	150 mm	800 mm
Tube D50 KU	400 N	150 mm	500 mm





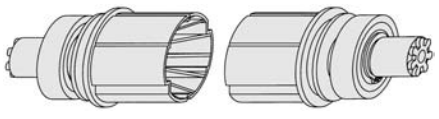
The housing of the Chain Reverse Unit is prepared for securing a Bearing Block. This Conveyor Roller is not driven via the chain. If required, the last Conveyor Roller can also be driven from the last driven roller by means of a ø 4 mm round belt.

5 6 8 12



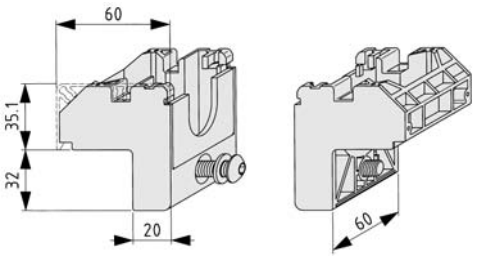
Conveyor Roller TRA50 (Chain-Driven), Driven Bearing Set
PA-GF
Roller bearing, preassembled
1 bearing flange, driven, with sprocket wheel
1 bearing flange, not driven
m = 285.0 g

black, 1 set	0.0.463.53



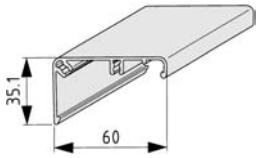
Conveyor Roller TRA50 (Chain-Driven), Bearing Set
PA-GF
Roller bearing, preassembled
2 bearing flanges, not driven
m = 265.0 g

black, 1 set	0.0.463.49



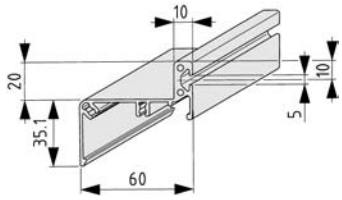
Conveyor Roller TRA50 (Chain-Driven), Bearing Block Set
2 Bearing Blocks, PA, black
1 fixed bearing cover, PA, black
1 floating bearing cover, PA, black
2 Button-Head Screws ISO 7380-M8x25, St, bright zinc-pl.
2 washers DIN 433-8,4, St, bright zinc-pl.
m = 152.0 g

1 set	0.0.463.54



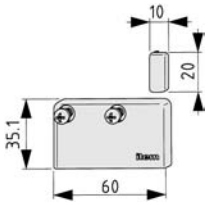
Conveyor Roller TRA50 (Chain-Driven), Housing Profile
Al, anodized
A = 2.17 cm²
m = 0.59 kg/m

natural, cut-off max. 3000 mm	0.0.463.38



Conveyor Roller TRA50 (Chain-Driven), Housing Profile with Side Guide
Al, anodized
A = 3.36 cm²
m = 0.91 kg/m

natural, cut-off max. 3000 mm	0.0.463.39



Conveyor Roller TRA50 (Chain-Driven), Housing End Cap Set
PA-GF
2 Caps 5 20x10
1 TRA 50 housing cap, left, 1 TRA 50 housing cap, right
4 Self-Tapp. Screws DIN 7981-St 4.2x9.5, St, bright zinc-pl.
m = 22.0 g

1 set	0.0.463.48

Tubes D50

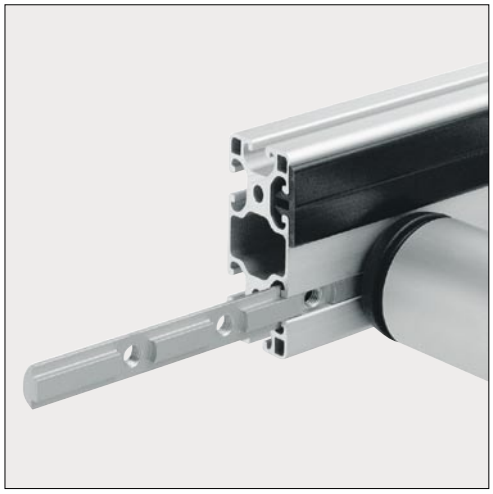
Tube D50 Al
Al, anodized
I = 8.16 cm⁴
W = 3.26 cm³
m = 0.76 kg/m

natural, cut-off max. 6000 mm	0.0.416.03

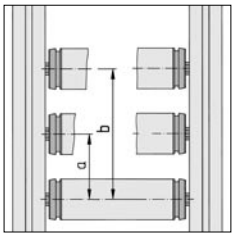
Tube D50 KU
PVC
Temperature range 0 - 60°C
I = 10.90 cm⁴
W = 4.36 cm³
m = 0.62 kg/m

black, cut-off max. 3000 mm	0.0.427.63

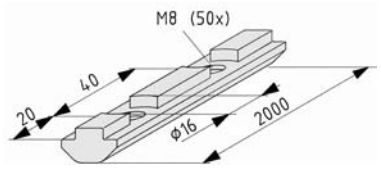
Groove Profile



The Groove Profiles 8 AI M8 are used for fastening elements with a constant spacing of 40 mm or 60 mm. It is ideal for Conveyor Rollers (∅ 50 mm) which can be positioned with minimal axial spacing.

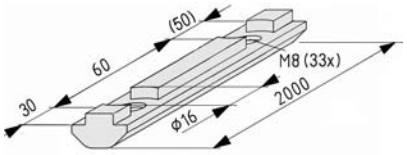


Groove Profile	a	b
8 AI M8-40	80 mm	120 mm
8 AI M8-60	60 mm	120 mm



Groove Profile 8 AI M8-40
AI, anodized
Threaded bore M8 in modular dimension 40 mm
m = 500.0 g

natural, 1 pce., length 2000 mm	0.0.427.72



Groove Profile 8 AI M8-60
AI, anodized
Threaded bore M8 in modular dimension 60 mm
m = 510.0 g

natural, 1 pce., length 2000 mm	0.0.465.33

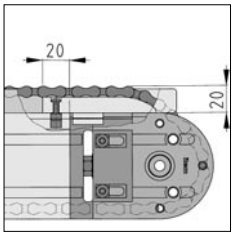
Chain Transfer

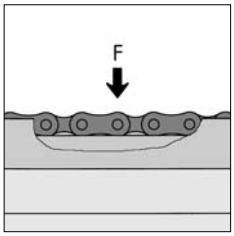
The Chain Transfer is a particularly cost-effective conveyor which uses a chain drive and is easy to install (Section 8.2 Mechanical Drive Elements).
The goods or a specially adapted workpiece carrier are placed directly onto the chains and transported. The weight of the goods provides the necessary frictional force. This solution also allows effortless transfer of accumulated products.

A Chain Transfer Unit consists of at least two chain drives on parallel frame profiles. The chains are guided out of the profile groove and over special Chain Transfer Slide Strips.

The Chain Transfer Slide Strip is also available with a Side Guide in order to guide the transported goods securely.

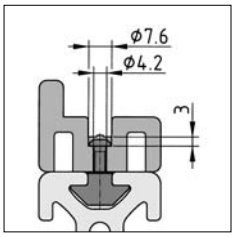
The Chain Transfer should not exceed 6 m in length.

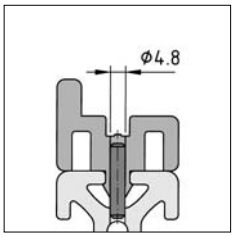




Start of chain transfer: the chain is guided over the End Ramp onto the Slide Strip.

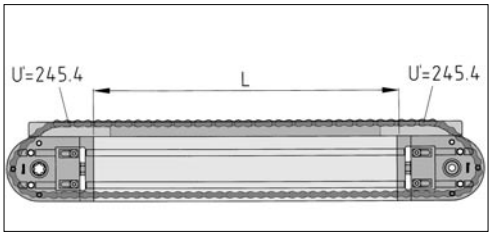
The maximum permissible load on a Chain Transfer Unit is calculated from the number of supporting links.
For each chain link, $F_{max.}$ = 6 N.
Note the chain's operating load!





It is advisable to secure the Slide Strips if under high load:
> Screw-connection using Button-Head Screw T4x18 and T-Slot Nut 8 PA (a counter bore must be drilled and the location ribs removed locally for the screw)

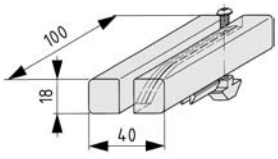
> Pinning with ∅ 4.8 mm bore and insertion of a fixing pin.



Calculation of the chain length:
The chain length is calculated in the same way as the length of a chain drive. However, the chain length L in the Reverse Unit (U') varies:

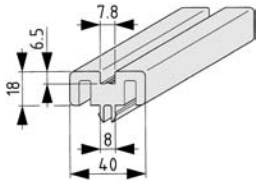
L_{chain} = 2 x L + 490.8 mm

5 6 **8** 12



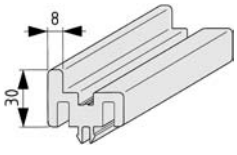
Chain Transfer End Ramp 8
PA
Button-Head Screw T4x18, St, black
T-Slot Nut 8 PA, black
m = 38.0 g

black, 1 set	0.0.472.01



Chain Transfer Slide Strip 8
PE-UHMW
antistatic
m = 510 g/m

black, 1 pce., length 2000 mm	0.0.463.95



Chain Transfer Slide Strip 8 with Side Guide
PE-UHMW
antistatic
m = 600 g/m

black, 1 pce., length 2000 mm	0.0.463.98

6.5 Work Bench Design

The item MB System is a modular system for a whole range of fixtures and equipment and opens up numerous possibilities for customised workplace design.
The compatibility and suitability of all products at the workplace is guaranteed by full integration of the “Work Bench” solution into the MB Building Kit System.

In addition to the standard elements for constructing work benches and interlinked production lines, special products for equipping work areas are also available:

> Parts Containers and Container Mountings for small components and work materials enable easy provision and ergonomic access.

> Tool Runners and Holders which allow rapid access to the required tools and keep them readily available at the workplace.

> Lighting that not only lights up the activity itself, but also illuminates the whole work area.

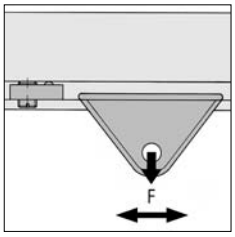
> Cable ducts, Lifting Columns and flexible Protective Profiles help to create work benches that adapt to the people working there.

Runner

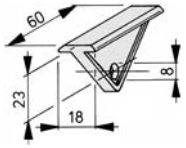
Hanger which can be moved along the profile groove and is used for suspending tools, balancers etc.

A T-Slot Nut is recommended as the end stop. It is secured in the groove by the grub screw.

$F_{max.}$ = 50 N



5 6 **8** 12

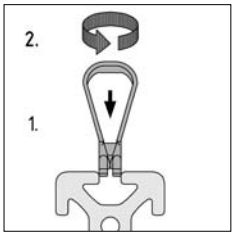


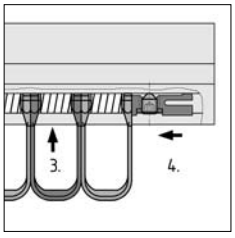
Runner 8
PA-GF
m = 8.0 g

black, 1 pce.	0.0.026.13

Tool Holder 8

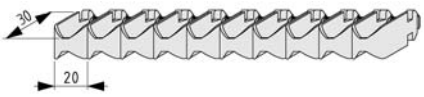
Tool Holder 8 can be fitted at any point in the groove of Profiles 8. Its spring-loaded elements made of flexible plastic enclose any inserted tools and pencils and hold them securely. The Tool Holder can be extended at will by simply adding further elements. The clamping force of the Tool Holder can also be varied by choosing the appropriate pre-tensioning.





Installation sequence:
1. Insert the loop into the groove
2. Turn it by 90°
3. Insert the spring into the groove
4. Secure the Tool Holder in the groove,
e.g. using T-Slot Nut 8 St/PA M6 and grub screw DIN 914-M6x8.

5 6 **8** 12



Tool Holder 8
10 loops, PA-GF, black
10 compression springs
m = 40.0 g

1 set = 10 elements	0.0.474.50

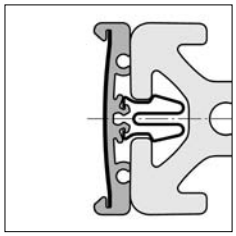
Label Holder

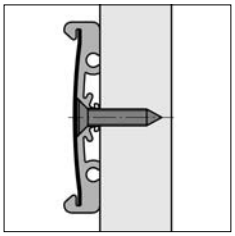
New in catalogue

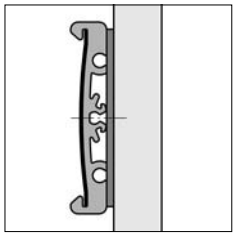
Label Holder 8 160x40 is used for attaching labels to shelves, work benches and fixtures. It consists of the Label Profile, which has a protective strip and side caps, and two Clips 8 St.

The Label Holder takes paper labels 36 mm high that can be customised at will. The transparent strip protects the labels against soiling.

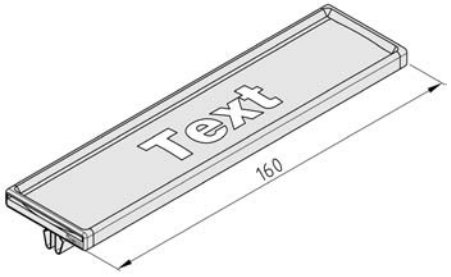
The Label Profile can also be cut to length and used for constructing Label Holders of any desired length. The Label Profile is then sealed by side caps.





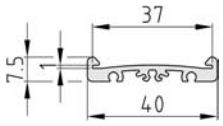


5 6 **8** 12



Label Holder 8 160x40
Label Profile 8 40, length 152 mm
2 Label Profile Caps 8 40
Label Protection Strip 8 40, length 152 mm
2 Clips 8 St
m = 66.0 g

1 set	0.0.488.70

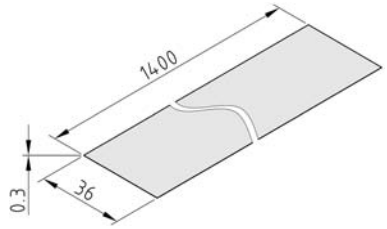


Label Profile 8 40
Al, anodized
m = 0.37 kg/m

natural, 1 pce., length 3000 mm	0.0.454.59

Label Profile Cap 8 40
PA-GF
m = 1.0 g

black, 1 pce.	0.0.488.56



Label Protection Strip 8 40
PVC
m = 14.3 g/m

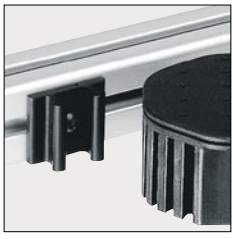
transparent, 1 pce., length 1400 mm	0.0.488.63

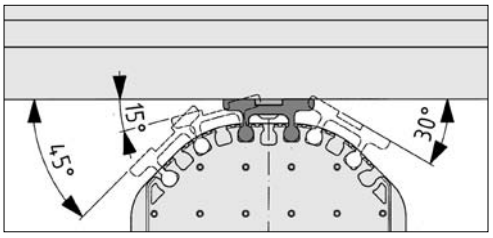
Parts Containers

Stackable Parts Containers in various widths and heights for holding small parts within easy reach at work benches.

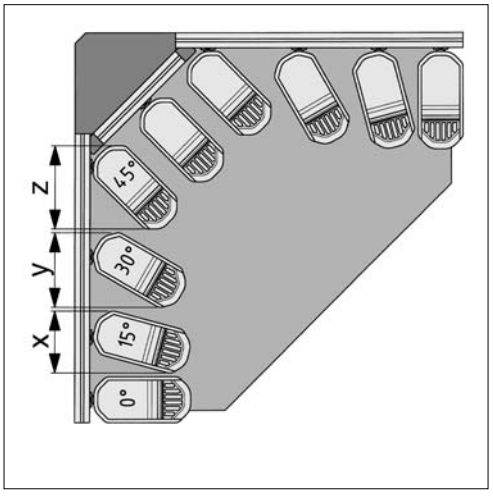
The Parts Containers are divided into two sections:
- Storage containers at the rear
- Front section where a small number of components can be transferred from the storage container for greater ease of handling.

The Parts Container Covers can be used to seal the Parts Containers against dust and enable the Parts Containers to be stacked offset one above the other.

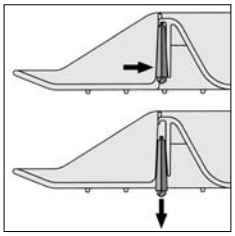




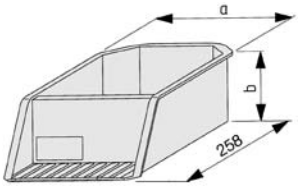
Parts Containers can be hooked onto the Parts Container Fasteners (in 15° increments) which themselves locate via anti-torsion lugs onto profiles or other components (drill ∅ 7 mm for M6). This allows each user to personalise his work space and means that parts that are needed can be put in place quickly.



Parts Container Width	α = 15° x [mm]	α = 30° y [mm]	α = 45° z [mm]
80	130	174	208
120	164	198	222
160	202	233	250



The window can be used for content labelling cards. It can also be used rotated around 180° (with the black face to the front).



Parts Container 80x40
PA-GF
Window, PC, transparent / black
a = 80 mm b = 40 mm
m = 152.0 g

black, 1 pce.	0.0.432.73

Parts Container 80x40 antistatic
PA-GF
Window, PC, transparent / black
a = 80 mm b = 40 mm
m = 152.0 g

black, 1 pce.	0.0.432.76

Parts Container 120x40
PA-GF
Window, PC, transparent / black
a = 120 mm b = 40 mm
m = 200.0 g

black, 1 pce.	0.0.432.74

Parts Container 120x40 antistatic
PA-GF
Window, PC, transparent / black
a = 120 mm b = 40 mm
m = 200.0 g

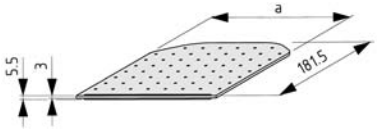
black, 1 pce.	0.0.432.77

Parts Container 160x80
PA-GF
Window, PC, transparent / black
a = 160 mm b = 80 mm
m = 400.0 g

black, 1 pce.	0.0.432.75

Parts Container 160x80 antistatic
PA-GF
Window, PC, transparent / black
a = 160 mm b = 80 mm
m = 400.0 g

black, 1 pce.	0.0.432.78



Parts Container Cover 80
PA-GF
a = 80 mm
m = 51.0 g

black, 1 pce.	0.0.429.16

Parts Container Cover 80 antistatic
PA-GF
a = 80 mm
m = 51.0 g

black, 1 pce.	0.0.432.29

Parts Container Cover 120
PA-GF
a = 120 mm
m = 82.0 g

black, 1 pce.	0.0.429.18

Parts Container Cover 120 antistatic
PA-GF
a = 120 mm
m = 82.0 g

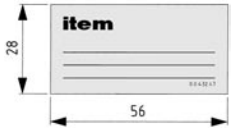
black, 1 pce.	0.0.432.26

Parts Container Cover 160
PA-GF
a = 160 mm
m = 109.0 g

black, 1 pce.	0.0.429.20

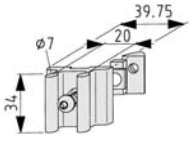
Parts Container Cover 160 antistatic
PA-GF
a = 160 mm
m = 109.0 g

black, 1 pce.	0.0.432.31



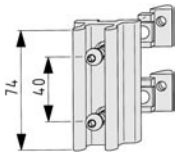
Labelling Cards for Parts Containers
Card
200 g/m²

white, 1 PU = 100 pce.	0.0.432.48



Parts Container Fastener 40
Parts Container Fastener 40, Al, anodized, black
1 Button-Head Screw ISO 7380-M6x16, St, bright zinc-pl.
1 T-Slot Nut 8 St M6, bright zinc-plated
1 anti-torsion lug, die-cast zinc, bright zinc-plated
m = 42.0 g

1 set	0.0.432.07

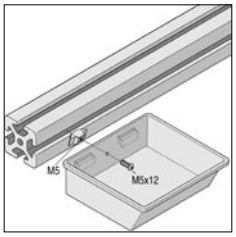


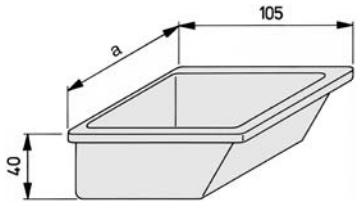
Parts Container Fastener 80
Parts Container Fastener 80, Al, anodized, black
2 Button-Head Screws ISO 7380-M6x16, St, bright zinc-pl.
2 T-Slot Nuts 8 St M6, bright zinc-plated
2 anti-torsion lugs, die-cast zinc, bright zinc-plated
m = 90.0 g

1 set	0.0.432.54

Containers 8

Suitable for holding small parts within easy reach at work benches. The attachment on the rear allows the Parts Container to be secured in the grooves of Profiles 8. The screw fastening prevents the Parts Container inadvertently becoming detached.





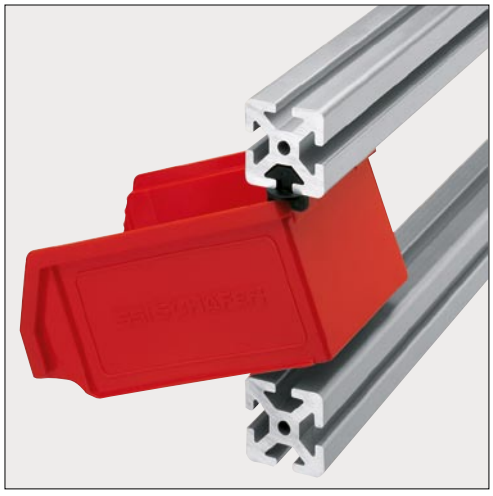
Parts Container 8 110x105
PA-GF, black
1 Button-Head Screw M5x12, St, bright zinc-plated
1 T-Slot Nut 8 Zn M5
a = 110 mm
m = 100.0 g

1 set	0.0.026.20

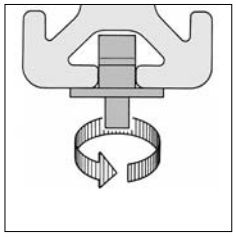
Parts Container 8 210x105
PA-GF, black
2 Button-Head Screws M5x12, St, bright zinc-plated
2 T-Slot Nuts 8 Zn M5
a = 210 mm
m = 210.0 g

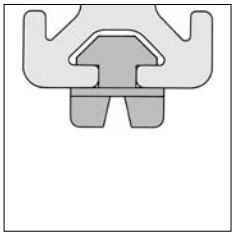
1 set	0.0.026.21

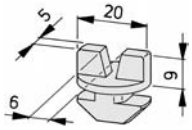
Container Mounting



Any kind of containers with wall thicknesses of up to 5 mm can be mounted between two profiles.







Container Mounting 8
PA-GF
m = 3.0 g

black, 1 pce.	0.0.026.87

Arm Rest

Ergonomic Arm Rest for rounding table edges and avoiding impact points.
The antistatic surface prevents the build-up of electrostatic charges.

The Arm Rest is secured by means of Velcro fasteners to fastening pads bonded onto the table top or screw-connected to a Profile 8 using T-Slot Nuts 8 PA and Button-Head Screws T4x12.

Arm Rest antistatic
PUR with Velcro fastening, black
2 fastening pads, self-adhesive, ABS, black
m = 130.0 g

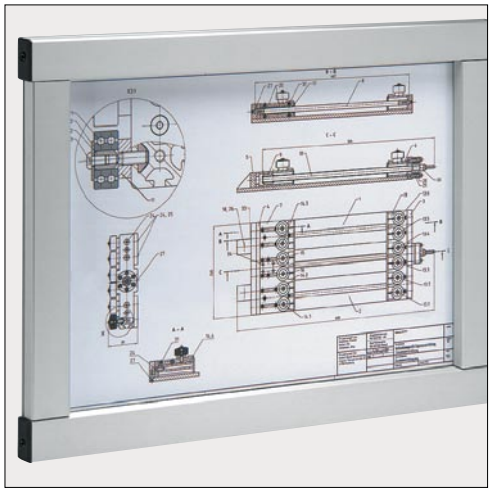
1 set	0.0.465.10

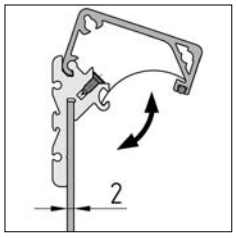
Document Holder

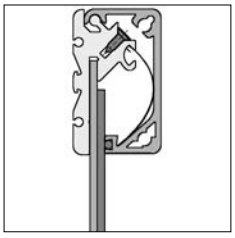
New in catalogue

The Document Holder system is used for constructing display and information panels of any size in the workplace or the training area. The panels can be attached directly to a frame construction made of aluminium profiles, e.g. to the work bench in the production area. The Document Holder can also be used to construct fixed or moveable panels on appropriate frame structures.

The system consists of two aluminium profiles that are interconnected using an integrated spring-loaded hinge. The Document Holder Support Profile forms the fixed frame which also secures the rear panel. This frame is fixed onto basic constructions made up of Line 8 Profiles using Clip 8 St.
The spring-loaded Lid Profile firmly clamps documents and drawings and can securely hold an optional acrylic glass panel to protect documents.

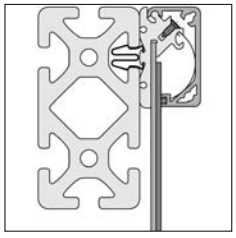


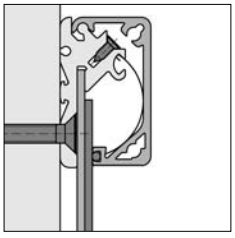




The Lid Profile opens and closes to clamp the Document Holder.
The leaf springs hold the lid in place at its two extreme positions. The document is held in place by simply closing the Lid Profile as illustrated.

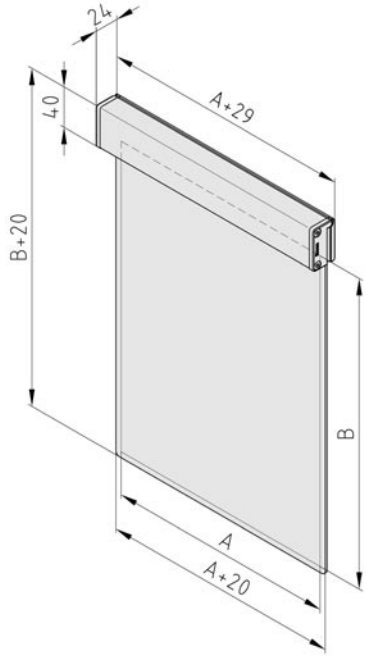
A protective panel can be used in Document Holder frames that are enclosed on all sides. This too is held in position by the Lid Profile.v





The Document Holder Support Profile is fixed onto basic constructions made up of Line 8 Profiles using Clip 8 St.

The Support Profile can also be secured to any surface using a Countersunk Screw.

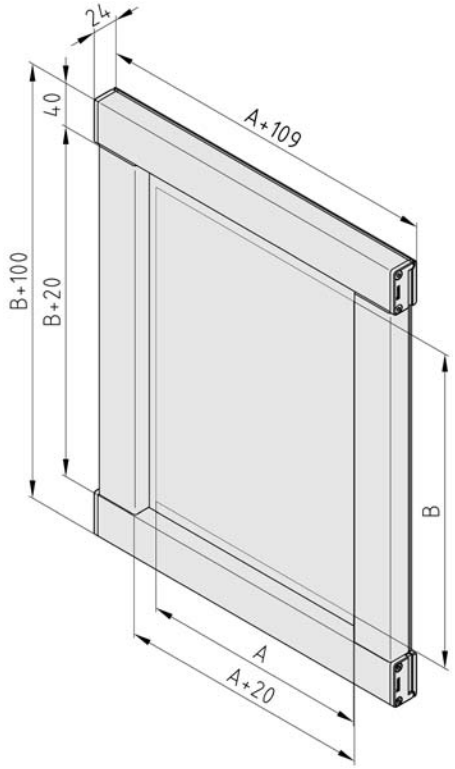


Document Holder 8 A4
Fully assembled (excluding protective panel)
Document dimension A = 210 mm
Document dimension B = 300 mm
m = 0.7 kg

1 set	0.0.476.22

Document Holder 8 A3
Fully assembled (excluding protective panel)
Document dimension A = 420 mm
Document dimension B = 300 mm
m = 1.3 kg

1 set	0.0.476.23

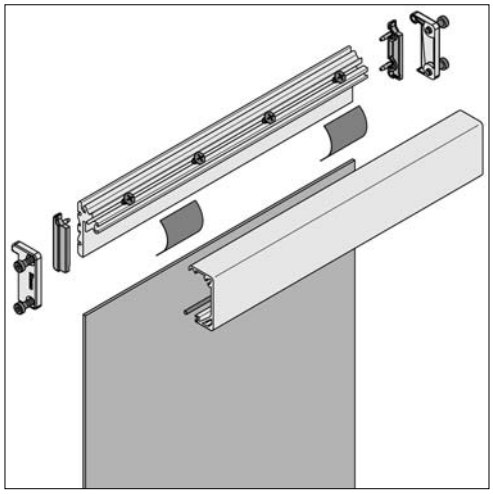


Document Holder 8 Frame A4
Fully assembled (including protective panel PMMA)
Document dimension A = 210 mm
Document dimension B = 300 mm
m = 2.3 kg

1 set	0.0.476.24

Document Holder 8 Frame A3
Fully assembled (including protective panel PMMA)
Document dimension A = 420 mm
Document dimension B = 300 mm
m = 3.4 kg

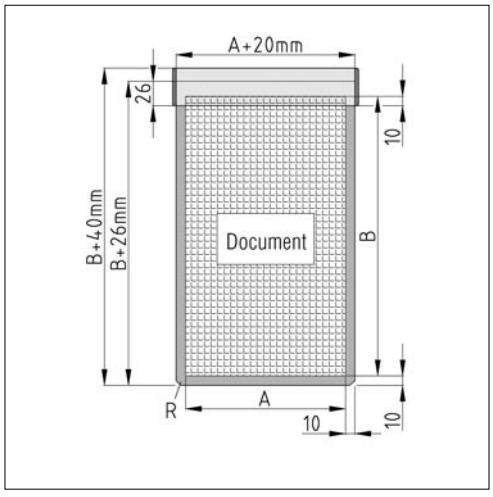
1 set	0.0.476.25



Document Holders can be constructed in any sizes as either clipboards or frames for documents.
item's sales partners provide design assistance and supply either individual components, complete frames or building kits.
The tables below show the dimensions required for Document Holders together with the various sizes.

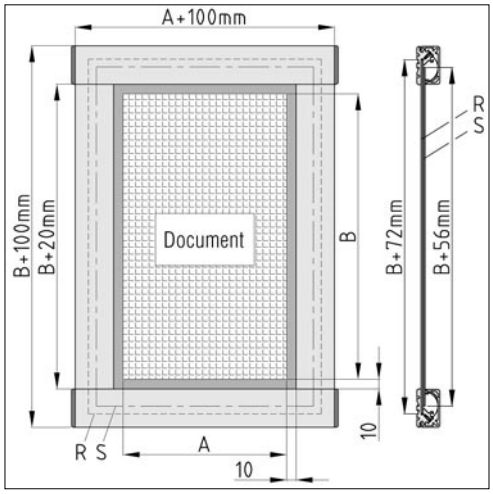
The rear panel (thickness 2 mm) is clamped to the Support Profile by driving the Self-Tapping Screws DIN 7982 St 3.5x9.5 into its groove.

Retaining Cord D2.5 is inserted into the Lid Profile to prevent the document from moving. Greasing the contact surfaces of the leaf springs in the Profiles is recommended.



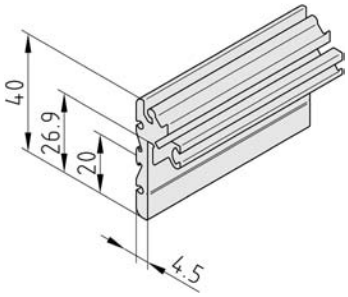
Calculating the number and lengths of the individual components for constructing Document Holders in the form of a clipboard.

	Qty.	Length	Length
Document dimensions		A	B
Rear panel (R)	1	A+20 mm	B+26 mm
Support Profile	1	A+20 mm	
Lid Profile	1	A+20 mm	
Retaining Cord	1	A+20 mm	
Leaf Springs	$\frac{A}{100}$		
Self-Tapping Screws 3.5x9.5	$\frac{A}{50}$		



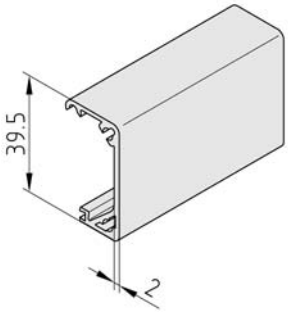
Calculating the number and lengths of the individual components for constructing Document Holder Frames.

	Qty.	Length	Length
Document dimensions		A	B
Rear panel (R)	1	A+72 mm	B+72 mm
Protective panel (S)	1	A+56 mm	B+56 mm
Support Profile, horiz.	2	A+100 mm	
Support Profile, vert.	2		B+20 mm
Lid Profile, horiz.	2	A+100 mm	
Lid Profile, vert.	2		B+19.5 mm
Leaf Springs	$\frac{A+B}{100}$		
Self-Tapping Screws 3,5x9,5	$\frac{A+B}{50}$		



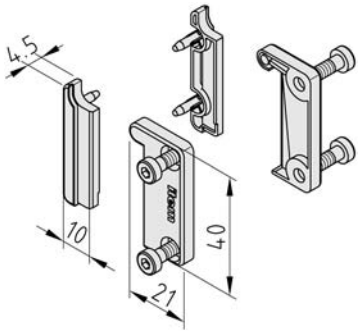
Document Holder 8 Support Profile
Al, anodized
m = 0.68 kg/m

natural, cut-off max. 3000 mm	0.0.485.90



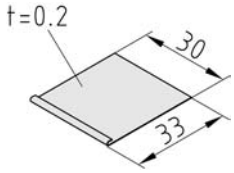
Document Holder 8 Lid Profile
Al, anodized
m = 0.47 kg/m

natural, cut-off max. 3000 mm	0.0.485.92



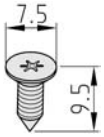
Document Holder 8 Cap Set
1 Cap Set right, PA-GF, black
1 Cap Set left, PA-GF, black
4 Hexagon Socket Head Cap Screws DIN 6912-M4x12, black
m = 12.0 g

1 set	0.0.485.76



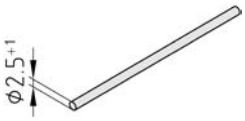
Document Holder 8 Leaf Spring
St
m = 1.2 g

stainless, 1 pce.	0.0.486.76



Countersunk Screw, self-threading DIN 7982 St 3.9x9.5, TX 15
St
m = 80 g/100

stainless, 1 PU = 100 pce.	8.0.008.11



Retaining Cord D2.5
Elastomer, resistant to oils, water and cleaning agents
m = 6 g/m

clear, cut-off max. 10 m	0.0.485.88

Lifting Column 8 200x170

Lifting Column 8 200x170 is designed for constructing variable height work benches, and is also suitable for many different applications where height adjustment is required in the factory or office. High capacity Roller Guides in conjunction with rack and pinion drives permit rigid constructions which employ only a central telescopic column and have the capacity to withstand considerable bending moments from any direction.

All parts of the drive including the power supply are integrated into the column and protected against dust ingress.

Lifting Column 8 200x170 has been designed to accommodate pressure loading when installed vertically. It is not intended for continuous lifting operations in automated industrial processes. The Lifting Column has a service life of 10,000 strokes under nominal load.

www.item.info

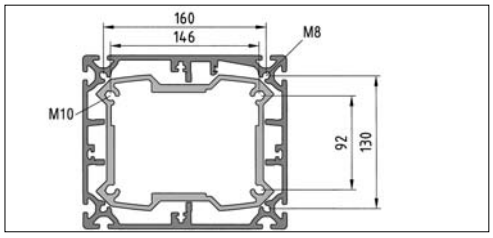
The “electronic” and “synchro/memory” versions are controlled by means of a Hand Held Control which can be stored in a special drawer for easy access.

In addition to the motor-driven columns, a manual version is also available (with handle).

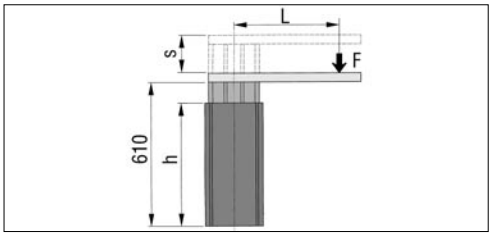
The “electronic” and “synchro/memory” versions feature a soft-start / soft-stop function.

The “synchro/memory” version has an integrated electronic control for parallel operation of several Lifting Columns and a memory function. Up to 9 positions can be stored and retrieved by the user. The Hand Held Control of this type includes an LED display which shows the current height of the column.

For reasons of electrical and mechanical safety every Lifting Column must be supported and covered over the whole area at the upper and lower ends. The Lifting Column Connection Profiles 240x32 are particularly suitable for this.

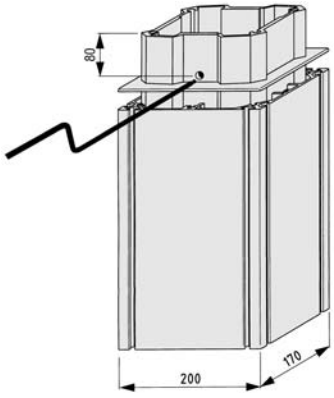


Profile groove 8 on all side faces of the basic profile enables the Lifting Column to be fully integrated into any work bench structures constructed from elements of the item MB Building Kit System.



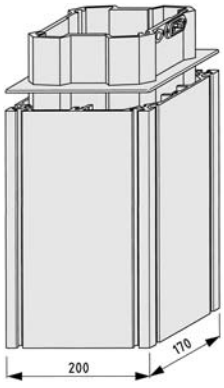
Lifting Column	Base h	Stroke s	Bending moment Fxl
1000N manual	515 mm	200 mm	220 Nm
1000N / 2000N electronic	585 mm	490 mm	220 Nm
1000N synchro/memory	585 mm	490 mm	220 Nm

5 6 **8** 12



Lifting Column 8 200x170, 1000N, manual
Column, Al, natural anodized
Cap, PA, black
Cranked Handle, St
Operating Instruction
m = 14.0 kg

1 pce. **0.0.471.01**



Lifting Column 8 200x170, 1000N, electronic
Voltage: 230 V AC 50/60 Hz (120 V AC version on request)
Operating temperature range: -20°C to 60°C
Maximum lifting force: 1000 N
Lifting speed: 50 mm/s / 30 mm/s
Continuous duty: 15% at rated load
Protection: IP 30
Conformity: CE
Column, Al, anodized, natural
Cap, PA, black
Hand Held Control, ABS, black
Power cord 2 m
Operating Instructions
m = 21.0 kg

1 pce. **0.0.471.07**

Lifting Column 8 200x170, 2000N, electronic
Voltage: 230 V AC 50/60 Hz (120 V AC version on request)
Operating temperature range: -20°C to 60°C
Maximum lifting force: 2000 N
Lifting speed: 50 mm/s / 30 mm/s
Continuous duty: 15% at rated load
Protection: IP 30
Conformity: CE
Column, Al, anodized, natural
Cap, PA, black
Hand Held Control, ABS, black
Power cord 2 m
Operating Instructions
m = 21.0 kg

1 pce. **0.0.471.05**

Lifting Column 8 200x170, 1000N, synchro/memory II
Voltage: 230 V AC 50/60 Hz (120 V AC version on request)
Operating temperature range: -20°C to 60°C
Maximum lifting force: 1000 N
Lifting speed: 50 mm/s / 30 mm/s
Continuous duty: 15% at rated load
Protection: IP 30
Conformity: CE
Column, Al, anodized, natural
Cap, PA, black
Power cord 2 m; Connecting cable 6 m
Operating Instructions
m = 21.0 kg

1 pce.	0.0.602.13

Hand Held Control synchro/memory
ABS
m = 150.0 g

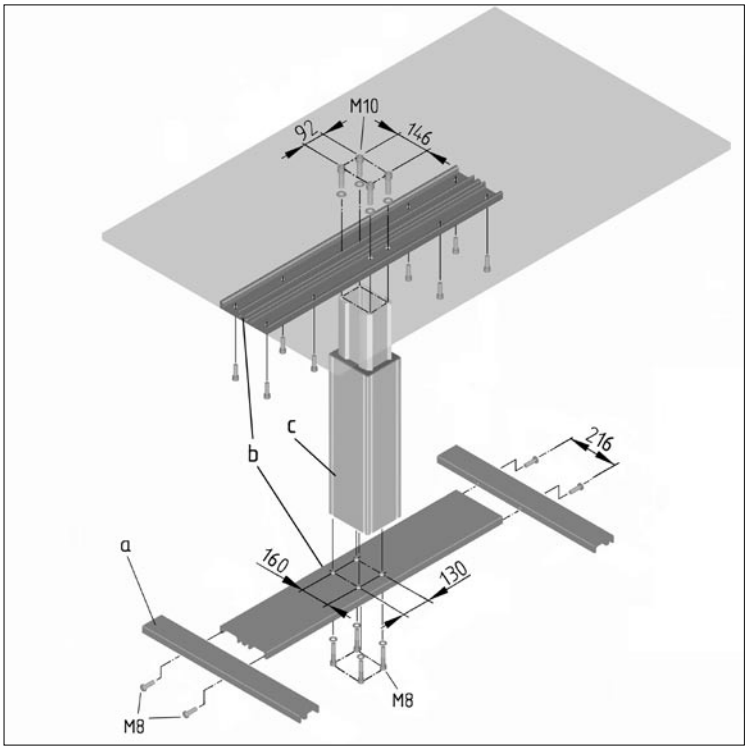
black, 1 pce.	0.0.471.06

Drawer for Hand Held Control
ABS
m = 100.0 g

black, 1 pce.	0.0.471.11

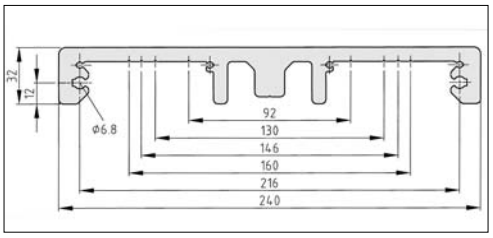
Lifting Column Connection Profiles

Lifting Column Connection Profiles 240x32 and 100x32 are designed for ensuring stable connections to Lifting Column 8 270x170. They can be used to create both base constructions and table top support structures. The Lifting Column Connection Profiles prevent access to the functional elements located inside the Lifting Columns and support the applied lifting forces.



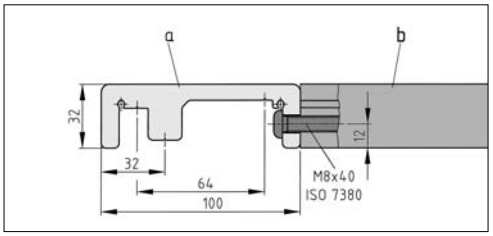
The screw channels already prepared in the lifting column profiles are used to secure these elements to the Lifting Column. Each Lifting Column Connection Profile 240x32 is screwed into the end face of the Lifting Column using four M10 screws (inner profile) or four M8 screws (outer profile).

a: Lifting Column Connection Profile 100x32
b: Lifting Column Connection Profile 240x32
c: Lifting Column 8 200x170



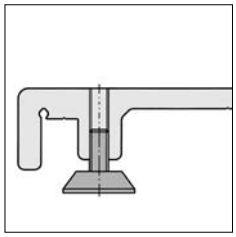
The marking grooves on the underside of Lifting Column Connection Profile 240x32 ensure easy location of the through hole for screw connection with Lifting Column 8 200x170.

To screw-fit Connection Profiles 100x32, M8 threads must be tapped into the end faces of the ø 6.8 mm screw channels of Connection Profiles 240x32.



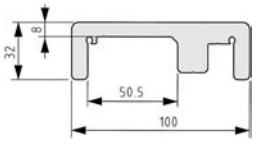
Lifting Column Connection Profiles 100x32 (a) are used with Lifting Column Connection Profiles 240x32 (b) to form a rigid stable base.

Connection Profiles 100x32 require two holes machined for screw-fitting to Connection Profiles 240x32.



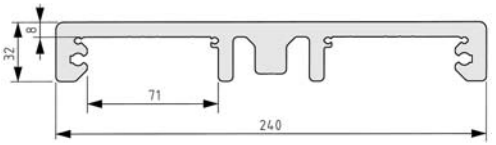
The solid rib of the Lifting Column Connection Profiles is designed for securing adjustable feet.

The Caps are fitted in the Lifting Column Connection Profiles using Self-Tapping Screws DIN 7981 St 4.2x16.



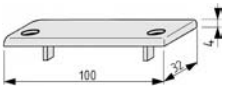
Lifting Column Connection Profile 100x32
Al, anodized
A = 16.20 cm² I_x = 13.31 cm⁴ I_y = 186.31 cm⁴
m = 4.37 kg/m W_x = 6.44 cm³ W_y = 30.87 cm³

natural, cut-off max. 6000 mm	0.0.473.30



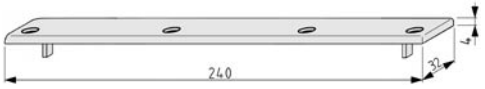
Lifting Column Connection Profile 240x32
Al, anodized
A = 32.94 cm² I_x = 25.85 cm⁴ I_y = 1,746.20 cm⁴
m = 8.89 kg/m W_x = 11.96 cm³ W_y = 145.51 cm³

natural, cut-off max. 6000 mm	0.0.473.32



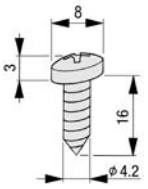
Cap 100x32
PA-GF
m = 12.0 g

black, 1 pce.	0.0.471.17



Cap 240x32
PA-GF
m = 30.0 g

black, 1 pce.	0.0.471.18



Self-Tapping Screw DIN 7981 St 4.2x16
St
m = 178 g/100

bright zinc-plated, 1 PU = 100 pce.	8.0.000.35

Lifting Column 180x120 E

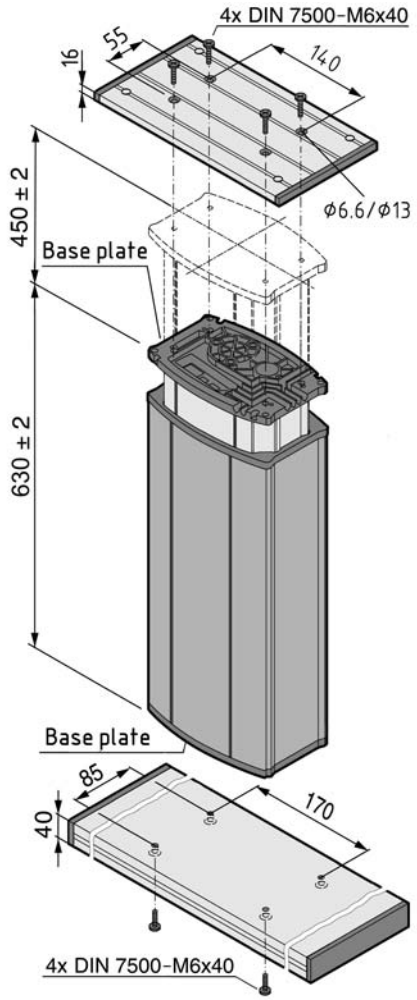
New in catalogue

www.item.info

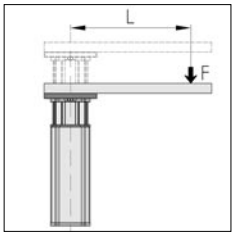
Lifting Columns for use in pairs when building smaller lifting tables, office furniture or equipment tables. The play-free telescopic columns enable the height of work surface to be adjusted easily.

All parts of the drive including the transformer are integrated into the Lifting Column and protected against dust ingress.

Lifting Column 180x120 E must only be subjected to compressive force. The lifting force of a pair is limited to 1500 N. The electronic controls include soft-start and soft-stop functions. Columns are operated using a control, which can be fastened directly to the tabletop. The power supply and control line are housed in the base plate at the top of the column.



Construction height of Lifting Columns when retracted:	630 mm
Stroke:	450 mm
Lifting speed:	17 mm/s
Operating temperature range:	10° to 40°C, only in dry conditions
Voltage:	230V AC 50 Hz (slave column 24 V DC, supply via master column)
Protection class:	II (protectively insulated)
Operating time:	ED 10% at rated load
Protection:	IP 30
CE compliance	

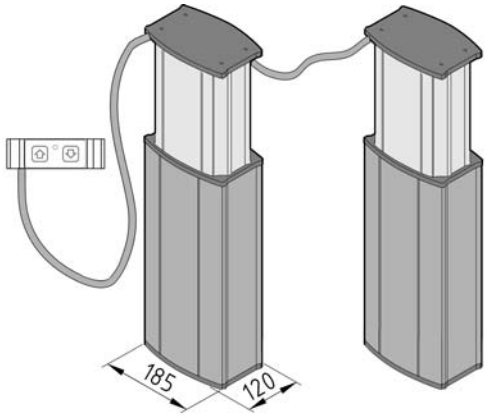


If the table surface is subjected to eccentric loading, the permitted bending moment of the column pair must be observed:

Bending moment F x l = 150 Nm

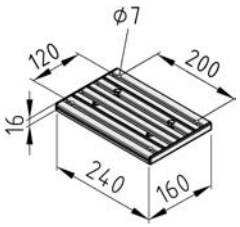
In order to ensure sufficient stability and electrical safety, the top and bottom of every Lifting Column must be completely covered by a plate.

Lifting Column Connection Set 8 E, Top is used to connect the top of the column to the tabletop.
Lifting Column Connection Sets 8 750/900 E, Bottom serve as a table base at the bottom of the column. For asymmetric table base constructions, the profiles can also be shortened as required on one side. The Connection Sets are pre-fitted with all the necessary through holes and fastening elements.



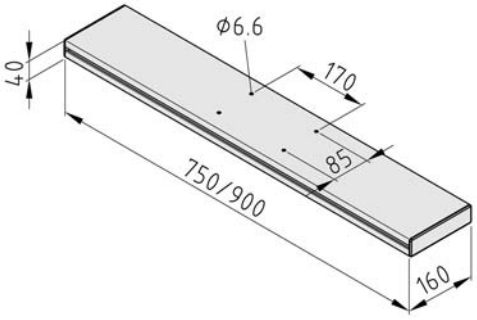
Lifting Column Set 180x120 E
2 columns, Al, anodized, natural
16 Button-Head Screws DIN 7500-M6x40, St, bright zinc-plated
Table control with lead 2.5 m, ABS black
Power cord 2.5 m
Connection cable 2.5 m
m = 23.3 kg

1 set 0.0.486.49



Lifting Column Connection Set 8 E, Top
2 Mounting Plates Al, anodized, natural
4 Caps 8 160x16, PA-GF, blac
m = 1.8 kg

1 set 0.0.486.52



Lifting Column Connection Set 8 750 E, Bottom
2 connection profiles, Al, anodized, natural
4 Caps 8 160x40, PA-GF, black
8 Cover Profiles 8 32x4, NBR, black
m = 8.9 kg

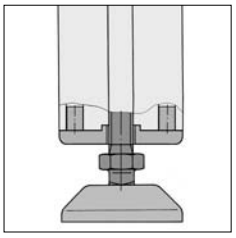
1 set 0.0.486.50

Lifting Column Connection Set 8 900 E, Bottom
2 connection profiles, Al, anodized, natural
4 Caps 8 160x40, PA-GF, black
8 Cover Profiles 8 32x4, NBR, black
m = 10.6 kg

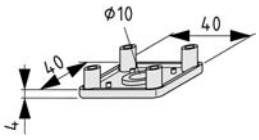
1 set 0.0.486.51

Foot Cap

For end-face covering of a Profile 8 40x40 light, where the core bore is used as a socket for an adjustable foot or similar.



The Foot Cap is clamped in the outer profile cavities of the Profile 8 40x40 light.



Foot Cap 8 40x40 light
PA-GF
m = 6.0 g

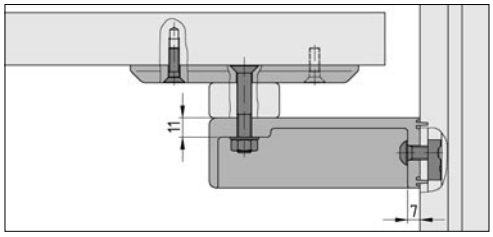
black, 1 pce.	0.0.473.03

Support Arm
Spacer Element
Flange

Stylish combination of fastening elements for constructing a whole range of fixtures and equipment, e.g. for connecting the legs of the workbench with the table top, securing railing elements or as a spacer for guards and enclosures.

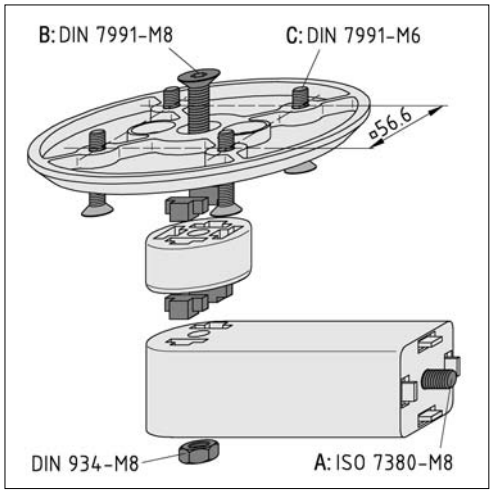
Spacer Element 8 D40 is positioned between Support Arm 8 120 and Flange 8 D130. The Flange can also be screwed directly to the Support Arm, however.

Support Arm 8 120 is also highly suitable for creating a stylish connection between Profile 8 R26-270° (Section 1.1 Profiles) and table tops, walls and panels.



Positioning aids ensure that the Support Arm is connected in the correct position on the profile side. These can be broken off in order to install the Support Arm at any chosen angle.

Flange 8 D130 and Spacer Element 8 D40 are used for securing the Support Arm to surfaces.



The removable fixing elements prevent the Support Arm, Spacer Element and Flange from twisting.

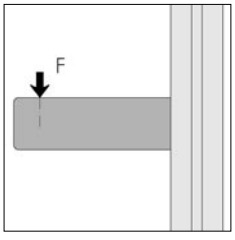
The length of the screws depends on the combination selected:

A: Button-Head Screw ISO 7380-M8x18 when connecting Support Arm 8 120 with system groove 8

B: Countersunk Screw DIN 7991-M8x50 when fitting Spacer Element 8 D40 between Flange 8 D130 and Support Arm 8 120

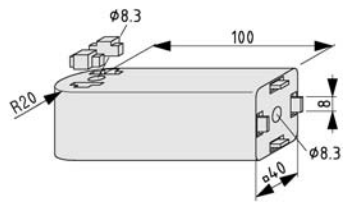
Countersunk Screw DIN 7991-M8x30 when connecting Flange 8 D130 directly to Support Arm 8 120 Countersunk Screw DIN 7991-M8x30

C: Countersunk Screw DIN 7991-M6x(10 + t) Depending on the particular application



$F_{max.}$ = 500 N

5 6 **8** 12



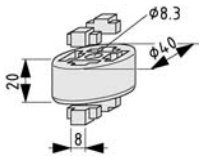
Support Arm 8 120
Die-cast zinc
2 fixing elements, die-cast zinc, galvanized
m = 530.0 g

white aluminium, similar to RAL 9006, 1 set	0.0.474.80

Flange 8 D130 can also be used as a mounting plate for table columns made from Column Profile D110 (Section 7.2 Profiles with Integrated Conduit). It can be used for connecting to the table top, to a Base Plate or directly to the floor.

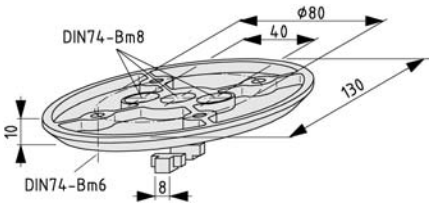
Flange 8 D130 is screwed to Column Profile D110 by means of 2 Countersunk Screws DIN 7981-M8x25. To do this, M8 threads must be drilled into the core bores (∅ 6.8 mm) in the Column Profile.

5 6 **8** 12



Spacer Element 8 D40
Die-cast zinc
4 fixing elements, die-cast zinc, galvanized
m = 129.0 g

white aluminium, similar to RAL 9006, 1 set	0.0.474.81

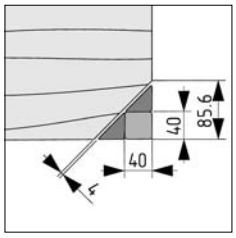


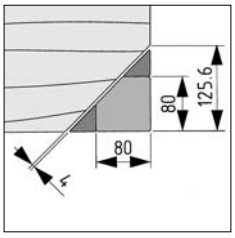
Flange 8 D130
Die-cast zinc
2 fixing elements, die-cast zinc, galvanized
m = 399.0 g

white aluminium, similar to RAL 9006, 1 set	0.0.474.82

Table Adapter Set

Industrial work benches, material trolleys and shelving often require through columns through the shelves or table tops (for tool rails etc.).
Table Adapter Sets are available to simplify the complex task of machining the table top (e.g. contoured saw cut around table leg).
Two Table Adapter Sets are needed for each through column.





When using the Table Adapter Set the single diagonal cut of the panel element is required (Section 5.3 Panels for Work Bench Design).
The Table Adapter Sets fill out the resulting gaps around the profile.

5 6 **8** 12

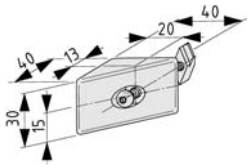


Table Adapter Set 40
1 Table adapter 40, PA-GF, black
1 Button-Head Screw ISO 7380-M5x25, St, bright zinc-pl.
1 washer DIN 433-5.3, St
1 T-Slot Nut 8 Zn M5
m = 27.0 g

1 set	0.0.438.03

Cable Duct

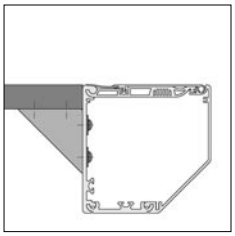
Robust modular special-purpose conduit for use as a cable duct on all types of work bench constructions designed to withstand both office and factory environment. The system elements are designed to create large cross-section Cable Ducts that are able to hold both adapter blocks and power packs. Lines can be run in and out of the Cable Duct at any position. Cables can be installed or exchanged quickly by opening the swing-up cover. A flexible brush provides a seal between the cover and the Cable Duct and also prevents cables slipping out.

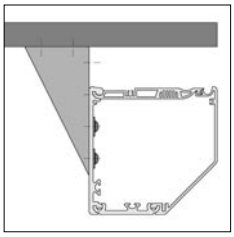
The modular design means that Cable Ducts can be built for almost all work bench geometries and constructions. item's sales partners provide design assistance and supply either individual components, complete Cable Ducts or building kits.

The space inside the Cable Duct is large enough to stow power packs even when plugged into adapter blocks.

The robust Cable Duct can be secured at any position on desks or work bench systems by means of holes provided in Wall Profile KW and is inherently stable.

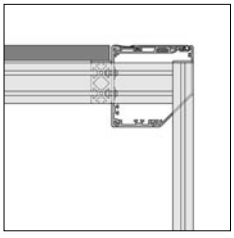
When snapped into place Catch KW provides the necessary stability for the cable duct despite the large swing lid opening. At least two Catches KW are recommended per lid section.

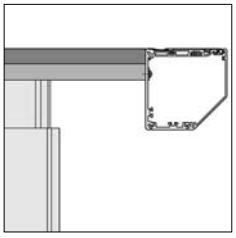




Depending on the intended purpose of the work bench, the Cable Duct can be used as an extension of the bench surface or can be hidden below the latter.

When used below the work bench top, the Cable Duct can be used without Lid Profile 160 KW, but not without Catch 160 KW.



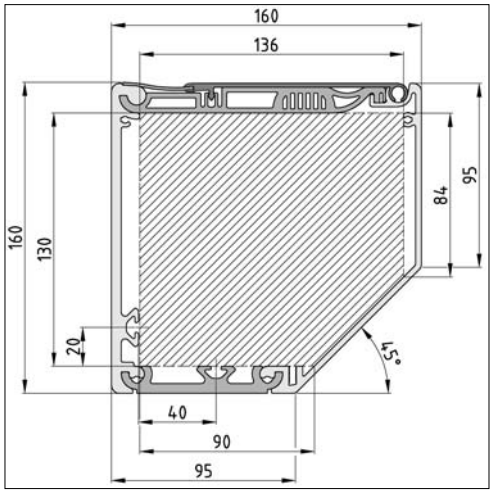


The Cable Duct either provides an extension to the work bench top within the frame of the work bench or is fitted to a height-adjustable work bench top.

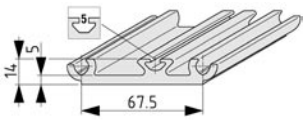
The design of the modular duct system allows the construction of segmented sections of any required length. The individual profile elements are simply locked together. Openings of any size in the Wall and Support Profiles are possible to each side.
Cables from the cable duct can be run through these openings.
The profiles are locked in position relative to each other using the screws of Cap KW.

The grooves of Line 5 Support and Wall Profiles KW enable T-Slot Nuts 5 (Section 3.1 T-Slot Nuts) to be used to secure parts within the cable duct.

The end face of the Cable Duct is closed by Conduit Caps 160-45° KW which are screwed to the Support and Wall Profiles. These are equipped with feedthrough openings for cables and plugs. An appropriate cover can be fitted to these openings if they are not being used.
The Conduit Caps are supplied in pairs.

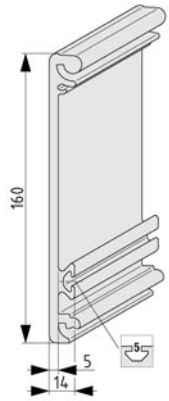


Sealing Brush KW is secured to Lid Profile 160 KW by inserting it into the appropriate groove. A centre punch or similar is then used on the underside of the groove in order to deform it and ensure that Sealing Brush KW is permanently held in position.



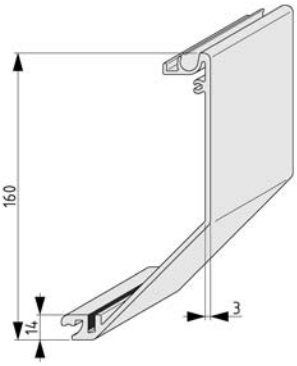
Support Profile KW
Al, anodized
m = 1.50 kg/m

natural, cut-off max. 3000 mm	0.0.474.75



Wall Profile KW
Al, anodized
m = 3.00 kg/m

natural, cut-off max. 3000 mm	0.0.474.79

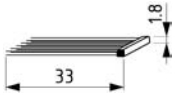


Wall Profile 160-45° KW
Al, anodized
m = 2.25 kg/m

natural, cut-off max. 3000 mm	0.0.474.76

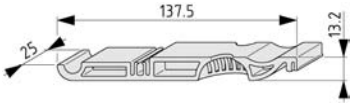
Lid Profile 160 KW
Al, anodized
m = 0.74 kg/m

natural, cut-off max. 3000 mm	0.0.474.78



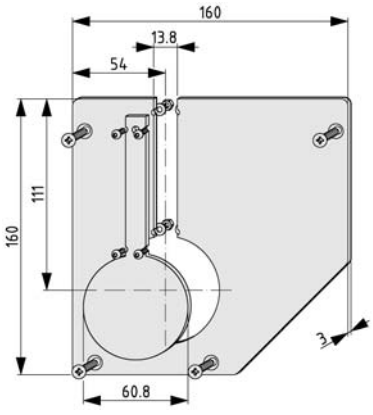
Sealing Brush KW
PA
m = 40 g/m

black, 1 pce., length 2000 mm	0.0.488.47



Catch 160 KW
PA-GF
m = 34.0 g

black, 1 pce.	0.0.474.70



Conduit Cap 160-45° KW
2 Conduit Caps, St, black
2 covers, St, black
8 Button-Head Screws ISO 7380-M3x6, St, black
8 washers DIN 125-3.2, St, black
8 hexagon nuts DIN 934-M3, St, black
8 Self-Tapping Screws DIN 7982-4.2x16, St, black
m = 540.0 g

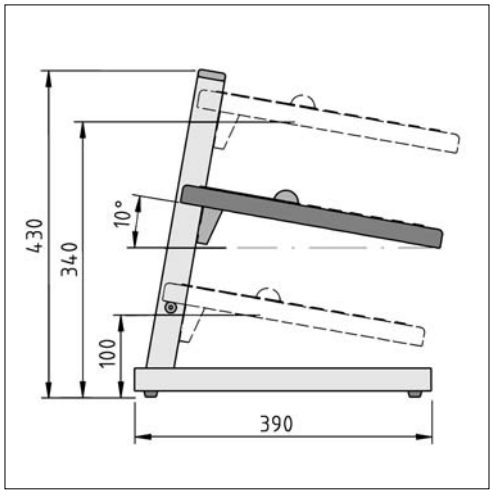
1 set	0.0.474.98

Foot Rest 450x400

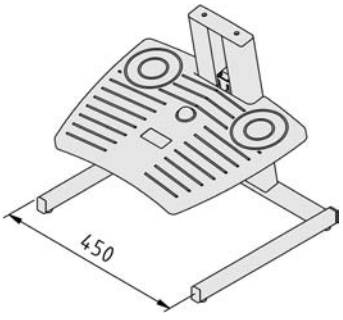
New in catalogue

Foot Rest 450x400 can be adjusted to different heights and is suitable for all kinds of work benches. It can be positioned at any location under work benches in workshops or offices and adjusted to suit specific users and working environments. Its adjustable height renders it suitable for activities carried out both standing and seated.

The tread plate is made from a plastic with ESD (electrostatic discharge) properties. ESD is only ensured if the tread plate has a conductive connection to the contact surface (floor) or an appropriate Earthing Terminal. A conductor is connected to the underside of the tread plate for this purpose. The discharge resistance R from the tread plate surface to the conductor connection is $10^3\,\Omega < R < 10^5\,\Omega$.



The tread plate can be secured in one of two different basic positions - high or low. Pressing the central foot-operated button releases the pneumatic spring lock inside the Lifting Column. The height of the surface on which the feet rest can then be infinitely adjusted as required over a range of 110 mm in each basic position by exerting pressure on the tread plate. The height of this surface can thus be anywhere between 100 and 340 mm.



Foot Rest 450x400 ESD
Base frame, St
Lifting Column, Al
Tread plate, PA
Notes on Use and Installation
m = 6.4 kg

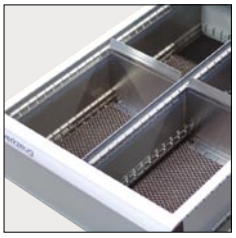
black, 1 set	0.0.600.72

Drawer Units

New in catalogue

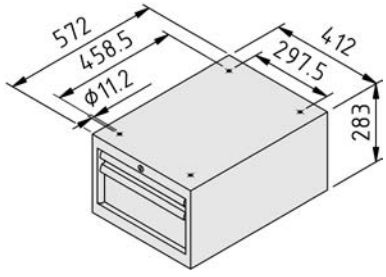
Robust Drawer Units made from powder-coated steel sheet (RAL 7042) in three different heights. The units can be attached to the work bench frame or fixed in place under the work surface.
The tallest Drawer Unit, the S4 H650, can also be located on a Base and used as a free-standing unit. Any table top can then be attached to the top of the unit - using the through holes.

The Mounting Frame allows the Drawer Units to be screwed to and suspended from table structures. The Mounting Frame consists of two parts, one of which is screwed to the through holes on the top of the Drawer Unit and the other to the underside of the table. The Drawer Unit can then simply be slid in and removed again if necessary.



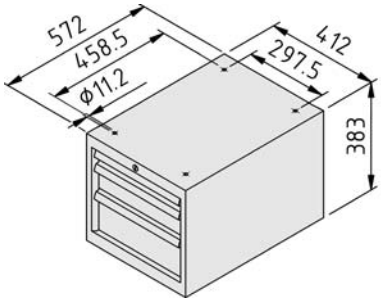
The drawers have maintenance-free ball-bearing pull-outs (85% pull-out depth) and a carrying capacity of at least 50 kg. Slip-resistant mats are fitted and one of the drawers has adjustable compartments. The grip rails have inserts that can be written on, allowing easy drawer labelling. The Drawer Units have a central lock.

The Base 130 for Drawer Unit S4 H650 allows the unit to stand on the floor. It comes with the fastening screws required to attach it to the Drawer Unit. The resultant total unit height is 780 mm. The unit can thus also be used directly as part of the table structure.



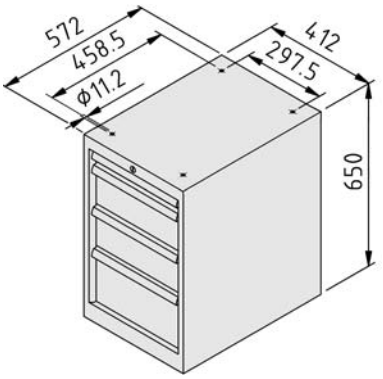
Drawer Unit S2 H283
Steel sheet
1 drawer 50 mm high
1 drawer 150 mm high with divider
Labelling cards for grip rails
Cylinder Lock with 2 keys
m = 31.0 kg

grey, similar to RAL 7042, 1 pce.	0.0.603.18



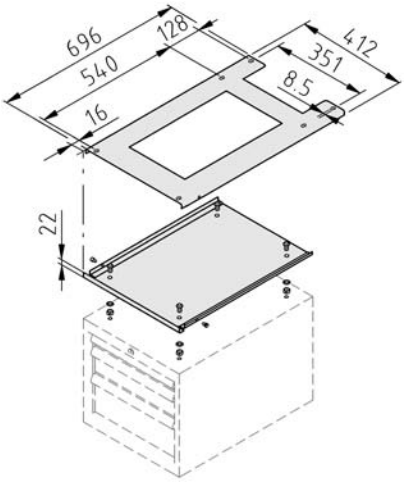
Drawer Unit S3 H383
Steel sheet
1 drawer 50 mm high
1 drawer 100 mm high with divider
1 drawer 150 mm high
Labelling cards for grip rails
Cylinder Lock with 2 keys
m = 40.6 kg

grey, similar to RAL 7042, 1 pce.	0.0.603.19



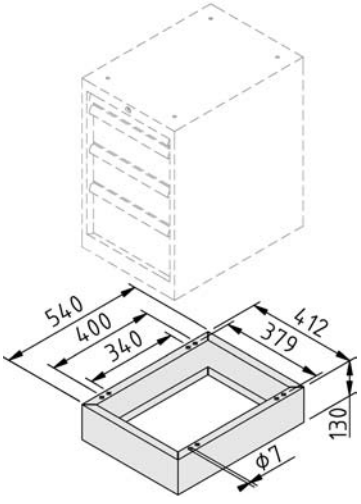
Drawer Unit S4 H650
Steel sheet
1 drawer 50 mm high
2 drawers 150 mm high
1 drawer divider
1 drawer 200 mm high
Labelling cards for grip rails
Cylinder Lock with 2 keys
m = 58.0 kg

grey, similar to RAL 7042, 1 pce.	0.0.603.20



Drawer Unit, Mounting Frame
Steel sheet
Two parts
Fastening Set for attaching to Drawer Unit
m = 7.0 kg

grey, similar to RAL 7042, 1 set	0.0.603.25



Drawer Unit, Base 130
Steel sheet
Fastening Set for attaching to Drawer Unit
m = 5.0 kg

grey, similar to RAL 7042, 1 set	0.0.603.21

6.6 Lighting und Power Supply

For illuminating work areas and areas used by traffic.

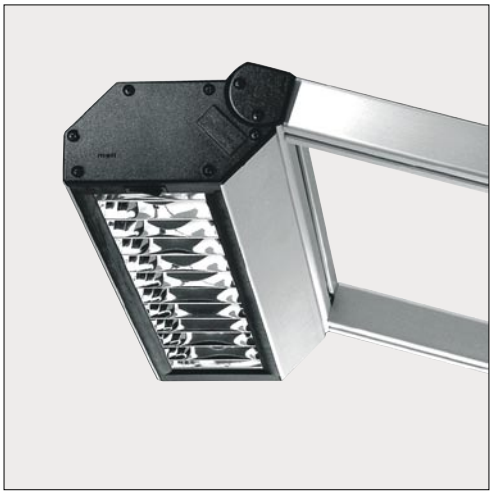
Light Fitting 55W is a workplace light with integrated swivel device and parabolic reflector grid to ensure optimum illumination.

Light Fitting 11W is based on the installation elements. and is therefore compatible with the cable conduits (see Section 7).

Both Light Fittings are equipped with electronic Lamp-Control Units to ensure flicker-free operation and can be connected together to produce light strips.

The Lamp 35W is a spotlamp for adjustable lighting of assembly areas. It is therefore also available as a model with flexible tube.

Light Fitting 55W



Sturdy Light Fitting for flicker-free illumination of work-places and machines. The integrated swivel profile with Line 8 system groove supports 7 setting angles.

The Light Fitting can be powered from a 230 V AC source (120 V AC on request) and is VDE-ENEC safety-approved. Upstream connection of a suitable dimmer enables the light output to be adjusted. When fitted with the impact-resistant Polycarbonate Protective Panel and sealing cap, the Light Fitting complies with IP 40-EN 60529.

All electrical connecting elements are approved for a rated voltage of 250 V AC with a rated current of 16 A.

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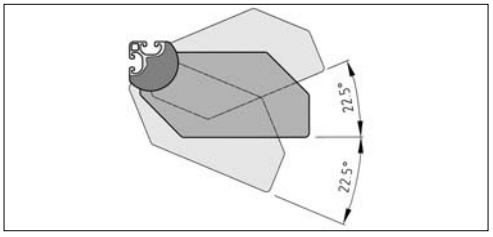
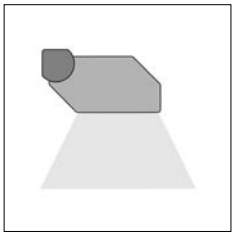
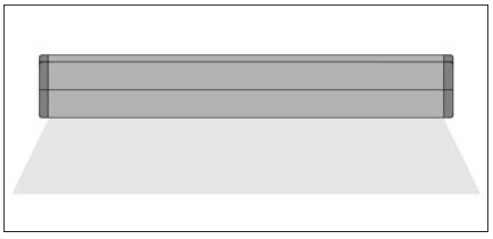


To allow the Light Fitting to be adjusted to individual applications, it can be locked in various positions over a swivel range of ±22.5° from 0°.



Light distribution by the Light Fitting (side view)

Distance (mm)	Beam width (mm)	E (Lux)
500	1000	3500
900	1800	1250
1300	2600	700
1700	3400	500



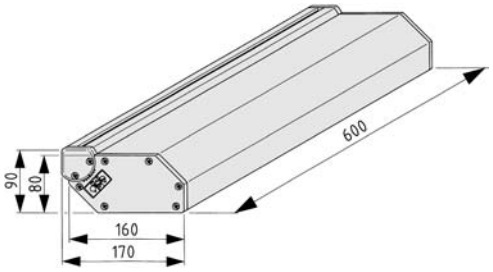
Light distribution by the Light Fitting (front view)

Distance (mm)	Beam width (mm)	E (Lux)
500	750	3500
900	950	1250
1300	1150	700
1700	1350	500

The Connecting Cable is used to connect the power supply to an earthed plug.
The socket can be used to power the Light Fitting from any line network which is in place. The wires are held securely in the socket by means of a spring-force connection.
If several Light Fittings are connected end-to-end, the power is fed from one Light Fitting to another by means of the Adapter. The dowel which is inserted into a mounting hole in the cap provides a mechanical link between the Light Fittings.
If several Light Fittings positioned separately are connected in series and share a common power supply, the Light Fittings are interconnected using the Extension Cable which is available prefitted with appropriate connectors in a standard length of 2 m, or alternatively a customised version may be made using a plug and socket.

The Light Fitting can be sealed against dust (IP 40) by means of the Protective Panel. This panel also protects the Light Fitting against soiling and damage. The open socket must be sealed with a cap.

5 6 **8** 12

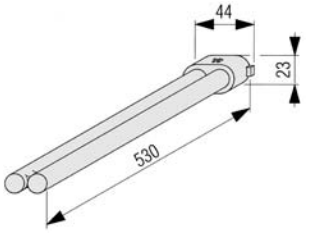


Light Fitting 55W, 230V
On/off switch
55W compact fluorescent lamp
Electronic Lamp-Control Unit
60° parabolic reflector grid
Socket lock
Notes on Use and Installation
m = 3.7 kg

1 pce.	0.0.417.34

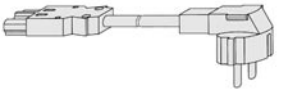
Light Fitting 55W, 120V
On/off switch
55W compact fluorescent lamp
Electronic Lamp-Control Unit
60° parabolic reflector grid
Socket lock
Notes on Use and Installation
m = 3.7 kg

1 pce.	0.0.417.58



Compact Lamp 55W
Twin tube
Tube diameter: 17 mm
Power: 55 Watt
Light colour: natural white, 4800 lm
m = 150.0 g

1 pce.	0.0.417.57



Connecting Cable, Socket / Earthed Plug
Cable length 3 m (1.5 mm^2)
m = 370.0 g

black, 1 pce.	0.0.417.42

Socket, Spring-Force Connected
PA
m = 25.0 g

black, 1 pce.	0.0.417.44

Adapter, Socket / Plug
PA
incl. dowel
m = 13.0 g

black, 1 set	0.0.417.45

Extension Cable, Socket / Plug
Cable length 2 m (1.5 mm²)
m = 234.0 g

black, 1 pce.	0.0.417.52

Plug, Spring-Force Connected
PA
m = 25.0 g

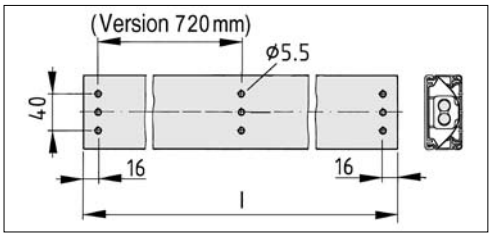
black, 1 pce.	0.0.417.59

Polycarbonate Protective Panel
PC, transparent
incl. socket sealing cap
m = 195.0 g

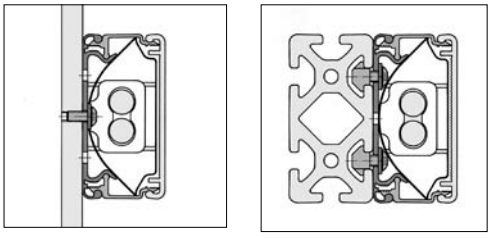
1 set	0.0.417.43

Light Fitting 11W

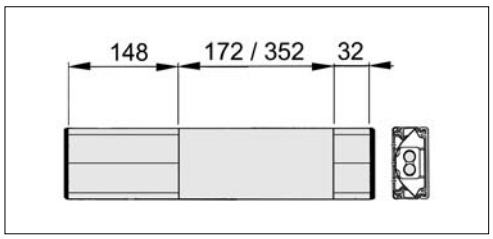
Compact industrial light for use with safety low voltage supply. Each segment (360 mm long) of the Light Fitting is equipped with an electronic Lamp-Control Unit for low voltage (24 V DC) and a Compact Lamp (power 11 W, corresponds to a conventional 75 W filament lamp).



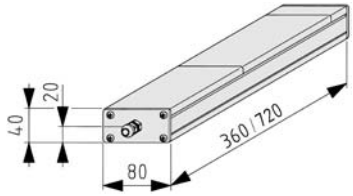
The rear of the housing is ready for fastening with Button-Head Screws M5x14.
Fully compatible with conduit profiles (Section 7.1 Conduits).



Fastening of Light Fitting 11W to any mounting surface or Profile 8 grooves.



Length of transparent cover



Light Fitting 11W 80x40x360
Aluminium housing
Transparent cover, PMMA
Caps, PA-GF, black
Lamp-Control Unit, Compact Lamp, reflectors, installation material, fastening screws M5x14
Rated voltage: 24 V DC
Protection: IP 50, EN 60529
Power output: 11 W
m = 0.7 kg

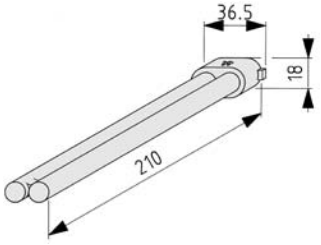
1 pce. 0.0.417.06

Light Fitting 11W 80x40x720
Aluminium housing
Transparent cover, PMMA
Caps, PA-GF, black
Lamp-Control Unit, Compact Lamp, reflectors, installation material, fastening screws M5x14
Rated voltage: 24 V DC
Protection: IP 50, EN 60529
Power output: 22 W
m = 1.4 kg

1 pce. 0.0.417.07

Compact Lamp

Lamp for Light Fitting 11W or Lamp-Control Unit 11W. The light output corresponds to a conventional 75 W filament lamp.



Compact Lamp 11W
Twin tube
Tube diameter: 12 mm
Power output: 11 W
m = 70.0 g

1 pce. 0.0.417.17

Lamp 35W

Dust-tight and water-tight industrial spotlight (IP 67) in a low-voltage (12 V) design.
The aluminium housing for the light fitting is equipped for fastening with Profile 8 grooves. A Hinge, heavy duty or other fastening elements can be used to integrate the Lamp 35W into machines and fixtures and equipment.

Lamp 35W comes with a 2 m connecting cable, which is linked to the electronic transformer using a coded system plug.
Up to 3 Lamps can be attached to this power pack via the distributor block.

The voltage supply to the electronic transformer is provided via the Connecting Cable, Socket / Earthed Plug (Art. No. 0.0.417.42) to a 230 V safety contact socket.

The housing of Lamp 35W can be fitted with Handle PA 80 (Section 4.1 Handles).

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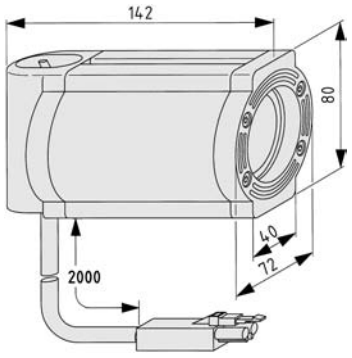
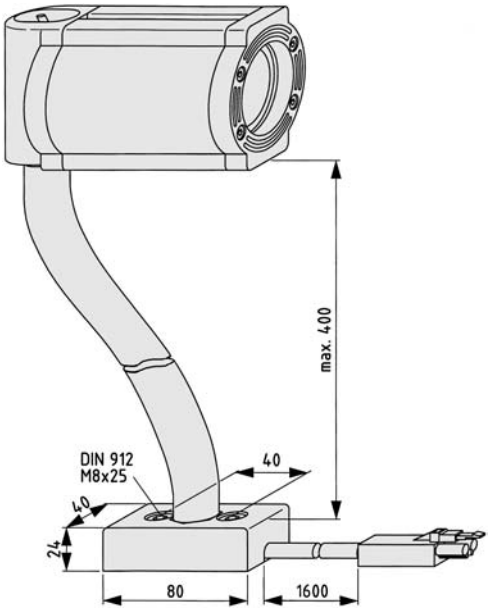
Fixed Lamp 35W, adjustable with Hinge 8 40x40, heavy-duty with Clamp Lever.



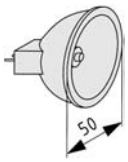
Lamp 35W
ON/OFF switch
Halogen reflector 35W
Protective panel of hardened glass
Protection: IP 67, EN 60529
Protection class III
Notes on Use and Installation
m = 0.6 kg

1 set	0.0.417.60



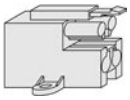
Lamp 35W with Flexible Tube
ON/OFF switch
Halogen reflector 35W
Protective panel of hardened glass
Protection: IP 67, EN 60529
Protection class III
m = 1.2 kg

1 set	0.0.417.71



Lamp 35W, Halogen Reflector
m = 25.0 g

1 pce.	0.0.417.77



Lamp 35W, 3-Way Distributor Block
m = 20.0 g

1 pce.	0.0.417.74

Electronic Transformer 105W
Primary voltage: 230/240 V AC
Secondary voltage: 12 V AC
m = 167.0 g

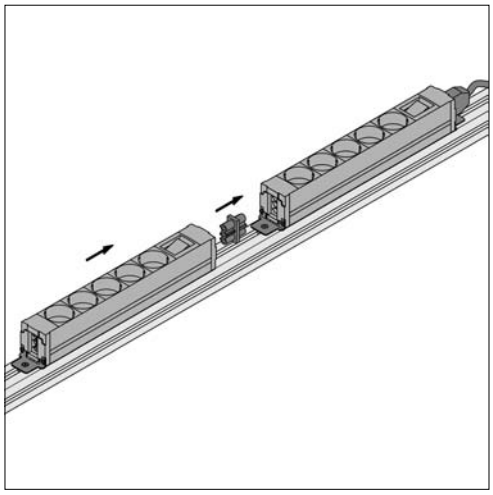
1 pce.	0.0.417.75

Multi-Socket Power Strips

New in catalogue

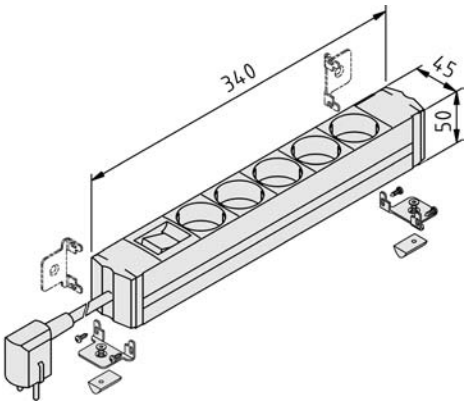
Multi-Socket Power Strips are used to provide work benches with a modular energy supply. They have 5 earthed plug sockets (German domestic standard) that can be isolated from the mains using an illuminated 2-pole ON/OFF switch. The plug sockets are set at an angle of 45° so that angled plugs can also be inserted without any problem.

Depending on their design, Multi-Socket Power Strips are connected to the mains using either a fixed conventional power cord with earthed plug or a system plug with reverse polarity protection power cord (Art. No. 0.0.417.42).



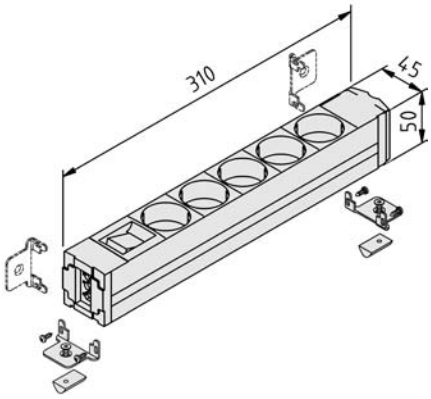
Multi-Socket Power Strips with a system plug can also be interconnected using an Adapter (Art. No. 0.0.417.45) or Extension Cable (Art. No. 0.0.417.52). The total current load must not exceed 16 A (at max. 250 V AC).

The Fastening Sets included with the Multi-Socket Power Strips enable them to be attached to Line 8 Profiles or any other components in a number of different ways. The angle brackets can be inserted in the Multi-Socket Power Strip end caps in various directions. This enables fastening on the profile groove on the top or side.



Multi-Socket Power Strip, 5 outlet, with conventional power cord
Housing, Al, anodized, natural
ON/OFF switch, illuminated, 2-pole
Feed cable 1.5 mm², l = 2 m
2 angle brackets with screws
2 T-Slot Nuts 8 St M4
m = 690.0 g

1 set	0.0.602.84



Multi-Socket Power Strip, 5 outlet, with system plug
Housing, Al, anodized, natural
ON/OFF switch, illuminated, 2-pole
System plug
System socket
2 angle brackets with screws
2 T-Slot Nuts 8 St M4
m = 470.0 g

1 set	0.0.602.83

6.7 General Accessories

This section contains specialised profiles (some with combined functions), accessories and damping elements.

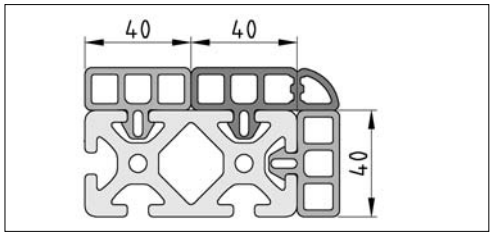
> Warning and Protective Profiles
> Impact Buffers and Parabolic Buffers are capable of absorbing impacts which are applied to linear axes, sliding doors, swing doors and lifting doors or any other moving components.
> Buffer Strip for elastic sealing of gaps and as a door buffer
> Telescope Profiles as length-adjustable struts.

Warning and Protective Profiles

Flexible plastic cavity profiles with fastening geometry for grooves of Line 8 Profiles, for protecting against knocks on the side face of profiles or to cover profile edges.

The profiles are available as Warning and Protective Profiles 8 with a yellow / black warning marking to highlight edges or corners that are in danger of being impacted or to identify danger zones.

The ends of the Warning and Protective Profiles are sealed by flexible Caps.



The Protective Profiles have a modular dimension of 40 mm.

Large cross-sections of Line 8 Profiles can be protected effectively by combining several Protective Profiles.

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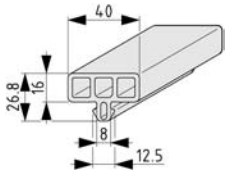
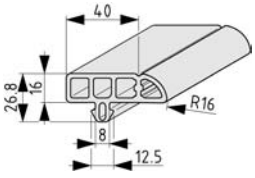


Protective Profile 8 40x16
TPE
m = 334 g/m

black, 1 pce., length 2000 mm	0.0.474.72

Warning and Protective Profile 8 40x16
TPE, black
yellow stripe
m = 334 g/m

1 pce., length 2000 mm	0.0.476.28

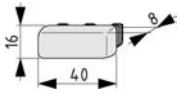


Protective Profile 8 40x16 R16
TPE
m = 435 g/m

black, 1 pce., length 2000 mm	0.0.474.71

Warning and Buffer Profile 8 40x16 R16
TPE, black
yellow stripe
m = 435 g/m

1 pce., length 2000 mm	0.0.476.27



Cap for Protective Profile 8 40x16
TPE
m = 6.0 g

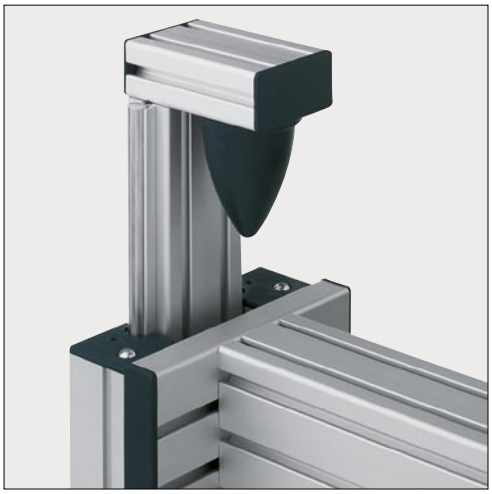
black, 1 pce.	0.0.474.74

Cap for Protective Profile 8 R16-90°
TPE
m = 2.0 g

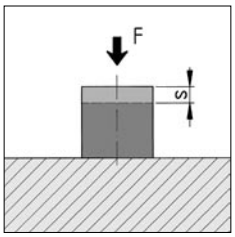
black, 1 pce.	0.0.474.73

Impact Buffers

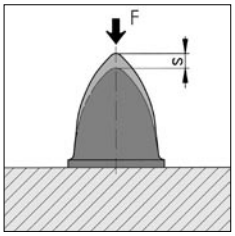
Parabolic Buffers



Rubber-metal elements for absorbing impacts. Resistant to oil, water, sea water and road salt solutions. Partially resistant to soap solutions, vegetable fats and animal fats. It can also be used as a simple, damping foot.

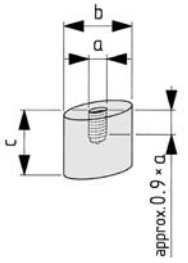


	max. F	s
Impact Buffer M4	90 N	1.4 mm
Impact Buffer M6	150 N	2.7 mm
Impact Buffer M8	350 N	3.0 mm



	max. F	s
Parabolic Buffer M8	370 N	20.0 mm
Parabolic Buffer M10	1057 N	35.0 mm
Parabolic Buffer M12	2360 N	50.0 mm

Parabolic buffer with approximately exponential force profile.



Impact Buffer M4 D15x15
NBR
Hardness 55 Sh A
Steel insert, St
a = M4 b = ∅ 15 mm
c = 15 mm
m = 5.0 g

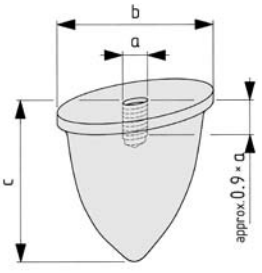
black, 1 pce.	0.0.416.33

Impact Buffer M6 D20x15
NBR
Hardness 55 Sh A
Steel insert, St
a = M6 b = ∅ 20 mm
c = 15 mm
m = 12.0 g

black, 1 pce.	0.0.416.35

Impact Buffer M8 D30x30
NBR
Hardness 55 Sh A
Steel insert, St
a = M8 b = ∅ 30 mm
c = 30 mm
m = 38.0 g

black, 1 pce.	0.0.416.37



Parabolic Buffer M8 D30x36
NBR
Hardness 55 Sh A
Steel insert, St
a = M8 b = ∅ 30 mm
c = 36 mm
m = 26.0 g

black, 1 pce.	0.0.416.39

Parabolic Buffer M10 D50x58
NBR
Hardness 55 Sh A
Steel insert, St
a = M10 b = ∅ 50 mm
c = 58 mm
m = 103.0 g

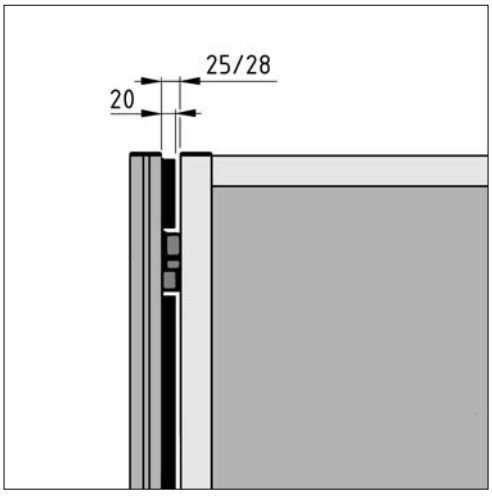
black, 1 pce.	0.0.416.41

Parabolic Buffer M12 D75x89
NBR
Hardness 55 Sh A
Steel insert, St
a = M12 b = ∅ 75 mm
c = 89 mm
m = 319.0 g

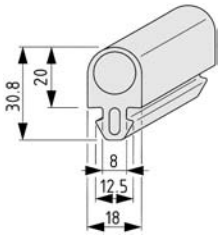
black, 1 pce.	0.0.416.43

Buffer Strip

Flexible plastic strip with fastening geometry for Profiles 8 and Clamp Profile 8 32x18.
The strip can be used as a stop for swing, sliding and lifting doors, as a sealing profile or for similar applications.



In enclosure and guard applications using Hanger 8/Door Rabbet 8 (gap width 25/28 mm), Buffer Strip 8 20x18 can be used to reduce the gap width.

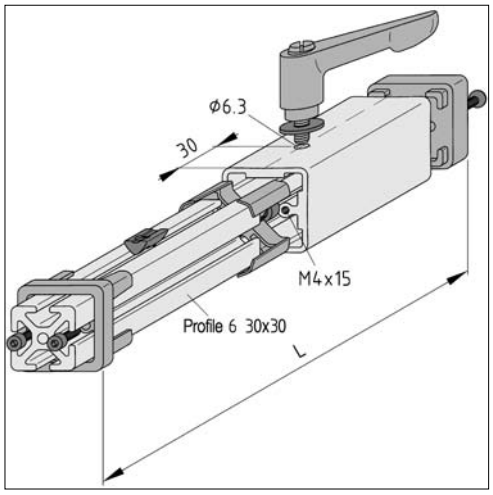


Buffer Strip 8 20x18
TPE
Hardness 73 Sh A
Oil, UV and water resisting
m = 240 g/m

black, 1 pce., length 2000 mm	0.0.458.01

Telescope Profile

Outside profile for constructing telescope profiles of variable length for adjusting the height or inclination of fixtures and equipment.
A profile 6 30x30 must be used for the inside profile.
The outside profile can be connected directly to a profile groove on the end face or using fastening elements (Hinges, heavy duty, etc.).
Line 6 components are suitable for connecting the inside profile.
The inside profile, which is guided by a sliding bearing in the telescope, is secured with the Telescope Securing Set.



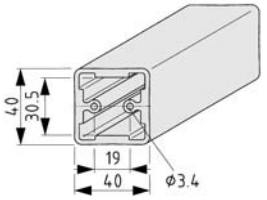
Profile 6 30x30 must be 14 mm shorter than Telescope Profile 8 40x40 in order that it can be inserted completely in the assembled telescope, and the stroke thereby maximised.

Max. load in telescope direction: 500 N

Overall length L of the telescope:

L ≥ stroke + 74 mm

5 6 **8** 12



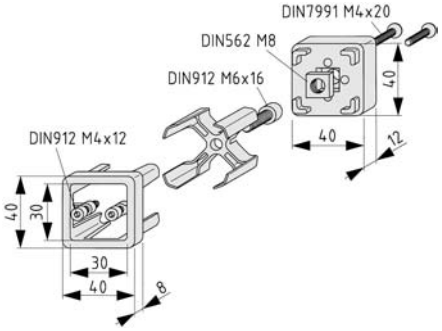
Telescope Profile 8 40x40
Al, anodized

A =	5.92 cm²	I_x =	10.52 cm⁴	I_y =	11.46 cm⁴		
		I_t =	16.28 cm⁴				
m =	1.59 kg/m	W_x =	5.26 cm³	W_y =	5.73 cm³		

natural, cut-off max. 3000 mm **0.0.440.50**

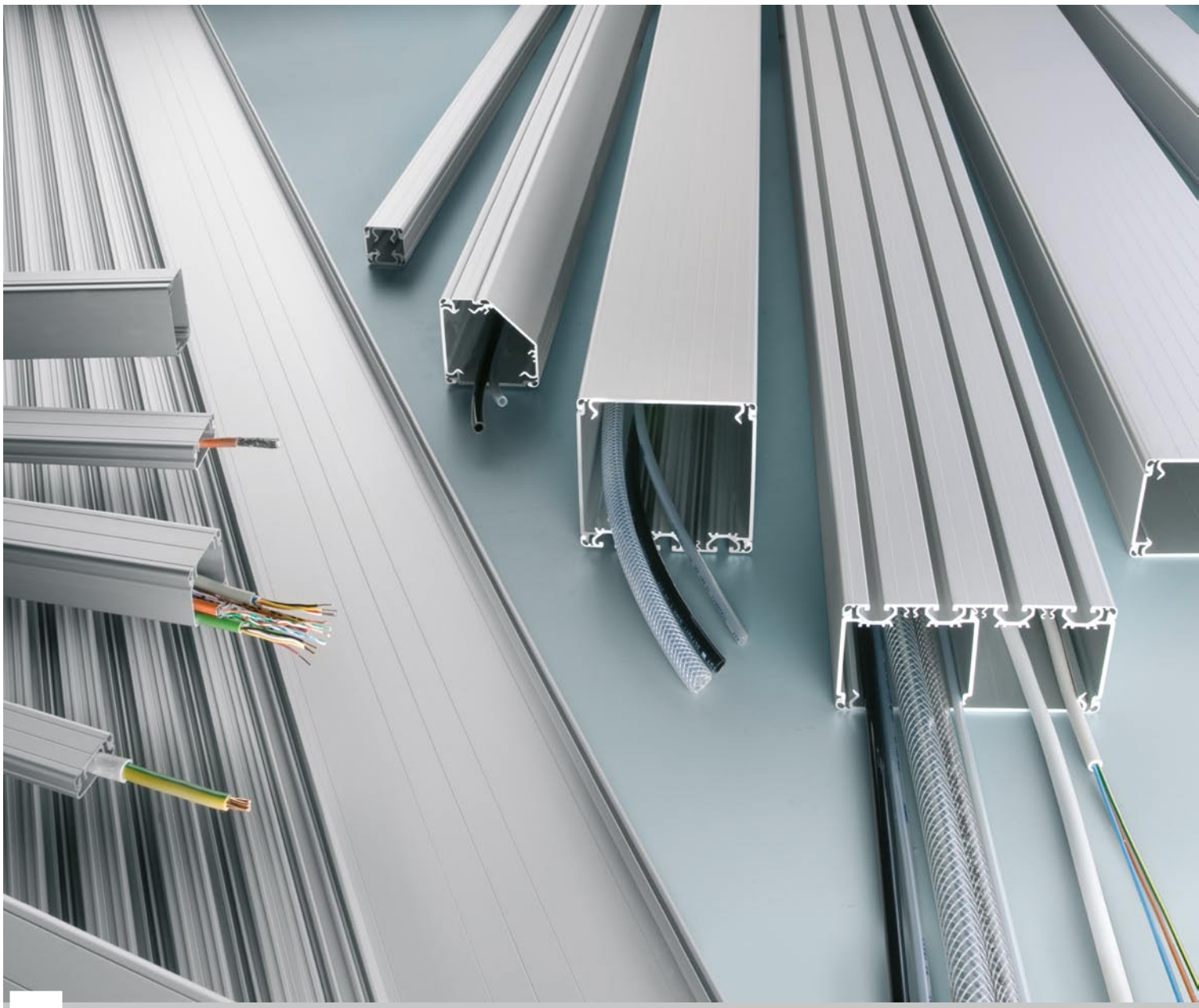
Telescope Securing Set 8 40x40
T-Slot Nut 6 St M6, bright zinc-plated
Washer DIN 9021-6,4, St, bright zinc-plated
Clamp lever, black
m = 86.0 g

1 set **0.0.444.71**



Telescope Connection Set 8 40x40
Telescope cap 8 40x40, PA, black
Telescope sliding cap 8 40x40, PA, black
Telescope connecting plate 8 40x40, die-cast zinc, white aluminium
1 Cap Screw DIN 912-M6x16, St, bright zinc-plated
2 Cap Screws DIN 912-M4x12, St, black
1 square nut DIN 562-M8, St, bright zinc-plated
2 Countersunk Screws DIN 7991-M4x20, St, bright zinc-pl.
m = 138.0 g

1 set **0.0.440.54**



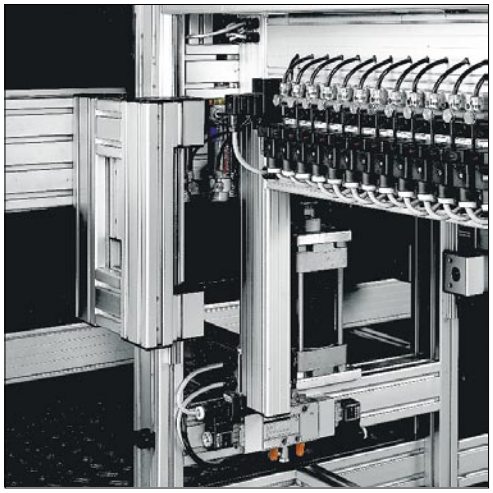
7 Installation Elements

Conduits
Profiles with Integrated Conduit
Electronic Boxes
Fasteners for Cables, Hoses and
Switches

The Installation Elements product group consists of simple conduits, the highly variable modular conduit systems, profiles with integrated conduits, Electronic Boxes and fasteners for cables and switches.

A significant portion of the work related to the planning and construction of fixtures involves the supply of power and compressed air to actuators, the connection of sensors and many other operations for which cables, hoses and pipes need to be laid.

The systematic integration of these solutions into the MB Building Kit System not only results in a clear, uncluttered and attractive design, it also offers greater operating safety by virtue of the clearly laid out installation and the elimination of shear and abrasion points.



7.1 Conduits

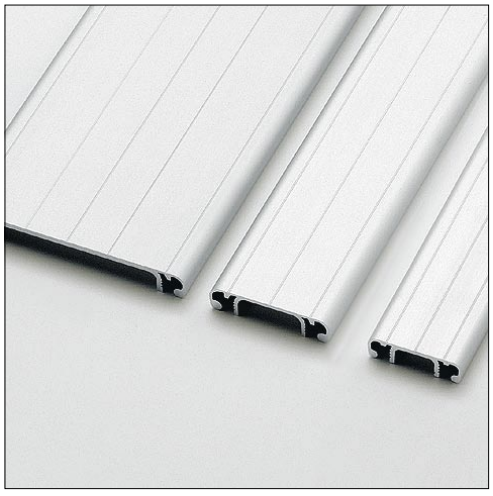
Conduits in the modular dimensions of the profile Lines for integrating all supply lines in machines and systems. Their stable construction from extruded aluminium means that the conduits are self-supporting even over long runs.

Installation conduits can be customised from Conduit Profiles E/SE with fixed modular dimensions 30x15 mm to 80x80 mm or from Support Profiles and Wall Profiles of modular conduit system 40x40 mm to 160x160 mm.

The Cable Duct is a special conduit which is particularly suitable for work area applications.
It is therefore described in Section 6.5 Work Bench Design.

7.1.1 Conduits E

Simple aluminium conduits for installation of cables and hoses. The conduits are made from U-section Conduit Profiles and a matching Lid Profile.
They are available in the modular dimensions of Profiles 6 and 8.



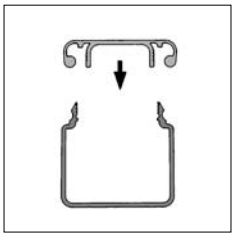
The Lid Profiles can be used as covers for the U-shaped Conduit Profiles and for the modular conduit system.

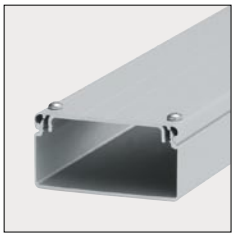
Conduits SE are fitted with continuous screw channels for securing the Conduit Caps.
For conduits E, it is possible, by using Conduit Cap Fastener E, to mount caps from the modular conduit system on conduits E of modular dimension 40 mm.

Conduit Profiles

Conduit Profiles E and the corresponding Lid Profiles can be used to construct installation conduits of sizes 30x15 mm to 80x80 mm.

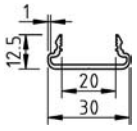
Self-Tapping Screws can also be used in the marking guideline to secure the Lid Profile.
An electrically conductive connection is established at the same time.





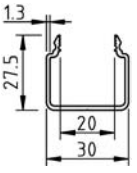
The installation conduits in the SE version feature a screw channel for fastening End Caps. This makes these cable routing conduits easier to use.

Conduit Profile U	x
30x30 SE; 60x30 D30 SE; 60x30 D60 SE; 60x60 SE	6.8
40x40 SE; 80x40 D40 SE; 80x40 D80 SE; 80x80 SE	7.2



Conduit Profile U 30x15 E
Al, anodized
A = 0.72 cm²
m = 0.19 kg/m

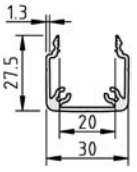
natural, cut-off max. 3000 mm	7.0.002.97



Conduit Profile U 30x30 E
Al, anodized
A = 1.12 cm²
m = 0.30 kg/m

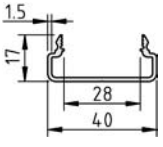
natural, cut-off max. 3000 mm	7.0.002.89

New in catalogue



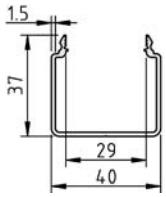
Conduit Profile U 30x30 SE
Al, anodized
A = 1.67 cm²
m = 0.44 kg/m

natural, cut-off max. 3000 mm	0.0.487.24



Conduit Profile U 40x20 E
Al, anodized
A = 1.01 cm²
m = 0.27 kg/m

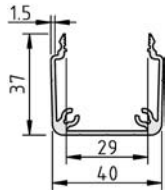
natural, cut-off max. 3000 mm	7.0.001.42



Conduit Profile U 40x40 E
Al, anodized
A = 1.70 cm²
m = 0.45 kg/m

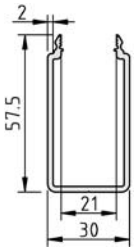
natural, cut-off max. 3000 mm	7.0.001.44

New in catalogue



Conduit Profile U 40x40 SE
Al, anodized
A = 2.23 cm²
m = 0.61 kg/m

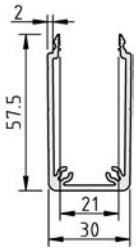
natural, cut-off max. 3000 mm	0.0.487.27



Conduit Profile U 60x30 D30 E
Al, anodized
A = 2.78 cm²
m = 0.75 kg/m

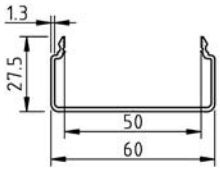
natural, cut-off max. 3000 mm	7.0.002.93

New in catalogue



Conduit Profile U 60x30 D30 SE
Al, anodized
A = 3.22 cm²
m = 0.86 kg/m

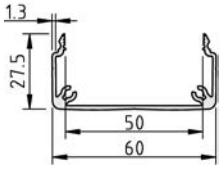
natural, cut-off max. 3000 mm	0.0.487.30



Conduit Profile U 60x30 D60 E
Al, anodized
A = 1.51 cm²
m = 0.41 kg/m

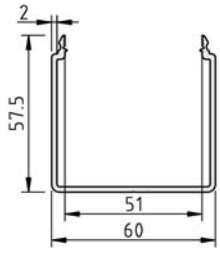
natural, cut-off max. 3000 mm	7.0.002.95

New in catalogue



Conduit Profile U 60x30 D60 SE
Al, anodized
A = 2.09 cm²
m = 0.55 kg/m

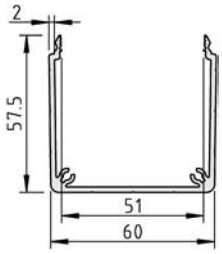
natural, cut-off max. 3000 mm	0.0.487.33



Conduit Profile U 60x60 E
Al, anodized
A = 3.38 cm²
m = 0.91 kg/m

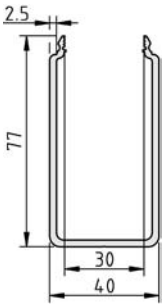
natural, cut-off max. 3000 mm	7.0.002.91

New in catalogue



Conduit Profile U 60x60 SE
Al, anodized
A = 3.82 cm²
m = 1.02 kg/m

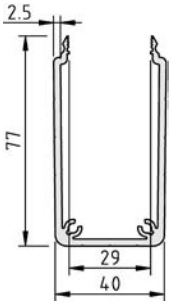
natural, cut-off max. 3000 mm	0.0.487.36



Conduit Profile U 80x40 D40 E
Al, anodized
A = 4.62 cm²
m = 1.25 kg/m

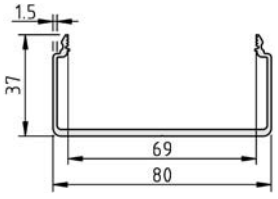
natural, cut-off max. 3000 mm	7.0.002.75

New in catalogue



Conduit Profile U 80x40 D40 SE
Al, anodized
A = 5.11 cm²
m = 1.37 kg/m

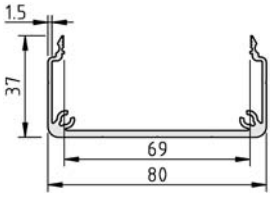
natural, cut-off max. 3000 mm	0.0.487.39



Conduit Profile U 80x40 D80 E
Al, anodized
A = 3.06 cm²
m = 0.82 kg/m

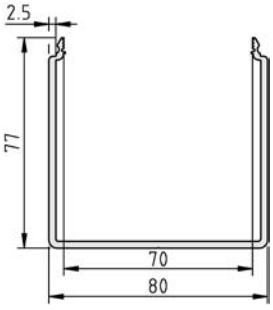
natural, cut-off max. 3000 mm	7.0.002.76

New in catalogue



Conduit Profile U 80x40 D80 SE
Al, anodized
A = 3.60 cm²
m = 0.96 kg/m

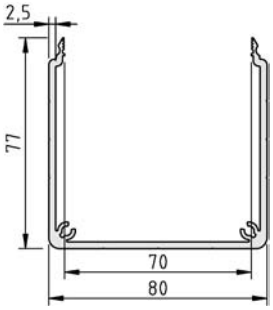
natural, cut-off max. 3000 mm	0.0.487.42



Conduit Profile U 80x80 E
Al, anodized
A = 5.61 cm²
m = 1.52 kg/m

natural, cut-off max. 3000 mm	7.0.002.74

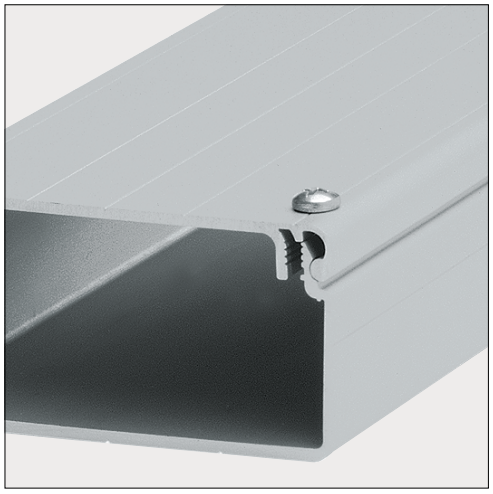
New in catalogue



Conduit Profile U 80x80 SE
Al, anodized
A = 6.10 cm²
m = 1.64 kg/m

natural, cut-off max. 3000 mm	0.0.487.45

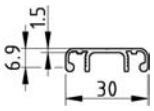
Lid Profiles



The Lid Profiles can be used as covers for U-shaped Conduit Profiles and the modular conduit system.

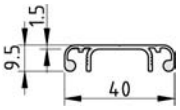
Self-Tapping Screws can also be used in the marking guideline to secure the Lid Profile. An electrically conductive connection is established at the same time.

Lid Profile	Self-Tapping Screw DIN 7981	Bore
D30 and D60	3.5x6.5	∅ 3.0 mm
D40 and D80	4.2x9.5	∅ 3.5 mm



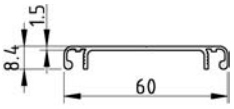
Lid Profile D30 E
Al, anodized
A = 0.85 cm²
m = 0.23 kg/m

natural, cut-off max. 3000 mm	7.0.002.85



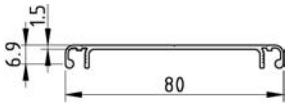
Lid Profile D40 E
Al, anodized
A = 1.13 cm²
m = 0.30 kg/m

natural, cut-off max. 3000 mm	7.0.001.46



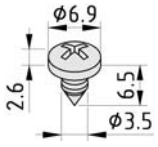
Lid Profile D60 E
Al, anodized
A = 1.50 cm²
m = 0.41 kg/m

natural, cut-off max. 3000 mm	7.0.002.87



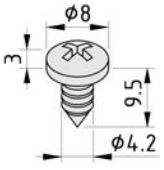
Lid Profile D80 E
Al, anodized
A = 2.12 cm²
m = 0.57 kg/m

natural, cut-off max. 3000 mm	7.0.002.73



Self-Tapping Screw DIN 7981 St 3.5x6.5
St
m = 74 g/100

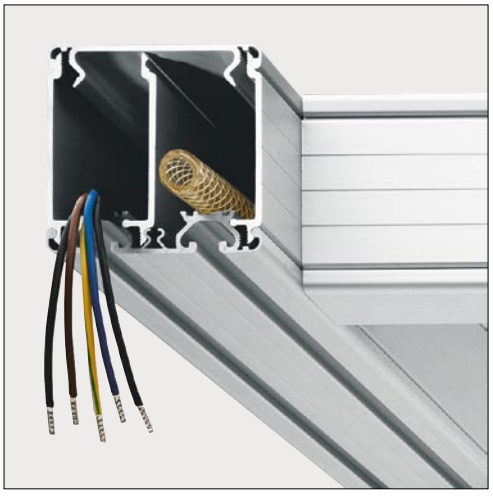
bright zinc-plated, 1 PU = 100 pce.	8.0.008.65



Self-Tapping Screw DIN 7981 St 4.2x9.5
St
m = 131 g/100

bright zinc-plated, 1 PU = 100 pce.	0.0.196.98

7.1.2 Modular Conduit System



The modular conduit system can be used to construct various sizes of conduit to accommodate cables and hoses.

The combination of Wall Profiles, Support Profiles and Lid Profiles facilitates the construction of complex, branched conduit structures without time-consuming processing of the walls at the branch points. The conduit elements are simply locked into each other.

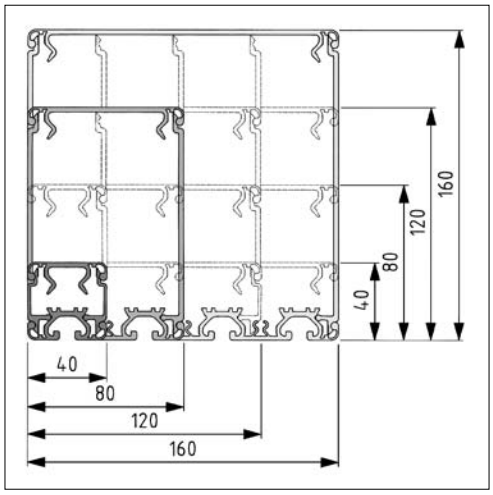
Existing conduit structures can also be modified subsequently with ease.
Even with branched systems, the cables and hoses can be installed or replaced at a later stage without the need for drilling etc.

The modular conduit system is constructed using the modular dimensions of Line 8. Profile structures can thus be combined without any restrictions. Support Profiles with grooves facilitate the process of connecting profiles and conduits.

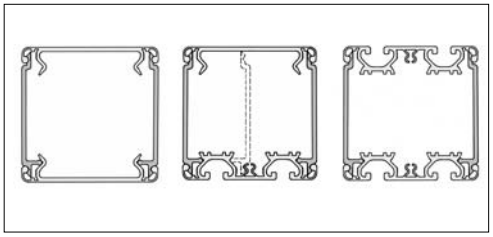
The possibilities of the modular conduit system comprise:
> Wall Profiles, Support Profiles, with and without grooves, in modular dimensions, for the construction of any type of self-supporting conduits from 40x40 mm up to 160x160 mm
> Variable positioning of the Support Profiles and Wall Profiles for different conduit configurations; the conduit can be opened from any side
> Partitioning of individual sectors by incorporating supplementary wall elements within the conduit
> Support Profiles with angular geometry for constructing special installation conduits
> High rigidity, inherent stability, load-bearing and scratchproof surface and low weight by virtue of the anodized profiles
> Total compatibility thanks to integration into the MB Building Kit System

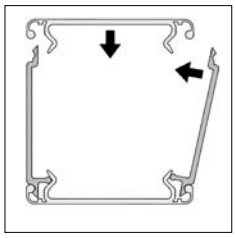
Wall and Support Profiles

Various conduits for running cables and hoses, ranging from sizes 40x40 mm through all intermediate sizes to 160x160 mm, can be constructed quickly and flexibly.



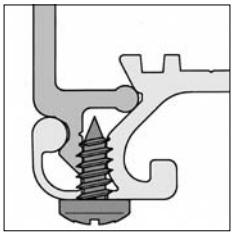
The fact that the Support Profiles and Wall Profiles have identical external dimensions means that different conduits can be constructed by choosing the position of the profiles accordingly. The conduit can be opened and closed from different sides.





Straightforward construction of the modular conduits by moving the Wall Profiles into the Support Profiles. The Support Profiles can also be used as a lid. Before installation, it is advisable to clean the locking areas of the conduit elements with a cloth soaked in oil.

The cable conduit can be opened with a screwdriver.



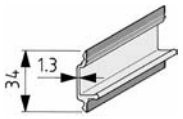
Wall Profiles and Lid Profiles can be secured in position by means of Self-Tapping Screw St 4.2x9.5. The Support Profiles must be provided with a bore ∅ 3.5 mm in the marking groove for this purpose. The screw connection creates a conductive bond between the conduit elements.

By subdividing Wall Profiles and Support Profiles into segments and machining accordingly (for e.g. cable glands, plug sockets, pushbuttons etc.) it is possible to reduce the load involved in assembling, dismanting and repairing installations.

Support Profiles with or without Line 8 grooves form the base and lid of the modular conduit system.

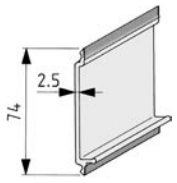
Conduit of dimensions 160x160 mm with Support Profile 160 with grooves can be used as a base.

Wall Profiles



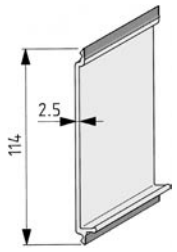
Wall Profile 40
Al, anodized
A = 0.76 cm²
m = 0.20 kg/m

natural, cut-off max. 3000 mm	0.0.196.39



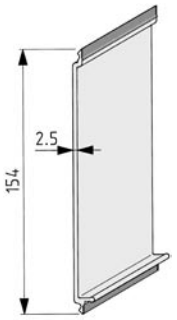
Wall Profile 80
Al, anodized
A = 2.03 cm²
m = 0.55 kg/m

natural, cut-off max. 3000 mm	0.0.196.42



Wall Profile 120
Al, anodized
A = 3.04 cm²
m = 0.82 kg/m

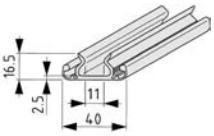
natural, cut-off max. 3000 mm	0.0.411.19



Wall Profile 160
Al, anodized
A = 4.04 cm²
m = 1.09 kg/m

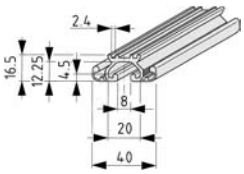
natural, cut-off max. 3000 mm	0.0.411.21

Support Profiles



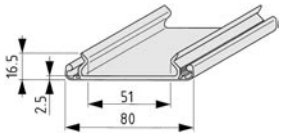
Support Profile 40
Al, anodized
A = 1.74 cm²
m = 0.47 kg/m

natural, cut-off max. 3000 mm	0.0.196.38



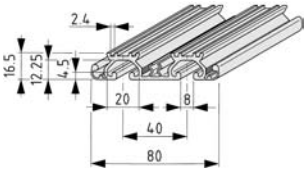
Support Profile 40 with groove 8
Al, anodized
A = 2.06 cm²
m = 0.55 kg/m

natural, cut-off max. 3000 mm	0.0.196.37



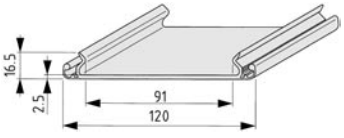
Support Profile 80
Al, anodized
A = 2.73 cm²
m = 0.74 kg/m

natural, cut-off max. 3000 mm	0.0.196.41



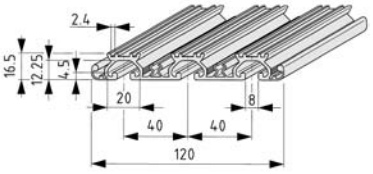
Support Profile 80 with grooves 8
Al, anodized
A = 4.17 cm²
m = 1.13 kg/m

natural, cut-off max. 3000 mm	0.0.196.40



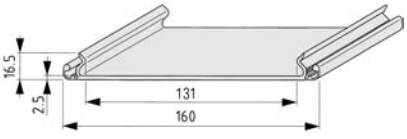
Support Profile 120
Al, anodized
A = 3.73 cm²
m = 1.01 kg/m

natural, cut-off max. 3000 mm	0.0.418.47



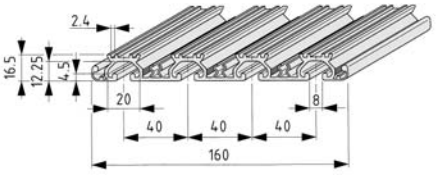
Support Profile 120 with grooves 8
Al, anodized
A = 6.21 cm²
m = 1.68 kg/m

natural, cut-off max. 3000 mm	0.0.418.48



Support Profile 160
Al, anodized
A = 4.73 cm²
m = 1.27 kg/m

natural, cut-off max. 3000 mm	0.0.265.84



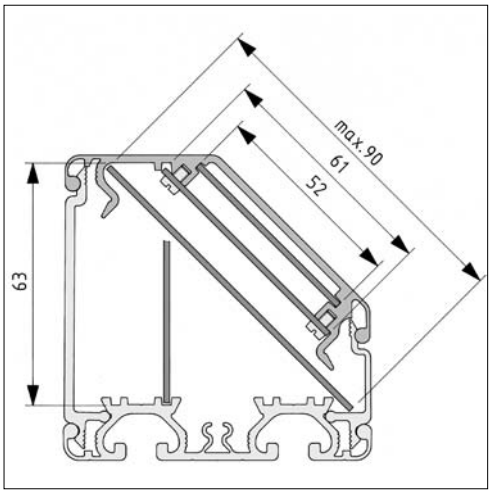
Support Profile 160 with grooves 8
Al, anodized
A = 8.27 cm²
m = 2.23 kg/m

natural, cut-off max. 3000 mm	0.0.265.85

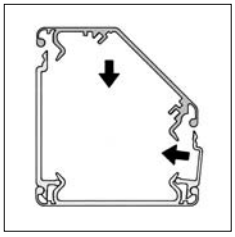
Support Profiles

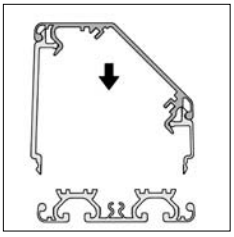
Angled Geometry

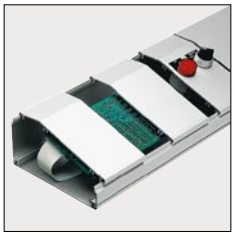
Support Profiles 80-45° and 160-20° are particularly suitable, as the lids of a modular conduit, for constructing operating consoles of any length, manual control boxes or similar applications.
The housings can be used to hold and secure printed circuit boards of various sizes up to width 100 mm.

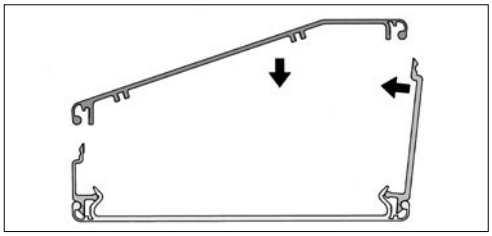


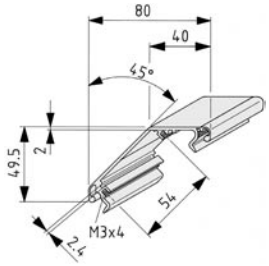
Support Profile 80-45° can be used as floor or lid element, while Support Profile 160-20° can only be used as a lid profile.
The Wall Profiles must exhibit a height difference of 40 mm.





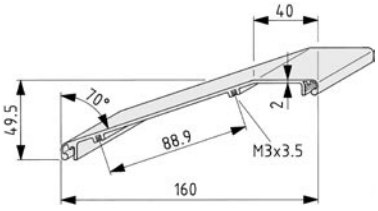






Support Profile 80-45°
Al, anodized
A = 3.53 cm²
m = 0.90 kg/m

natural, cut-off max. 3000 mm	0.0.411.54



Support Profile 160-20°
Al, anodized
A = 4.29 cm²
m = 1.16 kg/m

natural, cut-off max. 3000 mm	0.0.404.81

7.1.3 Accessories for Conduits

Various accessories can be added to enhance the functionality of the conduit system.

Conduit Caps

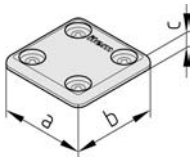
Rounded coverings for profile edges and end face closures for conduits and operating consoles, which eliminate deburring.

Recommended screws for fastening the Conduit Caps:

Modular 30 mm dimension: Self-Tapping Screw DIN 7981 3.5x6.5 (Order No. 8.0.008.65)

Modular 40 mm dimension: Self-Tapping Screw DIN 7981 4.2x9.5 (Order No. 0.0.196.98)

New in catalogue



Conduit Cap 30x15
PA-GF
a = 30 mm b = 15 mm c = 3 mm
m = 1.0 g

black, 1 pce.	0.0.486.81

New in catalogue

Conduit Cap 30x30
PA-GF
a = 30 mm b = 30 mm c = 3 mm
m = 2.0 g

black, 1 pce.	0.0.486.82

New in catalogue

Conduit Cap 40x20
PA-GF
a = 40 mm b = 20 mm c = 4 mm
m = 3.0 g

black, 1 pce.	0.0.486.85

Conduit Cap 40x40
PA-GF
a = 40 mm b = 40 mm c = 4 mm
m = 8.0 g
black, 1 pce. 0.0.196.88

New
in catalogue

Conduit Cap 60x30
PA-GF
a = 60 mm b = 30 mm c = 3 mm
m = 4.0 g
black, 1 pce. 0.0.486.83

New
in catalogue

Conduit Cap 60x60
PA-GF
a = 60 mm b = 60 mm c = 3 mm
m = 8.0 g
black, 1 pce. 0.0.486.84

Conduit Cap 80x40
PA-GF
a = 80 mm b = 40 mm c = 4 mm
m = 14.0 g
black, 1 pce. 0.0.196.89

Conduit Cap 80x80
PA-GF
a = 80 mm b = 80 mm c = 4 mm
m = 30.0 g
black, 1 pce. 0.0.196.90

Conduit Cap 120x40
PA-GF
a = 120 mm b = 40 mm c = 4 mm
m = 24.0 g
black, 1 pce. 0.0.411.33

Conduit Cap 120x80
PA-GF
a = 120 mm b = 80 mm c = 4 mm
m = 45.0 g
black, 1 pce. 0.0.411.34

Conduit Cap 120x120
PA-GF
a = 120 mm b = 120 mm c = 4 mm
m = 68.0 g
black, 1 pce. 0.0.418.33

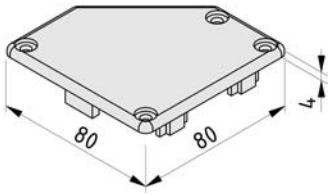
Conduit Cap 160x40
PA-GF
a = 160 mm b = 40 mm c = 4 mm
m = 30.0 g
black, 1 pce. 0.0.364.81

Conduit Cap 160x80
PA-GF
a = 160 mm b = 80 mm c = 4 mm
m = 58.0 g
black, 1 pce. 0.0.265.97

Conduit Cap 160x120
PA-GF
a = 160 mm b = 120 mm c = 4 mm
m = 89.0 g
black, 1 pce. 0.0.411.35

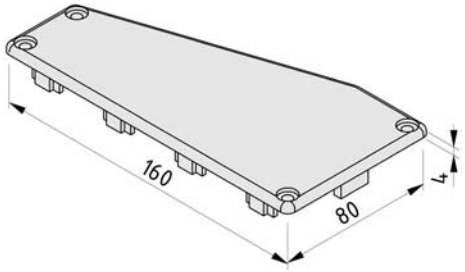
Conduit Cap 160x160
PA-GF
a = 160 mm b = 160 mm c = 4 mm
m = 115.0 g

black, 1 pce.	0.0.411.36



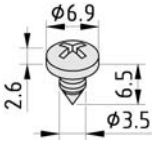
Conduit Cap Set 80x80-45°
PA-GF
Conduit Cap 80x80-45° left
Conduit Cap 80x80-45° right
m = 50.0 g

black, 1 set	0.0.406.68



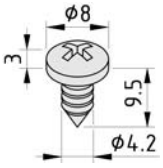
Conduit Cap Set 160x80-20°
PA-GF
Conduit Cap 160x80-20° left
Conduit Cap 160x80-20° right
m = 96.0 g

black, 1 set	0.0.406.67



Self-Tapping Screw DIN 7981 St 3.5x6.5
St
m = 74 g/100

bright zinc-plated, 1 PU = 100 pce.	8.0.008.65



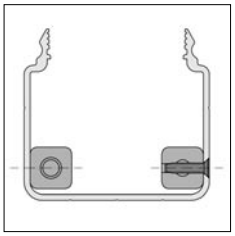
Self-Tapping Screw DIN 7981 St 4.2x9.5
St
m = 131 g/100

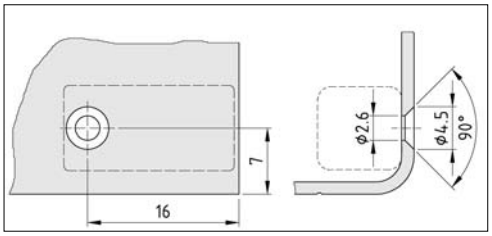
bright zinc-plated, 1 PU = 100 pce.	0.0.196.98

Conduit Cap Fastener 40 E

Conduit Cap Fastener 40 E is an adapter element for fitting Conduit Caps onto conduits E (no screw channel) of modular dimension 40 mm.

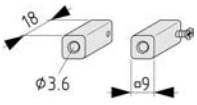
It forms the counterpart support for Self-Tapping Screws DIN 7981 St 4.2x9.5, which are used to attach the Conduit Caps.





The side walls of the conduits must be provided with a countersink which is used for screw-connecting the Conduit Cap Fastener 40 E.

The Conduit Caps are then screw-connected with the end face against the Conduit Profiles.



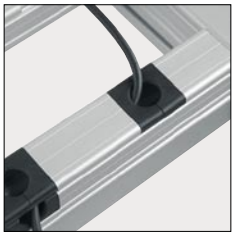
Conduit Cap Fastener 40 E
2 fastening elements, PA-GF, black
2 Self-Tapping Screws DIN 7982-2.2x9.5, St, black
m = 5.0 g

1 set	7.0.003.04

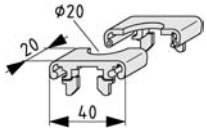
Cable Entry Protectors, Lid and Wall

The Cable Entry Protectors enable hoses and cables to be routed in and out of conduits without having to deburr the profiles or take other protective measures.
A break is made at a suitable point in the Support Profiles and Wall Profiles (modular conduit system) or the Lid Profiles (conduits E/SE). A Cable Entry Protector covers the sharp cut edges of the profiles and protects cables and hoses as they emerge from the conduits.
At conduit branches, multiple Cable Entry Protectors can be located next to each other on the inside of the conduit.

Cable Entry Protectors, Lid are suitable for use with Lid Profiles and Support Profiles. Cable Entry Protectors, Wall are suitable for the appropriate Wall Profiles.

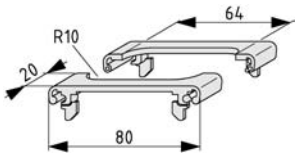


Cable Entry Protectors, Lid are divided into two parts, which greatly facilitates installation for cables fitted with plugs. This avoids having to thread cables and hoses through.



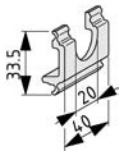
Cable Entry Protector Lid 40
PA-GF
2 halves
m = 7.0 g

black, 1 set	0.0.479.76



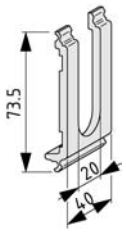
Cable Entry Protector Lid 80
PA-GF
2 halves
m = 9.0 g

black, 1 set	0.0.479.77



Cable Entry Protector Wall 40
PA-GF
m = 5.0 g

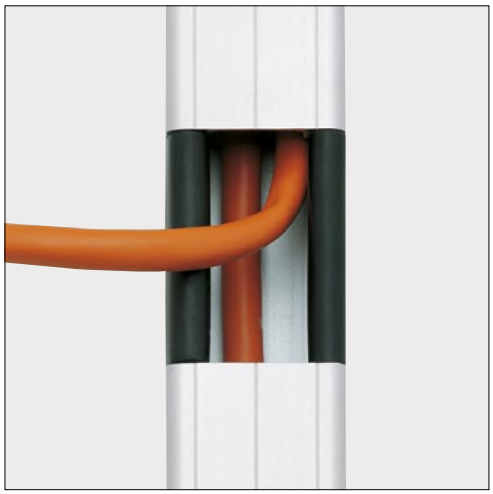
black, 1 pce.	0.0.479.74



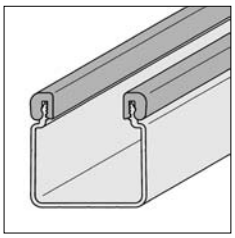
Cable Entry Protector Wall 80
PA-GF
m = 9.0 g

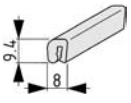
black, 1 pce.	0.0.479.75

Conduit Edge Profile



Flexible cover to protect cable insulation. It can be used with wall elements of the modular conduit systems or Conduit Profiles E.

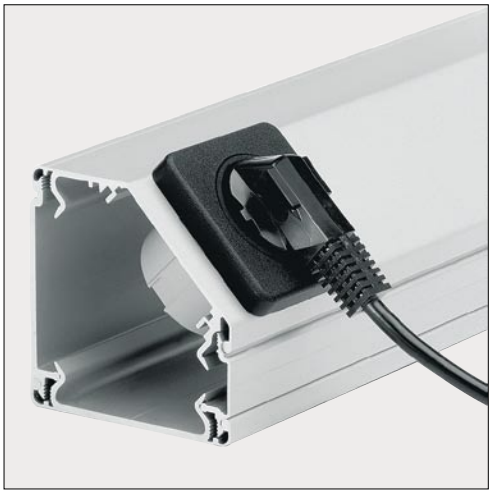




Conduit Edge Profile
TPE
m = 60 g/m

black, 1 roll length 20 m	0.0.411.58

Flush-Mounted Sockets

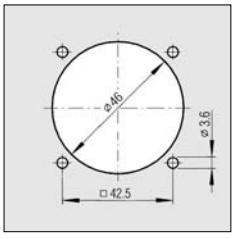


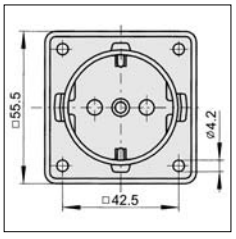
Flush-Mounted Sockets are easily installed in Wall Profiles, Support Profiles, panel elements, sheets etc.

When using the supplied insulation box with strain relief and shock-proof leads, the conduit elements do not need to be connected to the protective conductor system. Electrical connection may only be performed by a fully qualified electrician.

The sockets are VDE-compliant (German standards sockets).

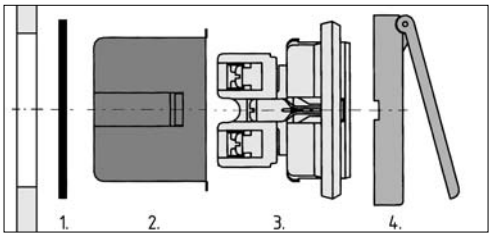
The Flush-Mounted Socket with Lid is dust-tight and protected against splash-water (IP44)



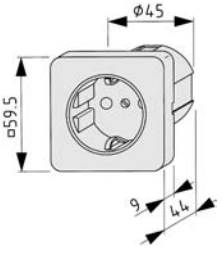


Mounting operations

Socket housing is secured by means of 4 Self-Tapping Screws DIN 7981 St-4.2x9,5 (Art. No. 0.0.196.98).

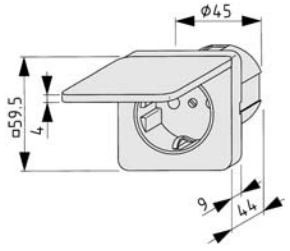


Sequence for installing Flush-Mounted Socket with lid:
1. Seal
2. Insulation box
3. Socket
4. Cover frame with swing lid



Flush-Mounted Socket
Socket, PA, black
Cover frame, PA, black
Insulation box, PA, grey
2-pin + earth, 16 A, 250 V
m = 50.0 g

1 pce.	0.0.465.82



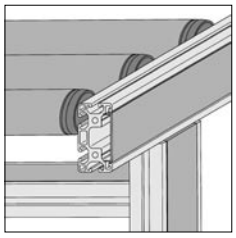
Flush-Mounted Socket with Lid
Socket, PA, black
Cover frame with swing lid and seal, PA, black
Protection: IP 44
Insulation box, PA, grey
m = 57.0 g

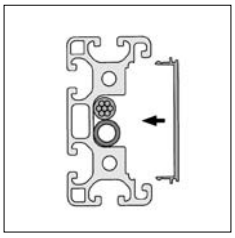
1 pce.	0.0.465.84

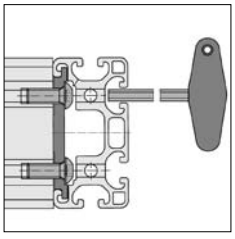
7.2 Profiles with Integrated Conduit

Stand Profiles with integrated conduits on either one or both sides can be used for lightweight applications such as the frame construction for a roller conveyor or transfer system. These conduits can be used to accommodate cables for motors and sensors. A special Lid Profile is used to seal the conduit.

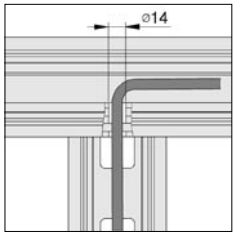
In the case of profiles with installation conduits on both sides, the central web separating the conduits is provided with pre-punched openings for routing cables and hoses from one side to the other.

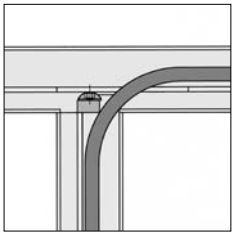




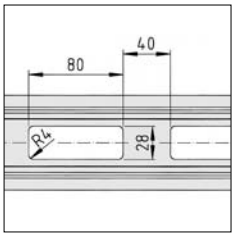


Standard fastening is effected on the end face in conjunction with Stand Profile Connection Element 8 and Button-Head Screws ISO 7380-M8x20 (M = 25 Nm).

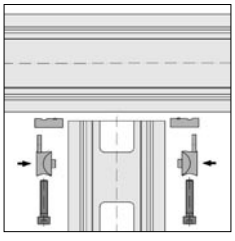




By providing Stand Profile 8 80x40 with a ⌀ 14 mm bore, the profile can be used for routing cables and hoses.

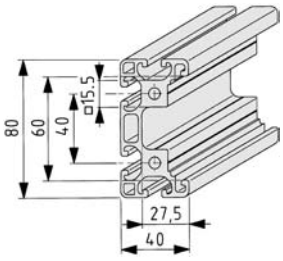


The openings are located at modular intervals and are used for running through cables and hoses.
The position of the cable openings in the profile's longitudinal direction is arbitrary. The minimum profile length is therefore 160 mm.



The joint on the groove side is effected with a Pneumatic Universal-Fastening Set 8 or Automatic-Fastening Set 8 (Section 1.3 Fasteners).

Stand Profiles

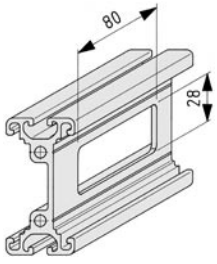


Stand Profile 8 80x40 K60

Al, anodized

A =	10.20 cm²	I_x =	69.02 cm⁴	I_y =	11.74 cm⁴		
		I_t =	2.72 cm⁴				
m =	2.75 kg/m	W_x =	17.26 cm³	W_y =	5.13 cm³		

natural, cut-off max. 6000 mm — 0.0.427.79

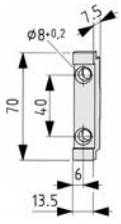


Stand Profile 8 80x40 2xK60

Al, anodized

A =	7.84 cm²	I_x =	64.19 cm⁴	I_y =	7.75 cm⁴		
		I_t =	0.84 cm⁴				
m =	2.05 kg/m	W_x =	16.05 cm³	W_y =	3.67 cm³		

natural, cut-off max. 6000 mm — 3.0.005.00

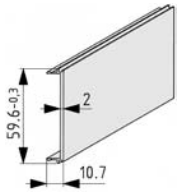


Stand Profile Connection Element 8

Al, anodized

m = 11.0 g

natural, 1 pce. — 3.0.005.03



Cover Profile 60

Al, anodized

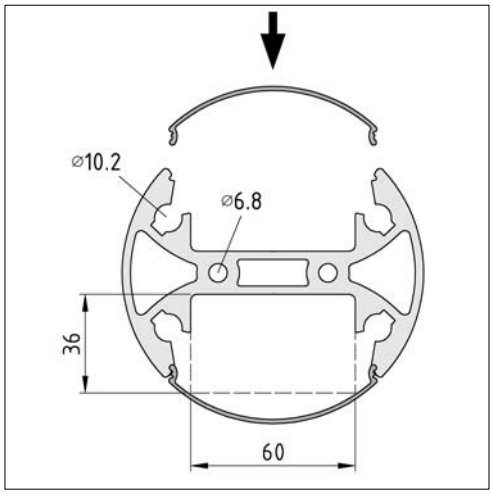
m = 0.36 kg/m

natural, cut-off max. 3000 mm — 3.0.005.01

Column D110

When used in conjunction with two Lid Profiles, Column Profile D110 can be used to create a column of circular cross-section which can form a central table leg or as a stylish support for structures mounted on top of it.

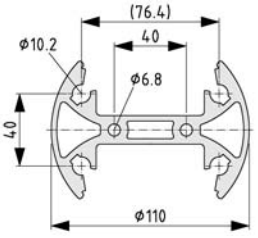
Profiles with grooves of modular dimension 40 mm can be screw-attached using the core bores of Column Profile D110.



Located below the Lid Profiles are integrated conduits for equipment cables. Cables can be run in and out of the column at any point through an opening in the Lid Profiles.

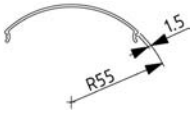
Thread M8 can be tapped in core bores 8960 6.8 mm. Screw channels 8960 10.2 mm are suitable for thread M12 or for use of Automatic Fasteners 8.

Column Profile D110 can be attached by its end face to various surfaces by using Flange D 130 (Section 6.5 Work Bench Design).



Column Profile D110
Al, anodized
A = 20.64 cm² I_x = 63.06 cm⁴ I_y = 283.93 cm⁴
m = 5.57 kg/m W_x = 16.55 cm³ W_y = 51.16 cm³

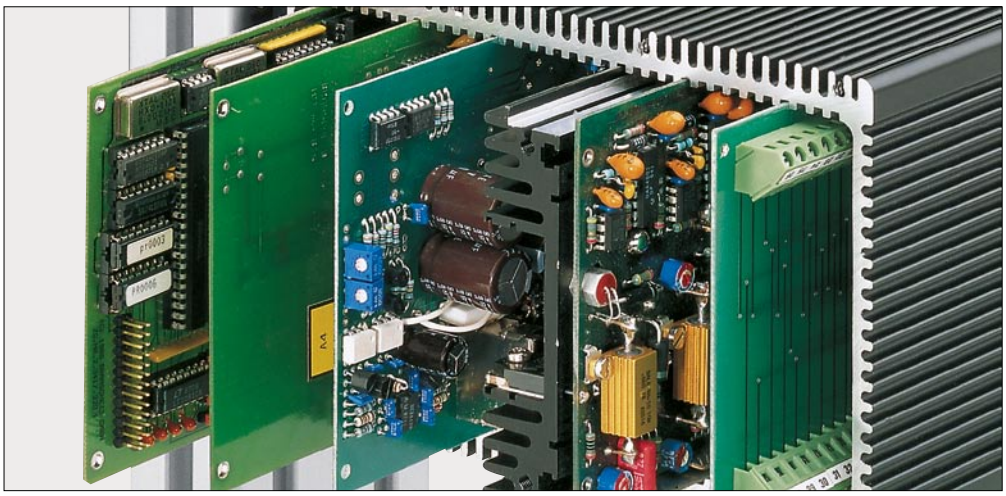
natural, cut-off max. 6000 mm	0.0.475.11

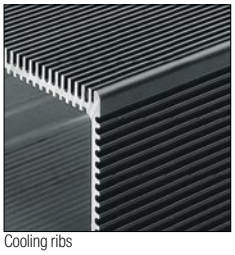


Column Lid Profile D110
Al, anodized
A = 1.39 cm²
m = 0.37 kg/m

natural, cut-off max. 3000 mm	0.0.475.09

7.3 Electronic Boxes




Cooling ribs


Grooves for securing boxes

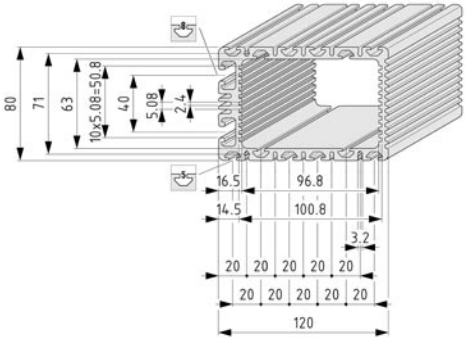

Seal in box lid

Sealed Electronic Boxes (IP 65, EN 60529) can be constructed, in any length, using Electronic-Box Profiles and the corresponding lids:

> Stable, anodized aluminium profiles with cooling ribs for heat dissipation, special grooves (in 5.08 mm grid) to accommodate printed circuit boards in European Standard format (100x160 mm) and Profile 5 and 8 grooves for integration into the MB Building Kit System

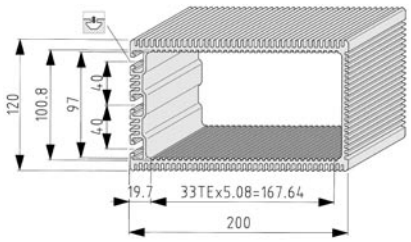
> Electronic-Box Lid, plain finish or with knockouts for cable glands, together with bore grid for installing a backplane; sealing provided by matching, peripheral seals

Electronic-Box Profiles



Electronic-Box Profile 8 120x80
Al, anodized
Protection: IP 65, EN 60529 in connection with Electronic-Box Lid 8 120x80
A = 20.50 cm²
m = 5.55 kg/m

black, cut-off max. 3000 mm	0.0.259.58



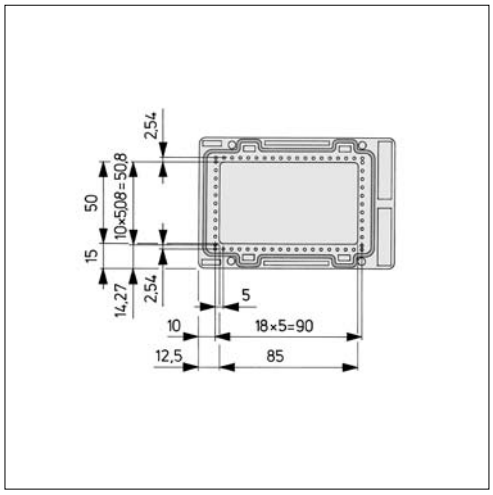
Electronic-Box Profile 8 200x120
Al, anodized
Protection: IP 65, EN 60529 in connection with Electronic-Box Lid 8 200x120
A = 36.51 cm²
m = 9.85 kg/m

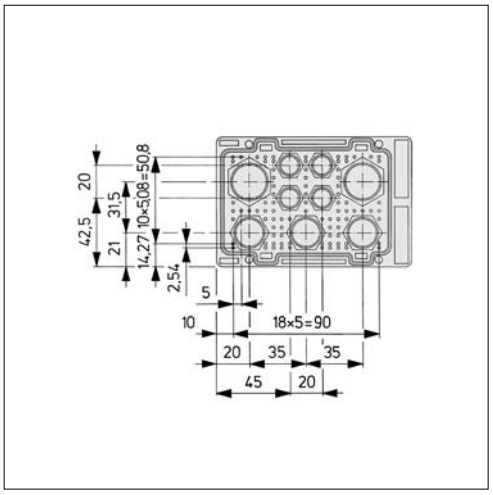
black, cut-off max. 3000 mm	0.0.259.36

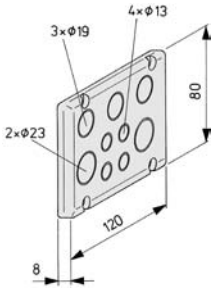
Electronic-Box Lids

Electronic-Box Lids 8 120x80 are provided with an all-round silicon seal and have a bore grid on the inside. Knockouts are provided for cable glands.

Electronic-Box Lids 8 120x80

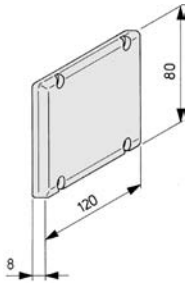






Electronic-Box Lid 8 120x80
PA-GF, black
Seal
Protection: IP 65, EN 60529 in connection with Electronic-Box Profile 8 120x80
4 Self-Tapping Screws DIN 7981-4.2x13, St, bright zinc-plated
m = 64.0 g

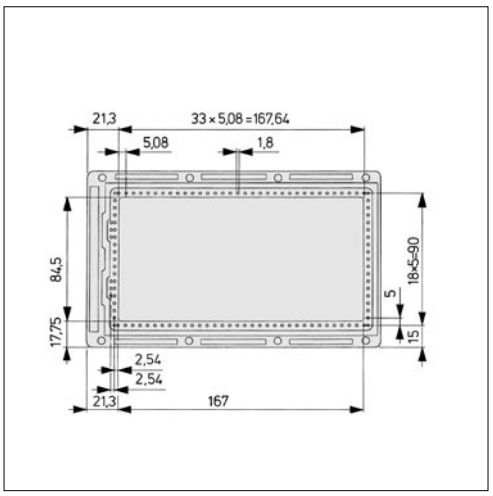
1 pce.	0.0.259.60

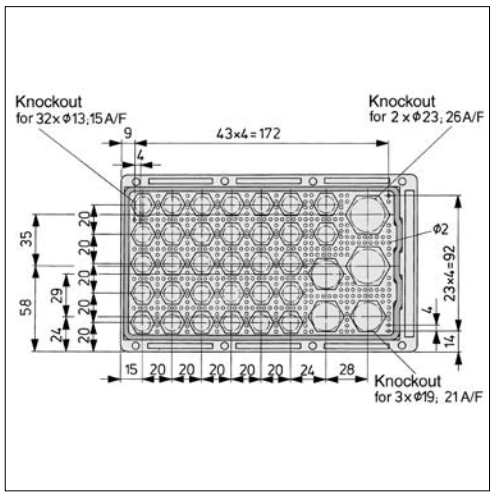


Electronic-Box Lid 8 120x80, plain
PA-GF, black
Seal
Protection: IP 65, EN 60529 in connection with Electronic-Box Profile 8 120x80
4 Self-Tapping Screws DIN 7981-4.2x13, St, bright zinc-plated
m = 59.0 g

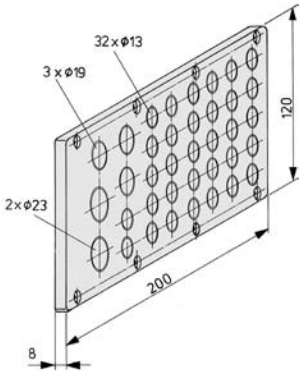
1 pce.	0.0.259.61

Electronic-Box Lids 8 200x120



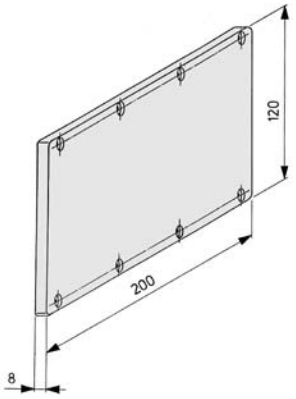


5 6 **8** 12



Electronic-Box Lid 8 200x120
PA-GF, black
Seal
Protection: IP 65, EN 60529 in connection with Electronic-Box Profile 8 200x120
8 Self-Tapping Screws DIN 7981-4.2x13, St, bright zinc-plated
m = 170.0 g

1 pce.	0.0.259.37



Electronic-Box Lid 8 200x120, plain
PA-GF, black
Seal
Protection: IP 65, EN 60529 in connection with Electronic-Box Profile 8 200x120
8 Self-Tapping Screws DIN 7981-4.2x13, St, bright zinc-plated
m = 140.0 g

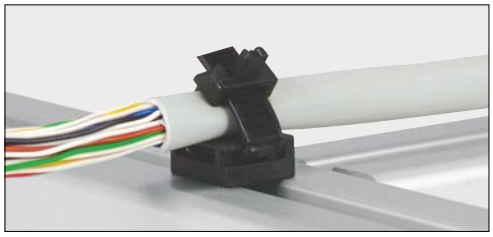
1 pce.	0.0.259.44

7.4 Cable and Hose Fasteners

In addition to routing cables, hoses and leads in fully enclosed insulation conduits, these can also be run along the profile or other elements.

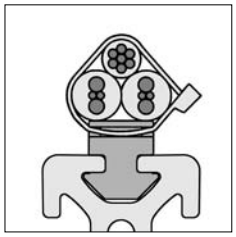
Universal Holder 8

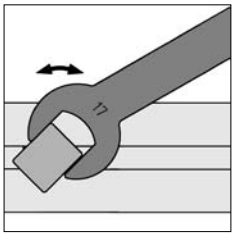
New in catalogue



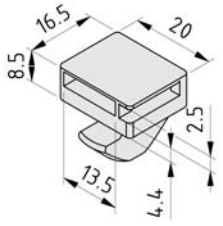
Universal Holder 8 provides a particularly easy means for securing cables to Line 8 profile structures.

Cable ties provide an easy means of securing cables, lines and hoses to Universal Holder 8, both along and across the groove.





Universal Holder 8 is inserted directly into the profile groove without additional fastening elements and is locked in place by means of a 90° turn. A wrench A/F 17 is recommended for this operation.

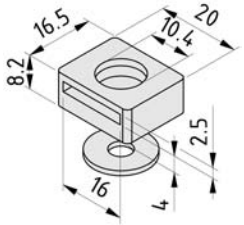


Universal Holder 8
PA-GF
m = 4.0 g

black, 1 pce.	0.0.494.52

Universal Holder

The Universal Holder can be assembled at any angle. Fastening is performed in the profile groove of the panel element using a Countersunk Screw DIN 7991-M5 and corresponding T-Slot Nut or in conjunction with a hexagon nut DIN 936-M5.

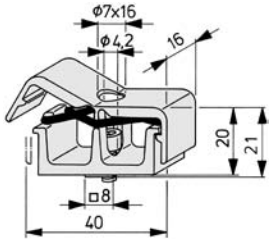


Universal Holder
PA-GF, black
1 washer DIN 9021-5.3, St, bright zinc-plated
m = 3.0 g

1 set	0.0.418.24

Holder for Cables and Hoses

Fastening element with two separate pockets for open routing of cables or hoses up to max. ∅ 12 mm. Fastening is performed on profiles using Hexagon Socket Head Cap Screw DIN 912-M4 and T-Slot Nut 8 Zn or on panel elements etc.
The cable is held in place by the O-ring.



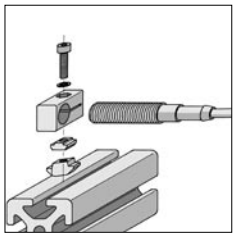
Holder for Cables and Hoses 8
PA, black
O-ring
1 Hexagon Socket Head Cap Screw DIN 912-M4x10, St, bright zinc-plated
m = 10.0 g

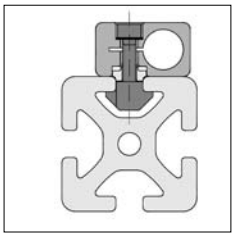
1 set	0.0.196.65

Limit-Switch Holders

For fastening Limit Switches to profiles or other components.

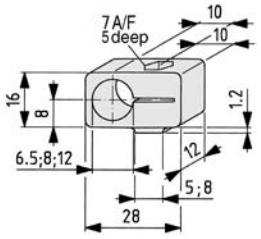
When an anti-torsion block is not used, the Limit-Switch Holders can be secured to all profile Lines.





Limit-Switch Holders D6.5, D8 and D12 can be attached with anti-torsion blocks either parallel or at right-angles to the Profile 5 or Profile 8 groove.

Fastening Limit-Switch Holders D6.5, D8 and D12 with Hexagon Socket Head Cap Screw DIN 912-M4, spring washer and T-Slot Nut of the corresponding Line.



Limit-Switch Holder D6.5
Housing and anti-torsion block, PA-GF, black
Spring washer, St, black
m = 8.0 g

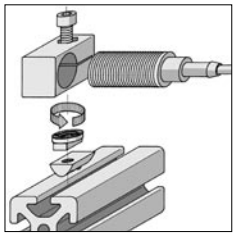
1 set	0.0.406.40

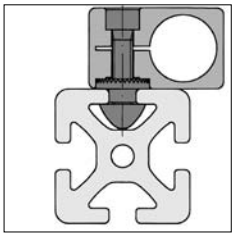
Limit-Switch Holder D8
Housing and anti-torsion block, PA-GF, black
Spring washer, St, black
m = 7.0 g

1 set	0.0.406.41

Limit-Switch Holder D12
Housing and anti-torsion block, PA-GF, black
Spring washer, St, black
m = 6.0 g

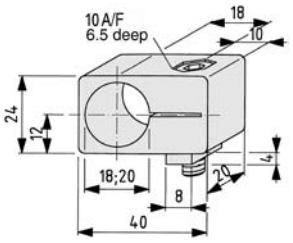
1 set	0.0.406.42





When the anti-torsion block is used, Limit-Switch Holders D18 and 20 can be attached in 10° increments relative to the Profile 8 groove. Without anti-torsion blocks, attachment is possible at any angle.

For fastening Limit-Switch Holders D18 and D20 with Hexagon Socket Head Cap Screw DIN 912-M6 and T-Slot Nut of the corresponding Line.
Screw M6x28 comes in a special length for fastening to Line 8 profiles.



Limit-Switch Holder D18
Housing and anti-torsion block, PA-GF, black
Cap Screw DIN 912-M6x28, St, bright zinc-plated
m = 23.0 g

1 set	0.0.411.30

Limit-Switch Holder D20
Housing and anti-torsion block, PA-GF, black
Cap Screw DIN 912-M6x28, St, bright zinc-plated
m = 22.0 g

1 set	0.0.411.31

8

Dynamic Elements

Linear Slides
Mechanical Drive Elements
Accessories for Mechanical Drive Elements

The Dynamic Elements product group of the MB Building Kit System contains components which enable precise linear movement. The dynamic elements make full use of the modular concept of the Building Kit System - the components can be combined quickly and inexpensively without need for additional machining.
The profiles of the basic frame are both construction elements and guide rails. As a result, laborious alignment work can be avoided in the majority of cases.

The dynamic elements are subdivided into:
> Linear slides
Roller Guides on shafts secured to the profile groove
Ball-bearing guide bushes on free-standing guiding shafts
Linear guide systems on guide rails on the profile groove

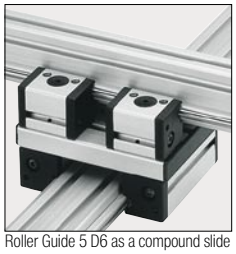
> Linear drives
Timing-belt drives in various Lines, for driving all linear units
Ball Screw Units for precise positioning
Chain drives where compactness and robustness are paramount

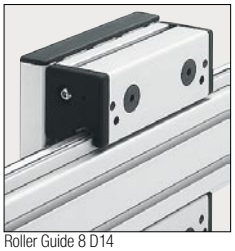
> Mechanical drive elements
Couplings and Bevel Gearboxes for connecting motors and other drive elements
Multi-Spline Shafts, adaption elements and fastening elements for transferring torque between drive elements

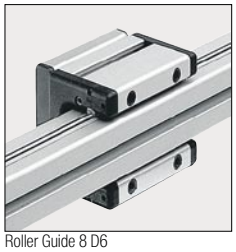
> Accessories for linear movements
Limit switches for position detection
Slide Clamps for manually securing linear slides

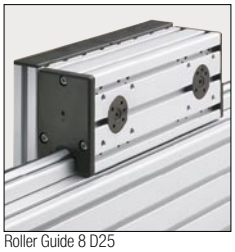
8.1 Linear Slides

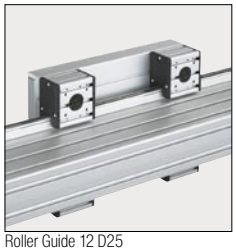
8.1.1 Roller Guides


Roller Guide 5 D6 as a compound slide


Roller Guide 8 D14


Roller Guide 8 D6


Roller Guide 8 D25


Roller Guide 12 D25


Two Roller Guides on one Profile


The Roller Guides can be extended to any length

The modular Roller Guides feature ease of assembly, high load-bearing capacity, a choice of stroke lengths and high travelling speed.
The low resistance and generous dimensions contribute to the long service life. Roller Guides consist of slides and guide profile.
The slides are of modular design, constructed using Bearing Units with ball-bearing mounted, prismatic rollers from roller bearing steel, End Cap and Lubricating Systems, and a carriage plate made from a construction profile.

The Roller Guides are mounted on Profiles 5, 8 or 12, with the Shaft-Clamp Profiles being secured easily and inexpensively by clipping or screwing them (Roller Guides D25) into the grooves. The hardened and polished steel shafts are then pressed into the Shaft-Clamp Profiles along the entire length of the Guide. By selecting appropriate lengths and offset section joints for the supporting profile, the Shaft-Clamp Profile and the shaft, it is possible to construct virtually any length of Roller Guide. Shaft-Clamp Profiles must not be used on profile grooves of types “light” and “E”, because sufficient clamping force will not be achieved.

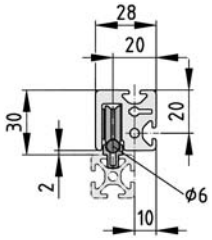
The various available diameters of the guiding shafts together with suitable dimensioning of the supporting profile, mean that a wide variety of permissible loads can be accommodated.
In addition, any number of Bearing Units can be used and they can be adjusted free from play by means of eccentric bolts.

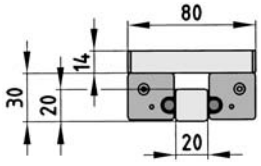
The Bearing Units offer a range of fastening options using the grooves of Profiles 5, 8 or 12; assembly and alignment on profiles or clamping plates are greatly simplified.

Guide
Alternatives

5 D6

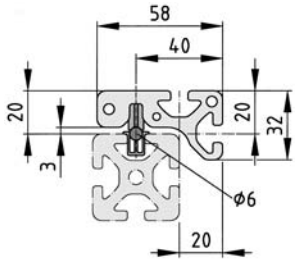
Basic construction of Profiles 5 with Roller Guide 5 on Shaft D6.

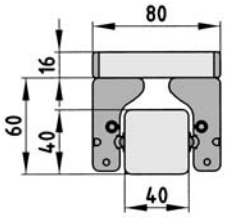




8 D6

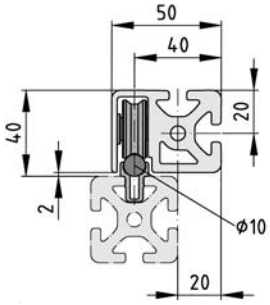
Basic construction of Profiles 8 with Roller Guide 8 on Shaft D6.

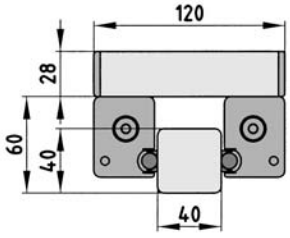




8 D10

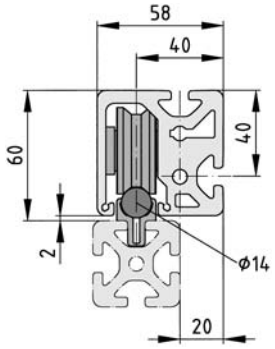
Basic construction of Profiles 8 with Roller Guide 8 on Shaft D10.

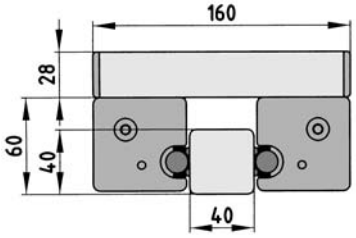




8 D14

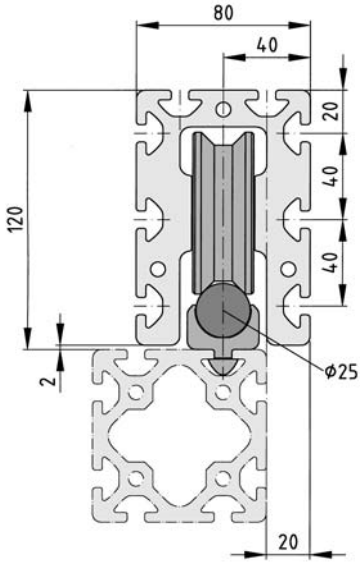
Basic construction of Profiles 8 with Roller Guide 8 on Shaft D14.

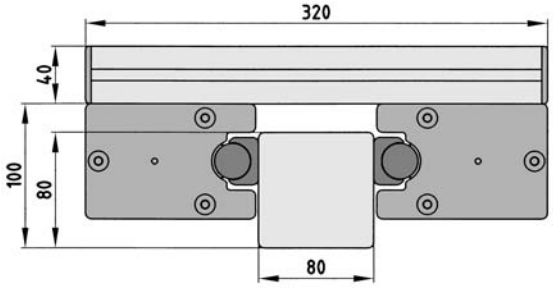




8 D25

Basic construction of Profiles 8 with Roller Guide 8 on Shaft D25.

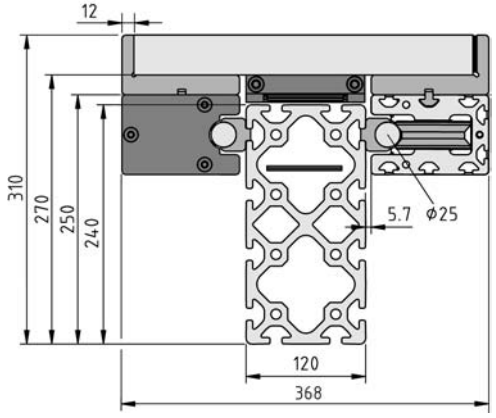




12 D25

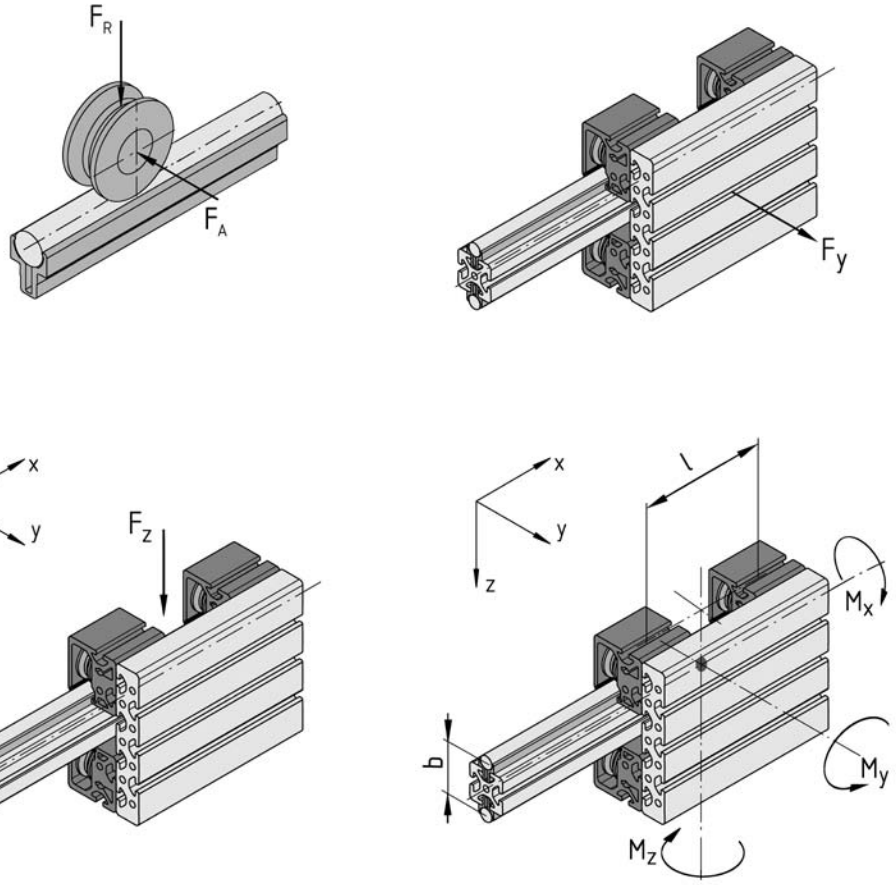
New in catalogue

Basic construction of Profiles 12 with Roller Guide 12 on Shaft D25.



Load Specifications

Simplified method for determining the maximum permissible load for Roller Guides:



	5 D6 / 8 D6	8 D10	8 D14	8 D25 / 12 D25
F_A	80 N	220 N	400 N	1300 N
F_R	200 N	650 N	1200 N	3800 N
F_y	320 N	880 N	1600 N	5200 N
F_z	400 N	1300 N	2400 N	7600 N
M_x	160 N x b	440 N x b	800 N x b	2600 N x b
M_y	200 N x l	650 N x l	1200 N x l	3800 N x l
M_z	160 N x l	440 N x l	800 N x l	2600 N x l

Performance at max. load: 10,000 km

Max. speed: 10 m/s

Lengths b and l quoted in m

When using stainless steel shafts and rollers, the permissible loading values must be reduced by 25%!

Calculation of Service Life

The service life of Roller Guides can be assessed using the following calculation method for roller bearings:

$$L = \left(\frac{C}{P}\right)^3$$

$$L_h = \left(\frac{C}{P}\right)^3 \cdot \frac{1666}{\bar{v}}$$

$$S_0 = \frac{C_0}{P}$$

L = Service life in millions of revolutions
L_h = Service life in h
C = Dynamic load rating in N
P = Load in N
$\bar{v}$ = Mean slide speed in m/min

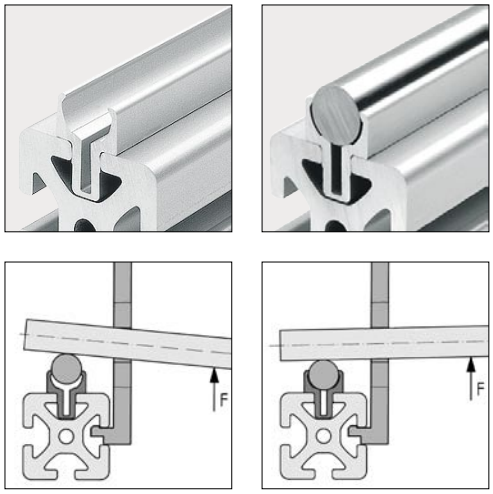
S_0 = Static load safety factor > 3
C_0 = Static load rating in N

Frictional Forces

Frictional losses must be taken into consideration when designing drive units. The quoted values refer to slides, each with 4 Rollers and 4 End Cap and Lubrication Systems.

Roller Guides 5 D6 and 8 D6	Roller Guide 8 D10	Roller Guide 8 D14	Roller Guide 8 D25 and 12 D25
F_R = 5 N	F_R = 10 N	F_R = 15 N	F_R = 25 N

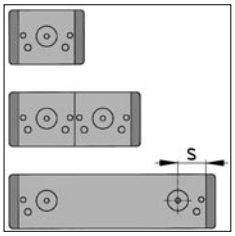
Assembly of Guiding Shafts



Assembly of Guiding Shafts proceed as follows when mounting the guiding shafts:
1. In order to prepare Shafts D10, D14 or D25 for pinning, drill blind holes into the Shaft and Shaft-Clamp Profile (for further details, see the note below).
2. Clean the Shaft-Clamp Profiles and the groove in the supporting profile.
3. Grease the contact faces of the Shaft-Clamp Profiles, supporting profile and guiding shafts with roller bearing grease.
4. Press in the Shaft-Clamp Profiles as far as they will go.
5. Press in the guiding shafts using the mounting aid.

Note: Where Roller Guides are longer than 3 m, the Shafts, the Shaft-Clamp Profile and the supporting profile should be assembled with joints offset to each other.

Minimum Stroke Lengths



Possible arrangement of the End Cap and Lubricating Systems which are required in every instance.
The spring-loaded end cap and lubricating felt can be re-lubricated via the hole provided. Recommended re-lubricating cycle: every six months.
In order to ensure adequate lubrication, the minimum stroke lengths required for the slides must be observed.

	5 D6	8 D6	8 D10	8 D14	8 D25 / 12 D25
Bearing Unit	28 mm	60 mm	60 mm	60 mm	120 mm
Double-Bearing Unit	68 mm	80 mm	140 mm	140 mm	300 mm
Special Bearing Unit	s + 50 mm	s + 50 mm	s + 85 mm	s + 120 mm	s + 235 mm
	s = distance between centre of Roller and felt in mm				

Assembly Tips

The Bearing Units include comprehensive mounting information. Please follow the mounting sequence set out there.

The appropriate Pin Spanners are available (Section 9 Auxiliary Elements) for fastening Bolts 5 D6 e, 8 D10 e, 8 D14 e, 8 D25 c and 8 D25 e with locking rings.

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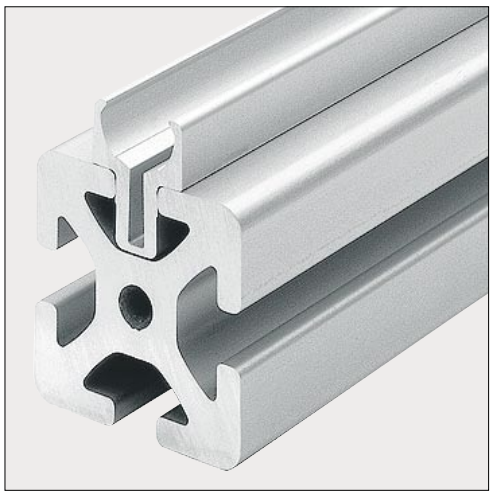
Pinning Alternatives

The Bearing Units of the Roller Guides must be pinned to the carriage plates.
The Bearing Units and Double-Bearing Units 5 D6, 8 D10, 8 D14 and 8 D25 are provided with holes which can be used as fastening and pinning bores when assembling of the slides.

Shaft-Clamp Profiles



For connecting Shafts D6, D10, D14 and D25 with the grooves of the corresponding Profile Lines.
After pressing the Shaft-Clamp Profile into the profile groove, the Shaft is then pressed in.
Shafts D10, D14 and D25 must be fixed in position at the chosen location using a dowel DIN 6325, one per length of shaft.
The appropriate Shafts can be found in Section 8.1.6 Shafts.

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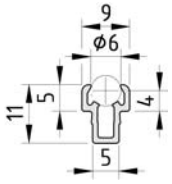
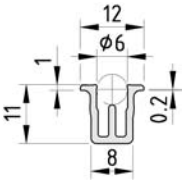
item Innovation
German patent
and foreign patent
EP 0 258 714



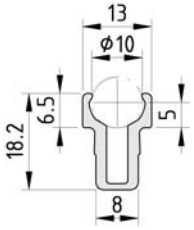
Shaft-Clamp Profile 5 D6
Al, anodized
A = 0.38 cm²
m = 0.10 kg/m

natural, cut-off max. 3000 mm	0.0.390.02



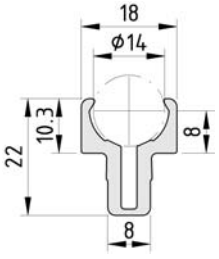
Shaft-Clamp Profile 8 D6
Al, anodized
A = 0.46 cm²
m = 0.12 kg/m

natural, cut-off max. 3000 mm	0.0.356.02



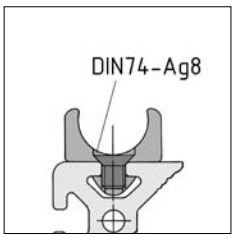
Shaft-Clamp Profile 8 D10
Al, anodized
A = 0.81 cm²
m = 0.22 kg/m

natural, cut-off max. 3000 mm	0.0.442.03

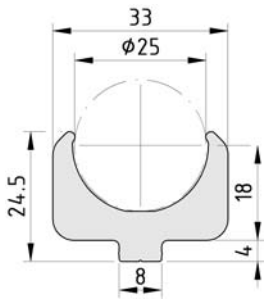


Shaft-Clamp Profile 8 D14
Al, anodized
A = 1.36 cm²
m = 0.36 kg/m

natural, cut-off max. 3000 mm	0.0.294.34



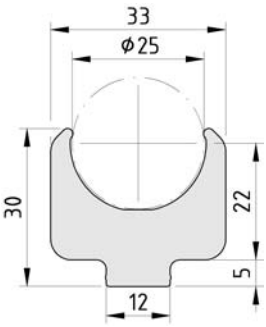
Shaft-Clamp Profile 8 D25 must be screwed to the profile groove with Countersunk Screws DIN 7991 - M8x14 and T-Slot Nut 8 M8 St.
Countersunk Screws DIN 7991-M8x25 and T-Slot Nuts 12 M8 are used for screwing Shaft-Clamp Profile 12 D25.
Shaft-Clamp Profiles D25 are provided with fastening bores spaced 200 mm apart.



Shaft-Clamp Profile 8 D25
Al, anodized
A = 3.74 cm²
m = 1.01 kg/m

natural, cut-off max. 3000 mm	0.0.350.02

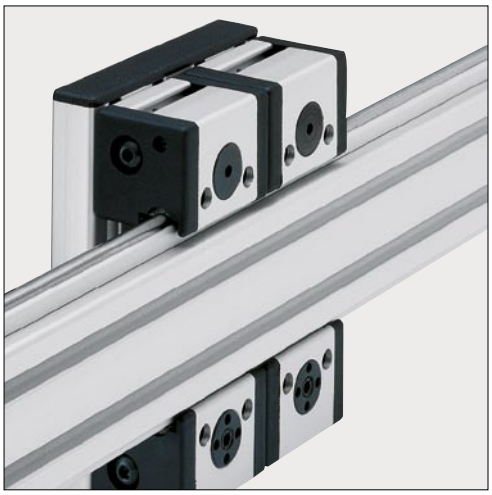
New in catalogue



Shaft-Clamp Profile 12 D25
Al, anodized
A = 5.35 cm²
m = 1.44 kg/m

natural, cut-off max. 3000 mm	0.0.009.04

Bearing Units



Bearing Units are used in conjunction with a carriage plate for constructing the sliding carriages.
Bearing Units e (eccentric) and c (centric) differ in the geometry of the bolts.
The eccentric bolts can be adjusted subsequently so as to ensure that the guide unit is free from play. Bearing Units should therefore always be used in pairs in both centric and eccentric versions.

The Bearing Units must always be equipped with End Cap and Lubricating Systems in order to prevent premature wear.

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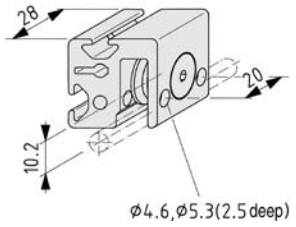
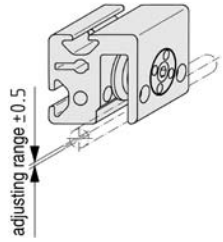


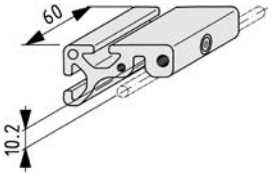
Bearing Unit 5 D6 c
Al, anodized, natural
Bolt 5 D6 c
Roller D6
2 Button-Head Screws ISO 7380-M5x8, St, bright zinc-pl.
2 washers DIN 125-5.3, St, bright zinc-plated
Notes on Use and Installation
M_{bolt} = 3 Nm
C = 1,620 N
C_0 = 780 N
m = 47.0 g

1 pce. **0.0.390.15**



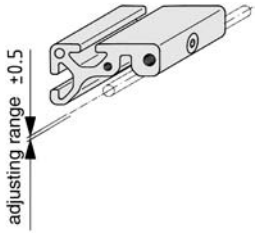
Bearing Unit 5 D6 e
Al, anodized, natural
Bolt 5 D6 e
Roller D6
2 Button-Head Screws ISO 7380-M5x8, St, bright zinc-pl.
2 washers DIN 125-5.3, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 3 Nm
C = 1,620 N
C_0 = 780 N
m = 47.0 g

1 pce. **0.0.390.16**



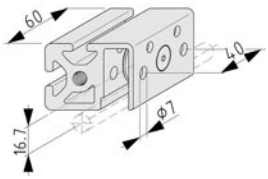
Bearing Unit 8 D6 c
Al, anodized, natural
Bolt 8 D6 c
Roller D6
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{grubscrew}$ = 3 Nm
C = 1,620 N
C_0 = 780 N
m = 146.0 g

1 pce. **0.0.356.30**



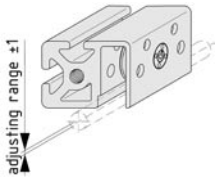
Bearing Unit 8 D6 e
Al, anodized, natural
Bolt 8 D6 e
Roller D6
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{grubscrew}$ = 3 Nm
C = 1,620 N
C_0 = 780 N
m = 146.0 g

1 pce. **0.0.356.31**



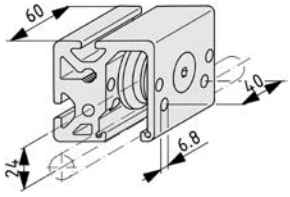
Bearing Unit 8 D10 c
Al, anodized, natural
Roller D10
Bolt 8 D10 c
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
M_{bolt} = 6 Nm
C = 4,400 N
C_0 = 2,470 N
m = 210.0 g

1 pce. 0.0.442.10



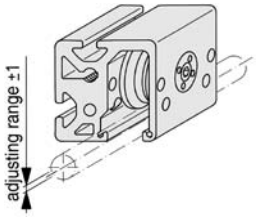
Bearing Unit 8 D10 e
Al, anodized, natural
Roller D10
Bolt 8 D10 e
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 6 Nm
C = 4,400 N
C_0 = 2,470 N
m = 210.0 g

1 pce. 0.0.442.09



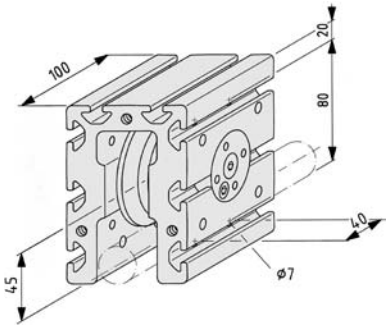
Bearing Unit 8 D14 c
Al, anodized, natural
Bolt 8 D14 c
Roller D14
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
M_{bolt} = 20 Nm
C = 7,800 N
C_0 = 4,400 N
m = 400.0 g

1 pce. 0.0.294.14



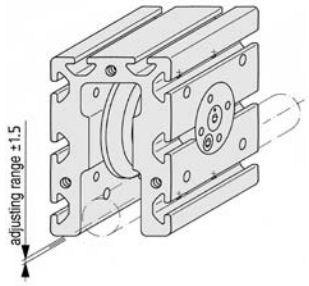
Bearing Unit 8 D14 e
Al, anodized, natural
Bolt 8 D14 e
Roller D14
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 20 Nm
C = 7,800 N
C_0 = 4,400 N
m = 400.0 g

1 pce. 0.0.294.15



Bearing Unit 8 D25 c
Al, anodized, natural
Bolt 8 D25 c
Roller D25
4 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
4 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 100 Nm
$M_{locking\ screw}$ = 10 Nm
C = 25,000 N
C_0 = 15,300 N
m = 2.0 kg

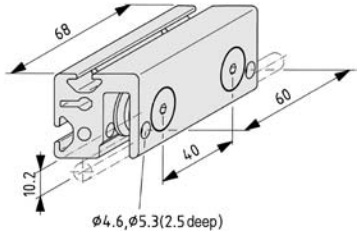
1 pce. 0.0.350.12



Bearing Unit 8 D25 e
Al, anodized, natural
Bolt 8 D25 e
Roller D25
4 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
4 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 100 Nm
$M_{locking\ screw}$ = 10 Nm
C = 25,000 N
C_0 = 15,300 N
m = 2.0 kg

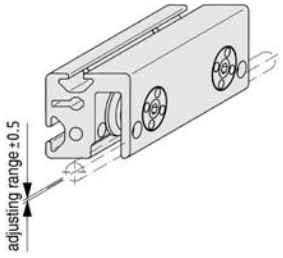
1 pce. 0.0.350.11

Double-Bearing Units



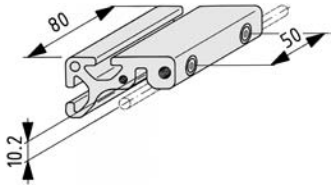
Double-Bearing Unit 5 D6 c
Al, anodized, natural
2 Bolts 5 D6 c
2 Rollers D6
2 Button-Head Screws ISO 7380-M5x8, St, bright zinc-pl.
2 washers DIN 125-5.3, St, bright zinc-plated
Notes on Use and Installation
M_{bolt} = 3 Nm
C = 3,240 N
C_0 = 1,560 N
m = 110.0 g

1 pce. 0.0.390.17



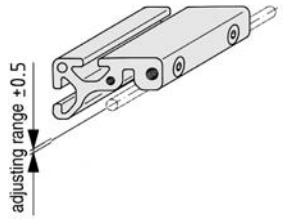
Double-Bearing Unit 5 D6 e
Al, anodized, natural
2 Bolts 5 D6 e
2 Rollers D6
2 Button-Head Screws ISO 7380-M5x8, St, bright zinc-pl.
2 washers DIN 125-5.3, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 3 Nm
C = 3,240 N
C_0 = 1,560 N
m = 110.0 g

1 pce. 0.0.390.18



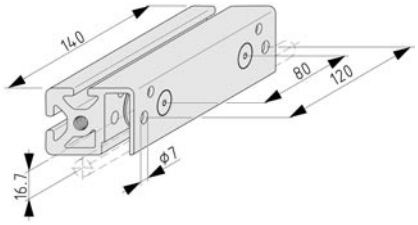
Double-Bearing Unit 8 D6 c
Al, anodized, natural
2 Bolts 8 D6 c
2 Rollers D6
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{grubscrew}$ = 3 Nm
C = 3,240 N
C_0 = 1,560 N
m = 200.0 g

1 pce. 0.0.356.32



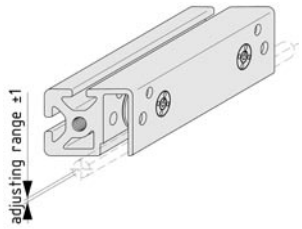
Double-Bearing Unit 8 D6 e
Al, anodized, natural
2 Bolts 8 D6 e
2 Rollers D6
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{grubscrew}$ = 3 Nm
C = 3,240 N
C_0 = 1,560 N
m = 200.0 g

1 pce.	0.0.356.33



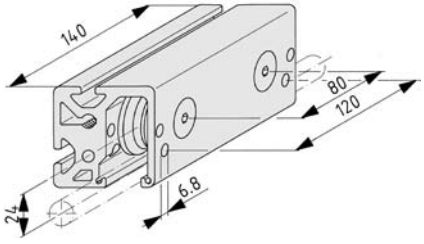
Double-Bearing Unit 8 D10 c
Al, anodized, natural
2 Rollers D10
2 Bolts 8 D10 c
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
M_{bolt} = 6 Nm
C = 8,800 N
C_0 = 4,940 N
m = 450.0 g

1 pce.	0.0.442.15



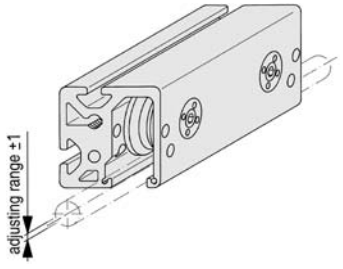
Double-Bearing Unit 8 D10 e
Al, anodized, natural
2 Rollers D10
2 Bolts 8 D10 e
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 6 Nm
C = 8,800 N
C_0 = 4,940 N
m = 450.0 g

1 pce.	0.0.442.14



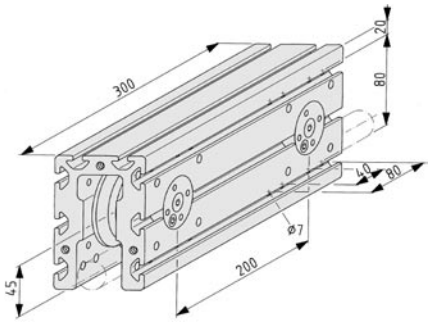
Double-Bearing Unit 8 D14 c
Al, anodized, natural
2 Rollers D14
2 Bolts 8 D14 c
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
M_{bolt} = 20 Nm
C = 15,600 N
C_0 = 8,800 N
m = 880.0 g

1 pce.	0.0.294.26



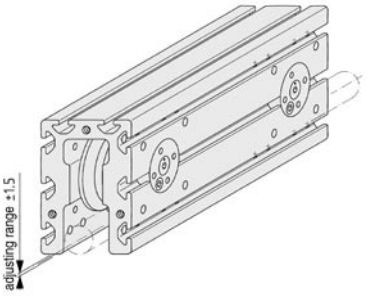
Double-Bearing Unit 8 D14 e
Al, anodized, natural
2 Rollers D14
2 Bolts 8 D14 e
2 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
2 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
M_{bolt} = 20 Nm
C = 15,600 N
C_0 = 8,800 N
m = 880.0 g

1 pce.	0.0.294.28



Double-Bearing Unit 8 D25 c
Al, anodized, natural
2 Bolts 8 D25 c
2 Rollers D25
8 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
8 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 100 Nm
$M_{locking\ screw}$ = 10 Nm
C = 50,000 N
C_0 = 30,600 N
m = 5.2 kg

1 pce. 0.0.350.19



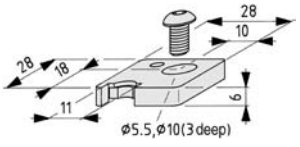
Double-Bearing Unit 8 D25 e
Al, anodized, natural
2 Bolts 8 D25 e
2 Rollers D25
8 Button-Head Screws ISO 7380-M8x16, St, bright zinc-pl.
8 washers DIN 125-8.4, St, bright zinc-plated
Notes on Use and Installation
$M_{locknut}$ = 100 Nm
$M_{locking\ screw}$ = 10 Nm
C = 50,000 N
C_0 = 30,600 N
m = 5.2 kg

1 pce. 0.0.350.18

End Cap and Lubricating Systems

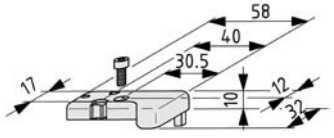
The End Cap and Lubricating Systems are essential in order to protect and lubricate the Bearing Units.

The end cap and lubricating felt is saturated with oil when it leaves the factory.
Recommended re-oiling interval: every six months.



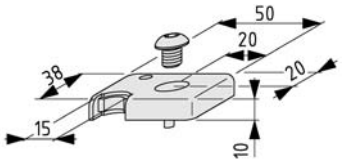
End Cap and Lubricating System 5 D6
PA-GF, black
End Cap and Lubricating System 5 D6, right
End Cap and Lubricating System 5 D6, left
2 Button-Head Screws ISO 7380-M5x10, St, bright zinc-pl.
m = 12.0 g

1 set 0.0.390.12



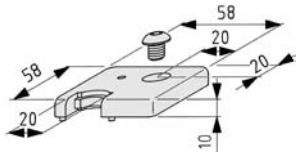
End Cap and Lubricating System 8 D6
PA-GF, black
End Cap and Lubricating System 8 D6, right
End Cap and Lubricating System 8 D6, left
2 Cap Screws DIN 912-M4x10, St, bright zinc-plated
m = 20.0 g

1 set 0.0.356.24



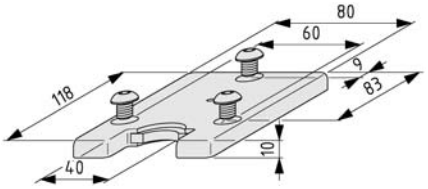
End Cap and Lubricating System 8 D10
PA-GF, black
End Cap and Lubricating System 8 D10, right
End Cap and Lubricating System 8 D10, left
2 Button-Head Screws ISO 7380-M8x10, St, bright zinc-pl.
m = 21.0 g

1 set	0.0.442.23



End Cap and Lubricating System 8 D14
PA-GF, black
End Cap and Lubricating System 8 D14, right
End Cap and Lubricating System 8 D14, left
2 Button-Head Screws ISO 7380-M8x10, St, bright zinc-pl.
m = 60.0 g

1 set	0.0.294.46

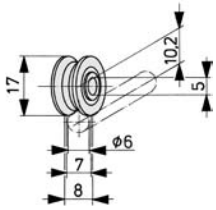


End Cap and Lubricating System 8 D25
PA-GF, black
End Cap and Lubricating System 8 D25, right
End Cap and Lubricating System 8 D25, left
6 Button-Head Screws ISO 7380-M8x10, St, bright zinc-pl.
m = 170.0 g

1 set	0.0.350.13

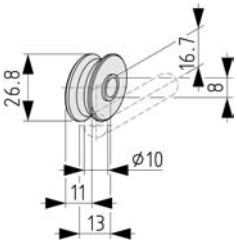
Rollers

For constructing customised Bearing Units for easy-running Roller Guides adjustable free from play, in conjunction with the Shafts.



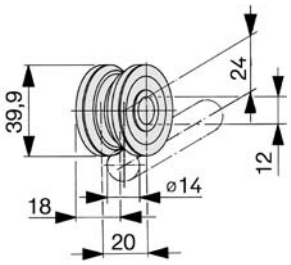
Roller D6
St, 100 Cr 6, hardened, polished
Double ball bearing, shielded
maintenance-free
C = 1,620 N
C_0 = 780 N
$n_{max.}$ = 10,000 min^{-1}
m = 8.0 g

1 pce.	0.0.356.03



Roller D10
St, 100 Cr 6, hardened, polished
Double ball bearing, shielded
maintenance-free
1 washer, St, bright zinc-plated
C = 4,400 N
C_0 = 2,470 N
$n_{max.}$ = 7,500 min^{-1}
m = 28.0 g

1 pce.	0.0.442.02



Roller D14
St, 100 Cr 6, hardened, polished
Double ball bearing, shielded
maintenance-free
C = 7,800 N
C_0 = 4,400 N
$n_{max.}$ = 5,000 min^{-1}
m = 100.0 g

1 pce.	0.0.294.03

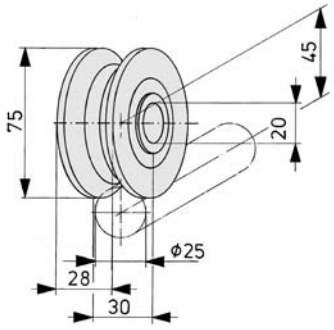
Roller D14K
St, 100 Cr 6, hardened, polished
Double ball bearing, shielded
maintenance-free
Also corrosion-resistant and coated
C = 7,800 N
C_0 = 4,400 N
$n_{max.}$ = 5,000 min^{-1}
m = 100.0 g

black, 1 pce.	0.0.294.52

New in catalogue

Roller D14, stainless
St, X 105 Cr Mo 17, hardened, polished
Double ball bearing, shielded
maintenance-free
C = 6,200 N
C_0 = 3,500 N
$n_{max.}$ = 5,000 min^{-1}
m = 100.0 g

1 pce.	0.0.488.20



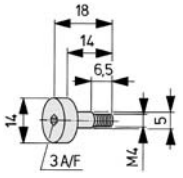
Roller D25
St, 100 Cr 6, hardened, polished
Double ball bearing, shielded
maintenance-free
C = 25,000 N
C_0 = 15,300 N
$n_{max.}$ = 2,500 min^{-1}
m = 590.0 g

1 pce.	0.0.350.03

Bolts

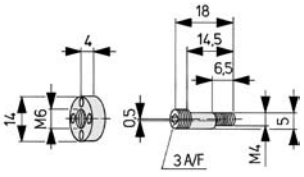
www.item.info

For securing Rollers in the Roller Profile or other elements.



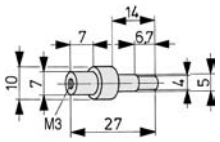
Bolt 5 D6 c
St
M =3 Nm
m = 5.0 g

bright zinc-plated, 1 pce.	0.0.390.03



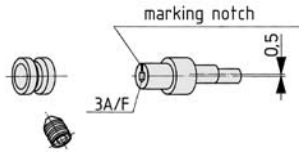
Bolt 5 D6 e
St
Bolt and locknut
$M_{locknut}$ = 3 Nm
m = 5.0 g

bright zinc-plated, 1 set	0.0.390.19



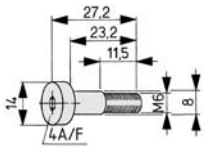
Bolt 8 D6 c
St
Bolt and locking ring
Grub screw DIN 914-M6x10
M =3 Nm
m = 6.0 g

bright zinc-plated, 1 set	0.0.356.04



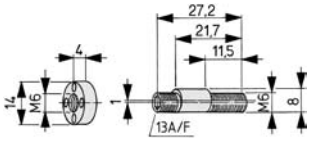
Bolt 8 D6 e
St
Bolt and locking ring
Grub screw DIN 914-M6x10
M =3 Nm
m = 6.0 g

bright zinc-plated, 1 set	0.0.356.05



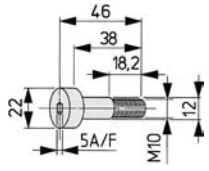
Bolt 8 D10 c
St
M =6 Nm
m = 12.0 g

bright zinc-plated, 1 pce.	0.0.442.06



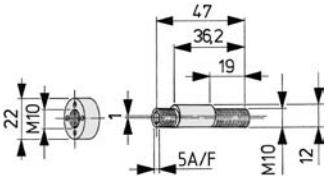
Bolt 8 D10 e
St
Bolt and lock nut
$M_{locknut}$ = 6 Nm
m = 10.0 g

bright zinc-plated, 1 set	0.0.442.07



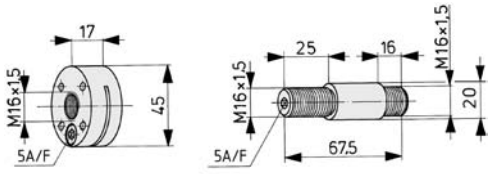
Bolt 8 D14 c
St
M =20 Nm
m = 48.0 g

bright zinc-plated, 1 pce.	0.0.294.10



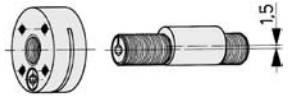
Bolt 8 D14 e
St
Bolt and lock nut
$M_{locknut}$ = 20 Nm
m = 46.0 g

bright zinc-plated, 1 set	0.0.294.12



Bolt 8 D25 c
St
Bolt and lock nut
$M_{locknut}$ = 100 Nm
$M_{locking\ screw}$ = 10 Nm
m = 285.0 g

bright zinc-plated, 1 set	0.0.350.04



Bolt 8 D25 e
St
Bolt and lock nut
$M_{locknut}$ = 100 Nm
$M_{locking\ screw}$ = 10 Nm
m = 285.0 g

bright zinc-plated, 1 set	0.0.350.05

Roller Profiles

Profiles for constructing Bearing Units of any length, using the appropriate Rollers, Bolts and End Cap and Lubricating Systems.

In conjunction with the End Cap and Lubricating Systems, the Roller Profile acts as a bearing shell and safety cover, as well as providing protection against soiling. This ensures uninterrupted operation, even under adverse operating conditions.

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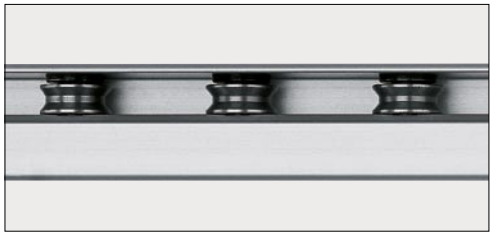
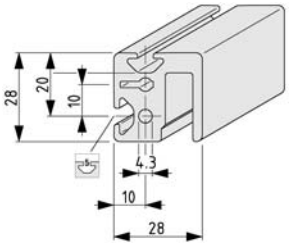


5 6 8 12



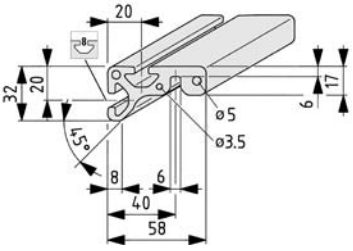
Roller Profile 5 D6

Al, anodized

A =	4.30 cm²	I_x =	2.99 cm⁴	I_y =	3.06 cm⁴		
		I_t =	0.81 cm⁴				
m =	1.16 kg/m	W_x =	1.98 cm³	W_y =	2.05 cm³		

natural, cut-off max. 3000 mm **0.0.390.01**

5 6 8 12

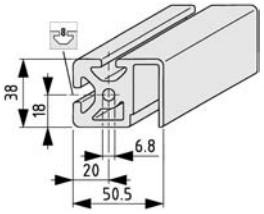


Roller Profile 8 D6

Al, anodized

A =	7.54 cm²	I_x =	4.46 cm⁴	I_y =	24.14 cm⁴		
		I_t =	1.66 cm⁴				
m =	2.03 kg/m	W_x =	2.09 cm³	W_y =	8.05 cm³		

natural, cut-off max. 3000 mm **0.0.356.23**

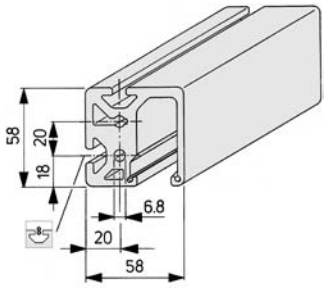


Roller Profile 8 D10

Al, anodized

A =	9.35 cm²	I_x =	12.64 cm⁴	I_y =	18.89 cm⁴		
		I_t =	5.18 cm⁴				
m =	2.52 kg/m	W_x =	6.52 cm³	W_y =	6.54 cm³		

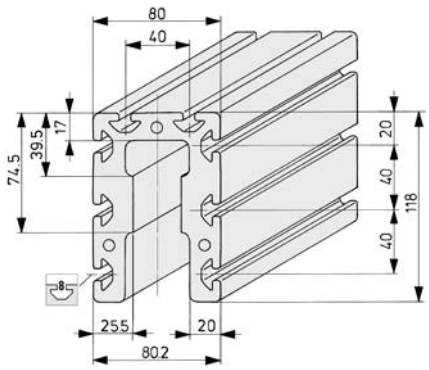
natural, cut-off max. 6000 mm **0.0.442.01**



Roller Profile 8 D14
Al, anodized

A =	15.48 cm²	I_x =	47.90 cm⁴	I_y =	47.92 cm⁴
		I_t =	11.14 cm⁴		
m =	4.18 kg/m	W_x =	15.34 cm³	W_y =	14.25 cm³

natural, cut-off max. 6000 mm — 0.0.294.02



Roller Profile 8 D25
Al, anodized

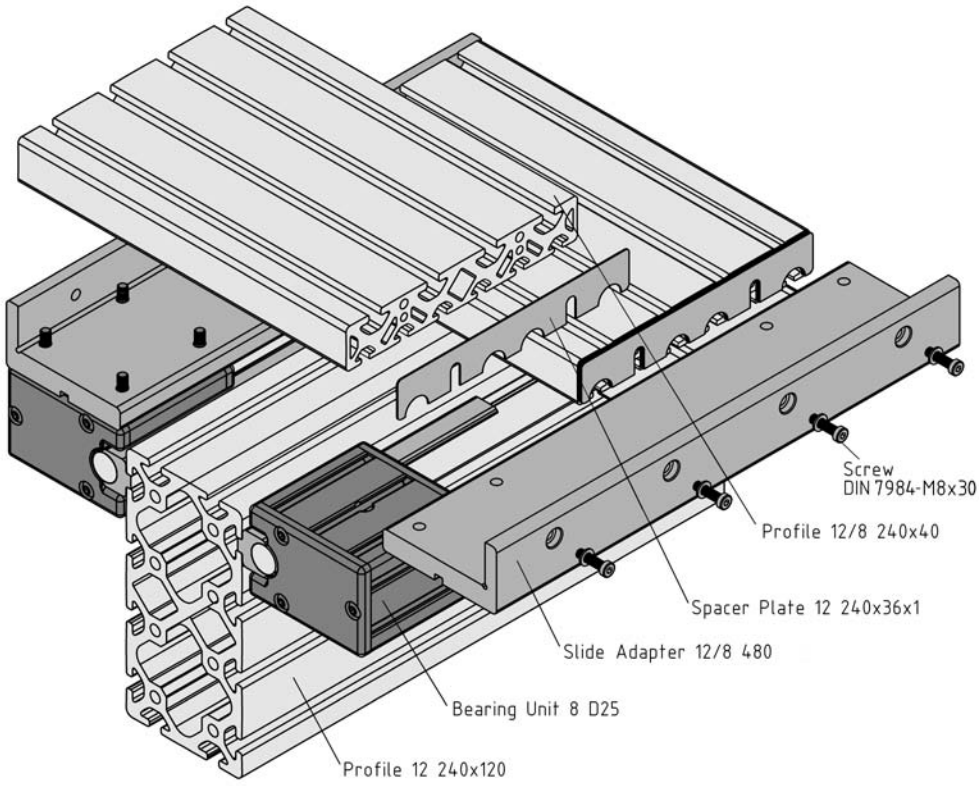
A =	44.19 cm²	I_x =	508.41 cm⁴	I_y =	331.49 cm⁴
		I_t =	30.51 cm⁴		
m =	11.93 kg/m	W_x =	79.98 cm³	W_y =	82.87 cm³

natural, cut-off max. 3000 mm — 0.0.350.01

Slide Adapter 12/8

New in catalogue

Slides of linear guides on Line 12 Profiles have been designed for high loads. The positive-lock construction removes any need to pin components.
Slide Adapters 12/8 are pre-prepared connectors that are fitted between Bearing Units 8 D25 and Profiles 12/8 240x40. They can be used for slide carriages of standard length 480 mm.
Unmachined Slide-Adapter Profile 12/8 118x60 can be used as a basis for creating customised adapters for large slide constructions.



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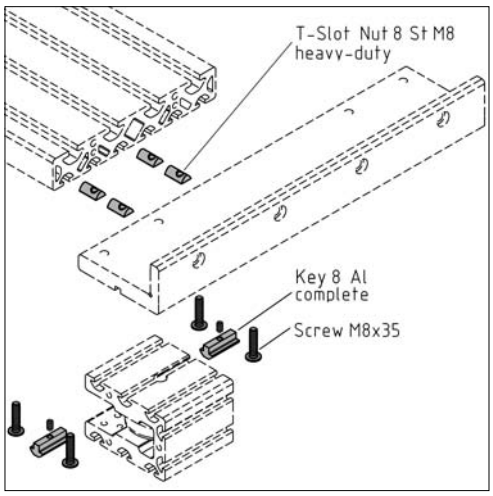
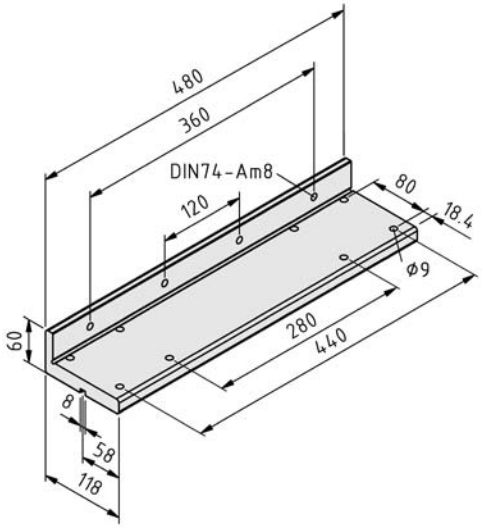


A Slide-Adapter Fastening Set is required for fastening each Bearing Unit 8 D25 to Slide Adapter 12/8 480. The set contains all the screws and T-Slot Nuts required to do this as well as pre-prepared Keys 8.
Positioning Key 8 between the Bearing Unit and Slide Adapter creates a rigid connection. The obviates any need to pin the Bearing Unit and slide and thereby produces a particularly strong slide construction.

5 6 8 12

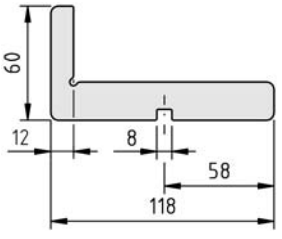


Slide Adapter 12/8 480
Al, anodized, natural
4 Hexagon Socket Head Cap Screws DIN 7984 - M8x30, St, bright zinc-plated
4 washers DIN 433 - 8.4, St, bright zinc-plated
m = 2.9 kg

1 set	0.0.009.07

Slide-Adapter Fastening Set
4 dome-head screws M8x35, St, bright zinc-plated
4 T-Slot Nuts 8 St M8
2 keys 8 Al 40
Notes on Use and Installation
m = 18.0 g

1 set	0.0.009.26



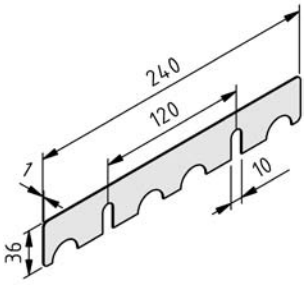
Slide-Adapter Profile 12/8 118x60
Al, anodized
m = 6.14 kg/m

natural, cut-off max. 6000 mm	0.0.009.06

Spacer Plate 12 240x36x1

New in catalogue

Spacer Plate 12 240x36x1 is used in constructing the carriage plate for compensating the tolerances of the cut-offs and profile dimensions. It is fitted between the Slide Adapter and the end face of Profile 12/8 240x40 and secured with screws. The Spacer Plates can also be used to modify the adjustment range of eccentric bolts 8 D25 e in order to align the slide carriage on linear guide 12.

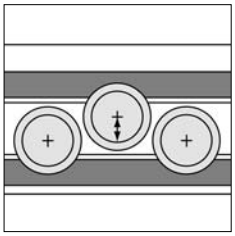


Spacer Plate 12 240x36x1
St, stainless
m = 130.0 g

1 pce.	0.0.009.23

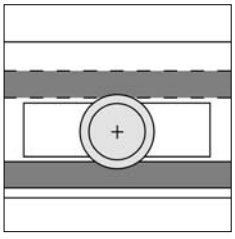
8.1.2 C-Rail Systems

C-Rail Systems are specialized Roller Guides and are ideal for constructing compact guides, lifting doors, sliding doors, movable guards and enclosures etc.

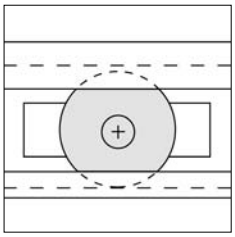


The C-Rail Systems for Profiles 5, 6 and 8 are each available in 3 versions:

C-Rail System 3R with guide slides that can be adjusted via eccentrics. The 3 steel rollers mounted on ball bearings run free from play on 2 polished shafts and are ideal for cases where particular requirements are placed on the precision of the guides. This version can accommodate high loads in the vertical downward plane and features particularly low-friction running.

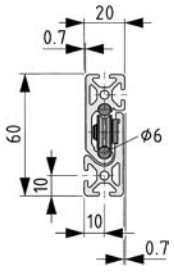
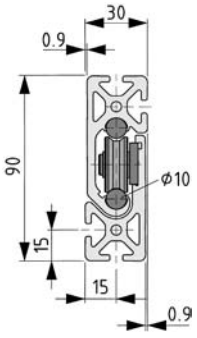
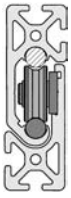
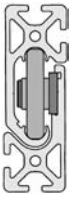
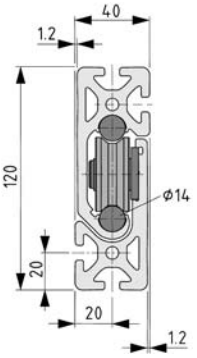
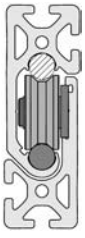
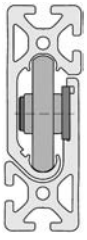


C-Rail System 1R with slides on prismatic steel rollers mounted on ball bearings and a polished guiding shaft. A second guiding shaft can also be fitted in order to prevent the sliding door from tilting when moved.

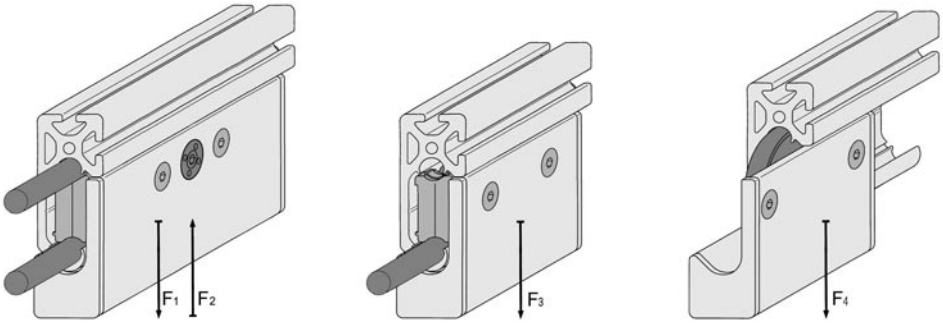


C-Rail System K with slide consisting of plastic rollers running directly on the aluminium rail profile.
This variant can accommodate low hanging loads as shown in the illustration opposite and is adequate for simple guide operations.

Guide Alternatives

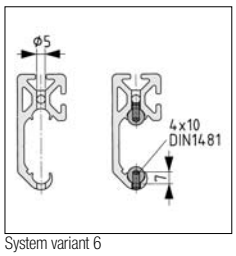
Line	C-Rail System 3R	C-Rail System 1R	C-Rail System K
5			
6			
8			

Load Specifications

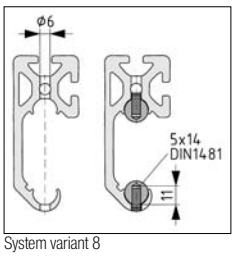


C-Rail System 5 D6 3R F_1 = 250 N, F_2 = 125 N	C-Rail System 5 D6 1R F_3 = 125 N	C-Rail System 5 K F_4 = 50 N
C-Rail System 6 D10 3R F_1 = 750 N, F_2 = 350 N	C-Rail System 6 D10 1R F_3 = 350 N	C-Rail System 6 K F_4 = 125 N
C-Rail System 8 D14 3R F_1 = 1500 N, F_2 = 750 N	C-Rail System 8 D14 1R F_3 = 750 N	C-Rail System 8 K F_4 = 250 N

Assembly of Guiding Shafts

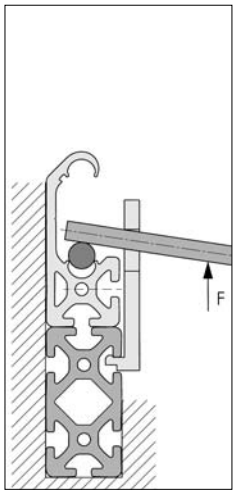


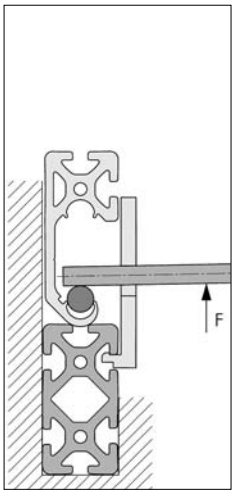
System variant 6



System variant 8

The following points must be taken into account when installing the guiding shafts:
> Preparation for pinning Shafts D10 or D14 by drilling a single blind hole into each shaft at any point using a carbide-tipped drill. Shaft D6 does not need to be pinned. The Shaft is best drilled using the Combination Drilling Jig for Shafts (Section 9.2 Jigs and Tools).
> Drill the through bores into the C-Rail Profile at the same point.
> Press a dowel pin DIN 1481-4x10 into Shaft D10 or dowel pin DIN 1481-5x14 into Shaft D14.
> Shaft D6 in C-Rail Profile 5 is not pinned.





> Using the Mounting Aid for Shafts (Section 9.2 Jigs and Tools), an appropriate round steel bar for a lever, and a profile for locating the Mounting Aid, the pre-greased guiding shafts are pressed into the C-Rail Profiles.

Minimum Stroke Lengths

Versions 1R und 3R with guiding shafts and steel rollers must not be run without lubrication.

The End Cap and Lubricating Systems are charged with oil at the factory. They should be topped up with machine oil every six months.

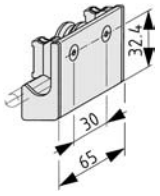
To ensure adequate lubrication, minimum stroke lengths must be complied with for the Bearing Units:

Bearing Unit	Minimum stroke length
5 D6 1R	60 mm
5 D6 3R	100 mm
6 D10 1R	90 mm
6 D10 3R	150 mm
8 D14 1R	120 mm
8 D14 3R	200 mm

C-Rail, Bearing Units

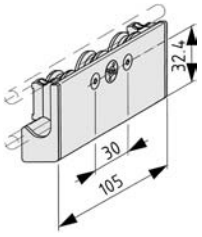
Completely machined and pre-assembled Bearing Units for simple construction of C-Rail Systems 5, 6 and 8.

5 6 8 12



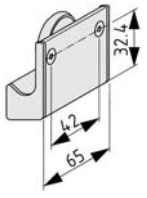
C-Rail, Bearing Unit 5 D6 1R
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 5
C-Rail, Bearing Set 5 D6 1R
m = 64.0 g

1 pce.	0.0.460.31



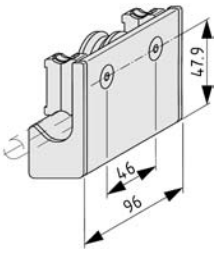
C-Rail, Bearing Unit 5 D6 3R
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 5
C-Rail, Bearing Set 5 D6 3R
m = 117.0 g

1 pce.	0.0.460.30



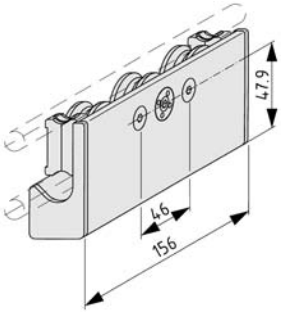
C-Rail, Bearing Unit 5 K
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 5
C-Rail, Bearing Set 5 K
m = 60.0 g

1 pce.	0.0.460.33



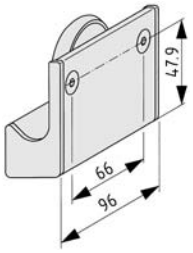
C-Rail, Bearing Unit 6 D10 1R
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 6
C-Rail, Bearing Set 6 D10 1R
m = 231.0 g

1 pce. 0.0.461.31



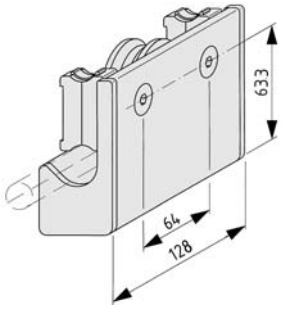
C-Rail, Bearing Unit 6 D10 3R
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 6
C-Rail, Bearing Set 6 D10 3R
m = 425.0 g

1 pce. 0.0.461.30



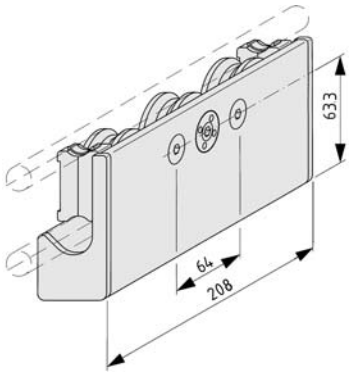
C-Rail, Bearing Unit 6 K
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 6
C-Rail, Bearing Set 6 K
m = 209.0 g

1 pce. 0.0.461.33



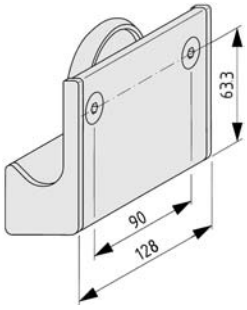
C-Rail, Bearing Unit 8 D14 1R
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 8
C-Rail, Bearing Set 8 D14 1R
m = 576.0 g

1 pce. 0.0.462.31



C-Rail, Bearing Unit 8 D14 3R
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 8
C-Rail, Bearing Set 8 D14 3R
m = 1.1 kg

1 pce. 0.0.462.30



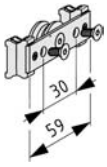
C-Rail, Bearing Unit 8 K
C-Rail, Slide Profile segment, Al, anodized, natural
C-Rail, Slide Profile Cap Set 8
C-Rail, Bearing Set 8 K
m = 492.0 g

1 pce.	0.0.462.33

C-Rail, Bearing Sets

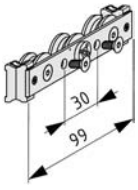
Pre-assembled Bearing Sets for special bearing units for creating continuous guide profiles using Slide Profiles. The Slide Profiles must be machined appropriately for installing the Bearing Sets.

5 6 8 12



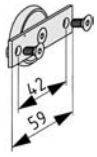
C-Rail, Bearing Set 5 D6 1R
1 C-Rail, slide plate complete, St, bright zinc-plated
1 Roller D6, centric
2 C-Rail, Lubricating Systems 5 D6
2 Countersunk Screws DIN 7991-M5x10, St, bright zinc-pl.
m = 21.0 g

1 set	0.0.460.35



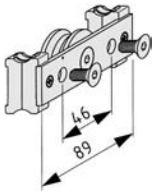
C-Rail, Bearing Set 5 D6 3R
1 C-Rail, slide plate complete, St, bright zinc-plated
2 Rollers D6, centric
1 Roller D6, eccentric
2 C-Rail, Lubricating Systems 5 D6
2 Countersunk Screws DIN 7991-M5x10, St, bright zinc-pl.
m = 51.0 g

1 set	0.0.460.34



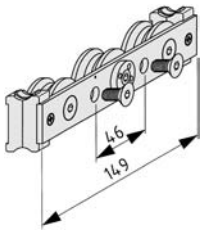
C-Rail, Bearing Set 5 K
1 C-Rail, slide plate complete, St, bright zinc-plated
1 C-Rail, Roller 5 K, PA
2 Countersunk Screws DIN 7991-M5x10, St, bright zinc-pl.
m = 21.0 g

1 set	0.0.460.37



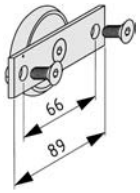
C-Rail, Bearing Set 6 D10 1R
1 C-Rail, slide plate complete, St, bright zinc-plated
1 Roller D10, centric
2 C-Rail, Lubricating Systems 6 D10
2 Countersunk Screws DIN 7991-M6x12, St, bright zinc-pl.
m = 103.0 g

1 set 0.0.461.35



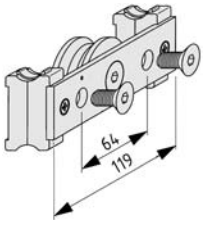
C-Rail, Bearing Set 6 D10 3R
1 C-Rail, slide plate complete, St, bright zinc-plated
2 Rollers D10, centric
1 Roller D10, eccentric
2 C-Rail, Lubricating Systems 6 D10
2 Countersunk Screws DIN 7991-M6x12, St, bright zinc-pl.
m = 214.0 g

1 set 0.0.461.34



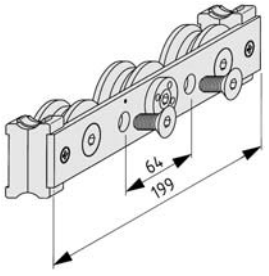
C-Rail, Bearing Set 6 K
1 C-Rail, slide plate complete, St, bright zinc-plated
1 C-Rail, Roller 6 K, PA
2 Countersunk Screws DIN 7991-M6x12, St, bright zinc-pl.
m = 79.0 g

1 set 0.0.461.37



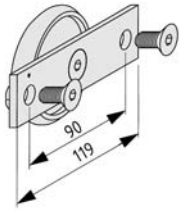
C-Rail, Bearing Set 8 D14 1R
1 C-Rail, slide plate complete, St, bright zinc-plated
1 Roller D14, centric
2 C-Rail, Lubricating Systems 8 D14
2 Countersunk Screws DIN 7991-M8x16, St, bright zinc-plated
m = 257.0 g

1 set 0.0.462.35



C-Rail, Bearing Set 8 D14 3R
1 C-Rail, slide plate complete, St, bright zinc-plated
2 Rollers D14, centric
1 Roller D14, eccentric
2 C-Rail, Lubricating Systems 8 D14
2 Countersunk Screws DIN 7991-M8x16, St, bright zinc-plated
m = 576.0 g

1 set 0.0.462.34

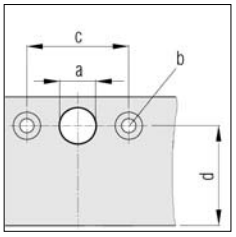


C-Rail, Bearing Set 8 K
1 C-Rail, slide plate complete, St, bright zinc-plated
1 C-Rail, Roller 8 K, PA
2 Countersunk Screws DIN 7991-M8x16, St, bright zinc-plated
m = 158.0 g

1 set 0.0.462.37

C-Rail,Slide Profiles

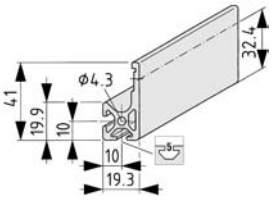
For constructing slides for C-Rail System 5, 6, or 8 using Bearing Sets.
The positions of the holes are identified by marking grooves in the profiles.



The relevant holes (a) for the lock nuts and countersinks DIN 74 (b) for the Countersunk Screws must be provided to secure the Bearing Sets.

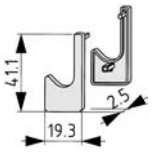
	a [mm]	b DIN 74	c [mm]	d [mm]
5	∅ 14.5	Bf5	30 / 42	32.4
6	∅ 16.5	Bf6	46 / 66	47.9
8	∅ 22.5	Bm8	64 / 90	63.3

5 6 8 12



C-Rail, Slide Profile 5
Al, anodized
A = 2.46 cm² I_x = 0.92 cm⁴ I_y = 2.86 cm⁴
m = 0.67 kg/m W_x = 0.81 cm³ W_y = 1.11 cm³

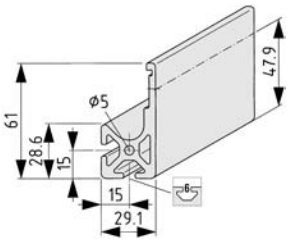
natural, cut-off max. 6000 mm	0.0.460.02



C-Rail, Slide Profile Cap Set 5
PA-GF
C-Rail, Slide Profile Cap right
C-Rail, Slide Profile Cap left
m = 2.0 g

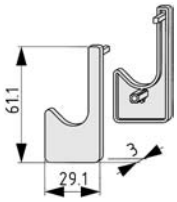
black, 1 set	0.0.460.39

5 6 8 12



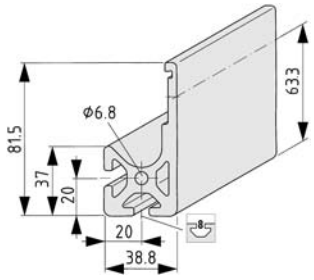
C-Rail, Slide Profile 6
Al, anodized
A = 5.44 cm² I_x = 4.00 cm⁴ I_y = 13.08 cm⁴
m = 1.47 kg/m W_x = 2.79 cm³ W_y = 3.24 cm³

natural, cut-off max. 6000 mm	0.0.461.02



C-Rail, Slide Profile Cap Set 6
PA-GF
C-Rail, Slide Profile Cap right
C-Rail, Slide Profile Cap left
m = 4.0 g

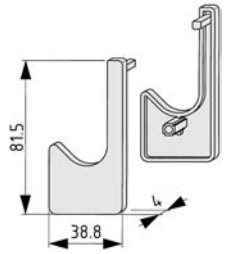
black, 1 set	0.0.461.39



C-Rail, Slide Profile 8
Al, anodized

A =	9.81 cm²	I_x =	16.08 cm⁴	I_y =	41.91 cm⁴		
m =	2.65 kg/m	W_x =	6.71 cm³	W_y =	7.63 cm³		

natural, cut-off max. 6000 mm	0.0.462.02



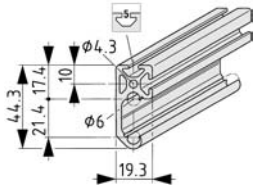
C-Rail, Slide Profile Cap Set 8
PA-GF
C-Rail, Slide Profile Cap right
C-Rail, Slide Profile Cap left
m = 11.0 g

black, 1 set	0.0.462.39

C-Rail,Rail Profiles

Bearing Units K (without guiding shaft) or 1R (with 1 or 2 guiding shafts) or 3R are guided in the Rail Profiles.

5 6 8 12

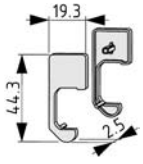


C-Rail, Rail Profile 5

Al, anodized

A =	2.62 cm²	I_x =	0.91 cm⁴	I_y =	4.67 cm⁴
m =	0.71 kg/m	W_x =	0.76 cm³	W_y =	1.78 cm³

natural, cut-off max. 6000 mm	0.0.460.01

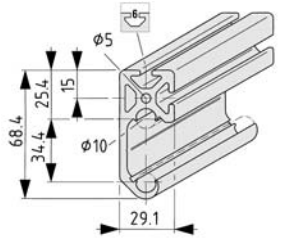


C-Rail, Rail Profile Cap Set 5

PA-GF
C-Rail, Rail Profile Cap right
C-Rail, Rail Profile Cap left
m = 2.0 g

black, 1 set	0.0.460.38

5 6 8 12

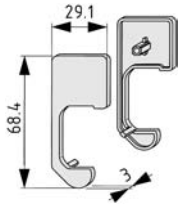


C-Rail, Rail Profile 6

Al, anodized

A =	6.23 cm²	I_x =	4.84 cm⁴	I_y =	26.26 cm⁴
m =	1.68 kg/m	W_x =	2.74 cm³	W_y =	6.22 cm³

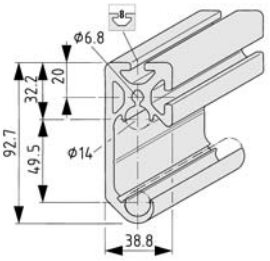
natural, cut-off max. 6000 mm	0.0.461.01



C-Rail, Rail Profile Cap Set 6

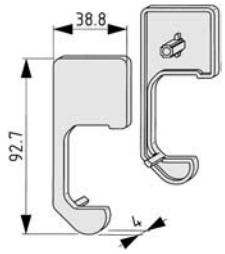
PA-GF
C-Rail, Rail Profile Cap right
C-Rail, Rail Profile Cap left
m = 5.0 g

black, 1 set	0.0.461.38



C-Rail, Rail Profile 8
Al, anodized
A = 11.41 cm² I_x = 17.35 cm⁴ I_y = 84.78 cm⁴
m = 3.10 kg/m W_x = 7.39 cm³ W_y = 14.35 cm³

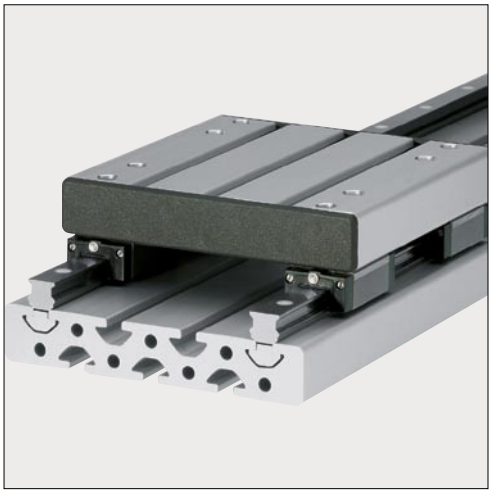
natural, cut-off max. 6000 mm	0.0.462.01



C-Rail, Rail Profile Cap Set 8
PA-GF
C-Rail, Rail Profile Cap right
C-Rail, Rail Profile Cap left
m = 13.0 g

black, 1 set	0.0.462.38

8.1.3 Profiled Steel Rail Guide Systems

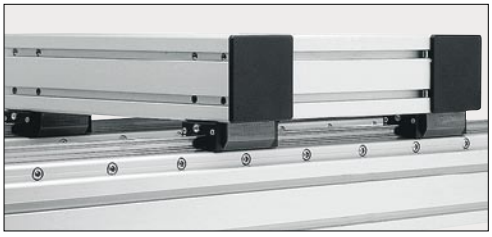


Four-row linear guide systems (with full complement) on profiled rails whose special fastening geometry makes them ideal for use on profile constructions.

The individual linear guide system carriages can be loaded from all directions and can absorb moments around all axes. The key features of linear guide systems PS are high load-carrying capacity, rigidity and compact design.
Each linear guide system carriage can be freely combined with every Linear Guide Rail within a given Line, so that one, two or more carriages are possible per rail and carriages can be exchanged.

In a number of application cases, particularly involving high forces and moments that need to be absorbed by greater support distances, the carriages should not be used individually, but rather in combination.
Solutions involving several carriages on a single rail and several carriages on parallel rails are also possible.

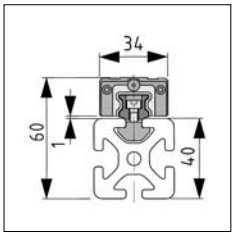
Guide rail PS 4-15 has a specially designed rail base that enables parallel rails to be secured free of strain to a supporting profile.
Guide rail PS 4-25 has a special fastening technique for particularly straightforward screw-connection.



Guide systems with parallel rails on a single supporting profile can be constructed on the profile groove without elaborate alignment measures due to the special fastening geometry employed by the rail. The use of parallel rails on independent profiles or different support constructions will require the amount of alignment and fastening which is typical for profile rail guides (machining of location surfaces, use of parallel segments etc.).

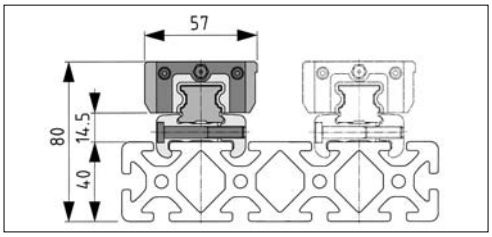
Rail Attachment

item Innovation
German patent
and foreign patent
EP 0 921 899



Guide rail PS 4-15 is attached to the Profile 8 groove. The rail has been shaped for this purpose and centres automatically when screwed against Groove Profile 8 Al M4-60.

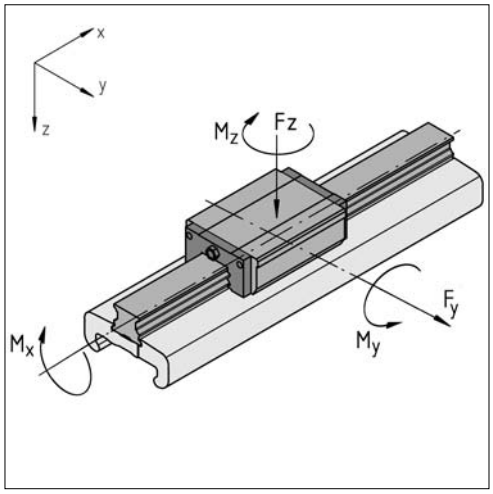
item Innovation
German
utility model
200 03 842



A guide PS 4-25 with one or more guide carriages, one guide rail and one rail clamp on a Support Profile.

The self-centring rail clamp also serves as a support for the guide rail and secures this to any Support Profile 8 with a minimum width of 80 mm. Profile 8 lightweight and 8 E should not be used for the support profiles.

Load Specifications



	PS 4-15	PS 4-25
$F_y = F_z$	1,000 N *	2,500 N
M_x	15 Nm	60 Nm
$M_y = M_z$	10 Nm	25 Nm
C	7,200 N	17,900 N
C_0	14,500 N	37,000 N
$v_{max.}$	5 m/s	5 m/s
ϑ	-40 – +100 °C	-40 – +100 °C
$h_{min.}$	40 mm	60 mm

The permissible load for a linear guide system depends on the load bearing capacity of the guide elements but also on the strength of the screw connections and the construction of the profile frame.
The minimum stroke length ($h_{min.}$) is required if the rolling-ball contact is to be adequately lubricated. The carriage is charged at the factory with lithium-based grease. Lithium-based grease with a mineral-oil base can be used for re-lubrication.

Given the contact pressure of the wipers, a displacement force of 10 N must be taken into account irrespective of the load.

*Note: The fastening of the guide rail does not enable the stated tensile forces of the PS4-15 linear guide system to be utilised to the full in all directions.

Calculation of Service Life

The static and dynamic load ratings and static moment characterise the rolling-ball contact between the carriage and rail and are used for calculating the service life based on the rules for the roller bearing calculation:

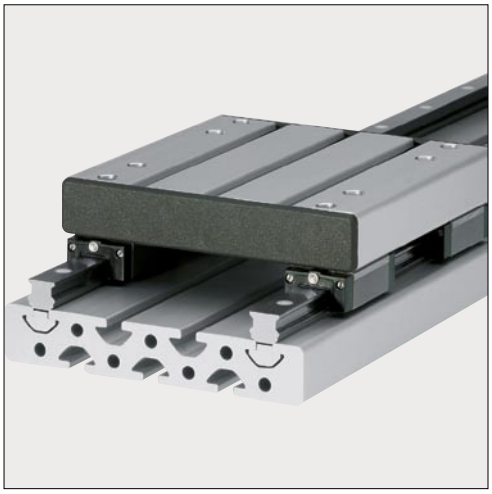
$$L = \left(\frac{C}{P}\right)^3 \cdot 100 \quad \text{in km}$$

$$L_h = \left(\frac{C}{P}\right)^3 \cdot \frac{1666}{\bar{v}} \quad \text{in h}$$

$$S_0 = \frac{C_0}{P}$$

L	=	Service life	in km
L_h	=	Service life	in h
C	=	Dynamic load rating	in N
P	=	Load	in N
$\bar{v}$	=	Mean slide speed	in m/min
S_0	=	Recommended load safety factor	4...10
C_0	=	Static load rating	in N

Bearing Carriages



The Bearing Carriages can be used either individually or in various combinations on one or more rails.
The Bearing Carriage has four polished tracks on which the bearings are in linear rolling-ball contact with the profiled rail.

The bearings are recirculated through the end-face reverse units and closed return conduits. The carriages are fitted with end-face wipers and additional longitudinal wipers in order to minimise sensitivity to external influences.

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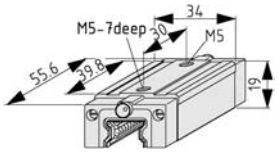
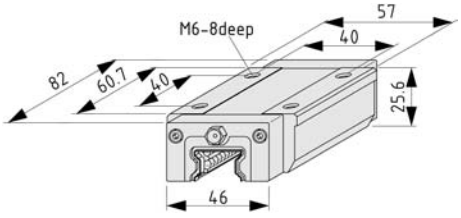
Profiles 8 can be secured to the Bearing Carriage by means of Button-Head Screws ISO 7380 and Locating Washers 8 (Section 3.2 Screws and Universal- Elements).

5 6 **8** 12



Bearing Carriage PS 4-15
Housing, St, hardened
2 wipers, PA, black
2 lubricating nipples
Notes on Use and Installation
m = 140.0 g

1 pce.	0.0.443.06



Bearing Carriage PS 4-25
Housing, St, hardened
2 wipers, PA, black
2 lubricating nipples DIN 3405 A M6-120°
m = 545.0 g

1 pce.	0.0.443.16

Bearing Wiper Set

The elastic wiper and seal element is used to retain lubricant and to clean the guide tracks. The correct functioning of the guide tracks is a critical factor for the service life of the linear guide system. The wipers can also be exchanged when the carriage is still fitted, as part of the maintenance process.

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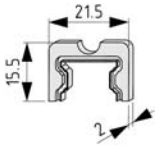
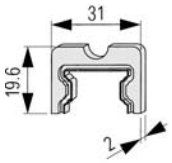
5 6 **8** 12



Bearing Wiper Set PS 4-15
TPE
2 wiper units
m = 2.0 g

black, 1 set	0.0.443.09

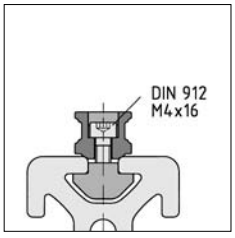


Bearing Wiper Set PS 4-25
TPE
2 wiper units
m = 4.0 g

black, 1 set	0.0.443.28

Linear Guide RailPS 4-15

Profiled Linear Guide Rail with special fastening geometry for grooves of Profile 8 at the base of the rail. The rails are provided with fastening bores and countersinks for Hexagon Socket Head Cap Screws DIN 912-M4. Following installation, the countersinks must be covered flush using the caps provided in order to increase the service life of the end-face wiper systems.



The rails are best fastened to the Profile 8 using Groove Profile 8 Al M4/60 and Hex. Socket Head Cap Screws DIN 912-M4x16 (Sec. 3.2 Screws a. Universal-Elements).

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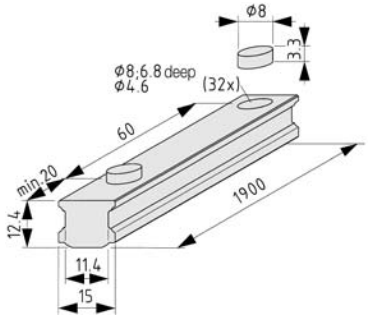
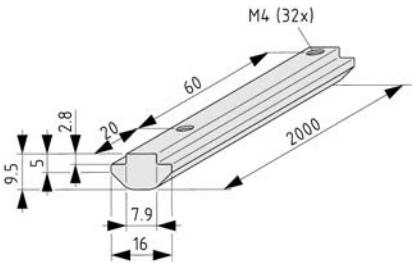
5 6 8 12



Linear Guide Rail PS 4-15
St, Cf 53, hardened, polished
Caps, PA
m = 1.30 kg/m

cut-off max. 1900 mm	0.0.443.32

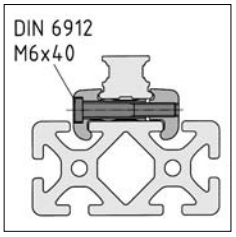


Groove Profile 8 Al M4-60
Al, anodized
m = 590 g/m

natural, 1 pce., length 2000 mm	0.0.443.02

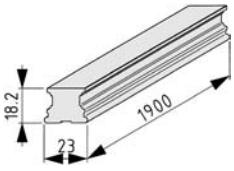
Linear Guide Rail PS 4-25

Profiled Linear Guide Rail with special rail base geometry. Clamping using the Guide Rail Mounting Profile and Guide Rail Clamping Profile makes it possible to use rails without holes that do not require Caps, or subsequent machining.



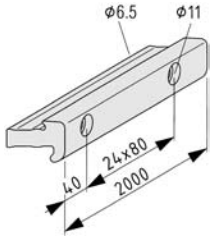
Fastening profiles for clamping the Linear Guide Rail PS 4-25, complete with drill holes and threads.
A Guide Rail Mounting Profile, Guide Rail Clamping Profile and an appropriate number of Hexagon Socket Head Cap Screws DIN 6912-M6x40 (Section 3.2 Screws and Universal- Elements) are required for securing each guide rail.

Recommended tightening torque M_A = 10 Nm.



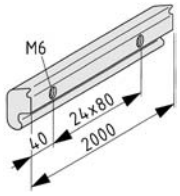
Linear Guide Rail PS 4-25
St, Cf 53, hardened, polished
m = 2.50 kg/m

cut-off max. 1900 mm	0.0.443.34



Guide Rail Mounting Profile PS 4-25
Al, anodized
m = 940 g/m

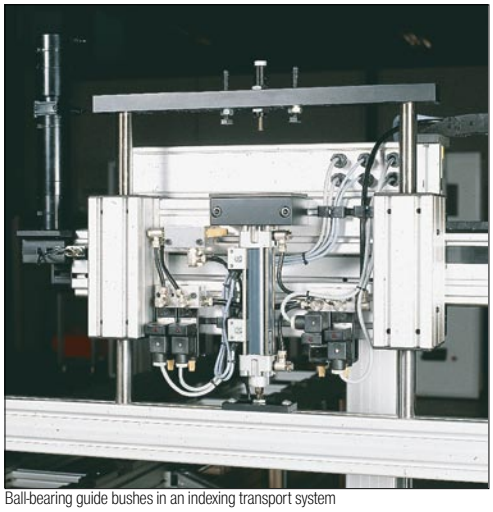
natural, 1 pce., length 2000 mm	0.0.443.17

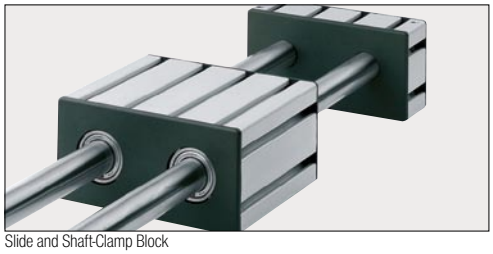


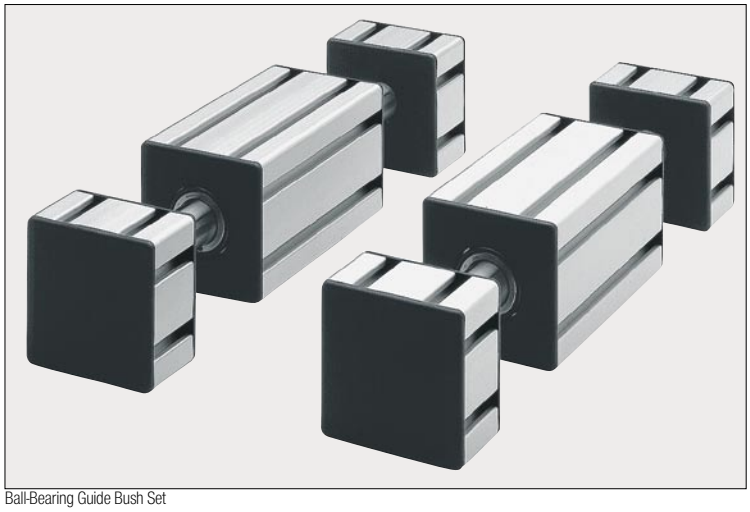
Guide Rail Clamping Profile PS 4-25
Al, anodized
m = 529 g/m

natural, 1 pce., length 2000 mm	0.0.443.18

8.1.4 Ball-Bearing Guide Bushes


Ball-bearing guide bushes in an indexing transport system


Slide and Shaft-Clamp Block


Ball-Bearing Guide Bush Set

Ball-bearing guide bushes can be integrated as compact linear slides in profile constructions.
The length of the guide is determined solely by the length of the guiding shaft.
The Ball Bushes offer low friction and are characterised by high linearity of motion.

The heart of a ball-bearing guide bush is the recirculating ball bearing which runs on a hardened steel guiding shaft. Ball Bushes and guiding shafts are integrated into the profile cavities with the minimum of ancillary components.

Two sizes, based on shaft diameters D14 and D25, are designed to withstand slide loads of 500 and 1500 N.
The maximum travelling speed is 2 m/s.
The double-sided seal of the Ball Bush, together with a high-quality grease filling, guarantee a long service life for the guide units, even under unfavourable operating conditions.

It is recommended that an evaluation should be made of the load-bearing capacity and service life, together with an allowance for deflection of the guiding shafts in the case of longer strokes.

Calculation of Service Life

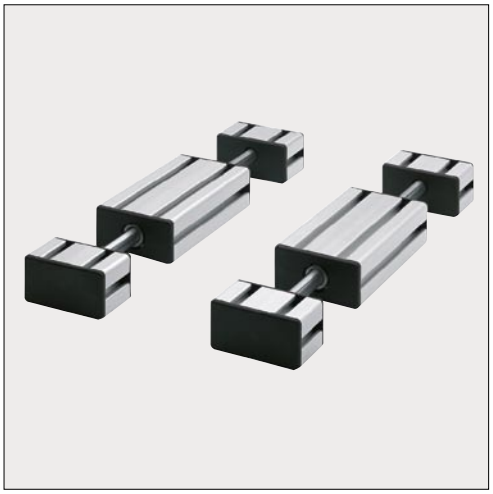
$$L = \left(\frac{C}{P}\right)^3 \cdot 100 \quad \text{in km}$$

$$L_h = \left(\frac{C}{P}\right)^3 \cdot \frac{1666}{\bar{v}} \quad \text{in h}$$

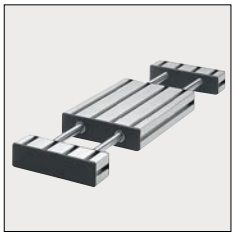
$$S_0 = \frac{C_0}{P}$$

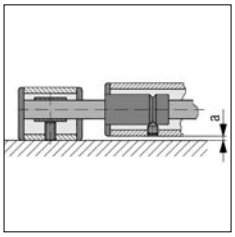
L	=	Service life	in km
L_h	=	Service life	in h
C	=	Dynamic load rating	in N
P	=	Load	in N
$\bar{v}$	=	Mean slide speed	in m/min
S_0	=	Static load safety factor	> 3
C_0	=	Static load rating	in N

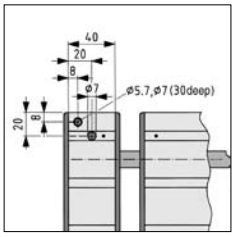
Ball-Bearing Guide Bush Sets



Complete guide systems based on Shafts D14 or D25 with variable slide (S) and stroke lengths (H) (please indicate when ordering). Shaft length W = 80 + H + S. The slightly shorter shaft length allows adjustments during installation.
The maximum length of guide is 2000 mm.
The load ratings of the slides are governed by the type and number of Ball-Bearing Guide Bush Units used.



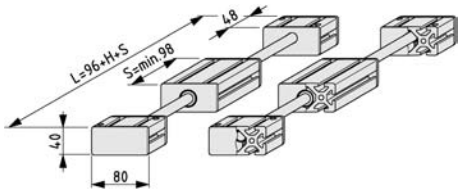




Guide Alternatives	a (Distance)
Set 8 80x40 D14 Set 8 160x40 D14	3.3 mm
Set 8 80x80 D25 Set 8 160x80 D25	4.3 mm

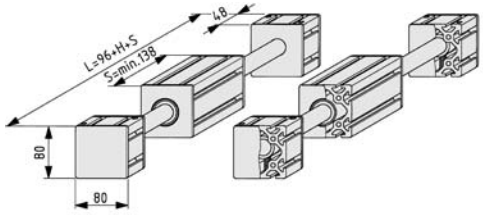
Recommended arrangement for a fixing or mounting hole.

5 6 **8** 12



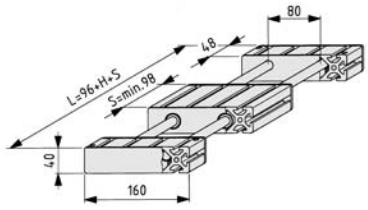
Ball-Bearing Guide Bush Set 8 80x40 D14
Fully machined and pre-assembled
2 slides 8 80x40 D14, Al, anodized, natural
4 Clamp Blocks 8 80x40 D14
4 Caps 8 80x40
4 Clamp-Block Caps 8 80x40 D14
4 Slide Caps 8 80x40 D14
4 Ball-Bearing Guide Bush Units 8 D14
4 Shaft-Clamping Bushes 8 D14
2 Shafts D14

1 set **0.0.386.11**



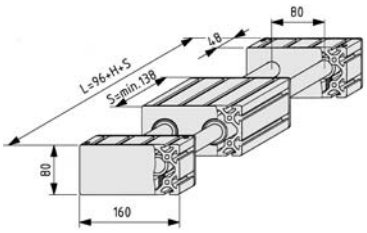
Ball-Bearing Guide Bush Set 8 80x80 D25
Fully machined and pre-assembled
2 slides 8 80x80 D25, Al, anodized, natural
4 Clamp Blocks 8 80x80 D25
4 Caps 8 80x80
4 Clamp-Block Caps 8 80x80 D25
4 Slide Caps 8 80x80 D25
4 Ball-Bearing Guide Bush Units 8 D25
4 Shaft-Clamping Bushes 8 D25
2 Shafts D25

1 set **0.0.387.11**



Ball-Bearing Guide Bush Set 8 160x40 D14
Fully machined and pre-assembled
1 slide 8 160x40 D14, Al, anodized, natural
2 Clamp Blocks 8 160x40 D14
2 Caps 8 160x40
2 Clamp-Block Caps 8 160x40 D14
2 Slide Caps 8 160x40 D14
4 Ball-Bearing Guide Bush Units 8 D14
4 Shaft-Clamping Bushes 8 D14
2 Shafts D14

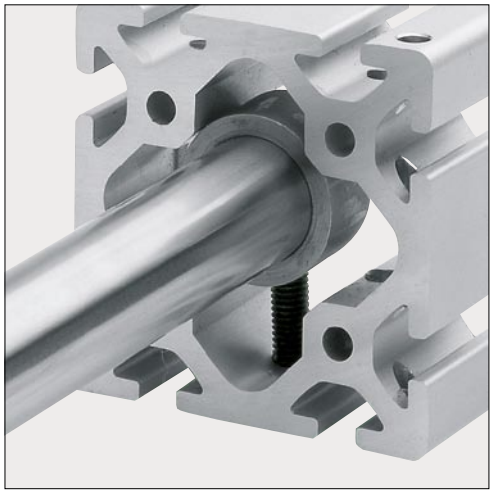
1 set **0.0.386.10**

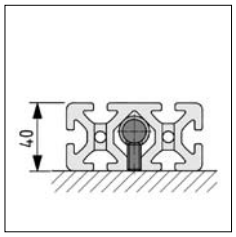


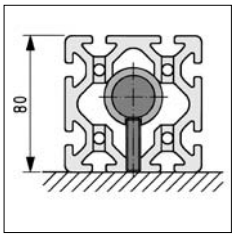
Ball-Bearing Guide Bush Set 8 160x80 D25
Fully machined and pre-assembled
1 slide 8 160x80 D25, Al, anodized, natural
2 Clamp Blocks 8 160x80 D25
2 Caps 8 160x80
2 Clamp-Block Caps 8 160x80 D25
2 Slide Caps 8 160x80 D25
4 Ball-Bearing Guide Bush Units 8 D25
4 Shaft-Clamping Bushes 8 D25
2 Shafts D25

1 set 0.0.387.10

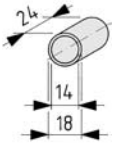
Shaft-Clamping Bushes





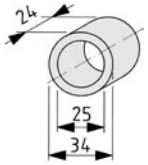


For clamping Shafts D14 and D25.
The Shaft-Clamping Bushes are fixed in the cavities of Profiles 8 using grub screw DIN 913-M8.



Shaft-Clamping Bush 8 D14
St, black
1 grub screw DIN 913-M8x14, St, bright zinc-plated
m = 22.0 g

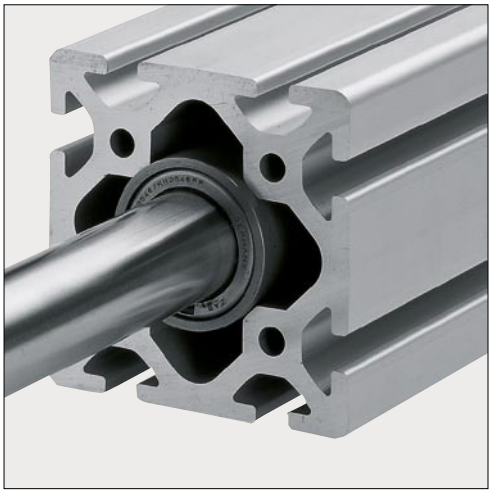
1 pce. 0.0.386.03



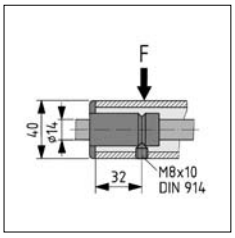
Shaft-Clamping Bush 8 D25
St, black
1 grub screw DIN 913-M8x27, St, bright zinc-plated
m = 85.0 g

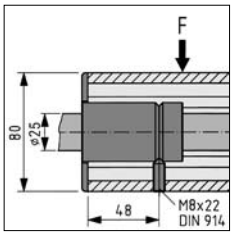
1 pce. 0.0.387.03

Ball-Bearing Guide Bush Units



Ball-Bearing Guide Bush Units consist of sleeves accommodating the Ball Bushes. They form the guide elements for a ball-bearing guide bush.

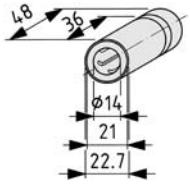




The Ball-Bearing Guide Bush Units are fixed in the cavities of Profiles 8 using grub screw DIN 914-M8.

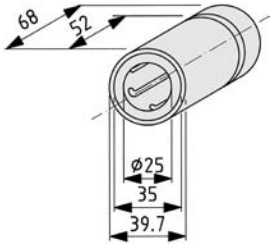
The direction of the load for the Ball-Bearing Guide Bush Unit should be selected such that the operating load presses the Ball-Bearing Guide Bush Unit into the prism of the profile cavity and not against the grub screw.

5 6 **8** 12



Ball-Bearing Guide Bush Unit 8 D14
Sleeve, St, black
Ball Bush D14, sealed both ends, maintenance-free
1 grub screw DIN 914-M8x10, St, bright zinc-plated
C = 620 N
C_0 = 520 N
$v_{max.}$ = 2 m/s
m = 62.0 g

1 pce.	0.0.386.12



Ball-Bearing Guide Bush Unit 8 D25
Sleeve, St, black
Ball Bush D25, sealed both ends, maintenance-free
1 grub screw DIN 914-M8x22, St, bright zinc-plated
C = 1,990 N
C_0 = 1,670 N
$v_{max.}$ = 2 m/s
m = 300.0 g

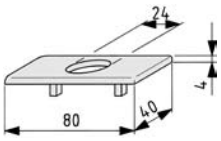
1 pce.	0.0.387.12

Caps

Rounded face covering for cut profile end of the slides or Clamp Blocks of ball-bearing guide bushes.

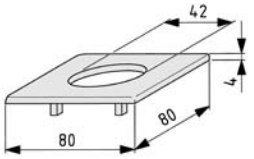
Slide Caps

5 6 **8** 12



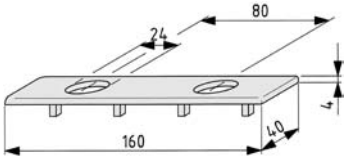
Slide Cap 8 80x40 D14
PA-GF
m = 13.0 g

black, 1 pce.	0.0.386.08



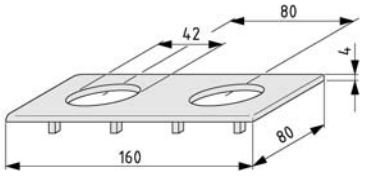
Slide Cap 8 80x80 D25
PA-GF
m = 24.0 g

black, 1 pce.	0.0.387.08



Slide Cap 8 160x40 D14
PA-GF
m = 26.0 g

black, 1 pce.	0.0.386.06

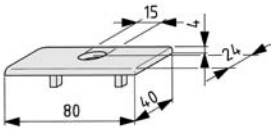


Slide Cap 8 160x80 D25
PA-GF
m = 53.0 g

black, 1 pce.	0.0.387.06

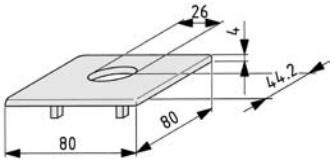
Clamp-Block Caps

5 6 **8** 12



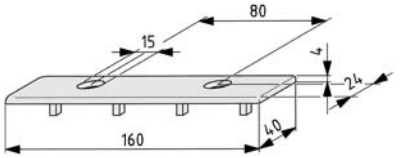
Clamp-Block Cap 8 80x40 D14
PA-GF
m = 14.0 g

black, 1 pce.	0.0.386.09



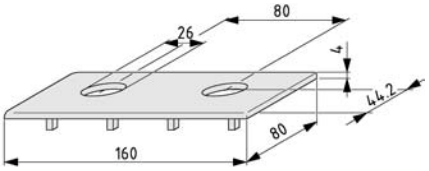
Clamp-Block Cap 8 80x80 D25
PA-GF
m = 28.0 g

black, 1 pce.	0.0.387.09



Clamp-Block Cap 8 160x40 D14
PA-GF
m = 28.0 g

black, 1 pce.	0.0.386.07



Clamp-Block Cap 8 160x80 D25
PA-GF
m = 56.0 g

black, 1 pce.	0.0.387.07

8.1.5 Ball-Bush Block Guides

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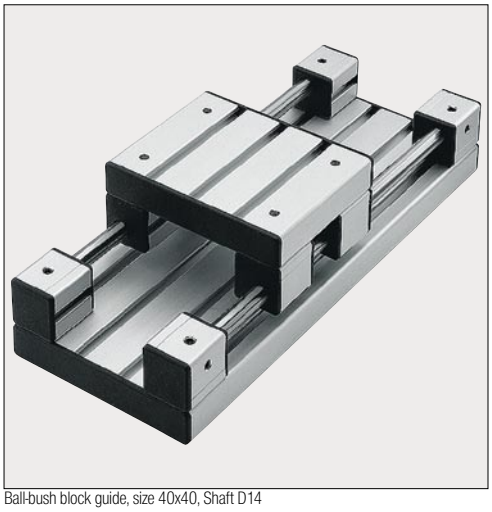
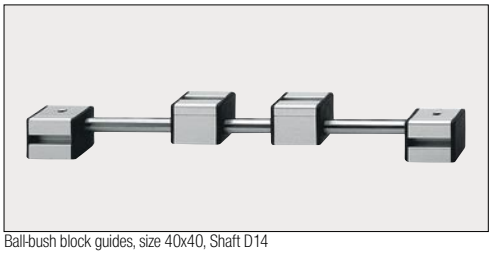
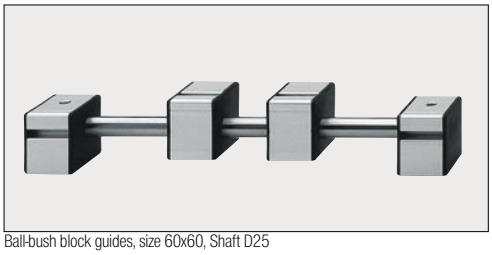


Ball-bush block guide, size 40x40, Shaft D14



Ball-bush block guides, size 40x40, Shaft D14



Ball-bush block guides, size 60x60, Shaft D25

In terms of application and characteristics, the modular ball-bush block guides are similar to those of the ball-bearing guide bushes. By separating the shafts, the distance between the points of support can be selected in accordance with the applied loads.

The special profiles of sizes 40x40 and 60x60 (with grooves of Line 8) accommodate both the shaft and the Ball Bushes.

The range of sizes and the different shaft diameters are designed to withstand applied loads ranging from 500 to 1500 N at a maximum travelling speed of 2 m/s. The double-sided seal of the Ball Bush, together with a high-quality grease filling, guarantees a long service life, even under unfavourable operating conditions.

It is advisable to perform an evaluation of the load-bearing capacity and service life and to make an allowance for the deflection of the guiding shafts in the case of longer strokes.

Calculation of Service Life

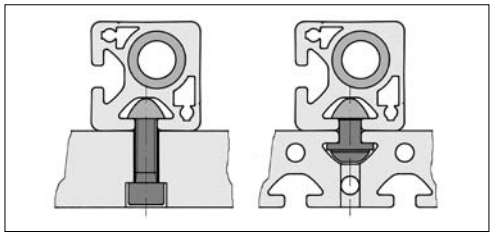
$$L = \left(\frac{C}{P}\right)^3 \cdot 100 \quad \text{in km}$$

$$L_h = \left(\frac{C}{P}\right)^3 \cdot \frac{1666}{\bar{v}} \quad \text{in h}$$

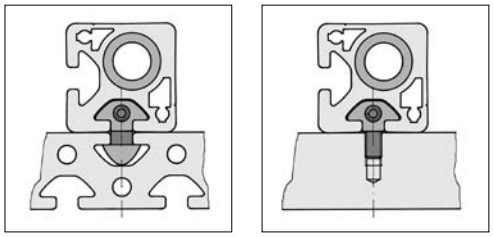
$$S_0 = \frac{C_0}{P}$$

L	=	Service life	in km
L_h	=	Service life	in h
C	=	Dynamic load rating	in N
P	=	Load	in N
$\bar{v}$	=	Mean slide speed	in m/min
S_0	=	Static load safety factor	> 3
C_0	=	Static load rating	in N

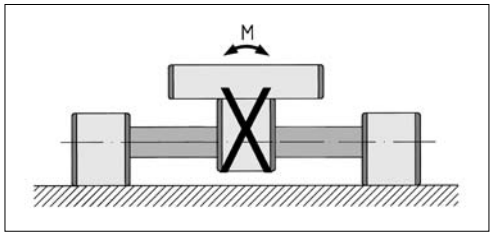
Assembly Tips



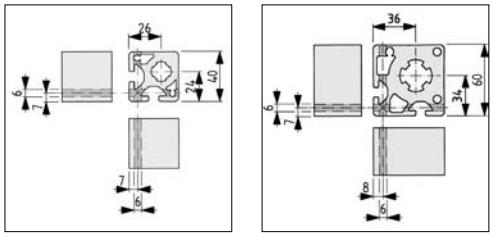
Grooves of Profiles 8 can be used to secure the Bearing Blocks using fastening elements of Line 8.



Direct-Fastening Set 8 provides a particularly easy means of securing Bearing Blocks without need for machining.



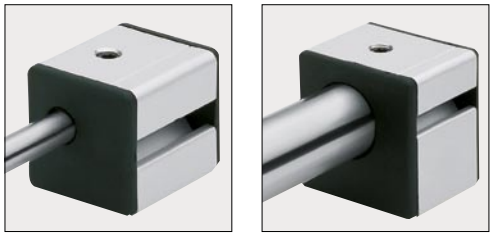
An individual Ball Bush is unable to absorb any moment. It is therefore always necessary to use two shafts for a guide system, with at least two Ball Bushes being located one after the other on a single shaft.
The distances must be appropriate for the moment loads.



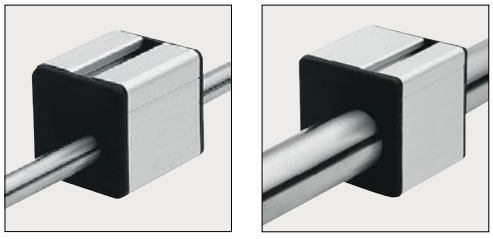
The blocks can be pinned in the areas marked (depending on requirements).

Bearing Blocks

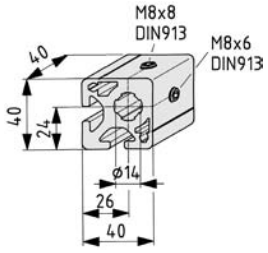
Individual components for constructing a ball-bush block guide.



The Shaft-Clamp Blocks hold and clamp the shafts. The shafts are clamped by means of appropriate grub screws.

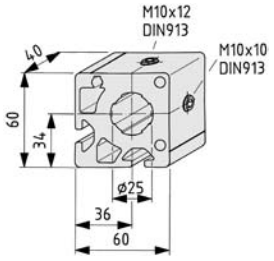


The Ball-Bush Blocks serve as the guide elements with integral press-fitted recirculating Ball Bushes.



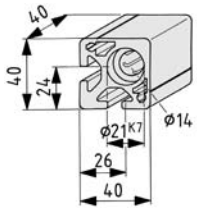
Shaft-Clamp Block 8 D14
Shaft-Clamp Block, Al, anodized, natural
Grub screw DIN 913-M8x6, St, bright zinc-plated
Grub screw DIN 913-M8x8, St, bright zinc-plated
m = 98.0 g

1 pce.	0.0.401.03



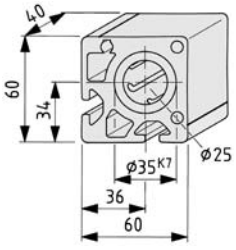
Shaft-Clamp Block 8 D25
Shaft-Clamp Block, Al, anodized, natural
Grub screw DIN 913-M10x10, St, bright zinc-plated
Grub screw DIN 913-M10x12, St, bright zinc-plated
m = 240.0 g

1 pce.	0.0.402.03



Ball-Bush Block 8 D14
Ball-Bush Block, Al, anodized, natural
Ball Bush D14, sealed both ends, maintenance-free
C = 620 N
C_0 = 520 N
m = 100.0 g

1 pce.	0.0.401.04



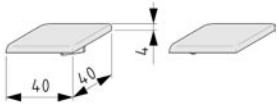
Ball-Bush Block 8 D25
Ball-Bush Block, Al, anodized, natural
Ball Bush D25, sealed both ends, maintenance-free
C = 1,990 N
C_0 = 1,670 N
m = 260.0 g

1 pce.	0.0.402.04

Block Caps

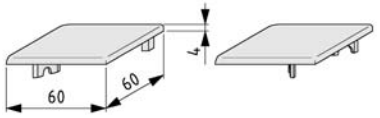
1 Block-End Cap Set and 3 Block-Cap Sets of the appropriate shaft diameter are required for each ball-bush block guide (each shaft, with 2 Ball-Bush Blocks and 2 Shaft-Clamps Blocks).

5 6 **8** 12



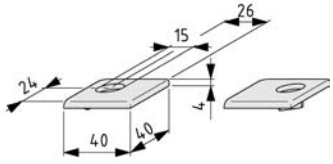
Block-End Cap Set 8 40x40
PA-GF
Block-end cap 8 40x40 right
Block-end cap 8 40x40 left
m = 14.0 g

black, 1 set	0.0.401.11



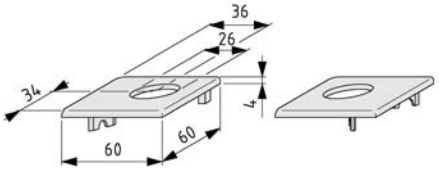
Block-End Cap Set 8 60x60
PA-GF
Block-end cap 8 60x60 right
Block-end cap 8 60x60 left
m = 30.0 g

black, 1 set	0.0.402.17



Block-Cap Set 8 D14
PA-GF
Block cap 8 D14 right
Block cap 8 D14 left
m = 12.0 g

black, 1 set	0.0.401.13



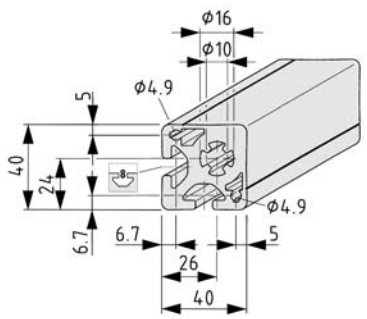
Block-Cap Set 8 D25
PA-GF
Block cap 8 D25 right
Block cap 8 D25 left
m = 27.0 g

black, 1 set	0.0.402.19

Ball-Bush Block Profiles

For use in constructing ball-bush block guides, in Particular with the item Ball Bushes. Also suitable for self-construction of pedestal bearings.

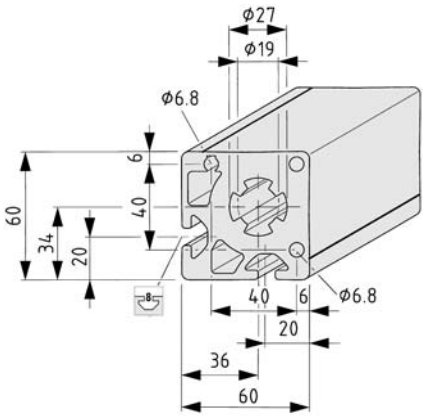
5 6 **8** 12



Ball-Bush Block Profile 8 40x40
Al, anodized

A =	9.58 cm²	I_x =	14.22 cm⁴	I_y =	14.38 cm⁴
		I_t =	9.95 cm⁴		
m =	2.58 kg/m	W_x =	6.77 cm³	W_y =	6.94 cm³

natural, cut-off max. 6000 mm	0.0.373.53

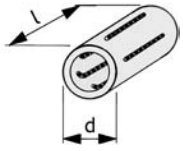


Ball-Bush Block Profile 8 60x60
Al, anodized
A = 23.05 cm² I_x = 76.03 cm⁴ I_y = 75.65 cm⁴
I_t = 77.49 cm⁴
m = 6.18 kg/m W_x = 26.77 cm³ W_y = 26.27 cm³

natural, cut-off max. 6000 mm	0.0.373.54

Ball Bushes

Ball Bushes for installation in the Ball-Bush Block Profiles.



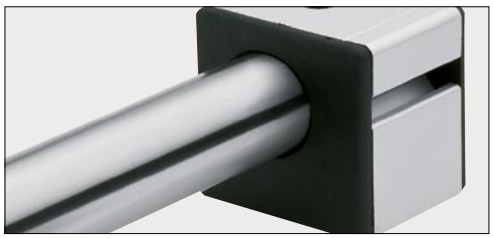
Ball Bush D14
Sealed both ends, maintenance-free
d = 21 mm
l = 28 mm
m = 20.5 g

1 pce.	0.0.401.20

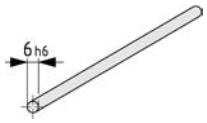
Ball Bush D25
Sealed both ends, maintenance-free
d = 25 mm
l = 40 mm
m = 66.0 g

1 pce.	0.0.402.29

8.1.6 Shafts

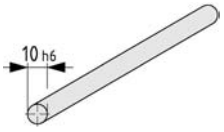


Hardened and ground shafts used as guiding shafts for Roller Guides, C-Rail Guides, ball-bearing guide bushes and ball-bush block guides.
Shaft D14 K is intended for special applications and is corrosion-resistant with a black coating.
Shaft D14, stainless is suitable for constructing corrosion-resistant linear slides when used in conjunction with stainless rollers.



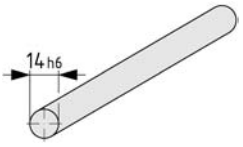
Shaft D6
St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.4 mm
Roundness 4 µm, Parallelism 5 µm/1000 mm
m = 0.22 kg/m

bright, cut-off max. 3000 mm	0.0.356.01



Shaft D10
St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.4 mm
Roundness 4 µm, Parallelism 6 µm/1000 mm
m = 0.62 kg/m

bright, cut-off max. 3000 mm	0.0.401.09



Shaft D14
St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.6 mm
Roundness 5 µm, Parallelism 8 µm/1000 mm
m = 1.21 kg/m

bright, cut-off max. 3000 mm	0.0.294.01

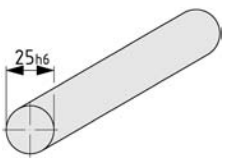
Shaft D14 K
St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.6 mm
Roundness 5 µm, Parallelism 8 µm/1000 mm
Also corrosion-resistant coating
m = 1.21 kg/m

black, cut-off max. 3000 mm	0.0.294.55

New in catalogue

Shaft D14, stainless
St, X 46 Cr 13, hardened, polished
Hardness HRc 54 ± 2
Roughness Ra = 0.3 µm, Rz = 2 µm
Hardening depth min. 0.6 mm
Roundness 5 µm, Parallelism 8 µm/1000 mm
m = 1.21 kg/m

stainless, cut-off max. 3000 mm	0.0.472.30



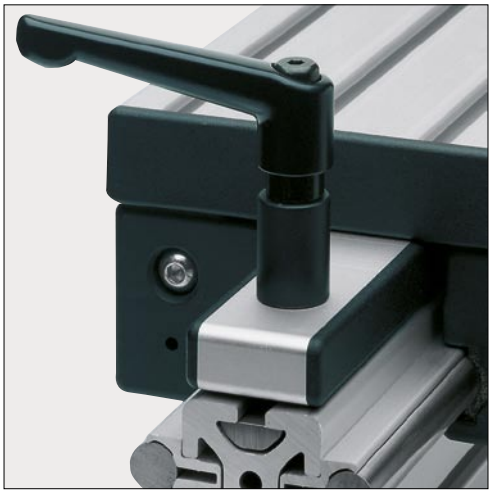
Shaft D25
St, Cf 53, hardened, polished
Hardness HRc 60 ± 2
Roughness Ra = 0.3 µm, Rz = 1.6 µm
Hardening depth min. 0.9 mm
Roundness 6 µm, Parallelism 9 µm/1000 mm
m = 3.85 kg/m

bright, cut-off max. 3000 mm	0.0.350.09

8.1.7 Accessories for Linear Slides

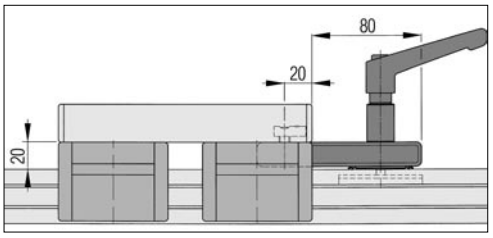
Components for expanding the range of applications of item linear slides:
> Slide Clamps for hand-operated linear slides
> Limit stop for limiting mechanical movement

Slide Clamp 8 heavy-duty

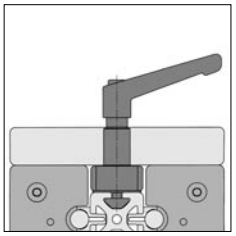


Slide Clamp 8 heavy-duty is used for securing the guide slide relative to the guide profile.
It can be screw-connected under any carriage of item's linear slides where there is a clearance of 20 mm to the guide profile.

It is advisable to additionally pin Slide Clamp 8 heavy-duty to the sliding profile (dowel DIN 6325-5m6 x 30). Fixing bores have already been provided in Slide Clamp 8 heavy-duty for this purpose.

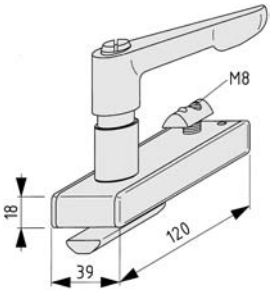


The special design of Slide Clamp 8 heavy-duty prevents undue force being applied to the bearings as a result of the clamping action.



Clamping elements	Holding force for maximum tightening torque of 15 Nm
dry	Approx. 1,500 N
oily	Approx. 1,000 N

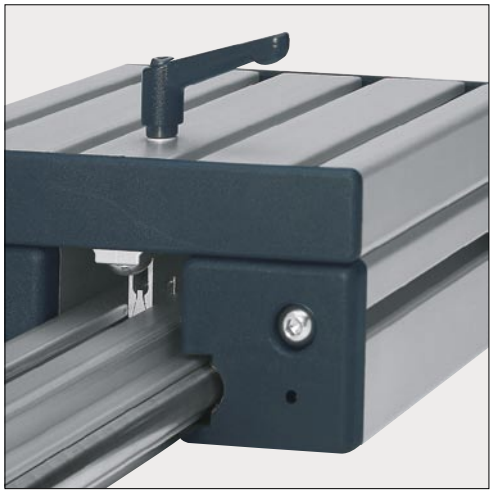
5 6 **8** 12



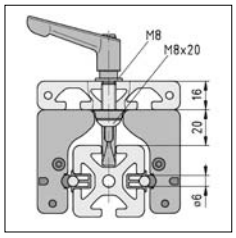
Slide Clamp 8 heavy-duty
1 Slide Clamp Profile 8, Al, anodized, natural
2 Caps, PA, black
1 special clamping nut, St, black
1 spacer sleeve, St
2 wipers
1 Hexagon Socket Head Cap Screw DIN912 M8x20, St
1 T-Slot Nut 8 St M8
1 clamp lever, black
m = 385.0 g

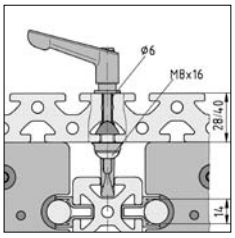
1 pce. 0.0.463.65

Slide Clamps 8



Slide Clamps 8 can be screw-connected under any carriage of item's linear slides where there is a clearance of 20 mm to the guide profile.
Slide Clamp 8 S16 (S16 = thickness of the sliding profile) is suitable for e.g. Roller Guides with a profile 8 80x16 as the sliding profile
Slide Clamps 8 S28 and 8 S40 can be used on sliding profiles 8 160x28 and 8 160x40 respectively.

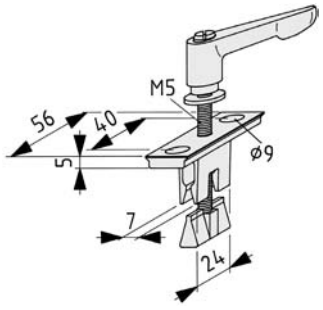




Typical arrangement of Slide Clamps over a groove in the guide profile.

Clamping elements	Holding force for maximum tightening torque of 5.5 Nm
dry	Approx. 500 N
oily	Approx. 200 N

5 6 **8** 12



Slide Clamp 8 S16
Clamping jaw cast steel, bright zinc-plated
Clamping wedge cast steel, stainless, slide coating
Clamp lever, black
Washer DIN 9021-5.3, St, bright zinc-plated
m = 93.0 g

1 pce. **0.0.356.35**

Slide Clamp 8 S28
Clamping jaw cast steel, bright zinc-plated
Clamping wedge cast steel, stainless, slide coating
Clamp lever, black
Washer DIN 9021-5.3, St, bright zinc-plated
m = 94.0 g

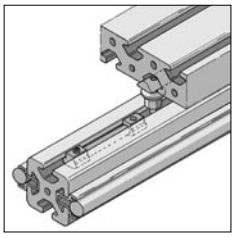
1 pce. **0.0.294.48**

Slide Clamp 8 S40
Clamping jaw cast steel, bright zinc-plated
Clamping wedge cast steel, stainless, slide coating
Clamp lever, black
Washer DIN 9021-5.3, St, bright zinc-plated
m = 95.0 g

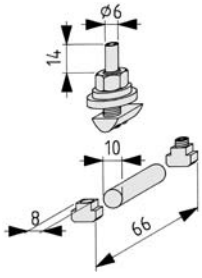
1 pce. **0.0.294.51**

Limit Stop

Limit Stop for hand-operated sliding carriage or additional mechanical safeguard.
A Limit Stop is required for each terminal position.
The Limit Stop can also be located in the area of the groove covered by a Timing Belt.



Arrangement of the plastic buffer in the groove of the supporting profile. Grub screw M8x44 is secured in the opposing groove of the moving carriage.



Limit Stop 8
T-Slot Nut 8 St M8, bright zinc-plated
Grub screw DIN 916-M6x12, St, bright zinc-plated
T-Slot Nut M6x8 with thrust piece, St, bright zinc-plated
Nut DIN 508-M6x8, St, bright zinc-plated
Plastic buffer ∅ 10x40 mm, PUR yellow, 90 Shore A
Grub screw M8x44, St, bright zinc-plated
Washer DIN 6340-8.4, St, bright zinc-plated
Hexagon nut DIN 6331-M8, St, bright zinc-plated
m = 65.0 g

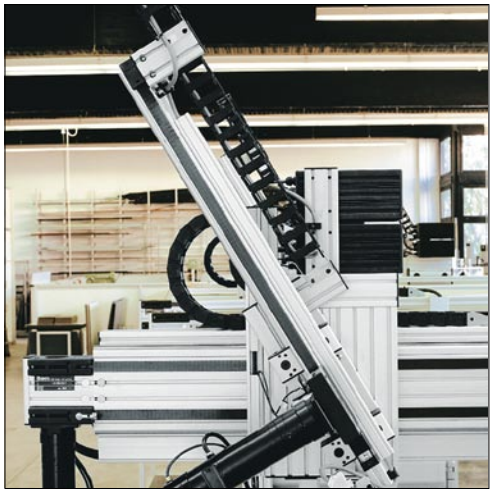
1 set	0.0.337.11

8.2 Mechanical Drive Elements

Within the MB Building Kit System, power can be supplied to the slides of the Roller Guides, ball-bearing guide bushes and linear guide systems or any other linear-guided structural elements, such as lifting and sliding doors etc., using timing-belt drives, Ball Screw Units or chain drives.

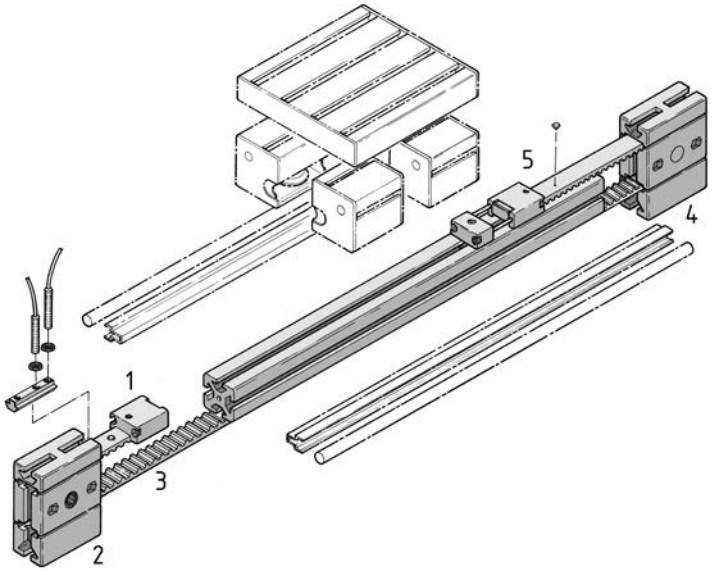
Drive	Speed	Repeating Accuracy	Length	Operating Load	Rigidity
Timing-Belt Drive	up to 5 m/s	up to 0.15 mm	up to 12 m	up to 3,000 N	medium
Chain Drive	up to 2 m/s	up to 0.5 mm	up to 5.7 m	up to 1,400 N	medium
Ball Screw Unit	up to 1 m/s	up to 0.05 mm	up to 2.7 m	up to 2,000 N	very high

8.2.1 Timing-Belt Drives

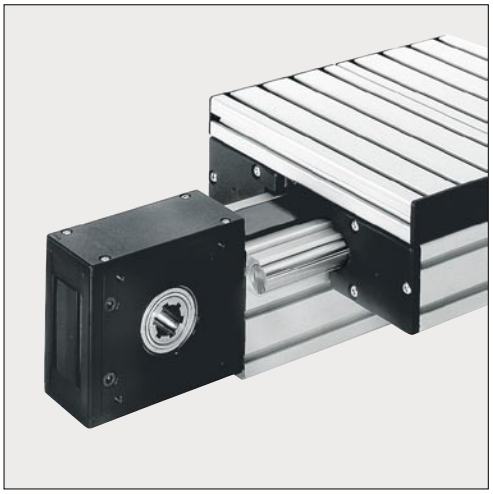


Timing-belt drives are particularly suitable for high speeds and extended stroke lengths. A range of sizes, with flexible and heavy duty Timing Belts of different widths and different pulley diameters, are designed to satisfy virtually any load and speed requirements.

Linear units driven by a Timing Belt mainly consist of a supporting profile with the corresponding linear slide, the sliding carriage and the components of the timing- belt drive mechanism.
The Timing Belt is secured to the slide by means of a Timing-Belt Tensioner (1), turned through 180° by a Timing-Belt Reverse Unit at the end of the supporting profile (2), routed back inside or outside the profile (3), turned through 180° once again by a second Timing-Belt Reverse Unit (4), and is then linked or clamped with the other end of the Timing Belt on the sliding carriage (5).

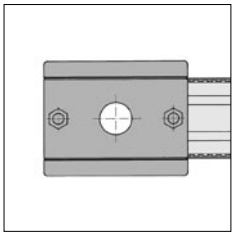


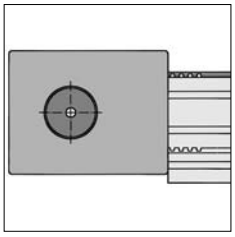
Timing-Belt Reverse Unit



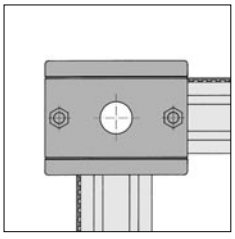
In addition to acting as a guide for the belt, the Timing-Belt Reverse Unit can also be used as a coupling for any type of drive mechanism or for Synchroniser Shafts. For this purpose, the pulley is in the form of a multi-spline hub or it can be individually processed for a shaft-hub joint.
Couplings and Coupling Housings provide a simple means of connecting any desired motors.

The choice of suitable Timing-Belt Reverse Unit depends on the required forces and speeds or on the combination of drive mechanism and gearbox.

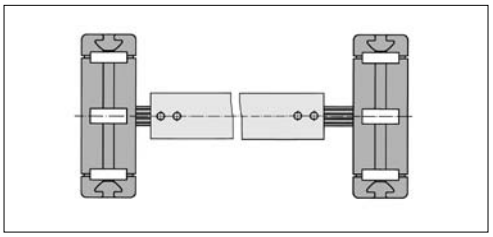




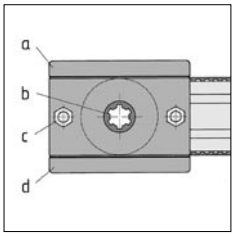
Reversal of the Timing Belt around 180°. The Timing Belt can be returned either inside or outside the profile. The timing pulley is provided with multi-spline toothing for attaching drive units or Multi-Spline / Adapter Shafts, or with a bore which can be machined for other shaft / hub connections. The housings of the Timing-Belt Reverse Units feature grooves for connecting to profiles of the relevant Lines.

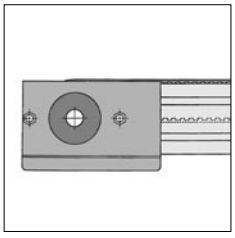


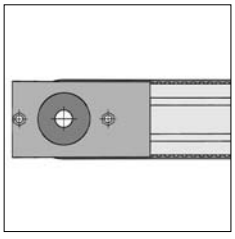
The special apertures in the Timing-Belt Reverse Unit can also be used to turn the belt through 90°, with the return path being located at any distance from the sliding carriage. If necessary, an additional slide can also be powered, offset at 90° from the first, using the same drive mechanism.



Connection of Timing-Belt Reverse Units either with Multi-Spline Shafts or, for distances in excess of 500 mm, with Adapter Shafts, hollow shafts or Synchroniser Shafts.







General function of bore and belt covers (exception: Timing-Belt Reverse Units R50 and R75)
> Top belt cover (a) can be detached when used as belt drive
> Timing pulley (b) with multi-spline hub or bore
> Bores in basic shell (c) for mounting Coupling Housings, Adapter Flange, Bevel Gearbox and Ball Screw Unit or for interconnecting Timing-Belt Reverse Units
> Bottom belt cover (d) can be detached where space is restricted

Timing-Belt Reverse Units 5 40 R10

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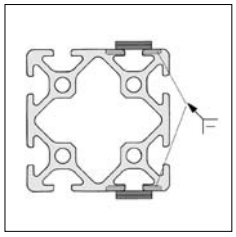
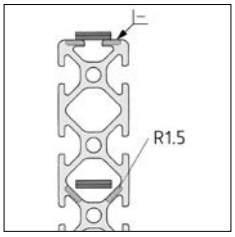
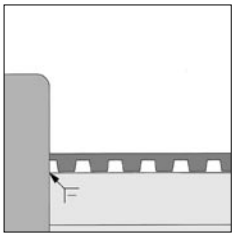
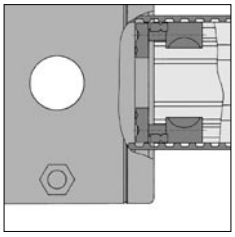
Timing-Belt Reverse Unit 5 40 R10 can be used to reverse and drive Timing Belt R10 T5 in conjunction with Profiles 5.
The housing of the Timing-Belt Reverse Unit has been prepared for attaching Adapter Plates and Coupling Housings D30 and for accommodating Centring Piece D50-D22 (Section 8.3 Accessories for Mechanical Drive Elements).





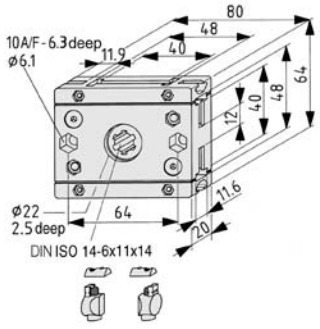
To protect the Timing Belt against damage, the profiles must be rounded at the joint to the Timing-Belt Reverse Unit.





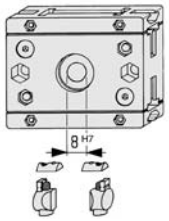
Mounting at a height of 40 mm in the groove of Profile 5 with Universal-Fastening Set 5.

5 6 8 12



Timing-Belt Reverse Unit 5 40 R10 VK14
Timing-Belt Reverse Unit, die-cast aluminium, black
Ball-bearing timing pulley with multi-spline hub, hub geometry VK14 for Multi-Spline Shaft VK14 DIN ISO 14 - 6x11x14, hub length 18 mm,
One revolution corresponds to 140 mm
effective radius r_w = 22.3 mm, Frictional moment with 1‰ pre-tensioning of the Timing Belt: M_R = 0.05 Nm
Max. load: M_D = 3.3 Nm
Timing Belt length in the Timing-Belt Reverse Unit for
90° reversal: 110 mm
180° reversal (outer dimension 80): 135 mm
180° reversal (outer dimension 64): 150 mm
2 Universal-Fastening Sets 5, die-cast zinc, bright zinc-pl.
Pitch p = 5 mm Number of teeth z = 28
Notes on Use and Installation
m = 262.0 g

1 pce. 0.0.410.01



Timing-Belt Reverse Unit 5 40 R10 with Bore
Timing-Belt Reverse Unit, die-cast aluminium, black
Ball-bearing timing pulley with bore ∅ 8H7, reborable up to max. ∅ 15 mm
Hub length 18 mm
One revolution corresponds to 140 mm
effective radius r_w = 22.3 mm, Frictional moment with 1‰ pre-tensioning of the Timing Belt: M_R = 0.05 Nm
Max. load: M_D = 3.3 Nm
Timing Belt length in the Timing-Belt Reverse Unit for
90° reversal: 110 mm
180° reversal (outer dimension 80): 135 mm
180° reversal (outer dimension 64): 150 mm
2 Universal-Fastening Sets 5, die-cast zinc, bright zinc-pl.
Pitch p = 5 mm Number of teeth z = 28
Notes on Use and Installation
m = 277.0 g

1 pce. 0.0.410.06

Timing-Belt Reverse Units 8 40 R25

Timing-Belt Reverse Unit 8 40 R25 is suitable for reversing and driving Timing Belt R25 T10 for linear units of Profiles 8. The emergence dimension of the Timing Belt is 40 mm.
The housing of the Timing-Belt Reverse Unit has been prepared for attaching Adapter Plates and Coupling Housings D55 and for accommodating Centring Piece D50-D22 (Section 8.3 Accessories for Mechanical Drive Elements).

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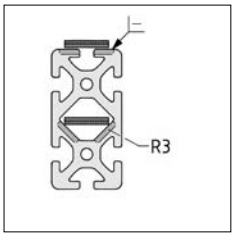
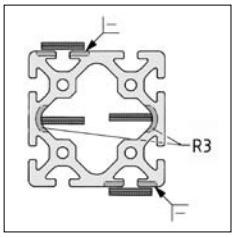
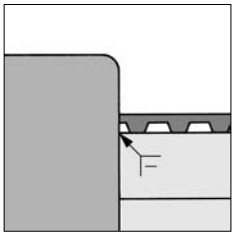
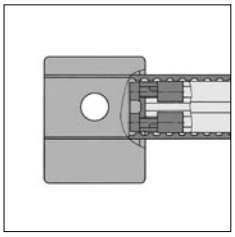
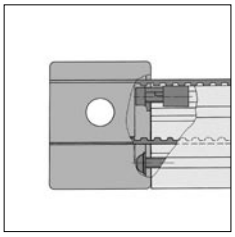




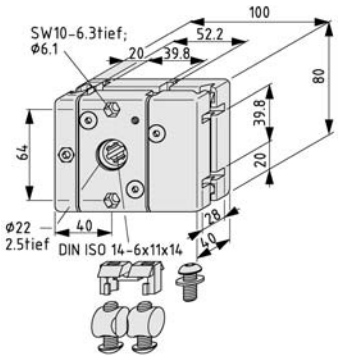
To protect the Timing Belt against damage, the profiles must be rounded at the joint to the Timing-Belt Reverse Unit.





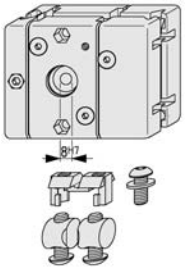


Timing-Belt Reverse Unit 8 40 R25 mounted at a height of 40 mm in the groove of Profile 8 using Universal Fastener 8 and special T-Slot Nut or in the core bore using Button-Head Screw ISO 7380-M8 and washer DIN 125-8.4.
The special T-Slot Nut can be split in the centre and halved if required.



Timing-Belt Reverse Unit 8 40 R25 VK14
Timing-Belt Reverse Unit, die-cast zinc, black
Ball-bearing timing pulley with multi-spline hub, hub geometry VK14 for Multi-Spline Shaft VK14 DIN ISO 14-6x11x14, hub length 30 mm
One revolution corresponds to 150 mm
effective radius r_w = 23.9 mm
Frictional moment with 1‰ pre-tensioning of the Timing Belt: M_R = 0.30 Nm
Max. load: M_D = 20 Nm
Timing Belt length in the Timing-Belt Reverse Unit for 90° reversal: 140 mm
180° reversal (emerg. on 100 mm side): 160 mm
180° reversal (emerg. on 80 mm side): 200 mm
2 Universal Fasteners 8
2 Button-Head Screws ISO 7380-M8x30, St, bright zinc-pl.
1 special T-Slot Nut M8, cast steel
1 Button-Head Screw ISO 7380-M8x20, St, bright zinc-pl.
1 washer DIN 125-8.4 St, bright zinc-plated
Pitch p = 10 mm Number of teeth z = 15
Notes on Use and Installation
m = 1.3 kg

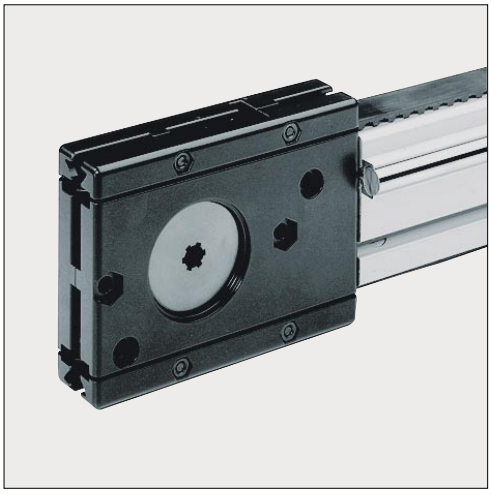
1 pce. 0.0.337.26



Timing-Belt Reverse Unit 8 40 R25 with Bore
Timing-Belt Reverse Unit, die-cast zinc, black
Ball-bearing timing pulley with bore ∅ 8H7, reborable up to max. ∅ 15 mm, hub length 30 mm
One revolution corresponds to 150 mm
effective radius r_w = 23.9 mm
Frictional moment with 1‰ pre-tensioning of the Timing Belt: M_R = 0.30 Nm
Max. load: M_D = 20 Nm
Timing Belt length in the Timing-Belt Reverse Unit for 90° reversal: 140 mm
180° reversal (emerg. on 100 mm side): 160 mm
180° reversal (emerg. on 80 mm side): 200 mm
2 Universal Fasteners 8
2 Button-Head Screws ISO 7380-M8x30, St, bright zinc-pl.
1 special T-Slot Nut M8, cast steel
1 Button-Head Screw ISO 7380- M8x20, St, bright zinc-pl.
1 washer DIN 125-8.4 St, bright zinc-plated
Pitch p = 10 mm Number of teeth z = 15
Notes on Use and Installation
m = 1.3 kg

1 pce. 0.0.337.34

Timing-Belt Reverse Units 8 80 R25



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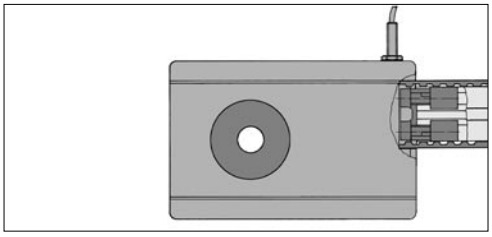
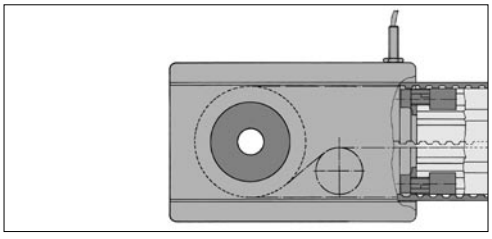
Timing-Belt Reverse Unit 8 80 R25 is suitable for reversing and driving Timing Belt R25 T10 for linear units of Profile 8.
The emergence dimension of the Timing Belt is 80 mm or 40 mm.

The housing of the Timing-Belt Reverse Unit has been prepared for attaching Adapter Plates and Coupling Housings D80 and for accommodating Centring Piece D60-D60 (Section 8.3 Accessories for Mechanical Drive Elements).

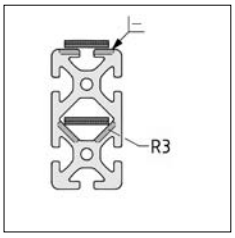


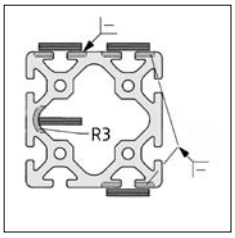
Timing-Belt Reverse Unit 8 80 R25 mounted at a profile height of 40 mm in the groove of Profile 8 using Universal Fastener 8 and special T-Slot Nut or at a profile height of 80 mm by splitting the special T-Slot Nut at the specified break point.



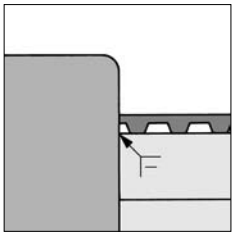
The variation in the emergence dimensions from 80 mm to 40 mm is achieved by internal rerouting of the Timing Belt. The Timing Belt is routed with its smooth reverse side over the reversing pulleys.

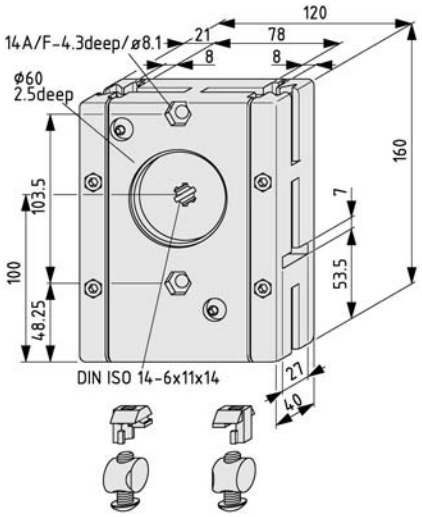
The allowable driving torque of Timing-Belt Reverse Units 8 80 R25 is limited to M_D = 40 Nm when the loaded belt runs through the reversing pulleys.
In this case, a Timing-Belt Reverse Unit 8 40 R25 can be used as a second reverse unit.





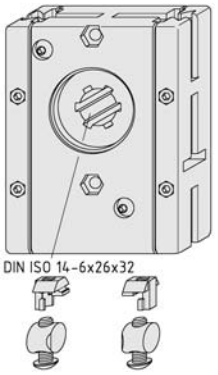
To protect the Timing Belt against damage, the profiles must be rounded at the joint to the Timing-Belt Reverse Unit.





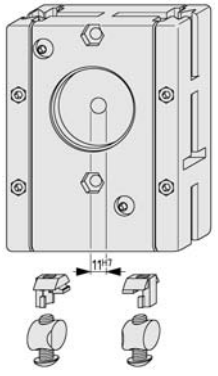
Timing-Belt Reverse Unit 8 80 R25 VK14
Timing-Belt Reverse Unit, die-cast zinc, black
Ball-bearing timing pulley with multi-spline hub, hub geometry VK14 for Multi-Spline Shaft VK14 DIN ISO 14 - 6x11x14, hub length 29 mm
One revolution corresponds to 280 mm
effective radius r_w = 44.6 mm
Frict. moment with 1‰ pre-tensioning of the Timing Belt:
(Emergence dim. 40) M_R = 1.05 Nm
(Emergence dim. 80) M_R = 0.55 Nm
Max. load: M_D = 28 Nm
Timing Belt length in the Timing-Belt Reverse Unit for
90° reversal: 190 mm
180° reversal (emergence dim. 40): 360 mm
180° reversal (emergence dim. 80): 340 mm
2 Universal Fasteners 8
2 Button-Head Screws ISO 7380-M8x30, St, bright zinc-pl.
1 special T-Slot Nut M8, cast steel
Pitch p = 10 mm Number of teeth z = 28
Notes on Use and Installation
m = 3.3 kg

1 pce. 0.0.366.02



Timing-Belt Reverse Unit 8 80 R25 VK32
Timing-Belt Reverse Unit, die-cast zinc, black
Ball-bearing timing pulley with multi-spline hub, hub geometry VK14 for Multi-Spline Shaft VK32 DIN ISO 32 - 6x26x32, hub length 29 mm
One revolution corresponds to 280 mm
effective radius r_w = 44.6 mm
Frict. moment with 1‰ pre-tensioning of the Timing Belt:
(Emergence dim. 40) M_R = 1.05 Nm
(Emergence dim. 80) M_R = 0.55 Nm
Max. load: M_D = 52 Nm
Timing Belt length in the Timing-Belt Reverse Unit for
90° reversal: 190 mm
180° reversal (emergence dim. 40): 360 mm
180° reversal (emergence dim. 80): 340 mm
2 Universal Fasteners 8
2 Button-Head Screws ISO 7380-M8x30, St, bright zinc-pl.
1 special T-Slot Nut M8, cast steel
Pitch p = 10 mm Number of teeth z = 28
Notes on Use and Installation
m = 3.2 kg

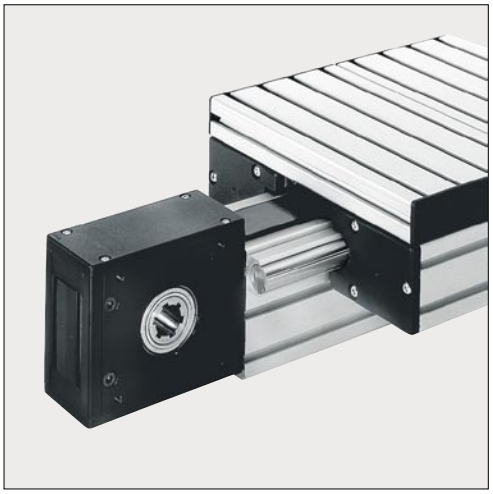
1 pce. 0.0.366.11



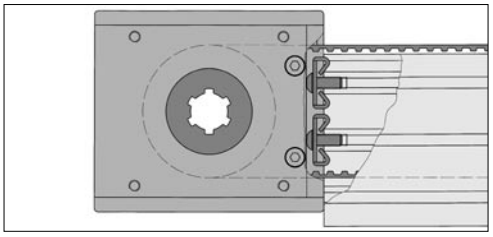
Timing-Belt Reverse Unit 8 80 R25 with Bore
Timing-Belt Reverse Unit, die-cast zinc, black
Ball-bearing timing pulley with bore ∅ 11H7, reborable up to max. ∅ 50 mm, hub length 29 mm
One revolution corresponds to 280 mm
effective radius r_w = 44,6 mm
Frict. moment with 1‰ pre-tensioning of the Timing Belt:
(Emergence dim. 40) M_R = 1.05 Nm
(Emergence dim. 80) M_R = 0.55 Nm
Max. load: M_D = 52 Nm
Timing Belt length in the Timing-Belt Reverse Unit for
90° reversal: 190 mm
180° reversal (emergence dim. 40): 360 mm
180° reversal (emergence dim. 80): 340 mm
2 Universal Fasteners 8
2 Button-Head Screws ISO 7380-M8x30, St, bright zinc-pl.
1 special T-Slot Nut M8, cast steel
Pitch p = 10 mm Number of teeth z = 28
Notes on Use and Installation
m = 3.3 kg

1 pce. 0.0.366.07

Timing-Belt Reverse Units 8 80 R50 II

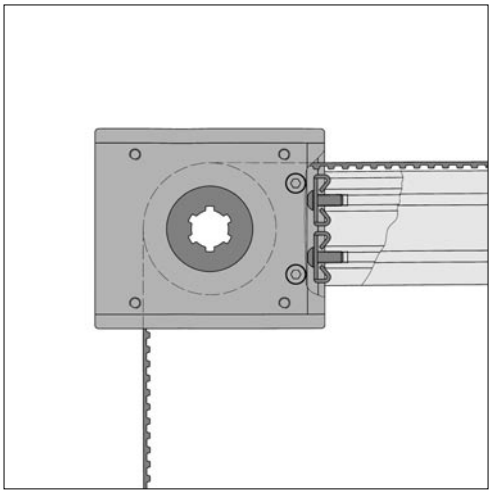


Timing-Belt Reverse Unit 8 80 R50 II is a particularly compact Timing-Belt Reverse Unit for driving Timing Belt R50 T10. It is fastened to the core bores of Profiles 8 (cross-sections of 80x80 mm and above).
The timing pulley of Timing-Belt Reverse Unit 8 80 R50 II VK32 features a multi-spline hub for accommodating Multi-Spline Shaft VK32.
The housing allows connection of coupling D80 VK32.
The hub of the version with the bore can be machined to a maximum diameter of ∅ 36 mm or diameter ∅ 30 mm with key.



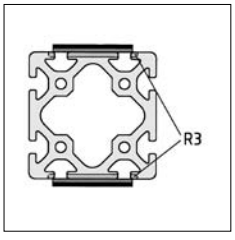
Connection of Timing-Belt Reverse Unit 8 80 R50 II based on a profile height of 120 mm (return of the Timing Belt in the profile cavity) or a profile height of 80 mm with Standard-Fastening Sets 8. To do this, the Timing-Belt Reverse Unit is partially dismantled, secured to the profile and then refitted.

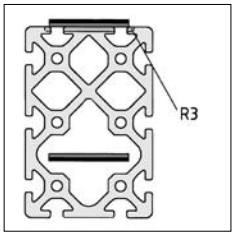
The emergence dimension of the Timing Belt is 80 mm.



90° reversal of Timing Belt R50 T10.

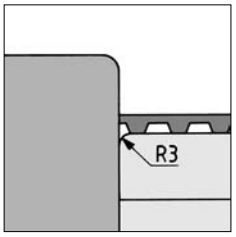
The opening for the Timing Belt is marked out on the inside and must be removed from the cap.
If for design reasons the Timing-Belt Reverse Unit is fitted without a cap, the length of the Timing Belt in the Reverse Unit reduces by 10 mm.

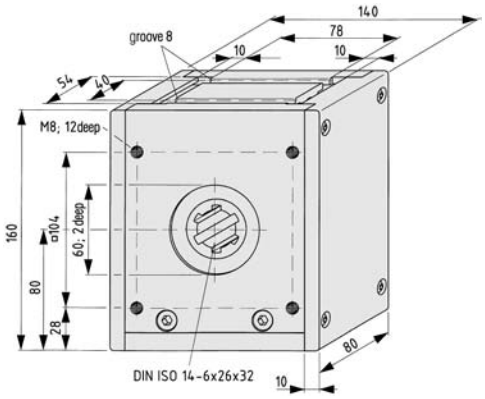




To protect the Timing Belt against damage, the profiles must be rounded at the joint to the Timing-Belt Reverse Unit.

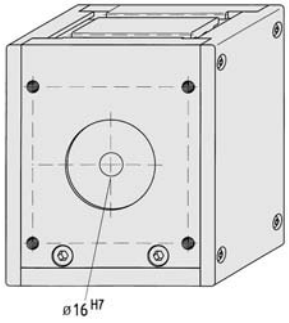
The profile cavities of Profiles 8 120x80 and 8 200x80 are suitable for routing back the Timing Belt internally.





Timing-Belt Reverse Unit 8 80 R50 II VK32
Timing-Belt Reverse Unit, Al, black
Ball-bearing timing pulley with multi-spline hub, Hub geometry VK32 for Multi-Spline Shaft VK32 DIN ISO 14 - 6x26x32, hub length 75 mm
One revolution corresponds to 280 mm
effective radius r_w = 44.6 mm
Frictional moment with 1‰ pre-tensioning of the Timing Belt: M_R = 1.05 Nm
Max. load: M_D = 92 Nm
Timing Belt length in the Timing-Belt Reverse Unit for
90° reversal: 220 mm
180° reversal: 300 mm
Pitch p = 10 mm Number of teeth z = 28
m = 3.9 kg

1 pce. 0.0.426.19



Timing-Belt Reverse Unit 8 80 R50 II with Bore
Timing-Belt Reverse Unit, Al, black
Ball-bearing timing pulley with bore ∅ 16H7, reborable up to max. ∅ 36 mm, hub length 75 mm
effective radius r_w = 44.6 mm
One revolution corresponds to 280 mm
Frictional moment with 1‰ pre-tensioning of the Timing Belt: M_R = 1.05 Nm
Max. load: M_D = 92 Nm
Timing Belt length in the Timing-Belt Reverse Unit for
90° reversal: 220 mm
180° reversal: 300 mm
Pitch p = 10 mm Number of teeth z = 28
m = 4.2 kg

1 pce. 0.0.426.21

Timing-Belt Reverse Units 12 80 R75 VK32

Reverse unit for Timing Belt R75 AT10 with the means to drive the belt via the pulley hub. The housing incorporates 12 mm grooves which can be secured easily to the core bores of Line 12 profiles.

The pulley of Timing-Belt Reverse Unit 12 80 R75 VK32 has a multi-spline hub for accommodating Multi-Spline Shaft VK 32.

The reverse unit housing can be connected to a drive motor, preferably using Coupling D80 VK32.

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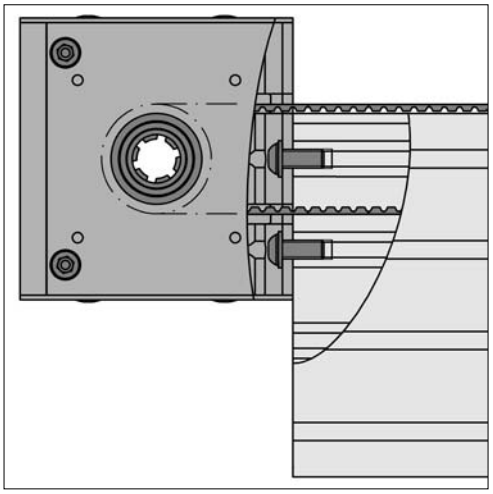
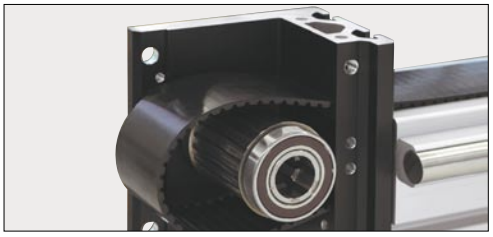
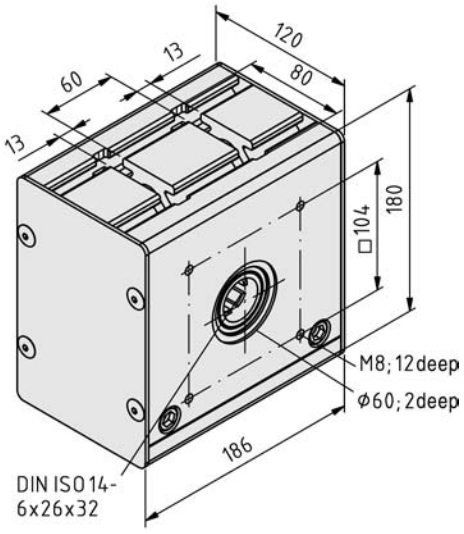


Connection of Timing-Belt Reverse Unit 12 80 R75 based on a profile height of 120 mm or 240 mm (return of the Timing Belt in the profile cavity).
The reverse unit is secured by means of 4 bolts DIN ISO 7380 M12x30 and washers DIN 125-A13.
To do this, the Timing-Belt Reverse Unit is partially dismantled, secured to the profile and then refitted.
The emergence dimension of the Timing Belt is 80 mm.



Mounting of the Reverse Unit half on the Line 12 profile and fitting of the Timing Belt over the pulley.

New in catalogue

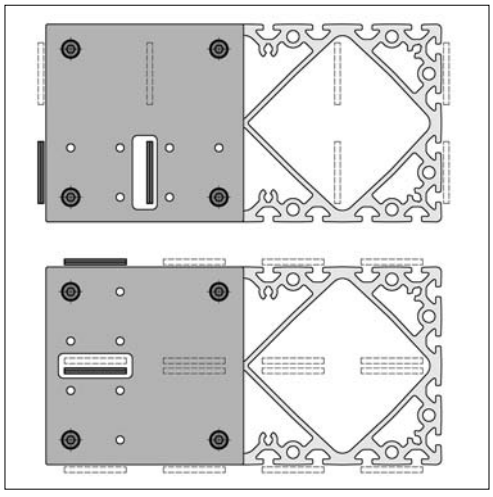


Timing-Belt Reverse Unit 12 80 R75 VK32
Timing-Belt Reverse Unit, Al, black
Ball-bearing timing pulley with multi-spline hub,
Hub geometry VK32 for Multi-Spline Shaft VK32
DIN ISO 14-6x26x32, hub length 112 mm
One revolution corresponds to 220 mm
effective radius r_w = 35 mm
Frictional moment with 1‰ pre-tensioning of the Timing Belt: M_R = 4 Nm
Max. load: M_D = 100 Nm
Timing Belt length in the Timing-Belt Reverse Unit for
90°reversal: 230 mm
180° reversal: 280 mm
Pitch p = 10 mm
Number of teeth z = 22
Notes on Use and Installation
m = 7.6 kg

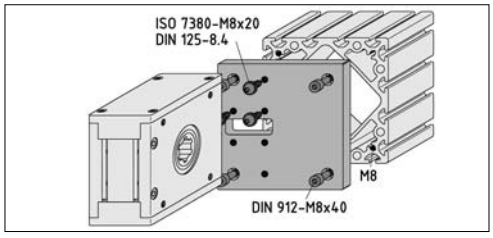
1 pce.	0.0.009.08

Mounting Plate

Special Mounting Plate for fastening Timing-Belt Reverse Unit 8 80 R50 II to large Profiles 8 160x160 and 320x160.
The plate features counterbores for fastening to the face end of the profile and threaded holes for the screws to secure the Reverse Unit.



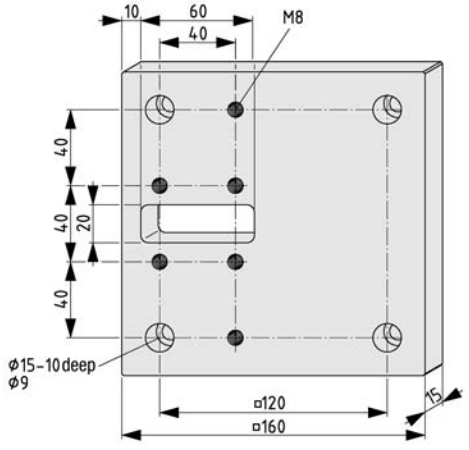
The Mounting Plate can be used to fasten Timing Belt R50 to any face of the profile.



1. Fitting the Mounting Plate to the end face of the profile: Securing to the profile core bores using four bolts DIN 912-M8x40.

2. Fitting the Timing-Belt Reverse Unit 8 80 R50 II to the Mounting Plate:
Assembling screws into the threaded bores of the Mounting Plate using 3 Button-Head Screws M8x20 and washers DIN 125-8.4.

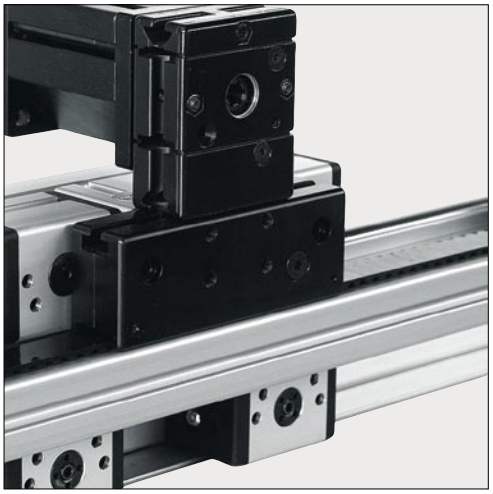
5 6 **8** 12



Connecting Plate 160x160 U80R50
Al
m = 1.0 kg

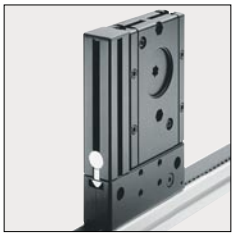
black, 1 pce.	0.0.480.71

Timing-Belt Counter-Reverse Unit 8 R25

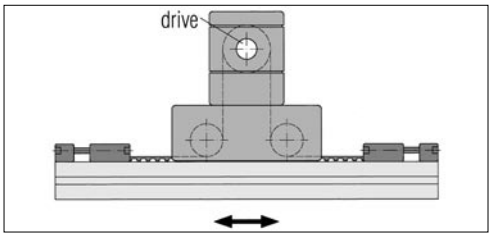


Timing-Belt Counter-Reverse Unit 8 R25 is a supplementary drive element for Timing-Belt Reverse Units 8 40 R25 and 8 80 R25. It is used to reverse Timing Belt R25 T10 with an emergence dimension of 40 mm around 2x90°. The Counter-Reverse Unit relocates the axis drive from the end of the axis to the carriage. The carriage and drive assembly is then integrated into the profile construction, while the axis itself becomes the moving element. This arrangement, when in the form of a vertical axis, can often increase the travelling speed and useful load.
The unit is already provided with bores for fitting Proximity Switch 8.

If the Counter-Reverse Unit is used, the Timing-Belt Tensioner is employed to attach and tension the Timing Belt on the supporting profile.

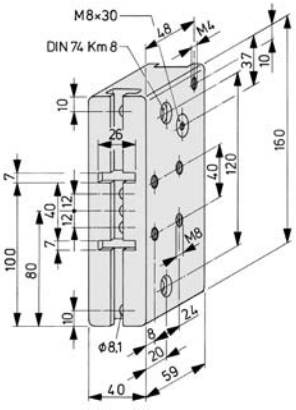


Possible connection to Timing-Belt Reverse Unit 8 40 R25 / 80 R25.



Moving support profile with stationary carriage unit and drive.

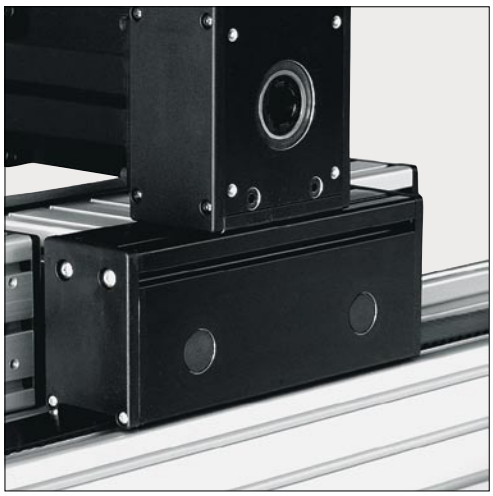
5 6 **8** 12



Timing-Belt Counter-Reverse Unit 8 R25
Counter-Reverse Unit, Al, black
Frictional moment with 1‰ pre-tensioning of the Timing Belt:
M_R = 0.30 Nm
Timing Belt length in Counter-Reverse Unit:
2 x 105 mm
m = 770.0 g

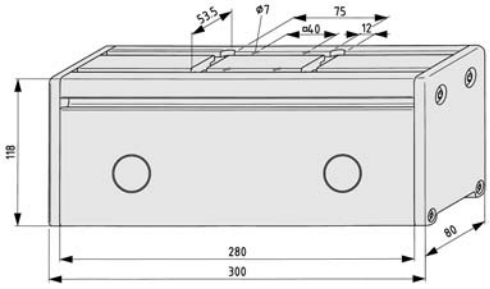
1 pce.	0.0.362.00

Timing-Belt Counter-Reverse Unit 8 80 R50



Timing-Belt Counter-Reverse Unit 8 80 R50 redirect the Timing Belt R50 T10, at 90° to the moving profile, with an emergence dimension of 80 mm. The driving force is then provided with a Timing-Belt Reverse Unit 8 80 R50 II.

5 6 **8** 12



Timing-Belt Counter-Reverse Unit 8 80 R50
Housing Al, black
2 caps, PA, black
2 ball-bearing reverse rollers, for Timing Belt width 50 mm
Frictional moment with 1‰ pre-tensioning of the Timing Belt:
M_R = 0.75 Nm
Timing Belt length in the Counter-Reverse Unit:
2 x 202 mm
m = 4.7 kg

1 pce.	0.0.362.07

Timing Belts

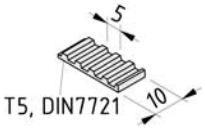
Timing Belts are positive driving elements which are used to perform precise linear movements. Their features include low noise, low maintenance and low play. The fact that they are made of polyurethane-moulded steel wires means they are also sufficiently elastic to absorb and dampen impacts.

item Timing Belts are finely stranded, giving them high flexural strength. They are therefore ideal for use with Timing-Belt Reverse and Counter-Reverse Units which are not compatible with standard (commercially available) Timing Belts.

The overall length of the Timing Belt is calculated from the length of the supporting profile and the Timing Belt segments located in the Timing-Belt Reverse Units.
The pre-tensioning should be larger than or equal to the expected operating load. The pre-tensioning and operating load together must not exceed the maximum permissible load.
To set the calculated pre-tensioning distance ΔL, it is advisable to measure the elongation during the tensioning process.
The required minimum pre-tensioning distance of the Timing Belt must be calculated as a function of the pre-tensioning force F_V :

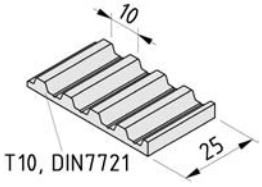
$$\Delta L = \frac{L \cdot F_V}{1000 \cdot K}$$

L = Total length of the Timing Belt in mm
F_V = Pre-tensioning force in N
K = Constant of expansion in N (equivalent to the pre-tensioning force to expand the Timing Belt by 1‰)



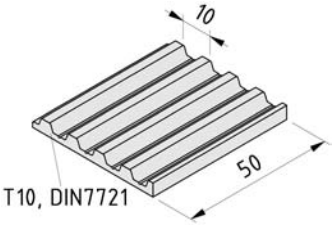
Timing Belt R10 T5
PUR
with integrated steel wires
Perm. load 300 N
K = 75 N
m = 23 g/m

black, cut-off max. 50 m	0.0.400.04



Timing Belt R25 T10
PUR
with integrated steel wires
Perm. load 2,400 N
K = 500 N
m = 125 g/m

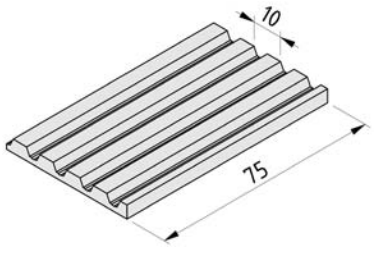
black, cut-off max. 50 m	0.0.337.10



Timing Belt R50 T10
PUR
with integrated steel wires
Perm. load 4,200 N
K = 1,000 N
m = 250 g/m

black, cut-off max. 50 m	0.0.426.03

New in catalogue



Timing Belt R75 AT10
PUR
with integrated steel wires
Perm. load 12,750 N
K = 3,000 N
m = 436 g/m

black, cut-off max. 50 m	0.0.009.03

Timing-Belt Tensioner

For fastening and tensioning the Timing Belt on a sliding carriage or support profile (using Counter-Reverse Unit 8).
A Tensioning Block is required for each end of the Timing Belt.
The number of Fixing Blocks is determined by the application.

Fastening and tensioning the Timing Belt on a sliding carriage using Tensioning Blocks and Fixing Block and the appropriate bolts.

Where high loads are involved, Tensioning Block 8 and Fixing Block 8 will need to be pinned (dowel ISO 2338-∅ 6 mm). The position of the dowels is indicated by the prepared bores ∅ 5.5 mm.

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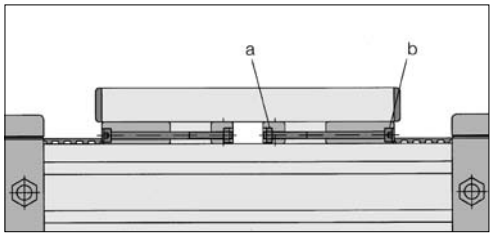
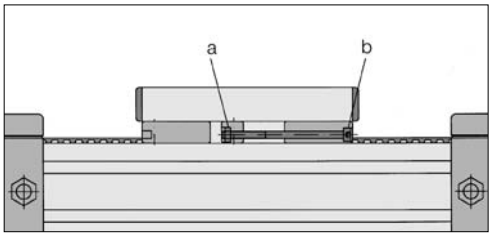
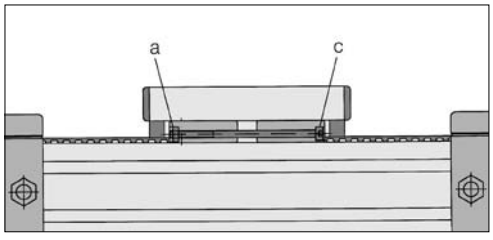
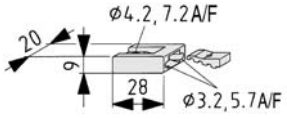






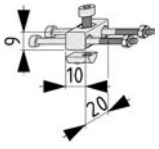
	5 R10	8 R25	8 R50
a = hexagon nut DIN 985	M3	M6	M6
b = Hexagon Socket Head Cap Screw DIN 912	M3x50	M6x80	M6x100
c = Hexagon Socket Head Cap Screw DIN 912	M3x60	M6x100	M6x140

5 6 8 12



Timing-Belt Tensioner, Tensioning Block 5 R10
Tensioning Block, die-cast aluminium, black
Interlocking fixing piece, die-cast aluminium, black
m = 8.5 g

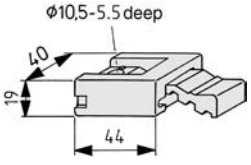
1 set **0.0.400.07**



Timing-Belt Tensioner, Fixing Block 5 R10
Fixing Block, die-cast aluminium, black
1 Cap Screw DIN 912-M4x10, St, bright zinc-plated
1 T-Slot Nut 5 St M4, bright zinc-plated
2 hexagon nuts DIN 985-M3, self-locking, St, bright zinc-plated
2 Cap Screws DIN 912-M3x50, St, bright zinc-plated
m = 13.0 g

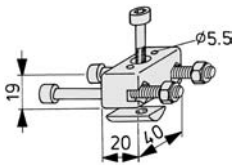
1 set **0.0.400.06**

5 6 8 12



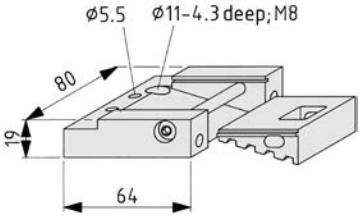
Timing-Belt Tensioner, Tensioning Block 8 R25
Tensioning Block, cast steel, black
Interlocking fixing piece, cast steel, black
m = 136.0 g

1 set **0.0.426.29**



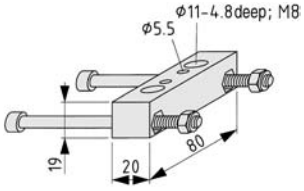
Timing Belt Tensioner, Fixing Block 8 R25
Fixing Block, cast steel, black
1 Cap Screw DIN 912-M6x25, St, bright zinc-plated
1 T-Slot Nut 8 St M6, bright zinc-plated
2 hexagon nuts DIN 985-M6, self-locking, St, bright zinc-plated
2 Cap Screws DIN 912-M6x80, St, bright zinc-plated
m = 128.0 g

1 set	0.0.426.30



Timing-Belt Tensioner, Tensioning Block 8 R50
Tensioning Block, Al, anodized, black
Interlocking fixing piece, Al, anodized, black
m = 205.0 g

1 set	0.0.426.04



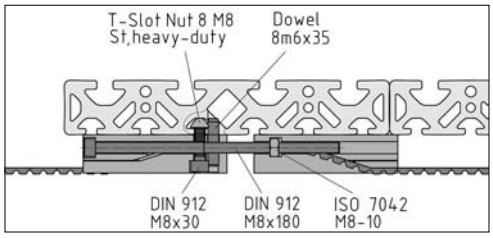
Timing-Belt Tensioner, Fixing Block 8 R50
Fixing Block, Al, anodized, black
2 hexagon nuts DIN 985-M6, self-locking, St, bright zinc-pl.
2 Hexagon Socket Head Cap Screws DIN 912-M6x100, St, bright zinc-plated
m = 119.0 g

1 set	0.0.426.05

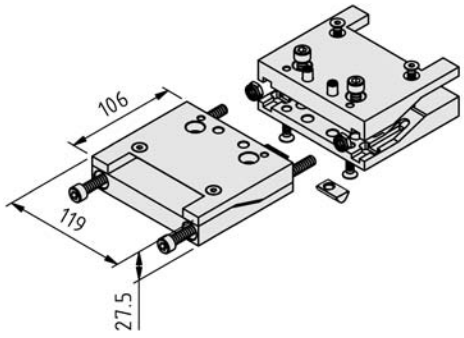
Timing-Belt Tensioning Set 12 R75

New in catalogue

Timing-Belt Tensioning Set 12 R75 is used for attaching Timing Belt R75 AT to the carriages of linear guide 12 D25 and tensioning the belt.



Possibilities for fastening the Timing Belt to a sliding carriage and tightening it using Timing-Belt Tensioning Set 12 R75.
The position of the dowels in the Tensioning Block of the Timing-Belt Tensioner is determined by the pre-drilled holes.



Timing-Belt Tensioning Set 12 R75
2 Timing-Belt Tensioner 12 R75, Al, black
2 Hex. nut ISO 7042-M8-10, self-locking, St, bright zinc-pl.
2 Hexagon Socket Head Cap Screws DIN 912-M8x180, St, bright zinc-plated
2 Hexagon Socket Head Cap Screws DIN 912-M8x30, St, bright zinc-plated
8 Countersunk Screw DIN 7991-M6x20, St, bright zinc-pl.
2 T-Slot Nuts 8 M8 St, heavy-duty
2 Dowels DIN 6325-8m6x35, St
m = 2.5 kg

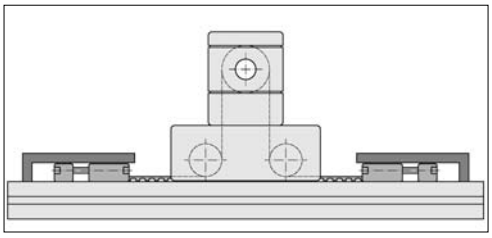
1 set	0.0.009.17

Timing-Belt Tensioner Holder

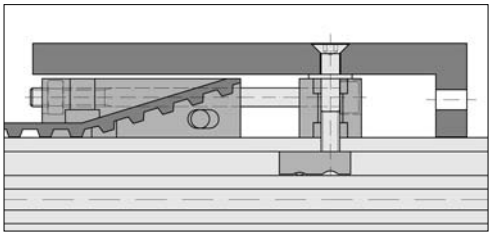
The Timing-Belt Tensioner Holder is used for driven linear axes with fixed Timing Belt. The holder counteracts the tendency of the timing-belt tensioner to lift up off the profile to which it is screwed by means of the fixing block.

The holder improves the running of the timing belt drive, particularly when operating at maximum load. The drive vibrates less and is more rigid. In reinforcing against the bending moment, the holder also reduces the load on the tensioning screws of the timing-belt tensioner.

The Timing-Belt Tensioner Holder is available in two versions for Timing Belts R25 and R50.

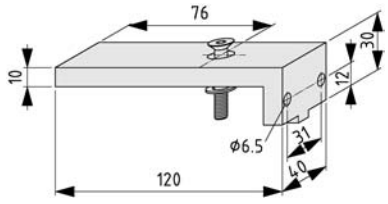


Drawing of a linear drive with moving axis. A holder fixes each of the timing-belt tensioners in place.



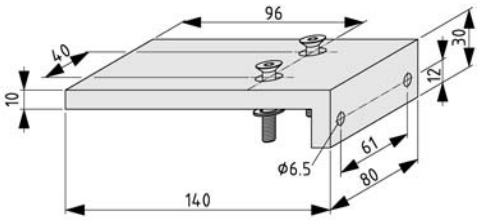
The Timing-Belt Tensioner Holder is screwed together with the fixing block. The tensioning screws of the timing-belt tensioner are accessed through the holes provided.

5 6 **8** 12



Timing-Belt Tensioner Holder 8 R25
1 Holder, Al, anodized, natural
1 Countersunk Screw DIN 7991-M6x40, St, bright zinc-plated
3 adapter washers DIN 988, St, stainless
m = 160.0 g

1 set	0.0.426.33



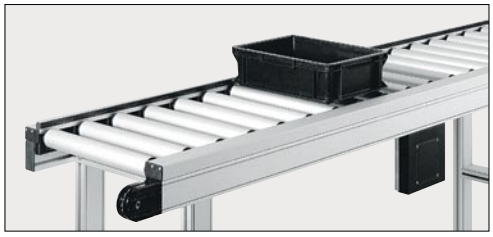
Timing-Belt Tensioner Holder 8 R50
1 Holder, Al, anodized, natural
2 Countersunk Screws DIN 7991-M6x40, St, bright zinc-plated
6 adapter washers DIN 988, St, stainless
m = 360.0 g

1 set	0.0.426.36

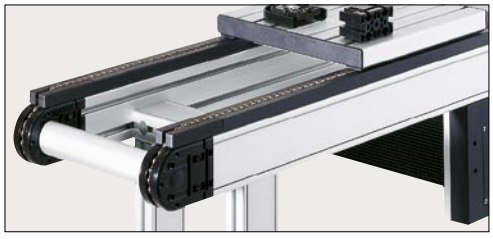
8.2.2 Chain Drives

The chain drive is ideal for a whole range of mechanical drives. The compact design of the drive elements is a particular feature. The fact that the chain runs in the groove of the Profile 8 throughout means that the drive force can be transmitted with complete protection and reliability.

Possible applications for chain drives in the MB Building Kit System include:
> as a traction device for linear axis slides (chain drive)
> as a roller conveyor drive (chain-driven conveyor rollers)
> as a transfer medium for workpiece carriers and products located directly on the chain (chain transfer)

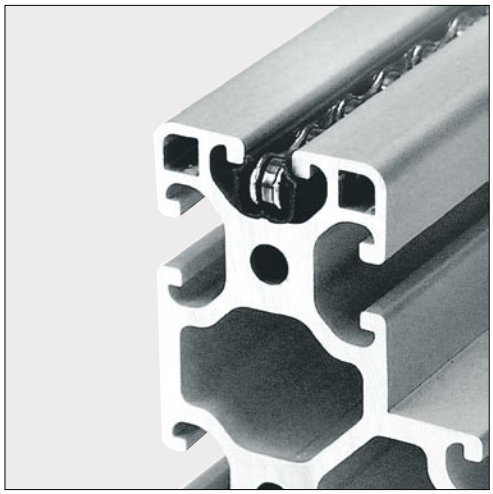


An item chain drive essentially consists of the following components:
> Chain ½″
> Chain Link (removable)
> 2 Chain Reverse Units
> Chain Guide Profile 8
> Chain Counter-Reverse Unit (an optional device which allows the motor to be mounted at any desired position, if drive is not possible directly at the Chain Reverse Unit)



Profiles 8 in either light or standard grade (Section 1.1 Profiles) with a section dimension of 80 mm provide ideal frames for chain drives, particularly Stand Profile 8 80x40 K60 (Section 7.2) with integrated cable conduit.

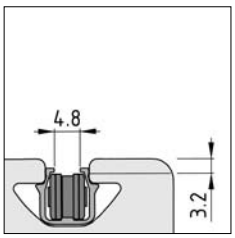
Chain Guidance in the Profile Groove



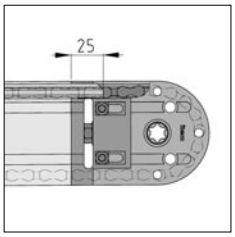
The chain is guided in the profile groove. It can be accessed through the groove and can be used to transfer drive forces.

No connection elements can be fitted in the profile grooves where the chain is run.

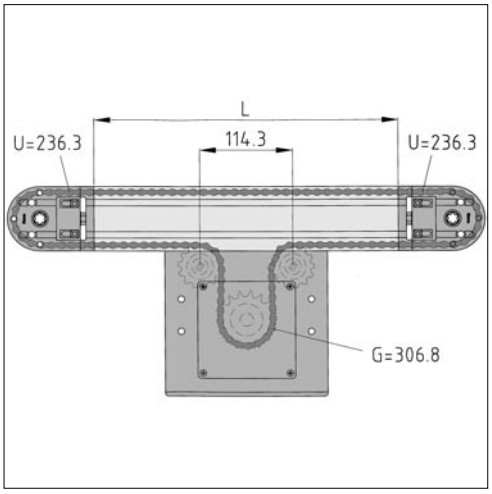
item Innovation
German patent
199 31 365



Chain Guide Profile 8 encloses the Chain. The profile is inserted into the profile groove.



The Chain Reverse Units are screw-connected into the core bores in the end faces of the frame profiles.
The Chain Guide Profile must be cut 50 mm longer than the aluminium profile, since it must project 25 mm into the Reverse Unit at each end.



Calculating the chain length:
Chain drive with two Chain Reverse Units 8 80

L_{chain} = 2 x L + 472.6 mm

Calculating the chain length:
Chain drive with two Chain Reverse Units 8 80 and one Chain Counter-Reverse Unit 8

L_{chain} = 2 x L + 665.1 mm

The exact length and precise number of chain links is arrived at by dividing the calculated chain length by 12.7 mm (= ½″) and rounding up to an even number. One chain link is then subtracted, such that the cut chain always has an odd number of links. Overall length of the chain = cut chain plus removable link.

Note: In view of the fact that the chain stretches under load during operation, it may be necessary, depending on the length involved, to use a chain which is shorter than calculated. This adjustment can be performed at the installation stage.

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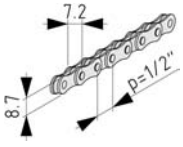
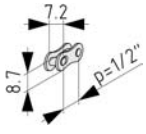


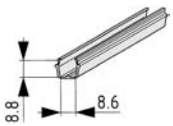
Chain ½″
St, nickel-plated
Pitch p = 12.7 mm corresponding to ½″
Operating load = max. 1.400 N
Elongation at 1,400 N = 2.5 - 3 ‰
m = 215 g/m

cut-off max. 25 m in 1″ intervals	0.0.465.17



Chain Link ½″ (removable)
St, nickel-plated
m = 2.0 g

1 set	0.0.465.39



Chain Guide Profile 8
PA
m = 22 g/m

transparent, 1 pce., length 2000 mm	0.0.463.50

Chain Reverse Units 8 80

Chain Reverse Units 8 80 are used for reversing, clamping and driving Chain ½".
They are screwed into the end faces of Profiles 8 at a height of 80 mm.

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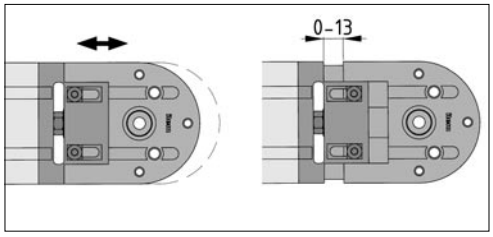
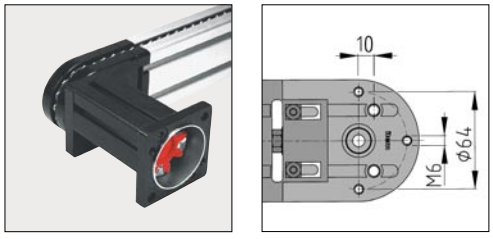


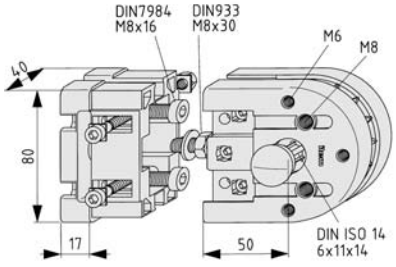
The Chain Reverse Unit incorporates integrated chain tensioning block and clamp.
The Chain tensioning distance is 2x13 mm in total. The Chain tension must be set so that the Chain can also be operated with the slack side of the Chain only slightly pre-tensioned.



It is possible to fit motors and couplings D55 directly to the Chain Reverse Unit.

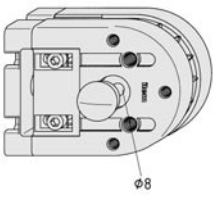
The Chain can be driven directly using the Chain Reverse Units or the Chain Counter-Reverse Unit. The sprocket wheels of the Chain Reverse Units are available with multi-spline hub VK14 or with a bore for individual machining. Use of multi-spline hub VK14 enables the modular accessories (Synchroniser Shafts) to be used without any restrictions.

5 6 **8** 12



Chain Reverse Unit 8 80 VK14
Chain Reverse Unit, die-cast zinc, black, pre-assembled
Ball-bearing sprocket wheel, z = 16 (z = number of teeth)
One revolution corresponds to 203.2 mm
effective radius r_w = 32.3 mm
Hub with multi-spline DIN ISO 14-6x11x14
Hub length 30 mm, Max. load: M_D = 20 Nm
Tensioning Block, die-cast zinc, black, pre-assembled
Fastening screws, St, black, 2 caps, PA, black
Chain length in Reverse Unit 236.3 mm
Notes on Use and Installation
m = 1.1 kg

1 pce. 0.0.463.37



Chain Reverse Unit 8 80 with Bore
Chain Reverse Unit, die-cast zinc, black, pre-assembled
Ball-bearing sprocket wheel, z = 16 (z = number of teeth)
One revolution corresponds to 203.2 mm
effective radius r_w = 32.3 mm
Hub with bore D8, reborable up to max. ∅ 15 mm
Hub length 30 mm, Max. load: M_D = 20 Nm
Tensioning Block, die-cast zinc, black, pre-assembled
Fastening screws, St, black, 2 caps, PA, black
Chain length in Reverse Unit 236.3 mm
Notes on Use and Installation
m = 1.1 kg

1 pce. 0.0.463.75

Chain Counter-Reverse Unit 8

The Chain Counter-Reverse Unit provides a means of moving the drive to any position on the chain guide.

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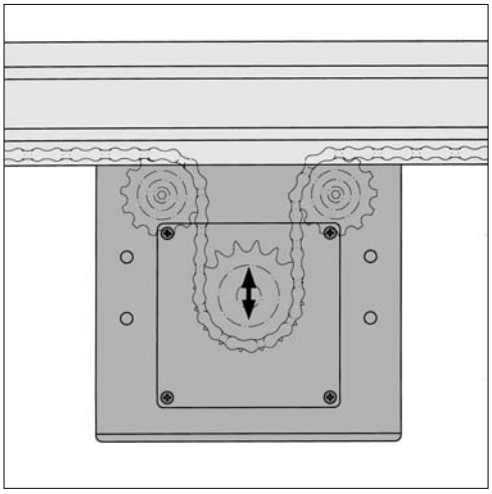
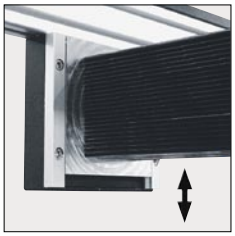


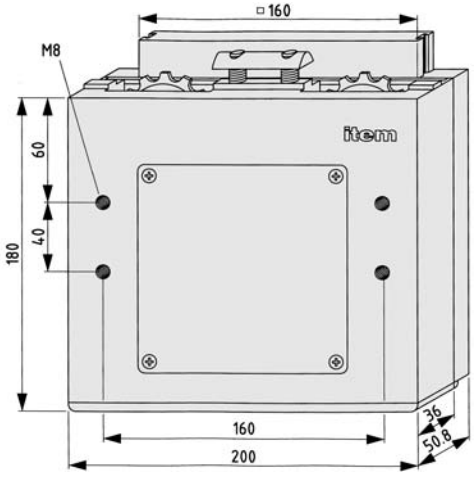
The Chain Counter-Reverse Unit is screwed directly to the Support Profile. The Chain Guide Profile must be interrupted at this point in order to remove the chain from the profile groove.

Drive motors can be fitted using the Adapter Plate. The sprocket wheel hub and the Adapter Plate of the Chain Counter-Reverse Unit must be machined individually. The sprocket wheel is fitted directly onto the motor gearbox output shaft which also provides the necessary bearing arrangement.



The Chain can be tensioned by moving the motor and sliding Adapter Plate Assembly within the Chain Counter-Reverse Unit if the setting cannot be carried out on the Chain Reverse Units.

5 6 **8** 12



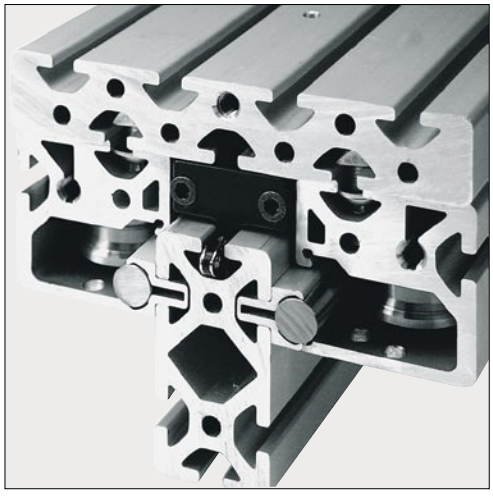
Chain Counter-Reverse Unit 8
Housing cast Aluminium, black, pre-assembled
2 reversing wheels, St, with ball bearings
Drive wheel with centric bore, St, z = 16
reborable up to ∅ 24 mm or ∅ 20 mm with parallel keyway to DIN 6885
Adapter Plate with clamping elements, Al, natural
Fastening screws, St, black
T-Slot Nut 8 St 2xM8-50, St, bright zinc-plated
4 caps, PA, black
Max. load: M_D = 35 Nm
Chain length in Counter-Reverse Unit 306.8 mm
Notes on Use and Installation
m = 3.0 kg

1 pce.	0.0.463.91

Chain Drives for Linear Slides

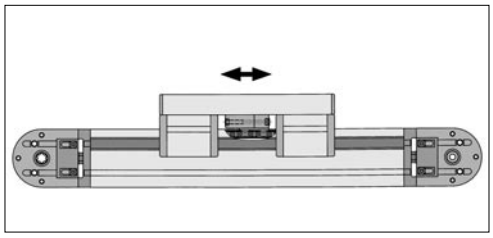
A chain guided in the profile groove is a highly compact design for driving a linear slide. The supporting profile accommodates both the drive chain and the Shaft-Clamp Profiles.
The carriage is connected to the drive chain in the groove by means of the Chain Carrier.

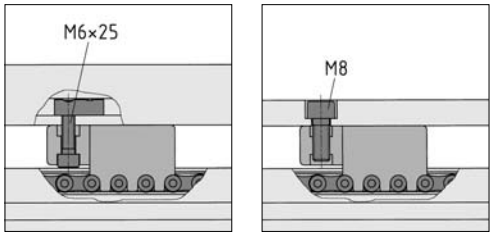
Chain Carrier 8



Chain Carrier 8 connects the drive chain and the carriage of the linear slide.

The connecting block is fastened to the carriage and the chain pick-up is inserted into the chain. After the carriage has been mounted onto the slide, the components are screwed together.





Options for fastening the Chain Carrier.

The connecting block must also be pinned (dowel ISO 2338-∅ 6 mm) under high loads. The position of the dowels is determined by the ∅ 5.5 mm holes which have been prepared.

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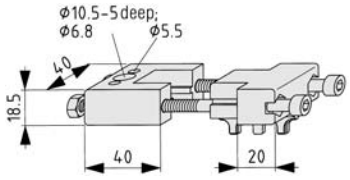
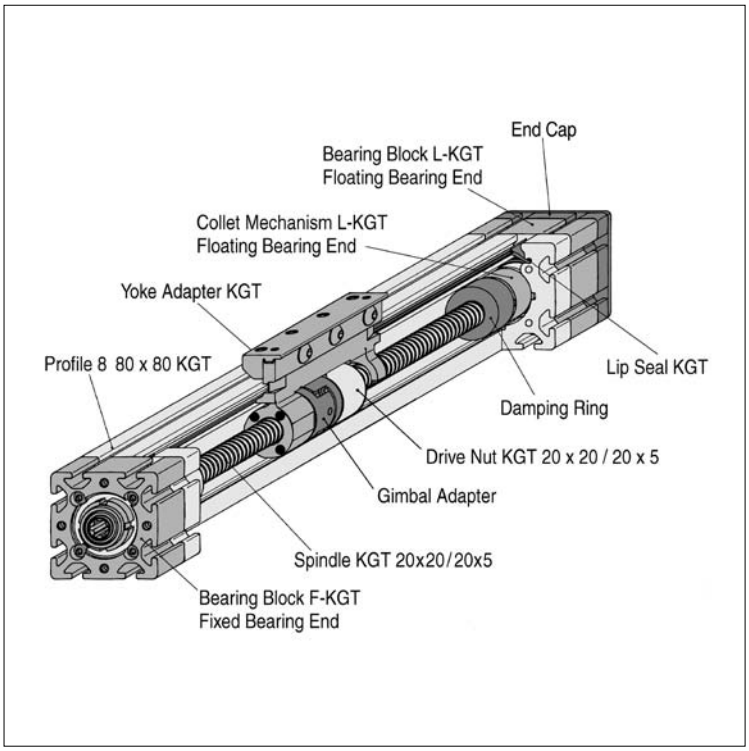


Chain Carrier 8
Connecting block, St, black
Chain pick-up, St, black
2 Cap Screws DIN 912-M6x55, St, bright zinc-plated
2 hexagon nuts DIN 985-M6, St, bright zinc-plated
m = 300.0 g

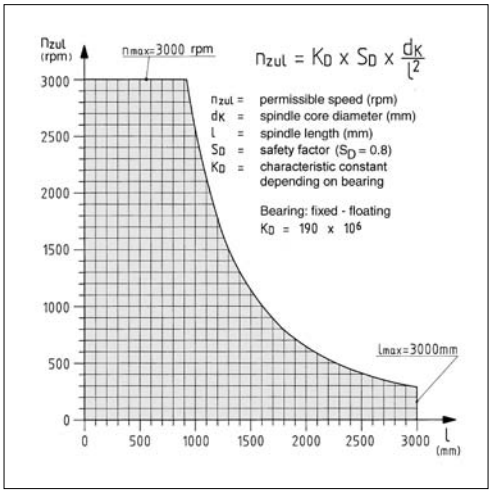
1 set	0.0.463.46

8.2.3 Ball Screw Units

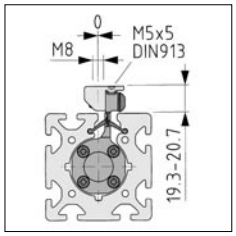
Ball Screw Units KGT are suitable for use as a drive mechanism for linear slides, particularly for low speeds and short strokes. They feature high precision, high efficiency, high rigidity of the drive system and low mechanical wear:
> For use in linear units, conveyors, handling devices, work bench design and any other fixtures
> Powered by hand wheel, AC/DC motors, stepping motors and hydraulic or pneumatic drive mechanisms
> Choice of power input end
> Can be combined with any type of guide
> Individual components are replaceable
> Full compatibility with MB Building Kit System products

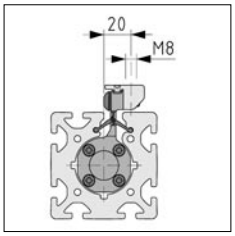


The modular design of the Ball Screw Units KGT with no need for complex machining results in short delivery times and facilitates installation and maintenance.



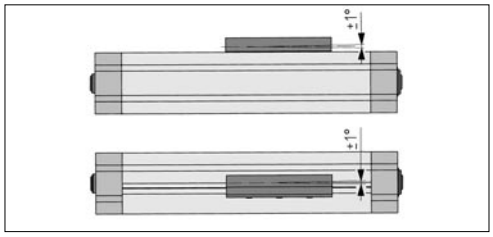
Suitable for combination with all item linear slides.
The necessary guidance for the yoke must be provided by the external linear slide.
The driving nut is suspended on gimbals to prevent strains and allow for slight errors in alignment with the load.
The Ball Screw Unit KGT can be driven from the fixed or floating bearing end.
The Ball Screw Unit should be so positioned as to ensure that the main load is a tensile load from the fixed bearing end (i.e. fixed bearing at the top in a vertical unit).
The maximum stroke velocities of the Ball Screw Unit depend on the spindle length (see diagram opposite).
Under axial compression, the buckling behaviour of the spindle must be taken into consideration.

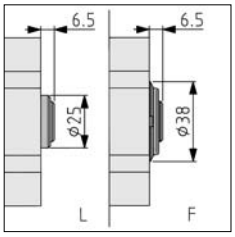


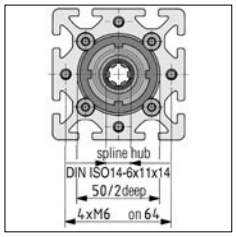


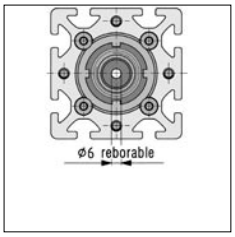
The yoke adapter can be matched to the height of the slide by means of grub screws DIN 913-M5x5.
The position of the connecting thread M8 for securing the slide can be either central or offset relative to the slide depending on the position the yoke adapter is used in.

It is important to ensure that the yoke adapter is aligned to the spindle and profile. The maximum permissible angular deviation must not be exceeded.



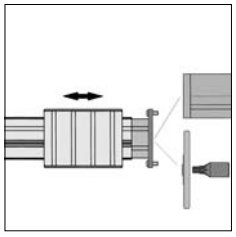


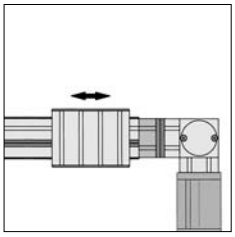




Connection dimensions of the Bearing Blocks at the floating (L) and fixed (F) bearing ends. Depending on the drive type selected, the Bearing Blocks and drive holders may need to be machined.

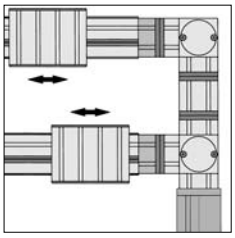
The hub is reborable up to max. ∅ 17 mm or ∅ 14 mm for insertion of a parallel keyway as per DIN 6885 T1.





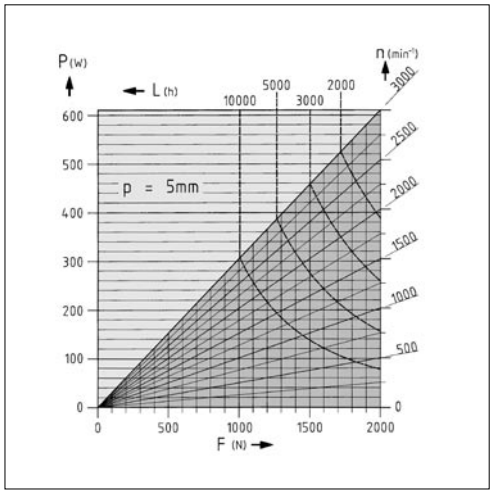
Direct drive connection with Adapter Plate 120x80. Various drives adaptable using the Adapter Shaft and Adapter Flange Universal (far left).

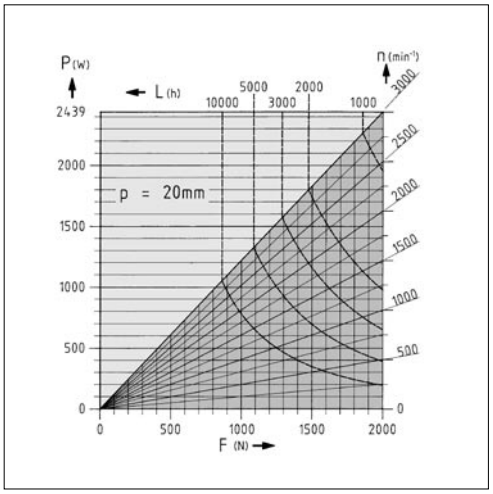
Direct connection of Bevel Gearbox WG with Adapter Plate 80x80. Drives can then be connected with the Coupling Housings (Section 8.3 Accessories for Mechanical Drive Elements) to Bevel Gearbox WG (immediate left).



Parallel arrangement of Ball Screw Units in connection with Bevel Gearboxes (immediate left).

Calculation of Service Life





The service life of the spindle / drive nut combination can be calculated as a function of the axial load and drive speed.

Ball Screw Units KGT

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Complete drive units of variable stroke length (H), spindle pitch 5 mm or 20 mm and drive option via Multi-Spline Shaft or indivually machined hubs.
Supporting profile with integrated lip seals,
fixed and floating bearing blocks,
specially designed ball-bearing collet mechanism for holding the spindle,
end of stroke damping,
secure yoke,
play minimized drive nut suspended on gimbals,
rolled spindle,
grease lubrication
Lubrication interval: every 400-500 service hours with lithium-based ball-bearing grease (not general purpose grease)
Acceleration$_{max.}$ = 5 m/s^2
Stroke length $_{max.}$ = 2762 mm
Total length L = stroke length + 308 mm

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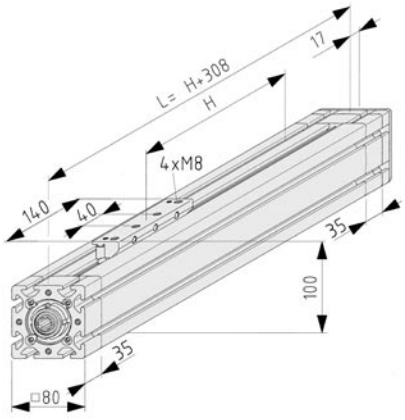


Ball Screw Unit KGT 20x5, VK14
Pitch p = 5 mm
Stroke velocity $_{max.}$ = 0.25 m/s
Efficiency of overall unit = 80 %
Backlash$_{max.(spindle/drivenut)}$ = 0.04 mm
m = 5 kg + H x 0.011 kg/mm

1 pce.	0.0.414.33

Ball Screw Unit KGT 20x5, bored and keyed to customer specification
Pitch p = 5 mm
Stroke velocity $_{max.}$ = 0.25 m/s
Efficiency of overall unit = 80 %
Backlash$_{max.(spindle/drivenut)}$ = 0.04 mm
m = 5 kg + H x 0.011 kg/mm

1 pce.	0.0.414.51

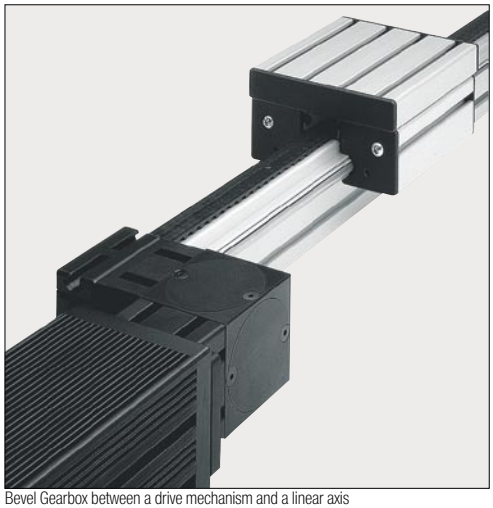
Ball Screw Unit KGT 20x20, VK14
Pitch p = 20 mm
Stroke velocity $_{max.}$ = 1.00 m/s
Efficiency of overall unit = 85 %
Backlash$_{max.(spindle/drivenut)}$ = 0.08 mm
m = 5 kg + H x 0.011 kg/mm

1 pce.	0.0.414.32

Ball Screw Unit KGT 20x20, bored and keyed to customer specification
Pitch p = 20 mm
Stroke velocity $_{max.}$ = 1.00 m/s
Efficiency of overall unit = 85 %
Backlash$_{max.(spindle/drivenut)}$ = 0.08 mm
m = 5 kg + H x 0.011 kg/mm

1 pce.	0.0.414.50

8.2.4 Bevel Gearboxes



Bevel Gearbox between a drive mechanism and a linear axis

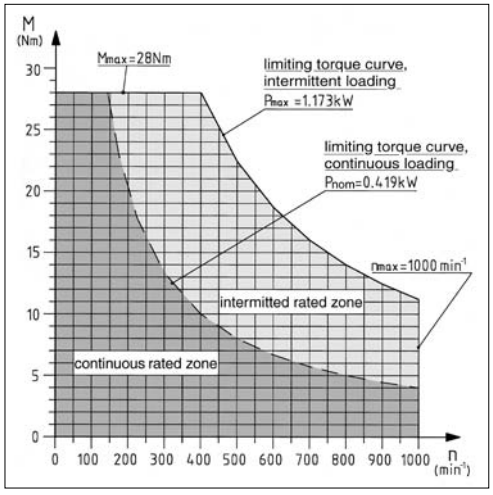
Modular design of Bevel Gearbox with aluminium housing and Bearing Blocks

Bevel Gearboxes can be used between a particular drive mechanism and a linear axis, consisting of a guide and either a timing-belt drive, chain drive or Ball Screw Unit. In this arrangement, the induced torque is turned through 90°.

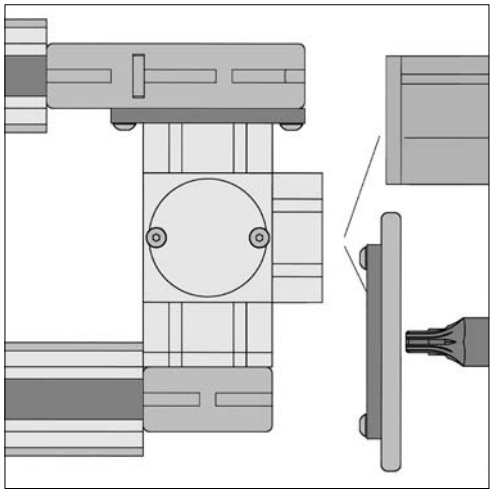
In addition to this reversing action, alternative versions with different kinematics also permit distribution of the induced torque with the choice of direction of rotation of the output shafts.
Subsequent changeover to other kinematics is also possible.

Bevel Gearboxes feature high efficiency, have low backlash gears and low mechanical wear.

> For use in conjunction with linear and rotary units, conveyors, handling devices, lifting systems and other fixtures
> Powered by hand wheel, AC/DC motors, stepping motors and hydraulic or pneumatic drive mechanisms
> Can be combined with timing-belt drives, chain drives and Ball Screw Units
> Individual components are replaceable
> Subsequent conversion to other kinematics also possible
> Compact external dimensions
> Full compatibility with MB Building Kit System products

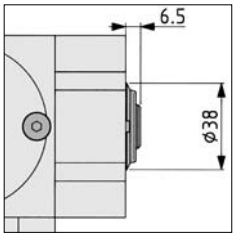


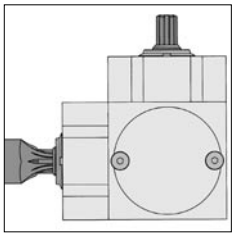
The diagram opposite is used for calculating the permissible torques M and speeds n of the Bevel Gearboxes. For loads in the continuous rated zone, continuous operation is permissible.
In the intermittent rated zone, operating times must be reduced accordingly.



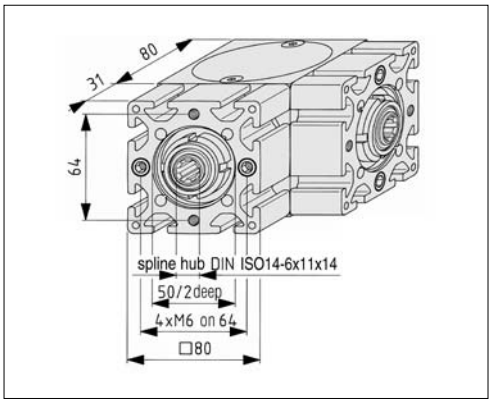
The Bevel Gearboxes with special kinematics and the ability to combine several Bevel Gearboxes allows flexible positioning of drives and linear units.

The geometry for connecting multi-spline hub to Multi-Spline Shaft or solid shaft ∅ 30 mm can be changed by using Connecting Shaft U-WG or the Adapter Shaft.



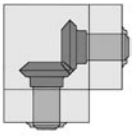


Bevel Gearboxes WG



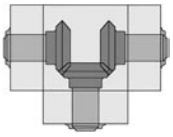
Box, box lid and Bearing Blocks, Al, anodized, black
Straight-toothed ball-bearing bevel gear pairs, made of high strength steel with minimal backlash and wear-resistant surface
Prelubricated, maintenance-free
Gear ratio i = 1 : 1
Nominal torque M_{nom} = 10 Nm
Nominal speed n_{nom} = 400 min^{-1}
Nominal power P_{nom} = 0.419 kW
Torque $M_{max.}$ = 28 Nm
Speed $n_{max.}$ = 1000 min^{-1}
Power $P_{max.}$ = 1.173 kW
Service life L = 10,000 h
Play angle $a_{max.}$ = 20 ’

5 6 **8** 12



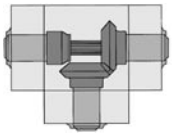
Bevel Gearbox WG 90°
Efficiency = 93 %
m = 2.0 kg

1 pce.	0.0.408.10



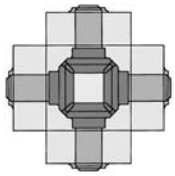
Bevel Gearbox WG 180°
Efficiency = 90 %
m = 2.6 kg

1 pce.	0.0.408.20



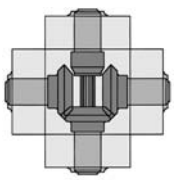
Bevel Gearbox WG 180° D
Efficiency = 91 %
m = 2.7 kg

1 pce.	0.0.408.25



Bevel Gearbox WG 360°
Efficiency = 87 %
m = 3.4 kg

1 pce.	0.0.408.26



Bevel Gearbox WG 360° D
Efficiency = 88 %
m = 3.4 kg

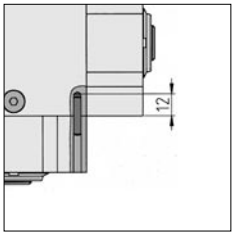
1 pce.	0.0.408.27

8.2.5. Accessories for Bevel Gearboxes

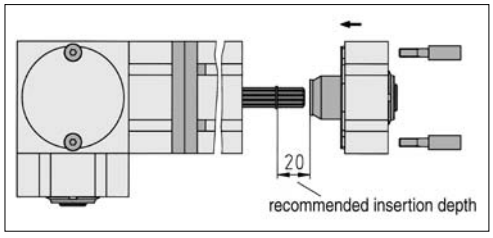
System elements for adapting the Bevel Gearboxes for use with various applications. They enable changes to be made to the kinematics and allow modular combination of Bevel Gearboxes with other dynamic elements.

Bearing Blocks WG

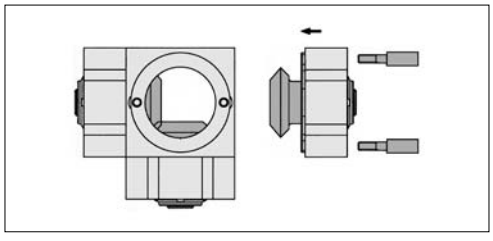
Bearing Blocks for changing or extending the Bevel Gearbox to other kinematics.



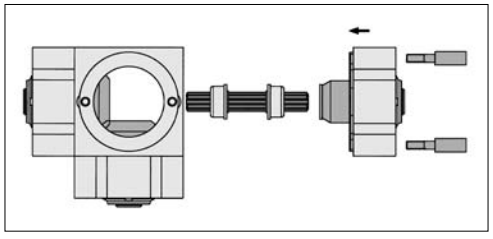
The Bearing Block can be pinned to the gear housing (dowel DIN 7-4m6x20).



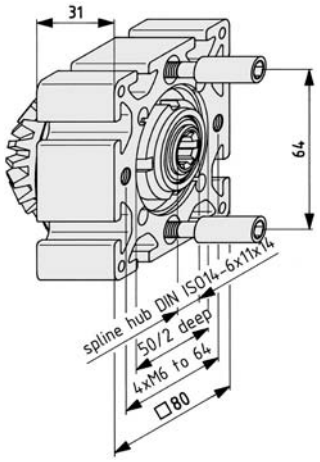
Bearing Block H-WG used as bearing and connection point when relocating the drive / output point.



Extending the Bevel Gearbox WG 90° by Bearing Block K-WG to produce a WG 180°.
Bearing Block K-WG gives an output by meshing with the internal bevel gear.

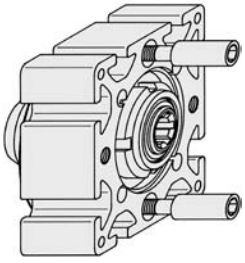


Conversion of a WG 90° into a WG 180° D by means of Bearing Block H-WG and Synchroniser Shaft WG.
Bearing Block H-WG in combination with Synchroniser Shaft WG provides a continuous connection with the opposing bevel gear.



Bearing Block K-WG
Al, anodized, black
Ball-bearing bevel gear
2 connecting pins
Seal and Sealing Plug
Tightening torque $M_{max.}$ = 14 Nm
m = 700.0 g

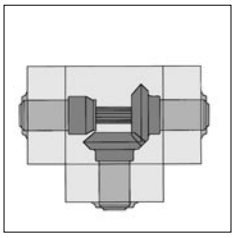
1 set	0.0.408.00

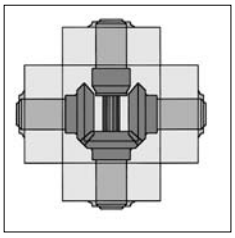


Bearing Block H-WG
Al, anodized, black
Ball-bearing hollow shaft
2 connecting pins
Seal and Sealing Plug
Tightening torque $M_{max.}$ = 14 Nm
m = 630.0 g

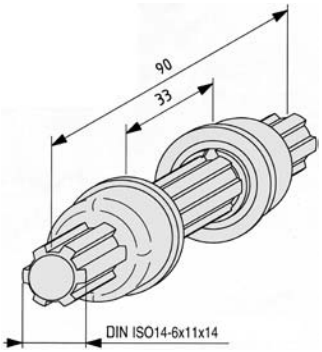
1 set	0.0.408.13

Synchroniser Shaft WG





For torque transmission between two Bearing Blocks (1xK-WG, 1xH-WG).
Sealing Plugs for sealing the Bevel Gearbox.
Grease the Multi-Spline Shaft.

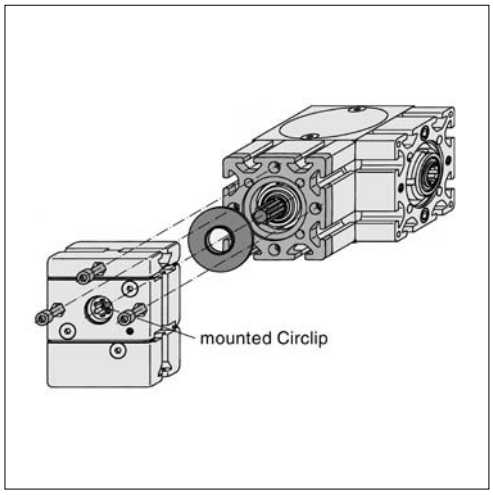


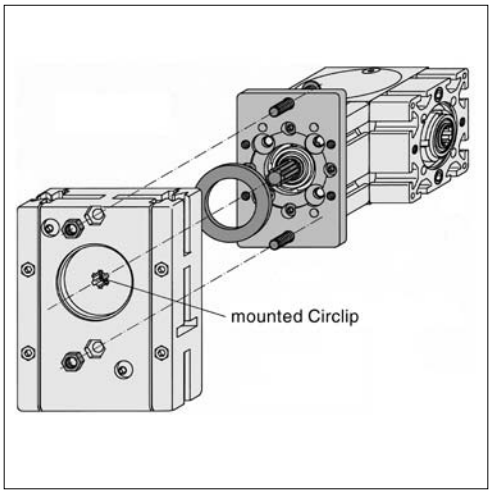
Synchroniser Shaft WG
Multi-Spline Shaft similar to DIN ISO 14-6x11x14, St, C 45 k
2 Snap Rings W
2 Sealing Plugs NW
m = 85.0 g

1 pce.	0.0.408.22

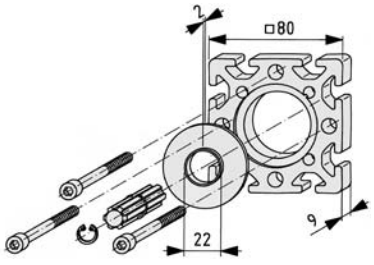
Fastening Sets for Bevel Gearboxes

For torque transmission between two Bearing Blocks (1xK-WG, 1xH-WG).Sealing Plugs for sealing the Bevel Gearbox.
Grease the Multi-Spline Shaft.



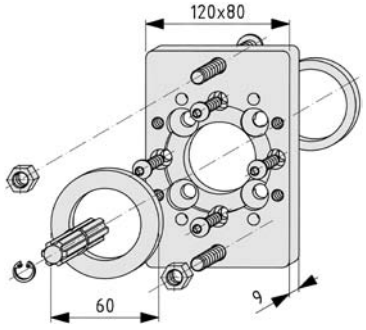


5 6 8 12



Fastening Set U40-WG
Locating profile 80x80x9, Al, anodized, black
Centring piece D50-D22
Connecting Shaft U-WG
3 Hexagon Socket Head Cap Screws DIN 912-M6x55, St, black
Circlip N
m = 185.0 g

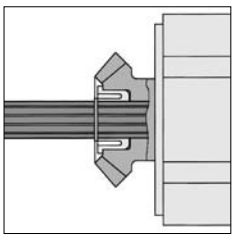
1 set 0.0.408.23



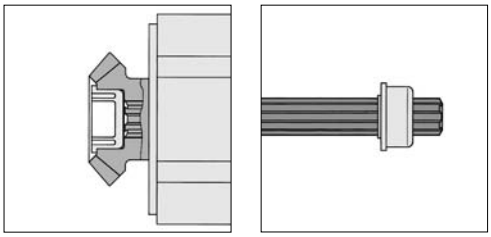
Fastening Set U80-WG
Adapter Plate 120x80
Centring Piece D60-D60
Centring Piece D50-D50
Connecting Shaft U-WG
Circlip N
4 Button-Head Screws ISO 7380-M6x16, St, bright zinc-plated
2 Button-Head Screws ISO 7380-M8x50, St, black
2 hexagon nuts DIN 936-M8, St, black
m = 320.0 g

1 set 0.0.408.24

Sealing Plugs



Sealing Plug for sealing the Bevel Gearbox to prevent lubricant emerging.
Axial movement of Sealing Plug NW is prevented by Snap Ring W14 (Section 8.3 Accessories for Mechanical Drive Elements).



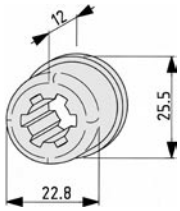
Sealing Plug N with sealing effect in the bevel gear hub.

Sealing Plug NW with sealing effect in the bevel gear hub and on the Multi-Spline Shaft.

5 6 **8** 12

Sealing Plug N
NBR
Hardness 70 Sh A
m = 3.0 g

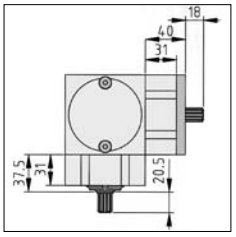
black, 1 pce.	0.0.408.17



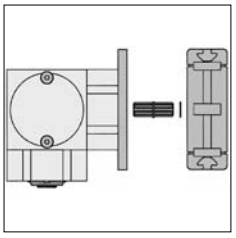
Sealing Plug NW
NBR
Hardness 70 Sh A
m = 3.0 g

black, 1 pce.	0.0.408.18

Connecting Shaft

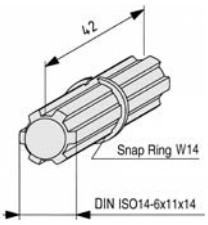


Connecting Shaft U-WG allows the torque to be transferred between two multi-spline hubs.
Particularly suitable for connecting Bevel Gearboxes and Timing-Belt Reverse Unit 8 40 R25 or 8 80 R25.
Grease the Multi-Spline Shaft.



Axial movement is prevented by a Snap Ring W14 fitted to the Bevel Gearbox and by a Circlip N14 fitted in the pulley of Timing-Belt Reverse Unit 8 40 R25 or 8 80 R25.

5 6 **8** 12



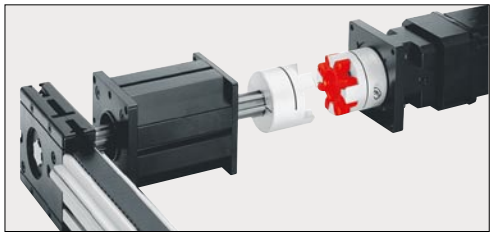
Connecting Shaft U-WG
Multi-Spline Shaft similar to DIN ISO 14 - 6x11x14, St, C 45 k
Snap Ring W
m = 39.0 g

1 pce.	0.0.408.21

8.3 Accessories for Mechanical Drive Elements

The accessories for the mechanical drive elements include:
> Couplings, Shafts and Adapter Plates for connecting motors and drive elements
> Limit Switches and related fastening elements

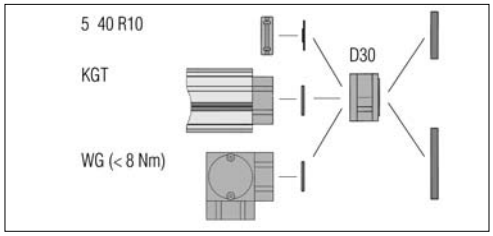
8.3.1 Couplings



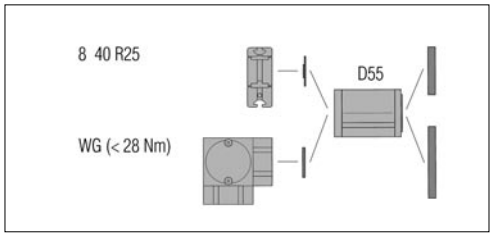
Between the mechanical drive elements (Timing-Belt Reverse Units, Chain Drives, Ball Screw Units, Bevel Gearboxes) and the drive motor, it is possible to use couplings for suppressing and compensating angular errors and radial or axial offset.
The use of couplings means that a plug-type connection is possible between the drive motor and mechanical drive elements, thereby facilitating assembly, machining and maintenance.

The various output shafts of the gears and / or motor drives are easily matched by machining the Coupling Half on the drive side.
Proven, plug-type Multi-Spline Shafts are used between the second Coupling Half and the mechanical drive elements in order to provide a shaft-hub connection. There is no need to machine the relevant Coupling Half or the mechanical drive elements.

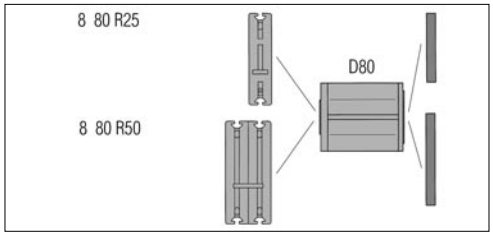
In addition to the connection of the rotating elements described above, the casings of the mechanical drive elements must have a static connection to the drives. This is achieved by various Coupling Housings which are adapted in length and diameter to the various couplings. Universal Coupling Adapter Plates, which have to be provided with fastening bores and centring diameters for the relevant drives, enable the drive to be secured to the Coupling Housing.



The connection dimensions and the permissible torque range (M_D < 8 Nm) make Coupling D30 ideally suited for use with Ball Screw Units (Ball Screw Units KGT; Centring Piece D50-D50), Timing-Belt Reverse Unit 5 40 R10 with multi-spline VK14 (Centring Piece D50-D22) and (optionally) Bevel Gearboxes WG (Centring Piece D50-D50).

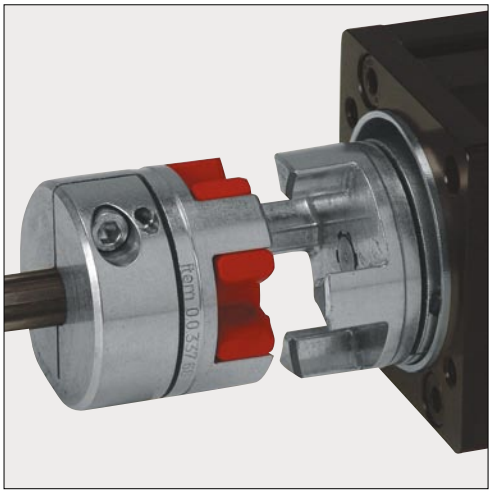


The connection dimensions and the permissible torque range (M_D < 50 Nm) make Coupling D55 ideally suited for use with Timing-Belt Reverse Unit 8 40 R25 with multi-spline VK14 (Centring Piece D50-D22) and (optionally) Bevel Gearboxes WG (Centring Piece D50-D50: note torque limit 28 Nm!).



Coupling D80 is used with an appropriately sized Coupling Housing for the purpose of transferring the high torque (M_D < 100 Nm) of Timing-Belt Reverse Units 8 80 R25 and 8 80 R50 II with multi-spline VK32. The Coupling Housing has a corresponding Centring Piece (∅ 60 mm) for the Timing-Belt Reverse Units.

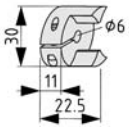
Coupling Halves



The Coupling Halves with multi-spline hubs VK14 and VK32 can be connected with the corresponding Connecting Shafts or mechanical drive elements without need for machining.

In the case of Coupling Halves with bores, simple machining (reboring, parallel keyway, etc.) is required for matching to the drive output shaft of gearboxes/motor drives.

Before machining the plain bore and keyway, the slot must be bridged by means of suitable spacers (washers etc.) and the tension screw tightened. In principle, parallel keyways should lie at an angle of 90° relative to the slot, preferably on the side of the thread for the tensioning screw.

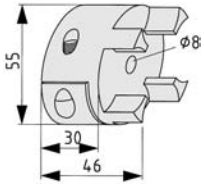


Coupling Half D30 D6
Al
1 Hex. Socket Head Cap Screw DIN 912-M3x12, St, black
Reborable up to max. ∅ 16 mm
m = 25.0 g

1 pce.	0.0.337.69

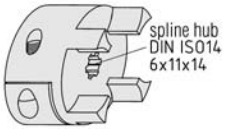
Coupling Half D30 VK14
Al
1 Hex. Socket Head Cap Screw DIN 912-M3x12, St, black
m = 22.0 g

1 pce.	0.0.337.67



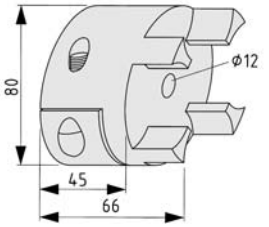
Coupling Half D55 D8
Al
1 Cap Screw DIN 912-M6x20, St, bright zinc-plated
Reborable up to max. ∅ 28 mm
m = 132.0 g

1 pce.	0.0.337.68



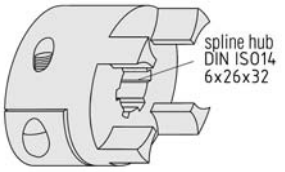
Coupling Half D55 VK14
Al
1 Cap Screw DIN 912-M6x20, St, bright zinc-plated
m = 130.0 g

1 pce.	0.0.337.66



Coupling Half D80 D12
Al
1 Cap Screw DIN 912-M8x30, St, bright zinc-plated
Reborable up to max. ∅ 45 mm
m = 455.0 g

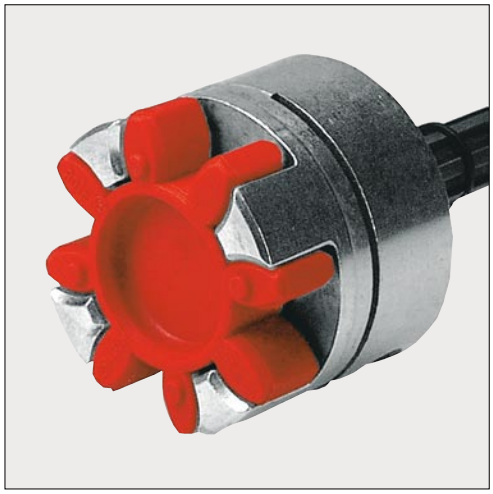
1 pce.	0.0.337.86



Coupling Half D80 VK32
Al
1 Cap Screw DIN 912-M8x30, St, bright zinc-plated
m = 420.0 g

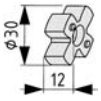
1 pce.	0.0.337.65

Coupling Inserts



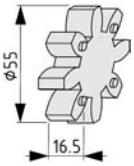
The Coupling Halves are connected via the Coupling Inserts whose elasticity is engineered to suit the item drive elements.
This takes the form of a plug-type connection and is used to compensate for angular errors and radial and axial offset.

In conjunction with Ball Screw Units which are driven with stepping motors, the flexible couplings make it possible to decouple the moving masses from spindle and drive. The process of inserting the Coupling Insert into the Coupling Halves can be facilitated by using spray oil.



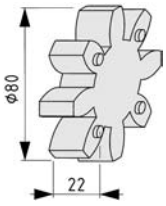
Coupling Insert D30
PUR
hardness 80 Sh A
Torque range: M_D < 8 Nm
Elasticity$_{dyn.}$ = 0.318 °/ Nm
Elasticity$_{stat.}$ = 0.955 °/ Nm
Perm. offset$_{axial}$ = 1.00 mm
Perm. offset$_{radial}$ = 0.21 mm
Perm. offset$_{angle}$ = 1.1 °
m = 5.0 g

blue, 1 pce.	0.0.463.20



Coupling Insert D55
PUR
hardness 98 Sh A
Torque range: M_D < 50 Nm
Elasticity$_{dyn.}$ = 0.009 °/ Nm
Elasticity$_{stat.}$ = 0.028 °/ Nm
Perm. offset$_{axial}$ = 1.40 mm
Perm. offset$_{radial}$ = 0.10 mm
Perm. offset$_{angle}$ = 0.9 °
m = 18.0 g

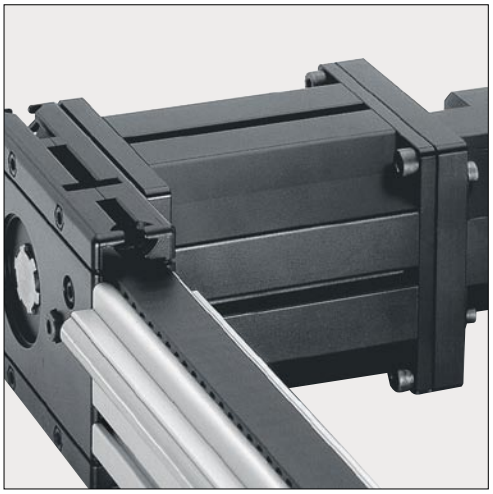
red, 1 pce.	0.0.463.19



Coupling Insert D80
PUR
hardness 98 Sh A
Torque range: M_D < 200 Nm
Elasticity$_{dyn.}$ = 0.003 °/ Nm
Elasticity$_{stat.}$ = 0.008 °/ Nm
Perm. offset$_{axial}$ = 1.80 mm
Perm. offset$_{radial}$ = 0.12 mm
Perm. offset$_{angle}$ = 0.9 °
m = 49.0 g

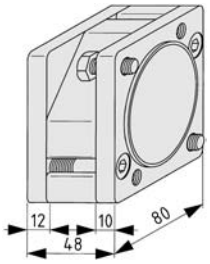
red, 1 pce.	0.0.463.18

Coupling Housings



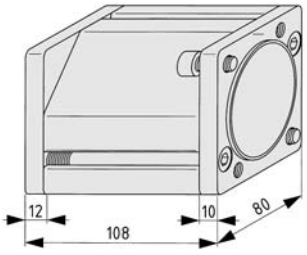
The Coupling Housings provide static connections between the mechanical drive elements and any selected drives / motors. On the side of the mechanical drive elements of the MB Building Kit System, the housings are provided with appropriate connection geometries (Coupling Housings 8 D30 and 8 D55: Centring Piece D50-D22 or D50-D50 required). The Coupling Adapter Plates Universal need to be machined to suit the motor/gearbox geometry.

The Coupling Housings are manufactured from special Line 8 profiles (Section 1.1 Profiles 8 D). These profiles can also be used to construct individual housings for couplings and Synchroniser Shafts. It is recommended that the drive unit (motor and coupling) be supported at the Coupling Housing by MB Building Kit System components, in order to minimize moment, loading of the Reverse Unit housing.



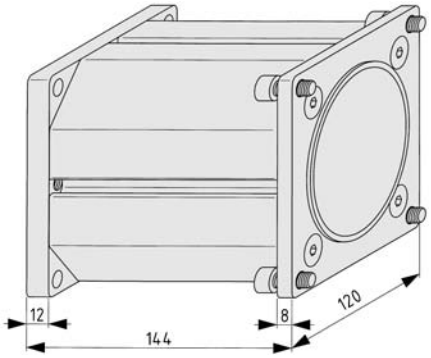
Coupling Housing 8 D30
Profile 8 80x80-45° D60, Al, anodized, black
Coupling Adapter Plate D30/D55 ZU40/WG/KGT, Al, anodized, black
Coupling end plate D30/D55, Al, anodized, black
2 Hex. Socket Hd. Cap Screws DIN 6912-M8x40, St, black
2 hexagon screws DIN 933-M8x22, St, black
m = 300.0 g

1 set	0.0.463.23



Coupling Housing 8 D55
Profile 8 80x80-45° D60, Al, anodized, black
Coupling Adapter Plate D30/D55 ZU40/WG/KGT, Al, anodized, black
Coupling end Plate D30/D55, Al, anodized, black
2 Hex. Socket Hd. Cap Screws DIN 6912-M8x100, St, black
2 Hex. Socket Hd. Cap Screws DIN 912-M8x20, St, black
m = 590.0 g

1 set	0.0.463.22

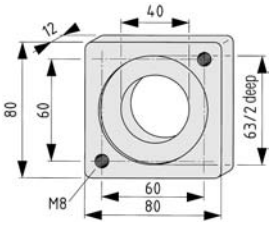


Coupling Housing 8 D80
Profile 8 120x120-45° D87, Al, anodized, black
Coupling Adapter Plate D80 ZU80, Al, anodized, black
Coupling end Plate D80, Al, anodized, black
8 Countersunk Screws DIN 7991-M8x25, St, black
4 Hex. Socket Hd. Cap Screws DIN 912-M8x20, St, black
m = 1.4 kg

1 set	0.0.463.21

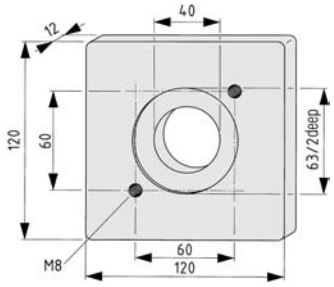
Coupling Adapter Plates

Coupling Adapter Plates Universal are designed for mounting onto the Coupling Housings. Additional machining operations, e.g. fastening bores and centring diameters are required to suit the customer's drive / motor. Two sizes for each of the two different Coupling Housings allow drives with different flange geometries to be joined.
The fastening screws for connecting the Coupling Adapter Plates Universal to the corresponding Coupling Housings are included in the scope of delivery of the Coupling Housings.



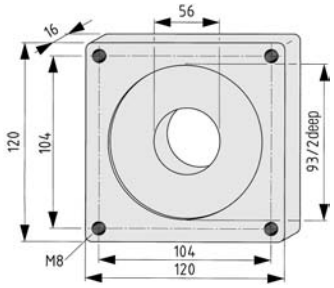
Coupling Adapter Plate D30/D55 Universal 80x80
Al, anodized
m = 160.0 g

black, 1 pce.	0.0.463.10



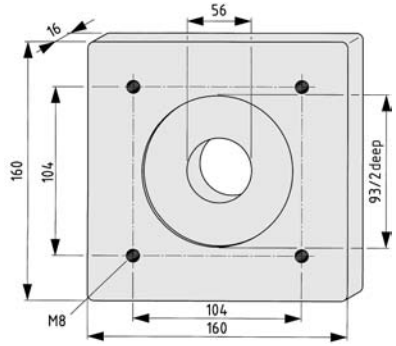
Coupling Adapter Plate D30/D55 Universal 120x120
Al, anodized
m = 420.0 g

black, 1 pce.	0.0.463.11



Coupling Adapter Plate D80 Universal 120x120
Al, anodized
m = 480.0 g

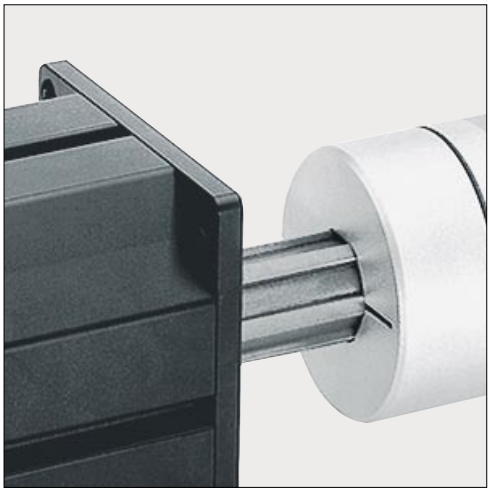
black, 1 pce.	0.0.463.07



Coupling Adapter Plate D80 Universal 160x160
Al, anodized
m = 960.0 g

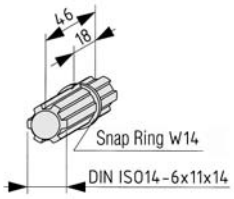
black, 1 pce.	0.0.463.08

Connecting Shafts



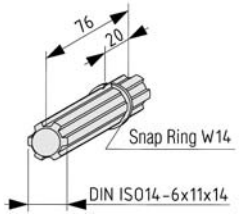
Connecting Shafts are used to provide a torsionally rigid connection between the mechanical drive elements and the corresponding Coupling Half. The Connecting Shafts are inserted into the drive elements until they come up against the Snap Ring. The clampable Coupling Half is slipped onto the free end of the shaft and clamped such that the length of the coupling matches the length of the Coupling Housing, and the Coupling Inserts are not under any axial load.

The part of the spline which locates in other MB drive elements should be greased prior to assembly.



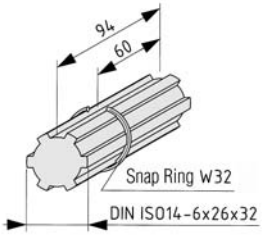
Connecting Shaft VK14 R10/KGT
Multi-Spline Shaft similar to DIN ISO 14-6x11x14, St, C 45 k
Snap ring W14
m = 44.0 g

1 pce.	0.0.463.17



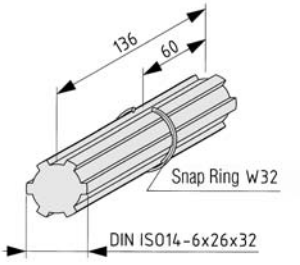
Connecting Shaft VK14 R25/WG
Multi-Spline Shaft similar to DIN ISO 14-6x11x14, St, C 45 k
Snap Ring W14
m = 73.0 g

1 pce.	0.0.463.15



Connecting Shaft VK32 R25
Multi-Spline Shaft similar to DIN ISO 14-6x26x32, St, C 45 k
Snap Ring W32
m = 470.0 g

1 pce.	0.0.337.93



Connecting Shaft VK32 R50
Multi-Spline Shaft similar to DIN ISO 14-6x26x32, St, C 45 k
Snap Ring W32
m = 680.0 g

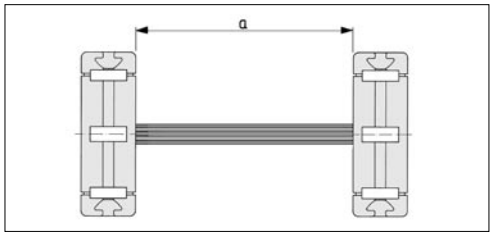
1 pce.	0.0.337.92

8.3.2 Supplementary Drive Elements

System elements for transferring torque and for mechanical connnection of drive elements, and Proximity Switches for use with mechanical drive elements:
> Multi-Spline Shafts
> Adapter and Synchroniser Shafts
> Synchronising Shaft Couplings
> Adapter Plates and adapter flanges
> Proximity Switches

Multi-Spline Shafts

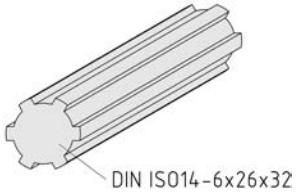
The Multi-Spline Shaft is used to provide a torsionally rigid connection between drive elements and multi-spline hubs.
The plug-type connection must be lubricated with multi-purpose grease or similar suitable lubricant.



Suitable for use in combination with Timing-Belt Reverse Units for generating synchronous movements up to a distance “a”.

Multi-Spline Shaft VK14
Multi-Spline Shaft similar to DIN ISO 14-6x11x14, St, C 45 k
Polar resistance moment: W_t = 261 mm³
a = 500 mm
m = 0.92 kg/m

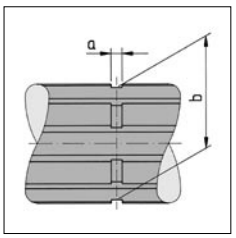
cut-off max. 3000 mm	0.0.337.05



Multi-Spline Shaft VK32
Multi-Spline Shaft similar to DIN ISO 14-6x26x32, St, C 45 k
Polar resistance moment: W_t = 3,450 mm³
a = 1,000 mm
m = 5.00 kg/m

cut-off max. 3000 mm	0.0.337.63

Snap Rings



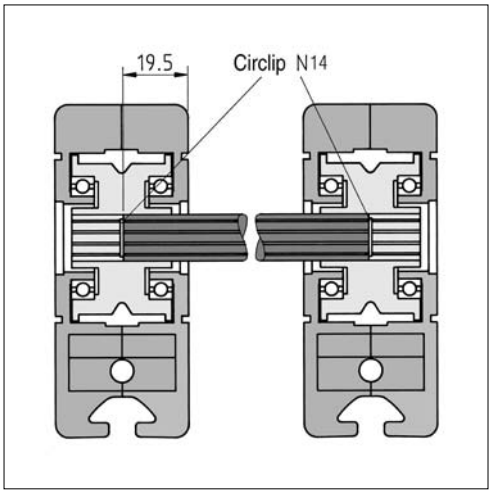
	a [mm]	b [mm]
W14	1.3 +0.1	13.5 -0.1
W32	1.6 +0.1	30.8 -0.2

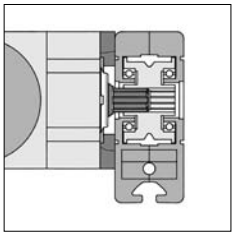
Snap Ring for axially securing sections of Multi-Spline Shafts which can be used e.g. as Connecting or Synchroniser Shafts between mechanical drive elements and couplings etc.

Snap Ring W14
St
m = 0.5 g
1 PU = 10 pce. 0.0.408.31

Snap Ring W32
St
m = 2.4 g
1 PU = 10 pce. 0.0.476.51

Circlip



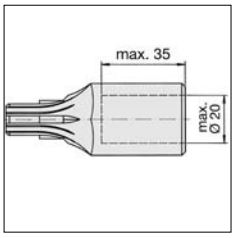


For limiting the axial movement of Multi-Spline Shafts in the multi-spline hub DIN ISO14-6x11x14.
Axial fixing of Multi-Spline Shafts or Connecting Shaft U-WG by means of Circlip N in the groove of the pulley of Timing-Belt Reverse Unit 8 40 R25 or 8 80 R25.

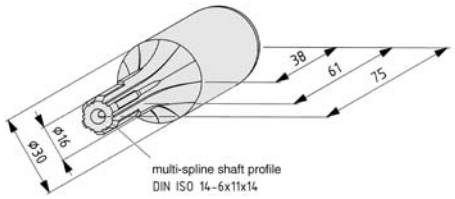
Circlip N14
St
m = 0.3 g
1 PU = 10 pce. 8.0.000.46

Adapter Shaft

For torsionally rigid connection of any desired drive shafts to the Timing-Belt Reverse Units, Chain Reverse Units, Bevel Gearboxes and Ball Screw Units.
The plug-in connection must be lubricated with a multi-purpose grease or similar.



The Adapter Shaft only uses half the hub width of timing pulleys R25 for transferring the torque.
With alternating loads, it is necessary to reduce the torque values of the Timing-Belt Reverse Units with Adapter Shafts.

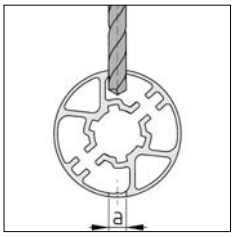


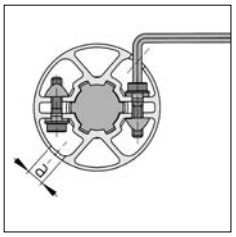
Adapter Shaft VK14
St
surface-hardened
m = 275.0 g

black, 1 pce.	0.0.337.25

Synchroniser Shaft Profiles

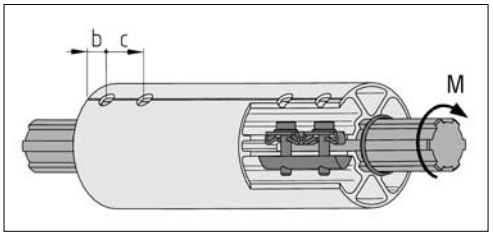
Synchronising Shaft Profiles are used to construct synchronising shafts using Multi-Spline Shaft sections VK14 or VK32.
The synchronising shafts can be used to connect and thus to synchronise dynamic elements such as Timing-Belt Reverse Units, Ball Screw Units and couplings etc.
By using Multi-Spline Shaft sections which go all the way through the Timing-Belt Reverse Units, it is possible to transfer the permissible torque.
A positive-lock connection is used to connect shafts to the Synchronising Shaft Profiles. A Synchroniser Shaft Equaliser Coupling enables the torsion angle to be set.



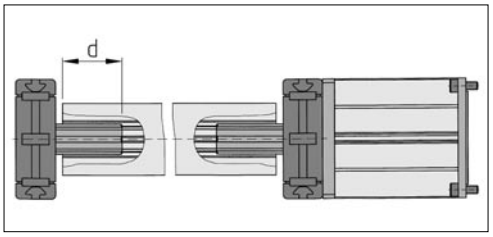


The mounting holes for the tensioning screws are drilled perpendicular to the profile's centre axis along the marking grooves.

The tensioning screws are tightened through the mounting holes drilled earlier.

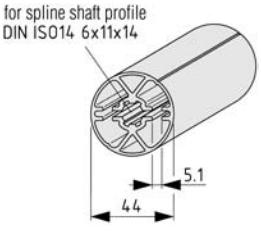


The clamping set contains all parts required for fastening the Multi-Spline Shaft sections to both ends of a Synchronising Shaft Profile.
Snap Rings W should be used to secure the Synchroniser Shaft axially between the drive elements.



Use of a synchronising shaft for connecting two Timing-Belt Reverse Units.
The length of a Multi-Spline Shaft section depends on the minimum penetration depth (d), the construction sizes of the connected dynamic elements and the gap between the rotating and fixed parts.

	Synchronising Shaft Profile	
	VK14	VK32
a	∅ 8 mm	∅ 10 mm
b	10 mm	15 mm
c	20 mm	30 mm
d	min. 40 mm	min. 60 mm
M	28 Nm	100 Nm

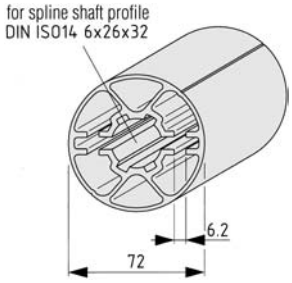


Synchronising Shaft Profile VK14
Al, anodized
A = 4.77 cm² I_x = 7.17 cm⁴ I_y = 6.68 cm⁴
I_t = 10.63 cm⁴
m = 1.29 kg/m

natural, cut-off max. 3000 mm	0.0.463.57

Clamping Set for Synchronising Shaft Profile VK14
8 standard connecting plates 5, St, bright zinc-plated
4 T-Slot Nuts 6 St 2xM5-40, bright zinc-plated
8 screws M5x16, St, bright zinc-plated
m = 88.0 g

1 set	0.0.463.72



Synchronising Shaft Profile VK32
Al, anodized
A = 11.62 cm² I_x = 47.42 cm⁴ I_y = 45.09 cm⁴
I_t = 65.95 cm⁴
m = 3.13 kg/m

natural, cut-off max. 3000 mm	0.0.463.56

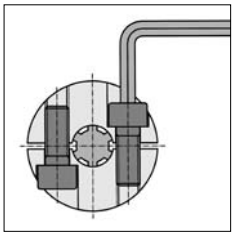
Clamping Set for Synchronising Shaft Profile VK32
8 standard connecting plates 6, St, bright zinc-plated
4 T-Slot Nuts 8 St 2xM6-60, bright zinc-plated
8 screws M6x25, St, bright zinc-plated
m = 196.0 g

1 set	0.0.463.30

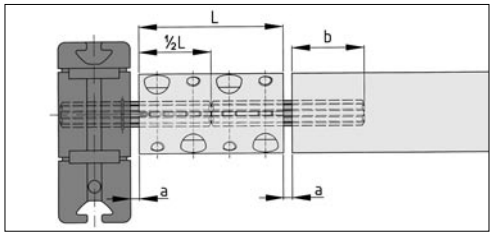
Synchroniser Shaft Equaliser Couplings

When Synchroniser Shafts are used for transferring torque, it is normally necessary to adjust the attached drives during assembly. The Synchroniser Shaft Equaliser Coupling enables the Synchroniser Shaft to be separated, and then creates a power-lock connection between the shafts.

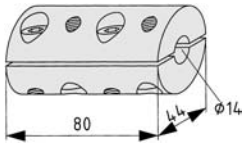
Snap Rings W should be used to secure the Synchroniser Shaft axially between the drive elements.



The Synchroniser Shaft Equaliser Coupling is positioned at the ends of the Multi-Spline Shafts and power-lock connected using clamping screws. The tightening torque of the clamping screws is 25 Nm (Equaliser Coupling VK14) or 50 Nm (Equaliser Coupling VK32).
The two halves of the coupling must be screwed onto degreased shaft ends using the waxed screws supplied, so as to transfer the necessary torque.

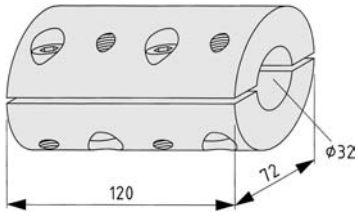


	Synchronizer Shaft Equaliser Coupling	
	VK14	VK32
L	80 mm	120 mm
a	1-1.5 mm	2-3 mm
b	min. 40 mm	min. 60 mm



Synchroniser Shaft Equaliser Coupling VK14
2 half shells, St, bright zinc-plated
8 Hexagon Socket Head Cap Screws DIN 912-M8x20, St, bright zinc-plated and waxed
m = 0.7 kg

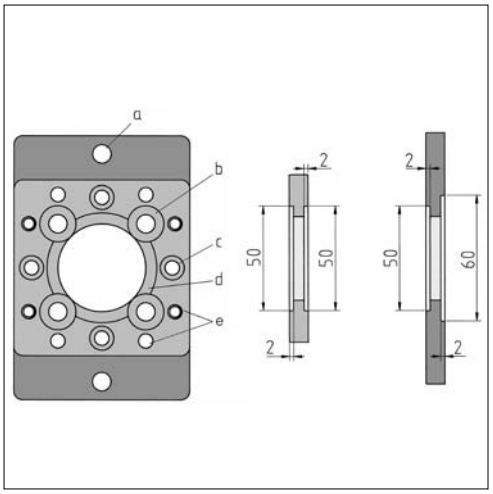
1 set	0.0.472.28



Synchroniser Shaft Equaliser Coupling VK32
2 half shells, St, bright zinc-plated
8 Hexagon Socket Head Cap Screws DIN 912-M10x30, St, bright zinc-plated and waxed
m = 2.8 kg

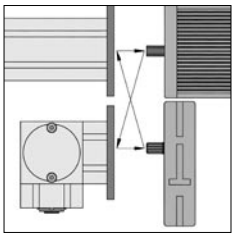
1 set	0.0.472.29

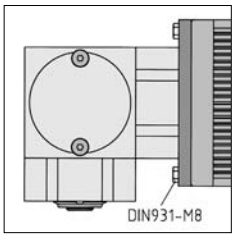
Adapter Plates



Adapter Plates for universal connection between drives, Bevel Gearboxes, Reverse Units and profiles.

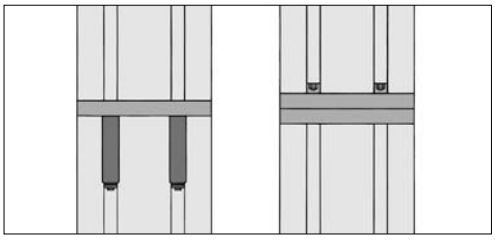
Functions of the mounting holes and threads:
> 2 x holes for M8 (a) for securing Timing-Belt Reverse Unit 8 80 R25 or 2 Adapter Plates to each other
> 4 x holes for Countersunk Screw M8 (b) for the central bores of Profiles 8
> 4 x counterbores ∅ 11, 6 deep (c) for Button-Head Screws ISO 7380-M6x16 for connecting Timing-Belt Reverse Unit 8 40 R25, Chain Reverse Unit 8 80, bearing profile 8 80x80 or Bevel Gearboxes
> Holder (d) for Centring Pieces
> 4 x holes for M6 or 4 x thread M6 (e) for connecting the Adapter Plates to each other or for connection to profiles (Automatic Fastener)



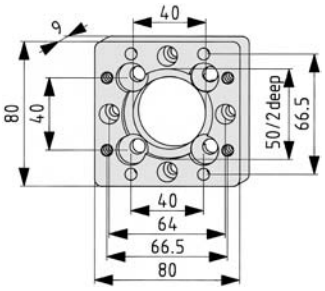


Attachment of drives (possibly with Adapter Flange Universal) and Timing-Belt Reverse Units to the Bevel Gearboxes with Adapter Plates.

Where space is restricted, hexagon screws DIN 931-M8 can be used.

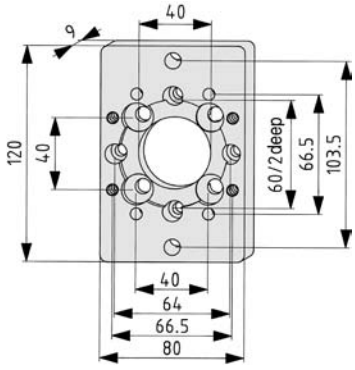


Possibilities for butt fastenings with Adapter Plates and Automatic Fasteners.



Adapter Plate 80x80
Al, anodized
m = 91.0 g

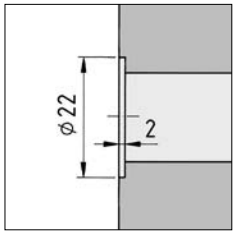
black, 1 pce.	0.0.408.16

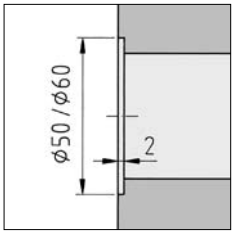


Adapter Plate 120x80
Al, anodized
m = 164.0 g

black, 1 pce.	0.0.408.06

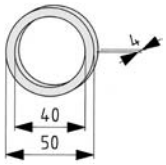
Centring Pieces





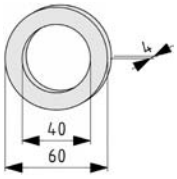
Centring Pieces for locating mechanical drive elements in the corresponding centring bores of the Adapter Plates, Coupling Adapter Plates etc.

Examples:
>Centring Piece D50-D50
Adapter Plate 80x80 ->Bevel Gearbox or Ball Screw Unit
>Centring Piece D60-D60
Adapter Plate 120x80 ->Timing-Belt Reverse Unit 8 80 R25 or Timing-Belt Reverse Unit 8 80 R50 II and 12 80 R75
>Centring Piece D50-D22
Bevel Gearbox ->Timing-Belt Reverse Unit 8 40 R25
or
Coupling Housing 8 D55 ->Timing-Belt Reverse Unit 8 40 R25
>Centring Piece D60-D50
Adapter Plate 120x80 ->Bevel Gearbox or Ball Screw Unit



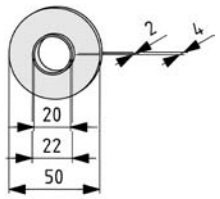
Centring Piece D50-D50
St
m = 21.0 g

black, 1 pce.	0.0.408.12



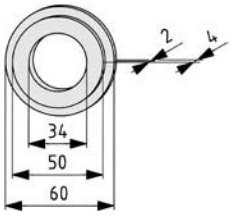
Centring Piece D60-D60
St
m = 48.0 g

black, 1 pce.	0.0.408.11



Centring Piece D50-D22
St
m = 27.0 g

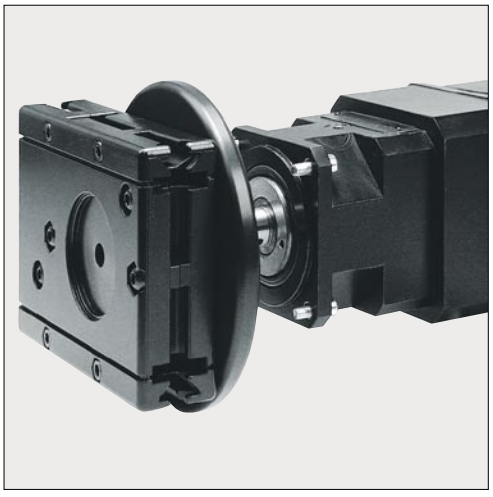
black, 1 pce.	0.0.379.17



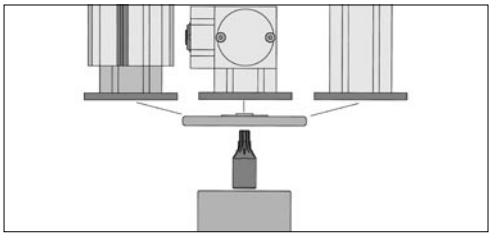
Centring Piece D60-D50
St
m = 47.0 g

black, 1 pce.	0.0.379.18

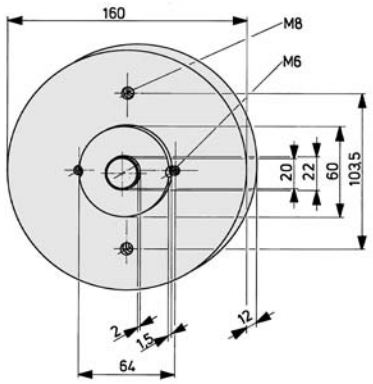
Adapter Flange



For adapting any desired drives to the Timing-Belt Reverse Units, Bevel Gearboxes and Ball Screw Units without use of couplings.
The Adapter Flange Universal can be machined to suit the connection geometry (hole pattern, centring) of the drive.
The part of the Adapter Flange extending beyond the Timing-Belt Reverse Units may require an appropriate shortening of the Shaft or Shaft-Clamp Profile.
The Adapter Flange Universal can be screwed directly to Timing-Belt Reverse Unit 8 40 R25, 8 80 R25 and Chain Reverse Unit 8 80.



For connecting any drives to the Ball Screw Units, the Bevel Gearbox or to profiles using the Adapter Shaft, the Adapter Plate 120x80 and the Adapter Flange Universal.



Adapter Flange Universal
Al, anodized
m = 635.0 g

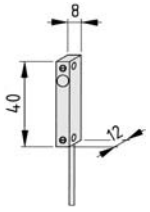
black, 1 pce.	0.0.337.32

8.3.3 Proximity Switches

Proximity Switch for integration in the grooves of Profiles 8 for limiting the terminal position or as reference on linear units.
The Proximity Switch can be retrofitted at any point in the groove and can be secured in position from above.

▶ www.item.info

5 6 **8** 12



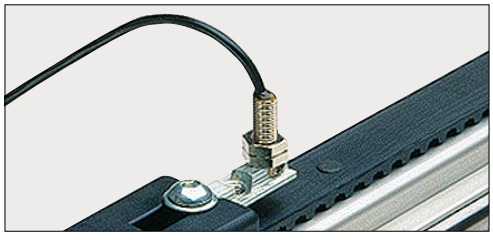
Proximity Switch 8 - 1NO
Inductive Proximity Switch, positive switching
Casing Al, anodized, natural
Fixing mechanism, fixing screws
Voltage = 10...30 V DC
Switching current$_{max}$ = 150mA
Sensing range = 2 mm
Cable, black l = 3 m ; d = 3 mm
m = 51.0 g

1 pce.	0.3.001.30

New in catalogue

Proximity Switch 8 - 1NC
Inductive Proximity Switch, positive switching
Casing Al, anodized, natural
Fixing mechanism, fixing screws
Voltage = 10...30 V DC
Switching current$_{max}$ = 150mA
Sensing range = 2 mm
Cable, black l = 3 m ; d = 3 mm
m = 51.0 g

1 pce.	0.0.600.05

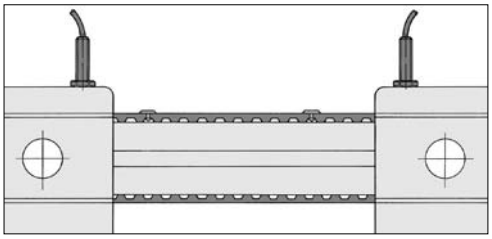


Proximity Switch M8 is a versatile device for limiting the terminal position or for reference on linear units with timing-belt drives. It is available with a permanent or plug-in connecting cable.

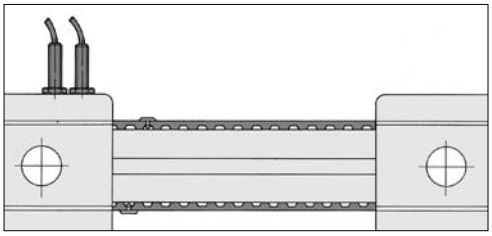
The cam reaching the Proximity Switch signals the electrical terminal position and/or the reference point of the unit on the Timing Belt.

The Proximity-Switch Fastening Set is used to position and attach inductive Proximity Switches M8 on the Timing-Belt Reverse Units.

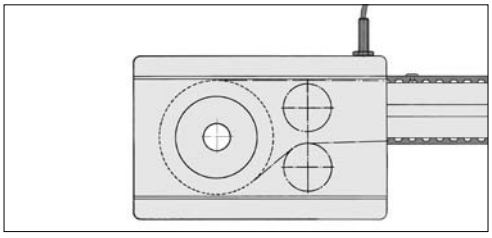
Proximity-Switch Connecting Cable in plug-in design with integrated LEDs for displaying the switch function and operating voltage.



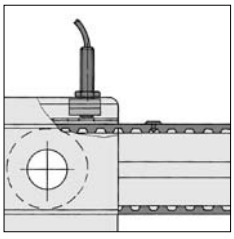
Possible arrangement of Proximity Switches 8 and Proximity-Switch Cams 8:
The Proximity-Switch Cams do not run through the Timing-Belt Reverse Units.

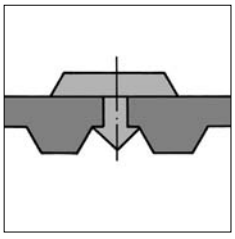


Possible arrangement of Proximity Switches 8 and Proximity-Switch Cams 8:
The Proximity-Switch Cams run through the Timing-Belt Reverse Units.
Particularly suitable when used with the drive end Timing Belt Reverse Unit for simplifying cable routing between the drive unit, Proximity Switch and motor control unit.



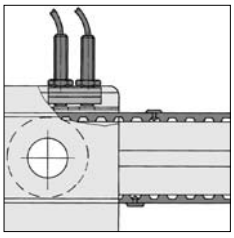
When using Proximity-Switch Cams 8 with reversing on the flat side (Timing-Belt Counter-Reverse Unit 8 R25/ Timing-Belt Reverse Unit 8 80 R25 with emergence 40 mm), these must not pass through the Timing-Belt Reverse Units. In this case, Proximity Switches 8 and Proximity-Switch Cams 8 must be positioned to prevent this from happening.

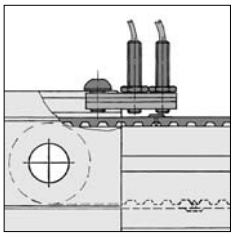




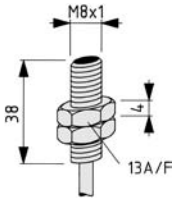
Proximity-Switch Cam 8 is pressed into the Timing Belt at the required positions from the flat side.

Options for fastening Proximity Switches 8 in conjunction with the Proximity-Switch Fastening Set. Depending on the application, the Proximity-Switch Fastening Set must be shortened accordingly.



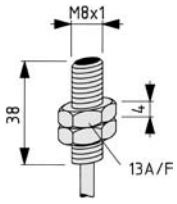


Proximity Switch 8 is particularly suitable in conjunction with Timing-Belt Reverse Units 8 or Timing-Belt Counter-Reverse Unit 8, Proximity-Switch Fastening Set 8 and Proximity-Switch Cams 8. Timing-Belt Reverse Units 8 are provided with openings for the Proximity Switch at appropriate points in order to ensure compact installation.



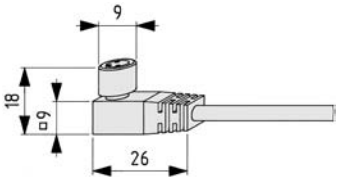
Proximity Switch M8
St, stainless
Inductive Proximity Switch, positive switching, suitable for installation in thread M8x1
Voltage = 10...30 V DC
Max. switching current = 200 mA
Sensing range = 1.5 mm
LED control display
Connecting cable, black l = 3 m; d = 3.5 mm
m = 54.0 g

1 pce.	**0.0.337.14**



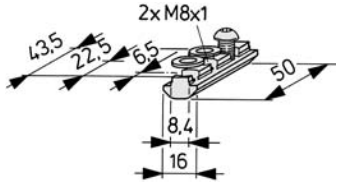
Proximity Switch M8, Plug Connection
St, stainless
Inductive Proximity Switch, positive switching, suitable for installation in thread M8x1
Voltage = 10...30 V DC
Max. switching current = 200 mA
Sensing range = 1.5 mm
LED control display
Connecting cable, black l = 3 m; d = 3.5 mm
m = 16.0 g

1 pce.	0.3.001.24



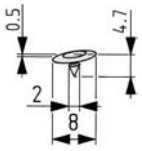
Proximity-Switch Connecting Cable
Outer sheath PUR, black
Connecting cable l = 5 m; d = 4.0 mm
Structure LifY11Y, 3x0.25 mm²
Plug: integrated 3-pole plug with metal collar M8x1
Cable inlet angled by 90°
LED control display: Green = Operating display, Yellow/orange = Switch function display
m = 144.0 g

1 pce.	0.3.001.25



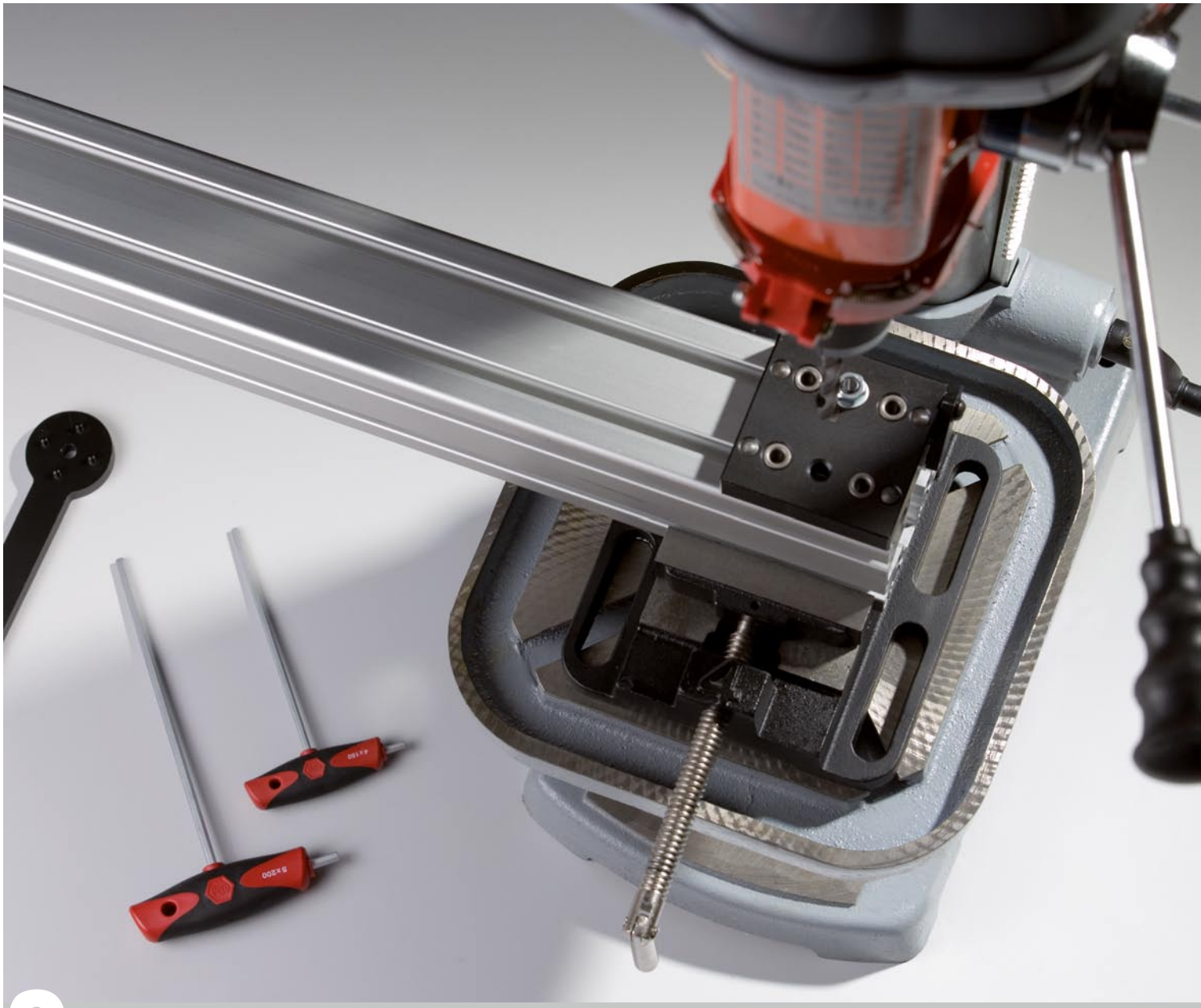
Proximity-Switch Fastening Set 8
St
2 washers DIN 433-8.4, St, bright zinc-plated
1 Button-Head Screw ISO 7380- M8x10, St, bright zinc-pl.
m = 37.0 g

1 set	0.0.337.31



Proximity-Switch Cam 8
St
m = 0.2 g

black, 1 pce.	0.0.337.15



9

Auxiliary Elements

Design and Ordering Software
Jigs and Tools
Services

The Auxiliary Elements product group comprises
> Special software for facilitating the design process and working with the MB Building Kit System
> Jigs and tools for cost-effective installation of components
> A broad spectrum of services to support the user in his work - from profile processing to complete solutions

9.1 Design and Ordering Software

The free item ikasys CD catalogue is designed to assist users of the MB and RS Building Kit Systems with everything from project planning and design to project implementation.

The item ikasys catalogue system combines all the functions of the online catalogue with installation instructions, CAD data and parts list functions with the possibility of dispatching enquiries and orders. A convenient full-text search and a structural tree that mirrors the item product catalogues make it easier to locate the required article. The installation instructions are available in PDF format and can thereby be opened with ease on virtually every PC. The CAD data can be seen in a 3D preview and then exported to the preferred 2D or 3D format.

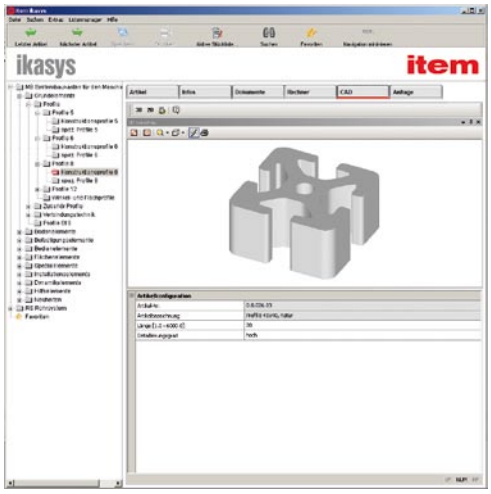
Further software support modules are available online at www.item.info:

> Our website provides you with a direct link to item's online catalogue. Like the item ikasys, this gives you access to all catalogue information, a deflection calculator for construction profiles and detailed installation instructions - with everything right up to date. You can also download the CAD data for each article and generate an enquiry list that you can dispatch directly to your item partner via the Internet.

> The Download area of our website gives you access to our products through item CAD Online. You can also easily download our CAD data in the preferred 2D and 3D-CAD format from here. The search function or directory tree allows you to search by name or part number and to put the chosen parts directly in the download centre. A shopping basket can contain up to 10 files in different formats. The download is naturally free of charge for you, and registration is not required.

> The download area also contains updates for your installed item software. This ensures you are able to keep your local data up to date and have access to all product innovations and changes.

CD item ikasys international



CD item ikasys international
item ikasys
Catalogue information in 4 languages
CAD data parts list function
Enquiry and ordering module
Search function (keyword/part number/full-text search)
Can be run from the CD Installation requirements:
Windows 2000 / XP
Installation requirements:
Hard disk with approx. 660 MB free space

1 pce.	0.4.116.27

9.2 Jigs and Tools

Special jigs and tools for processing elements of the MB Building Kit System.

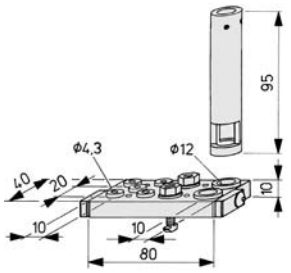
The necessary holes and threads for the fasteners used for basic, fastening and dynamic elements can be made particularly easily and cost-effectively using drilling jigs and other tools.

Special tools are available for installing Shaft-Clamp Profiles and Bearing Units. General tools (keys) make working with fasteners easier.

9.2.1 Connections for Basic Elements

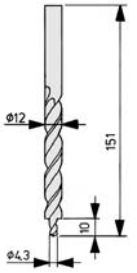
Drilling Jigs and Step Drills

Drilling Jigs for precisely positioned machining of profiles with the required through holes for Standard Connection, or stepped bores for Universal Connection, with either hand-held or pillar drills.
Drilling Jig 8 ensures easy machining on a pillar drill.



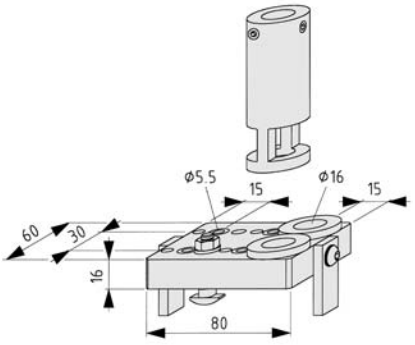
Drilling Jig 5
St, black
Drill bushes, St, hardened and polished
Slewable longitudinal limit stop
Clamp attachment on the profile
Depth limit stop for the Step Drill
m = 390.0 g

1 pce. 0.0.370.19



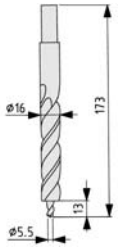
Step Drill, Universal Connection 5
High-performance, high-speed steel, nitrided
Shaft: ∅ 12 mm
m = 80.0 g

1 pce. 0.0.370.35



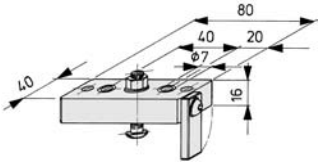
Drilling Jig 6
St, black
Drill bushes, St, hardened and polished
Slewable longitudinal limit stop
Clamp attachment on the profile
Depth limit stop for the Step Drill
m = 832.0 g

1 pce.	0.0.434.25



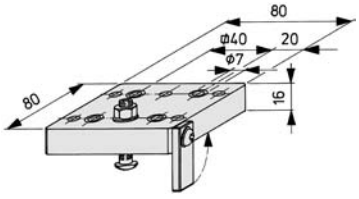
Step Drill, Universal Connection 6
High-performance, high-speed steel, nitrided
Shaft: ∅ 13 mm
m = 150.0 g

1 pce.	0.0.431.19



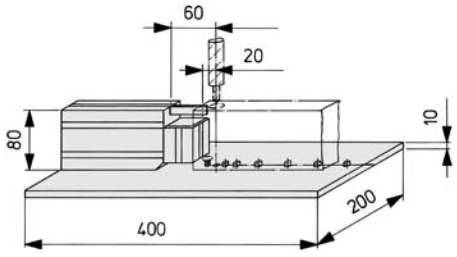
Drilling Jig 8, small, Standard Connection 8
St, black
Drill bushes, St, hardened and polished
Slewable longitudinal limit stop
Clamp attachment on the profile
m = 420.0 g

1 pce.	0.0.026.09



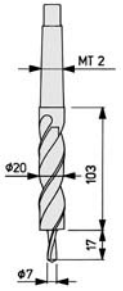
Drilling Jig 8, large, Standard Connection 8
St, black
Drill bushes, St, hardened and polished
Slewable longitudinal limit stop
Clamp attachment on the profile
m = 810.0 g

1 pce.	0.0.026.19



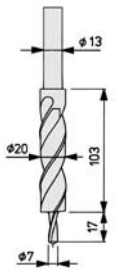
Drilling Jig 8
Base plate, plastic, green
Profile, Al, anodized, natural
Drill bush, St, hardened and polished
Slewable stop
Profile-guide elements
m = 2.3 kg

1 pce.	0.0.026.91



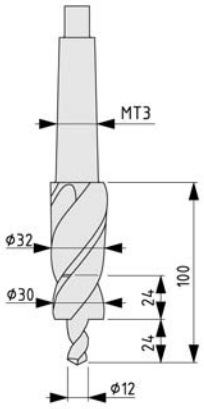
Step Drill, Universal Connection 8
High-performance, high-speed steel, nitrided
Taper shank: MT 2
m = 260.0 g

1 pce.	0.0.026.90



Step Drill, Universal Connection 8 D13
High-performance, high-speed steel, nitrided
Shaft: ∅ 13 mm
m = 240.0 g

1 pce.	0.0.465.90



Step Drill, Universal Connection 12
High-performance, high-speed steel, nitrided
Taper shank: MT3
m = 550.0 g

1 pce.	0.0.014.03

Drilling Unit

www.item.info

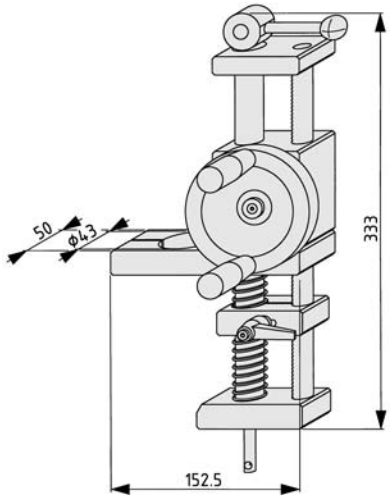
The Drilling Unit is a profile machining jig. It is secured directly to the profile being machined and is therefore particularly easy to use on existing profile constructions.

The profile Drilling Unit can be used to drill through holes for Standard Connections, tap the profile ends for Standard Connections and produce stepped bores for Universal Connections in Profiles 5, 6 and 8.
A special adapter set is required for each Line.
In addition, the profiles can also be drilled for various other applications.

The Drilling Stand is attached with ease to the profile grooves by means of a clamp attachment with eccentric clamping lever.
The drill is advanced by means of a hand wheel.
A compression spring is fitted to facilitate the return stroke. The drilling depth can be limited by means of an adjustable depth limit stop.
To tap into the profile core bores, an Angle Bracket is secured to the Adapter Plate which is used to arrange the Drilling Unit on the profile's end face.

The Drilling Unit can be operated with a commercially available drilling machine with European mount (∅ 43 mm). A machine with electronic speed control, R/L operation and 2-speed gearing is recommended.

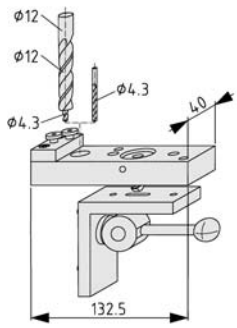
5 6 8 12



Drilling Unit, Drilling Stand
St
m = 3.0 kg

1 pce.	0.0.465.88

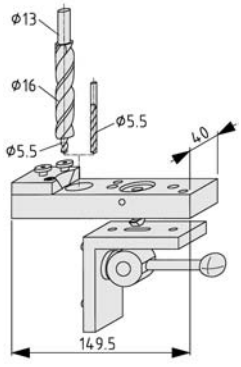
5 6 8 12



Drilling Unit, Drilling Adapter Set 5
Adapter Plate, St, black
Angle Bracket, St, black
Step Drill, Universal Connection 5, high-performance, high-speed steel, nitrided
Drill ∅ 4.3 DIN 338, high-performance, high-speed steel
m = 1.2 kg

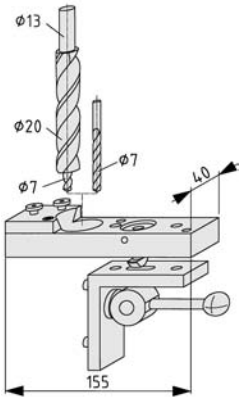
1 set	0.0.464.30

5 6 8 12



Drilling Unit, Drilling Adapter Set 6
Adapter Plate, St, black
Angle Bracket, St, black
Step Drill, Universal Connection 6, high-performance, high-speed steel, nitrided
Drill ∅ 5.5 DIN 338, high-performance, high-speed steel
m = 1.3 kg

1 set	0.0.459.33



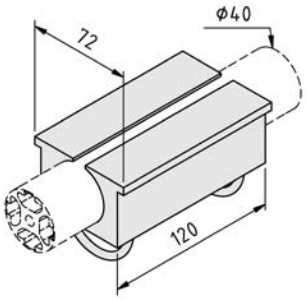
Drilling Unit, Drilling Adapter Set 8
Adapter Plate, St, black
Angle Bracket, St, black
Step Drill, Universal Connection 8, high-performance, high-speed steel, nitrided
Drill ∅ 7 DIN 338, high-performance, high-speed steel
m = 1.3 kg

1 set	0.0.465.89

Clamping Jaws D40

New in catalogue

Clamping jaws D40 are recommended when clamping round cross-section profiles in a vice as these protect the profiles from marking or damage.



Clamping Jaws D40
PA
4 magnetic inserts
m = 185.0 g

1 pce.	1.0.003.75

Drilling Jig and Step Drill Mitre Connection

New in catalogue

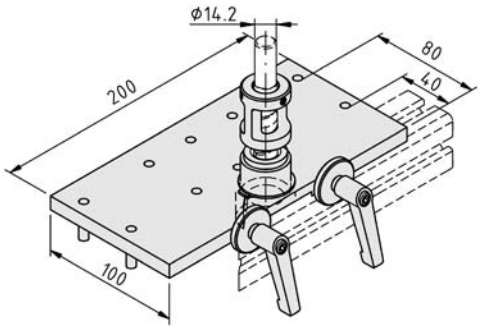
www.item.info

Drilling into profiles for Mitre-Fastening Sets 8 should be performed using special drilling jigs.

Drilling Jig 8 D14.2 is positioned onto the mitred profile and ensures – irrespective of the cut-off angle – that the 14.2 mm dia. drill hole can be drilled at the right distance from the end face of the profile. The depth limit stop is positioned on the shaft of Step Drill D14.2 to ensure the correct drill depth (26.2 mm).

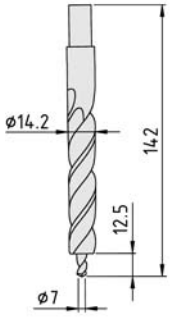
Drilling Jig 8 D9 is then fitted into the 14.2 mm dia. profile bore on the side.
For every cut-off angle γ, it positions a 9 mm dia. Standard Drill at right angles to the end face cut profile edge.

5 6 **8** 12



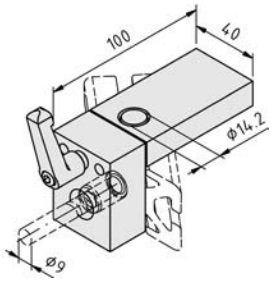
Drilling Jig Mitre Connection 8 D14.2
St
Depth limit stop
Notes on Use and Installation
m = 1.8 kg

black, 1 pce.	0.0.493.72



Step Drill D14.2, Mitre Connection 8
High-performance, high-speed steel, nitrided
Shaft: ∅ 12.5 mm
m = 104.0 g

1 pce.	0.0.492.60



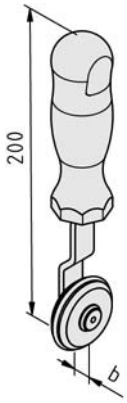
Drilling Jig Mitre Connection 8 D9
St
Notes on Use and Installation
m = 0.8 kg

black, 1 pce.	0.0.493.71

Assembly Tool Lip Seal

New in catalogue

The Assembly Tool facilitates the process of pressing the Lip Seal into the profile groove in the right orientation.



Assembly Tool Lip Seal 5
Roller, PA
Bolt, St
Button-Head Screw ISO 7380-M5x10
Handle, PA
b = 11 mm
m = 85.0 g

1 pce.	0.0.484.40

Assembly Tool Lip Seal 6-8-12
Roller, PA
Bolt, St
Button-Head Screw ISO 7380-M5x10
Handle, PA
b = 8 mm
m = 81.0 g

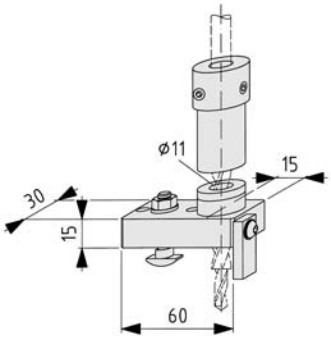
1 pce.	0.0.493.28

9.2.2 Connections for Fastening Elements

Drilling Jigs and Step Drills

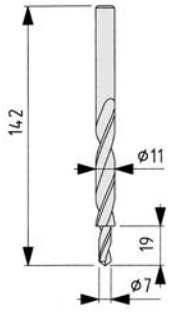
Drilling Jigs for precisely positioned machining (stepped bores) for 90° connection of Clamp Profiles 6 30x30 and 8 40x40.

5 **6** 8 12



Drilling Jig 6, Clamp Profile 6 30x30
St, black
Drill bush, St, hardened and polished
Slewable longitudinal limit stop
Clamp attachment on the profile
Depth limit stop for the Step Drill
m = 388.0 g

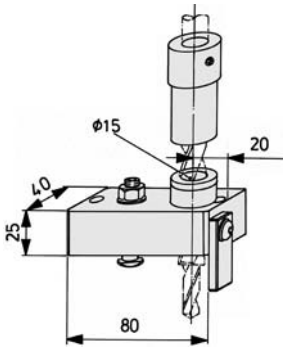
1 pce.	0.0.434.23



Step Drill, Clamp Profile 6 30x30
High-performance, high-speed steel, nitrided
Shaft: ∅ 11 mm
m = 63.0 g

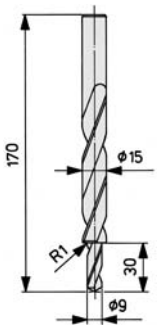
1 pce.	0.0.431.20

5 6 **8** 12



Drilling Jig 8, Clamp Profile 8 40x40
St, black
Drill bush, St, hardened and polished
Slewable longitudinal limit stop
Clamp attachment on the profile
Depth limit stop for the Step Drill
m = 880.0 g

1 pce.	0.0.265.22

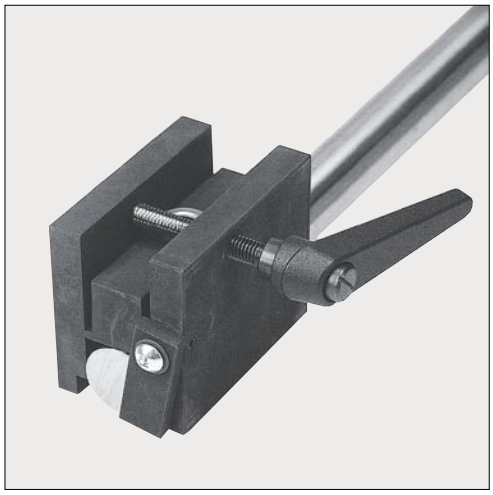


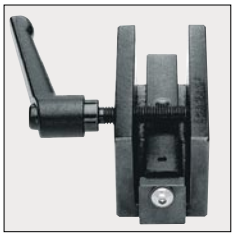
Step Drill, Clamp Profile 8 40x40
High-performance, high-speed steel, nitrided
Shaft: ∅ 15 mm
m = 150.0 g

1 pce. 0.0.265.21

9.2.3 Connections for Dynamic Elements

Combination Drilling Jigs

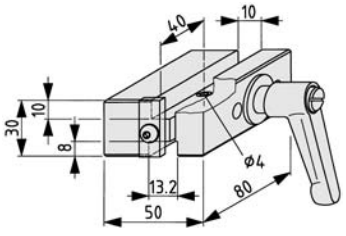




For precisely positioned drilling of fixing bores in shafts, Shaft-Clamp Profiles and Support Profiles for Roller Guides 8 D10, 8 D14 and 8 D25.

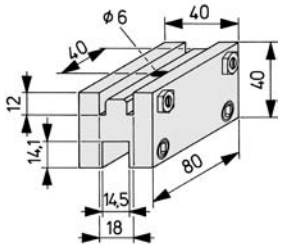
A carbide-tipped drill must be used for drilling in hardened shafts.

5 6 **8** 12



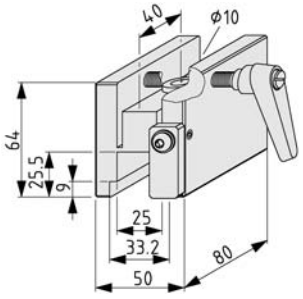
Combination Drilling Jig for Shaft D10
St, black
Drill bush, St, hardened and polished
Clamp lever
Slewable longitudinal limit stop
m = 715.0 g

1 pce. 0.0.444.68



Combination Drilling Jig for Shaft D14
St, black
Drill bush, St, hardened and polished
Clamp attachment
m = 780.0 g

1 pce.	0.0.373.55

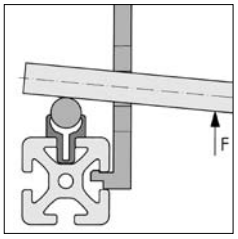


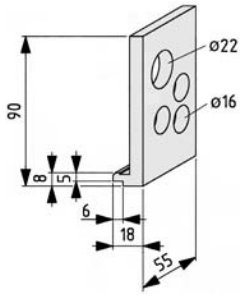
Combination Drilling Jig for Shaft D25
St, black
Drill bush, St, hardened and polished
Clamping lever
Slewable longitudinal limit stop
m = 1.4 kg

1 pce.	0.0.373.15

Mounting Aid

For press-fitting guiding shafts into Shaft-Clamp Profiles 5 D6, 8 D6, 8 D10, 8 D14 and 8 D25 using a suitable round steel bar as a lever.



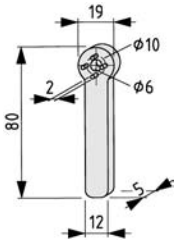


Mounting Aid for Shaft D6/D14/D25
St
m = 270.0 g

black, 1 pce.	0.0.265.38

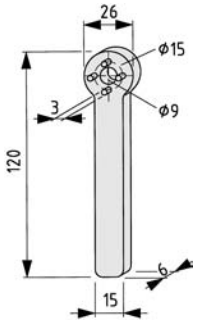
Pin Spanners

For tightening lock nuts in the Bearing Units of Roller Guides 5 D6, 8 D10, 8 D14 and 8 D25.



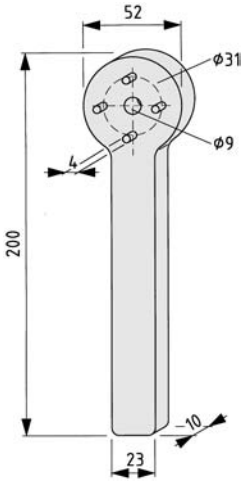
Pin Spanner 5 D6, 8 D10
St
m = 40.0 g

black, 1 pce.	0.0.390.13



Pin Spanner 8 D14
St
m = 90.0 g

black, 1 pce.	0.0.294.41



Pin Spanner 8 D25
St
m = 430.0 g

black, 1 pce.	0.0.350.30

9.2.4 General Tools

Keys

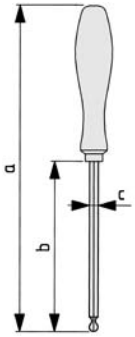
Ball-Headed Keys are particularly suitable for initial tightening and for screws which are difficult to reach (tightening angles up to 25°).

Keys with T-Handle and L-Keys are suitable for the maximum tightening torques of the various screws.

L-Keys are particularly suitable for tightening the screws of Universal Connections.
A special L-Key 5 A/F N is used for the Automatic-Fastening Sets 8 N.

The wrenches are made of high-grade chrome-vanadium steel, matt-chrome plated. The ergonomic plastic handles have an elastic coating of TPE.

c	Ball-Headed Key			Key with T-Handle			L-Key		
	a [mm]	b [mm]	m [g]	a [mm]	b [mm]	m [g]	a [mm]	b [mm]	m [g]
1.5 A/F	179	75	29						
2 A/F	204	100	30						
3 A/F	204	100	30	170	145	33	93	66	9
4 A/F	211	100	54	170	145	45	109	74	19
5 A/F	211	100	64	230	195	90	125	85	34
5 A/F N							163	20	30
6 A/F	243	125	105	230	195	110	200	160	150
8 A/F	268	150	150	330	295	200	300	200	300
10 A/F	271	150	211	330	295	320			



Ball-Headed Key 1.5 A/F
m = 29.0 g
1 pce. 0.0.473.79

Ball-Headed Key 2 A/F
m = 30.0 g
1 pce. 0.0.473.78

Ball-Headed Key 3 A/F
m = 30.0 g
1 pce. 0.0.370.58

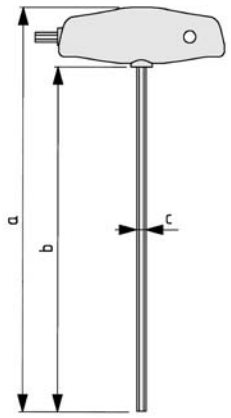
Ball-Headed Key 4 A/F
m = 54.0 g
1 pce. 0.0.406.60

Ball-Headed Key 5 A/F
m = 64.0 g
1 pce. 0.0.026.54

Ball-Headed Key 6 A/F
m = 105.0 g
1 pce. 0.0.406.61

Ball-Headed Key 8 A/F
m = 150.0 g
1 pce. 0.0.480.34

Ball-Headed Key 10 A/F
m = 211.0 g
1 pce. 0.0.480.35



Key with T-Handle 3 A/F
m = 33.0 g
1 pce. 0.0.370.59

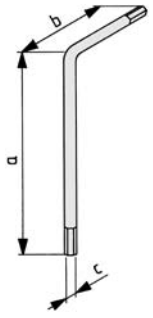
Key with T-Handle 4 A/F
m = 45.0 g
1 pce. 0.0.406.39

Key with T-Handle 5 A/F
m = 90.0 g
1 pce. 0.0.026.29

Key with T-Handle 6 A/F
m = 110.0 g
1 pce. 0.0.406.38

Key with T-Handle 8 A/F
m = 200.0 g
1 pce. 0.0.480.36

Key with T-Handle 10 A/F
m = 320.0 g
1 pce. 0.0.480.37



L-Key 3 A/F
Chrome-vanadium steel, matt-chrome plated
m = 9.0 g
1 pce. 0.0.440.73

L-Key 4 A/F
Chrome-vanadium steel, matt-chrome plated
m = 19.0 g
1 pce. 0.0.440.74

L-Key 5 A/F
Chrome-vanadium steel, matt-chrome plated
m = 34.0 g
1 pce. 0.0.026.89

New in catalogue

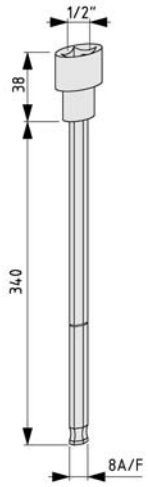
L-Key 5 A/F N
Chrome-vanadium steel, matt-chrome plated
m = 30.0 g
1 pce. 0.0.492.59

L-Key 6 A/F
Chrome-vanadium steel, matt-chrome plated
m = 150.0 g
1 pce. 0.0.007.01

L-Key 8 A/F
Chrome-vanadium steel, matt-chrome plated
m = 300.0 g
1 pce. 0.0.007.12

Screwdriver Socket

Screwdriver Socket 8 A/F-½″ enables the use of a torque key with ½″ square drive to check the tightening torques of Universal Connections 12.

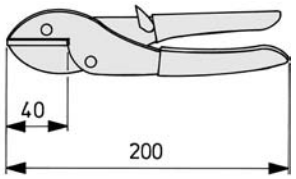


Screwdriver Socket 8 A/F-½″
Chrome-vanadium steel, matt-chrome plated
m = 320.0 g

1 pce.	0.0.007.47

Multi-Purpose Pliers

Pliers for cutting Cover Profiles or similar elements made from rubber, leather, plastic, wood or aluminium.



Multi-Purpose Pliers
Scissor body, sheet steel, bright nickel-plated
Blade, special steel
Anvil, light steel
Handle plastic-coated, non-slip design
m = 300.0 g

1 pce.	0.0.265.63

9.3 Service

Local customer service centres provide support to the user in the form of a wide range of services:
> Faster delivery of all system elements
> Ready-for-assembly processing on modern purpose-build machinery
> Provision of building kits
> Turnkey solutions using system elements
> Complete assembly and initial operation
> Tools, jigs and machines

> Customer application software
> User support in resolving special problems
> Internal or external training in planning, design and production
> CAD-assisted project planning, preparation of quotations and tenders and design of plant and fixtures

9.3.1 Saw Cuts

Square and burr-minimised saw cuts, bores and threads (tolerances to DIN ISO 2768 - mK).
The saw cut required for the cut-off is specified individually for each profile in the price list.

Saw Cut for Small Cross-Sections

1 pce.	0.0.026.30

Saw Cut for Medium Cross-Sections

1 pce.	0.0.026.66

Saw Cut for Large Cross-Sections

1 pce.	0.0.265.55

Saw Cut for Oversize Cross-Sections

1 pce.	0.0.475.31

Saw Cut for RS Slat Profile Al

1 pce.	0.0.483.21

New in catalogue

Saw Cut for Steel, Medium Cross-Sections

1 pce.	0.0.487.60

New in catalogue

Saw Cut Mitred for Small Cross-Sections

1 pce.	39.8.000.13

New in catalogue

Saw Cut Mitred for Medium Cross-Sections

1 pce.	39.8.000.14

Right-angled cut-offs in this catalogue include panel elements. The panels are cut to the chosen dimensions with allowable tolerances. Please contact your distributor for details.

Saw Cut for Panel Elements Cat. 1

1 pce.	0.0.475.48

Saw Cut for Panel Elements Cat. 2

1 pce.	0.0.475.49

Saw Cut for Panel Elements Cat. 3

1 pce.	0.0.475.50

Saw Cut for Panel Elements Cat. 3

1 pce.	0.0.475.51

9.3.2 Connection Processing

Connection Processing, End Face

Profile processing for Standard or Universal Connections. The position of the bores and threads must be specified when ordering.

Connection Processing, End Face, Thread M5x12
(Thread for Standard Connection 5)

1 pce.	0.0.370.45

Connection Processing, End Face, Thread M6x15
(Thread for Standard Connection 6)

1 pce.	0.0.419.15

Connection Processing, End Face, Thread M8x18
(Thread for Standard Connection 8)

1 pce.	0.0.026.95

Connection Processing, End Face, Thread M12x30
(Thread for Standard Connection 12)

1 pce.	0.0.015.01

Connection Processing, Drilled Hole

Connection Processing, Drilled Hole D4.3
(Access hole for tool when processing a Standard Connection 5)

1 pce.	0.0.370.51

Connection Processing, Drilled Hole D5.5
(Access hole for tool when processing a Standard Connection 6)

1 pce.	0.0.419.16

Connection Processing, Drilled Hole D7
(Access hole for tool when processing a Standard Connection 8)

1 pce.	0.0.026.96

Connection Processing, Drilled Hole D11.5
(Access hole for tool when processing a Standard Connection 12)

1 pce.	0.0.015.02

New in catalogue

Connection Processing, Mitre-Fastener 8

1 pce.	0.0.494.12

Connection Processing, Stepped Bore

Connection Processing, Stepped Bore D12x8.5
(Stepped bore for Universal Fastener 5)

1 pce.	0.0.370.55

Connection Processing, Stepped Bore D16x12.7
(Stepped bore for Universal Fastener 6)

1 pce.	0.0.419.75

Connection Processing, Stepped Bore D20x16
(Stepped bore for Universal Fastener 8)

1 pce.	0.0.026.97

Connection Processing, Stepped Bore D20x5
(Stepped bore for Pneumatic-Universal Fastener 8)

1 pce.	0.0.373.17

Connection Processing, Stepped Bore D30x24
(Stepped bore for Universal Fastener 12)

1 pce.	0.0.015.03

Connection Processing for Clamp Profiles

Profile processing for interconnecting Clamp Profiles. The position of the holes must be specified when ordering.

Connection Processing, End Face, Thread M5x16
(Thread for the bolt of the Line 8 Clamp-Profile Connection, Clamp Profile 8 32x18)

1 pce.	0.0.404.13

Connection Processing, Stepped Bore D11x13
(Stepped bore for the bolt of the Line 6 Clamp-Profile Connection, Clamp Profile 6 30x30)

1 pce.	0.0.431.17

Connection Processing, Stepped Bore D15x17
(Stepped bore for the bolt of the Line 8 Clamp-Profile Connection, Clamp Profile 8 40x40)

1 pce.	0.0.196.67

9.3.3 Counter Boring and Tapping

Machining a larger core bore in profiles, e.g. for Knuckle Feet. Specify the depth and position of the core bore for the thread when ordering.

Connection Processing, End Face, Thread M5x32

1 pce.	0.0.391.18

Connection Processing, End Face, Thread M6x33

1 pce.	0.2.000.93

Connection Processing, End Face, Thread M8x35

1 pce.	0.0.026.98

Connection Processing, End Face, Counter Boring and Tapping M10x45

1 pce.	0.0.026.99

9.3.4 Processing Shafts

Saw Cuts for Shafts and Rails

5 6 8 12

Square, burr-minimised saw cut for all Shafts and Multi-Spline Shafts and the guide rails of linear guide systems.

Saw Cut for Shafts

1 pce.	0.0.294.06

Saw Cut for Guide Rails

1 pce.	0.2.000.96

Fixing Bore for Shafts

5 6 8 12

Square and precisely positioned fixing bore for the shafts of Roller Guides 8 D10, 8 D14 and 8 D25.
Specify the position of the bore when ordering.

Fixing Bore for Shafts D10/D14/D25

1 pce.	0.0.294.32

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