## item



# Systematic innovation. New Products 2016/ I



### 4 MB Building Kit System

New capacities! The new Installation Profile 8 160x80 K76 offers plenty of space for supply lines and cables. It features a generously sized cable conduit, two integrated compressed air conduits and can be fitted with numerous pneumatic accessories.

New safety! The item **Corner Deflector Guard 8 St 160x160x80** protects transport trolleys like a bumper. It prevents damage to supporting profiles that could collide with walls or racks when turning. The robust steel protection considerably reduces wear.

New lightness! The item **Tool Balancers** make work with heavy tools safer. The Tool Balancers make sure tools are in easy reach but automatically remove them from the immediate working area when not in use.

### 22 Work Bench System

New organisation! Our **Dividers 600** support ergonomic and simple container restocking at work benches. The narrow ribs ensure that semi-open fronted boxes are properly organised and lined up in the correct picking positions. If picking systems are changed, the Dividers can be rapidly adjusted.

New orientation! The new **Back Stop Insert ESD** makes sure that crates and goods move in only one direction on interlinked work benches fitted with the modular Castor Rail 8 40x40. When used on mobile material supply equipment, it acts as a transport securing device.

New choice! Cantilever Foot Set 8, Table-Top Support Set 8 and Profile 8 160x60 6N E can be used to build fully customized work benches. They are the basis for stable work benches.



### 33 Lean Production Building Kit System

New inclination! The new **Ball Joint Butt Fastener D30** connects the end faces of two Profiles D30 at any angle. As a result, it can turn the outer Tubes of a transport trolley into angled grips for pulling or pushing the equipment around. Angled outer edges also make it easier to pass through strip curtains.

New size! Lots of things run more smoothly with the new Roller Conveyor St 60x24 D15. Its combination of low height and wide rollers make it ideal for most transported goods. The robust Roller Conveyor is easy to install. What's more, it is also easy to fit with Guide Rail e 4, which along with Fastening Profile D30-60 gives the Roller Conveyor additional rigidity.

New restraint! Controlling speed on Roller Conveyor 6 40x40 is the speciality of the new **Braking Castor D30-23**. It slows down crates and goods according to their travel speed. Depending on their weight, they can be very accurately slowed down to prevent major impacts at the Limit Stop.

New material! Profile Tube System D30 now comes in carbon! The extrememly torsion-resistant **Tube D30x1.5 CFRP** combines low weight with maximum strength! It is ideal for weight-optimised applications in production and intralogistics.



### Factory equipment engineering – with the MB Building Kit System.

Profile 8 80x40 3N90 light

Profile 8 120x40 3N light

Cap 8 80x16 Zn

Cap 6 D11

Spanner 65A/F / 17A/F flat

Security Bit Set 2A/F - 6A/F

Installation Profile 8 160x80 K76

Caps 8 St

Face Plates M45 with Labelling Panel, Horizontal

Pneumatic components

**Tool Balancers** 

Corner Deflector Guard 8 St 160x160x80





### Profile 8 80x40 3N90 light Profile 8 120x40 3N light

For strong and clean frames! Profile 8 80x40 3N90 light features closed grooves on two outer edges and is ideal for building solid framework for cabins and frames.

The wide Profile 8 120x40 3N light is torsion resistant and gives frames that are exposed to transverse loads additional stability. Closed grooves on the outer face seal out dust and deposits.









Profile 8 120x40 3N light							8
Al, anodi:	zed						
A [cm <sup>2</sup> ]	m [kg/m]	I <sub>x</sub> [cm <sup>4</sup> ]	I <sub>y</sub> [cm <sup>4</sup> ]	It [cm4]	W <sub>x</sub> [cm <sup>3</sup> ]	W <sub>y</sub> [cm <sup>3</sup> ]	
16.57	4.48	25.80	226.04	31.29	12.58	37.67	
natural, cut-off max. 6000 mm						0.0.675.52	
natural, 1 pce., length 6000 mm						0.0.675.51	



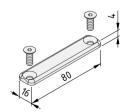


### Cap 8 80x16 Zn

Better protection for flat Profile 8 80x16! This robust metal Cap guards against even hard impacts and seals the end face of the profile.

Thanks to its special shape, it is ideal for use with Profile 8 80x16 when designing guides or guide elements. It is also used as a flat cap and as simple collision protection, when it is often subjected to high impacts. Cap 8 80x16 Zn is therefore fixed to the screw channels of the profile using the enclosed screws to create a strong friction-based connection, which ensures it can resist impacts and vibration over long-term use.

For low-stress applications, Cap  $8\,80x16$  is available in grey and black (0.0.627.25 and 0.0.265.98). The plastic version is tapped into place using a hammer.



### Cap 8 80x16 Zn



Cap, die-cast zinc, white aluminium 2 Countersunk Screws DIN 7991-M5x14, St, bright zinc-plated m = 24.0 g

1 set 0.0.674.71

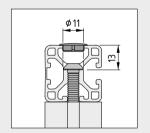




### Cap 6 D11

Perfection down to the smallest detail! When screwing together two Line 6 profiles, users have to drill through one profile to reach the core bore of the other profile. Cap 6 D11 seals off the hole. This ensures that cut edges are safely covered over and keeps dust out of the drilled hole.

What's more, the colour-coordinated Cap preserves the uniform look of Line 6 profiles with closed grooves.





Cap 6 D11	6
PA m = 30 g/100	
grey similar to RAL 7042, 1 pce.	0.0.672.31



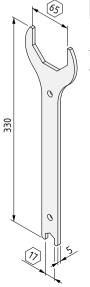
### Spanner 65A/F / 17A/F flat

Optimum force transmission even in tight spaces! Spanner 65A/F / 17A/F flat makes it extremely easy to tighten and adjust Jacking Castors D62. It combines all the key widths that are relevant to the Jacking Castors.

Jacking Castors D62 boast optimum mobility, thanks to a stable castor, and a solid footing, thanks to an extendible foot. The latter is operated via an adjustment wheel. When under heavy loads, an additional small 17 A/F wrench is also needed. The item Spanner 65A/F / 17A/F flat is compact enough that it is easy to use close to the floor and long enough that strong leverage can be generated.

The opposite end of Spanner 65A/F / 17A/F flat features a large 65 A/F wrench for fitting Jacking Castor D62 (0.0.674.53) to the profile. As a result, one tool is all you need to do everything.





### Spanner 65A/F / 17A/F flat

St, bright zinc-plated m = 416.0 g

1 pce. 0.0.671.12





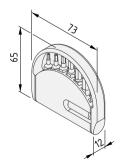
### Security Bit Set 2A/F - 6A/F

Access for authorised personnel only! Products fitted with item Security Bolts cannot be opened or fastened using conventional bit sets. The security pin in the centre prevents the insertion of a hex bit. item Security Bolts thus offer effective protection from unauthorised tampering.

Security Bit Set 2A/F – 6A/F has the appropriate depression in all five sizes. item security bolts are used as standard with the following products:

- Safety Switch 8, 24V DC (0.0.658.28)
- Safety Fastening Set Multiblock 8 (0.0.626.63)
- Safety Hanger 8/6 (0.0.627.78)
- Safety Hanger 8/8 (0.0.626.00)





### Security Bit Set 2A/F - 6A/F

Security bit TR2; 2.5; 3; 4; 5; 6, chromium-vanadium steel Universal Holder, St in plastic case, black  $m=68.0\ g$ 

1 set 0.0.661.47





### Installation Profile 8 160x80 K76

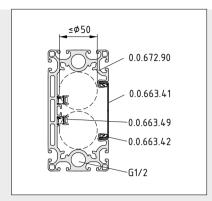
The turnkey solution for all your supply needs! Installation Profile 8 160x80 K76 is a cable conduit, a dual compressed air conduit, a hub for plugs and switches and a load-bearing profile – all in one solution. Power and network cables can be safely routed through the large cable conduit, which can be divided into different sections. Outlets and switches can be easily clipped into the conduit opening. Two sealed conduits can convey compressed air to precisely where it is needed. Two Line 8 grooves on each side can be used to attach accessories or connect the profile to frames of any type. When built into work benches, the Installation Profile can be used as a robust aluminium cable conduit. It can be installed horizontally and vertically.

Installation Profile 8 160x80 K76 is compatible with Installation Column Profile 8 160x160 K76 (0.0.663.39). All accessories such as mounting boxes K76, switches, plugs and Cover Profile 76 Al (0.0.663.41) for covering over the cable conduit can be used.

**Note:** Installation Profile 8 160x80 K76 is also available in complete sets for installation in item work benches. You can find detailed information on page 29.

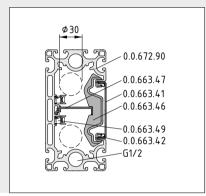




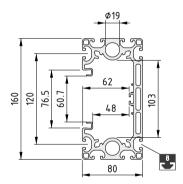


Installation example showing Installation Profile 8 160x80 K76 with Cover Profile 76 Al (0.0.663.41), Locking Clip St (0.0.663.42) and Earth Connection, Installation Column Profile (0.0.663.49).

The maximum available clearance in the conduit is 50 mm in diameter.



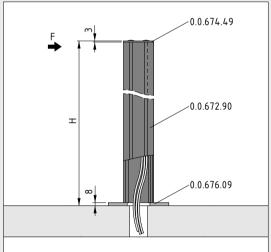
Installation example showing Installation Profile 8 160x80 K76 with the conduit divided using Partition Profile K76 K (0.0.663.47) and Partition Profile Clip K76 K (0.0.663.46). The maximum available clearance in the conduit is 30 mm in diameter.



Installation Profile 8 160x80 K76							
Al, anodiz	zed						
A [cm <sup>2</sup> ]	m [kg/m]	I <sub>x</sub> [cm <sup>4</sup> ]	I <sub>y</sub> [cm <sup>4</sup> ]	It [cm4]	W <sub>x</sub> [cm <sup>3</sup> ]	W <sub>y</sub> [cm <sup>3</sup> ]	
28.01	7.56	937.38	191.32	15.76	117.23	41.23	
natural, cut-off max. 6000 mm					0.0.672.90		
natural, 1 pce., length 6000 mm						0.0.672.89	

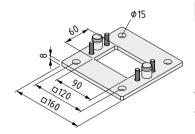


When combined with Base Plate, Installation Profile 160x80, Installation Profile 8 160x80 K76 can be used in a free-standing application, as an anchor point for a safety barrier or as a vertical strut in a construction. The fastening materials for the Installation Profile are included in the scope of supply. The Base Plate can, for example, be doweled with four additional Floor-Fastening Sets M10x135 (0.0.485.82).



Maximum torsional moment, such as for cracked C20/C25 concrete and Floor-Fastening Set M10x135 (0.0.485.82):

FxH < 600 Nm



### Base Plate, Installation Profile 160x80



Floor flange 160x160, St, white aluminium similar to RAL 9006 2 Sealing Plugs D19 Fastening elements Notes on Use and Installation  $m=1.2\ kg$ 

1 set 0.0.676.09



### A clear edge.



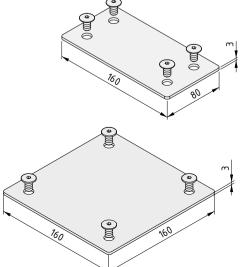


### Caps 8 St

The perfect and safe finishing touch! The screw-attached Cap 8 160x80 St seals the end-face of Installation Profile 8 160x80 K76. Cap 8 160x160 St is used with Installation Column Profile 8 160x160 K76 (0.0.663.39).

The Cap, combined with Cover Profile 76 Al (0.0.663.41), keeps dust out of the cable conduit. It is advisable to fit the Cap when using Sealing Plugs D19, as it ensures the Sealing Plugs cannot be forced out of the compressed air conduits. It also covers over cut edges safely.





### Cap 8 160x80 St

Cap 8 160x80, St, white aluminium similar to RAL 9006 4 dome-head screws M8x14, St, bright zinc-plated  $m=324.0\ g$ 

1 set 0.0.674.49

### Cap 8 160x160 St

Cap 8 160x160, St, white aluminium similar to RAL 9006 4 dome-head screws M8x14, St, bright zinc-plated m = 625.0  $g\,$ 

1 set 0.0.674.57



8

8

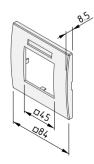


### Face Plates M45 with Labelling Panel, Horizontal

Keep things clear at the work bench! Face Plates M45 with Labelling Panel, Horizontal encompass one, two or three Mounting Boxes K76 and feature a horizontal labelling panel. This is important if Installation Profile 8 160x80 K76 is being used on work benches as a robust, horizontal aluminium cable conduit. It ensures that the labels can be easily read. The Face Plates are available in white and black grey.

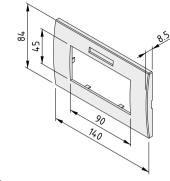
**Note:** item supplies vertical Face Plates M45 with Labelling Panel for Installation Profiles that have been installed vertically.



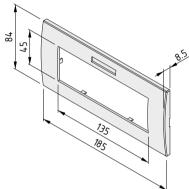


Face Plate M45 1 Gang with Labelling Panel, Horizontal	
PC	
m = 17.0 g	
white, similar to RAL 9010, 1 pce.	0.0.675.75
black grey, similar to RAL 7021, 1 pce.	0.0.675.76





Face Plate M45 2 Gang with Labelling Panel, Horizontal	
PC	
m = 24.0 g	
white, similar to RAL 9010, 1 pce.	0.0.675.77
black grey, similar to RAL 7021, 1 pce.	0.0.675.78



Face Plate M45 3 Gang with Labelling Panel, Horizontal				
PC m = 29.0 g				
white, similar to RAL 9010, 1 pce.	0.0.675.79			
black grev, similar to RAL 7021, 1 pce.	0.0.675.80			



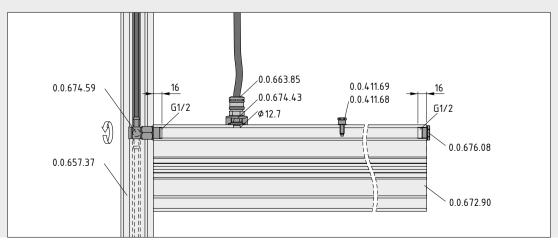


### Pneumatic components

The easy way to use pneumatic applications with Installation Profile 8 160x80 K76! Simply use Pneumatic Connecting Set 8 80x40 G1/2 to connect to a compressed air supply. It can be fitted to any point along the narrow edge of the profile, once a through-hole has been drilled to the integral compressed-air conduit. The drill template is included in the scope of supply. The through-hole is predrilled with a 10.0 mm drill and then widened to 12.7 mm.

**Note:** Pneumatic Connecting Set 8 160x40 G1/2 is used with Installation Column Profile 8 160x160 K76. Accessories such as Sealing Plugs and the Screw Plug can be used on both the Installation Profile and the Installation Column.



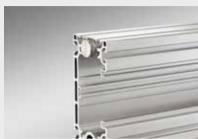






If space for a compressed air connection is limited, such as when using the Installation Profile as part of a work bench, Banjo Connector G1/2 for 9 mm hoses offers a swivelling right-angled connection.

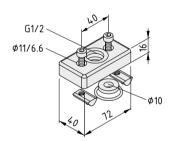
When using this device, the compressed air supply can be swivelled 360° steplessly.



Screw Plug with Shoulder G1/2 can be used to reliably close and seal the compressed-air conduit.



Sealing Plug D19 creates an airtight seal in a compressed air conduit on Installation Profile 8 160x80 K76 and Installation Column Profile 8 160x160 K76 (0.0.663.39). It is advisable also to fit the screw-fastened Cap 8 160x80 to the Installation Profile and/or Cap 8 160x160 to the Installation Column Profile so as to prevent the Sealing Plugs being forced out of the conduits. They are not connected to the Caps, which prevents leakage when the Installation Profiles are subjected to transverse loads.



### Pneumatic Connecting Set 8 80x40 G1/2



Pneumatic connecting plate 8 80x40 G1/2, Al, white aluminium similar to RAL 9006 O-ring 25x2.5, NBR, black

2 Hexagon Socket Head Cap Screws DIN 912-M6x20, St, bright zinc-plated

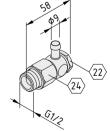
2 T-Slot Nuts V 8 St M6, bright zinc-plated

Drill template

Notes on Use and Installation

m = 141.0 g

1 set 0.0.674.43



### Banjo Connector G1/2 for Hose 9 mm

Banjo Connector G3/8, CuZn, nickel-plated Reducing nipple G1/2 G3/8, CuZn, nickel-plated Gasket DIN 7603-A 21x26, Al

m = 147.0 g

1 set 0.0.674.59



### Screw Plug with Shoulder G1/2

Screw Plug with Shoulder G1/2, CuZn, nickel-plated Flat gasket DIN 7603-A 21x26, Al

m = 29.0 g

1 set 0.0.676.08



### Sealing Plug D19

Sealing Plug D19, Al O-ring DIN 3771 15x2.5, NBR, black

m = 16.0 g

1 set 0.0.674.47

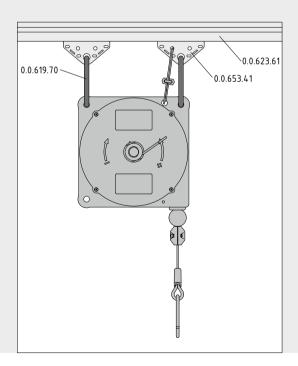


### **Tool Balancers**

Out of the way, but close to hand! Tool Balancers from item ensure tools are at the right height for employees to reach. When not required, the Tool Balancer automatically removes the tool from the immediate working area. Because the retraction force can be manually set, the Tool Balancer can be adjusted to perfectly match the weight of the tool. This takes a considerable amount of strain off employees who are working with heavy tools. An arrester mechanism is also included as standard.

Hangers are available as appropriate to the weight of tools. The four Tool Balancers can be selected for the following weight ranges: 4 to 6 kg, 6 to 8 kg, 8 to 10 kg and 10 to 14 kg.

Employees can customise any of the Tool Balancers to their reaching height using a screw-adjusted stopper. Useful accessories include Runway Profile 8 40x40~(0.0.623.61), Tool Slide 40x40~(0.0.653.41) and Spring Hook 80~D8~(0.0.619.70).



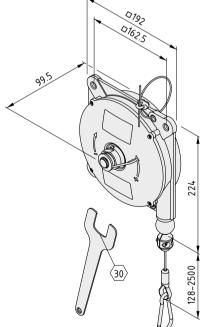






### The following applies to all the sets below:

Casing
Steel cable Ø 2.5mm, St, stainless
Arrester mechanism: Steel cable Ø 2mm, St, stainless; steel cable clamp, St, bright zinc-plated
Spring hook, St
Wrench 30 A/F, St, bright zinc-plated
Notes on Use and Installation



Tool Balancer 4-6 kg	
m = 3.3  kg	
1 set	0.0.674.95
Tool Balancer 6-8 kg	
m = 3.4  kg	
1 set	0.0.674.96
Tool Balancer 8-10 kg	
m = 3.5  kg	
1 set	0.0.674.97
Tool Balancer 10-14 kg	
m = 3.8  kg	
1 set	0.0.674.98





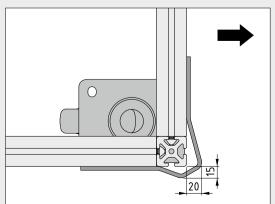
### Corner Deflector Guard 8 St 160x160x80

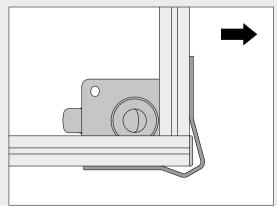
Is the curve too tight or the wall too wide? There's no way of completely avoiding minor knocks and scrapes in intralogistics. The item Corner Deflector Guard 8 St 160x160x80, which is made of steel, acts like an integral bumper. It absorbs the impact so that the frame of the transport trolley isn't damaged.

The collision protection covers the outer edges because these are the most likely to be damaged when a trolley is being manoeuvred around bends. Maintenance outlay and wear are greatly reduced when the load-bearing profiles are protected from damage.



Installation examples showing Corner Deflector Guard 8 St 160x160x80 on basic constructions made of Line 8 profiles:



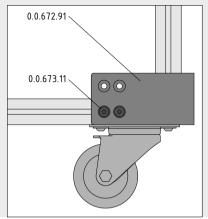


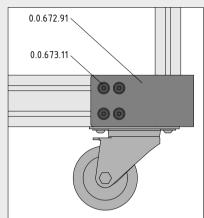


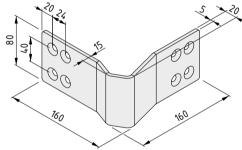
The fastening set for Corner Deflector Guard 8 St 160x160x80 consists of four double T-Slot Nuts, which ensure a secure hold and are easy to install. Because they are easier to align, the double T-Slot Nuts can be screwed into place much faster than single T-Slot Nuts.

Installation examples showing the Fastening Set for Corner Deflector Guard 8 St 160x160x80:

1 pce.







### 8 7 Corner Deflector Guard 8 St 160x160x80 St, bright zinc-plated m = 934.0 g 0.0.672.91



Fastening Set for Corner Deflector Guard 8 St 160x160x80	8
4 T-Slot Nuts 8 St 2xM8-36, bright zinc-plated 8 Countersunk Screws DIN 7991 M8x16, St, bright zinc-plated m = 124.0 g	
_1 set	0.0.673.11



### Ergonomic production – with the item Work Bench System.

Divider and Guide Profile 32x12

Divider and Guide Profile 32x12, Connection Sets

Divider 600

Cantilever Foot Set 8 160x60-790x90

Double Cantilever Foot Set 8 160x60-1260x90

Profile 8 160x60 6N E

Table-Top Support Set 8 520x100

Installation Profile 160x80 1200, 1500, 1800

LED Light Set 30W

Back Stop Insert ESD



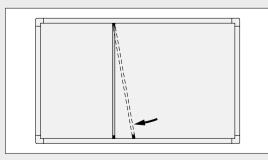
### Divider and Guide Profile 32x12 Divider and Guide Profile 32x12, Connection Sets Divider 600

The perfect addition to full-width Trays 8 ESD A! The Dividers are used to separate the material restocking and removal positions for containers. The narrow and stable ribs ensure that semi-open fronted boxes, etc. are properly organised and lined up in the correct picking positions. When a work bench is reconfigured, the material picking system can be adapted in a few simple steps.

Divider and Guide Profile 32x12 is combined with the relevant Divider and Guide Profile 32x12, Connection Set to build dividing ribs in custom lengths. Please note that the Connection Sets are intended for use with different types of Tray edging (which Connection Set is required depends on whether the Tray has an all-round raised edge, one lowered edge or two lowered edges).

Divider 600 comes as a complete set suitable for Trays 8 ESD A in a standard depth of 600 mm. Designed for use with the three different Tray variants available in item ergologistic, the appropriate Dividers perfectly complement the ergonomic fusion of intralogistics and manual assembly processes.



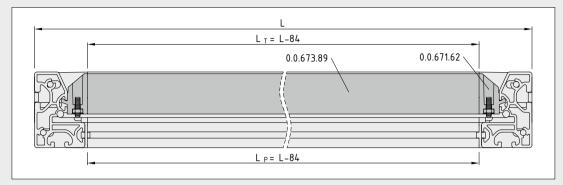


When fitted to Trays with an all-round raised edge, the Dividers are pivoted into place from the side.

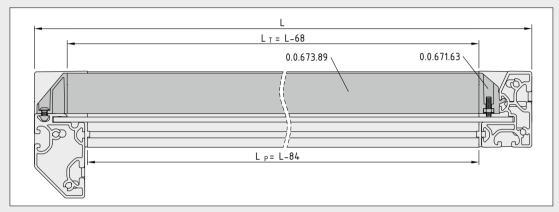
The Divider and Guide Profile and the relevant Connection Set are used to build dividing ribs in custom lengths.

 $L_T$  = Length of Divider and Guide Profile

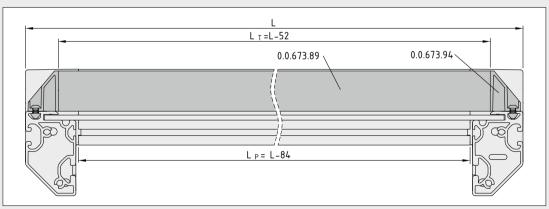
 $L_P$  = Length of profile



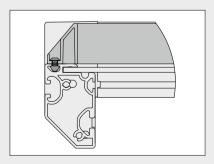
Divider



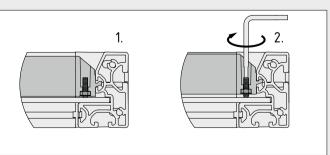
Divider 1x180°



Divider 2x180°







When the grub screw is tightened, the Connection Set hooks into the groove on the raised edge because the divider is pushed up slightly.





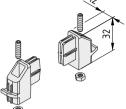
### Divider and Guide Profile 32x12

Al, anodized

m = 420 g/m

 natural, cut-off max. 6000 mm
 0.0.673.89

 natural, 1 pce., length 6000 mm
 0.0.671.64

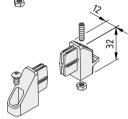


### Divider and Guide Profile 32x12, Connection Set

2 Divider and Guide Profile 32x12 fasteners  $0^{\circ}$ , PA-GF, grey similar to RAL 7042 Fastening elements

m = 16.0 q

1 set 0.0.671.62

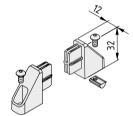


### Divider and Guide Profile 32x12, Connection Set 1x180°

Divider and Guide Profile 32x12 fastener 180°, PA-GF, grey similar to RAL 7042 Divider and Guide Profile 32x12 fastener 0°, PA-GF, grey similar to RAL 7042 Fastening elements

m = 17.0 g

1 set 0.0.671.63

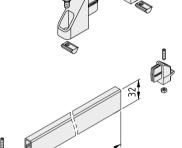


#### Divider and Guide Profile 32x12, Connection Set 2x180°

2 Divider and Guide Profile 32x12 fasteners 180°, PA-GF, grey similar to RAL 7042 Fastening elements

m = 17.0 g

1 set 0.0.673.94



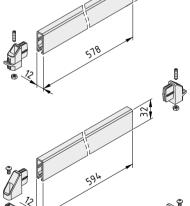
### Divider 600

Divider and Guide Profile 32x12, Al

Divider and Guide Profile 32x12, Connection Set

m = 244.0 g

1 set 0.0.676.37



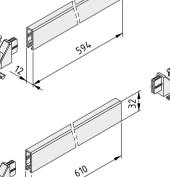
### Divider 600 1x180°

Divider and Guide Profile 32x12, Al

Divider and Guide Profile 32x12, Connection Set 1x180°

m = 250.0 g

1 set 0.0.676.36



### Divider 600 2x180°

Divider and Guide Profile 32x12, Al Divider and Guide Profile 32x12, Connection Set 2x180°

m = 268.0 g

1 set 0.0.676.35



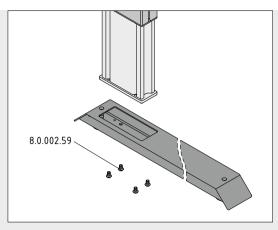


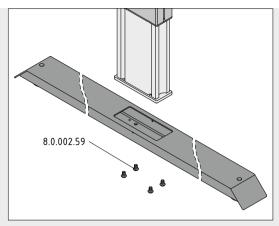
Cantilever Foot Set 8 160x60-790x90 Double Cantilever Foot Set 8 160x60-1260x90 Profile 8 160x60 6N E Table-Top Support Set 8 520x100

The specialists for custom work bench solutions! These components can be used to build reliable work benches while economising on materials.





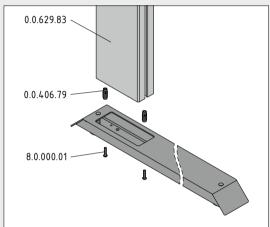


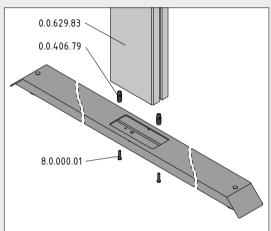


The item Cantilever Feet create a strong footing for work benches, their design ensuring stability even on benches with only two legs. As a result, users enjoy a great deal of legroom.

Cantilever Foot Set 8 160x60-790x90 is used to build individual benches. Double Cantilever Foot Set 8 160x60-1260x90 is used to support two back-to-back table tops mounted on just two central table legs.

Both Cantilever Feet can be combined with the electrically height-adjustable item Lifting Columns and the various Profiles 8 160x60. The necessary fixings for both applications are included in the scope of supply for the sets.









### Cantilever Foot Set 8 160x60-790x90

 $2\ \text{table}$  feet 160x60, St, powder-coated white aluminium similar to RAL 9006 Fastening elements

m = 10.1 kg

1 set 0.0.676.18

### Double Cantilever Foot Set 8 160x60-1260x90

 $2\ \text{double}$  table feet 160x60, St, powder-coated white aluminium similar to RAL 9006 Fastening elements

m = 15.8 kg

1 set 0.0.676.19



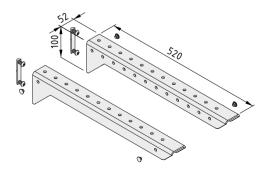
Profile 8 160x60 6N E creates strong table legs thanks to a cross-section that provides maximum torsion resistance for minimal weight. Suitable for use with the Cantilever Feet and featuring Line 8 system grooves, it opens up countless opportunities to exploit its compatibility with the MB Building Kit System to build custom table solutions.



Profile 8 160x60 6N E							8
Al, anodi:	zed						
A [cm <sup>2</sup> ]	m [kg/m]	I <sub>x</sub> [cm <sup>4</sup> ]	I <sub>y</sub> [cm <sup>4</sup> ]	I <sub>t</sub> [cm <sup>4</sup> ]	W <sub>x</sub> [cm <sup>3</sup> ]	W <sub>y</sub> [cm <sup>3</sup> ]	
18.13	4.89	96.88	639.00	168.70	30.56	79.88	
natural, cut-off max. 6000 mm						0.0.629.83	
natural, 1 pce., length 6000 mm						0.0.629.81	



Table-Top Support Set  $8\,520x100$  is used to fasten table tops in place. It comprises two solid supports in compact dimensions that offer fastening options for the table legs, the table top and supporting struts on large work benches.

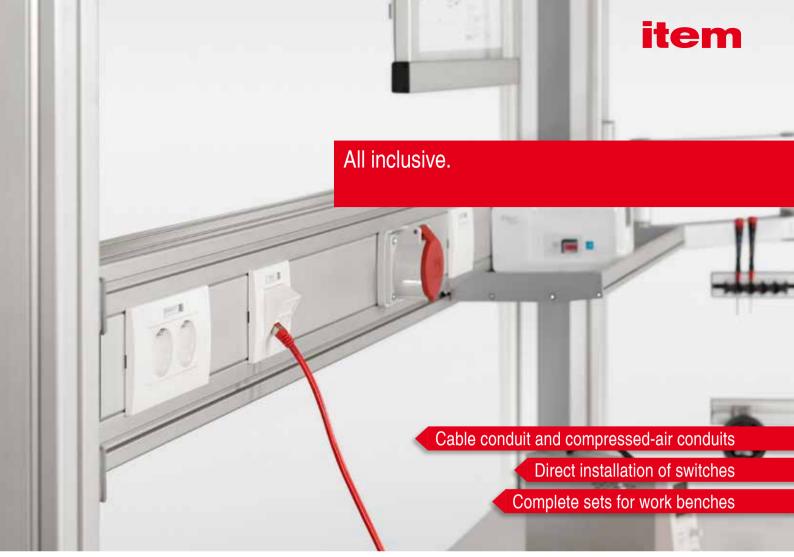


### Table-Top Support Set 8 520x100

Table-Top Support right, St, powder-coated white aluminium similar to RAL 9006 Table-Top Support left, St, powder-coated white aluminium similar to RAL 9006 Fastening elements

m = 4.4 kg

1 set 0.0.676.17





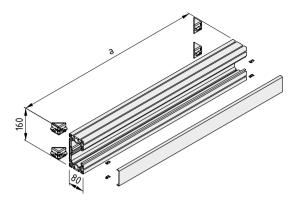
### Installation Profile 160x80 1200, 1500, 1800

Staying well supplied at the work bench! The Installation Profile 160x80 can be used to route all supply lines and cables safely to exactly where they are needed at the work bench. The complete sets include the Profile with integrated cable conduit and dual compressed-air conduit, Cover Profile and fixings.

Users can fit plug sockets and switches directly to the cable conduit of this load-bearing profile for tables in the standard widths of 1200 mm, 1500 mm and 1800 mm. Simply clip the Mounting Box into place – job done! Face Plates M45 with Labelling Panel, Horizontal can be used with the profile. Pneumatic Connecting Set 8 80x40 G1/2 allows users to connect to a compressed air supply.

**Note:** Installation Profile 8 160x80 K76 is available in custom lengths as a separate cable conduit. Detailed information, including technical drawings for Installation Profile 8 160x80 K76 and additional accessories such as Face Plates and Pneumatic Connecting Sets can be found starting on page 10.





### 8 Installation Profile 160x80 1200 Installation Profile 8 160x80 K76, Al Cover Profile 76K, Al Installation Profile 160x80 Assembly Set a = 1,080 mm m = 9.5 kg 1 set 0.0.676.11 8 Installation Profile 160x80 1500 Installation Profile 8 160x80 K76, Al Cover Profile 76K, Al Installation Profile 160x80 Assembly Set a = 1,380 mm m = 12.0 kg 1 set 0.0.676.12 8 Installation Profile 160x80 1800 Installation Profile 8 160x80 K76, Al Cover Profile 76K, Al Installation Profile 160x80 Assembly Set a = 1,680 mm m = 14.4 kg1 set 0.0.676.13



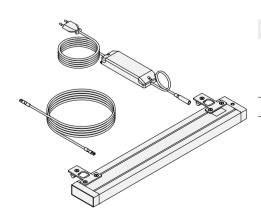


### LED Light Set 30W

Everything that you need to bring light to the work bench! LED Light Set 30W combines the energy-saving item LED Light Fitting 30W with the corresponding Transformer and all the Connecting Cables to create a set that is ready to install.

The award-winning design of the LED Light Fitting, which features a diffusor panel and parabolic reflector grid, ensures that light is distributed evenly and without any glare. It is the perfect basis for supporting fatigue-free and efficient working practices.

The LED Light Fitting features an ON/OFF switch with integrated two-stage dimming.



### LED Light Set 30W

LED Light Fitting 30W Electronic Transformer LED 30W 24V Connecting Cable, LED Light Fitting m = 2.0 kg

1 set 0.0.676.14





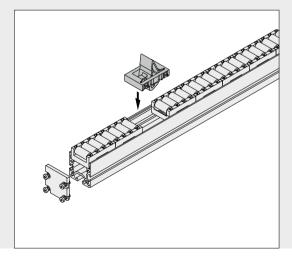


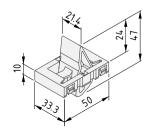
### Back Stop Insert ESD

Make sure Castor Rail 8 40x40 has just one objective! Back Stop Insert ESD lets containers and goods pass in one direction only. When work benches are interlinked, including in one-piece-flow scenarios, this insert ensures that work-piece carriers and containers stick to the specified route. When used on mobile material supply equipment, the insert acts as a transport securing device.

Back Stop Insert ESD is compatible with the modular Castor Rail 8 40x40 and, like the other Inserts that are available, can also be retrofitted by simply being clipped into place – no tools required. The Back Stop is ESD-safe as standard.

**Note:** Back Stop D2.8-25 (0.0.666.67) is used for Roller Conveyor St D30 (0.0.633.91). Back Stop D4-23 (0.0.659.05) is used for Roller Conveyor 6 40x40 E D30 (0.0.658.69).





### Back Stop Insert ESD

Housing, PA-GF, black Back Stop D4-23, PA-GF, black Axle, St, stainless

m = 19.0 g

1 set 0.0.675.98



### Build lean – with the Lean Production Building Kit System.

Roller Conveyor St 60x24 D15
Fastening Profile D30-60
Guide Rail e 4
Button-Head Screw Self-Tapping M5x16, TX25
Roller Conveyor 60 Fastening Brackets D30
Braking Castor D30-23

Roller D46/D30-20 ESD Fastening Ring D40/D30-10 ESD Threaded Inserts, Profile Tube D30 heavy duty Ball Joint Butt Fastener D30 Tube D30x1.5 CFRP

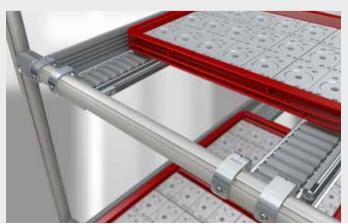




### Roller Conveyor St 60x24 D15

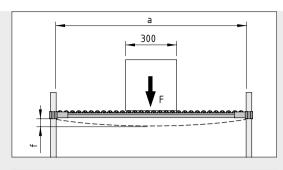
The robust roller conveyor for all scenarios! Thanks to its wide rollers and low roller diameter, Roller Conveyor St 60x24 D15 is compatible with most installation scenarios and transported goods – even crates and goods with awkward bases. As such, it is a perfect addition to the Lean Production Building Kit System.

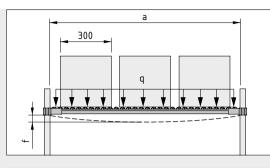
Fixing it to a frame couldn't be easier: Roller Conveyor 60 Fastening Bracket D30 is used to create a connection with the frame at the start and end of a roller conveyor. Roller Conveyor 60 Fastening Bracket D30 with Stop H43 is used as a stop at the end of a Roller Conveyor St 60.

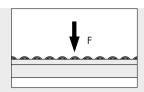




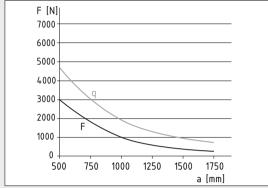


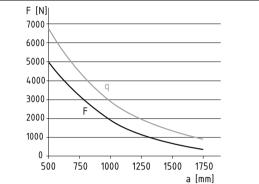






Permissible force on a single roller of Roller Conveyor St 60x24 D15: F < 100 N





Load specifications for two parallel Roller Conveyors. Maximum recommended profile deflection: f < 1/100 a

#### Caution:

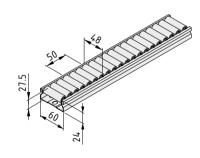
Note the maximum load-carrying capacity of the components involved.

### Roller Conveyor St 60x24 D15

The additional use of Fastening Profile D30-60 increases resistance to profile deflection. Permissible load increases by 20 percent compared to the diagram.

Roller Conveyor St 60x24 D15 Roller Conveyor St 60x24 D15 with Fastening Profile D30-60 and Guide Rail e 4

Recommended load on Roller Conveyor St 60x24 D15 with Fastening Profile D30-60 and Guide Rail e 4.



### Roller Conveyor St 60x24 D15

St, bright zinc-plated Rollers PP, grey Axles St, bright zinc-plated m = 1.53 kg/m

cut-off max. 4500 mm	0.0.673.74
1 pce., length 4500 mm	0.0.670.87

# Roller Conveyor St 60x24 D15, ESD St, bright zinc-plated Rollers PP, black Axles St, bright zinc-plated m = 1.53 kg/m cut-off max. 4500 mm 0.0.673.75 1 pce., length 4500 mm 0.0.673.73



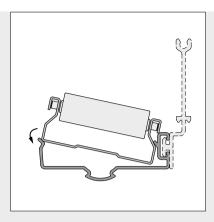
### Fastening Profile D30-60

This profile keeps things connected! Fastening Profile D30-60 is used to fit a guide rail to Roller Conveyor St 60x24 D15. The roller conveyor is simply slotted or clipped in. Fitting Guide Rail e 4, which is anchored in the special flat groove along the side, makes the roller conveyor more rigid.

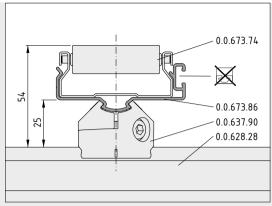
The Guide Rail can run right up to the cross tube, thereby minimising the gap at crossing points. A Profile Tube D30 contour runs along the underside of Fastening Profile D30-60 and can be used to make a connection with struts and accessories.



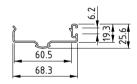




Roller Conveyor St 60x24 D15 can be pressed into Fastening Profile D30-60 using a little force or can be slotted into place during assembly.



If necessary, Roller Conveyor St D60x24 D15 can be reinforced against profile deflection with the aid of Fastening Profile D30-60.



Fastening Profile D30-60	
Al, untreated m = 0.44 kg/m	
natural, cut-off max. 6000 mm	0.0.673.86
natural, 1 pce., length 6000 mm	0.0.673.85



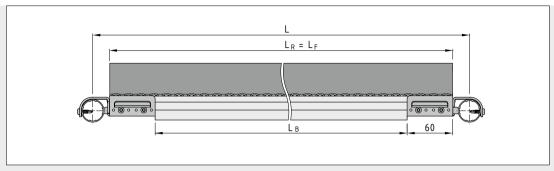
# Guide Rail e 4 Button-Head Screw Self-Tapping M5x16, TX25

Keeping everything in line! Robust Guide Rail e 4 ensures that crates and goods stay on Roller Conveyor St 60x24 D15. Fastening Profile D30-60 is used to install the Guide Rail. The aluminium Guide Rail e 4 is inserted into the special groove that runs along the side of the Fastening Profile. This combination of Guide Rail and Fastening Profile boosts the rigidity of the roller conveyor.

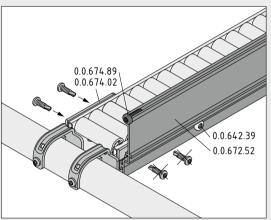
When Guide Rails e 4 are cut to size, sharp edges on the channel at the top can present an injury hazard for personnel loading and unloading the roller conveyor. The quickest way to eliminate this hazard is to use Button-Head Screw Self-Tapping M5x16, TX25! It quickly and reliably makes the end of the channel safe, without having to spend time manually deburring it, thus lowering assembly costs.

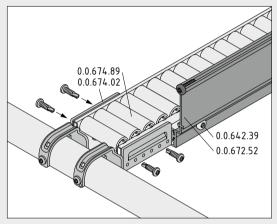


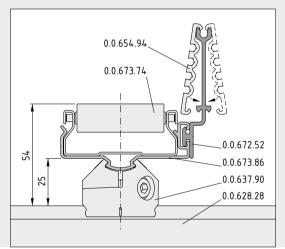




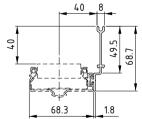
L<sub>R</sub> = Roller Conveyor L<sub>F</sub> = Guide Rail L<sub>B</sub> = Fastening Profile







If necessary, Roller Conveyor St D60x24 D15 can be reinforced against profile deflection with the aid of Fastening Profile D30-60.



# Guide Rail e 4

Al, untreated m = 0.51 kg/m

111 0.51 kg/111	
natural, cut-off max. 6000 mm	0.0.672.52
natural, 1 pce., length 6000 mm	0.0.672.51



# Button-Head Screw Self-Tapping M5x16, TX25

St m -

m = 4.0 g

bright zinc-plated, 1 pce. 0.0.674.89



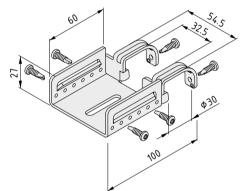
# Roller Conveyor 60 Fastening Bracket D30 Roller Conveyor 60 Fastening Bracket D30 with Stop H43

Secure hold and optimum extendibility in one! Roller Conveyor 60 Fastening Bracket D30 creates a connection with the frame at the start and end of a Roller Conveyor St 60x24 D15. Thanks to the asymmetrical arrangement of the hooks, two Fastening Brackets can be fixed to the same Tube to create level or angled conveyor lines. This reduces the number of different parts that are required, which benefits stockkeeping.

Roller Conveyor 60 Fastening Bracket D30 with Stop H43 can be used to bring containers safely to a stop at the end of Roller Conveyor St 60x24 D15. The raised stop secures crates and prevents them slipping out of the roller conveyor.





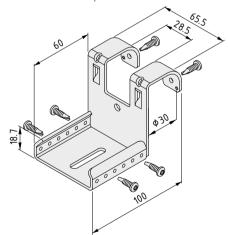




St, bright zinc-plated

6 Button-Head Screws, self-tapping St, 3.9x16, TX20, bright zinc-plated m = 174.0 g

1 set 0.0.674.02



## Roller Conveyor 60 Fastening Bracket D30 with Stop H43

St, bright zinc-plated 6 Button-Head Screws, self-tapping St, 3.9x16, TX20, bright zinc-plated m = 231.0~g

1 set 0.0.674.03



# **Braking Castor D30-23**

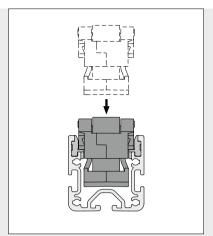
The insert for controlling speed on the roller conveyor! Since crates and goods glide over a roller conveyor at high speed, it can sometimes be necessary to intervene at specific points to prevent heavy impacts and thus reduce strain on the frame and the transported goods.

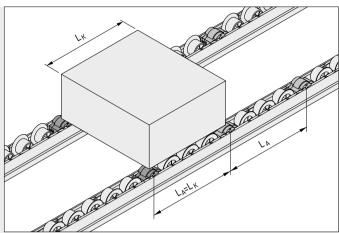
Braking Castor D30-23 regulates speed on the rigid aluminium Roller Conveyor 6 40x40 E D30 (0.0.658.69). When objects are moving slowly, the mechanical system has a lower braking effect. Braking Castors keep things moving at a consistent speed, even on steep gradients and when working with heavy objects.

While a roller conveyor brake is fitted at the end of the line, Braking Castors are spread out along the entire length of a roller conveyor. There are two benefits to this: Firstly, it is an effective way to stop transported goods from building up too much speed. Secondly, it does not compromise automatic unloading on a FIFO rack or Karakuri solution, because the lower-most containers are stored on moving roller elements and can start moving again.

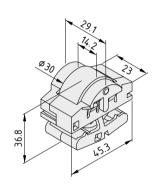
The item Braking Castor can also be retrofitted to existing conveyor lines without needing any special tools, making it easy to install it in the optimum position for the relevant application. It is also just as easy to change the position of the Braking Castor or replace it.







L<sub>A</sub> = Spacing of Braking Roller



# Braking Castor D30-23

PA/TPE 4 Dowel Pins 6x20, St, bright zinc-plated m = 35.0 g

grey similar to RAL 7042, 1 pce.

0.0.670.90





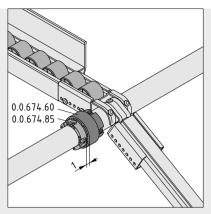
# Roller D46/D30-20 ESD Fastening Ring D40/D30-10 ESD

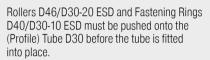
The helpful Roller now available in an electrostatically dissipative version! Roller D46/D30-20 ESD uses a D30 profile as an axis. It guides crates and goods safely through the frame and protects the containers and profile at the same time. If necessary, its vertical or horizontal position can be fixed using Fastening Ring D40/D30-10 ESD.

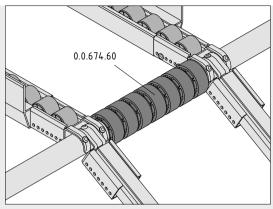
Roller D46/D30-20 ESD is used to provide side guidance (e.g. in Karakuri applications) or to support crossing points on roller conveyors. As it has the same conveying height as the item roller conveyors, the Roller can be installed between angled sections of roller conveyor by being mounted directly to the same support profile that the Roller Conveyor Fastening Brackets are fixed to. This further reduces the gap and ensures gentler, more reliable travel.

Roller D46/D30-20 ESD rotates on a Tube D30 or Profile Tube D30 and does not need to be lubricated. Static charges generated by friction on the plastic roller are dissipated through the profile.

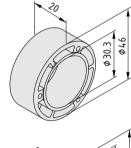




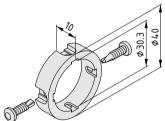




Several Rollers can be used alongside each other to create a broader rolling surface.



# PA m = 13.0 g black similar to RAL 9005, 1 pce.



Fastening Ring D40/D30-10 ESD	
Fastening Ring D40/D30-10 ESD, PA, black 2 Button-Head Screws self-tapping St 3.9x16, TX20, bright zinc-plated m = 6.0 g	
1 set	0.0.674.85



# Threaded Insert, Profile Tube D30 heavy duty M8 Threaded Insert, Profile Tube D30 heavy duty M10

More options for the especially strong Profile Tube D30 heavy duty! The self-tapping item Threaded Insert is now also available for M8 and M10 threads. Whether for connecting Adjustable Feet or fixing accessories to the end face of the profile, Threaded Insert, Profile Tube D30 heavy duty M8 and Threaded Insert, Profile Tube D30 heavy duty M10 create a mechanically locked connection that can accommodate exceptionally high compressive and tensile loads.

Threaded Insert, Profile Tube D30 heavy duty M12 (0.0.648.64) is still available for heavy-duty fixtures that use M12 bolts.

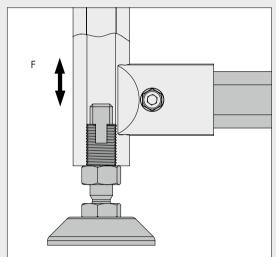
When working with Tubes D30 and Profile Tubes D30 that have the standard wall thickness, use Threaded Inserts D30 with the relevant thread size.



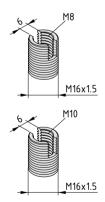


Threaded Inserts, Profile D30 heavy duty are very easy to screw into the end face of the Profile D30.

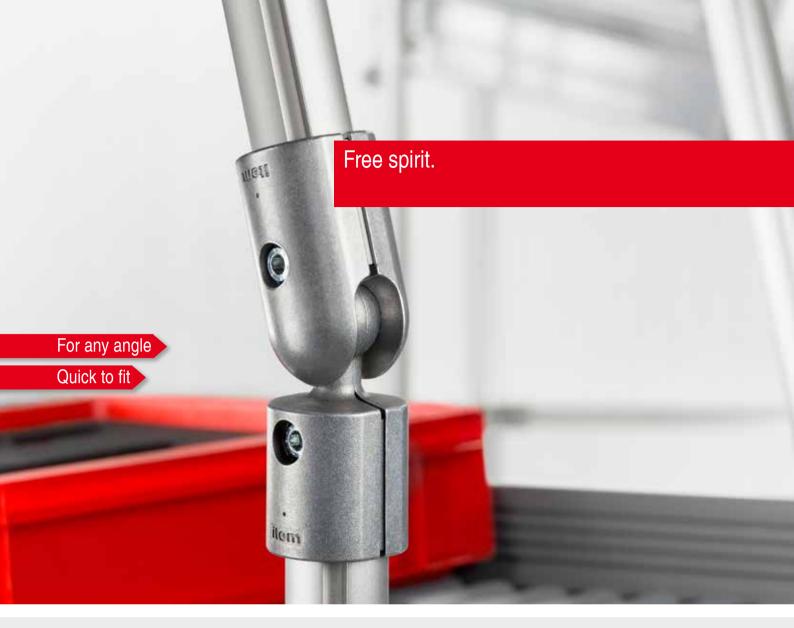




 $F_{max} = 20.000 \text{ N}$ 

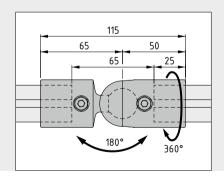


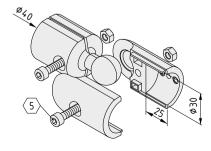
Threaded Insert, Profile Tube D30 heavy duty M8	
St m = 18.6 g	
bright zinc-plated, 1 pce.	0.0.672.18
Threaded Insert, Profile Tube D30 heavy duty M10	
St m = 15.4 g	
bright zinc-plated, 1 pce.	0.0.672.19



# Ball Joint Butt Fastener D30

Perfect for custom transport trolleys! Ball Joint Butt Fastener D30 connects the end faces of two Profiles D30 at any angle. Thanks to the stable internal ball, users can twist and turn the fastener 180° to the desired position and fix it in place with a single screw.





#### Ball Joint Butt Fastener D30

- 2 ball joint fastener halves, ball head with profile fixture, die-cast aluminium, natural
- 2 ball joint fastener halves, ball socket with profile fixture, die-cast aluminium, natural
- 2 Hexagon Socket Head Cap Screws DIN 912-M6x28, St, bright zinc-plated
- 2 washers, St, bright zinc-plated
- 2 hexagon nuts DIN 934-M6, St, bright zinc-plated

m = 219.0 g

1 set 0.0.671.72



# Tube D30x1.5 CFRP

Minimum weight, maximum strength! Extremely torsion-resistant Tube D30x1.5 CFRP supports weight-optimised applications. The high-strength carbon tube weighs around 40 percent less than a Tube D30 made of aluminium – which is already light to start with. Its low dead weight makes it ideal for building dynamic Karakuri assemblies. Structures mounted on handling devices and robots also benefit from the combination of low mass moment of inertia and high torsion resistance.

The anthracite-coloured tube is also very attractive. Using high-quality Tube D30x1.5 CFRP enhances the value of constructions.

**Note:** Health and safety guidelines for the machining of CFRP materials (e.g. DGUV regulations in Germany) should be taken into account when carrying out machining work. For perfect results, item recommends ordering Tubes that have already been cut to size.





Tube D30x1.5 CFRP							
CFRP							
A [cm <sup>2</sup> ]	m [kg/m]	I <sub>x</sub> [cm <sup>4</sup> ]	I <sub>y</sub> [cm <sup>4</sup> ]	I <sub>t</sub> [cm <sup>4</sup> ]	W <sub>x</sub> [cm <sup>3</sup> ]	W <sub>y</sub> [cm <sup>3</sup> ]	
1.34	0.24	1.37	1.37	2.73	0.91	0.91	
anthracite, cut-off max. 6000 mm					0.0.644.75		
anthracite, 1 pce., length 6000 mm						0.0.644.74	

# MB Building Kit System



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Lean Production Building



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#### Line XMS



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## Stairway/Platform System



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# Work Bench System



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#### **Automation System**



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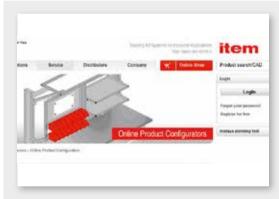




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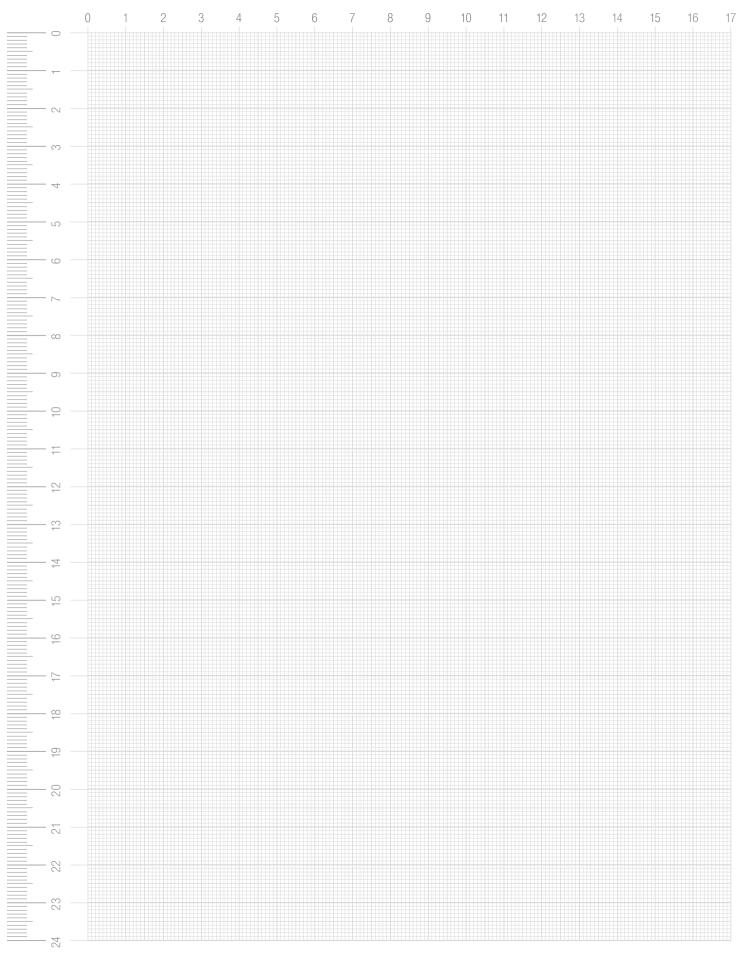
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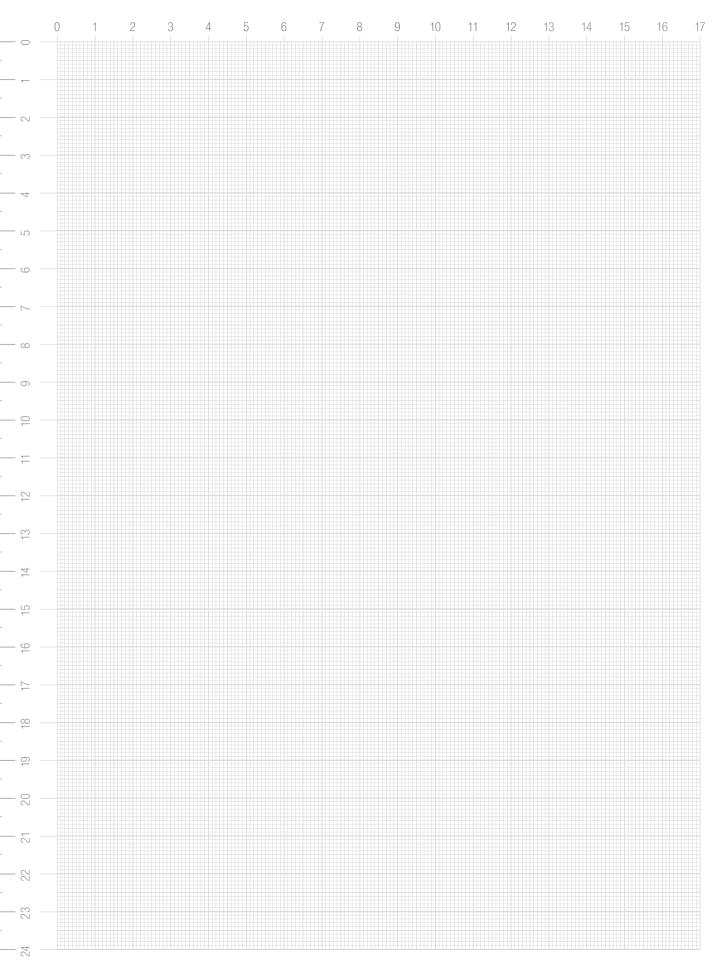
youtube.com/item24com



В		L	
Back Stop Insert ESD Ball Joint Butt Fastener D30 Banjo Connector G1/2 for Hose 9 mm	32 48 16	LED Light Set 30W	31
Base Plate, Installation Profile 160x80 Braking Castor D30-23 Button-Head Screw Self-Tapping M5x16, TX25	10 42 38	Pneumatic Connecting Set 8 80x40 G1/2 Profile 8 120x40 3N light Profile 8 80x40 3N90 light	16 5 5
C		R	
Cantilever Foot Set 8 160x60-790x90 Cap 6 D11 Cap 8 160x160 St Cap 8 160x80 St Cap 8 80x16 Zn Corner Deflector Guard 8 St 160x160x80	26 7 13 13 6 20	Roller Conveyor 60 Fastening Bracket D30 Roller Conveyor 60 Fastening Bracket D30 with Stop H43 Roller Conveyor St 60x24 D15 Roller D46/D30-20 ESD S	40 40 34 44
D		Screw Plug with Shoulder G1/2	16
Divider 600 Divider and Guide Profile 32x12 Divider and Guide Profile 32x12, Connection Sets Double Cantilever Foot Set 8 160x60-1260x90	23 23 23 26	Sealing Plug D19 Security Bit Set 2A/F - 6A/F Spanner 65A/F / 17A/F flat T	16 9 8
F		Table-Top Support Set 8 520x100	26
Face Plates M45 with Labelling Panel, Horizontal Fastening Profile D30-60 Fastening Ring D40/D30-10 ESD Fastening Set for Corner Deflector Guard 8 St 160x160x80	14 36 44 20	Threaded Insert, Profile Tube D30 heavy duty M10 Threaded Insert, Profile Tube D30 heavy duty M8 Tool Balancer 10-14 kg Tool Balancer 4-6 kg Tool Balancer 6-8 kg	46 46 18 18
G		Tool Balancer 8-10 kg Tube D30x1.5 CFRP	18 49
Guide Rail e 4	38	.227 2 55 5	.0
I			
Installation Profile 160x80 Installation Profile 8 160x80 K76	29 10		









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#### Concept, design and realisation

item Industrietechnik GmbH

#### Photographs

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