

EcoShape tubular framing system



- ▶ All connectors can be combined with the EcoShape round tubes D28L and D28L, N10, and the D28 round tube
- ▶ Integrated poka-yoke system for easy and secure connector installation
 - Anti-torsion element for secure joints
 - Positive interlocking connection

- ▶ All connectors are suitable for setting up ESD-conductive systems.

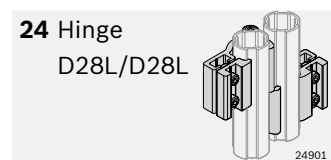
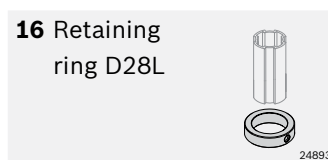
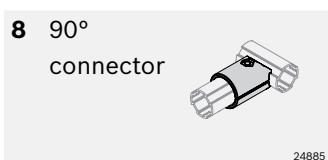
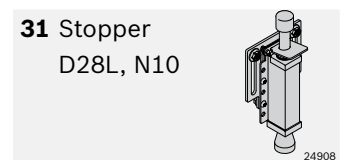
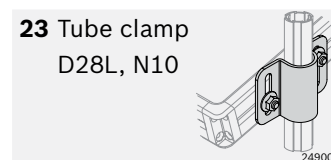
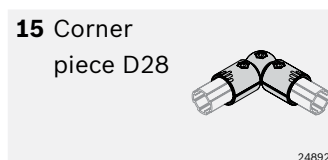
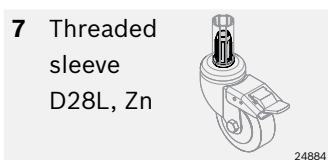
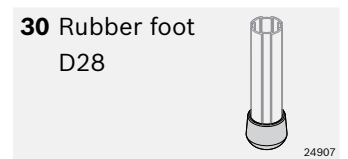
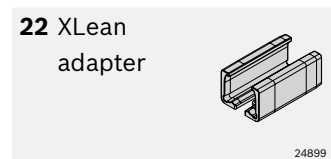
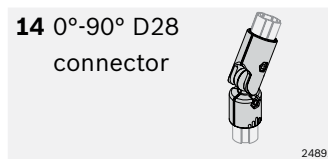
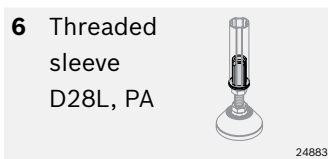
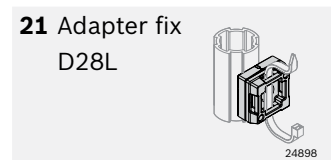
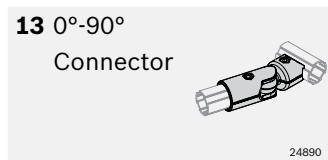
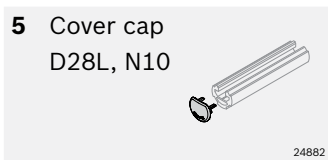
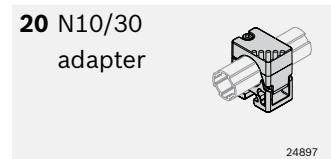
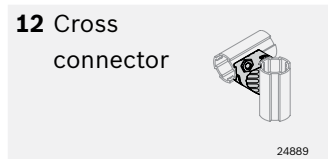
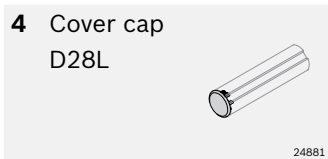
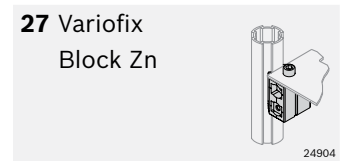
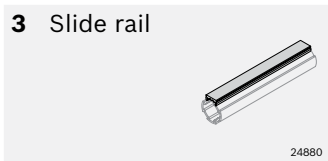
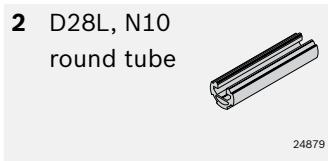
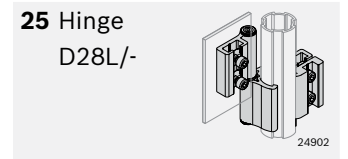
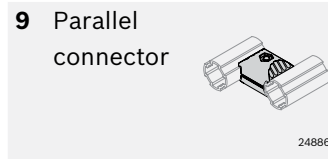
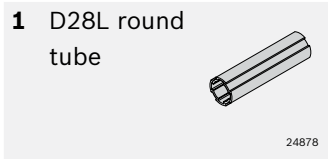
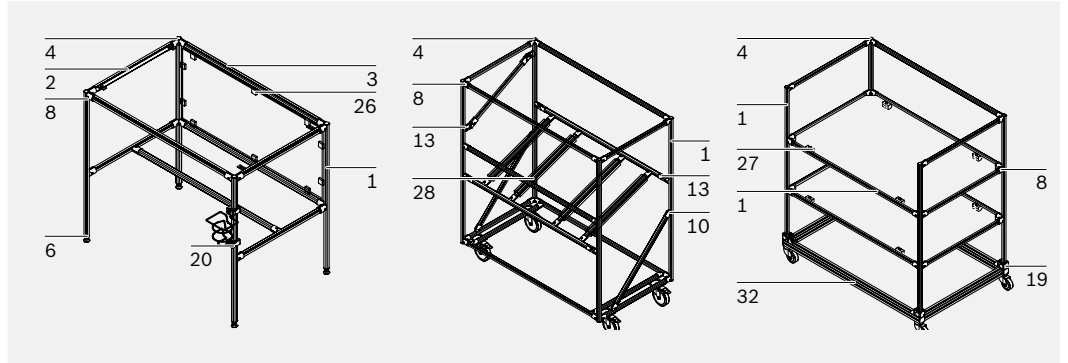
Material: diecast zinc

Scope of delivery: Incl. fastening material



31 components – a myriad of options

The EcoShape system is characterized by its consistent simplicity and efficiency: using just a few components, you can build complete assembly lines as well as simple transport shuttles.



1

$A = 1,8 \text{ cm}^2$
 $I_x = 1,3 \text{ cm}^4$
 $I_y = 1,3 \text{ cm}^4$
 $W_x = 1,0 \text{ cm}^3$
 $W_y = 1,0 \text{ cm}^3$
 $m = 0,5 \text{ kg/m}$

00134985

- ▶ Round tube D28L with 4 interfaces for attaching EcoShape connectors

Round tube D28L		L (mm)	No.
1 pcs		50 ... 5600	3 842 996 191/L
	50 pcs	5600	3 842 541 211

Material: aluminum, anodized

2

$A = 2,6 \text{ cm}^2$
 $I_x = 1,2 \text{ cm}^4$
 $I_y = 2,0 \text{ cm}^4$
 $W_x = 0,8 \text{ cm}^3$
 $W_y = 1,4 \text{ cm}^3$
 $m = 0,7 \text{ kg/m}$

00134986

- ▶ Round tube D28L, N10 with 10 mm slot for mounting accessories from the modular aluminum framing system
- ▶ 3 interfaces for attaching EcoShape connectors

Round tube D28L, N10		L (mm)	No.
1 pcs		50 ... 5600	3 842 996 192/L
	20 pcs	5600	3 842 541 213

Material: aluminum, anodized

3

00134987

- ▶ Slide rail for creating a simple conveyor track or manual slide section by clipping the slide rail onto the round tube D28L or D28L, N10

Slide rail	L (mm)	ESD		No.
	2000	10		3 842 541 196
	2000		10	3 842 548 117

Material: PVC; gray
ESD: PVC (conductive); black

4

24132

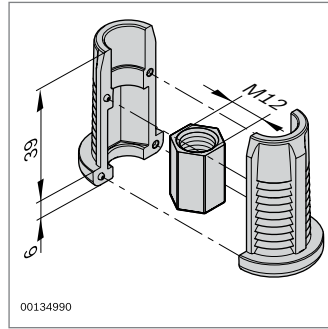
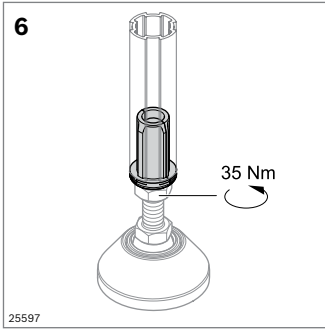
5

24133

- ▶ Cover cap for D28L and D28L round tube, N10

Cover cap	ESD		No.
4 D28L		20	3 842 548 129
5 D28L, N10		20	3 842 548 130

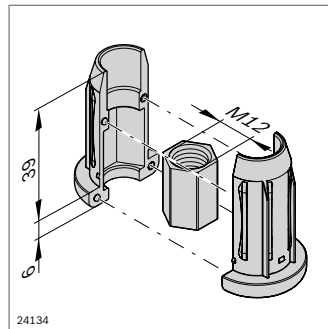
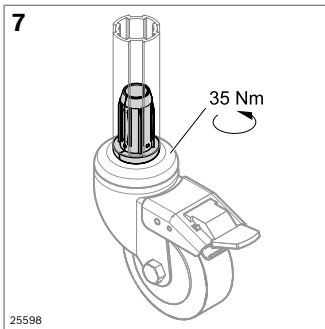
Material: PA66 (conductive); black



► Threaded sleeve for incorporating a leveling foot or caster. For further information (see p. 6-7)

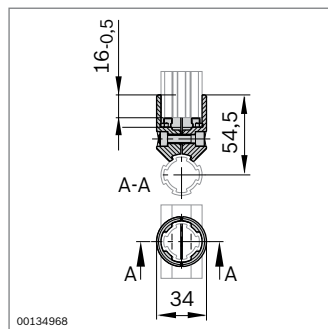
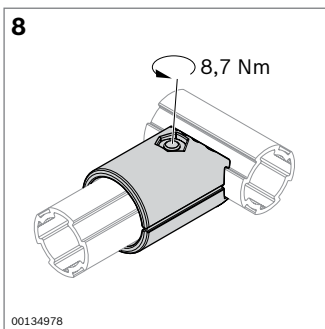
Threaded sleeve D28L; PA	ESD	No.
	20	3 842 541 185

Material: PA66 (conductive); black
Hexagon nut: aluminum



Threaded sleeve D28L, Zn	ESD	No.
	20	3 842 548 119

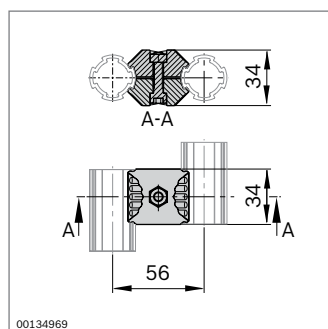
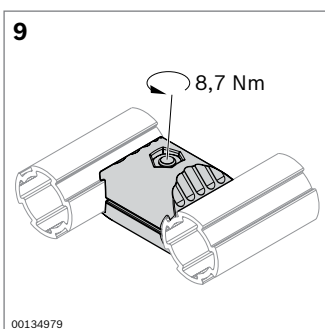
Material: diecast zinc
Hexagon nut: aluminum



90° connector	ESD	No.	FS
	20	3 842 541 173	FS1

Material: diecast zinc
Scope of delivery: incl. fastening material (FS)

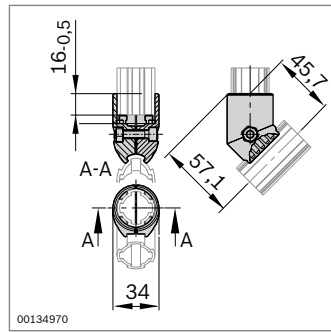
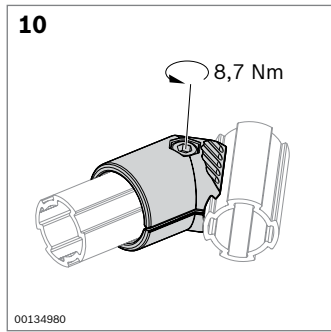
FS1
ISO 4762
M6x25
DIN EN
ISO 10511
M6



Parallel connector	ESD	No.	FS
	20	3 842 541 183	FS1

Material: diecast zinc
Scope of delivery: incl. fastening material (FS)

FS1
ISO 4762
M6x25
DIN EN
ISO 10511
M6

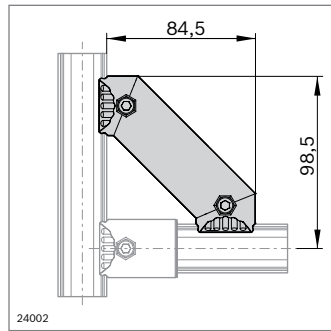
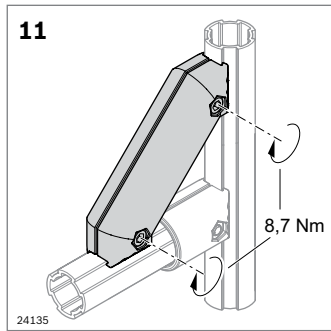


45° connector	ESD	No.	FS
		20	3 842 541 175 FS1

Material: diecast zinc
 Scope of delivery: incl. fastening material (FS)

FS1

	ISO 4762
	M6x25
	DIN EN
	ISO 10511
	M6

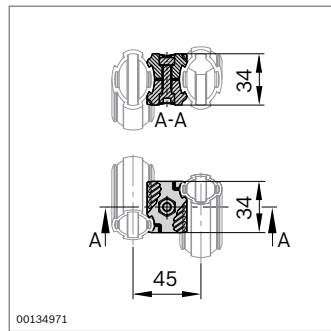
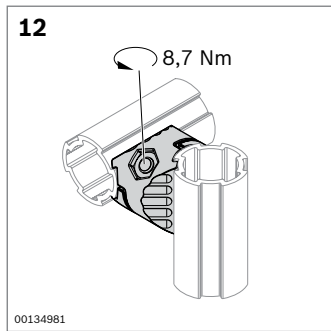


Strut D28L, 45°	ESD	No.	FS
		20	3 842 548 118 2xFS1

Material: diecast zinc
 Scope of delivery: incl. fastening material (FS)

FS1

	ISO 4762
	M6x25
	DIN EN
	ISO 10511
	M6

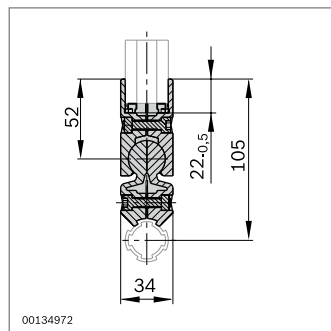
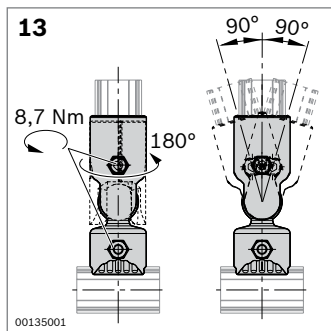


Cross connector	ESD	No.	FS
		20	3 842 541 181 FS1

Material: diecast zinc
 Scope of delivery: incl. fastening material (FS)

FS1

	ISO 4762
	M6x25
	DIN EN
	ISO 10511
	M6

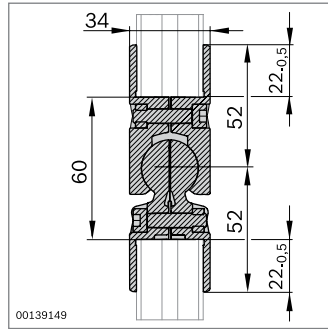
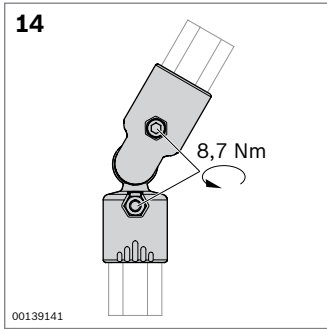


0°-90° connector	ESD	No.	FS
		20	3 842 541 178 2xFS1

Material: diecast zinc
 Scope of delivery: incl. fastening material (FS)

FS1

	ISO 4762
	M6x25
	DIN EN
	ISO 10511
	M6

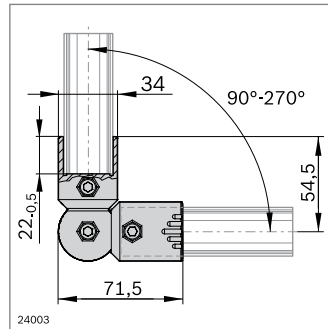
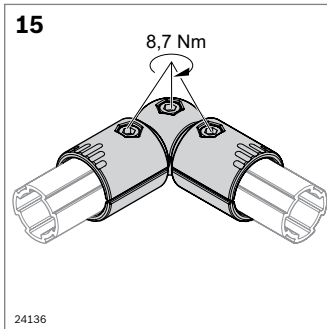


0°-90° D28 connector	ESD	No.	FS
	20	3 842 543 480	2xFS1

Material: diecast zinc
 Scope of delivery: incl. fastening material (FS)

FS1

ISO 4762	M6x25
DIN EN	ISO 10511
M6	



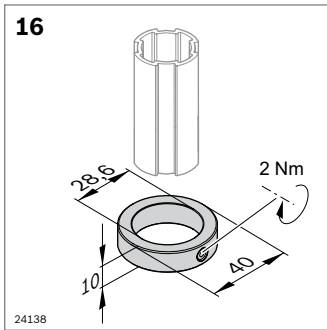
- ▶ Corner bracket D28 for easy adjustment within a 15° range
- ▶ Swivel range: 90°-270°

Corner piece D28	ESD	No.	FS
	20	3 842 548 123	3xFS1

Material: diecast zinc
 Scope of delivery: incl. fastening material (FS)

FS1

ISO 4762	M6x25
DIN EN	ISO 10511
M6	

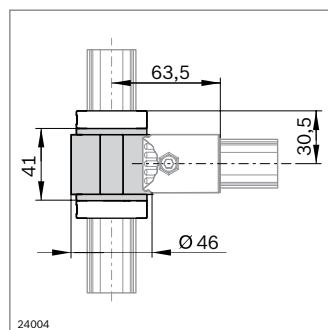
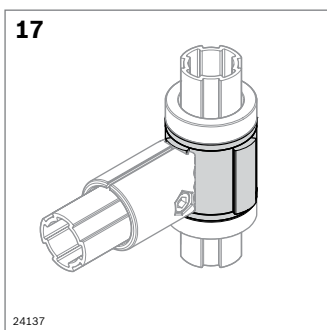


Retaining ring D28L	ESD	No.	FS
	20	3 842 548 122	FS2

Material: aluminum
 Scope of delivery: incl. fastening material (FS)

FS2

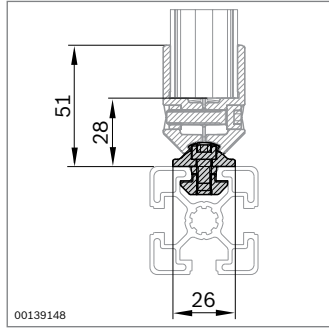
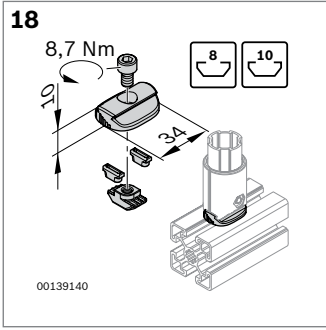
ISO 4026	M6x6
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- ▶ For axial shifting along the D28L or D28L, N10 round tube; the retaining ring defines the end position.
- ▶ Construction of swiveling applications

Swivel bearing D28L	No.
20	3 842 548 121

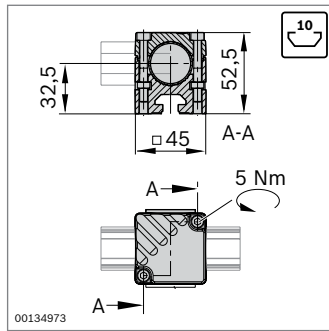
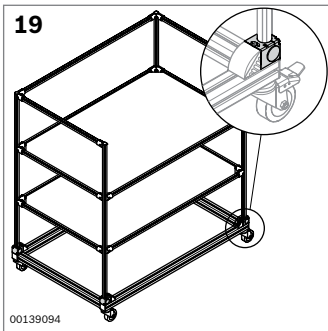
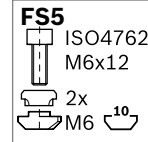
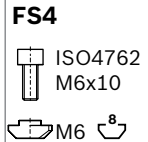
Material: aluminum,
 Socket: POM; black



- ▶ N8, N10 adapter for connecting an MGE strut profile (8 mm, 10 mm slots)

N8, N10 adapter	ESD	No.	FS
	20	3 842 543 272	FS4, FS5

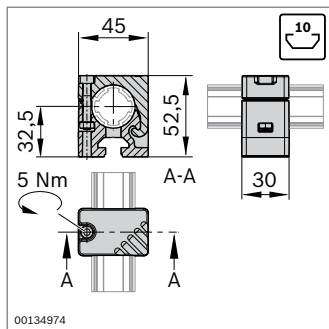
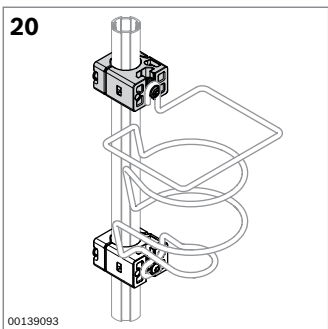
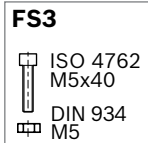
Material: diecast zinc
 Scope of delivery: incl. fastening material (FS)



- ▶ N10/45 adapter for connecting D28L or D28L, N10 round tubes to profiles with a 10 mm slot

N10/45 adapter	ESD	No.	FS
	20	3 842 541 187	2xFS3

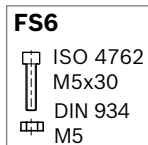
Material: Adapter: Diecast zinc
 Cap: PE
 Scope of delivery: incl. cover cap, fastening material (FS)

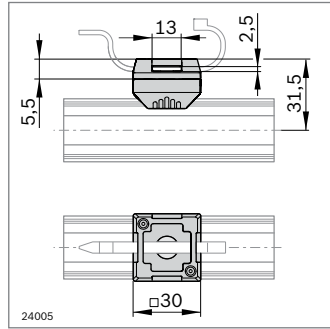
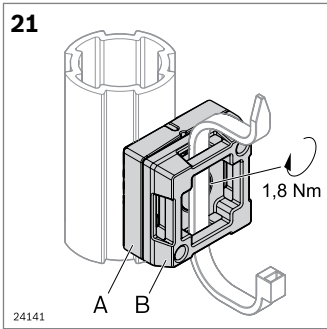


- ▶ N10/30 adapter for fastening light accessories such as a bottle holder to the D28L round tube

N10/30 adapter	ESD	No.	FS
	20	3 842 541 190	FS6

Material: diecast zinc
 Scope of delivery: incl. fastening material (FS)

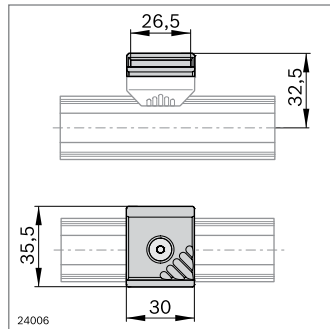
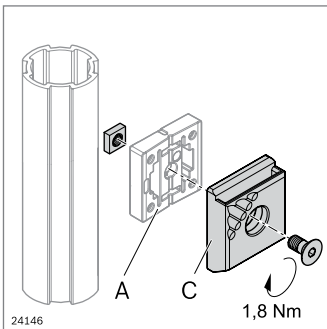
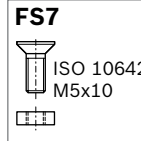




► For attaching cable ties

Adapter fix D28L	ESD	No.	FS
A + B		20 3 842 548 120	FS7

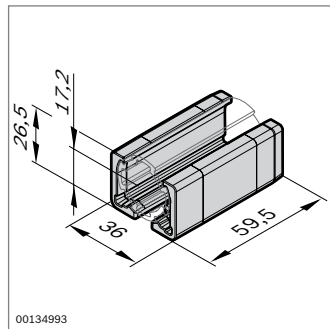
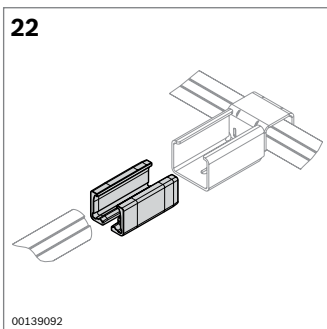
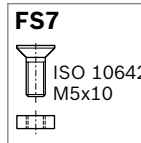
Material: PA66 (conductive); black
 Scope of delivery: incl. fastening material (FS)



► For attaching containers using the container mount

Container mount	ESD	No.	FS
C		10 3 842 544 797	FS7

Material: PA66 (conductive); black
 Scope of delivery: incl. fastening material (FS)

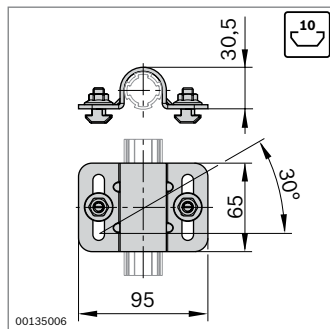
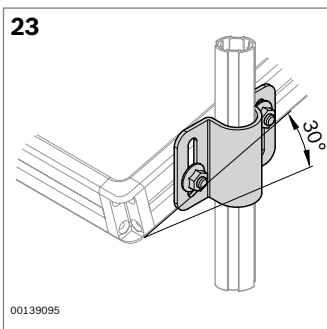


► XLean adapter for combination with XLean.

The XLean adapter connects the D28L round tube with the XLean rail holder (p. 12-26)

XLean adapter	ESD	No.
		20 3 842 541 296

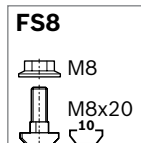
Material: PA66 (conductive); black

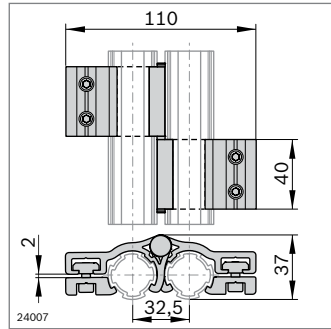
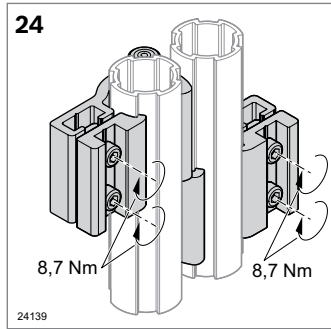


► D28L, N10 tube clamp for fastening material shelves with a 10 mm slot to the D28L round tube; oblique positioning up to 30 degrees is possible

Tube clamp D28L, N10	ESD	No.	FS
		20 3 842 541 193	2xFS8

Material: steel; galvanized
 Scope of delivery: incl. fastening material (FS)

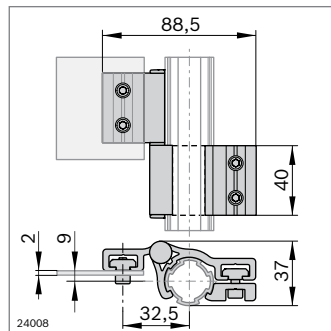
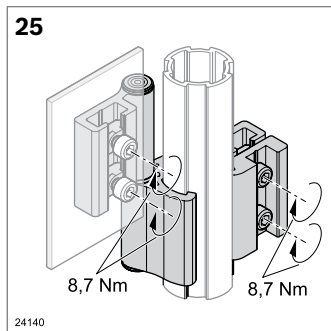
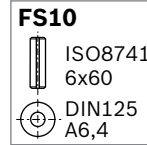
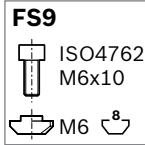




- ▶ Opening angle: 180°
- ▶ For mounting D28L round tube

Hinge D28L/D28L	ESD	No.	FS
		2	3 842 548 126 4xFS9, FS10

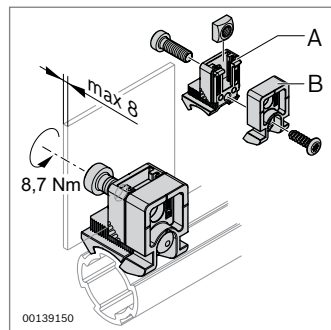
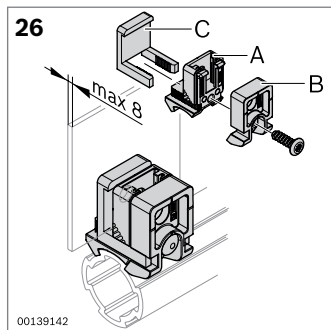
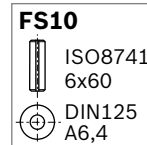
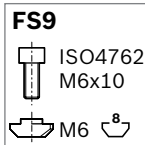
Material: aluminum
 Scope of delivery: incl. fastening material (FS)



- ▶ Opening angle: 180°
- ▶ For mounting surface elements

Hinge D28L/-	ESD	No.	FS
		2	3 842 548 127 2xFS9, FS10

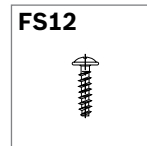
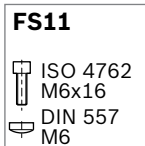
Material: aluminum
 Scope of delivery: incl. fastening material (FS)



- ▶ Plastic Variofix block for fastening surface elements with snap-in clips or a screw
- ▶ Variofix remover for releasing the snap-in clip (p. 14-7)

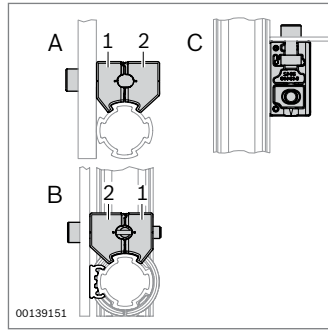
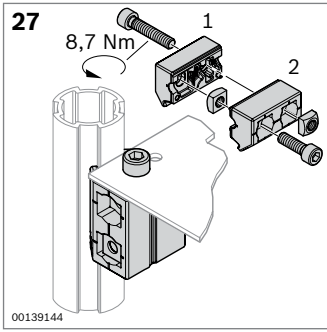
Variofix block PA	No.	FS
A + B	20	3 842 543 311 FS11, FS12

Material: PA66 (conductive); black
 Scope of delivery: incl. fastening material (FS)



Snap-in clip	No.
C	10 3 842 184 738

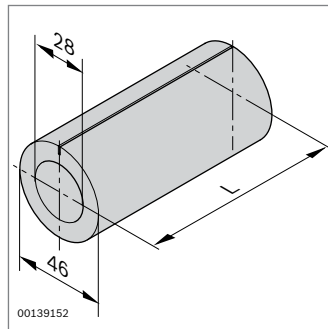
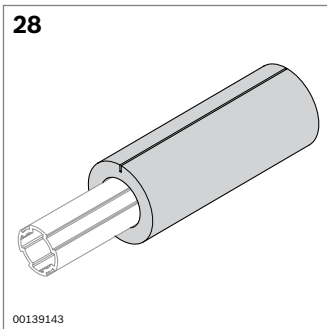
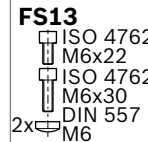
Material: PA6; transparent



- ▶ diecast zinc Variofix block for fastening surface elements
- ▶ Three arrangements possible (“A”, “B”, “C”)

Variofix Block Zn	ESD	No.	FS
		20	3 842 543 494 FS13

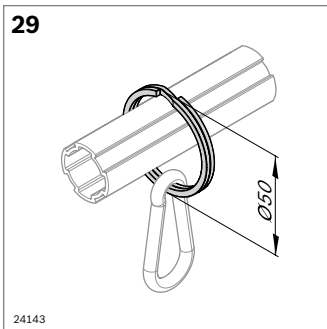
Material: diecast zinc
 Scope of delivery incl. fastening material (FS)



- ▶ Impact protection device for round tube D28 and D28L

Impact protection device	L (mm)	No.
	2000	10 3 842 544 637

Material: PE-LD; gray



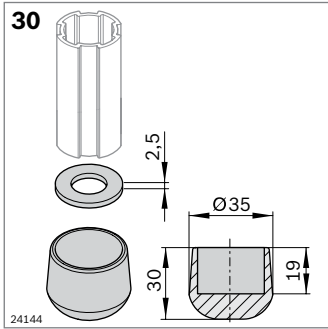
- ▶ For designing simple tool holders

Ring D50	No.
	20 3 842 548 131

Material: steel; nickel-plated

Spring hook	No.
	1 0 842 901 309

Material: galvanized steel

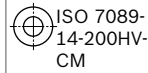


- ▶ Non-slip design of flow racks and stands

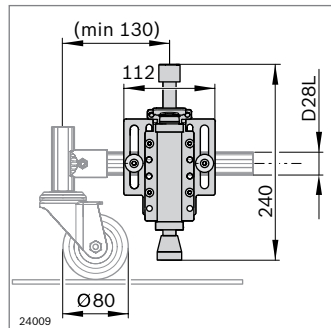
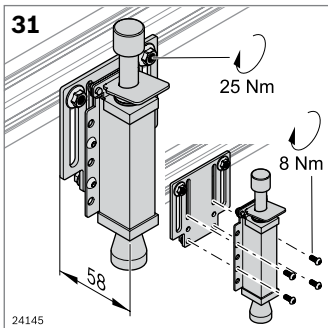
Rubber foot D28	ESD	No.	FS
		20	3 842 548 128 FS14

Material: NR/SBR (conductive); black

FS14



- ▶ To stop material shuttles ergonomically at just one point
- ▶ All-purpose option for attachment to different round tubes and profile cross-sections
- ▶ Stopper tension path: 34 mm



Stopper D28L, N10	No.	FS
	3 842 548 132	4xFS15, 2xFS16

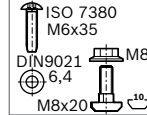
Material: Stopper: stainless steel .EPDM
Attachment plate: aluminum

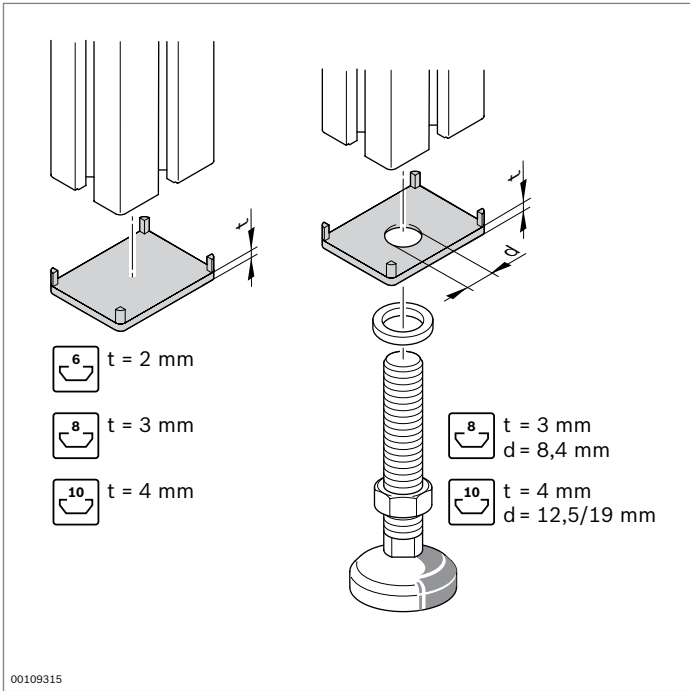
Scope of delivery: incl. fastening material (FS)

FS15

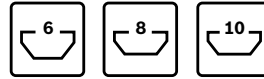


FS16



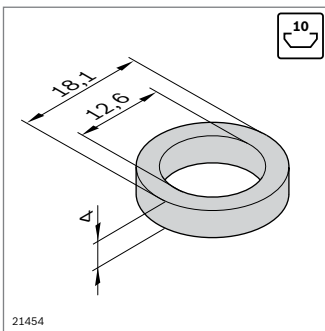


Cover cap Cover cap with hole



- ▶ To prevent injuries at open profile ends
- ▶ Attractive design
- ▶ Cover cap with hole for use with leveling feet and rollers
- ▶ Cap material: PA or PP

Order information for the caps can be found together with the profiles

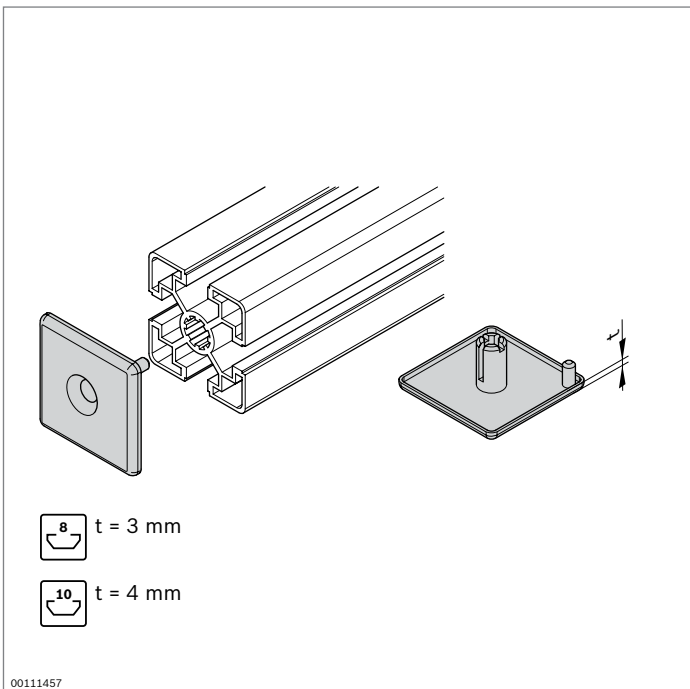


Bearing ring

- ▶ For cover caps with hole in the sizes 40x40, 45x45, 50x50 and 60x60
- ▶ For M12 threads
- ▶ To protect the caps when tightening accessories

Bearing ring	No.
	100 3 842 555 653

Material: diecast zinc

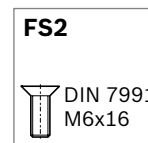
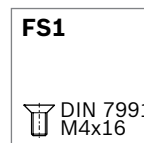


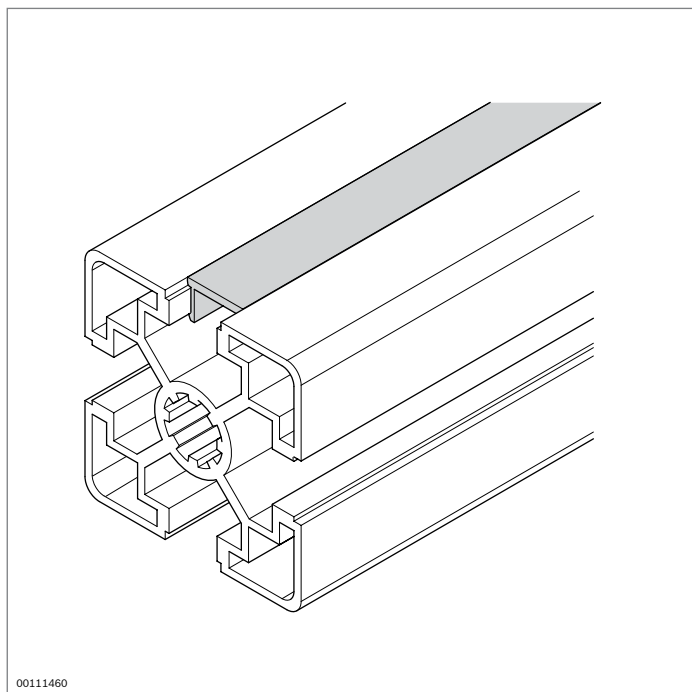
Diecast zinc cover cap

- ▶ Shock-resistant
- ▶ Resistant to aggressive media
- ▶ Fastened with countersunk screw; profile finishing not required

Cover cap	L1xL2	ESD No.	FS
30x30-ZN	30x30	3 842 518 204	FS1
40x40-ZN	40x40	3 842 541 807	FS2
45x45-ZN	45x45	3 842 518 205	FS2

Material: diecast zinc

















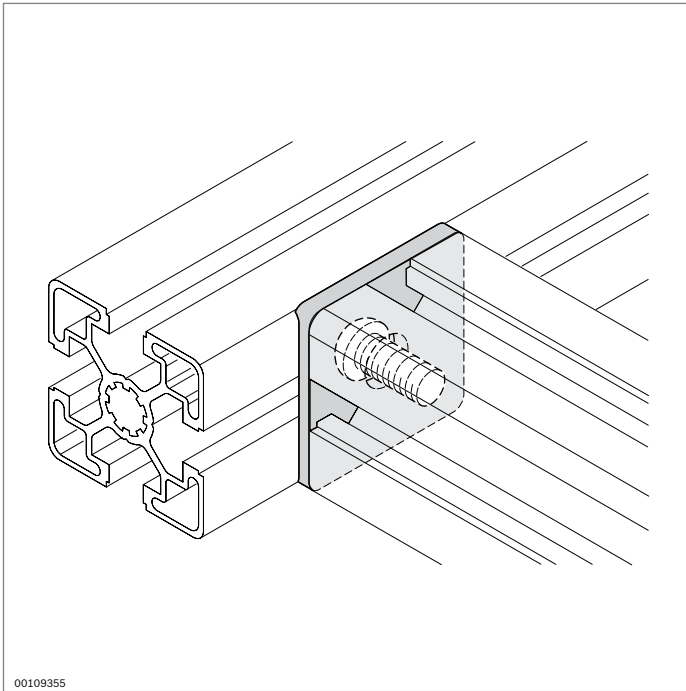


Cover profiles

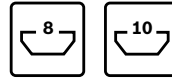


- ▶ For fixing cables in position
- ▶ To prevent dirt from entering the profile slot
- ▶ Attractive design
- ▶ Soft PVC cover profile for 6 mm slot is provided as a roller
- ▶ Flush with profile
- ▶ An ESD-conductive connection between the cover profile and the strut profile must be ensured through a design solution, e.g. screw

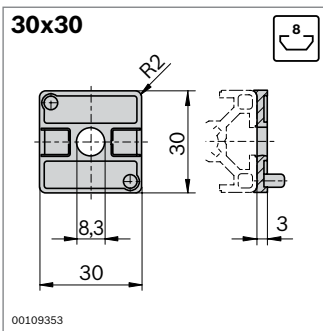
Cover profile, 6 mm slot	Color	Material	ESD	L (mm)		No.
 00109385	Colorless, natural	aluminum, anodized		2000	10	3 842 523 254
 00117777	Light gray (RAL 7035)	Soft PVC		10000	1	3 842 542 435
Cover profile, 8 mm slot	Color	Material	ESD	L (mm)		No.
 00109366	Colorless, natural	aluminum, anodized		2000	10	3 842 523 256
 00109367	Signal gray (RAL 7004)	PP		2000	10	3 842 548 878
	Black (RAL 9005)	PP		2000	10	3 842 548 879
	Light gray (RAL 7035)	Hard PVC		2000	10	3 842 518 375
	Red (RAL 3020)	Hard PVC		2000	10	3 842 518 376
	Yellow (RAL 1023)	Hard PVC		2000	10	3 842 518 377
	Yellow (RAL 6032)	Hard PVC		2000	10	3 842 549 882
	Blue (RAL 5010)	Hard PVC		2000	10	3 842 538 956
	Orange (RAL 2004)	Hard PVC		2000	10	3 842 538 958
	Colorless, transparent	Hard PVC		2000	10	3 842 503 073
Cover profile, 10 mm slot	Color	Material	ESD	L (mm)		No.
 00109388	Colorless, natural	aluminum, anodized		2000	10	3 842 523 258
 19502	Signal gray (RAL 7004)	Hard PVC		2000	10	3 842 548 876
	Black (RAL 9005)	Hard PVC		2000	10	3 842 548 877
	Light gray (RAL 7035)	Hard PVC		2000	10	3 842 518 367
	Red (RAL 3020)	Hard PVC		2000	10	3 842 518 368
	Yellow (RAL 1023)	Hard PVC		2000	10	3 842 518 369
	Yellow (RAL 6032)	Hard PVC		2000	10	3 842 549 888
	Blue (RAL 5010)	Hard PVC		2000	10	3 842 538 955
	Orange (RAL 2004)	Hard PVC		2000	10	3 842 538 957
	Colorless, transparent	Hard PVC		2000	10	3 842 191 182



Radial compensation

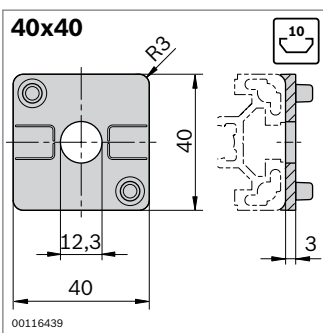



- ▶ To avoid gaps and sharp edges on T-connections between two profiles using a central bolt or quick connector (note spacing of hole from the face of the profile)
- ▶ The slot segments can be broken out in order to fix surface elements in the slot
- ▶ Important note: the load carrying capacity of the profile connection is reduced when using radial compensation (see “Technical data”, page 19-10)!



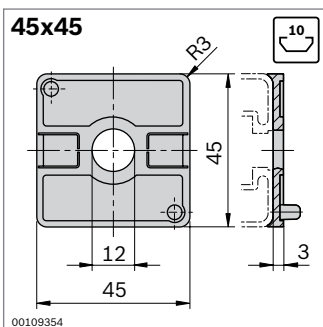
Radial compensation	Groove		No.
30x30	8	10	3 842 551 026


Material: PA; signal gray RAL 7004



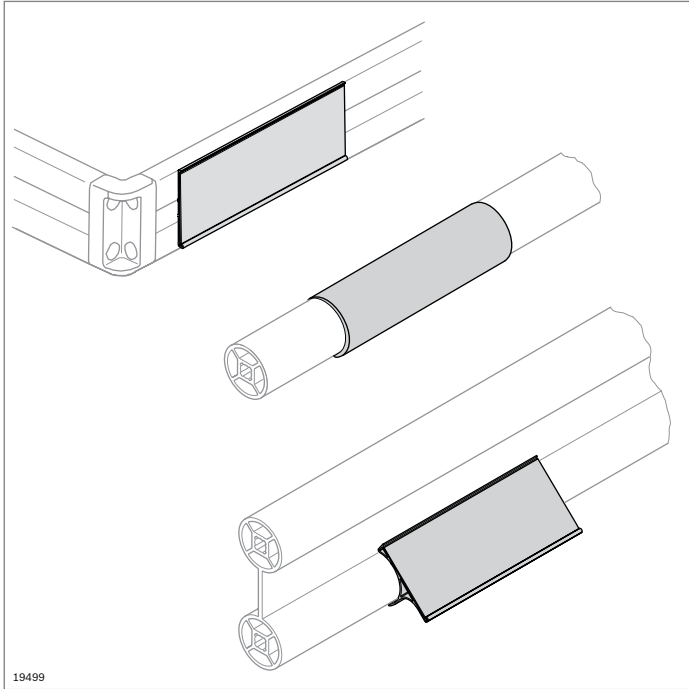
Radial compensation	Groove		No.
40x40	10	10	3 842 551 028

Material: PA; signal gray RAL 7004



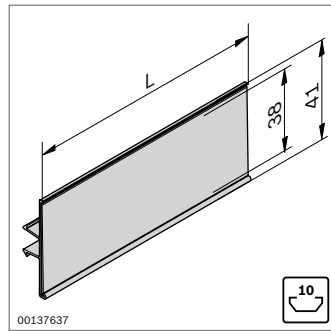
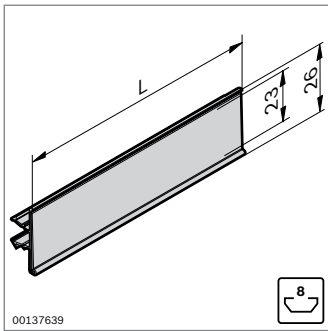
Radial compensation	Groove		No.
45x45	10	10	3 842 551 030

Material: PA; signal gray RAL 7004



Lettering clips

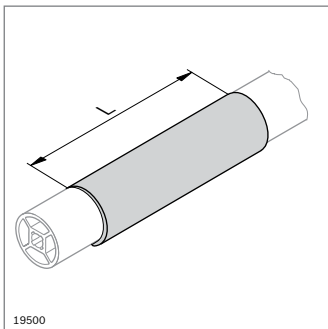
- For the labeling of profiles and tubular cross ties



- Lettering clip for strut profiles with 8 mm and 10 mm slot

Lettering clip	Groove	L (mm)		No.
	8	2000	20	3 842 537 113
	8	102	20	3 842 537 650
	10	2000	20	3 842 537 116
	10	102	20	3 842 537 651

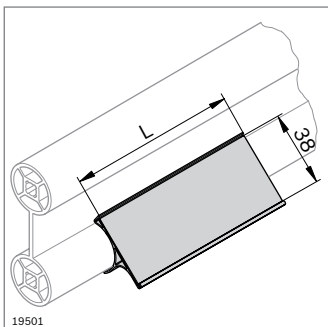
Material: hard PVC, light gray (RAL 7035), transparent



- Self-adhesive
- Lettering clip with rounded text surface for strut profiles D28; D28L; D28L, N10, and D28x55
- Label height 38 mm

Lettering clip	L (mm)		No.
For tubular cross ties	2000	20	3 842 535 136
	102	20	3 842 538 093

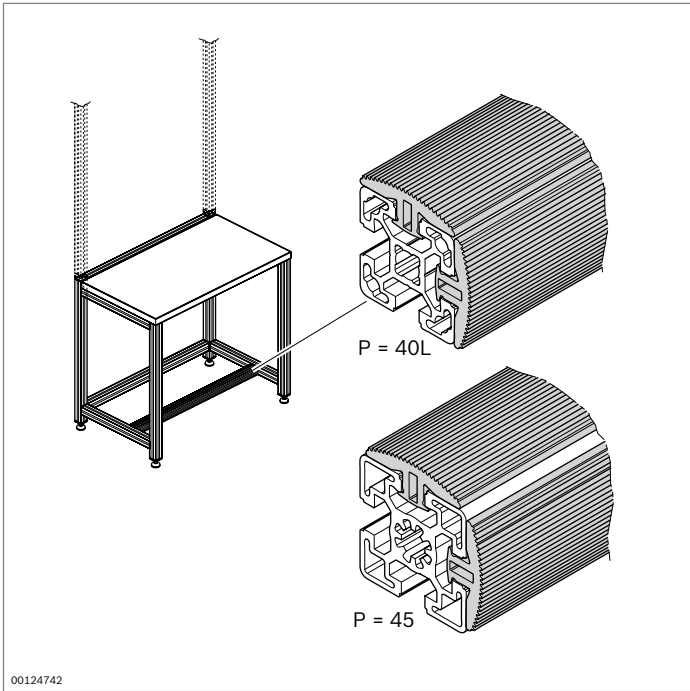
Material: hard PVC, colorless, transparent



- Self-adhesive
- Lettering clip with flat text surface for strut profiles D28; D28L; D28L, N10, and D28x55

Lettering clip	L (mm)		No.
For tubular cross ties	2000	20	3 842 537 119
	102	20	3 842 537 652

Material: hard PVC, light gray (RAL 7035), transparent



Rubber profile Cloth holder

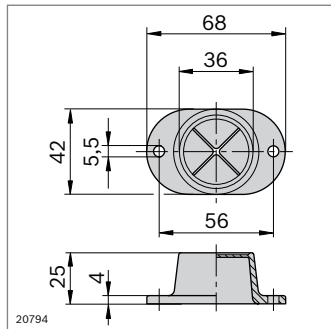
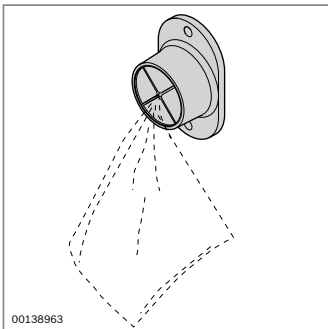


Rubber profile

- ▶ To avoid hard abutting edges, for instance when setting down impact-sensitive products
- ▶ For use as footrest to clip onto the cross strut of the workstation from the top and front
- ▶ Really simple and inexpensive
- ▶ Suitable for the construction of ESD workstations

Rubber profile	L (mm)	ESD	No.
	30 ... 2000		1 3 842 994 979 / L
	2000		10 3 842 537 135

Material: EPDM; conduction resistance
RA = 1x10³ – 1x10⁹ Ω



Screwed-on cloth holder

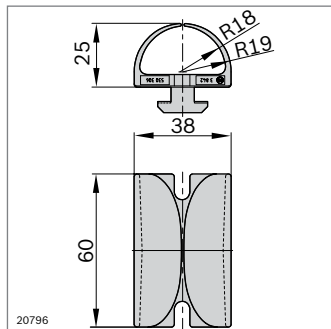
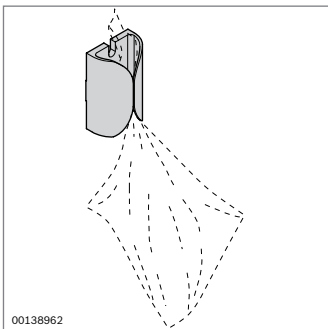
- ▶ For hanging cleaning cloths

Required accessories:

- ▶ T-nut, 10 mm slot, M5 (**3 842 530 283**) (p. 3-4)
- ▶ Screw DIN 7984 M5x12

Screwed-on cloth holder	No.
	1 845 719 000

Material: PE; black



Cloth holder with clamp base

- ▶ With injection molded clamp base for direct assembly on strut profile with 10 mm slot
- ▶ Can also be used as a cable guide

Cloth holder with clamp base	No.
	3 842 530 306

Material: PA6, black

