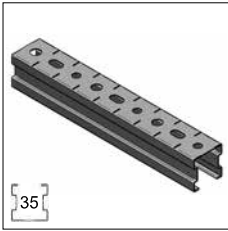
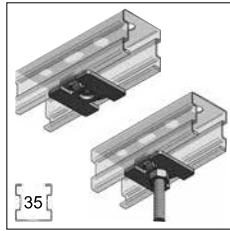


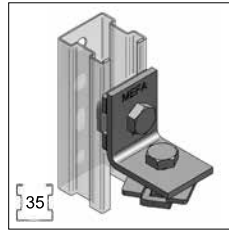
MEFA rail system



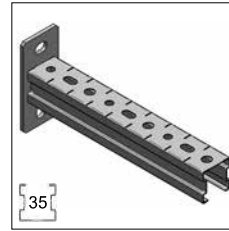
Profile rails STEX 35
Page 2/3



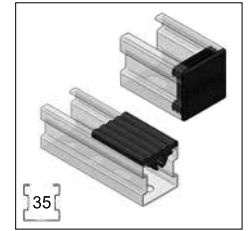
STEX 35 GP and GB
Page 2/4



STEX 35-angle
Page 2/5



STEX 35-panels
Page 2/6

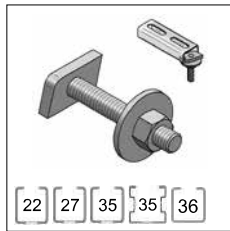


STEX 35 accessory
Page 2/8



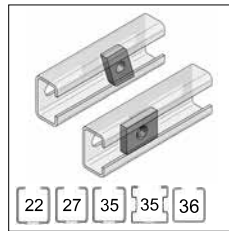
22 27 35 36

Profile rails 22 - 36
Page 2/9



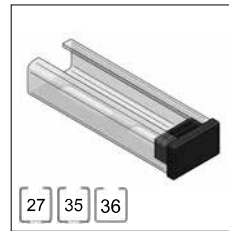
22 27 35 35 36

Hammer head screws
Page 2/10



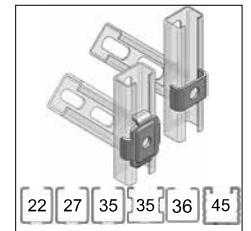
22 27 35 35 36

Threaded plate
Page 2/11



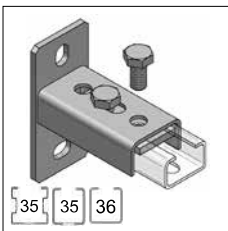
27 35 36

Protecting caps
Page 2/12



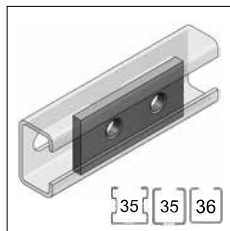
22 27 35 35 36 45

Profile holder
Page 2/12



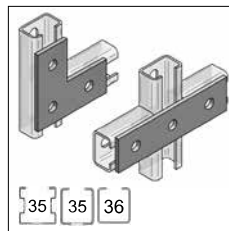
35 35 36

Holder 35
Page 2/14



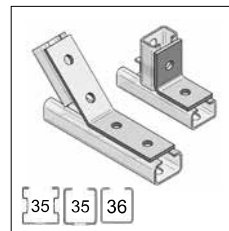
35 35 36

Threaded plate/ hole plate
Page 2/14



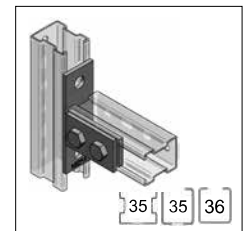
35 35 36

Flat connector
Page 2/15



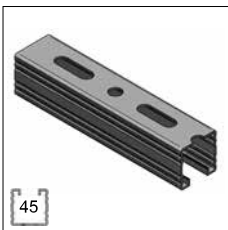
35 35 36

Angles
Page 2/15



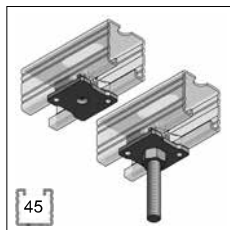
35 35 36

Connectors
Page 2/16



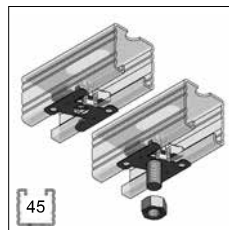
45

Profile rails 45
Page 2/20



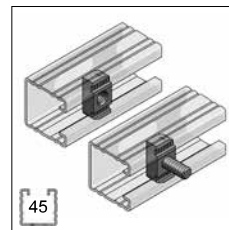
45

STEX 45 GP and GB
Page 2/22



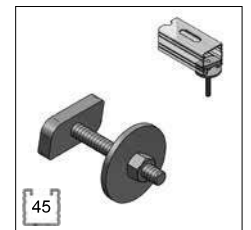
45

STEX 45 MP and MTB
Page 2/23



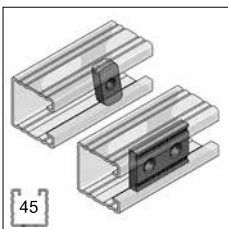
45

tooth plates / -bolts
Page 2/24



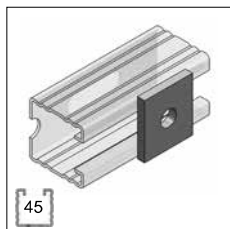
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Hammer head screws
Page 2/25



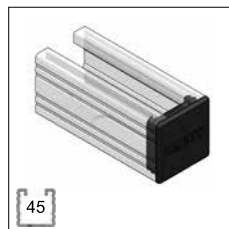
45

Threaded-/ tooth plates
Page 2/25



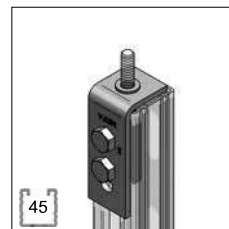
45

Perforated plates
Page 2/31



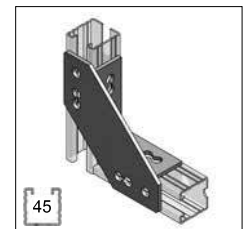
45

Protecting caps
Page 2/31



45

Head adapter
Page 2/31

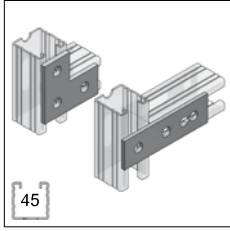


45

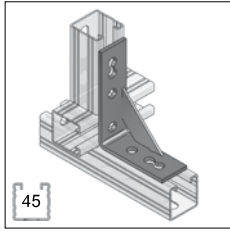
Universal knot
Page 2/32

MEFA rail system

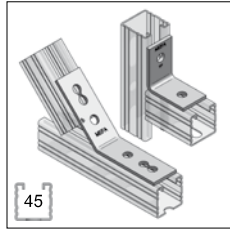
02



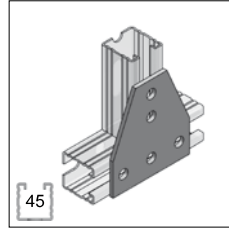
Flat connectors
Page 2/33



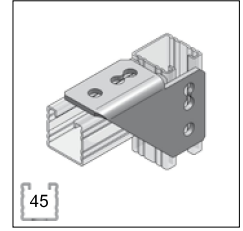
Knot triangles
Page 2/33



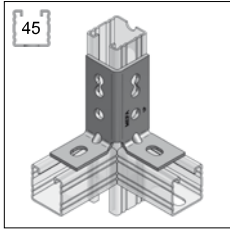
Angles
Page 2/34



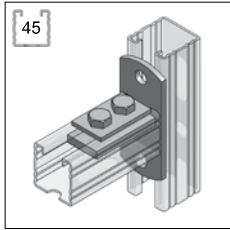
Lugs
Page 2/35



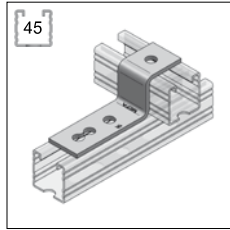
Corner angle
Page 2/35



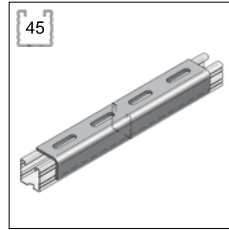
Angle connector
Page 2/36



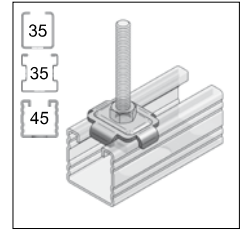
Front Connector
Page 2/36



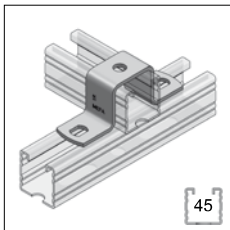
3-hole corresponding
Page 2/37



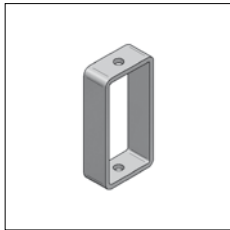
Connector 45
Page 2/37



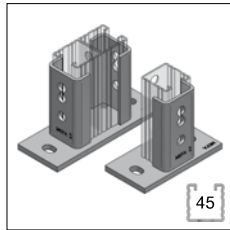
Profile holder
Page 2/38



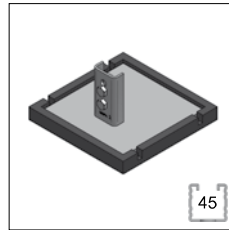
Head profile
Page 2/38



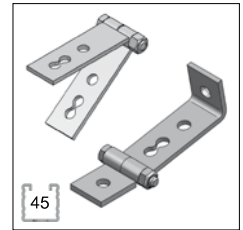
Suspending console
Page 2/39



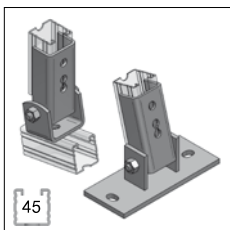
Holder
Page 2/39



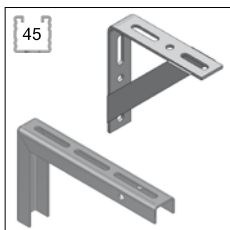
Rooftop holder
Page 2/40



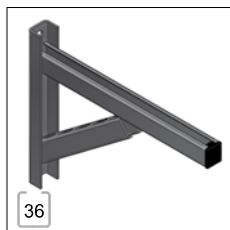
Joint connector
Page 2/41



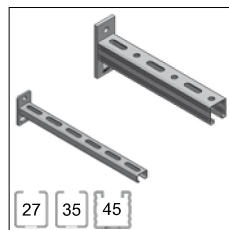
Joint holder
Page 2/43



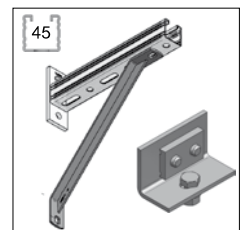
Consoles without
and with braces
Page 2/45



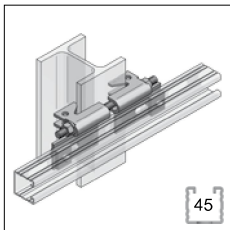
Carrier console
Page 2/46



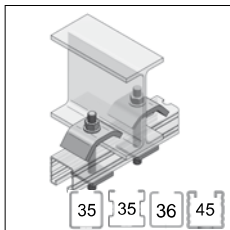
Consoles
Page 2/47



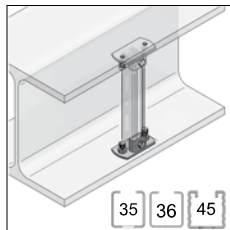
Brace 45°; Adapter angle
Page 2/54



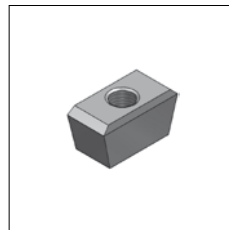
Girder connection vertical
Page 2/55



Girder connection horizontal
Page 2/56 ff.



Girder clampings
Page 2/58

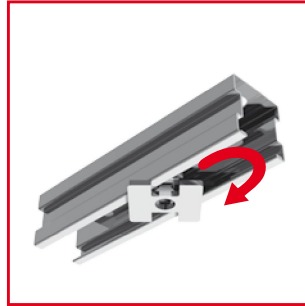


Wedge nut for ceiling
Page 2/58

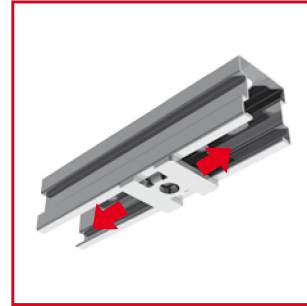
Quick-fixing system STEX 35



Insert STEX



Turn STEX

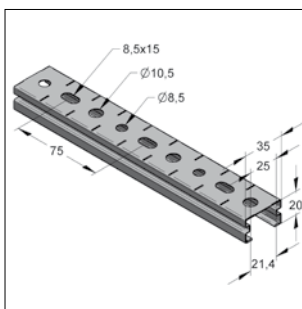


Position STEX

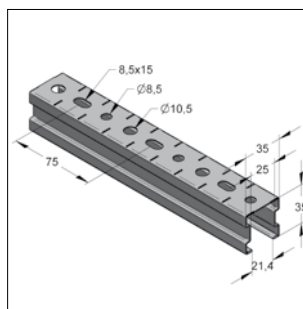


Counter STEX with nut

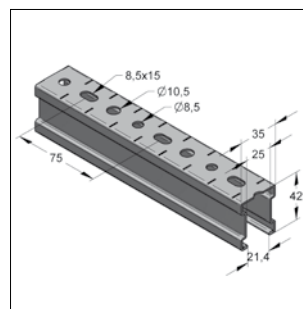
STEX 35 profile rail



STEX profile rail 35/20



STEX profile rail 35/35



STEX profile rail 35/42



Specification:

Profile rail type: C-profile
 Connection system: System STEX 35, system 35
 Hole pattern: round hole Ø 8,5 and 10,5 mm
 long hole 8,5 x 15 mm
 Center hole distance: 75 mm

Technical data:

Material: steel
 Materialtyp: S 250 GD-Z150-N-A, DIN EN 10346
 Surface: pre-galvanized

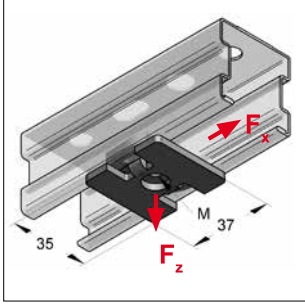
- Straight knurling against slipping of components
- Marking for fit-up aid and to cut rails

application loads see on page 2/13

Description	Length [m]	Width [mm]	Height [mm]	Weight [kg/m]	Packing [m]	Part-No.
35/20/0,8	2	35	20	0,64	336	1273520
35/20/0,8	3	35	20	0,64	504	1273523
35/35/1,0	2	35	35	1,03	252	1273538
35/35/1,0	3	35	35	1,03	378	1273539
35/42/1,5	2	35	42	1,63	80	12735422
35/42/1,5	6	35	42	1,63	240	12735426

i Technical overview of profile rails see on page 2/58

■ STEX 35 threaded plate GP



STEX-threaded plate

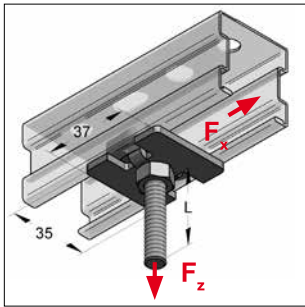
Specification:
 Profile rail type: STEX
 Profile rail type: 35 mm

Technical data:
 Material: steel
 Material type: S235JR
 Surface: galvanized

application loads see on page 2/13

Description	Weight [kg/pc.]	Packing [pcs.]	Part-No.
STEX 35 threaded plate M8	0,039	50	127201001
STEX 35 threaded plate M10	0,039	50	127201101

■ STEX 35 threaded bolt GB



STEX threaded bolt

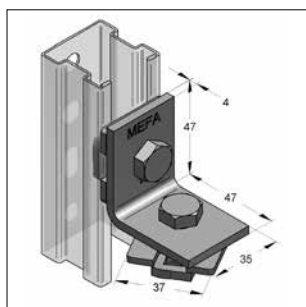
Specification:
 For profile rail type: STEX
 Profile rail type: 35 mm

Technical data:
 Material: steel
 Material type: S235JR
 Surface: galvanized

application loads see on page 2/13

Description	Length L [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
STEX 35 threaded bolt M8/50	36	0,061	50	127805001
STEX 35 threaded bolt M8/70	56	0,067	50	127807001
STEX 35 threaded bolt M8/90	76	0,074	50	127809001
STEX 35 threaded bolt M8/110	96	0,080	25	127811001
STEX 35 threaded bolt M8/130	116	0,087	25	127813001
STEX 35 threaded bolt M10/50	34	0,076	50	127005001
STEX 35 threaded bolt M10/70	54	0,086	50	127007001
STEX 35 threaded bolt M10/90	74	0,097	50	127009001
STEX 35 threaded bolt M10/110	94	0,107	25	127011001
STEX 35 threaded bolt M10/130	114	0,117	25	127013001

■ STEX 35 universal angle



STEX 35 universal angle-set
Angle with two STEX threaded plates (threaded plate turnable)

Specification:

For profile rail type: STEX
Profile rail type: 35 mm

Remark: suitable for all STEX-profile-rails

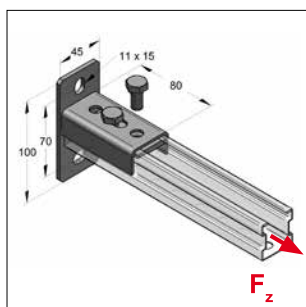
Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

application loads see on page 2/13

Description	Weight [kg/pc.]	Packing [pcs.]	Part-No.
STEX 35 universal angle	0,216	25	127201801

■ Holder 35



Holder 35 vertical

Specification:

Profile rail type: C-Profile 35,36 and STEX 35
Scope of delivery: completely pre-assembled with 2-hole-threaded plate M10 and hexagon screws M10

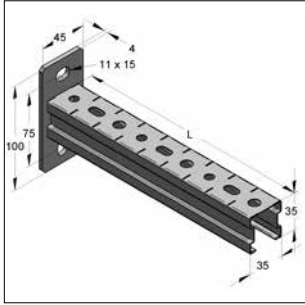
Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

* Loads are based on component, not connection

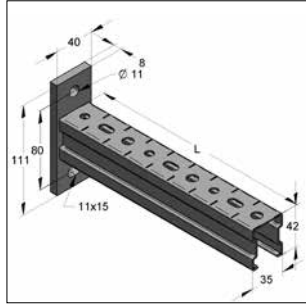
Description	Dimension base plate	tightening torque [Nm]	max. load * F_z [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Holder 35 vertical	100 x 45 x 4,0 mm	25	2,0	0,374	25	080213402
Holder 35 horizontal	100 x 45 x 4,0 mm	25	2,0	0,374	25	080213502

STEX 35 console



STEX console 35/35

Profile opening on bottom side



STEX console 35/42

Profile opening on bottom side

Technical data: galvanized

Material: steel
 Material type profile rail: S235JR
 Material type plate: S235JR
 Surface: galvanized
 global safety coefficient γ : 1,35

Static values only apply to Stex console 35/42:

limitation torque M_G : 312,72 Nm
 Reaction force F_{AX} : 3,91 kN
 Reaction force F_{BX} : 3,91 kN
 M_G, F_{AX}, F_{BX} on LF1: up to $L = 825,0$ mm
 LF2: up to $L = 525,0$ mm
 LF3: up to $L = 675,0$ mm

* max. load at elastic limit of $\sigma_{max.} = 160$ N/mm² and max. bending of $f = L/150$

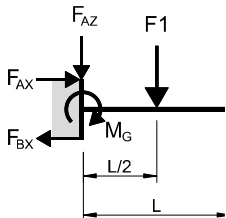
STEX console 35/35 - profile rails 35/35/1 - plate 100 x 45 x 4 mm

Description	Length [mm]	max. load *			Weight [kg/pc.]	Packing [pcs.]	Part-No.
		Loading cond. 1	Loading cond. 2	Loading cond. 3			
		F1 [kN]	F2 [kN]	q0 [kN/m]			
STEX 35 console	150	2,05	1,02	0,285	0,285	25	1274150
STEX 35 console	225	1,37	0,68	0,362	0,362	25	1274225
STEX 35 console	300	1,02	0,51	0,440	0,440	25	1274300
STEX 35 console	375	0,82	0,41	0,517	0,517	25	1274375
STEX 35 console	450	0,68	0,34	0,594	0,594	20	1274450
STEX 35 console	525	0,59	0,28	0,671	0,671	20	1274525

STEX console 35/42 - profile rails 35/42/1,5 - plate 111 x 40 x 8 mm

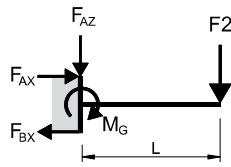
STEX 35 console	225	2,78	1,39	0,630	0,630	20	12760225
STEX 35 console	300	2,08	1,04	0,752	0,752	20	12760300
STEX 35 console	450	1,39	0,69	0,997	0,997	15	12760450
STEX 35 console	525	1,19	0,60	1,119	1,119	15	12760525
STEX 35 console	600	1,04	0,49	1,241	1,241	10	12760600

Loading condition 1



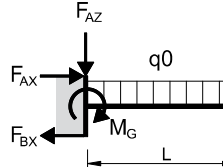
$F_{AZ} = F1$	$M_G = \frac{F1 * L}{2}$
---------------	--------------------------

Loading condition 2



$F_{AZ} = F2$	$M_G = F2 * L$
---------------	----------------

Loading condition 3

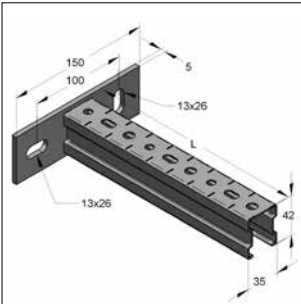


$F_{AZ} = q0 * L$	$M_G = \frac{q0 * L^2}{2}$
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Notice:

all loads referring to static loads

■ STEX 35 console 35/42 plate horizontal



STEX console 35/42 horizontal
Profile opening on bottom side

Technical data: galvanized

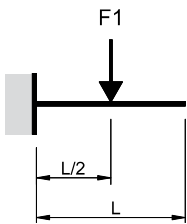
Material: steel
 Material type profile rail: S235JR
 Material type plate: S235JR
 Surface: galvanized
 global safety coefficient γ : 1,35

* max. load at elastic limit of $\sigma_{max.} = 160 \text{ N/mm}^2$ and max. bending of $f = L/150$

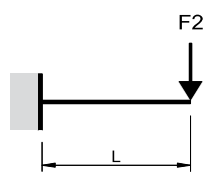
02

Description	Length [mm]	max. load *			Weight [kg/pc.]	Packing [pcs.]	Part-No.
		Loading cond. 1 F1 [kN]	Loading cond. 2 F2 [kN]	Loading cond. 3 q0 [kN/m]			
STEX 35 console 35/42 horizontal	300	1,46	0,73	4,8	0,765	20	127603001
STEX 35 console 35/42 horizontal	450	0,96	0,48	2,1	1,010	15	127604501

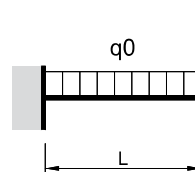
Loading condition 1



Loading condition 2

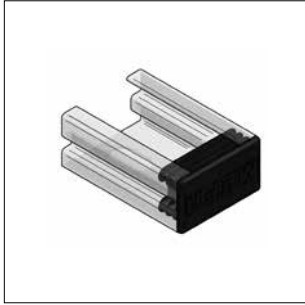


Loading condition 3

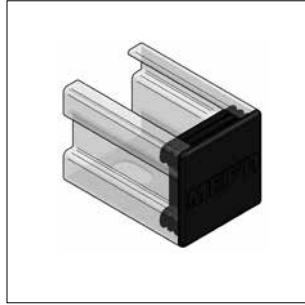


Remark:
all loads referring to static loads

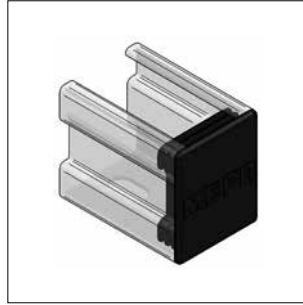
■ STEX 35 protecting cap



STEX protecting cap 35/20



STEX protecting cap 35/35



STEX protecting cap 35/42

Specification:

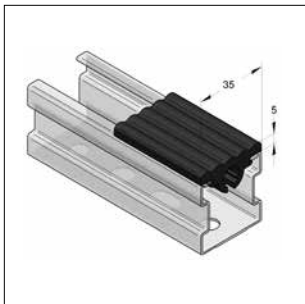
Profile rail type: STEX 35
 Profile rail type: 35 mm

Technical data:

Material: plastic PE
 Material colour: black

Description	Weight [kg/pc.]	Packing [pcs.]	Part-No.
STEX 35 protecting cap 35/20	0,003	50	1272017
STEX 35 protecting cap 35/35	0,005	50	1272016
STEX 35 protecting cap 35/42	0,005	50	1272024

■ STEX 35 rail rubber



STEX 35 rail rubber

Specification:

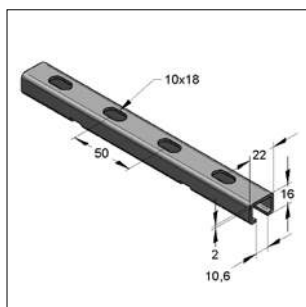
sound-, soil- and insulation resistance between rail and supporting element (e.g. ventilation duct) is guaranteed. Mounting profiles for rapid mounting. Suitable for STEX 35 profile rails and threaded rod M8 and M10

Technical data:

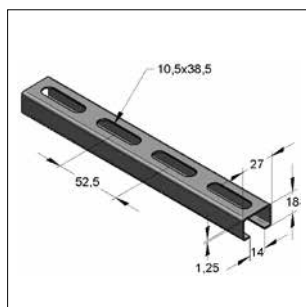
Material: Rubber TPE
 Material colour: black
 Temperature-resistance: - 35 °C up to + 100 °C

Description	Weight [kg/m]	Packing	Part-No.
STEX 35 rail rubber, roll	0,302	20 m	1272019
STEX 35 rail rubber, part 50 mm	0,016/pc	50 pcs.	1272020

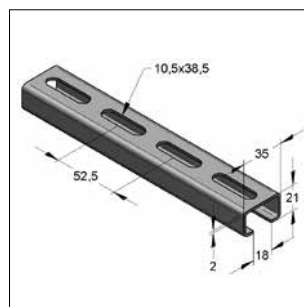
Profile rails, pre-galvanized, C-profile rail, perforated



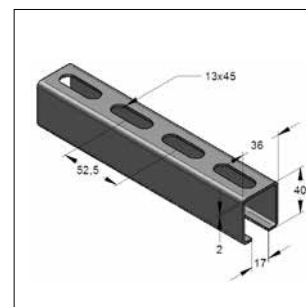
Type 22/16



Type 27/18



Type 35/21



Type 36/40

Specification:

Material: S250GD-Z275-N-A (EN 10346)
 Surface: pre-galvanized (sendzimir galvanizing)



Type 22/16

Description	Corrosion protection	Weight [kg/m]	Length [m]	Packing [m]	Bulk pack [m]	Part-No.
22/16/2,0 fbv	pre-galvanized	0,78	2	20	640	0800013

Type 27/18

27/18/1,25 fbv	pre-galvanized	0,60	2	20	1000	1240013
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Type 35/21

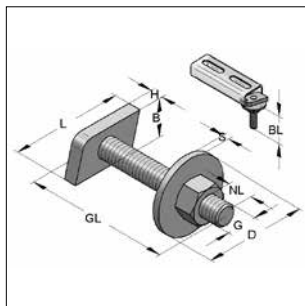
35/21/2,0 fbv	pre-galvanized	1,16	2	12	192	0800022
35/21/2,0 fbv	pre-galvanized	1,16	6	36	576	0800026

Type 36/40

36/40/2,0 fbv	pre-galvanized	1,82	2	12	80	0800032
36/40/2,0 fbv	pre-galvanized	1,82	6	72	240	080003601

i technical overview of profile rails see on page 2/58
 profile rails in stainless steel V2A or V4A see chapter 13
 profile rails with coating on request

■ Hammer head screw 35



Hammer head screw

Specification:

Mounting method: for glide fast connections and shear hole haunch connections with MEFA profile rails

Application area: should preferably be used for pipe clamp mounting

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

application loads see on page 2/13

¹⁾ not suitable for thread M8/M10

²⁾ not suitable for thread M10/M12

For profile rails 22/16

Description	G x GL [mm]	L x B x H [mm]	S [mm]	D [mm]	Usable	Construction	Weight [kg/pc.]	Packing [pcs.]	Part-No.
					length NL [mm]	length BL [mm]			
Hammer head screw	M8x25 ¹⁾	17x17x5	2	25	9,5	18	0,029	100	0692320
Hammer head screw	M8x30	17x17x5	2	25	14,5	23	0,031	100	0692328
Hammer head screw	M8x40	17x17x5	2	25	24,5	33	0,034	100	0692330
Hammer head screw	M10x40	17x17x5	2	20	23,0	33	0,044	100	0693340

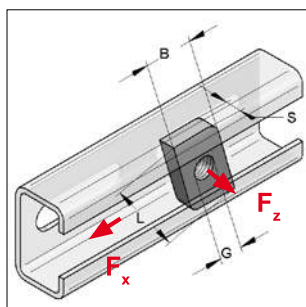
For profile rails 27/18

Hammer head screw	M8x20 ¹⁾	24x13x4	2	25	6,3	15	0,025	100	0695289
Hammer head screw	M8x30	24x13x4	2	25	16,3	25	0,028	100	0695300
Hammer head screw	M8x40	24x13x4	2	25	26,3	35	0,032	100	0695327

For profile rails 35/21, 36/40, STEX 35/20, STEX 35/35, STEX 35/42

Hammer head screw	M8x30 ¹⁾	35x18x6	3	35	12,5	22	0,060	50	0697044
Hammer head screw	M8x40	35x18x6	3	35	22,5	32	0,063	50	0697051
Hammer head screw	M8x50	35x18x6	3	35	32,5	42	0,066	50	0697060
Hammer head screw	M8x70	35x18x6	3	35	52,5	62	0,073	50	0697075
Hammer head screw	M10x30 ²⁾	35x18x6	3	35	10,5	22	0,070	50	0697540
Hammer head screw	M10x40	35x18x6	3	35	21,0	32	0,075	50	0697560
Hammer head screw	M10x50	35x18x6	3	35	31,0	42	0,080	50	0697570
Hammer head screw	M10x70	35x18x6	3	35	51,0	62	0,090	50	0697590
Hammer head screw	M12x35	35x18x6	3	37	14,0	27	0,086	50	0698040
Hammer head screw	M12x50	35x18x6	3	37	29,0	42	0,097	50	0698050
Hammer head screw	M12x70	35x18x6	3	37	49,0	62	0,111	50	0698070

Threaded plate



Threaded plate

Specification:

Mounting method: for glide fast connections and shear hole haunch connections with MEFA profile rails in combination with hexagon screws, threaded bolts or rods (property class 4.6), washers and hexagon nuts

Application area: for direct mounting of pipe clamps or bearing support

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

application loads see on page 2/13

02

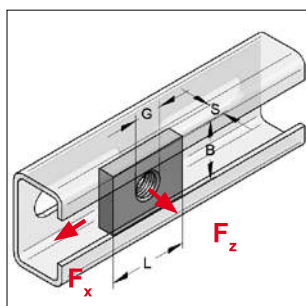
For profile rails 27/18

Description	Thread G	Dimension L x B x S [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Threaded plate 28 x 15	M8	24 x 13 x 4	0,008	100	0750069

For profile rail 35/21, 36/40, Stex 35/20, Stex 35/35, Stex 35/42

Threaded plate 38 x 17	M8	35 x 18 x 6	0,024	100	0750077
Threaded plate 38 x 17	M10	35 x 18 x 6	0,023	100	0750085
Threaded plate 38 x 17	M12	35 x 18 x 6	0,022	100	0750093

Threaded square plate



Threaded square plate

Specification:

Mounting method: for glide fast connections and shear hole haunch connections with MEFA profile rails in combination with hexagon screws, threaded pins or rods (property class 4.6), washers and hexagon nuts

Application area: for mounting of connecting parts and profile rails

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized¹⁾

application loads see on page 2/13

¹⁾ Components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

For profile rail 22 mm

Description	Dimension L x B x S [mm]	Thread G	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Threaded square plate	17 x 17 x 5	M6	0,011	100	0740012
Threaded square plate	17 x 17 x 5	M8	0,010	100	0740020
Threaded square plate	17 x 17 x 5	M10	0,010	100	0740039

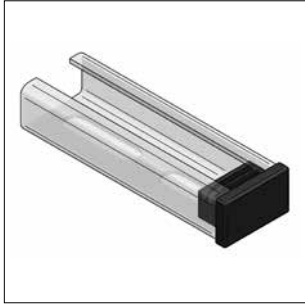
For profile rail 27, 35, 36 mm

Threaded square plate	30 x 22 x 6	M8	0,030	100	0750808
Threaded square plate	30 x 22 x 6	M10	0,029	100	0750810

For profile rail 35, 36 mm (*should not be used for STEX 35/20 and 35/35)

Threaded square plate	35 x 30 x 6	M8	0,048	50	0816112
Threaded square plate	35 x 30 x 6	M10*	0,047	50	081612001
Threaded square plate	35 x 30 x 6	M12*	0,046	50	081613801
Threaded square plate	35 x 30 x 8	M16*	0,058	50	0816146

■ Protecting cap



Protecting cap

Specification:

Profile rail type: C-Profile 27/18, 35/21, 36/40
 Profile rail type: 27 mm, 35 mm, 36 mm

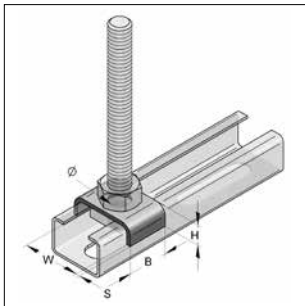
Technical data:

Material: plastic PE
 Material colour: black

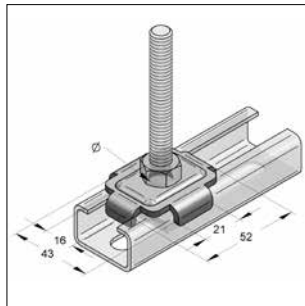
02

Description	For profile rail	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Protecting cap	27/18	0,005	50	0809032
Protecting cap	35/21	0,006	50	0809012
Protecting cap	36/40	0,009	50	0809045

■ Profile holder



Profile holder



Profile holder combi

Specification:

Profile rail type: C-Profile 22, 27, 35, 36, STEK 35
 C-Profile 45

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized¹⁾

¹⁾ Components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

For profile rail 22

Description	W [mm]	B [mm]	Dimension hole-Ø [mm]	H [mm]	S [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Profile holder 22	23,0	20	10,5	10	2	0,013	100	0809502

For profile rail 27

Profile holder 27	28,0	20	10,5	8	2	0,013	100	0809504
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For profile rail 35, 36, 45 mm and STEK 35


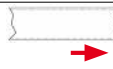
Profile holder combi 11	-	-	11,0	-	-	0,049	100	08095035
Profile holder combi 13	-	-	13,0	-	-	0,047	100	08162945



■ Admissible loading capacity



 global safety coefficient $\gamma = 2$



02

Profile rail pre-galvanized	STEX threaded bolt, threaded plate			
				
	F_z [kN]	F_x [kN]	M10 4.6 [Nm]	M8 4.6 [Nm]
STEX 35/20/0,8	1,5	0,4	12	10
STEX 35/35/1,0		0,5		
STEX 35/42/1,5				

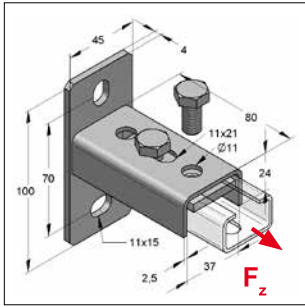
Profile rail pre-galvanized	Threaded plate 28 x 15 (24 x 13 x 4)		
			
	F_z [kN]	F_x [kN]	M8 4.6 [Nm]
27/18/1,25	1,4	0,5	10

Profile rail pre-galvanized	Threaded plate 38 x 17 (35 x 18 x 6)				
					
	F_z [kN]	F_x [kN]	M12 4.6 [Nm]	M10 4.6 [Nm]	M8 4.6 [Nm]
35/21/2,0	1,8	0,5	30	25	20
36/40/2,0					
STEX 35/20/0,8					
STEX 35/35/1,0					
STEX 35/42/1,5					

Profile rail pre-galvanized	Threaded square plate 17 x 17 (17 x 17 x 5)				
					
	F_z [kN]	F_x [kN]	M12 4.6 [Nm]	M10 4.6 [Nm]	M8 4.6 [Nm]
22/16/2,0	4,5	0,5	20	15	10

Profile rail pre-galvanized	Threaded square plate 30 x 22 (30 x 22 x 6)				
					
	F_z [kN]	F_x [kN]	M12 4.6 [Nm]	M10 4.6 [Nm]	M8 4.6 [Nm]
27/18/1,25	2,7	0,5	30	25	20
35/21/2,0	4,3				
36/40/2,0					

Holder 35



Holder 35 vertical

Specification:

Profile rail type: 35, 36 and Stex 35/20, 35/35, 35/42
 Scope of delivery: completely pre-assembled with 2-hole-threaded plate M10 and hexagon screws M10

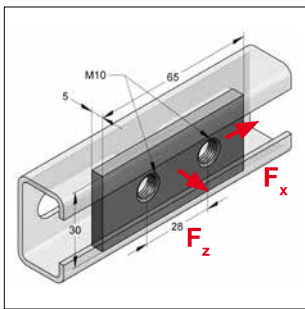
Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

* Loads are based on component, not connection

Description	Dimension base plate	tightening torque [Nm]	max. load * F_z [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Holder 35 vertical	100 x 45 x 4,0 mm	25	2,0	0,374	25	080213402
Holder 35 horizontal	100 x 45 x 4,0 mm	25	2,0	0,374	25	080213502

2-hole threaded plate



2-hole threaded plate 35/4

Specification:

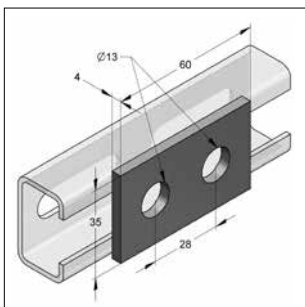
Profile rail type: 35, 36 and Stex 35/20, 35/35, 35/42
 Application area: for mounting of connecting parts and profile rails

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

Description	Dimension [mm]	Thread	tightening torque [Nm]	max. load F_x [kN]	max. load F_z [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
2-hole threaded plate	65 x 30 x 5	M10	25	1,1	5,0	0,072	50	0816092

2-hole plate 35/4



2-hole plate 35/4

Specification:

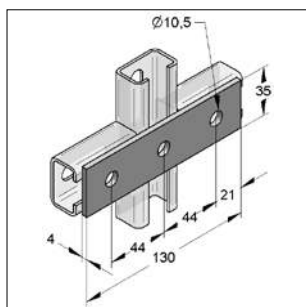
Profile rail type: 35, 36 and Stex 35/20, 35/35, 35/42
 Application area: for connections between profile rails and components

Technical data:

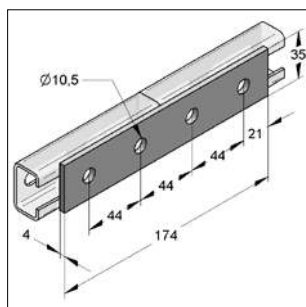
Material: steel
 Material type: S235JR
 Surface: galvanized

Description	Dimension	Weight [kg/pc.]	Packing [pcs.]	Part-No.
2-hole plate 35/4	60 x 35 x 4	0,059	50	0816086

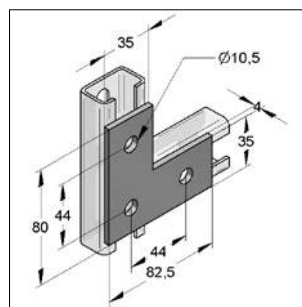
Flat connector 35/4



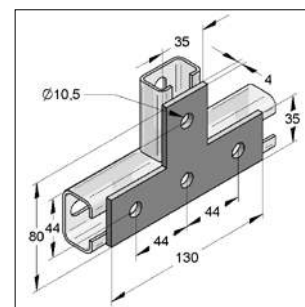
3-hole flat connector 35/4



4-hole flat connector 35/4



Flat connector 35/4 L-shape



Flat connector 35/4 T-shape

Specification:

Profile rail type: 35, 36 and Stex 35/20, 35/35, 35/42

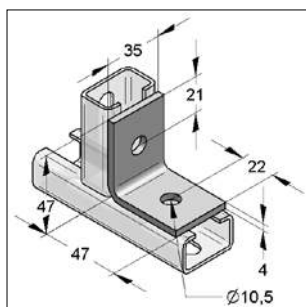
Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

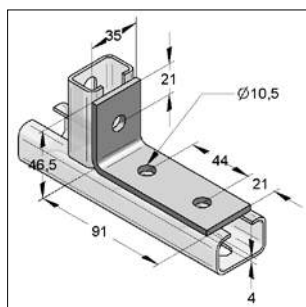
Remark: admissible loads are depending on component.

Description	Dimension [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
3-hole flat connector 35/4	130 x 35 x 4	0,138	25	0814457
4-hole flat connector 35/4	174 x 35 x 4	0,184	25	0814465
Flat connector 35/4 L-shape	82,5 x 80 x 4	0,135	25	0814430
Flat connector 35/4 T-shape	130 x 80 x 4	0,185	25	0814449

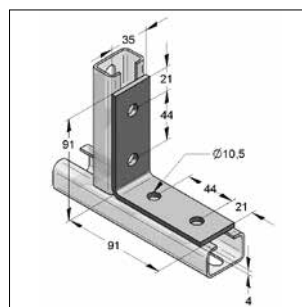
Angle 35/4



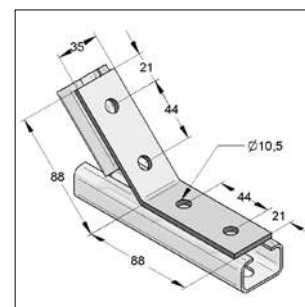
2-hole angle 35/4



3-hole angle 35/4 K



4-hole angle 35/4 90°



4-hole angle 35/4 135°

Specification:

Profile rail type: 35, 36 and Stex 35/20, 35/35, 35/42

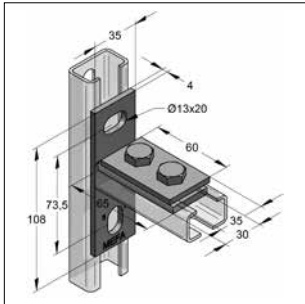
Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

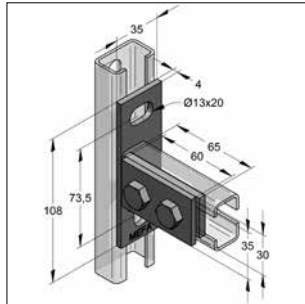
Remark: admissible loads are depending on component.

Description	Dimension [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
2-hole angle 35/4	47 x 47	0,094	100	0814510
3-hole angle 35/4 K	91 x 47	0,139	50	0814520
4-hole angle 35/4 90°	91 x 91	0,185	50	0814530
4-hole angle 35/4 135°	88 x 88	0,185	50	0814540

Connector 35



Connector 35 horizontal



Connector 35 vertical

Specification:

Profile rail type: 35, 36 and Stex 35/20, 35/35, 35/42

Scope of supply: 2-hole plate 13 mm
hexagon screw M10

Remark: - not applicable as ceiling support
or vertical use (hanging)
- no use as console connection

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

Description	Screws	Plate L x B x S [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Connector 35 horizontal	M10	108 x 35 x 4	0,283	20	081645302
Connector 35 vertical	M10	108 x 35 x 4	0,283	20	081655802

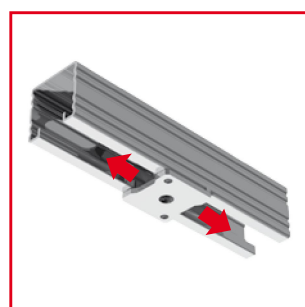
Quick-fixing system Stex 45



Insert Stex in



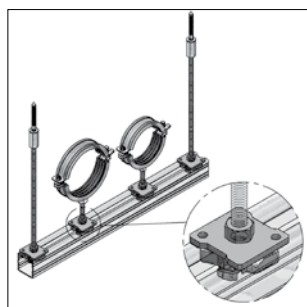
Turn Stex



Position Stex



Counter Stex with nut

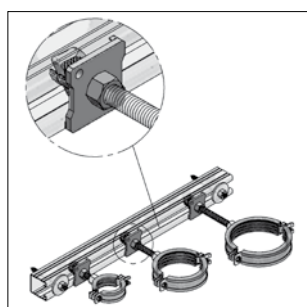


■ Stex 45 threaded plate GP

optional with connection M8, M10 or M12

Your advantages:

- tooth and counter plate can be replaced by one-part STEX 45 threaded plate
- insert STEX 45 threaded plate into profile rail, turn it about 45°, plug threaded pin and counter nut in and screw pipe clamp onto profile rail
- tooth plate guarantees a form-locking connection with profile rail
- after turning, STEX 45 threaded plate automatically locks in profile rail
- after turning, STEX 45 threaded plate can be positioned in profile rail by moving
- threaded pins or threaded rods can be turned in easily

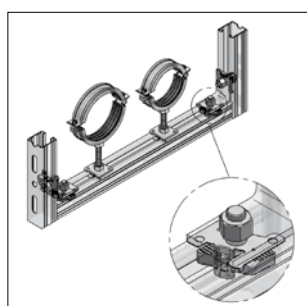


■ Stex 45 threaded bolt GB

optional with threaded pin M8, M10 or M12

Your advantages:

- tooth and counter plate, as well as threaded pin can be replaced by one-part STEX 45 threaded bolt
- insert STEX 45 threaded bolt into profile rail, turn it about 45°, plug threaded pin and counter nut in and screw pipe clamp onto profile rail
- length- and height differences up to 30 mm can be balanced without any tools
- due to different bolt lengths, differences up to 130 mm can be realised

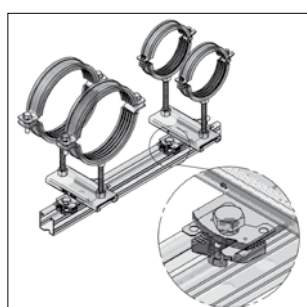


■ Stex 45 mounting bolt MTB

for mounting the rail constructions

Your advantages:

- insert mounting bolt into profile rail, turn it about 45°, position component and counter nut
- circumstantial insertion of tooth bolts and tooth plates is not necessary
- profile rail keeps components on its own
- simplifies mounting of connection parts in rail constructions



■ Stex 45 mounting plate MP


















for mounting the rail constructions or add-on-part

Your advantages:

- insert mounting bolt into profile rail, turn it about 45°, position component and screw the bolt
- circumstantial insertion of tooth bolt and tooth plates is not necessary
- profile rail keeps on its own, no holder necessary
- simplifies mounting of add-on-parts like sliding elements or connection parts in rail constructions

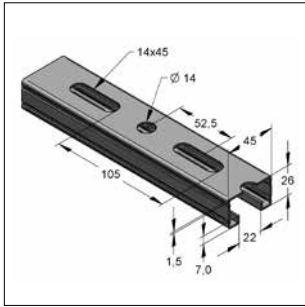
System components		Profile type						Recommended connecting parts				
		45/45	45/60	45/75	45/90	45/120	45/150	Mounting plate M12	Mounting bolt	Tooth plate M12	Threaded square plate M12	2-hole tooth plate M12
Identification - catalogue page		Part-No.										
	2-hole angle 40/5	081402400	■	■	■	■	■	○	●	○	□▲○	
	Page 2/34							Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	Quantity: 2 scope of delivery with nut	Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	
	3-hole angle 40/5	L 08140300 K 08140400	■	■	■	■	■	○	●	○	□▲○	▲○
	Page 2/34							Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 scope of delivery with nut	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 1 1 Mounting bolt 3 hex. screws M12x25
	4-hole angle 40/5	45° 08141000 90° 08140500 135° 08140600	■	■	■	■	■	○	●	○	□▲○	○
	Page 2/34							Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 scope of delivery with nut	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 4 hex. screws 8.8 M12x25
	4-hole knot triangle	08140701	■	■	■	■	■	○	●	○	□▲○	○
	Page 2/33							Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 scope of delivery with nut	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 4 hex. screws 8.8 M12x25
	Universal knot	08141600										
	Page 2/32											
	5-hole knot triangle	08141701	■	■	■	■	■	○	●	○	□▲○	○
	Page 2/33							Quantity: 5 Accessory: 5 hex. screws 8.8 M12x25	Quantity: 5 scope of delivery with nut	Quantity: 5 Accessory: 5 hex. screws 8.8 M12x25	Quantity: 5 Accessory: 5 hex. screws 8.8 M12x25	Quantity: 2+ 1 Mounting bolt Accessory: 5 hex. screws M12x25
	3-hole flat connector	0814331	■	■	■	■	■	○	●	○	▲○	
	Page 2/33							Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 scope of delivery with nut	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x2	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	
	4-hole flat connector	0814349	■	■	■	■	■	○	●	○	▲○	
	Page 2/33							Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 scope of delivery with nut	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	
	Flat connector 40/6 L-shape	0814307	■	■	■	■	■	○	●	○	▲○	
	Page 2/33							Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 scope of delivery with nut	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	
	Flat connector 40/6 T-shape	0814315	■	■	■	■	■	○	●	○	▲○	
	Page 2/33							Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 scope of delivery with nut	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	
	Universal knot K	08141601	■	■	■	■	■	○	●	○	○	
	Page 2/32							Quantity: 2 Accessory: 2 6 hex. screws 8.8 M12x25 *	Quantity: 2 scope of delivery with nut *	Quantity: 2 Accessory: 2 6 hex. screws 8.8 M12x25 *	Quantity: 2 Accessory: 2 6 hex. screws 8.8 M12x25*	
	4-hole corner angle left	08147100	■	■	■	■	■	○	●	○	▲○	▲○
	Page 2/35							Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 scope of delivery with nut	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 4 hex. screws 8.8 M12x25
	4-hole corner angle right	08147200										
	Page 2/35											
	Cross strap	0816582	■	■	■	■	■	□○	□○	●	▲○□	▲●
	Page 2/35							Quantity: 5 Accessory: 5 hex. screws 8.8 M12x25	Quantity: 5 scope of delivery with nut	Quantity: 6 Accessory: 6 hex. screws 8.8 M12x25	Quantity: 5 Accessory: 5 hex. screws 8.8 M12x25	Quantity: 2+ 2 Mounting bolt + 6 hex. screws M12x25

■ standard □ conditional ● optimal ○ alternative ▲ suitable for bolting in profile

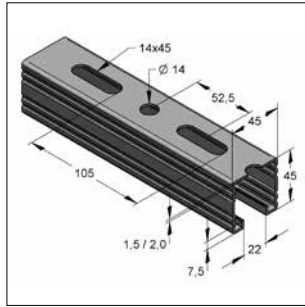
System components		Profile type						Recommended connecting parts				
		45/45	45/60	45/75	45/90	45/120	45/150	Mounting plate M12	Mounting bolt	Tooth plate M12	Threaded square plate M12	2-hole tooth plate M12
												
Identification - catalogue page		Part-No.						1280012	1280001	0818103	081613801	0818110
	T-lug not angled	0816574	■	■	■	■	■	□ ○	□ ○	●	□ ▲ ○	▲ ●
	90° angled	0816870						Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 scope of delivery with nut	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 1 2 threaded plate 4 hex. screws M12x25
	4-hole corner plate	08165900	■	■	■	■	■	○	●	○	▲ ○	▲ ○
								Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 scope of delivery with nut	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 2 4 hex. screws M12x25
	Angle connector	08123000	■	■	■	■	■	○	●	○	▲ ○	▲ ○
	Angle connector 90°	08123200	■	■	■	■	■	Quantity: 2 Accessory: 2 hex. screws M12x25	Quantity: 2 scope of delivery with nut	Quantity: 2 Accessory: 2 hex. screws M12x25	Quantity: 2 Accessory: 2 hex. screws M12x25	Quantity: 1 Accessory: 2 hex. screws M12x25
	Angle connector 180°	08123100	■	■	■	■	■					
	Head profile 45	08162445	■					○	●	○		
	60	0816253		■				Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 scope of delivery with nut	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25		
	75	08162875			■							
	90	08162690				■						
	120	0816274					■					
150	081628150						■					
	3-hole corresp. angle 45	08141245	■					○	●	○	▲ ○	▲ ○
	3-hole corresp. angle 60	08141300		■				Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 scope of delivery with nut	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 1 1 Mounting bolt 3 hex. screws M12x25
	Profile holder combi							○		●	○	
	13 mm - hole Ø	08162945	■	■	■	■	■	Quantity: 1 Accessory: 1 hex. screw 8.8 M12x30 + H		Quantity: 1 Accessory: 1 hex. screw M12x30 + H	Quantity: 1 Accessory: 1 hex. screw M12/16x30+H	
	17 mm - hole Ø	08163365	■	■	■	■	■					
	Connector							○	●	○	□ ○ ▲	▲ ○
	45	08162000	■	■	■	■	■	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 scope of delivery with nut	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 4 hex. screws 8.8 M12x25
	Holder							●	□ ○	○	▲ ○	●
	45/26-52 vertical	08120102	■					Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	Quantity: 2 scope of delivery with nut	Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	Quantity: 1 Accessory: 2 hex. screws 8.8 M12x25
	45/26-75 horizontal	08120402	■	■	■	□	□					
45/60-75 vertical	08121802	□	■	■								
	Holder							●		○	○	○ ●
	45/90	08120952				■		Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25		Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 4 Accessory: 4 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 4 hex. screws 8.8 M12x25
	45/120	08121002					■					
45/150	08121452						■					
	Joint holder							○	●	○	▲ ○	▲ ○
	vertical	08120600	■	■	■	□	□	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 scope of delivery with nut	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 3 Accessory: 3 hex. screws 8.8 M12x25	Quantity: 1+ 1 Mounting bolt Acc.: 3 hex. screws M12x25
horizontal	08121100	■	■	■	□	□						
	Joint holder with base plate	08122600	■	■	■	□	□	○	●	○	▲ ○	▲ ○
	vertical	08122500						Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	Quantity: 2 scope of delivery with nut	Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	Quantity: 2 Accessory: 2 hex. screws 8.8 M12x25	Quantity: 1 Accessory: 2 hex. screws 8.8 M12x25
	Connector	Page 2/36										
	Joint holder	Page 2/44										
	Joint connector	Page 2/41										

■ standard □ conditional ● optimal ○ alternative ▲ suitable for bolting in profile

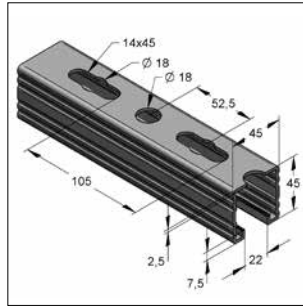
Profile rail 45, galvanized, C-profile rail, perforated, toothed



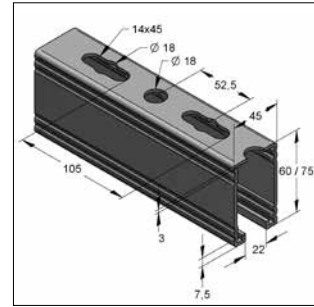
Type 45/26/1,5



Type 45/45/1,5
and Type 45/45/2,0



Type 45/45/2,5



Type 45/60/3,0
and Type 45/75/3,0

Specification:

Profile rail type: C-profile rail, perforated, toothed
Mounting method: form-locking connections and shear hole haunch connections

Remark: double rails are perforated and welded

Technical data:

Material: steel
Material type: S250GD-Z275-N-A
Surface: pre-galvanized
Material type: S235JRG2
Surface: hot-dip galvanized



¹⁾ variations up to 1 mm at hot-dip galvanized elements possible

³⁾ Load calculation acc. DIN EN 1993-1-2 (EC3)

²⁾ not certified acc. RAL



Type 45/26

Identification	Surface	Weight [kg/m]	Length [m]	Bulk pack [m]	Part-No.
45/26/1,5 fbv	pre-galv.	1,34	2	120	08202622
45/26/1,5 fbv	pre-galv.	1,34	6	360	08202662

Type 45/45

45/45/1,5 fbv	pre-galv.	1,89	2	80	082045215
45/45/1,5 fbv	pre-galv.	1,89	6	240	082045615
45/45/2,0 fbv ³⁾	pre-galv.	2,45	2	80	082045220
45/45/2,0 fbv ³⁾	pre-galv.	2,45	6	240	082045620
45/45/2,5 fbv ³⁾	pre-galv.	2,96	3	120	0820453251
45/45/2,5 fbv ³⁾	pre-galv.	2,96	6	240	0820456251
45/45/2,5 fsv ^{1) 3)}	hot-dip galv.	3,21	3	120	0820453252
45/45/2,5 fsv ^{1) 3)}	hot-dip galv.	3,21	6	240	0820456252

Type 45/60

45/60/3,0 fbv ³⁾	pre-galv.	4,06	6	180	0810762
45/60/3,0 fsv ^{1) 3)}	hot-dip galv.	4,35	6	180	0810770

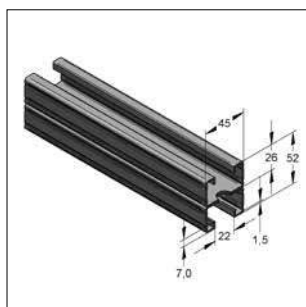
Type 45/75

45/75/3,0 fbv ³⁾	pre-galv.	4,82	6	180	08207562
45/75/3,0 fsv ^{1) 2) 3)}	hot-dip galv.	5,15	6	180	08207561

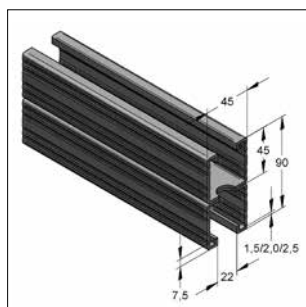
i technical overview of profile rails see on page 2/58
profile rails made of stainless steel V2A or V4A see in chapter 13
profile rails with various coatings on request

Profile rail 45, galvanized, C-profile rail, perforated, toothed

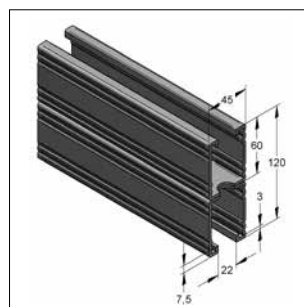
02



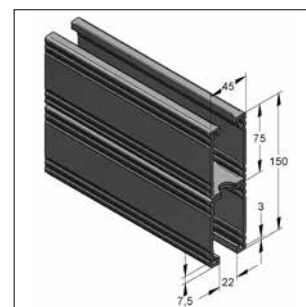
Type 45/52



Type 45/90



Type 45/120



Type 45/150

Specification:

Profile rail type: C-profile rail, perforated, toothed
 Mounting method: form-locking connections and shear hole haunch connections

Remark: double rails are perforated and welded

Technical data:

Material: steel
 Material type: S250GD-Z275-N-A
 Surface: pre-galvanized
 Material type: S235JRG2
 Surface: hot-dip galvanized



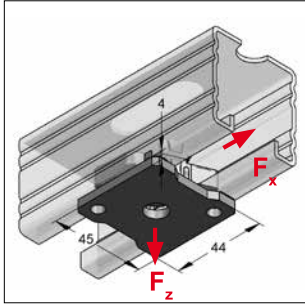
¹⁾ variations up to 1 mm at hot-dip galvanized elements possible
³⁾ Load calculation acc. DIN EN 1993-1-2 (EC3)

²⁾ not certified acc. RAL

Type 45/52					
Identification	Surface	Weight [kg/m]	Length [m]	Bulk pack [m]	Part-No.
45/52/1,5 D fbv ³⁾	pre-galv	2,69	6	180	08215262
Type 45/90					
45/90/1,5 D fbv ³⁾	pre-galv	3,78	6	120	0821901615
45/90/2,0 D fbv ³⁾	pre-galv	4,90	6	120	0821901620
45/90/2,5 D fbv ³⁾	pre-galv	5,92	6	120	0821901625
45/90/2,5 D fsv ^{1) 3)}	hot-dip galv	6,35	6	120	0821902625
Type 45/120					
45/120/3,0 D fbv ³⁾	pre-galv	8,12	6	96	0810825
45/120/3,0 D fsv ^{1) 3)}	hot-dip galv	8,63	6	96	0810833
Type 45/150					
45/150/3,0 D fbv ³⁾	pre-galv	9,64	6	96	08225062
45/150/3,0 D fsv ^{1) 2) 3)}	hot-dip galv	10,24	6	96	08225061

Technical overview of profile rails see on page 2/58

■ STEX 45 threaded plate GP



Specification:
 Profile rail type: rail system 45, toothed
 Mounting method: form-locking connections and shear hole haunch connections
 Applications area: pipe clamp fixation

Technical data:
 Material: steel
 Material type: S235JR
 Surface: galvanized

application loads see on page 2/27

* not certified acc. to RAL

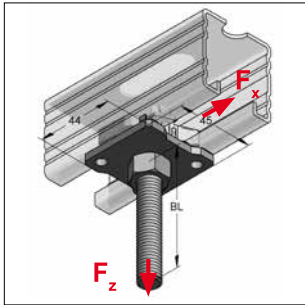
Stex 45 threaded plate GP

Identification

Stex 45 threaded plate GP M8*
 Stex 45 threaded plate GP M10
 Stex 45 threaded plate GP M12

Weight [kg/pc.]	Packing [pcs.]	Part-No.
0,113	30	1280508
0,111	30	1280510
0,108	30	1280512

■ STEX 45 threaded bolt GB



Stex 45 threaded bolt GB

Specification:
 Profile rail type: rail system 45, toothed
 Mounting method: form-locking connections and shear hole haunch connections
 Applications area: pipe clamp fixation

Technical data:
 Material: steel
 Material type: S235JR
 Surface: galvanized
 Threaded bolt: property class 4.6

application loads see on page 2/29

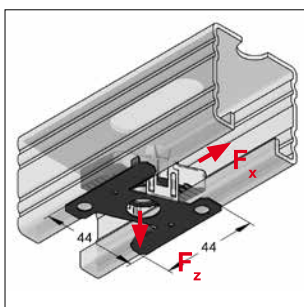
Identification

Stex 45 threaded bolt GB M8/50
 Stex 45 threaded bolt GB M8/70
 Stex 45 threaded bolt GB M8/90
 Stex 45 threaded bolt GB M8/110
 Stex 45 threaded bolt GB M8/130
 Stex 45 threaded bolt GB M10/50
 Stex 45 threaded bolt GB M10/70
 Stex 45 threaded bolt GB M10/90
 Stex 45 threaded bolt GB M10/110
 Stex 45 threaded bolt GB M10/130
 Stex 45 threaded bolt GB M12/50
 Stex 45 threaded bolt GB M12/70
 Stex 45 threaded bolt GB M12/90
 Stex 45 threaded bolt GB M12/110
 Stex 45 threaded bolt GB M12/130

Construction length
 BL
 [mm]

Weight [kg/pc.]	Packing [pcs.]	Part-No.
0,134	40	1281050
0,141	20	1281070
0,147	20	1281090
0,154	20	1281110
0,160	20	1281130
0,147	40	1282050
0,157	20	1282070
0,166	20	1282090
0,178	20	1282110
0,188	20	1282130
0,159	40	1283050
0,174	20	1283070
0,189	20	1283090
0,203	20	1283110
0,218	20	1283130

■ STEX 45 mounting plate MP



Stex 45 mounting plate MP



Specification:

Profile rail type: rail system 45, toothed
 Mounting method: form-lock connections and shear hole haunch connections
 Applications area: connecting parts
 Required accessory: hexagon screw FK 8.8

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

application loads see on page 2/27

* not certified acc. to RAL

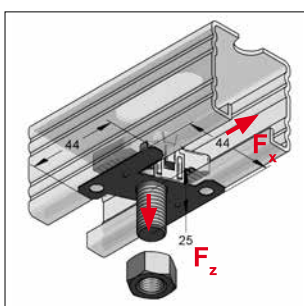
02

Identification

Stex 45 mounting plate MP M6*
 Stex 45 mounting plate MP M8*
 Stex 45 mounting plate MP M10
 Stex 45 mounting plate MP M12

Weight [kg/pc.]	Packing [pcs.]	Part-No.
0,059	30	1280006
0,058	30	1280008
0,056	30	1280010
0,053	30	1280012

■ STEX 45 mounting bolt MTB



Stex 45 mounting bolt MTB
 incl. nut M12



Specification:

Profile rail type: rail system 45, toothed
 Mounting method: form-lock connections and shear hole haunch connections
 Applications area: connecting parts

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized
 Threaded bolt: property class 8.8

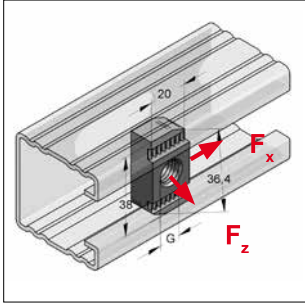
application loads see on page 2/27

Identification

Stex 45 mounting bolt MTB M12x40

Weight [kg/pc.]	Packing [pcs.]	Part-No.
0,099	40	1280001

■ Tooth plate S



Tooth plate S



Specification:

Profile rail type: rail system 45, toothed
 Mounting method: form-lock connections and shear hole haunch connections
 Applications area: connecting parts, pipe clamp fixation
 Required accessory: hexagon screw, threaded pin or -rod, washer and hexagon nut

Technical data:

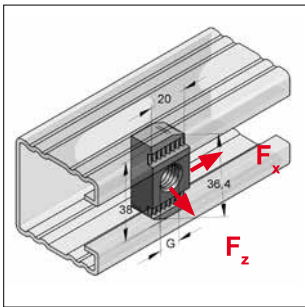
Material: steel
 Material type: S235JR
 Surface: galvanized

application loads see on page 2/27

* not certified acc. to RAL

Identification	Dimension L x W [mm]	Thread G	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Tooth plate	34 x 21	M6*	0,053	100	0818000
Tooth plate S	36 x 20	M8*	0,060	100	0818101
Tooth plate S	36 x 20	M10	0,058	100	0818102
Tooth plate S	36 x 20	M12	0,056	100	0818103

■ Tooth plate S Zinc-Nickel



Tooth plate S Zinc-Nickel



Specification:

Profile rail type: rail system 45, toothed
 Mounting method: form-lock connections and shear hole haunch connections
 Applications area: connecting parts, pipe clamp fixation, hot-dip galvanized profile rail for outside application
 Required accessory: hexagon screw, threaded bolt or -rod, washer and hexagon nut

Technical data:

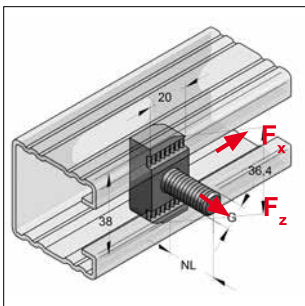
Material: steel
 Material type: S235JR
 Surface: zinc-nickel

application loads see on page 2/27

* not certified acc. to RAL

Identification	Dimension L x W [mm]	Thread G	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Tooth plate S Zinc-Nickel	34 x 20	M8*	0,042	100	081810101/zn
Tooth plate S Zinc-Nickel	36 x 20	M10	0,058	100	0818102/zn
Tooth plate S Zinc-Nickel	36 x 20	M12	0,056	100	0818103/zn

■ Tooth bolt



Tooth bolt



Specification:

Profile rail type: rail system 45, toothed
 Mounting method: form-lock connections and shear hole haunch connections
 Applications area: connecting parts, pipe clamp fixation
 Required accessory: washer and hexagon nut

Technical data:

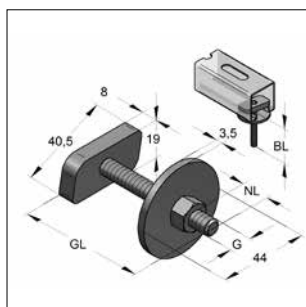
Material: steel
 Material type: S235JR
 Surface: galvanized
 Tooth bolt: property class 8.8

application loads see on page 2/27

* not certified acc. to RAL

Identification	Usable length NL [mm]	Thread G	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Tooth bolt	17,5	M8*	0,072	100	0816936
Tooth bolt	17,5	M10	0,070	100	0816944
Tooth bolt	22,5	M12	0,085	100	0816952

■ Hammer head screw 45



Hammer head screw

Specification:

Profile rail type: rail system 45
 Mounting method: glide fast connections and shear hole haunch connections
 Applications area: pipe clamp fixations

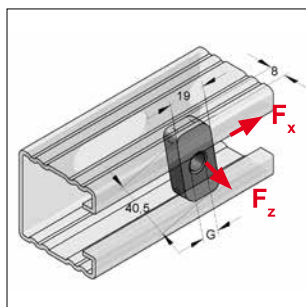
Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

¹⁾ not in combination with thread M8/10
²⁾ not in combination with thread M10/12

Identification	Thread GxGL [mm]	Construction length BL [mm]	Usable length NL [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Hammer head screw	M8x35 ¹⁾	19,5	9,5	0,099	50	0698735
Hammer head screw	M8x40	24,5	14,5	0,101	50	0698740
Hammer head screw	M8x50	34,5	24,5	0,104	50	0698750
Hammer head screw	M8x70	54,5	44,5	0,111	50	0698770
Hammer head screw	M10x35 ²⁾	19,5	8,0	0,109	50	0699235
Hammer head screw	M10x50	34,5	23,0	0,117	50	0699250
Hammer head screw	M10x70	54,5	43,0	0,127	50	0699270
Hammer head screw	M12x40	25,0	11,0	0,123	50	0699740
Hammer head screw	M12x50	35,0	21,0	0,130	50	0699750
Hammer head screw	M12x70	55,0	41,0	0,145	50	0699770

■ Threaded plate



Threaded plate

Specification:

Profile rail type: rail system 45
 Mounting method: glide fast connections and shear hole haunch connections
 Applications area: pipe clamp fixation
 Required accessory: hexagon screw, threaded bolt or -rod, washer and hexagon nut

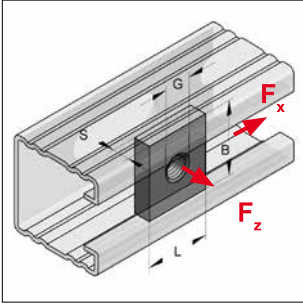
Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

application loads see on page 2/29

Identification	Type	Thread G	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Threaded plate	40 x 22	M8	0,043	100	0750107
Threaded plate	40 x 22	M10	0,041	100	0750115
Threaded plate	40 x 22	M12	0,040	100	0750123

■ Threaded square plate



Threaded square plate

Specification:

Profile rail type: rail system 45
 Mounting method: glide fast connections and shear hole haunch connections
 Applications area: connecting parts, can be mounted on bottom of profile
 Required accessory: hexagon screw property class 8.8, threaded bolt or- rod, washer and hexagon nut

Technical data:

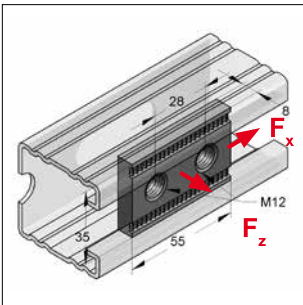
Material: steel
 Material type: S235JR
 Surface: galvanized

application loads see on page 2/29

For profile rail width 45 mm

Identification	Dimension L x B x S [mm]	Thread G	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Threaded square plate	30 x 35 x 6	M8	0,048	50	0816112
Threaded square plate	30 x 35 x 6	M10	0,047	50	081612001
Threaded square plate	30 x 35 x 6	M12	0,046	50	081613801
Threaded square plate	30 x 35 x 8	M16	0,058	50	0816146

■ 2-hole tooth plate



2-hole tooth plate



Specification:

Profile rail type: rail system 45
 Mounting method: form-lock connections and shear hole haunch connections
 Applications area: connecting parts, threaded plate can be mounted on bottom of profile rail
 Required accessory: hexagon screw property class 8.8, washer and hexagon nut

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized¹⁾



application loads see on page 2/27



¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!



Identification	Dimension L x W x T	Thread	Weight [kg/pc.]	Packing [pcs.]	Part-No.
2-hole tooth plate	55 x 35 x 8	M12	0,106	50	0818110

■ Admissible loading capacity according to RAL-GZ 655-D

in combination with STEX 45, 2-hole tooth plate, tooth plate S, tooth bolt
global safety coefficient $\gamma = 2$

Profile rail pre-galvanized	STEX 45 threaded bolt, STEX 45 mounting plate, STEX 45 mounting bolt			
			M12 8.8	M10 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]	tightening torque [Nm]
45/26/1,5	4,11	3,86	50	45
45/52/1,5 D				
45/45/1,5				
45/90/1,5 D				
45/45/2,0				
45/90/2,0 D				
45/45/2,5	10,94	4,41	50	45
45/90/2,5 D				
45/60/3,0				
45/120/3,0 D				
45/75/3,0				
45/150/3,0 D				



Profile rail pre-galvanized	2-hole tooth plate		
			M12 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]
45/26/1,5	5,57	10,00	60
45/52/1,5 D			
45/45/1,5			
45/90/1,5 D			
45/45/2,0			
45/90/2,0 D			
45/45/2,5	13,97	12,81	60
45/90/2,5 D			
45/60/3,0			
45/120/3,0 D			
45/75/3,0			
45/150/3,0 D			



Profile rail pre-galvanized	Tooth plate S, tooth bolt			
			M12 8.8	M10 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]	tightening torque [Nm]
45/26/1,5	4,50	3,91	60	50
45/52/1,5 D				
45/45/1,5				
45/90/1,5 D				
45/45/2,0				
45/90/2,0 D				
45/45/2,5	13,86	4,32	60	50
45/90/2,5 D				
45/60/3,0				
45/120/3,0 D				
45/75/3,0				
45/150/3,0 D				


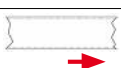
Admissible loading capacity according to RAL-GZ 655-D

in combination with STEX 45, 2-hole tooth plate, tooth plate S, tooth bolt
global safety coefficient $\gamma = 2$

02

Profile rail hot-dip galvanized	STEX 45 threaded bolt, STEX 45 mounting plate, STEX 45 mounting bolt			
			M12 8.8	M10 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]	tightening torque [Nm]
45/45/2,5	10,94	2,95	50	45
45/90/2,5 D				
45/60/3,0				
45/120/3,0 D				
45/75/3,0*				
45/150/3,0 D*				



Profile rail hot-dip galvanized	2-hole threaded plate		
			M12 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]
45/45/2,5	13,97	4,38	60
45/90/2,5 D			
45/60/3,0			
45/120/3,0 D			
45/75/3,0*			
45/150/3,0 D*			



Profile rail hot-dip galvanized	Tooth plate S, tooth bolt			
			M12 8.8	M10 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]	tightening torque [Nm]
45/45/2,5	13,86	2,90	60	50
45/90/2,5 D				
45/60/3,0				
45/120/3,0 D				
45/75/3,0*				
45/150/3,0 D*				



* without approval according to RAL-GZ 655-D

■ Admissible loading capacity

in combination with Stex45, threaded bolt GB, threaded plate, threaded square plate
global safety coefficient $\gamma = 2$

Profile rail pre-galvanized	STEX 45 GB, threaded bolt GB		
			M12 4.6
	F_z [kN]	F_x [kN]	tightening torque [Nm]
45/26/1,5	4,11	2,80	29
45/52/1,5 D			
45/45/1,5			
45/90/1,5 D			
45/45/2,0			
45/90/2,0 D			
45/45/2,5	9,54	2,80	
45/90/2,5 D			
45/60/3,0			
45/120/3,0 D			
45/75/3,0			
45/150/3,0 D			

Profile rail pre-galvanized	Threaded plate 40 x 22 (40,5 x 19 x 8)		
			M12 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]
45/26/1,5	4,24	1,10	40
45/52/1,5 D			
45/45/1,5			
45/90/1,5 D			
45/45/2,0			
45/90/2,0 D			
45/45/2,5	10,00	1,10	
45/90/2,5 D			
45/60/3,0			
45/120/3,0 D			
45/75/3,0			
45/150/3,0 D			



Profile rail pre-galvanized	Threaded square plate M10 and M12 35 x 30 x 6, (M16 35 x 30 x 8)*			
			M12 8.8 (M16 8.8)	M10 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]	tightening torque [Nm]
45/26/1,5	2,80 (3,23)*	1,45 (1,70)*	40 (60)*	35
45/52/1,5 D				
45/45/1,5				
45/90/1,5 D				
45/45/2,0				
45/90/2,0 D				
45/45/2,5	8,6 (8,8)*	1,75 (2,00)*		
45/90/2,5 D				
45/60/3,0				
45/120/3,0 D				
45/75/3,0				
45/150/3,0 D				



* Values in brackets only for M16 35 x 30 x 8


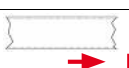
Admissible loading capacity

in combination with Stex45, threaded bolt GB, threaded plate, threaded square plate
global safety coefficient $\gamma = 2$

02

Profile rail hot-dip galvanized	STEX 45 GB, threaded bolt GB		
			M12 4.6
	F_z [kN]	F_x [kN]	tightening torque [Nm]
45/45/2,5	9,54	2,36	29
45/90/2,5 D			
45/60/3,0			
45/120/3,0 D			
45/75/3,0*			
45/150/3,0 D*			

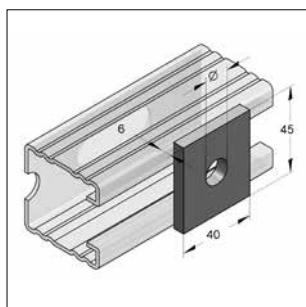
Profile rail hot-dip galvanized	Threaded plate 40 x 22		
			M12 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]
45/45/2,5	10,00	1,74	60
45/90/2,5 D			
45/60/3,0			
45/120/3,0 D			
45/75/3,0*			
45/150/3,0 D*			

Profile rail hot-dip galvanized	Threaded square plate M10 and M12 35 x 30 x 6, (M16 35 x 30 x 8)**			
			M12 8.8 (M16 8.8)	M10 8.8
	F_z [kN]	F_x [kN]	tightening torque [Nm]	tightening torque [Nm]
45/45/2,5	8,60 (8,80)**	1,60 (1,90)**	40 (60)**	35
45/90/2,5 D				
45/60/3,0				
45/120/3,0 D				
45/75/3,0*				
45/150/3,0 D*				

* without approval according to RAL-GZ 655-D

** Values in brackets only for M16 35 x 30 x 8

■ Perforated plate



Perforated plate

Specification:
Profile rail type: rail system 45

Technical data:
Material: steel
Material type: S235JR
Surface: galvanized¹⁾

¹⁾ components for outdoor application areas also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

02

Identification	Hole-Ø [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Perforated plate	13	0,081	50	0814016
Perforated plate	17	0,076	50	0814017

■ Protecting cap



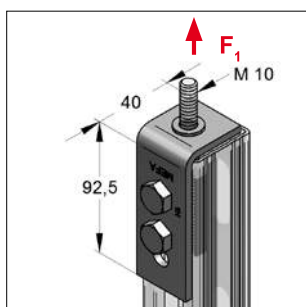
Protecting cap

Specification:
Profile rail type: rail system 45

Technical data:
Material: plastic PE
Material colour: black

Identification	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Protecting cap 45 / 26	0,007	50	0819005
Protecting cap 45 / 40 (for stainless steel profile rails)	0,010	50	0819032
Protecting cap 45 / 45	0,008	50	0819036
Protecting cap 45 / 60	0,015	50	0819042
Protecting cap 45 / 75	0,019	50	0819046

■ Head adapter



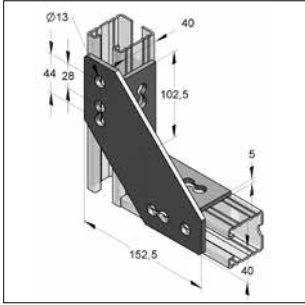
Head adapter K

Specification:
Profile rail type: rail system 45/45
Applications area: Connection angle for the head-side thread connection for 45-45 rails

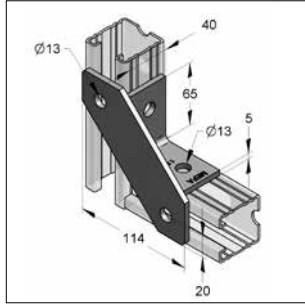
Technical data:
Material: steel
Material colour: S235JR
Surface: galvanized

Identification	thread	max. load F1 [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Head adapter K	M10	1,0	0,398	1	081656710

■ Universal knot



Universal knot



Universal knot K

Specification:

Profile rail type: rail system 45
 Applications area: corner joint of C-profile channels
 combination of knot triangle, corner lug and corner angle left and right

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized¹⁾

Loads referring to component, not to connection

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223).

Delivery time on demand!

²⁾ Remark: torque free rail connection.

Identification

Universal knot
Universal knot K*

Weight

[kg/pc.]

0,803
 0,445

Packing

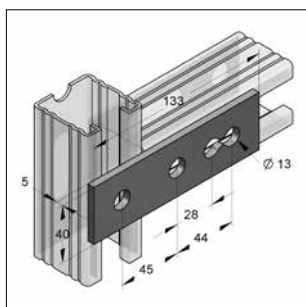
[pcs.]

10
 25

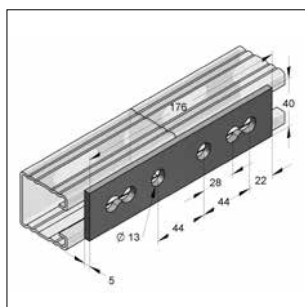
Part-No.

08141600
 08141601

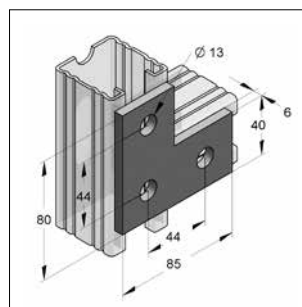
Flat connector



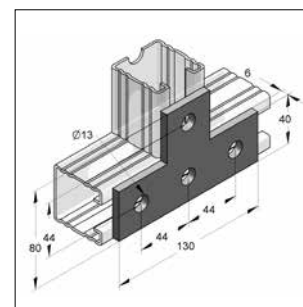
3-hole flat connector 40/5



4-hole flat connector 40/5



L-shaped flat connector 40/6



T-shaped flat connector 40/6

Specification:

Profile rail type: rail system 45

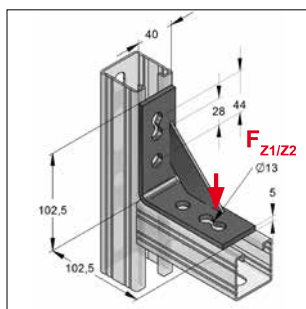
Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

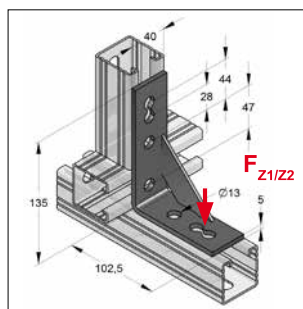
Remark: torque free rail connection

Identification	Dimension [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
3-hole flat connector 40/5	133 x 40 x 5	0,192	25	0814331
4-hole flat connector 40/5	176 x 40 x 5	0,250	25	0814349
Flat connector 40/6 L-shape	85 x 80 x 6	0,221	25	0814307
Flat connector 40/6 T-shape	130 x 80 x 6	0,301	25	0814315

Knot triangle



4-hole knot triangle 40/5



5-hole knot triangle 40/5

Specification:

Profile rail type: rail system 45

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized¹⁾

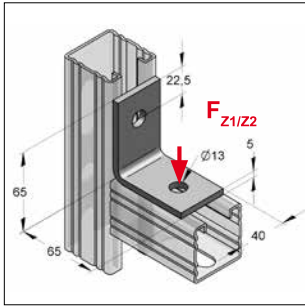
¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

²⁾ loads referring to component, not to connection

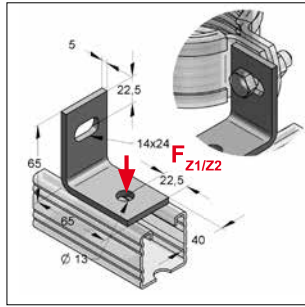
³⁾ loads referring to component, double-sided fixed on profile

Identification	Dimension L x W [mm]	Max. load		Weight [kg/pc.]	Packing [pcs.]	Part-No.
		$F_{Z1}^{2)}$ without profile rail [kN]	$F_{Z2}^{3)}$ with profile rail [kN]			
4-hole knot triangle 40/5	102,5 x 102,5	2,0	6,0	0,327	25	08140701
5-hole knot triangle 40/5	135 x 102,5	2,0	6,0	0,373	25	08141701

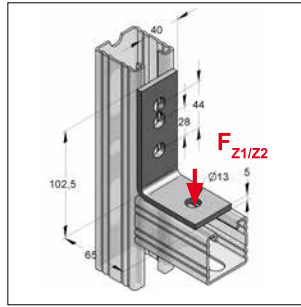
Angle 40/5



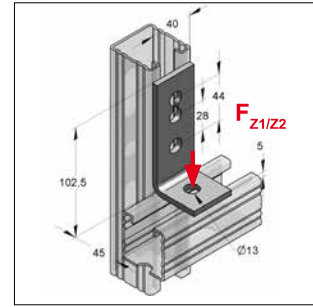
2-hole angle 40/5



2-hole angle 40/5,
with elongated hole, vertical



3-hole angle 40/5 L



3-hole angle 40/5 K

Specification:

Profile rail type: rail system 45

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

²⁾ loads referring to component, not to connection

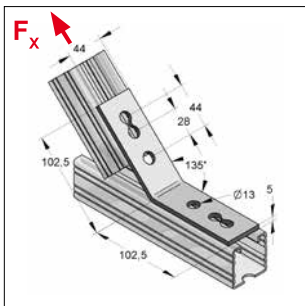
³⁾ loads referring to component, double-sided fixed on profile

Technical data:

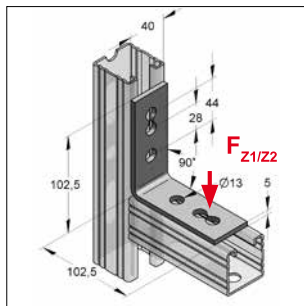
Material: steel
Material type: S235JR
Surface: galvanized¹⁾

Identification	Dimension [mm]	Max. load		Weight [kg/pc.]	Packing [pcs.]	Part-No.
		$F_{Z1}^{2)}$ without profile rail [kN]	$F_{Z2}^{3)}$ with profile rail [kN]			
2-hole angle 40/5	65 x 65	1,0	2,5	0,185	50	081402400
2-hole angle 40/5, elongated hole horizontal	65 x 65	1,0	2,5	0,178	50	08147300
3-hole angle 40/5 L	102,5 x 65	1,0	2,5	0,234	25	08140300
3-hole angle 40/5 K	102,5 x 45	1,0	2,5	0,202	50	08140400

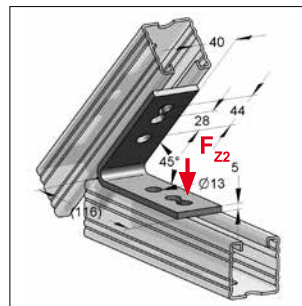
Angle 40/5



4-hole angle 40/5 135°



4-hole angle 40/5 90°



4-hole angle 40/5 45°

Specification:

Profile rail type: rail system 45

^{1), 3)} loads referring to component, not to connection

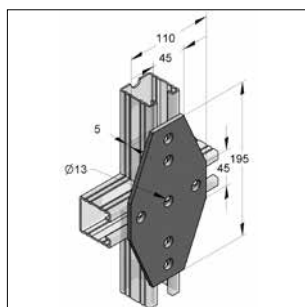
²⁾ loads referring to component, double-sided fixed on profile

Technical data:

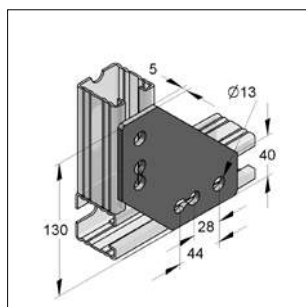
Material: steel
Material type: S235JR
Surface: galvanized

Identification	Dimension [mm]	Max. load			Weight [kg/pc.]	Packing [pcs.]	Part-No.
		$F_{Z1}^{1)}$ without profile rail [kN]	$F_{Z2}^{2)}$ with profile rail [kN]	$F_x^{3)}$ [kN]			
4-hole angle 40/5 135°	102,5 x 102,5	-	-	6,6	0,293	50	08140600
4-hole angle 40/5 90°	102,5 x 102,5	1,0	2,5	-	0,283	50	08140500
4-hole angle 40/5 45°	116 x 116	-	2,5	-	0,336	25	08141000

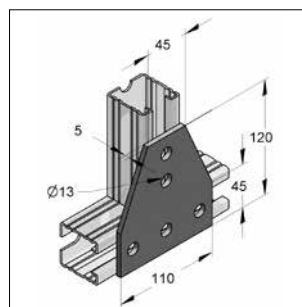
Lug



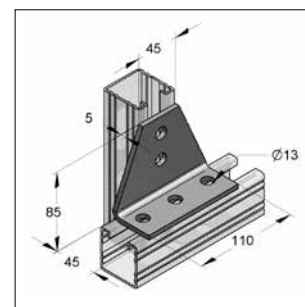
Cross strap



4-hole corner plate



T-lug, not angled



T-lug, angled

Specification:

Profile rail type: rail system 45

Technical data:

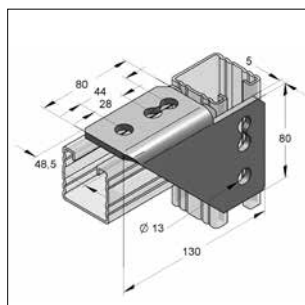
Material: steel
Material type: S235JR
Surface: galvanized¹⁾

Remark: admissible loads are dependant on component

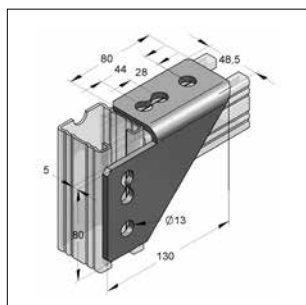
¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

Identification	Dimension L x W x T [mm]	Weight	Packing	Part-No.
		[kg/pc.]	[pcs.]	
Cross strap	195 x 110 x 5	0,626	10	0816582
4-hole corner plate	130 x 40 x 5	0,417	10	08165900
T-lug, not angled	120 x 110 x 5	0,404	25	0816574
T-lug 90° angled	85 x 110 x 5	0,404	25	0816870

Corner angle



4-hole corner angle right



4-hole corner angle left

Specification:

Profile rail type: rail system 45

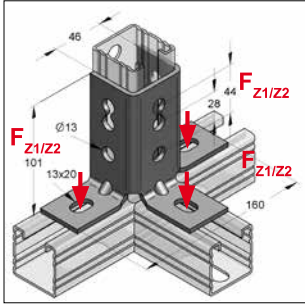
Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

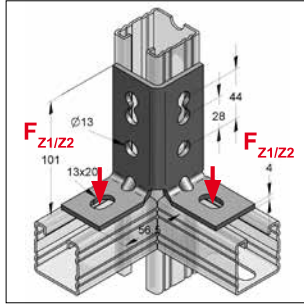
Remark: admissible loads are dependant of component

Identification	Weight [kg/pc.]	Packing [pcs.]	Part-No.
4-hole corner angle left	0,384	15	08147100

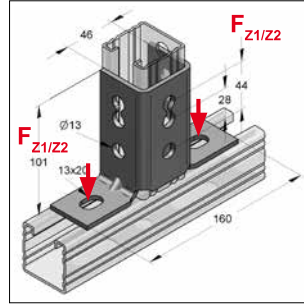
■ Angle connector



Angle connector C 45



Angle connector C 45 90°



Angle connector C 45 180°

Specification:

Profile rail type: rail system 45
 Applications area: connection of profile rail and frames

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized¹⁾

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

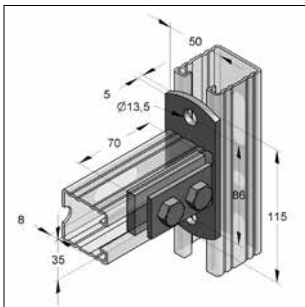
²⁾ loads referring to component, not to connection

³⁾ loads referring to component, double-sided fixed on profile

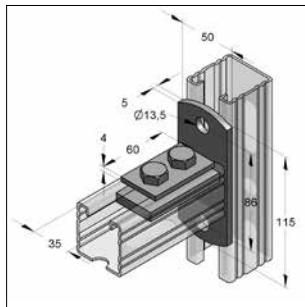
Remark: With lateral screw connection, 2-hole tooth plates have to be used

Identification	Max. load	Max. load	Weight	Packing	Part-No.
	$F_{z1}^{2)}$ without profile rail [kN]	$F_{z2}^{3)}$ with profile rail [kN]			
Angle connector C45	1,5	4,0	0,548	15	08123000
Angle connector C45 90°	1,5	4,0	0,361	15	08123200
Angle connector C45 180°	1,5	4,0	0,481	15	08123100

■ Connector 45



Connector 45 lengthways



Connector 45 horizontal

Specification:

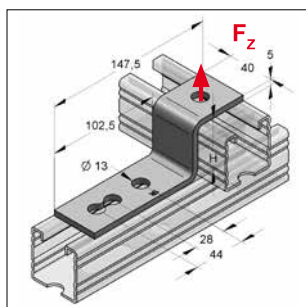
Profile rail type: rail system 45
 Applications area: connection of profile rails, moment-free connections only (not for connection of consoles)
 Scope of supply: 2-hole plate 13 mm hexagon screw M12

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

Identification	Screws	Weight	Packing	Part-No.
		[kg/pc.]	[pcs.]	
Connector 45 lengthways	M12	0,491	25	081656601
Connector 45 horizontal	M12	0,491	25	081646501

3-hole corresponding angle 40/5



Corresponding angle 40/5

Specification:
Profile rail type: rail system 45

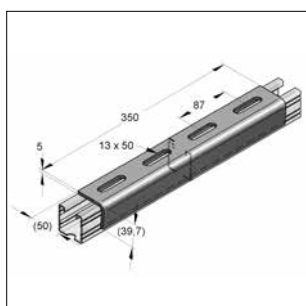
Technical data:
Material: steel
Material type: S235JR
Surface: galvanized

* loads referring to component, not to connection

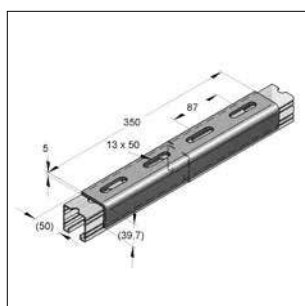
02

Identification	Dimension H [mm]	Max. load * F _z [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Corresponding angle 45	45	1,0	0,272	25	08141245
Corresponding angle 60	60	1,0	0,301	25	08141300

Connector 45



Connector 45
rail slot at top



Connector 45
rail slot at bottom

Remark:
fixation on top of rail
(not double profile rails) to
reach equal load capacity as
unbroken rail

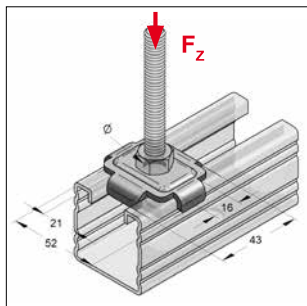
Specification: Profile rail type: Applications area:	rail system 45 for static load connection and extension of C-profile rails of the rail system 45	Technical data: Material: Material type: Surface:	steel S235JR galvanized ¹⁾
Recommended accessory:	4 x tooth plate S M12 or Stex 45 MP/MTB M12 4 x hexagon screw M12 x 25 4 x washer 13 x 24 x 2,5 (DIN 7089-12)	¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!	
Remark:	connecting of double profile rails with two connectors 45		

For profile rail width 45

Identification	Height [mm]	Width [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Connector 45	39,7	50	1,05	15	08162001

mounting recommendation see chapter 15

Profile holder



Profile holder

Specification:

Profile rail type: rail system 35, 45, Stex 35
 Applications area: suitable for connection of profile rails

Technical data:

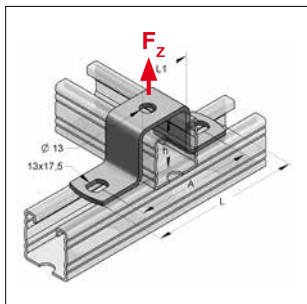
Material: steel
 Material type: S235JR
 Surface: galvanized¹⁾

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

For profile rail 35, 45 and Stex 35

Identification	Tightening torque [Nm]	Max. load F_z [kN]	Hole-Ø [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Profile holder combi 13	10	4,7	13,0	0,047	100	08162945
Profile holder combi 17	10	4,7	17,0	0,046	100	08163365

Head profile



Head profile

Specification:

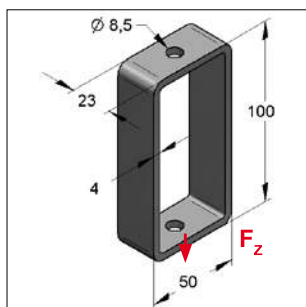
Profile rail type: rail system 45
 Applications area: suitable for connection of profile rails

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

Identification	Suitable for profile rail	L [mm]	A [mm]	L1 [mm]	h [mm]	Max. load F_z [kN]	Material thickness [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Head profile 45	45/45	134,5	105	46	45	3,5	4	0,218	25	08162445
Head profile 52	45/52-D	134,5	105	46	52	3,5	4	0,235	25	08162452
Head profile 60	45/60	134,5	105	46	60	3,5	4	0,253	25	0816253
Head profile 75	45/75	134,5	105	46	75	3,5	4	0,286	25	08162875
Head profile 90	45/90-D	134,5	105	46	90	3,5	4	0,320	25	08162690
Head profile 120	45/120-D	134,5	105	46	120	3,5	4	0,387	25	0816274
Head profile 150	45/150-D	134,5	105	46	150	3,5	4	0,454	1	081628150

2-hole suspending console



2-hole suspending console
100/50/4

Specification:
Application area: universal fixation e.g. suitable for ceiling suspension

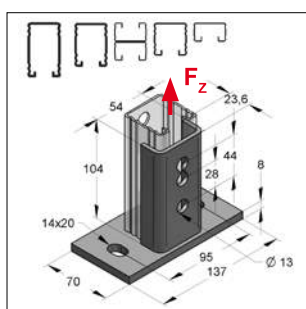
Technical data:
Material: steel
Material type: S235JR
Surface: galvanized

¹⁾ loads referring to component, not to connection

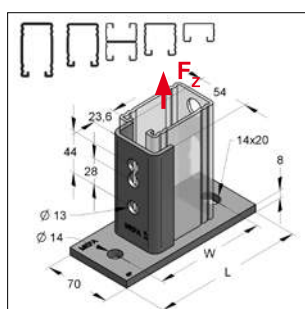
02

Identification	Dimension L x B x S [mm]	Hole-Ø [mm]	max. load F_z ¹⁾ [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
2-hole suspending console	100 x 50 x 4	8,5	1,9	0,196	50	9998541

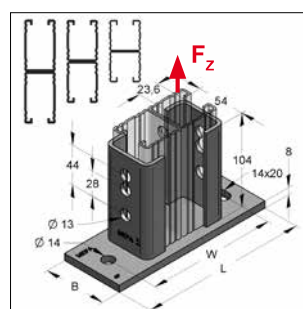
Holder



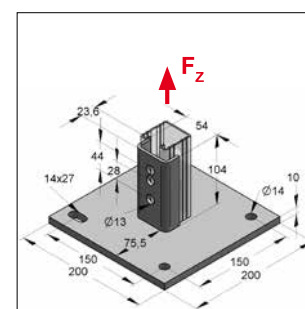
Holder horizontal
for C-profile rail



Holder vertical
for C-profile rail



Holder for double
C-profile rail



Holder square
for C-profile rail

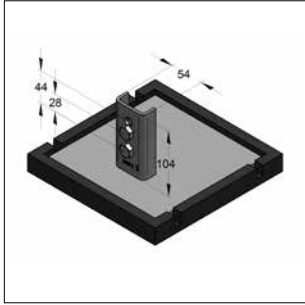
Specification:
Profile rail type: rail system 45
Applications area: for fixation of profile rails on construction

Technical data:
Material: steel
Material type: S235JR
Surface: hot-dip galv¹⁾

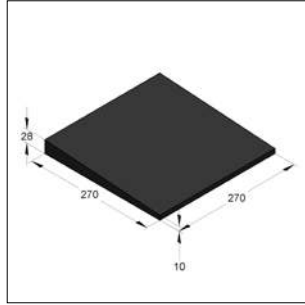
¹⁾ variations in dimension up to 1 mm possible
²⁾ loads referring to component, not to connection
³⁾ matching sound-decoupling set see on page 3a/11

Identification	Plate L x B [mm]	Hole distance W [mm]	Max. profile height [mm]	Suitable for								Max. load F_z ²⁾ [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
				C-profile 45/...											
				26	45	60	75	52D	90D	120D	150D				
Holder 45/26-75 horizontal³⁾	137 x 70	95	75	•	•	•	•	•				12,0	0,90	15	08120402
Holder 45/26-52 vertical³⁾	137 x 70	95	52	•	•			•				9,3	0,90	15	08120102
Holder 45/60-70 vertical	160 x 70	118	75			•	•					7,3	1,01	15	08121802
Holder 45/90	186 x 70	144	90						•			13,7	1,41	10	08120952
Holder 45/120	216 x 70	174	120							•		13,7	1,55	5	08121002
Holder 45/150	246 x 70	204	150								•	13,5	1,68	5	08121452
Holder „Holorib“	200 x 200	150		•	•	•	•	•	•	•	•	10,0	3,49	5	08197000

Rooftop holder for rooftop constructions



Rooftop holder complete



Rubber wedge 4°



Rooftop holder complete with rubber wedge underneath

Specification:

Profile rail type: 45/26, 45/45, 45/60, 45/52, 45/60, 45/75, 45/90, 45/120
 Applications area: for profile channel constructions onto rooftop
 Installation advise: position rooftop holder on rubber pad. For compensation of possible roof pitch place rubber wedge (4°) below rubber pad
 Separation fleece: recommended for use on PVC membrane roof surfaces to prevent migration of plasticizer
 Scope of delivery (Rooftop holder complete): 1 x rubber pad, 1 x holder, 2 x hexagon screws M12 x 25, 1 x 2-hole tooth plate

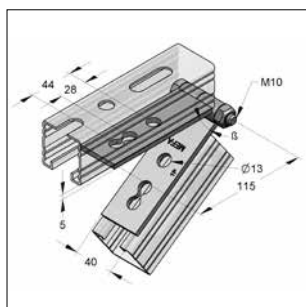
Technical data:

Material holder: steel
 Material type: S235JR
 Surface screw : zinc-nickel
 Surface holder:: hot-dip galv.
 Material rubber pad: EPDM
 separation fleece: polyester
 according to building material class DIN 4102: B2
 temperature resistance separation fleece: -60°C up to +220°C

* Permissible floor load has to be checked by the customer. Wind and snow loads must be considered separately.

Identification	Dimension steel plate [mm]	Dimension rubber pad / seperation fleece [mm]	Pressure load [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Rooftop holder complete	200x200x6	225x225x17	4,0	3,71	2	08197500
Rooftop holder rubber wedge	-	270x270x28/10	4,0	1,73	1	08197598
Rooftop holder separation fleece	-	270x270x3,5	-	0,04	1	0819759701

Joint connector for C-profile rails



Joint connector
for C-profile rails

Specification:

Profile rail type: rail system 45
Applications area: mounting of two profile rails of various angularity

Technical data:

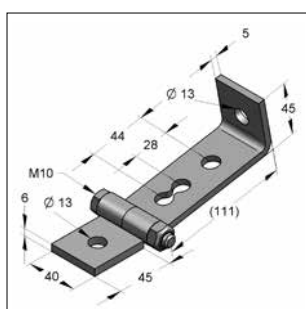
Material: steel
Material type: S235JR
Surface: galvanized¹⁾

Loads see Profile joint connector page 2/42

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

Identification	Dimension L x W x T [mm]	Angle β	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Joint connector	115 x 40 x 5	+/-160°	0,461	25	08122200

Joint angle

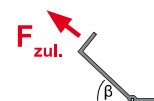


Joint angle



Mounting example
Joint angle with bracing

Admissible load at angle β



Angle β	0°	30°	45°	60°	90°
Fzul.* [kN]	4,5	5,2	4,0	3,2	2,8

Specification:

Applications area: for bracing of threaded rod M12 with arbitrary angularity. fixation onto profile channel or direct-mounting onto building structure.

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized¹⁾

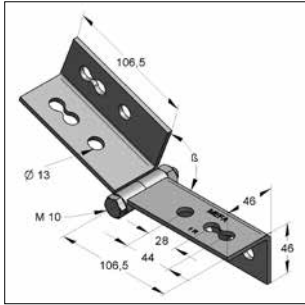
Remark: for upright mounting consider shear forces in radial tubular axle

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

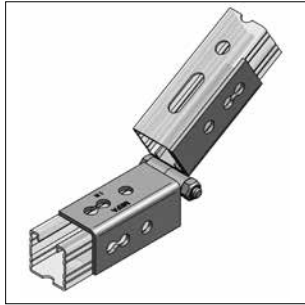
* loads referring to component, not to connection

Identification	Hole-Ø [mm]	Angle β	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Joint angle 40/5	13	0° - 90°	0,407	20	08122300

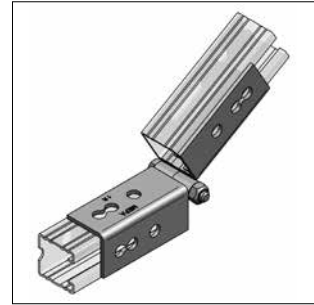
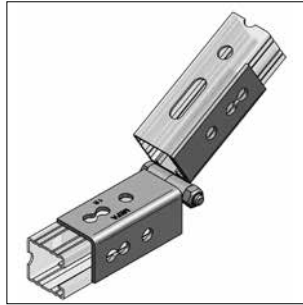
Profile joint connector



Profile joint connector



Position of channel arbitrary



Specification:

Profile rail type: rail system 45
 Applications area: connection of C-profiles channels of system 45 with adjustable angle, position of channel arbitrary
 Recommended accessory: 2 x 2-hole tooth plate
 4 x hexagon screws M12 x 25

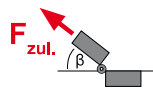
Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

* loads referring to component, not to connection

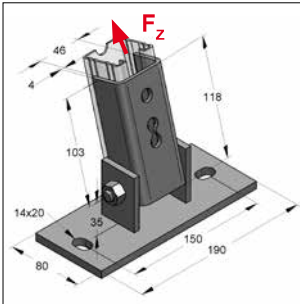
Identification	Hole-Ø [mm]	Angle β	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Profile joint connector	13	30° - 90°	0,684	10	08122700

Admissible load at angle β

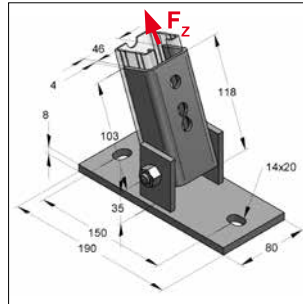


Angle β	30°	45°	60°	90°
Fzul.* [kN]	6,0	4,24	3,45	3,0

Joint holder with base plate



Joint holder with base plate horizontal



Joint holder with base plate vertical

Specification:

Profile rail type: rail system 45
 Mounting method: on inclined roof- and bottom construction stepless fixable

Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized¹⁾

Recommended accessory: 1 x 2-hole tooth plate
 2 x hexagon screw M12 x 25
 2 x washer DIN 7089-12

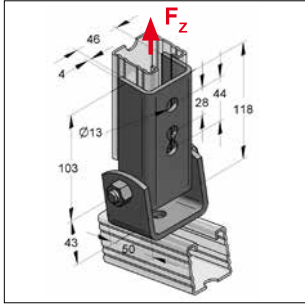
Applications area: cross girder at various angle up to 90°

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

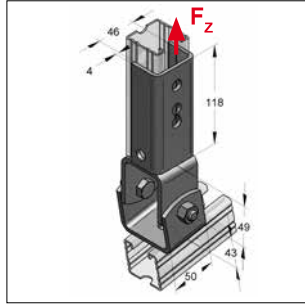
²⁾ loads referring to component, not to connection

Identification	Dimension plate [mm]	Tightening torque [Nm]	Max. load $F_z^{2)}$ [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Joint holder with base plate horizontal	190 x 80 x 8,0	50	7,0	1,67	10	08122500
Joint holder with base plate vertical	190 x 80 x 8,0	50	7,0	1,67	10	08122600

Joint holder



Joint holder
vertical



Joint holder
horizontal

Specification:

Profile rail type: rail system 45
Mounting method: on inclined roof- and bottom construction
stepless fixable

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized¹⁾

Recommended accessory: 1 x 2-hole tooth plate
2 x hexagon screw M12 x 25
2 x washer DIN 7089-12

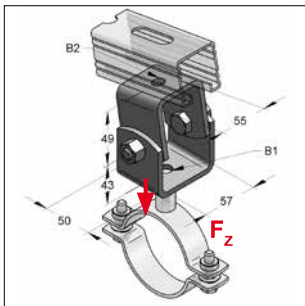
Applications area: cross girder at various
angle up to 90°

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

²⁾ loads referring to component, not to connection

Identification	For profile rail width [mm]	Hole-Ø [mm]	Tightening torque [Nm]	Max. load $F_z^{2)}$ [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Joint holder vertical	45	13	50	7,0	0,82	15	08120600
Joint holder horizontal	45	13	50	7,0	1,13	5	08121100

Joint holder with terminal hole



Joint holder with terminal hole

Specification:

Mounting method: on inclined roof- and bottom construction
stepless fixable
Applications area: for connecting pipe clamps

Technical data:

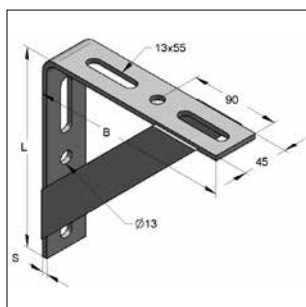
Material: steel
Material type: S235JR
Surface: galvanized¹⁾

¹⁾ components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

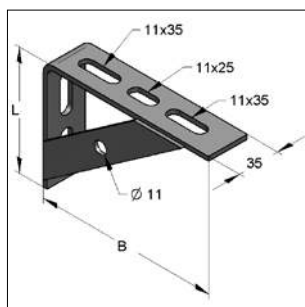
²⁾ loads refer to component, not to connection

Identification	For threaded rods B1 / B2	B1 [mm]	B2 [mm]	Max. load $F_z^{2)}$ [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Joint holder with terminal hole	M8-M12 / M8-M12	13	13	10,0	0,722	25	0812072
Joint holder with terminal hole	M8-M12 / M16	13	17	10,0	0,719	15	0812080
Joint holder with terminal hole	M16 / M16	17	17	10,0	0,715	15	0812177

■ Angle bracket



Angle bracket



Knot bracket 100/150/4 L

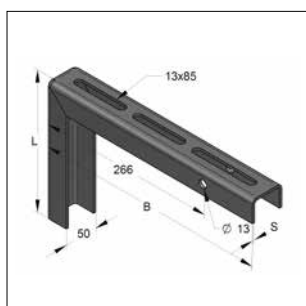
Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

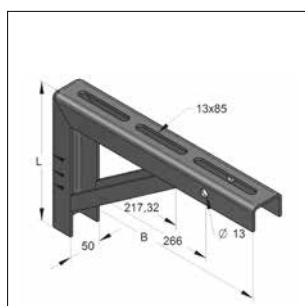
¹⁾ loads referring to component, not to connection

Identification	Dimension L x B x S [mm]	max. load ¹⁾ [kN]	Length [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Angle bracket with 2 braces	200 x 200 x 5	5,0	150	1,07	15	0814083
Angle bracket with 2 braces	300 x 300 x 5	5,0	250	1,69	10	0814091
Knot bracket L	100 x 152 x 4	2,5	120	0,30	25	0803100

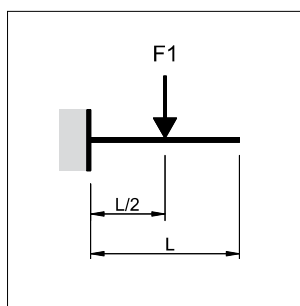
■ Universal console



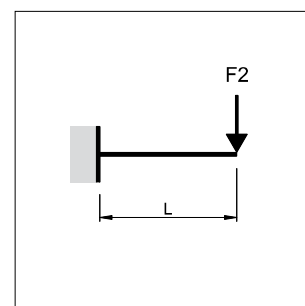
Universal console



Universal console with knot



Loading condition 1 (LC1)



Loading condition 2 (LC2)

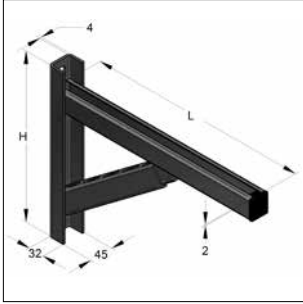
Technical data:

Material: steel
 Material type: S235JR
 Surface: galvanized

¹⁾ loads referring to component, not to connection

Identification	Dimension L x B x S [mm]	max. load ¹⁾		Weight [kg/pc.]	Packing [pcs.]	Part-No.
		F ₁ [kN]	F ₂ [kN]			
Universal console	200 x 200 x 4,0	6,5	4,0	1,02	15	0814201
Universal console	200 x 350 x 4,0	5,0	3,0	1,64	10	081421901
Universal console	350 x 550 x 4,0	4,0	1,5	2,73	6	081422701
Universal console with knot	200 x 350 x 4,0	6,2	4,9	2,03	10	081423501
Universal console with knot	350 x 550 x 4,0	6,5	3,7	4,14	6	081424301

Carrier console 36/40/2,0



Carrier console with brace

Specification:

Dimension u-steel: 45 x 32 x 4,0 mm
 Dimension profile rails: 36 x 40 x 2,0 mm

With enclosed protecting caps

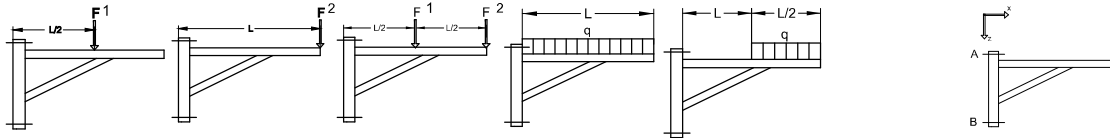
Technical data:

Material type u-steel: S235JR, $f_y = 235 \text{ N/mm}^2$
 Material type profile rails: S235JR, $f_y = 235 \text{ N/mm}^2$
 Material: steel
 Surface: hot-dip galvanized
 global safety coefficient: 1,54

Load specifications refer to component, not to connection

Identification	Length L [mm]	Height H [mm]	hole distance dowel Ø14x21 [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Carrier console 36/40/2,0	420	320	275	2,36	6	180304203/fvz
Carrier console 36/40/2,0	525	355	310	2,88	6	180305253/fvz
Carrier console 36/40/2,0	630	380	335	3,38	6	180306303/fvz
Carrier console 36/40/2,0	735	490	445	4,14	6	180307353/fvz
Carrier console 36/40/2,0	840	490	445	4,35	6	180308403/fvz

Load and permissible loads:



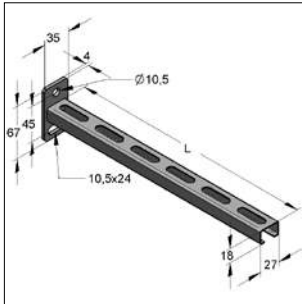
load situation 1 load situation 2 LS1 + LS2 load situation 3 load situation 4 bearing reaction forces

L	F1	F2	F1 = F2	q(0-L)	q(L/2-L)	$F_{A,x} =$	$F_{B,x} =$	$F_{A,z} =$
420 mm	4,97 kN					3,73 kN	-3,73 kN	4,97 kN
		1,53 kN				2,30 kN	-2,30 kN	1,53 kN
			1,42 kN			3,20 kN	-3,20 kN	2,84 kN
				11,14 kN/m ²		3,51 kN	-3,51 kN	4,68 kN
					13,53 kN/m ²	3,20 kN	-3,20 kN	2,84 kN
525 mm	5,66 kN					4,72 kN	-4,72 kN	5,66 kN
		1,53 kN				2,55 kN	-2,55 kN	1,53 kN
			1,53 kN			3,83 kN	-3,83 kN	3,06 kN
				9,82 kN/m ²		4,30 kN	-4,30 kN	5,16 kN
					11,78 kN/m ²	3,87 kN	-3,87 kN	3,10 kN
630 mm	4,84 kN					4,49 kN	-4,49 kN	4,84 kN
		1,54 kN				2,87 kN	-2,87 kN	1,54 kN
			1,54 kN			4,30 kN	-4,30 kN	3,08 kN
				8,49 kN/m ²		4,97 kN	-4,97 kN	5,36 kN
					10,12 kN/m ²	4,44 kN	-4,44 kN	3,19 kN
735 mm	4,56 kN					3,73 kN	-3,73 kN	4,56 kN
		1,06 kN				1,74 kN	-1,74 kN	1,06 kN
			1,23 kN			3,03 kN	-3,03 kN	2,46 kN
				8,49 kN/m ²		5,11 kN	-5,11 kN	6,25 kN
					9,42 kN/m ²	4,25 kN	-4,25 kN	3,47 kN
840 mm	5,60 kN					3,75 kN	-3,75 kN	5,60 kN
		0,65 kN				1,23 kN	-1,23 kN	0,65 kN
			0,69 kN			1,93 kN	-1,93 kN	1,38 kN
				4,08 kN/m ²		3,75 kN	-3,75 kN	4,02 kN
					4,77 kN/m ²	2,41 kN	-2,41 kN	1,73 kN

Remark:

All load specifications refer exclusively to static loads.

Console C-profile 27/18/1,25 mm



Console C 27/18/1,25 mm
Profile slot at bottom side

Technical data:

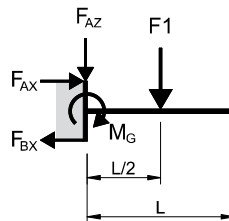
Material type plate: S235JR, $f_y = 235 \text{ N/mm}^2$ Dimension plate: 67 x 35 x 4,0 mm
 Material type profile rail: DC01, $f_y = 160 \text{ N/mm}^2$ Dimension profile rail: 27 x 18 x 1,25 mm
 Surface: galvanized
 Material: steel
 global safety coefficient γ : 1,35

limitation torque M_G : 36,74 Nm
 Reaction force F_{AX} : 0,82 kN
 Reaction force F_{BX} : 0,82 kN
 M_G, F_{AX}, F_{BX} on LC1: up to $L = 630,5 \text{ mm}$
 LC2: up to $L = 315,5 \text{ mm}$
 LC3: up to $L = 420,5 \text{ mm}$

02

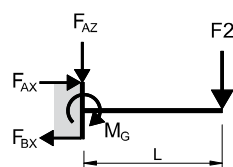
Identification	Length L [mm]	Load situation1 F1 [kN]	max. load		Weight [kg/pc.]	Packing [pcs.]	Part-No.
			Load situation 2 F2 [kN]	Load situation 3 q0 [kN/m]			
Console C-27/18	157,5	0,47	0,23	2,94	0,159	25	18010158
Console C-27/18	210,0	0,35	0,17	1,66	0,190	25	18010210
Console C-27/18	262,5	0,28	0,14	1,06	0,222	25	18010263
Console C-27/18	315,0	0,23	0,12	0,74	0,253	25	18010315

Loading condition 1 (LC1)



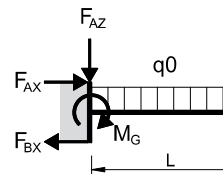
$F_{AZ} = F1$	$M_G = \frac{F1 * L}{2}$
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Loading condition 2 (LC2)



$F_{AZ} = F2$	$M_G = F2 * L$
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Loading condition 3 (LC3)

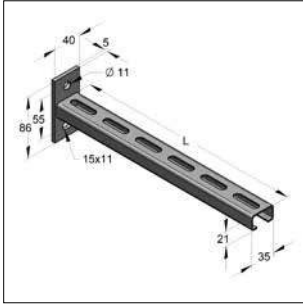


$F_{AZ} = q0 * L$	$M_G = \frac{q0 * L^2}{2}$
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Notice:

all loads referring to static loads

Console C-profile 35/21/2,0 mm



Console C 35/21/2,0 mm
Profile slot at bottom side

Technical data:

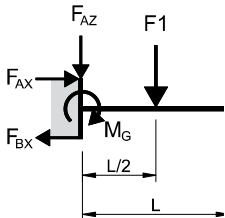
Material type plate: S235JR, $f_y = 235 \text{ N/mm}^2$ Dimension plate: 86 x 40 x 5,0 mm
 Material type profile rail: S250JR, $f_y = 250 \text{ N/mm}^2$ Dimension profile rail: 35 x 21 x 2,0 mm
 Surface: galvanized
 Material: steel
 global safety coefficient γ : 1,35

limitation torque M_G : 93,86 Nm
 Reaction force F_{AX} : 1,71 kN
 Reaction force F_{BX} : 1,71 kN
 M_G, F_{AX}, F_{BX} on LC1: up to $L = 630,0 \text{ mm}$
 LC2: up to $L = 315,0 \text{ mm}$
 LC3: up to $L = 472,5 \text{ mm}$

¹⁾ load limitation due to admissible bending $L/150$. Limitation torque M_G and bearing strengths F_{AX}, F_{BX} not valid anymore

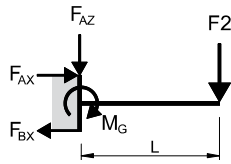
Identification	Length L [mm]	loading condition 1 F1 [kN]	max. load loading condition 2 F2 [kN]	loading condition 3 q0 [kN/m]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Console C-35/21	210,0	0,89	0,45	4,26	0,368	25	18020210
Console C-35/21	262,5	0,72	0,36	2,72	0,429	25	18020263
Console C-35/21	315,0	0,60	0,30	1,89	0,490	25	18020315
Console C-35/21	420,0	0,45	0,19 ¹⁾	1,06	0,612	25	18020420
Console C-35/21	525,0	0,36	0,12 ¹⁾	0,62 ¹⁾	0,734	25	18020525

Loading condition 1 (LC1)



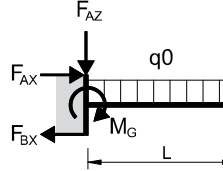
$F_{AZ} = F1$	$M_G = \frac{F1 * L}{2}$
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Loading condition 2 (LC2)



$F_{AZ} = F2$	$M_G = F2 * L$
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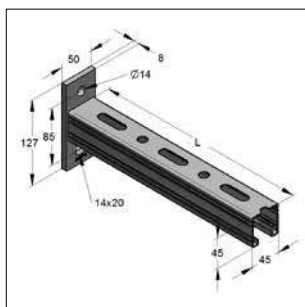
Loading condition 3 (LC3)



$F_{AZ} = q0 * L$	$M_G = \frac{q0 * L^2}{2}$
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Notice:
all loads referring to static loads

Console C-profile 45/45/2,0 mm



Console C 45/45/2,0 mm

Technical data: galvanized / hot-dip galv

Material type plate: S355J2, $f_y = 355 \text{ N/mm}^2$ Dimension plate: 127 x 50 x 8,0 mm
 Material type profile rail: S235JR, $f_y = 235 \text{ N/mm}^2$ Dimension profile rail: 45 x 45 x 2,0 mm¹⁾
 Surface: galvanized / hot-dip galvanized
 Material: steel
 Global safety coefficient γ : 1,54

Limitation torque M_G : 522 Nm
 Reaction force F_{AX} : 6,15 kN
 Reaction force F_{BX} : 6,15 kN
 M_G, F_{AX}, F_{BX} on LC1: up to = 1155 mm
 LC2: up to = 525 mm
 LC3: up to = 735 mm

¹⁾ Console with dimension profile rail: 45 x 45 x 2,5 mm see page 12/9

²⁾ load limitation due to admissible bending $L/150$. Limitation torque M_G and bearing strengths F_{AX}, F_{BX} not valid anymore

02

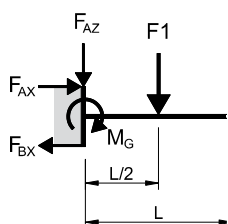
Console C-45/45 - profile rail 45/45/2,0 galvanized

Identification	Length L [mm]	Loading condition 1 F1 [kN]	Max. load Loading condition 2 F2 [kN]	Loading condition 3 q0 [kN/m]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Console C-45/45	315,0	3,32	1,66	10,53	1,15	15	180450315
Console C-45/45	420,0	2,49	1,24	5,92	1,41	10	180450420
Console C-45/45	525,0	1,99	1,00	3,79	1,67	10	180450525
Console C-45/45	630,0	1,66	0,82 ²⁾	2,63 ²⁾	1,93	5	180450630
Console C-45/45	735,0	1,42	0,61 ²⁾	1,93 ²⁾	2,19	5	180450735
Console C-45/45	1050,0	1,00	0,30 ²⁾	0,75 ²⁾	2,96	5	180451050

Console C-45/45 - profile rail 45/45/2,0 hot-dip galv

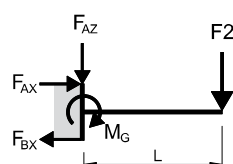
Console C-45/45	315,0	3,32	1,66	10,53	1,24	15	180450315/fvz
Console C-45/45	525,0	1,99	1,00	3,79	1,81	10	180450525/fvz

Loading condition 1 (LC1)



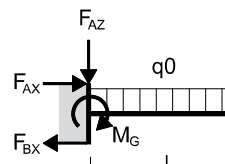
$$F_{AZ} = F1 \quad M_G = \frac{F1 * L}{2}$$

Loading condition 2 (LC2)



$$F_{AZ} = F2 \quad M_G = F2 * L$$

Loading condition 3 (LC3)

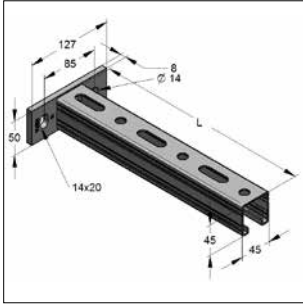


$$F_{AZ} = q0 * L \quad M_G = \frac{q0 * L^2}{2}$$

Remark:

all loads refer to static loads

■ Console C-profile 45/45/2,0 mm, plate horizontal



Console C 45/45/2,0 horizontal

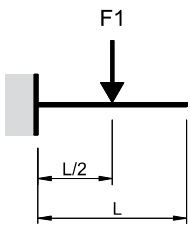
Technical data: galvanized

Material type profile rail:	S355J2, $f_y = 355 \text{ N/mm}^2$	Dimension plate:	127 x 50 x 8,0 mm
Material type plate:	S235JR, $f_y = 235 \text{ N/mm}^2$	Dimension profile rail:	45 x 45 x 2,0 mm ¹⁾
Material:	steel		
Surface:	galvanized		
Global safety coefficient γ :	1,35		

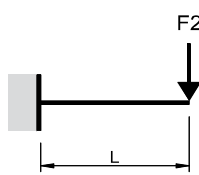
¹⁾ Console with dimension profile rail: 45 x 45 x 2,5 mm see page 12/9

Identification	Length L [mm]	Loading condition 1 F1 [kN]	Max. load Loading condition 2 F2 [kN]	Loading condition 3 q0 [kN/m]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Console C-45/45	210,0	3,68	1,84	17,52	0,89	15	180460210
Console C-45/45	315,0	2,45	1,23	7,78	1,15	15	180460315
Console C-45/45	420,0	1,84	0,92	4,38	1,41	10	180460420
Console C-45/45	525,0	1,47	0,74	2,80	1,67	10	180460525

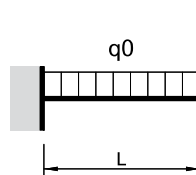
Loading condition 1 (LC1)



Loading condition 2 (LC2)

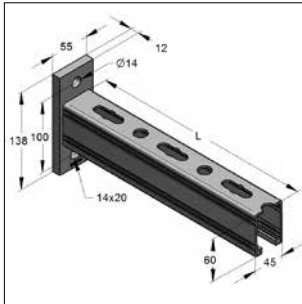


Loading condition 3 (LC3)



Remark:
all loads refer to static loads

Console C-profile 45/60/3,0 mm



Console C 45/60/3,0 mm

Technical data:

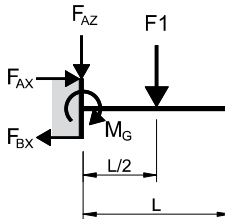
Material type plate: S235JR, $f_y = 235 \text{ N/mm}^2$ Dimension plate: 138 x 55 x 12,0 mm
 Material type profile rail: S235JR, $f_y = 235 \text{ N/mm}^2$ Dimension profile rail: 45 x 60 x 3,0 mm
 Surface: galvanized
 Material: steel
 Global safety coefficient γ : 1,35

Limitation torque M_G : 1144,44 Nm
 Reaction force F_{AX} : 11,44 kN
 Reaction force F_{BX} : 11,44 kN
 M_G, F_{AX}, F_{BX} on LC1: up to $L = 1155 \text{ mm}$
 LC2: up to $L = 630 \text{ mm}$
 LC3: up to $L = 840 \text{ mm}$

¹⁾ load limitation due to admissible bending $L/150$. Limitation torque M_G and bearing strengths F_{AX}, F_{BX} not valid anymore

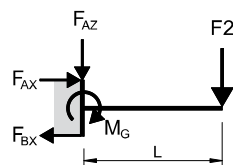
Identification	Length L [mm]	Loading condition 1 F1 [kN]	Max. load Loading condition 2 F2 [kN]	Loading condition 3 q0 [kN/m]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Console C-45/60	630,0	3,63	1,82	5,77	3,23	5	18050630
Console C-45/60	735,0	3,11	1,45 ¹⁾	4,24	3,66	5	18050735
Console C-45/60	840,0	2,72	1,11 ¹⁾	3,24	4,08	5	18050840

Loading condition 1 (LC1)



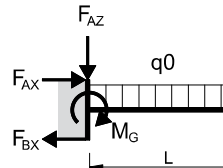
$F_{AZ} = F1$	$M_G = \frac{F1 * L}{2}$
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Loading condition 2 (LC2)



$F_{AZ} = F2$	$M_G = F2 * L$
---------------	----------------

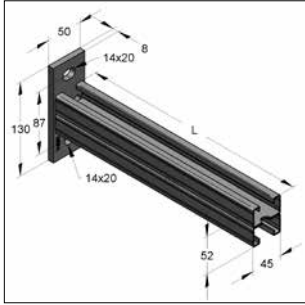
Loading condition 3 (LC3)



$F_{AZ} = q0 * L$	$M_G = \frac{q0 * L^2}{2}$
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Remark:
all loads refer to static loads

Double console C-profile 45/52/1,5 mm



Double console C 45/52/1,5

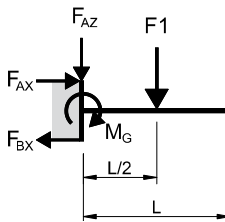
Technical data:

Material type plate: S235JR, $f_y = 235 \text{ N/mm}^2$ Dimension plate: 130 x 50 x 8,0 mm
 Material type profile rail: S235JR, $f_y = 235 \text{ N/mm}^2$ Dimension profile rail: 45 x 52 x 1,5 mm
 Surface: galvanized
 Material: steel
 Global safety coefficient γ : 1,35

Limitation torquet M_G : 461,54 Nm
 Reaction force F_{AX} : 5,31 kN
 Reaction force F_{BX} : 5,31 kN
 M_G, F_{AX}, F_{BX} on LC1: up to $L = 1155 \text{ mm}$
 LC2: up to $L = 735 \text{ mm}$
 LC3: up to $L = 945 \text{ mm}$

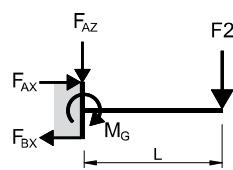
Identification	Length L [mm]	Loading condition 1 F1 [kN]	Max. load		Weight [kg/pc.]	Packing [pcs.]	Part-No.
			Loading condition 2 F2 [kN]	Loading condition 3 q0 [kN/m]			
Console C-45/52 D	315,0	2,93	1,47	9,30	1,22	15	18070315
Console C-45/52 D	420,0	2,20	1,10	5,23	1,50	10	18070420
Console C-45/52 D	525,0	1,76	0,88	3,35	1,78	10	18070525
Console C-45/52 D	630,0	1,47	0,73	2,33	2,07	5	18070630

Loading condition 1 (LC1)



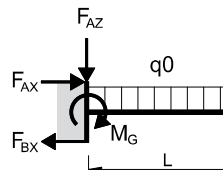
$F_{AZ} = F1$	$M_G = \frac{F1 * L}{2}$
---------------	--------------------------

Loading condition 2 (LC2)



$F_{AZ} = F2$	$M_G = F2 * L$
---------------	----------------

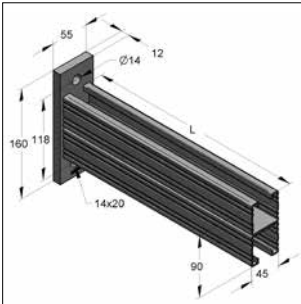
Loading condition 3 (LC3)



$F_{AZ} = q0 * L$	$M_G = \frac{q0 * L^2}{2}$
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Remark:
all loads refer to static loads

Double console C-profile 45/90/2,0 mm



Double console C 45/90/2,0

Technical data: galvanized / hot-dip galv

Material: steel
 Material type plate: S235JR
 Material type profile rail: S235JR
 Surface: galvanized / hot-dip galvanized
 Global safety coefficient γ : 1,54

Dimension plate: 160 x 55 x 12,0 mm
 Dimension profile rail: 45 x 90 x 2,0 mm

Limitation torquet M_G : 1564,12 Nm
 Reaction force F_{AX} : 13,03 kN
 Reaction force F_{BX} : 13,03 kN
 M_G, F_{AX}, F_{BX} on LC1: up to =1155 mm
 LC2: up to =1155 mm
 LC3: upt to =1155 mm

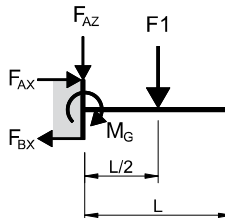
Console D-45/90 - profile rail 45/90/2,0 D - plate 160 x 55 x 12,0 mm galvanized

Identification	Length L [mm]	Max. load			Weight [kg/pc.]	Packing [pcs.]	Part-No.
		Loading condition 1 F1 [kN]	Loading condition 2 F2 [kN]	Loading condition 3 q0 [kN/m]			
Console C-45/90 D	630,0	4,97	2,48	7,88	3,90	5	180900630
Console C-45/90 D	735,0	4,26	2,13	5,79	4,42	5	180900735
Console C-45/90 D	840,0	3,72	1,86	4,43	4,94	5	180900840
Console C-45/90 D	945,0	3,31	1,66	3,50	5,46	5	180900945
Console C-45/90 D	1050,0	2,98	1,49	2,84	5,98	5	180901050

Console D-45/90 - profile rail 45/90/2,0 D - plate 160 x 55 x 12,0 mm hot-dip galv

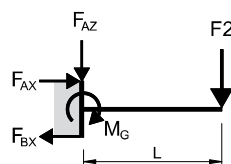
Console C-45/90 D	630,0	4,97	2,48	7,88	4,19	5	180900630/fvz
Console C-45/90 D	840,0	3,72	1,86	4,43	5,32	5	180900840/fvz

Loading condition 1 (LC1)



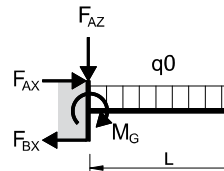
$$F_{AZ} = F1 \quad M_G = \frac{F1 * L}{2}$$

Loading condition 2 (LC2)



$$F_{AZ} = F2 \quad M_G = F2 * L$$

Loading condition 3 (LC3)

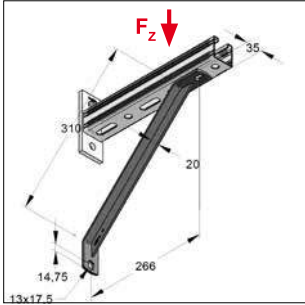


$$F_{AZ} = q0 * L \quad M_G = \frac{q0 * L^2}{2}$$

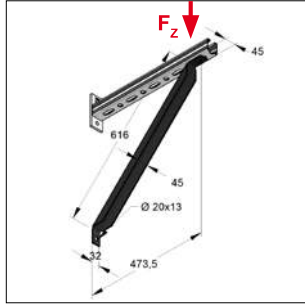
Remark:

all loads refer to static loads

Brace 45°



Brace 45° short



Brace 45° long

Specification:

Applications area: to increase the loading capacity of consoles and wall brackets

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

Identification

max. load (pressure)

Weight

Packing

Part-No.

F_z
[kN]

[kg/pc.]

[pcs.]

Brace 45° short

11,5

0,68

25

0815101

Brace 45° long

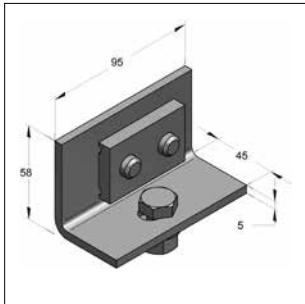
10,0

2,07

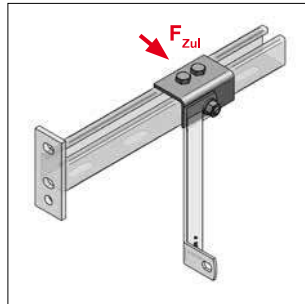
1

0815102

Adapter angle



Adapter angle



Mounting example

Specification:

Applications area: angle for lateral bracing of consoles

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

scope of delivery adapter angle: 3 x hexagon screws M12 x 25
1 x 2-hole tooth plate
1 x washer 13 x 24 x 2,5
1 x nut M12

* Loads do refer to components, not to connections

Adapter angle for braces 45°

Identification

max. load

Weight

Packing

Part-No.

F_{zul}
[kN]

[kg/pc.]

[pcs.]

Adapter angle

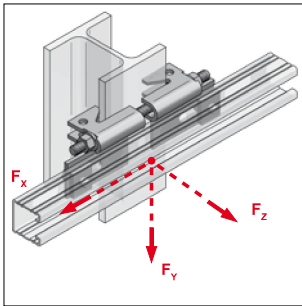
10,0

0,59

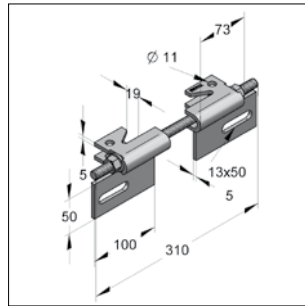
5

08151500

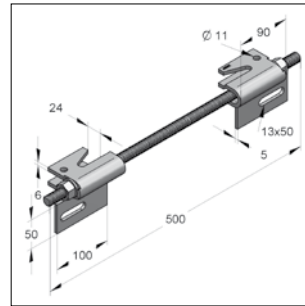
Girder connection vertical



Girder connection vertical



Typ D III



Typ D IV

Specification:

Applications area: vertical clamping connection of profile rails at steel girder

Recommended accessory: 2 x guide cleat
1 x threaded rod
2 x nut
2 x washer

Mounting instruction: fix buttstraps on load anticipated side. Can be combined with rail system 45. Screwing of profile rail on buttstrap of guide cleat thru profile base with 2 screws M12 x 25, washers and threaded square plates or tooth plate

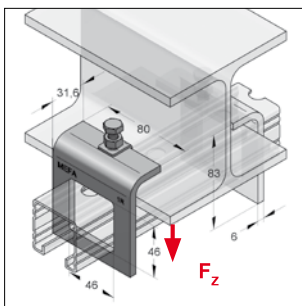
Technical data:

Material: steel
Material type: S235JR (clamps)
Surface:
- Clamps: hot-dip galv.
- Screw connection: zinc-nickel

Identification	Clamping-thickness Flange [mm]	Clamping-range Flange [mm]	Threaded rod [mm]	Tightening torque [Nm]	Max. load			Weight [kg/set]	Packing [pcs.]	Part-No.
					F_x [kN]	F_y [kN]	F_z [kN]			
Typ D III	8-15	100-220	M12 x 310	64	4,0	4,0	4,0	1,14	1	08146103
Typ D IV	13-20	110-360	M16 x 500	64	4,0	4,0	4,0	2,05	1	08146104

mounting recommendation see chapter 15

Clamping claw



Clamping claw

Specification:

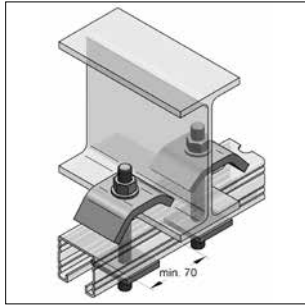
Profile rail type: C-profile rail 45/45
Application area: for mounting of C-profile rail 45/45 on T-girder

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

Identification	max. load with 2 clamping claws F_z [kN]	tightening torque [Nm]	max. clamping thickness [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Clamping claw 45/45	6,00	8	17	0,336	50	08165071

■ Clamping claw (set) steel



Clamping claw (set) steel

Specification:

Profile rail type: rail system 35, 36, 45, Stex 35
 Application area: for mounting of C-profile rail on steel girder

Technical data:

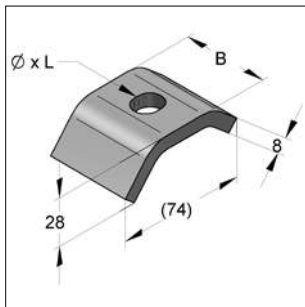
Material: steel
 Material type: S235JR
 Surface: galvanized

Assembly kit consisting of:

- 2 clamping claws
- 2 threaded bolts
- 4 hexagon nuts
- 2 perforated plates
- 2 washers DIN 7089

Identification	threaded pin [mm]	max. profile height [mm]	max. clamping thickness [mm]	Weight [kg/set]	Packing [sets]	Part-No.
Clamping claw (set) steel 35 + 36	M10 x 110	42	26	0,549	20	0814595
Clamping claw (set) steel 45	M12 x 130	60	26	0,922	10	0819527

■ Clamping claw



Clamping claw

Specification:

without accessories

Technical data:

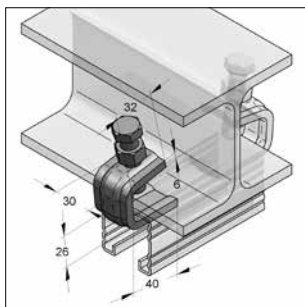
Material: steel
 Material type: S235JR
 Surface: galvanized¹⁾

¹⁾ Components for outdoor application also available with Zinc-Nickel-coating (corrosion-protection class C3 acc. to ISO 9223). Delivery time on demand!

²⁾ loads referring to component, not to connection

Identification	Dimension Ø x L [mm]	suitable for threaded rod	tightening torque [Nm]	max. load ²⁾ [kN]	B [mm]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Clamping claws	12 x 18	M10	5	6,7	35	0,170	50	0814591
Clamping claws	14 x 18	M12	5	8,2	50	0,246	50	0816515
Clamping claws	Ø 18	M16	10	11,9	50	0,243	25	0819519

■ Rail clamp



Rail clamp

Specification:

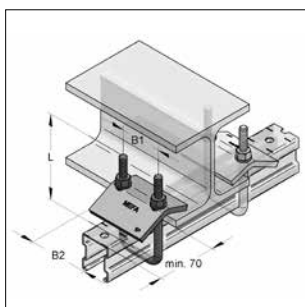
Profile rail type: rail system 35/21, 36/40, 45/45, Stex 35/35, 35/42
 Application area: for mounting the C-profile rail on steel girder
 Assembly instruction: pre-stressing 8 Nm requiring counter nuts, if necessary max. clamping thickness 23 mm

Technical data:

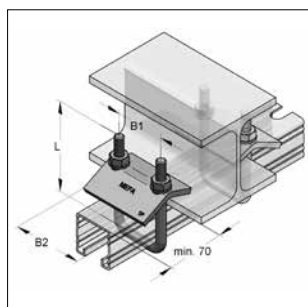
Material type: St 44-2
 Surface: galvanized
 hexagonal nut: M12, SW19
 hexagonal screw: M12x50, SW19 with cup point

Identification	max. load [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Rail clamp	5,0	0,226	20	0816477

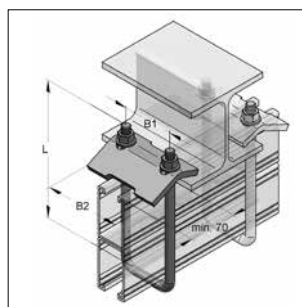
■ Clamping bow



Clamping bow M8 35 + 36



Clamping bow M10 45/60



Clamping bow M12 45/150

Specification:

Profile rail type: rail system 35, 36, 45, Stex 35, 36
 Application area: for mounting of C-profile rail on steel girder

Clamping bow consisting of:

1 U-bolt pipe hanger
 1 tensioning bracket
 2 nuts DIN 4032
 2 serrated lock washer

Technical data:

Material: steel
 Material type: St 36 FK 4.6
 Surface: galvanized

Remark: - in case of horizontal mounting of pipes, the maximum loads of the clamping bow can differ to quoted loads due to torque of lever arm
 - per anchorage point two clamping bows should be plugged in
 - application loads refer to clamping bow
 - application loads of C-profile rail should be noticed

Suitable for profile rail 35, 36 and STEX 35

Identification	L [mm]	B1 [mm]	recommended tightening torque [Nm]	max. B2 [mm]	recommended clamping thickness [mm]	max. load [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Clamping bow M8 35 + 36	100	48	8	70	26	3,5	0,307	20	0816710

Suitable for profile rail 45/26, 45/45, 45/60

Clamping bow M10 45/60	100	56	15	80	26	4,0	0,401	20	0816720
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Suitable for profile rail 45/75, 45/90

Clamping bow M10 45/90	140	56	15	80	26	4,0	0,440	20	0816730
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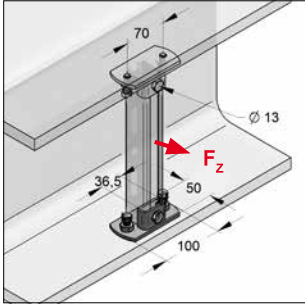
Suitable for profile rail 45/75, 45/90

Clamping bow M12 45/90	140	59	30	100	29	7,0	0,749	20	08167401
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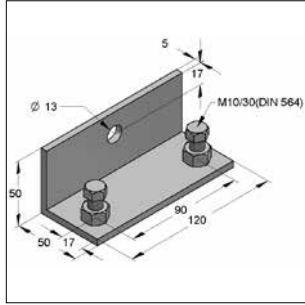
Suitable for profile rail 45/120, 45/150

Clamping bow M12 45/150	210	59	30	100	29	7,0	0,831	20	08167501
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Girder clamping



Girder clamping 35



Girder clamping L 45

Max. load on girders at a length of ≤ 400 mm		
Identification	in combination with profile rail	max. load F_z [kN]
Girder clamping 35	35/21	2,0
Girder clamping 35	Stex 35/35	2,0
Girder clamping 35	36/40, Stex 35/42	3,0
Girder clamping L 45	45/45	3,0

Specification:

Profile rail type:
Application area:

35/21, 36/40, Stex 35/35, Stex 35/42, 45/45
for clamped fixation
at steel girder
(IPE 120 or U 160)

Technical data:

Material: steel
Material type: S235JR
Surface: galvanized

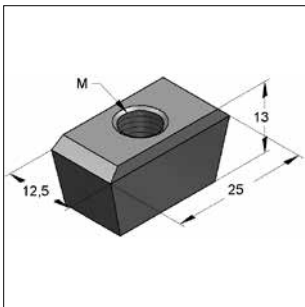
Assembly instruction:

Recommended accessory:

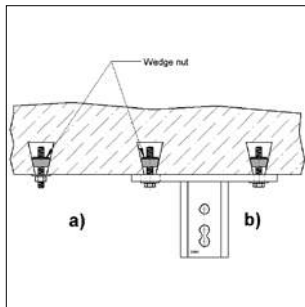
tightening torque min. 25 Nm. For a rail fastening two girder clampings are required.
threaded square plate 35x30 (Beam clamping device L 45)
threaded square plate 30x22 (Beam clamping device 35)

Identification	for profile rail	Weight	Packing	Part-No.
		[kg/pc.]	[pcs.]	
Girder clamping 35	35/21, 36/40, Stex 35/35, Stex 35/42	0,301	20	9999695
Girder clamping L 45	45/45	0,519	20	08163909

Wedge nut for ceiling



Wedge nut for ceiling



Fixed under ceiling

Assembly instruction:

Illustration a): single mounting

- 1 wedge nut for ceiling
- 1 threaded bolt M8 or M10 (min. length 50 mm)
- 1 washer DIN 7089 (8,4 or 10,5) M8 or M10
- 1 hexagon nut M8 or M10

Illustration b): mounting of ceiling holder

- 1 holder for C-profile rail. plate 200 x 200
- 4 wedge nut for ceiling (M8 or M10)
- 4 hexagon screw, galvanized (M8 x 50 or M10 x 50)
- 2 washer DIN 7089 (8,4 or 10,5)

Specification:

Application area:

for ceiling 38 / 51 x 150
type „HOLORIB“ and „HOESCH“

Technical data:

Material: GTW
Surface: galvanized

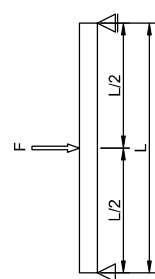
* Maximum load of HOLORIB-ceiling (system: Montana) is 9 kN/m² and max.4 fixing points per m².

Identification	max. load* [kN]	Weight [kg/pc.]	Packing [pcs.]	Part-No.
Wedge nut, female thread M8	1,50	0,022	100	0819715
Wedge nut, female thread M10	2,25	0,020	100	0819722

Loads of profile rails, galvanized: maximum loads for 1 x F																										
System 45 (toothed)																										
Surface	F L	System 35										System 45 (toothed)														
		22/16/2,0	27/18/1,25	35/20/0,8	35/21/2,0	35/35/1,0	35/42/1,5	36/40/2,0	45/26/1,5	45/45/1,5	45/45/2,0	45/45/2,5	45/52/1,5 D	45/90/1,5 D	45/90/2,0 D	45/90/2,5 D	45/120/3,0 D	45/120/3,0 D	45/150/3,0 D							
[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]							
250	0,26	0,81	1,02	1,85	2,71	4,86	5,15	2,76	7,04	8,96	9,87	9,28	16,05	15,09	24,26	22,8	7,94	8,79	14,8	15,92	17,33	15,25	15,25	15,25	16,22	16,22
500	0,13	0,41	0,51	0,92	1,35	2,43	2,57	1,38	3,52	4,48	4,93	4,64	8,02	7,54	12,12	11,39	4,09	8,79	13,3	15,92	15,07	15,25	15,25	15,25	16,22	16,22
750		0,26	0,34	0,62	0,9	1,62	1,71	0,92	2,34	2,98	3,28	3,09	5,34	5,02	8,07	7,59	2,72	6,9	8,86	10,68	10,03	15,25	15,25	15,25	16,22	16,22
1000		0,15	0,2	0,4	0,68	1,21	1,28	0,69	1,76	2,23	2,46	2,31	4	3,76	6,05	5,68	2,04	5,17	6,64	8	7,51	12,93	12,15	16,22	16,22	16,22
1250			0,13	0,25	0,54	0,97	1,07	0,45	1,4	1,78	1,96	1,84	3,19	3	4,83	4,53	1,62	4,13	5,3	6,38	6	10,32	9,7	16,1	15,13	15,13
1500				0,17	0,41	0,8	0,85	0,31	1,16	1,48	1,63	1,53	2,65	2,49	4,01	3,77	1,35	3,43	4,41	5,31	4,98	8,59	8,06	13,4	12,59	12,59
1750				0,12	0,3	0,67	0,66	0,22	0,99	1,26	1,39	1,3	2,26	2,12	3,43	3,22	1,15	2,93	3,77	4,54	4,26	7,34	6,89	11,46	10,76	10,76
2000					0,23	0,51	0,50	0,17	0,75	0,96	1,08	1,08	1,74	1,63	2,65	2,48	0,78	2,27	2,91	3,5	3,29	5,68	5,32	8,87	8,33	8,33
2250					0,18	0,4	0,39	0,13	0,59	0,75	0,84	0,84	1,45	1,44	2,37	2,22	0,62	2,03	2,61	3,14	2,94	5,09	4,77	7,96	7,47	7,47
2500					0,14	0,32	0,31	0,10	0,47	0,6	0,67	0,67	1,45	1,44	2,15	2,01	0,51	1,84	2,36	2,84	2,66	4,61	4,32	7,22	6,77	6,77
2750					0,11	0,26	0,25		0,38	0,48	0,54	0,54	1,18	1,18	1,9	1,83	0,41	1,68	2,15	2,59	2,42	4,21	3,94	6,59	6,18	6,18
3000						0,21	0,20		0,31	0,4	0,44	0,44	0,98	0,97	1,6	1,59	0,34	1,54	1,97	2,38	2,22	3,86	3,62	6,07	5,68	5,68
3250						0,17	0,16		0,26	0,33	0,37	0,36	0,81	0,81	1,36	1,35	0,28	1,4	1,8	2,17	2,05	3,57	3,34	5,61	5,25	5,25
3500						0,14	0,13		0,22	0,27	0,3	0,3	0,69	0,68	1,16	1,15	0,24	1,21	1,55	1,86	1,85	3,31	3,1	5,21	4,88	4,88
3750						0,12	0,10		0,18	0,23	0,25	0,25	0,58	0,57	1,16	1,15	0,24	1,21	1,55	1,86	1,85	3,31	3,1	5,21	4,88	4,88
4000									0,15	0,19	0,21	0,2	0,49	0,49	1	0,99	0,2	1,04	1,34	1,61	1,6	3,09	2,88	4,86	4,55	4,55
4250									0,13	0,16	0,17	0,17	0,42	0,41	0,87	0,86	0,16	0,91	1,16	1,4	1,39	2,89	2,69	4,56	4,26	4,26
4500									0,11	0,13	0,14	0,14	0,36	0,35	0,75	0,74	0,13	0,79	1,02	1,23	1,21	2,71	2,52	4,28	4	4
4750										0,11	0,12	0,11	0,3	0,3	0,65	0,64	0,11	0,7	0,89	1,07	1,06	2,44	2,37	4,03	3,76	3,76
5000													0,26	0,25	0,57	0,56		0,61	0,78	0,94	0,93	2,17	2,15	3,81	3,55	3,55
5250													0,22	0,21	0,5	0,49		0,54	0,69	0,83	0,82	1,93	1,92	3,6	3,36	3,36
5500													0,18	0,17	0,43	0,42		0,48	0,61	0,73	0,72	1,73	1,71	3,42	3,18	3,18
5750													0,15	0,14	0,37	0,36		0,42	0,54	0,64	0,63	1,54	1,53	3,22	3,02	3,02
6000													0,12	0,11	0,32	0,31		0,37	0,47	0,57	0,55	1,38	1,36	2,91	2,87	2,87

Surface property
fbv: pre-galvanized
fsv: hot-dip galvanized

Calculation according to RAL-GZ 655-C
 Safety $\chi = 1,54$
 max. bending $\delta_{\text{zul}} = L/200$
 module of elasticity $E = 210000 \text{ N/mm}^2$

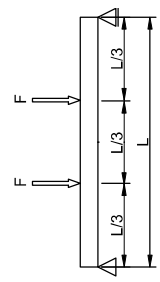


Loads of profile rails, galvanized: maximum loads for 2 x F

Surface	System 35										System 45 (toothed)														
	22/16/2,0	27/18/1,25	35/20/0,8	35/21/2,0	35/35/1,0	35/42/1,5	36/40/2,0	45/26/1,5	45/45/1,5	45/45/2,0	45/45/2,5	45/45/2,5	45/60/3,0	45/60/3,0	45/75/3,0	45/75/3,0	45/90/1,5 D	45/90/2,0 D	45/90/2,5 D	45/90/2,5 D	45/120/3,0 D	45/120/3,0 D	45/150/3,0 D	45/150/3,0 D	
F	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv	fbv
L	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]
250	0,2	0,61	0,76	1,39	2,03	3,65	3,86	2,07	5,28	6,72	7,4	6,96	12,04	11,32	18,2	17,1	3,97	4,4	7,4	7,96	8,67	7,63	7,63	8,11	8,11
500	0,10	0,31	0,38	0,69	1,02	1,82	1,93	1,04	2,64	3,36	3,7	3,48	6,02	5,66	9,09	8,55	3,07	4,4	7,4	7,96	8,67	7,63	7,63	8,11	8,11
750		0,16	0,21	0,42	0,68	1,21	1,29	0,69	1,76	2,24	2,46	2,32	4,01	3,77	6,06	5,69	2,04	4,4	6,65	7,96	7,53	7,63	7,63	8,11	8,11
1000			0,12	0,24	0,51	0,91	0,96	0,42	1,32	1,68	1,84	1,73	3	2,82	4,54	4,26	1,53	3,88	4,98	6	5,64	7,63	7,63	8,11	8,11
1250				0,15	0,35	0,73	0,77	0,27	1,05	1,34	1,47	1,38	2,39	2,25	3,62	3,4	1,22	3,1	3,98	4,79	4,5	7,63	7,28	8,11	8,11
1500				0,10	0,24	0,54	0,53	0,18	0,8	1,02	1,15	1,15	1,99	1,87	3,01	2,83	1,01	2,58	3,31	3,98	3,74	6,44	6,05	8,11	8,11
1750					0,18	0,4	0,39	0,13	0,59	0,74	0,84	0,84	1,7	1,59	2,57	2,42	0,78	2,2	2,83	3,4	3,19	5,51	5,17	8,11	8,07
2000					0,14	0,3	0,29	0,1	0,44	0,56	0,64	0,63	1,36	1,35	2,24	2,1	0,59	1,92	2,46	2,97	2,79	4,81	4,51	7,51	7,05
2250					0,11	0,24	0,23		0,35	0,44	0,5	0,49	1,06	1,06	1,99	1,86	0,46	1,7	2,18	2,63	2,47	4,26	3,99	6,66	6,25
2500						0,19	0,18		0,28	0,35	0,4	0,39	0,85	0,85	1,64	1,63	0,37	1,52	1,96	2,36	2,21	3,82	3,58	5,97	5,61
2750						0,15	0,15		0,23	0,29	0,32	0,32	0,7	0,69	1,34	1,34	0,3	1,37	1,76	2,12	2	3,46	3,24	5,42	5,08
3000						0,12	0,12		0,19	0,23	0,26	0,26	0,57	0,57	1,12	1,11	0,25	1,14	1,47	1,77	1,76	3,16	2,96	4,95	4,64
3250						0,10	0,10		0,15	0,19	0,22	0,21	0,48	0,48	0,94	0,94	0,2	0,97	1,24	1,49	1,49	2,9	2,71	4,55	4,26
3500									0,13	0,16	0,18	0,18	0,4	0,4	0,8	0,79	0,17	0,82	1,06	1,27	1,27	2,68	2,5	4,21	3,94
3750									0,11	0,14	0,15	0,15	0,34	0,34	0,68	0,68	0,14	0,71	0,91	1,09	1,09	2,41	2,32	3,91	3,66
4000										0,11	0,13	0,12	0,29	0,29	0,59	0,58	0,12	0,61	0,79	0,95	0,94	2,1	2,1	3,65	3,41
4250										0,10	0,10	0,10	0,25	0,24	0,51	0,51	0,10	0,54	0,69	0,83	0,82	1,84	1,83	3,42	3,19
4500													0,21	0,21	0,44	0,44		0,47	0,6	0,72	0,71	1,62	1,61	3,21	3
4750													0,18	0,18	0,39	0,38		0,41	0,53	0,63	0,63	1,44	1,43	2,9	2,82
5000													0,15	0,15	0,34	0,33		0,36	0,46	0,56	0,55	1,28	1,27	2,59	2,58
5250													0,13	0,12	0,29	0,29		0,32	0,41	0,49	0,48	1,14	1,13	2,32	2,31
5500													0,11	0,10	0,26	0,25		0,28	0,36	0,43	0,42	1,02	1,01	2,09	2,08
5750															0,22	0,21		0,25	0,32	0,38	0,37	0,91	0,9	1,89	1,88
6000															0,19	0,18		0,22	0,28	0,33	0,32	0,81	0,80	1,71	1,70

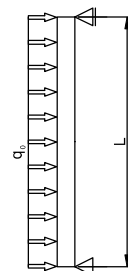
Surface property
 fbv: pre-galvanized
 fsv: hot-dip galvanized

Calculation according to RAL-GZ 655-C
 Safety $\chi = 1,54$
 max. bending $\delta_{all} = L/200$
 module of elasticity $E = 210000 \text{ N/mm}^2$



Loads of profile rails, galvanized: maximum loads for distributed load

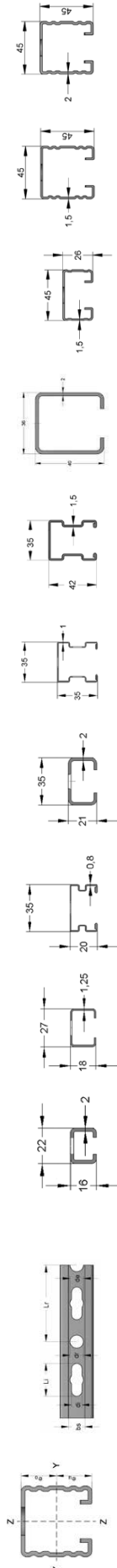
Surface	System 45 (toothed)																									
	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]	fbv [kN/m]											
250	2,08	6,44	8,1	14,75	21,61	38,85	41,13	22,02	56,3	71,67	78,94	74,2	128,38	120,67	183,37	172,37	31,76	35,16	59,17	63,65	69,32	60,97	60,97	64,88	64,88	
500	0,52	1,61	2,02	3,68	5,4	9,7	10,27	5,50	14,06	17,9	19,72	18,53	32,07	30,14	48,48	45,56	15,88	17,58	29,59	31,83	34,66	30,49	30,49	32,44	32,44	
750	0,21	0,55	0,76	1,52	2,4	4,31	4,56	2,44	6,24	7,95	8,75	8,22	14,23	13,37	21,52	20,22	7,25	11,72	19,73	21,22	23,11	20,33	20,33	21,63	21,63	
1000		0,23	0,32	0,64	1,35	2,42	2,56	1,14	3,51	4,46	4,91	4,61	7,99	7,51	12,09	11,36	4,07	8,79	13,27	15,92	15,02	15,25	15,25	16,22	16,22	
1250		0,12	0,16	0,32	0,76	1,54	1,63	0,58	2,24	2,85	3,13	2,94	5,1	4,79	7,72	7,25	2,6	6,6	8,48	10,21	9,59	12,2	12,2	12,98	12,98	
1500				0,18	0,44	0,99	0,97	0,33	1,45	1,84	2,08	2,04	3,53	3,32	5,35	5,02	1,8	4,57	5,87	7,08	6,64	10,17	10,17	10,82	10,82	
1750				0,11	0,27	0,62	0,60	0,21	0,91	1,15	1,3	1,3	2,59	2,43	3,92	3,68	1,21	3,35	4,3	5,18	4,87	8,39	7,88	9,27	9,27	
2000					0,18	0,41	0,40	0,13	0,6	0,77	0,86	0,86	1,85	1,84	2,99	2,8	0,8	2,56	3,28	3,96	3,71	6,41	6,01	8,11	8,11	
2250					0,13	0,28	0,28		0,42	0,53	0,6	0,6	1,29	1,28	2,35	2,21	0,56	2,02	2,59	3,12	2,92	5,05	4,73	7,21	7,21	
2500						0,2	0,20		0,3	0,38	0,43	0,43	0,93	0,93	1,78	1,78	0,4	1,63	2,09	2,51	2,35	4,07	3,82	6,37	5,98	
2750							0,15		0,22	0,28	0,32	0,32	0,69	0,69	1,33	1,33	0,3	1,34	1,72	2,07	1,94	3,35	3,14	5,25	4,92	
3000							0,11		0,17	0,21	0,24	0,24	0,52	0,52	1,01	1,01	0,22	1,04	1,33	1,61	1,6	2,81	2,63	4,4	4,12	
3250									0,13	0,16	0,18	0,18	0,4	0,4	0,79	0,79	0,17	0,81	1,04	1,25	1,25	2,38	2,23	3,73	3,5	
3500									0,10	0,13	0,14	0,14	0,32	0,31	0,62	0,62	0,13	0,64	0,82	0,99	0,99	2,04	1,91	3,21	3	
3750										0,10	0,11	0,11	0,25	0,25	0,5	0,5	0,10	0,52	0,66	0,8	0,79	1,76	1,65	2,78	2,6	
4000													0,2	0,2	0,4	0,4		0,42	0,54	0,65	0,64	1,43	1,43	2,43	2,28	
4250													0,16	0,16	0,33	0,33		0,35	0,44	0,53	0,53	1,18	1,18	2,15	2,01	
4500													0,13	0,13	0,27	0,27		0,29	0,37	0,44	0,43	0,99	0,98	1,9	1,78	
4750													0,11	0,10	0,22	0,22		0,24	0,3	0,37	0,36	0,83	0,82	1,66	1,59	
5000															0,19	0,18		0,2	0,25	0,31	0,3	0,7	0,69	1,41	1,41	
5250															0,15	0,15		0,17	0,21	0,26	0,25	0,59	0,59	1,21	1,2	
5500															0,13	0,13		0,14	0,18	0,22	0,21	0,51	0,5	1,04	1,03	
5750															0,11	0,10		0,12	0,15	0,18	0,18	0,43	0,43	0,9	0,89	
6000																		0,10	0,13	0,15	0,15	0,15	0,37	0,37	0,78	0,77



Calculation according to RAL-GZ 655-C
 Safety $\chi = 1,54$
 max. bending $\delta_{zul} = L/200$
 module of elasticity $E = 210000 \text{ N/mm}^2$

Surface property
 fbv: pre-galvanized
 fsv: hot-dip galvanized

Profile rail overview, pre- and hot-dip galvanized



Profile rail	System 35						System 45 (toothed)			
	22/16/2,0	27/18/1,25	35/20/0,8	35/21/2,0	35/35/1,0	35/42/1,5	36/40/2,0	45/26/1,5	45/45/1,5	45/45/2,0
Surface pre-galvanized										
Material according to DIN EN 10346	S250GD-Z275-N-A									
Elastic limit	250									
Weight/ meter	0,78									
Surface hot-dip galvanized according to DIN EN ISO 1461										
Material according to DIN EN 10025-2	-									
Elastic limit	-									
Weight/meter	-									
Delivery length 1	2,0									
Delivery length 2	-									
Area (least cross section of the profile rail)	0,68									
Slot width	14,0									
Grid dimension	50,0									
Diameter round hole	-									
Diameter elongated hole x length	10,0 x 18,0									
Extension diameter elongated hole	-									
Characteristic values YY-axis										
Axial angular impulse	0,11									
Section modulus	0,10									
Centroid distance	0,41									
Centroid distance	1,19									
Radius of inertia	0,38									
Characteristic values ZZ-axis										
Axial angular impulse	0,55									
Section modulus z-axis	0,50									
Centroid distance	1,10									
Radius of inertia	0,84									
Approvals/quality marks										
RAL quality mark	RAL-GZ 655-C									

