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U-Holder SB F 100 Page 2-30











U Bolt Fastening UB F Page 2-38











## Beam Section TP F 100

Group: A810

#### Application

Galvanised hollow-box-section for fabrication of steel frames. Designed for both simple two-dimensional supports and complex volumetric arrangements. Holes designed to receive Self Forming Screw FLS in conjunction with the relevant component.

#### **Technical Data**

Туре	Section modulus [cm <sup>3</sup> ]	Moment of inertia [cm⁴ ]	Radius of inertia [cm]	Torsional moment It [cm <sup>4</sup> ]	Cross section A [cm <sup>2</sup> ]
TP F 100	Wy: 36.93 Wz: 36.93	ly: 179.85 lz: 179.85	iy: 4.80 iz: 4.80	135,00	7.80
TP F 100/160	Wy: 75.52 Wz: 46.26	ly: 559.42 lz: 280.34	iy: 6.16 iz: 4.36	193.00	14.74

Mechanical properties shown above take into account perforations.

The specific values are effective values established by tests, geometrical quantities (analytically determined) can be significantly higher.

Steel, HCP Material:

#### **Approvals / Compliance**

Туре	Weight [kg/m]	Qty. [m]	Part number
TP F 100	10.8	6	112904
TP F 100/160	14.3	6	112905









Cantilever Bracket AK F 100

Group: A820

#### Application

Galvanised hollow-box-section with welded end-plate to serve as cantilever arm. May be used as a crossbar when combined with End Support STA and 4 x Self Forming Screw FLS. By means of the round holes in the base plate a direct connection to excisting cast-in channels is possible. With the types F 100-80 and F 100-80-E a combination of Beam Section F 100 with F 80/80 is possible.

#### Installation

With 4 x Self Forming Screw FLS when fixed to another siFramo hollow-box-section. Alternatively with two suitable wall anchors through holes "A" when fixed directly to building structure.

#### **Technical Data**

Туре	Dimensions of base plate [mm]	L [mm]	d [mm]	b₁ x l₁ [mm]
AK F 100-400	210 x 100 x 8	400	14	11 x 20
AK F 100-800	210 x 100 x 8	800	14	11 x 20
AK F 100-1200	210 x 100 x 8	1200	14	11 x 20
AK F 100-E - 600	185 x 100 x 8	600	-	11 x 20
AK F 100-80 - 400	190 x 100 x 8	400	14	11 x 20
AK F 100-80 - 800	190 x 100 x 8	800	14	11 x 20
AK F 100-80-E - 600	170 x 100 x 8	600	-	11 x 20

Configuration:Plate welded to Beam Section TP F 100Material:Steel, HCP

#### Approvals / Compliance

Туре	W [kg]	Quantity [pack]	Part number
AK F 100-400	5.7	1	113068
AK F 100-800	10.1	1	113069
AK F 100-1200	14.7	1	113419
AK F 100-E-600	7.8	1	113070
AK F 100-80 - 400	3.6	1	117143
AK F 100-80 - 800	6.0	1	117144
AK F 100-80-E - 600	4.7	1	117254







b<sub>1</sub> x l





## Cantilever Bracket AK F 160-100-E

Group: A820

## Application

Galvanised hollow-box-section with welded end-plate to serve as cantilever arm for Beam Section TP F 100/160 (flange side 160) or Beam Bracket TKO F 100/160.

#### Installation

With 4 x Self Forming Screw FLS when fixed to another siFramo 100/160 (flange side 160) hollow- box- section. Fixing to walls and ceilings with suitable wall anchors M10.

#### **Technical Data**

Туре	Dimensions of	L	b1 x l1
	base plate [mm]	[mm]	[mm]
AK F 160-100-E-800	160 x 200	800	11 x 20
AK F 160-100-E-1200	160 x 200	1200	11 x 20

Configuration:Plate welded with Beam Section F 100Material:Steel, HCP

#### Approvals / Compliance

Туре	W [kg]	Quantity [pack]	Part number
AK F 160-100-E-800	10.9	1	117145
AK F 160-100-E-1200	15.4	1	117146











## Beam Bracket TKO F 100

Group: A823

#### Application

Galvanised hollow-box-section with welded end-plate to serve as cantilever arm. May be used as a crossbar when combined with End Support STA/End Support WBD and 4 x Self Forming Screw FLS.

#### Scope of delivery

With pre-assembled End Cap ADK F100

#### Installation

Depending on the situation, different options are recommended:

- a) Directly to building structure: 4x suitable wall anchors.
- To traditional steel beams between 80 120 mm flange dimensions: with Assembly Set 5P M12 S.
- c) To traditional steel beams > 120 flange dimension: with on-demand Adaptor Plate (tbc)
- d) To Sikla Simotec Steel Beams 100/120: with Bracket Plates FV 100/120 when positive mechanical connection required.

#### **Technical Data**

Туре	L [mm]	Dimensions of base plate [mm]	Slots in base plate for
TKO F 100-400	400	220 x 220 x 12	M12
TKO F 100-800	800	220 x 220 x 12	M12
TKO F 100-1200	1200	220 x 220 x 12	M12

Configuration: Material: Plate: Beam Section:

Steel, HCP Steel, HCP

### Approvals / Compliance

CE mark (Declaration of performance see www.sikla.com/service/downloads)

Base plate welded to Beam Section TP F 100

Туре	W [kg]	Quantity [pack]	Part number
TKO F 100-400	8.6	1	113071
TKO F 100-800	12.8	1	113072
TKO F 100-1200	17.5	1	113421





## Beam Bracket TKO F 100/160

Group: A823

#### Application

Galvanised hollow-box-section with welded end-plate to serve as cantilever arm. May be used as a crossbar when combined with End Support STA/End Support WBD and 4 x Self Forming Screw FLS.

#### Scope of delivery

With pre-assembled End Cap ADK F100

#### Installation

Depending on the situation, different options are recommended:

- Directly to building structure: 4x suitable wall anchors. a)
- b) To traditional steel beams between 100 - 180 mm flange dimensions: with Assmebly Set 5P M12 S.

#### **Technical Data**

Туре	L	Dimensions of base plate	Slots in base plate for
	[mm]	[mm]	
TKO F 100/160-800	800	280 x 280 x 12	M12
TKO F 100/160-1200	1200	280 x 280 x 12	M12

Base plate welded to Beam Section TP F 100/160 Configuration: Material: Base plate: Steel, HCP Steel, HCP Beam Section:

#### **Approvals / Compliance**

CE mark (Declaration of performance see www.sikla.com/service/downloads)

Туре	W [kg]	Quantity [pack]	Part number
TKO F 100/160-800	18.5	1	113097
TKO F 100/160-1200	24.5	1	113420





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## Bracing Arm SKO F 100

Group: A823

#### Application

Bracing arm for reinforcement of frames made from Beam Section TP F100 and/or Cantilever Bracket AK F100.

#### Installation

- With 2x4 Self Forming Screw FLS when used inside a corner of two F100 size hollow-box sections.

- With 4x Self Forming Screw FLS and 2x suitable wall anchors/fixings when used to connect between one

F 100 size hollow-box section and the building structure.

#### **Technical Data**

Туре	Dimensions of	е	e1
	Base plate [mm]	[mm]	[mm]
SKO F 100	210 x 100 x 8	450	710

Material: Steel, HCP

#### Approvals / Compliance

Туре	W	Quantity	Part
	[kg]	[pack]	number
SKO F 100	5.5	1	113096

















## End Support STA F 100

Group: A822

#### Application

Plug-in component designed to create an endplate at the open end of a Beam Section TP F 100 or a Cantilever bracket AK F 100. Variation types F 100-80 (E) are designed to combine F 100 with F 80 beam sections. Octagonal insert allows full utilisation of beam section within the space required by the End Support STA itself.

#### Installation

Depending on the situation, different options are recommended:

- a) With 2x4 Self Forming Screws FLS when used to connect 2 Beam Sections.
- b) With 4 Self Forming Screws FLS applied to the octagonal insert and 2 suitable wall anchors/fixings when connected to the building structure.

The Beam Section TP F 100/100 connected to the End Support STA F 100 has to be screwed with 4 Self Forming Screws FLS F. On each of the opposite sides 2 Self Forming Screws FLS F are necessary.

#### **Technical Data**

Туре	Dimensions of base plate	А	В	н
	[mm]	[mm]	[mm]	[mm]
STA F 100	210 x 100 x 8	14	20 x 11	188
STA F 100-E	185 x 100 x 8	-	20 x 11	188
STA F 100-80	210 x 100 x 8	14	20 x 11	148
STA F 100-80-E	185 x 100 x 8	-	20 x 11	148

Configuration: Base plate welded to Octagon F 100 or F 80 Material:

vialeriai.	
Base plate:	Steel, HCP
Octagon:	Steel, HCP

#### **Approvals / Compliance**

Туре	W [kg]	Quantity [pack]	Part number
STA F 100	2.4	1	113073
STA F 100-E	2.2	1	113074
STA F 100-80	2.0	1	113337
STA F 100-80-E	1.8	1	113481







#### Application

Plug-in component designed to create an end plate at the open end of a Beam Section TP F 100/160.

#### Installation

For the connection to Beam Section TP F 100/160 (flange side 160) 4 Self Forming Screws FLS F are necessary. The Beam Section TP F 100 connected to the End Support STA F 160-100-E has to be screwed with 4 Self Forming Screws FLS F. On each of the broader sides 2 Self Forming Screws FLS F are necessary. Fixing to walls and ceilings with suitable wall anchors M10.

#### **Technical Data**

Туре	Dimensions of	L	b₁ x l₁
	base plate [mm]	[mm]	[mm]
STA F 160-100-E	160 x 200	180	11 x 20

Steel, HCP

Configuration: Material:

## Approvals / Compliance

CE-mark (Declaration of performance see www.sikla.com/downloads)

Base plate welded to octagonal F 100

Туре	W	Quantity	Part
	[kg]	[pack]	number
STA F 160-100-E	3.1	1	116875













ά

b₁ x h₁



Group: A822

## Application

The End Support STA F 100-80-E 45° is designed to generate a 45° bracing element in combination with F100 Beam Sections or F100 Cantilever Brackets.

#### Installation

Depending on the situation on site there are two options to use this product:

- a) Connection within the siFramo system by connecting with 4 FLS screws to each beam section F100.
- b) Connection to building fabric by using 2 suitable wall anchors in diagonal configuration.

#### **Technical Data**

Туре	L	В	L <sub>1</sub>	d	b <sub>1</sub>	h₁	α
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]
STA F 100-80-E 45°	210	100	244.5	14	11	20	45

Configuration:Base Plate welded to octagonal F 80Material:Steel, HCP

## Approvals / Compliance

CE-mark (Declaration of performance www.sikla.com/downloads)

Туре	W	Quantity	Part
	[kg]	[pack]	number
STA F 100-80-E 45°	2.4	1	406002









End Support STA F 100 - 100/160

Group: A822

#### Application

Plug-in component designed to create an endplate at the open end of a Beam Section TP F 100 and TP F 100/160 or a Cantilever bracket AK F 100.

#### Installation

For the connection to Beam Section TP F 100 or TP F 100/160 (flange side 100) 4 Self Forming Screws FLS F are necessary. The Beam Section TP F 100/160 connected to the End Support STA F 100 - 100/160 has to be screwed with 8 Self Forming Screws FLS F. On each of the broader sides 4 Self Forming Screws FLS F are necessary.

#### **Technical Data**

Туре	Dimensions of base plate   Slotting in base plate		н
	[mm]	for	[mm]
STA F 100 - 100/160	270 x 100 x 8	M10	238
STA F 100 - 100/160 E	245 x 100 x 8	M10	238

Configuration: Material:

: Base plate welded to Octagon F 100/160

Plate:	Steel, HCP
Octagon:	Steel, HCP

Туре	W	Quantity	Part
	[kg]	[pack]	number
STA F 100 - 100/160	4.4	1	114878
STA F 100 - 100/160 E	4.2	1	114879







 $b_1 \times l_1$ 

all also







Group: A822

#### Application

Plug-in component designed to create an endplate at the open end of a Beam Section TP F 100/160.

#### Installation

For the connection to Beam Section TP F 100/160 (flange side 160) 4 Self Forming Screws FLS F are necessary. The Beam Section TP F 100/160 connected to the End Support STA F 160-Q has to be screwed with 8 Self Forming Screws FLS F. On each of the broader sides 4 Self Forming Screws FLS F are necessary. Fixing to walls and ceilings with suitable wall anchors M10.

#### **Technical Data**

Туре	Dimensions of	L	$b_1 \ge l_1$
	base plate [mm]	[mm]	[mm]
STA F 160-Q	160 x 200	230	11 x 20

Steel, HCP

Configuration: Material:

## **Approvals / Compliance**

CE-mark (Declaration of performance see www.sikla.com/downloads)

Туре	W	Quantity	Part
	[kg]	[pack]	number
STA F 160-Q	4.8	1	117147

Base plate welded to octagonal F 100/160

















## End Support WBD F 100

Group: A821

#### Application

Plug-in component designed to create a square end plate at the open end of a Beam Section TP F 100 or a Beam Bracket/Cantilever bracket AK F 100. Variation "T" with octagonal insert allows full utilisation of beam section within the space required by the End Support WBD itself.

#### Installation

Depending on the situation, different options are recommended:

- a) Directly to building structure: 4 x suitable wall anchors and 4 Self Forming Screws FLS applied to the square/octagonal insert
- b) To traditional steel beams between 80 310 mm flange dimensions: 1x Assembly Set 5P M12 S, M16 S and 4 Self Forming Screws FLS applied to the square/octagonal insert
- d) To Sikla Simotec steel beams 100/120: with Bracket Plates FV 100/120 when positive mechanical connection required

The Beam Section TP F 100 connected to the End Support WBD F 100 has to be screwed with 4 Self Forming Screws FLS F. On each of the opposite sides 2 Self Forming Screws FLS F are necessary. The permissible distance between base plate WBD and profile must not exceed 30 mm.

#### **Technical Data**

Туре	Base plate finish	for flange width [mm]	Dimensions of base plate	Slots in base plate [l x b)
WBD F 100-80/120	flat	80 - 120	220 x 220 x 12	30 x 14
WBD-P F 100-121/160	corrugated	121 - 160	320 x 260 x 12	20 x 14
WBD-P F 100-161/200	corrugated	161 - 200	320 x 310 x 12	20 x 18
WBD-P F 100-201/310	corrugated	201 - 310	420 x 220 x 12	55 x 18
WBD F 100-T	flat	80 - 120	220 x 220 x 12	30 x 14

Туре	e [mm]	L [mm]	t₁ [mm]	Slots in base plate for
WBD F 100-80/120	max. mögl. Abstand	232	-	M12
WBD-P F 100-121/160	max. mögl. Abstand	232	27	M12
WBD-P F 100-161/200	max. mögl. Abstand	232	27	M16
WBD-P F 100-201/310	max. mögl. Abstand	232	27	M16
WBD F 100-T	max. mögl. Abstand	192	-	M12

configuration: Plate welded to square F 100 resp. octagonal element F 100 (only WBD F 100-T) material: Steel, HCP

#### Approvals / Compliance

Туре	W [kg]	Quantity [pack]	Part number
WBD F 100-80/120	6.1	1	113075
WBD-P F 100-121/160	9.7	1	117167
WBD-P F 100-161/200	11.2	1	117168
WBD-P F 100-201/310	10.3	1	117169
WBD F 100-T	5.3	1	113079







#### Application

Plug-in component designed to create a square endplate at the open end of a Beam Section TP F100 or a Beam Bracket.

#### Installation

Depending on the situation, different options are recommended:

- Directly to building structure: 4 x suitable wall anchors and 4 Self a) Forming Screws FLS applied to the square/octagonal insert.
- To traditional steel beams between 80 300 mm flange dimensions: b) 1x Assembly Set 5P M12 S, M16 S and 4 Self Forming Screws FLS applied to the square/octagonal insert.
- To traditional steel beams > 120 flange dimension: with on-demand c) Adaptor Plate (tbc).

The Beam Section TP F 100/160 connected to the End Support WBD F 100/160 has to be screwed with 8 Self Forming Screws FLS F. On each of the broader sides 4 Self Forming Screws FLS F are necessary.

### **Technical Data**

Туре	For flange width [mm]	Dimensions of base plate [mm]	Slots in base plate for	H [mm]
WBD F 100/160-121/160	121 - 160	320 x 260 x 12	M12	232
WBD F 100/160-161/200	161 - 200	320 x 310 x 12	M16	232
WBD F 100/160-201/300	201 - 300	420 x 220 x 12	M16	232

Configuration: Base plate welded to square F 100/60 Material:

Plate:	Steel, HCP
Square F 100:	Steel, HCP

#### **Approvals / Compliance**

Туре	W	Quantity	Part
	[kg]	[pack]	number
WBD F100/160-121/160	10.53	1	113098
WBD F100/160-161/200	11.95	1	113099
WBD F100/160-201/300	11.14	1	113100













## Pivot Joint GE F 100

Group: A437

#### Application

Applicable as a bracing element for single-arm cantilevers in conjunction with siFramo 100 section, and for the knee-brace reinforcing of siFramo frame constructions. The pivot can be installed with angles from 25° to 155°.

#### Installation

Attachment of the Joints to Beam Section TP F 100 by means of 4 Self Forming Screws FLS F at the base plate. The support profile TP F 80 or TP F 100 (depending on joint type) plugged onto the octagon is also attached by means of 4 Self Forming Screws, so 8 Self Forming Screws are necessary in total. The cutting length of the support profile can be determined by the table belowmentioned. After installation at the desired angle the screws have to be tightened with 40 Nm.

#### **Technical Data**

Туре	Height H [mm]	Length L [mm]	Width B [mm]	Angle α	Dimensions of base plate [mm]
GE F 100 - 80	140	100	100	25° - 155°	-
GE F 100 - 80 q	140	100	80	25° - 155°	210 x 100 x 8
GE F 100 - 100	180	100	100	25° - 155°	-
GE F 100 - 100 q	180	100	100	25° - 155°	210 x 100 x 8

Cutting length c of support profile between two joints:

		b [mm] 1000	b [mm] 1500	b [mm] 2000	b [mm] 2500
α	a [mm]	c [mm]	c [mm]	c [mm]	c [mm]
25°	2095	2155	3340	4525	5710
30°	1701	1810	2810	3810	4810
35°	1410	1565	2435	3305	4180
40°	1184	1380	2160	2940	3720
45°	1000	1245	1955	2660	3370
50°	846	1145	1800	2450	3100
55°	713	1060	1670	2285	2895
60°	596	1000	1580	2155	2730
65°	489	950	1500	2055	2605

a = vertical length from centerline of joint to bottom of profile at connection

b = horizontal length of cantilever from connection to centerline of joint

c = cutting length of support profile between two joints

 $\alpha$  = angle at the opposite of the vertical bracing

Material: Steel, HCP

Туре	W [kg]	Quantity [pack]	Part number
GE F 100 - 80	2.3	<b>1</b>	113838
GE F 100 - 100	3.0	1	113837
GE F 100 - 80 q	3.4	1	113032
GE F 100 - 100 q	4.1	1	113836



GE F 100 - 100 q







## Pivot Joint GE F - ST F 100

Group: A437

#### Application

Applicable as a bracing element for single-arm cantilevers supported from primary steelwork or concrete surfaces, also for the knee-brace reinforcing of all siFramo 100 frame constructions. The pivot can be installed with angles from 25° to 155°.

#### Scope of delivery

Pivot Joint GE F - ST F 100 with pre-attached base plate

#### Installation

Attachment of the Joints to steel structure by means of Assembly Set MS 5P M12 S while connecting the base plate. From Type 161/200 on an Assembly Set MS 5P M16 S is used. Another option is to fix the Joint to concrete walls by means of 4 heavy-duty anchors M12. The support profile TP F 100 plugged onto the octagon is attached by means of 4 Self Forming Screws. The cutting length of the support profile can be determined by the table below-mentioned. After installation at the desired angle the screws have to be tightened with 40 Nm.

By loosening the screw connection between Joint and Joining Plate it is possible to rotate the Joint by 90° and to use it for a cross member then (see figure 4).

#### **Technical Data**

Туре	Height H [mm]	Length L [mm]	Width B [mm]	Angle $\alpha$
GE F 80/120 - 100	180	220	220	25° - 155°
GE F 121/160 - 100 - 1	180	320	260	25° - 155°
GE F 161/200 - 100 - 1	180	320	310	25° - 155°
GE F 201/300 - 100 - 1	180	220	420	25° - 155°

Cutting length c of support profile between two joints:

		b [mm] 1000	b [mm] 1500	b [mm] 2000	b [mm] 2500
α	a [mm]	c [mm]	c [mm]	c [mm]	c [mm]
25°	2095	2130	3313	4496	5679
30°	1701	1784	2784	3784	4784
35°	1410	1542	2413	3285	4157
40°	1184	1364	2142	2920	3698
45°	1000	1230	1938	2645	3352
50°	846	1128	1780	2433	3086
55°	713	1048	1658	2268	2879
60°	596	985	1563	2140	2717
65°	489	937	1488	2040	2592

a = vertical length from centerline of joint to bottom of profile at connection

- b = horizontal length of cantilever from connection to centerline of joint
- c = cutting length of support profile between two joints
- $\alpha$  = angle at the opposite of the vertical bracing

Material: Steel, HCP

\* in stock









Туре	W [kg]	Quantity [pack]	Part number
GE F 80/120 - 100 *	6.9	1	115863
GE F 121/160 - 100 - 1	10.5	1	115864
GE F 161/200 - 100 - 1	11.9	1	115866
GE F 201/300 - 100 - 1	11.1	1	115868

## siFramo 100











## Pivot Joint GE F 100/160

Group: A437

#### Application

Applicable as a bracing element for single-arm cantilevers in conjunction with siFramo 100/160 section, and for the knee-brace reinforcing of all frame constructions. The pivot can be installed with angles from 25° to 155°.

#### Scope of delivery

Pivot Joint GE F 100/160 with pre-attached 100/160 joining plate

#### Installation

Attachment of the Joints to the 160 mm face of Beam Section TP F 100/160 by means of 4 Self Forming Screws FLS F at the base plate. The support profile TP F 80 or TP F 100 (depending on joint type) plugged onto the octagon is also attached by means of 4 Self Forming Screws, so 8 Self Forming Screws are necessary in total. The cutting length of the support profile can be determined by the table below-mentioned. After installation at the desired angle the screws have to be tightened with 40 Nm.

#### **Technical Data**

Тур	Height H [mm]	Length L [mm]	Width B [mm]	Angle $\alpha$
GE F 160 - 80	140	160	160	25° - 155°
GE F 160 - 100	180	160	160	25° - 155°

Cutting length c of support profile between two joints:

		b [mm] 1000	b [mm] 1500	b [mm] 2000	b [mm] 2500
α	a [mm]	c [mm]	c [mm]	c [mm]	c [mm]
25°	2095	2140	3323	4506	5689
30°	1701	1792	2792	3792	4792
35°	1410	1549	2420	3292	4164
40°	1184	1370	2148	2926	3704
45°	1000	1236	1943	2650	3357
50°	846	1133	1786	2438	3091
55°	713	1053	1663	2273	2884
60°	596	990	1567	2145	2722
65°	489	941	1493	2044	2596

- a = horizontal length of distance from centerline of joint at steel structure to profile side of connection 100/160
- b = length of cantilever from connection to centerline of joint
- c = cutting length of support profile between two joints
- $\alpha$  = angle at the opposite of the vertical bracing

Туре	W	Quantity	Part
	[kg]	[pack]	number
GE F 160 - 80	3.6	1	115854
GE F 160 - 100	4.3	1	115855





## Joining Plate AP

Group: A630

#### Application

Interface element to enable the connection of standard endplates of Beam Brackets TKO F80 or F100, TKO 100 or 120 to primary steel with flange width >120 mm.

#### Scope of delivery

Joining Plate AP

- 4 Countersink Screws M12 x 40
- 4 Hexagon Nuts M12
- 4 Washers

#### Installation

Connect the Joining Plate AP to the Beam Bracket TKO's end plate by using the accessories above. Then continue with either heavy-duty anchors or Assembly Set 5P/Beam Clips as required by the building structure.

#### **Technical Data**

Туре	Dimension of Base Plate L x B [mm]	Perforation for	Connection to flange width [mm]
AP 121/160	320 x 260 x 12	M12	121 - 160
AP 161/200	320 x 310 x 12	M16	161 - 200
AP 201/300	420 x 220 x 12	M16	246 - 300
AP 301/310	440 x 220 x 12	M16	301 - 310

#### Material:

Joining Plate: Bolts: Nuts: Washers:

e: Steel, hot-dipped galvanised Steel DIN 7991, class 8.8, Dacromet/delta seal Steel, class 8, hot-dipped galvanised Steel, hot-dipped galvanised

Туре	W [kg]	Quantity [pack]	Part number
AP 121/160	7.7	1	183953
AP 161/200	9.3	1	183962
AP 201/300	8.4	1	183980
AP 301/310	9.8	1	113129

















## Welding Plate SPL

Group: A430

#### Application

Interface element to enable a welded connection of load chains, spring hangers etc. to Beam Section TP F. Our type "SPL universal" enables a welded connection to primary steel with flange width up to 300 mm. At the same time it's possible to install type "SPL universal" to Beam Section TP F if a larger installation surface is needed.

The welding plate can be welded directly without previous treatment due to a corrosion-resistant weld-thru coating which is compatible with both the HDG surface of the siFramo section and the health and safety requirements of the welding process.

#### Installation

Depending on the type, different installation methods are recommended:

- a) Installation of SPL F 80 or 100 with 4 Self Forming Screws FLS to Beam Section TP F.
- b) Installation of SPL universal with Flange Screws SCR FLA TT M10 x 30 (part no. 116479) to Beam Section TP F.
- c) Installation of SPL universal by means of 1 Assembly Set 5P M12 S to primary steel with flange width between 100 and 300 mm.

#### **Technical Data**

Туре	Installation surface [mm]	Mounting Plate size [mm]
SPL F 80	70 x 20	110 x 80 x 8
SPL F 100	80 x 80	180 x 90 x 8
SPL universal	220 x 220	370 x 370 x 12

Туре	W [kg]	Quantity [pack]	Part number
SPL F 80	0.5	1	113831
SPL F 100	1.0	1	113635
SPL universal	11.9	1	113636







#### Application

Welding plate with square insert to receive siFramo section. May be implemented into the structural steel design in anticipation of siFramo-frames or used in situ as a connection element when clamping is not an option but hot works are permitted.

#### Scope of delivery

Mounting Plate 100 with welded on square joint.

#### Installation

The welding plate of the ASA can be welded directly without previous treatment due to a corrosion-resistant weld-thru coating which is compatible with both the HDG surface of the siFramo section and the health and safety requirements of the welding process. Once the ASA adapter has been connected, the coating may also receive paint without previous treatment. The siFramo section must be connected to the Welding Adapter ASA with 4 x Self Forming Screw FLS. 8 pieces of Self Forming Screws are to be used for the Beam Section TP F 100/160, whereas 4 Self Forming Screws have to be screwed together on the flat flanks' opposite sides.

#### **Technical Data**

Туре	Adapter size H [mm]	Mounting Plate size [mm]
ASA F 100 GPL 4kt	240	120 x 120 x 20
ASA F 100/160 GPL 4kt	240	180 x 120 x 20

Material: Steel, HCP

#### **Approvals / Compliance**

Туре	W [kg]	Quantity [pack]	Part number
ASA F 100 GPL 4kt	4.4	1	113339
ASA F 100/160 GPL 4kt	6.5	1	113410













#### Application

Welding plate with octagonal insert to receive siFramo section. May be implemented into the structural steel design in anticipation of siFramo-frames or used in situ as a connection element when clamping is not an option but hot works are permitted. The octagonal insert allows for full utilisation of beam section within the space required by the Welding Adapter ASA itself.

#### Scope of delivery

Mounting Plate 100 with welded on octagonal joint.

#### Installation

The welding plate of the ASA can be welded directly without previous treatment due to a corrosion-resistant weld-thru coating which is compatible with both the HDG surface of the siFramo section and the health and safety requirements of the welding process. Once the ASA adapter has been connected, the coating may also receive paint without previous treatment. The siFramo section must be connected to the Welding Adapter ASA with 4 x Self Forming Screw FLS.

#### **Technical Data**

Туре	Adapter size H [mm]	Mounting Plate size [mm]
ASA F 100 GPL 8kt	200	120 x 120 x 20

Material: Steel, HCP

#### **Approvals / Compliance**

Туре	W	Quantity	Part
	[kg]	[pack]	number
ASA F 100 GPL 8kt	3.3	1	113080











#### Application

Component to be used for connections between two F100 or F100/160 sections when the structural design requires an alternative to the End Support STA F 100 as the default solution. Connections with the Corner Bracket WD F 100 allow flexible constructions and

Connections with the Corner Bracket WD F 100 allow flexible constructions and provide a high load capacity at the same time.

Using the bracket hole (Ø 18mm) additional bracings can be installed and comprehensive solutions can be realized.

#### Installation

To be used in pairs only. 8 pieces of Self Forming Screw FLS are necessary for one Corner Bracket.

## **Technical Data**

Туре	perm. tensile load bracket hole [kN]
WD F 100 140/140	45,3

Material: Steel, HCP

### Approvals / Compliance

Туре	W	Quantity	Part
	[kg]	[pack]	number
WD F 100 140/140	1.9	1	113095











## Channel Adapter SA F 100

Group: A827

#### Application

Interface element to enable a stiff and solid connection between the siFramo profile and strut channel of the international 41/41 mm standard. The 41/41 Channel Adapter SA F100 is equipped with automatically locking spring nuts which means that no accessories from the strut channel's range are required in order to make the connection.

#### Installation

The Channel Adapter SA F100-41 requires 4 x Self Forming Screw FLS in order to be connected to the siFramo profile. The strut channel must be inserted with the slot first whilst pressing the two bolt's heads triggering an automatic  $90^{\circ}$ -locking operation of the two channel spring nuts. The strut channel is now securely held and can be adjusted. Finally the two screws must be tightened with the appropriate torque for the strut channel used.

#### **Technical Data**

Туре	Dimension of base plate	Slotted holes	Round holes
	[mm]	[mm]	[mm]
SA F 100-41	210 x 100 x 8	20 x 11	14

Туре	W	Quantity	Part
	[kg]	[pack]	number
SA F 100-41	1.8	1	113081









## Self Forming Screw FLS F

Group: A430

#### Application

The Self Forming Screw FLS creates its own thread inside the wall of the siFramo pilot hole. During the screw-driving operation, the base steel is reshaped and hardened to form an air-tight seal between the threads of the screw and the surrounding steel, making it exceptionally resistant to vibrational loosening and increasing fastening strength.

## **Technical Data**

Application	Tightening torque [Nm]
System siFramo	60
Connection to Channels MS 41	35

Material: Steel, HCP

#### Approvals / Compliance MPA tested

Туре	W	Quantity	Part
	[kg]	[pack]	number
FLS F	0.03	100	192512







## Assembly Set MS 5P

Group: A640

#### Application

Element for connecting Beam Bracket TKO, Angled Beam Bracket SKO, End Support WBD or Pivot Joint GE F to a beam section.

#### Scope of delivery

Туре	Beam Clip [Quantity]	Support plate [Quantity]	HR trimming * [Quantity]
M12 S	4 x M12	4 x M12	4 x M12 x 80
M16 S	4 x M16	4 x M16	4 x M16 x 100
M12 S2	2 x M12	2 x M12	2 x M12 x 80

\* HR trimming according EN 14399-3 consisting of: Hexagon bolt M12 or M16, 2 washers, 1 hexagon nut

#### Installation

- 1. Position Beam Clip with the split end on beam section.
- 2. Install support plate and HR trimming and tighten accordingly.

The support plate secures a rectangular assembly of the bolt and prevents its shifting or bending stress. In conjunction with the HR trimming a continuous and predictable preload force is guaranteed.

#### **Technical Data**

Туре	Size range [mm]	Tightening torque M <sub>A</sub> [Nm]	F <sub>y</sub> permitted per Beam Clip [kN]	Shear force load capacity F <sub>z</sub> per set = 4 Beam Clips [kN]
M12 S	1 - 30	85	26,3	12,0 *
M16 S	4 - 40	150	32,0	13,6 *

<sup>\*</sup> The specified data relate to the worst case with flange thicknesses 30 mnm (M12) or 40 mm (M16) as well as a coefficient of adhesion  $\mu_{adhesion} = 0,20$ . A possibly operating tensile force  $F_y$  isn't included.

Туре	W [kg]	Qty. [set]	Part number
M12 S	1.2	10	115843
M16 S	2.2	10	115844
M12 S2	0.6	10	115845











Assembly Set MS 5P MA

Group: A640

#### Application

Element for connecting Beam Bracket TKO, Angled Beam Bracket SKO, End Support WBD or Pivot Joint GE F to a beam section.

#### Scope of delivery

Туре	Beam Clip [Quantity]	Support plate [Quantity]	Stop plate [Quantity]	HR trimming * [Quantity]
M12 MA S	4 x M12	4 x M12	4 x M12	4 x M12 x 80
M16 MA S	4 x M16	4 x M16	4 x M16	4 x M16 x 100

\* HR trimming according EN 14399-3 consisting of: Hexagon bolt M12 or M16, 2 washers, 1 hexagon nut

#### Installation

- 1. Position stop plate on component to be mounted.
- 2. Position the Beam Clip with the slit side into the indentations of the stop plate and with the lug on the steel girder.
- 3. Install support plate and HR trimming and tighten accordingly.

The support plate secures a rectangular assembly of the bolt and prevents its shifting or bending stress. In conjunction with the HR trimming a continuous and predictable preload force is guaranteed. The stop plate ensures a tight fit of the Beam Clip.

#### **Technical Data**

Туре	Size range	Tightening torque M <sub>A</sub>	F <sub>y</sub> permitted	Shear force load capacity $F_z$
	[]	[]	[kN]	[kN]
M12 MA S	1 - 30	85	32.9	15.1 *
M16 MA S	4 - 40	150	39.1	16.7 *

\* The specified data relate to the worst case with flange thicknesses 30 mm (M12) or 40 mm (M16) as well as a coefficient of adhesion  $\mu_{adhesion} = 0.20$ . A possibly operating tensile force  $F_{y}$  isn't included.

Туре	W [kg]	Qty. [set]	Part number
M12 MA S	1.6	10	114886
M16 MA S	2.8	10	114887













## U-Holder SB F 100

Group: A839

#### Application

Pre-assembled component to clamp Beam Section F100 to the flange side of traditional steel sections.

#### Scope of delivery

Type SB F 100-16: Holder with thread M10 Plate 2 Hexagon nuts M10 2 Washers

Type SB F 100-40 and 100/160-40 Holder with thread M12 Plate 2 Beam Clips SPA 5P AU 2 Hexagon nuts M12

#### Installation

U-Holder to be used in pairs. Type 16 up to flange thickness 16 mm Type 40 up to flange thickness 40 mm

### **Technical Data**

Туре	Thread	Tightening torque	Fz	$F_{y}$	My	$M_{z}$
		[Nm]	per U-Holder [kN]	[kN]	[kNm]	[kNm]
SB F 100-16	M10	40	9,5	*	*	*
SB F 100-40	M12	85	16	*	*	*
SB F 100/160-40	M12	85	16	*	*	*

\* Please compare the suitable type's dimensions by means of the Simotec user guideline to get the permissible lateral forces and torques.

Туре	W [kg]	Quantity [pack]	Part number
SB F 100-16	0.7	20	113082
SB F 100-40	1.6	10	113083
SB F 100/160-40	1.7	10	113101









Beam Section Holder TPH F 100

Group: A825

#### Application

Interface element to connect 90° intersecting Beam Sections F100. Alternatively the Beam Section Holder TPH may be used to connect only one beam section to an even surface with suitable wall anchors or with cast-in channel accessories.

#### Installation

Connecting one Beam Section F100 90° to another one by using 6 x Self Forming Screw FLS applied through all elongated holes. Connecting to any other surface or member by using 2 x Self Forming Screws FLS through the two elongated holes on the top of the Beam Section Holder TPH F100 plus 2 appropriate fixing elements up to M12 through the two holes "d1".

#### **Technical Data**

Туре	Lxbxs	Ød1	Elongated hole LL1	Elongated hole LL2
	[mm]	[mm]	d x a [mm]	d x a [mm]
TPH F 100 C	219 x 100 x 4	14	11 x 20	11 x 20
TPH F 100/80 C	199 x 100 x 4	14	11 x 20	11 x 20

Туре	F <sub>y</sub> [kN]	F <sub>z</sub> [kN]	M <sub>y</sub> [kNm]	M <sub>z</sub> [kNm]
TPH F 100 C	24.1	20.8	1.0	0.9
TPH F 100/80 C	24.1	20.8	1.0	0.9

Туре	F <sub>x</sub> [kN]	F <sub>y</sub> [kN]	F <sub>z</sub> [kN]	M <sub>y</sub> [kNm]	M <sub>z</sub> [kNm]
TPH F 100 C	6.2	12.7	12.3	0.6	0.5
TPH F 100/80 C	6.2	12.7	12.3	0.6	0.5

The specified load values are permissible loads and contain the partial safety factors  $\gamma_{M2} = 1,25$  (DIN EN 1993-1-8:2010-12, chart 2.1) and  $\gamma_G = 1,35$  (DIN EN 1990:2010-12, chart A1.2(B)) for permanent actions.

Material: Steel, HCP

Туре	W	Quantity	Part
	[kg]	[pack]	number
TPH F 100 C	1.2	10	113084
TPH F 100/80 C	1.0	10	113085



LL(1)









## Octagonal Coupling PK F 100 8kt HCP

Group: A430

#### Application

Internal splice connecting element for TP F 100 Beam Section, particularly suitable for vertical extension. Should the component be used for horizontal application, the bending moment needs to be considered. This particular connection element allows rotation of the siFramo TP F 100 Beam Section by 45°.

#### Installation

To be fastened with 2 x 4 FLS F Self Forming Screws. For optimal bending moment, distance between screws to be as far from each other as possible.

#### Note:

Self Forming Screw FLS F to be fastened on two sides with a distance of minimum of 50 mm and to be fastened symmetrically. To optimise the bending moment the FLS F should be installed to maintain the pipe weight of the effective flow - i.e. screws are located top and bottom for horizontal cross bars not sideways.

#### **Technical Data**

Туре	L	Н	В	F <sub>max</sub>	Mb <sub>max</sub>
	[mm]	[mm]	[mm]	[kN]	[kNm]
PK F 100 8kt	360	90	90	10.0	0.25

Туре	W	Quantity	Part
	[kg]	[pack]	number
PK F 100 8kt	2.3	1	400389











Square Coupling PK F 100 4kt HCP

Group: A430

## Application

Internal splice connecting element for TP F 100 Beam Section, particularly suitable for vertical extension. Should the component be used for horizontal application, the bending moment needs to be considered.

#### Installation

To be fastened with 2 x 4 FLS F Self Forming Screws. For optimal bending moment, distance between screws to be as far from each other as possible.

#### Note:

Self Forming Screw FLS F to be fastened on two sides with a distance of minimum of 100mm and to be fastened symmetrically.

To optimise the bending moment the FLS F should be installed to maintain the pipe weight of the effective flow - i.e. screws are located top and bottom for horizontal cross bars not sideways.

## **Technical Data**

Туре	, L	,Η	, B	Fmax	Mb <sub>max</sub>
	[mm]	[mm]	[mm]	[kN]	[kNm]
PK F 100 4kt	442.5	90	90	10.0	0.5

Туре	W	Quantity	Part
	[kg]	[pack]	number
PK F 100 4kt	3.4	1	400390











## End Cap ADK F 100 Group: A430

#### Application

Plastic end cap to close cut ends of Beam Section F100 to meet both visual and health & safety requirements. Standard Cantilever- and Beam Brackets (AK F100 and TKO F100) already include this end cap.

#### Installation

Mallet required.

#### **Technical Data**

Material: PE, colour yellow

Туре	W [kg]	Quantity [pack]	Part number
ADK F 100	0.05	25	113086
ADK F 100/160	0.08	25	113102











Slide Set GS F 100 2G

Group: A436

### Application

Pipe guide for twin-clamp connection designed to clutch the Beam Section F100 fixed by 2 x Self Forming Screws FLS.

#### Installation

Pipe clamp connection points "2G" receive M10 studs or M16 by adapter connection.

#### **Technical Data**











## Application

Slide Set in solid construction for installation on top of siFramo Beam Sections TP F.  $1/2^{"}$  thread connection allows direct connection to pipe clamp Stabil I  $-1/2^{"}$  by means of threaded tube without further adaption parts.

#### Installation

Installation on top of Beam Section TP F with two Self Forming Screws FLS F.

#### **Technical Data**

Туре	а	b	с	perm. load	perm. load
	[mm]	[mm]	[mm]	support [kN]	suspended [kN]
GS F 100 1G	-	102	85.5	17.0	5.7
GS F 100 1G2	210	102	85.5	12.0	8.7

The perm. loads have been determined by load tests following DIN EN 13480-3 annex J.

The pipe clamp and the possibly used  $^{1\!/_{2}"}$  threaded tube have to be verified seperately.



Туре	max. lever [mm]	max. glide path s [mm]
GS F 100 1G	200	100
GS F 100 1G2	300	135

Temperature range (permanent exposure):	130°C
Static friction coefficient µ0:	0,20
Sliding friction coefficient µ:	0,15

Material: Metal components: Slide bar: ,15

Steel, HCP Polyamide, glass fibre reinforced

Туре	W [kg]	Quantity [pack]	Part number
GS F 100 1G	1.4	10	113091
GS F 100 1G2	1.8	10	113092









# Mounting Plate GPL F 100 Group: A838

#### Application

Interface component to connect threaded bar and threaded tube to Beam Section F100.

#### Installation

Requires 2 x Self Forming Screw FLS per Mounting Plate GPL.

#### **Technical Data**

Туре	Tension [kN]	Lateral force [kN]	Perm. bending moment [Nm]
GPL F 100-1/2"	8,0	13,0	29,6
GPL F 100-M10	8,0	13,0	29,6
GPL F 100-M12	8,0	13,0	29,6
GPL F 100-M16	8,0	13,0	29,6

Dimensions of Base plate:	100 x 50 x 4 mm
Material:	Steel, HCP

Stee	I, HCP	
	W	Quantity

Туре	W	Quantity	Part
	[Kg]	[раск]	number
GPL F 100-1/2"	0.2	50	113089
GPL F 100-M10	0.2	50	113338
GPL F 100-M12	0.2	50	113646
GPL F 100-M16	0.2	50	113090









**U** Bolt Fastening UB F

Group: A430

## Application

U Bolt Fastening to connect standard U-Bolts required for pipework to the supporting Beam Sections, Cantilever Brackets and Beam Brackets F80 or F100.

Scope of delivery For U-bolts  $\ge 4$ <sup>"</sup> always 2 U-bolt fastenings F are needed.

#### **Technical Data**

Тур	d	bxl	В
	[mm]	[mm]	[mm]
UB F <sup>1</sup> / <sub>2</sub> " - 1 <sup>1</sup> / <sub>2</sub> "	-	65 x 11	85
UB F 2" - 3"	-	20 x 13	165
UB F 4" - 6"	17	-	45
UB F 8" - 12"	22	-	45
UB F 378 - 530	26	-	45

tabelle\_t Material:

#zelle\_k Steel, HCP or hot-dipped galvanised #/tabelle

Туре	W [kg]	Quantity [pack]	Part number
UB F <sup>1</sup> / <sub>2</sub> " - 1 <sup>1</sup> / <sub>2</sub> "	0.13	25	192931
UB F 2" - 3"	0.44	10	196212
UB F 4" - 6"	0.18	20	113124
UB F 8" - 12"	0.18	20	113125
UB F 378 - 530	0.18	20	113126



