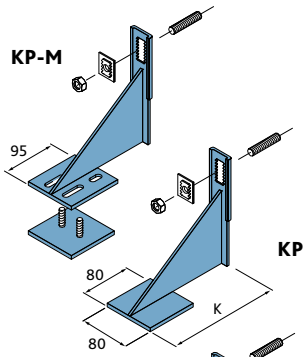
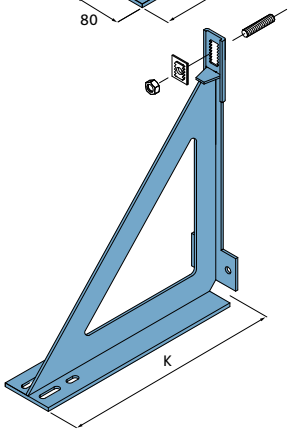
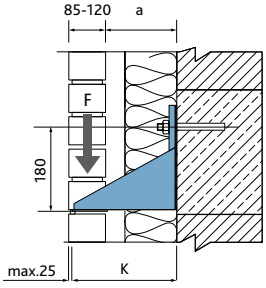
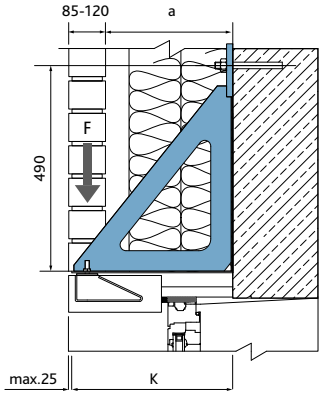
TECHNICAL SPECIFICATIONS OF BRACKETS



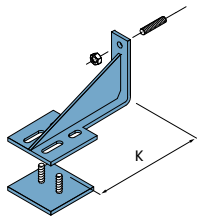


Standard configuration
with a bottom plate

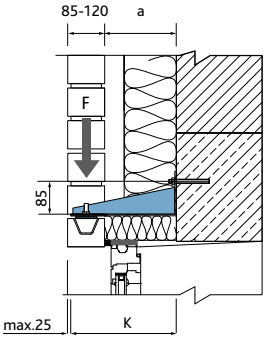




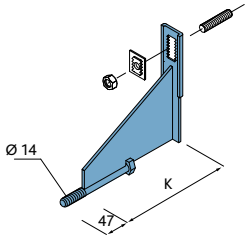
TYPE KP	TYPE KP-M	F kN	a mm	K mm
KP - 160	KP-M - 160	4.5	65 - 95	160
KP - 180	KP-M - 180	4.5	85 - 115	180
KP - 210	KP-M - 210	4.5	115 - 145	210
KP - 230	KP-M - 230	4.5	135 - 165	230
KP - 245	KP-M - 245	4.5	150 - 180	245
KP - 260	KP-M - 260	4.5	165 - 195	260
KP - 275	KP-M - 275	4.5	180 - 210	275
KP - 300	KP-M - 300	4.0	205 - 235	300
Bracket suspension with hollow stiffness edges				
KP - 400	KP-M - 400	3.0	305 - 355	400
KP - 450	KP-M - 450	3.0	355 - 385	450
KP - 470	KP-M - 470	3.0	375 - 405	470
KP - 500	KP-M - 500	3.0	405 - 435	500
Thickness of metal			4 mm	
Stainless steel in accordance with EN 10088-1			1.4301/1.4401	

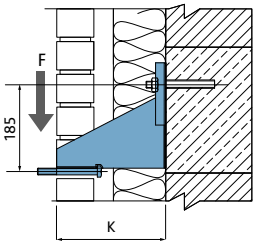


Standard configuration
with a bottom plate

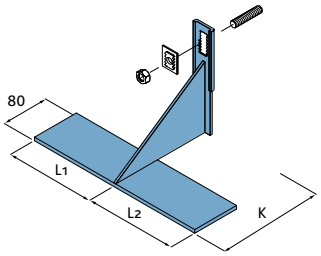


TYPE	F kN	a mm	K mm
GSP-110	1.5	20 - 55	119
GSP-180	1.5	90 - 125	189
GSP-210	1.5	120 - 155	219
GSP-230	1.5	140 - 175	239
GSP-245	1.5	155 - 190	254
GSP-260	1.5	170 - 205	269
GSP-275	1.5	185 - 220	284
GSP-300	1.0	210 - 245	309
Thickness of metal		4 mm	
Stainless steel in accordance with EN 10088-1		1.4301/1.4401	

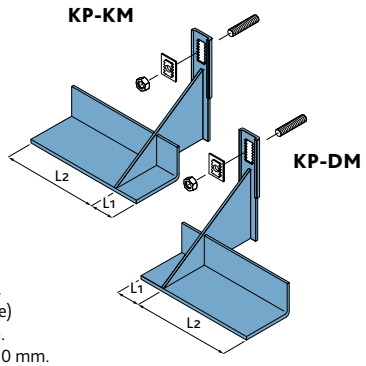




TYPE	F kN	K mm
KP - V-160-M14	4.5	160
KP - V-180-M14	4.5	180
KP - V-210-M14	4.5	210
KP - V-230-M14	4.5	230
KP - V-245-M14	4.5	245
KP - V-260-M14	4.5	260
Thickness of metal	4 mm	
Stainless steel in accordance with EN 10088-1	1.4301/1.4401	

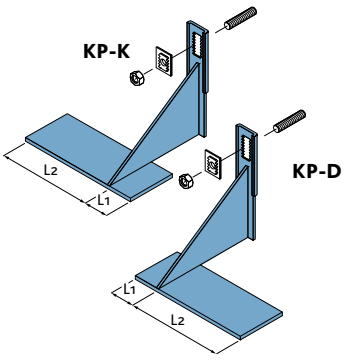


TYPE	Fv	L1	L2	a mm	K mm
KP-P-160	4.5	160	160	75	160
KP-P-180	4.5	160	160	95	180
KP-P-210	4.5	160	160	125	210
KP-P-230	4.5	160	160	145	230
KP-P-245	4.5	160	160	160	245
KP-P-260	4.5	160	160	175	260
KP-P-275	4.5	160	160	190	275
KP-P-300	4.0	160	160	215	300



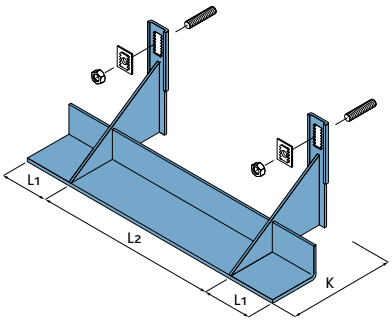
HERE AND FURTHER.
Unequal angle (L profile) dimensions 80x50 mm.
Based per order – 50x50 mm.

TYPE	Fv	L1	L2	a mm	K mm
KP-DM-160	4.5	40	140	75	160
KP-KM-160	4.5	40	140	75	160
KP-DM-180	4.5	40	140	95	180
KP-KM-180	4.5	40	140	95	180
KP-DM-210	4.5	40	140	125	210
KP-KM-210	4.5	40	140	125	210
KP-DM-230	4.5	40	140	145	230
KP-KM-230	4.5	40	140	145	230
KP-DM-245	4.5	40	140	160	245
KP-KM-245	4.5	40	140	160	245
KP-DM-260	4.5	40	140	175	260
KP-KM-260	4.5	40	140	175	260
KP-DM-275	4.5	40	140	190	275
KP-KM-275	4.5	40	140	190	275
KP-DM-300	4.0	40	140	215	300
KP-KM-300	4.0	40	140	215	300

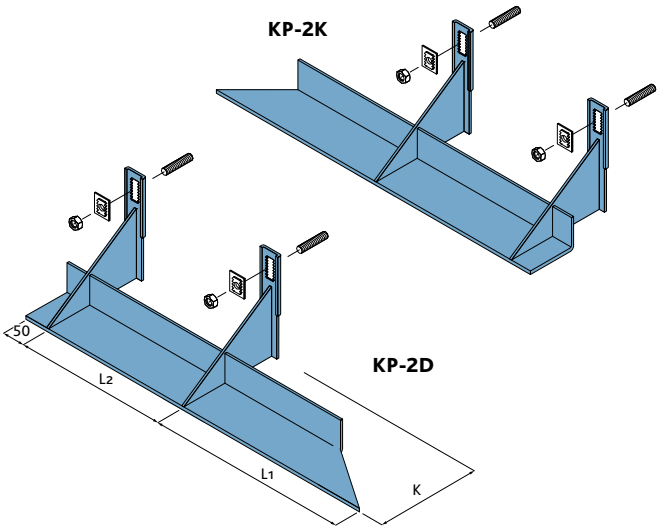


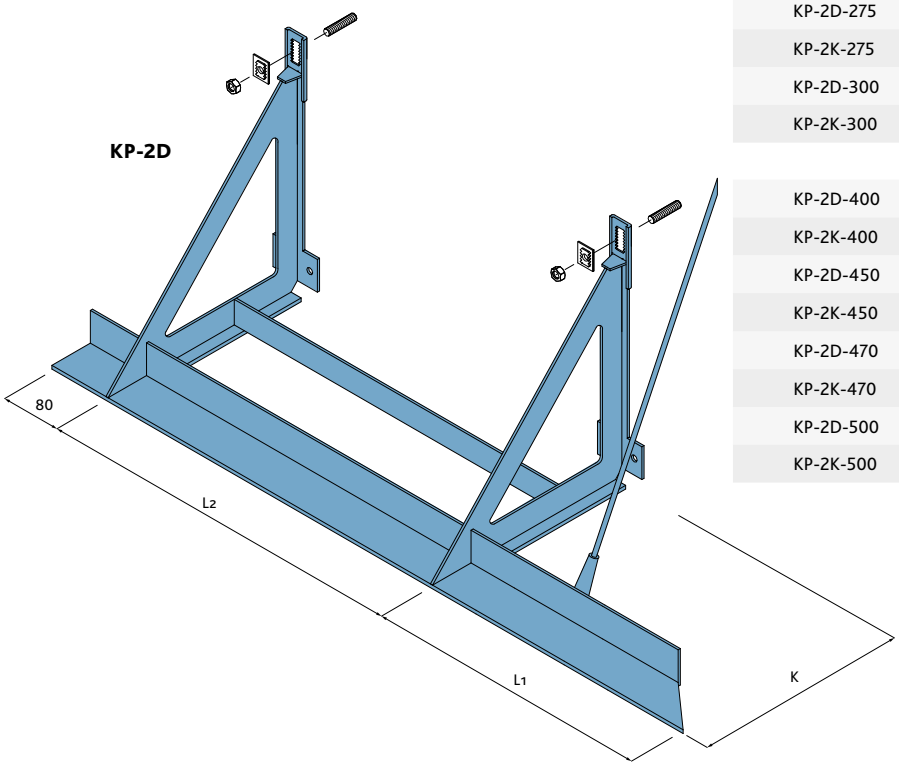
TYPE	Fv	L1	L2	a mm	K mm
KP-D-160	4.5	40	140	75	160
KP-K-160	4.5	40	140	75	160
KP-D-180	4.5	40	140	95	180
KP-K-180	4.5	40	140	95	180
KP-D-210	4.5	40	140	125	210
KP-K-210	4.5	40	140	125	210
KP-D-230	4.5	40	140	145	230
KP-K-230	4.5	40	140	145	230
KP-D-245	4.5	40	140	160	245
KP-K-245	4.5	40	140	160	245
KP-D-260	4.5	40	140	175	260
KP-K-260	4.5	40	140	175	260
KP-D-275	4.5	40	140	190	275
KP-K-275	4.5	40	140	190	275
KP-D-300	4.0	40	140	215	300
KP-K-300	4.0	40	140	215	300

MARKINGS:
D – the right protrusion,
K – the left protrusion



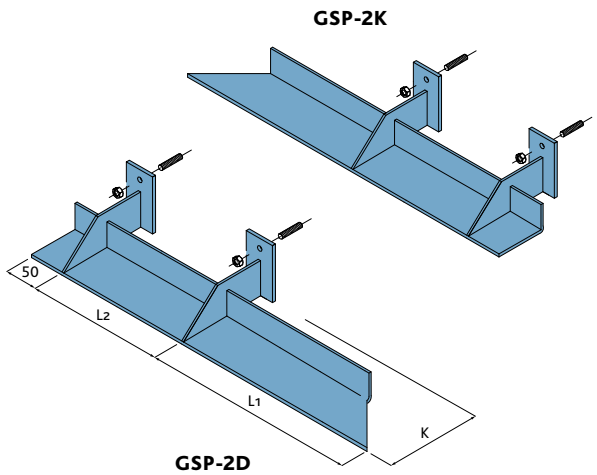
TYPE	Fv	L1	L2	a mm	K mm
KP-2-160-520	9.0	100	520	75	160
KP-2-160-780	9.0	100	780	75	160
KP-2-180-520	9.0	100	520	95	180
KP-2-180-780	9.0	100	780	95	180
KP-2-210-520	9.0	100	520	125	210
KP-2-210-780	9.0	100	780	125	210
KP-2-230-520	9.0	100	520	145	230
KP-2-230-780	9.0	100	780	145	230
KP-2-245-520	9.0	100	520	160	245
KP-2-260-520	9.0	100	520	175	260
KP-2-275-520	9.0	100	520	190	275
KP-2-300-520	8.0	100	520	215	300





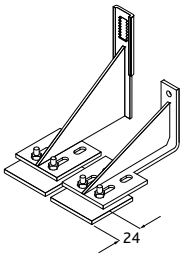
TYPE	Fv	L1	L2	a mm	K mm
KP-2D-160	9.0	270	260	75	160
KP-2K-160	9.0	270	260	75	160
KP-2D-180	9.0	290	260	95	180
KP-2K-180	9.0	290	260	95	180
KP-2D-210	9.0	320	260	125	210
KP-2K-210	9.0	320	260	125	210
KP-2D-230	9.0	340	260	145	230
KP-2K-230	9.0	340	260	145	230
KP-2D-245	9.0	355	260	160	245
KP-2K-245	9.0	355	260	160	245
KP-2D-260	9.0	370	260	175	260
KP-2K-260	9.0	370	260	175	260
KP-2D-275	9.0	385	260	190	275
KP-2K-275	9.0	385	260	190	275
KP-2D-300	8.0	410	260	215	300
KP-2K-300	8.0	410	260	215	300
KP-2D-400	6.0	500	520	320	400
KP-2K-400	6.0	500	520	320	400
KP-2D-450	6.0	550	520	370	450
KP-2K-450	6.0	550	520	370	450
KP-2D-470	6.0	570	520	390	470
KP-2K-470	6.0	570	520	390	470
KP-2D-500	6.0	600	520	420	500
KP-2K-500	6.0	600	520	420	500

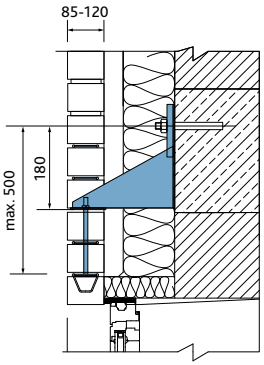
MARKINGS:
2 – double,
D – the right protrusion,
K – the left protrusion



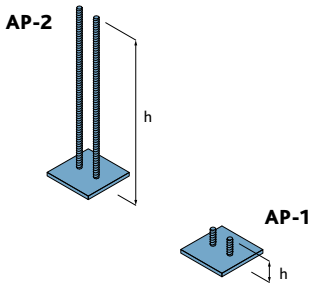
TYPE	Fv	L1	L2	a mm	K mm
GSP-2D-110	3.0	220	260	25	110
GSP-2K-110	3.0	220	260	25	110
GSP-2D-180	3.0	290	260	95	180
GSP-2K-180	3.0	290	260	95	180
GSP-2D-210	3.0	320	260	125	210
GSP-2K-210	3.0	320	260	125	210
GSP-2D-245	3.0	355	260	160	245
GSP-2K-245	3.0	355	260	160	245
GSP-2D-260	3.0	370	260	175	260
GSP-2K-260	3.0	370	260	175	260
GSP-2D-275	3.0	385	260	190	275
GSP-2K-275	3.0	385	260	190	275
GSP-2D-300	2.0	410	260	215	300
GSP-2K-300	2.0	410	260	215	300

ANCILLARY ELEMENTS

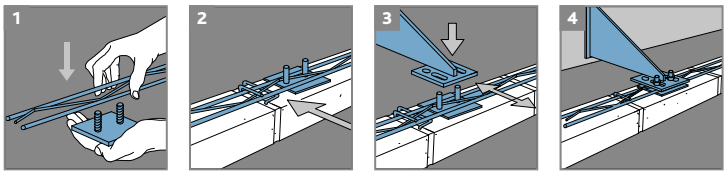




MAKE	Dimensions in mm	Material
BOTTOM PLATE		
AP-1	80x80x34 h	1.4301/1.4401
AP-2	80x80x350 h	1.4301/1.4401

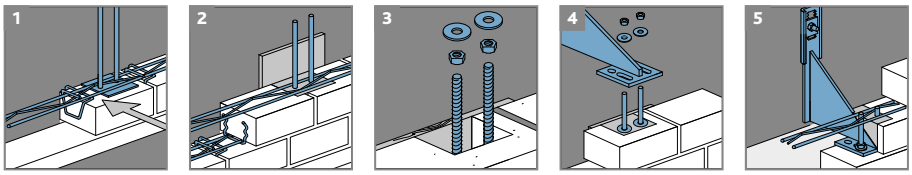


BRACKET KP-M (GSP) MOUNTING WITH A BOTTOM PLATE AP-1

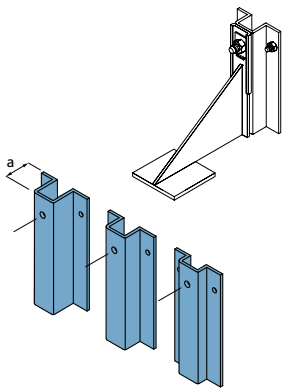


For details see page 18.

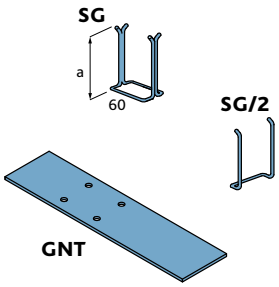
BRACKET KP-M (GSP) MOUNTING WITH A BOTTOM PLATE AP-2



Possible suspension up to 4 mansonry rows

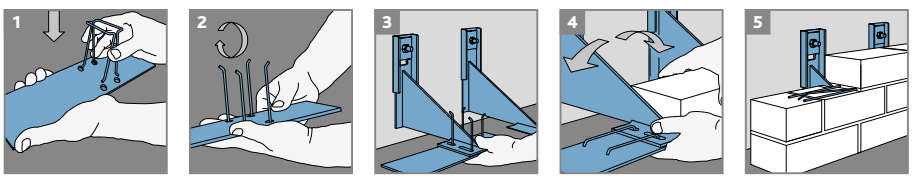


MAKE	Dimensions in mm	Thickness mm	Material
ATTACHING ELEMENT OMEGA			
Omega 30	a - 30	4	1.4301/1.4401
Omega 50	a - 50	4	1.4301/1.4401
Omega 70	a - 70	4	1.4301/1.4401

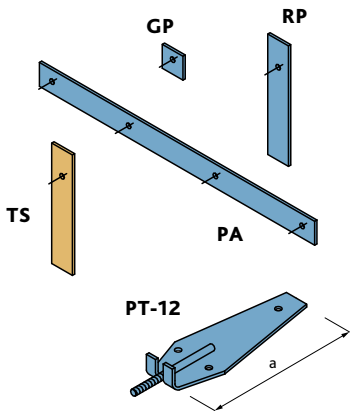


MAKE	Dimensions in mm	Thickness mm	Material
HOOKS			
SG double	a - 80	Ø3	1.4301
SG/2 single	a - 80	Ø3	1.4301
SUPPORTING PLATE			
GNT	320x90	4	1.4301/1.4401

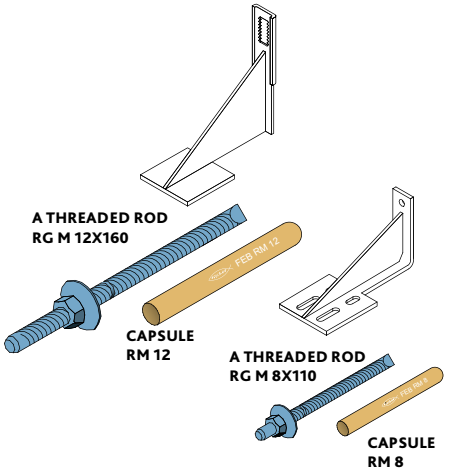
CORNER ORIFICES DECORATION MASONRY SUSPENSION USING SG HOOKS



ANCILLARY ELEMENTS AND BRACKETS FIXING



MAKE	Dimensions in mm	Thickness mm	Material
Levelling plate			
RP	230 x 65	4	1.4301/1.4401
Backing element			
GP	65 x 65	4	1.4301/1.4401
Supporting plate			
PA	1000 x 100	4	1.4301/1.4401
Thermal gasket			
TS	230 x 65	4	Glass fiber
Entablature anchor			
PT-12	a - 220	Ø 12	1.4301/1.4401

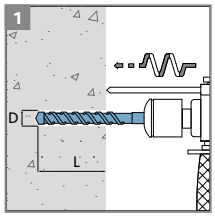


FIXING OF BRACKETS

MAKE	Dimensions in mm	Diameter in mm	Material
A threaded rod and glue capsule Fischer R (Eurobond)			
RG M 12x160	160	12	A4
RG M 8x110	110	8	A4
RM 12	90	Polimeric resin	
RM 8	80	Polimeric resin	

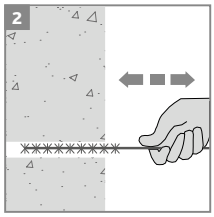
It is possible to use analogous items in compliance to the applicable requirements.

INSTALLATION OF CHEMICAL ANCHOR

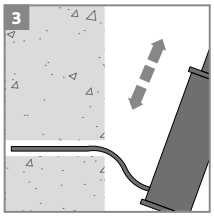


	L mm	D mm
RG M 12x160	110	14
RG M 8x110	80	10

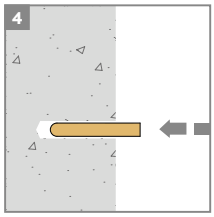
A hole for the chemical anchor in the concrete block should be drilled in accordance with the applicable technical requirements.



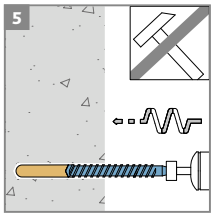
The hole should be carefully cleaned from dust manually, using a brush.



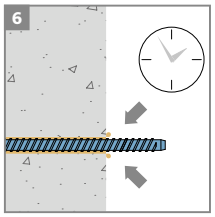
Hole cleaning is completed with a blow-down. Mechanic cleaning and blow-down is carried 2-3 times.



The capsule is inserted into the cleaned hole.

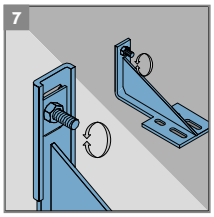


The threaded rod RG M inserted by a percussive-rotary method with a drill. The rotation speed should not exceed 750 RPM. Hammering the threaded rod into the capsule is strictly prohibited.



Ambient temperature, T °C	Hardening time T
> 20	10 min.
10 - 20	20 min.
0 - 9	45 min.
-5 - -1	1 h

The rod is threaded up to the mark on it, until a small amount of glue appears on the surface. Duration of hardening depends on the temperature of concrete, which is considered as the ambient temperature. After the specified time elapses, the bracket can be suspended.



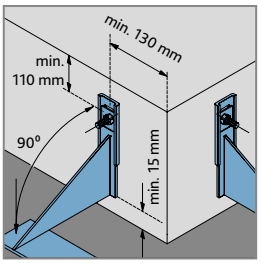
Diameter of the nut mm	Tightening torque Nm
8	10
12	40

ATTENTION!
Wear gloves while performing all tasks

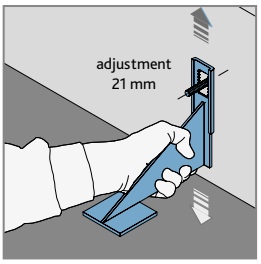
INSTALLATION OF SUSPENDED BRACKETS

The base, on which brackets are mounted, is a cast reinforced concrete or pre-cast reinforced concrete structure of Class C 20/25 (B 25 or higher). For maintaining a vertical position and ensuring the required allowances in respect of supporting of the decorative masonry on the brackets, it is necessary to make a shot of the reinforced concrete base. For insignificant adjustment, levelling plates RP should be used. In case of significant deviations, it is necessary to order brackets with larger (or smaller) shoulder overhang. The brackets should seat on the reinforced concrete structure with the entire surface of their supporting walls.

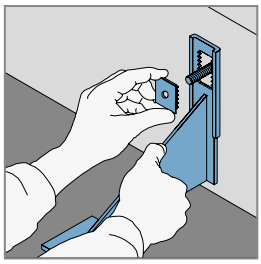
REQUIREMENTS AND PERMITS



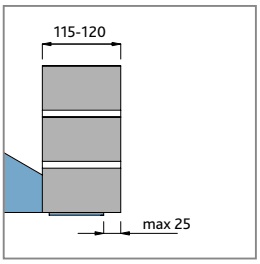
Minimal distances to the edges of reinforced concrete structures



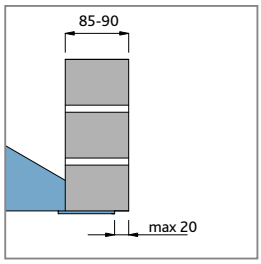
Height adjustment 21 mm



Brackets fixing

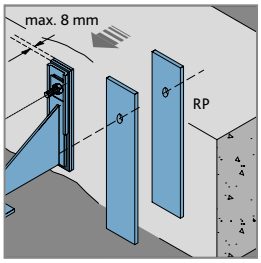


Permitted mansonry protrusion from the support limits

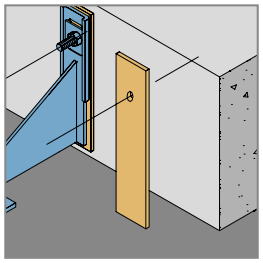


Permitted mansonry protrusion from the support limits

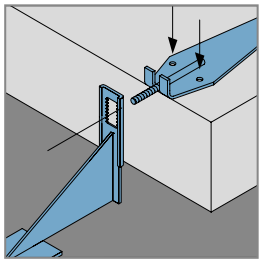
USE OF ANCILLLARY ELEMENTS



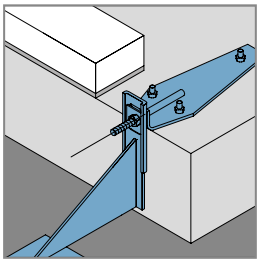
Use no more than 2 stripes of RP



For reducing heat losses between the bracket and reinforced concrete construction thermoinsulation shall be installed TS.

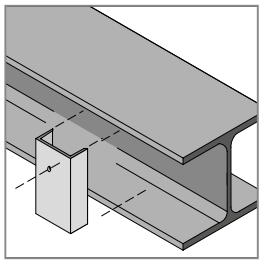


The bracket shall be fixed to the reinforced concrete slab by means of PT-12.

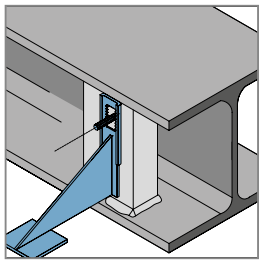


Later the anchor can be hidden in the wall construction.

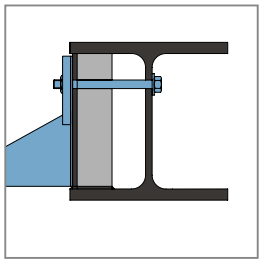
FIXING OF BRACKETS TO METAL



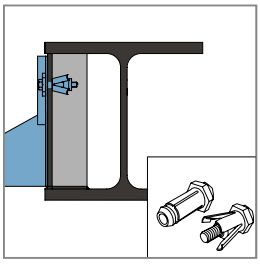
A UPN-type profile is inserted into the cavity of the HEB and welded there.



The bracket is fixed by a stainless steel bolt.



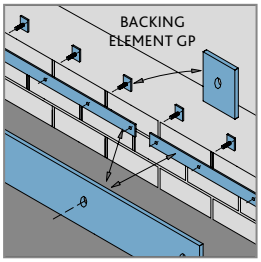
Fixing of brackets

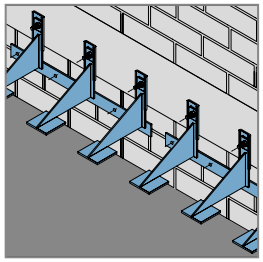


It is also allowed to use certified bolts of the type BoxBolt, intended for fixing metal elements.

NOTE:
Here one of more difficult cases was analysed when the bracked is fixed to HEB type metal beam.

SUPPORTING OF BRACKETS ON THE WALL STRUCTURE





If it is impossible to fix and support brackets on a single reinforced concrete structure, it is allowed to support brackets on the wall structure, the density of which is at least 1,500 kg/m³. In order to reduce the load upon the wall structure and to distribute it, the supporting plate PA should be fixed on the wall providing a support for the brackets. An important condition is a reliable fixation of the supporting wall, including clamping it by the overlying reinforced concrete structure.