



ETA-Danmark A/S  
Göteborg Plads 1  
DK-2150 Nordhavn  
Tel. +45 72 24 59 00  
Fax +45 72 24 59 04  
Internet [www.etadanmark.dk](http://www.etadanmark.dk)

Authorised and notified according  
to Article 29 of the Regulation (EU)  
No 305/2011 of the European  
Parliament and of the Council of 9  
March 2011

MEMBER OF EOTA



## European Technical Assessment ETA-10/0422 of 2019/11/16

### I General Part

**Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S**

**Trade name of the construction product:**

Rotho Blaas GmbH/srl post bases type F10, F20, F30, F40, F50, F60, F70, FD10, FD20, FD30, FD40, FD50, FD60, M10, M20, M30, M50, M60, M70, P10, P20, R10, R20, R30, R40, R50, R60, R70, R80, R90, S10, S20, S30, S40, S50, FI10, FI50, RI40, MI20 and XS10

**Product family to which the above construction product belongs:**

Three-dimensional nailing plate (Post bases for the support of timber columns and posts as load-bearing elements)

**Manufacturer:**

Rotho Blaas s.r.l  
Via dell'Adige 2/1  
IT-38040 Cortaccia (BZ)  
Tel. + 39 0471 818400  
Fax + 39 0471 818484  
Internet [www.rothoblaas.com](http://www.rothoblaas.com)

**Manufacturing plant:**

Rotho Blaas s.r.l  
Manufacturing Plants: 1P, 2P

**This European Technical Assessment contains:**

86 pages including 2 annexes which form an integral part of the document

**This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:**

Guideline for European Technical Approval (ETAG) No. 015 Three Dimensional Nailing Plates, April 2013, used as European Assessment Document (EAD).

**This version replaces:**

The ETA with the same number issued on 2016-01-08

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es) referred to above). However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.

## II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

### 1 Technical description of product and intended use

#### Technical description of the product

The Rotho Blaas post bases are made of 2.0 mm to 16.0 mm thick steel plates in combination with steel tubes or threaded rods. The post bases are produced of steel grade S235JR according to EN 10025-2 with a minimum characteristic yield strength of  $R_{eH} = 235$  N/mm<sup>2</sup> and a minimum characteristic tensile strength of  $R_m = 360$  N/mm<sup>2</sup> or of stainless steel according to EN 10088-3 with at least minimum characteristic yield strength of  $R_{p0.2} = 235$  N/mm<sup>2</sup> and minimum characteristic tensile strength of  $R_m = 500$  N/mm<sup>2</sup>. The threaded rods correspond to property class 4.8 according to EN ISO 898-1.

For the connections with metal fasteners bolts  $\varnothing 10$  mm and  $\varnothing 12$  mm and dowels  $\varnothing 12$  mm according to EN 14592 and self-tapping dowels SBD  $\varnothing 7.5$  mm according to EN 14592, screws HBS+/GHS+  $\varnothing 6$  mm and  $\varnothing 8$  mm and fully threaded screws  $\varnothing 7.0$  mm according according to ETA-11/0030 are used. The screws shall be driven without pre-drilling or after pre-drilling according to the ETA-11/0030. The outer diameter for washers of bolts shall be not less than  $3 \cdot d_B$ , where  $d_B$  is the diameter of the bolts. The thickness shall be not less than  $0,3 \cdot d_B$ .

For anchorage in the foundation reinforcement bars or steel profiles are used, as well as metal anchors. Dimensions are shown in Annex A and B.

### 2 Specification of the intended use in accordance with the applicable EAD

The intended use of the post bases is the support of timber columns and posts as load-bearing elements, where requirements for mechanical resistance and stability and safety in use in the sense of the basic requirements for construction works 1 and 4 of Regulation (EU) 305/2011 shall be fulfilled.

The static and kinematical behaviour of the timber members or the supports shall be as described in Annex B.

The timber posts may be of solid timber of strength class C20 or better according to EN 338 or of glued laminated timber according to EN 14080. Minimum dimensions for the post have to be considered (Annex

A). The cross-section of the timber column shall be positioned centrally and with the end grain plane on the base plate. Post bases type M20, M50 and F70 have a clearance between the end grain of the timber post and the base plate or foot plate, respectively, due to the geometry of the post bases. In order to avoid fungal attack due to permanent high moisture content, the end grain of timber posts with contact or only a very small distance to the foundation (post bases type F10, F20, F30, F40, F70, FD30, FD50, FD60, M30, M70 and XS10) should be protected from humidity by other means.

The maximum distance between the foundation and the base plates' lower edge of the post base shall in general be 100 mm. The maximum distance between the foundation and the base plates' lower edge plate of the post base is given in Annex A, table A.1 (distance a). For post bases type P10, P20, R20, R30, R40; R50, R60; R80, R90, S10, S20, S30, S50 and RI40 larger distances are allowed.

Annex B states the load-carrying capacities of the post bases for solid timber of strength class C24 according to EN 338. Thus, when solid timber of strength class C20 is used, the characteristic load-carrying capacities of timber should be reduced by a factor of 0,9.

For timber or wood base material with higher characteristic density than 350 kg/m<sup>3</sup> the load-carrying capacities shall taken as that for 350 kg/m<sup>3</sup> unless detailed analyses are conducted. The design of the connections shall be in accordance with Eurocode 3 and Eurocode 5 or a similar national code. The anchorage of the post base in the foundation (except for type M70) and imperfections exceeding the assumptions in Eurocode 5, 5.4.4 are not part of this ETA.

The post bases are for use in timber structures subject to service classes 1, 2 and 3 of Eurocode 5 and for connections subject to static or quasi-static loading. In service class 1 and 2 the corrosion protection is given according to EN1995-1-1, or by equivalent measures.

In service class 3 the corrosion protection is given according to EN1995-1-1 or by stainless steel or zinc coating with minimum thickness of 55  $\mu$ m according to EN ISO 1461, or by equivalent measures. Alternatively, a Zn-Al flake coating with minimum thickness 8  $\mu$ m (DAC8 also called Dac Coat) can be used as corrosion protection in service class 3.

The metal fasteners must also be of stainless steel or have a zinc coating for the intended use in service class

3 of EN 1995-1-1 (zinc coating Fe/Zn 25 according to EN ISO 2081).

The assumed intended working life of the post bases for the intended use is 50 years, provided that they are subject to appropriate use and maintenance.

The information on the working life should not be regarded as a guarantee provided by the manufacturer or ETA Danmark. An “assumed intended working life” means that it is expected that, when this working life has elapsed, the real working life may be, in normal use conditions, considerably longer without major degradation affecting the basic requirements for construction works.

### 3 Performance of the product and references to the methods used for its assessment

Characteristic	Assessment of characteristic
<b>3.1 Mechanical resistance and stability*) (BWR1)</b>	
Characteristic load-carrying capacity	See Annex B
Stiffness	No performance assessed
Ductility in cyclic testing	No performance assessed
<b>3.2 Safety in case of fire (BWR2)</b>	
Reaction to fire	The post bases are made from steel classified as class A1 in accordance with EN 13501-1 and Commission Delegated Regulation 2016/364.
<b>3.7 Sustainable use of natural resources (BWR7)</b>	
<b>3.8 General aspects related to the performance of the product</b>	The post bases have been assessed as having satisfactory durability and serviceability when used in timber structures using the timber species described in Eurocode 5 and subject to the conditions defined by service class 1, 2 and 3.
Identification	See Annex A

\*) See additional information in section 3.9 – 3.12.

### 3.9 Methods of verification

The characteristic load-carrying capacities are based on the characteristic values of the connections with metal fasteners, the steel plates, the timber post and the foundation (only for type M70).

In the case of timber failure or failure of the metal fasteners, the design values shall be calculated according to EN 1995-1-1 by dividing the characteristic values of the load-carrying capacities by different partial factors for the strength properties, and in addition multiplied with the coefficient  $k_{mod}$ .

In the case of steel failure, the design value shall be calculated according to EN 1993-1-1 by reducing the characteristic values of the load-carrying capacity with different partial factors.

In the case of foundation failure, the design value shall be calculated according to EN 1997-1 by reducing the characteristic values of the load-carrying capacity with different partial factors.

The design value of the load-carrying capacity is the smaller value of all load-carrying capacities:

$$F_{Rd} = \min \left\{ \frac{k_{mod} \cdot F_{Rk,T}}{\gamma_{M,T}}; \frac{k_{mod} \cdot F_{Rk,C}}{\gamma_{M,C}}; \frac{F_{Rk,S}}{\gamma_{Mi,S}}; \frac{F_{Rk,B}}{\gamma_{Ri,B}} \right\}$$

Therefore, for timber failure or failure of the metal fasteners the load duration class and the service class are included. The different partial factors for steel  $\gamma_{Mi,S}$ , timber  $\gamma_{M,T}$ , connections  $\gamma_{M,C}$  or foundation  $\gamma_{Ri,B}$  failure, respectively, have to be correctly taken into account.

### 3.10 Mechanical resistance and stability

See Annex B for the characteristic load-carrying capacity in the different directions  $F_1$  to  $F_5$  and  $M_2$  to  $M_5$  for solid timber of strength class C24 according to EN 338. Solid timber of strength class C20 may be included by a reducing factor of 0,9 for the characteristic load-carrying capacity of timber. Using the load-carrying capacities of the post bases, the specifications in Annex A must be fulfilled. The end grain of the timber post must in general be plane on the base plate of the post base Post bases type M20, M50 and F70 have a clearance between the end grain of the timber post and the base plate or foot plate, respectively, due to the geometry of the post bases.

The characteristic capacities of the post bases are assessed by calculation according to Eurocode 3 and Eurocode 5. They should be used for designs in accordance with Eurocode 3 and Eurocode 5 or a similar national code. For post base type M70 the characteristic capacities of the foundation are determined by calculation according to Eurocode 7 on

condition that following soil characteristics are provided: bulk density  $\gamma=18 \text{ kN/m}^3$ , angle of shearing resistance  $\varphi=30^\circ$ , cohesion  $c=5 \text{ kN/m}^2$ . The characteristic capacities of post bases type R10 and R30 were assessed by using test results of Holzforschung Austria.

For timber or wood base material with higher characteristic density than  $350 \text{ kg/m}^3$  the load-carrying capacities shall taken as that for  $350 \text{ kg/m}^3$  unless detailed analyses are conducted

No performance has been assessed in relation to ductility of a joint under cyclic testing. The contribution to the performance of structures in seismic zones, therefore, has not been assessed.

No performance has been assessed in relation to the joint's stiffness properties - to be used for the analysis of the serviceability limit state.

No performance has been determined in relation to the anchorage of the post bases in the foundation (except for type M70). It must be checked by the designer of the structure to ensure it is not less than the post base capacity and, if necessary, the post base capacity reduced accordingly. Therefore, the specifications for the lever arms  $e_{F2/F3}$  (for load case  $F_2 / F_3$ ) and  $e_{F4/F5}$  (for load case  $F_4 / F_5$ ) in annex A have to be considered. The lever arm is the distance between the top edge of the foundation and the load.

### 3.11 Aspects related to the performance of the product

#### 3.11.1 Corrosion protection in service class 1 and 2.

The corrosion protection is given according to EN1995-1-1, or by equivalent measures.

The requirement is fulfilled also by post bases with a corrosion protection hot-dip galvanized of approximately  $55 \text{ um}$  according to EN ISO 1461, or by equivalent measures.. See section II.1 for characteristics of the steel.

#### 3.11.2. Corrosion protection in service class 3

In service class 3 the corrosion protection is given according to EN1995-1-1, or by equivalent measure.

The requirement is fulfill by post bases with a corrosion protection stainless steel according to EN 10088-3 or hot-dip galvanized of approximately  $55 \text{ um}$  according to EN ISO 1461, or by equivalent measures. Alternatively, a Zn-Al flake coating with minimum thickness  $8 \text{ um}$  (DAC8 also called Dac Coat) can be used as corrosion protection in service class 3. See section II.1 for characteristics of the steel.

### 3.12 General aspects related to the fitness for use of the product

Rotho Blaas post bases are manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

- The timber post
  - shall be restrained against rotation, and supported at the lower and upper end
  - shall be strength class C20 according to EN 338 or better, see section 3 of this evaluation report
  - shall be free from wane in the post base
  - must fulfil the requirements regarding minimum dimensions (see Annex A)
  - end grain must in general be plane on the base plate of the post base; post bases type M20, M50 and F70 have a clearance between the end grain of the timber post and the base plate or foot plate, respectively, due to the geometry of the post bases.
- The actual end bearing capacity of the timber member to be used in conjunction with the post base is checked by the designer of the structure to ensure it is not less than the post base capacity and, if necessary, the post base capacity reduced accordingly.
- To provide for constructive wood preservation, appropriate measures should be taken to protect the end grain of timber posts with contact or little distance to the foundation (post bases type F10, F20, F30, F40, F70, FD30, FD50, FD60, M30, M70 and XS10).
- There are no specific requirements relating to preparation of the timber members.
- The maximum distance between the foundation and the base plates' lower edge of the post base shall in general be 100 mm. For post bases type P10, P20, R20, R30, R40; R50, R60; R80, R90, S10, S20, S30, S50 and RI40 larger distances are allowed.
- In case of post base type M70 the characteristic capacities of the foundation are determined by calculation according to Eurocode 7 on condition that following soil characteristics are provided: bulk density  $\gamma = 18 \text{ kN/m}^3$ , angle of shearing resistance  $\varphi = 30^\circ$ , cohesion  $c = 5 \text{ kN/m}^2$ .
- The anchorage of the post base in the foundation – except for post base type M70 - is not part of this ETA. It must be checked by the designer of the structure to ensure it is not less than the post base capacity and, if necessary, the post base capacity

reduced accordingly. Therefore, the specifications for the lever arms  $e_{F2/F3}$  (for load case  $F_2 / F_3$ ) and  $e_{F4/F5}$  (for load case  $F_4 / F_5$ ) in Annex A have to be considered. The lever arm is the distance between the top edge of the foundation and the load.

- Due to the design of the post bases F70 and XS10, the wood cross-sections are sensitive to splitting under horizontal or moment load. Above the inner steel plates, fully threaded screws against splitting should be arranged in case of horizontal or moment load (2 per direction).

## **4 Attestation and verification of constancy of performance (AVCP)**

### **4.1 AVCP system**

According to the decision 97/638/EC of the European Commission<sup>1</sup>, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 2+.

## **5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD**

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking

Issued in Copenhagen on 2019-11-16 by



Thomas Bruun  
Managing Director, ETA-Danmark



**Annex A**  
**Product details and definitions**

Table A.1: Specifications of the post bases

Post base			Quantity	Metal Fasteners	Post [mm]	Distances [mm]		
Type	Art.-No.	Configuration				min b/h	max. a	eF2/F3
F10	F10_1	-	1	2x HBS+/GHS+ ø8x60mm	71/71	-	77	77
	F10_2	-	1	4x HBS+/GHS+ ø8x40mm	91/91	-	77	77
F20	F20_1	-	1	4x HBS+/GHS+ ø8x40mm	ø81	-	77	77
	F20_2	-	1	4x HBS+/GHS+ ø8x40mm	ø101	-	77	77
	F20_3	-	1	4x HBS+/GHS+ ø8x60mm	ø121	-	77	77
	F20_4	-	1	4x HBS+/GHS+ ø8x60mm	ø141	-	77	77
F30	F30_1	-	1	4x HBS+/GHS+ ø8x60mm	71/71	-	122	122
	F30_2	-	1	4x HBS+/GHS+ ø8x40mm	91/91	-	122	122
F40	F40_1	-	1	4x HBS+/GHS+ ø8x60mm	71/71	-	122	122
	F40_2	-	1	4x HBS+/GHS+ ø8x40mm	91/91	-	122	122
F50	F50_1	-	1	4x HBS+/GHS+ ø8x60mm	101/101	-	83	83
	F50_2	-	1	4x HBS+/GHS+ ø8x60mm	121/121	-	83	83
	F50_3	-	1	4x HBS+/GHS+ ø8x60mm	141/141	-	83	83
	F50_4	-	1	4x HBS+/GHS+ ø8x60mm	161/161	-	108	108
	F50_5	-	1	4x HBS+/GHS+ ø8x60mm	181/181	-	108	108
	F50_6	-	1	4x HBS+/GHS+ ø8x60mm	201/201	-	108	108
F60	F60_1	-	1	4x HBS+/GHS+ ø8x60mm	121/120	-	119	84
	F60_2	-	1	4x HBS+/GHS+ ø8x60mm	141/140	-	119	84
	F60_3	-	1	4x HBS+/GHS+ ø8x60mm	161/160	-	119	109
	F60_4	-	1	4x HBS+/GHS+ ø8x60mm	201/200	-	119	109
	F60_5	-	1	4x HBS+/GHS+ ø8x60mm	161/160	-	119	84
	F60_6	-	1	4x HBS+/GHS+ ø8x60mm	201/200	-	119	84
F70 <sup>1)</sup>	F70_1	F70_1-4SBD 75 100	1	4x SBD ø7,5x75mm	100/100 <sup>3)</sup>	21 <sup>2)</sup>	136	33
		F70_1-2STA80/ BOLT120 100	1	2x SD ø12,0x80mm or 2x Bo M12x120mm	100/100 <sup>3)</sup>	21 <sup>2)</sup>	136	33
	F70_2	F70_2-6SBD 95 120	1	6x SBD ø7,5x95mm	120/120 <sup>4)</sup>	21 <sup>2)</sup>	146	38
		F70_2-4STA120/ BOLT160 140	1	4x SD ø12,0x120mm or 4x Bo M12x160mm	140/140 <sup>5)</sup>	21 <sup>2)</sup>	146	38
	F70_3	F70_3-8SBD 115 160	1	8x SBD ø7,5x115mm	160/160 <sup>6)</sup>	23 <sup>2)</sup>	203	43
		F70_3-6STA140/ BOLT180 160	1	6x SD ø12,0x140mm or 6x Bo M12x180mm	160/160 <sup>6)</sup>	23 <sup>2)</sup>	210	43
FD10	FD10_1	-	2	4x HBS+/GHS+ ø8x60mm	121/120	-	108	40
	FD10_2	-	2	4x HBS+/GHS+ ø8x60mm	141/131	-	108	40
	FD10_3	-	2	4x HBS+/GHS+ ø8x60mm	161/151	-	108	40
	FD10_4	-	2	4x HBS+/GHS+ ø8x60mm	181/171	-	108	40
	FD10_5	-	2	4x HBS+/GHS+ ø8x60mm	201/191	-	108	40
FD20	FD20_1	-	2	4x HBS+/GHS+ ø8x60mm	121/76	-	94	41
	FD20_2	-	2	4x HBS+/GHS+ ø8x60mm	141/92	-	94	41
	FD20_3	-	2	4x HBS+/GHS+ ø8x60mm	161/106	-	94	41
	FD20_4	-	2	4x HBS+/GHS+ ø8x60mm	201/140	-	94	41
FD30	FD30_1	-	2	4x HBS+/GHS+ ø8x40mm	80/120	-	-	38
	FD30_2	-	2	4x HBS+/GHS+ ø8x40mm	80/120	-	-	38
FD30 internal	FD30_1	-	2	2x Bo M10mm	80/120	-	-	38
	FD30_2	-	2	2x Bo M10mm	80/120	-	-	38

Post base			Quantity	Metal Fasteners	Post [mm]	Distances [mm]		
Type	Art.-No.	Configuration				min b/h	max. a	eF2/F3
FD40	FD40_1	-	2	4x HBS+/GHS+ ø8x40mm	80/120	-	-	46
	FD40_2	-	2	4x HBS+/GHS+ ø8x40mm	80/120	-	-	46
FD40 internal	FD40_1	-	2	2x Bo M10mm	80/120	-	-	43
	FD40_2	-	2	2x Bo M10mm	80/120	-	-	43
FD50	FD50_1	-	2 / 4	4x HBS+/GHS+ ø8x60mm	82/82	-	-	-
	FD50_2	-	2 / 4	4x HBS+/GHS+ ø8x60mm	127/127	-	90	90
FD60	FD60_1	-	2 / 4	4x HBS+/GHS+ ø8x60mm	82/82	-	-	-
	FD60_2	-	2 / 4	4x HBS+/GHS+ ø8x60mm	112/112	-	89	89
M10	M10_1	-	1	4x HBS+/GHS+ ø8x40mm	71/71	-	45	14
	M10_2	-	1	2x HBS+/GHS+ ø8x60mm	91/91	-	45	14
M20	M20_1	-	1	5x HBS+/GHS+ ø8x60mm	71/114	-	139	72
	M20_2	-	1	5x HBS+/GHS+ ø8x60mm	91/114	-	139	72
	M20_3	-	1	5x HBS+/GHS+ ø8x60mm	101/114	-	139	72
	M20_4	-	1	6x HBS+/GHS+ ø8x60mm	121/114	-	139	72
M30	M30_1	-	1	2x HBS+/GHS+ ø8x60mm	71/80	-	185	30
	M30_2	-	1	4x HBS+/GHS+ ø8x40mm	81/80	-	185	30
	M30_3	-	1	4x HBS+/GHS+ ø8x40mm	91/80	-	185	30
	M30_4	-	1	4x HBS+/GHS+ ø8x40mm	101/80	-	185	30
	M30_5	-	1	4x HBS+/GHS+ ø8x60mm	121/80	-	185	30
M50	M50_1	-	1	5x HBS+/GHS+ ø8x60mm	71/114	100	235	77
	M50_2	-	1	5x HBS+/GHS+ ø8x60mm	91/114	100	235	77
	M50_3	-	1	5x HBS+/GHS+ ø8x60mm	101/114	100	235	77
	M50_4	-	1	6x HBS+/GHS+ ø8x60mm	121/114	100	235	77
M60	M60_1	-	1	4x Bo M10mm	80/120	100	218	30
M70	M70_1	-	1	2x HBS+/GHS+ ø8x60mm	71/71	-	-	-
	M70_2	-	1	4x HBS+/GHS+ ø8x40mm	91/91	-	-	-
	M70_3	-	1	4x HBS+/GHS+ ø8x40mm	ø81	-	-	-
	M70_4	-	1	4x HBS+/GHS+ ø8x40mm	ø101	-	-	-
P10 <sup>10)</sup>	P10_1	-	1	4x HBS+/GHS+ ø8x80mm	100/100 ø100	150	-	-
	P10_2	-	1	4x HBS+/GHS+ ø8x80mm	100/100 ø100	250	-	-
	P10_1 Alt	-	1	4x HBS+/GHS+ ø8x80mm	100/100 ø100	150	-	-
	P10_2 Alt	-	1	4x HBS+/GHS+ ø8x80mm	100/100 ø100	250	-	-
P20 <sup>10)</sup>	P20_1	-	1	4x HBS+/GHS+ ø8x80mm	100/100	218	-	-
	P20_2	-	1	4x HBS+/GHS+ ø8x80mm	100/100	318	-	-
R10	R10_1	-	1	4x HBS+/GHS+ ø6x90mm	80/80	136	-	-
	R10_2	-	1	4x HBS+/GHS+ ø8x100mm	100/100	209	-	-
	R10_3	-	1	4x HBS+/GHS+ ø8x100mm	140/140	257	-	-
R20	R20_1	-	1	4x HBS+/GHS+ ø6x90mm	80/80	136	-	-
	R20_2	-	1	4x HBS+/GHS+ ø8x100mm	100/100	209	-	-
	R20_3	-	1	4x HBS+/GHS+ ø8x100mm	140/140	257	-	-
R30	R30_1	-	1	8x full thread ø6x60mm	120/120	155	-	-
	R30_2	-	1	16x full thread ø6x90mm	160/160	215	-	-
	R30_1	with Disc Flat 80	1	10 x full thread screws ø7x60mm	120	150	-	-
	R30_2	with Disc Flat 120	1	18 x full thread screws ø7x80mm	160	210	-	-

Post base			Quantity	Metal Fasteners	Post [mm]	Distances [mm]		
Type	Art.-No.	Configuration				min b/h	max. a	eF2/F3
	R30_1	with Disc Flat Stainless 80	1	10 x partial thread screws ø6x80mm	150	150	-	-
	R30_2	with Disc Flat Stainless 120	1	18 x partial thread screws ø6x80mm	160	210	-	-
R40	R40_1	-	1	4x HBS+/GHS+ ø8x60mm	70/70	105	-	-
	R40_2	-	1	4x HBS+/GHS+ ø8x60mm	80/80	97	-	-
	R40_3	-	1	4x HBS+/GHS+ ø8x60mm	100/100	150	-	-
	R40_4	-	1	4x HBS+/GHS+ ø8x60mm	100/100	250	-	-
R50	R50_1	-	1	2x HBS+/GHS+ ø8x60mm	100/100	277	-	-
	R50_2	-	1	2x HBS+/GHS+ ø8x60mm	100/100	202	-	-
R60	R60_1	-	1	4x HBS+/GHS+ ø8x60mm	100/100	194	-	-
R70	R70_1	-	1	4x HBS+/GHS+ ø8x60mm	100/100	100	-	-
	R70_2	-	1	4x HBS+/GHS+ ø8x60mm	140/140	100	-	-
	R70_3	-	1	4x HBS+/GHS+ ø8x60mm	100/100	100	-	-
R80	R80_1	R80_1	1	2-4x HBS+/GHS+ ø8x60mm	80/80	195	-	-
R90	R90_1	R90_1	1	4x HBS+/GHS+ ø8x60mm	100/100	164	-	-
S10	S10_1	S10_1	1	4x HBS+/GHS+ ø8x60mm	ø140	118	-	-
	S10_2	S10_2	1	4x HBS+/GHS+ ø8x60mm	ø140	153	-	-
S20	S20_1	S20_1	1	2x HBS+/GHS+ ø8x60mm	100/100	118	-	-
	S20_2	S20_2	1	2x HBS+/GHS+ ø8x60mm	100/100	153	-	-
S30	S30_1	S30_1	1	4x HBS+/GHS+ ø8x60mm	100/100	166	-	-
	S30_2	S30_2	1	4x HBS+/GHS+ ø8x60mm	140/140	168	-	-
	S30_3	S30_3	1	4x HBS+/GHS+ ø8x60mm	100/100	166	-	-
	S30_4	S30_4	1	4x HBS+/GHS+ ø8x60mm	140/140	168	-	-
S40	S40_1	S40_1	1	5x HBS+/GHS+ ø8x60mm	71/98	-	86	-
	S40_2	S40_2	1	5x HBS+/GHS+ ø8x60mm	91/98	-	86	-
S50	S50_1	-	1	4x HBS+/GHS+ ø8x80mm	120x120	132	-	-
	S50_2	-	1	4x HBS+/GHS+ ø8x80mm	120x120	192	-	-
	S50_3	-	1	4x HBS+/GHS+ ø8x80mm	160x160	196	-	-
	S50_4	-	1	4x HBS+/GHS+ ø8x80mm	160x160	256	-	-
	S50_1 Alt	-	1	4x HBS+/GHS+ ø8x80mm	120x120	132	-	-
	S50_2 Alt	-	1	4x HBS+/GHS+ ø8x80mm	120x120	192	-	-
	S50_3 Alt	-	1	4x HBS+/GHS+ ø8x80mm	160x160	196	-	-
	S50_4 Alt	-	1	4x HBS+/GHS+ ø8x80mm	160x160	256	-	-
FI10	FI10_1	-	1	2x HBS+/GHS+ ø8x60mm	71/71	-	107	77
	FI10_2	-	1	2x HBS+/GHS+ ø8x60mm	91/91	-	107	77
FI50	FI50_1	-	1	4x HBS+/GHS+ ø8x60mm	101/101	-	83	83
	FI50_2	-	1	4x HBS+/GHS+ ø8x60mm	121/121	-	83	83
	FI50_3	-	1	4x HBS+/GHS+ ø8x60mm	141/141	-	83	83
	FI50_4	-	1	4x HBS+/GHS+ ø8x60mm	161/161	-	108	108
	FI50_6	-	1	4x HBS+/GHS+ ø8x60mm	201/201	-	108	108
RI40	RI40_3	-	1	4x HBS+/GHS+ ø8x60mm	100/100	150	-	-
	RI40_4	-	1	4x HBS+/GHS+ ø8x60mm	100/100	250	-	-
MI20	MI20_1	-	1	5x HBS+/GHS+ ø8x60mm	71/114	-	139	72
	MI20_2	-	1	5x HBS+/GHS+ ø8x60mm	91/114	-	139	72
	MI20_3	-	1	5x HBS+/GHS+ ø8x60mm	101/114	-	139	72
	MI20_4	-	1	6x HBS+/GHS+ ø8x60mm	121/114	-	139	72
XS10	XS10_1	XS10_1-16SBD 115 160	1	16x SBD ø7,5x115mm	160x160 <sup>8)</sup>	40	250	250

Post base			Quantity	Metal Fasteners	Post [mm]	Distances [mm]		
Type	Art.-No.	Configuration				min b/h	max. a	eF2/F3
		XS10_1-16SBD 95 140	1	16x SBD $\varnothing 7,5 \times 95 \text{mm}$	140x140 <sup>7)</sup>	40	232	232
		XS10_1-16SBD 115 140	1	16x SBD $\varnothing 7,5 \times 115 \text{mm}$	140x140 <sup>7)</sup>	40	232	232
		XS10_1-16SBD 135 160	1	16x SBD $\varnothing 7,5 \times 135 \text{mm}$	160x160 <sup>8)</sup>	40	232	232
		XS10_1- 8STA120_160	1	8x SD $\varnothing 12,0 \times 120 \text{mm}$	160x160 <sup>8)</sup>	40	230	230
	XS10_2	XS10_2-16SBD 115 160	1	16x SBD $\varnothing 7,5 \times 115 \text{mm}$	160x160 <sup>8)</sup>	42	252	252
		XS10_2-16SBD 115 160 Alt	1	16x SBD $\varnothing 7,5 \times 115 \text{mm}$	160x160 <sup>8)</sup>	42	235	235
		XS10_2-16SBD 135 160	1	16x SBD $\varnothing 7,5 \times 135 \text{mm}$	160x160 <sup>8)</sup>	42	235	235
		XS10_2-16SBD 155 200	1	16x SBD $\varnothing 7,5 \times 155 \text{mm}$	200x200 <sup>9)</sup>	42	235	235
		XS10_2- 8STA120_160	1	8x SD $\varnothing 12,0 \times 120 \text{mm}$	160x160 <sup>8)</sup>	42	227	227
		XS10_2-12STA 120_160	1	12x SD $\varnothing 12,0 \times 120 \text{mm}$	160x160 <sup>8)</sup>	42	227	227
		XS10_2- 8STA120_200	1	8x SD $\varnothing 12,0 \times 120 \text{mm}$	200x200 <sup>9)</sup>	42	227	227
		XS10_2-12STA 160_200	1	12x SD $\varnothing 12,0 \times 120 \text{mm}$	200x200 <sup>9)</sup>	42	227	227

<sup>1)</sup> Pre-holes on the inner steel plate are optional (in case of bolts or dowels)

<sup>2)</sup> Maximum distance between the top edge of the foundation and the end grain of the post.

<sup>3)</sup> Tensile reinforcement perpendicular to the grain, loaded by force  $F_{4/5}$ : 2x fully threaded screws  $\varnothing 7.0 \times 100 \text{mm}$  and above the inner steel plate

<sup>4)</sup> Tensile reinforcement perpendicular to the grain, loaded by force  $F_{4/5}$ : 2x fully threaded screws  $\varnothing 7.0 \times 120 \text{mm}$  and above the inner steel plate

<sup>5)</sup> Tensile reinforcement perpendicular to the grain, loaded by force  $F_{4/5}$ : 2x fully threaded screws  $\varnothing 7.0 \times 140 \text{mm}$  and above the inner steel plate

<sup>6)</sup> Tensile reinforcement perpendicular to the grain, loaded by force  $F_{4/5}$ : 2x fully threaded screws  $\varnothing 7.0 \times 160 \text{mm}$  and above the inner steel plate

<sup>7)</sup> Tensile reinforcement perpendicular to the grain, loaded by force  $F_{2/3}$  or  $F_{4/5}$  or moment  $M_{2/3}$  or  $M_{4/5}$ : 4x fully threaded screws  $\varnothing 7.0 \times 140 \text{mm}$ ; 2x fully threaded screws installed parallel to the each load direction and above the inner steel plate

<sup>8)</sup> Tensile reinforcement perpendicular to the grain loaded by force  $F_{2/3}$  or  $F_{4/5}$  or moment  $M_{2/3}$  or  $M_{4/5}$ : 4x fully threaded screws  $\varnothing 7.0 \times 160 \text{mm}$ ; 2x fully threaded screws installed parallel to the each load direction and above the inner steel plate

<sup>9)</sup> Tensile reinforcement perpendicular to the grain loaded by force  $F_{2/3}$  or  $F_{4/5}$  or moment  $M_{2/3}$  or  $M_{4/5}$ : 4x fully threaded screws  $\varnothing 7.0 \times 200 \text{mm}$ ; 2x fully threaded screws installed parallel to the each load direction and above the inner steel plate

<sup>10)</sup> Encased in concrete

**Table A.2:** Specifications of the metal fasteners according to EN 14592 or ETA

Fastener type	Size (mm)			Material	Finish
	Diameter	Length	Thickness		
Screws HBS+/GHS+	8 mm	40/60/80/ 100 mm		ETA-11/0030	Galvanic zinc coating
Screws HBS+/GHS+	6 mm	90 mm		ETA-11/0030	Galvanic zinc coating
Fully threaded screws	6 mm	60/90 mm		ETA-11/0030	Galvanic zinc coating
Partially threaded screws	6 mm	80 mm		ETA-11/0030 or EN 14592	Stainless steel
Fully threaded screws	7 mm	60-80 mm		ETA-11/0030 or EN 14592	Galvanic zinc coating
Fully threaded screws	7 mm	100/120/140/160/200 mm		ETA-11/0030	Galvanic zinc coating
Bolts	10/12 mm			Min 4.6 according to EN ISO 4016 or EN ISO 4017 or EN ISO 4018 or EN ISO 898 or EN 14592	Galvanic zinc coating
Dowels	12 mm			S235 according to EN 10025-2 and EN 14592	Galvanic zinc coating
Self-tapping dowels SBD	7.5 mm			$f_{u,k} \geq 742 \text{ N/mm}^2$ , $M_{y,Rk} = 42.000 \text{ Nmm}$ according to specification of the manufacturer and EN 14592	Galvanic zinc coating
Washers	30/36 mm		3,0/3,6 mm	according to EN ISO 7091 or EN ISO 7093 or EN ISO 7094	Galvanic zinc coating
The load-carrying-capacities of the metal fasteners were calculated according to Eurocode 5 for lateral loads. The contribution to the load-carrying capacity due to the rope effect was considered according to Eurocode 5.					

**Annex B**  
**Characteristic load-carrying capacities**

**Table B.1:** Characteristic load-carrying capacities (forces) for post bases in kN

Post base			F <sub>1,c,Rk</sub> (Compression)			F <sub>1,t,Rk</sub> (Tension)			F <sub>2/3,Rk</sub> (Horizontal)			F <sub>4/5,Rk</sub> (Horizontal)				
Type	Art.-No.	Configuration	Timber	Steel	Timber	Steel	Timber	Steel	Timber	Steel	Timber	Steel				
F10	F10_1	-	50,8	-	-	6,2	4,3	-	5,0	-	4,5	-	7,6	-	9,5	-
	F10_2	-	84,8	-	-	8,2	3,8	-	9,9	-	4,7	-	13,3	-	10,2	-
		-	γ <sub>M,T</sub>	-	-	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,C</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-
F20	F20_1	-	17,2	-	-	7,4	4,1	-	6,5	-	2,4	-	8,1	-	3,1	-
	F20_2	-	62,5	-	-	7,4	8,8	-	3,2	-	6,6	-	12,8	-	8,4	-
	F20_3	-	99,1	-	-	11,0	10,0	-	9,9	-	8,9	-	18,4	-	11,4	-
	F20_4	-	142	-	-	11,0	11,1	-	9,9	-	11,5	-	25,3	-	14,7	-
		-	γ <sub>M,T</sub>	-	-	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,C</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-
F30	F30_1	-	50,8	-	-	7,1	6,5	-	7,6	-	2,9	-	7,6	-	2,9	-
	F30_2	-	84,8	-	-	9,5	13,0	-	7,6	-	2,9	-	7,6	-	2,9	-
		-	γ <sub>M,T</sub>	-	-	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-
F40	F40_1	-	50,8	-	-	7,1	7,7	-	7,6	-	5,4	-	7,6	-	5,4	-
	F40_2	-	84,8	-	-	9,5	21,8	-	13,3	-	7,9	-	13,3	-	7,9	-
		-	γ <sub>M,T</sub>	-	-	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-
F50	F50_1	-	29,4	29,1	-	7,1	-	-	17,2	-	9,0	-	17,2	-	9,0	-
	F50_2	-	33,6	33,3	-	7,1	11,5	-	17,2	-	8,7	-	17,2	-	8,7	-
	F50_3	-	42,0	41,6	-	7,1	-	-	17,2	-	11,9	-	17,2	-	11,9	-
	F50_4	-	42,0	41,6	-	7,1	13,8	-	20,4	-	10,6	-	20,4	-	10,6	-
	F50_5	-	42,0	41,6	-	7,1	16,1	-	20,4	-	13,9	-	20,4	-	13,9	-
	F50_6	-	46,2	45,7	-	7,1	17,3	-	21,0	-	14,4	-	21,0	-	14,4	-
		-	γ <sub>M,T</sub>	-	-	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-
F60	F60_1	-	33,6	32,7	-	7,0	34,2	-	17,3	-	11,7	-	8,7	-	-	6,8
	F60_2	-	37,8	36,8	-	7,0	37,6	-	20,6	-	15,0	-	10,2	-	-	6,8
	F60_3	-	42,0	40,8	-	7,0	41,0	-	22,6	-	16,5	-	11,3	-	15,2	-
	F60_4	-	54,6	53,1	-	7,0	24,1	-	22,6	-	16,5	-	11,3	-	13,0	-
	F60_5	-	42,0	40,8	-	7,0	41,0	-	32,9	-	23,3	-	11,3	-	-	15,6
	F60_6	-	54,6	54,4	-	7,0	24,1	-	32,9	-	23,3	-	11,3	-	18,4	-
		-	γ <sub>M,T</sub>	-	-	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	γ <sub>M,2</sub>
F70	F70_1	F70_1-4SBD75 100	29,6	-	32,7	17,9	18,3	-	13,3	14,0	3,44	-	1,79	-	2,49	-
		F70_1-2STA80/BOLT120 100	21,1	-	32,7	14,3	18,3	-	13,2	10,9	3,44	-	1,86	-	2,49	-
	F70_2	F70_2-6SBD95 120	52,6	-	67,8	52,6	15,7	-	18,2	45,0	3,83	-	2,02	-	6,12	-
		F70_2-4STA120/BOLT160 140	55,7	-	67,8	55,7	15,7	-	25,5	50,5	3,83	-	2,95	-	6,12	-
	F70_3	F70_3-8SBD115 160	87,7	-	103	87,7	25,7	-	36,3	65,2	6,45	-	3,07	-	13,5	-
		F70_3-6STA140/BOLT180 160	104	-	103	104	25,7	-	34,0	82,1	6,24	-	2,88	-	13,5	-
	-	γ <sub>M,C</sub>	-	γ <sub>M,1</sub>	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-	
FD10	FD10_1	-	33,6	33,5	-	7,1	4,7	-	20,9	-	2,6	-	10,2	-	10,4	-
	FD10_2	-	37,8	37,6	-	7,1	5,0	-	24,4	-	3,3	-	11,5	-	11,4	-

Post base			F <sub>1,c,Rk</sub> (Compression)			F <sub>1,t,Rk</sub> (Tension)			F <sub>2/3,Rk</sub> (Horizontal)			F <sub>4/5,Rk</sub> (Horizontal)				
Type	Art.-No.	Configuration	Timber	Steel		Timber	Steel		Timber	Steel		Timber	Steel			
	FD10_3	-	42,0	41,8	-	7,1	5,6	-	24,4	-	4,1	-	12,7	-	12,5	-
	FD10_4	-	46,2	46,0	-	7,1	6,1	-	24,4	-	5,0	-	14,0	-	13,5	-
	FD10_5	-	54,6	54,4	-	7,1	6,0	-	24,4	-	6,0	-	15,3	-	14,0	-
		-	$\gamma_{M,T}$	$\gamma_{M,0}$	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-
FD20	FD20_1	-	33,6	33,5	-	7,0	11,8	-	22,9	-	3,7	-	16,1	-	19,4	-
	FD20_2	-	37,8	37,6	-	7,0	13,3	-	31,6	-	4,7	-	17,7	-	21,4	-
	FD20_3	-	42,0	41,8	-	7,0	14,6	-	32,9	-	5,9	-	19,3	-	23,3	-
	FD20_4	-	54,6	54,4	-	7,0	17,0	-	27,5	-	2,6	-	17,0	-	27,2	-
		-	$\gamma_{M,T}$	$\gamma_{M,0}$	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-
FD30	FD30_1	-	77,6	71,9	-	7,0	4,7	-	-	-	-	-	9,3	-	3,2	-
	FD30_2	-	115	95,9	-	7,3	3,6	-	-	-	-	-	9,0	-	4,0	-
		-	$\gamma_{M,T}$	$\gamma_{M,0}$	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	-	-	-	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-
FD30 internal	FD30_1	-	77,6	12,5	-	13,5	4,7	-	-	-	-	-	2,1	-	3,2	-
	FD30_2	-	115	16,7	-	13,5	3,6	-	-	-	-	-	2,6	-	4,0	-
		-	$\gamma_{M,T}$	$\gamma_{M,0}$	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	-	-	-	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-
FD40	FD40_1	-	7,0	6,3	-	4,5	6,3	-	-	-	-	-	8,2	-	5,0	-
	FD40_2	-	7,3	8,4	-	9,0	8,4	-	-	-	-	-	8,6	-	6,5	-
		-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	-	-	-	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-
FD40 internal	FD40_1	-	19,8	12,5	-	13,5	6,3	-	-	-	-	-	2,1	-	5,1	-
	FD40_2	-	20,7	16,7	-	13,5	8,4	-	-	-	-	-	2,6	-	5,2	-
		-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	-	-	-	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-
FD50 <sup>1)</sup>	FD50_1	-	69,4	-	-	-	-	-	-	-	-	-	-	-	-	-
	FD50_2	-	203	-	-	7,8	10,0	-	-	-	-	-	-	-	-	-
		-	$\gamma_{M,T}$	-	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	-	-	-	-	-	-	-	-
FD60 <sup>2)</sup>	FD60_1	-	75,6	-	-	-	-	-	-	-	-	-	-	-	-	-
	FD60_2	-	263	-	-	7,8	17,7	-	-	-	-	-	-	-	-	-
		-	$\gamma_{M,T}$	-	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	-	-	-	-	-	-	-	-
M10	M10_1	-	6,1	14,0	-	3,5	10,0	-	7,6	-	5,9	-	7,6	-	-	5,8
	M10_2	-	12,2	14,4	-	7,1	11,5	-	13,0	-	5,9	-	13,0	-	-	5,4
		-	$\gamma_{M,C}$	$\gamma_{M,1}$	-	$\gamma_{M,C}$	$\gamma_{M,1}$	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-	$\gamma_{M,T}$	-	-	$\gamma_{M,2}$
M20	M20_1	-	7,4	-	8,1	7,4	7,8	8,1	5,5	-	1,5	-	8,2	-	3,0	-
	M20_2	-	7,4	-	8,1	7,4	5,4	8,1	5,5	-	1,5	-	8,2	-	3,0	-
	M20_3	-	7,4	-	8,1	7,4	4,7	8,1	5,5	-	1,5	-	8,2	-	3,0	-
	M20_4	-	7,4	-	8,1	7,4	3,8	8,1	5,5	-	1,5	-	8,2	-	3,0	-
		-	$\gamma_{M,C}$	-	$\gamma_{M,2}$	$\gamma_{M,C}$	$\gamma_{M,0}$	$\gamma_{M,2}$	$\gamma_{M,C}$	-	$\gamma_{M,0}$	-	$\gamma_{M,C}$	-	$\gamma_{M,0}$	-
M30	M30_1	-	89,2	-	-	3,7	12,9	-	2,7	-	1,2	-	8,5	-	5,9	-
	M30_2	-	101	-	-	5,1	21,8	-	3,7	-	1,2	-	9,7	-	5,6	-
	M30_3	-	114	-	-	5,1	21,8	-	3,7	-	1,2	-	10,9	-	5,6	-
	M30_4	-	127	-	-	5,1	21,8	-	3,7	-	1,2	-	12,1	-	5,6	-
	M30_5	-	152	-	-	7,4	21,8	-	5,5	-	1,2	-	14,0	-	5,9	-
		-	$\gamma_{M,T}$	-	-	$\gamma_{M,C}$	$\gamma_{M,0}$	-	$\gamma_{M,C}$	-	$\gamma_{M,0}$	-	$\gamma_{M,T}$	-	$\gamma_{M,0}$	-
M50	M50_1	-	7,4	7,8	8,5	7,8	7,8	-	5,5	-	1,8	2,7	8,6	-	3,3	-
	M50_2	-	7,4	5,5	8,5	7,8	5,5	-	5,5	-	1,8	2,7	8,6	-	3,3	-







Post base			F <sub>1,c,Rk</sub> (Compression)			F <sub>1,t,Rk</sub> (Tension)			F <sub>2/3,Rk</sub> (Horizontal)			F <sub>4/5,Rk</sub> (Horizontal)			
Type	Art.-No.	Configuration	Timber	Steel		Timber	Steel		Timber	Steel		Timber	Steel		
	S50_1 Alt	-	193	127	277	-	-	-	-	-	-	-	-	-	
	S50_2 Alt	-	193	127	277	-	-	-	-	-	-	-	-	-	
	S50_3 Alt	-	324	247	351	-	-	-	-	-	-	-	-	-	
	S50_4 Alt	-	324	247	351	-	-	-	-	-	-	-	-	-	
		-	γ <sub>M,T</sub>	γ <sub>M,0</sub>	γ <sub>M,1</sub>	-	-	-	-	-	-	-	-	-	
FI10	FI10_1	-	50,8	-	-	3,5	3,5	-	5,0	-	3,0	-	7,6	-	7,7
	FI10_2	-	84,8	-	-	3,5	3,1	-	5,0	-	3,7	-	13,0	-	9,1
		-	γ <sub>M,T</sub>	-	-	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,C</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>
FI50	FI50_1	-	29,4	24,0	-	-	-	-	15,5	-	7,3	-	15,5	-	7,3
	FI50_2	-	33,6	26,7	-	7,2	9,3	-	15,5	-	7,0	-	15,5	-	7,0
	FI50_3	-	42,0	33,3	-	7,2	-	-	15,5	-	10,7	-	15,5	-	10,7
	FI50_4	-	42,0	33,3	-	7,2	11,2	-	18,4	-	8,6	-	18,4	-	8,6
	FI50_6	-	46,2	36,7	-	7,2	14,0	-	18,9	-	13,0	-	18,9	-	13,0
		-	γ <sub>M,T</sub>	γ <sub>M,0</sub>	-	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,T</sub>	-	γ <sub>M,0</sub>
RI40	RI40_3	-	99,9	38,8	47,8	-	-	-	-	-	-	-	-	-	
	RI40_4	-	100	47,1	57,0	-	-	-	-	-	-	-	-	-	
		-	γ <sub>M,T</sub>	γ <sub>M,0</sub>	γ <sub>M,1</sub>	-	-	-	-	-	-	-	-	-	
MI20	MI20_1	-	7,4	-	11,2	7,4	6,3	-	5,5	-	1,2	-	8,2	-	2,4
	MI20_2	-	7,4	-	8,1	7,4	4,4	-	5,5	-	1,2	-	8,2	-	2,4
	MI20_3	-	7,4	-	8,1	7,4	3,8	-	5,5	-	1,2	-	8,2	-	2,4
	MI20_4	-	7,4	-	8,1	7,4	3,0	-	5,5	-	1,2	-	8,2	-	2,4
		-	γ <sub>M,C</sub>	-	γ <sub>M,2</sub>	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,C</sub>	-	γ <sub>M,0</sub>	-	γ <sub>M,C</sub>	-	γ <sub>M,0</sub>
XS10	XS10_1	XS10_1-16SBD115 160	122	-	225	87,8	32,6	-	32,9	34,7	3,68	-	32,9	34,7	3,68
		XS10_1-16SBD95 140	118	-	225	96,9	32,6	-	45,0	25,7	3,97	-	45,0	25,7	3,97
		XS10_1-16SBD115 140	133	-	225	109	32,6	-	49,3	25,7	3,97	-	49,3	25,7	3,97
		XS10_1-16SBD135 160	149	-	225	122	32,6	-	54,3	34,7	3,97	-	54,3	34,7	3,97
		XS10_1-8STA120 160	125	-	225	125	32,6	-	23,8	16,2	4,01	-	23,8	16,2	4,01
	XS10_2	XS10_2-16SBD115 160	116	-	464	86,7	59,0	-	32,6	33,8	7,45	-	32,6	33,8	7,45
		XS10_2-16SBD115_160 Alt	175	-	464	132	59,0	-	48,9	33,8	7,99	-	48,9	33,8	7,99
		XS10_2-16SBD135 160	197	-	464	148	59,0	-	53,8	33,8	7,99	-	53,8	33,8	7,99
		XS10_2-16SBD155 200	213	-	464	160	59,0	-	59,2	55,4	7,99	-	59,2	55,4	7,99
		XS10_2-8STA120 160	112	-	464	112	59,0	-	22,8	15,8	8,29	-	22,8	15,8	8,29
		XS10_2-12STA120 160	151	-	464	151	59,0	-	150	27,3	8,29	-	150	27,3	8,29
		XS10_2-8STA120 200	124	-	464	124	59,0	-	50,0	51,3	8,29	-	50,0	51,3	8,29
		XS10_2-12STA160 200	182	-	464	182	59,0	-	180	51,3	8,29	-	180	51,3	8,29
			γ <sub>M,C</sub>	-	γ <sub>M,1</sub>	γ <sub>M,C</sub>	γ <sub>M,0</sub>	-	γ <sub>M,C</sub>	γ <sub>M,T</sub>	γ <sub>M,0</sub>	-	γ <sub>M,C</sub>	γ <sub>M,T</sub>	γ <sub>M,0</sub>

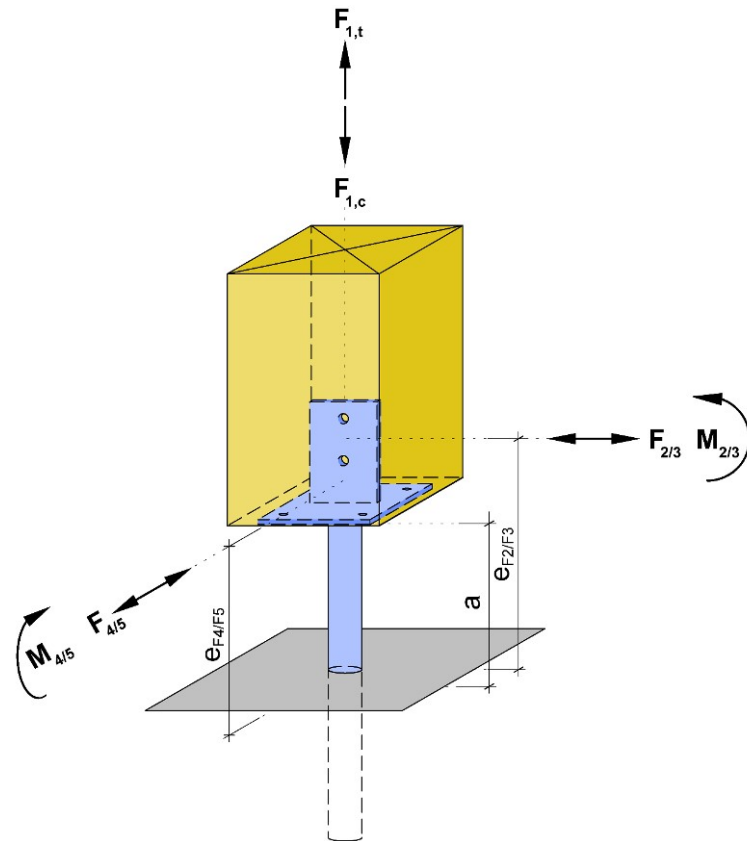
<sup>1)</sup> When 4 angle brackets are used, the characteristic load-carrying capacities may be increased by a factor of 2,0.

<sup>2)</sup> When 4 angle brackets are used, the characteristic load-carrying capacities for F<sub>1</sub> (Tension), F<sub>23</sub> and F<sub>45</sub> may be increased by a factor of 2,0.

**Table B.1:** Characteristic load-carrying capacities (moments) for post bases in kNm

Post base			$M_{2/3,Rk}$ (Moment)		$M_{4/5,Rk}$ (Moment)		
Type	Art.-No.	Configuration	Timber	Steel	Timber	Steel	
F70	F70_1	F70_1- 4SBD75_100	0,36	0,46	-	-	
		F70_1- 2STA80/ BOLT120_100	-	-	-	-	
	F70_2	F70_2- 6SBD95_120	1,98	0,55	-	-	
		F70_2- 4STA120/ BOLT160_140	2,46	0,55	-	-	
	F70_3	F70_3- 8SBD115_160	4,22	1,28	-	-	
		F70_3- 6STA140/ BOLT180_160	4,88	1,28	-	-	
			$\gamma_{M,C}$	$\gamma_{M,0}$	$\gamma_{M,C}$	$\gamma_{M,0}$	
	XS10	XS10_1	XS10_1- 16SBD115_160	3,08	0,90	3,08	0,90
			XS10_1- 16SBD95_140	2,75	0,90	2,75	0,90
			XS10_1- 16SBD115_140	3,03	0,90	3,03	0,90
XS10_1- 16SBD135_160			3,34	0,90	3,34	0,90	
XS10_1- 8STA120_160			2,09	0,90	2,09	0,90	
XS10_2		XS10_2- 16SBD115_160	3,03	1,83	3,03	1,83	
		XS10_2- 16SBD115_160 Alt	3,01	1,83	3,01	1,83	
		XS10_2- 16SBD135_160	3,33	1,83	3,33	1,83	
		XS10_2- 16SBD155_200	3,68	1,83	3,68	1,83	
		XS10_2- 8STA120_160	1,74	1,83	1,74	1,83	
		XS10_2- 12STA120_160	4,19	1,83	4,19	1,83	
		XS10_2- 8STA120_200	4,65	1,83	4,65	1,83	
		XS10_2- 12STA160_200	6,74	1,83	6,74	1,83	
				$\gamma_{M,C}$	$\gamma_{M,0}$	$\gamma_{M,C}$	$\gamma_{M,0}$

**Definitions of forces, their directions and eccentricity**



**Acting forces and moments**

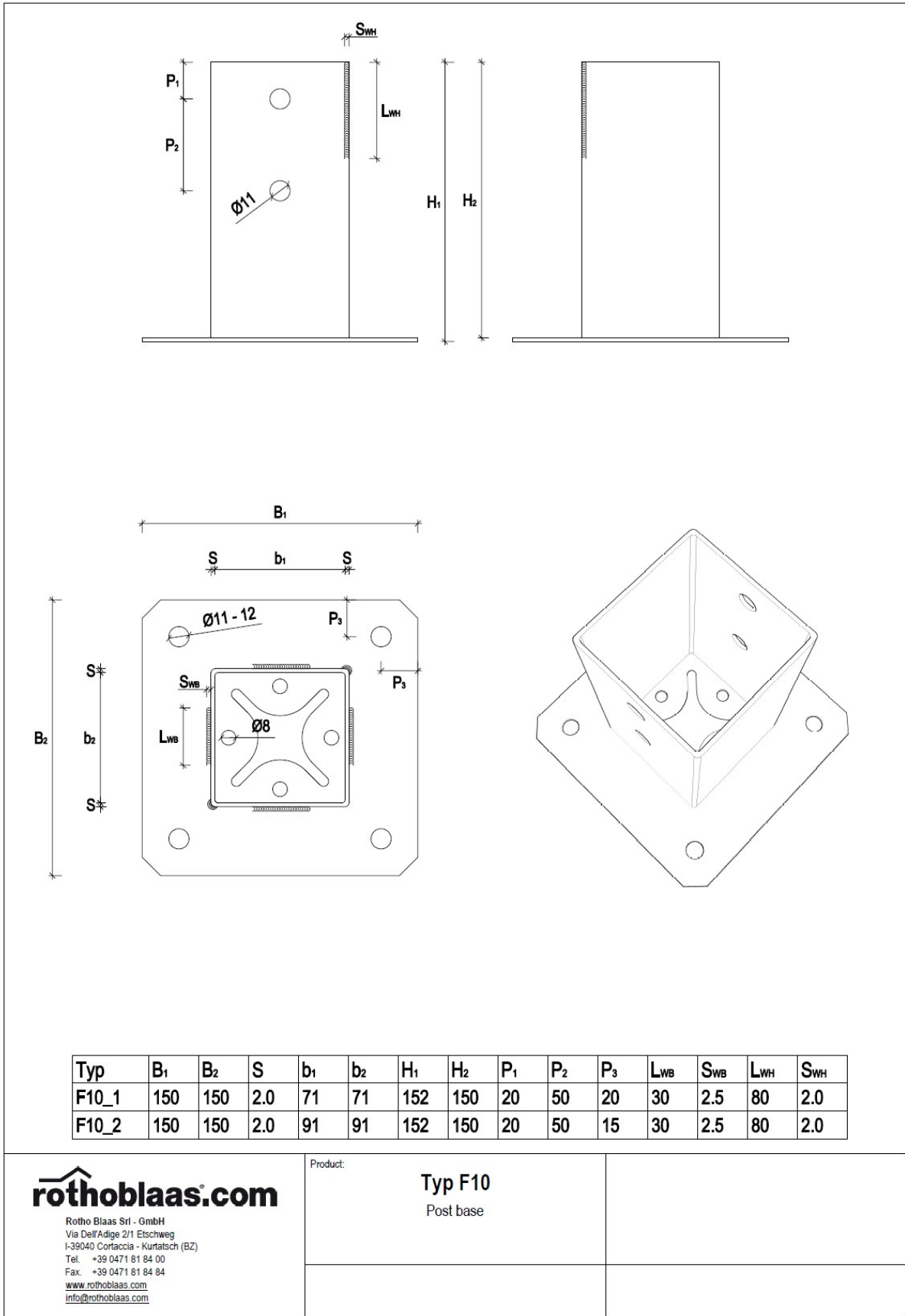
- $F_1$  axial force (tension or compression) acting along the central axis of the joint
- $F_2$  and  $F_3$  horizontal force parallel to the inner steel plate of the post base acting with the lever arm  $e_{F2/F3}$  above the foundation
- $F_4$  and  $F_5$  horizontal force perpendicular to the inner steel plate of the post base acting with the lever arm  $e_{F4/F5}$  above the foundation
- $M_2$  and  $M_3$  moment parallel to the inner steel plate of the post base
- $M_4$  and  $M_5$  moment perpendicular to the inner steel plate of the post base

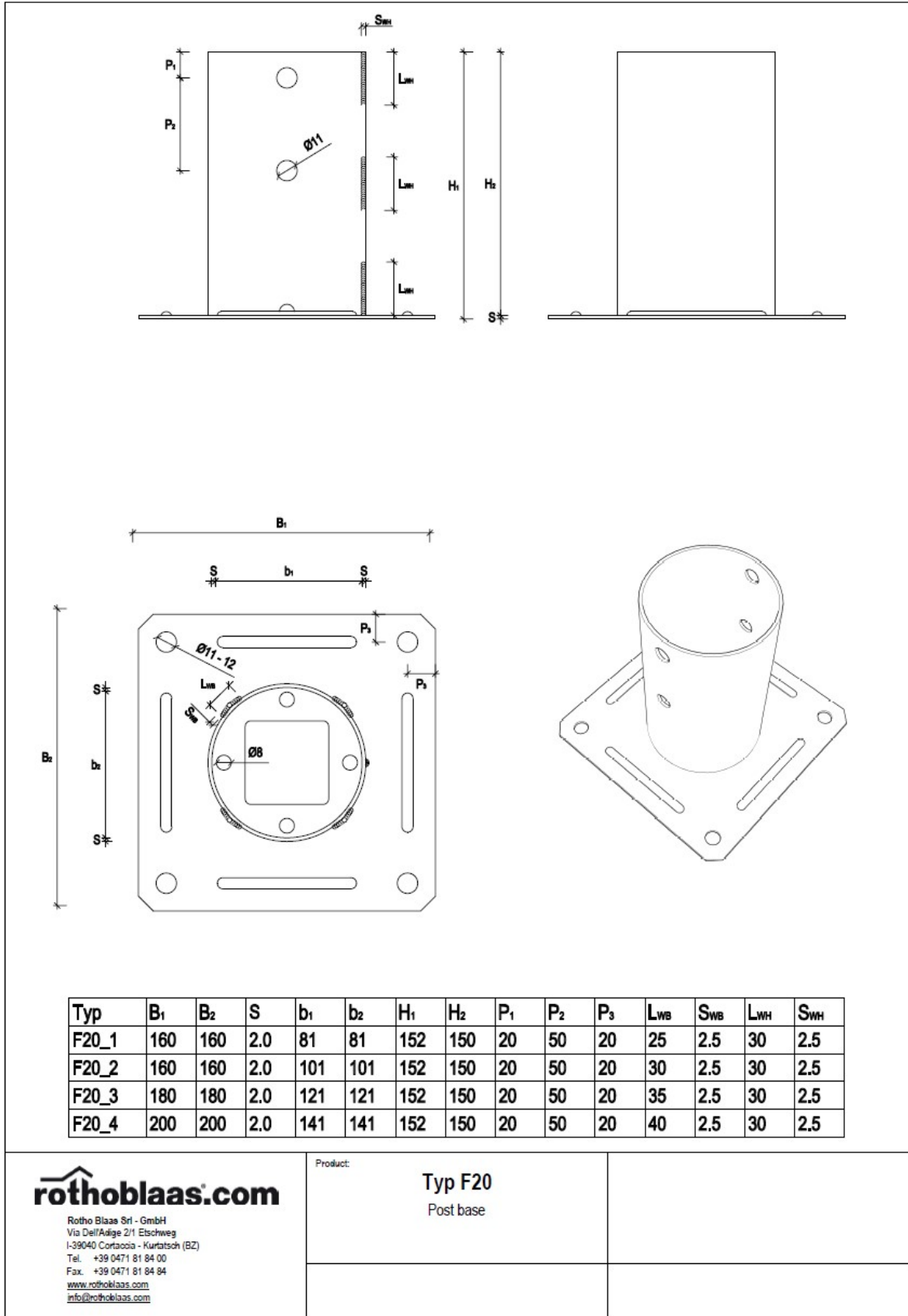
**Combined forces**

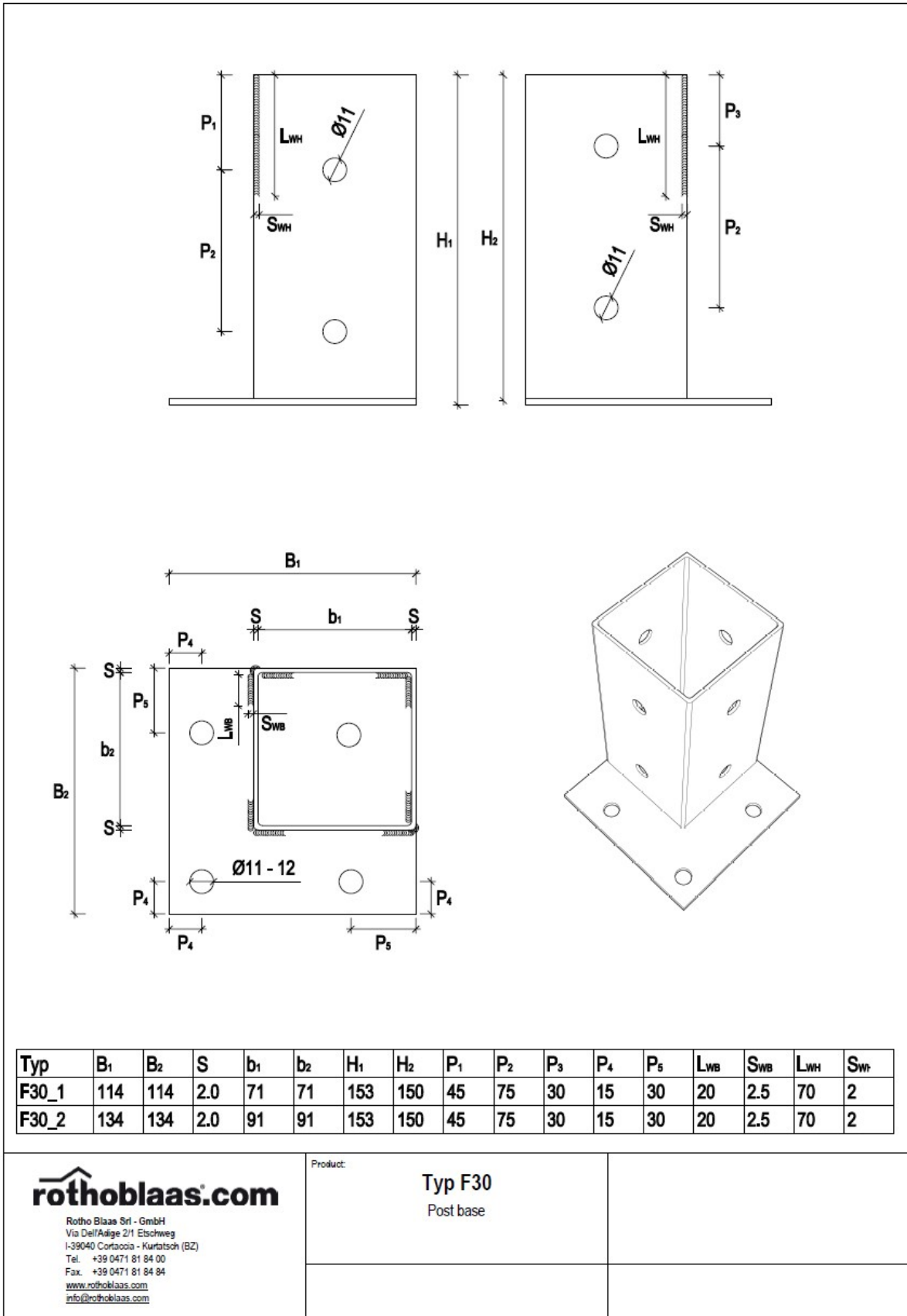
If the forces  $F_1$ ,  $F_2 / F_3$  and  $F_4 / F_5$  and moments  $M_2 / M_3$  and  $M_4 / M_5$  act at the same time, the following inequality shall be fulfilled:

$$\sum \frac{E_{i,d}}{R_{i,d}} = \left( \frac{F_{1,t,Ed}}{F_{1,t,Rd}} \right) + \left( \frac{F_{1,c,Ed}}{F_{1,c,Rd}} \right) + \left( \frac{F_{2/3,Ed}}{F_{2/3,Rd}} \right) + \left( \frac{F_{4/5,Ed}}{F_{4/5,Rd}} \right) + \left( \frac{M_{2/3,Ed}}{M_{2/3,Rd}} \right) + \left( \frac{M_{4/5,Ed}}{M_{4/5,Rd}} \right) \leq 1$$

The forces  $F_2$  and  $F_3$  or  $F_4$  and  $F_5$  are forces with opposite direction. Therefore, only one force  $F_2$  or  $F_3$ , and  $F_4$  or  $F_5$ , respectively, is able to act simultaneously with  $F_1$ . This applies analogously to the moments.





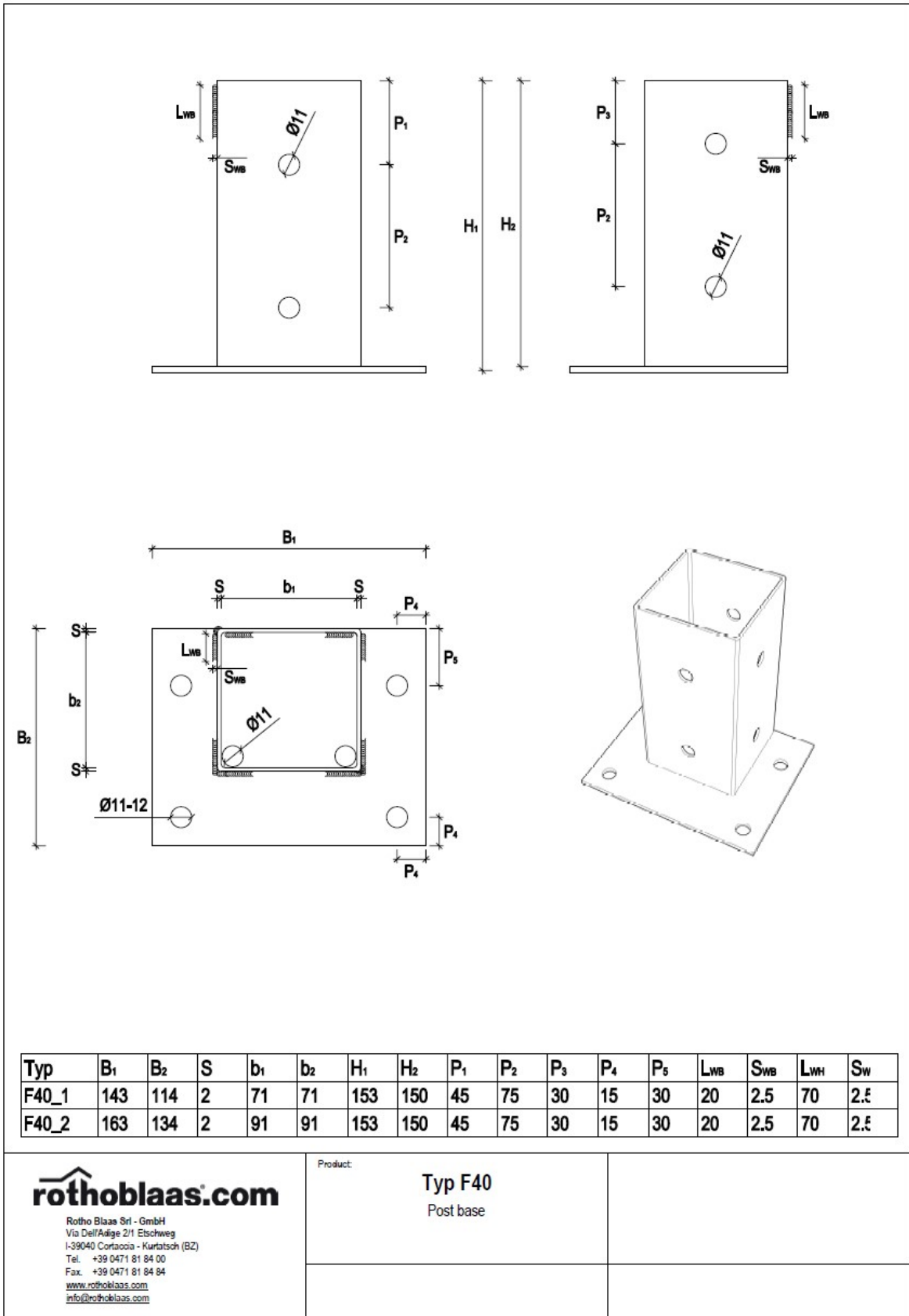


**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ F30  
 Post base



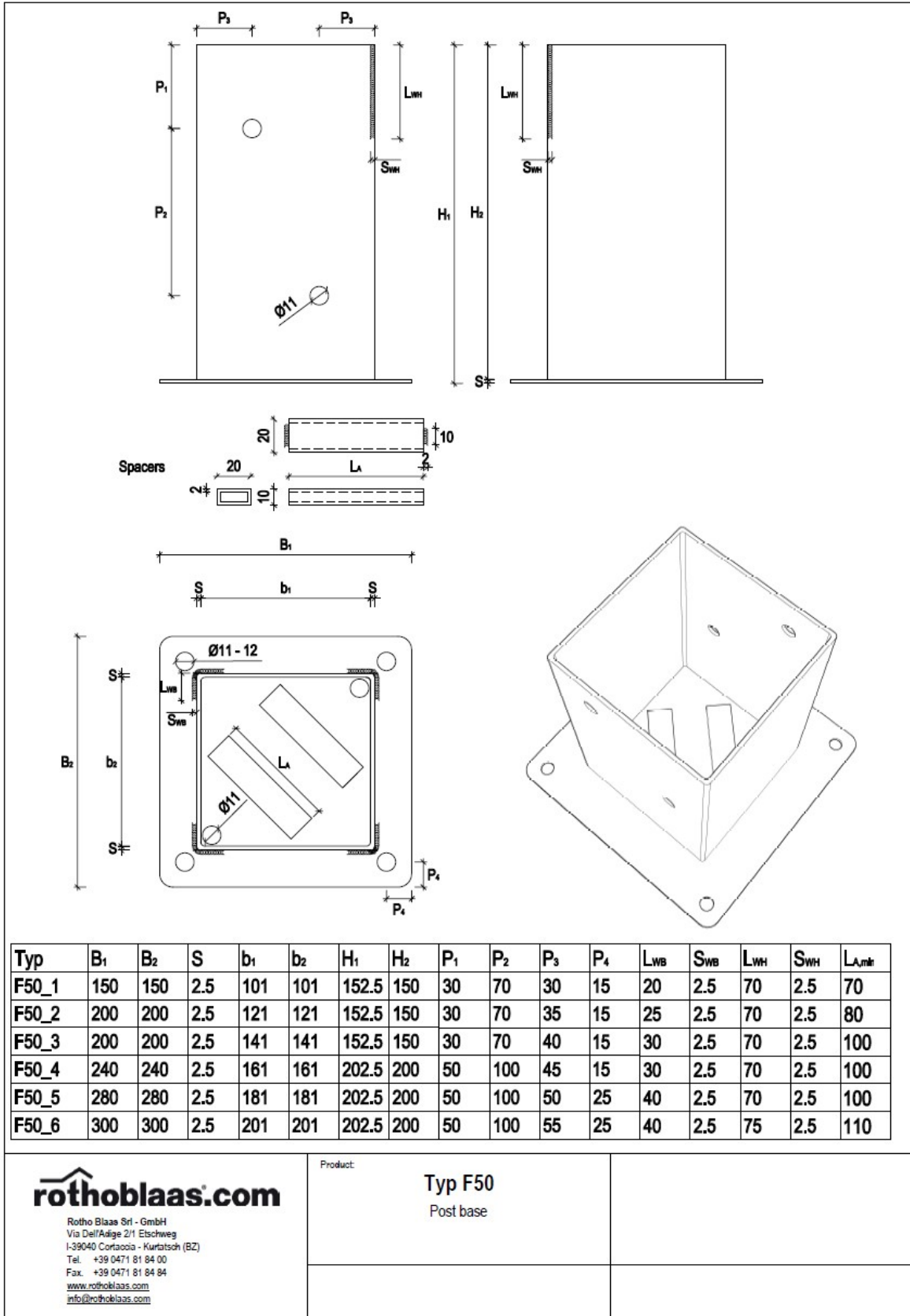
**rothoblaas.com**

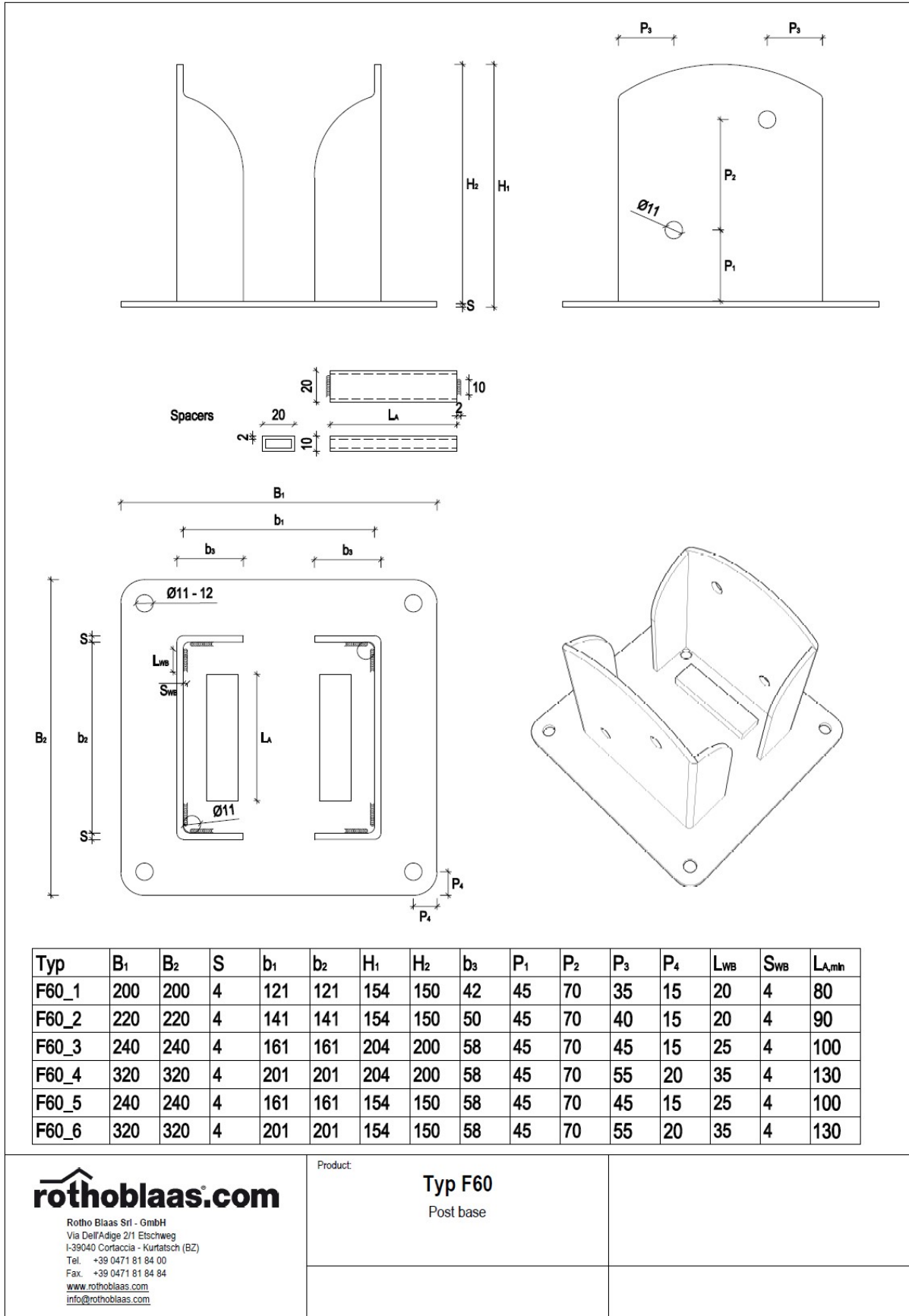
Rotho Blaas Srl - GmbH  
 Via Dell'Alaige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

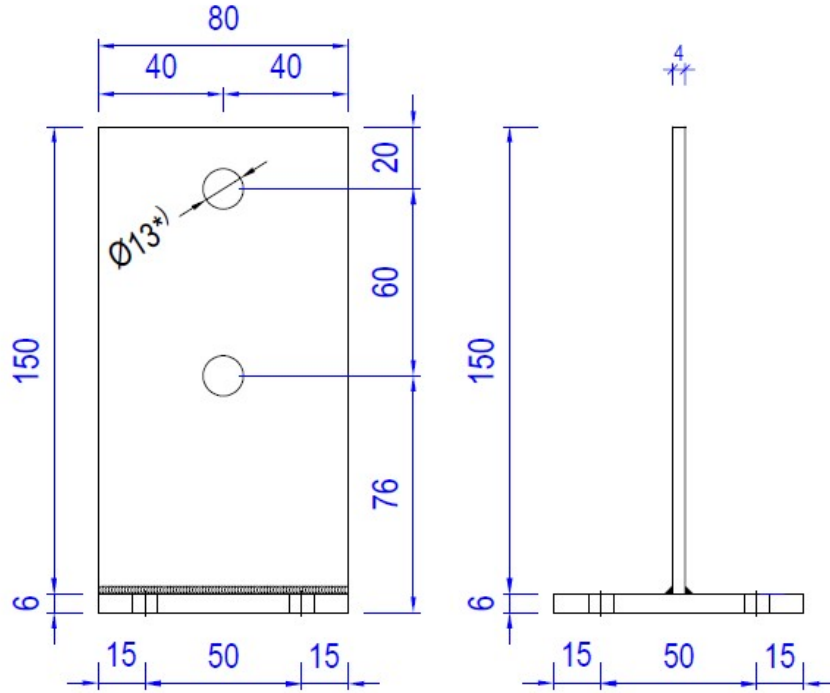
Product:

**Typ F40**  
 Post base

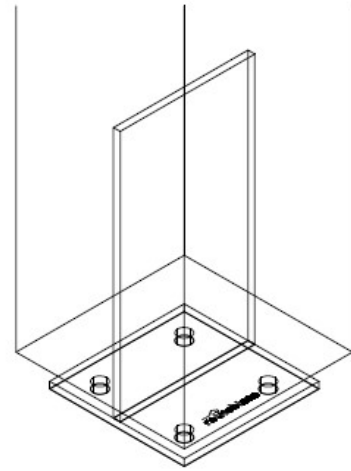
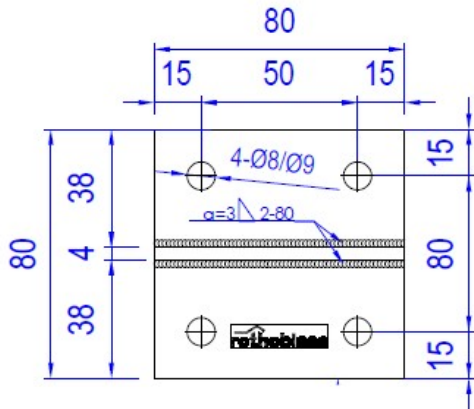








\*) Holes Ø13 mm on vertical flange are optional



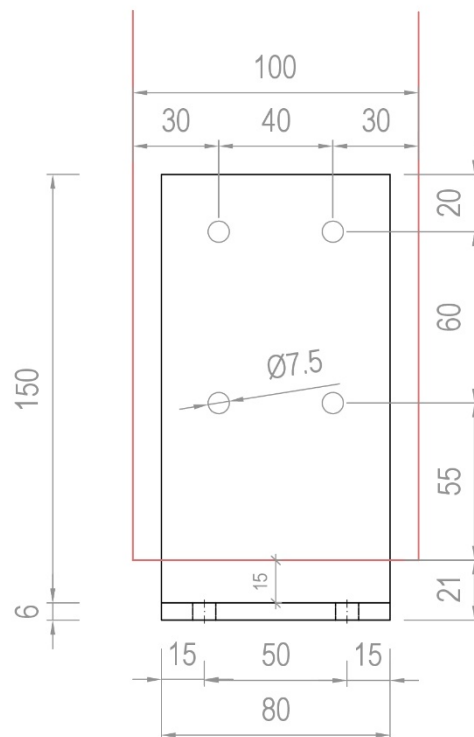
All dimension in mm



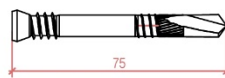
Object:

Postbase F70\_1


4 selftapping dowels SBD  $\text{Ø}7.5 \times 75$   
Post MIN 100x100 mm



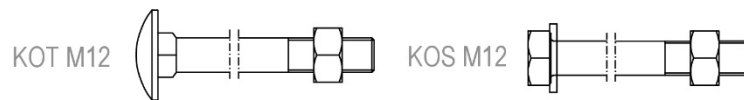
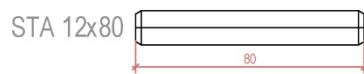
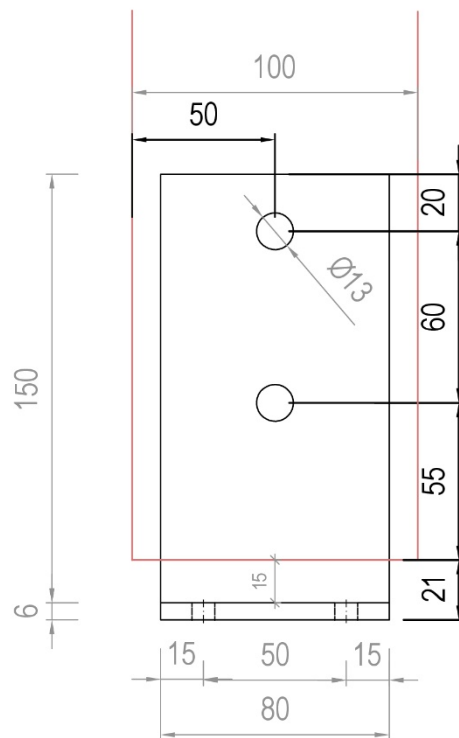
SBD 7.5x75



Object: Postbase F70\_1

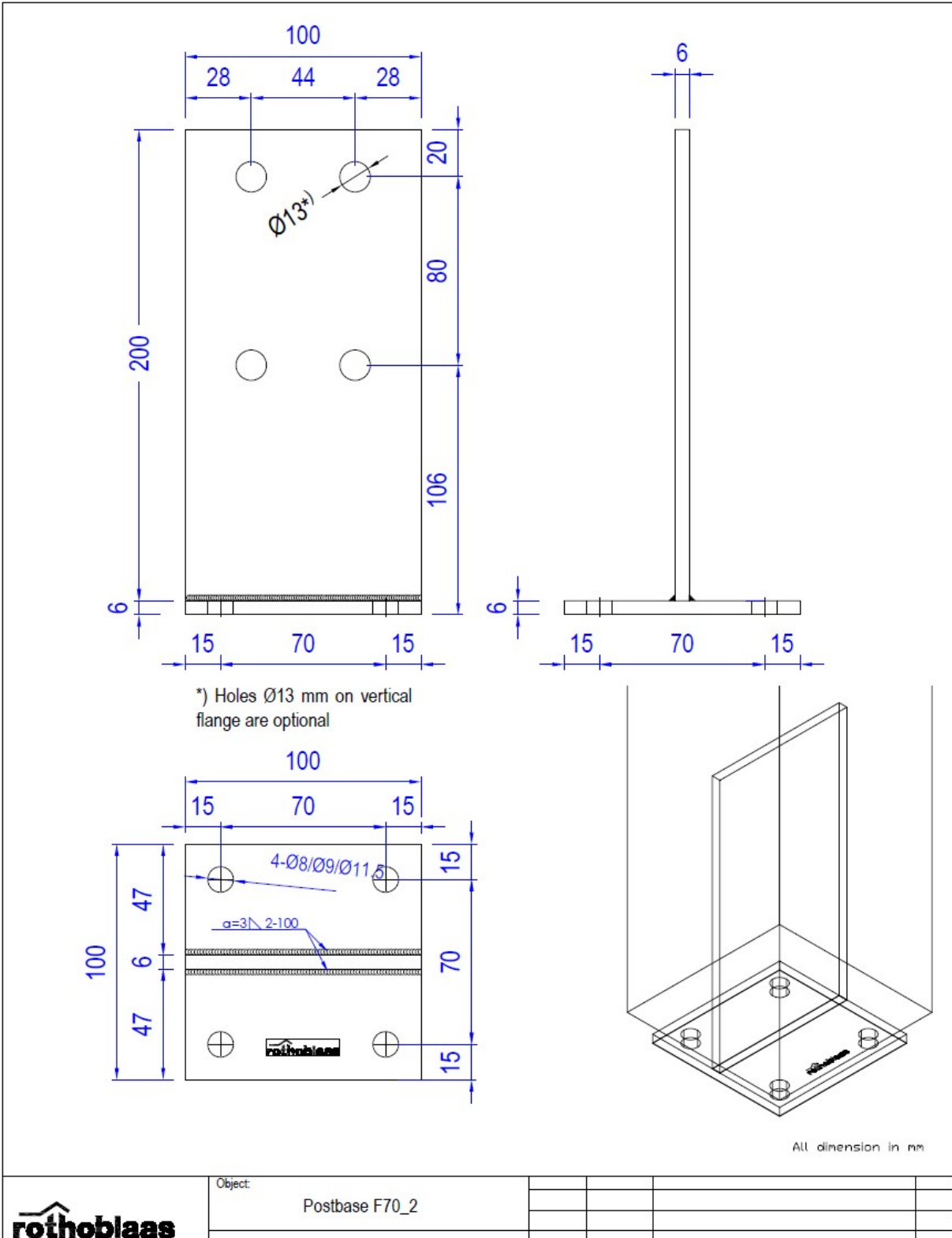
Configuration: F70\_1-4SBD75\_100

2 smooth dowels STA  $\text{Ø}12 \times 80$   
or 2 bolts M12 x 120  
Post MIN 100x100 mm



Object: Postbase F70\_1

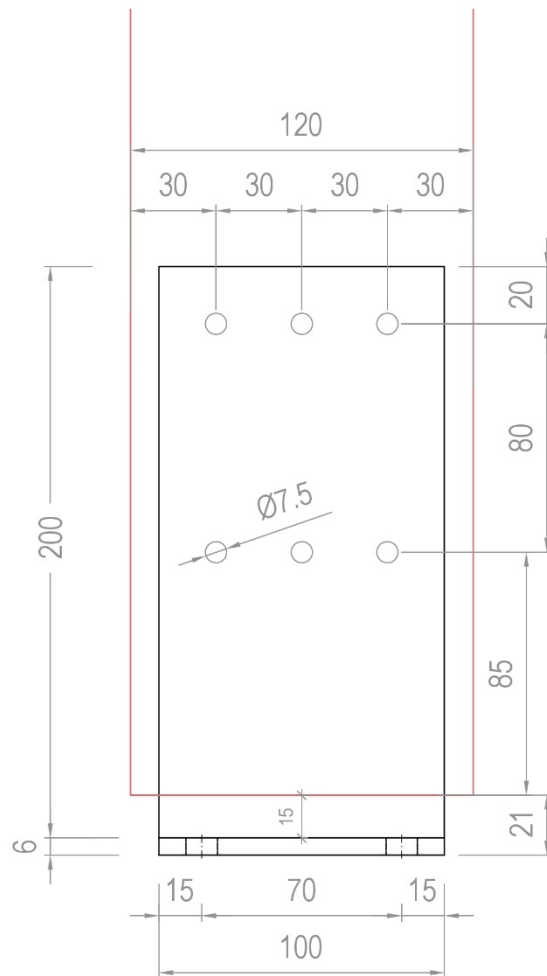
Configuration: F70\_1-2STA80/BOLT120\_100



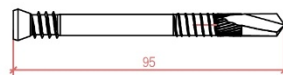
Object:

Postbase F70\_2


6 selftapping dowels SBD  $\text{Ø}7.5 \times 95$   
Post MIN 120x120 mm



SBD 7.5x95

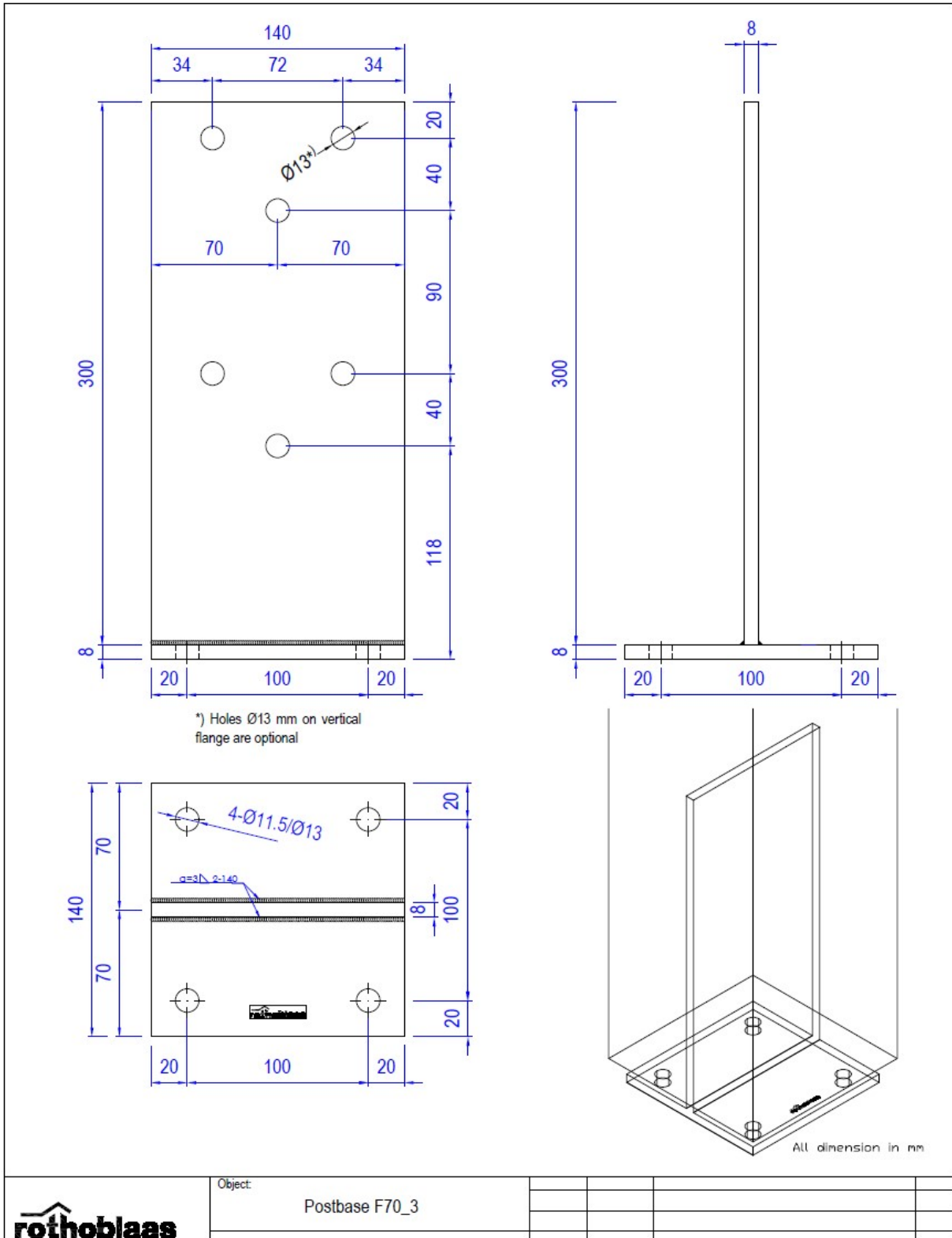


Object: Postbase F70\_2

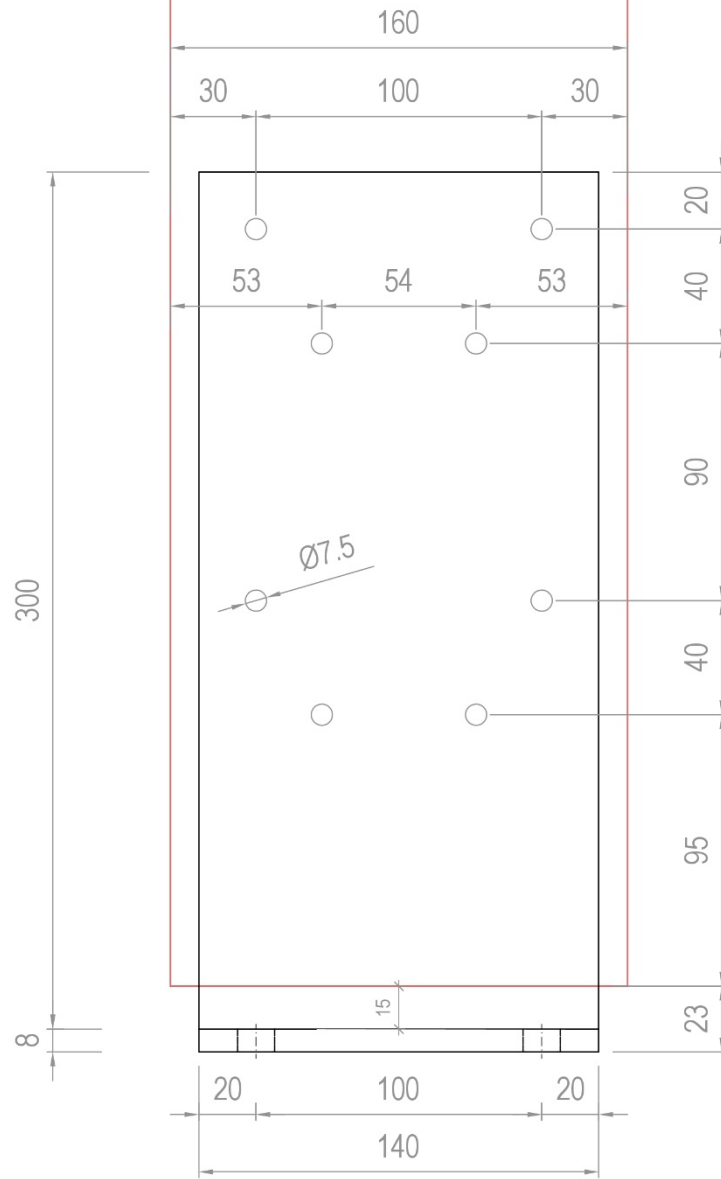
Configuration: F70\_2-6SBD95\_120







8 selftapping dowels SBD  $\text{Ø}7.5 \times 115$   
Post MIN 160x160 mm



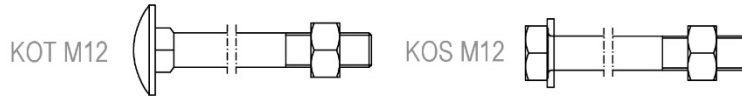
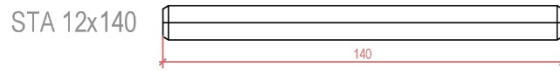
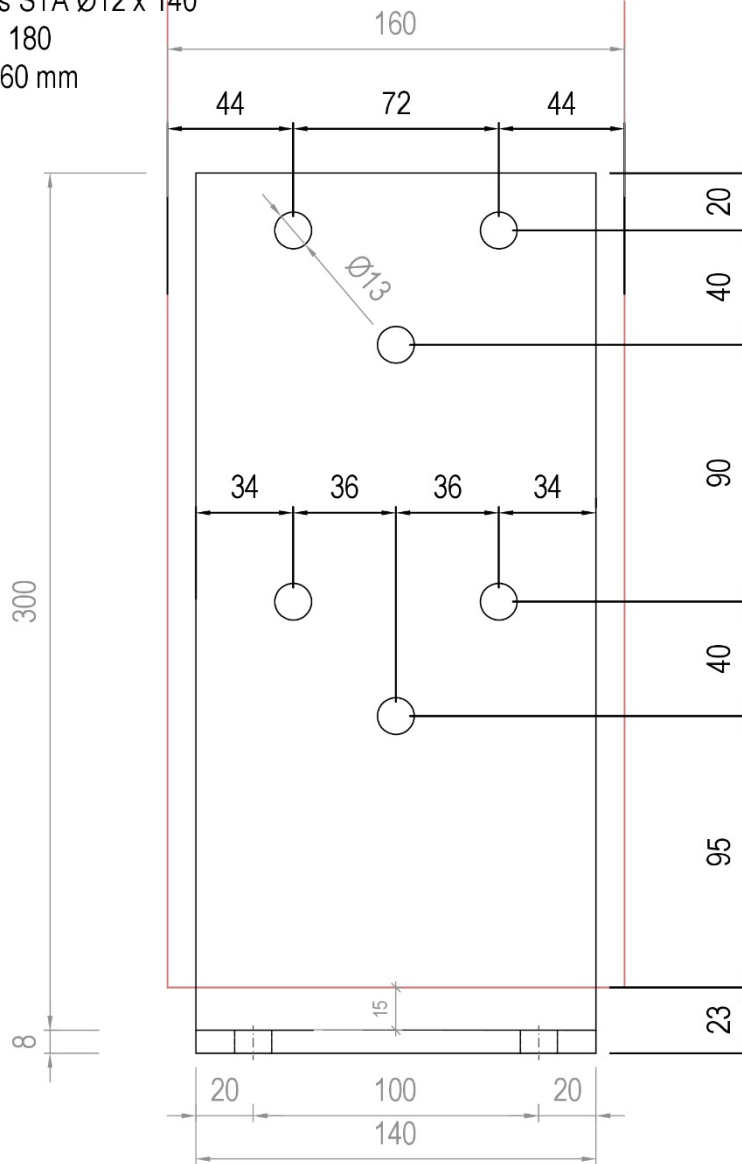
SBD 7.5x115



Object: Postbase F70\_3

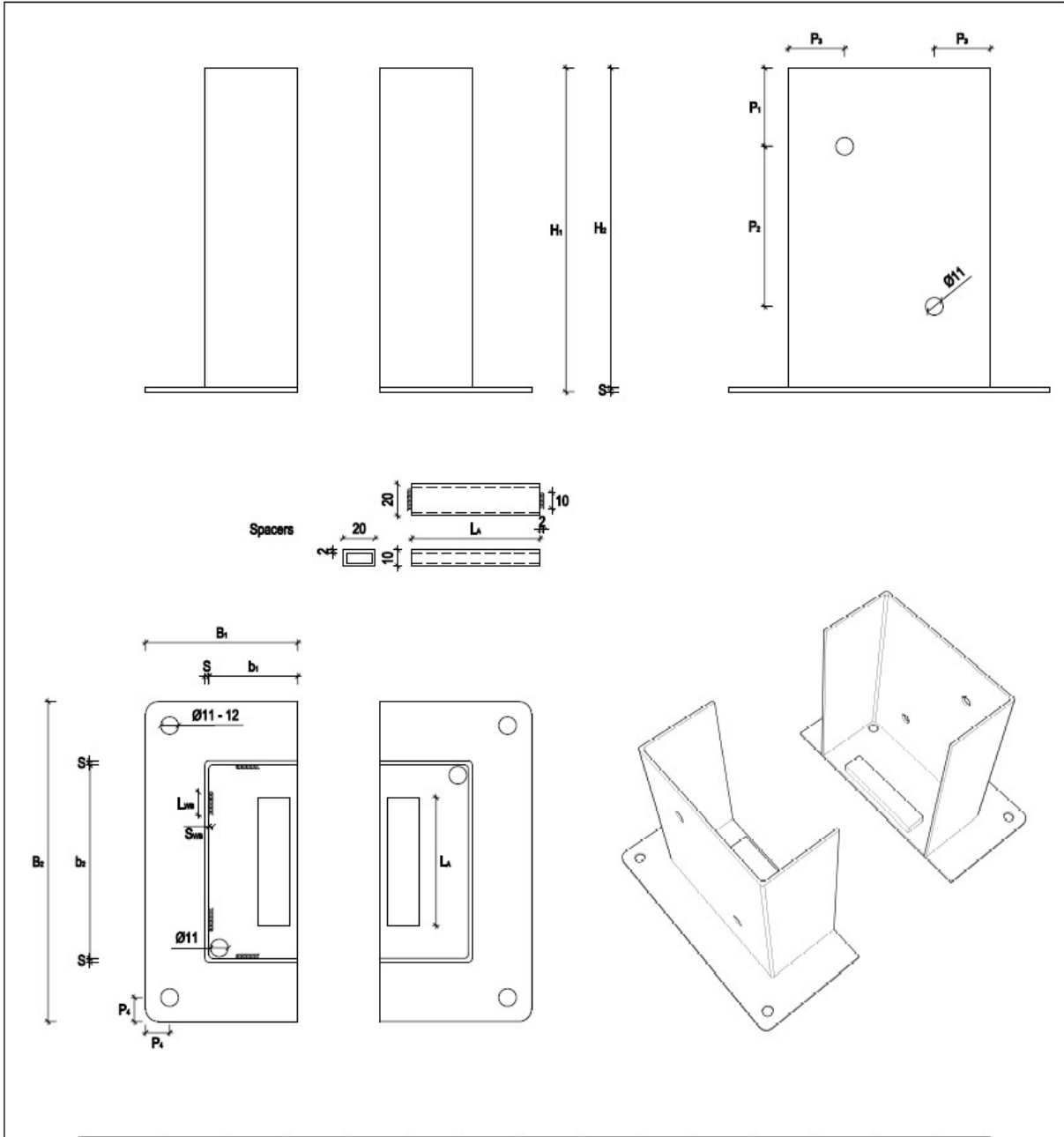
Configuration: F70\_3-8SBD115\_160

6 smooth dowels STA  $\varnothing 12 \times 140$   
 or 6 bolts M12 x 180  
 Post MIN 160x160 mm



Object: Postbase F70\_3

Configuration: F70\_3-6STA140/BOLT180\_160



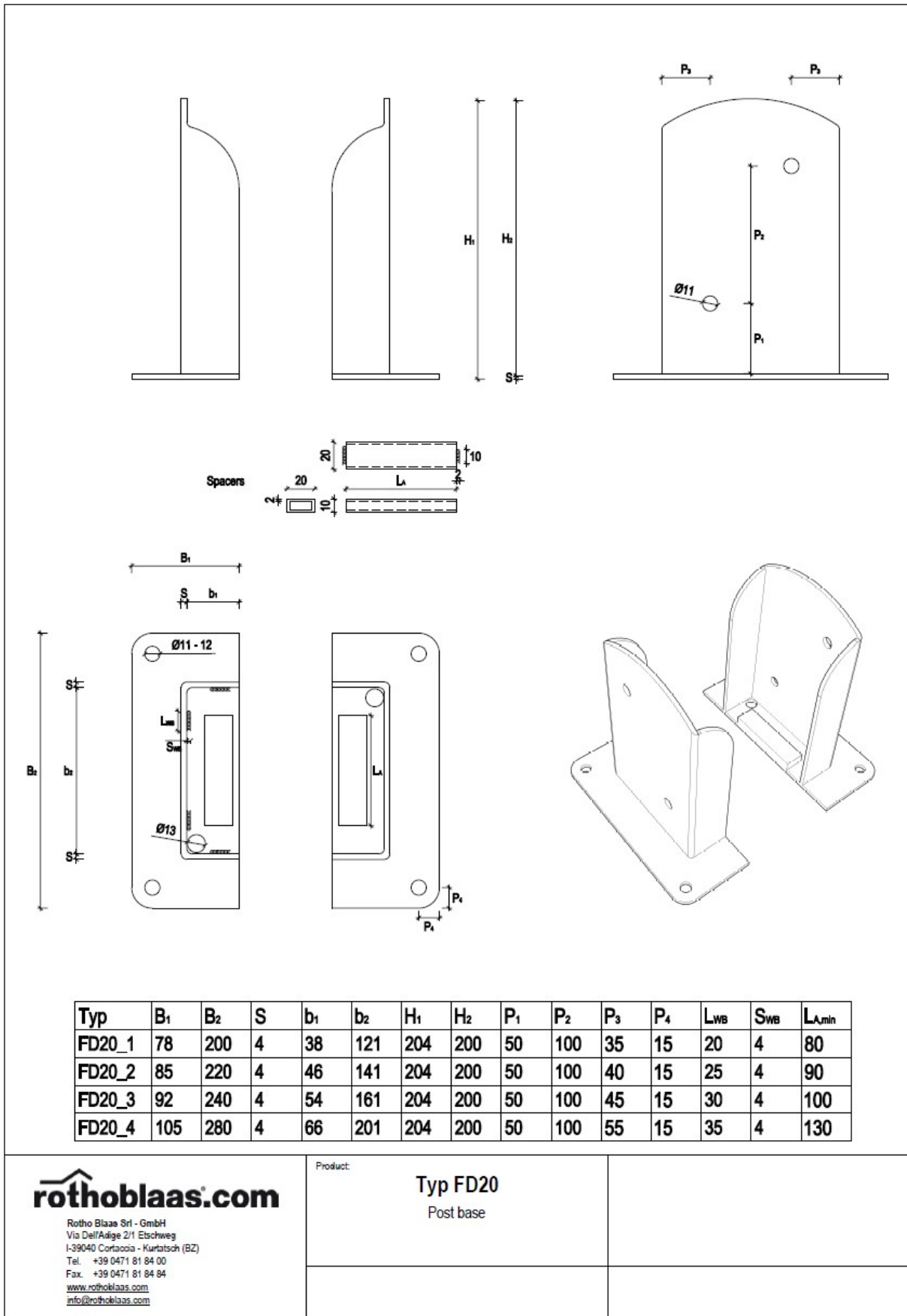
Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	L <sub>wb</sub>	S <sub>wb</sub>	L <sub>s,inh</sub>
FD10_1	95	200	2.5	55.5	121	202.5	200	50	100	35	15	25	2.5	80
FD10_2	105	220	2.5	65.5	141	202.5	200	50	100	40	15	25	2.5	90
FD10_3	115	240	2.5	75.5	161	202.5	200	50	100	45	15	30	2.5	100
FD10_4	125	260	2.5	85.5	181	202.5	200	50	100	50	15	30	2.5	110
FD10_5	135	280	2.5	95.5	201	202.5	200	50	100	55	15	35	2.5	130

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 94  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ FD10  
 Post base

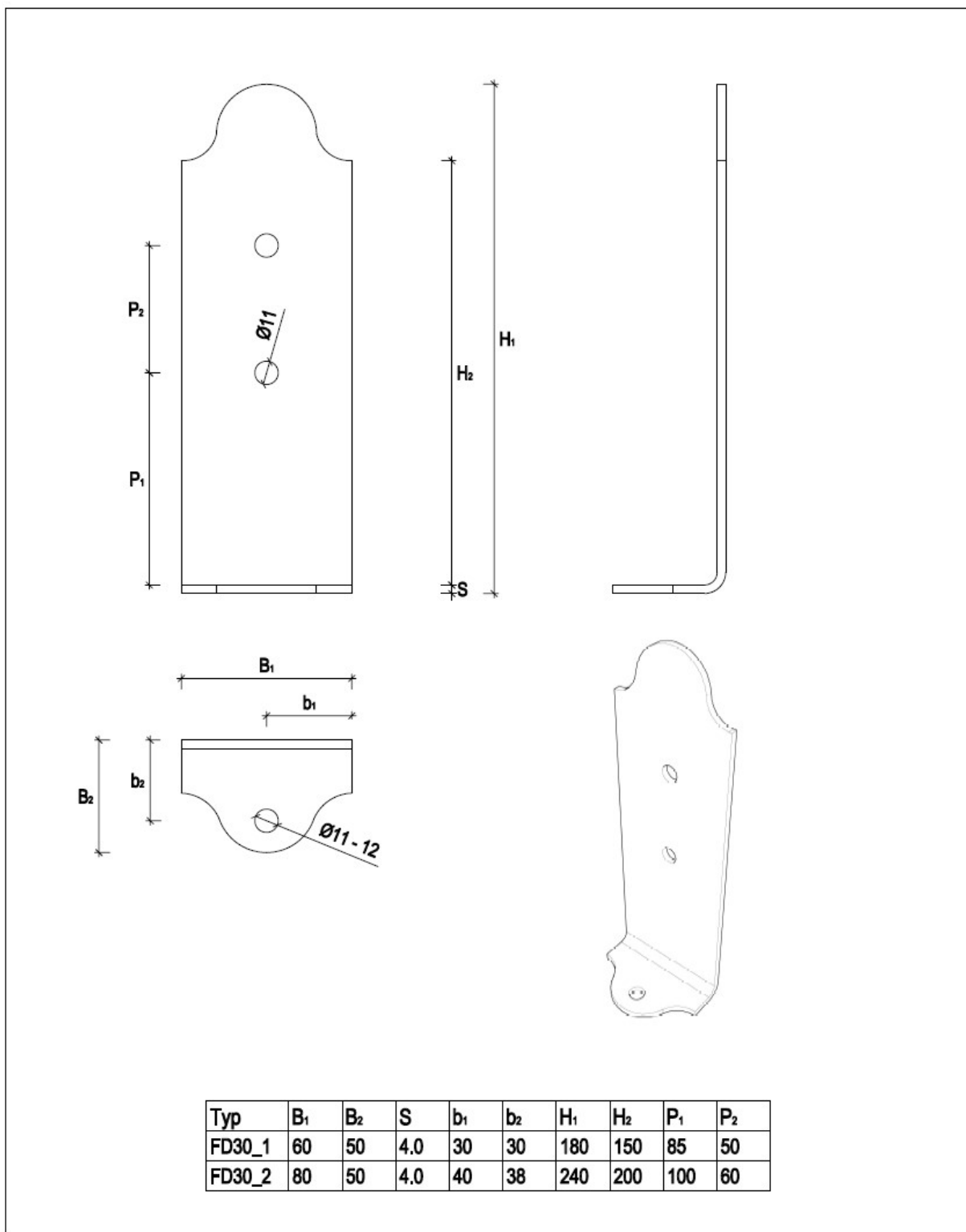


**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ FD20**  
 Post base

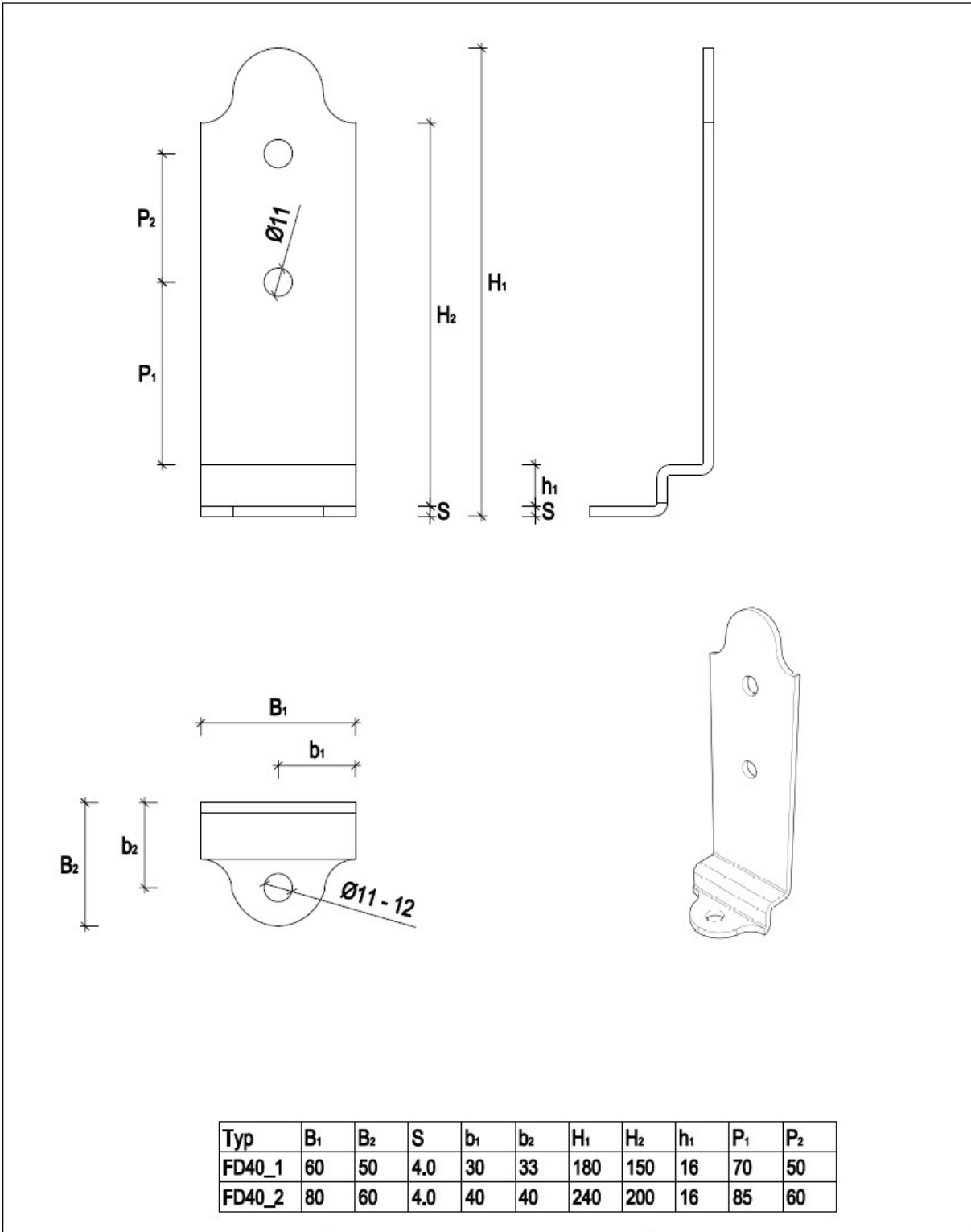


**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ FD30  
 Post base

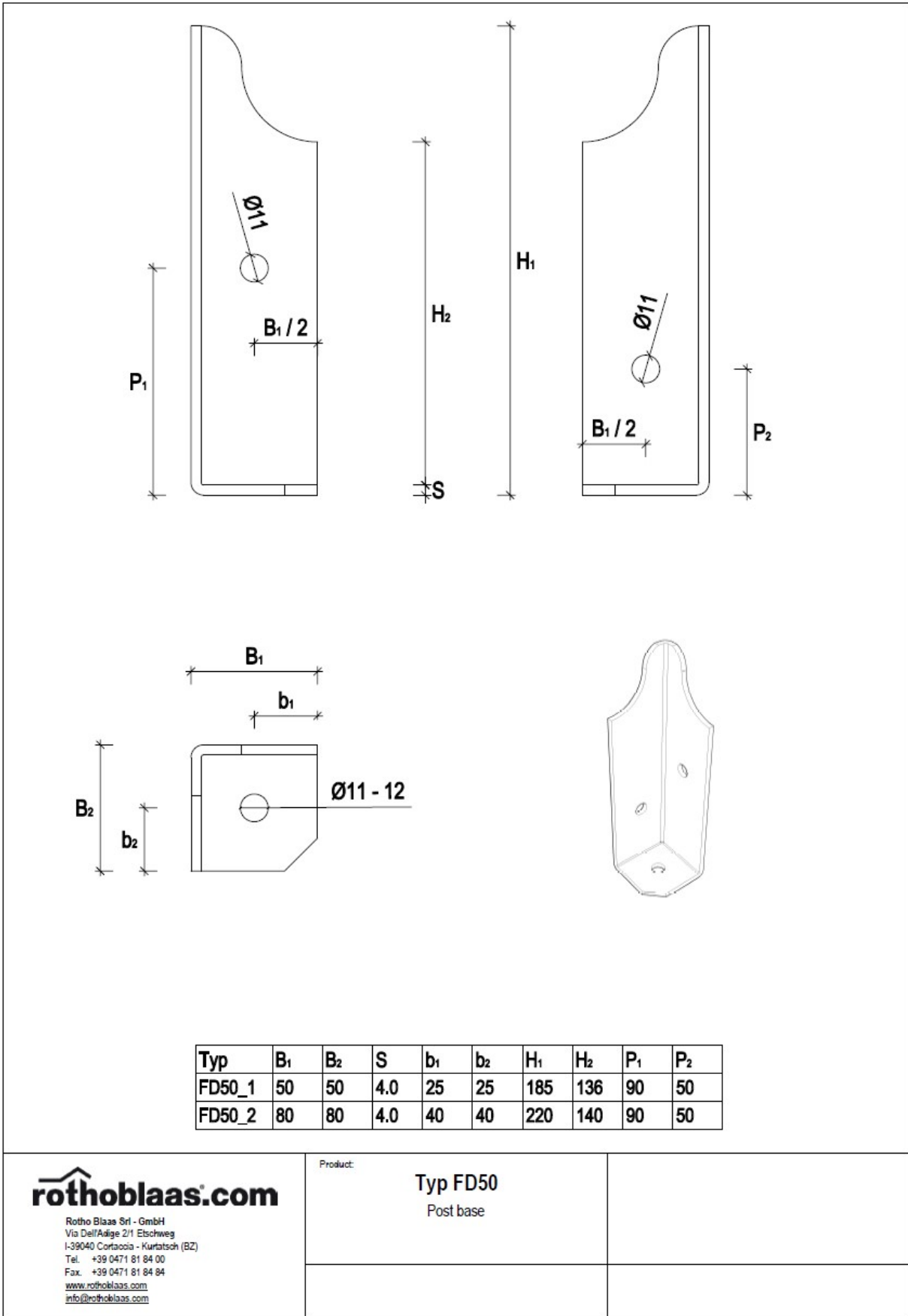


**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ FD40**  
 Post base



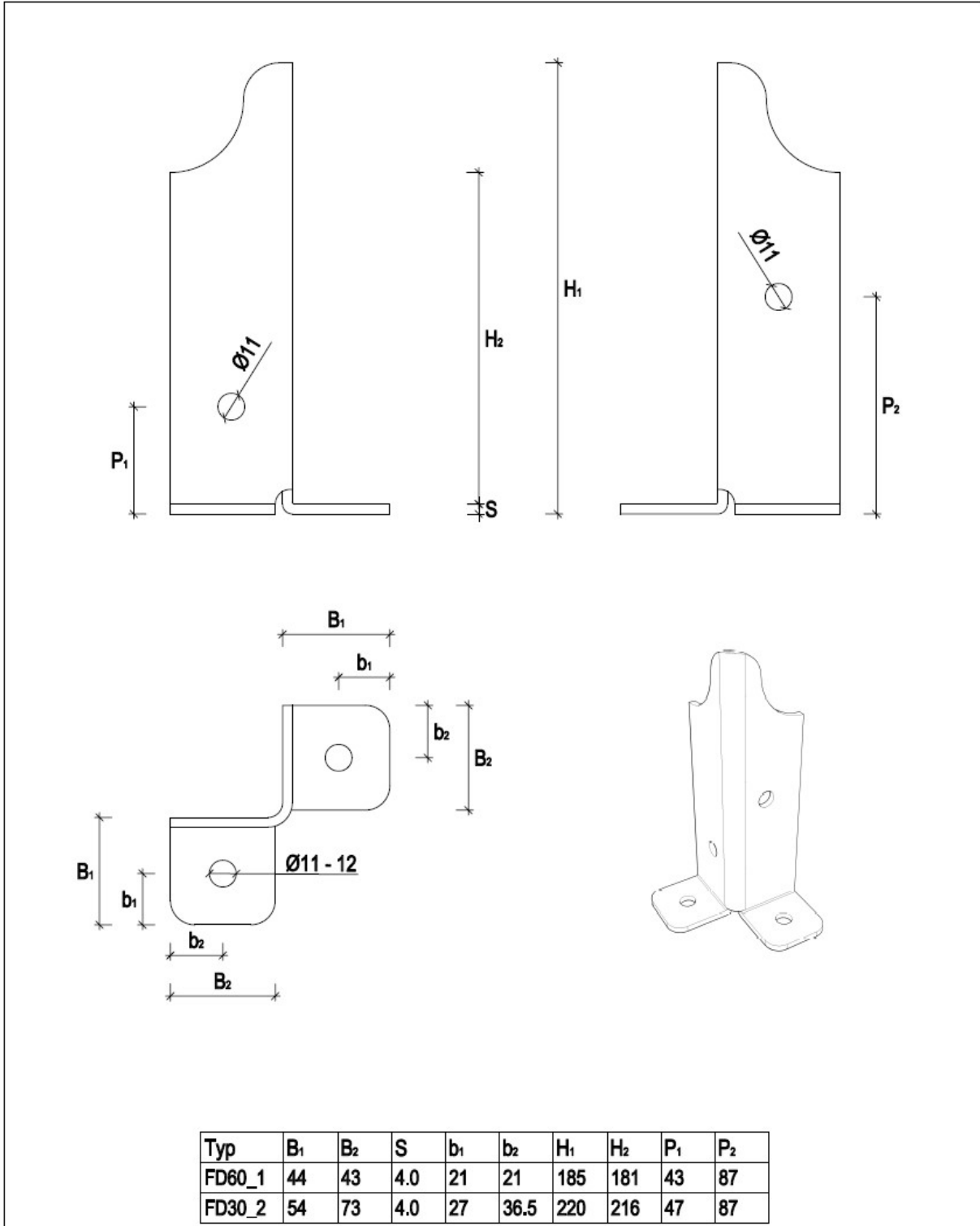
**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

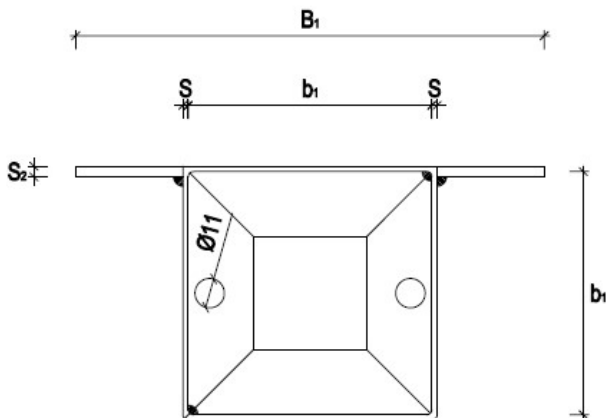
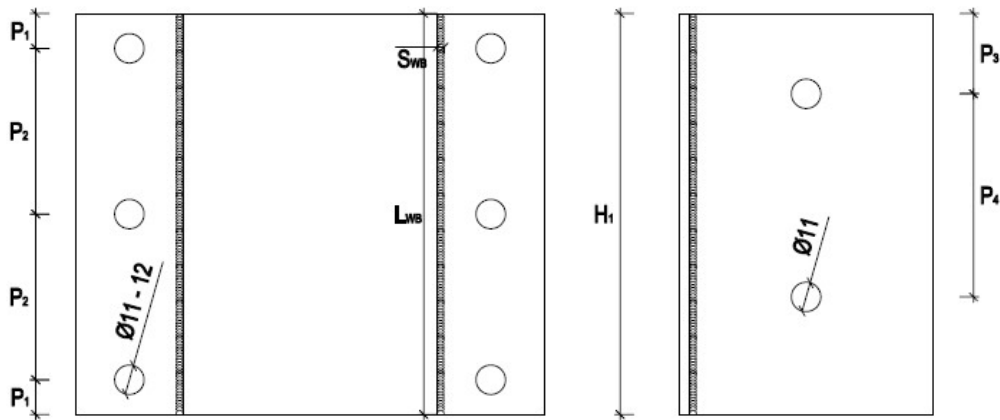
Product:

Typ FD50  
 Post base





<p>Rotho Blaas Srl - GmbH Via Dell'Adige 2/1 Eitschweg I-39040 Cortaccia - Kurtatsch (BZ) Tel. +39 0471 81 84 00 Fax. +39 0471 81 84 84 <a href="http://www.rothoblaas.com">www.rothoblaas.com</a> <a href="mailto:info@rothoblaas.com">info@rothoblaas.com</a></p>	Product:	Typ FD60 Post base



Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	S <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	L <sub>WB</sub>	S <sub>WB</sub>	L <sub>WH</sub>	S <sub>WH</sub>
M10_1	151	-	2	71	4	150	-	15	60	30	75	150	2.5	-	-
M10_2	175	-	2	91	4	150	-	15	60	30	75	150	2.5	-	-

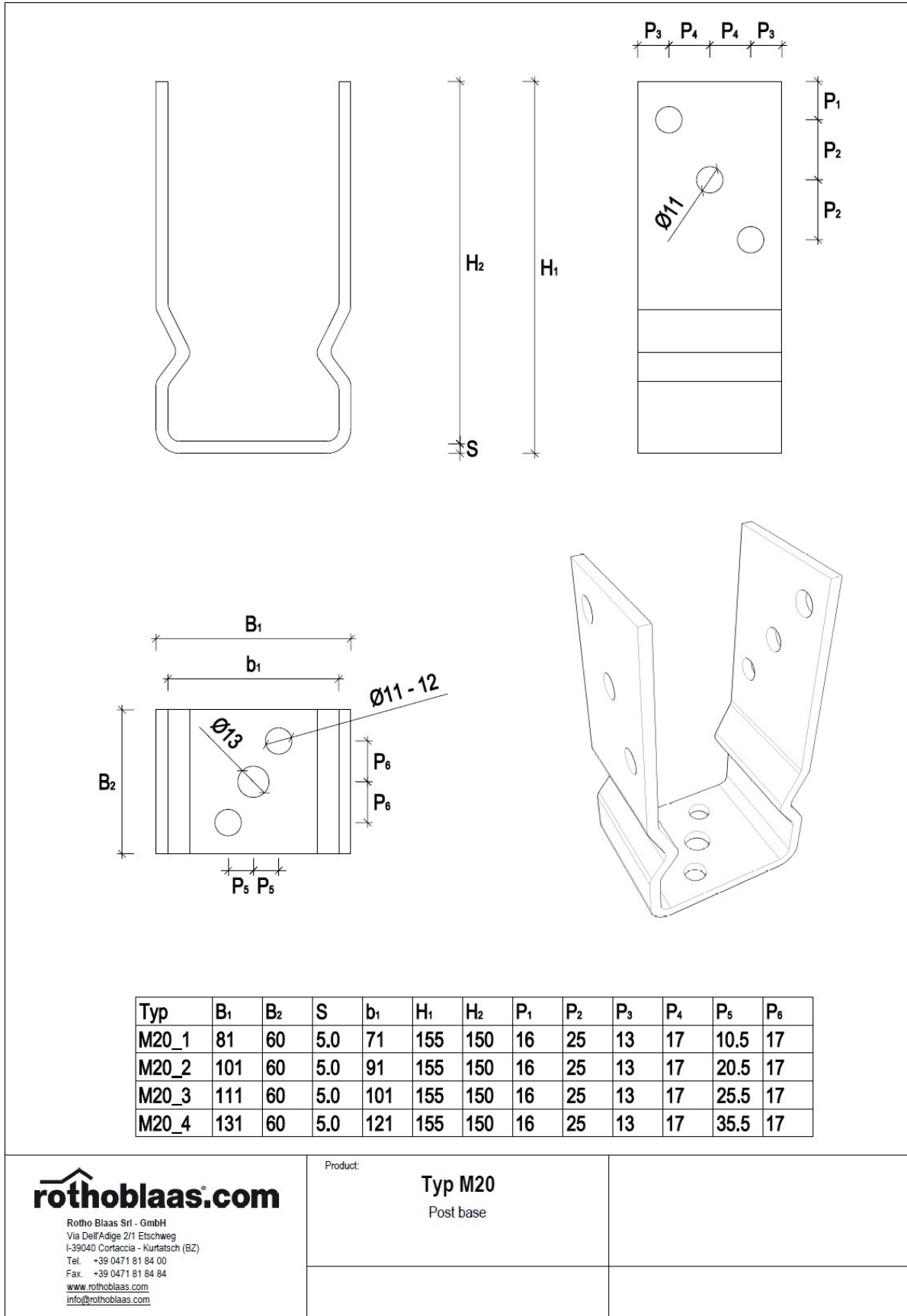
**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ M10**

Post base

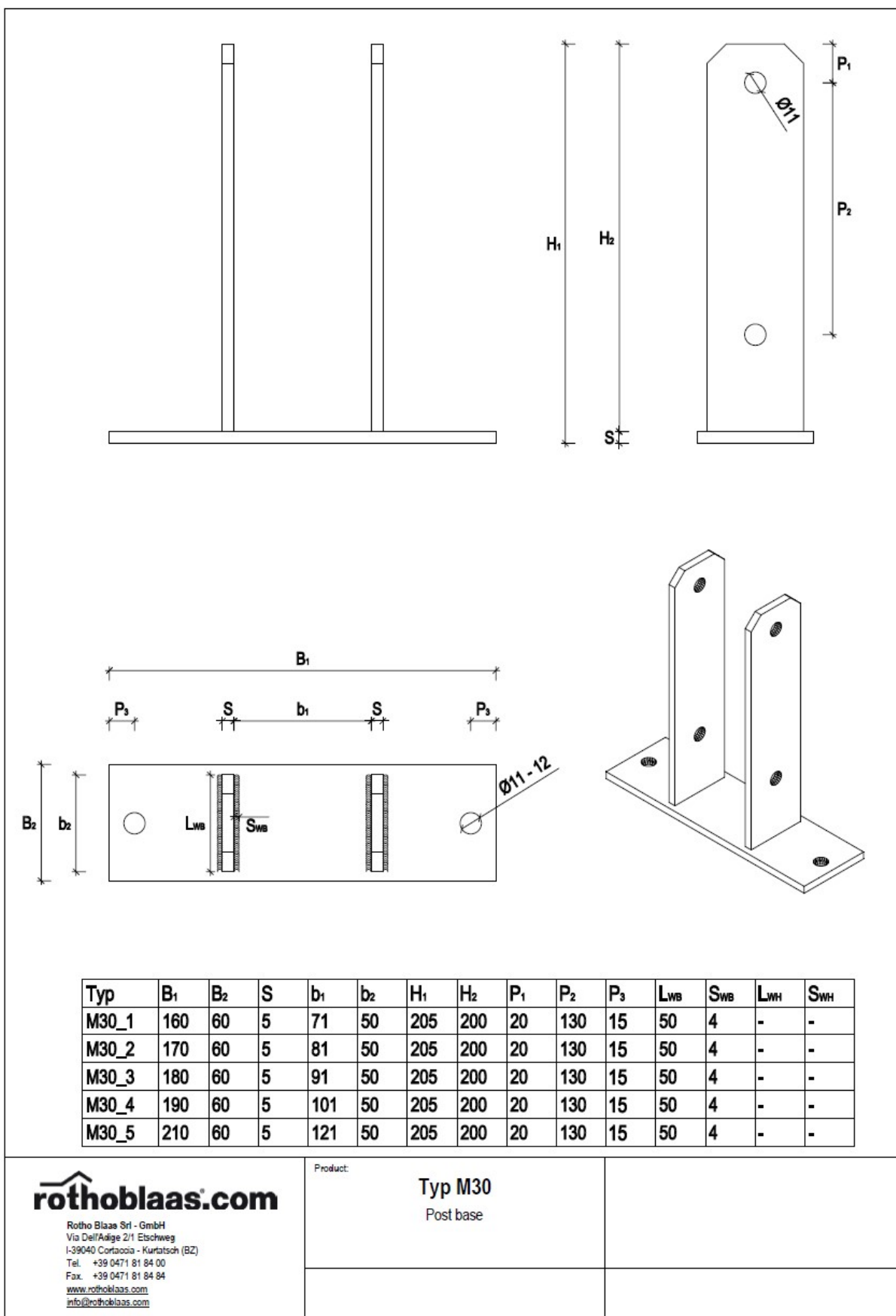


**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Corfaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ M20**  
 Post base



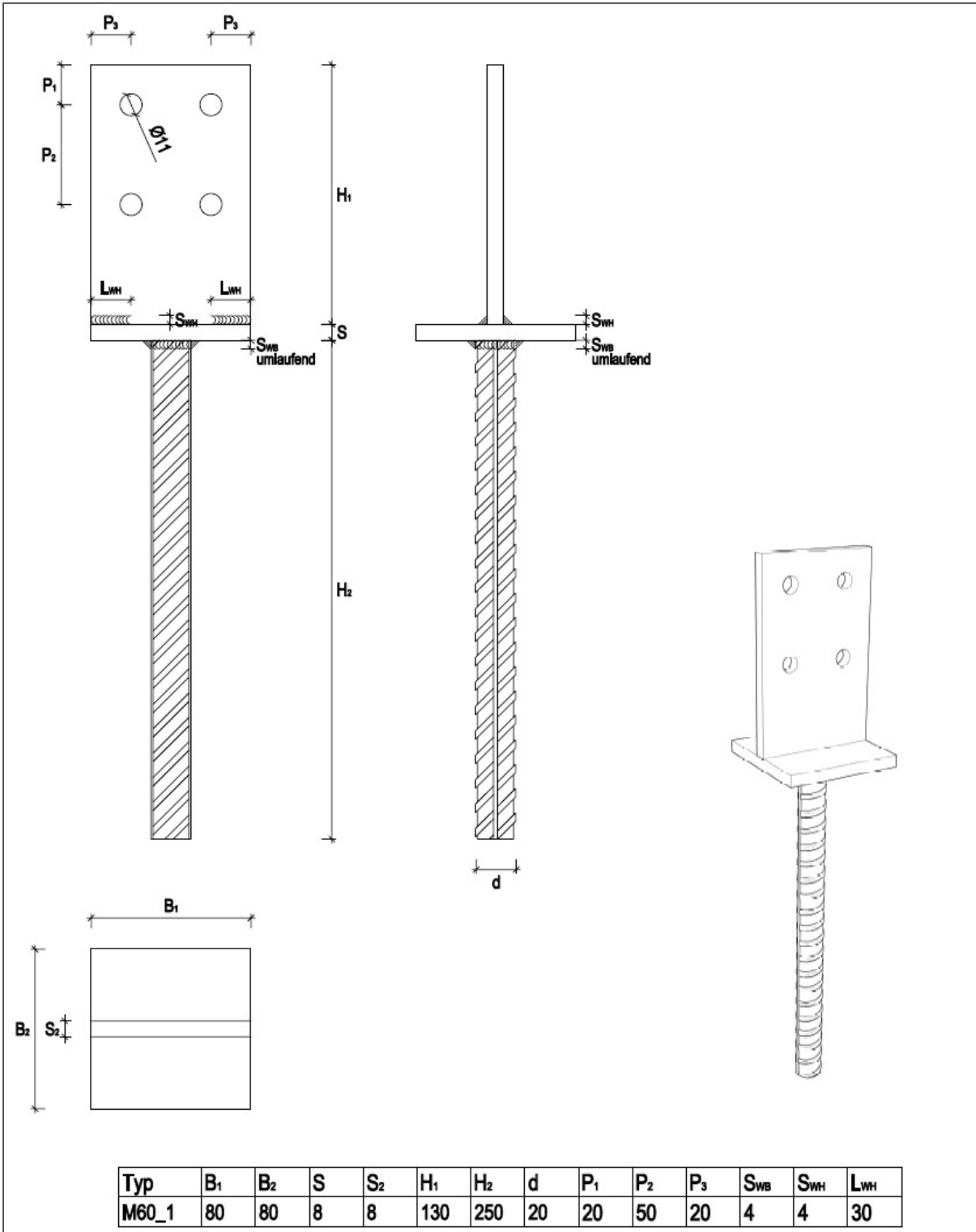
**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Alige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ M30  
 Post base



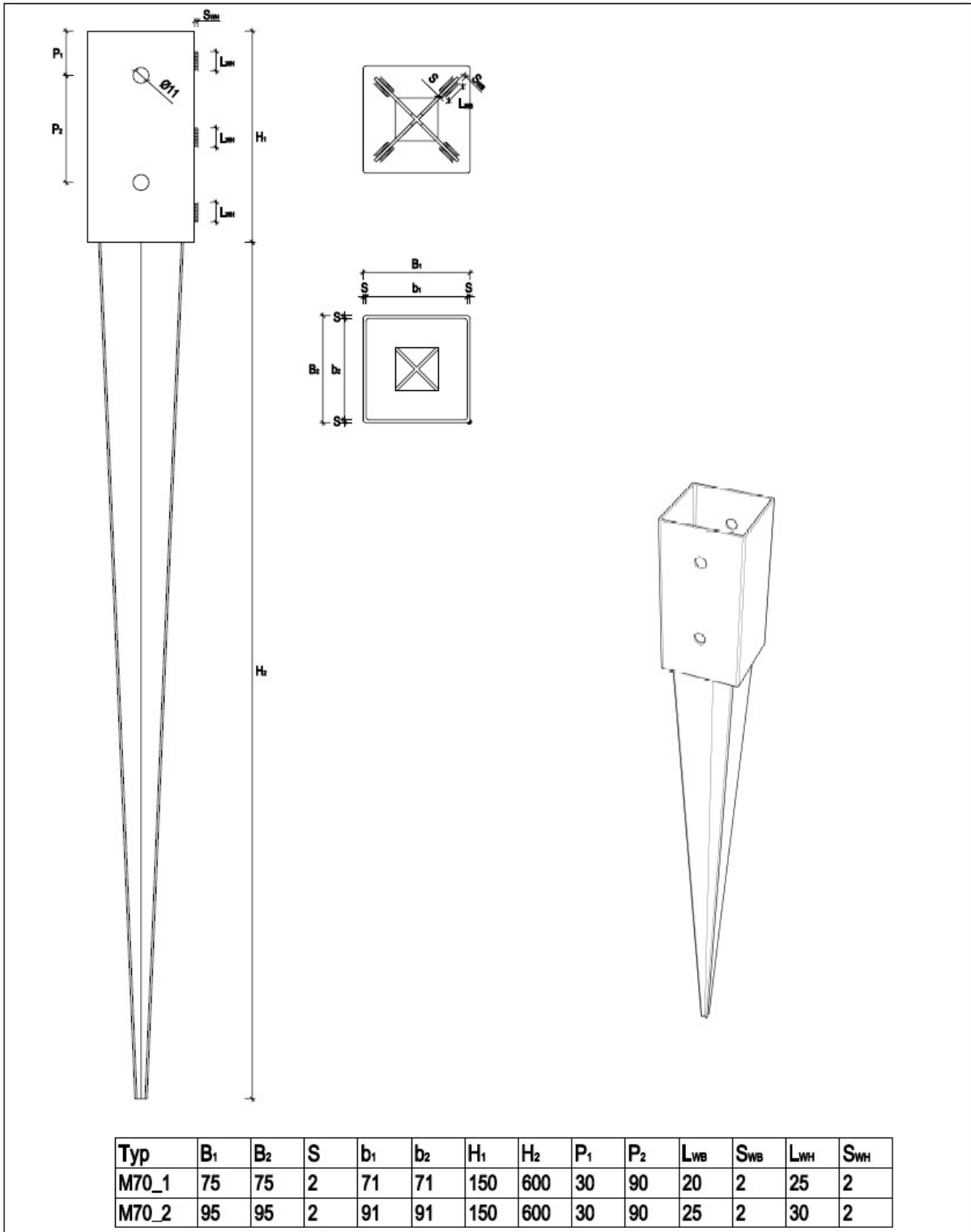


**rothoblaas.com**

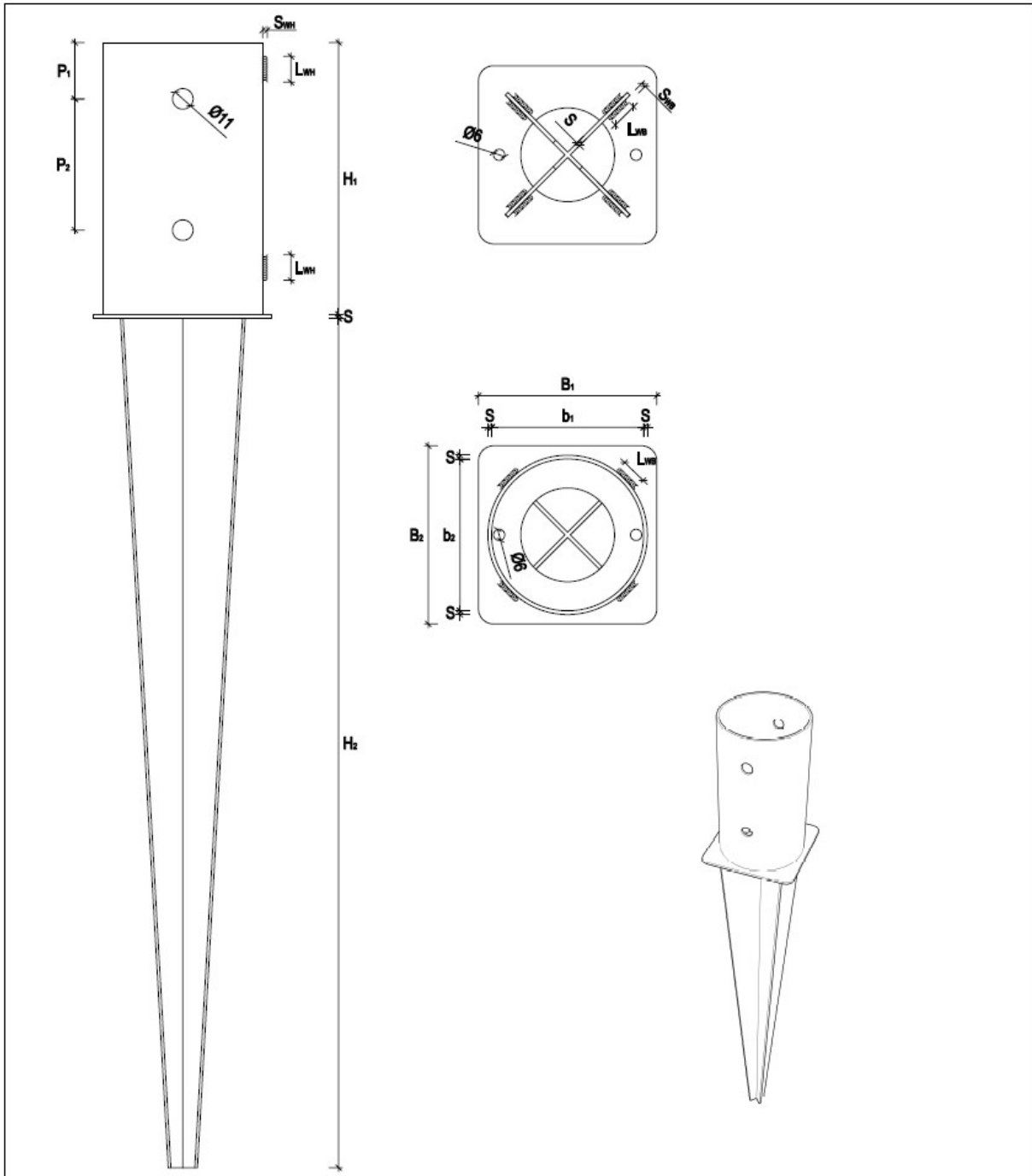
Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ M60  
 Post base



<p>Rotho Blaas Srl - GmbH Via Dell'Alge 2/1 Etschweg I-39040 Cortaccia - Kurtatsch (BZ) Tel. +39 0471 81 84 00 Fax. +39 0471 81 84 84 <a href="http://www.rothoblaas.com">www.rothoblaas.com</a> <a href="mailto:info@rothoblaas.com">info@rothoblaas.com</a></p>	Product:	Typ M70_1, M70_2



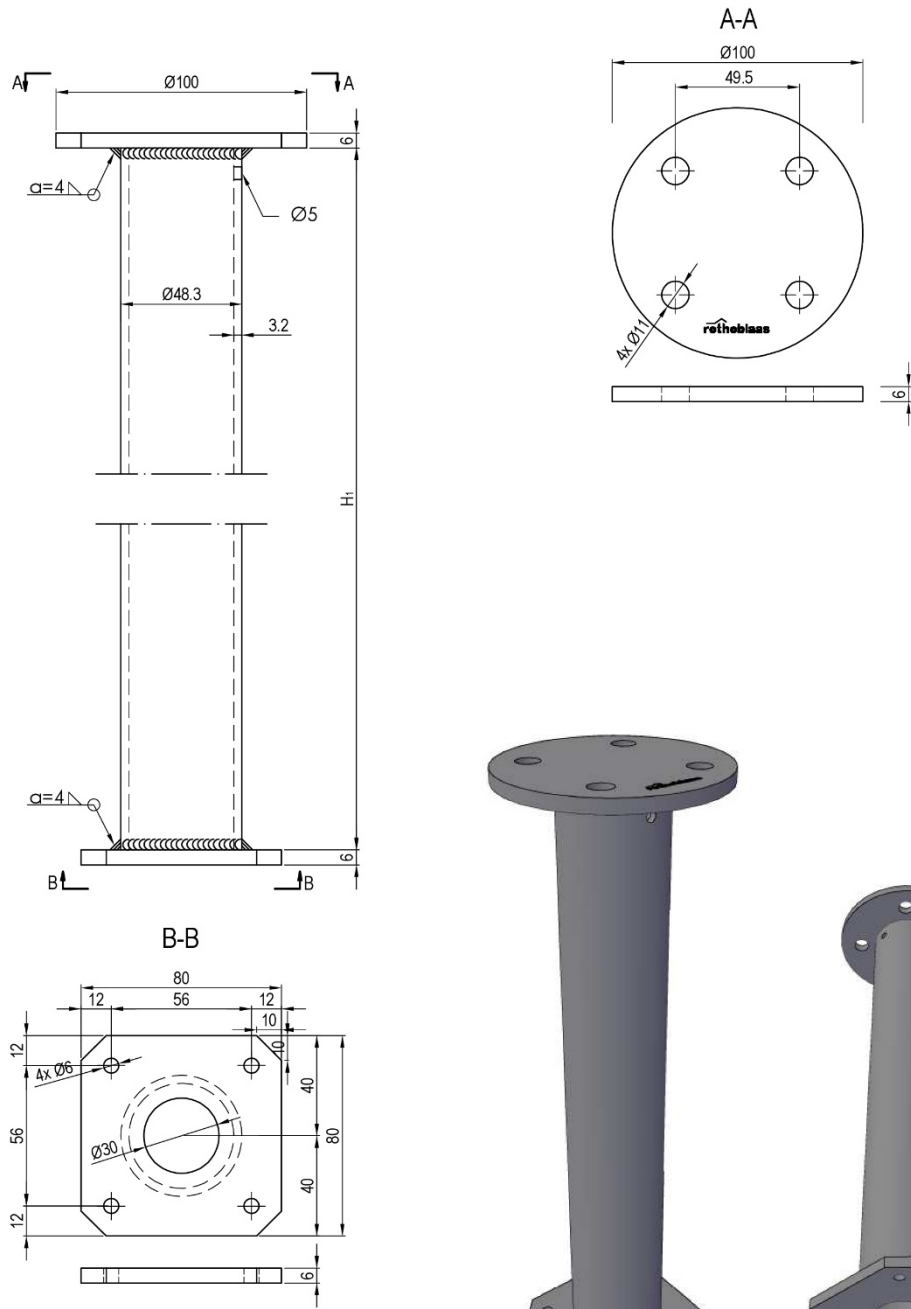
Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	P <sub>1</sub>	P <sub>2</sub>	L <sub>WB</sub>	S <sub>WB</sub>	L <sub>MH</sub>	S <sub>MH</sub>
M70_3	95	95	2	81	81	145	453	30	70	20	2.5	25	3
M70_4	110	110	2	101	101	145	453	30	70	30	2.5	35	3

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product: Typ M70\_3, M70\_4





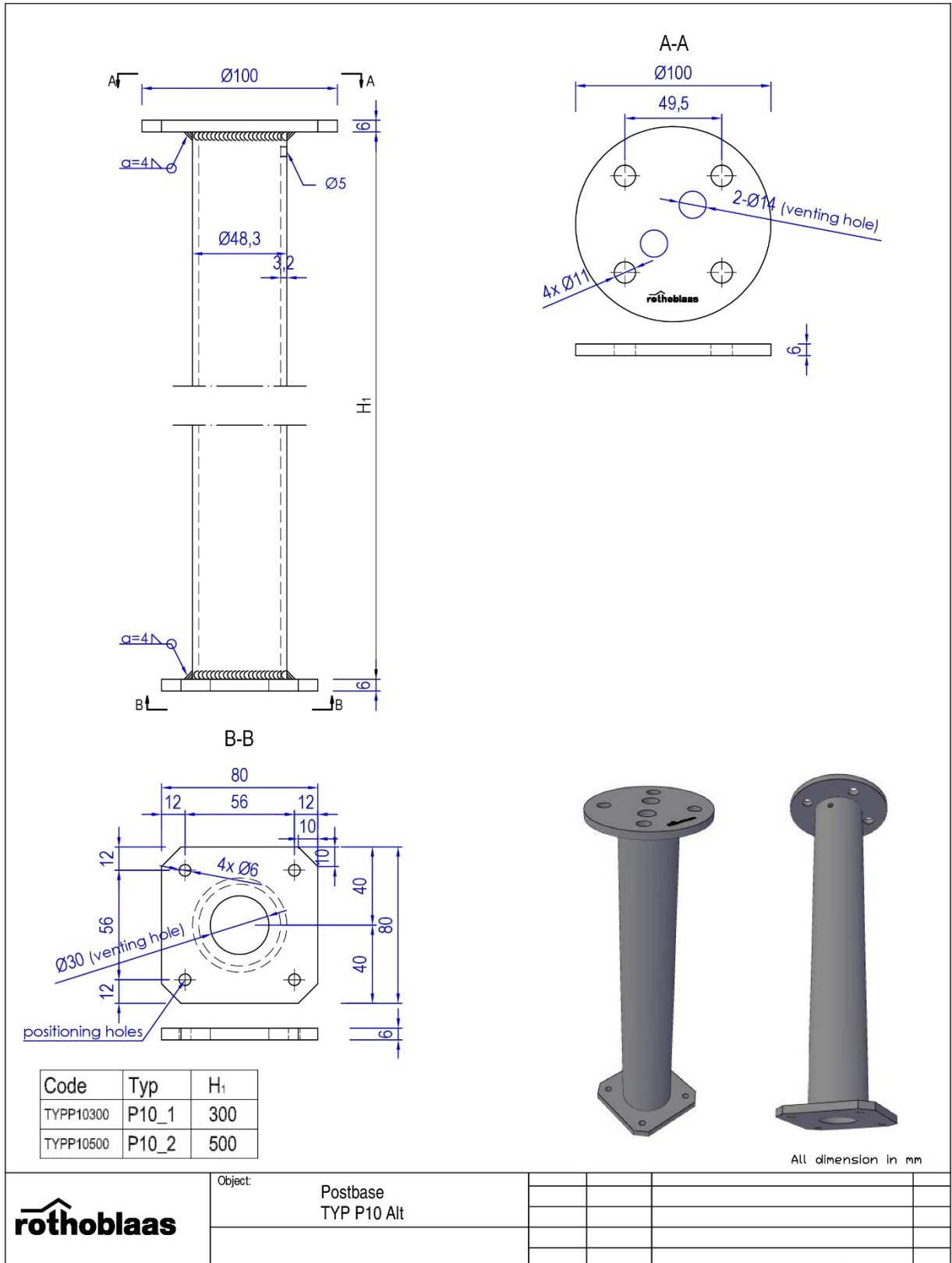
Code	Typ	H <sub>1</sub>
TYPP10300	P10_1	300
TYPP10500	P10_2	500

All dimension in mm

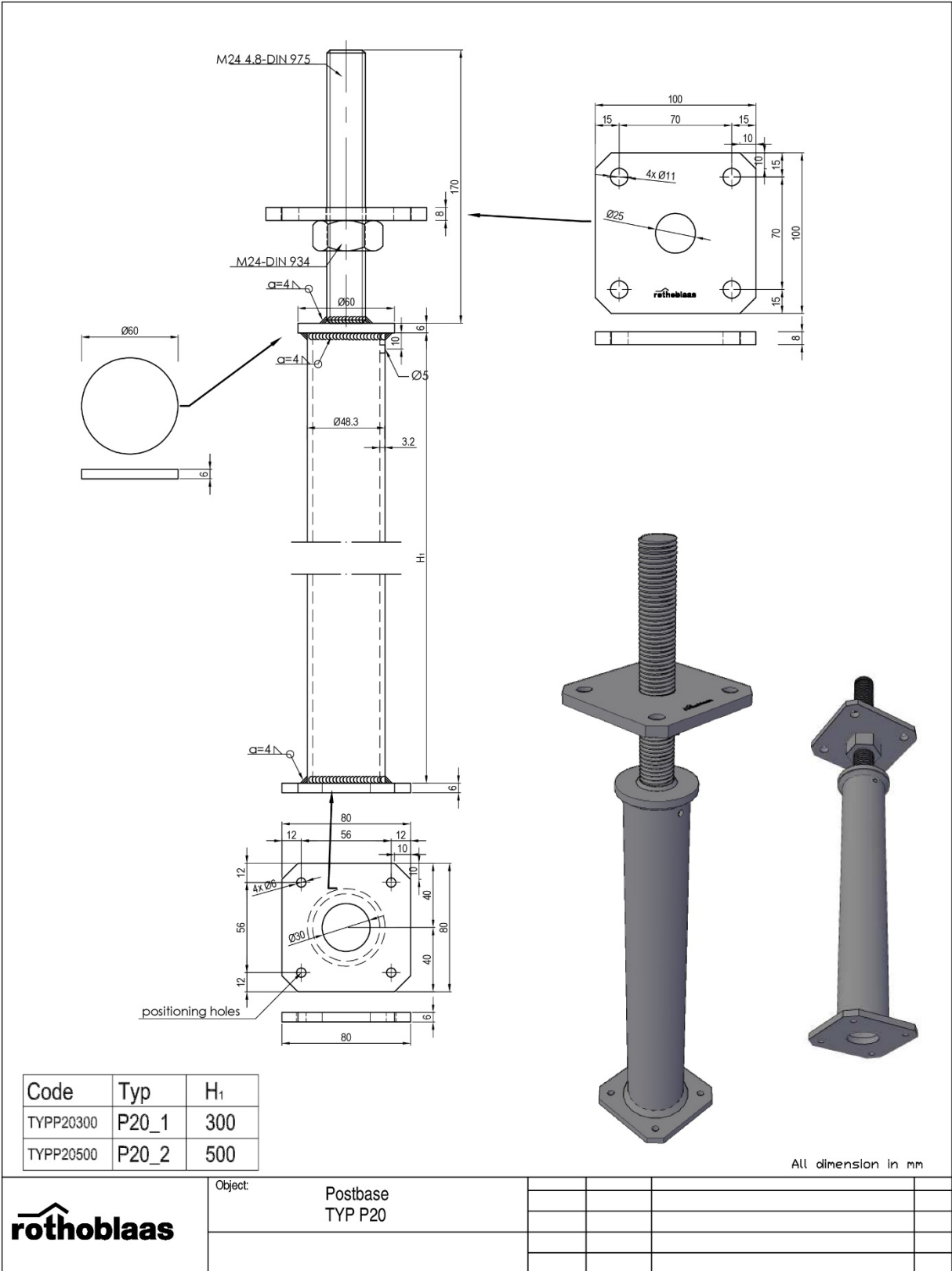
**rothoblaas**

Object:

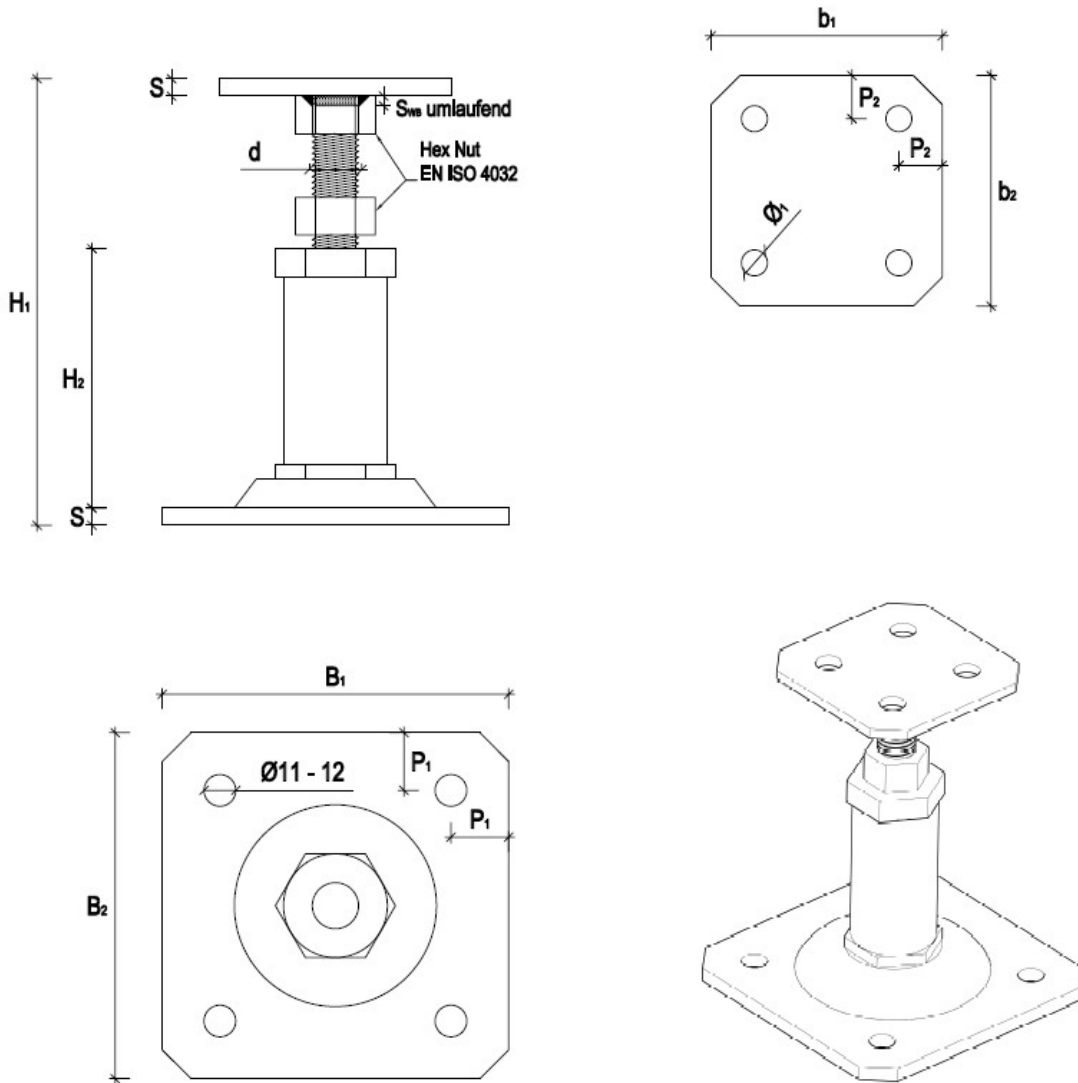
Postbase  
TYP P10

Post base type P10\_1 Alt and P10\_2 Alt



All dimension in mm



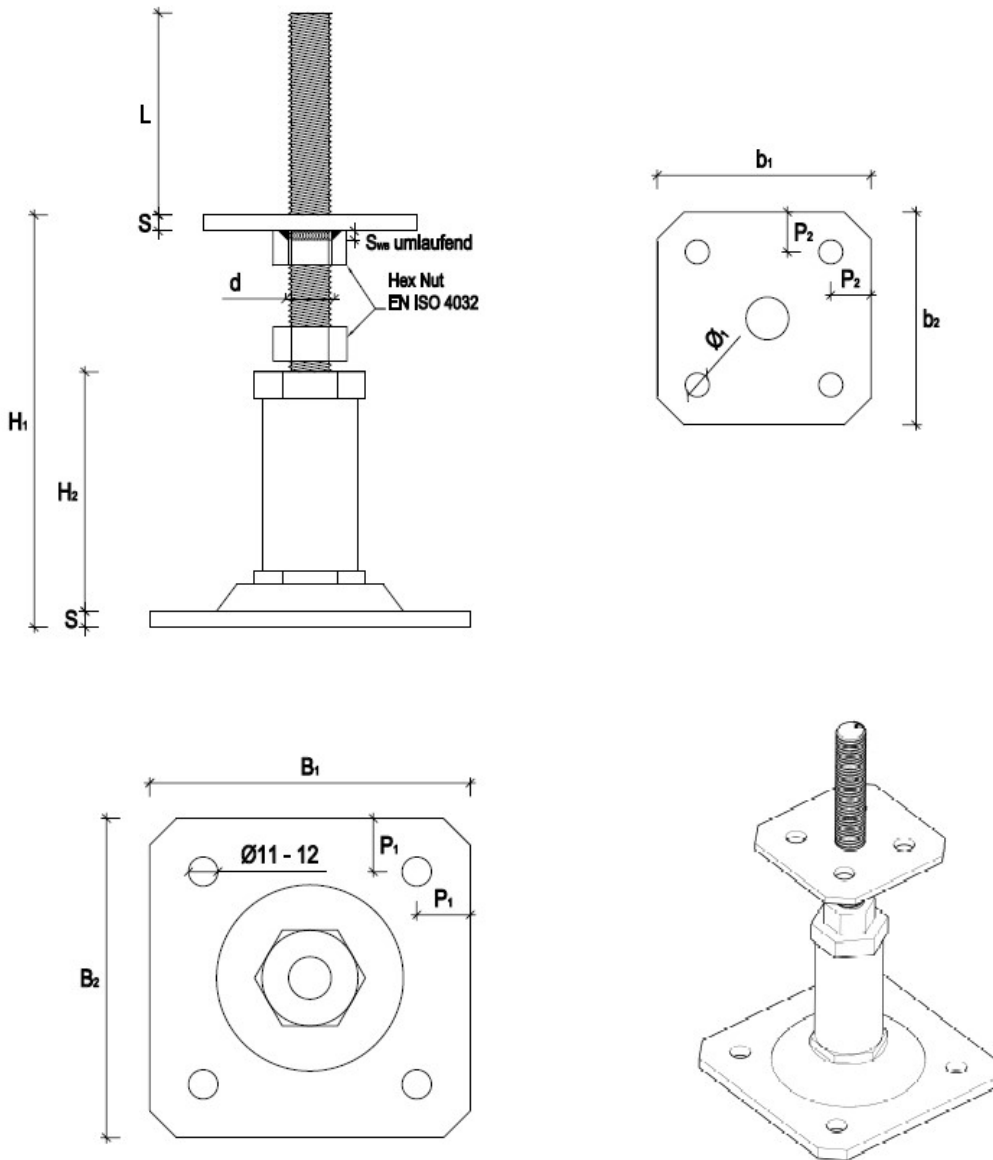
Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	d	P <sub>1</sub>	P <sub>2</sub>	Ø <sub>1</sub>	S <sub>WS</sub>
R10_1	120	120	6	80	80	130/165	90	16	20	15	9	4
R10_2	160	160	6	100	100	160/205	110	20	20	20	11	4
R10_3	200	200	8	140	140	190/250	130	24	20	20	11	4

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kuriatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ R10**  
 Adjustable Post base



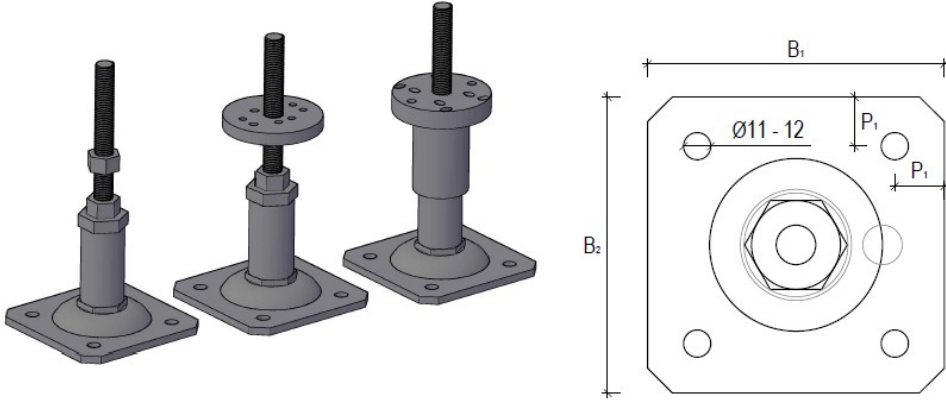
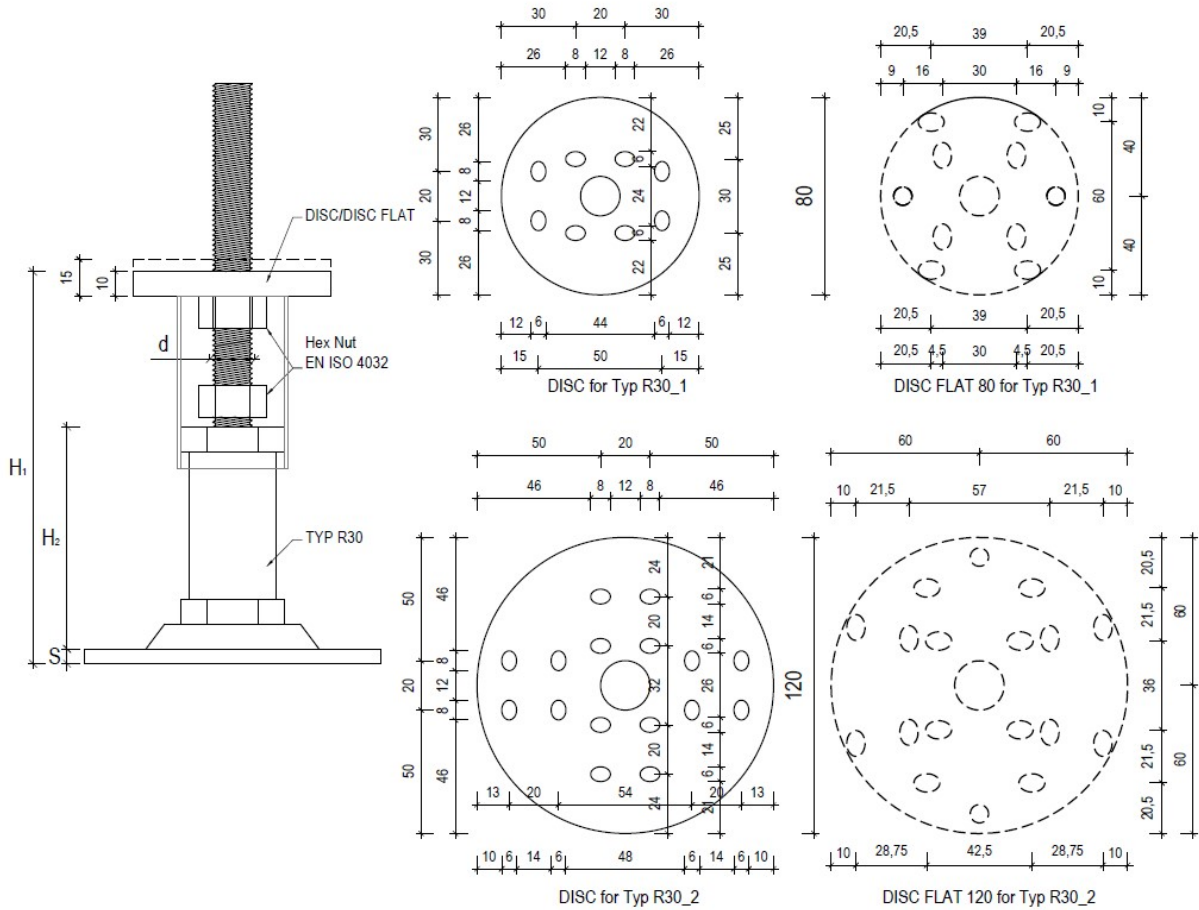
Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	d	P <sub>1</sub>	P <sub>2</sub>	Ø <sub>1</sub>	L	S <sub>swb</sub>
R20_1	120	120	6	80	80	130/165	90	16	20	15	9	80	4
R20_2	160	160	6	100	100	160/205	110	20	20	20	11	120	4
R20_3	200	200	8	140	140	190/250	130	24	20	20	11	150	4

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ R20**  
 Adjustable Post base



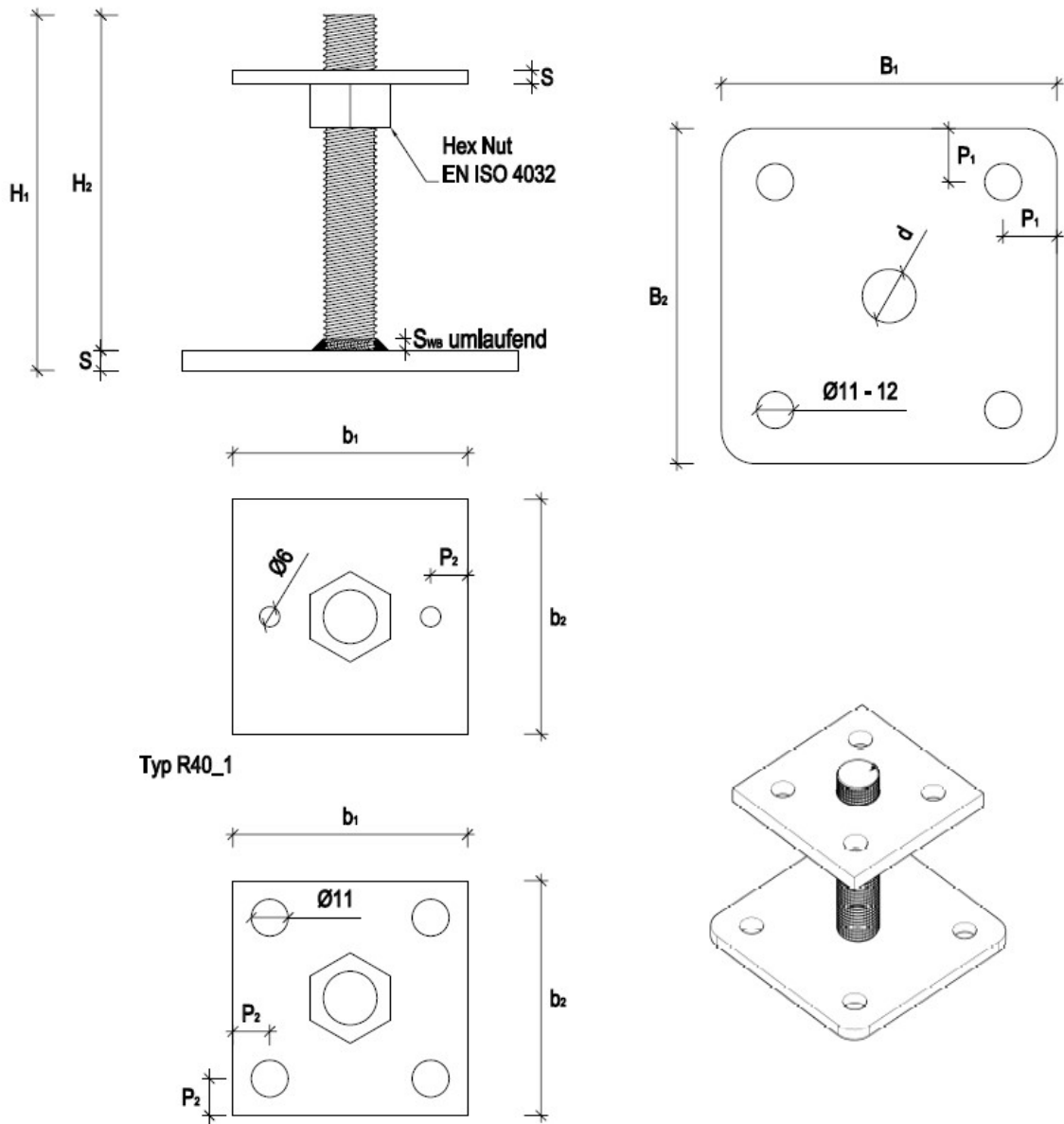
Typ	B <sub>1</sub>	B <sub>2</sub>	S	H <sub>1</sub>	H <sub>2</sub>	d	P <sub>1</sub>	S <sub>WB</sub>
R30_1	120	120	6	135/170	90	16	20	4
R30_2	160	160	6	165/210	110	20	20	4

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Eitschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ R30**  
**with Disc or Disc Flat**  
 Adjustable Post base



Typ R40\_1

Typ R40\_2 - Typ R40\_3 - typ R40\_4

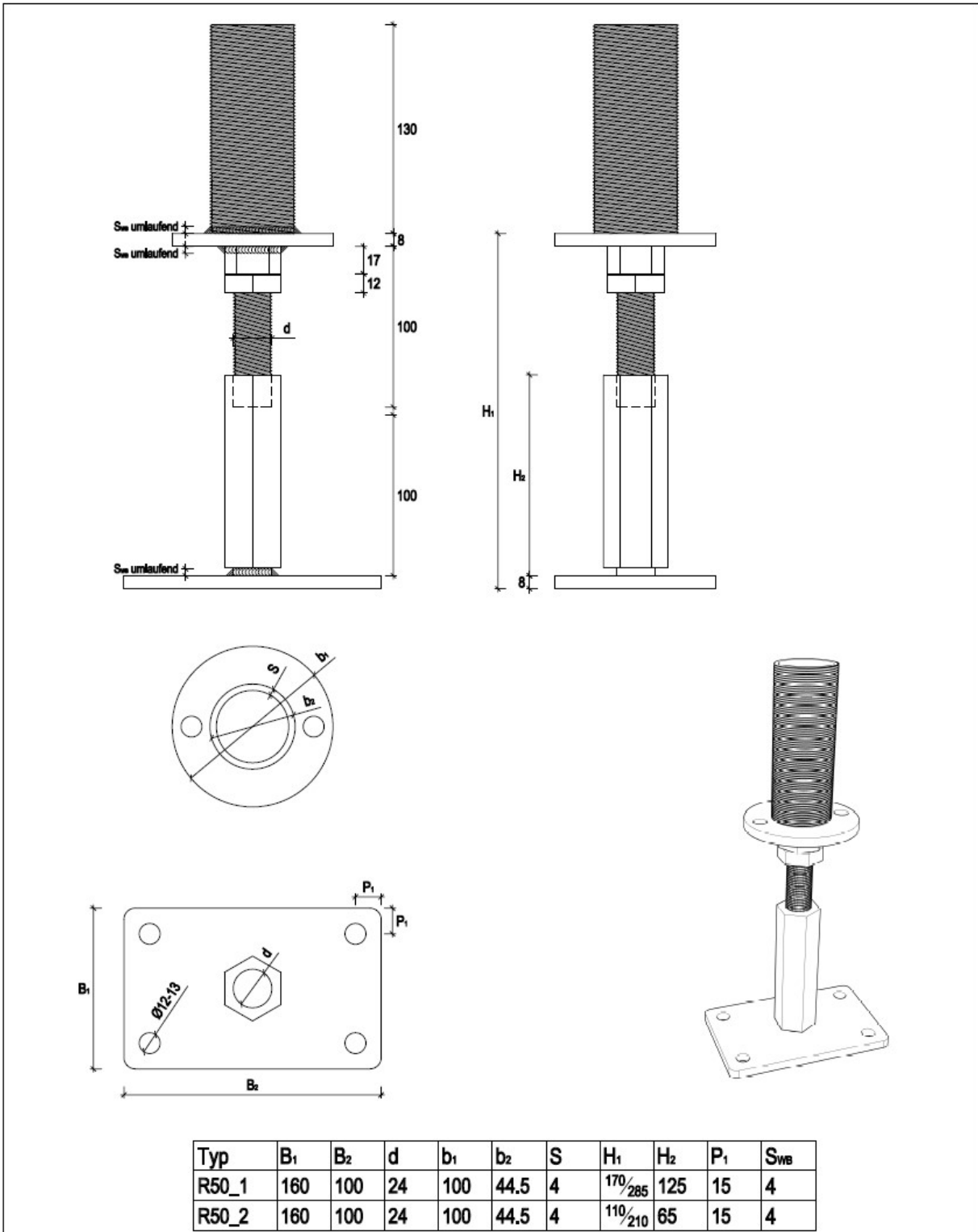
Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	d	P <sub>1</sub>	P <sub>2</sub>	S <sub>WS</sub>
R40_1	100	100	6	70	70	105	99	16	15	10	4
R40_2	100	100	6	80	80	105	99	20	15	15	4
R40_3	160	100	6	100	100	156	150	20	20	20	4
R40_4	160	100	6	100	100	256	250	24	20	20	4

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

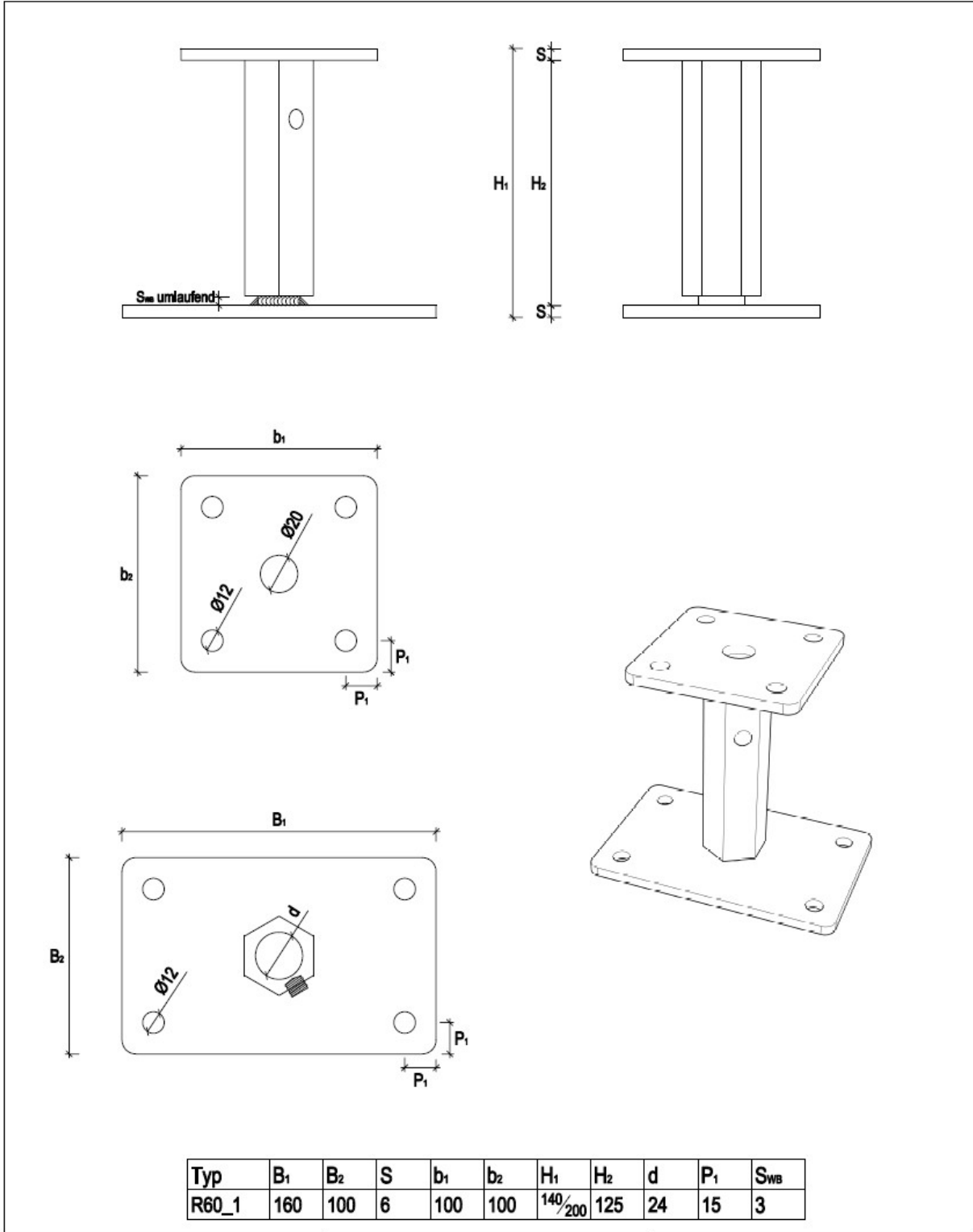
Product:


Typ R40  
 Post base

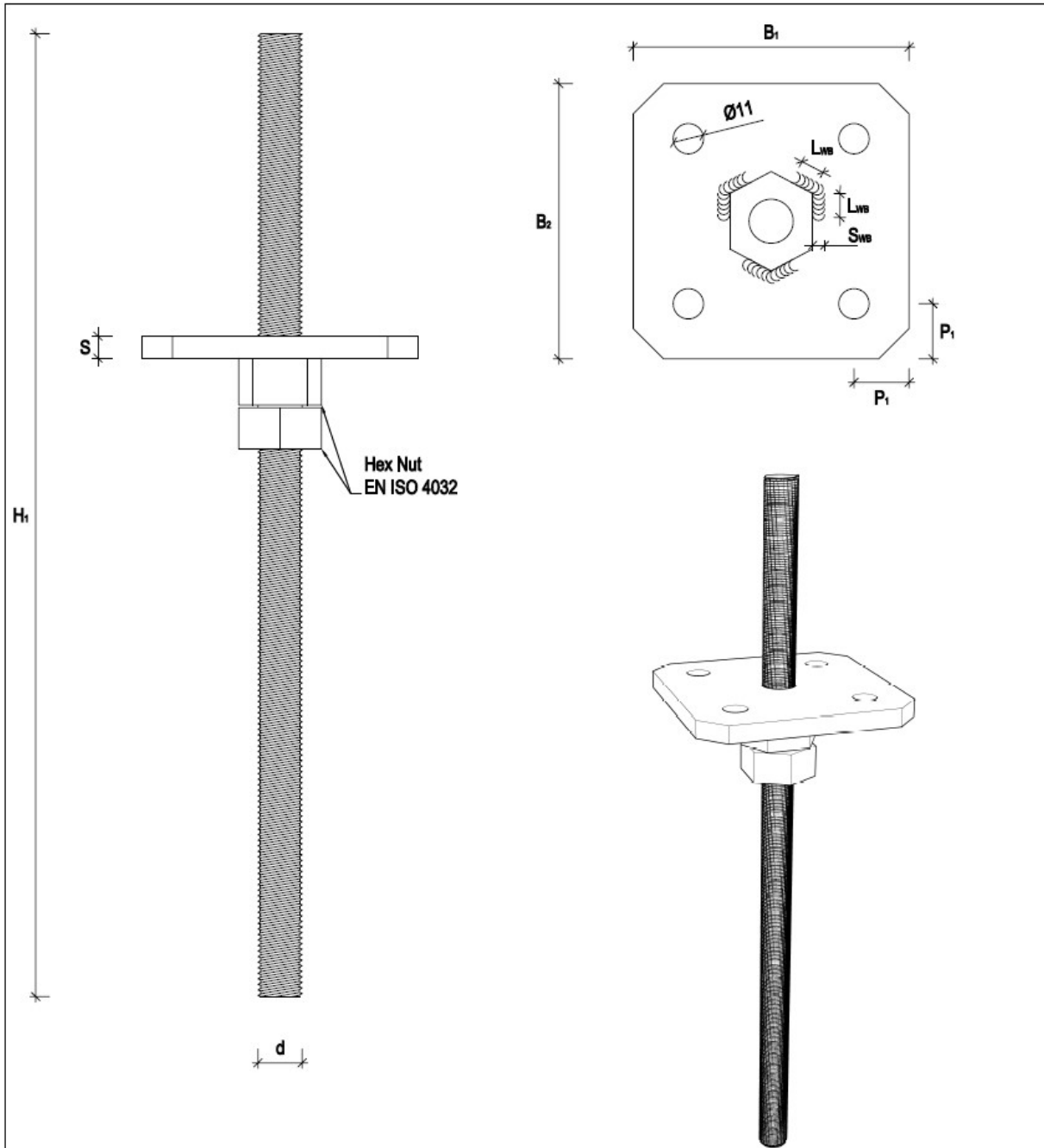


<p>Rotho Blaas Srl - GmbH Via Dell'Adige 2/1 Etschweg I-39040 Cortaccia - Kurtatsch (BZ) Tel. +39 0471 81 84 00 Fax. +39 0471 81 84 84 <a href="http://www.rothoblaas.com">www.rothoblaas.com</a> <a href="mailto:info@rothoblaas.com">info@rothoblaas.com</a></p>	Product:	Typ R50 Post base





 <p>Rotho Blaas Srl - GmbH Via Dell'Adige 2/1 Eitschweg I-39040 Cortaccia - Kurtatsch (BZ) Tel. +39 0471 81 84 00 Fax. +39 0471 81 84 84 <a href="http://www.rothoblaas.com">www.rothoblaas.com</a> <a href="mailto:info@rothoblaas.com">info@rothoblaas.com</a></p>	Product:	Typ R60 Post base



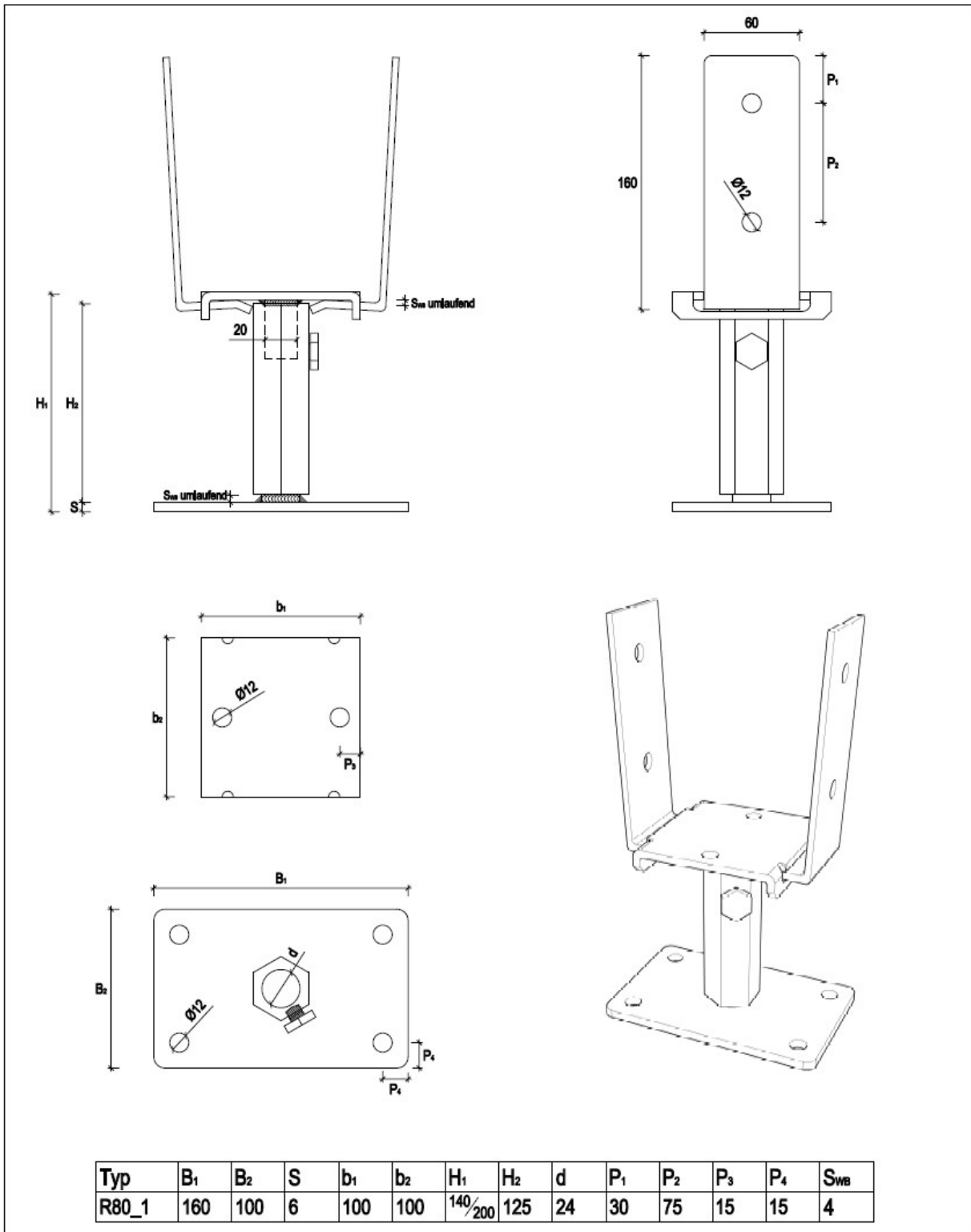
Typ	B <sub>1</sub>	B <sub>2</sub>	S	H <sub>1</sub>	d	P <sub>1</sub>	S <sub>WB</sub>	L <sub>WB</sub>
R70_1	100	100	8	350	20	20	4	5
R70_2	140	140	8	450	24	20	4	8
R70_3	100	100	8	350	16	20	4	5

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ R70  
 Post base

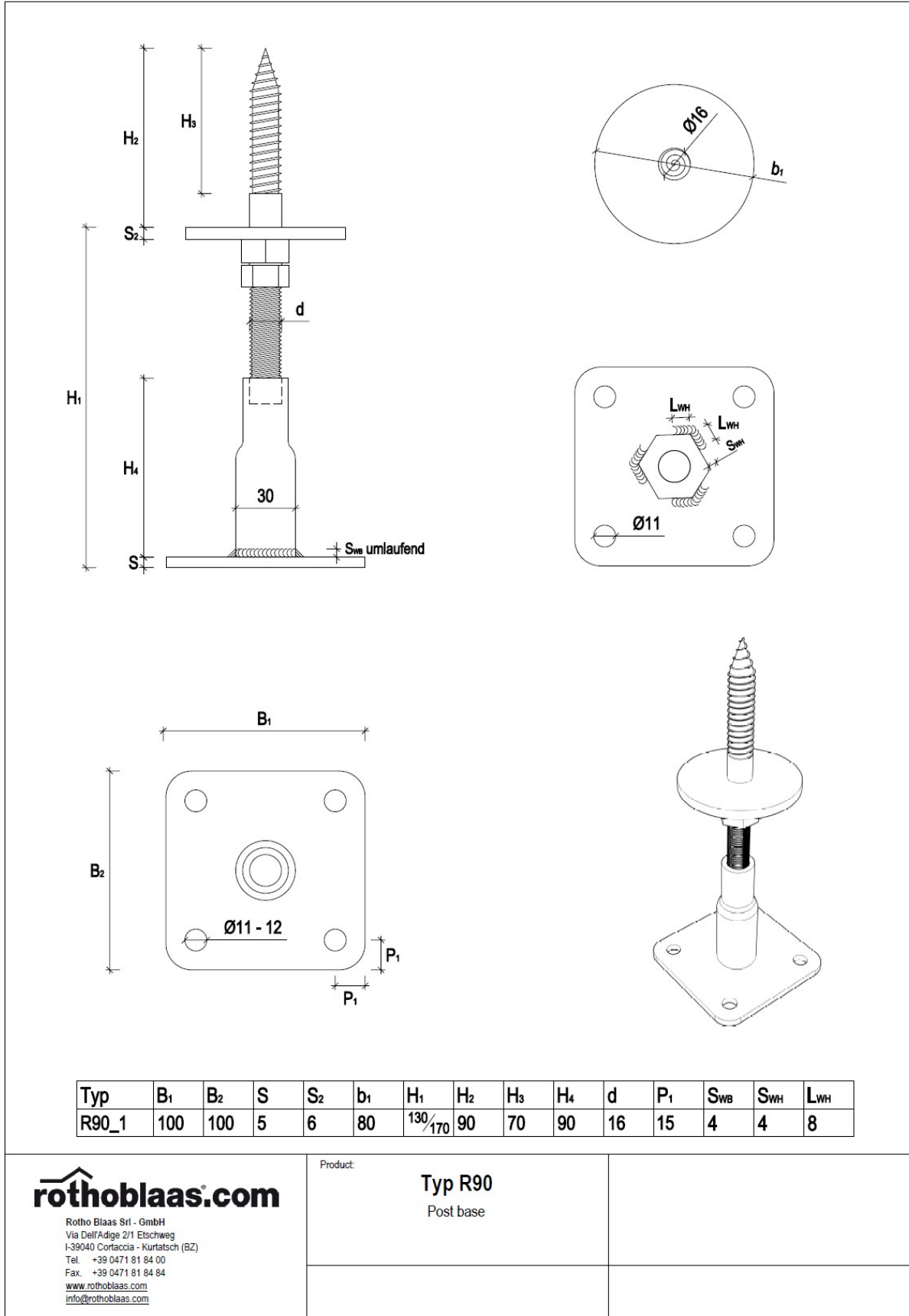


**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ R80  
 Post base

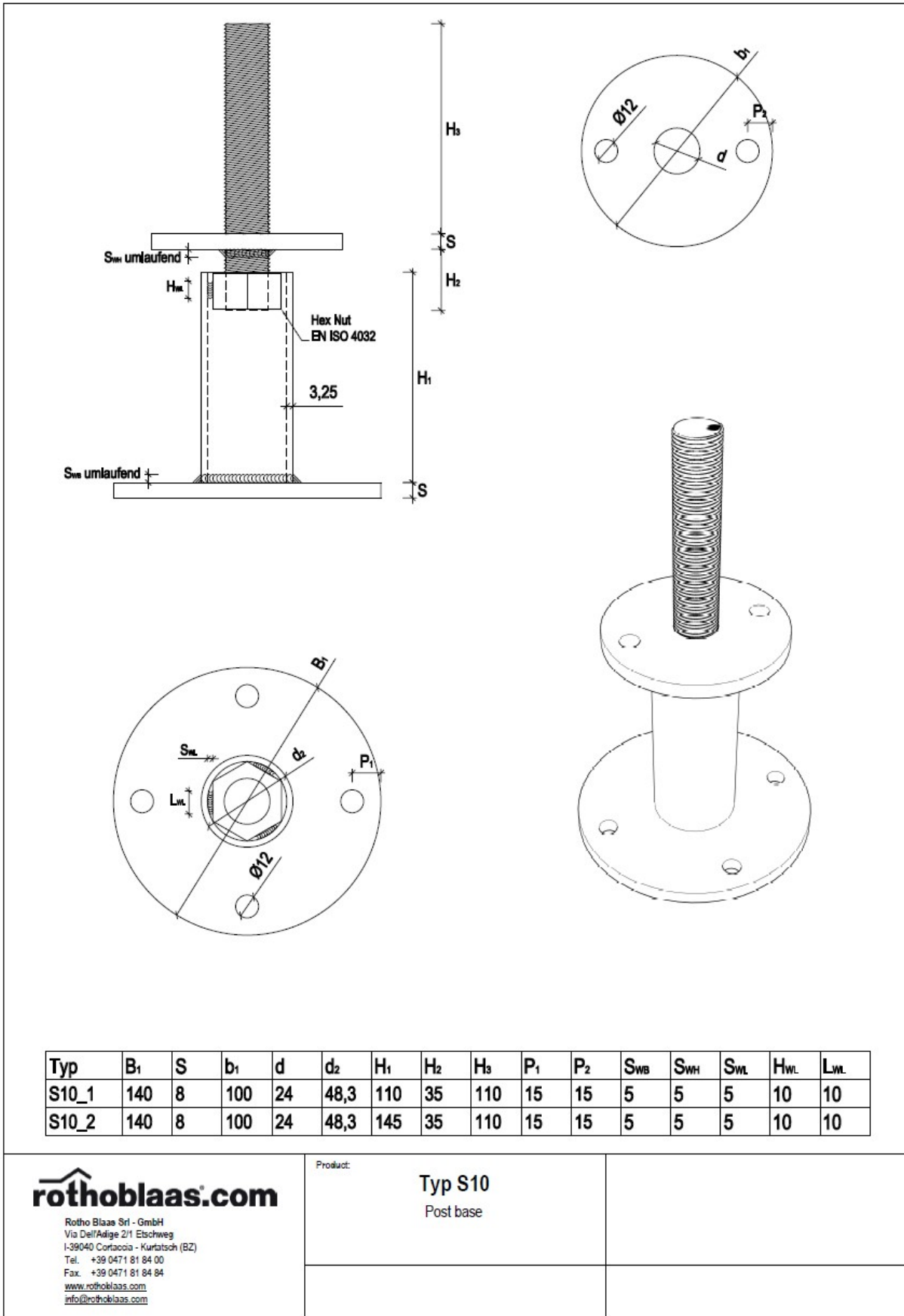


**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ R90**  
 Post base

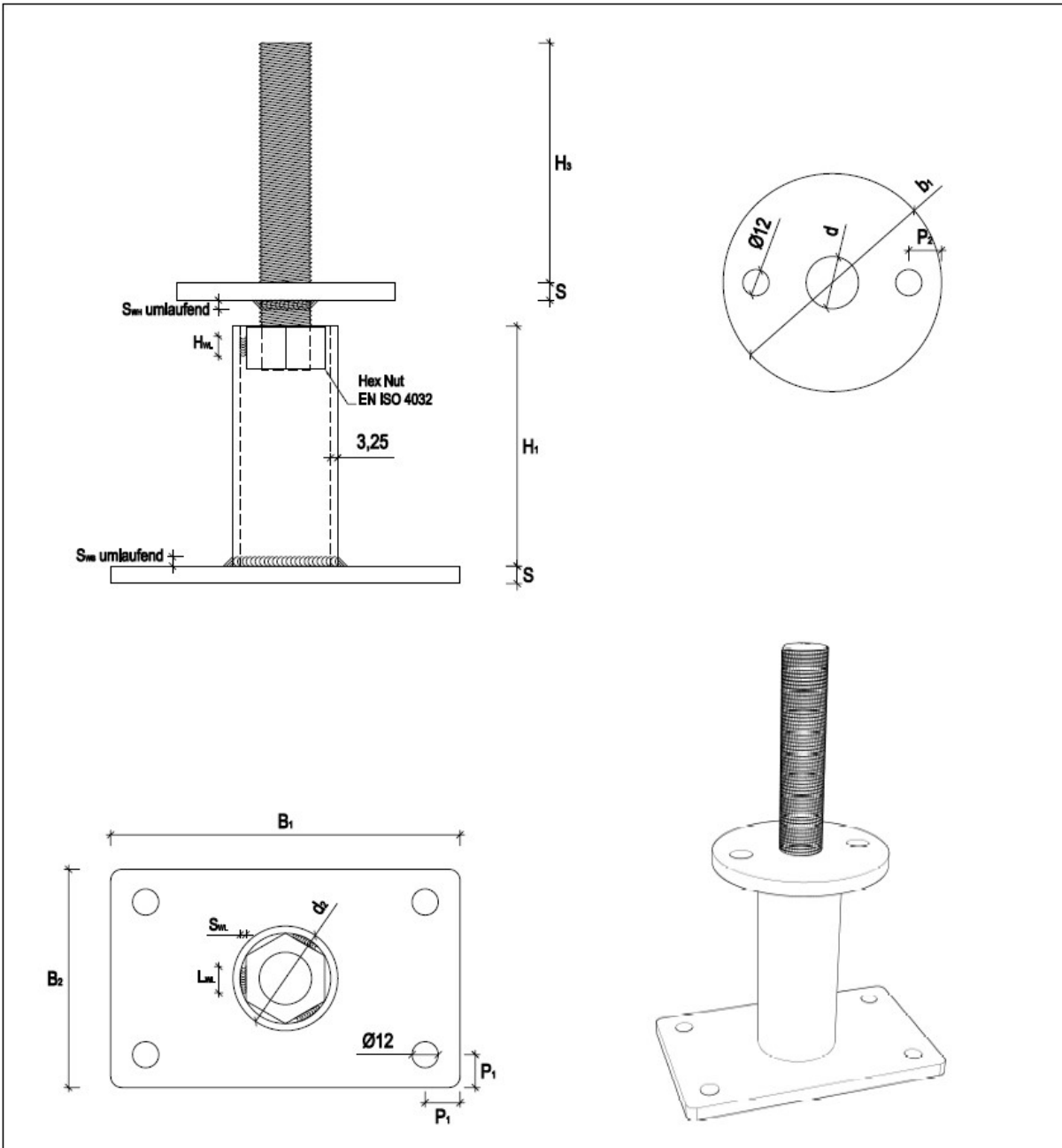


**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ S10  
 Post base



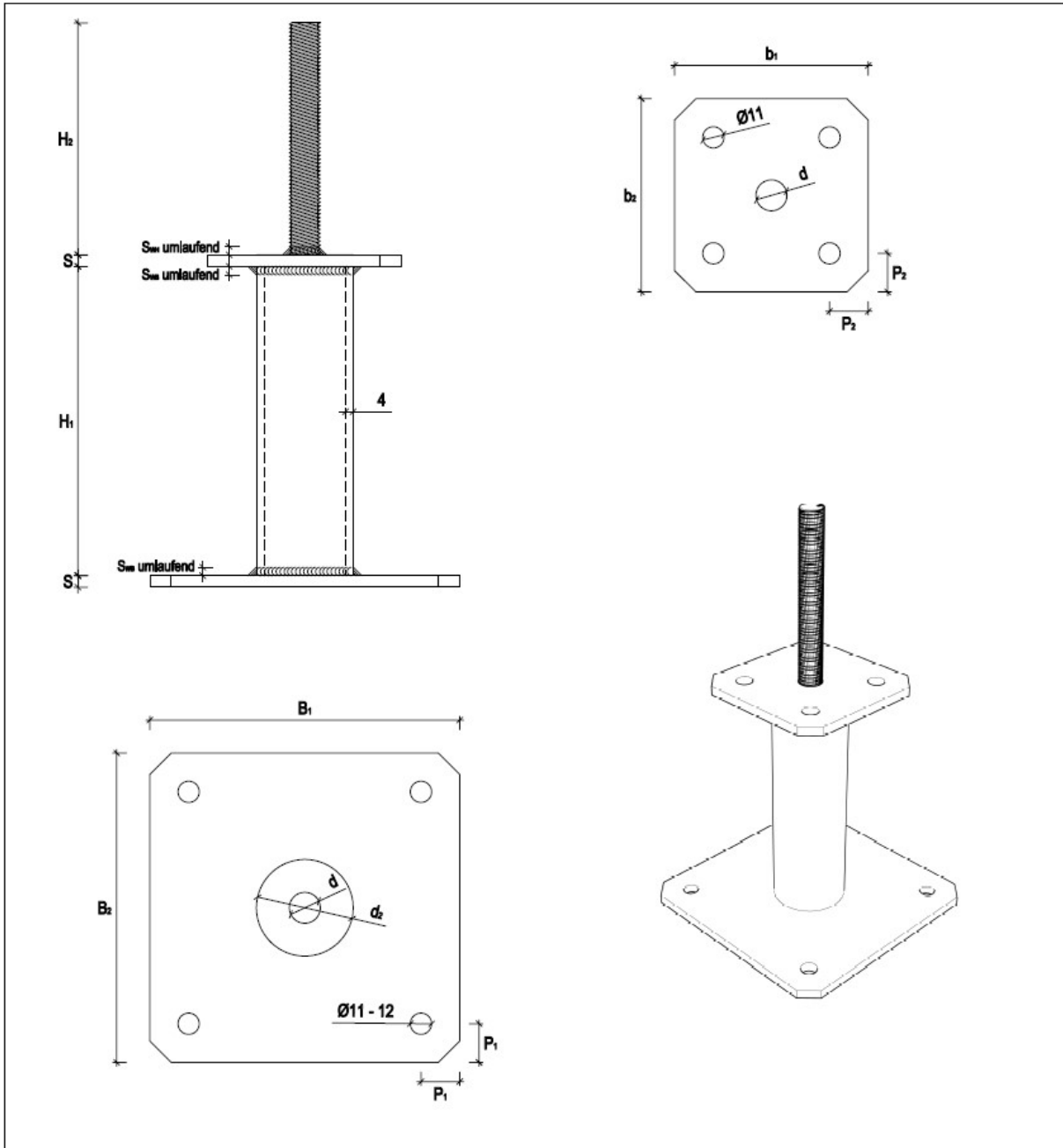
Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	d	d <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	P <sub>1</sub>	P <sub>2</sub>	S <sub>WB</sub>	S <sub>WH</sub>	S <sub>WL</sub>	H <sub>WL</sub>	L <sub>WL</sub>
S20_1	160	100	8	100	24	48.3	110	35	110	15	15	5	5	5	10	10
S20_2	160	100	8	100	24	48.3	145	35	110	15	15	5	5	5	10	10

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ S20  
 Post base



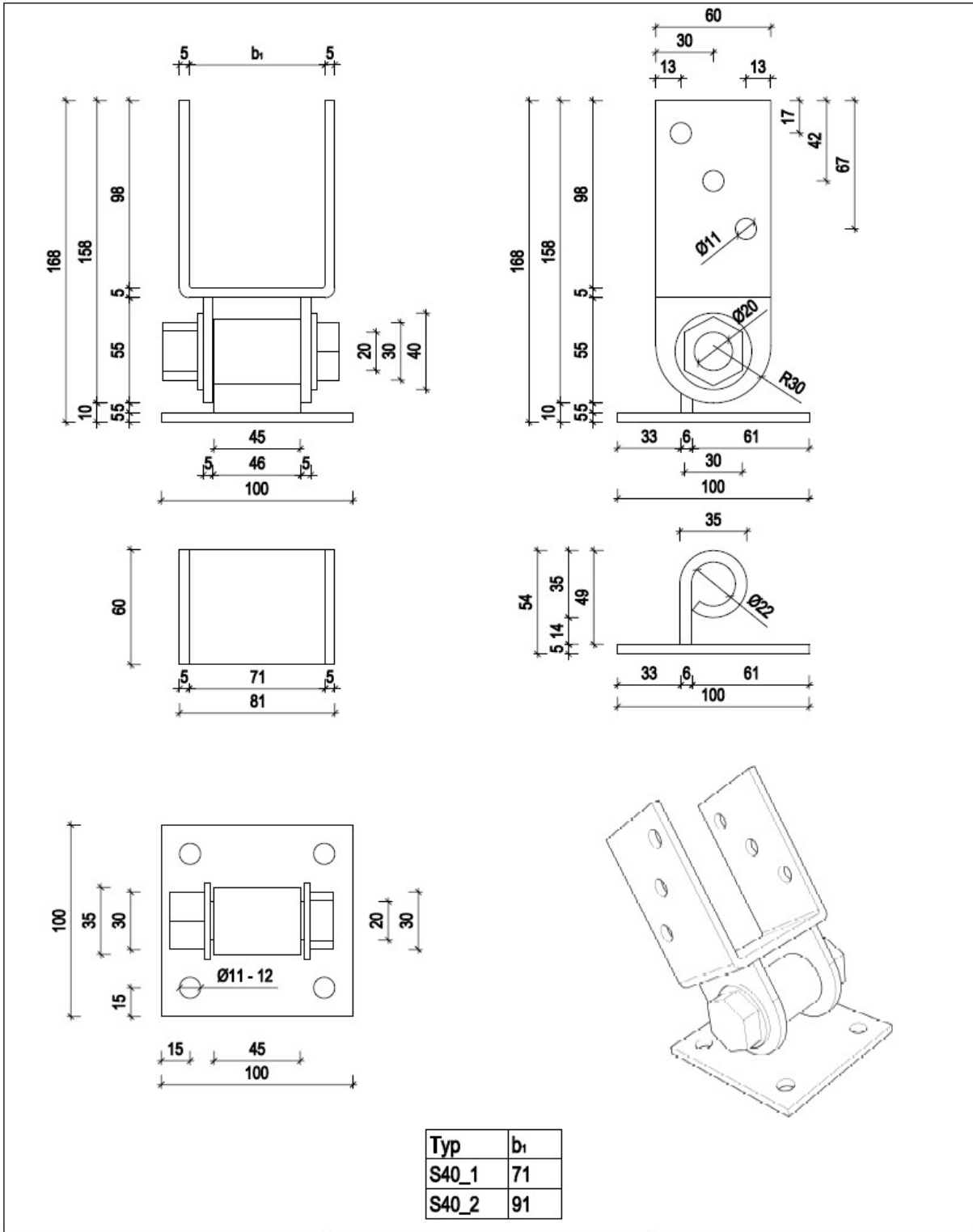
Typ	$B_1$	$B_2$	$S$	$b_1$	$b_2$	$H_1$	$H_2$	$d$	$d_2$	$P_1$	$P_2$	$S_{sw}$	$S_{wh}$
S30_1	160	160	6	100	100	160	120	16	50	20	20	5	5
S30_2	200	200	8	140	140	160	150	20	80	20	20	5	5
S30_3	160	160	6	100	100	120	120	16	50	20	20	5	5
S30_4	200	200	8	140	140	160	120	20	80	20	20	5	5

**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ S30**  
 Post base



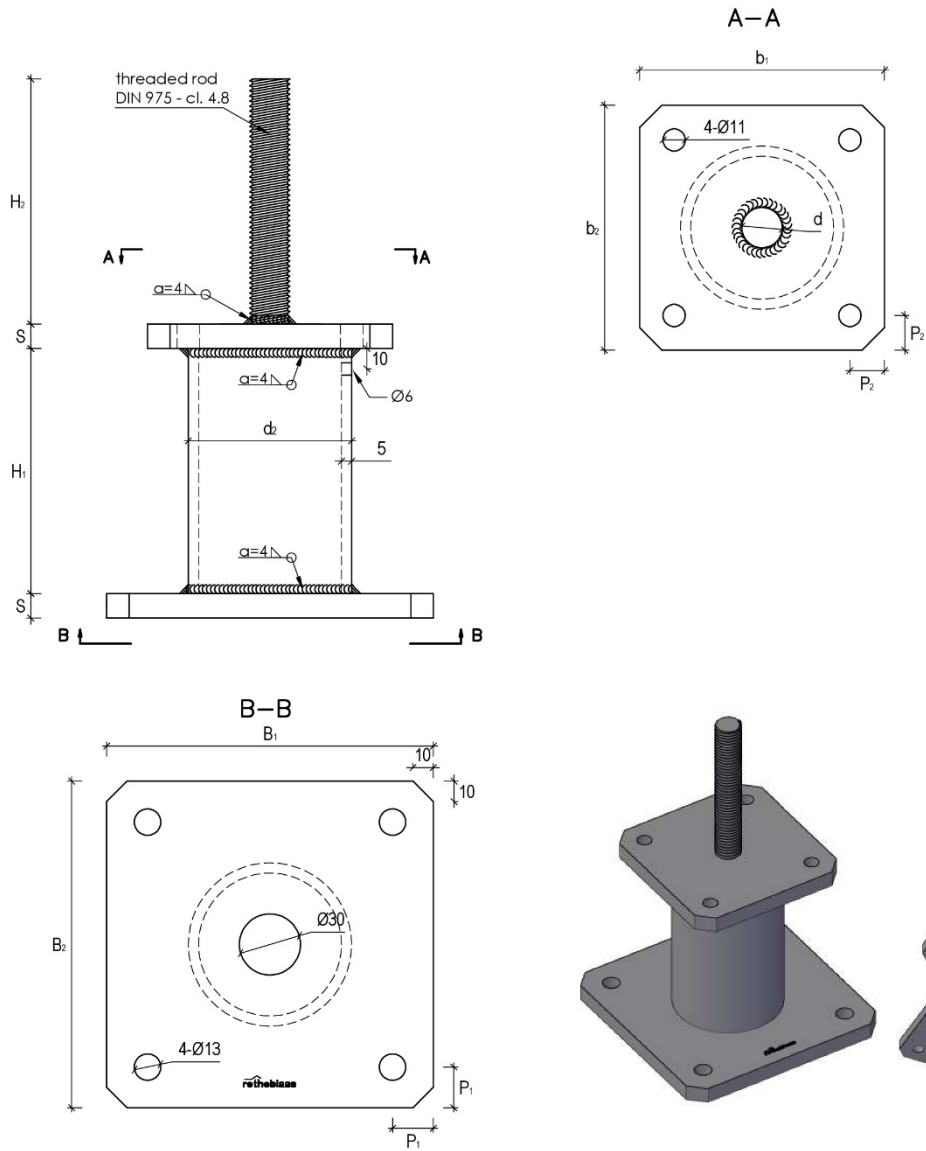
**rothoblaas.com**

Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ S40  
 Post base



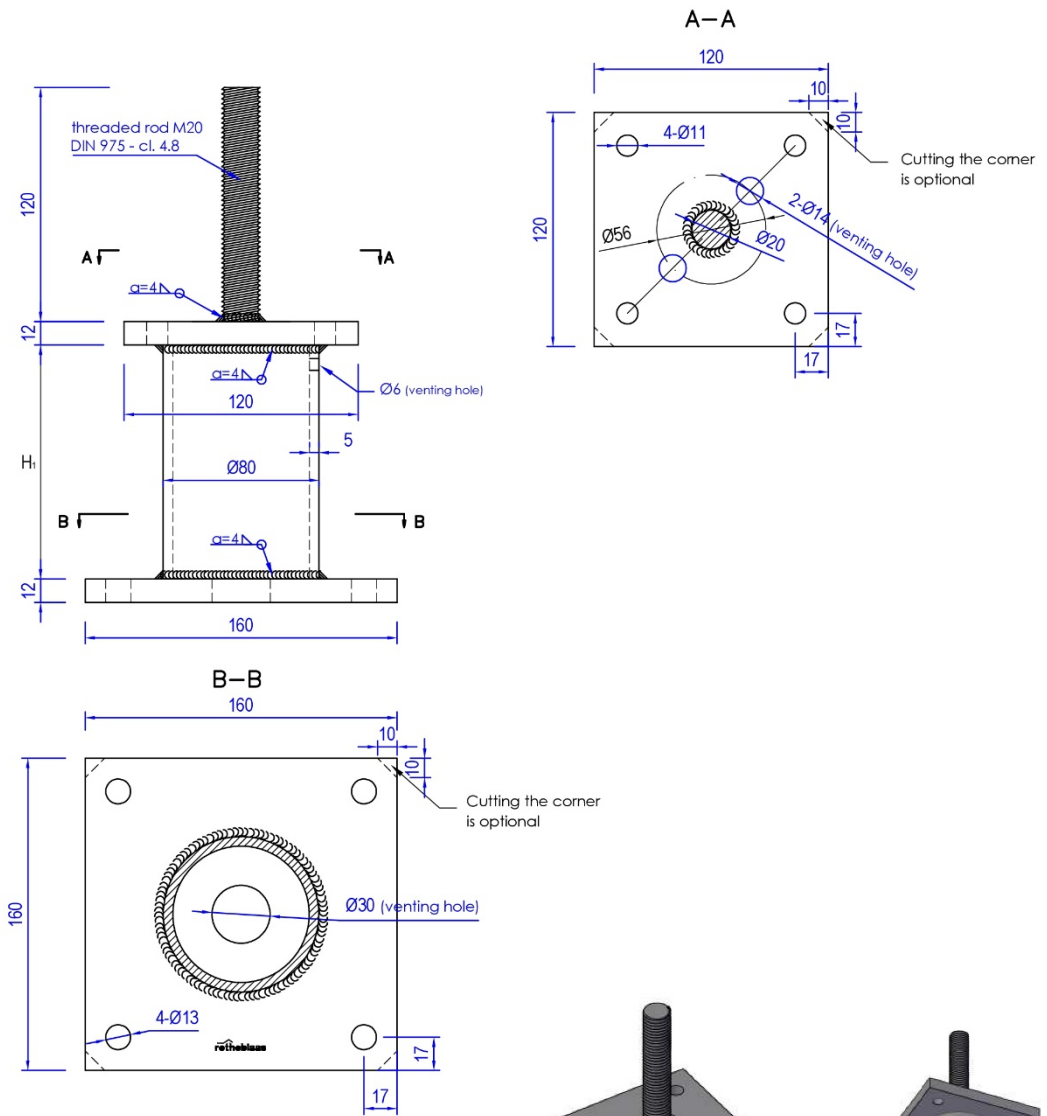


Code	Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	d	d <sub>2</sub>	P <sub>1</sub>	P <sub>2</sub>
TYP501212	S50_1	160	160	12	120	120	120	120	M20	Ø80	17	17
TYP501218	S50_2	160	160	12	120	120	180	120	M20	Ø80	17	17
TYP501618	S50_3	200	200	14/15/16	160	160	180	150	M24	Ø100	20	20
TYP501624	S50_4	200	200	14/15/16	160	160	240	150	M24	Ø100	20	20

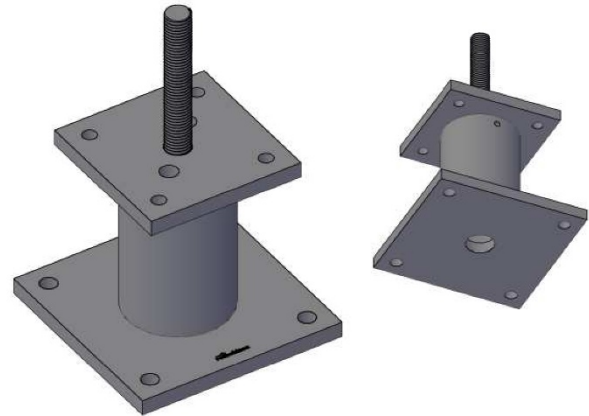
All dimension in mm



Object	Postbase				
	TYP S50				



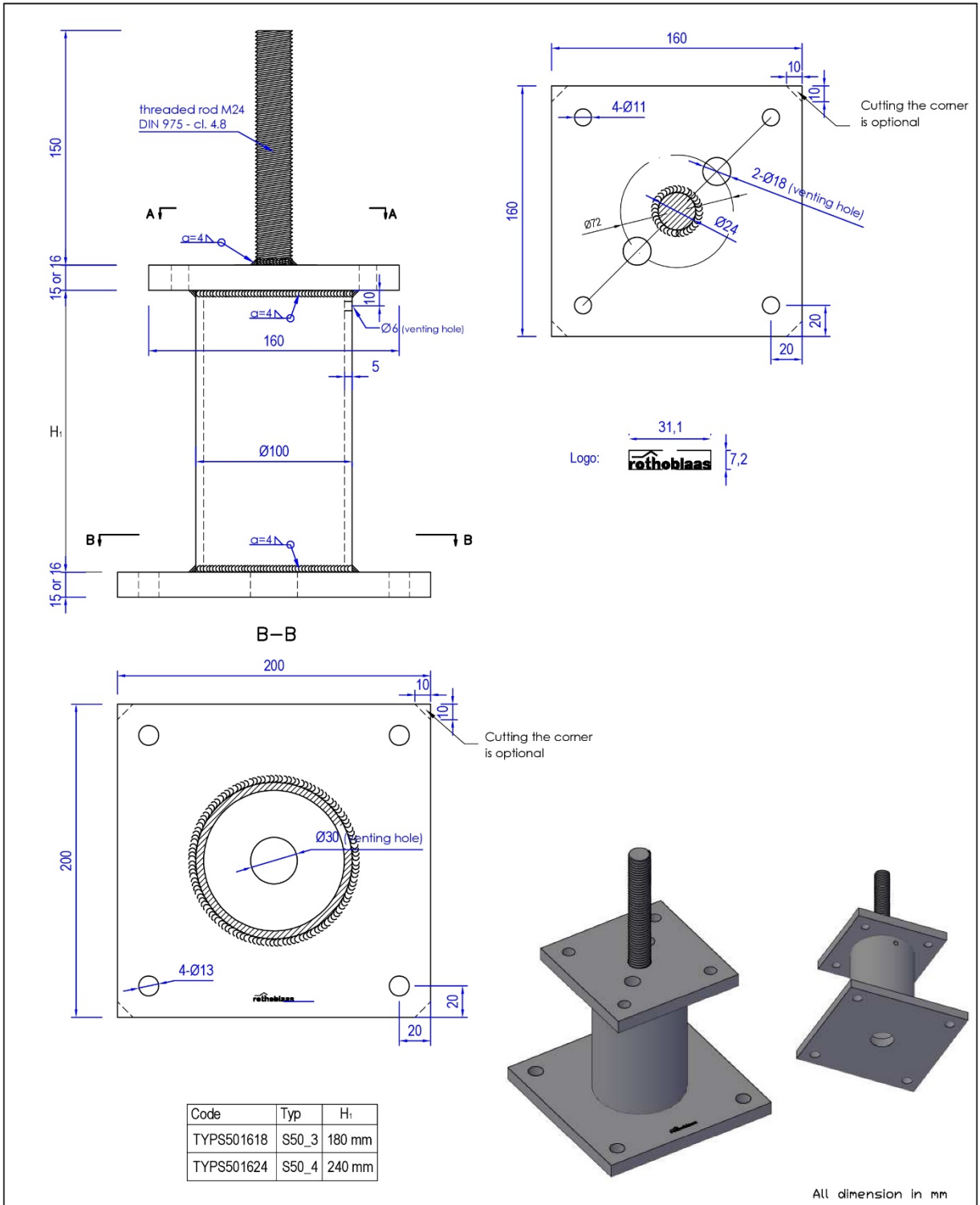
Code	Typ	H <sub>i</sub>
TYP S501212	S50_1	120 mm
TYP S501218	S50_2	180 mm



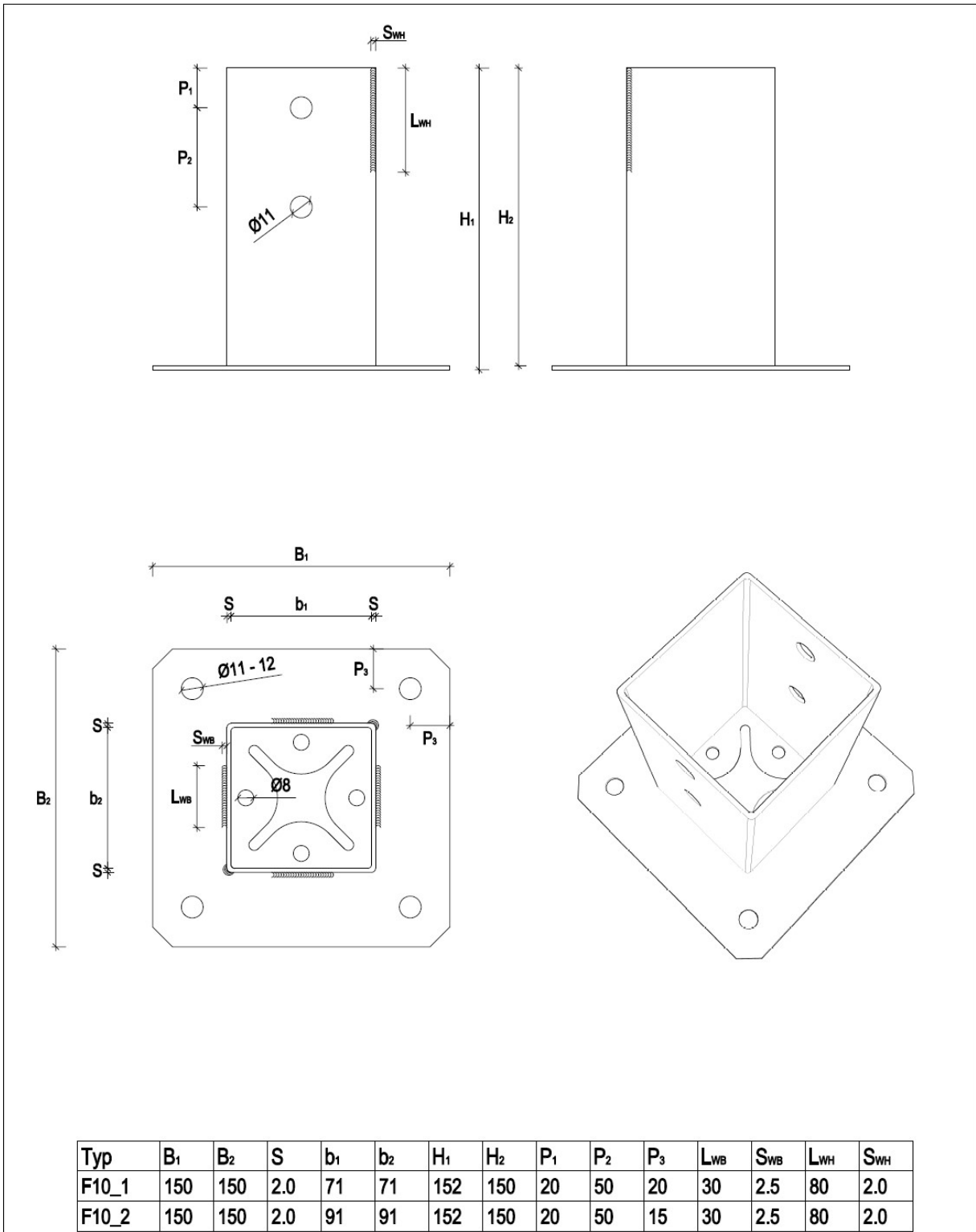
All dimension in mm




Object: Postbase  
TYP S50\_1 Alt and TYP S50\_2 Alt

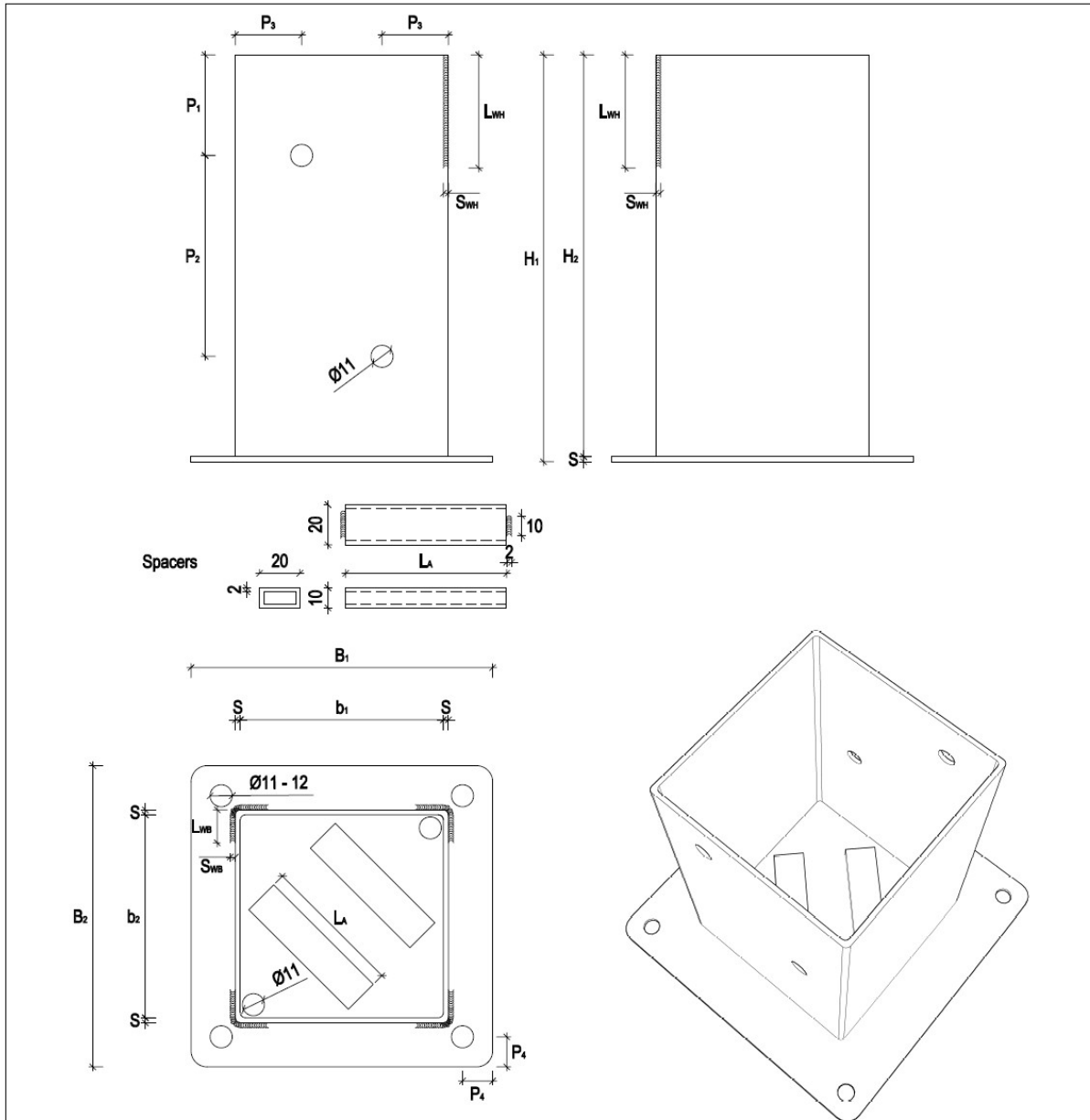



Object: Postbase  
TYP S50\_3 Alt and TYP S50\_4 Alt





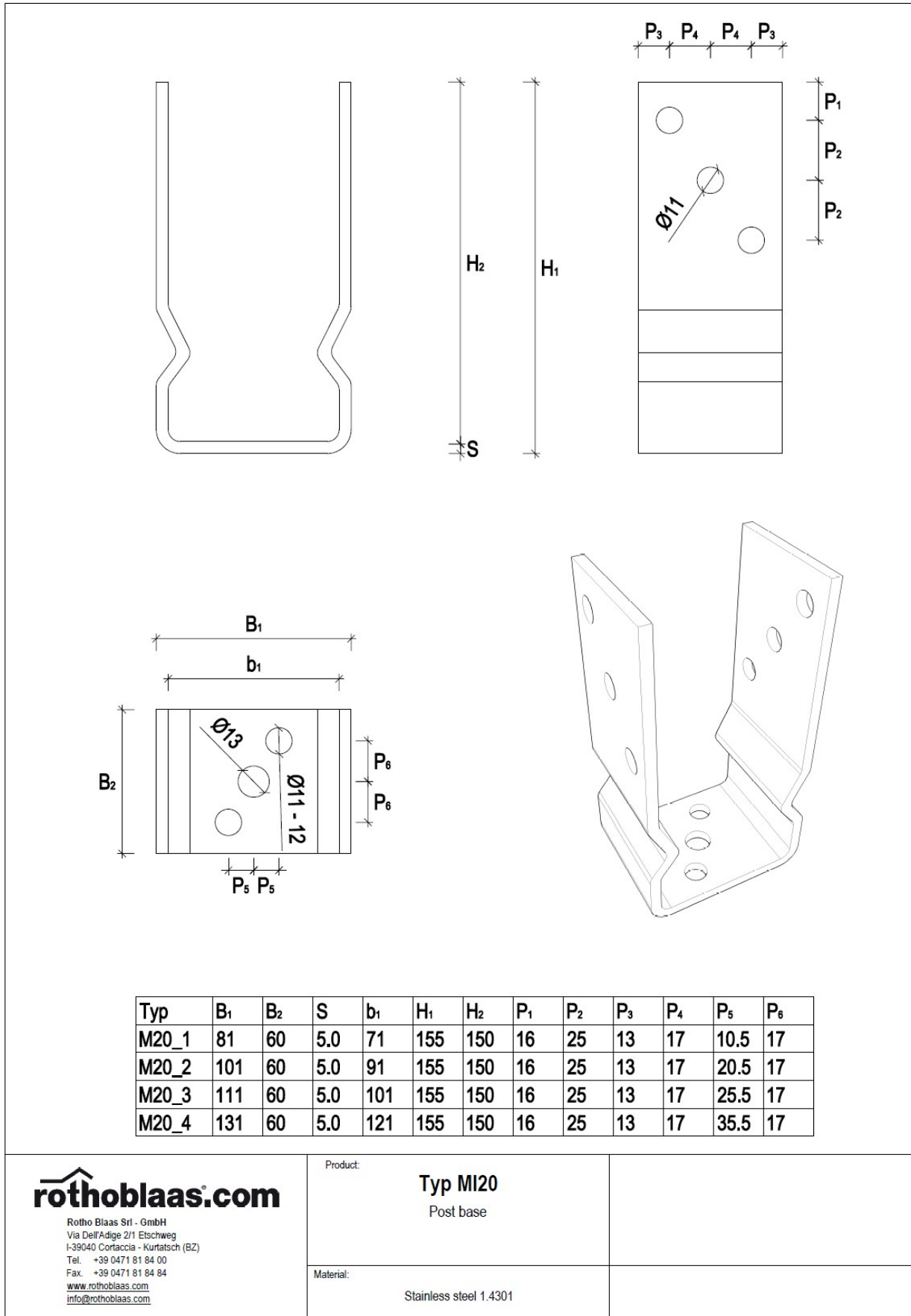
Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	L <sub>WB</sub>	S <sub>WB</sub>	L <sub>WH</sub>	S <sub>WH</sub>
F10_1	150	150	2.0	71	71	152	150	20	50	20	30	2.5	80	2.0
F10_2	150	150	2.0	91	91	152	150	20	50	15	30	2.5	80	2.0

 <p>Rotho Blaas Srl - GmbH Via Dell'Adige 2/1 Etschweg I-39040 Cortaccia - Kurtatsch (BZ) Tel. +39 0471 81 84 00 Fax. +39 0471 81 84 84 <a href="http://www.rothoblaas.com">www.rothoblaas.com</a> <a href="mailto:info@rothoblaas.com">info@rothoblaas.com</a></p>	Product: <p style="text-align: center;"><b>Typ F110</b> Post base</p>	
	Material: <p style="text-align: center;">Stainless steel 1.4301</p>	



Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	L <sub>WB</sub>	S <sub>WB</sub>	L <sub>WH</sub>	S <sub>WH</sub>	L <sub>A,mir</sub>
F50_1	150	150	2.5	101	101	152.5	150	30	70	30	15	20	2.5	70	2.5	70
F50_2	200	200	2.5	121	121	152.5	150	30	70	35	15	25	2.5	70	2.5	80
F50_3	200	200	2.5	141	141	152.5	150	30	70	40	15	30	2.5	70	2.5	100
F50_4	240	240	2.5	161	161	202.5	200	50	100	45	15	30	2.5	70	2.5	100
F50_5	280	280	2.5	181	181	202.5	200	50	100	50	25	40	2.5	70	2.5	100
F50_6	300	300	2.5	201	201	202.5	200	50	100	55	25	40	2.5	75	2.5	110

 <p>Rotho Blaas Sri - GmbH Via Dell'Adige 2/1 Etschweg I-39040 Cortaccia - Kurtatsch (BZ) Tel. +39 0471 81 84 00 Fax. +39 0471 81 84 84 www.rothoblaas.com info@rothoblaas.com</p>	Product:	Typ F150 Post base
	Material:	Stainless steel 1.4301



**rothoblaas.com**

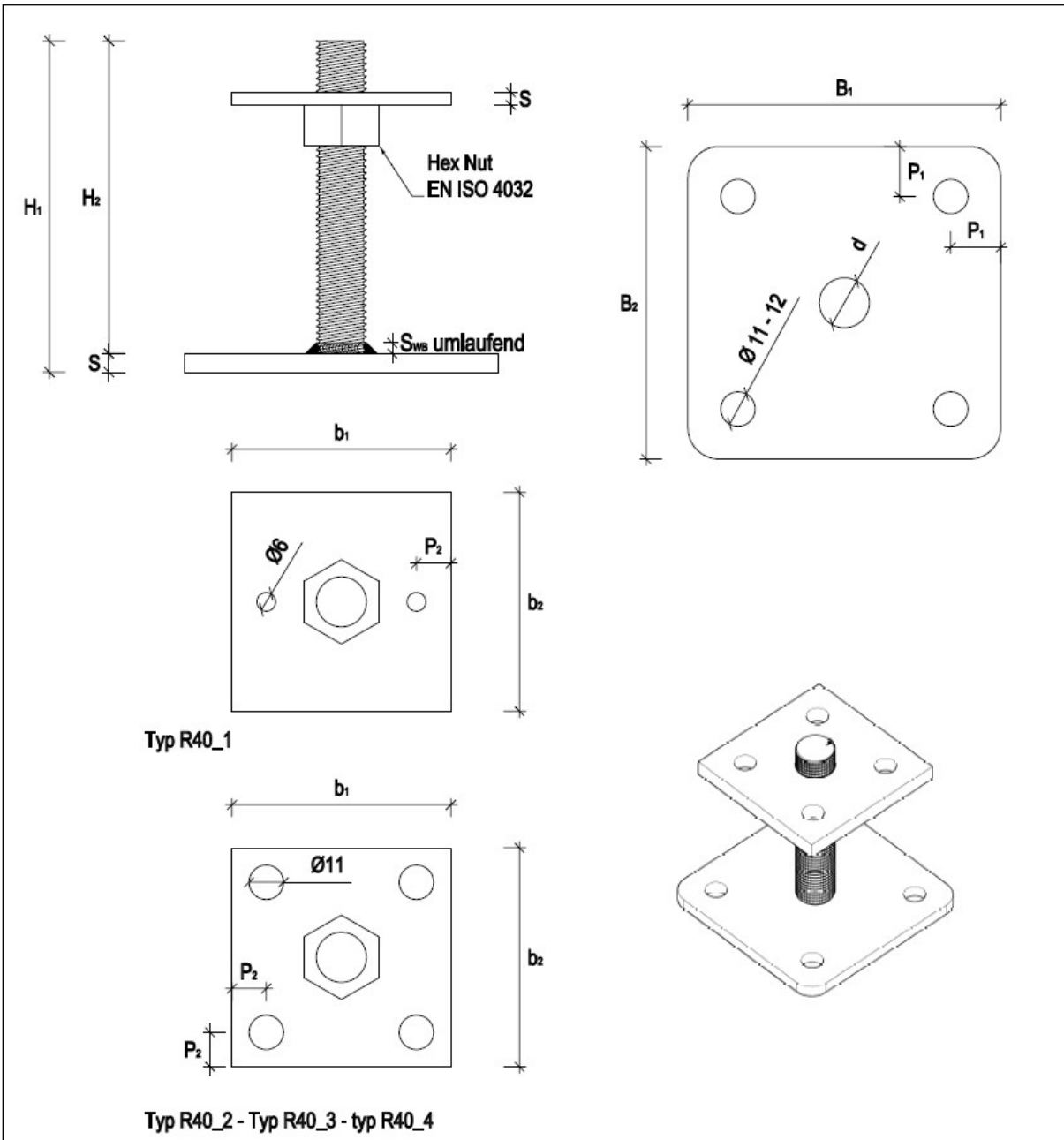
Rotho Blaas Srl - GmbH  
 Via Dell'Adige 2/1 Etschweg  
 I-39040 Cortaccia - Kurtatsch (BZ)  
 Tel. +39 0471 81 84 00  
 Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

**Typ MI20**  
 Post base

Material:

Stainless steel 1.4301



Typ	B <sub>1</sub>	B <sub>2</sub>	S	b <sub>1</sub>	b <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	d	P <sub>1</sub>	P <sub>2</sub>	S <sub>ws</sub>
R40_1	100	100	6	70	70	105	99	16	15	10	4
R40_2	100	100	6	80	80	105	99	20	15	15	4
R40_3	160	100	6	100	100	156	150	20	20	20	4
R40_4	160	100	6	100	100	256	250	24	20	20	4

**rothoblaas.com**

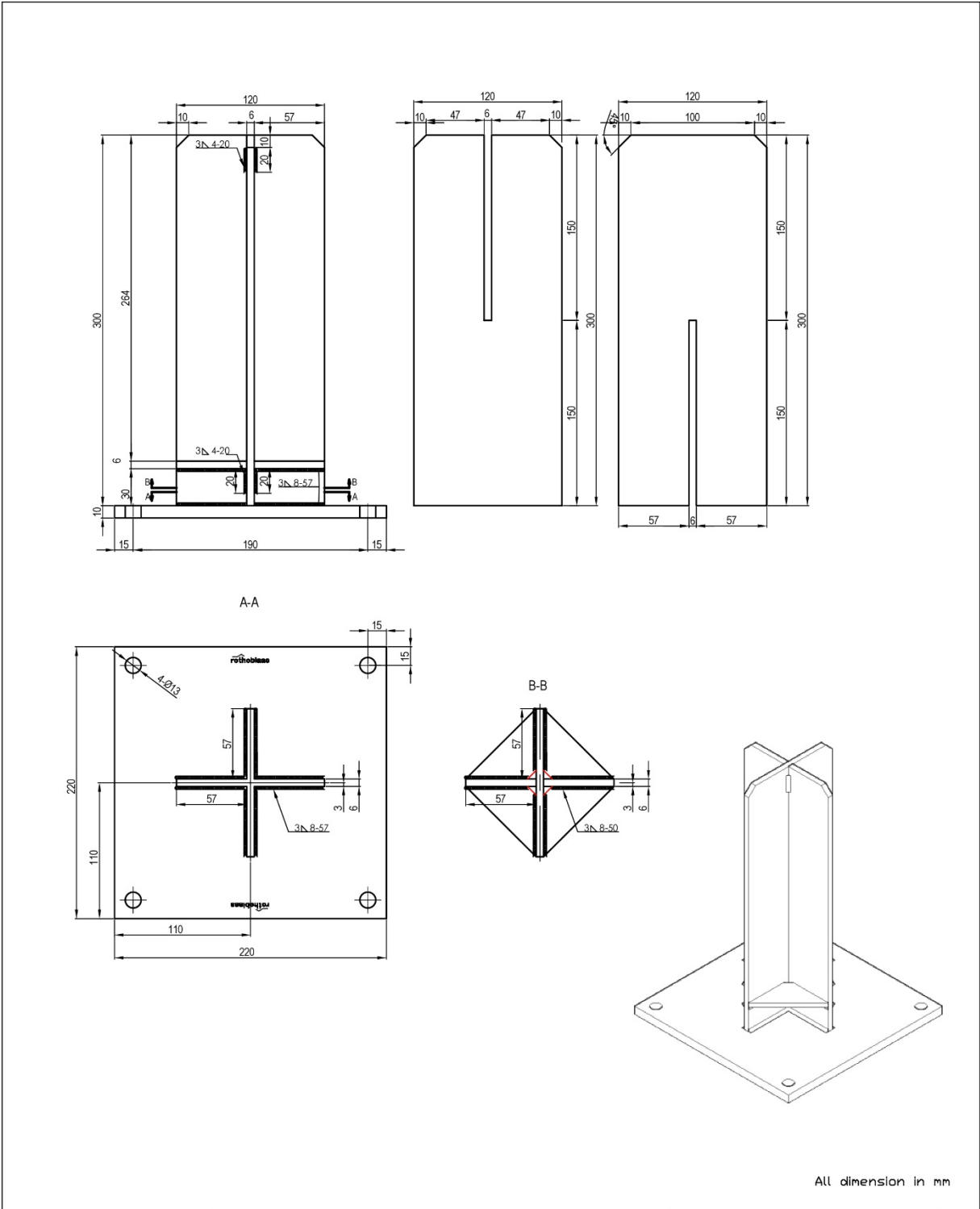
Rotho Blaas Srl - GmbH  
Via Dell'Adige 2/1 Etschweg  
I-39040 Cortaccia - Kurtatsch (BZ)  
Tel. +39 0471 81 84 00  
Fax. +39 0471 81 84 84  
[www.rothoblaas.com](http://www.rothoblaas.com)  
[info@rothoblaas.com](mailto:info@rothoblaas.com)

Product:

Typ RI40  
Post base

Material:

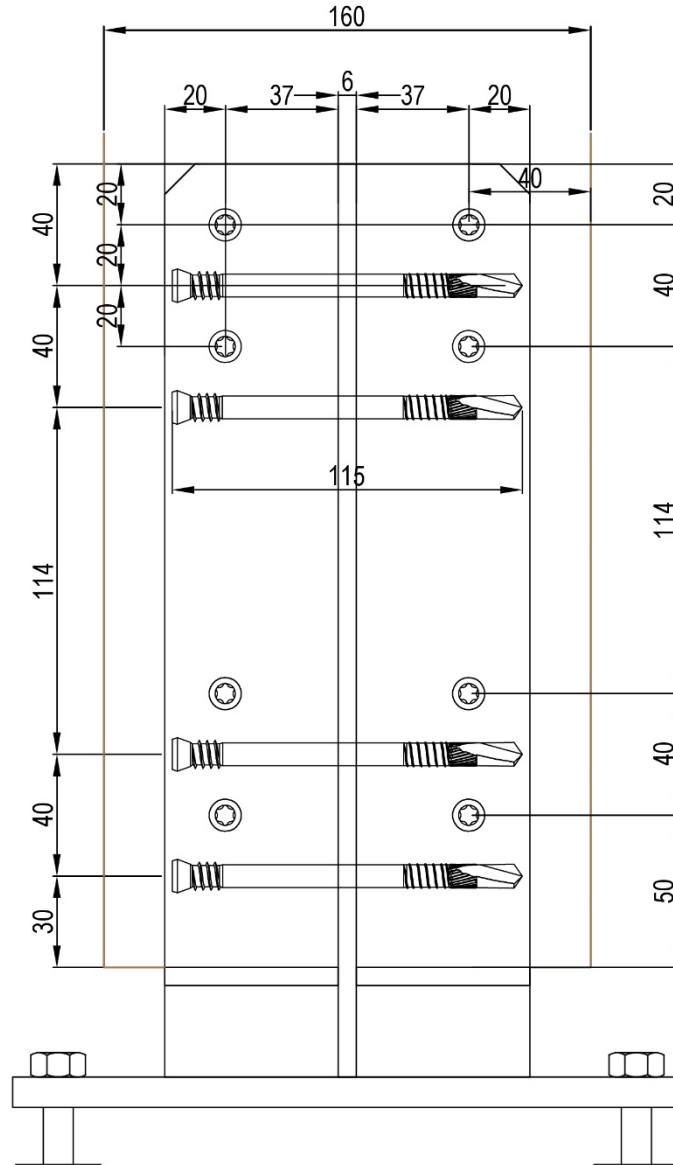
Stainless steel 1.4301



	Postbase TYP XS10_1				



16 selftapping dowels SBD  $\text{\O}7,5 \times 115$   
Post MIN 160x160 mm

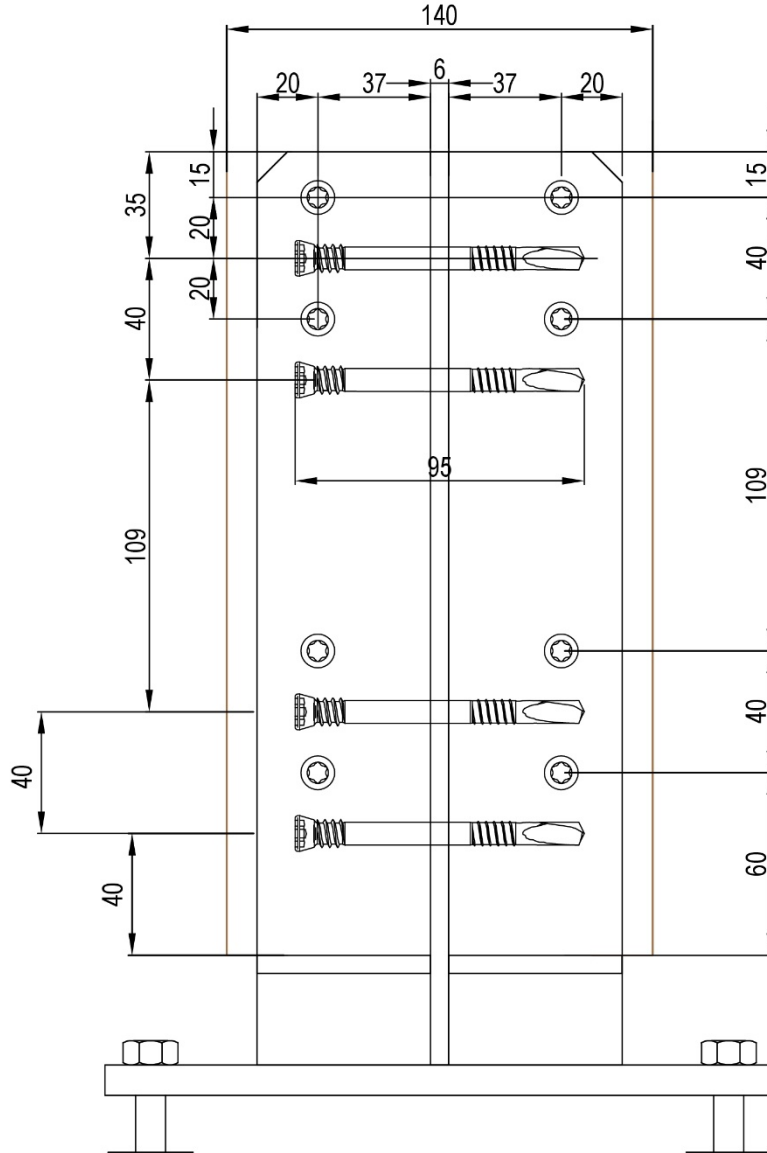


holes for concrete bolts  $\text{\O}13$

Object: Postbase TYP XS10\_1

Configuration: XS10\_1-16SBD115\_160

16 selftapping dowels SBD  $\text{Ø}7,5 \times 95$   
Post MIN 140x140 mm

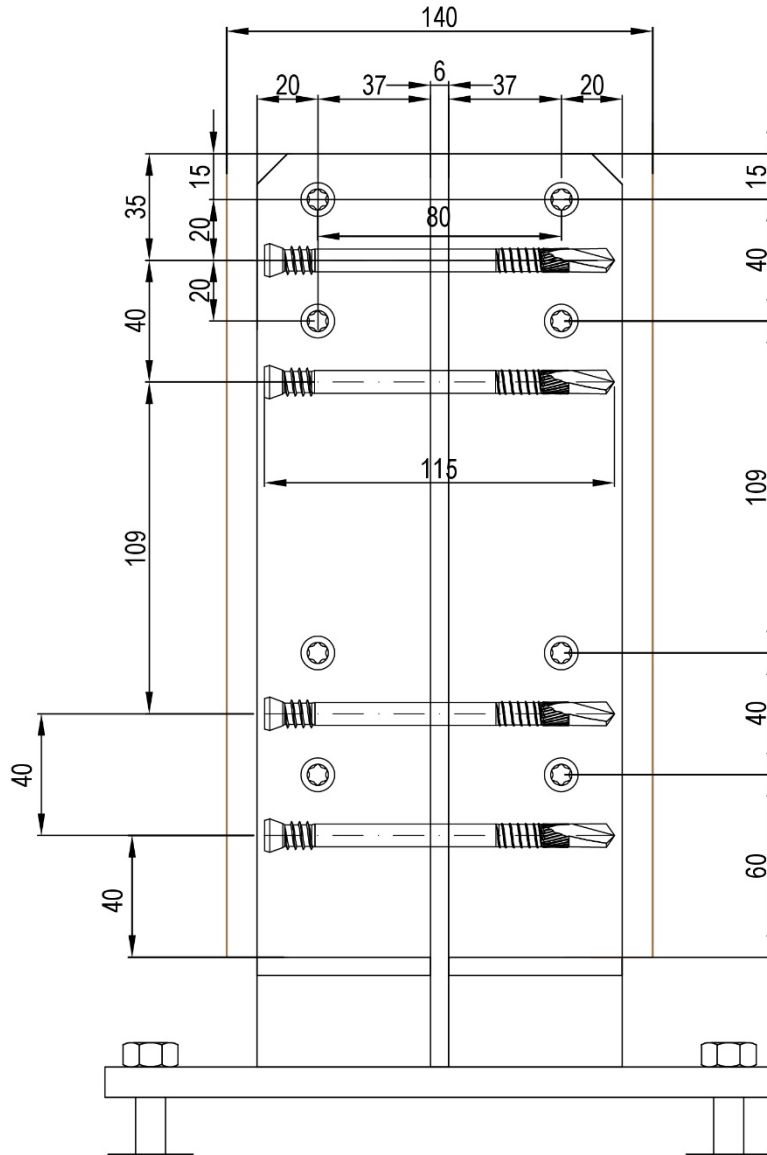


holes for concrete bolts  $\text{Ø}13$

Object: Postbase TYP XS10\_1

Configuration: XS10\_1-16SBD95\_140

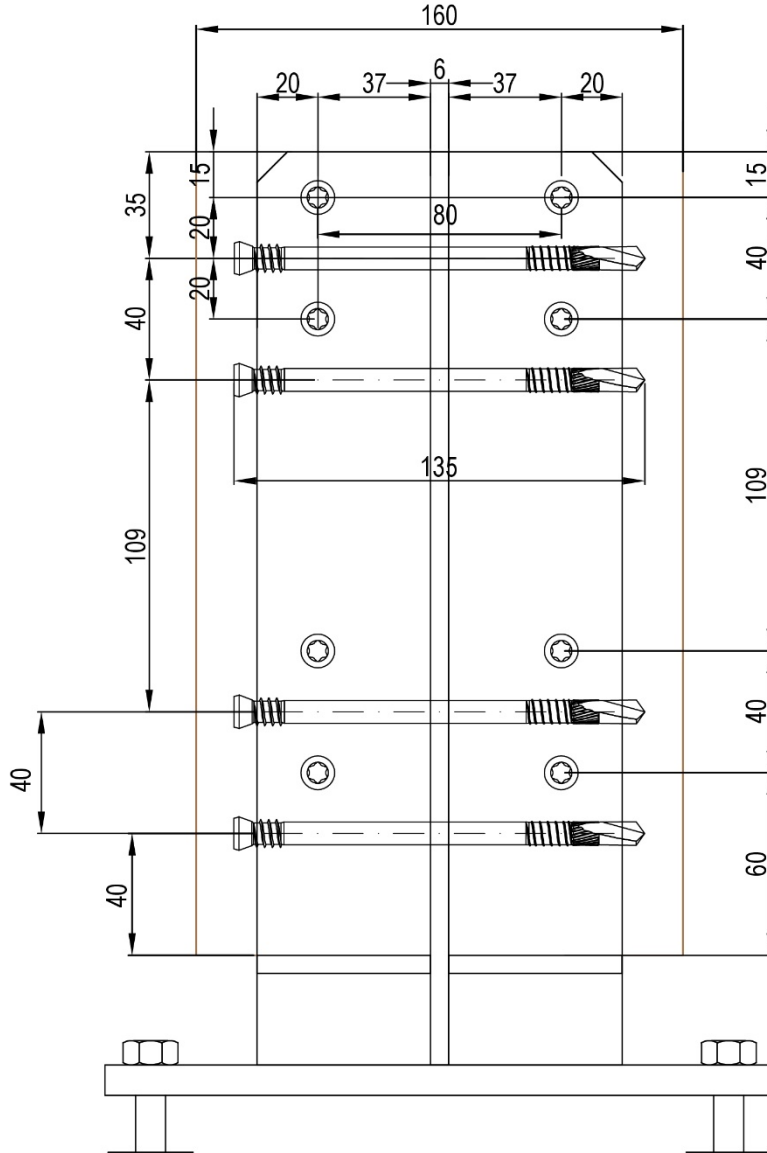
16 selftapping dowels SBD  $\text{\O}7,5 \times 115$   
Post MIN 140x140 mm



Object: Postbase TYP XS10\_1

Configuration: XS10\_1-16SBD115\_140

16 selftapping dowels SBD Ø7,5 x135  
Post MIN 160x160 mm

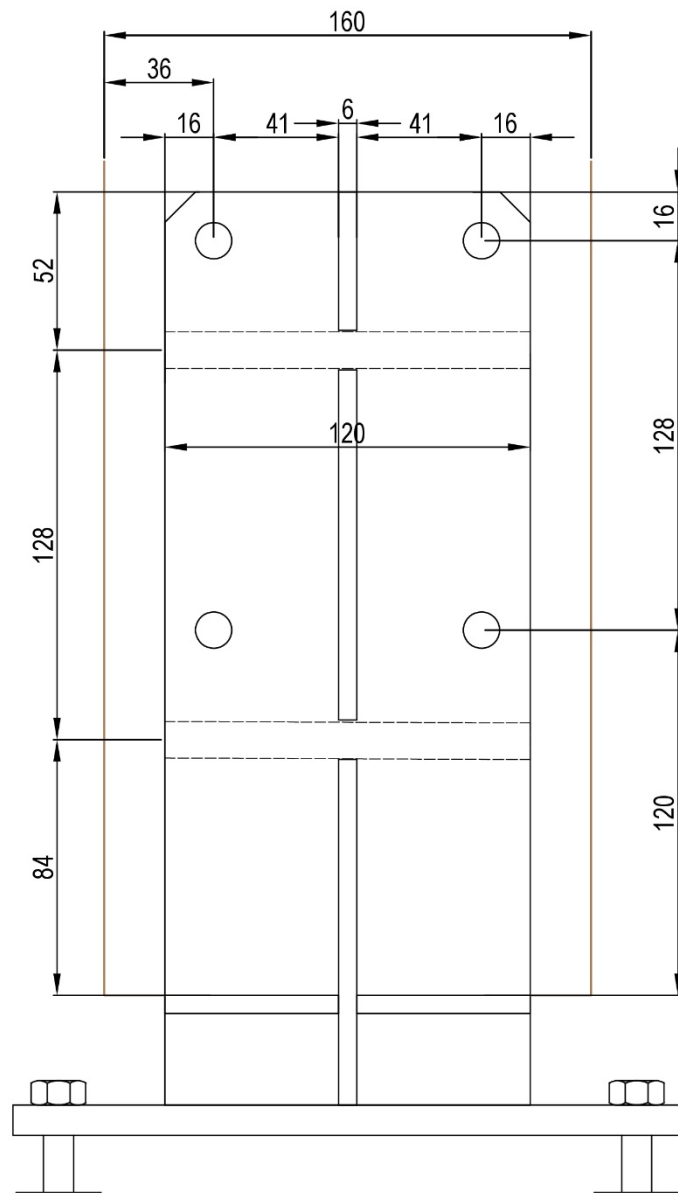


holes for concrete bolts Ø13

Object: Postbase TYP XS10\_1

Configuration: XS10\_1-16SBD135\_160

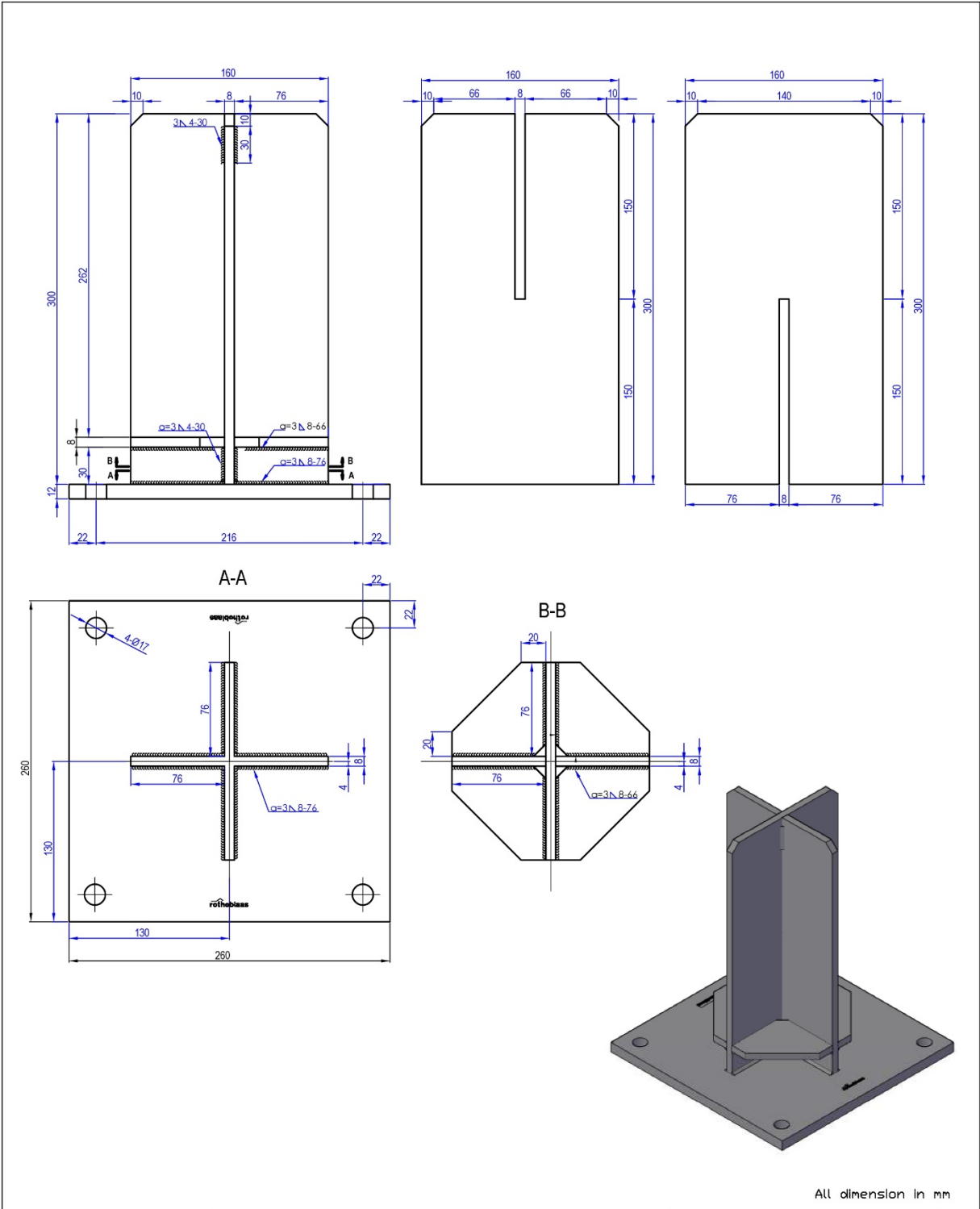
8 smooth dowels STA  $\text{Ø}12 \times 120$   
Post MIN  $160 \times 160$  mm



holes for concrete bolts  $\text{Ø}13$

Object: Postbase TYP XS10\_1

Configuration: XS10\_1-8STA120\_160

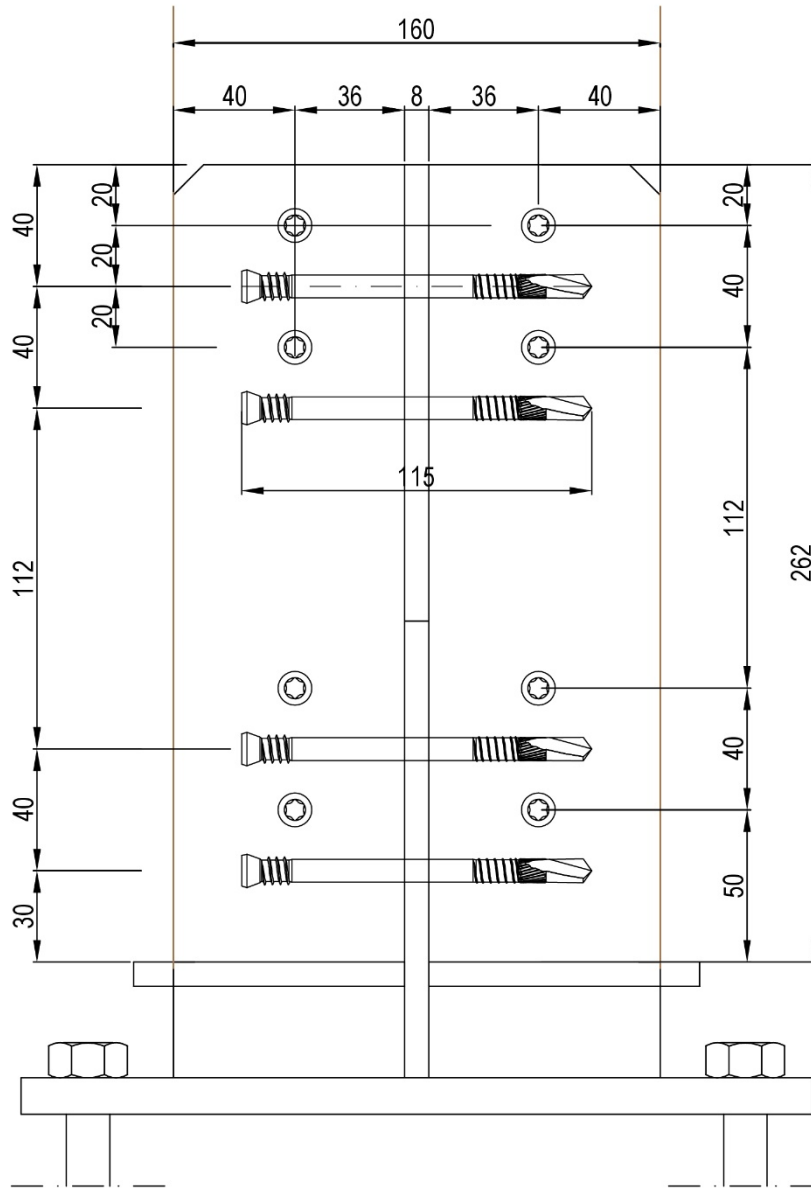


All dimension in mm



Postbase  
TYP XS10\_2


16 selftapping dowels SBD  $\text{\O}7.5 \times 115$   
Post MIN 160x160 mm

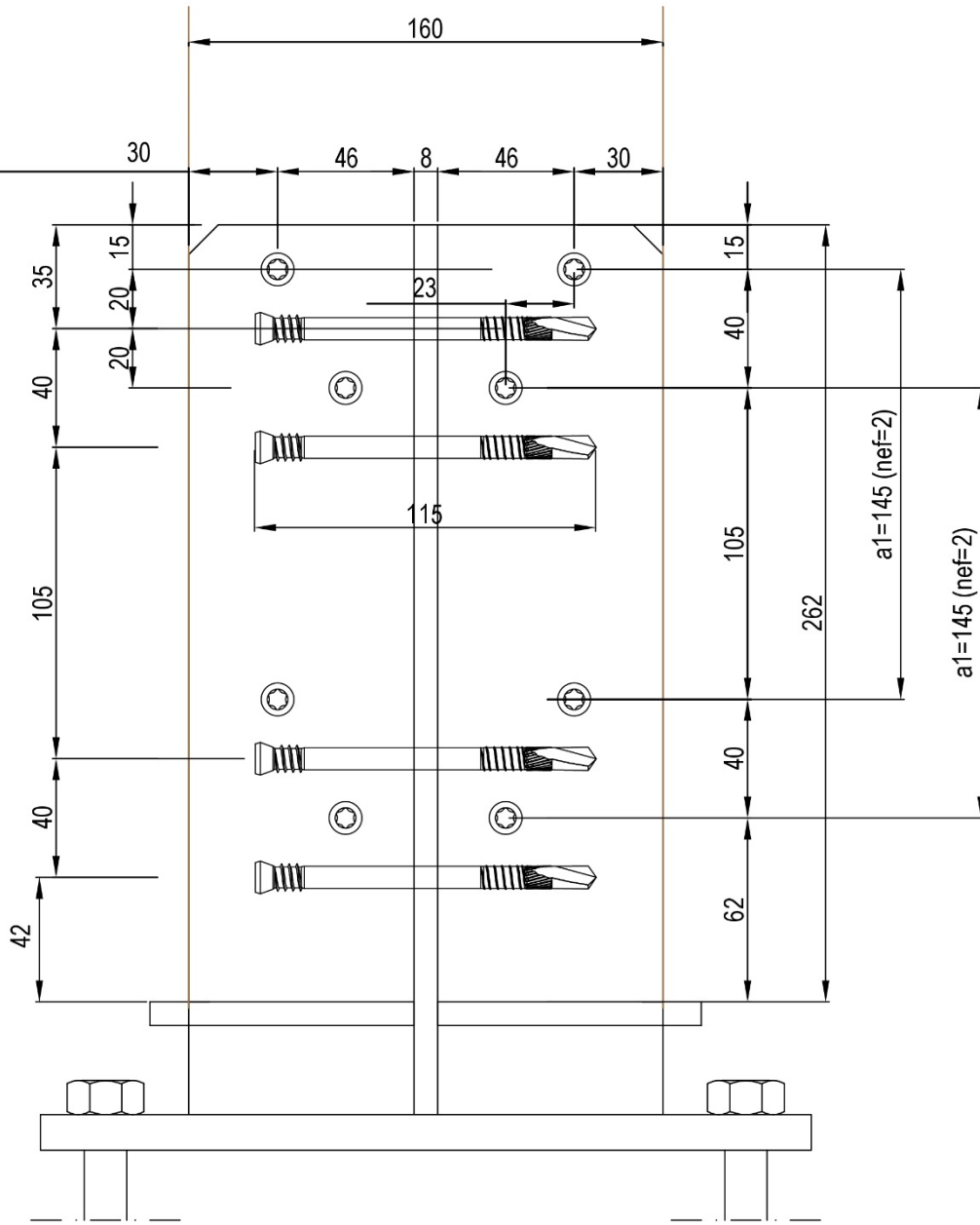


holes for concrete bolts  $\text{\O}17$

Object: Postbase TYP XS10\_2

Configuration: XS10\_2-16SBD115\_160

16 selftapping dowels SBD  $\text{Ø}7,5 \times 115$   
Post MIN160x160 mm



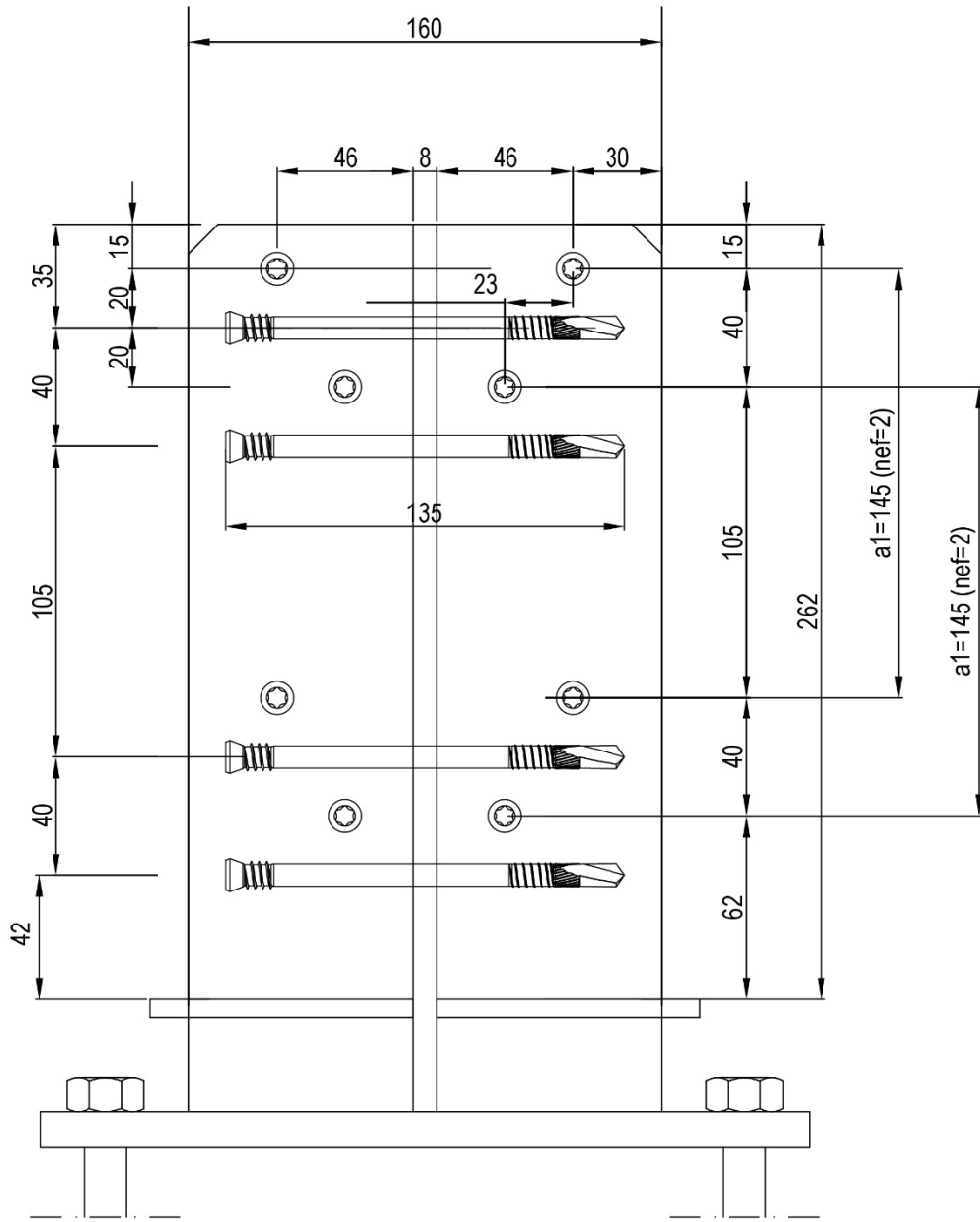
holes for concrete bolts  $\text{Ø}17$

Object: Postbase TYP XS10\_2

Configuration: XS10\_2-16SBD115\_160 Alt



16 selftapping dowels SBD  $\text{Ø}7,5 \times 135$   
Post MIN160x160 mm

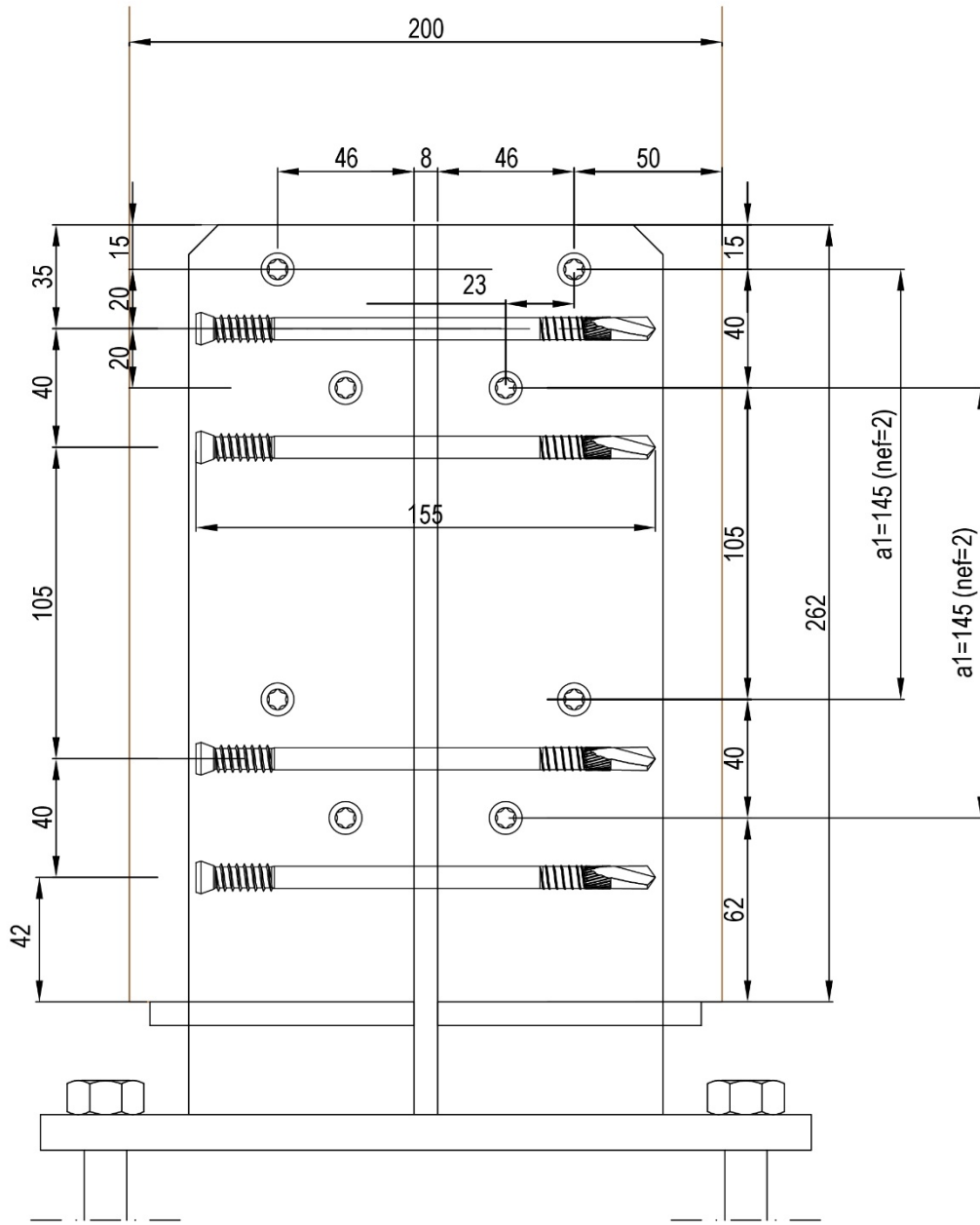


holes for concrete bolts  $\text{Ø}17$

Object: Postbase TYP XS10\_2

Configuration: XS10\_1-16SBD135\_160

16 selftapping dowels SBD  $\text{Ø}7,5 \times 155$   
Post MIN160x160 mm

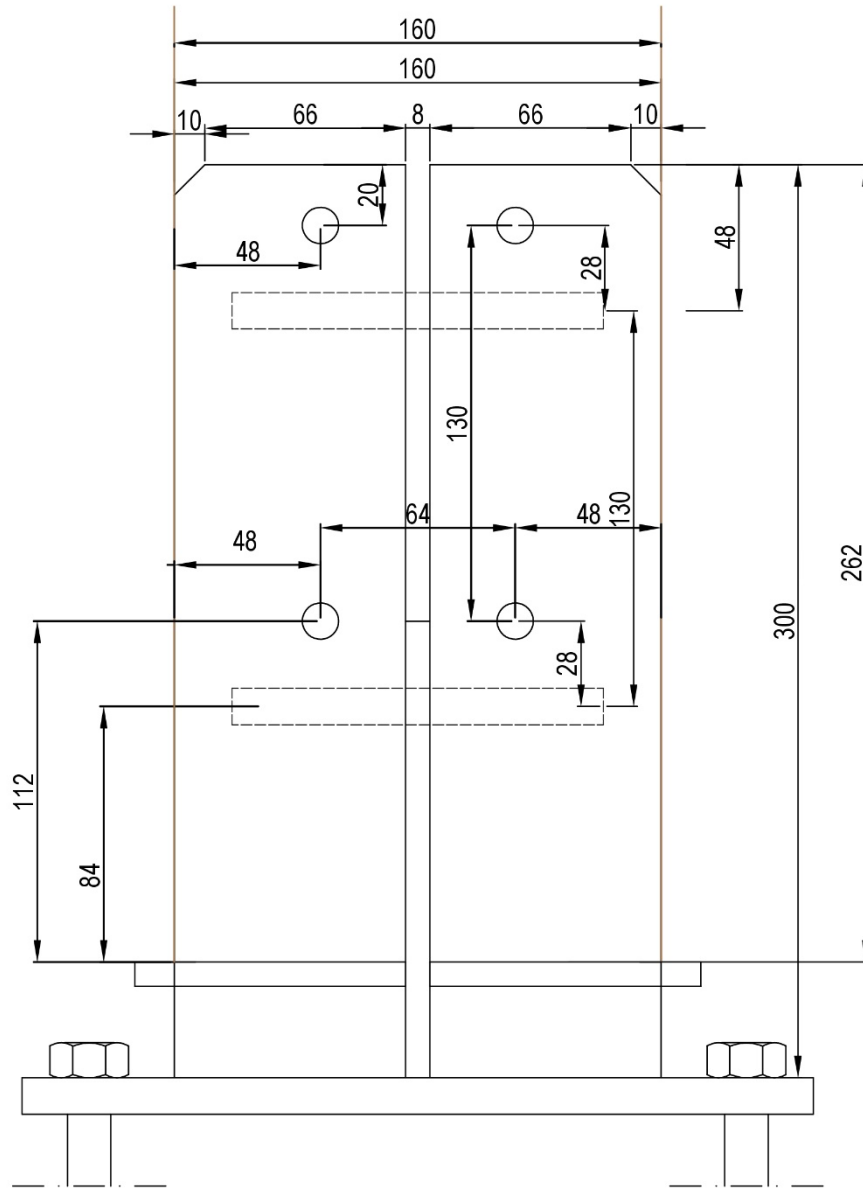


holes for concrete bolts  $\text{Ø}17$

Object: Postbase TYP XS10\_2

Configuration: XS10\_2-16SBD155\_200

8 smooth dowels STA Ø12 x 120  
Post MIN 160x160 mm

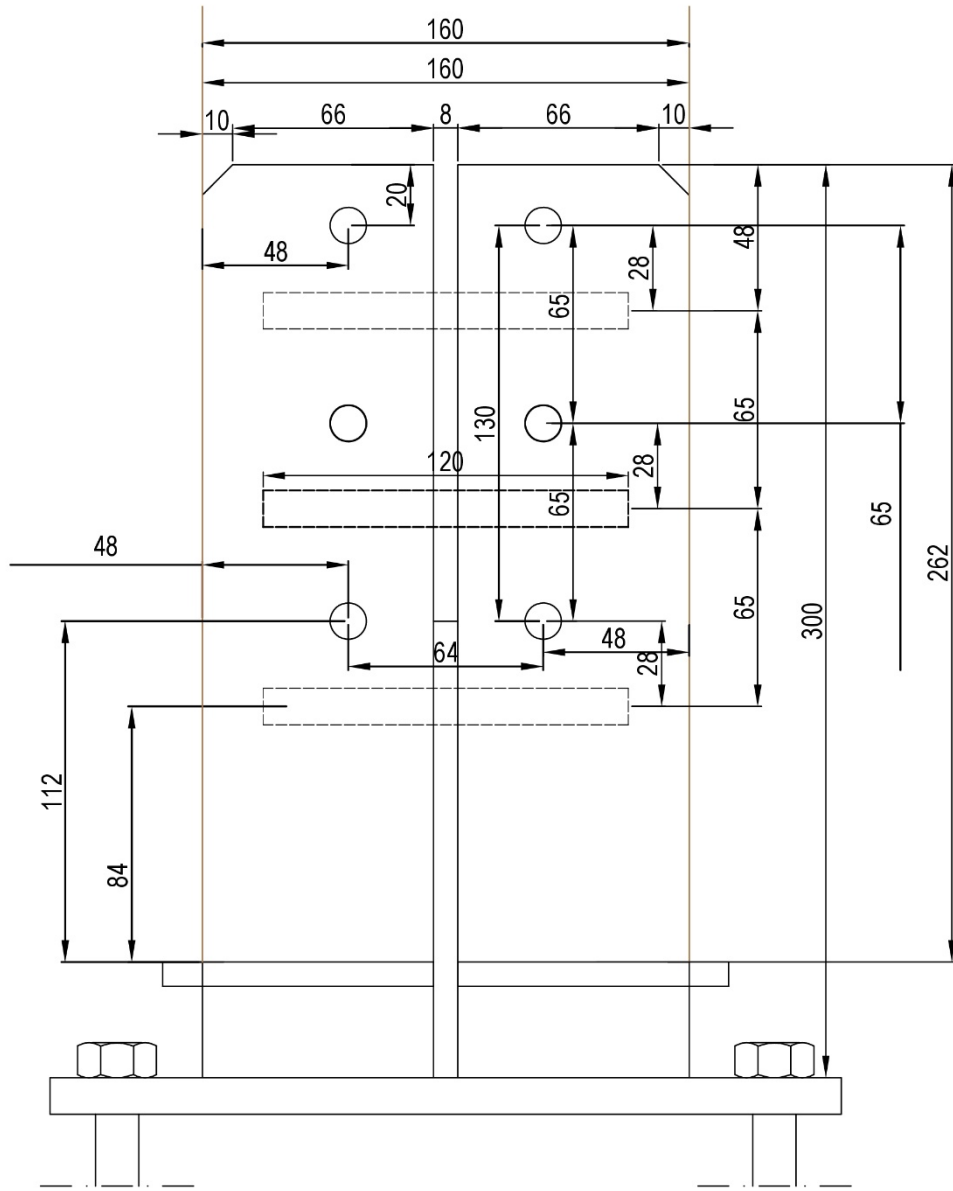


holes for concrete bolts Ø17

Object: Postbase TYP XS10\_2

Configuration: XS10\_2-8STA125\_160

12 smooth dowels STA  $\text{\O}12 \times 120$   
Post MIN 160x160 mm

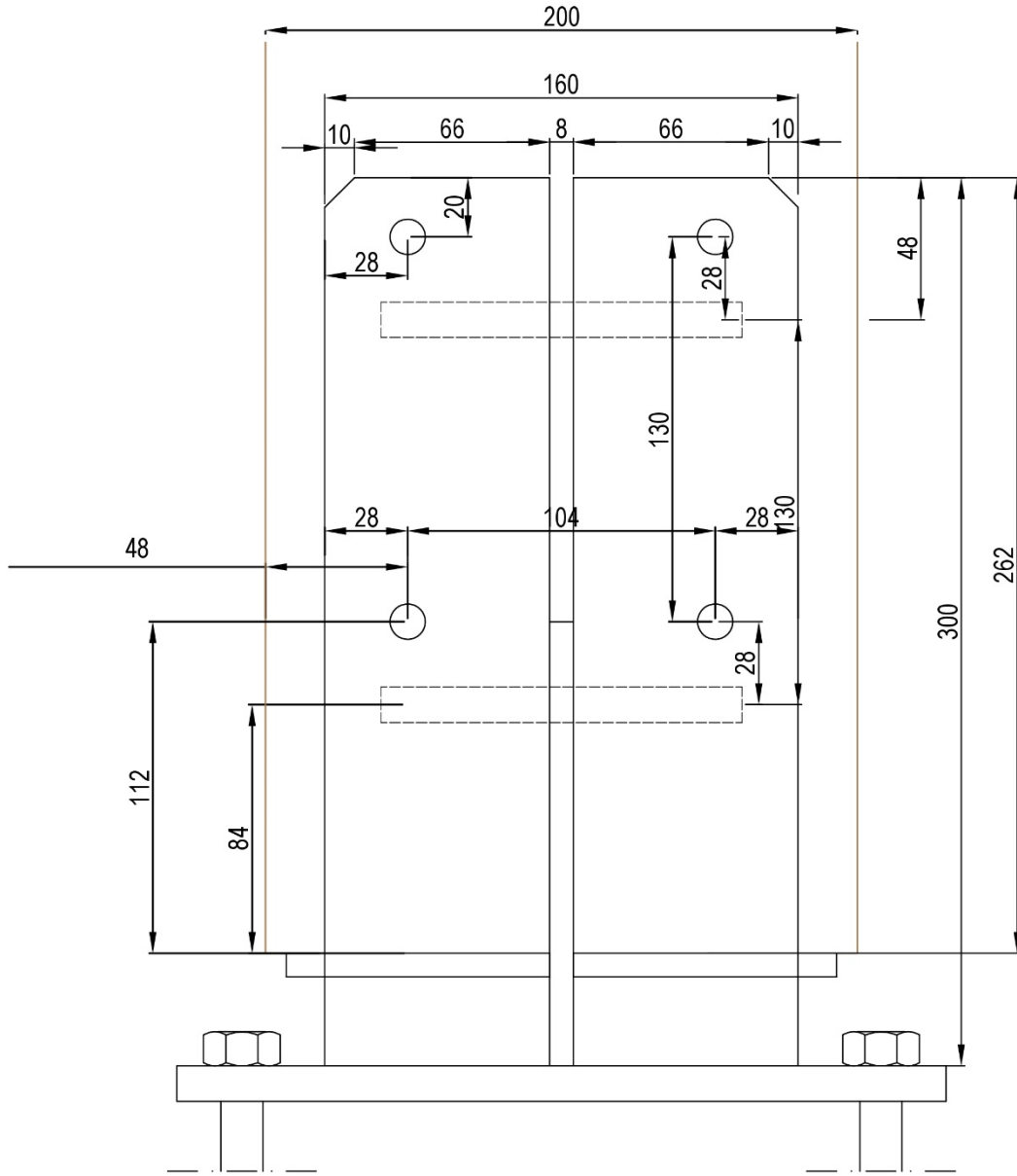


holes for concrete bolts  $\text{\O}17$

Object: Postbase TYP XS10\_2

Configuration: XS10\_2-12STA120\_160

8 smooth dowels STA  $\text{\O}12 \times 120$   
Post MIN 200x200 mm

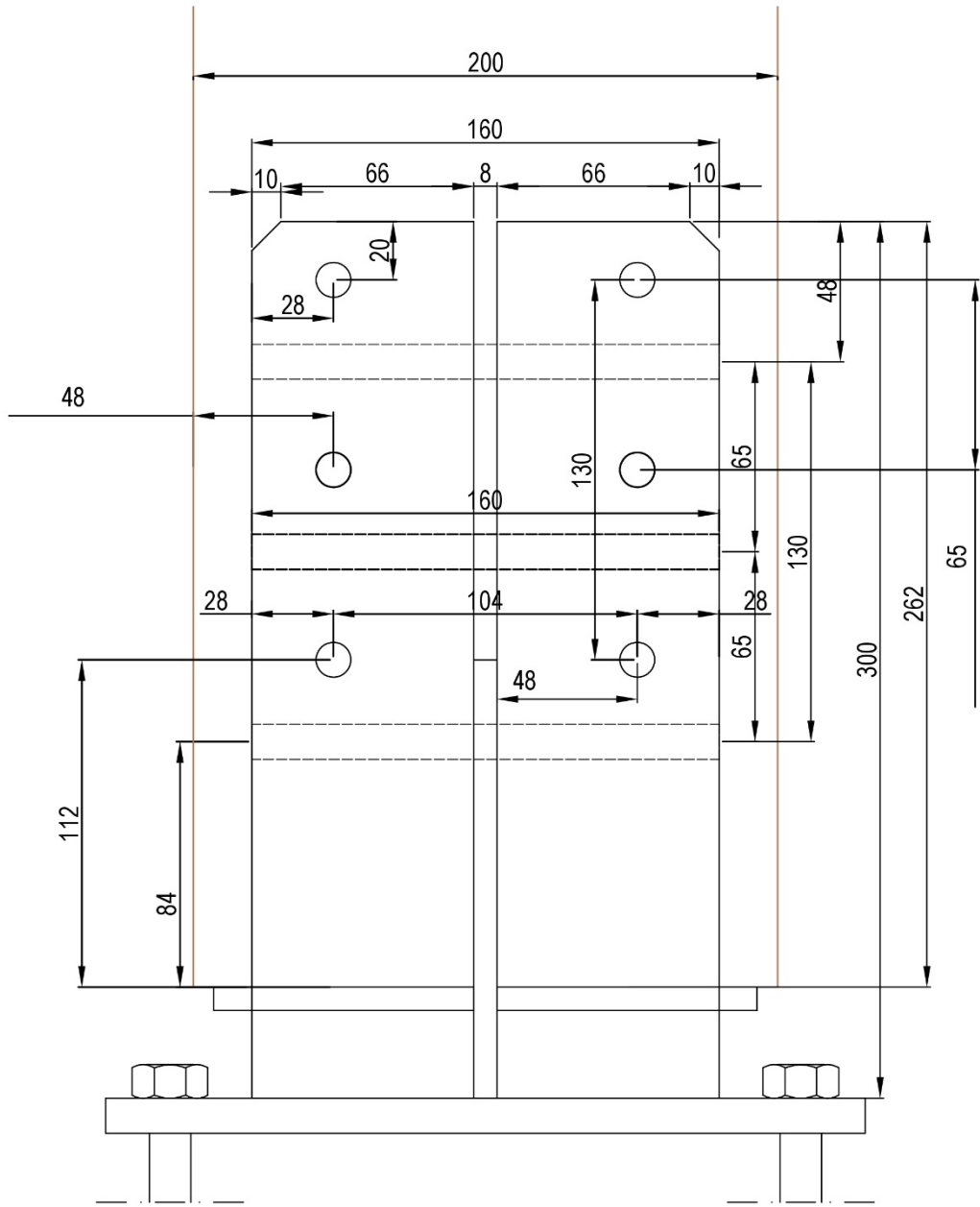


holes for concrete bolts  $\text{\O}17$

Object: Postbase TYP XS10\_2

Configuration: XS10\_2-8STA120\_200

12 smooth dowels STA  $\text{\O}12 \times 160$   
Post MIN 200x200 mm



holes for concrete bolts  $\text{\O}17$

Object: Postbase TYP XS10\_2

Configuration: XS10\_2-12STA160\_200