

# P10 - P20

## EMBEDDED TUBULAR POST BASE



### RAISED

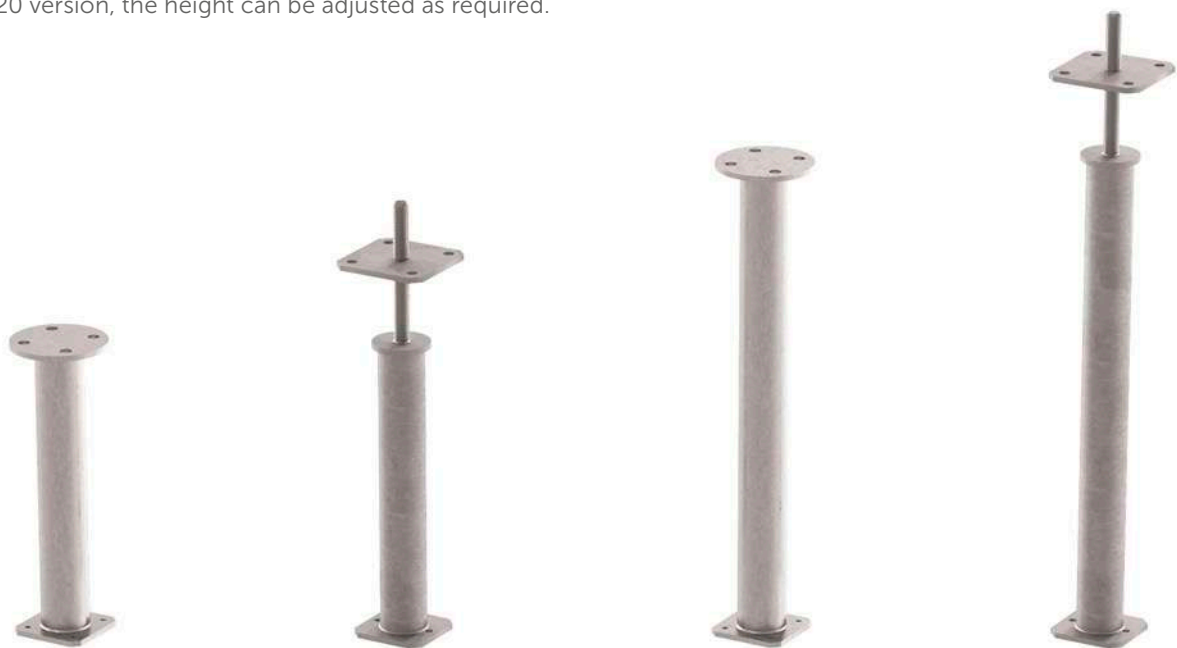
To be embedded in concrete, it allows keep the column distant from the ground ensuring high durability of the timber.

### $H \geq 300 \text{ mm}$

The column can be installed at a distance of more than 300 mm from the ground in accordance with DIN 68800.

### ADJUSTABLE

In the P20 version, the height can be adjusted as required.



## CHARACTERISTICS

FOCUS	raised structures
COLUMNS	from 70 x 70 mm to 160 x 160 mm
HEIGHT	300   500 mm
FASTENERS	HBS PLATE EVO, XEPOX



## MATERIAL

Hot dip bright zinc plated carbon steel (P10) and Dac Coat zinc plating (P20).

## FIELDS OF USE

Outdoor joints. Suitable for service class 1, 2 and 3

- solid timber and glulam
- CLT, LVL



## BALCONIES AND TERRACES

Ideal for creating high durability concealed joints for outdoor wooden columns.

### DISTANCE 300 mm

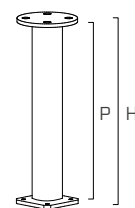
In the 500 mm height versions it guarantees a distance between the ground and the column head greater than 300 mm.

## CODES AND DIMENSIONS

### P10

CODE	H [mm]	P [mm]	top plate [mm]	top holes [n. x mm]	bottom plate [mm]	pcs
<b>P10300</b>	312	300	Ø100 x 6	4 x Ø11,0	80 x 80 x 6	1
<b>P10500</b>	512	500	Ø100 x 6	4 x Ø11,0	80 x 80 x 6	1

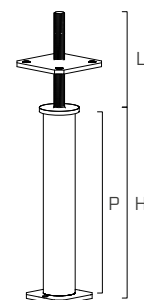
**S235**  
HOT DIP



### P20

CODE	H [mm]	P [mm]	top plate [mm]	top holes [n. x mm]	bottom plate [mm]	rod Ø x L [mm]	pcs
<b>P20300</b>	312	300	100 x 100 x 8	4 x Ø11,0	80 x 80 x 6	M24 x 170	1
<b>P20500</b>	512	500	100 x 100 x 8	4 x Ø11,0	80 x 80 x 6	M24 x 170	1

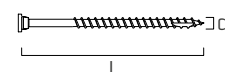
**S235**  
DAC COAT



### HBS PLATE EVO

CODE	d <sub>1</sub> [mm]	L [mm]	b [mm]	TX	pcs
<b>HBSPEVO880</b>	8	80	55	TX 40	100

**C4**  
EVO  
COATING



### MATERIAL AND DURABILITY

P10: S235 carbon steel with hot galvanising.

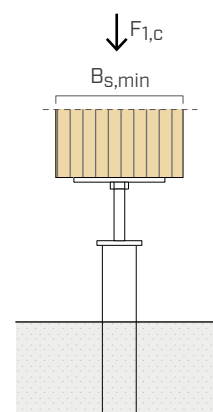
P20: S235 carbon steel with special coating Dac Coat.

To be used in service classes 1, 2 and 3 (EN 1995-1-1).

### FIELD OF USE

- Timber column drowned in the casting

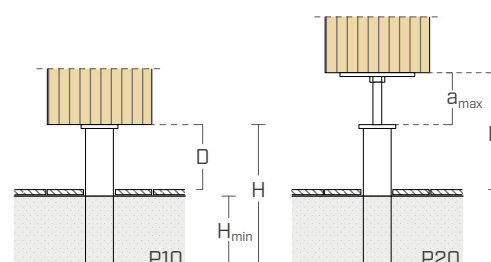
### EXTERNAL LOADS



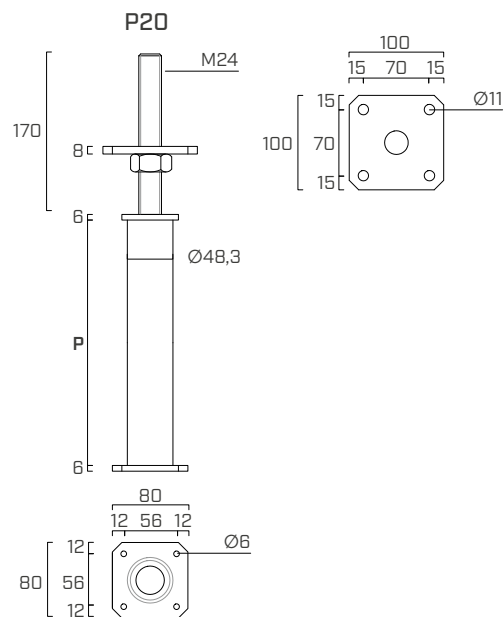
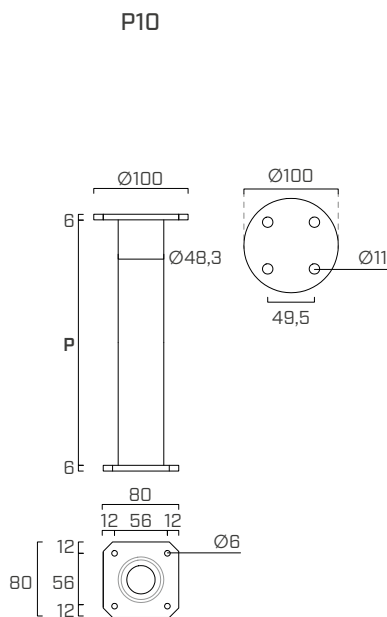
## INSTALLATION ON CONCRETE

	CODE	H [mm]	H <sub>min</sub> [mm]	a <sub>max</sub> * [mm]	D <sub>max</sub> [mm]
<b>P10</b>	<b>P10300</b>	312	156	-	<b>156</b>
	<b>P10500</b>	512	256	-	<b>256</b>
<b>P20</b>	<b>P20300</b>	312	156	70	<b>226</b>
	<b>P20500</b>	512	256	70	<b>326</b>

\* a<sub>min</sub> ≈ 25 ÷ 30 mm (upper plate + nut)

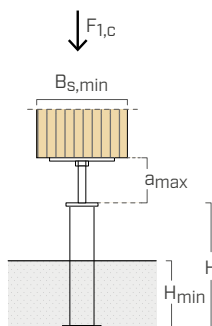


## GEOMETRY



## STATIC VALUES

### COMPRESSION STRENGTH



#### P10

CODE	B <sub>s,min</sub> [mm]	H [mm]	H <sub>min</sub> [mm]	R <sub>1,c</sub> k timber		R <sub>1,c</sub> k steel			
				[kN]	γ <sub>timber</sub>	[kN]	γ <sub>steel</sub>	[kN]	γ <sub>steel</sub>
P10300	□ 100 x 100	312	156	98,6	γ <sub>MT</sub> <sup>(1)</sup>	78,7	γ <sub>M0</sub>	107,0	γ <sub>M1</sub>
P10500	○ Ø100	512	256					99,3	

#### P20

CODE	B <sub>s,min</sub> [mm]	H [mm]	H <sub>min</sub> [mm]	a <sub>max</sub> [mm]	R <sub>1,c</sub> k timber		R <sub>1,c</sub> k steel			
					[kN]	γ <sub>timber</sub>	[kN]	γ <sub>steel</sub>	[kN]	γ <sub>steel</sub>
P20300	□ 100 x 100	312	156	70	93,7	γ <sub>MT</sub> <sup>(1)</sup>	59,5	γ <sub>M0</sub>	106,0	γ <sub>M1</sub>
P20500	○ Ø100	512	256	70					106,0	

### NOTES:

<sup>(1)</sup> γ<sub>MT</sub> partial coefficient of the timber.

### GENERAL PRINCIPLES:

- The characteristic values are in accordance with ETA-10/0422 and valid for a minimum anchoring depth in the concrete casting of H<sub>min</sub>.
- The design values are obtained from the characteristic values as follows:

$$R_d = \min \left\{ \begin{array}{l} \frac{R_{i,k \text{ timber}} \cdot k_{mod}}{\gamma_{timber}} \\ \frac{R_{i,k \text{ steel}}}{\gamma_{steel}} \end{array} \right.$$

The coefficients k<sub>mod</sub> and γ should be taken according to the current regulations used for the calculation.

The verification of the fastener-to-concrete connection must be carried out separately.

- For the calculation process a timber density ρ<sub>k</sub> = 350 kg/m<sup>3</sup> has been considered.
- Dimensioning and verification of timber and concrete elements must be carried out separately.