# P10 - P20

## EMBEDDED TUBULAR POST BASE

VIDEO

CE
ETA-10/0422

### RAISED
To be embedded in concrete, it allows the column to be separated from the ground. Hot-dip galvanising for P10 models and DAC COAT coating for P20 models ensure maximum durability in outdoor environments.

### HEIGHT
It is possible to distance the column from the ground by more than 300 mm for excellent durability, in compliance with national standards such as DIN68800.

### ADJUSTABLE AFTER INSTALLATION
In the P20 version, the height can be adjusted even after assembly is completed.

USA, Canada and more design values available online.

**SERVICE CLASS** SC1 SC2 SC3

**MATERIAL**

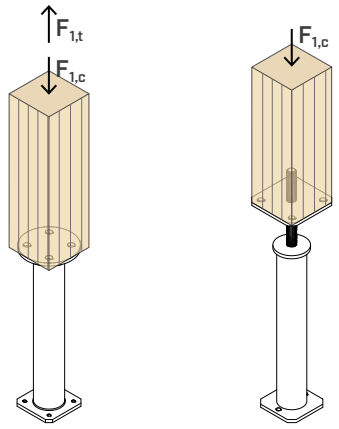
S235 HDG55 **P10:** S235 carbon steel with hot galvanising 55 µm

S235 DAC COAT **P20:** S235 carbon steel with special coating DAC COAT

**GROUND CLEARANCE**

from 193 to 326 mm

**EXTERNAL LOADS**




### VIDEO
Scan the QR Code and watch the video on our YouTube channel

## FIELDS OF USE

Ground joints for columns requiring high spacing.

Suitable for columns in:
- solid timber softwood and hardwood
- glulam, LVL

## BALCONIES AND TERRACES

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

## PROFESSIONAL INSTALLATION

The timber-to-ground distance of more than 300 mm allows for professional and particularly durable supports.

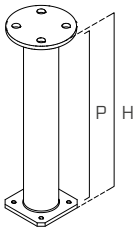
## CODES AND DIMENSIONS

### P10

S235 HDG55

| CODE | H [mm] [in] | P [mm] [in] | top plate [mm] [in] | top holes [n. x mm] [n. x in] | bottom plate [mm] [in] | pcs |
|---|---|---|---|---|---|---|
| **P10300** | 312 *12 5/16* | 300 *11 3/4* | Ø100 x 6 *Ø3.94 x 0.24* | 4 x Ø11 *4 x Ø0.43* | 80 x 80 x 6 *3 1/8 x 3 1/8 x 0.24* | 1 |
| **P10500** | 512 *20 3/16* | 500 *19 3/4* | Ø100 x 6 *Ø3.94 x 0.24* | 4 x Ø11 *4 x Ø0.43* | 80 x 80 x 6 *3 1/8 x 3 1/8 x 0.24* | 1 |

Screws are not included and must be ordered separately.

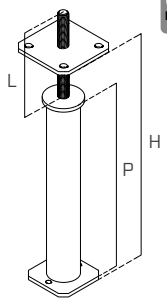



### P20

S235 DAC COAT

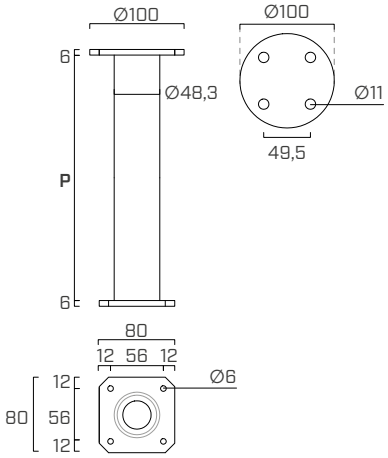
| CODE | H [mm] [in] | P [mm] [in] | top plate [mm] [in] | top holes [n. x mm] [n. x in] | bottom plate [mm] [in] | rod Ø x L [mm] [in] | pcs |
|---|---|---|---|---|---|---|---|
| **P20300** | 312 *12 5/16* | 300 *11 3/4* | 100 x 100 x 8 *4 x 4 x 0.31* | 4 x Ø11 *4 x Ø0.43* | 80 x 80 x 6 *3 1/8 x 3 1/8 x 0.24* | M24 x 170 *0.95 x 6 3/4* | 1 |
| **P20500** | 512 *20 3/16* | 500 *19 3/4* | 100 x 100 x 8 *4 x 4 x 0.31* | 4 x Ø11 *4 x Ø0.43* | 80 x 80 x 6 *3 1/8 x 3 1/8 x 0.24* | M24 x 170 *0.95 x 6 3/4* | 1 |

Screws are not included and must be ordered separately.

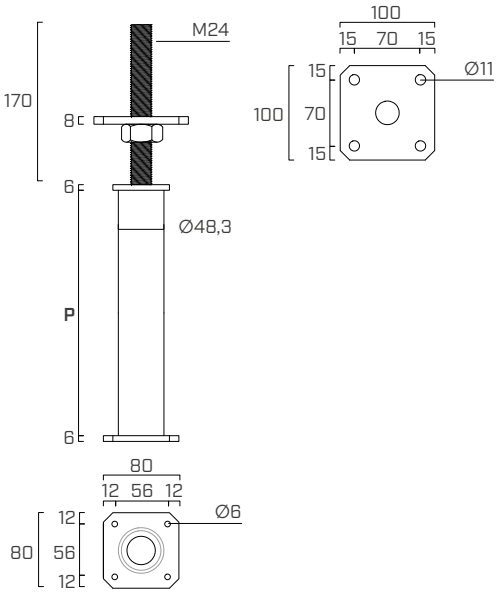



## GEOMETRY

P10




P20

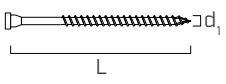



## FASTENERS

C4 EVO COATING

**HBS PLATE EVO** - C4 EVO pan head screw

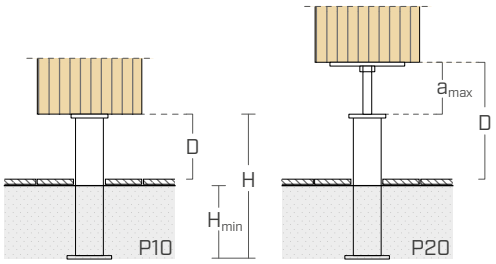
| CODE | $d_1$ [mm] | L [mm] | b [mm] | TX | pcs |
|---|---|---|---|---|---|
| **HBSPLEVO880** | 8 | 80 | 55 | TX 40 | 100 |



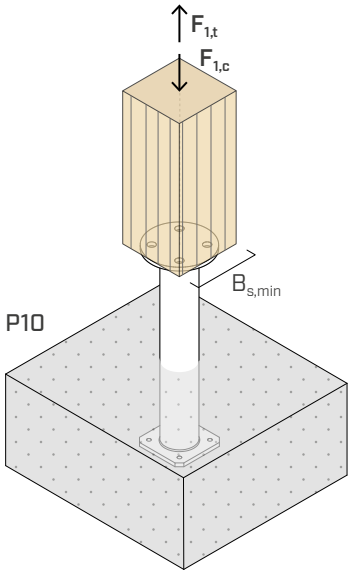
## INSTALLATION ON CONCRETE

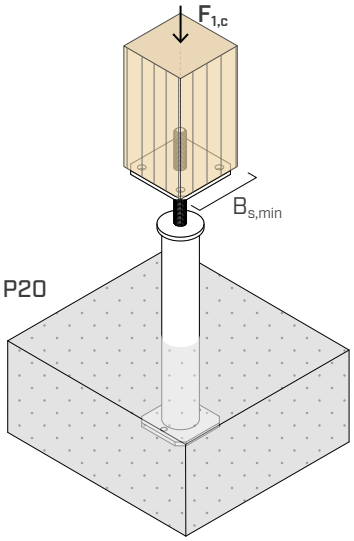
| | CODE | H | $H_{min}$ | $a_{max}$ (*) | $D_{max}$ |
|---|---|---|---|---|---|
| | | [mm] | [mm] | [mm] | [mm] |
| P10 | **P10300** | 312 | 156 | - | **156** |
| | **P10500** | 512 | 256 | - | **256** |
| P20 | **P20300** | 312 | 156 | 70 | **193-226** |
| | **P20500** | 512 | 256 | 70 | **293-326** |

(*) $a_{min}$ ≈ 35÷40 mm (top plate + nut + welding space).




## STRUCTURAL VALUES




P10

| | | | | | | COMPRESSION | | | | | | TENSION | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CODE | $B_{s,min}$ | H | $H_{min}$ | fasteners for timber | | $R_{1,c\ k\ timber}$ | | $R_{1,c\ k\ steel}$ | | | | $R_{1,t\ k\ timber}$ | |
| | [mm] | [mm] | [mm] | type | pcs - Ø x L [mm] | [kN] | $\gamma_{timber}$ | [kN] | $\gamma_{steel}$ | [kN] | $\gamma_{steel}$ | [kN] | $\gamma_{timber}$ |
| **P10300** | ☐ 100 x 100 | 312 | 156 | HBS PLATE EVO Ø8 | 4 - Ø8x80 | **98,6** | $\gamma_{MT}$ (1) | **78,7** | $\gamma_{M0}$ | **107,0** | $\gamma_{M1}$ | **6,2** | $\gamma_{MC}$ (2) |
| **P10500** | ○ Ø100 | 512 | 256 | | 4- Ø8x160 | | | | | **99,3** | | **14,6** | |

P20

| | | | | | | | COMPRESSION | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CODE | $B_{s,min}$ | H | $H_{min}$ | $a_{max}$ | fasteners for timber | | $R_{1,c\ k\ timber}$ | | $R_{1,c\ k\ steel}$ | | | |
| | [mm] | [mm] | [mm] | [mm] | type | pcs - Ø x L [mm] | [kN] | $\gamma_{timber}$ | [kN] | $\gamma_{steel}$ | [kN] | $\gamma_{steel}$ |
| **P20300** | ☐ 100 x 100 | 312 | 156 | 70 | HBS PLATE EVO Ø8 | 4 - Ø8x80 | **93,7** | $\gamma_{MT}$ (1) | **59,5** | $\gamma_{M0}$ | **106,0** | $\gamma_{M1}$ |
| **P20500** | | 512 | 256 | 70 | | | | | | | **106,0** | |

### NOTES

(1) $\gamma_{MT}$ partial coefficient of the timber.

(2) $\gamma_{MC}$ partial coefficient for connections.

### GENERAL PRINCIPLES

- The characteristic values are consistent with EN 1995-1-1:2014 and in accordance with ETA-10/022 and valid for a minimum anchoring depth in the concrete casting of $H_{min}$.
- Design values can be obtained from characteristic values as follows:

$$R_d = min \begin{cases} \frac{R_{i,k\ timber} \cdot k_{mod}}{\gamma_M} \\ \frac{R_{i,k\ steel}}{\gamma_{Mi}} \end{cases}$$

The coefficients $k_{mod}$, $\gamma_M$ and $\gamma_{Mi}$ 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.

- A timber density of $\rho_k$ = 350 kg/m$^3$ was considered for the calculation process.
- Dimensioning and verification of timber and concrete elements must be carried out separately.

### UK CONSTRUCTION PRODUCT EVALUATION

- UKTA-0836-22/6374.