

ST3

Steel Column Base

The ST3 application allows the verification of unbraced base plates exposed to the internal forces N (compression) in the connection, the moment M_y and the shear forces V_z (V_y only for anchor check). The base plate is supported by a mortar layer on concrete.

Double-T steel profile sections are permitted.

Standards

- DIN 18800
- DIN EN 1993
- ÖNORM EN 1993

The software application performs the following verifications:

- Verification of the base plate and the bed joint according to component model of the EN 1993-1-8.
- Transfer of the shear forces via friction or mechanical shearing protections (profile and flat steel dowels)
- Verification of the welding seams (circumferential fillet weld) in the connections of the column to the base plate and of the base plate to the dowels
- DIN 18800: Calculation of the maximum tie rod force applying to the base plate under moment loading (Kahlmeyer, Thiele/Lohse).

Interfaces

Load transfer from STS+ Single-span Steel Column and S7+ Portal Frame

Steel	
structural steel	GammaM0= 1,0
S235	S235
Bearing	
C 20/25	fcd = 11,33 N/mm2
Action	
Design loads	>>
Column	
Column	HEA 200
Base plate	
Base plate	Length= 400,0 mm
Thickness= 20,0	Width = 210,0 mm
awS= 3,0	awF= 3,0 mm
	Joint thckn.= 20,0 mm
Betaj = 0,667	
Fac,A1/A0= 1,500	fjd = 11,34 N/mm ²
Anchors at the base plate	
Anchor pattern	
<input type="checkbox"/> Decrease with 0.85 acc.to Grf.3.6.1 (3)	
Transfer of the shear forces	
ignore	>> ignore
Eta = 1,00 < 1	

