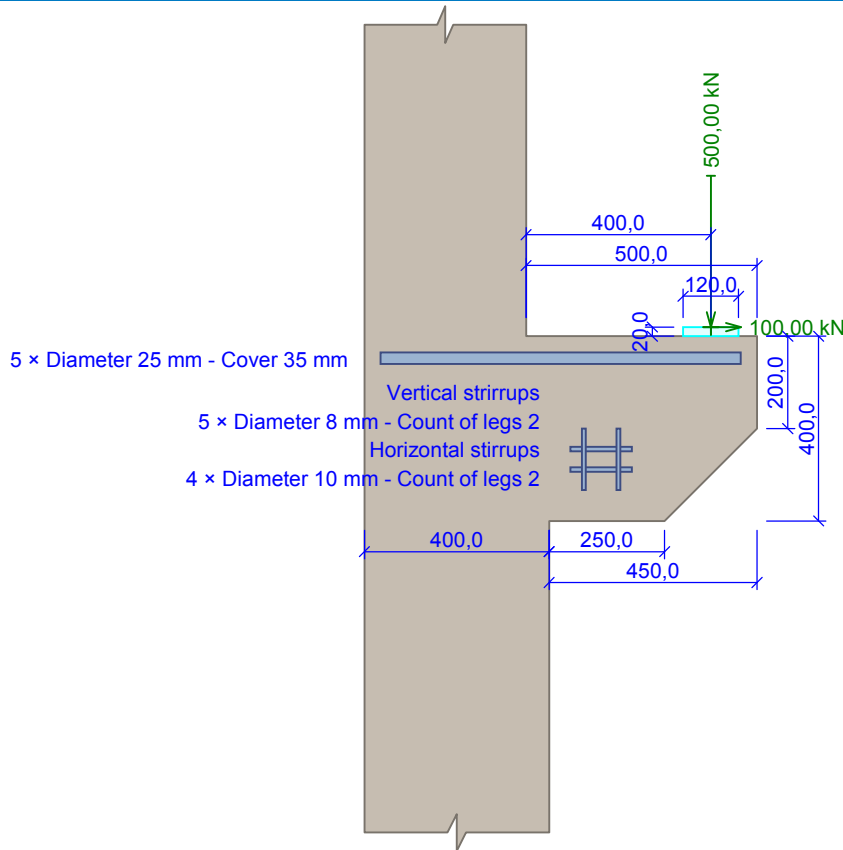


## Direct supported corbel



### Dimensions

Corbel length - top :  
 $l_2 = 500,0$  mm  
Corbel length :  
 $l_c = 450,0$  mm  
Corbel height :  
 $h_c = 400,0$  mm  
Corbel height - front :  
 $h_1 = 200,0$  mm  
Corbel length - bottom :  
 $l_1 = 250,0$  mm  
Column width :  
 $l = 400,0$  mm  
Width :  
 $b = 350,0$  mm

### Slide plate

Height :  
 $\Delta h = 20,0$  mm  
Length :  
 $l_p = 120,0$  mm  
Width :  
 $b_p = 300,0$  mm

### Materials

Exposure class : X0  
Concrete : C 25/30  
Longitudinal reinf. : B500  
Shear reinf. : B500

### Loading

Vertical force :  $F_{Ed} = 500,00$  kN  
Horizontal force :  $H_{Ed} = 100,00$  kN  
Eccentricity :  $a_c = 400,0$  mm

### Reinforcement

5 x Diameter 25 mm - Cover 35 mm

#### Vertical stirrups

5 x Diameter 8 mm - Count of legs 2

#### Horizontal stirrups

4 x Diameter 10 mm - Count of legs 2

### Results

Main tension force  $F_t = 428,6$  kN  
Required area of main reinforcement  $A_{sl,req} = 985,9$  mm<sup>2</sup>  
Specified area of main reinforcement  $A_{sl} = 2\,454$  mm<sup>2</sup>  $\geq A_{sl,req} = 985,9$  mm<sup>2</sup>  $\Rightarrow$  **PASS** 40,2 %  
Required area of vertical reinf.  $A_{sv,req} = 359,4$  mm<sup>2</sup>  
Specified area of vertical reinforcement  $A_{sv} = 502,7$  mm<sup>2</sup>  $\geq A_{sv,req} = 359,4$  mm<sup>2</sup>  $\Rightarrow$  **PASS** 71,5 %  
It required at least 287,5 mm<sup>2</sup> (3x stirrup) place in the middle three-quarters of the area between the column and the slide plate  
Required area of horizontal reinf.  $A_{sh,req} = 546,8$  mm<sup>2</sup>  
Specified area of horizontal reinforcement  $A_{sh} = 628,3$  mm<sup>2</sup>  $\geq A_{sh,req} = 546,8$  mm<sup>2</sup>  $\Rightarrow$  **PASS** 87,0 %

**87,0 % Pass**