

MEMO 522b

BSF 300

REINFORCEMENT IN BEAM END WITH  
MAXIMUM LOAD 300KN  
DESIGN

Dato: 17.04.2013

Siste rev.: 24.05.2016

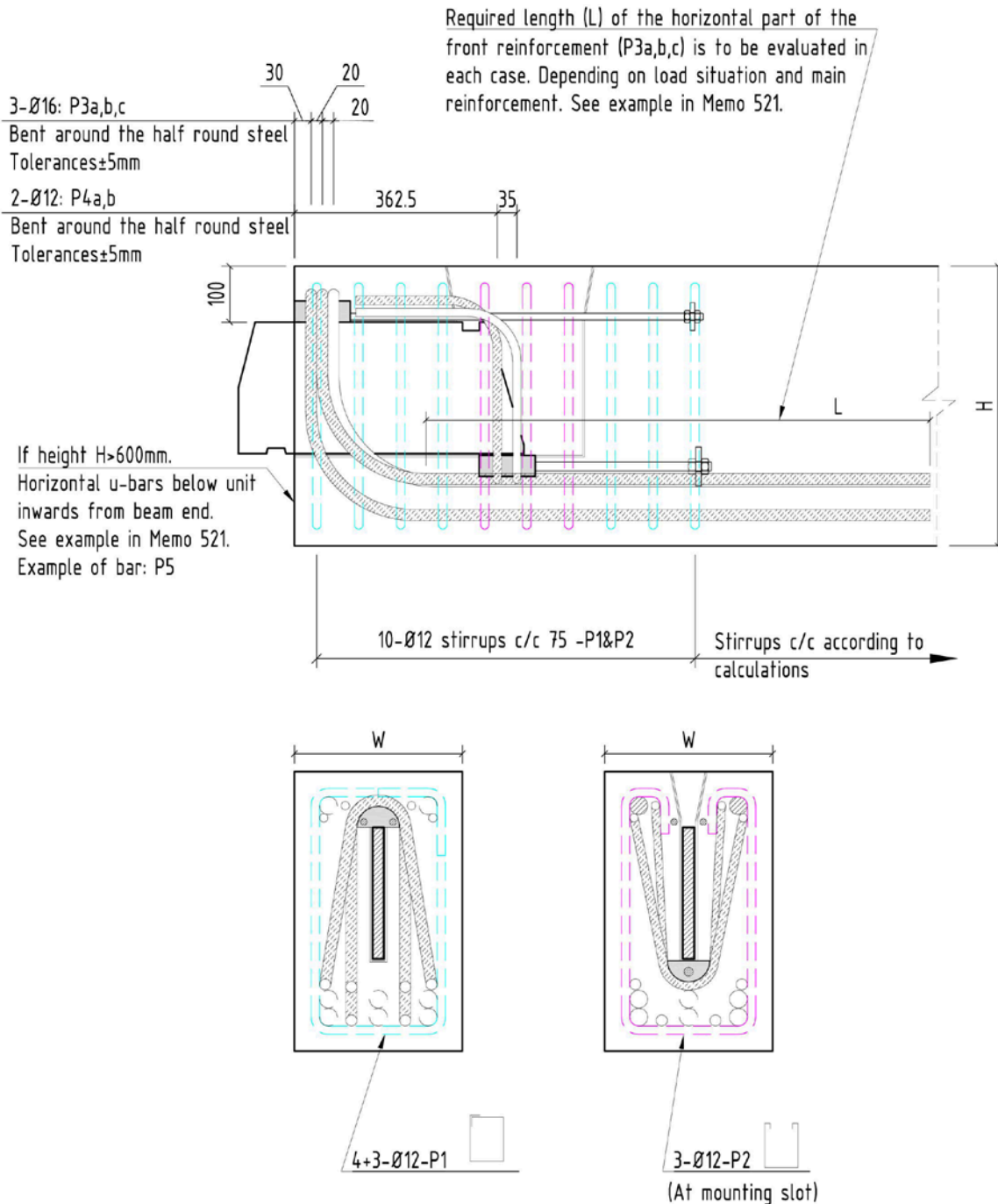
Dok. nr.: K4-10/522bE

Sign.: sss

Sign.: sss

Control: ps

## BSF 300 - REINFORCEMENT IN BEAM END WITH MAXIMUM LOAD 300KN



**Figure 1: Reinforcement in beam end.**

The basis for the illustrated reinforcement is found in the example calculations in Memo521. The amount of reinforcement and final shape of several of the bars has to be evaluated in each case. This can be done according to the procedures outlined in the Memo. Concrete quality C35 and beam dimension:

W×H=300×500 is used in the example calculation. This corresponds to the approximate minimum cross section of the beam in order to utilize the full capacity of the unit.

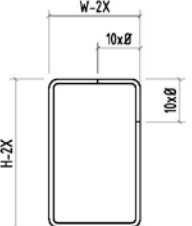
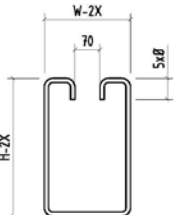
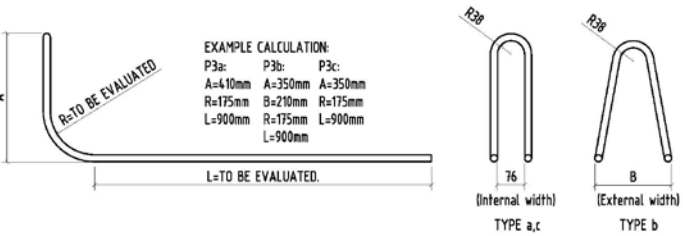
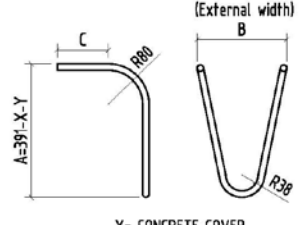
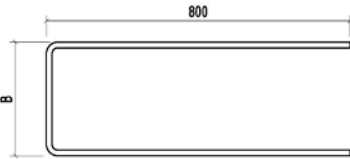
Pos.	Ø	No. pr. unit	Bar schedule	Grade
P1	Ø12	7	 <p>X= CONCRETE COVER EXAMPLE CALCULATION: H-2X=500-2x30=440mm W-2X=300-2x30=240mm 10Ø=120mm</p>	500C (EC2, Annex C)
P2	Ø12	3	 <p>X= CONCRETE COVER EXAMPLE CALCULATION: H-2X=500-2x30=440mm W-2X=300-2x30=240mm 5Ø=50mm</p>	500C (EC2, Annex C)
P3a,b,c	Ø16	1+1+1	 <p>EXAMPLE CALCULATION: P3a: P3b: P3c: A=410mm A=350mm A=350mm R=175mm B=210mm R=175mm L=900mm R=175mm L=900mm L=900mm</p> <p>R=TO BE EVALUATED. L=TO BE EVALUATED.</p> <p>(Internal width) 76 (External width) B TYPE a,c TYPE b</p>	500C (EC2, Annex C)
P4a,b	Ø12	1+1	 <p>EXAMPLE CALCULATION: P4a: P4b: A=340mm A=315mm B=130mm B=210mm C=165mm C=200mm</p> <p>X= CONCRETE COVER Y= TO BE DECIDED</p>	500C (EC2, Annex C)
P5	Ø12		 <p>In beams with H&gt;600mm. Number to be decided. B=to be decided.</p>	500C (EC2, Annex C)

Table 1: List of reinforcement.

REVISION HISTORY	
Date:	Description:
17.04.2013	First Edition (for ETA)
12.06.2013	Updated before ETA. Corrected reinforcement quality notation from: B500C to 500C.
28.08.2013	Included revision signature.
27.02.2015	Included a nut on the front side of the steel plate anchoring the threaded bars. (To ensure correct position of the plate when casting the concrete).
24.05.2016	New template