

## Product data sheet – HB flat shearing angle

### Product description

The HB flat shearing angle (wood-concrete) is a bracket connector for absorbing shearing forces that was specifically developed for modern timber construction. Its low height means it is ideally suited to use in timber frame construction. The pressure plate allows the occurring loads to be optimally conducted into the concrete.

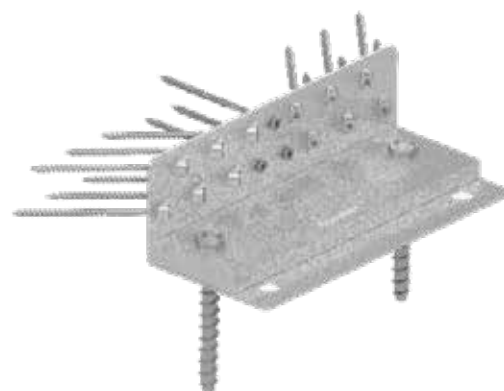
### Material

- HB flat shearing angle: Galvanised S250
- Thickness of the HB flat shearing angle's material: 3 mm
- Pressure plate of the HB flat shearing angle: Galvanised S235
- Thickness of the HB flat shearing angle's pressure plate's material: 12 mm



### Advantages

- For assembly on concrete
- Very high shear load-bearing capacity thanks to a new fixing concept
- Fewer connectors required
- In combination with the pressure plate, tensile forces can also be absorbed when fixing in concrete



### Certification

- European Technical Assessment ETA-19/0020



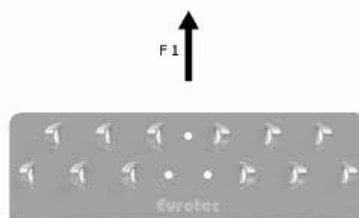
### Product table

HB flat shearing angle			
Art. no.	Designation	Dimensions [mm] <sup>a)</sup>	PU
954087	HB flat shearing angle	100 x 230 x 70	1
954111	Shearing angle pressure plate	230 x 68 x 12	1

a) Length x width x depth

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### Static values



Load direction F1					
	Force per shearing angle	Connection means			Steel
		Two rock concrete screws	Two bolt anchors	PT SK Ø 5 x 120	S355
	$F_{1,Rk}$ [kN]	$F_{t,Rk}$ [kN]	$k_{th}$	piece	$L_D$ [mm]
230 x 100* shearing angle + 230 base plate + two M12 screws near the bending line	30	120	2	12 pieces	10

\* Values relate to six 5 x 120 screws and three 5 x 25 screws per side



### Load direction F2/3

$F_{23,Rk}$  per 230 x 100 shearing angle with a full screw connection\* / wood-concrete connection or steel connection,  $p_k = 350 \text{ kg/m}^3$  (six 5 x 120 screws and three 5 x 25 screws per vertical side):

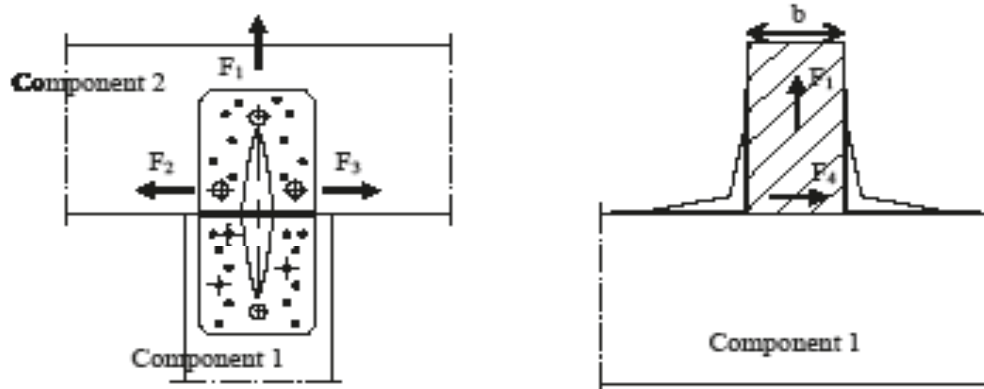
$$F_{23,Rk} = \min \{40 \text{ kN}; n_{ef} \cdot F_{v,screw,Rk}\}$$

where  $n_{ef} = 1.89$  for two screws near the bending line,  $n_{ef} = 1.48$  for two screws away from the bending line

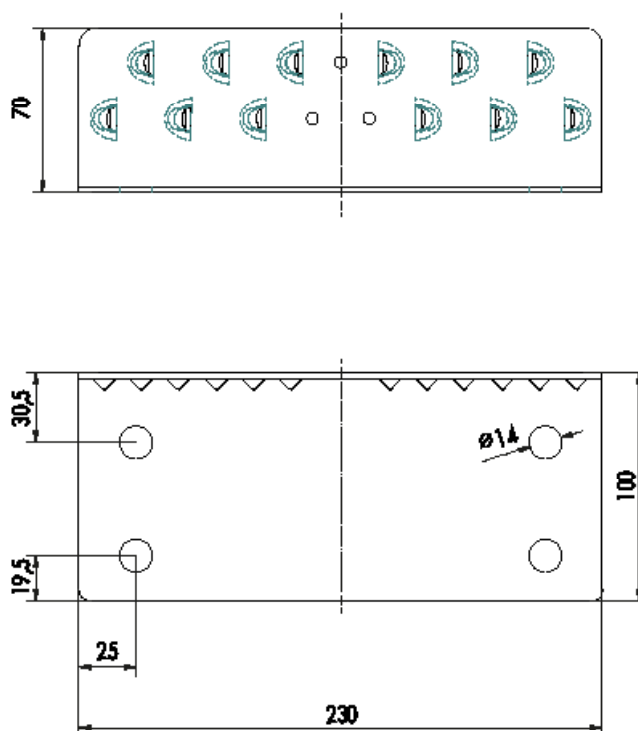
$F_{4,Rk}$  per 230 x 100 shearing angle with a full screw pattern\* / wood-concrete connection or steel connection,  $p_k = 350 \text{ kg/m}^3$  (six 5 x 120 screws and three 5 x 25 screws per vertical side):

$$F_{4,Rk} = \min \{40 \text{ kN}; n_B \cdot F_{v,screw,Rk}\}$$

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Drawing



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### Instructions for use

For anchoring in wood, a total of 12 slanted screw connection holes and three 90° holes are available per shearing angle. Anchoring in wood takes place with our Paneltwistec 5 x 120 mm and angle-bracket screw 5 x 25 screws. Anchoring in concrete is carried out using the holes (ø 14 mm) provided for this purpose with the rock concrete screw ø 12,5 mm or bolt anchors ø 12 mm.

### Application image



If you are not familiar with how this product is used, and particularly with the product's intended use, please contact our Application Technology department (Technik@eurotec.team).