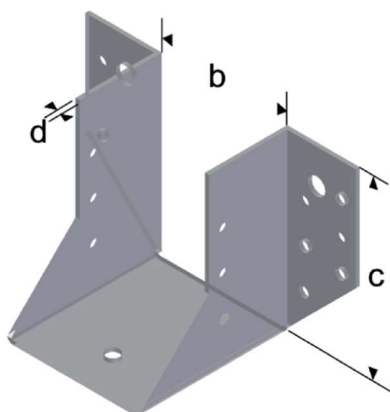
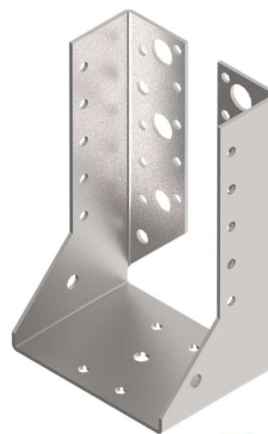


# 452286-JOISTHANGER INV 90X145 CE

ESSVE Joist hangers are intended for anchoring wooden beams and joists in the same level, both wood against wood and wood against concrete or masonry.

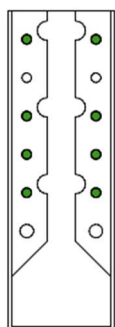
Made of 1.5 or 2.0 mm hot-dip galvanised sheet steel. The beam shoes are equipped with 5 mm holes for nails/screws and 9 mm or 11 mm holes for bolts. There is also a 7 mm hole on the beam shoe flange that goes under the beam. Beam shoes are available in two designs, one with external tabs, Standard, and one with internal tabs, Type I.



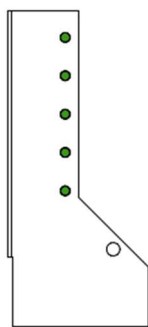
Dimensions [mm]			Pattern 1		Pattern 2	
			Header holes	Joist holes	Header holes	Joist holes
b	c	d	Anchor nail	Anchor nail	Anchor nail	Anchor nail
90	145	2	8	10	8	5

Sample	Characteristic resistance			Allowable load
	$R_{down,k}$ [kN]	$R_{lat,k}$ [kN]	$R_{up,k}$ [kN]	$F_{down,to}$ [kg]
1	10.3	7.9	10.3	455
2	9.1	5.8	6.5	400

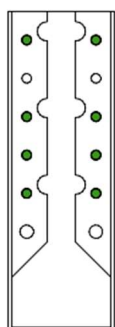
- Values refer to fittings as a system with ESSVE 4.0x40 anchor nails in accordance with ETA-23/0235
- In cases where the beam shoe is only attached to one side of the primary beam or a 20% difference between the transverse forces each beam shoe is exposed to,  $M_v = F_d * \left( \frac{B_{PB}}{2} + 30mm \right)$  the torque must be taken into account.
- The secondary beam must be at least 20 mm higher than the beam shoe (c+20 mm).
- $R_{2/3}$  refers to the system's resistance to the acting transverse force  $F_{2/3}$  placed 0.2 times the height of the secondary beam above the centre of the nails in the beam.
- When horizontal and vertical transverse force act  $\left( \frac{F_{up/down,d}}{R_{up/down,d}} \right)^2 + \left( \frac{F_{lat,d}}{R_{lat,d}} \right)^2 \leq 1,0$  simultaneously, the condition shall be fulfilled.
- The allowable load is shown in unit [kg] and can be applied directly. All safety factors according to Eurocode 5 are already included with partial coefficient ( $\gamma_M = 1.3$ ), load duration and moisture factor ( $k_{mod} = 0.8$ ) as well as assumed load factor for ultimate limit state ( $\gamma_{load} = 1.4$ ) according to EN 1990



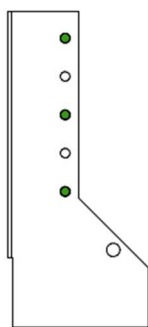
PATTERN 1



PATTERN 1



PATTERN 2



PATTERN 2

