Heavy-duty HVP 88450

Application
Heavy-duty concealed beam connector for wood-wood connections.

Product Specifications

Dimensions w × h × d	120 x 500 x 20
Number of screws	40
Screw size	ø 8 x 100 – 200
Minimum timber section with screw ø 8 × 160 (mm) header	170 x 520
Joist	140 x 520
Characteristic load capacity* ø 8 × 160	201.15
ø 8 x 200	248.84
Carton quantity	4
CE	*

* $F_{2,Rk}$ (kN) for GL24h with fully threaded screws: ø 8 x 160 with effective thread length of 150 mm and ø 8 x 200 with effective thread length of 190 mm. For other screws and thread lengths or wood based materials: cf. design manual.

Product Description

Main and secondary beam connection wood to wood
Main and secondary beam connection wood to wood with PITZL HVP 88450.1000 according to ETA-15/0187. The connection to secondary beam with 20 SFS HT (Heco) screws with a diameter of 8.0 mm and a length of 160/180/200 mm. Connection to main beam with 20 SFS HT (Heco) screws with a diameter of 8.0 mm and a length of 160/180/200 mm. The lift-off protection with 2 pcs. SFS HT cylinder head screws with a diameter of 6.0 mm and a length of 20 mm is required. A transverse tension lock is/is not to be provided in the area of the main/secondary beam. The main beam is/is not torsional fixed or sufficiently held. The serviceability has to be proven by the stiffness characteristics. A fire resistance time of 60 minutes is to be solved by appropriate design measures.

The characteristic load bearing capacity according to timber strength class C24 are:
$F_{1,Rk}$ = 48.32 / 54.09 / 59.78 kN – Force acting in direction of the secondary beam
$F_{2,Rk}$ = 186.38 / 208.61 / 230.57 kN – Force acting in direction of insertion
$F_{3,Rk}$ = 36.40 kN – Force acting against direction of insertion
$F_{4,Rk}$ = 64.54 kN – Force acting perpendicular to direction of insertion
$M_{tor,J,Rk}$ = 4782.54 kN – Rotation moment in the axis of the secondary beam

The characteristic load bearing capacity according to timber strength class GL24h are:
$F_{1,Rk}$ = 52.15 / 58.37 / 64.52 kN – Force acting in direction of the secondary beam
$F_{2,Rk}$ = 201.15 / 225.14 / 248.84 kN – Force acting in direction of insertion
$F_{3,Rk}$ = 36.40 kN – Force acting against direction of insertion
$F_{4,Rk}$ = 67.69 kN – Force acting perpendicular to direction of insertion
$M_{tor,J,Rk}$ = 5015.97 kN – Rotation moment in the axis of the secondary beam

The number and arrangement of the connectors as well as the installation and assembly must be taken from the specifications in accordance with ETA-15/0187. Basically, the requirements of DIN EN 1995 must be fulfilled.

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Static Values

Effective thread length (ℓ_{ef})		Minimal section (mm)		Characteristic load capacity R_K (KN)							
				Solid wood C24 (ρ_k = 350 kg/m³)				Glued-laminated timber GL24h (ρ_k = 385 kg/m³)			
Screws	ℓ_{ef} (mm)	H	J	$F_{2,RK}$	$F_{3,RK}$	$F_{4,RK}$	$F_{1,RK}$	$F_{2,RK}$	$F_{3,RK}$	$F_{4,RK}$	$F_{1,RK}$
ø 8 x 160	150	170 x 520	140 x 520	186.38	36.40	64.54	48.32	199.06	36.40	67.25	51.61
ø 8 x 180	170	190 x 550	140 x 550	208.61			54.09	222.79			57.76
ø 8 x 200	190	210 x 580	140 x 580	230.57			59.78	246.25			63.85

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