Heavy-duty HVP 88540

Application
Heavy-duty concealed beam connector for wood-wood connections. The width of 140 mm is optimally suitable for wide beams (from 170 mm) under very high loads.

Product Specifications	
Dimensions w × h × d	140 x 400 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 420
Joist	170 x 420
Characteristic load capacity* ø 8 × 160	201.15
ø 8 x 200	248.84
Carton quantity	4
CE	*

* F2,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. Screws up to 200 mm length and the expanded heavy-duty series 885 enable a high augmentation of the load capacity.

Product Description

Main and secondary beam connection wood to wood
Main and secondary beam connection wood to wood with PITZL HVP 88540.1000 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
$M_{tor,J,Rk}$ = 3562.70 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
$M_{tor,J,Rk}$ = 3736.59 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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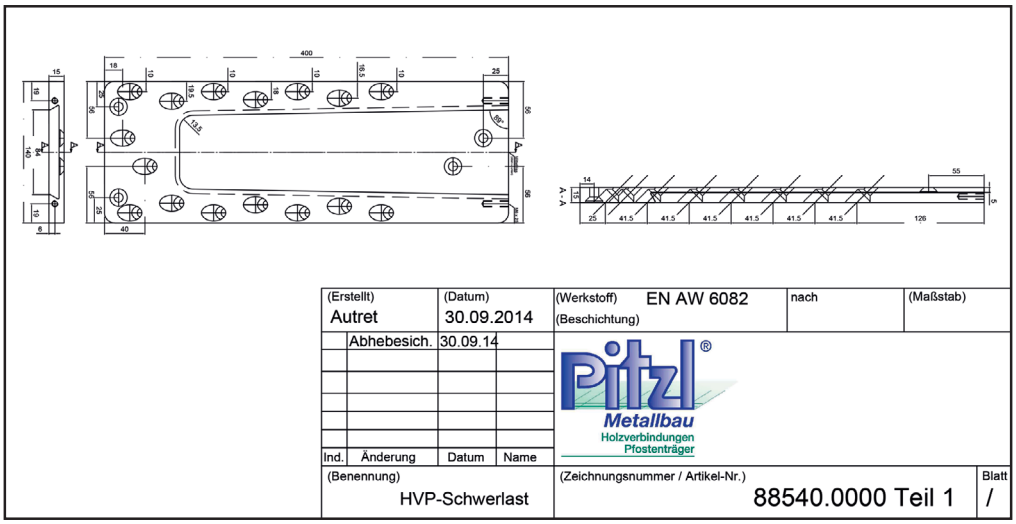
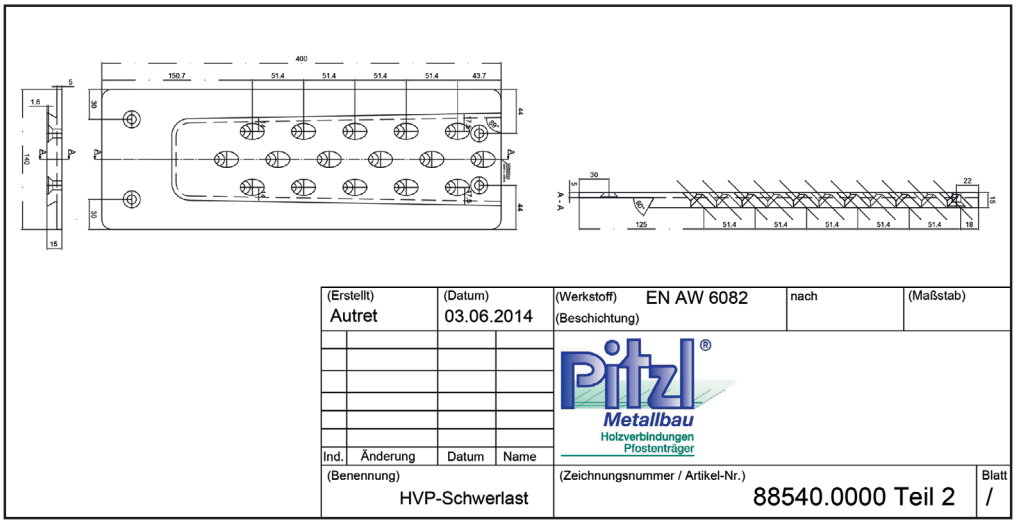
Static Values

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 420	170 x 420	186.38	36.40	64.54	48.32	199.06	36.40	67.25	51.61
ø 8 x 180	170	190 x 450	170 x 450	208.61			54.09	222.79			57.76
ø 8 x 200	190	210 x 480	170 x 480	230.57			59.78	246.25			63.85





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