



3.1 Characteristic load capacity for solid wood C24

F_{2,Rk}: Characteristic load-capacity in the direction of insertion for a centered load (e₂ ≤ e_{lim})

Failure type of the tables : Pull-out of the wood screws. Valid for all screws for structural wood construction according to ETA-15/0187. Characteristic load-capacity of aluminium (F_{2,ALU,Rk}): cf. table 1 p. 16

For solid wood C24 with ρ_k= 350 kg/m³

HVP connectors with screws Ø 4.5

HVP connectors				F _{2,Rk} in kN with screws Ø 4.5:		
Series	Item no.	Dimensions W x H x T (mm)	Material	50 mm	60 mm	80 mm
880	88004.1000	25 x 40 x 12	C24	2.26	2.67	3.54
	88006.1000	25 x 60 x 12	C24	4.52	5.33	7.08
	88008.1000	25 x 80 x 12	C24	6.79	8.00	10.6
	88010.1000	25 x 100 x 12	C24	9.05	10.7	14.2
	88107.1000	40 x 70 x 12	C24	6.79	8.00	10.6
881	88109.1000	40 x 90 x 12	C24	9.05	10.7	14.2
	88111.1000	40 x 110 x 12	C24	11.3	13.3	17.7
	88113.1000	40 x 130 x 12	C24	13.6	16.0	21.2
	88115.1000	40 x 150 x 12	C24	18.1	21.3	28.3



HVP connectors with screws Ø 5

HVP connectors				F _{2,Rk} in kN with screws Ø 5:		
Series	Item no.	Dimensions W x H x T (mm)	Material	60 mm	80 mm	100 mm
882	88210.1000	60 x 100 x 12	C24	18.4	24.4	30.2
	88214.1000	60 x 140 x 12	C24	29.4	39.0	48.4
883	88318.1000	80 x 180 x 12	C24	44.1	58.5	72.6
	88322.1000	80 x 220 x 12	C24	58.8	78.0	96.8

Double HVP connectors with screws Ø 5

HVP connectors				F _{2,Rk} in kN with screws Ø 5:		
Series	Item no.	Dimensions W x H x T (mm)	Material	60 mm	80 mm	100 mm
882	88210.2000	120 x 100 x 12	C24	36,7	48,8	60,5
	88214.2000	120 x 140 x 12	C24	58,8	78,0	96,8
883	88318.2000	160 x 180 x 12	C24	88,1	117,0	145,1
	88322.2000	160 x 220 x 12	C24	117,5	156,0	193,5

Heavy-duty HVP connectors with screws Ø 8

HVP connectors				F _{2,Rk} in kN with screws Ø 8:		
Series	Item no.	Dimensions W x H x T (mm)	Material	160 mm	180 mm	200 mm
884	88420.1000	120 x 200 x 20	C24	46.6	52.2	57.6
	88425.1000	120 x 250 x 20	C24	69.9	78.2	86.5
	88430.1000	120 x 300 x 20	C24	93.2	104.3	115.3
	88435.1000	120 x 350 x 20	C24	116.5	130.4	144.1
	88440.1000	120 x 400 x 20	C24	139.8	156.5	172.9
	88445.1000	120 x 450 x 20	C24	163.1	182.5	201.7
	88450.1000	120 x 500 x 20	C24	186.4	208.6	230.6
	88455.1000	120 x 550 x 20	C24	209.7	234.7	259.4
	88460.1000	120 x 600 x 20	C24	233.0	260.8	288.2
	885	88540.1000	140 x 400 x 20	C24	186.4	208.6
88545.1000		140 x 450 x 20	C24	233.0	260.8	288.2
88550.1000		140 x 500 x 20	C24	256.3	286.8	317.0
88555.1000		140 x 550 x 20	C24	279.6	312.9	345.9
88560.1000		140 x 600 x 20	C24	326.2	365.1	403.5

Double-Heavy-duty HVP connectors with screws Ø 8

HVP connectors				F _{2,Rk} in kN with screws Ø 8:		
Series	Item no.	Dimensions W x H x T (mm)	Material	160 mm	180 mm	200 mm
884	88420.2000	240 x 200 x 20	C24	93.2	104.3	115.3
	88425.2000	240 x 250 x 20	C24	139.8	156.5	172.9
	88430.2000	240 x 300 x 20	C24	186.4	208.6	230.6
	88435.2000	240 x 350 x 20	C24	233.0	260.8	288.2
	88440.2000	240 x 400 x 20	C24	279.6	312.9	345.9
	88445.2000	240 x 450 x 20	C24	326.2	365.1	403.5
	88450.2000	240 x 500 x 20	C24	372.8	417.2	461.1
	88455.2000	240 x 550 x 20	C24	419.4	469.4	518.8
	88460.2000	240 x 600 x 20	C24	466.0	521.5	576.4

Values valid for the following effective thread-lengths (l_{ef}):

Screws length	HVP-Series 880 - 881		882 - 883			884 - 885		
	Ø	4.5	5.0		8.0			
l _{ef}	45	54	54	74	94	150	170	190

Remark : The values are valid for glue-laminated timber GL24c too, since ρ_k=

350 kg/m³ Calculation of the design value:

For pull-out of the screws: according to Eurocode 5 or a similar national Timber Code. For aluminium failure: according to Eurocode 9 or a similar national AluminiumCode. The littlest value is decisive.

