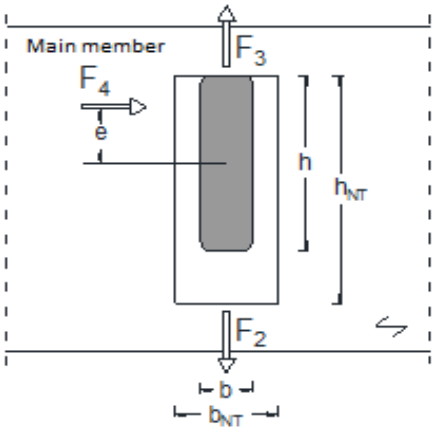
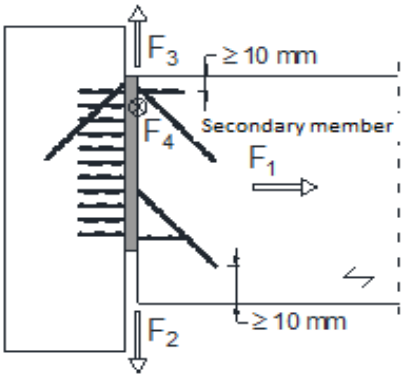
GH Top UV 80

ETA 11/0036





For further design notes, refer to UV connectors in general, structural calculations

Dimensions

Timber-to-timber	60x215x16
Timber-to-concrete	60x215x24

Characteristic resistances per connector in kN All holes filled with screws

				Screws 45°					
				6x100	6x120	6x140	6x160	6x180	6x200
Screws 90°	5x50	$F_{1,Rk}$		2,90	2,90	2,90	2,90	2,90	2,90
		$F_{2,Rk}$		**42,4**	**52,2**	**60,0**	**64,0**	**64,0**	**64,0**
		$F_{3,Rk}$		5,31	6,53	7,50	8,72	9,72	9,72
		$F_{4,Rk}$	e = 0 mm	10,4	10,4	10,4	10,4	10,4	10,4
			e = 108 mm	3,37	3,37	3,37	3,37	3,37	3,37
	5x60	$F_{1,Rk}$		3,53	3,53	3,53	3,53	3,53	3,53
		$F_{2,Rk}$		**42,4**	**52,2**	**60,0**	**68,0**	**68,0**	**68,0**
		$F_{3,Rk}$		5,31	6,53	7,50	8,72	9,72	9,72
		$F_{4,Rk}$	e = 0 mm	10,9	10,9	10,9	10,9	10,9	10,9
			e = 108 mm	3,53	3,53	3,53	3,53	3,53	3,53
	5x70	$F_{1,Rk}$		4,16	4,16	4,16	4,16	4,16	4,16
		$F_{2,Rk}$		**42,4**	**52,2**	**60,0**	**69,8**	**71,9**	**71,9**
		$F_{3,Rk}$		5,31	6,53	7,50	8,72	9,72	9,72
		$F_{4,Rk}$	e = 0 mm	11,3	11,3	11,3	11,3	11,3	11,3
			e = 108 mm	3,68	3,68	3,68	3,68	3,68	3,68
Minimum height of secondary member in mm				215	230	245	260	270	285
Minimum width of secondary member in mm				80					

Resistance design value: $F_{i,Rd} = F_{i,Rk} \cdot k_{mod} / \gamma_{M,Timber}$ where $\gamma_{M,Timber} = 1.3$

Design value of the resistance in load case F_3 for timber-to-concrete/steel joint: $F_{3,Rd} = 6 / 1.25 = 4.8$ kN

Characteristic resistances per connector in kN, partially screwed

				Screws 45°					
				6x100	6x120	6x140	6x160	6x180	6x200
Screws 90°	5x50	$F_{1,Rk}$		2,90	2,90	2,90	2,90	2,90	2,90
		$F_{2,Rk}$		**21,2**	**26,1**	**30,0**	**34,1**	**34,1**	**34,1**
		$F_{3,Rk}$		5,31	6,53	7,50	8,72	9,72	9,72
		$F_{4,Rk}$	e = 0 mm	6,94	6,94	6,94	6,94	6,94	6,94
			e = 108 mm	2,78	2,78	2,78	2,78	2,78	2,78
	5x60	$F_{1,Rk}$		3,53	3,53	3,53	3,53	3,53	3,53
		$F_{2,Rk}$		**21,2**	**26,1**	**30,0**	**34,9**	**36,2**	**36,2**
		$F_{3,Rk}$		5,31	6,53	7,50	8,72	9,72	9,72
		$F_{4,Rk}$	e = 0 mm	7,25	7,25	7,25	7,25	7,25	7,25
			e = 108 mm	2,90	2,90	2,90	2,90	2,90	2,90
	5x70	$F_{1,Rk}$		4,16	4,16	4,16	4,16	4,16	4,16
		$F_{2,Rk}$		**21,2**	**26,1**	**30,0**	**34,9**	**38,4**	**38,4**
		$F_{3,Rk}$		5,31	6,53	7,50	8,72	9,72	9,72
		$F_{4,Rk}$	e = 0 mm	7,57	7,57	7,57	7,57	7,57	7,57
			e = 108 mm	3,03	3,03	3,03	3,03	3,03	3,03
Minimum height of secondary member in mm				215	230	245	260	270	285
Minimum width of secondary member in mm				80					

Resistance design value: $F_{i,Rd} = F_{i,Rk} \cdot k_{mod} / \gamma_{M,Timber}$ where $\gamma_{M,Timber} = 1.3$

Design value of the resistance in load case F_3 for timber-to-concrete/steel joint: $F_{3,Rd} = 6 / 1.25 = 4.8$ kN