

Highest permissible loads in concrete C20/25

Multiple use for non-structural applications. Total safety factor as per ETAG 001 included (γ_M and γ_p). The maximum load per fixing point for multiple use for non-structural applications may, depending on national regulations, are below the approved load of the anchor. The approved loads per fixing point are regulated for their respective countries in the ETAG 001, Part 6.

Loads and performance data		Drop-in Anchor E/ES	M8x25	M8x30	M8x40	M10x30	M10x40	M12x50	M16x65	
Approved loads (C12/15 and C16/20)	appr. F	[kN]	1,2	-	-	-	-	-	-	
Approved loads (C20/25 to C50/60)	appr. F	[kN]	1,9	1,7	2,0	2,0	2,0	2,4	6,3	
Approved bending moments (Screw 4.6)	appr. M	[Nm]	6,4	6,4	6,4	12,8	12,8	22,2	56,9	
Approved bending moments (Screw 5.6)	appr. M	[Nm]	8,1	8,1	8,1	15,8	15,8	27,8	71,0	
Approved bending moments (Screw 5.8)	appr. M	[Nm]	10,9	10,9	10,9	21,1	21,1	37,1	94,9	
Approved bending moments (Screw 8.8)	appr. M	[Nm]	17,1	17,1	17,1	33,7	34,3	60,0	152,0	
Spacing and edge distance										
Effective anchorage depth	h_{ef}	[mm]	25	30	40	30	40	50	65	
Characteristic spacing	s_{cr}	[mm]	75	180	210	230	170	170	400	
Characteristic edge distance	c_{cr}	[mm]	38	90	105	115	85	85	200	
Minimum spacing ¹⁾	s_{min}	[mm]	50	60	80	100	100	120	150	
Minimum edge distance ¹⁾	c_{min}	[mm]	100	95	95	115	135	165	200	
Standard/Minimum thickness of concrete slab	$h_{min 2} / h_{min 1}$	[mm]	100/80	100	100	120	120	130	160	
Installation parameters										
Drill hole diameter	d_o	[mm]	10	10	10	12	12	15	20	
Diameter of clearance hole in the fixture	d_f	[mm]	9	9	9	12	12	14	18	
Depth of drill hole	h_o	[mm]	25	30	40	30	40	50	65	
Installation torque	$\leq T_{inst}$	[Nm]	8	8	8	15	15	35	60	
Minimum screwing depth ¹⁾	L_{sd}	[mm]	8	9	9	10	11	13	18	
Maximum screwing depth ¹⁾	L_{th}	[mm]	12	13	20	12	15	18	23	
Loads under fire exposure (C20/25 to C50/60)										
(for screw ≥ 4.8)	Approved loads R30	appr. F	[kN]	0,6	0,9	1,1	0,9	1,5	1,5	4,0
	Approved loads R60	appr. F	[kN]	0,6	0,9	0,9	0,9	1,5	1,5	4,0
	Approved loads R90	appr. F	[kN]	0,6	0,6	0,6	0,9	1,1	1,5	3,0
	Approved loads R120	appr. F	[kN]	0,5	0,5	0,5	0,7	0,9	1,2	2,4
(for screw ≥ 5.6)	Approved loads R30	appr. F	[kN]	0,6	0,9	1,5	0,9	1,5	1,5	4,0
	Approved loads R60	appr. F	[kN]	0,6	0,9	1,5	0,9	1,5	1,5	4,0
	Approved loads R90	appr. F	[kN]	0,6	0,9	0,9	0,9	1,5	1,5	3,7
	Approved loads R120	appr. F	[kN]	0,5	0,5	0,5	0,7	1,0	1,2	2,4
Characteristic spacing	s_{crfi}	[mm]	100	180	210	170	170	200	400	
Characteristic edge distance	c_{crfi}	[mm]	50	90	105	85	85	100	200	