Internal Threaded Sockets

Performance Data (C20/25 Concrete)									
Thread Diam mm	Characteristic Resistance kN		Design Resistance kN		Recommended Resistance kN		Spacing mm	Edge Distance mm	
	Tensile	Shear	Tensile	Shear	Tensile	Shear	Tensile & Shear	Tensile	Shear
8	25.6	9.0	12.2	7.2	8.7	5.7	135	80	90
10	35.5	14.0	16.9	11.2	12.1	8.5	180	90	125
12	43.5	21.0	20.7	16.8	14.8	11.3	200	100	160
16	76.9	39.0	36.6	31.2	26.1	14.2	250	125	270

Shear Resistance towards a free edge is for single anchors where Spacing ≥ 3 x Edge Distance
Loads are for Grade 5.8 Bolts and Grade 70 Stainless Steel Bolts

Reduced Design Resistance (kN) • Divide Resistance by 1.4 for Recommended Resistance

Edge Distance (C20/25 Concrete) for single anchors								
Edge mm	Tensile Resistance				Shear Resistance			
	M8	M10	M12	M16	M8	M10	M12	M16
45	8.5				3.6			
50	9.0	11.6			4.0			
55	9.5	12.3	14.2		4.4			
60	10.1	13.0	14.9		4.8			
65	10.6	13.6	15.6		5.2	5.8		
70	11.1	14.3	16.4	24.3	5.6	6.3		
80	12.2	15.6	17.8	25.3	6.4	7.2	8.4	
90		16.9	19.3	27.4	7.2	8.1	9.5	
100			20.7	29.4		9.0	10.5	
110				31.5		9.9	11.6	
120				33.5		10.8	12.6	
125				36.6		11.2	13.1	
140							14.7	16.2
160							16.8	18.5
180								20.8
200								23.1
220								25.4
250								28.9
270								31.2

Spacing (C20/25 Concrete)					
Spacing mm	Tensile Resistance per Pair of Anchors				
	M8	M10	M12	M16	
70	18.5				
80	19.4				
90	20.3				
100	21.2	26.3			
110	22.1	27.2			
120	23.0	28.2	33.1		
135	24.4	29.6	34.7		
150		31.0	36.2	58.6	
160		31.9	37.3	60.0	
170		32.9	38.3	61.5	
180		33.8	39.3	63.0	
190			40.4	64.4	
200			41.4	65.9	
210				67.3	
220				68.8	
230				70.3	
240				71.7	
250				73.2	

Influence of concrete strength

Concrete Strength		C20/25	C25/30	C30/37	C40/50	C50/60
Cylinder	N/mm²	20	25	30	40	50
Cube	N/mm²	25	30	37	50	60
Factor		1.00	1.10	1.22	1.41	1.55

When using concrete factors check all other information to ensure Steel Stength and Pull out Resistance is not exceeded

Steel Design Resistance for single anchor

		M8	M10	M12	M16	
Tension	kN	12.0	19.3	28.0	52.0	Grade 5.8 Bolts
	kN	13.9	21.4	31.5	58.8	Stainless Steel Grade 70
Shear	kN	7.2	11.2	16.8	31.2	Grade 5.8 Bolts
	kN	8.3	12.8	18.5	35.2	Stainless Steel Grade 70

Anchor mechanical properties

		M8	M10	M12	M16	
Nominal Tensile Strength	N/mm²	500	500	500	500	Zinc plated
		700	700	700	700	Stainless Steel
Yield Strength	N/mm²	400	400	400	400	Zinc plated
		450	450	450	450	Stainless Steel