

TAB+ OPT 1 CONCRETE BOLT SIESMIC C1 & C2

Features:

- Through fixing
- Approved for cracked and non-crack concrete
- Rapid Installation
- Hardened Steel with Zinc Plating, minimum 5um
- Fire tested class A1 resistant

Benefits:

- Quick and simple installation
- One anchor for concrete from C20/25 to C50/60
- Adjustable fixture thickness
- Removable for use with temporary structures



C1 & C2
SEISMIC



Concrete Ranges:	C20/C25 according to EN 206:2013+A1:2016
Certification:	European technical assessment 25/1029 Issued 25/02/2026

Product Range

Product Code	Anchor Length	Drill Hole Diameter	Anchor Length	Embedment Depth	Fixture Thickness	Embedment Depth	Fixture Thickness	Embedment Depth	Fixture Thickness	Fixture Clearance Hole	Torque Impact Screwdriver
	L	d _o	l	h _{nom}	t _{fix}	h _{nom}	t _{fix}	h _{nom}	t _{fix}	d _f	T _{imp,max}
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm
TAB06050+	50	6	50	35	15	55	-	-	-	8	160
TAB06060+	60		60	35	25	55	5	-	-		
TAB06075+	75		75	35	40	55	20	-	-		
TAB06100+	100		100	35	65	55	45	-	-		
TAB06120+	120		120	35	85	55	65	-	-		
TAB06150+	150		150	35	115	55	95	-	-		
TAB08060+	60	8	60	40	20	55	5	70	-	12	300
TAB08075+	75		75	40	35	55	20	70	5		
TAB08100+	100		100	40	60	55	45	70	30		
TAB08120+	120		120	40	80	55	65	70	50		
TAB08130+	130		130	40	90	55	75	70	60		
TAB08150+	150		150	40	110	55	95	70	80		
TAB10060+	60	10	60	55	5	70	-	85	-	14	400
TAB10075+	75		75	55	20	70	5	85	-		
TAB10100+	100		100	55	45	70	30	85	15		
TAB10120+	120		120	55	65	70	50	85	35		
TAB10150+	150		150	55	95	70	80	85	65		
TAB12075+	75	12	75	60	15	80	-	100	-	16	600
TAB12100+	100		100	60	40	80	20	100	-		
TAB12120+	120		130	60	70	80	50	100	30		
TAB12150+	150		150	60	90	80	70	100	50		
TAB14100+	100	14	100	65	35	85	15	115	-	18	650
TAB14130+	130		130	65	65	85	45	115	15		
TAB14150+	150		150	65	85	85	65	115	35		

Installation Data

Anchor Diameter			M6		M8			M10			M12			M14		
Nominal Embedment Depth	h_{nom}	[mm]	35	55	40	55	70	55	70	85	60	80	100	65	85	115
Effective Embedment Depth	h_{eff}	[mm]	27	44	31	43	56	43	55	68	47	64	81	51	68	94
Minimum Hole Depth	h_t	[mm]	$h_{nom} = 15mm$													
Minimum Concrete Thickness	h_{min}	[mm]	100	100	100	100	120	100	125	130	120	130	150	120	140	170
Minimum Spacing	s_{min}	[mm]	35	35	35	35	35	40	40	40	50	50	50	60	60	60
Minimum Edge Distance	c_{min}	[mm]	35	35	35	35	35	40	40	40	50	50	50	60	60	60
Torque Impact Screwdriver	$T_{imp,max}$	[Nm]	160	160	300	300	300	400	400	400	600	600	600	650	650	650
Design Spacing - Tension	$S_{cr,N,ucr}$	[mm]	$3 \times h_{ef}$													
Design Edge Distance - Tension	$C_{cr,N,ucr}$	[mm]	$1.5 \times h_{ef}$													

Load Data

Characteristics Resistance

Anchor Diameter			M6		M8		M10			M12			M14			
Non-Cracked Concrete																
N _{Rk}	Tensile	[kN]	6.5	7.0	7.0	10.0	18.0	11.0	19.0	24.0	15.8	22.0	30.0	17.9	24.0	36.0
V _{Rk}	Shear without lever arm	[kN]	6.9	8.2	8.5	13.8	12.7	13.8	20.0	20.3	15.8	30.6	35.1	17.9	55.1	48.6

Design Resistance

Anchor Diameter			M6		M8		M10			M12			M14			
Non-Cracked Concrete																
N _{Rd}	Tensile	[kN]	3.6	3.9	3.9	5.5	10.0	6.1	10.5	13.3	8.8	12.2	16.6	9.9	15.3	20.0
V _{Rd}	Shear without lever arm	[kN]	3.8	6.5	4.7	7.7	10.1	7.7	11.1	16.2	8.8	24.4	28.0	9.9	30.6	38.8

Recommended Resistance

Anchor Diameter			M6		M8		M10			M12			M14			
Non-Cracked Concrete																
N _{rec}	Tensile	[kN]	2.6	2.8	2.8	3.9	7.1	4.4	7.5	9.5	6.3	8.7	11.9	7.1	10.9	14.3
V _{rec}	Shear without lever arm	[kN]	2.7	4.6	3.4	5.5	7.2	5.5	7.9	11.6	6.3	17.4	20.0	7.1	21.9	27.7

Includes Partial Safety Factor $\gamma = 1.4$ in the absence of national regulations and type of loading

Data is for Static and Quasi Static Loads for a single anchor

Characteristics Resistance

Anchor Diameter			M6		M8			M10			M12			M14		
Cracked Concrete																
N _{Rk}	Tensile	[kN]	3.5	4.5	5.0	7.5	11.0	9.0	14.0	19.3	11.1	16.0	24.0	12.5	19.3	26.0
V _{Rk}	Shear without lever arm	[kN]	4.8	10.0	5.9	9.7	14.4	9.7	14.0	20.3	11.1	35.2	50.2	12.5	38.6	50.4

Design Resistance

Anchor Diameter			M6		M8		M10		M12		M14					
Cracked Concrete																
N_{Rd}	Tensile	[kN]	1.9	2.5	2.7	4.1	6.1	5.0	7.8	10.7	6.1	8.9	13.3	6.9	10.7	14.4
V_{Rd}	Shear without lever arm	[kN]	2.7	5.6	3.3	5.4	8.0	5.4	7.8	16.2	6.1	19.6	27.9	6.9	21.4	56.2

Recommended Resistance

Recommended Resistance																
Anchor Diameter			M6		M8		M10		M12		M14					
Cracked Concrete																
N _{rec}	Tensile	[kN]	1.4	1.8	1.9	2.9	4.4	3.6	5.6	7.6	4.4	6.4	9.5	4.9	7.6	10.3
V _{rec}	Shear without lever arm	[kN]	1.9	4.0	2.4	3.9	5.7	3.9	5.6	11.6	4.4	14.0	19.9	4.9	15.3	40.1

Includes Partial Safety Factor $\gamma = 1.4$ in the absence of national regulations and type of loading

Data is for Static and Quasi Static Loads for a single anchor

Increasing Concrete Factors

Anchor Diameter		M6	M8	M10	M12	M14
ψ_c C25/30	[-]	1.12				
ψ_c C30/37	[-]	1.22				
ψ_c C35/45	[-]	1.32				
ψ_c C40/45	[-]	1.41				
ψ_c C45/55	[-]	1.5				
ψ_c C50/60	[-]	1.58				

When using increasing factors care must be taken not to exceed steel limits

Steel Failure with lever arm

Anchor Diameter			M6	M8	M10	M12	M14		
Cracked and Uncracked Concrete									
M ⁰ _{Rk,s}	Characteristic Bending Moment	[Nm]	8.2	12.7	20.3	30.6	35.1	43.0	48.6
γ _{Ms}	Partial Safety Factor	[-]	1.25						

Fire Loads

Characteristic resistance under fire exposure in cracked and uncracked concrete C20/25 to C50/60

Anchor Diameter			M6			M8			M10			M12			M14		
Steel failure for tension and shear loads $F_{Rk,s,fi} = N_{Rk,s,fi} = V_{Rk,s,fi}$																	
Characteristic Resistance	$F_{Rk,s,fi}$	R30	[kN]	-	0.23	0.42			0.87			1.75			2.45		
	$F_{Rk,s,fi}$	R60	[kN]	-	0.21	0.37			0.76			1.31			1.84		
	$F_{Rk,s,fi}$	R90	[kN]	-	0.16	0.29			0.58			1.14			1.60		
	$F_{Rk,s,fi}$	R120	[kN]	-	0.12	0.21			0.46			0.87			1.23		
	$M^0_{Rk,s,fi}$	R30	[Nm]	-	0.19	0.37			1.12			2.77		3.40	4.60	5.54	
	$M^0_{Rk,s,fi}$	R60	[Nm]	-	0.17	0.33			0.97			2.08		2.55	3.45	4.16	
	$M^0_{Rk,s,fi}$	R90	[Nm]	-	0.13	0.26			0.75			1.80		2.21	2.99	3.60	
	$M^0_{Rk,s,fi}$	R120	[Nm]	-	0.10	0.19			0.60			1.38		1.70	2.30	2.77	
Pull out failure																	
Characteristic Resistance	$N_{Rk,s,fi}$	R30 - R90	[kN]	0.93	1.67	1.49	2.16	2.76	2.97	5.17	5.29	3.69	3.67	6.39	4.50	5.45	7.36
	$N_{Rk,s,fi}$	R120	[kN]	0.75	1.34	1.19	1.73	2.20	2.38	4.14	4.23	2.95	2.93	5.11	3.60	4.36	5.89
Concrete cone failure and splitting failure																	
Characteristic Resistance	$N_{Rk,s,fi}$	R30 - R90	[kN]	0.51	1.47	0.92	1.86	3.09	2.56	5.69	7.20	3.47	4.69	10.40	4.59	7.41	13.84
	$N_{Rk,s,fi}$	R120	[kN]	0.41	1.18	0.74	1.49	2.47	2.05	4.55	5.76	2.77	3.75	8.28	3.67	5.93	11.08
Edge Distance																	
R30 to R120	$C_{Cr,fi}$		[mm]	2 x h_{ef}													
Anchor Spacing																	
R30 to R120	$S_{Cr,fi}$		[mm]	4 x h_{ef}													

Trutek Impact Sockets
available for all diameters

