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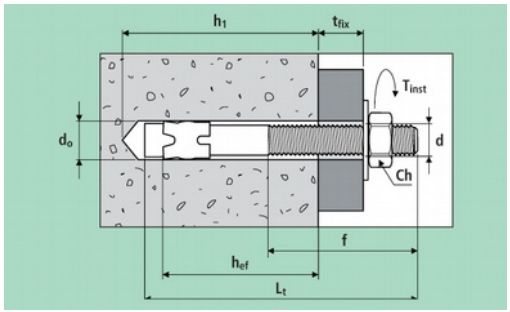
TECHNICAL DATASHEET

EN
rev. 12/2016

SITA ACCIAIO steel wedge anchor for concrete

Use

specific use
concrete natural stone



d = anchor diameter
L_t = anchor length
t_{fix} = fixable thickness
f = thread length
d_0 = hole diameter
h_1 = minimum hole depth
h_{nom} = overall embedment depth
h_{ef} = effective anchorage depth
d_f = hole diameter in fixture
Ch = spanner
T_{inst} = tightening torque

SITA Acciaio

zinc plated, with pre-assembled nut and washer

art.	descr.	d mm	L_t mm	t_{fix} mm	f mm	d_0 mm	h_1 mm	h_{nom} mm	h_{ef} mm	Ch mm	T_{inst} Nm
TTS01	S645/5	6	45	5	25	6	40	30	24	10	14
TTS02	S655/15		55	15	25						
TTS24	S690/50		90	50	50						
TTS25	S850/5	8	50	5	20	8	45	35	27	13	20
TTS96	S865/15		65	15	25		50	40	32		
TTS05	S875/25		75	25	35						
TTS06	S895/45		95	45	55						
TTS17	S8115/65		115	65	70						
TTS26	S1070/10	10	70	10	30	10	55	45	35	17	30
TTS08	S1090/30		90	30	50						
TTS09	S10100/40		100	40	60						
TTS18	S10120/60		120	60	70						
TTS97	S10140/80		140	80	80						
TTS095	S10150/90		150	90	80						
TTS1017	S10170/110		170	110	80						
TTS1270	S1270/5	12	70	5	30	12	60	50	38	19	80
TTS10	S1295/15		95	15	55		75	65	53		
TTS19	S12110/30		110	30	70						
TTS27	S12120/40		120	40	70						
TTS98	S12140/60		140	60	90						
TTS12	S12160/80		160	80	100						
TTS121	S12200/120		200	120	110						
TTS122	S12240/160		240	160	140						
TTS93	S14100/5	14	100	5	50	14	90	80	65	22	100
TTS94	S14130/35		130	35	80						
TTS95	S14150/55		150	55	100						

art.	descr.	d mm	L_t mm	t_{fix} mm	f mm	d_0 mm	h_1 mm	h_{nom} mm	h_{ef} mm	Ch mm	T_{inst} Nm
TTS1690	S1690/5	16	90	5	50	16	75	65	48	24	140
TTS28	S16110/5		110	5	70		95	85	68		
TTS120	S16125/20		125	20	75						
TTS20	S16145/40		145	40	95						
TTS14	S16170/65		170	65	100						
TTS1620	S16200/95		200	95	110						
TTS29	S16220/115		220	115	120						
TTS99	S20130/5	20	130	5	70	20	110	100	80	30	200
60112	S20160/35		160	35	100						
TTS30	S20170/45		170	45	110						
TTS2022	S20220/95		220	95	110						
TTS31	S20270/145		270	145	125						

Materials

part	material	coating
body	steel C1008, class 4.6	white zinc plating ≥ 5 µm ISO 4042 (A2J)
clip	steel C1008	
nut	steel (DIN 934, EN ISO 4032)	
washer	steel (DIN 125, EN ISO 7089)	

SITA Acciaio A2

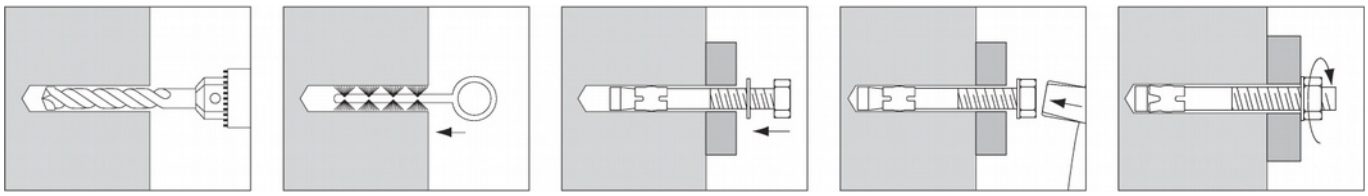
stainless steel A2 (AISI 304), with pre-assembled nut and washer

art.	descr.	d mm	L_t mm	t_{fix} mm	f mm	d_0 mm	h_1 mm	h_{nom} mm	h_{ef} mm	Ch mm	T_{inst} Nm
TTSI05	SI875/25	8	75	25	35	8	50	40	32	13	20
TTSI06	SI895/45		95	45	55						
TTSI08	SI1090/30	10	90	30	50	10	55	45	35	17	30
TTSI09	SI10100/40		100	40	60						
TTSI18	SI10120/60		120	60	70						
TTSI11	SI12100/20	12	100	20	60	12	75	65	53	19	80
TTSI19	SI12110/30		110	30	70						
TTSI27	SI12120/40		120	40	70						
TTSI98	SI12140/60		140	60	90						
TTSI12	SI12160/80		160	80	100						
TTSI120	SI16125/20	16	125	20	75	16	95	85	68	24	140
TTSI20	SI16145/40		145	40	95						

Materials

part	material	coating
body	stainless steel A2 (AISI 304)	–
clip	stainless steel A2 (AISI 304)	
nut	stainless steel A2 (AISI 304) (DIN 934, EN ISO 4032)	
washer	stainless steel A2 (AISI 304) (DIN 125, EN ISO 7089)	

Installation



Setting parameters

size		M6	M8	M10	M12	M14	M16	M20
minimum thickness of base material	h_{min} mm	100	100	100	140	170	200	300

Strength data

Valid for a single anchor, isolated and far from the edges, on a thick concrete member of class C20/25.

Characteristic resistance (kN)

size		M6	M8	M10	M12	M14	M16	M20
tension	N_{Rk} kN	7.5	11.7	15.5	24.3	29.9	34.5	48.9
shear	V_{Rk} kN	5.4	9.6	16.2	25.2	33.4	41.7	60.9

Design resistance (kN)

size		M6	M8	M10	M12	M14	M16	M20
tension	N_{Rd} kN	2.5	3.9	5.2	8.1	10.0	11.5	16.3
shear	V_{Rd} kN	1.8	3.2	5.4	8.4	11.1	13.9	20.3

Recommended load (kN)

size		M6	M8	M10	M12	M14	M16	M20
tension	N_{rec} kN	1.8	2.8	3.7	5.8	7.1	8.2	11.6
shear	V_{rec} kN	1.3	2.3	3.9	6.0	8.0	9.9	14.5

1 kN ≈ 100 kg
steel failure

Characteristic resistances N_{Rk} e V_{Rk} derive from tests conducted in G&B Fissaggi's laboratories according to international guidelines. Design resistances N_{Rd} e V_{Rd} include partial safety factors on strengths. Recommended values N_{rec} and V_{rec} include the further 1.4 safety factor.

For anchors with reduced spacing or reduced edge distance (lower than the critical values) the resistance of anchors must be decreased.

Critical spacing and distances

size		M6	M8	M10	M12	M14	M16	M20
critical spacing	$s_{cr,N}$ mm	70	90	100	120	135	150	180
critical edge distance	$c_{cr,N}$ mm	100	125	140	160	180	200	300