

TECHNICAL DATA SHEET

SITA ACCIAIO CE 7 GBK steel wedge anchor for non-cracked concrete

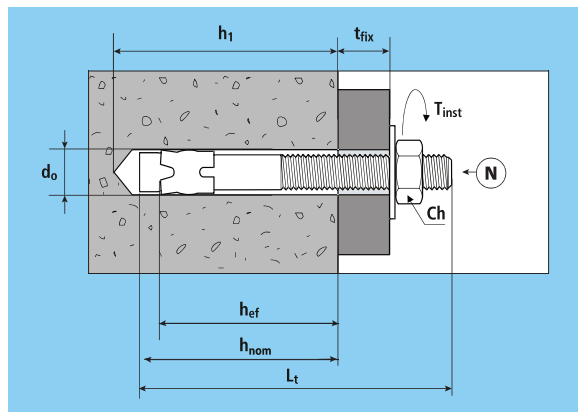
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Certificates

ETA-17/0237 Certification for use on non-cracked concrete (Option 7)

Supports

certified use	specific use
non-cracked concrete	solid stone



- d_0 = hole diameter = anchor diameter
- L_t = anchor length
- t_{fix} = fixable thickness
- f = thread length
- 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
- N = marking on head for length identification

SITA Acciaio CE7 GBK

zinc plated, with pre-assembled nut and washer ISO 7089 (DIN 125)

art.	descr.	size	d ₀ mm	L _t mm	t _{fix} mm	N	h ₁ mm	h _{nom} mm	h _{ef} mm	d _f mm	T _{inst} Nm	Ch mm
60322	GBK865/7	M8X65	8	65	7	A	60	50	45	10	20	13
60323	GBK875/17	M8X75		75	17	B						
60324	GBK895/37	M8X95		95	37	E						
60325	GBK8115/57	M8X115		115	57	H						
60351	GBK8130/72	M8X130		130	72	K						
60352	GBK8155/97	M8X155		155	97	N						
60353	GBK1067/2	M10X67	10	75	2	A	65	55	50	12	35	17
60326	GBK1075/10	M10X75		75	10	B						
60327	GBK1090/25	M10X90		90	25	D						
60328	GBK10100/35	M10X100		100	35	F						
60354	GBK10110/45	M10X110		110	45	G						
60329	GBK10120/55	M10X120		120	55	I						
60330	GBK10150/85	M10X150		150	85	N						
60331	GBK10170/105	M10X170		170	105	P						
60369	GBK10200/135	M10X200		200	135	R						
60355	GBK1285/3	M12X85	12	85	3	C	80	70	60	14	55	19
60348	GBK1290/8	M12X90		90	8	D						
60332	GBK12100/18	M12X100		100	18	F						
60333	GBK12110/28	M12X110		110	28	G						

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art.	descr.	size	d ₀ mm	L _t mm	t _{fix} mm	N	h ₁ mm	h _{nom} mm	h _{ef} mm	d _f mm	T _{inst} Nm	Ch mm
60334	GBK12120/38	M12X120	12	120	38	I	80	70	60	14	55	19
60335	GBK12140/58	M12X140		140	58	L						
60336	GBK12160/78	M12X160		160	78	O						
60337	GBK12180/98	M12X180		180	98	Q						
60356	GBK16117/2	M16X117	16	117	2	H	110	100	85	18	100	24
60341	GBK16125/10	M16X125		125	10	J						
60342	GBK16145/30	M16X145		145	30	M						
60343	GBK16170/55	M16X170		170	55	P						
60349	GBK16200/85	M16X200		200	85	R						
60344	GBK16220/105	M16X220		220	105	S						
60350	GBK20150/15	M20X150	20	150	15	N	125	115	100	22	150	30
60345	GBK20170/35	M20X170		170	35	P						
60346	GBK20220/85	M20X220		220	85	S						
60347	GBK20270/135	M20X270		270	135	U						

SITA Acciaio CE7 GBK – extralong sizes

zinc plated, with pre-assembled nut and washer ISO 7093 (DIN 9021)

art.	descr.	size	d ₀ mm	L _t mm	t _{fix} mm	N	h ₁ mm	h _{nom} mm	h _{ef} mm	d _f mm	T _{inst} Nm	Ch mm
60135	GBK12200/118	M12X200	12	200	118	R	80	70	60	14	55	19
60136	GBK12220/138	M12X220		220	138	S						
60137	GBK12240/158	M12X240		240	158	T						
60138	GBK12280/198	M12X280		280	198	V						
60139	GBK12300/218	M12X300		300	218	W						
60140	GBK12360/278	M12X360		360	278	Y						
60141	GBK16240/125	M16X240	16	240	125	T	110	100	85	18	100	24
60142	GBK16280/165	M16X280		280	165	V						
60143	GBK16300/185	M16X300		300	185	W						
60144	GBK16400/285	M16X400		400	285	Z						

Material

part	material	coating
body	carbon steel (f _{uk} ≥ 500 MPa M8÷M16; ≥ 480 MPa M20)	white zinc plating ≥ 5 µm ISO 4042
clip	carbon steel	
nut	ISO 898-2 carbon steel class 8	
washer	ISO 7089 (DIN 125) or 7093 (DIN 2021)	

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SITA Acciaio CE7 GBK stainless steel

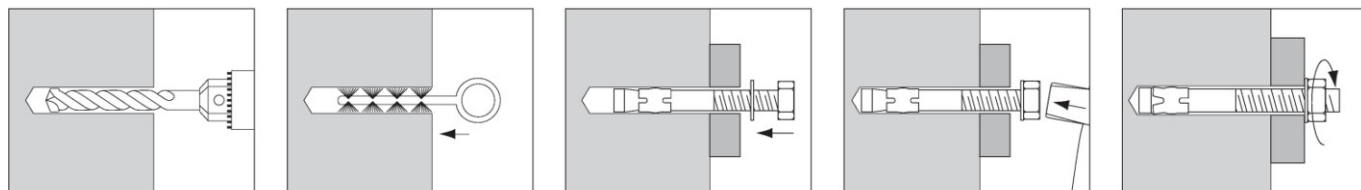
in A4 stainless steel, with pre-assembled nut and washer ISO 7089 (DIN 125)

art.	descr.	size	d ₀ mm	L _t mm	t _{fix} mm	N	h ₁ mm	h _{nom} mm	h _{ef} mm	d _f mm	T _{inst} Nm	Ch mm
60501	GBK1875/17	M8X75	8	75	17	B	60	50	45	10	15	13
60502	GBK1895/37	M8X95		95	37	E						
60503	GBK18115/57	M8X115		115	57	H						
60515	GBK11075/10	M10X75	10	75	10	B	65	55	50	12	30	17
60504	GBK11090/25	M10X90		90	25	D						
60505	GBK110100/35	M10X100		100	35	F						
60506	GBK110120/55	M10X120		120	55	I						
60507	GBK110140/75	M10X140	12	140	75	L	80	70	60	14	50	19
60508	GBK112100/18	M12X100		100	18	F						
60509	GBK112120/38	M12X120		120	38	I						
60510	GBK112140/58	M12X140		140	58	L						
60511	GBK112160/78	M12X160	16	160	78	O	110	100	85	18	90	24
60512 ¹	GBK116125/10	M16X125		125	10	-						
60513 ¹	GBK116145/30	M16X145		145	30	-						
60514 ¹	GBK116170/55	M16X170		170	55	-						

¹ not included in CE certification

Materials

part	material	coating
body	A4 stainless steel	-
clip	A4 stainless steel	
nut	ISO 898-2 A4 stainless steel	
washer	ISO 7089 (DIN 125) or 7093 (DIN 2021) A4 stainless steel	

Installation

Setting parameters

size		M8	M10	M12	M16	M20
minimum spacing	s _{min} mm	61	68	81	115	135
minimum edge distance	c _{min} mm	61	68	81	115	135
minimum thickness of base material	h _{min} mm	100	100	120	170	200

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Strength data

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

 ○ **Zinc plated steel version**
Characteristic resistance (kN)

size		M8	M10	M12	M16	M20
tension	N_{Rk}	9,0	12,0	20,0	22,0	30,0
shear	V_{Rk}	9,2	14,5	21,1	39,3	58,8

Design resistance (kN)

size		M8	M10	M12	M16	M20
tension	N_{Rd}	5,0	6,7	11,1	10,5	20,0
shear	V_{Rd}	7,4	11,6	16,9	31,4	47,0

Recommended load (kN)

size		M8	M10	M12	M16	M20
tension	N_{rec}	3,6	4,8	7,9	7,5	14,3
shear	V_{rec}	5,3	8,3	12,1	22,5	33,6

 1 kN $\approx$ 100 kg

steel failure

 ○ **A4 stainless steel version**
Characteristic resistance (kN)

size		M8	M10	M12
tension	N_{Rk}	9,0	13,0	22,0
shear	V_{Rk}	11,0	17,4	25,3

Design resistance (kN)

size		M8	M10	M12
tension	N_{Rd}	5,0	8,7	14,7
shear	V_{Rd}	7,3	11,6	16,9

Recommended load (kN)

size		M8	M10	M12
tension	N_{rec}	3,6	6,2	10,5
shear	V_{rec}	5,2	8,3	12,0

 1 kN $\approx$ 100 kg

steel failure

Characteristic resistances N_{Rk} and V_{Rk} derive from parameters certified in European Technical Assessment ETA-17/0237. 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 the design of fixing with reduced spacing, near the edge or on concrete with increased resistance or reduced thickness refer to ETA-17/0237 or to Declaration of Performance DPGE1004 and use the design method outlined in EN 1992-4. One can also calculate and verify the fixings made with SITA ACCIAIO CE 7 GBK by means of *G&B Calculation Program* available on the website www.gebfissaggi.com.