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TECHNICAL DATASHEET
GETO PLUS CE1 self-threading screw for concrete

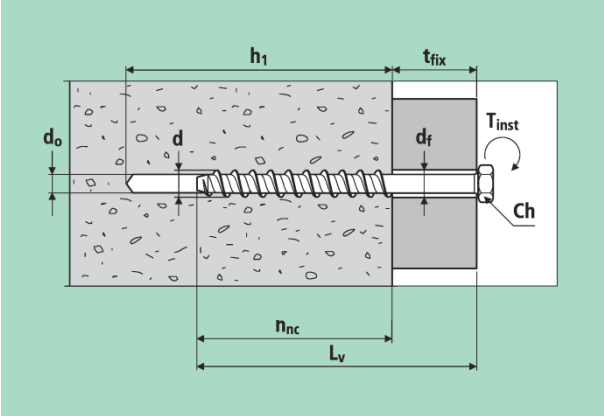
Available in versions: hexagonal flanged head, countersunk head, head with inner thread for threaded bar.

Certificates

ETA-17/0983 Certification according to EAD 330232-00-0601 (fomer ETAG 001) for non-cracked and cracked concrete (Option 1); Fire Resistance 120 min

Base material

certified use	specific use
non-cracked concrete cracked concrete	natural stone solid masonry



d_0 = hole diameter
d = outer diameter of screw
L_v = screw (and anchor) length
t_{fix} = fixable thickness
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

GETO PLUS TEFL

hexagonal flanged head

art.	descr.	d_0 mm	d mm	L_v mm	t_{fix} mm	h_1 mm	h_{nom} mm	h_{ef} mm	d_f mm	T_{inst} Nm	T_{SD} Nm	Ch mm	Ø flange mm
87086	GPTEF6/60	6	7.5	60	5	65	55	42.5	9	14	90	11	14.5
87087	GPTEF6/80			80	25								
87088	GPTEF6/100			100	45								
87138	GPTEF8/70	8	10	70	5	75	65	48.5	12	40	200	13	17.5
87139	GPTEF8/80			80	15								
87140	GPTEF8/100			100	35								
87141	GPTEF8/120			120	55								
87142	GPTEF10/90	10	12	90	5	95	85	61.5	14	90	500	15	19.7
87097	GPTEF10/100			100	15								
87098	GPTEF10/120			120	35								
87099	GPTEF10/140			140	55								

GETO PLUS TPS
countersunk head

art.	descr.	d_0 mm	d mm	L_v mm	t_{fix} mm	h_1 mm	h_{nom} mm	h_{ef} mm	d_f mm	T_{inst} Nm	T_{SD} Nm	Ch mm	Ø head mm
87143	GPTPS6/60	6	7.5	60	5	65	55	42.5	9	14	90	11	14.0
87144	GPTPS6/100			100	45								

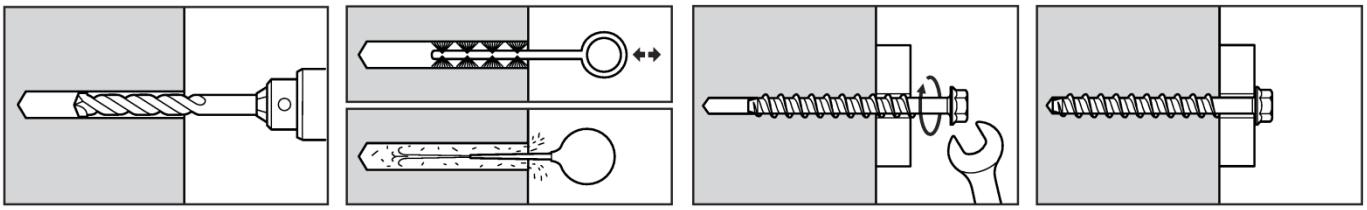
GETO PLUS DF
with internal thread M8/M10

art.	descr.	d_0 mm	d mm	L_v mm	t_{fix} mm	h_1 mm	h_{nom} mm	h_{ef} mm	d_f mm	T_{inst} Nm	T_{SD} Nm	Ch mm	Ø flange mm
87145	GPDF6/60	6	7.5	60	5	65	55	42.5	9	14	90	13	17.2

Materials

material	coating
cold-formed steel	white zinc plating ≥ 5 µm ISO 4042

Installation



Setting parameters

size		7.5 hole 6 mm	10 hole 8 mm	12 hole 10 mm
minimum spacing	s_{min} mm	35	50	50
minimum edge distance	c_{min} mm	35	50	50
minimum thickness of base material	h_{min} mm	100	110	125

Strength data

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

o Non-cracked concrete

Characteristic resistance

size		**7.5 hole 6 mm**	**10 hole 8 mm**	**12 hole 10 mm**
tension	N_{Rk} kN	6.0	8.0	19.0
shear	V_{Rk} kN	9.8	14.2	29.1

Design resistance

size		**7.5 hole 6 mm**	**10 hole 8 mm**	**12 hole 10 mm**
tension	N_{Rd} kN	3.3	4.4	10.6
shear	V_{Rd} kN	7.8	11.4	23.3

Recommended load

size		**7.5 hole 6 mm**	**10 hole 8 mm**	**12 hole 10 mm**
tension	N_{rec} kN	2.4	3.2	7.5
shear	V_{rec} kN	5.6	8.1	16.6

1 kN ≈ 100 kg
steel failure

o Cracked concrete

Characteristic resistance

size		**7.5 hole 6 mm**	**10 hole 8 mm**	**12 hole 10 mm**
tension	N_{Rk} kN	3.0	4.0	7.0
shear	V_{Rk} kN	10.0	12.2	34.7

Design resistance

size		**7.5 hole 6 mm**	**10 hole 8 mm**	**12 hole 10 mm**
tension	N_{Rd} kN	1.7	2.2	3.9
shear	V_{Rd} kN	6.6	8.1	23.2

Recommended load

size		**7.5 hole 6 mm**	**10 hole 8 mm**	**12 hole 10 mm**
tension	N_{rec} kN	1.2	1.6	2.8
shear	V_{rec} kN	4.7	5.8	16.5

1 kN ≈ 100 kg
steel failure

Characteristic resistances N_{Rk} and V_{Rk} derive from values certified in European Technical Assessment ETA-17/0983. Design resistances N_{Rd} and V_{Rd} include partial safety factors on resistances. Recommended loads N_{rec} and V_{rec} include the further safety factor 1.4.

For the design of anchors with reduced spacing, with reduced edge distance, or for fixing on concrete with higher strength, with reduced thickness or with dense reinforcement, refer to ETA-17/0983 or to Declaration of Performance DPGEB1021 and use one of the design methods outlined in Technical Report *TR 020* issued by EOTA.

For the design of anchors under fire exposure refer to ETA and Technical Report *TR 020* issued by EOTA.

Data for design

Critical spacing and distances

size		**7.5 hole 6 mm**	**10 hole 8 mm**	**12 hole 10 mm**
critical spacing	$s_{cr,N}$ mm	128	146	184
	$s_{cr,sp}$ mm	128	146	184
critical edge distance	$c_{cr,N}$ mm	64	73	92
	$c_{cr,sp}$ mm	64	73	92

Increasing factors for tension resistance (excluding steel failure)

size		**7.5 hole 6 mm**	**10 hole 8 mm**	**12 hole 10 mm**
Ψ_c	C25/30	1.01	1.00	1.06
	C30/37	1.03	1.00	1.14
	C35/45	1.06	1.00	1.22
	C40/50	1.07	1.00	1.26
	C45/55	1.09	1.00	1.31
	C50/60	1.10	1.00	1.35