

Declaration of Performance

No. **DPGEB1017** v2

1. Unique identification code of the product-type: **Gebofix TF**

2. Intended uses:

Intended use of the construction product according to ETA-08/0231	
Generic type	Capsule bonded anchor for use in non-cracked concrete
Anchorage subject to	Static and quasi-static loads: threaded rod M8, M10, M12, M16, M20, M24
Base materials	- Reinforced or unreinforced normal weight concrete according to EN 206-1:2000 - Strength class C20/25 to C50/60 according to EN 206-1:2000 - Non-cracked concrete
Service temperature range	-40 °C to +80 °C (max. short term temperature +80 °C and max. long term temperature +50 °C)
Environmental conditions	- Structures subject to dry internal conditions zinc plated or hot-dip galvanised steel class 5.8 stainless steel A4-70 high corrosion resistant steel, property class 70 - Structures subject to external atmospheric exposure (including industrial and marine environment) and to permanently damp internal condition, if no particular aggressive conditions exist stainless steel A4-70 high corrosion resistant steel, property class 70 - Structures subject to external atmospheric exposure and to permanently damp internal condition, if other particular aggressive conditions exist high corrosion resistant steel, property class 70 Note: Particular aggressive conditions are e.g. permanent, alternating immersion in seawater or the splash zone of seawater, chloride atmosphere of indoor swimming pools or atmosphere with extreme chemical pollution (e.g. in desulphurization plants or road tunnels where de-icing materials are used)
Concrete conditions	Dry or wet concrete threaded rod M8, M10, M12, M16, M20, M24 Flooded holes (not sea water) threaded rod M12, M16, M20, M24
Installation	Perforation by hammer drilling Installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters on job site
Design	Anchorage designed in accordance with ETAG 001 Annex C edition 2010-08, design method A, under the responsibility of an engineer experienced in anchorages and concrete work.

3. Manufacturer: **G&B Fissaggi S.r.l.** C.so Savona 22, Villastellone (TO), Italia

5. System of AVCP: 1

6b.

European Assessment Document: ETAG 001 Part 1 and Part 5, edition 2013, used as EAD

European Technical Assessment: ETA-08/0231

Technical Assessment Body: Deutsches Institut für Bautechnik

Notified Body: 1343 Technische Universität Darmstadt Staatliche Materialprüfungsanstalt Darmstadt

7. Declared performances:

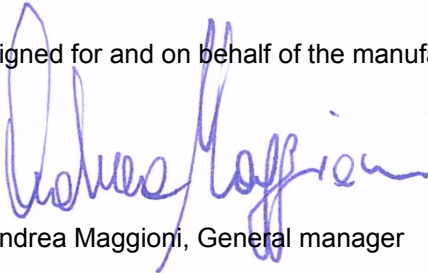
Declared performances according to ETAG 001:2013 Part 1 and Part 5, 0ETA-8/0231

Threaded rod diameter			M8	M10	M12	M16	M20	M24
Essential characteristics			Performance					
<i>Installation parameters</i>								
d	Nominal diameter of bar	[mm]	8	10	12	16	20	24
d ₀	Hole diameter	[mm]	10	12	14	18	25	28
d _{fix}	Diameter of steel brush	[mm]	12	14	16	20	27	30
h _{ef}	Effective anchorage depth	[mm]	80	90	110	125	170	210
h ₁	Depth of the drilling hole	[mm]	h _{ef}					
h _{min}	Minimum thickness of the concrete member	[mm]	110	120	150	160	220	300
d _{fix}	Diameter of clearance hole in the fixture	[mm]	9	12	14	18	22	26
T _{inst}	Maximum installation torque	[Nm]	10	20	40	60	120	150
s _{min}	Minimum spacing	[mm]	60	70	85	95	130	160
c _{min}	Minimum edge distance	[mm]	60	70	85	95	130	160
<i>Tension steel failure mode</i>								
N _{Rk,s}	Characteristic tension resistance of steel, class 5.8	[kN]	17	26	38	72	114	165
N _{Rk,s}	Characteristic tension resistance of steel, class 70	[kN]	23	34	52	97	153	222
<i>Combined pull-out and concrete failure mode</i>								
N _{Rk,p}	Characteristic resistance, Standard cleaning	[kN]	9	12	16	25	40	60
N _{Rk,p}	Characteristic resistance, Premium cleaning	[kN]	12	16	25	35	60	75
ψ _{c,C30/37}	Increasing factor for concrete C30/37	[-]	1.08					
ψ _{c,C40/50}	Increasing factor for concrete C40/50	[-]	1.15					
ψ _{c,C50/60}	Increasing factor for concrete C50/60	[-]	1.19					
<i>Splitting failure mode</i>								
s _{cr,sp}	Critical spacing	[mm]	240	270	330	380	510	630
c _{cr,sp}	Critical edge distance	[mm]	120	135	165	190	255	315
<i>Installation safety factor</i>								
γ _{inst} = γ ₂	Safety factor, dry and wet concrete	[-]	1.2					
γ _{inst} = γ ₂	Safety factor, flooded holes	[-]	NPD			1.2		
<i>Shear steel failure mode without lever arm</i>								
V _{Rk,s}	Characteristic shear resistance of steel, class 5.8	[kN]	8	13	19	36	57	83
V _{Rk,s}	Characteristic shear resistance of steel, class 70	[kN]	11	17	26	49	77	111
<i>Shear steel failure mode with lever arm</i>								
M ⁰ _{Rk,s}	Characteristic bending resistance of steel, class 5.8	[Nm]	16	30	56	144	285	498
M ⁰ _{Rk,s}	Characteristic bending resistance of steel, class 70	[Nm]	22	41	75	194	384	670
<i>Concrete pry-out failure mode</i>								
k	Factor in eq. (5.6) of ETAG 001 Annex C sect. 5.2.3.3	[-]	2.0					
γ _{inst} = γ ₂	Installation safety factor	[-]	1.0					
<i>Concrete edge failure mode</i>								

Threaded rod diameter			M8	M10	M12	M16	M20	M24
l_f	Effective length of anchor	[mm]	80	90	110	125	170	210
d_{nom}	Outside diameter of anchor	[mm]	10	12	14	18	25	28
$\gamma_{inst} = \gamma_2$	Installation safety factor	[-]	1,0					
<i>Displacement under tension load</i>								
δ_{N0}	Short term displacement under tension load	[mm]	0.1	0.1	0.1	0.2	0.3	0.3
$\delta_{N\infty}$	Long term displacement under tension load	[mm]	1.1	1.1	1.1	2.2	3.3	3.3
<i>Displacement under shear load, non-cracked concrete C20/25</i>								
δ_{V0}	Short term displacement under shear load	[mm]	1.5	1.6	1.8	2.0	2.5	3.0
$\delta_{V\infty}$	Long term displacement under shear load	[mm]	2.3	2.4	2.7	3.0	3.8	4.5

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:



Andrea Maggioni, General manager

Villastellone, 24 June 2014



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