



DECLARATION OF PERFORMANCES
N° BARACOA4 01B EN

According to RPC 305/2011/EU



LR ETANCO SAS

Parc les Erables – Bât 1 – 66 route de Sartrouville – BP 49 – 78231 LE PECQ Cedex – France

Tel. : +33 (0)1 34 80 52 00 – Fax : +33 (0)1 30 71 01 89

E-mail : commercial.france@etanco.fr – Web : www.etanco.eu

1 – Product identification :

FM 753 A4

2 – Intended use :

Torque controlled expansion stainless steel anchor for cracked and uncracked concrete

3 - Manufacturer :

FRIULSIDER S.p.A. - Via Trieste 1 - 33048 San Giovanni al Natisone (UD) - Italy

4 – Authorized representative :

Not allowed

5 – Systems of assessment (Annex V) :

System 1

6a/b – Harmonised standard / European assessment document :

Standard / EAD	Notified body	Report
ETAG 001 p 1-2	CSTB notified body nb 0679	ETA-01/0009 of 29/01/2015
ETAG 001 p 1	CSTB notified body nb 0679	0679-CPR-0016

7 – Declared performances :

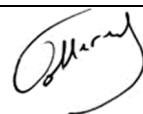
See annex

8 – Appropriate technical documentation and/or specific technical documentation :

Not allowed

The performance of the product identified above is consistent with the reported performance. In accordance with Regulation (EU) No. 305/2011, this performance statement is made under the sole responsibility of the manufacturer mentioned above.

Manufacturer's representation signatures: Le Pecq – 13/02/2021

Function	Name	Sign
Technical director	Philippe Tolleret	
Quality manager	Frédéric Lucas	



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Annex

Intended use :

Generic type and intended use of the product	Torque controlled expansion anchor made of galvanized steel, sizes M6, M8, M10, M12, M14 and M16
For use in	Un-cracked concrete (C20/25 to C50/60 according to EN 206-1 :2003)
Option / category	ETAG 001 option 7
Loading	Static and quasi-static
Material	Steel class 8.8 according to EN ISO 898-1 Zinc-plated steel according to EN ISO 4042 : Dry internal conditions only
Fire class	A1 according to EN 13501-1

Declared performances :

Declared performances acc to ETA 01/0014 - ETAG 001 P1 and 2 Desing method acc to EN 1992-4:2018			Performance					
Installation parameters			M6 ²⁾	M8	M10	M12	M14	M16
d ₀	Nominal diameter of drill bit	[mm]	6	8	10	12	14	16
h _{nom}	Minimum installation depth	[mm]	41	48	59	71	80	96
h _{ef}	Effective anchorage depth	[mm]	35 ²⁾	40	50	60	70	85
h _{min}	Minimum thickness of the concrete member	[mm]	100	100	100	120	140	170
T _{inst}	Nominal torque moment	[Nm]	6	15	25	50	70	100
s _{min}	Minimum spacing	[mm]	50	60	75	90	105	130
c _{min}	Minimum edge distance	[mm]	50	60	75	90	105	130
Tension Steel failure mode								
N _{Rk,s}	Tension Steel characteristic failure	[kN]	10,9	17,2	28,0	31,6	51,2	72,3
γ _{m,sN} ¹⁾	Partial safety factor for tension steel failure	[-]	1,5	1,4	1,4	1,4	1,5	1,5
Pull-out failure mode								
N _{Rk,p,ucr}	Tension characteristic load in un-cracked concrete	[kN]	6 ²⁾	9	12	20	25	35
γ ₂	Partial safety factor	[-]	1,2			1,0		
γ _{m,c} ¹⁾	Partial safety factor	[-]	1,8			1,5		
s _{cr,N}	Critical spacing	[mm]	105	120	150	180	210	255
c _{cr,N}	Critical edge distance	[mm]	53	60	75	90	105	130
ψ _c C30/37	Increasing factor	[-]	1,17			1,22		
ψ _c C40/50		[-]	1,32			1,41		
ψ _c C50/60		[-]	1,42			1,55		
Splitting failure mode								
s _{cr,sp}	Critical spacing (splitting)	[mm]	210	240	300	360	420	510
c _{cr,sp}	Critical edge distance(splitting)	[mm]	105	120	150	180	210	255
γ _{m,c} ¹⁾	Partial safety factor	[-]	1,8			1,5		
Displacement on Tension Load								
N _{ucr}	Service tension load in un-cracked concrete C20/25	[kN]	2,4	3,6	4,8	9,5	11,9	16,7
δ _{N0,ucr}	Short term displacement under tension load	[mm]	0,1	0,1	0,1	0,1	0,1	0,1
δ _{N∞,ucr}	Long term displacement under tension load	[mm]	0,6	0,6	0,6	0,6	0,6	0,6
Shear Steel failure mode								
V _{Rk,s}	Shear Steel characteristic failure	[kN]	6,0	9,1	14,8	18,4	32,1	42,3
M ⁰ _{Rk,s}	Bending Moment characteristic failure	[Nm]	12	24	49	68	121	193
γ _{m,sv} ¹⁾	Partial safety factor for shear steel failure	[-]	1,5					
Shear Concrete Pry-out and Edge failure mode								
k	Factor equation (5.6) of ETAG, Annex C, § 5.2.3.3	[-]	1,0			2,0		
l _{ef}	Effective anchorage length	[mm]	35	40	50	60	70	85
d _{nom}	Nominal diameter of anchor	[mm]	6	8	10	12	14	16
γ _m ¹⁾	Partial safety factor (γ _{m,c} =γ _{m,pr})	[-]	1,5					



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Displacement on Shear Load

V	Service shear load in concrete	[kN]	2,9	4,3	7,0	8,8	15,3	20,1
δ_{v0}	Short term displacement under shear load	[mm]	1,5	1,5	2,1	2,2	2,4	2,4
$\delta_{v\infty}$	Long term displacement under shear load	[mm]	1,9	2,0	2,6	2,7	3,0	3,0

¹⁾ In absence of other national regulations;

²⁾ Use restricted to anchoring of structural components statically indetermined.