



**DECLARATION OF PERFORMANCES**  
**N° BARACO 01B EN**

According to RPC 305/2011/EU



LR ETANCO SAS  
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1 – Product identification :

**FM 753**

2 – Intended use :

**Torque controlled expansion zinc plated steel anchor for uncracked concrete in internal dry use**

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
<b>ETAG 001 p 1-2</b>	<b>CSTB notified body Nb 0679</b>	<b>ETA-01/0014 of 29/01/2015</b>
<b>ETAG 001 p 1</b>	<b>CSTB notified body Nb 0679</b>	<b>0679-CPR-0016</b>

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
<b>Technical director</b>	Philippe Tolleret	
<b>Quality manager</b>	Frédéric Lucas	

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Annex

Intended use :

<b>Generic type and intended use of the product</b>	<b>Torque controlled expansion anchor made of galvanized steel, sizes M6, M8, M10, M12, M14 and M16</b>
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 <sup>2)</sup>	M8	M10	M12	M14	M16
<b>d<sub>0</sub></b>	Nominal diameter of drill bit	[mm]	6	8	10	12	14	16
<b>h<sub>nom</sub></b>	Minimum installation depth	[mm]	41	48	59	71	80	96
<b>h<sub>ef</sub></b>	Effective anchorage depth	[mm]	35 <sup>2)</sup>	40	50	60	70	85
<b>h<sub>min</sub></b>	Minimum thickness of the concrete member	[mm]	100	100	100	120	140	170
<b>T<sub>inst</sub></b>	Nominal torque moment	[Nm]	6	15	25	50	70	100
<b>s<sub>min</sub></b>	Minimum spacing	[mm]	50	60	75	90	105	130
<b>c<sub>min</sub></b>	Minimum edge distance	[mm]	50	60	75	90	105	130
<b>Tension Steel failure mode</b>								
<b>N<sub>Rk,s</sub></b>	Tension Steel characteristic failure	[kN]	10,9	17,2	28,0	31,6	51,2	72,3
<b>γ<sub>m,sN</sub><sup>1)</sup></b>	Partial safety factor for tension steel failure	[-]	1,5	1,4	1,4	1,4	1,5	1,5
<b>Pull-out failure mode</b>								
<b>N<sub>Rk,p,ucr</sub></b>	Tension characteristic load in un-cracked concrete	[kN]	6 <sup>2)</sup>	9	12	20	25	35
<b>γ<sub>2</sub></b>	Partial safety factor	[-]	1,2			1,0		
<b>γ<sub>m,c</sub><sup>1)</sup></b>	Partial safety factor	[-]	1,8			1,5		
<b>s<sub>cr,N</sub></b>	Critical spacing	[mm]	105	120	150	180	210	255
<b>c<sub>cr,N</sub></b>	Critical edge distance	[mm]	53	60	75	90	105	130
<b>ψ<sub>c</sub> C30/37</b>	Increasing factor	[-]	1,17			1,22		
<b>ψ<sub>c</sub> C40/50</b>		[-]	1,32			1,41		
<b>ψ<sub>c</sub> C50/60</b>		[-]	1,42			1,55		
<b>Splitting failure mode</b>								
<b>s<sub>cr,sp</sub></b>	Critical spacing (splitting)	[mm]	210	240	300	360	420	510
<b>c<sub>cr,sp</sub></b>	Critical edge distance (splitting)	[mm]	105	120	150	180	210	255
<b>γ<sub>m,c</sub><sup>1)</sup></b>	Partial safety factor	[-]	1,8			1,5		
<b>Displacement on Tension Load</b>								
<b>N<sub>ucr</sub></b>	Service tension load in un-cracked concrete C20/25	[kN]	2,4	3,6	4,8	9,5	11,9	16,7
<b>δ<sub>NO,ucr</sub></b>	Short term displacement under tension load	[mm]	0,1	0,1	0,1	0,1	0,1	0,1
<b>δ<sub>N°,ucr</sub></b>	Long term displacement under tension load	[mm]	0,6	0,6	0,6	0,6	0,6	0,6
<b>Shear Steel failure mode</b>								
<b>V<sub>Rk,s</sub></b>	Shear Steel characteristic failure	[kN]	6,0	9,1	14,8	18,4	32,1	42,3
<b>M<sup>0</sup><sub>Rk,s</sub></b>	Bending Moment characteristic failure	[Nm]	12	24	49	68	121	193
<b>γ<sub>m,sV</sub><sup>1)</sup></b>	Partial safety factor for shear steel failure	[-]	1,5					
<b>Shear Concrete Pry-out and Edge failure mode</b>								
<b>k</b>	Factor equation (5.6) of ETAG, Annex C, § 5.2.3.3	[-]	1,0			2,0		
<b>l<sub>ef</sub></b>	Effective anchorage length	[mm]	35	40	50	60	70	85
<b>d<sub>nom</sub></b>	Nominal diameter of anchor	[mm]	6	8	10	12	14	16
<b>γ<sub>m</sub><sup>1)</sup></b>	Partial safety factor (γ <sub>m,c</sub> =γ <sub>m,pr</sub> )	[-]	1,5					



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**Displacement on Shear Load**

<b>V</b>	Service shear load in concrete	[kN]	<b>2,9</b>	<b>4,3</b>	<b>7,0</b>	<b>8,8</b>	<b>15,3</b>	<b>20,1</b>
<b><math>\delta_{vo}</math></b>	Short term displacement under shear load	[mm]	1,5	1,5	2,1	2,2	2,4	2,4
<b><math>\delta_{v\infty}</math></b>	Long term displacement under shear load	[mm]	1,9	2,0	2,6	2,7	3,0	3,0

<sup>1)</sup> In absence of other national regulations;

<sup>2)</sup> Use restricted to anchoring of structural components statically indetermined.