


 1. Identification of the product: **FM753**

2. Identification code (art. 11.4), for the batch or serial number see packaging:

d ¹⁾	L ²⁾ [mm]	t _{fix} ³⁾ [mm]	Marking	ID	Cod.
M6	65	15	FM-L 6/15	B	75320b06065
	85	35	FM-L 6/35	C	75320b06085
	100	50	FM-L 6/50	D	75320b06100
M8	65	7	FM-L 8/7	B	75320b08065
	75	15	FM-L 8/15	C	75320b08075
	90	30	FM-L 8/30	D	75320b08090
	115	55	FM-L 8/55	E	75320b08115
	135	75	FM-L 8/75	F	75320b08135
	165	105	FM-L 8/105	G	75320b08165
M10	75	5	FM-L 10/5	B	75320b10075
	90	20	FM-L 10/20	C	75320b10090
	100	30	FM-L 10/30	I	75320b10100
	120	50	FM-L 10/50	D	75320b10120
	145	75	FM-L 10/75	E	75320b10145
M12	170	100	FM-L 10/100	F	75320b10170
	100	10	FM-L 12/10	B	75320b12100
	110	20	FM-L 12/20	C	75320b12110
	120	30	FM-L 12/30	I	75320b12120
	135	45	FM-L 12/45	D	75320b12135
	160	70	FM-L 12/70	E	75320b12160
M14	185	100	FM-L 12/100	F	75320b12185
	100	3	FM-L 14/3	A	75320b14100
	110	10	FM-L 14/10	B	75320b14110
	130	30	FM-L 14/30	C	75320b14130
	150	50	FM-L 14/50	D	75320b14150
	170	70	FM-L 14/70	E	75320b14170
M16	200	100	FM-L 14/100	F	75320b14200
	125	10	FM-S 16/10	A	75320b16125
	145	30	FM-S 16/30	B	75320b16145
	175	60	FM-S 16/60	C	75320b16175
	215	100	FM-S 16/100	D	75320b16215

¹⁾ Nominal diameter of thread; ²⁾ Length of anchor; ³⁾ Thickness fixture max.

3. Intended use:

Generic type	Torque controlled expansion anchor throughbolt type
Base material	Un-cracked concrete C20/25 to C50/60 acc. to EN 206-1
Material	Steel zinc coated 5µm according to EN ISO 4042 (cl. 5.8 min. according to EN ISO 898-1)
Durability	Internal dry conditions
Loading	Static and quasi-static
Fire Resistance	NPD
Fire Reaction	A1 according to EN 13501-1

 4. Manufacturer (art. 11.5): **Friulside SpA via trieste,1 - 33048 San Giovanni al Natisone (UD) - Italy**

 5. Authorised representative (art. 12.2): **Not Relevant**

 6. System of Assessment AVCP (annex V): **System 1**

7/8. Harmonised Specification & Notified Body:	Name of Body	System of Assessment	Reference	EAD / hEN Document
Technical Specification	CSTB _[TAB]	1	ETA-01/0014	ETAG001 p.1-2
Constasy of Performance & FPC	CSTB nr.0679 _[NB]	1	0679-CPR-0016	ETAG001 p.1

 9. Declared Performance: **See Annex**

10. The performance of the product identified in points 1 and 2 is in conformity with declared performance in point 9. This declaration of performance is issued under the sole responsibility of Friulside SpA. Signed for and behalf of the manufacturer by:

Function	Name	Signature	Place and date of issue
Technical Manager	Michele Franzoso		San Giovanni al Natisone, 22-05-2018
C.E.O	Claudio Peleson		

ANNEX

Declared Performances acc. to ETA-01/0014 - ETAG001 p.1 and 2
 Design method ETAG001-Annex C or CEN/TS 1992-4

ESSENTIAL CHARACTERISTICS			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			M6 ²⁾	M8	M10	M12	M14	M16
$N_{Rk,s}$	Tension Steel characteristic failure	[kN]	10,9	17,2	28,0	31,6	51,2	72,3
$\gamma_{ms,N}$ ¹⁾	Partial safety factor for tension steel failure	[-]	1,5	1,4	1,4	1,4	1,5	1,5
Pull-out failure								
$N_{Rk,p,ucr}$	Tension characteristic load in un-cracked concrete C20/25	[kN]	6 ²⁾	9	12	20	25	35
γ_2	Partial safety factor	[-]		1,2			1,0	
γ_{mc} ¹⁾	Partial safety factor	[-]		1,8			1,5	
Ψ_c C30/37	Increasing factor for concrete C30/37	[-]		1,17			1,22	
Ψ_c C40/50	Increasing factor for concrete C40/50	[-]		1,32			1,41	
Ψ_c C50/60	Increasing factor for concrete C50/60	[-]		1,42			1,55	
Concrete cone failure and Splitting failure								
K_{ucr}	Factor for un-cracked concrete rif. CEN/TS 1992-4-4 §. 6.2.1. 4	[-]				10,1		
$s_{cr,N}$	Critical spacing	[mm]	105	120	150	180	210	255
$c_{cr,N}$	Critical edge distance	[mm]	53	60	75	90	105	130
$s_{cr,sp}$	Critical spacing (splitting)	[mm]	210	240	300	360	420	510
$c_{cr,sp}$	Critical edge distance (splitting)	[mm]	105	120	150	180	210	255
$\gamma_{mc} = \gamma_{msp}$ ¹⁾	Partial safety factor	[-]		1,8			1,5	
Displacement on Tension Load			M6 ²⁾	M8	M10	M12	M14	M16
N_{ucr}	Service tension load in un-cracked concrete	[kN]	2,4	3,6	4,8	9,5	11,9	16,7
$\delta_{N0,ucr}$	Short term displacement under tension load	[mm]				0,1		
$\delta_{N\infty,ucr}$	Long term displacement under tension load	[mm]				1,6		
SHEAR Steel failure			M6	M8	M10	M12	M14	M16
$V_{Rk,s}$	Shear Steel characteristic failure	[kN]	6,0	9,1	14,8	18,4	32,1	42,3
K_2	Ductility factor acc.to CEN/TS 1992-4-5 Section § 6.3.2.1	[-]				0,8		
$M^0_{Rk,s}$	Bending Moment characteristic failure	[Nm]	12	24	49	68	121	193
$\gamma_{ms,V}$ ¹⁾	Partial safety factor for shear steel failure	[-]				1,5		
Shear Concrete Pry-out failure								
k	Factor equation (5.6) of ETAG, Annex C, § 5.2.3.3	[-]		1,0			2,0	
k_3	Factor equation (16) of CEN/TS 1992-4-4, § 6.2.2.3	[-]		1,0			2,0	
γ_{mc} ¹⁾	Partial safety factor	[-]				1,5		
Shear Concrete Edge failure								
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_{mc} ¹⁾	Partial safety factor	[-]				1,5		
Displacement on Shear Load			M6	M8	M10	M12	M14	M16
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.