

FM-753[®] CRACK

ETA OPTION 1: FOR CRACKED CONCRETE

Heavy Duty Through Anchor for Concrete



GREATER STABILITY
Nine gripping dents for
adhesion to hole walls



HIGH RESISTANCE
Special anti-corrosion coating with
glossy finish 1000 hours in salt spray
test

SOLID EXPANSION
Stainless steel clip with innovative design



since 1966

CERTIFICATION OF QUALITY MANAGEMENT SYSTEM
ISO 9001 Cert. n° 1085



CERTIFICATION OF ENVIRONMENTAL MANAGEMENT SYSTEM



FM-753[®] CRACK

Heavy duty through anchor for cracked concrete

Versions Available

- FM 753 Crack INOX (Stainless Steel)
- FM 753 Crack Nautilus (Anti-Corrosion Coating)



GREATER STABILITY

Nine gripping dents for
adhesion to hole walls

Applications

- Hand Rails, Guard Rails
- Facade Brackets & Clamps
- Pipe Supports, Channels
- Warehousing Racks
- Elevators, Escalators
- Columns & Beams Fixing
- Consoles
- Cable Trays, Conduits
- Tunnels & Gates
- Mechanical Equipments
- Stadium Seat Fastening
- Steel & Wood Constructions

OPTION 1

Heavy duty through anchor for
cracked concrete



HIGH RESISTANCE

Special anti-corrosion coating
with glossy finish
1000 hours in salt spray test



SOLID EXPANSION

Stainless steel clip with innovative design

FM-753[®] CRACK

- INOX A4 -

-Assembled
-Stainless steel A4 (AISI 316)



INOX
A4

INOX: STAINLESS STEEL



Code	d x L mm	Thread length mm	do mm	tfix mm	df mm	sw	Pkg.	Outer box
75350b08068	M8x68	30	8	4	9	13	100	800
75350b08075	M8x75	30	8	10	9	13	100	800
75350b08090	M8x90	40	8	25	9	13	100	500
75350b08115	M8x115	60	8	50	9	13	100	500
75350b08135	M8x135	80	8	70	9	13	100	500
75350b08165	M8x165	80	8	100	9	13	50	250
75350b10090	M10x90	40	10	10	12	17	50	400
75350b10105	M10x105	55	10	25	12	17	50	250
75350b10115	M10x115	55	10	35	12	17	50	250
75350b10135	M10x135	85	10	55	12	17	50	250
75350b10155	M10x155	85	10	75	12	17	50	250
75350b10185	M10x185	85	10	105	12	17	25	125
75350b12110	M12x110	65	12	10	14	19	50	250
75350b12120	M12x120	65	12	20	14	19	50	250
75350b12145	M12x145	85	12	45	14	19	25	200
75350b12170	M12x170	85	12	70	14	19	25	125
75350b12200	M12x200	85	12	100	14	19	25	125
75350b16130	M16x130	65	16	10	18	24	20	120
75350b16150	M16x150	85	16	30	18	24	20	100
75350b16185	M16x185	85	16	60	18	24	20	80
75350b16220	M16x220	85	16	100	18	24	15	90

FM-753[®] CRACK NAUTILUS

Assembled
Hardened and tempered
anchor body
Stainless steel A4 clip
Nautilus: Anti Corrosion Coating



NAUTILUS 1000 h

Special anti-corrosion coating
with glossy finish - 1000 hours
in salt spray test



Code	d x L mm	Thread length mm	do mm	tfix mm	df mm	sw	Pkg.	Outer box
75350008068	M8x68	30	8	4	9	13	100	800
75350008075	M8x75	30	8	10	9	13	100	800
75350008090	M8x90	40	8	25	9	13	100	500
75350008115	M8x115	60	8	50	9	13	100	500
75350008135	M8x135	80	8	70	9	13	100	500
75350008165	M8x165	80	8	100	9	13	50	250
75350010090	M10x90	40	10	10	12	17	50	400
75350010105	M10x105	55	10	25	12	17	50	250
75350010115	M10x115	55	10	35	12	17	50	250
75350010135	M10x135	85	10	55	12	17	50	250
75350010155	M10x155	85	10	75	12	17	50	250
75350010185	M10x185	85	10	105	12	17	25	125
75350012110	M12x110	65	12	10	14	19	50	250
75350012120	M12x120	65	12	20	14	19	50	250
75350012145	M12x145	85	12	45	14	19	25	200
75350012170	M12x170	85	12	70	14	19	25	125
75350012200	M12x200	85	12	100	14	19	25	125
75350016130	M16x130	65	16	10	18	24	20	120
75350016150	M16x150	85	16	30	18	24	20	100
75350016185	M16x185	85	16	60	18	24	20	80
75350016220	M16x220	85	16	100	18	24	15	90

FEATURES

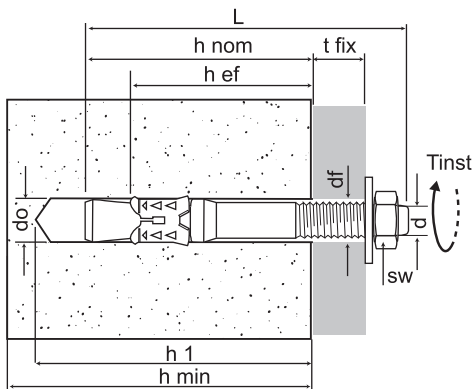
- Heavy Duty Anchor bolt for through fixings
- ETA Option 1 Certification
- Hardened and Tempered Steel Body 9.8 Grade
- Certified for 1000 hours in salt spray test
- F120 Fire Resistant Certification
- Nine gripping dents for adhesion with hole walls
- Stainless Steel Clip with Innovative Design
- Hole Diameter & Anchor Diameter is the same

ADVANTAGES

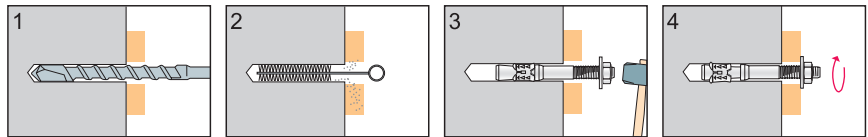
- Wide range of Applications
- Reliable fastening in Cracked Concrete
- High Tensile Resistance Steel for Loads
- Can be used in Corrosive Environments
- Fire Rating Integrity upto 120 minutes
- Prevents the anchor from rotating
- Friction & Keying Effect
- Minimum protrusion of thread when installation complete

Base Materials

- Cracked Concrete
- Solid Stone



Installation Procedure



- | | |
|--------------------------------------|--------------------------------|
| d = screw diameter | hnom = nominal embedment depth |
| df = hole diameter of fixing element | L = anchor length |
| do = hole diameter | sw = wrench |
| h1 = minimum hole depth | tfix = fixture thickness |
| hef = minimum depth of anchorage | Tinst = torque |
| hmin = minimum support thickness | |

DESIGN⁽¹⁾ AND RECOMMENDED⁽²⁾ LOADS

Single anchor with large anchor spacing and edge distances in cracked and non-cracked concrete C20/25

Anchor		M8	M10	M12	M16	
Minimum support thickness	h_{min} mm	100	120	150	170	
Minimum hole depth	h_1 mm	70	80	100	115	
Nominal embedment depth	h_{nom} mm	54	67	81	97	
Minimum depth of anchorage	h_{ef} mm	48	60	72	86	
Hole diameter	d_o mm	8	10	12	16	
Spacing	$S_{cr,N}$ mm	144	180	220	260	
Edge distance	$C_{cr,N}$ mm	72	90	110	130	
FM-753 [®] CRACK	Tensile cracked concrete	N_{rd} kN	4.1	8.0	10.6	13.3
		N kN	2.9	5.7	7.6	9.5
NAUTILUS coating	Tensile non-cracked concrete	N_{rd} kN	6.0	10.6	13.3	23.4
		N kN	4.3	7.6	9.5	16.7
glossy finish	Shear $C \geq 10x_{ef}$	V_{rd} kN	8.6	16.0	22.7	44.0
		V kN	6.2	11.4	16.2	31.4
ETA 09/0056	Minimum spacing	S_{min} mm	50	60	70	80
		for C mm	65	80	90	120
ETA 10/0293	Minimum edge distance	C_{min} mm	50	60	70	85
		for S mm	75	120	150	170
ETA 10/0293	Shear $C = C_{min}$	$V_{rd,cmin}$ kN	2.1	3.2	4.3	6.6
		V_{cmin} kN	1.5	2.3	3.1	4.7
ETA 10/0293	Tensile cracked concrete	N_{rd} kN	3.4	6.0	8.0	16.7
		N kN	2.4	4.3	5.7	11.9
ETA 10/0293	Tensile non-cracked concrete	N_{rd} kN	6.0	10.6	13.3	23.4
		N kN	4.3	7.6	9.5	16.7
ETA 10/0293	Shear $C \geq 10x_{ef}$	V_{rd} kN	9.1	14.6	21.1	39.2
		V kN	6.5	10.4	15.1	28.0
ETA 10/0293	Minimum spacing	S_{min} mm	50	55	60	70
		for C mm	50	70	80	100
ETA 10/0293	Minimum edge distance	C_{min} mm	50	50	60	70
		for S mm	50	100	120	130
ETA 10/0293	Shear $C = C_{min}$	$V_{rd,cmin}$ kN	2.1	2.4	3.5	4.9
		V_{cmin} kN	1.5	1.7	2.5	3.5
Torque	T_{inst} Nm	20	40	60	120	







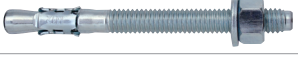





















































1kN = 100 kgf

⁽¹⁾ The design loads N_{rd} and V_{rd} derive from the characteristic loads on the ETA certification and are inclusive of the partial safety factors γ_m proportional to each diameter (see ETA).

⁽²⁾ The recommended loads N and V derive from the characteristic loads on the ETA certification and are inclusive of the partial safety factors $\gamma_{F1.4}$ and γ_m proportional to each diameter (see ETA).

The load values are only valid if the installation has been carried out correctly. The designing and calculation of the anchorage should be carried out in accordance with annex C. of the ETAG 001. design method A.

Our Range of Products

ATS-evo		ETAG 001	ETA 10/0423 op.1		
FM-753® CRACK		ETAG 001	ETA 09/0056 op.1 ETA 10/0293 op.1		
FM-753®		ETAG 001	ETA 01/0014 op.7 ETA 01/0009 op.7 ETA 13/0367 op.7		
FM-744®		ETAG 001	ETA 05/0169 op.7		
FM-MP3®evo LONG		ETAG 001 ETAG 001 part 6	ETA 09/0067 op.7 ETA 10/0074		
KEM-UP EPOXY		ETAG 001 ETAG 001 TR 023	ETA 09/0061 op.1 ETA 12/0602 op.7 "Diamond" ETA 12/0542		
KEM-UP VINYLESTER		ETAG 001 ETAG 029 TR 023	ETA 08/0383 op.1 ETA 12/0543 ETA 12/0553		
KEM-UP POLYESTER		ETAG 001 ETAG 029	ETA 12/0608 op.7 ETA 12/0534		
FRP		ETAG 001	ETA 11/0155		
VF			EN 14592		
FM-X5®		ETAG 020	ETA 10/0425		
FM-TXT		ETAG 020	ETA 12/0388		
TSS / TBB / TPP		ETAG 014	ETA 10/0190		
DRILLNOX TH 6			ETA 10/0181		
DRILLNOX TH 12			ETA 10/0181		
ISODRILL TH DF		ETAG 006	ETA 08/0239		
ISODRILL TT		ETAG 006	ETA 08/0239		
APL / AFL			EN 14592		
SOLAR-V			EN 14592:2009		
TAP					
TUPP					
X1					

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