FM753 CRACK

HEAVY DUTY THROUGH ANCHOR

WITH SEISMIC CERTIFICATION

- DYNAMIC AND SEISMIC LOADS
- IMMEDIATE EXPANSION
- HARDENED AND TEMPERED STEEL BODY grade 9.8 - STAINLESS STEEL A4 CLIP

CE ETA 09/0056 - op. 1

CE ETA 10/0293 - op. 1

SEISMIC C1 C2

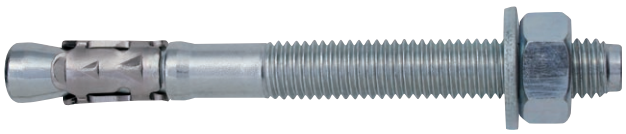
R 120

3DG COATING

FRIULSIDER YOUR FIXING FACTORY

FM-753® CRACK 3DG

ETA 09/0056 - op. 1 | FIRE RESISTANCE F120 | C1 SEISMIC | C2 SEISMIC | 3DG COATING



Assembled Hardened and tempered anchor body
Stainless steel A4 clip

3DG 1000 h
Special anti-corrosion coating with glossy finish
1000 hours in salt spray test

Seismic certification category C1
For non-structural use

Seismic certification category C2
For structural and non-structural use

OPTION 1
For cracked concrete

3DG		ø	Clearance		Thread	Socket		
Part No.	Description	mm	mm	mm	mm	mm	qty	qty
FM753C08068G (75350b08068)	M8x68	8	9	4	30	13	100	400
FM753C08075G (75350b08075)	M8x75	8	9	10	30	13	100	400
FM753C08090G (75350b08090	M8x90	8	9	25	40	13	100	400
FM753C08115G (75350b08115)	M8x115	8	9	50	60	13	100	400
FM753C08135G (75350b08135)	M8x135	8	9	70	80	13	100	400
FM753C08165G (75350b08165)	M8x165	8	9	100	80	13	50	200
FM753C10090G (75350b10090)	M10x90	10	12	10	40	17	50	200
FM753C10105G (75350b10105)	M10x105	10	12	25	55	17	50	200
FM753C10115G (75350b10115)	M10x115	10	12	35	55	17	50	200
FM753C10135G (75350b10135)	M10x135	10	12	55	85	17	50	200
FM753C10155G (75350b10155)	M10x155	10	12	75	85	17	50	200
FM753C10185G (75350b10185)	M10x185	10	12	105	85	17	25	100
FM753C12110G (75350b12110)	M12x110	12	14	10	65	19	50	200
FM753C12120G (75350b12120)	M12x120	12	14	20	65	19	50	200
FM753C12145G (75350b12145)	M12x145	12	14	45	85	19	25	100
FM753C12170G (75350b12170)	M12x170	12	14	70	85	19	25	100
FM753C12200G (75350b12200)	M12x200	12	14	100	85	19	25	100
FM753C16130G (75350b16130)	M16x130	16	18	10	65	24	20	80
FM753C16150G (75350b16150)	M16x150	16	18	30	85	24	20	80
FM753C16185G (75350b16185)	M16x185	16	18	60	85	24	20	80
FM753C16220G (75350b16220)	M16x220	16	18	100	85	24	15	60

FM-753® CRACK - INOX A4 - 316SS

ETA 10/0293 - op. 1 | FIRE RESISTANCE F120 | C1 SEISMIC | C2 SEISMIC

Assembled
Stainless steel A4 - 316SS

Seismic certification category C1
For non-structural use

Seismic certification category C2
For structural and non-structural use

OPTION 1
For cracked concrete

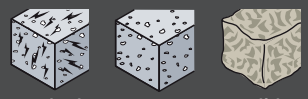
316 SS		ø	Clearance		Thread	Socket		
Part No.	Description	mm	mm	mm	mm	mm	qty	qty
FM753C08068SS (75350008068)	M8x68	8	9	4	30	13	100	400
FM753C08075SS (75350008075)	M8x75	8	9	10	30	13	100	400
FM753C08090SS (75350008090)	M8x90	8	9	25	40	13	100	400
FM753C08115SS (75350008115)	M8x115	8	9	50	60	13	100	400
FM753C08135SS (75350008135)	M8x135	8	9	70	80	13	100	400
FM753C08165SS (75350008165)	M8x165	8	9	100	80	13	50	200
FM753C10090SS (75350010090)	M10x90	10	12	10	40	17	50	200
FM753C10105SS (75350010105)	M10x105	10	12	25	55	17	50	200
FM753C10115SS (75350010115)	M10x115	10	12	35	55	17	50	200
FM753C10135SS (75350010135)	M10x135	10	12	55	85	17	50	200
FM753C10155SS (75350010155)	M10x155	10	12	75	85	17	50	200
FM753C10185SS (75350010185)	M10x185	10	12	105	85	17	25	100
FM753C12110SS (75350012110)	M12x110	12	14	10	65	19	50	200
FM753C12120SS (75350012120)	M12x120	12	14	20	65	19	50	200
FM753C12145SS (75350012145)	M12x145	12	14	45	85	19	25	100
FM753C12170SS (75350012170)	M12x170	12	14	70	85	19	25	100
FM753C12200SS (75350012200)	M12x200	12	14	100	85	19	25	100
FM753C16130SS (75350016130)	M16x130	16	18	10	65	24	20	80
FM753C16150SS (75350016150)	M16x150	16	18	30	85	24	20	80
FM753C16185SS (75350016185)	M16x185	16	18	60	85	24	20	80
FM753C16220SS (75350016220)	M16x220	16	18	100	85	24	15	60

FM-753® CRACK
Heavy duty through anchor for use in seismic zones

VERSIONS:
- 3DG special anti-corrosion coating
- stainless steel A4

PRODUCT FEATURES:
- hardened and tempered steel class 9.8 anchor body
- stainless steel A4 expander clip
- increased thickness of three expander segments
- nine gripping dents for keying effect into the concrete

SUITABLE BASE MATERIALS:

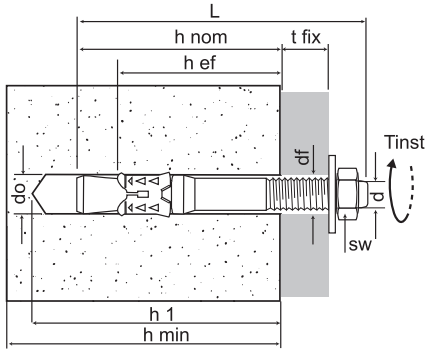


cracked concrete | concrete | solid stone

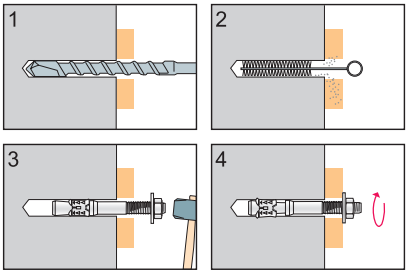
CERTIFICATIONS:
- Seismic certification C1 - C2
- OPTION 1: For cracked concrete
- F120 fire resistance certification

CE ETA 09/0056 - op. 1 | C1 SEISMIC C2 SEISMIC

CE ETA 10/0293 - op. 1 | FIRE RESISTANCE F120



d	=	anchor diameter
do	=	hole diameter
df	=	clearance hole in fixture
tfix	=	fixture thickness
sw	=	socket size
L	=	anchor length
h_1	=	minimum hole depth
h_{ef}	=	minimum depth of anchorage
h_{min}	=	min support (concrete) thickness
h_{nom}	=	nominal embedment depth
T_{inst}	=	torque



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_0	mm	8	10	12	16
Spacing			$S_{cr,N}$	mm	140	180	220	260
Edge distance			$C_{cr,N}$	mm	70	90	110	130
FM-753® CRACK NAUTILUS coating glossy finish ETA 09/0056	Tensile non-cracked concrete		$N_{rd,ucr}$	kN	6,0	10,7	13,3	23,3
			N_{ucr}	kN	4,3	7,6	9,5	16,7
	Tensile cracked concrete		$N_{rd,cr}$	kN	4,0	8,0	10,7	13,3
			N_{cr}	kN	2,9	5,7	7,6	9,5
	Shear(3)		V_{rd}	kN	8,6	16,1	22,5	44,3
			V	kN	6,1	11,5	16,1	31,6
	Seismic Resistance Category C1	Tensile	$N_{rd,\ seis\ C1}$	kN	4,0	8,0	10,7	13,3
			$N_{seis\ C1}$	kN	2,9	5,7	7,6	9,5
		Shear(3)	$V_{rd,\ seis\ C1}$	kN	5,1	11,3	20,3	38,4
			$V_{seis\ C1}$	kN	3,7	8,1	14,5	27,4
	Seismic Resistance Category C2	Tensile	$N_{rd,\ seis\ C2}$	kN	-	2,2	7,9	13,3
			$N_{seis\ C2}$	kN	-	1,6	5,6	9,5
		Shear(3)	$V_{rd,\ seis\ C2}$	kN	-	7,9	12,9	20,8
			$V_{seis\ C2}$	kN	-	5,7	9,2	14,9
	Minimum spacing		S_{min}	mm	50	60	70	80
			for C	mm	65	80	90	120
	Minimum edge distance		C_{min}	mm	50	60	70	85
			for S	mm	75	120	150	170
	Shear C = C_{min}		$V_{rd,cmin}$	kN	3,2	4,4	5,8	8,1
			V_{cmin}	kN	2,3	3,2	4,1	5,8
FM-753® CRACK stainless steel A4 ETA 10/0293	Tensile non-cracked concrete		$N_{rd,ucr}$	kN	6,0	10,7	13,3	23,3
			N_{ucr}	kN	4,3	7,6	9,5	16,7
	Tensile cracked concrete		$N_{rd,cr}$	kN	3,3	6,0	8,0	16,7
			N_{cr}	kN	2,4	4,3	5,7	11,9
	Shear(3)		V_{rd}	kN	9,1	14,5	21,1	39,2
			V	kN	6,5	10,4	15,1	28,0
	Minimum spacing		S_{min}	mm	50	55	60	70
			for C	mm	50	70	80	100
	Minimum edge distance		C_{min}	mm	50	50	60	70
			for S	mm	50	110	120	130
	Shear C = C_{min}		$V_{rd,cmin}$	kN	3,2	3,5	4,7	6,3
			V_{cmin}	kN	2,3	2,5	3,4	4,5
Torque			T_{inst}	Nm	20	40	60	120

(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 γ_f=1.4 and γ_m proportional to each diameter (see ETA).
(3) Shear values valid with distance from the edge C > 10 x h_{ef}

The load values are only valid if the installation has been carried out correctly. The design engineer is responsible for the designing and calculation of the fixing. The designing and calculation of the anchorage should be carried out in accordance with ETAG001-C or CEN/TS 1992/4 or under Seismic action acc.to TR045.

ICCONS®

FM753 CRACK

STUD ANCHOR

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