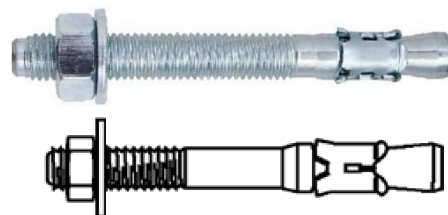


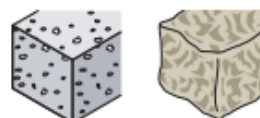
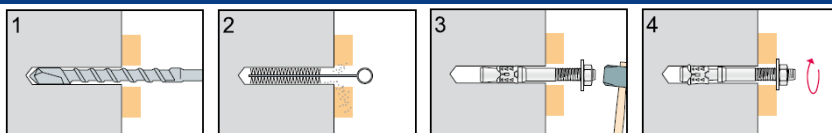
FM753 OPTION 7



PRODUCT DESCRIPTION

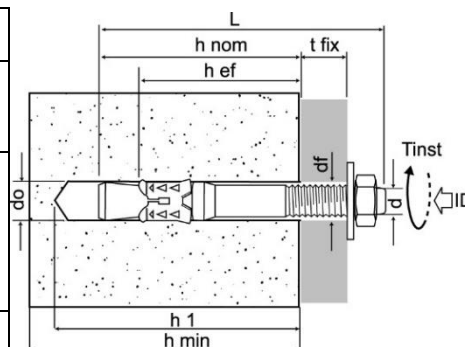
Heavy duty through anchor for un-cracked concrete. For fixing and/or supporting to concrete, structural elements (which contributes to the stability of the works) or heavy units.

APPLICATION



LENGTH OF SCREWS

d	size d x L	ID	tfix [mm]	tfix,RED [mm]	do [mm]	h1 [mm]	hnom [mm]	hef [mm]	df [mm]	hmin [mm]	Tinst [Nm]	sw
M6	M6x45*	A	-	3	6	45	36	30	7	100	6	10
	M6x65	B	15	(20)								
	M6x85	C	35	(40)								
	M6x100	D	50	(55)								
M8	M8x50*	A	-	5	8	50	38	30	9	100	15	13
	M8x65	B	7	(15)								
	M8x75	C	15	(25)								
	M8x90	D	30	(40)								
	M8x115	F	55	(65)								
	M8x135	F	75	(85)								
	M8x165	G	105	(115)								
M10	M10x60*	A	-	5	10	55	44	35	12	100	25	17
	M10x75	B	5	(20)								
	M10x90	C	20	(35)								
	M10x100	I	30	(45)								
	M10x120	D	50	(65)								
	M10x145	E	75	(90)								
	M10x170	F	100	(115)								
M12	M12x80*	A	-	7	12	70	56	45	14	120	50	19
	M12x100	B	10	(25)								
	M12x110	C	20	(35)								
	M12x120	I	30	(45)								
	M12x135	D	45	(60)								
	M12x160	E	70	(85)								
	M12x185	F	100	(115)								
	M12x200	G	115	(130)								
	M12x220	H	135	(150)								
	M12x240	I	155	(170)								
	M12x255	L	170	(185)								
	M12x285	M	200	(215)								
	M12x300	N	215	(230)								
	M12x325	P	240	(255)								
M12x355	Q	270	(285)									
M14	M14x100	A	3	-	14	95	80	70	16	140	70	22
	M14x110	B	10	-								
	M14x130	C	30	-								
	M14x150	D	50	-								
	M14x170	E	70	-								
	M14x200	F	100	-								
M16	M16x110*	P	-	15	16	95	76	65	18	130	100	24
	M16x125	A	10	(30)								
	M16x145	B	30	(50)								
	M16x175	C	60	(80)								
	M16x215	D	100	(120)								
	M16x230	E	115	(135)								
	M16x250	F	135	(155)								
	M16x270	G	155	(175)								
	M16x285	H	170	(190)								
	M16x320	I	205	(225)								



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

Anchor body characteristics

Anchor diameter			M6	M8	M10	M12	M14	M16
Tensile stressed cross-section	$A_{s,N}$	[mm ²]	13,9	26,4	43,0	60,8	88,2	125
Shear stressed cross-section	$A_{s,V}$	[mm ²]	20,1	36,6	58,0	84,3	115	157
Bending moment - Galvanized steel anchor body grade 9.8	M	[Nm]	6,0	12,0	23,0	32,0	58	92

EUROPEAN TECHNICAL APPROVAL ETA-01/0014

FM-753 ZINC PLATED DESIGN¹⁾ and RECOMMENDED²⁾ LOADS

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

Anchor diameter			M6	M8	M10	M12	M14	M16
Depth of anchorage	h_{ef}	[mm]	35 ⁽⁴⁾	40	50	60	70	85
Tensile	$N_{rd}^{(1)}$	[kN]	3,4	5,0	6,7	13,3	16,7	23,4
	N ⁽²⁾	[kN]	2,4	3,6	4,8	9,5	11,9	16,7
Spacing	$S_{cr,N}$	[mm]	105	120	150	180	210	260
Edge distance	$C_{cr,N}$	[mm]	53	60	75	90	105	130
Shear ⁽³⁾ $C \geq 10xh_{ef}$	$V_{rd}^{(1)}$	[kN]	4,1	6,0	9,8	12,3	21,4	28,1
	V ⁽²⁾	[kN]	2,9	4,3	7,0	8,8	15,3	20,1

1kN = 100 kgf

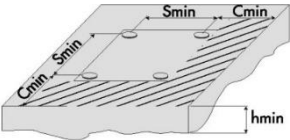
⁽¹⁾ The design loads N_{rd} and V_{rd} derive from the characteristic loads on the ETA-01/0014 certification and are inclusive of the partial safety factors γ_m proportional to each diameter (see ETA).

⁽²⁾ The recommended loads N and V derive from the characteristic loads on the ETA-01/0014 certification and are inclusive of the partial safety factors $\gamma_t=1.4$ and γ_m proportional to each diameter (see ETA).

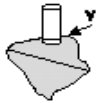
⁽³⁾ Shear values valid with distance from the edge $C \geq 10xh_{ef}$.

⁽⁴⁾ Use restricted to anchoring of structural components statically indetermined.

Minimum installation distances

Anchor diameter			M6	M8	M10	M12	M14	M16
	Minimum distance between anchors	S_{min} [mm]	50	60	75	90	105	130
	Minimum distance from edge	C_{min} [mm]	50	60	75	90	105	130

Example (according to annex C of the ETAG 001) of shear load across the C20/25 concrete edge at a distance of C_{min}

Anchor diameter			M6	M8	M10	M12	M14	M16
	$V_{rd,cmin}$	[kN]	2,9	4,0	5,8	7,8	10,0	14,1
	Shear $C = C_{min}$ V_{cmin}	[kN]	2,1	2,9	4,1	5,6	7,2	10,1

OTHER FEATURES

Type	Zinc plated
Anchor body	Steel grade min. 5.8
Clip	Acciaio Steel
Hex nut	DIN 934 grade 8
Washer	DIN 125/1
Coating	> 5µm ISO 4042

