Technical Sheet

FM 753 evo
Heavy Duty Wedge Anchor

Heavy-duty wedge anchor for the medium load range, in sizes M6 - M20 for anchoring in non-cracked concrete C20/25 - C50/60.





Features

Material

- Cold formed carbon steel body with special geometry clip

Benefits

- Wide range
- Easy installation
- Versatile
- Cold forged anchor body
- Increased thickness of three expander segments
- Six teeth and anti-slip ridge to prevent slip during tightening



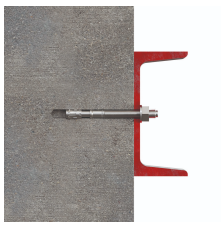




Applications

Applications

- Railings
- Metal and wood carpentry
- Facades







Suitable for

- Non-cracked concrete
- Solid stone





Fixation de structure bois



Zoom de la pointe



Steel frame structure anchoring

Technical Sheet

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Technical Data

Dimensions

| Reference | Metallic fixings dimensions | | |

Technical Sheet

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Design capacities - single anchor - no edge distances

Reference	Metallic fixings dimensions	Metallic fixings loads								
	Product Dimensions[mm]	Design capacity - Non-cracked concrete (3)[kN]								Design capacity - Cracked concrete
	Dimensions[mm]	Tension - NRd (1)				Shear - VRd (1-2)[kN]				Bending moment MRd[Nm]
		C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	
75340B0606500	M6x65	4	4	4	4.1	5.1	5.1	5.1	5.1	7.3
75340B0608500	M6x85	4	4	4	4.1	5.1	5.1	5.1	5.1	7.3
75340B0610000	M6x100	4	4	4	4.1	5.1	5.1	5.1	5.1	7.3
75340B0807300	M8x73	8	8.3	8.5	8.7	7.9	7.9	7.9	7.9	21.5
75340B0809300	M8x93	8	8.3	8.5	8.7	7.9	7.9	7.9	7.9	21.5
75340B0811300	M8x113	8	8.3	8.5	8.7	7.9	7.9	7.9	7.9	21.5
75340B0813300	M8x133	8	8.3	8.5	8.7	7.9	7.9	7.9	7.9	21.5
75340B1007800	M10x78	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75340B1009300	M10x93	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75340B1010300	M10x103	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75340B1012300	M10x123	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75340B1014300	M10x143	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75340B1017300	M10x173	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75340B1021300	M10x213	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75340B1208500	M12x85*/**	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1210400	M12x104	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1210900	M12x109	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1211900	M12x119	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1212900	M12x129	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1217900	M12x179	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1223900	M12x239	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1225900	M12x259	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1226900	M12x269	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1229900	M12x299	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1231900	M12x319	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1611000	M16x110*/**	23.5	27	29.8	32.4	37.5	37.5	37.5	37.5	155.3
75340B1613100	M16x131	23.5	27	29.8	32.4	37.5	37.5	37.5	37.5	155.3
75340B1615100	M16x151	23.5	27	29.8	32.4	37.5	37.5	37.5	37.5	155.3
75340B1617100	M16x171	23.5	27	29.8	32.4	37.5	37.5	37.5	37.5	155.3
75340B1620100	M16x201	23.5	27	29.8	32.4	37.5	37.5	37.5	37.5	155.3
75340B1628100	M16x281	23.5	27	29.8	32.4	37.5	37.5	37.5	37.5	155.3
75340B1632100	M16x321	23.5	27	29.8	32.4	37.5	37.5	37.5	37.5	155.3
75340B2017300	M20x173**	27.9	19.9	19.9	19.9	37.4	37.4	37.4	37.4	-
75340B2022300	M20x223**	27.9	19.9	19.9	19.9	37.4	37.4	37.4	37.4	-

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Reference	Metallic fixings dimensions	Metallic fixings loads								
	Product Dimensions[mm]	Design capacity - Non-cracked concrete (3)[kN]								Design capacity - Cracked concrete
	Dimensions[mm]	Tension - NRd (1)				Shear - VRd (1-2)[kN]				Bending moment MRd[Nm]
		C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	

1. The design loads loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Technical Sheet

FM 753 evo
Heavy Duty Wedge Anchor

Recommended capacities - single anchor - no edge distances

Reference	Metallic fixings dimensions	Metallic fixings loads								
	Product Dimensions[mm]	Recommended loads - Non-cracked concrete								Design capacity - Non-cracked concrete (3) [kN]
	Dimensions[mm]	Tension - N_{rec}[kN]				Shear - V_{rec}[kN]				Bending moment MRd[Nm]
		C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	
75340B0606500	M6x65	2.2	2.9	2.9	2.9	2.9	3.6	3.6	3.6	3.6
75340B0608500	M6x85	2.2	2.9	2.9	2.9	2.9	3.6	3.6	3.6	3.6
75340B0610000	M6x100	2.2	2.9	2.9	2.9	2.9	3.6	3.6	3.6	3.6
75340B0807300	M8x73	2.4	5.7	5.9	6.1	6.2	5.6	5.6	5.6	5.6
75340B0809300	M8x93	2.4	5.7	5.9	6.1	6.2	5.6	5.6	5.6	5.6
75340B0811300	M8x113	2.4	5.7	5.9	6.1	6.2	5.6	5.6	5.6	5.6
75340B0813300	M8x133	2.4	5.7	5.9	6.1	6.2	5.6	5.6	5.6	5.6
75340B1007800	M10x78	4.7	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3
75340B1009300	M10x93	4.7	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3
75340B1010300	M10x103	4.7	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3
75340B1012300	M10x123	4.7	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3
75340B1014300	M10x143	4.7	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3
75340B1017300	M10x173	4.7	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3
75340B1021300	M10x213	4.7	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3
75340B1208500	M12x85*/**	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1210400	M12x104	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1210900	M12x109	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1211900	M12x119	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1212900	M12x129	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1217900	M12x179	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1223900	M12x239	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1225900	M12x259	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1226900	M12x269	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1229900	M12x299	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1231900	M12x319	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1611000	M16x110*/**	9.2	16.8	19.3	21.3	23.1	26.8	26.8	26.8	26.8
75340B1613100	M16x131	9.2	16.8	19.3	21.3	23.1	26.8	26.8	26.8	26.8
75340B1615100	M16x151	9.2	16.8	19.3	21.3	23.1	26.8	26.8	26.8	26.8
75340B1617100	M16x171	9.2	16.8	19.3	21.3	23.1	26.8	26.8	26.8	26.8
75340B1620100	M16x201	9.2	16.8	19.3	21.3	23.1	26.8	26.8	26.8	26.8
75340B1628100	M16x281	9.2	16.8	19.3	21.3	23.1	26.8	26.8	26.8	26.8
75340B1632100	M16x321	9.2	16.8	19.3	21.3	23.1	26.8	26.8	26.8	26.8
75340B2017300	M20x173**	-	19.9	14.2	14.2	14.2	26.7	26.7	26.7	26.7
75340B2022300	M20x223**	-	19.9	14.2	14.2	14.2	26.7	26.7	26.7	26.7

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Heavy Duty Wedge Anchor

Reference	Metallic fixings dimensions	Metallic fixings loads								
	Product Dimensions[mm]	Recommended loads - Non-cracked concrete								Design capacity - Non-cracked concrete (3) [kN]
	Dimensions[mm]	Tension - N_{rec}[kN]				Shear - V_{rec}[kN]				Bending moment MRd[Nm]
		C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	

1. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of γF=1.4. The loading figures
are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10 mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per
ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

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Heavy Duty Wedge Anchor

Design capacities - single anchor - no edge distances - reduced embedment depth

Reference	Metallic fixings dimensions	Metallic fixings loads	Installation data				
	Product Dimensions[mm]	Design loads - Tension & Shear - N_rd[kN]	Installation data	Spacing and edge distances			
	Dimensions[mm]		Reduced setting depth [$h_ef,_reD$][mm]	Characteristic spacing for $h_ef,_r$([5]) [mm]	Min. setting depth [h_ef] [mm]	Min. spacing for $h_ef,_r$[mm]	Min. edge distance for $h_ef,_r$
75340B0606500	M6x65	5.2	30	90	45	30	40
75340B0608500	M6x85	5.2	30	90	45	30	40
75340B0610000	M6x100	5.2	30	90	45	30	40
75340B0807300	M8x73	13.4	30	90	45	40	40
75340B0809300	M8x93	13.4	30	90	45	40	40
75340B0811300	M8x113	13.4	30	90	45	40	40
75340B0813300	M8x133	13.4	30	90	45	40	40
75340B1007800	M10x78	26.6	35	105	55	50	50
75340B1009300	M10x93	26.6	35	105	55	50	50
75340B1010300	M10x103	26.6	35	105	55	50	50
75340B1012300	M10x123	26.6	35	105	55	50	50
75340B1014300	M10x143	26.6	35	105	55	50	50
75340B1017300	M10x173	26.6	35	105	55	50	50
75340B1021300	M10x213	26.6	35	105	55	50	50
75340B1208500	M12x85*/**	46.6	50	150	75	70	70
75340B1210400	M12x104	46.6	50	150	75	70	70
75340B1210900	M12x109	46.6	50	150	75	70	70
75340B1211900	M12x119	46.6	50	150	75	70	70
75340B1212900	M12x129	46.6	50	150	75	70	70
75340B1217900	M12x179	46.6	50	150	75	70	70
75340B1223900	M12x239	46.6	50	150	75	70	70
75340B1225900	M12x259	46.6	50	150	75	70	70
75340B1226900	M12x269	46.6	50	150	75	70	70
75340B1229900	M12x299	46.6	50	150	75	70	70
75340B1231900	M12x319	46.6	50	150	75	70	70
75340B1611000	M16x110*/**	110.9	59	180	90	90	90
75340B1613100	M16x131	110.9	59	180	90	90	90
75340B1615100	M16x151	110.9	59	180	90	90	90
75340B1617100	M16x171	110.9	59	180	90	90	90
75340B1620100	M16x201	110.9	59	180	90	90	90
75340B1628100	M16x281	110.9	59	180	90	90	90
75340B1632100	M16x321	110.9	59	180	90	90	90

Shear value valid with distance from the edge c>10 x $h_{ef,r}$

Technical Sheet

FM 753 evo
Heavy Duty Wedge Anchor

Recommended capacities - single anchor - no edge distances - reduced embedment depth

Reference	Metallic fixings dimensions	Metallic fixings loads	Installation data				
	Product Dimensions[mm]	tension / shear load R_{reC}[kN]	Installation data	Spacing and edge distances			
	Dimensions[mm]		Reduced setting depth [$h_{ef,reD}$][mm]	Characteristic spacing for $h_{ef,r}$(5)[mm]	Min. setting depth [h_{ef}][mm]	Min. spacing for $h_{ef,r}$[mm]	Min. edge distance for $h_{ef,r}$
75340B0606500	M6x65	1.6	30	90	45	30	40
75340B0608500	M6x85	1.6	30	90	45	30	40
75340B0610000	M6x100	1.6	30	90	45	30	40
75340B0807300	M8x73	1.7	30	90	45	40	40
75340B0809300	M8x93	1.7	30	90	45	40	40
75340B0811300	M8x113	1.7	30	90	45	40	40
75340B0813300	M8x133	1.7	30	90	45	40	40
75340B1007800	M10x78	3.4	35	105	55	50	50
75340B1009300	M10x93	3.4	35	105	55	50	50
75340B1010300	M10x103	3.4	35	105	55	50	50
75340B1012300	M10x123	3.4	35	105	55	50	50
75340B1014300	M10x143	3.4	35	105	55	50	50
75340B1017300	M10x173	3.4	35	105	55	50	50
75340B1021300	M10x213	3.4	35	105	55	50	50
75340B1208500	M12x85*/**	5.2	50	150	75	70	70
75340B1210400	M12x104	5.2	50	150	75	70	70
75340B1210900	M12x109	5.2	50	150	75	70	70
75340B1211900	M12x119	5.2	50	150	75	70	70
75340B1212900	M12x129	5.2	50	150	75	70	70
75340B1217900	M12x179	5.2	50	150	75	70	70
75340B1223900	M12x239	5.2	50	150	75	70	70
75340B1225900	M12x259	5.2	50	150	75	70	70
75340B1226900	M12x269	5.2	50	150	75	70	70
75340B1229900	M12x299	5.2	50	150	75	70	70
75340B1231900	M12x319	5.2	50	150	75	70	70
75340B1611000	M16x110*/**	6.5	59	180	90	90	90
75340B1613100	M16x131	6.5	59	180	90	90	90
75340B1615100	M16x151	6.5	59	180	90	90	90
75340B1617100	M16x171	6.5	59	180	90	90	90
75340B1620100	M16x201	6.5	59	180	90	90	90
75340B1628100	M16x281	6.5	59	180	90	90	90
75340B1632100	M16x321	6.5	59	180	90	90	90

The recommended loads N,V and F derive from the mean ultimate loads and are inclusive of the total safety factor γ=4 (shear γ=3).
Shear value valid with distance from the edge c>10 x hef,r

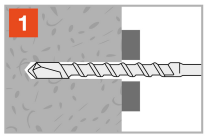
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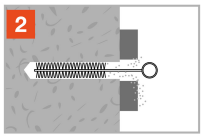
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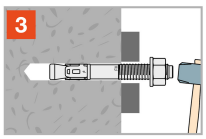
Product Dimension - D.I.Y

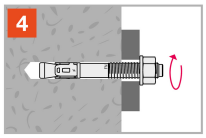
Reference	Metallic fixings dimensions				
	Product Dimensions[mm]	Product Reference	Other		
	Dimensions[mm]		Fixture thickness [$tfix,max$] with standard setting depth [hef,stD][mm]	Pcs/blister	Blister/Pkg.

Installation









Spacing, Edge Distance and Member Thickness

Reference	Metallic fixings dimensions				Installation data						
	Product Dimensions[mm]			Other	Installation data			Spacing and edge distances - Rebar		Spacing and edge dis	
	Dim									acteristic cing(5) - N[mm]	Characteristic edge distance[mm]
75340B0606500										120	60
75340B0608500	M6x85	10	6	7	55	8	40	100	40	120	60
75340B0610000	M6x100	10	6	7	55	8	40	100	40	120	60

Spacing, Edge Distance and Member Thickness
See full table online ➡️

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