

FM-753 3DG

Expanderskruv, 3DG ytbehandlad

Kraftig expanderskruv för medelhöga laster i storlekarna M6-M20. Option 7 klassad för montage i osprucken betong C20/25 - C50/60. 3DG ytbehandling för utomhusbruk.

Egenskaper

Material

- Stål
- 3DG ytbehandling med matt yta
- Clips i rostfritt stål A4

Fördelar

- Brett sortiment
- Enkel installation
- För utomhusmiljöer
- Kallformat stål
- Godkänd för reducerade sättdjup
- Clips med hullingar som förhindrar glidning vid montage

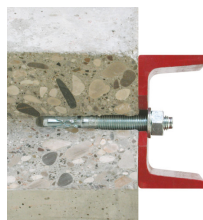
Användning

Användningsområden

- Räckan
- Metall- och träkonstruktioner
- Fasader

Lämplig för

- Osprucken betong
- Sten

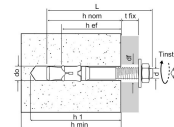
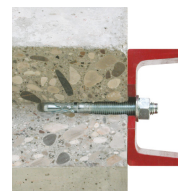


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Teknisk data

Product dimensions



Art. nr.	Produktreferens	Dimensions [ØxL] [mm]	Thread length	Fästdonets tjocklek [$t_{fix,max}$] med standardinställningsdjup [$h_{ef,STD}$] [mm]	Fixtursens tjocklek [$t_{fix,max}$] med reducerat sättningsdjup [$h_{ef,RED}$] [mm]	Håldiameter i fästdon [d_f] [mm]	Hålets diameter [d_0] x djup [h_1] i underlag [mm]	Min. stödtjocklek [h_{min}] [mm]	infä [
75320C0805000	FM-753 3DG	M8x50*	23	-	5	9	8x50	100	
75320C0806500		M8x65	38	7	(15)	9	8x60	100	
75320C0807500		M8x75	48	15	(25)	9	8x60	100	
75320C0809000		M8x90	63	30	(40)	9	8x60	100	
75320C0811500		M8x115	83	55	(65)	9	8x60	100	
75320C1006000		M10x60*	28	-	5	12	10x55	100	
75320C1007500		M10x75	43	5	(20)	12	10x70	100	
75320C1009000		M10x90	55	20	(35)	12	10x70	100	
75320C1010000		M10x100	60	30	(45)	12	10x70	100	
75320C1012000		M10x120	85	50	(65)	12	10x70	100	
75320C1014500		M10x145	85	75	(90)	12	10x70	100	
75320C1208000		M12x80*	40	-	7	14	12x70	100	
75320C1211000		M12x110	68	20	(35)	14	12x85	120	
75320C1213500		M12x135	93	45	(60)	14	12x85	120	
75320C1216000		M12x160	93	70	(85)	14	12x85	120	
75320C1218500		M12x185	93	100	(115)	14	12x85	120	
75320C1611000		M16x110*	53	-	15	18	16x95	130	
75320C1614500		M16x145	88	30	(50)	18	16x115	170	
75320C1617500		M16x175	88	60	(80)	18	16x115	170	

* Short series with reduced embedment depth

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Konstruktionskapacitet – enkel förankring – inga kantavstånd

Art. nr.	Dimensions [ØxL] [mm]	Produktreferens	Konstruktionskapacitet – enkel förankring – inga kantavstånd								
			Dimensioneringskapacitet – icke-sprickbildad betong (3)								
			Spänning - NRd (1)				Skärkraft - VRd (1-2)				Böjmoment 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]	
75320C0805000	M8x50*	FM-753 3DG	4	-	-	-	4.3	-	-	-	-
75320C0806500	M8x65	FM-753 3DG	8	-	-	-	5.4	-	-	-	-
75320C0807500	M8x75	FM-753 3DG	8	-	-	-	6.1	-	-	-	-
75320C0809000	M8x90	FM-753 3DG	8	-	-	-	6.1	-	-	-	-
75320C0811500	M8x115	FM-753 3DG	8	-	-	-	6.1	-	-	-	-
75320C1006000	M10x60*	FM-753 3DG	4	-	-	-	8.3	-	-	-	-
75320C1007500	M10x75	FM-753 3DG	8	-	-	-	9.3	-	-	-	-
75320C1009000	M10x90	FM-753 3DG	8	-	-	-	9.3	-	-	-	-
75320C1010000	M10x100	FM-753 3DG	8	-	-	-	9.3	-	-	-	-
75320C1012000	M10x120	FM-753 3DG	8	-	-	-	9.3	-	-	-	-
75320C1014500	M10x145	FM-753 3DG	8	-	-	-	9.3	-	-	-	-
75320C1208000	M12x80*	FM-753 3DG	8	-	-	-	9.9	-	-	-	-
75320C1211000	M12x110	FM-753 3DG	15.2	-	-	-	13.4	-	-	-	-
75320C1213500	M12x135	FM-753 3DG	15.2	-	-	-	13.4	-	-	-	-
75320C1216000	M12x160	FM-753 3DG	15.2	-	-	-	13.4	-	-	-	-
75320C1218500	M12x185	FM-753 3DG	15.2	-	-	-	13.4	-	-	-	-
75320C1611000	M16x110*	FM-753 3DG	17.2	-	-	-	28.4	-	-	-	-
75320C1614500	M16x145	FM-753 3DG	23.3	-	-	-	28.4	-	-	-	-
75320C1617500	M16x175	FM-753 3DG	23.3	-	-	-	28.4	-	-	-	-

1. The design 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 $s \geq 15$ cm (any diameter) or with a rebar spacing $s \geq 10$ 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 ($c \leq \max [10 \text{ hef}; 60d]$) 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 $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

*Short series with reduced embedment depth

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Rekommenderade kapaciteter – enkel förankring – inga kantavstånd

Art. nr.	Produktreferens	Dimensions [ØxL] [mm]	Rekommenderade laster – Icke sprucken betong								Böjmoment M_{zul} [Nm]
			Spänning - N_{zul}				Skärning - V_{zul}				
			C20/25 [kN]	C30/37 [kN]	C40/50 [kN]	C50/60 [kN]	C20/25 [kN]	C30/37 [kN]	C40/50 [kN]	C50/60 [kN]	
75320C0805000	FM-753 3DG	M8x50*	-	-	-	-	-	-	-	-	
75320C0806500	FM-753 3DG	M8x65	5.7	6.1	6.5	6.8	4.4	4.4	4.4	11.4	
75320C0807500	FM-753 3DG	M8x75	5.7	6.1	6.5	6.8	4.4	4.4	4.4	11.4	
75320C0809000	FM-753 3DG	M8x90	5.7	6.1	6.5	6.8	4.4	4.4	4.4	11.4	
75320C0811500	FM-753 3DG	M8x115	5.7	6.1	6.5	6.8	4.4	4.4	4.4	11.4	
75320C1006000	FM-753 3DG	M10x60*	-	-	-	-	-	-	-	-	
75320C1007500	FM-753 3DG	M10x75	5.7	6.3	6.8	7.4	6.6	6.6	6.6	23.3	
75320C1009000	FM-753 3DG	M10x90	5.7	6.3	6.8	7.4	6.6	6.6	6.6	23.3	
75320C1010000	FM-753 3DG	M10x100	5.7	6.3	6.8	7.4	6.6	6.6	6.6	23.3	
75320C1012000	FM-753 3DG	M10x120	5.7	6.3	6.8	7.4	6.6	6.6	6.6	23.3	
75320C1014500	FM-753 3DG	M10x145	5.7	6.3	6.8	7.4	6.6	6.6	6.6	23.3	
75320C1208000	FM-753 3DG	M12x80*	-	-	-	-	-	-	-	-	
75320C1211000	FM-753 3DG	M12x110	11.2	12.3	13.4	14.6	9.6	9.6	9.6	34.3	
75320C1213500	FM-753 3DG	M12x135	11.2	12.3	13.4	14.6	9.6	9.6	9.6	34.3	
75320C1216000	FM-753 3DG	M12x160	11.2	12.3	13.4	14.6	9.6	9.6	9.6	34.3	
75320C1218500	FM-753 3DG	M12x185	11.2	12.3	13.4	14.6	9.6	9.6	9.6	34.3	
75320C1611000	FM-753 3DG	M16x110*	-	-	-	-	-	-	-	-	
75320C1614500	FM-753 3DG	M16x145	16.7	18.4	20	21.7	20.3	20.3	20.3	91.9	
75320C1617500	FM-753 3DG	M16x175	16.7	18.4	20	21.7	20.3	20.3	20.3	91.9	

1) In case of interaction of tension and shear loads (lever arm) as well as in case of anchor groups and/or edge influence, a design according to ETAG 001, Annex C, Design Method A (Aug. 2010) or CEN/TS 1992-4-4 shall be carried out taking into account the entire European Technical Assessment ETA-13/0367.

2) The load data take into account the partial safety factors of the resistances given in the European Technical Assessment ETA-13/0367 and a partial safety factor of the

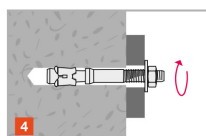
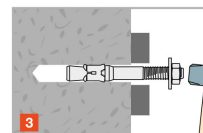
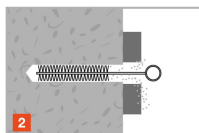
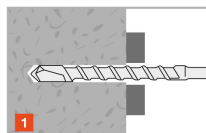
The values given assume unreinforced or normally reinforced concrete with a spacing of the reinforcing bars $s \geq 15$ cm or $s \geq 10$ cm with a diameter of the reinforcing bars $d_s \geq 15$ cm.

rebar diameter $d_s \leq 10$ mm.

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Montering



Avstånd och kantavstånd

Art. nr.	Avstånd och kantavstånd					
	Produkterferens	Dimensions [ØxL] [mm]	Min. edge distance [cmin] [mm]	Min. spacing [smin] [mm]	Karakteristiskt avstånd (5) - Scr,N [scr,N] [mm]	Characteristic edge distance [ccr,N] [mm]
75320C0805000	FM-753 3DG	M8x50*	45	45	90	45
75320C0806500	FM-753 3DG	M8x65	55	55	120	60
75320C0807500	FM-753 3DG	M8x75	55	55	120	60
75320C0809000	FM-753 3DG	M8x90	55	55	120	60
75320C0811500	FM-753 3DG	M8x115	55	55	120	60
75320C1006000	FM-753 3DG	M10x60*	50	50	105	55
75320C1007500	FM-753 3DG	M10x75	55	55	150	75
75320C1009000	FM-753 3DG	M10x90	55	55	150	75
75320C1010000	FM-753 3DG	M10x100	55	55	150	75
75320C1012000	FM-753 3DG	M10x120	55	55	150	75
75320C1014500	FM-753 3DG	M10x145	55	55	150	75
75320C1208000	FM-753 3DG	M12x80*	80	120	135	80
75320C1211000	FM-753 3DG	M12x110	90	90	180	90
75320C1213500	FM-753 3DG	M12x135	90	90	180	90
75320C1216000	FM-753 3DG	M12x160	90	90	180	90
75320C1218500	FM-753 3DG	M12x185	90	90	180	90
75320C1611000	FM-753 3DG	M16x110*	100	140	195	100
75320C1614500	FM-753 3DG	M16x145	130	130	255	130
75320C1617500	FM-753 3DG	M16x175	130	130	255	130

* Not included in the approval

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Installation data

Art. nr.	Installationsdata								
	Produkterferens	Dimensions [ØxL] [mm]	Ø borrhål [d0] [mm]	Min. borrdjup [h1] [mm]	Ø borrhåttur [df] [mm]	Wrench size [SW] [mm]	Installation torque [Tinst] [Nm]	Embedment depth [hef] [mm]	Min. stødtjocklek [hmin] [mm]
75320C0805000	FM-753 3DG	M8x50*	8	50	9	13	15	30	100
75320C0806500	FM-753 3DG	M8x65	8	60	9	13	15	40	100
75320C0807500	FM-753 3DG	M8x75	8	60	9	13	15	40	100
75320C0809000	FM-753 3DG	M8x90	8	60	9	13	15	40	100
75320C0811500	FM-753 3DG	M8x115	8	60	9	13	15	40	100
75320C1006000	FM-753 3DG	M10x60*	10	55	12	17	25	35	100
75320C1007500	FM-753 3DG	M10x75	10	70	12	17	25	50	100
75320C1009000	FM-753 3DG	M10x90	10	70	12	17	25	50	100
75320C1010000	FM-753 3DG	M10x100	10	70	12	17	25	50	100
75320C1012000	FM-753 3DG	M10x120	10	70	12	17	25	50	100
75320C1014500	FM-753 3DG	M10x145	10	70	12	17	25	50	100
75320C1208000	FM-753 3DG	M12x80*	12	70	14	19	50	45	100
75320C1211000	FM-753 3DG	M12x110	12	85	14	19	50	60	120
75320C1213500	FM-753 3DG	M12x135	12	85	14	19	50	60	120
75320C1216000	FM-753 3DG	M12x160	12	85	14	19	50	60	120
75320C1218500	FM-753 3DG	M12x185	12	85	14	19	50	60	120
75320C1611000	FM-753 3DG	M16x110*	16	95	18	24	100	65	130
75320C1614500	FM-753 3DG	M16x145	16	115	18	24	100	85	170
75320C1617500	FM-753 3DG	M16x175	16	115	18	24	100	85	170

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