

FM 753 evo Expanderskruv

Det nya ankaret FM 753 evo är en kraftig expanderskruv för medelhöga laster i storlekarna M6-M20. För option 7 klassade montage i osprucken betong C20/20 - C50/60.

Egenskaper

Material

- Cold formed carbon steel body with special geometry clip

Egenskaper

- Optimerad geometri för hög styrka
- Clips med hullingar för att motverka glidning vid montage
- Höghållfast stål för bästa prestanda
- Ytbehandlad för optimal funktion av clipset
- ETA godkänd med dokumenterad lastkapacitet

Användning

Användningsområden

- Räckan
- Metall- och träkonstruktion
- Fasader

Lämplig för

- Osprucken betong
- Sten



FM 753 evo
Expanderskruv

Teknisk data

Dimensioner

Art. nr.	Produktreferens	Type [d x L]	ID ¹⁾	Thread length	Fixturens tjocklek [t_{fix}]	Hålets diameter [d_d]	Minsta hål djup [h_1]	Inbäddningsdjup [h_{ef}]	Hålets diameter i fästelementet [d_f]	Min. stödtjocklek [h_{mi}]
75340B0604800	FM 753 evo	M6x48*/**	A	18	3	6	45	30	7	90
75340B0606500	FM 753 evo	M6x65	B	30	10	6	55	40		100
75340B0811300	FM 753 evo	M8x113	G	60	50	8	65	45	9	100
75340B1006300	FM 753 evo	M10x63*/**	A	25	5	10	55	35	12	90
75340B1008300	FM 753 evo	M10x83	C	40	10	10	70	50		100
75340B1010300	FM 753 evo	M10x103	E	50	30	10	70	50		100
75340B1012300	FM 753 evo	M10x123	G	60	50	10	70	50		100
75340B1208500	FM 753 evo	M12x85*/**	A	40	5	12	75	50	14	120
75340B1210900	FM 753 evo	M12x109	C	60	10	12	90	65		130
75340B1212900	FM 753 evo	M12x129	E	70	30	12	90	65		130
75340B1214900	FM 753 evo	M12x149	G	100	50	12	90	65		130
75340B1219900	FM 753 evo	M12x199	I	110	100	12	90	65		130
75340B1611000	FM 753 evo	M16x110*/**	A	50	15	16	89	59	18	140
75340B1615100	FM 753 evo	M16x151	C	80	30	16	110	80		160
75340B1617100	FM 753 evo	M16x171	D	80	50	16	110	80		160
75340B1622100	FM 753 evo	M16x221	F	100	100	16	110	80		160

* Ankare med reducerat infästningsdjup.

** Omfattas inte av CE-certifiering.

1) Identitetsmärkning, produktlängd.

FM 753 evo Expanderskruv

Konstruktionskapacitet – enkel förankring – inga kantavstånd

Art. nr.	Konstruktionskapacitet – Ospreckt betong ⁽³⁾ [kN]									
	Type [d x L]	Spänning - NRd ⁽¹⁾				Skjuvning - VRd ⁽¹⁻²⁾ [kN]				Böjmoment MRd [Nm]
		C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60	
75340B0604800	M6x48*/**	4	4	4	4.1	5.1	5.1	5.1	5.1	7.3
75340B0606500	M6x65	4	4	4	4.1	5.1	5.1	5.1	5.1	7.3
75340B0811300	M8x113	8	8.3	8.5	8.7	7.9	7.9	7.9	7.9	21.5
75340B1006300	M10x63*/**	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75340B1008300	M10x83	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
75340B1208500	M12x85*/**	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
75340B1212900	M12x129	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1214900	M12x149	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75340B1219900	M12x199	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
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
75340B1622100	M16x221	23.5	27	29.8	32.4	37.5	37.5	37.5	37.5	155.3

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).

FM 753 evo Expanderskruv

Rekommenderade kapaciteter – enkel förankring – inga kantavstånd

Art. nr.	Rekommenderad kapacitet – Icke sprucken betong									
	Type [d x L]	Spänning - Nrec ⁽¹⁻²⁾ [kN]				Skjuvning - Vrec ⁽¹⁻³⁾ [kN]				Böjmoment Mrec ⁽¹⁻⁶⁾ [Nm]
		C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60	
75340B0604800	M6x48*/**	2.2	2.9	2.9	2.9	2.9	3.6	3.6	3.6	3.6
75340B0606500	M6x65	2.2	2.9	2.9	2.9	2.9	3.6	3.6	3.6	3.6
75340B0811300	M8x113	2.4	5.7	5.9	6.1	6.2	5.6	5.6	5.6	5.6
75340B1006300	M10x63*/**	4.7	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3
75340B1008300	M10x83	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
75340B1208500	M12x85*/**	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
75340B1212900	M12x129	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1214900	M12x149	7.2	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4
75340B1219900	M12x199	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
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
75340B1622100	M16x221	9.2	16.8	19.3	21.3	23.1	26.8	26.8	26.8	26.8

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 $\gamma_F=1.4$. 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 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 ($c \leq \max [10 \text{ hef}; 60d]$) 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).

FM 753 evo
Expanderskruv

Dimensioneringskapacitet – enkel förankring – inga kantavstånd – reducerat ingjutningsdjup

Art. nr.	Type [d x L]	Minskat infästningsdjup [$h_{ef,r}$]	Karakteristiskt avstånd för $h_{ef,r}$ ⁽⁵⁾ [$S_{cr,red}$] [mm]	Karakteristiskt kantavstånd för $h_{ef,r}$ [$C_{cr,red}$] [mm]	Min. avstånd för $h_{ef,r}$ [$S_{min,red}$] [mm]	Min. kantavstånd för $h_{ef,r}$ [$C_{min,red}$]	Dimensioneringsbelastningar – Drag & Skjuvning – N_{Rd} [kN]
75340B0604800	M6x48*/**	30	90	45	30	40	5.2
75340B0606500	M6x65	30	90	45	30	40	5.2
75340B0811300	M8x113	30	90	45	40	40	13.4
75340B1006300	M10x63*/**	35	105	55	50	50	26.6
75340B1008300	M10x83	35	105	55	50	50	26.6
75340B1010300	M10x103	35	105	55	50	50	26.6
75340B1012300	M10x123	35	105	55	50	50	26.6
75340B1208500	M12x85*/**	50	150	75	70	70	46.6
75340B1210900	M12x109	50	150	75	70	70	46.6
75340B1212900	M12x129	50	150	75	70	70	46.6
75340B1214900	M12x149	50	150	75	70	70	46.6
75340B1219900	M12x199	50	150	75	70	70	46.6
75340B1611000	M16x110*/**	59	180	90	90	90	110.9
75340B1615100	M16x151	59	180	90	90	90	110.9
75340B1617100	M16x171	59	180	90	90	90	110.9
75340B1622100	M16x221	59	180	90	90	90	110.9

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

FM 753 evo Expanderskruv

Rekommenderade kapaciteter – enkel förankring – inga kantavstånd – reducerat infästningsdjup

Art. nr.	Type [d x L]	Minskat infästningsdjup [h _{ef,r}]	Karakteristiskt avstånd för h _{ef,r} ⁽⁵⁾ [S _{cr,red}] [mm]	Karakteristiskt kantavstånd för h _{ef,r} [C _{cr,red}] [mm]	Min. avstånd för h _{ef,r} [S _{min,red}] [mm]	Min. kantavstånd för h _{ef,r} [C _{min,red}]	Rekommenderade belastningar – Spänning & skjuvning – N _{rec} [kN]
75340B0604800	M6x48*/**	30	90	45	30	40	1.6
75340B0606500	M6x65	30	90	45	30	40	1.6
75340B0811300	M8x113	30	90	45	40	40	1.7
75340B1006300	M10x63*/**	35	105	55	50	50	3.4
75340B1008300	M10x83	35	105	55	50	50	3.4
75340B1010300	M10x103	35	105	55	50	50	3.4
75340B1012300	M10x123	35	105	55	50	50	3.4
75340B1208500	M12x85*/**	50	150	75	70	70	5.2
75340B1210900	M12x109	50	150	75	70	70	5.2
75340B1212900	M12x129	50	150	75	70	70	5.2
75340B1214900	M12x149	50	150	75	70	70	5.2
75340B1219900	M12x199	50	150	75	70	70	5.2
75340B1611000	M16x110*/**	59	180	90	90	90	6.5
75340B1615100	M16x151	59	180	90	90	90	6.5
75340B1617100	M16x171	59	180	90	90	90	6.5
75340B1622100	M16x221	59	180	90	90	90	6.5

The recommended loads N,V and F derive from the mean ultimate loads and are inclusive of the total safety factor $\gamma=4$ (shear $\gamma=3$).

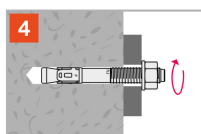
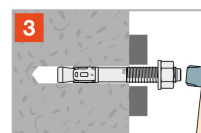
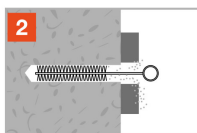
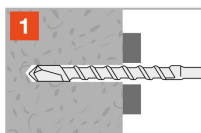
Shear value valid with distance from the edge $c>10 \times h_{ef,r}$

Produktdimension – D.I.Y

Table "Produktdimension – D.I.Y" cannot be displayed : no references available.

FM 753 evo Expanderskruv

Montering



Spacing, Edge Distance and Member Thickness

Art. nr.	Type [d x L]	Hålets diameter [d _o]	Minsta hål djup [h ₁]	Hålets diameter i fästelementet [d _f]	Skiftnyckel [SW]	Vridmoment [T _{inst}]	Inbäddningsdjup [h _{ef}]	Min. stödtjocklek [h _{min}]	Kara av [S _c]
75340B0604800	M6x48*/**	6	45	7	10	8	30	90	
75340B0606500	M6x65	6	55	7	10	8	40	100	
75340B0811300	M8x113	8	65	9	13	15	45	100	
75340B1006300	M10x63*/**	10	55	12	17	30	35	90	
75340B1008300	M10x83	10	70	12	17	30	50	100	
75340B1010300	M10x103	10	70	12	17	30	50	100	
75340B1012300	M10x123	10	70	12	17	30	50	100	
75340B1208500	M12x85*/**	12	75	14	19	50	50	120	
75340B1210900	M12x109	12	90	14	19	50	65	130	
75340B1212900	M12x129	12	90	14	19	50	65	130	
75340B1214900	M12x149	12	90	14	19	50	65	130	
75340B1219900	M12x199	12	90	14	19	50	65	130	
75340B1611000	M16x110*/**	16	89	18	24	100	59	140	
75340B1615100	M16x151	16	110	18	24	100	80	160	
75340B1617100	M16x171	16	110	18	24	100	80	160	
75340B1622100	M16x221	16	110	18	24	100	80	160	

