

FM-X5

Lange, flexibele nylonplug

De lange nylonplug FM-X5 is ideaal voor het bevestigen van elementen op elk type holle of volle ondergrond die tijdens de installatie handmatig moet worden afgesteld, zoals venster- of deurramen of -omlijstingen. De plug wordt voorgemonteerd geleverd met een schroef met verzonken kop of zeskantkop.

Kenmerken

Materiaal

- Plug : nylon,
- Schroef : elektrolytisch verzinkt staal.

Voordelen

Tijdwinst:

- Voorgemonteerde plug en schroef
- Montage door het te bevestigen element
- 8 vleugels die rotatie in het boorgat voorkomen
- Flexibel nylon en laag aandraaimoment, waardoor handmatige afstelling mogelijk is
- Plug van polyamide PA6 garandeert een zeer goede duurzaamheid

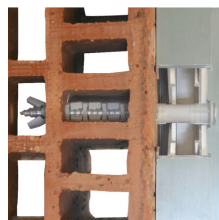
Toepassingen

Toepassingsgebieden

- Bevestiging van kepers of steunlatten
- Bevestiging van enkele hoekijzers
- Bevestiging van ramen en deuren
- Bevestiging van rails en klemmen voor kabels en leidingen,
- Bevestiging van dunne bekledingen op gevels.

Ondergrond

- Ongescheurd beton,
- Cellenbeton,
- Hol en vol metselwerk,
- Natuursteen.

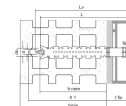
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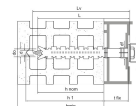
Technische gegevens

Afmetingen



Referentie	Product Reference	Dimensions [ØxL] [mm]	Max. fixture thickness [t _{fix}] [mm]	Min. hole depth [h ₁] [mm]	Nominal embedment depth [h _{nom}] [mm]	Min. support thickness* [h _{min}] [mm]	Hole diameter in fixture [d _f] [mm]	Screw diameter [d] [mm]	Screw length [L _v] [mm]	Bit	Qty per box	Qty per outer box
64301B0808000	FM-X5	Ø8x80	10	80	70	120	8.5	6	85	T30	100	1000
64301B0810000	FM-X5	Ø8x100	30	80	70	120	8.5	6	105	T30	50	500
64301B0812000	FM-X5	Ø8x120	50	80	70	120	8.5	6	125	T30	50	500
64301B1008500	FM-X5	Ø10x85	15	80	70	120	10.5	7	90	T40	50	500
64301B1010000	FM-X5	Ø10x100	30	80	70	120	10.5	7	105	T40	50	500
64301B1011500	FM-X5	Ø10x115	45	80	70	120	10.5	7	120	T40	50	500
64301B1013500	FM-X5	Ø10x135	65	80	70	120	10.5	7	140	T40	50	200
64301B1016000	FM-X5	Ø10x160	90	80	70	120	10.5	7	165	T40	50	200
64301B1020000	FM-X5	Ø10x200	130	80	70	120	10.5	7	205	T40	50	-
64301B1023000	FM-X5	Ø10x230	160	80	70	120	10.5	7	235	T40	50	-

*Including plaster



Product Dimensions Hex Head Screw

Referentie	Product Reference	Dimensions [ØxL] [mm]	Max. fixture thickness [t _{fix}] [mm]	Min. hole depth [h ₁] [mm]	Nominal embedment depth [h _{nom}] [mm]	Min. support thickness* [h _{min}] [mm]	Hole diameter in fixture [d _f] [mm]	Washer diameter [d _w] [mm]	Screw diameter [d] [mm]	Screw length [L _v] [mm]	Wrench [SW] [mm]
64302B1008500	FM-X5	Ø10x85	15	80	70	120	10.5	19	7	90	13
64302B1010000	FM-X5	Ø10x100	30	80	70	120	10.5	19	7	105	13
64302B1011500	FM-X5	Ø10x115	45	80	70	120	10.5	19	7	120	13
64302B1013500	FM-X5	Ø10x135	65	80	70	120	10.5	19	7	140	13
64302B1016000	FM-X5	Ø10x160	90	80	70	120	10.5	19	7	165	13

*Including plaster

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Design capacities - single anchor - no edge distances

Referentie	Design capacity - Non-cracked concrete (3)								Bending moment MRd [Nm]
	Tension - NRd (1)				Shear - VRd (1-2)				
	C20/25 [kN]	C30/37 [kN]	C40/50 [kN]	C50/60 [kN]	C20/25 [kN]	C30/37 [kN]	C40/50 [kN]	C50/60 [kN]	
64301B0808000	-	-	-	-	-	-	-	-	-
64301B0810000	-	-	-	-	-	-	-	-	-
64301B0812000	-	-	-	-	-	-	-	-	-
64301B1008500	-	-	-	-	-	-	-	-	-
64301B1010000	-	-	-	-	-	-	-	-	-
64301B1011500	-	-	-	-	-	-	-	-	-
64301B1013500	-	-	-	-	-	-	-	-	-
64301B1016000	-	-	-	-	-	-	-	-	-
64301B1020000	-	-	-	-	-	-	-	-	-
64301B1023000	-	-	-	-	-	-	-	-	-
64302B1008500	-	-	-	-	-	-	-	-	-
64302B1010000	-	-	-	-	-	-	-	-	-
64302B1011500	-	-	-	-	-	-	-	-	-
64302B1013500	-	-	-	-	-	-	-	-	-
64302B1016000	-	-	-	-	-	-	-	-	-

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).
- *Not covered by ETA-11/0080

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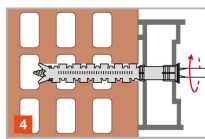
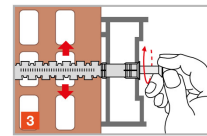
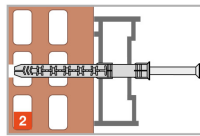
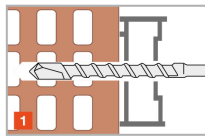
Recommended capacities - single anchor - no edge distances

Referentie	Design capacity								Bending moment - MRd [Nm]
	Tension - NRd				Shear - VRd				
	Non-cracked concrete C20/25 [kN]	Hollow concrete block [kN]	Hollow brick [kN]	Solid brick (BP400) [kN]	Non-cracked concrete C20/25 [kN]	Hollow concrete block [kN]	Hollow brick [kN]	Solid brick (BP400) [kN]	
64301B0808000	-	-	-	-	-	-	-	-	-
64301B0810000	-	-	-	-	-	-	-	-	-
64301B0812000	-	-	-	-	-	-	-	-	-
64301B1008500	-	-	-	-	-	-	-	-	-
64301B1010000	-	-	-	-	-	-	-	-	-
64301B1011500	-	-	-	-	-	-	-	-	-
64301B1013500	-	-	-	-	-	-	-	-	-
64301B1016000	-	-	-	-	-	-	-	-	-
64301B1020000	-	-	-	-	-	-	-	-	-
64301B1023000	-	-	-	-	-	-	-	-	-
64302B1008500	-	-	-	-	-	-	-	-	-
64302B1010000	-	-	-	-	-	-	-	-	-
64302B1011500	-	-	-	-	-	-	-	-	-
64302B1013500	-	-	-	-	-	-	-	-	-
64302B1016000	-	-	-	-	-	-	-	-	-

- 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.
- 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.
- 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).

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Plaatsing



Spacing, Edge Distance and Member Thickness

Referentie	Ø drilling hole [d0] [mm]	Min. drill depth [h1] [mm]	Ø drilling fixture [df] [mm]	Wrench size [SW] [mm]	Installation torque [Tinst] [Nm]	Embedment depth [hef] [mm]	Characteristic spacing(5) - Scr,N [scr,N] [mm]	Characteristic edge distance [ccr,N] [mm]
64301B0808000	8	80	8.5	-	-	-	-	-
64301B0810000	8	80	8.5	-	-	-	-	-
64301B0812000	8	80	8.5	-	-	-	-	-
64301B1008500	10	80	10.5	-	-	-	-	-
64301B1010000	10	80	10.5	-	-	-	-	-
64301B1011500	10	80	10.5	-	-	-	-	-
64301B1013500	10	80	10.5	-	-	-	-	-
64301B1016000	10	80	10.5	-	-	-	-	-
64301B1020000	10	80	10.5	-	-	-	-	-
64301B1023000	10	80	8.5	-	-	-	-	-
64302B1008500	10	80	10	-	-	-	-	-
64302B1010000	10	80	10	-	-	-	-	-
64302B1011500	10	80	10	-	-	-	-	-
64302B1013500	10	80	10	-	-	-	-	-
64302B1016000	10	80	10	-	-	-	-	-

* Not included in the approval

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Installation data

Referentie	Min. edge distance [cmin] [mm]	Min. spacing [smin] [mm]	Characteristic spacing(5) - Scr,N [scr,N] [mm]	Characteristic edge distance [ccr,N] [mm]
64301B0808000	100	250	-	-
64301B0810000	100	250	-	-
64301B0812000	100	250	-	-
64301B1008500	100	250	-	-
64301B1010000	100	250	-	-
64301B1011500	100	250	-	-
64301B1013500	100	250	-	-
64301B1016000	100	250	-	-
64301B1020000	100	250	-	-
64301B1023000	100	250	-	-
64302B1008500	100	250	-	-
64302B1010000	100	250	-	-
64302B1011500	100	250	-	-
64302B1013500	100	250	-	-
64302B1016000	-	-	-	-

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