Technical Sheet

X3
High Performance Long Plug

The X3 plugs in Ø8 and Ø10 mm versions in combination with countersunk / hexagon head screws are approved for multiple fixings in concrete and masonry.







Features

Material

Plug: nylon
Screw: white zinc plated steel

Benefits

- Extraordinary performance on all base materials.
- Up to 3 embedment depths
- Extreme versatility and significant reduction in installation time.
- Increased expansion
- Designed for facades and heavy carpentry.

Applications

Applications

- Ventilated facades
- Steel carpentry
- Wood carpentry

Suitable for

Non-cracked concrete
Solid brick
Honeycomb brick

- Cell like clay brick
- Lightweight honeycomb brick
- Hollow dense aggregate block
- Hollow light aggregate block
- Aerated concrete
- Solid stone

Technical Sheet

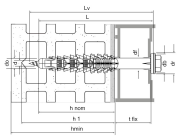
X3
High Performance Long Plug

Technical Data

Product Dimension - Countersunk PZ Screw

Reference	Nylon fixings dimensions										
	Info product									Tun / DB nr.	NOB nr.
	Product Reference	Plug[mm]	Screw[mm]	Reduced fixture thickness [tf_{ix}][mm]	Standard fixture thickness [tf_{ix}][mm]	Max fixture thickness[mm]	Bit	Qty per box[pcs]	Qty per outer box[mm]		
64601B0810000	X3	8x100	6x108	60	50	-	PZ3	50.0	500.0	-	-

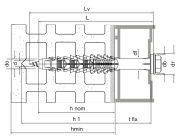
(1) Only for aerated concrete
** Not covered by CE certification*



Product Dimensions Countersunk TX Screw

Reference	Nylon fixings dimensions									Nylon fixings Installation data
	Info product									Installation data
	Product Reference	Plug[mm]	Screw[mm]	Reduced fixture thickness [tf_{ix}][mm]	Standard fixture thickness [tf_{ix}][mm]	Max fixture thickness[mm]	Bit	Qty per box[pcs]	Qty per outer box[mm]	Ø drilling fixture[mm]

*Only for aerated concrete
NOTE: The thickness of the plaster must be included in the fixing thickness t_{fix}



Product Dimensions Hex-head Screw

Reference	Nylon fixings dimensions											Nylon fixings Installation data
	Info product											Installation data
	Product Reference	Plug[mm]	Screw[mm]	Reduced fixture thickness [tf_{ix}] [mm]	Standard fixture thickness [tf_{ix}] [mm]	Max fixture thickness[mm]	Bit	Wrench size[mm]	Built-in washer	Qty per box[pcs]	Qty per outer box[mm]	Ø drilling fixture[mm]

* Only for aerated concrete
NOTE: The thickness of the plaster must be included in the fixing thickness t_{fix}

Technical Sheet

X3
High Performance Long Plug



Product Dimensions Large Rim Plug with Hex-head screw

Reference	Nylon fixings dimensions										
	Info product										
	Product Reference	Plug[mm]	Screw[mm]	Reduced fixture thickness [tf_{ix}][mm]	Standard fixture thickness [tf_{ix}][mm]	Max fixture thickness[mm]	Bit	Wrench size[mm]	Built-in washer	Qty per box[pcs]	Qty per outer box[mm]

*Only for aerated concrete
NOTE: The thickness of the plaster must be included in the fixing thickness t_{fix}

Design capacities - single anchor - no edge distances

Reference	Nylon fixings Loads									
	Design capacities - single anchor - no edge distances									
	Design capacity									
	Bending moment - MRd[Nm]	Tension - NRd (1)[kN]				Shear - VRd (1-2)[kN]				
		Non-cracked concrete C12/15[kN]	Non-cracked concrete C16/20[kN]	Autoclaved aerated concrete AAC[kN]	Solid brick[kN]	Non-cracked concrete C12/15[kN]	Non-cracked concrete C16/20[kN]	Autoclaved aerated concrete AAC[kN]	Solid brick[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).
*Not covered by ETA-11/0080

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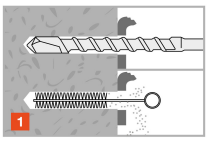
Recommended capacities - single anchor - no edge distances

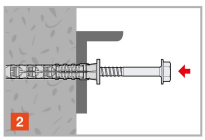
Reference	Nylon fixings Loads								
	Design capacities - single anchor - no edge distances								
	Design capacity								
	Bending moment - MRd[Nm]	Tension - NRd (1)[kN]				Shear - VRd (1-2)[kN]			
		Non-cracked concrete C12/15[kN]	Non-cracked concrete C16/20[kN]	Autoclaved aerated concrete AAC[kN]	Solid brick[kN]	Non-cracked concrete C12/15[kN]	Non-cracked concrete C16/20[kN]	Autoclaved aerated concrete AAC[kN]	Solid brick[kN]

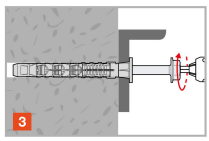
1. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of γF=1.4. The loading figures
are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) 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).

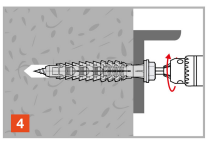
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Installation









Spacings and edge distances

Reference	Nylon fixings dimensions	Nylon fixings Installa
	Info product	Spacings and edge d
	Product Reference	2/15
		stic / Minimun thickness of support[mm] / Mir dista

Spacings and edge distances
See full table online ➡️

* Not included ir

Installation data

Reference	Nylon fixings Installation data		
	Installation data		
	Ø drilling hole[mm]	Min. drill depth[mm]	Ø drilling fixture[mm]

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