

# FIX NYLON EXPANSION PLUG

Easy-to-install nylon plug giving exceptional performance in solid base materials



## Approvals and Reports

- KOT-2022/2086



## Product information

### Features and benefits

- Anti-rotation fins prevent spinning during tightening of the screw.
- Engineered grip feature for extra holding power.
- Two-way expansion mechanism provides a strong anchorage in solid base materials.
- Small edge distances achievable.

### Applications

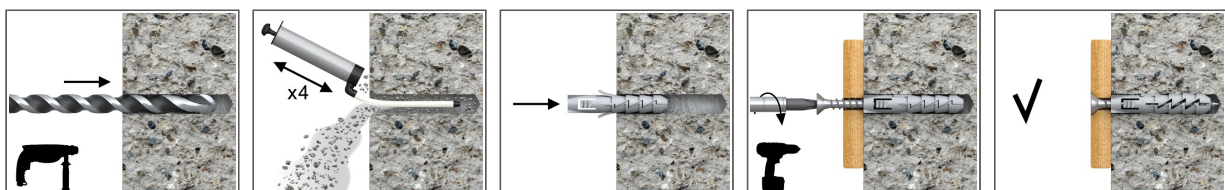
- Pictures
- Lighting
- Skirting / Dado railing
- Shelves
- Trunking
- Cable trays
- Electrical fittings
- Letterboxes

### Base materials

**Approved for use in:**

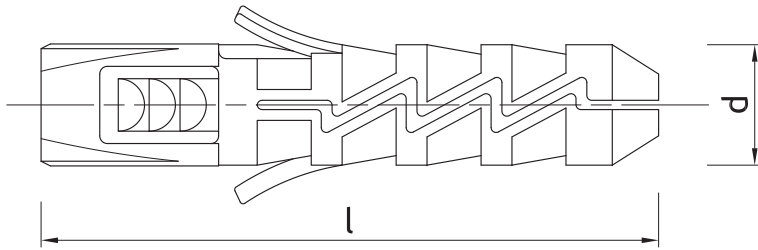
- Concrete
- Solid Brick
- Solid Sand-lime Brick
- Aerated Concrete Block

## Installation guide



1. Drill a hole of required diameter.
2. Insert FIX plug into hole and tap home.
3. Insert screw of required diameter into plug through fixture and tighten.

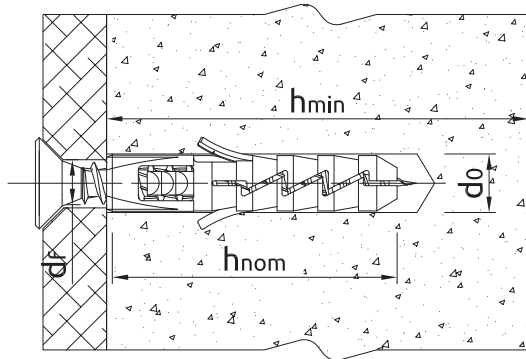
Product information



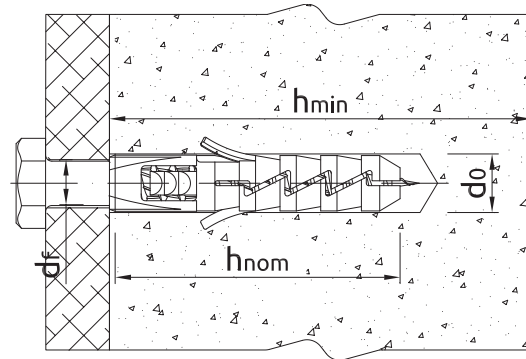
Product dimensions

Size	Product Code	Plug		Screw	Fixture
		Diameter	Length	Diameter	Hole diameter
		d	l	D	d <sub>f</sub>
[mm]					
Ø5	FIX-N-05	5	25	3,5	4
Ø6	FIX-N-06	6	30	3,5 - 4,0	4,0 - 5,0
Ø8	FIX-N-08	8	40	4,5 - 5,0	5,0 - 6,0
Ø10	FIX-N-10	10	50	5,0 - 6,0	6,0 - 7,0
Ø12	FIX-N-12	12	60	6,0 - 8,0	7,0 - 9,0
Ø14	FIX-N-14	14	70	10,0	11,0
Ø6	R-FIX-N-06	6	30	3,5 - 4,0	4,0 - 5,0
Ø8	R-FIX-N-08	8	40	4,5 - 5,0	5,0 - 6,0
Ø10	R-FIX-N-10	10	50	5,0 - 6,0	6,0 - 7,0
Ø14	R-FIX-N-14	14	70	10,0	11,0
	R-FIX-N-12	12	-	6,0 - 8,0	-

Installation data



Installation data



Installation data

Size	Ø5	Ø6	Ø8	Ø10	Ø12	Ø14		
Hole diameter in substrate	d <sub>0</sub>	[mm]	5	6	8	10	12	14
Min. hole depth in substrate	h <sub>0</sub>	[mm]	35	40	50	60	70	80
Min. installation depth	h <sub>nom</sub>	[mm]	25	30	40	50	60	70
Min. substrate thickness	h <sub>min</sub>	[mm]	55	60	70	80	90	100
Min. spacing (countersunk head)	s <sub>min</sub>	[mm]	25	30	40	30	30	-
Min. spacing (HEX head)	s <sub>min</sub>	[mm]	-	-	-	50	60	70
Min. edge distance (countersunk head)	c <sub>min</sub>	[mm]	25	30	40	40	40	-
Min. edge distance (HEX head)	c <sub>min</sub>	[mm]	-	-	-	50	60	70
Fixing diameter	d	[mm]	5	6	8	10	12	14
Min. spacing	s <sub>min</sub>	[mm]	-	30	-	-	-	-
Min. edge distance	c <sub>min</sub>	[mm]	-	30	-	-	-	-

## Basic performance data

Performance data for single fixing without influence of edge distance and spacing

Substrate		Concrete C20/25 - C50/60	Solid clay brick min 20MPa (eg Mz20/2.0)	Sand-lime solid brick	Aerated concrete 600 Mark V
<b>MEAN ULTIMATE LOAD <math>F_{Ru,m}</math></b>					
Ø5, Embedment depth 25mm	[kN]	0.26	0.32	0.22	0.30
Ø6, Embedment depth 30mm	[kN]	0.24	1.11	0.65	0.76
Ø8, Embedment depth 40mm	[kN]	1.02	2.92	1.65	1.17
Ø10, Embedment depth 50mm	[kN]	0.78	1.86	1.62	1.64
Ø12, Embedment depth 60mm	[kN]	1.82	5.80	4.06	2.99
Ø14, Embedment depth 70mm	[kN]	2.29	3.73	2.37	1.80
<b>CHARACTERISTIC LOAD <math>F_{Rk}</math></b>					
Ø5, Embedment depth 25mm	[kN]	0.10	0.15	0.10	0.15
Ø6, Embedment depth 30mm	[kN]	0.15	0.40	0.30	0.40
Ø8, Embedment depth 40mm	[kN]	0.50	2.00	1.20	0.75
Ø10, Embedment depth 50mm	[kN]	0.40	0.90	0.60	0.90
Ø12, Embedment depth 60mm	[kN]	1.20	4.00	3.00	2.00
Ø14, Embedment depth 70mm	[kN]	1.20	2.50	1.20	1.15
<b>DESIGN LOAD <math>F_{Rd}</math></b>					
Ø5, Embedment depth 25mm	[kN]	0.05	0.06	0.04	0.07
Ø6, Embedment depth 30mm	[kN]	0.08	0.16	0.12	0.20
Ø8, Embedment depth 40mm	[kN]	0.27	0.80	0.48	0.37
Ø10, Embedment depth 50mm	[kN]	0.22	0.36	0.24	0.45
Ø12, Embedment depth 60mm	[kN]	0.66	1.60	1.20	1.00
Ø14, Embedment depth 70mm	[kN]	0.66	1.00	0.48	0.57
<b>RECOMMENDED LOAD <math>F_{Rec}</math></b>					
Ø5, Embedment depth 25mm	[kN]	0.04	0.04	0.03	0.05
Ø6, Embedment depth 30mm	[kN]	0.06	0.11	0.09	0.14
Ø8, Embedment depth 40mm	[kN]	0.19	0.57	0.34	0.26
Ø10, Embedment depth 50mm	[kN]	0.16	0.26	0.17	0.32
Ø12, Embedment depth 60mm	[kN]	0.47	1.14	0.86	0.71
Ø14, Embedment depth 70mm	[kN]	0.47	0.71	0.34	0.41

## Product commercial data

Product Code	Plug	Quantity [pcs]			Weight [kg]			Bar Codes
	Diameter [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
FIX-N-05 <sup>1)</sup>	5	400	12800	307200	0.17	5.4	160.6	5906675014227
FIX-N-06 <sup>1)</sup>	6	250	8000	192000	0.17	5.4	160.6	5906675014326
FIX-N-08 <sup>1)</sup>	8	200	2400	57600	0.33	4.0	125.0	5906675014425
FIX-N-10 <sup>1)</sup>	10	100	1600	38400	0.30	4.8	145.2	5906675014524
FIX-N-12 <sup>1)</sup>	12	50	800	19200	0.28	4.5	137.7	5906675014623
FIX-N-14 <sup>1)</sup>	14	25	400	9600	0.19	3.1	104.1	5906675118635
R-FIX-N-06 <sup>1)</sup>	6	100	3200	179200	0.08	2.5	169.8	5906675168449
R-FIX-N-08 <sup>1)</sup>	8	100	3200	76800	0.17	5.4	160.6	5906675168463
R-FIX-N-10 <sup>1)</sup>	10	100	1600	38400	0.31	4.9	147.9	5906675168487
R-FIX-N-14 <sup>1)</sup>	14	25	400	9600	0.18	2.9	99.9	5906675009049
R-FIX-N-12 <sup>1)</sup>	12	50	800	19200	0.26	4.2	131.4	5906675168500

1) KOT-2022/2086