

# FIX EXPANSION PLUG

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

## Product information



### Applications

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

### 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.

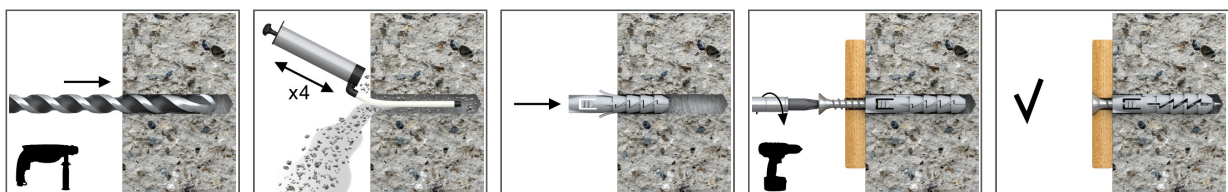
### Base materials

#### Approved for use in:

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

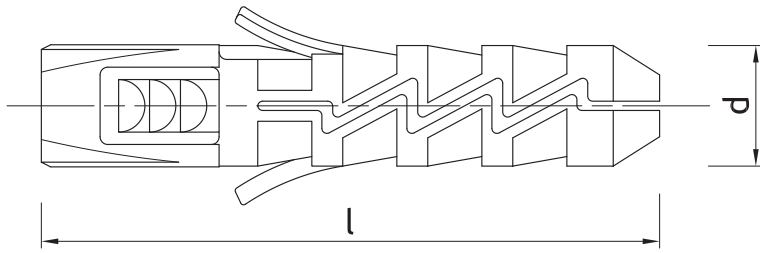


## Installation guide



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.

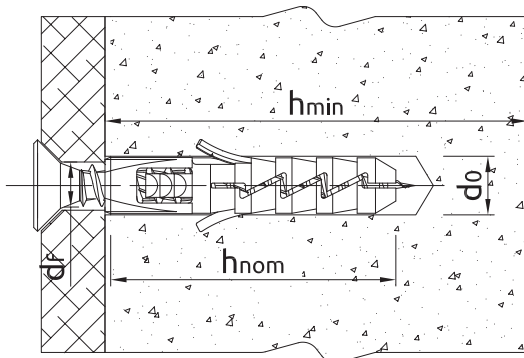
Product information



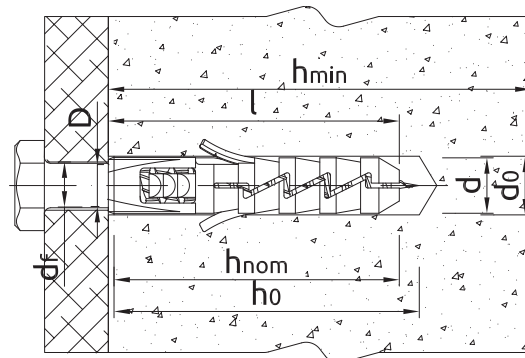
Product dimensions

Size	Product Code	Plug		Screw	Fixture
		Diameter	Length	Diameter	Hole diameter
		d	l	D	d <sub>f</sub>
[mm]					
Ø5	FIX-K-05	5	25	3,5	4
Ø6	FIX-K-06	6	30	3,5 - 4,0	4 - 5
Ø7	FIX-K-07	7	35	4,5	5,0
Ø8	FIX-K-08	8	40	4,5 - 5,0	5,0 - 6,0
Ø10	FIX-K-10	10	50	5,0 - 6,0	6,0 - 7,0
Ø12	FIX-K-12	12	60	6,0 - 8,0	7,0 - 9,0
Ø14	FIX-K-14	14	70	10	11

Installation data



Installation data



Installation data for countersunk head screw

Size			Ø5	Ø6	Ø7	Ø8	Ø10	Ø12	Ø14
Fixing diameter	d	[mm]	5	6	7	8	10	12	14
Hole diameter in substrate	d <sub>0</sub>	[mm]	5	6	7	8	10	12	14
Min. hole depth in substrate	h <sub>0</sub>	[mm]	35	40	45	50	60	70	80
Min. installation depth	h <sub>nom</sub>	[mm]	25	30	35	40	50	60	70
Min. substrate thickness	h <sub>min</sub>	[mm]	55	60	65	70	80	90	100
Min. spacing (countersunk head)	s <sub>min</sub>	[mm]	25	30	35	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	35	40	40	40	-
Min. edge distance (HEX head)	c <sub>min</sub>	[mm]	-	-	-	-	50	60	70

## 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_{Rk,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
Ø7, Embedment depth 35mm	[kN]	0.57	-	-	0.61
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
Ø7, Embedment depth 35mm	[kN]	0.49	-	-	0.52
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
Ø7, Embedment depth 35mm	[kN]	0.20	-	-	0.26
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
Ø7, Embedment depth 35mm	[kN]	0.14	-	-	0.18
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

Size	Product Code	Plug	Quantity [pcs]			Weight [kg]			Bar Codes
		Diameter [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
Ø5	FIX-K-05	5	400	12800	307200	0.14	4.5	137.5	5906675090320
Ø6	FIX-K-06	6	250	8000	192000	0.16	5.3	156.2	5906675080321
Ø7	FIX-K-07	7							
Ø8	FIX-K-08	8	200	2400	57600	0.30	3.6	116.0	5906675080420
Ø10	FIX-K-10	10	100	1200	28800	0.28	3.4	111.9	5906675080529
Ø12	FIX-K-12	12	50	800	19200	0.23	3.7	119.9	5906675080628
Ø14	FIX-K-14	14	25	600	13200	0.15	3.7	110.5	5906675106403