

# UNO® UNIVERSAL PLUG

Truly universal plug which fixes into any base material, solid or hollow.



## Product information

### Features and benefits

- Recommended for unknown substrates and exploited holes.
- Short length enables successful use in thin walls.
- Unique geometry guarantees maximum expansion and grip.
- 100% assurance of proper anchoring derived from unique split design of the plug in it's top part.
- Anti-rotation features prevent spinning in the hole.
- Lip prevents plug slipping into over-sized holes.

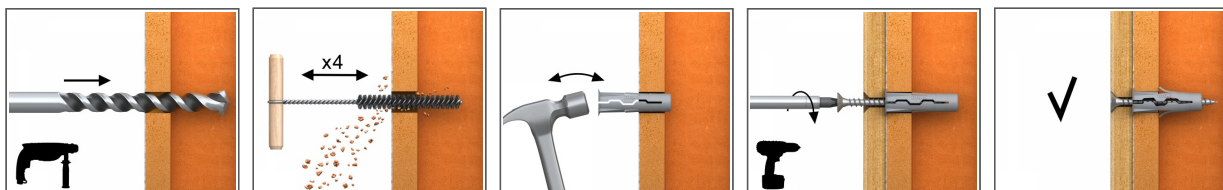
### Applications

- Shelves
- Suspended ceilings
- Electrical fittings
- Cable trays
- Boilers
- Radiators
- Lighting
- Bathroom fittings

### Base materials

- Suitable for use in**
- Concrete
  - Solid Brick
  - Solid Sand-lime Brick
  - Vertically-perforated Clay Block
  - Hollow Sand-lime Brick
  - Aerated Concrete Block
  - Plasterboard

## Installation guide

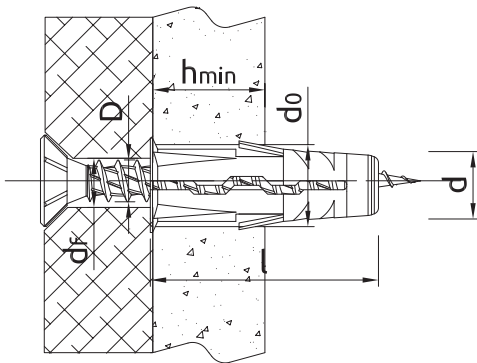


1. Drill a hole of required diameter.
2. Insert UNO plug into hole and tap home.
3. Insert screw of required diameter into plug through fixture and tighten.

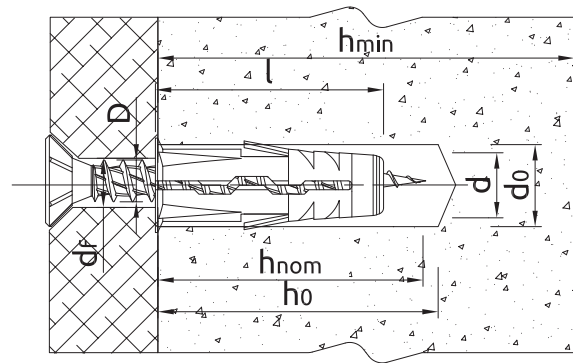
## Product information

Size	Product Code	Plug		Screw		Fixture
		Diameter	Length	Diameter	Length	Hole diameter
		d	l	D	L	d <sub>f</sub>
[mm]						
Ø5	UNO-K-05	5	24	3,0 - 4,5	min. 25	4,0 - 5,0
Ø6	UNO-K-06	6	28	3,5 - 5,0	min. 25	4,0 - 6,0
Ø7	UNO-K-07	7	30	4,0 - 6,0	min. 25	5,0 - 7,0
Ø8	UNO-K-08	8	32	4,5 - 6,0	min. 30	5,0 - 7,0
Ø10	UNO-K-10	10	36	5,0 - 8,0	min. 30	6,0 - 9,0

## Installation data



Installation data in hollow substrates



Installation data in solid substrates

Size			Ø5	Ø6	Ø7	Ø8	Ø10
Hole diameter in substrate	d <sub>0</sub>	[mm]	5	6	7	8	10
Min. hole depth in substrate	h <sub>0</sub>	[mm]	34	38	40	42	46
Min. installation depth	h <sub>nom</sub>	[mm]	24	28	30	32	36
Min. substrate thickness	h <sub>min</sub>	[mm]	80	80	80	80	80
Min. spacing	s <sub>min</sub>	[mm]	48	56	60	64	72
Min. edge distance	c <sub>min</sub>	[mm]	48	56	60	64	72
Fixing diameter	d	[mm]	5	6	7	8	10

## Basic performance data

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

Substrate	CHARACTERISTIC LOAD									
		Concrete C20/25	Solid brick	Sand-lime solid brick	Perforated brick 15MPa	Hollow brick 15MPa	Sand-lime hollow brick	Plasterboard min. 12.5 mm	Aerated concrete 600 Mark V	Lightweight concrete hollow block
TENSION LOAD N <sub>Rk</sub>										
Ø5, Embedment depth 24mm	[kN]	0.60	1.50	1.50	0.60	0.75	1.50	0.17	0.40	1.50
Ø6, Embedment depth 28mm	[kN]	1.20	2.50	2.50	0.75	0.75	1.50	0.21	0.50	1.20
Ø7, Embedment depth 30mm	[kN]	1.20	3.00	3.00	0.90	0.90	3.50	0.24	0.75	1.20
Ø8, Embedment depth 32mm	[kN]	1.20	3.00	2.50	0.90	0.90	1.50	0.37	0.75	1.20
Ø10, Embedment depth 36mm	[kN]	2.50	3.50	4.00	0.90	1.20	1.20	0.34	0.90	1.20

## Basic performance data

Substrate		Concrete C20/25	Solid brick	Sand-lime solid brick	Perforated brick 15MPa	Hollow brick 15MPa	Sand-lime hollow brick	Plasterboard min. 12.5 mm	Aerated concrete 600 Mark V	Lightweight concrete hollow block
<b>SHEAR LOAD <math>V_{rk}</math></b>										
Ø5, Embedment depth 24mm	[kN]	0.60	1.50	1.50	0.60	0.75	1.50	0.17	0.40	1.50
Ø6, Embedment depth 28mm	[kN]	1.20	2.50	2.50	0.75	0.75	1.50	0.21	0.50	1.20
Ø7, Embedment depth 30mm	[kN]	1.20	3.00	3.00	0.90	0.90	3.50	0.24	0.75	1.20
Ø8, Embedment depth 32mm	[kN]	1.20	3.00	2.50	0.90	0.90	1.50	0.37	0.75	1.20
Ø10, Embedment depth 36mm	[kN]	2.50	3.50	4.00	0.90	1.20	1.20	0.34	0.90	1.20
<b>DESIGN LOAD</b>										
<b>TENSION LOAD <math>N_{rd}</math></b>										
Ø5, Embedment depth 24mm	[kN]	0.33	0.60	0.60	0.24	0.30	0.60	0.09	0.20	0.60
Ø6, Embedment depth 28mm	[kN]	0.67	1.00	1.00	0.30	0.30	0.60	0.11	0.25	0.48
Ø7, Embedment depth 30mm	[kN]	0.67	1.20	1.20	0.36	0.36	1.40	0.12	0.38	0.48
Ø8, Embedment depth 32mm	[kN]	0.67	1.20	1.00	0.36	0.36	0.60	0.19	0.38	0.48
Ø10, Embedment depth 36mm	[kN]	1.39	1.40	1.60	0.36	0.48	0.48	0.17	0.45	0.48
<b>SHEAR LOAD <math>V_{rd}</math></b>										
Ø5, Embedment depth 24mm	[kN]	0.48	1.20	1.20	0.48	0.60	1.20	0.14	0.32	1.20
Ø6, Embedment depth 28mm	[kN]	0.96	2.00	2.00	0.60	0.60	1.20	0.17	0.40	0.96
Ø7, Embedment depth 30mm	[kN]	0.96	2.40	2.40	0.72	0.72	2.80	0.19	0.60	0.96
Ø8, Embedment depth 32mm	[kN]	0.96	2.40	2.00	0.72	0.72	1.20	0.30	0.60	0.96
Ø10, Embedment depth 36mm	[kN]	2.00	2.80	3.20	0.72	0.96	0.96	0.27	0.72	0.96
<b>RECOMMENDED LOAD</b>										
<b>TENSION LOAD <math>N_{rec}</math></b>										
Ø5, Embedment depth 24mm	[kN]	0.24	0.43	0.43	0.17	0.21	0.43	0.06	0.14	0.43
Ø6, Embedment depth 28mm	[kN]	0.48	0.71	0.71	0.21	0.21	0.43	0.08	0.18	0.34
Ø7, Embedment depth 30mm	[kN]	0.48	0.86	0.86	0.26	0.26	1.00	0.09	0.27	0.34
Ø8, Embedment depth 32mm	[kN]	0.48	0.86	0.71	0.26	0.26	0.43	0.13	0.27	0.34
Ø10, Embedment depth 36mm	[kN]	0.99	1.00	1.14	0.26	0.34	0.34	0.12	0.32	0.34
<b>SHEAR LOAD <math>V_{rec}</math></b>										
Ø5, Embedment depth 24mm	[kN]	0.34	0.86	0.86	0.34	0.43	0.86	0.10	0.23	0.86
Ø6, Embedment depth 28mm	[kN]	0.69	1.43	1.43	0.43	0.43	0.86	0.21	0.29	0.69
Ø7, Embedment depth 30mm	[kN]	0.69	1.71	1.71	0.51	0.51	2.00	0.14	0.43	0.69
Ø8, Embedment depth 32mm	[kN]	0.69	1.71	1.43	0.51	0.51	0.86	0.21	0.43	0.69
Ø10, Embedment depth 36mm	[kN]	1.43	2.00	2.29	0.51	0.69	0.69	0.19	0.51	0.69

## Product commercial data

Product Code	Plug	Quantity [pcs]			Weight [kg]			Bar Codes
	Diameter [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
UNO-K-05	5	200	6400	153600	0.10	3.3	109.9	5906675009513
UNO-K-06	6	200	6400	153600	0.15	4.9	146.7	5906675009544
UNO-K-07	7	100	3200	76800	0.12	3.9	123.7	5906675009575
UNO-K-08	8	100	3200	76800	0.15	4.9	148.3	5906675009599
UNO-K-10	10	50	1600	38400	0.32	10.2	275.8	5906675009612