UNO® UNIVERSAL PLUG

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

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.



SUBSTRATES

- Concrete
- Solid brick
- Solid sand-lime brick
- Vertically-perforated clay block
- Hollow sand-lime brick
- Aerated concrete
- Plasterboard
- Gypsum fibreboards

UNO® UNIVERSAL PLUG



UNO – Reliable Expansion Plug
The UNO plug provides secure and durable fastening even in challenging conditions. A special collar and anti-rotation wings prevent slipping and turning during installation, while the unique geometry ensures maximum expansion and grip. Ideal for thin walls, unknown substrates, and worn-out holes.

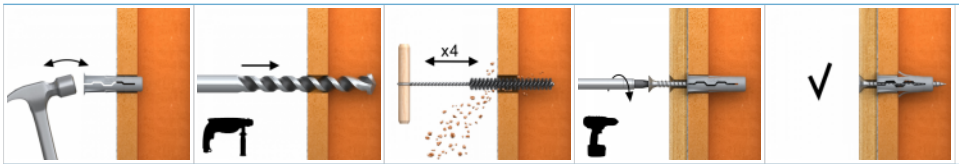
APPLICATIONS

- Bathroom accessories
- Boilers
- Cabinets, brackets and wall brackets
- Electrical Installations
- Lighting
- Radiators
- Suspended Ceilings



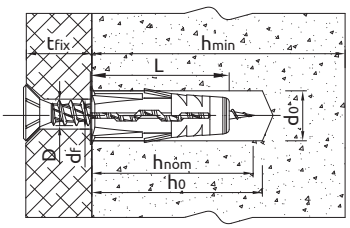


INSTALLATION GUIDE

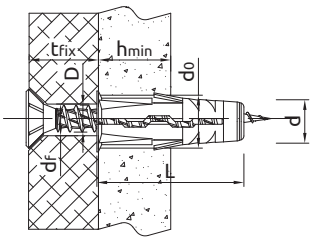


1. Drill a hole of required diameter.
2. Insert UNO plug into hole and tap home.
3. Insert screw of required diameter into plug through fixture and tighten.

INSTALLATION DATA



Solid substrates



Hollow substrates

Size			Ø5	Ø6	Ø7	Ø8	Ø10
Fixing diameter	d	[mm]	5	6	7	8	10
Hole diameter in substrate	d_0	[mm]	5	6	7	8	10
Min. hole depth in substrate	h_0	[mm]	34	38	40	42	46
Embedment depth [1]	h_{nom}	[mm]	24	28	30	32	36
Embedment depth [2]	h_{nom}	[mm]	12,5	12,5	12,5	12,5	12,5
Min. substrate thickness [1]	h_{min}	[mm]	80	80	80	80	80
Min. spacing in the case of concrete substrate	s_{min}	[mm]	48	56	60	64	72
Min. spacing for other substrates	s_{min}	[mm]	72	84	90	96	108
Min. edge distance	c_{min}	[mm]	48	56	60	64	72

[1] Does not apply to plasterboard

[2] Through-hole assembly

BASIC PERFORMANCE DATA

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

Size			Ø5	Ø6	Ø7	Ø8	Ø10
Nominal embedment depth	h_{nom}	[mm]	24	28	30	32	36
CHARACTERISTIC RESISTANCE							
TENSION LOAD							
Concrete C20/25 - C50/60	N_{Rk}	[kN]	0,60	1,20	1,20	1,20	2,50
Solid brick min. 20MPa	N_{Rk}	[kN]	1,50	2,50	3,00	3,00	3,50
Solid silicate brick min. 20MPa	N_{Rk}	[kN]	1,50	2,50	3,00	2,50	4,00
Porous ceramic hollow brick min. 15MPa	N_{Rk}	[kN]	0,60	0,75	0,90	0,90	0,90
Hollow brick min. 15MPa, web thickness 30mm	N_{Rk}	[kN]	0,75	0,75	0,90	0,90	1,20
Silicate hollow brick min. 20MPa	N_{Rk}	[kN]	1,50	1,50	3,50	1,50	1,20
Autoclaved aerated concrete 6MPa	N_{Rk}	[kN]	0,17	0,21	0,24	0,37	0,34
Plasterboard min. 12,5mm [1]	N_{Rk}	[kN]	0,40	0,50	0,75	0,75	0,90
TeknoAmerblok brick min. 12,5MPa	N_{Rk}	[kN]	1,50	1,20	1,20	1,20	1,20
SHEAR LOAD							
Concrete C20/25 - C50/60	V_{Rk}	[kN]	0,60	1,20	1,20	1,20	2,50
Solid brick min. 20MPa	V_{Rk}	[kN]	1,50	2,50	3,00	3,00	3,50
Solid silicate brick min. 20MPa	V_{Rk}	[kN]	1,50	2,50	3,00	2,50	4,00
Porous ceramic hollow brick min. 15MPa	V_{Rk}	[kN]	0,60	0,75	0,90	0,90	0,90
Hollow brick min. 15MPa, web thickness 30mm	V_{Rk}	[kN]	0,75	0,75	0,90	0,90	1,20
Silicate hollow brick min. 20MPa	V_{Rk}	[kN]	1,50	1,50	3,50	1,50	1,20
Autoclaved aerated concrete 6MPa	V_{Rk}	[kN]	0,17	0,21	0,24	0,37	0,34
Plasterboard min. 12,5mm [1]	V_{Rk}	[kN]	0,40	0,50	0,75	0,75	0,90

UNO® UNIVERSAL PLUG

Size			Ø5	Ø6	Ø7	Ø8	Ø10
TeknoAmerblok brick min. 12,5MPa	V_{Rk}	[kN]	1,50	1,20	1,20	1,20	1,20
DESIGN RESISTANCE							
TENSION LOAD							
Concrete C20/25 - C50/60	N_{Rd}	[kN]	0,33	0,67	0,67	0,67	1,39
Solid brick min. 20MPa	N_{Rd}	[kN]	0,60	1,00	1,20	1,20	1,40
Solid silicate brick min. 20MPa	N_{Rd}	[kN]	0,60	1,00	1,20	1,00	1,60
Porous ceramic hollow brick min. 15MPa	N_{Rd}	[kN]	0,24	0,30	0,36	0,36	0,36
Hollow brick min. 15MPa, web thickness 30mm	N_{Rd}	[kN]	0,30	0,30	0,36	0,36	0,48
Silicate hollow brick min. 20MPa	N_{Rd}	[kN]	0,60	0,60	1,40	0,60	0,48
Autoclaved aerated concrete 6MPa	N_{Rd}	[kN]	0,09	0,11	0,12	0,19	0,17
Plasterboard min. 12,5mm [1]	N_{Rd}	[kN]	0,20	0,25	0,38	0,38	0,45
TeknoAmerblok brick min. 12,5MPa	N_{Rd}	[kN]	0,60	0,48	0,48	0,48	0,48
SHEAR LOAD							
Concrete C20/25 - C50/60	V_{Rd}	[kN]	0,48	0,96	0,96	0,96	2,00
Solid brick min. 20MPa	V_{Rd}	[kN]	1,20	2,00	2,40	2,40	2,80
Solid silicate brick min. 20MPa	V_{Rd}	[kN]	1,20	2,00	2,40	2,00	3,20
Porous ceramic hollow brick min. 15MPa	V_{Rd}	[kN]	0,48	0,60	0,72	0,72	0,72
Hollow brick min. 15MPa, web thickness 30mm	V_{Rd}	[kN]	0,60	0,60	0,72	0,72	0,96
Silicate hollow brick min. 20MPa	V_{Rd}	[kN]	1,20	1,20	2,80	1,20	0,96
Autoclaved aerated concrete 6MPa	V_{Rd}	[kN]	0,14	0,17	0,19	0,30	0,27
Plasterboard min. 12,5mm [1]	V_{Rd}	[kN]	0,32	0,40	0,60	0,60	0,72
TeknoAmerblok brick min. 12,5MPa	V_{Rd}	[kN]	1,20	0,96	0,96	0,96	0,96
RECOMMENDED LOAD							
TENSION LOAD							
Concrete C20/25 - C50/60	N_{rec}	[kN]	0,24	0,48	0,48	0,48	0,99
Solid brick min. 20MPa	N_{rec}	[kN]	0,43	0,71	0,86	0,86	1,00
Solid silicate brick min. 20MPa	N_{rec}	[kN]	0,43	0,71	0,86	0,71	1,14
Porous ceramic hollow brick min. 15MPa	N_{rec}	[kN]	0,17	0,21	0,26	0,26	0,26
Hollow brick min. 15MPa, web thickness 30mm	N_{rec}	[kN]	0,21	0,21	0,26	0,26	0,34
Silicate hollow brick min. 20MPa	N_{rec}	[kN]	0,43	0,43	1,00	0,43	0,34
Autoclaved aerated concrete 6MPa	N_{rec}	[kN]	0,06	0,08	0,09	0,14	0,12
Plasterboard min. 12,5mm [1]	N_{rec}	[kN]	0,14	0,18	0,27	0,27	0,32
TeknoAmerblok brick min. 12,5MPa	N_{rec}	[kN]	0,43	0,34	0,34	0,34	0,34
SHEAR LOAD							
Concrete C20/25 - C50/60	V_{rec}	[kN]	0,34	0,69	0,69	0,69	1,43
Solid brick min. 20MPa	V_{rec}	[kN]	0,86	1,43	1,71	1,71	2,00
Solid silicate brick min. 20MPa	V_{rec}	[kN]	0,86	1,43	1,71	1,43	2,29
Porous ceramic hollow brick min. 15MPa	V_{rec}	[kN]	0,34	0,43	0,51	0,51	0,51
Hollow brick min. 15MPa, web thickness 30mm	V_{rec}	[kN]	0,43	0,43	0,51	0,51	0,69
Silicate hollow brick min. 20MPa	V_{rec}	[kN]	0,86	0,86	2,00	0,86	0,69
Autoclaved aerated concrete 6MPa	V_{rec}	[kN]	0,10	0,12	0,14	0,21	0,19
Plasterboard min. 12,5mm [1]	V_{rec}	[kN]	0,23	0,29	0,43	0,43	0,51
TeknoAmerblok brick min. 12,5MPa	V_{rec}	[kN]	0,86	0,69	0,69	0,69	0,69

[1] Through-hole assembly

Tensile load capacity of angle hooks

Plug size			Ø05	Ø06	Ø06	Ø08	Ø08	Ø10
Hook diameter	d_h	[mm]	3,5	3,5	4,0	4,5	5,0	6,0
Characteristic load	N_{Rk}	[kN]	0,55	0,48	0,48	0,88	0,88	1,78
Design load	N_{Rd}	[kN]	0,44	0,38	0,38	0,70	0,70	1,42
Recommended load	N_{rec}	[kN]	0,31	0,27	0,27	0,50	0,50	1,02

Tensile load capacity of round hooks

Plug size			Ø05	Ø06	Ø06	Ø07	Ø07	Ø08	Ø08	Ø10
Hook diameter	d_h	[mm]	3,5	3,5	4,0	4,0	4,5	4,5	5,0	6,0
Characteristic load	N_{Rk}	[kN]	0,32	0,38	0,37	0,37	0,43	0,43	0,43	1,1
Design load	N_{Rd}	[kN]	0,26	0,30	0,30	0,30	0,34	0,34	0,34	0,88
Recommended load	N_{rec}	[kN]	0,18	0,22	0,21	0,21	0,25	0,25	0,25	0,63

LOGISTICAL DATA

SKU	Base-sales unit	Unit pack	Bulk pack	Pallet	Single Package - Gross Weight	Bulk Package - Gross Weight	Palette - Gross Weight	Barcode
R-BIOS-UNO-05/90	pack	1.0	12.0	1152.0	0.0	0.0	0.0	5906675504704
R-BIOS-UNO-06/70	pack	1.0	12.0	1152.0	0.0	0.0	0.0	5906675504711
R-BIOS-UNO-07/60	pack	1.0	12.0	1152.0	0.0	0.0	0.0	5906675504728
R-BIOS-UNO-08/40	pack	1.0	12.0	1152.0	0.0	0.0	0.0	5906675504735
R-BIOS-UNO-10/20	pack	1.0	12.0	1152.0	0.0	0.0	0.0	5906675504742
R-C1-UNOBLU	pack	6.0	6.0	144.0	4.9	4.9	117.4	5906675399607
R-C1-UNOBRN	pack	6.0	6.0	144.0	5.5	5.5	131.2	5906675399591

LOGISTICAL DATA

SKU	Base-sales unit	Unit pack	Bulk pack	Pallet	Single Package - Gross Weight	Bulk Package - Gross Weight	Palette - Gross Weight	Barcode
R-C1-UNORED	pack	6.0	6.0	144.0	5.5	5.5	131.2	5906675399584
R-PDM-UNORED/300	pack	5.0	5.0	280.0	0.0	0.0	0.0	5906675393926
R-S9-UNO-05/20	pack	5.0	30.0	2640.0	0.1	0.6	54.1	5906675563664
R-S9-UNO-05/50	pack	5.0	25.0	2200.0				5906675215563
R-S9-UNO-06/50	pack	5.0	25.0	2200.0				5906675215587
R-S9-UNO-08/30	pack	5.0	25.0	2200.0				5906675215624
R-S9-UNO-10/20	pack	5.0	25.0	2200.0				5906675215655
R-S9-UNO-BLUE-08/8	pack	5.0	30.0	1680.0	0.1	0.7	39.2	5906675395180
R-S9-UNO-RED-06/10	pack	5.0	30.0	1680.0	0.1	0.6	31.6	5906675395173
R-S9-UNO-YEL-05/10	pack	5.0	30.0	1680.0	0.0	0.5	26.9	5906675395142
R-SLL1-UNO06/600	pack	6.0	6.0	180.0	7.5	7.5	225.0	5906675459615
UNO-K-05	pcs.	200.0	6400.0	153600.0	0.1	3.7	88.2	5906675009513
UNO-K-06	pcs.	200.0	6400.0	153600.0	0.2	5.2	125.5	5906675009544
UNO-K-07	pcs.	100.0	3200.0	76800.0	0.1	4.2	100.9	5906675009575
UNO-K-08	pcs.	100.0	3200.0	76800.0	0.2	5.3	126.8	5906675009599
UNO-K-10	pcs.	50.0	1600.0	38400.0	0.3	10.2	245.8	5906675009612
R-U1-BLU-40-C	pack	20.0	20.0	1920.0	1.3	1.3	121.2	5906675166735
R-U1-BLU-80-C	pack	10.0	10.0	960.0	1.2	1.2	119.0	5010445685958
R-U1-BRN-48-C	pack	20.0	20.0	1920.0	1.2	1.2	116.4	5010445685552
R-U1-BRN-96-C	pack	10.0	10.0	960.0	1.5	0.2	14.5	5010445685606
R-U1-GRY-40-C	pack	20.0	20.0	1600.0	2.5	2.5	198.4	5906675166797
R-U1-GRY-80-C	pack	10.0	10.0	800.0	2.4	2.4	190.4	5010445686153
R-U1-RED-48-C	pack	20.0	20.0	1920.0	0.8	0.8	76.8	5010445685156
R-U1-RED-96-C	pack	10.0	10.0	960.0	0.8	0.8	74.8	5010445685200
R-U1-YEL-96-C	pack	10.0	10.0	2250.0	0.5	0.5	119.3	5010445685002
R-U1-MIX-BRN-288	pack	4.0	4.0	384.0	1.3	1.3	126.7	5010445685651
R-U1-MIX-RED-288	pack	4.0	4.0	384.0	0.9	0.9	84.5	5010445685255

RELATED PRODUCTS

DRILLING

Cordless
RawlHammer 18V



Multipourpose drill bits
RT-UNI



Drill bits Aggressor SDS plus
RT-SDSA



Drill bits Brickdrill SDS plus
RT-SDSB



CLEANING

Blow Pump
R-BLOWPUMP



ANCHORING

Cordless RawlDriver 18V, set
R-PDD18



Bit holder with 2 magnets
RT-BIT-ADAP



Pozidriv screwdriver bits
RT-BIT-PZ123

