R-4ALL UNIVERSAL PLUG

High performance nylon plug for all types of substrates

FEATURES AND BENEFITS

Expanding section designed to collapse in hollow materials and provide positive grip behind surfaces.

Solid head design provides strength whilst plug is installed.

Anti-rotational lugs promote grip in wide range of substrates including soft masonry materials.

Unique internal design provides positive grip for screws.

The unique four-way expansion method of the plug allows application in any type of substrate.

Rib detail at plug head provides added grip.

SUBSTRATES

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

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4ALL Expansion Plug for Demanding Applications.
The modern design ensures secure attachment in any material – from concrete to drywall. Anti-rotation wings prevent spinning in the hole, while specially shaped ribs enhance anchoring strength. Installation is quick and easy, delivering a secure and safe result. The perfect choice for anyone who values strength, reliability, and ease of use.

APPLICATIONS

- Bathroom accessories
- Cabinets, brackets and wall brackets
- Electrical Installations
- Letterboxes
- Lighting
- TV brackets

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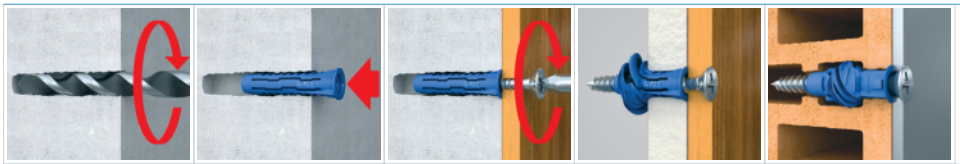
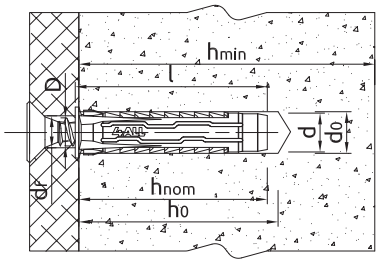
INSTALLATION GUIDE

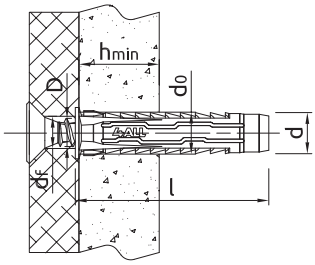


1. Drill a hole of required diameter.
2. Insert 4ALL plug into hole and tap home.
3. Insert screw of required diameter into plug through fixture and tighten.

INSTALLATION DATA



Solid substrates



Hollow substrates

Size			Ø5	Ø6	Ø6L	Ø8	Ø8L	Ø10	Ø12	Ø14
Fixing diameter	d	[mm]	5	6	6	8	8	10	12	14
Hole diameter in substrate	d_0	[mm]	5	6	6	8	8	10	12	14
Min. hole depth in substrate	h_0	[mm]	35	40	60	50	75	60	70	80
Embedment depth [1]	h_{nom}	[mm]	25	30	50	40	65	50	60	70
Embedment depth (1x12,5mm) [2]	h_{nom}	[mm]	12,5	12,5	-	12,5	-	12,5	12,5	12,5
Embedment depth (2x12,5mm) [2]	h_{nom}	[mm]	25	25	25	25	25	25	25	25
Min. substrate thickness [1]	h_{min}	[mm]	80	80	80	80	98	80	90	105
Min. spacing in the case of concrete substrate	s_{min}	[mm]	50	60	100	80	130	100	120	140
Min. spacing for other substrates	s_{min}	[mm]	75	90	150	120	195	150	180	210
Min. edge distance	c_{min}	[mm]	50	60	100	80	130	100	120	140

[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	Ø6L	Ø8	Ø8L	Ø10	Ø12	Ø14
Effective embedment depth	h_{ef}	[mm]	25	30	50	40	65	50	60	70
CHARACTERISTIC RESISTANCE										
TENSION LOAD										
Concrete C20/25 - C50/60	N_{Rk}	[kN]	0,10	0,20	0,30	0,50	0,50	0,50	4,50	5,50
Solid ceramic brick min. 20MPa	N_{Rk}	[kN]	-	0,15	0,60	0,75	0,50	0,90	4,00	6,00
Hollow ceramic brick min.15MPa, web thickness 14mm	N_{Rk}	[kN]	0,20	0,60	0,90	0,90	0,60	1,20	7,00	10,50
Hollow ceramic brick min.15MPa, web thickness 12mm	N_{Rk}	[kN]	0,20	0,30	0,50	0,30	0,40	0,60	0,60	1,20
Porous ceramic hollow brick min. 15MPa	N_{Rk}	[kN]	-	-	0,50	-	0,90	-	-	-
Silicate hollow brick min. 20MPa	N_{Rk}	[kN]	0,15	0,30	-	0,50	-	0,50	2,50	1,50
Hollow silicate brick min. 15MPa	N_{Rk}	[kN]	0,50	0,60	-	0,75	-	0,75	4,50	5,00
Autoclaved aerated concrete 6MPa	N_{Rk}	[kN]	-	-	0,90		0,90	-	-	-
Plasterboard min. 12,5mm [1]	N_{Rk}	[kN]	0,20	0,30	0,60	0,50	0,50	0,60	3,50	5,50
Plasterboard min. 2x12,5mm [2]	N_{Rk}	[kN]	0,11	0,12	-	0,15	-	0,26	-	-
Plasterboard min. 2x12,5mm [2]	N_{Rk}	[kN]	-	-	0,60	-	0,75	-	0,66	0,74
TeknoAmerblok brick min. 12,5MPa	N_{Rk}	[kN]	0,20	0,60	0,60	0,40	0,60	0,90	1,50	2,00
SHEAR LOAD										
Concrete C20/25 - C50/60	V_{Rk}	[kN]	0,10	0,20	0,30	0,50	0,50	0,50	4,50	5,50
Solid ceramic brick min. 20MPa	V_{Rk}	[kN]	-	0,15	0,60	0,75	0,50	0,90	4,00	6,00

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Size			Ø5	Ø6	Ø6L	Ø8	Ø8L	Ø10	Ø12	Ø14
Solid silicate brick min. 20MPa	V_{Rk}	[kN]	0,20	0,60	0,90	0,90	0,60	1,20	7,00	10,50
Hollow ceramic brick min.15MPa, web thickness 14mm	V_{Rk}	[kN]	0,20	0,30	0,50	0,30	0,40	0,60	0,60	1,20
Hollow ceramic brick min.15MPa, web thickness 12mm	V_{Rk}	[kN]	-	-	0,50	-	0,90	-	-	-
Porous ceramic hollow brick min. 15MPa	V_{Rk}	[kN]	0,15	0,30	-	0,50	-	0,50	2,50	1,50
Silicate hollow brick min. 20MPa	V_{Rk}	[kN]	0,50	0,60	-	0,75	-	0,75	4,50	5,00
Hollow silicate brick min. 15MPa	V_{Rk}	[kN]	-	-	0,90		0,90	-	-	-
Autoclaved aerated concrete 6MPa	V_{Rk}	[kN]	0,20	0,30	0,60	0,50	0,50	0,60	3,50	5,50
Plasterboard min. 12,5mm [1]	V_{Rk}	[kN]	0,11	0,12	-	0,15	-	0,26	-	-
Plasterboard min. 2x12,5mm [2]	V_{Rk}	[kN]	-	-	0,60	-	0,75	-	0,66	0,74
TeknoAmerblok brick min. 12,5MPa	V_{Rk}	[kN]	0,20	0,60	0,60	0,40	0,60	0,90	1,50	2,00
DESIGN RESISTANCE										
TENSION LOAD										
Concrete C20/25 - C50/60	N_{Rd}	[kN]	0,06	0,11	0,17	0,28	0,28	0,28	2,50	3,06
Solid ceramic brick min. 20MPa	N_{Rd}	[kN]	-	0,06	0,24	0,30	0,20	0,36	1,60	2,40
Solid silicate brick min. 20MPa	N_{Rd}	[kN]	0,08	0,24	0,36	0,36	0,24	0,48	2,80	4,20
Hollow ceramic brick min.15MPa, web thickness 14mm	N_{Rd}	[kN]	0,08	0,12	0,20	0,12	0,16	0,24	0,24	0,48
Hollow ceramic brick min.15MPa, web thickness 12mm	N_{Rd}	[kN]	-	-	0,20	-	0,36	-	-	-
Porous ceramic hollow brick min. 15MPa	N_{Rd}	[kN]	0,06	0,12	-	0,20	-	0,20	1,00	0,60
Silicate hollow brick min. 20MPa	N_{Rd}	[kN]	0,20	0,24	-	0,30	-	0,30	1,80	2,00
Hollow silicate brick min. 15MPa	N_{Rd}	[kN]	-	-	0,36	0,00	0,36	-	-	-
Autoclaved aerated concrete 6MPa	N_{Rd}	[kN]	0,10	0,15	0,30	0,25	0,25	0,30	1,75	2,75
Plasterboard min. 12,5mm [1]	N_{Rd}	[kN]	0,06	0,06	-	0,08	-	0,13	-	-
Plasterboard min. 2x12,5mm [2]	N_{Rd}	[kN]	-	-	0,30	-	0,38	-	0,33	0,37
TeknoAmerblok brick min. 12,5MPa	N_{Rd}	[kN]	0,08	0,24	0,24	0,16	0,24	0,36	0,60	0,80
SHEAR LOAD										
Concrete C20/25 - C50/60	V_{Rd}	[kN]	0,08	0,16	0,24	0,40	0,40	0,40	3,60	4,40
Solid ceramic brick min. 20MPa	V_{Rd}	[kN]	-	0,12	0,48	0,60	0,40	0,72	3,20	4,80
Solid silicate brick min. 20MPa	V_{Rd}	[kN]	0,16	0,48	0,72	0,72	0,48	0,96	5,60	8,40
Hollow ceramic brick min.15MPa, web thickness 14mm	V_{Rd}	[kN]	0,16	0,24	0,40	0,24	0,32	0,48	0,48	0,96
Hollow ceramic brick min.15MPa, web thickness 12mm	V_{Rd}	[kN]	-	-	0,40	-	0,72	-	-	-
Porous ceramic hollow brick min. 15MPa	V_{Rd}	[kN]	0,12	0,24	-	0,40	-	0,40	2,00	1,20
Silicate hollow brick min. 20MPa	V_{Rd}	[kN]	0,40	0,48	-	0,60	-	0,60	3,60	4,00
Hollow silicate brick min. 15MPa	V_{Rd}	[kN]	-	-	0,72	0,00	0,72	-	-	-
Autoclaved aerated concrete 6MPa	V_{Rd}	[kN]	0,16	0,24	0,48	0,40	0,40	0,48	2,80	4,40
Plasterboard min. 12,5mm [1]	V_{Rd}	[kN]	0,09	0,10	-	0,12	-	0,21	-	-
Plasterboard min. 2x12,5mm [2]	V_{Rd}	[kN]	-	-	0,48	-	0,60	-	0,53	0,59
TeknoAmerblok brick min. 12,5MPa	V_{Rd}	[kN]	0,16	0,48	0,48	0,32	0,48	0,72	1,20	1,60
RECOMMENDED LOAD										
TENSION LOAD										
Concrete C20/25 - C50/60	N_{rec}	[kN]	0,04	0,08	0,12	0,20	0,20	0,20	1,79	2,18
Solid ceramic brick min. 20MPa	N_{rec}	[kN]	-	0,04	0,17	0,21	0,14	0,26	1,14	1,71
Solid silicate brick min. 20MPa	N_{rec}	[kN]	0,06	0,17	0,26	0,26	0,17	0,34	2,00	3,00
Hollow ceramic brick min.15MPa, web thickness 14mm	N_{rec}	[kN]	0,06	0,09	0,14	0,09	0,11	0,17	0,17	0,34
Hollow ceramic brick min.15MPa, web thickness 12mm	N_{rec}	[kN]	-	-	0,14	-	0,26	-	-	-
Porous ceramic hollow brick min. 15MPa	N_{rec}	[kN]	0,04	0,09	-	0,14	-	0,14	0,71	0,43
Silicate hollow brick min. 20MPa	N_{rec}	[kN]	0,14	0,17	-	0,21	-	0,21	1,29	1,43
Hollow silicate brick min. 15MPa	N_{rec}	[kN]	-	-	0,26	0,00	0,26	-	-	-
Autoclaved aerated concrete 6MPa	N_{rec}	[kN]	0,07	0,11	0,21	0,18	0,18	0,21	1,25	1,96
Plasterboard min. 12,5mm [1]	N_{rec}	[kN]	0,04	0,04	-	0,05	-	0,09	-	-
Plasterboard min. 2x12,5mm [2]	N_{rec}	[kN]	-	-	0,21	-	0,27	-	0,24	0,26
TeknoAmerblok brick min. 12,5MPa	N_{rec}	[kN]	0,06	0,17	0,17	0,11	0,17	0,26	0,43	0,57
SHEAR LOAD										
Concrete C20/25 - C50/60	V_{rec}	[kN]	0,06	0,11	0,17	0,29	0,29	0,29	2,57	3,14
Solid ceramic brick min. 20MPa	V_{rec}	[kN]	-	0,09	0,34	0,43	0,29	0,51	2,29	3,43
Solid silicate brick min. 20MPa	V_{rec}	[kN]	0,11	0,34	0,51	0,51	0,34	0,69	4,00	6,00
Hollow ceramic brick min.15MPa, web thickness 14mm	V_{rec}	[kN]	0,11	0,17	0,29	0,17	0,23	0,34	0,34	0,69
Hollow ceramic brick min.15MPa, web thickness 12mm	V_{rec}	[kN]	-	-	0,29	-	0,51	-	-	-
Porous ceramic hollow brick min. 15MPa	V_{rec}	[kN]	0,09	0,17	-	0,29	-	0,29	1,43	0,86
Silicate hollow brick min. 20MPa	V_{rec}	[kN]	0,29	0,34	-	0,43	-	0,43	2,57	2,86
Hollow silicate brick min. 15MPa	V_{rec}	[kN]	-	-	0,51	0,00	0,51	-	-	-
Autoclaved aerated concrete 6MPa	V_{rec}	[kN]	0,11	0,17	0,34	0,29	0,29	0,34	2,00	3,14
Plasterboard min. 12,5mm [1]	V_{rec}	[kN]	0,06	0,07	-	0,09	-	0,15	-	-

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Size			Ø5	Ø6	Ø6L	Ø8	Ø8L	Ø10	Ø12	Ø14
Plasterboard min. 2x12,5mm [2]	V_{rec}	[kN]	-	-	0,34	-	0,43	-	0,38	0,42
TeknoAmerblok brick min. 12,5MPa	V_{rec}	[kN]	0,11	0,34	0,34	0,23	0,34	0,51	0,86	1,14

[1] Effective depth h_{ef}=12,5mm

[2] Effective depth h_{ef}=25mm

Tensile load capacity of round hooks

Plug size			Ø05	Ø06	Ø08	Ø10
Hook diameter	d_h	[mm]	3,5	3,5	4,5	6,1
Characteristic load	N_{Rk}	[kN]	0,27	0,38	0,43	1,1
Design load	N_{Rd}	[kN]	0,22	0,30	0,34	0,88
Recommended load	N_{rec}	[kN]	0,15	0,22	0,25	0,63

Data do not covered by approval

Tensile load capacity of angle hooks

Plug size			Ø05	Ø06	Ø08	Ø10
Hook diameter	d_h	[mm]	3,5	3,5	4,5	6,1
Characteristic load	N_{Rk}	[kN]	1,11	0,38	0,88	1,78
Design load	N_{Rd}	[kN]	0,89	0,30	0,70	1,42
Recommended load	N_{rec}	[kN]	0,63	0,22	0,50	1,02

Data do not covered by approval

LOGISTICAL DATA

SKU	Base-sales unit	Unit pack	Bulk pack	Pallet	Single Package - Gross Weight	Bulk Package - Gross Weight	Palette - Gross Weight	Barcode
4ALL-05	pcs.	100.0	3200.0	179200.0	0.1	2.0	114.0	5906675028408
4ALL-06	pcs.	100.0	3200.0	153600.0	0.1	2.8	132.8	5906675028903
4ALL-06050	pcs.	50.0	1600.0	38400.0	0.1	2.7	64.8	5906675383477
4ALL-08	pcs.	100.0	1600.0	76800.0	0.2	3.3	158.2	5906675028910
4ALL-08065	pcs.	50.0	800.0	19200.0	0.2	2.9	69.8	5906675383484
4ALL-10	pcs.	50.0	800.0	38400.0	0.2	3.0	144.3	5906675028927
4ALL-12	pcs.	20.0	320.0	15360.0	0.1	2.2	107.5	5906675159454
4ALL-14	pcs.	10.0	160.0	3840.0	0.1	1.9	46.6	5906675159478
R-C1-4ALL06	pack	6.0	6.0	144.0	4.0	4.0	96.3	5906675433110
R-S1-4ALL-05/100	pack	5.0	25.0	2200.0	0.0	0.0	0.0	5906675093116
R-S9-4ALL-05/10	pack	5.0	30.0	3600.0	0.1	0.5	58.8	5906675139548
R-S9-4ALL-05/26	pack	5.0	30.0	2640.0	0.1	0.7	60.4	5906675204390
R-S9-4ALL-06/10	pack	5.0	30.0	3600.0	0.1	0.6	67.2	5906675139579
R-S9-4ALL-06/20	pack	5.0	30.0	2640.0	0.1	0.8	66.0	5906675204475
R-S9-4ALL-06L/12	pack	5.0	25.0	1400.0				5906675649115
R-S9-4ALL-08/20	pack	5.0	25.0	3000.0	0.2	1.1	132.0	5906675204567
R-S9-4ALL-08/8	pack	5.0	25.0	1800.0	0.1	0.5	38.6	5906675139661
R-S9-4ALL-08L/8	pack	5.0	25.0	1400.0	0.0	0.0	0.0	5906675563695
R-S9-4ALL-10/12	pack	5.0	25.0	3000.0	0.2	1.2	144.0	5906675204628
R-S9-4ALL-10/4	pack	5.0	25.0	3000.0	0.1	0.6	73.2	5906675139678
R-S9-4ALL-12/6	pack	5.0	25.0	2200.0	0.2	1.1	100.0	5906675563756
R-S9-4ALL-14/4	pack	5.0	25.0	2200.0	0.2	1.2	101.6	5906675563558

RELATED PRODUCTS

ANCHORING

Cordless
RawlHammer 18V

Cordless RawlDriver 18V
R-PDD18

Bit holder with 2 magnets
RT-BIT-ADAP/2M

Multipourpose drill bits
RT-UNI

Drill bits Rebardrill SDS plus
RT-SDSR

CLEANING

Blow Pump
R-BLOWPUMP