

## The installation-friendly nylon plug with 2-way expansion



Small shelves



Signs

### BUILDING MATERIALS

- Concrete
- Solid sand-lime brick
- Natural stone with dense structure
- Solid brick made from lightweight concrete
- Solid brick

### CHARACTERISTICS



### ADVANTAGES

- As the plug has no rim it allows the plug to be set as deep as required below the plaster to the bearing substrate to achieve the maximum load-bearing capacity.
- As the plug only expands in two directions, it is possible to direct the expansion forces so that they run parallel to the edge of the building material by turning the plug. This provides smaller edge distances.
- The slimline design makes it easy to push the plug into the drill hole for a fast and simple installations.
- The anti-rotation lock prevents the plug rotating in the drill hole promoting a high level of installation safety.

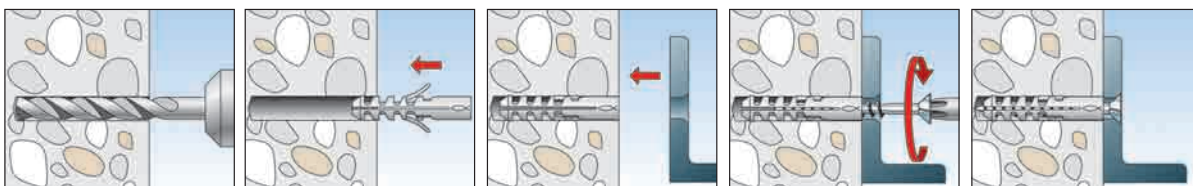
### APPLICATIONS

- Pictures
- Lighting
- Skirting
- Shelves
- Mirror cabinets
- Letter boxes
- Motion sensors
- Information boards
- Curtain rails
- Electrical installations

### FUNCTIONING

- The S plug is suitable for pre-positioned and push-through installation.
- When turning the screw the S plug expands in two directions providing a secure anchoring in the building material.
- The required screw length is given by the plug length + plaster and/or insulation material thickness + fixture thickness + 1 x screw diameter.
- Suitable for wood and chipboard screws.
- The edge distance must be at least one plug length.
- For installations close to the edge, turn the plug so that the expansion force acts parallel to the edge.

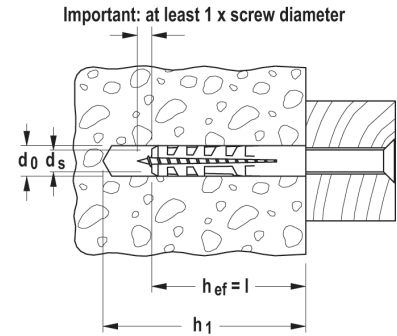
### INSTALLATION



## TECHNICAL DATA



Plug S



Items to order only	Art.-No.	Drill hole diameter $d_0$ [mm]	Anchor length $l$ [mm]	Min. drill hole depth $h_1$ [mm]	Wood and chipboard screws $d_s$ [mm]	Sales unit [pcs]
	Standard					
<b>S 4</b>	<b>050104</b>	4	20	25	2 - 3	200
<b>S 5</b>	<b>050105</b>	5	25	35	3 - 4	100
<b>S 5</b>	—	5	25	35	3 - 4	200
<b>S 6</b>	<b>050106</b>	6	30	40	4 - 5	100
<b>S 6</b>	—	6	30	40	4 - 5	200
<b>S 8</b>	<b>050108</b>	8	40	55	4,5 - 5	100
<b>S 8</b>	—	8	40	55	4,5 - 5	200
<b>S 10</b>	<b>050110</b>	10	50	70	6 - 8	50
<b>S 10</b>	—	10	50	70	6 - 8	100
<b>S 12</b>	<b>050112</b>	12	60	80	8 - 10	25
<b>S 14</b>	<b>050114</b>	14	75	90	10 - 12	20
<b>S 16</b>	<b>050116</b>	16	80	100	12 (1/2")	10
<b>S 20</b>	<b>050120</b>	20	90	120	16	5

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## LOADS

### S-Plug

Highest recommended loads<sup>1)</sup> for a single anchor.

The given loads are valid for wood screws with the specified diameter.

Type		S4	S5	S6	S8	S10	S12	S14	S16	S20
Screw diameter	$\emptyset$ [mm]	3	4	5	6	8	10	12	12	16
Min. edge distance in concrete	$c_{min}$ [mm]	20	25	30	40	50	60	70	80	100
<b>Recommended loads in the respective base material <math>F_{rec}</math><sup>2)</sup></b>										
Concrete	$\geq C20/25$ [kN]	0,16	0,28	0,40	0,60	1,10	1,50	1,85	2,26	3,88
Solid brick	$\geq Mz 12$ [kN]	0,14	0,24	0,28	0,50	- <sup>3)</sup>	- <sup>3)</sup>	- <sup>3)</sup>	- <sup>3)</sup>	- <sup>3)</sup>
Solid sand-lime brick	$\geq KS 12$ [kN]	0,14	0,24	0,28	0,55	- <sup>3)</sup>	- <sup>3)</sup>	- <sup>3)</sup>	- <sup>3)</sup>	- <sup>3)</sup>
Aerated concrete	$\geq PB4, PP4 (G4)$ [kN]	-	-	0,05	0,07	0,16	0,28	0,40	- <sup>3)</sup>	- <sup>3)</sup>
Plaster wall	[kN]	-	-	-	0,15	0,23	0,37	0,60	- <sup>3)</sup>	- <sup>3)</sup>

<sup>1)</sup> Includes the safety factor 7.

<sup>2)</sup> Valid for tensile load, shear load and oblique load under any angle.

<sup>3)</sup> Due to that the failure of the substrate varies too much no reproducible values can be given.