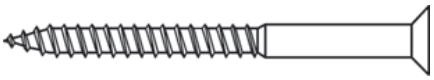
S-Plug

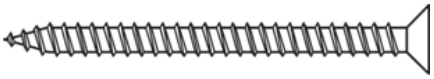
The classics. Often copied - never equalled !

OVERVIEW

S-plug



Wood screw



Chipboard screw

Suitable for:

- Concrete
- Natural stone with dense structure
- Solid brick
- Solid sand-lime brick
- Solid block made from lightweight concrete
- Hollow concrete blocks etc.

For fixing of:

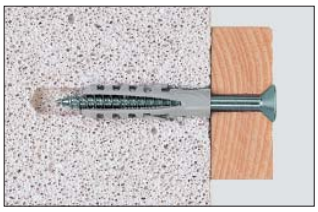
- Pictures
- Motion detectors
- Lamps
- Skirting
- Electric switches
- Small wall-mounted shelves
- Towel rails
- Lightweight mirror cabinets
- Letter boxes
- Hanging baskets
- Curtain rails

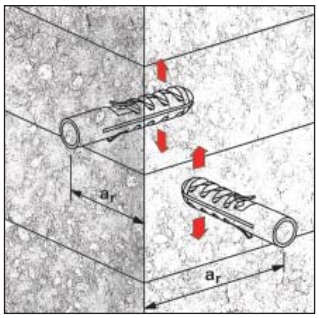
DESCRIPTION

- Nylon expansion fixing.
- For use with wood-, chipboard-, and self-tapping screws (see chapter safety-screws)

Advantages/Benefits

- Anti-rotation lugs stop the plug rotating in the drill hole.
- The wide neck is subject to no expansion pressure and prevents surface damage to tiles and plaster.
- Temperature-resistant from -40° to +80°C.
- Can be used with wood and chipboard screws from 2 mm to 16 mm.



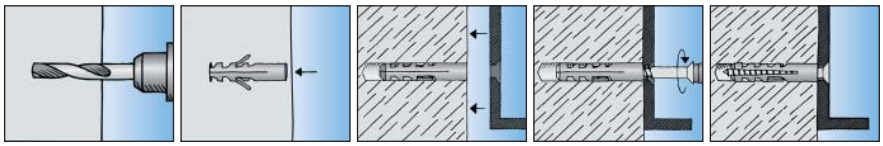


- The edge distance a_r must be at least onnce the anchorage length. For installations close to the edge we recommend turning the plug in a way that the direction of expansion acts parallel to the edge.

INSTALLATION

Type of installation

- Pre-positioned and push-through installation.



Installation information

- Determination of the minimum screw length:
  Fixing length
  + Thickness of plaster and/or insulation
  + Fixture thickness
  + 1x screw diameter
- Drill only in a rotary motion (hammer switched off) in perforated and hollow bricks and aircrete.
- For safety relevant applications under permanent tensile load, nylon plugs are not allowed. Therefore nylon plugs may not be used for suspensions from the ceiling like lightnings.

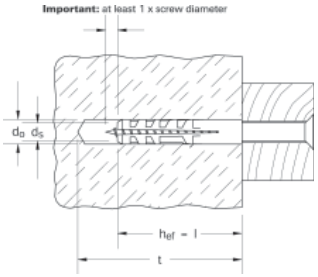
FIXING PRINCIPLES
In detail: The general principles for installation, the correct drilling procedure and much more on page 26.

TECHNICAL DATA

S-plug

Type	Art.-No.	ID	drill-Ø d_0 [mm]	min. drill hole depth t [mm]	plug length = min. anchorage depth $l = h_{ef}$ [mm]	wood or chipboard screw min / max d_s [Ø mm]	qty. per box pcs.
S 4	**50104**	7	4	25	20	2 - **3**	200
S 5	**50105**	4	5	35	25	3 - **4**	100
S 6	**50106**	1	6	40	30	4 - **5**	100
S 8	**50108**	5	8	55	40	4,5 - **6**	100
S 10	**50110**	8	10	70	50	6 - **8**	50
S 12	**50112**	2	12	80	60	8 - **10**	25
S 14	**50114**	6	14	90	75	10 - **12**	20
S 16	**50116**	0	16	100	80	12 (**1/2"**)	10
S 20	**50120**	7	20	120	90	16	5
S 5 DP	**50124**	5	5	35	25	3 - **4**	200
S 6 DP	**50125**	2	6	40	30	4 - **5**	200
S 8 DP	**50126**	9	8	55	40	4,5 - **6**	200
S 10 DP	**50127**	6	10	70	50	6 - **8**	100

DP = Double pack



BOXES

Stacking box **ST**

fischerbox

UX/SX Assortment box

Type	Art.-No.	ID	contents	Qty. per box pcs.
ST 1 S8 S	**60510**	3	34 plugs S 8, 34 countersunk wood screws SH 4,5 x 45	1
ST 1 S6 S	**60509**	7	50 plugs S 6, 50 countersunk wood screws SH 5 x 60	1
ST 1 S6/8	**60499**	1	50 plugs S 6, 30 plugs S 8	1
UX/SX Assortment box	**43540**	3	60 plugs SX 6 x 30, 50 plugs SX 8 x 40, 20 plugs SX 10 x 50, 60 plugs UX 5 x 30 R, 40 plugs UX 6 x 50 R, 50 plugs UX 8 x 50 R, 10 plugs UX 10 x 60 R	-
Box UX 6.8.10	**93182**	0	100 plugs UX 6 x 35, 70 plugs UX 8 x 50, 20 plugs UX 10 x 60	1
Box SX 5.6.8	**30191**	3	100 plugs SX 5 x 25, 100 plugs SX 6 x 30, 100 plugs SX 8 x 40	1
Box S 6.8.10	**60515**	8	100 plugs S 6, 100 plugs S 8, 25 plugs S 10	1
Box S 5.6.8	**60513**	4	100 plugs S 5, 100 plugs S 6, 100 plugs S8	1
Box empty	**60500**	4	-	1

LOADS

Recommended loads N_{rec} [kN] and characteristic (5% fractile) loads N_{Rk} [kN]. These values apply to the use of wood screws with the given screw diameter. When use chipboard screws these values should be reduced by 30%.

Fixing type	**S 4**		**S 5**		**S 6**		**S 8**		**S 10**		**S 12**		**S 14**		**S 16**		**S 20**	
Wood screw diameter [mm]	3		4		5		6		8		10		12		12		16	
Substrate	N_{rec} [1]	N_{Rk}	N_{rec} [1]	N_{Rk}	N_{rec} [1]	N_{Rk}	N_{rec} [1]	N_{Rk}	N_{rec} [1]	N_{Rk}	N_{rec} [1]	N_{Rk}	N_{rec} [1]	N_{Rk}	N_{rec} [1]	N_{Rk}	N_{rec} [1]	N_{Rk}
Concrete ≧ C12/15	0.16	0.8	0.28	1.4	0.4	2.0	0.66	3.3	1.22	6.1	1.80	9.0	2.38	11.9	2.26	11.3	3.88	19.4
Solid brick ≧ Mz 12 (DIN 105)	0.14	0.7	0.24	1.2	0.38	1.9	0.66	3.3	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Sand-lime solid brick ≧ KS 12 (DIN 106)	0.14	0.7	0.24	1.2	0.38	1.9	0.66	3.3	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Aerated concrete ≧ PB2	-	-	-	-	0.05	0.25	0.07	0.35	0.16	0.8	0.28	1.4	0.4	2.0	[2]	[2]	[2]	[2]

[1] Safety factors for the material (γ_M) and for the load (γ_L) included.

[2] Due to large range of scatter of test results not suitable, the failure of the substrate varies so greatly that no reproducible values can be given.