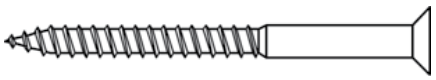
Plug SX

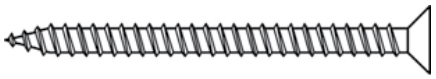
A class of its own. Its combined advantages will convince you, too !

OVERVIEW

Plug **SX**



Wood screw



Chipboard screw

Universal spacing screw **ASL**

Suitable for:
- Concrete
- Prestressed hollow-core concrete slabs
- Natural stone with dense structure
- Solid brick
- Solid sand-lime brick
- Solid block made from lightweight concrete
- Aerated concrete
- Solid panel made from gypsum
- Vertically perforated brick
- Perforated sand-lime block
- Hollow block made from lightweight concrete
- Slabs made of perforated bricks
- 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

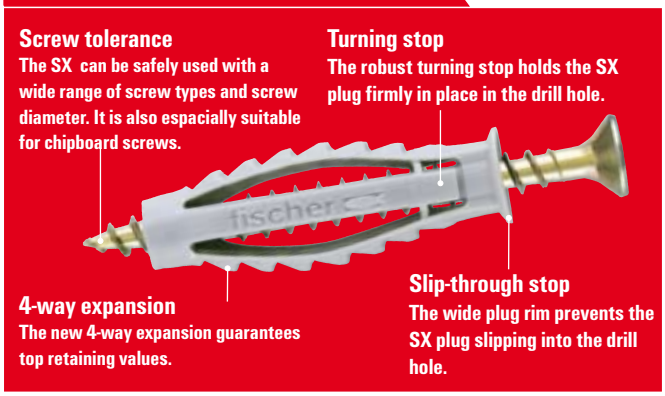
DESCRIPTION

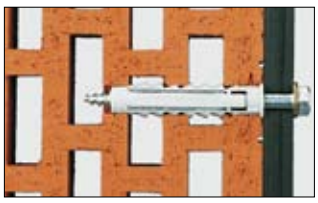
- Nylon expansion fixing
- For use with wood, chipboard and self-tapping screws and ASL spacing screws (see chapter spaceing screws).
- SX long versions for maximum load-bearing capacity in perforated building materials, aerated concrete and to bridge plaster.

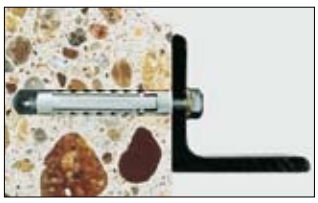
Advantages/Benefits

- 4-way expansion form lock guarantees highest grip.
- Anti-rotation lugs prevent the plug rotating in the drill hole.
- The wide neck is subject to no expansion pressure and prevents surface damage to tiles and plaster.
- Simple and quick push-through installation reduces installation time.
- Integrated hammer-in-stop enables push-through fixing. If pre-assembled with screw
- The plug´s collar prevents it slipping deeper into the drilled hole.
- Temperature-resistant from -40° to +80°C.
- The plug‘s geometry allows the use of wood and chipboard screws between 2 and 12 mm.

SX - ADVANTAGES AT A GLANCE







INSTALLATION

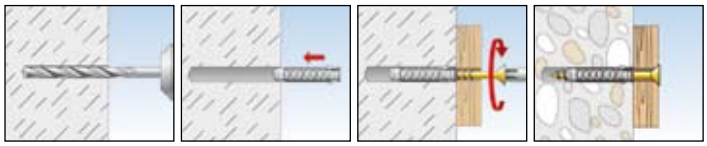
Type of installation

- Pre-positioned and push-through installation.

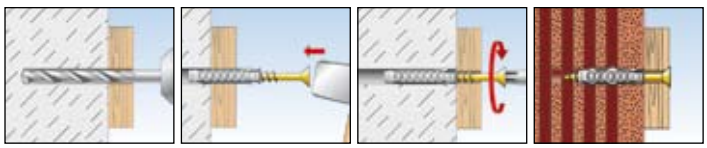
Installation information

- The required screw length is given by the anchorage depth + the thickness of the fixture.
- Push-through installation requires the largest possible screw diameter.
- Drill only in a rotary motion (hammer switched off) in perforated and hollow bricks and aerated concrete.

Pre-positioned installation



Push-through installation



FIXING PRINCIPLES

In detail: The general principles for installation, the correct drilling procedure and much more on page 303.

TECHNICAL DATA

Plug **SX**

Plug **SX** - long version

Type	Art.-No.	ID	drill	min. drill hole depth	plug length = min. anchoring depth	chipboard screw	qty. per box
			d_0	t	$l = h_{ef}$	$d_s \times l_s$	
			[mm]	[mm]	[mm]	[Ø mm]	pcs.
SX 4 x 20	**70004**	4	4	25	20	2 - 3	200
SX 5 x 25	**70005**	1	5	35	25	3 - 4	100
SX 6 x 30	**70006**	8	6	40	30	4 - 5	100
SX 6 x 50 *	**24827**	0	6	60	50	4 - 5	100
SX 6 x 50 R	**78185**	2	6	60	50	4 - 5	100
SX 8 x 40	**70008**	2	8	50	40	4,5 - 6	100
SX 8 x 65	**24828**	7	8	75	65	4,5 - 6	50
SX 10 x 50	**70010**	5	10	70	50	6 - 8	50
SX 10 x 80	**24829**	4	10	95	80	6 - 8	25
SX 12 x 60	**70012**	9	12	80	60	8 - 10	25
SX 14 x 70	**70014**	3	14	90	70	10 - 12	20
SX 16 x 80	**70016**	7	16	100	80	12 (1/2")	10

* without collar

Plug **SX** with chipboard screw

Type		Art.-No.	ID	drill	min. drill hole depth	plug length = min. anchoring depth	max. usable length	chipboard screw	qty. per box
				d_0	t	$l = h_{ef}$	t_{fix}	$d_s \times l_s$	
				[mm]	[mm]	[mm]	[mm]	[Ø mm]	pcs.
SX 6 x 30 S/10	1)	**70021**	1	6	40	30	10	4,5 x 40	50
SX 8 x 40 S/20	1)	**70022**	8	8	50	40	20	5 x 60	50

1) Fixing set consisting of fixing and chipboard screw.

LOADS

Recommended loads N_{rec} [kN] and mean ultimate loads N_u [kN]. These values apply to the use of wood screws with the given screw diameter. When used with chipboard screws these values should be reduced by 30%.

Fixing type	SX 5 x 25		SX 6 x 30		SX 6 x 50 SX 6 x 50 R		SX 8 x 40		SX 8 x 65		SX 10 x 50		SX 10 x 80		SX 12 x 60		SX 14 x 70		SX 16 x 80	
Wood screw diameter [mm]	4		5		5		6		6		8		8		10		12		12	
Substrate	N_{rec}	N_u	N_{rec}	N_u	N_{rec}	N_u	N_{rec}	N_u	N_{rec}	N_u	N_{rec}	N_u	N_{rec}	N_u	N_{rec}	N_u	N_{rec}	N_u	N_{rec}	N_u
Concrete ≧ C12/C15	0.3	2.0	0.7	4.9	0.8	5.8	0.7	8.5	0.7	5.0	1.2	8.5	1.2	8.5	1.7	12.0	2.0	14.1	2.6	18.0
Solid brick ≧ Mz12 (DIN 105)	0.3	1.6	0.3	2.2	0.6	4.4	0.65	4.5	0.6	4.1	0.65	4.5	1.2	8.5	0.7	5.0	0.8	5.6	0.9	6.9
Solid sand-lime brick ≧ KS12 (DIN 106)	0.3	2.0	0.5	3.5	0.8	5.4	1.2	8.5	0.6	4.2	1.2	8.5	1.2	8.5	1.7	12.0	2.0	14.1	2.6	18.0
Vertical perforated brick ≧ Hlz12 (ρ ≧ 1.0 kg/dm³, DIN 105)	0.07	0.5	0.07	0.5	–[1]	–[1]	0.17	1.2	0.17	1.2	0.17	1.2	0.5	3.5	0.26	1.8	0.4	3.1	0.6	4.1
Perforated sand-lime brick ≧ KSL12 (DIN 106)	0.17	1.2	0.3	2.1	0.3	2.7	0.3	2.0	0.35	2.3	0.3	2.0	0.8	5.5	0.3	2.0	0.3	2.2	0.4	2.8
Aerated concrete ≧ PB2	0.03	0.2	0.03	0.2	–[1]	–[1]	0.09	0.6	0.04	0.3	0.09	0.6	0.2	1.4	0.14	1.0	0.3	2.2	0.4	2.8
Aerated concrete ≧ PB4	0.09	0.6	0.09	0.6	0.15	1.0	0.3	2.0	0.14	1.0	0.3	2.0	0.6	4.2	0.45	3.1	0.5	3.4	0.6	4.0

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

Distance from component edges

(edge and corner distance a_r) in concrete

Fixing	Screw diameter [mm]	Edge/corner distance [mm]
SX 6 x 30	5	35
SX 8 x 40	6	40
SX 10 x 50	8	50
SX 12 x 60	10	65