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#### www.fischer-international.com















#### fischer stands for

Fixing Systems Automotive fischertechnik Consulting **Electronic Solutions** 

fischerwerke GmbH & Co. KG Klaus-Fischer-Straße 1 · 72178 Waldachtal Germany T +49 7443 12 - 0

www.fischer-international.com · info@fischer.de



# SX Plus. When progress takes hold.

When the plug is inserted, the fixing wings fold inwards and have a firm grip on the screw by light insertion. This means that the user has **both hands free**, **especially for overhead applications**.

Due to the closed geometry of the plug tip the tightening torque is easily felt and avoids overtightening of the screw.



The pronounced plug edge prevents the plug from slipping into the drill hole for secure fixing.

The 4-way expansion ensures optimum force transmission into the building material and guarantees high holding values, especially in rigid materials.

The side ribs prevent rotation in the drill hole for convenient installation.



The extended expansion range makes the SX Plus long version perfect for problematic building materials, such as aerated concrete and perforated building materials.

#### **Building materials**

Suitable for building materials, such as



Cracked concrete



Uncracked concrete



Solid brick



Perforated brick



Plaster layer



Aerated concrete

# Advantages, functioning and installation.

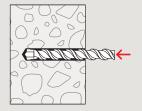
#### Your advantages at a glance

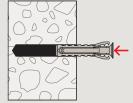
- The 4-way expansion ensures optimum force transmission into the building material and guarantees high holding values in solid and perforated building materials.
- The special fixing wings ensure prefixation of the screw, leaving both of the user's hands free during the setting process.
- The expansion-free plug neck prevents the creation of expansion forces on the material surface whilst screwing in the screw. This helps to prevent damage to tiles and plaster.
- The special shape of the plug makes it easy to insert into the drill hole with just a few hammer blows.
- The pronounced edge of the plug prevents it from slipping deeper into the drill hole and enables secure installation.

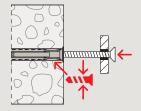
#### **Functioning**

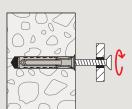
- The SX Plus is suitable for pre-positioned and push-through installation.
- When the plug is inserted, the fixing wings fold inwards. This
  locks the screw in place when it is inserted into the plug and
  prevents it from falling out, which is particularly helpful in
  overhead applications.
- The anti-rotation lock prevents the plug from twisting and allows for easy installation.
- The special design of the SX Plus anchor ensures a high tightening torque, therefore prevents overtightening of the screw.
- · Suitable for wood and chipboard screws, as well as stud screws.
- The required screw length is given by the plug length + fixture thickness + the screw diameter.

#### SX Plus in concrete



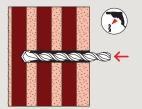


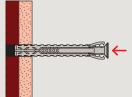


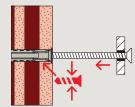


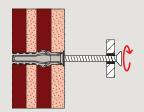


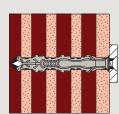
#### SX Plus long in vertically perforated brick



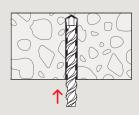


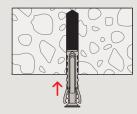






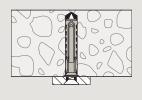
#### SX Plus in overhead application







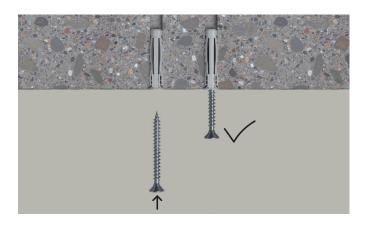




# Innovative fixing wings for secure hold.

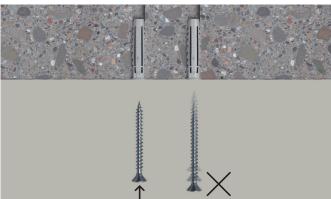
#### fischer SX Plus:

The special fixing wings of the SX Plus fix the screw in place by simply inserting it. As soon as the plug is inserted, the fixing wings are pressed inwards, causing the screw to lock and be held in place. Depending on the building material, the inserted screw also fixes light attachment parts which leaves both of the user's hands free. This is particularly helpful for overhead applications.



#### fischer SX:

With the previous fischer expansion plug SX, the screws do not remain in the plug by simply inserting them. Therefore, the user has to hold the screw permanently during installation in order to install the attachment correctly. Alternatively the screw can also be screwed in to achieve pre-fixation, which is more time consuming for mass applications.



## **Applications**

















Shelves





Radiators



Ceiling lamps

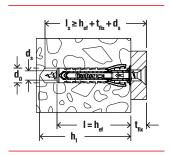


Net holders



Hanging baskets

## **Assortment**



#### Expansion plug SX Plus







SX Plus		SX Plu	s S	SX Plus PH							
	without with screw		Drill diameter	Min. drill hole depth	Anchor length	Wood and chipboard screws	Max. fixture thickness	Sales unit			
	ArtNo.	ArtNo.	d <sub>o</sub> [mm]	h, [mm]	[mm]	d <sub>ds/dsxls</sub> [mm]	t fix [mm]	[pcs]			
Item											
SX Plus 4 x 20	568004	-	4	25	20	2.0 - 3.0	_	200			
SX Plus 5 x 25	568005	-	5	35	25	3.0 - 4.0	-	100			
SX Plus 6 x 30	568006	-	6	40	30	4.0 - 5.0	-	100			
SX Plus 6 x 30 S	-	568206	6	45	30	4.5 x 40	5	50			
SX Plus 6 x 30 S PH TX	-	567935	6	45	30	4.5 x 40	5	100			
SX Plus 6 x 50	568106	-	6	60	50	4.0 - 5.0	-	100			
SX Plus 8 x 40	568008	-	8	50	40	4,5 - 6,0	-	90			
SX Plus 8 x 40 S	-	568208	8	65	40	5.0 x 60	15	50			
SX Plus 8 x 65	568108	-	8	75	65	4.5 - 6.0	_	50			
SX Plus 10 x 50	568010	-	10	70	50	6.0 - 8.0	-	50			
SX Plus 10 x 80	568110	-	10	100	80	6.0 - 8.0	-	25			
SX Plus 12 x 60	568012	-	12	80	60	8.0 - 10.0	-	25			
SX Plus 14 x 70	568014	-	14	90	70	10.0 - 12.0	_	20			

#### Expansion plug SX Plus in bucket



SX Plus in bucket

OAT 100 III DUOROE						
		Drill diameter	Min. drill hole depth	Anchor length	Wood and chipboard screws	Sales unit
		$d_0$	h <sub>1</sub>	I	d <sub>ds/dsxls</sub>	
	ArtNo.	[mm]	[mm]	[mm]	[mm]	[pcs]
Item						
SX Plus 6 x 30	567893	6	40	30	4.0 - 5.0	3200
SX Plus 8 x 40	567899	8	50	40	4.5 - 6.0	1200
SX Plus 10 x 50	567900	10	70	50	6.0 - 8.0	720
SX Plus 12 x 60	567901	12	80	60	8.0 - 10.0	350

#### Assortment boxes









MeisterBox SX Plus

s FixTainer SX Plus

PodRoy HY / SY Dive

fischer Box UX / SX Plus

MeisterBox SX Plus FixTa	iner SX Plus	RedBox UX / SX Plus	fischer Box UX / SX Plus	
		Contents		Sales unit
	ArtNo.			[pcs]
Item				
MeisterBox SX Plus	041648	60x Expansion plug SX Plus 6 x 30 60x Expansion plug SX Plus 8 x 40 12x Expansion plug SX Plus 10 x 50		1
MeisterBox SX Plus + screws	513777	50x Expansion plug SX Plus 6 x 30 30x Expansion plug SX Plus 8 x 40 50x Countersunk screw 4,5 x 40 30x Countersunk screw 5 x 55		1
ProfiBox SX Plus 6,8	567896	60x SX Plus 6 x 30 60x SX Plus 8 x 40 12x SX Plus 10 x 50		1
ProfiBox SX Plus 6,8 + screws	567897	50x Expansion plug SX Plus 6 x 30 30x Expansion plug SX Plus 8 x 40 50x Chipboard screws 4,5 x 40 30x Chipboard screws 5 x 55		1
FixTainer SX Plus 5,6,8 + hooks + screws	567903	50x Expansion plug SX Plus 5 x 25 25x Plug Screw 3,5 x 35 50x Expansion plug SX Plus 6 x 30 25x Plug screw 4,5 x 40 20x Expansion plug SX Plus 8 x 40 10x Plug Screw 5 x 55 8x Hook Fast&Fix Black 8x Hook Fast&Fix White 8x GKM 8x Panhead screw 4,5 x 35		1
FixTainer SX Plus 6,8,10	567904	120x Expansion plug SX Plus 6 x 30 60x Expansion plug SX Plus 8 x 40 30x Expansion plug SX Plus 10 x 50		1
FixTainer SX Plus, UX, GK 6 + screws	567905	50x Expansion plug SX Plus 6 x 30 50x Expansion plug UX 6 x 35 25x Plasterboard fixing GK 15x Plasterboard fixing metal GKM 50x Chipboard screw 4,5 x 40 50x Chipboard screw 4,5 x 45		1
RedBox SX Plus/UX 6,8,10	569147	60x Expansion plug SX Plus 6 x 30 50x Expansion plug SX Plus 8 x 40 20x Expansion plug SX Plus 10 x 50 60x Universal plug UX 6 x 35 R 40x Universal plug UX 6 x 50 R 50x Universal plug UX 8 x 50 R 10x Universal plug UX 10 x 60 R		1
fischer Box SX Plus 5,6,8	567891	100x Expansion plug SX Plus 5 x 25 100x Expansion plug SX Plus 6 x 30 100x Expansio plug SX Plus 8 x 40		1
fischer Box SX Plus, UX 6,8 S	567919	50x Universal plug UX 6 x 35 50x Chipboard screw 4,5 x 45 50x Expansion plug SX Plus 6 x 30 50x Chipboard screw 4,5 x 40 25x Universal plug UX 8 x 50 25x Chipboard screw 5 x 65 25x Expansion plug SX Plus 8 x 40 25x Chipboard screw 5 x 55		1

### Greenline.

## The fixing range with renewable raw materials.

fischer makes no compromises when it comes to the safety of greenline plastic plugs. They have the same performance characteristics and load-bearing capacity as the grey product range. Only made from castor oil and 100% made in Germany.



#### **Naturally grown**

All greenline products are produced with renewable raw materials. These do not compete with food and animal feed, nor with the corresponding cultivation areas. The regenerative material from castor oil is verified in each case by independent testing and certification by DIN CERTCO / TÜV Rheinland. The products belong to the "BIOBASED 50-85%" class.

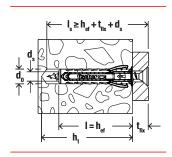


#### Sustainable building

With its fischer greenline products, fischer is the first manufacturer in the world to offer a range of bio-based fixing systems. We are thus addressing you as customers who, in addition to building, renovating and decorating, also attach great importance to sustainability when it comes to fixing.



## **Assortment**



#### Expansion plug SX Plus Green





SX Plus Green

SX Plus Green S

SA FILIS GLEETI S										
	without	with	Drill diameter	Min. drill hole depth	Anchor length	Wood and chipboard	Max. fixture thickness	Sales unit		
	screw	screw				screws				
			$d_0$	h <sub>1</sub>	1	d <sub>ds/dsxls</sub>	t <sub>fix</sub>			
	ArtNo.	ArtNo.	[mm]	[mm]	[mm]	[mm]	[mm]	[pcs]		
Item										
SX Plus Green 5 x 25	567806	-	5	35	25	3.0 - 4.0	_	90		
SX Plus Green 6 x 30	567807	-	6	40	30	4.0 - 5.0	-	90		
SX Plus Green 6 x 30 S	-	567813	6	45	30	4.5 x 40	5	45		
SX Plus Green 6 x 50	567808	-	6	60	50	4.0 - 5.0	-	90		
SX Plus Green 8 x 40	567809	-	8	50	40	4.5 - 6.0	_	90		
SX Plus Green 8 x 40 S	-	567814	8	65	40	5.0 x 60	15	45		
SX Plus Green 8 x 65	567810	-	8	75	65	4.5 - 6.0	-	45		
SX Plus Green 10 x 50	567811	-	10	70	50	6.0 - 8.0	-	45		
SX Plus Green 12 x 60	567812	-	12	80	60	8.0 - 10.0	-	45		

#### Assortment boxes



MeisterBox SX Plus Green

		Contents	Sales unit
Item	ArtNo.		[pcs]
MeisterBox SX Plus Green 6,8 + screw A2 DE	531227	50x Expansion plug SX 6 x 30 Green, 30x Expansion plug SX 8 x 40 Green 25x Countersunk screw 4,5 x 40 A2 15x Countersunk screw 5 x 55 A2	1
ProfiBox SX Plus Green 6,8 + screw A2	567898	50x Expansion plug SX 6 x 30 Green 30x Expansion plug SX 8 x 40 Green 25x Countersunk screw 4,5 x 40 A2 15x Countersunk screw 5 x 55 A2	1

## Loads

#### Expansion plug SX Plus

Recommended loads  $^{\eta}$  for a single anchor. The given loads are valid for wood screws with the specified diameter.

Туре			SX Plus 4x20	SX Plus 5x25	SX Plus 6x30	SX Plus 6x50	SX Plus 8x40	SX Plus 8x65	SX Plus 10x50	SX Plus 10x80	SX Plus 12x60	SX Plus 14x70
Wood screw diameter		[mm]	3	4	5	5	6	6	8	8	10	12
Min. edge distance in concrete	C <sub>min</sub>	[mm]	20	25	35	35	40	50	50	65	65	100
Recommended loads in the respective base material F <sub>rec</sub> <sup>2)</sup>												
Concrete	≥ C20/25	[kN]	0.20	0.35	0.65	1.30	0.75	1.50	1.40	2.90	2.40	3.50
Solid brick	≥ Mz 12	[kN]	0.15	0.27	0.35	0.50	0.60	0.80	1.00	1.40	1.25	1.30
Solid sand-lime brick	≥ KS 12	[kN]	0.20	0.35	0.65	1.30	0.75	1.50	1.40	2.90	2.40	3.50
Aerated concrete	≥ PB2, AAC 2	[kN]	0.03	0.03	0.07	0.12	0.10	0.15	0.18	0.28	0.22	0.35
Aerated concrete	≥ PB4, AAC 4	[kN]	0.10	0.15	0.20	0.35	0.30	0.40	0.50	0.90	0.80	1.00
Perforated sand-lime brick	≥ KSL 12	[kN]	0.18	0.25	0.30	0.35	0.40	0.80	0.45	1.50	0.70	1.00
Vertically perforated brick	≥ HLz 12, Doppio UNI 19	[kN]	0.13	0.13	0.15	0.17	0.25	0.40	0.25	0.50	0.35	0.40
Vertically perforated brick	Forato Type F8	[kN]	0.083)	0.083)	0.103)	-	0.103)	-	0.123)	-	-	-
Light-weight concrete hollow block	Sepa Parpaing	[kN]	0.15	0.20	0.25	0.303)	0.25	0.303)	0.35	0.403)	0.503)	0.503)

Required safety factors are considered.
Valid for tension, shear and combined tension and shear load.

<sup>3)</sup> Load determination on plastered wall.

# Our 360° service to you.

From software solutions, to training, to personal consulting. As a reliable partner, we are always happy to assist you with words and deeds.



#### Your advantages:

- Our products range from chemical resin systems to steel anchors through to nylon anchors.
- · Competence and innovation through own research, development and production.
- Global presence and active sales service in over 100 countries.
- Qualified technical consulting for economical and compliant fastening solutions. Also on-site at the construction site if requested.
- Training sessions, some with accreditation, at your premises or at the fischer academy.
- Design and construction software for demanding applications.

### Design Software fischer FiXperience.

The fischer design Software FiXperience gives you safe and reliable support in measuring your projects whether you are a planer, structural engineer or craftsman. Measuring has never been so simple!



#### Software and modules for your daily work.

- The modular design program includes engineering software and application modules.
- The software is based on international design standards (EN 1992-4, EC1, EC2, EC3 and EC5), including the national application documents. All common force and measurement units are available.
- Incorrect input will be recognized and the software gives tips to get a correct result. This ensures a safe and reliable design every time.
- The graphical display can easily be rotated through 360°, panned, tilted or zoomed as required.
- · The 3D display gives a detailed and realistic image.
- The "live update" feature helps to keep the program up to date ensuring you are always working with the latest version.
- Free download and updates at: www.fischer.de/fixperience-en