

Dealer:

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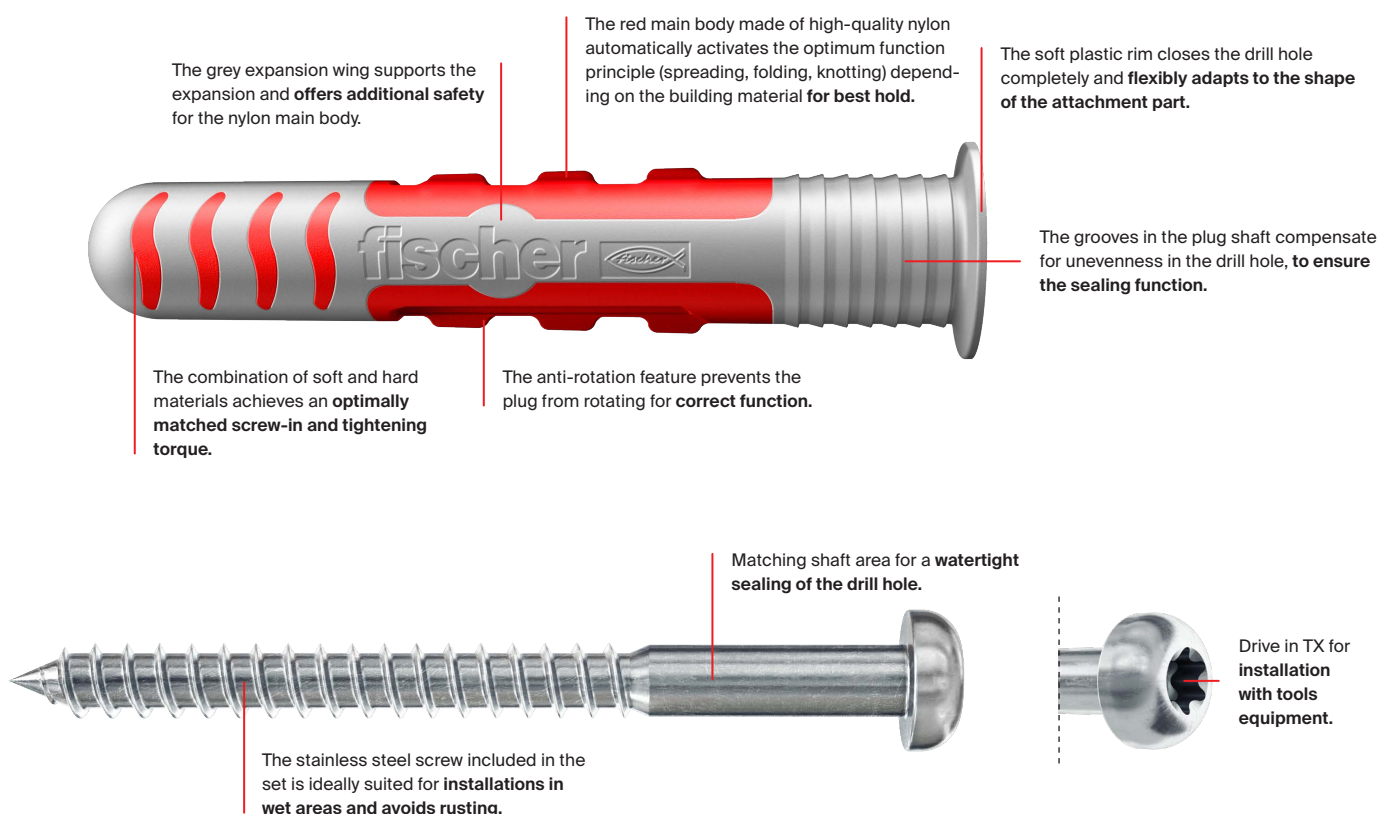
fischer 

DuoSeal.
The sealing plug for
wet areas.



DuoSeal.

The sealing plug for wet areas.



Recommendation

Suitable for building materials, such as



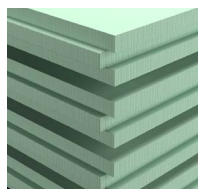
Uncracked concrete



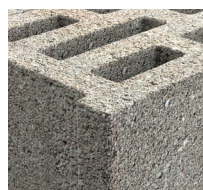
Solid brick



Perforated brick



Gypsum board wall



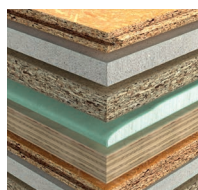
Light concrete
(hollow brick)



Light concrete
(solid brick)



Aerated concrete



Panel building materials

Advantages, functions and assembly

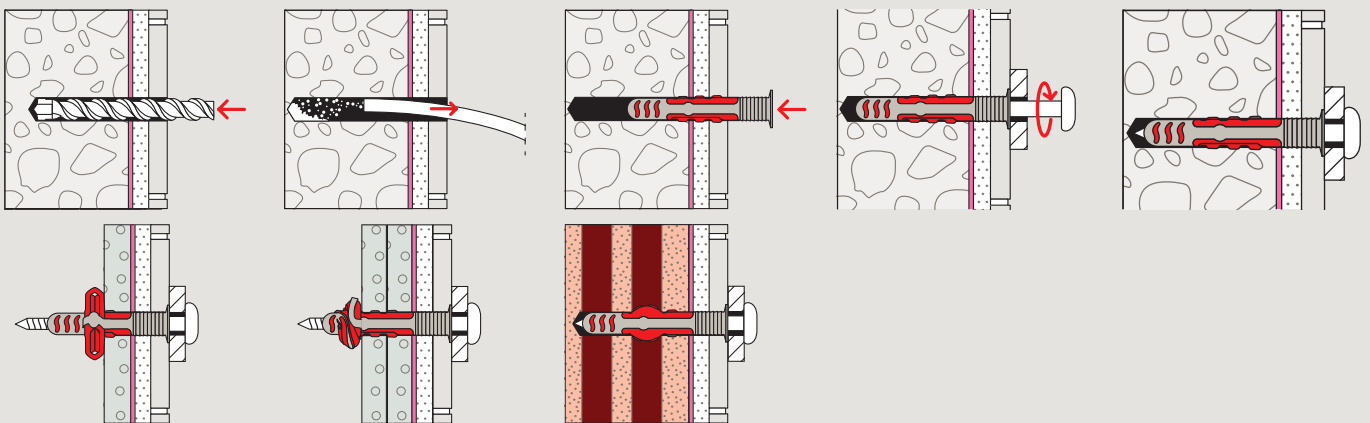
Your advantages at a glance

- The DuoSeal completely seals drill holes in tiles without additional sealing compound and thus prevents structural damage caused by moisture in the building material.
- The DuoSeal is ideally suited for tiled surfaces which are exposed to very frequent splash water and temporarily accumulated water. In any case, please take note of the general national regulations on the use of plugs in wet areas.
- The universal plug can be installed gently on tiles with very little effort.
- Its red component ensures a secure hold in all building materials. Thus, the DuoSeal achieves the same load values as conventional nylon plugs.
- The stainless steel screw included in the set is ideally suited for installation in wet areas and avoids rusting.
- The soft plastic rim closes the drill hole completely and flexibly adapts to the shape of the attachment part.

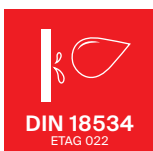
Functioning

- The DuoSeal is only suitable for application on tiles and can only be mounted as pre-position installation. A suitable (diamond) tile drill should be used for drilling the hole.
- The DuoSeal can be installed gently on tiles with just a few hammer blows. The rim of the shaft prevents the plug from being set too deep and additionally seals the drill hole.
- The red component made of high-quality nylon automatically activates the optimum function principle (spreading, folding, knotting) depending on the building material for best hold.
- The soft grey component is pressed against the drill hole wall by screwing in the screw and seals the drill hole completely.
- The stainless steel screw with TX drive included in the set is ideal for installation in wet areas
- The grooves in the plug shaft compensate for unevenness in the hole, so that the sealing function is guaranteed even if the drill hole is not perfect.

The DuoSeal is only suitable for plug-in installation.



Approvals



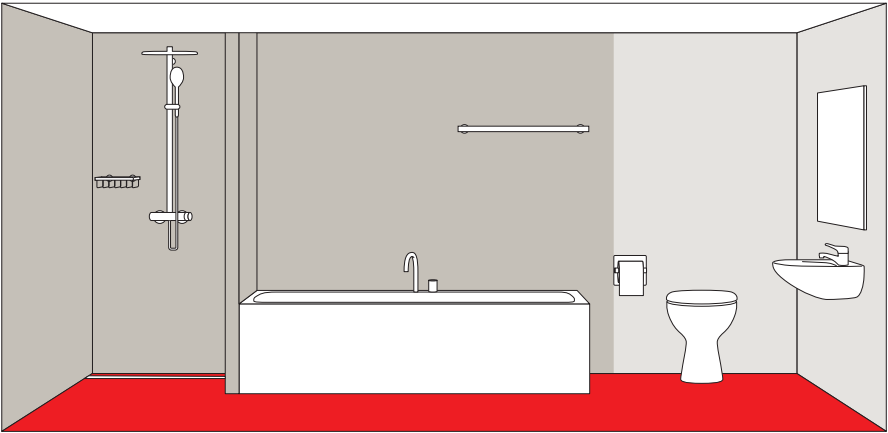
Description of the water impact classes.

The new waterproofing standard DIN 18534 has been in force since July 2017 and regulates the waterproofing of floor and wall surfaces in interior rooms. The relevant areas of application include surfaces exposed to service and cleaning water, such as bathrooms, shower facilities, swimming pool surrounds, commercially used kitchens, and production or commercial areas. The DIN 18534 distinguishes between four water exposure classes: W0-I (surfaces with low water exposure), W1-I (surfaces with moderate water exposure), W2-I (surfaces with high water exposure), W3-I (surfaces with very high water exposure).

The longer and the more water a surface is exposed to, the better it must be sealed to prevent damage from moisture. The water exposure class thus determines the application for which the planned waterproofing is suitable. ETAG 022, on the other hand, regulates the waterproofing of interior floor and wall surfaces at European level. The corresponding test procedure is based on ETAG 022 in accordance with Part 1 and Part 2 of Annex F.

Water exposure class W0-I (low)* Surfaces with low splash water impact			
Application surface	Wall Guest bathrooms and above sinks	Ceiling Bathrooms with domestic use	Floor Kitchen, guest bathrooms and utility rooms without backwater
Water exposure class W1-I (moderate) Surfaces with less splashing water effect			
Application surface	Wall Bathrooms with domestic use (area of shower and bathtub)	Ceiling Sports facilities, wellness areas and bathrooms	Floor Bathrooms with little water from the shower
Water exposure class W2-I (high) Areas with frequent exposure to splashing water and occasional accumulation of water			
Application surface	Wall Public showers or wet rooms of sports and commercial premises	Ceiling Public swimming pools and showers	Floor Floors within shower area
Water exposure class W3-I (very high) Areas with very frequent exposure to splashing water and/or water with detergents and frequent accumulation of water			
Application surface	Wall Commercial kitchens or laundries with chemical exposure	Ceiling Commercial kitchens or laundries with chemical exposure	Floor Fabric surfaces of shower facilities in sports and commercial facilities

*Extract from the standard DIN 18534



Water exposure classes:

- W0-I
- W1-I
- W2-I

Sealing standards in wet areas.

Never again sealing drill holes with silicone.

Reliable sealing in wet areas is obligatory according to the regulations of the DIN 18534 and ETAG 022. Up to now, these drill holes have always been additionally sealed with silicone or other sealing compound at great expense. This not only causes additional costs, but is also very time-consuming. In addition, silicone does not comply with the above-mentioned sealing standards, as this is only a temporary solution and joints must be repaired regularly. Insufficient sealing of the drill holes can lead to structural damage and mold due to moisture behind the wall. With the fischer DuoSeal and the matching stainless steel screw, drill holes in wet areas can be sealed watertight for the first time without additional

sealing compound. The plastic plug was tested independently by the Testing and Certification Institute of the Säure Fliesner Vereinigung e. V.. The watertightness was confirmed for the ETAG 022 and water exposure class W3-I based on the DIN 18534. Taking into account the national and international sealing standards in wet areas the DuoSeal in combination with the enclosed screw is therefore ideally suited for applications in commercial, private and public wet areas, which are often exposed to frequent splashing and temporary accumulation of water. In any case, please take note of the general national regulations on the use of plugs in wet areas.

Characteristics	DuoSeal	Plastic plug with silicone sealing
Sealing function tested according to the standard	Yes	No
Secure sealing of the drill hole ensured	Yes	No (silicone may leak during assembly)
Permanent sealing of the drill hole given	Yes	No (silicone must be replaced after approx. 5 years)
Immediate loading of the screw possible	Yes	No (silicone must be hardened)
Prevention of mould and moisture in the wall	Yes	No
Adjusted system available	Yes (with supplied stainless steel screw)	No
High installation comfort given	Yes	No (plug must be hammered in)
Additional equipment necessary	No	Yes (hammer and silicone)



Applications

Bathroom accessories on tiles



Furnishing of bathrooms



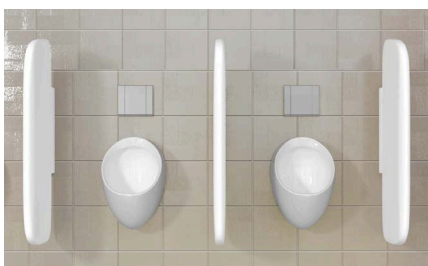
Accessories close to the washbasin



Accessories inside the shower



Fixing of towel holders



Fixing of partition walls



Cupboards and shelves close to water

Tiled surfaces in public and commercial areas



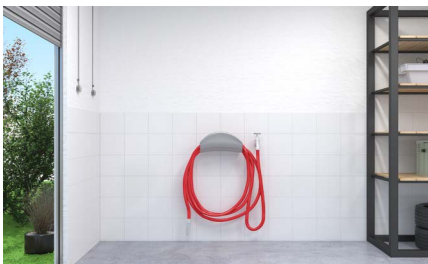
Fixings in dressing rooms

Tiled surfaces in kitchens



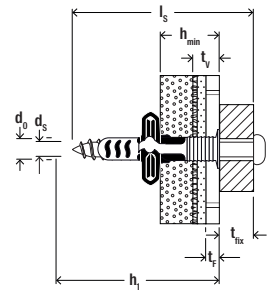
Wall fixings in kitchens

Tiled surfaces in garages



Tubes

Assortment & Loads



DuoSeal Assortment



Item	Art.-No.	Drill-diameter d_0 [mm]	Drill hole diameter tolerance [mm]	Minimum drill hole depth h_1 [mm]	Minimum building material thickness h_{min} [mm]	Plug length l [mm]	Screw dimensions $d_s \times l_s$ [mm]	Drive [TX]	Sealing depth t_v [mm]	Tile thickness t_f [mm]	Maximum thickness of the attachment t_{fix} [mm]	Sales unit [pcs]
DuoSeal 6 x 38 S PH TX A2	557727	6	6,0-6,40	65- t_{fix}	22	38	4,5 x 60	20	5-14	5-10	12	50
DuoSeal 8 x 48 S PH TX A2	557728	8	8,0-8,45	75- t_{fix}	25	48	6,0 x 70	30	5-14	5-10	16	25
DuoSeal 6 x 38 S PH TX A2 K	557731	6	6,0-6,40	65- t_{fix}	22	38	4,5 x 60	20	5-14	5-10	12	4
DuoSeal 8 x 48 S PH TX A2 K	557732	8	8,0-8,45	75- t_{fix}	25	48	6,0 x 70	30	5-14	5-10	16	2

DuoSeal

Recommended loads¹⁾ for a single anchor.

Type		DuoSeal 6	DuoSeal 8
Screw diameter	[mm]	4.5	6.0
Recommended loads in the respective base material F_{rec} ^{2) 3)}			
Concrete	$\geq C20/25$	[kN] 0.40	0.60
Solid brick	$\geq Mz 12$	[kN] 0.20	0.30
Solid sand-lime brick	$\geq KS 12$	[kN] 0.30	0.40
Aerated concrete	$\geq PB2, PP2$	[kN] 0.10	0.10
Vertically perforated brick	$\geq HLZ 12$	[kN] 0.20	0.30
Perforated sand-lime brick	$\geq KSL 12$	[kN] 0.30	0.40
Gypsum plasterboard impregnated (green)	12.5 mm	[kN] 0.10	0.10 ⁴⁾
Gypsum plasterboard impregnated (green)	2 x 12.5 mm	[kN] 0.15	0.15
Gypsum plasterboard hard and impregnated (e. g. Knauf Diamant board or Rigipis Die Harte)	12.5 mm	[kN] 0.15	0.15
Gypsum plasterboard hard and impregnated (e. g. Knauf Diamant board or Rigipis Die Harte)	2 x 12.5 mm	[kN] 0.20	0.20
Gypsum fibreboard	12.5 mm	[kN] 0.20	0.20
Gypsum block	$\rho \geq 0.85 \text{ kg/dm}^3$	[kN] 0.10	0.10

¹⁾ Required safety factor is considered.

Load values are valid for using the supplied screws and under consideration of the total tile thickness: tile + tile glue + sealing compound.

²⁾ Valid for tensile load, shear load and oblique load under any angle.

³⁾ Values apply to tile thickness 5 - 10 mm and total tile thickness 9.5 - 14.5 mm.

⁴⁾ Value applies to tile thickness 8 - 10 mm and total tile thickness 12.5 - 14.5 mm.