fischer

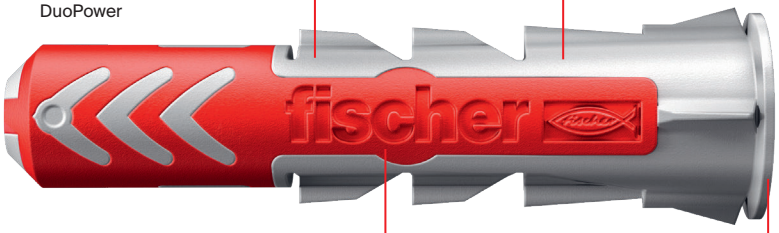
DuoPower.
The Duo of Power and Intelligence.

Simply clever, the combination of two components guarantees even more performance.

The combination of soft and hard materials achieves an **optimally matched screw-in and tightening torque.**

Depending on the building material, the main body made from high quality nylon automatically activates **the optimum function principle for permanent and safe hold.**

DuoPower



Short plug length allows less drilling and shorter screws for a **quick installation.**

The wide plug opening allows **easy application of the screw.**

Red expansion wings support the safe expansion and offer **additional safety** for the nylon main body.

The narrow plug rim **prevents slipping in the drill hole.**

Distinctive side ribs interlock in the building material and **prevent rotation** in the drill hole.

DuoPower long

Function zone I:
The tip spreads in two directions for **a higher load bearing capacity in difficult building materials.**

Function zone II:
The expanding element spreads in a 90° angle to the zone I and III and additionally provides an optimal **screw guidance.**

Function zone III:
Depending on the building material, the back part of the plug either **expands or folds** for the best hold.

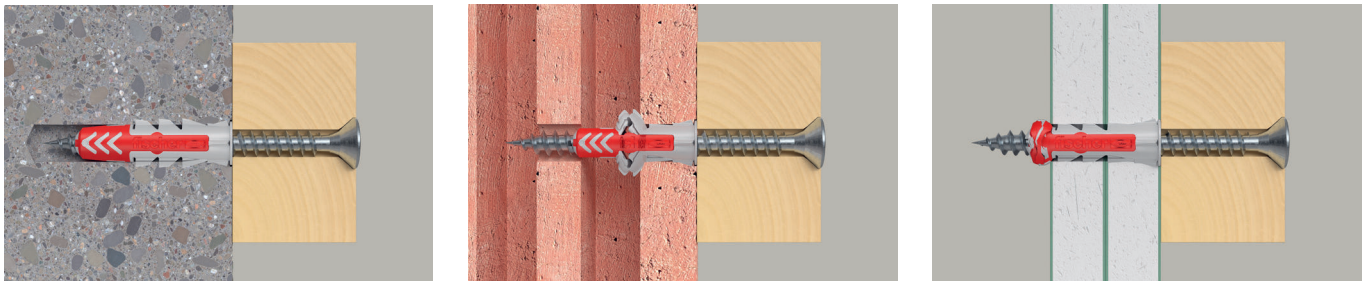
Advantages and functioning.

Your advantages at a glance:

- The plug activates the optimum functional principle depending on the substrate. It expands in solid building materials, folds in perforated building materials and knots in panel building materials.
- Due to the two-component technology, the DuoPower has a higher expansion volume for a perfectly matched insertion and tightening torque.
- The nylon plug is suitable for all common building materials and thus enables universal use.
- The long version of the DuoPower is particularly suitable for fastening in perforated building materials, in aerated concrete and for bridging plaster.
- The large anchoring depths of the long version provide even more load-bearing capacity.
- The European Technical Assessment (ETA) for certain DuoPower dimensions guarantees tested safety for safety-relevant applications in concrete and masonry (see load table).

Functioning

- The DuoPower is suitable for push-in and push-through installation.
- The red expansion wings support secure expansion and provide additional safety to the grey main body.
- The required screw length results from plug length + attachment thickness + screw diameter.
- The plug can be used with wood, chipboard and hanger bolts.
- For panel building materials, the threadless part of the screw must not be longer than the thickness of the attachment part.
- The fischer DuoPower ETA 10x50 with safety screw is approved for concrete and masonry. The DuoPower ETA 8x40 with FPF II and safety screw are approved for concrete.



Intelligent self-activating functions depending on the substrate.

Long versions with additional bite in problematic building materials.

Features

CE

ETA-22/0512, for multiple non-structural systems in concrete and masonry

★★★★★ Nylon Quality

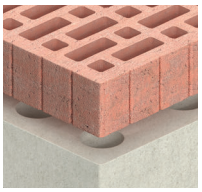
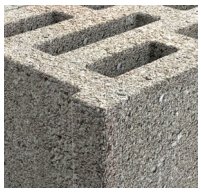
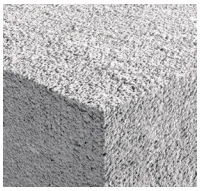
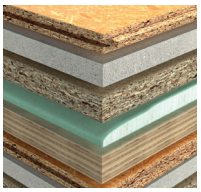
2K Technology

DuoLine

Substrates and installation.

Recommendation

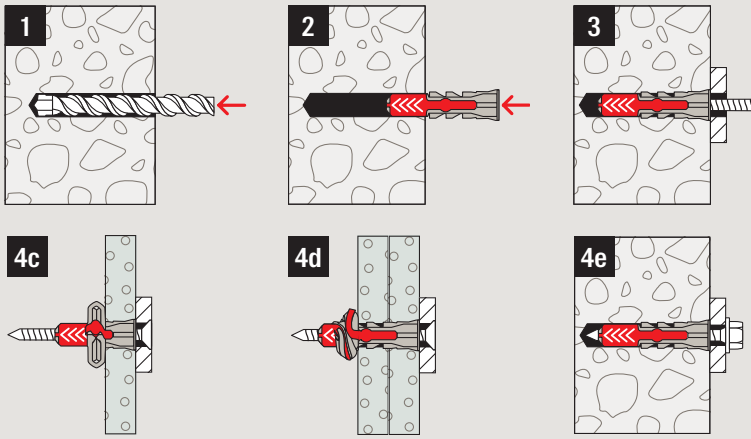


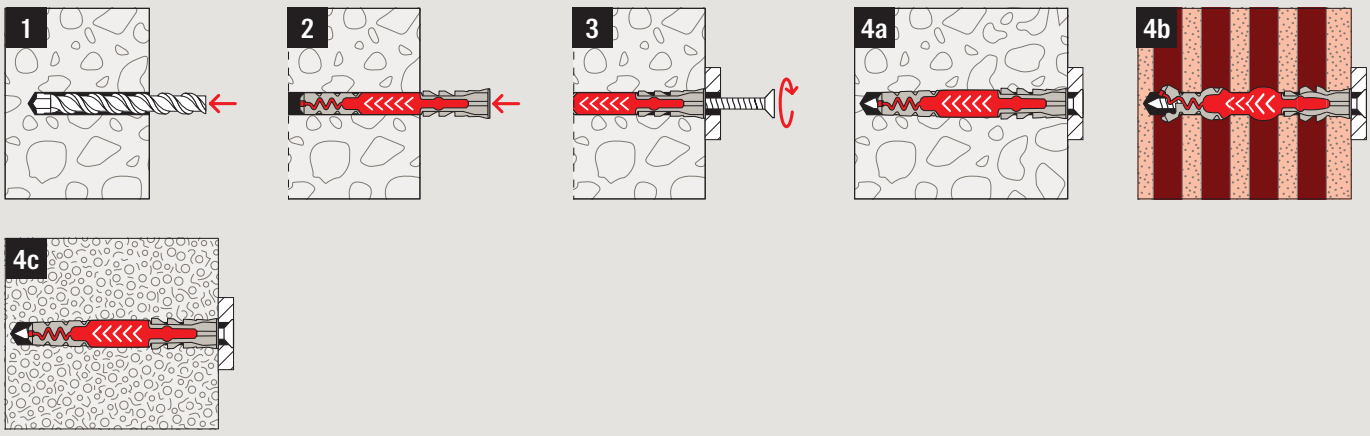
Suitable for concrete [1], solid brick [2], solid sand-lime brick [2], vertically perforated brick [2], hollow brick ceilings, perforated sand-lime brick, hollow block and solid block of lightweight concrete, aerated concrete, natural stone, plasterboard and gypsum fiberboard, solid gypsum board, gypsum board, chipboard.

1) Approved for DuoPower ETA 8x40 with safety screw and FPF II and DuoPower ETA 10x50 with safety screw
2) Approved for DuoPower ETA 10x50 with safety screw

Installation DuoPower



Installation DuoPower long



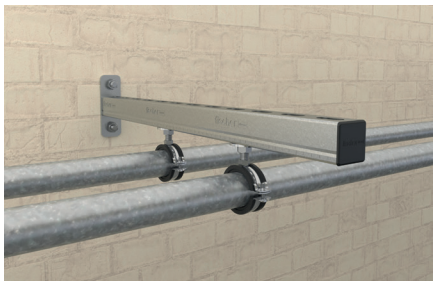
Applications

Kitchen cabinets

Wall shelves

TV consoles

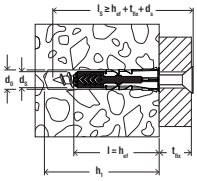
Consoles



Pipe fastenings

Radiators

Assortment



Technical data

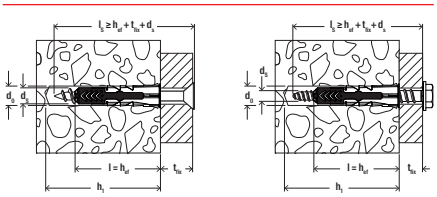
DuoPower

DuoPower

DuoPower long

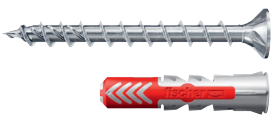
Item	Without screw Item No.	With screw Item No.	Drill hole diameter d_0 [mm]	Min. drill hole depth h_1 [mm]	Min. panel thickness d_p [mm]	Min. bolt penetration $l_{E,min}$ [mm]	Anchor length l [mm]	Screws d_S / d_S x l_S [mm]	Drive	Max. fixture thickness t_{fix} [mm]	Sales unit [pcs]
DuoPower 5 x 25	**555005**	–	5	35	12,5	29	25	3 – 4	–	–	100
DuoPower 6 x 30	**555006**	–	6	40	12,5	35	30	4 – 5	–	–	100
DuoPower 6 x 50	**538240**	–	6	60	12,5	55	50	4 – 5	–	–	100
DuoPower 8 x 40	**555008**	–	8	50	12,5	46	40	4,5 – 6	–	–	100
DuoPower 8 x 65	**538241**	–	8	75	2x 12,5	71	65	4,5 – 6	–	–	50
DuoPower 10 x 50	**555010**	–	10	70	12,5	58	50	6 – 8	–	–	50
DuoPower 10 x 80	**538242**	–	10	100	–	88	80	6 – 8	–	–	25
DuoPower 12 x 60	**538243**	–	12	80	–	70	60	8 – 10	–	–	25
DuoPower 14 x 70	**538244**	–	14	90	–	82	70	10 – 12	–	–	20
DuoPower 5 x 25 S	–	**555105**	5	40	12,5	29	25	3,5 x 35	PZ2	6	50
DuoPower 6 x 30 S	–	**555106**	6	45	12,5	35	30	4,5 x 40	PZ2	5	50
DuoPower 6 x 30 S PH TX	–	**545838** [1]	6	45	12,5	35	30	4,5 x 40	TX 20	5	100
DuoPower 6 x 50 S	–	**538245**	6	65	12,5	55	50	4,5 x 60	PZ2	15	50
DuoPower 8 x 40 S	–	**555108**	8	65	12,5	45	40	5,0 x 55	PZ2	10	50
DuoPower 8 x 65 S	–	**538246**	8	85	2x 12,5	70	65	5,0 x 80	PZ2	10	25
DuoPower 10 x 50 S	–	**555110**	10	74	12,5	57	50	7,0 x 69	SW 13/TX 40	12	25
DuoPower 10 x 80 S	–	**538247**	10	112	–	87	80	7,0 x 107	SW 13	20	10
DuoPower 12 x 60 S	–	**538248**	12	85	–	68	60	8,0 x 80	SW 13	12	10
DuoPower 14 x 70 S	–	**538249**	14	100	–	80	70	10,0 x 95	SW 17	15	8

[1] DuoPower S PH TX with chipboard screw panhead

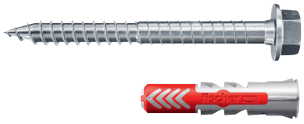


Technical data

DuoPower ETA



DuoPower FPF II



DuoPower Safety screw

Item	Item No.	Approval ETA	Drill hole diameter d_0 [mm]	Min. drill hole depth [1] h_1 [mm]	Min. bolt penetration $l_{E,min}$ [mm]	Anchor length l [mm]	Screw d_S / d_S x l_S [mm]	Drive	Max. fixture thickness [2] t_{fix} [mm]	Sales unit [pcs]
DuoPower ETA 8 x 40 FPF II [3]	**564789**	●	8	69	46	40	6,0 x 60	TX 30	14	50
DuoPower ETA 8 x 40 Safety screw	**564790**	●	8	76	46	40	6,0 x 66,5	SW 10/TX 30	20	50
DuoPower ETA 10 x 50 Safety screw	**564792**	●	10	78	57	50	7,0 x 69	SW 13/TX 40	12	50

[1] Min. drill hole depth $h_{1\,[mm]} = l_s - t_{fix} + 10$
[2] Max. fixture thickness $t_{fix\,[mm]} = l_s - l - d_s$
[3] Power Fast II screw

Loads

Universal plug DuoPower

Highest recommended loads[1] for a single anchor. The given loads are valid for wood screws with the specified diameter.

Type			5 x 25	6 x 30	6 x 50	8 x 40	8 x 65	10 x 50	10 x 80	12 x 60	14 x 70
Wood screw diameter		[mm]	4	5	5	6	6	8	8	10	12
Min. edge distance concrete	c_{min}	[mm]	30	35	35	50	50	65	65	80	100
Recommended loads in the respective base material F_{rec}[2]											
Concrete	≥ C20/25	[kN]	0.40	0.95	1.65	1.10	2.30	2.15	4.20	3.30	5.30
Solid brick	≥ Mz 12	[kN]	0.30	0.50	0.55	0.62	0.69	1.20	1.45	1.30	1.35
Solid sand-lime brick	≥ KS 12	[kN]	0.50	1.00	1.60	1.25	2.25	2.20	3.85	2.80	4.50
Aerated concrete	≥ AAC 2 (G2)	[kN]	0.05	0.10	0.15	0.10	0.16	0.20	0.30	0.24	0.35
Aerated concrete	≥ AAC 4 (G4)	[kN]	0.25	0.38	0.55	0.42	0.60	0.60	1.10	1.00	1.45
Vertically perforated brick	≥ Hlz 12 (ρ ≥ 0.9 kg/dm³)	[kN]	0.13	0.15	0.17	0.25	0.40	0.25	0.40	0.35	0.40
Perforated sand-lime brick	≥ KSL 12 (ρ ≥ 1.6 kg/dm³)	[kN]	0.40	0.60	0.60	0.70	1.00	0.70	2.00	0.75	1.50
Gypsum block	(ρ ≥ 0,9 kg/dm³)	[kN]	0.10	0.18	0.37	0.25	0.50	0.35	0.65	0.50	0.50
Gypsum fibreboard	12.5 mm	[kN]	0.24	0.33	0.35	0.35	-	0.50	-	-	-
Gypsum plasterboard	12.5 mm	[kN]	0.12	0.15	0.15	0.15	-	0.15	-	-	-
Gypsum plasterboard	2 x 12.5 mm	[kN]	0.13	0.15	0.24	0.20	0.32	0.30	-	-	-
Mattone Forato Typ F8		[kN]	0.30	0.30	-	0.25	-	0.25	-	-	-
Tramezza Doppio UNI 19		[kN]	0.15	0.15	0.23	0.15	0.30	0.20	0.52	0.35	0.35
Sepa Parpaing		[kN]	0.30	0.45	0.25[3]	0.45	0.45[3]	0.45	0.45[3]	0.60[3]	0.60[3]

[1] Required safety factors are considered.
[2] Valid for tensile load, shear load and oblique load under any angle.
[3] Load determination on plastered wall.

Universal plug DuoPower

Permissible loads[1][2][3] of a single anchor as part of a multiple fixing of non-structural systems.
For the design the complete current assessment ETA-22/0512 of 04.11.2022 has to be considered.

Type			DuoPower ETA 8x40 Power Fast II	DuoPower ETA 8x40 special screw	DuoPower ETA 10x50 special screw	
Anchor diameter	d_0	[mm]	8	8	10	
Screw diameter	d	[mm]	6	6	7	
Anchorage depth	h_{nom}	[mm]	40	40	50	
Anchorage in concrete ≥ C16/20[4]						
Permissible tensile load N_{perm}		[kN]	0.12	0.79	0.79	
Permissible shear load V_{perm}	zinc coated screws (gvz)	[kN]	3.10	4.23	5.98	
	stainless steel screw (R)	[kN]	-	3.93	5.98	
Minimum member thickness	h_{min}	[mm]	150	150	150	
Characteristic edge distance	$c_{cr,N}$	[mm]	55	90	80	
Characteristic spacing	a resp. $s_{cr,N}$	[mm]	15	50	50	
Minimum spacing	s_{min}	[mm]	50	50	50	
with an edge distance	c ≥	[mm]	100	100	100	
Minimum edge distance	c_{min}	[mm]	50	80	80	
with a spacing	s ≥	[mm]	100	160	160	
Anchorage in masonry						
Permisible load[5] F_{perm} in solid brick	≥ Mz 10/2; NF	[kN]	–	–	0.40	–
	≥ Mz 16/2; NF	[kN]	–	–	0.57	–
	≥ Mz 20/2; NF	[kN]	–	–	0.71	–
Permissible load[5] F_{perm} in solid sand-lime brick	≥ KS 8/2; 2DF	[kN]	–	–	0.60	0.70[6]
	≥ KS 12/2; 2DF	[kN]	–	–	0.60	0.70[6]
Permissible load[5] F_{perm} in perforated clay brick	≥ Hlz 10/1.2; 9 DF	[kN]	–	–	0.17	
	≥ Hlz 12/1.2; 9 DF	[kN]	–	–	0.21	
Minimum member thickness	h_{min}	[mm]	–	–	115	
Minimum spacing (single anchor)	a_{min}	[mm]	–	–	250	
Minimum spacing (anchor group)	s_{min}	[mm]	–	–	50	
Minimum edge distance (anchor group)	c_{min}	[mm]	–	–	80	

[1] Valid for zinc coated (gvz) Power Fast II and special screw and as well as for special screw made of stainless steel (R). For exterior use of the zinc coated screws measures against incoming humidity have to be taken.
[2] The required partial safety factors for material resistance as well as a partial safety factor for load actions γ_L = 1.4 are considered. As a single anchor counts e.g. an anchor with a minimum spacing a according to Annex B 2 or B 3 of the assessment.
[3] Valid for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).
[4] For values in concrete C12/15 see assessment.
[5] Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads and bending moments see assessment. Bulk density of stone in [kg/dm³] and minimum compressive strength in [N/mm²] according to EN 771.
[6] Only valid for c_{1min} 110 mm and c_{2min} 165 mm.

Dealer:

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fischer stands for

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