

DuoPower

The duo of power and intelligence.



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Console



Pipelines

Applications

- TV consoles
- Lighting
- Shelves
- Mirror cabinets
- Letter boxes
- Pictures
- Fixing blinds
- Curtain rails
- Wash basin fixings
- Plumbing and heating fixings
- Bath and toilet installations
- Wall cabinets
- Range hood

Advantages

- Two component materials for top load values and intelligent functioning depending on the substrate.
- Great feedback (feel-good factor) of the plug. You can feel exactly when the plug is installed perfectly.
- The narrow plug rim prevents slipping into the drill hole.
- The serrated anti-rotation feature prevents rotation in the drill hole during installation.
- The greater anchorage depth of the DuoPower 6 x 50, 8 x 65 and 10 x 80 means that the plug is especially suited to fixings in hollow building materials, aerated concrete and to bridge plaster.
- The European Technical Assessment (ETA) for certain DuoPower dimensions guarantees tested safety for safety-relevant applications in concrete and masonry (see load table).

Certificates / Features



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



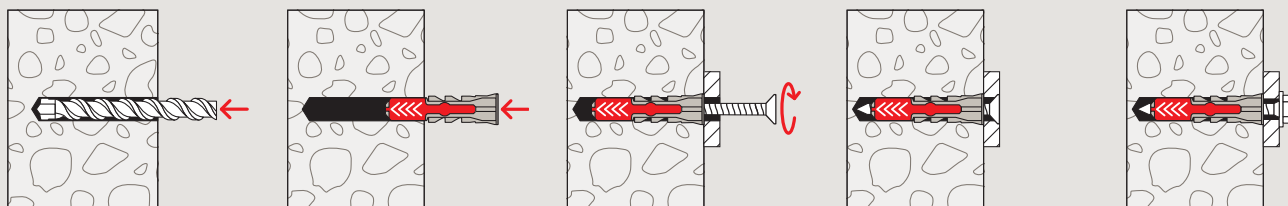
Building materials

- Concrete
- Solid brick
- Solid sand-lime brick
- Aerated concrete
- Vertically perforated brick
- Perforated sand-lime brick
- Plasterboard
- Gypsum plasterboard and gypsum fibreboards
- Hollow blocks made from lightweight concrete
- Cavity floor slabs made from bricks and concrete or similar
- Natural stone
- Chipboard
- Solid panel made from gypsum
- Solid brick made from lightweight concrete

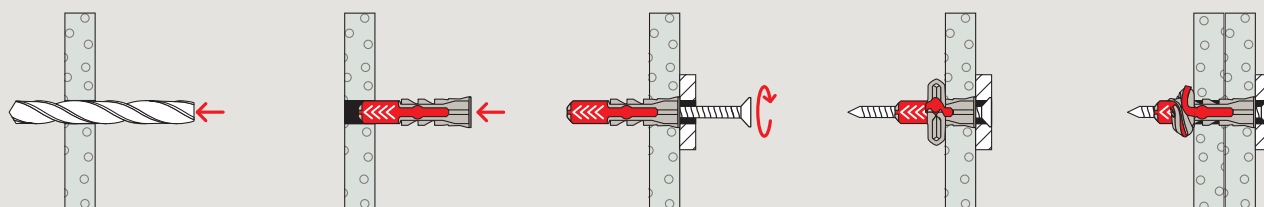
Functioning

- The grey component made from high quality nylon automatically activates for the optimum product function (expansion, folding, knotting) for the best hold.
- The required screw length is given by the plug length + fixture thickness + the screw diameter.
- Suitable for wood and chipboard screws, as well as stud screws.
- In the case of fixing boards, the threadless part of the screw must not be longer than the fixture.
- The fischer DuoPower ETA 10x50 with fischer safety screw is approved for concrete and masonry. The DuoPower ETA 8x40 with FPF II or fischer safety screw is approved for concrete.

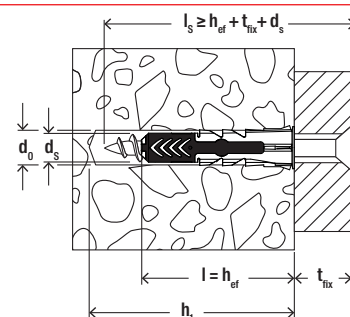
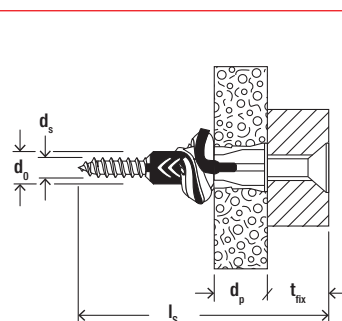
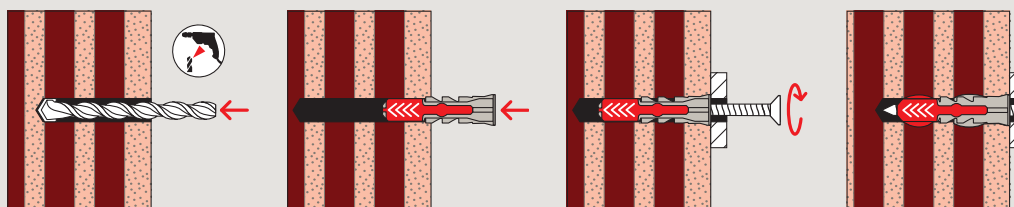
Installation in solid building materials



Installation in panel building materials



Installation in hollow building materials



Technical data

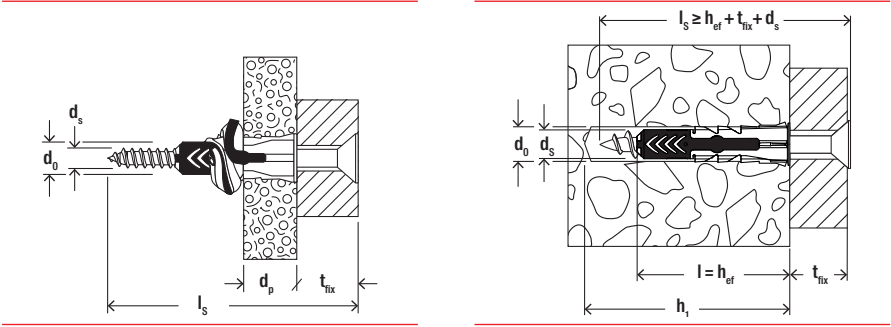
DuoPower



DuoPower

DuoPower longversion

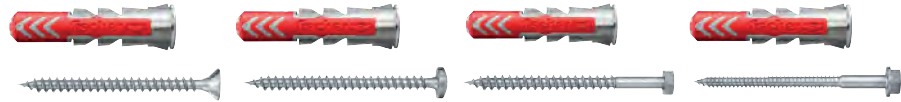
		Drill diameter	Min. drill hole depth	Min. panel thickness	Min. bolt penetration	Anchor length	Sales unit
	Item no.	d_0 [mm]	h_1 [mm]	d_p [mm]	$l_{E,min}$ [mm]	l [mm]	[pcs]
Item							
DuoPower 5 x 25	535452	5	35	12.5	29	25	100
DuoPower 6 x 30	535453	6	40	12.5	35	30	100
DuoPower 6 x 50	538250	6	60	12.5	55	50	100
DuoPower 8 x 40	535455	8	50	12.5	46	40	100
DuoPower 8 x 65	538251	8	55	12.5	71	65	50
DuoPower 10 x 50	535456	10	60	12.5	58	50	50
DuoPower 10 x 80	538252	10	65	12.5	88	80	25
DuoPower 12 x 60	538253	12	90	12.5	70	60	25
DuoPower 14 x 70	538254	14	90	12.5	80	70	20



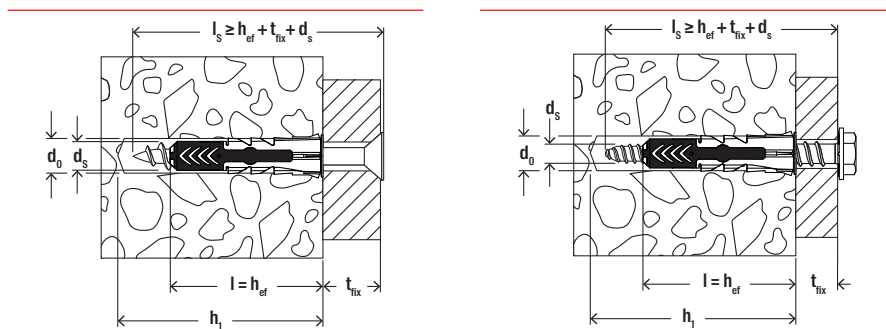
Technical data

DuoPower with screws

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DuoPower S		DuoPower S PH		DuoPower S		DuoPower S				
Item	Item no.	Drill diameter	Min. drill hole depth	Min. panel thickness	Min. bolt penetration	Anchor length	Screw dimension	Drive	Max. fixture thickness	Sales unit
		d ₀ [mm]	h ₁ [mm]	d _p [mm]	l _{E,min} [mm]	l [mm]	d _s x l _s [mm]		t _{fix} [mm]	[pcs]
DuoPower 5 x 25 S	535458	5	40	12.5	29	25	3.5 x 35	PZ2	6	50
DuoPower 6 x 30 S	535459	6	45	12.5	35	30	4.5 x 40	PZ2	5	50
DuoPower 6 x 30 S PH	535463	6	45	12.5	34	30	4.5 x 40	PZ2	6	50
DuoPower 6 x 30 S PH TX	545838	6	45	12.5	35	30	4.5 x 40	TX20	5	100
DuoPower 6 x 50 S	538255	6	65	–	55	50	4.5 x 60	PZ2	5	50
DuoPower 6 x 50 S PH	538260	6	65	12.5	55	50	4.5 x 60	PZ2	5	50
DuoPower 8 x 40 S	535460	8	60	12.5	45	40	5.0 x 55	PZ2	10	50
DuoPower 8 x 65 S	538256	8	85	–	70	65	5.0 x 80	PZ2	10	25
DuoPower 8 x 65 S PH	538261	8	85	–	70	65	5.0 x 80	PH2	13	25
DuoPower 10 x 50 S	535461	10	74	12.5	57	50	7.0 x 69	TX40 / SW 13	12	25
DuoPower 10 x 80 S	538257	10	80	–	87	80	7.0 x 107	SW 13	20	10
DuoPower 12 x 60 S	538258	12	85	12.5	68	60	8.0 x 80	SW 13	12	10
DuoPower 14 x 70 S	538259	14	100	–	80	70	10.0 x 95	SW 17	15	8



Technical data

DuoPower ETA



DuoPower ETA FPF II

DuoPower ETA Safety Screw

Item	Item no.	Ap- pro- val ETA	Drill diameter d_0 [mm]	Min. drill hole depth h_1 [mm]	Min. bolt penetration $l_{e,min}$ [mm]	Anchor length l [mm]	Screw dimen- sion $d_s \times l_s$ [mm]	Drive	Max. fixture thickness t_{fix} [mm]	Sales unit [pcs]
DuoPower ETA 8 x 40 FPF II	564789	●	8	69	45	40	6.0 x 60	TX30	14	50
DuoPower ETA 8 x 40 Safety Screw	564790	●	8	78	45	40	6.0 x 66.5	TX30 / SW 10	20	50
DuoPower ETA 10 x 50 Safety Screw	564792	●	10	78	57	50	7.0 x 69	TX40 / SW 13	12	50

The drill diameter is relative to the substrate compressive strength. Generally, the higher the compressive strength, the greater the drill diameter.

Loads

DuoPower

Recommended loads¹⁾ 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 $\geq C20/25$	[kN]	0.40	0.95	1.65	1.10	2.30	2.15	4.20	3.30	5.30
Solid brick $\geq Mz 12$	[kN]	0.30	0.50	0.55	0.62	0.69	1.20	1.45	1.30	1.35
Solid sand-lime brick $\geq KS 12$	[kN]	0.50	1.00	1.60	1.25	2.25	2.20	3.85	2.80	4.50
Aerated concrete $\geq AAC 2$	[kN]	0.05	0.10	0.15	0.10	0.16	0.20	0.30	0.24	0.35
Aerated concrete $\geq AAC 4$	[kN]	0.25	0.38	0.55	0.42	0.60	0.60	1.10	1.00	1.45
Sand-lime hollow block $\geq KSL 12 (\rho \geq 1.6 \text{ kg/dm}^3)$	[kN]	0.40	0.60	0.60	0.70	1.00	0.70	2.00	0.75	1.50
Vertically perforated brick $\geq HLz 12 (\rho \geq 0.9 \text{ kg/dm}^3)$	[kN]	0.13	0.15	0.17	0.25	0.40	0.25	0.40	0.35	0.40
Vertically perforated brick Doppio UNI 19	[kN]	0.15	0.15	0.23	0.25	0.30	0.25	0.52	0.35	0.35
Vertically perforated brick Forato Typ F8	[kN]	0.15	0.15	-	0.25	-	0.25	-	-	-
Light-weight concrete hollow block 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⁾
Gypsum block $(\rho \geq 0.9 \text{ kg/dm}^3)$	[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	-	-	-

¹⁾ Required safety factors are considered. Valid for installation and use in dry base material for temperatures in the substrate up to +24 °C (resp. short term up to +40 °C).

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

³⁾ Load determination on plastered wall.

Loads

Universal plug DuoPower

Permissible loads¹⁾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 Spezialschraube	DuoPower ETA 10x50 Spezialschraube
Anchor diameter	d_D	[mm]	8	8	10
Screw diameter	d	[mm]	6	6	7
Anchorage depth	h_{nom}	[mm]	40	40	50
Anchorage in concrete $\geq C16/20^{4)}$					
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	$c \geq$	[mm]	100	100	100
Minimum edge distance	c_{min}	[mm]	50	80	80
with a spacing	$s \geq$	[mm]	100	160	160
Anchorage in masonry					
Permissible load ⁵⁾ F_{perm} in solid brick	$\geq Mz 10/2; NF$	[kN]	-	-	0.40
	$\geq Mz 16/2; NF$	[kN]	-	-	0.57
	$\geq Mz 20/2; NF$	[kN]	-	-	0.71
Permissible load ⁵⁾ F_{perm} in solid sand-lime brick	$\geq KS 8/2; 2DF$	[kN]	-	-	0.60
	$\geq KS 12/2; 2DF$	[kN]	-	-	0.60
Permissible load ⁵⁾ F_{perm} in perforated clay brick	$\geq Hlz 10/1.2; 9 DF$	[kN]	-	-	0.17
	$\geq Hlz 12/1.2; 9 DF$	[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 $\gamma_L = 1.4$ 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.