

fischer DUO-Line

More power, more intelligence



fischer
innovative solutions

DUO-Line – Intelligent combinations for more power and intelligence.

DUOline

More component technology
The component materials used are selected to optimally support the appropriate functional requirements.

More function
Various product functions are combined in one product. The most suitable function for the specific building material is always automatically activated.

More benefits
The innovative combination of materials and functions provides new and additional applications compared to standard products.

More colourful
The red colour completes the functional design and makes the DUO-Line easily recognizable.

More ease of installation
Installation is always easily done, without special tools and so saving time and costs.

More performance
The clever combination of materials and functions leads to higher loads and so more security.

pro-K award GOLD 2016 · INDUSTRIE PREIS 2016 BEST OF · INNOVATION WINNER EISEN AWARD 2016 · Focus Open 2016 Internationaler Designpreis Baden-Württemberg

»Cleverly combined, very well rewarded«

Due to its convincing innovative performance in regards to design and expertise in plastic technology, DUOPOWER has already received numerous awards.

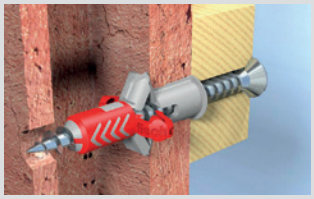

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DUOPOWER

The plug with superior performance in a wide variety of building materials.

- Two component materials create even more expansion volume and an optimally coordinated screw-in and tightening torque.
- Expands in solid building materials, folds open in hollow building materials and knots in panel building materials.
- Automatically adapts itself to the requirements of the respective building material and therefore is extremely versatile to use.
- Due to the compact and short shape, it needs significantly less drilling effort and shorter screws can be used.
- A plug for numerous applications with top load values in a wide variety of building materials.


Intelligent self-activating functions depending on the base material.





Long version

DUOPOWER

The long versions for even more bite in problematic building materials.

- Two component materials for even more expansion volume and an optimally coordinated screw-in and tightening torque despite deeper anchorage.
- Three plug zones: Tip, shaft and base with differently arranged expansion and fold out functions for more bite and higher pull-out values.
- Automatically adapts itself to the requirements of each building material. Ensures excellent holding thanks to its longer anchorage depth.
- A plug for numerous applications with high load capacity in problematic building materials, e. g. perforated building materials, aerated concrete or for plaster bridging.



Long versions with additional bite in problematic building materials.



» Intelligent combination for high loads in gypsum plasterboard. «

DUOTEC

Solves difficult mounting tasks in panel building materials.

- The 2-component tilting element (hard/soft) and the collar sleeve made of glass-fibre-reinforced plastic ensure high tensile and shear loads.
- Folds out in cavities behind panel building materials, even in ones insulated with mineral wool. Expands in solid building materials, such as wood or concrete.
- Due to its flexible screw fixture, suitable for chipboard screws or metric threaded rods.
- Simple installation with the aid of a standard 10 mm drill bit.
- A plug with high load-bearing capacity for all panel building materials, especially for gypsum plasterboard.

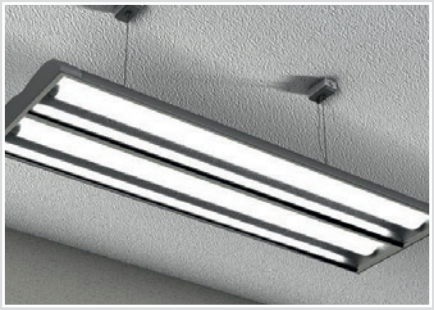




Ideal fold plug in panel building materials, or also expansion plug in solid building materials.

Applications and recommendations

DUOPOWER and DUOTEC applications



Ceiling lamps



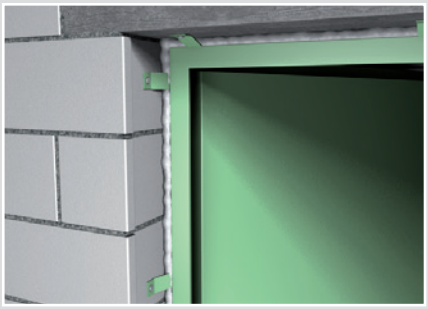
Pictures



Window blinds



Radiators



Steel doors



Shelves

DUOPOWER material properties

- Two component injection moulding for thermal combining of hard and soft plastic.

DUOTEC material properties

- The plastics of all components are extra glass-fibre reinforced.

DUOPOWER building material recommendation

max. 110 kg*



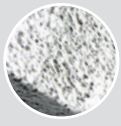
max. 62 kg*



max. 25 kg*



max. 10 kg*



max. 15 kg*



- Suitable for concrete, solid brick, solid sand-lime brick, aerated concrete, vertically perforated brick, perforated sand-lime brick, gypsum plasterboard, gypsum plaster-board and gypsum fibreboard, hollow block made of lightweight concrete, cavity floor slabs made of brick, prestressed hollow-core concrete floor slab, or similar, natural stone, chipboard, solid gypsum panels, solid brick made from lightweight concrete.

* The load bearing values are reference values of the DUOPOWER 8x40 and dependent on building material and its processing. Valid in combination with wood screws having a diameter of 6 mm.

DUOTEC building material recommendation

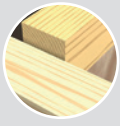
max. 36 kg**



max. 75 kg**



max. 75 kg**

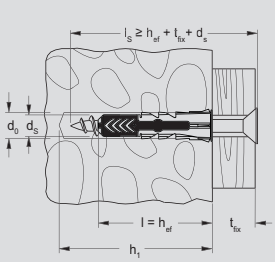


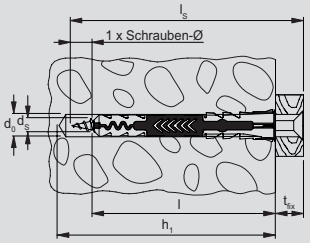
- Suitable for all panel building materials, for example: gypsum plasterboard, gypsum fibreboard, wooden boards (e.g. OSB, chipboard, MDF boards, plywood), steel plates, plastic plates (except for hollow stone ceilings).
- Also suitable for drill-holes wood sub-structures.

** Recommended loads in the respective base material for plate span w = 120mm.

Product selection and loads

DUOPOWER







DUOPOWER



DUOPOWER long version

Item	Without screw Art.-No.	With screw Art.-No.	Drill hole diameter d_0 [mm]	Min. drill hole depth h_1 [mm]	Min. panel thickness d_p [mm]	Anchor length l [mm]	Wood and chip-board screws d_s / d_s x l_s [mm]	Max. fixture thickness t_{fix} [mm]
DUOPOWER 5 x 25	**555005**		5	35	12.5	25	3 - 4	-
DUOPOWER 5 x 25 S	–	**555105**	5	35	12.5	25	4 x 35	6
DUOPOWER 6 x 30	**555006**	–	6	40	12.5	30	4 - 5	-
DUOPOWER 6 x 30 S	–	**555106**	6	40	12.5	30	4.5 x 40	5
DUOPOWER 6 x 50	**538240**	–	6	60	12.5	50	4 - 5	-
DUOPOWER 6 x 50 S	–	**538245**	6	75	12.5	50	4.5 x 70	15
DUOPOWER 8 x 40	**555008**	–	8	50	12.5	40	4.5 - 6	-
DUOPOWER 8 x 40 S	–	**555108**	8	60	12.5	40	5 x 60	15
DUOPOWER 8 x 65	**538241**	–	8	75	2 x 12.5	65	4.5 - 6	-
DUOPOWER 8 x 65 S	–	**538246**	8	85	2 x 12.5	65	5 x 80	10
DUOPOWER 10 x 50	**555010**	–	10	60	-	50	6 - 8	-
DUOPOWER 10 x 50 S	–	**555110**	10	70	-	50	7 x 70	13
DUOPOWER 10 x 80	**538242**	–	10	90	-	80	6 - 8	-
DUOPOWER 10 x 80 S	–	**538247**	10	112	-	80	7 x 107	20
DUOPOWER 12 x 60	**538243**	–	12	70	-	60	8 - 10	-
DUOPOWER 12 x 60 S	–	**538248**	12	85	-	60	8 x 80	12
DUOPOWER 14 x 70	**538244**	–	14	80	-	70	10 - 12	-
DUOPOWER 14 x 70 S	–	**538249**	14	100	-	70	10 x 95	15

Highest recommended loads[1] for a single anchor

The given loads are valid for 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**
Screw diameter [3]	Ø	[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 load in building 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	≥ PB2, PP2 (G2)	[kN]	0.05	0.10	0.15	0.10	0.16	0.20	0.30	0.24	0.35
Aerated concrete	≥ PB4, PP4 (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 plasterboard	(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	2x12.5 mm	[kN]	0.13	0.15	0.24	0.20	0.32	0.30	-	-	-

[1] Required safety factor taken into account.

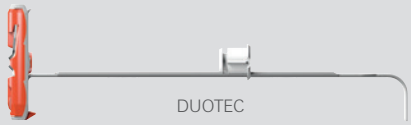
[2] The load data are valid for tension load, shear load and diagonal pull at every angle.

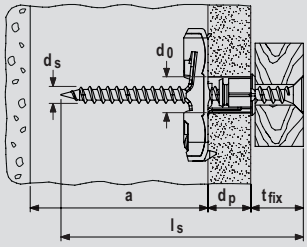
[3] Wood screw

[4] Load calculation done on plastered wall.

Product selection and loads

DUOTEC





Panel building materials

Item	Art.-No.	Drill hole diameter d_0 [mm]	Min. panel thickness d_p [mm]	Max. panel thickness d_p [mm]	Min. cavity depth a [mm]	Screw diameter d_s [mm]	Screw length l_s [mm]	Sales unit [pcs]
DUOTEC	**537258**	10	9.5	55	40	4.5 - 5	≥ d_p + t_{fix} +20	50
DUOTEC S	**537259**	10	9.5	55	40	5	70	25
DUOTEC S PH	**539025**	10	9.5	55	40	5	70	25

Solid building materials

Item	Art.-No.	Drill hole diameter d_0 [mm]	Min. drill hole depth h_1 [mm]	Screw diameter d_s [mm]	Screw length [mm]	Anchor length l [mm]	Max. fixture thickness t_{fix} [mm]	Sales unit [pcs]
DUOTEC	**537258**	10	l_s + 10	4.5 - 5	≥ t_{fix} + 60	47	–	50
DUOTEC S	**537259**	10	80	5	70	47	10	25
DUOTEC S PH	**539025**	10	80	5	70	47	10	25

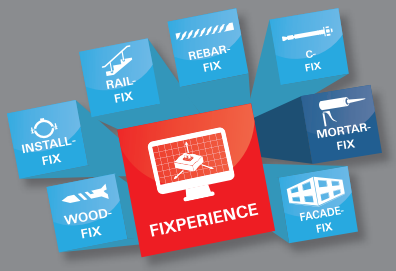
Highest recommended loads[1] for a single anchor

Screw diameter		[mm]	Chipboard screws 4.5	Chipboard screws 5	Metric threads 5	fischer round hook with fasten 5
**** Recommended loads in respective base material F_{rec} for plate span w = 625mm**						
Gypsum plasterboard	9.5 mm	[kN]	0.17	0.17	0.17	0.17
Gypsum plasterboard	12.5 mm	[kN]	0.20	0.20	0.20	0.20
Gypsum plasterboard	2 x 12.5 mm	[kN]	0.43	0.43	0.43	0.30[2]
Gypsum fibreboard	12.5 mm	[kN]	0.51	0.51	0.51	0.30[2]
Chipboard	16 mm	[kN]	0.71	0.71	0.71	0.30[2]
OSB boards	18 mm	[kN]	0.75	0.75	0.75	0.30[2]
**** Recommended loads in respective base material F_{rec} for plate span w = 120mm**						
Gypsum plasterboard	9.5 mm	[kN]	0.20	0.20	0.20	0.20
Gypsum plasterboard	12.5 mm	[kN]	0.36	0.36	0.36	0.30[2]
Gypsum plasterboard	2 x 12.5 mm	[kN]	0.59	0.59	0.59	0.30[2]
Gypsum fibreboard	12.5 mm	[kN]	0.75	0.75	0.75	0.30[2]
Chipboard	16 mm	[kN]	0.75	0.75	0.75	0.30[2]
OSB boards	18 mm	[kN]	0.75	0.75	0.75	0.30[2]
Recommended load in solid building materials F_{rec}						
Concrete	≥ C20/25	[kN]	0.45	0.75	–	0.30[2]
Wood		[kN]	0.30	0.75	–	0.30[2]

[1] Required safety factor taken into account. The data are valid for tension load, shear load and diagonal pull at every angle.

[2] Bending the hook is critical, only applies to central tension load

fischer FIXPERIENCE.
The design and information software suite.



- The modular design program includes engineering software and application modules.
- The software is based on international design standards (ETAG 001 and EC2, such as EC1, 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.
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Our service to you.



We are available to you at any time as a reliable partner to offer technical support and advice:

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