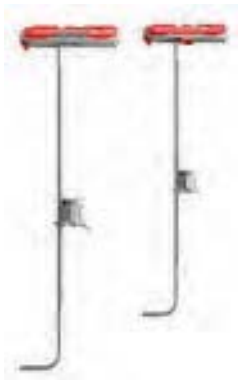


# Nylon toggle DuoTec

Easy to install nylon toggle for high loads in all panel building materials



Kitchen hanging cabinets



Shelves

7

## Applications

- Kitchen hanging cabinets
- Living room cabinets
- Shelves
- Wardrobes
- Handrails
- Pictures
- Mirrors
- Lamps
- Heavy hanging baskets

## Advantages

- Flexible screw mount allows for the use of screws and hooks with different thread shapes.
- Glass fibre-reinforced plastics and a metal skeleton insert (fischer DuoTec 12) allow the toggle to handle heavy tensile and transverse loads in all panel building materials.
- Soft grey nylon contact surface distributes the load over the panel surface, thereby minimising weakening of the supporting building material.
- Standard drill hole diameters and short tilting element for easy installation in narrow cavities, including cavities with insulation.
- White flush sleeve with snap function allows the plug to be pre-installed quickly and securely in the drill hole.
- With scale on the grip strap (fischer DuoTec 12) for determining the required screw length (scale value + 20 mm).

## Certificates



## Building materials

Suitable for:

- Gypsum plasterboard
- Gypsum fibreboard
- Wooden panels, such as OSB boards, chipboard, MDF sheets
- Steel plates
- Plastic boards
- Hollow blocks made from concrete

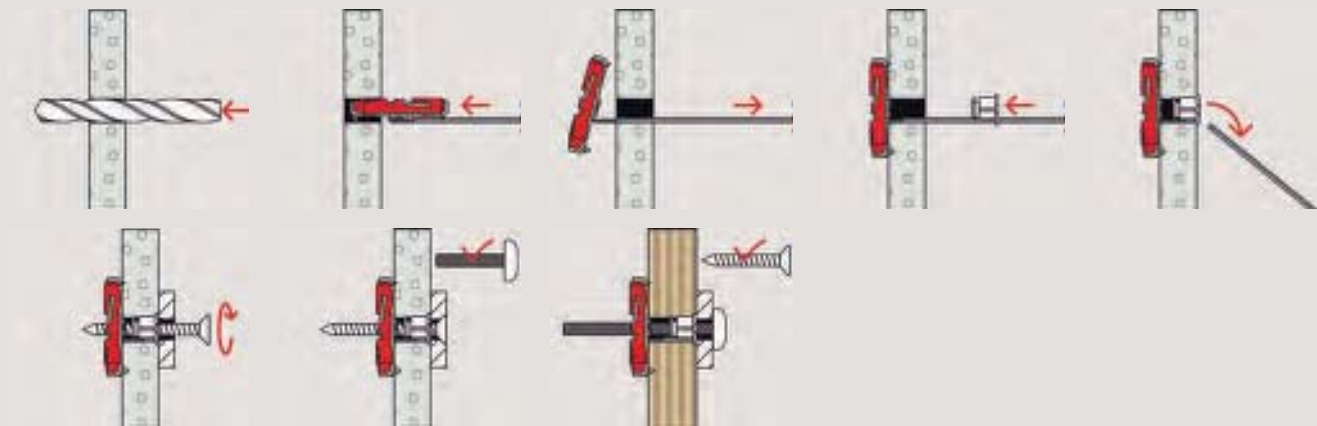
Also functioning in:

- Solid materials, such as concrete and wood

## Functioning

- The fischer DuoTec is designed for pre-positioned installation.
- Simple installation with a standard diameter 10 or 12 mm drill bit.
- The short toggle element makes it suitable for narrow and even with mineral wool insulated cavities. Note the length of the toggle element!
- Functions like an expansion plug in solid building materials such as concrete or wood. Note, not with metric screws!
- Flexible screw insert allows for the use of wood, chipboard and metric screws and hooks.

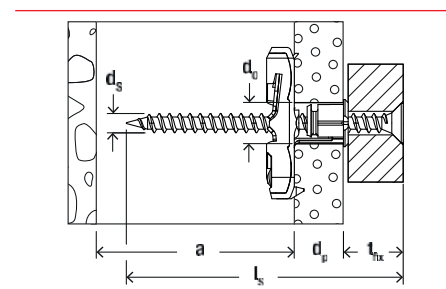
### Installation in board materials



### Installation in cavities



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### Technical data in board material

#### Nylon toggle fischer DuoTec



Item	Item 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]
fischer DuoTec 10 S	537259 <sup>1)</sup>	10	12	55	40	5,0	60	25
fischer DuoTec 10	537258	10	12	55	40	—	$\geq d_p + t_{fix} + 20$	50
fischer DuoTec 10 S PH	539025 <sup>2)</sup>	10	12	55	40	—	60	25
fischer DuoTec 12	542796	12	12	55	50	—	$\geq d_p + t_{fix} + 20$	10
fischer DuoTec 12 RH	542798 <sup>4)</sup>	12	12	55	50	5,5	70	10
fischer DuoTec 12 S PH M	542797 <sup>3)</sup>	12	12	55	50	—	70	10

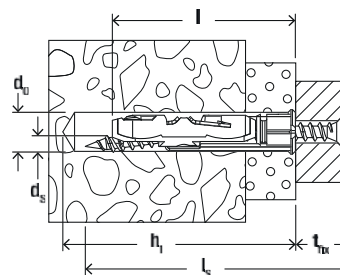
1) fischer DuoTec S - with chipboard screw countersunk head

2) fischer DuoTec S PH - with chipboard screw panhead

3) fischer DuoTec S PH M - with machine screw panhead

4) fischer DuoTec RH - with screw with round hook

## Installation for hits in solid building materials



7

## Technical data in solid materials

### Nylon toggle fischer DuoTec



fischer DuoTec 10

fischer DuoTec 12

fischer DuoTec S PH

Item	Item No.	Drill hole diameter $d_0$ [mm]	Min. drill hole depth $h_1$ [mm]	Screw diameter [mm]	Min. screw length $l_s$ [mm]	Anchor length $l$ [mm]	Max. fixture thickness $t_{fix}$ [mm]	Sales unit [pcs]
fischer DuoTec 10 S	537259 <sup>1)</sup>	10	65	5,0	60	50	27	25
fischer DuoTec 10	537258	10	$l_s - t_{fix} + 10$	4,5 - 5,0	$t_{fix} + 55$	50	$l_s - 55$	50
fischer DuoTec 10 S PH	539025 <sup>2)</sup>	10	65	5,0	60	50	27	25
fischer DuoTec 12	542796	12	$l_s - t_{fix} + 10$	5,0 - 6,0	$t_{fix} + 65$	60	$l_s - 65$	10
fischer DuoTec 12 RH	542798 <sup>3)</sup>	12	75	5,5	55	60	—	10

1) fischer DuoTec S - with chipboard screw countersunk head

2) fischer DuoTec S PH - with chipboard screw panhead

3) fischer DuoTec RH - with screw with round hook

## Loads

Nylon toggle DuoTec									
Recommended loads <sup>1) 2)</sup> for a single anchor.									
Type		DuoTec 10				DuoTec 12			
		Chipboard screws		Metrical screw	fischer Hook	Chipboard screws		Metrical screw	fischer Hook
Screw diameter	[mm]	4.5	5.0	5.0	5.0	5.0	6.0	6.0	5.5
<b>Recommended loads in the respective base material <math>F_{rec}^{3)}</math> for a span in the construction <math>b = 625</math> mm</b>									
Gypsum plasterboard	9.5 mm	[kN]	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Gypsum plasterboard	12.5 mm	[kN]	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Gypsum plasterboard	2 x 12.5 mm	[kN]	0.43	0.43	0.43	0.30 <sup>4)</sup>	0.43	0.43	0.43
Gypsum fibreboard	12.5 mm	[kN]	0.51	0.51	0.51	0.30 <sup>4)</sup>	0.51	0.51	0.50 <sup>4)</sup>
Chipboard	16 mm	[kN]	0.71	0.71	0.71	0.30 <sup>4)</sup>	0.75	0.80	0.50 <sup>4)</sup>
OSB board	18 mm	[kN]	0.75	0.75	0.75	0.30 <sup>4)</sup>	0.75	1.30	0.50 <sup>4)</sup>
<b>Recommended loads in the respective base material <math>F_{rec}^{3)}</math> for a span in the construction <math>b = 120</math> mm</b>									
Gypsum plasterboard	9.5 mm	[kN]	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Gypsum plasterboard	12.5 mm	[kN]	0.36	0.36	0.36	0.30 <sup>4)</sup>	0.36	0.36	0.20
Gypsum plasterboard	2 x 12.5 mm	[kN]	0.59	0.59	0.59	0.30 <sup>4)</sup>	0.70	0.80	0.50 <sup>4)</sup>
Gypsum fibreboard	12.5 mm	[kN]	0.75	0.75	0.75	0.30 <sup>4)</sup>	0.80	1.10	0.50 <sup>4)</sup>
Chipboard	16 mm	[kN]	0.75	0.75	0.75	0.30 <sup>4)</sup>	0.80	1.40	0.50 <sup>4)</sup>
OSB board	18 mm	[kN]	0.75	0.75	0.75	0.30 <sup>4)</sup>	0.80	1.50	0.50 <sup>4)</sup>
<b>Recommended loads in solid building materials <math>F_{rec}^{3)}</math></b>									
Concrete	$\geq C20/25$	[kN]	0.45	0.75	-	0.30 <sup>4)</sup>	0.40	0.75	0.30
Wood		[kN]	0.30	0.75	-	0.30 <sup>4)</sup>	0.20	0.65	0.30
<b>Recommended loads in the respective base material <math>F_{rec}^{3)}</math></b>									
Hollow block of lightweight aggregate concrete 'Sepa Parpaing'	$f_b \geq 8$ N/mm <sup>2</sup>	[kN]	-	-	-	-	0.65	1.00	0.50 <sup>4)</sup>
Pre-stressed hollow-core concrete slabs		[kN]	-	-	-	-	1.00	1.40	0.50 <sup>4)</sup>
Lightweight concrete hollow block Hbl acc. to EN 771-3	$f_b \geq 2$ N/mm <sup>2</sup>	[kN]	-	-	-	-	0.90	1.00	0.50 <sup>4)</sup>

<sup>1)</sup> Required safety factors are considered.

<sup>2)</sup> The recommended loads are reference values and depending to the building material and the workmanship. The values are only valid for the given screw diameter.

<sup>3)</sup> Valid for tensile load, shear load and oblique load under any angle.

<sup>4)</sup> Bending of the hook is decisive. Only for tension load.