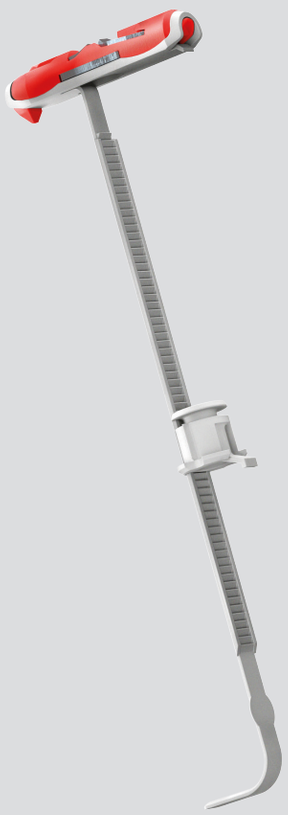



# fischer DUOTEC

NEW

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



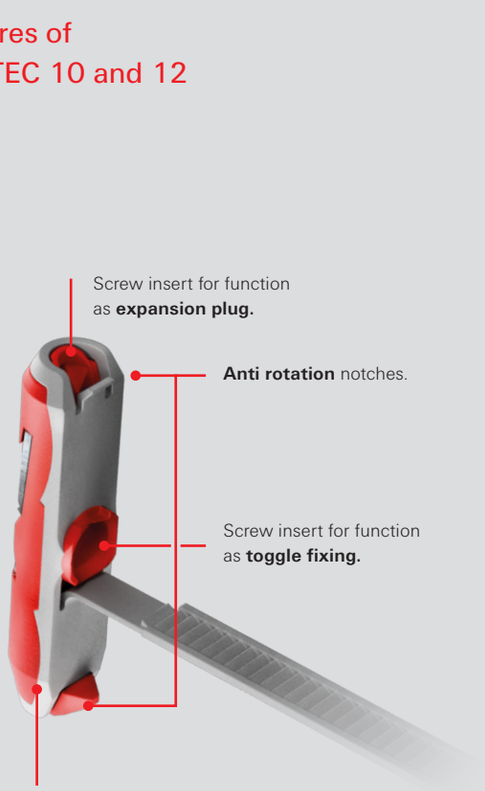
DUOline

fischer
innovative solutions

# fischer DUOTEC 10

## Easy to install nylon toggle for high loads in gypsum plasterboard

### Features of DUOTEC 10 and 12



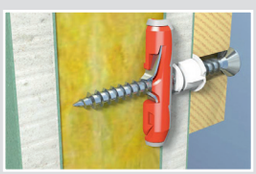




**Your advantages at a glance**

- Flexible screw insert allows for screws and hooks with different thread types to be used.
- Glass fibre-reinforced plastics and a metal skeleton insert (DUOTEC 12) allow the toggle to handle high tensile and transverse loads in all panel building materials.
- Soft grey nylon contact surface distributes the load over the panel surface, thereby minimising any weakening of the supporting building material.
- Standard drill hole diameters and a short toggle element for easy installation in narrow cavities, including use in cavities with insulation.
- White flange sleeve with snap function allows the toggle to be pre-installed quickly and securely in the drill hole prior to fitting the screw.
- Scale on the grip strap (DUOTEC 12) helps to determine the necessary screw length (scale value + 20 mm).



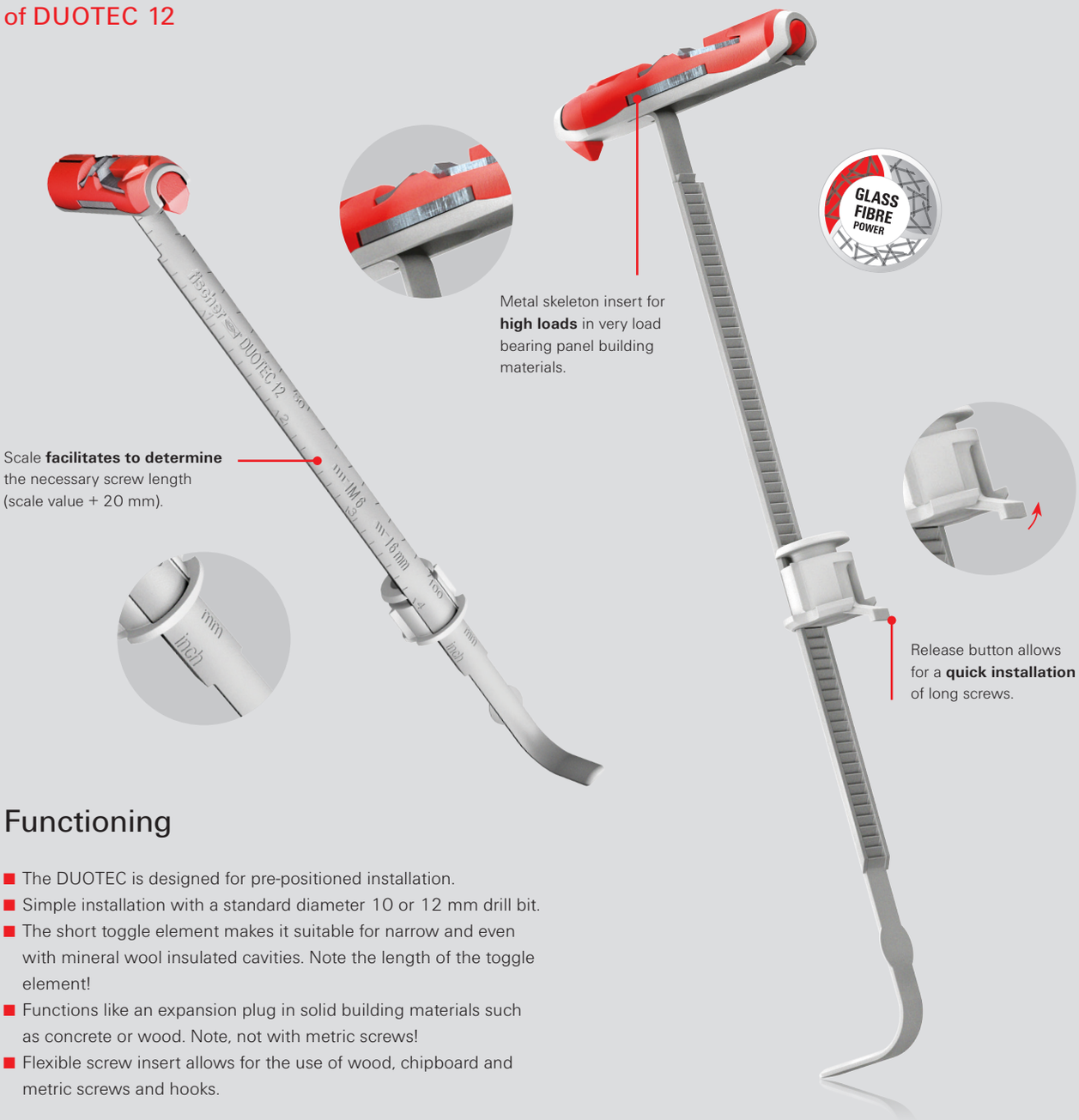




# fischer DUOTEC 12

## Easy to install nylon toggle with metal insert for high loads in all panel building materials

### Additional features of DUOTEC 12



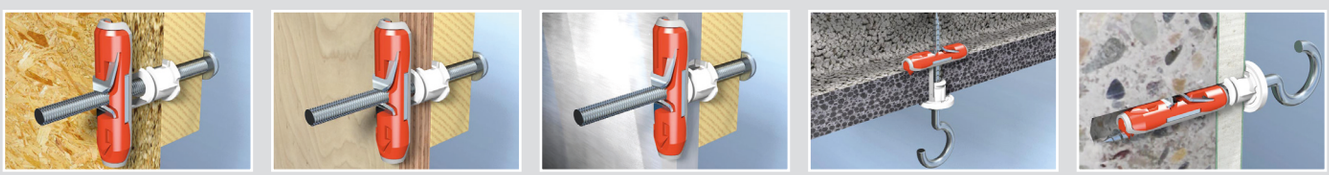

Metal skeleton insert for **high loads** in very load bearing panel building materials.

Scale **facilitates to determine** the necessary screw length (scale value + 20 mm).

Release button allows for a **quick installation** of long screws.

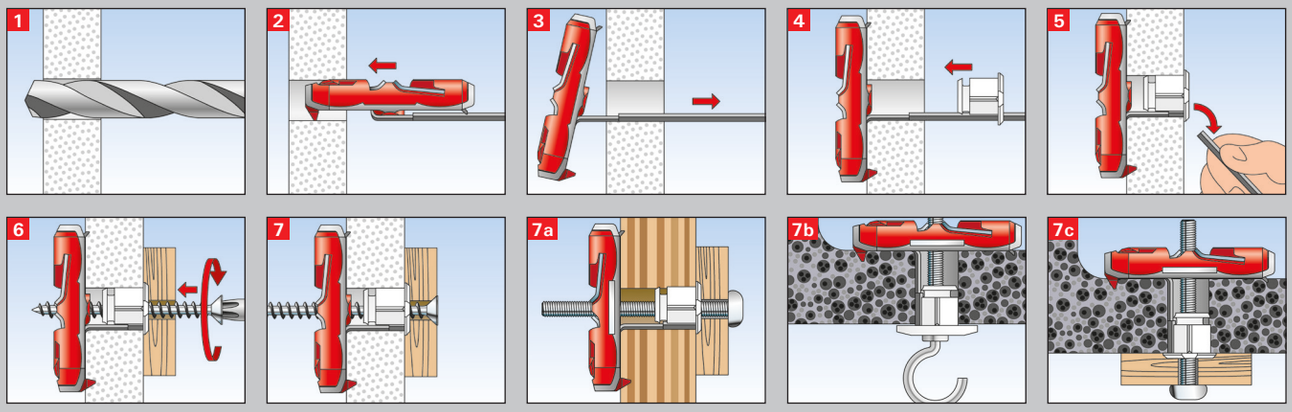
## Functioning

- The 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.

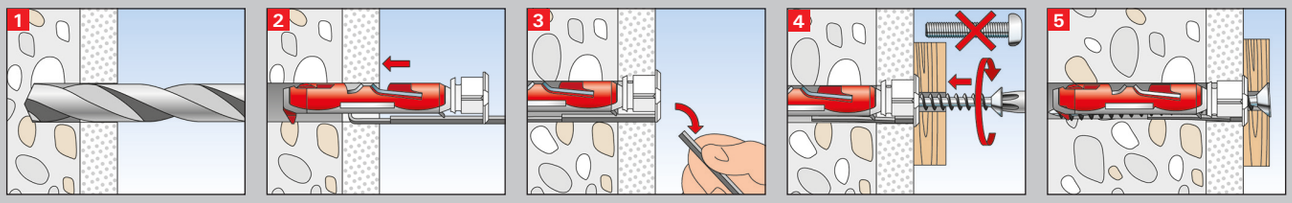


# Installation and recommendation

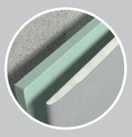
## DUOTEC – Installation in panel building materials and cavities

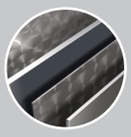



## DUOTEC – Installation hitting in solid materials

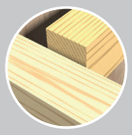



## Recommendation






- **Suitable for all panel construction materials, such as:**
  - Gypsum plasterboard
  - Gypsum fibreboard
  - Wooden panels, such as OSB boards, chipboard, MDF shets and plywood boards
  - Steel panels
  - Plastic boards
  - Hollow blocks made from concrete

- **Also suitable for drill holes hitting solid materials, such as:**
  - Concrete
  - Wood

## Test mark

fischer NYLON QUALITY

GLASS FIBRE POWER

## Product family

DUOline

# Applications

## Applications



Kitchen cabinets



Wall cabinets



Washbasins



Handrails



Wardrobes



Radiators



Lamps



Mirrors



Shelves



Pictures

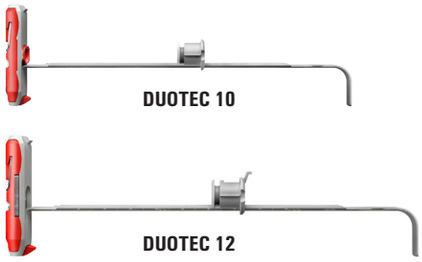


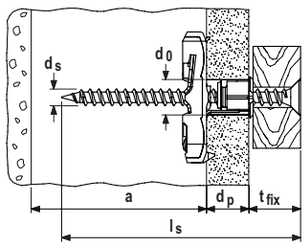
Tv consoles



Hanging baskets

# Range

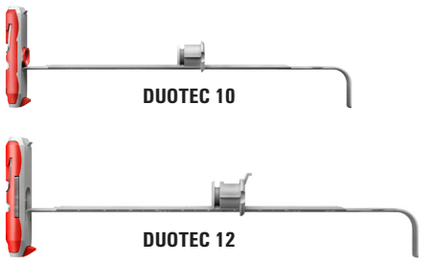


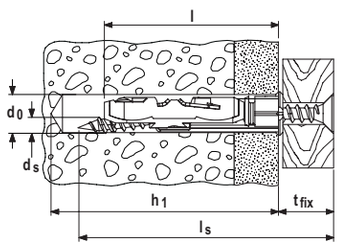




## Technical data for board materials

| 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 10** | 537258 | 10 | 9,5 | 55 | 40 | 4,5 - 5 | $\geq d_p + t_{fix} + 20$ | 50 |
| **DUOTEC 10 S** | 537259 [1] | 10 | 9,5 | 55 | 40 | 5 | 70 | 25 |
| **DUOTEC 10 S PH** | 539025 [2] | 10 | 9,5 | 55 | 40 | 5 | 70 | 25 |
| **DUOTEC 12** | 542796 | 12 | 9,5 | 55 | 50 | 5-6 / M6 | $\geq d_p + t_{fix} + 20$ | 10 |
| **DUOTEC 12 S PH** | 542797 [3] | 12 | 9,5 | 55 | 50 | M6 | 70 | 10 |
| **DUOTEC 12 RH** | 542798 [4] | 12 | 9,5 | 55 | 50 | 5,5 | 55 | 10 |

[1] DUOTEC S – with chipboard screw countersunk head
[2] DUOTEC S PH – with chipboard screw panhead
[3] DUOTEC S PH – with machine screw panhead
[4] DUOTEC RH – with screw with round hook




## Technical data for solid materials

| Item | Art.-No. | Drill hole diameter $d_0$ [mm] | Min. drill hole depth $h_1$ [mm] | Screw diameter $d_s$ [mm] | Screw length $l_s$ [mm] | Anchor length l [mm] | Max. fixture thickness $t_{fix}$ [mm] | Sales unit [pcs] |
|---|---|---|---|---|---|---|---|---|
| **DUOTEC 10** | 537258 | 10 | $l_s + 10$ | 4,5 - 5 | $\geq t_{fix} + 60$ | 50 | $l_s - 60$ | 50 |
| **DUOTEC 10 S** | 537259 | 10 | 80 | 5 | 70 | 50 | 10 | 25 |
| **DUOTEC 10 S PH** | 539025 | 10 | 80 | 5 | 70 | 50 | 10 | 25 |
| **DUOTEC 12** | 542796 | 12 | 80 | 5-6 / M6 | $\geq t_{fix} + 70$ | 58 | $l_s - 70$ | 10 |
| **DUOTEC 12 S PH** [1] | 542797 | – | – | – | – | – | – | 10 |
| **DUOTEC 12 RH** | 542798 | 12 | 80 | 5,5 | 55 | 58 | – | 10 |

[1] Installation with panhead screws in solid construction materials not possible.

# Loads

## Nylon toggle DUOTEC

Highest recommended loads[1) 4)] for a single anchor.

| Type | | | DUOTEC 10 | | | | DUOTEC 12 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Chipboard screw | | Metrical screw | fischer Hook | Chipboard screw | | Metrical screw | fischer Hook |
| **Screw diameter** | | **[mm]** | **4,5** | **5** | **5** | **5** | **5** | **6** | **6** | **5,5** |
| **Recommended loads in the respective base material $F_{rec}$[2)] for a span in the construction b = 625 mm** | | | | | | | | | | |
| Gypsum plasterboard | 9,5 mm | [kN] | 0,17 | 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 | 0,20 |
| Gypsum plasterboard | 2 x 12,5 mm | [kN] | 0,43 | 0,43 | 0,43 | 0,30[3)] | 0,43 | 0,43 | 0,43 | 0,43 |
| Gypsum fibreboard | 12,5 mm | [kN] | 0,51 | 0,51 | 0,51 | 0,30[3)] | 0,51 | 0,51 | 0,51 | 0,50[3)] |
| Chipboard | 16 mm | [kN] | 0,71 | 0,71 | 0,71 | 0,30[3)] | 0,75 | 0,80 | 0,80 | 0,50[3)] |
| OSB board | 18 mm | [kN] | 0,75 | 0,75 | 0,75 | 0,30[3)] | 0,75 | 1,30 | 1,20 | 0,50[3)] |
| **Recommended loads in the respective base material $F_{rec}$[2)] for a span in the construction b = 120 mm** | | | | | | | | | | |
| Gypsum plasterboard | 9,5 mm | [kN] | 0,20 | 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[3)] | 0,36 | 0,36 | 0,36 | 0,20 |
| Gypsum plasterboard | 2 x 12,5 mm | [kN] | 0,59 | 0,59 | 0,59 | 0,30[3)] | 0,70 | 0,80 | 0,80 | 0,50[3)] |
| Gypsum fibreboard | 12,5 mm | [kN] | 0,75 | 0,75 | 0,75 | 0,30[3)] | 0,80 | 1,10 | 1,10 | 0,50[3)] |
| Chipboard | 16 mm | [kN] | 0,75 | 0,75 | 0,75 | 0,30[3)] | 0,80 | 1,40 | 1,30 | 0,50[3)] |
| OSB board | 18 mm | [kN] | 0,75 | 0,75 | 0,75 | 0,30[3)] | 0,80 | 1,50 | 1,40 | 0,50[3)] |
| **Recommended loads in solid building materials $F_{rec}$[2)]** | | | | | | | | | | |
| Concrete | ≥ C20/25 | [kN] | 0,45 | 0,75 | – | 0,30[3)] | 0,40 | 0,75 | – | 0,30 |
| Wood | | [kN] | 0,30 | 0,75 | – | 0,30[3)] | 0,20 | 0,65 | – | 0,30 |
| **Recommended loads in the respective base material $F_{rec}$[2)]** | | | | | | | | | | |
| Hollow block of lightweight aggregate concrete 'Sepa Parpaing' | fb ≥ 8 N/mm² | [kN] | – | – | – | – | 0,65 | 1,00 | 1,00 | 0,50[3)] |
| Pre-stressed hollow-core concrete slabs | | | – | – | – | – | 1,00 | 1,40 | 1,30 | 0,50[3)] |
| Hollow block of lightweight aggregate concrete Hbl acc. EN 771-3 | fb ≥ 2 N/mm² | [kN] | – | – | – | – | 0,90 | 1,00 | 1,00 | 0,50[3)] |

[1)] Required safety factors are considered.

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

[3)] Bending of the hook is decisive. Only for tension load.

[4)] 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.

## 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.
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