

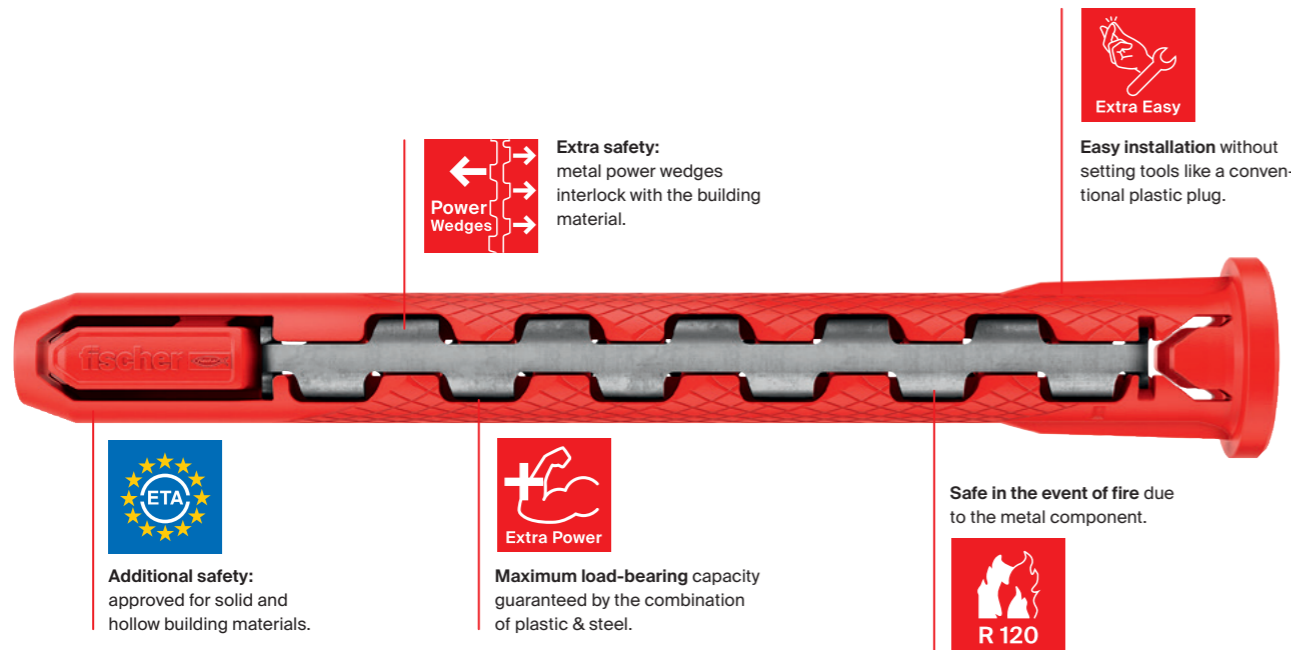
fischer 

HybridPower.
Plastic meets steel.
Strong, universal &
approved.

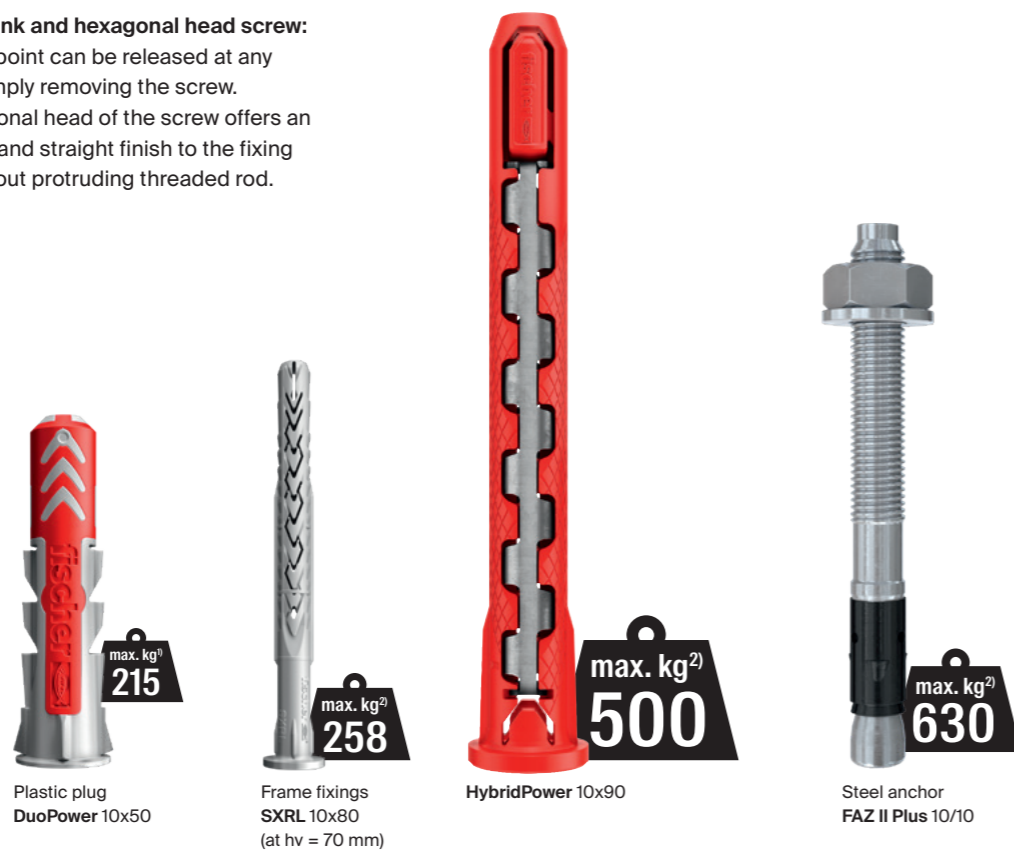


HybridPower.

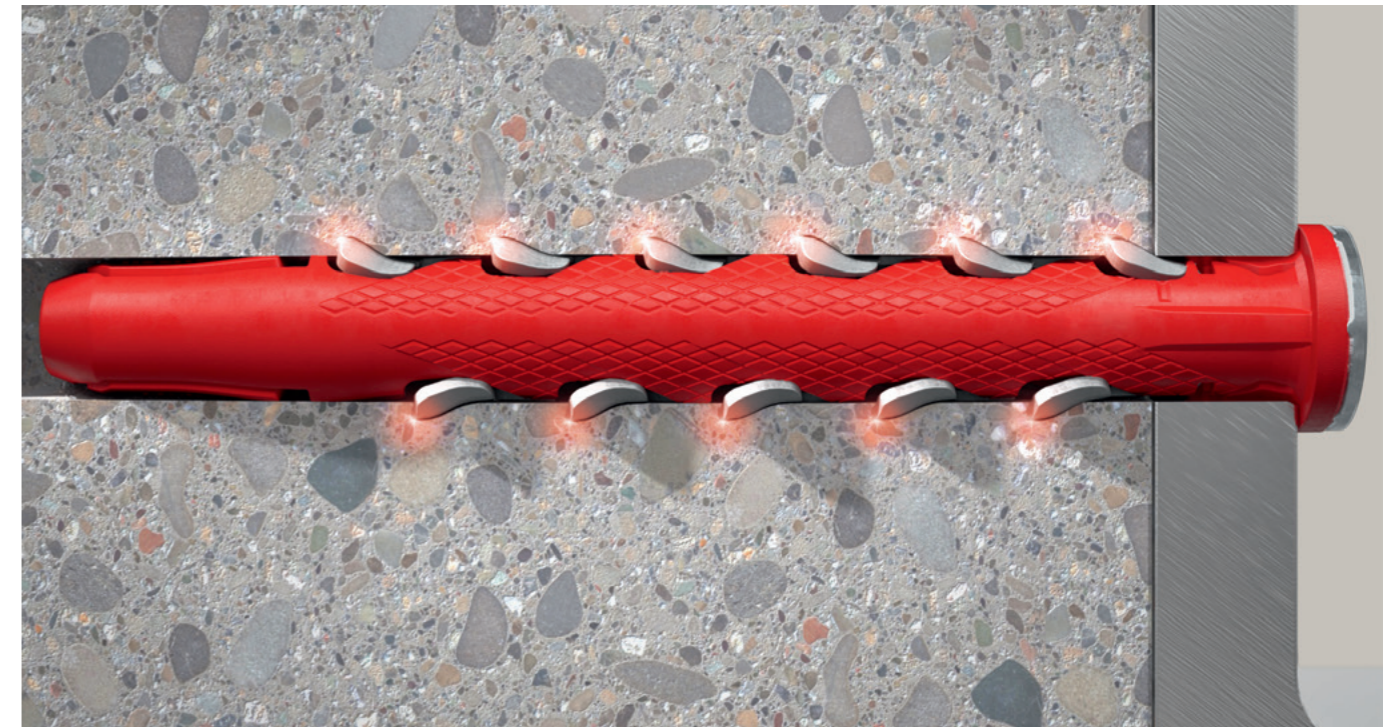
The best of both worlds: safe like steel, universal like plastic.



Countersunk and hexagonal head screw:
The fixing point can be released at any time by simply removing the screw.
The hexagonal head of the screw offers an appealing and straight finish to the fixing point, without protruding threaded rod.



1) Recommended loads in concrete ≥ C20/25 2) Approved loads in concrete ≥ C20/25



Perfect fit and hold:

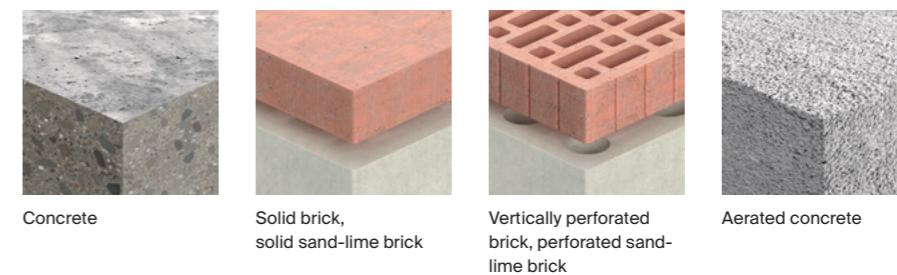
- The flexible plastic part expands against the borehole wall, ensuring a perfect fit.
- The metal skeleton spreads and the power wedges interlock with the building material, ensuring a perfect hold.

The advantages at a glance

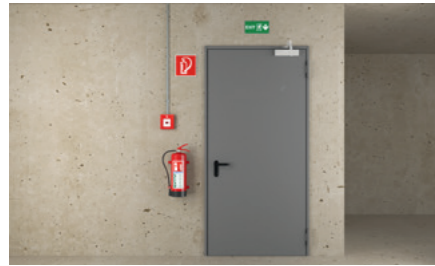
- The HybridPower can be installed quickly and easily, just like a conventional plastic plug. It can be inserted by hand and no special tools or torque wrench are required.
- Thanks to the metal component, the plug also holds heavy loads, offers a high load-bearing capacity and certified safety.
- The HybridPower is universally applicable and can be used in solid and hollow building materials. The flexible plastic expands in any building material.
- The metal component also withstands fire and offers certified safety in case of fire.
- The HybridPower is approved for single-point fastenings in concrete and for multiple fastenings of non-load-bearing systems, enabling secure fastening in all building material classes.
- The fixing point can be released at any time by simply removing the screw.

Recommendations

Suitable for building materials such as:



Applications, function and installation.



Fire doors



Anchor channels



Kitchen hanging cabinets



Cable trays



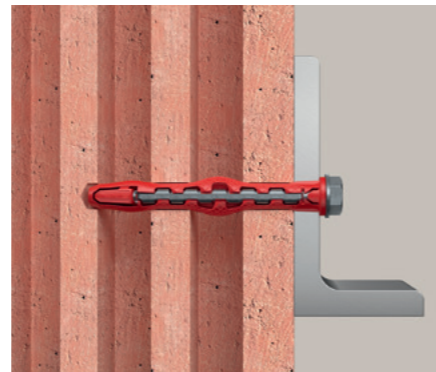
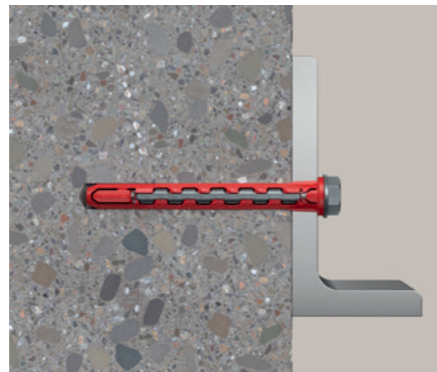
TV mountings



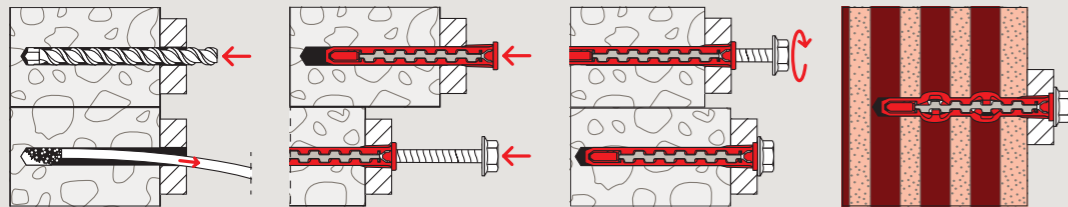
Cable support systems

Function

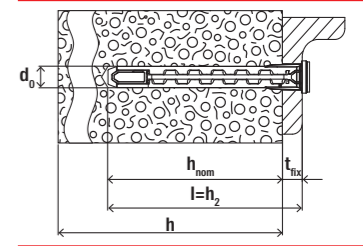
- The HybridPower is suitable for push-through installation.
- The plug is pushed directly into the drill hole by hand or with a few light hammer blows and then expands by screwing the screw into the building material.
- Countersunk head screws are recommended for timber constructions.
- Hexagon head screws are recommended for metal constructions.



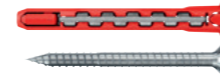
Installation steps



Assortment

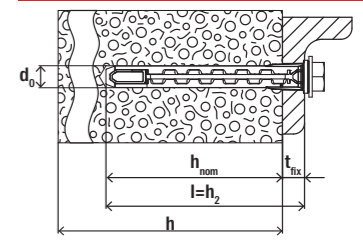


HybridPower T

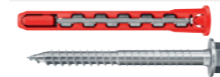


HybridPower T

Item	Item no.	Ap-pro-val ETA	Drill diameter d_0 [mm]	Min. drill hole depth h_2 [mm]	Anchor length l [mm]	Screw dimension $d_s \times l_s$ [mm]	Anchorage depth h_{nom} [mm]	Max. fixture thickness t_{fix} [mm]	Drive	Sales unit [pcs]
HybridPower 10 x 90 T	577365	●	10	90	90	7.0 x 87	80	10	TX40	50
HybridPower 10 x 110 T	580832	●	10	110	110	7.0 x 107	80	30	TX40	50
HybridPower 10x90 T (10)	577391	●	10	90	90	7.0 x 87	80	10	TX40	10
HybridPower 10x110 T (10)	580834	●	10	110	110	7.0 x 107	80	30	TX40	10
HybridPower 10x90 T K	577393	●	10	90	90	7.0 x 87	80	10	TX40	1
HybridPower 10x110 T K	580836	●	10	110	110	7.0 x 107	80	30	TX40	1



HybridPower FUS



HybridPower FUS

Item	Item no.	Ap-pro-val ETA	Drill diameter d_0 [mm]	Min. drill hole depth h_2 [mm]	Anchor length l [mm]	Screw dimension $d_s \times l_s$ [mm]	Anchorage depth h_{nom} [mm]	Max. fixture thickness t_{fix} [mm]	Drive	Sales unit [pcs]
HybridPower 10x90 FUS	577364	●	10	90	90	7.0 x 89	80	10	TX40 / SW13	50
HybridPower 10x110 FUS	580831	●	10	110	110	7.0 x 109	80	30	TX40 / SW13	50
HybridPower 10x90 FUS (10)	577390	●	10	90	90	7.0 x 89	80	10	TX40 / SW13	10
HybridPower 10x110 FUS (10)	580833	●	10	110	110	7.0 x 109	80	30	TX40 / SW13	10
HybridPower 10x90 FUS K	577392	●	10	90	90	7.0 x 89	80	10	TX40 / SW13	1
HybridPower 10x110 FUS K	580835	●	10	110	110	7.0 x 109	80	30	TX40 / SW13	1

Loads

HybridPower												
Permissible loads of a single anchor ¹⁾ in normal concrete of strength class C20/25. For the design the complete current assessment ETA-26/0167 has to be considered.												
Type	Material / surface ²⁾	Minimum member thickness	Cracked concrete				Non-cracked concrete					
			Nominal anchorage depth	Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads			Nominal anchorage depth	Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads				
				$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]		$c_{min}^{3)}$ [mm]	$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]
HybridPower 10	gvz	100	80	1.0	3.4	50	50	80	5.0	6.0	50	50
	R	100	80	1.0	3.4	50	50	80	5.0	6.0	50	50

¹⁾ Design according to EN 1992-4:2018 (for static resp. quasi-static loads). The partial safety factors for material resistance well as a partial safety factor for load actions of $\gamma_f = 1,4$ are considered. As a single anchor counts e.g. an anchor with a spacing $s \geq 3 \times h_{ef}$ and an edge distance $c \geq 1,5 \times h_{ef}$. Accurate data see approval.

²⁾ Further steel grades, versions and technical data see ETA, e.g. for dry internal conditions, galvanised steel (gvz); for damp interiors and for outdoor use, stainless steel (R).

³⁾ In the case of combinations of tensile and shear loads, bending moments with reduced or minimum spacing and edge distances (anchor groups), the design must be carried out in accordance with the provisions of the complete ETA and the provisions of the EN 1992-4:2018.

Loads

HybridPower			
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-26/0168 has to be considered.			
Type			HybridPower 10
Drill hole diameter	d_0	[mm]	10
Anchorage depth	h_{nom}	[mm]	80
Anchorage in concrete $\geq C16/20$			
Permissible tensile load N_{perm}		[kN]	1.59
Permissible shear load V_{perm}	zinc coated screw (gvz)	[kN]	5.98
	stainless steel screw (R)	[kN]	5.98
Minimum member thickness	h_{min}	[mm]	100
Characteristic edge distance	$c_{cc,N}$	[mm]	50
Characteristic spacing	a bzw. $s_{cc,N}$	[mm]	75
Minimum spacing	s_{min}	[mm]	50
with an edge distance	$c \geq$	[mm]	50
Minimum edge distance	c_{min}	[mm]	50
with a spacing	$s \geq$	[mm]	50
Anchorage in masonry			
Permissible load ⁴⁾ F_{perm} in solid brick Mz	$\geq NF 10.0/2.0$	[kN]	0.57
	$\geq NF 20.0/2.0$	[kN]	1.00
Permissible load ⁴⁾ F_{perm} in solid sand-lime brick KS	$\geq 2DF 10.0/2.0$	[kN]	0.57
	$\geq 2DF 15.0/2.0$	[kN]	0.85
Permissible load ⁴⁾⁵⁾ F_{perm} in solid sand-lime brick Vbl	$\geq 2DF 2.5/1.2$	[kN]	0.34
	$\geq 2DF 5.0/1.2$	[kN]	0.43
Permissible load ⁴⁾⁵⁾ F_{perm} in vertically perforated brick HLZ	$\geq 3DF 10.0/1.2$	[kN]	0.21
	$\geq 3DF 12.5/1.2$	[kN]	0.26
Permissible load ⁴⁾ F_{perm} in perforated sand-lime brick KSL	$\geq 2DF 12.5/1.6$	[kN]	0.43
	$\geq 2DF 20.0/1.6$	[kN]	0.71
Permissible load ⁴⁾⁵⁾ F_{perm} in hollow lightweight concrete blocks Hbl	$\geq 2.5/0.7$	[kN]	0.26
	$\geq 5.0/0.7$	[kN]	0.57
Minimum member thickness	h_{min}	[mm]	115
Minimum spacing (single anchor)	a_{min}	[mm]	250
Minimum spacing (anchor group)	s_{min}	[mm]	100
Minimum edge distance (anchor group)	c_{min}	[mm]	100
Anchorage in aerated concrete			
Permissible load ⁴⁾ F_{perm} in aerated concrete acc. to EN 771-4:2011+A1:2015	$PB \geq 2 N/mm^2$	[kN]	0.18
	$PB \geq 4 N/mm^2$	[kN]	0.32
	$PB \geq 6 N/mm^2$	[kN]	0.54
Permissible load ⁴⁾ F_{perm} in reinforced aerated concrete acc. to EN 12602:2016	$AAC \geq 2 N/mm^2$	[kN]	0.14
	$AAC \geq 4 N/mm^2$	[kN]	0.43
	$AAC \geq 6 N/mm^2$	[kN]	0.71
Minimum member thickness	h_{min}	[mm]	115/175 ⁶⁾
Minimum spacing (single anchor)	a_{min}	[mm]	250
Minimum spacing (anchor group)	s_{min}	[mm]	100
Minimum edge distance (anchor group)	c_{min}	[mm]	100

¹⁾ Valid for zinc coated screws (gvz) and for screws made of stainless steel (R). For exterior use of the zinc coated screws measures against incoming humidity according to ETA have to be taken.

²⁾ The required partial safety factors for material resistance as well as a partial safety factor for load actions $\gamma_f = 1.4$ are considered. As a single anchor counts e.g. an anchor with a minimum spacing a according to annexes of the ETA.

³⁾ Valid for temperatures in the substrate up to +50 °C (resp. short term up to +80 °C). For long term temperatures up to +30 °C higher permissible loads may be possible.

⁴⁾ Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile and shear loads as well as bending moments, see the ETA.

⁵⁾ Rotary drilling.

⁶⁾ Compression strength $> 3 N/mm^2$.

Dealer:

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