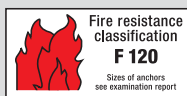




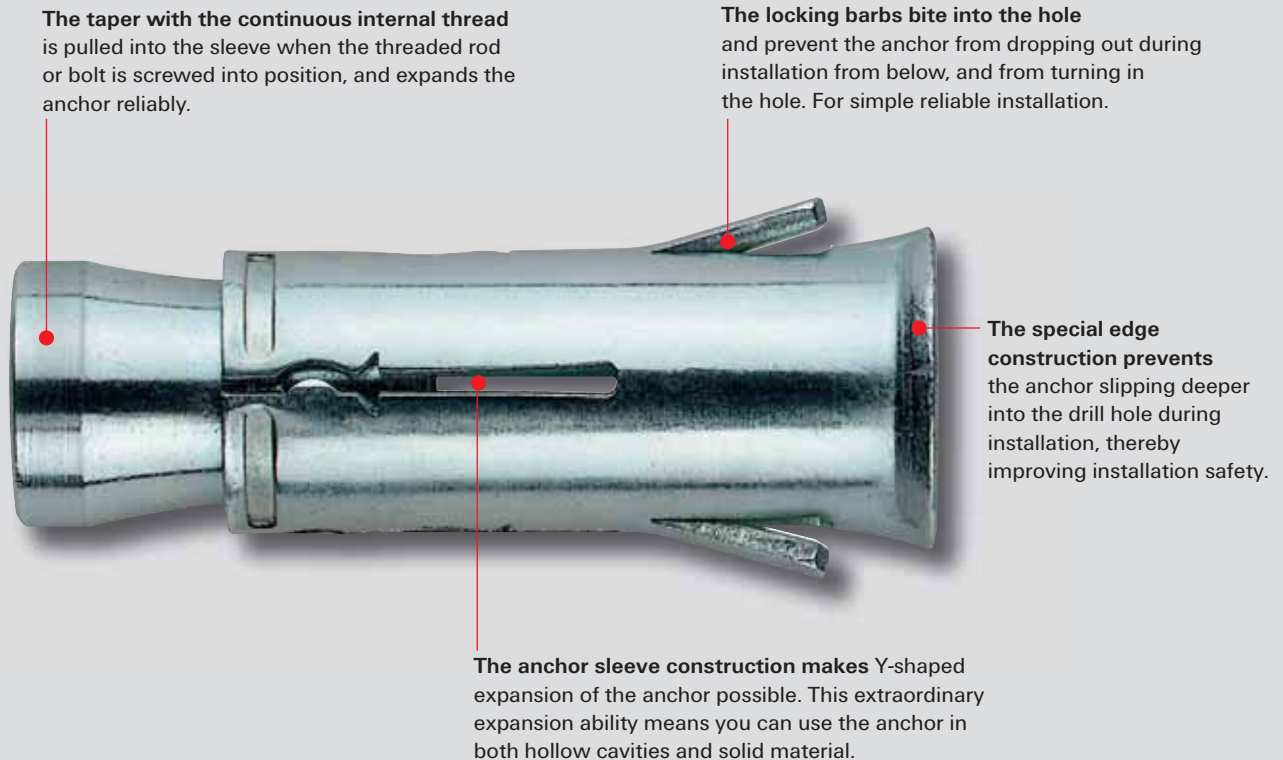
fischer Hollow-Ceiling Anchor FHY

Strong Grip
in Hollow-Ceiling Slabs.



fischer 
FIXING SYSTEMS

For universal use in hollow-ceiling slabs.



For fixings in prestressed concrete hollow-ceiling slabs. FHY.

The new fischer hollow-ceiling anchor FHY has been developed specially for fastenings in hollow-ceiling slabs of prestressed concrete. The tapered section has a continuous internal thread which permits use with both bolts and threaded rods. The high expanding capacity of the anchor makes it suitable for use with solid material and hollow-ceiling slabs with thicknesses greater than 25 mm. In principle, the FHY can be used anywhere with the exception of the safety zone around the prestressing steel.

Suitability.

- Suitable for: ceilings of prestressed hollow slabs, concrete strength $\geq C45/55$ resp. $\geq B55$.
- For fastening: cross-heads, pipes and ventilation ducts, suspended ceilings, safety technology, acoustic ceilings, lighting equipment, ceiling substructures.

This means a maximum of flexibility. The following diagram illustrates the wide range of possible uses for the hollow-ceiling anchor type FHY.



Advantages

- Installation at virtually any point in the hollow-ceiling slab.
- Installation possible in material thickness of 25 mm and over.
- High load-bearing capacity of up to 3.0 kN.
- Use of both bolts and threaded rods possible.
- Fast and simple installation.
- FHY can be installed with only a few blows of the hammer, a great advantage for ceiling installation.

Certified safety.

The fischer hollow-ceiling anchor type FHY is approved by the (German) building supervisory authority for installation in hollow-ceiling slabs of prestressed concrete. Concrete strength \geq C45/55 resp. \geq B55.



Types available.

The fischer hollow-ceiling anchor FHY is available in two versions to cater for the varying demands in different fields of application.

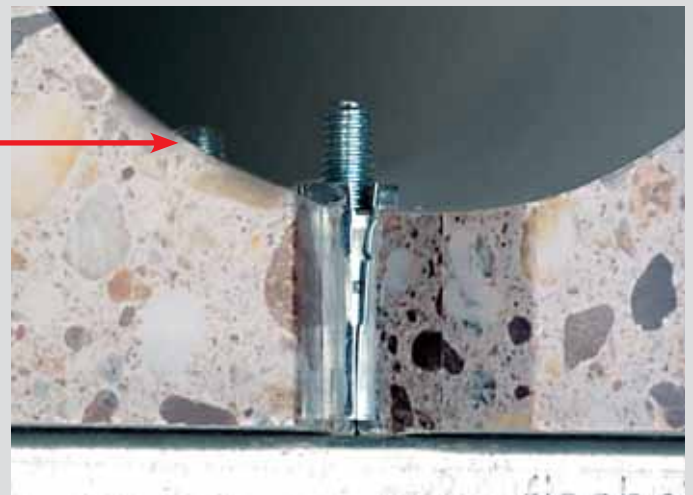
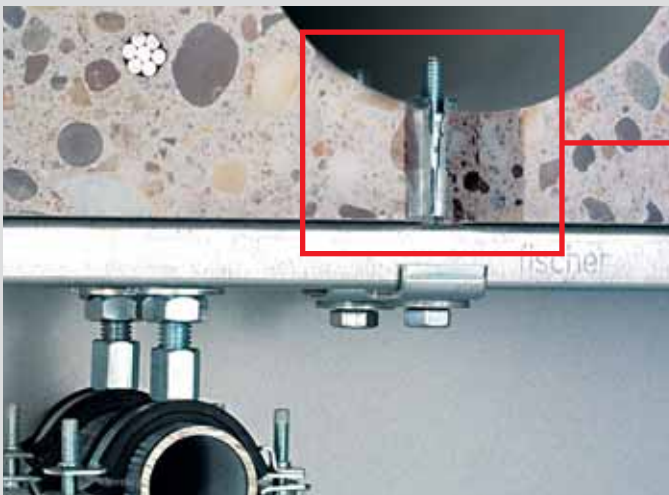
- in zinc-plated steel or
- stainless steel A4 (material 1.4401)

Installation notes.

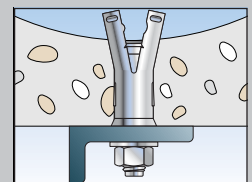
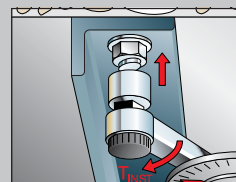
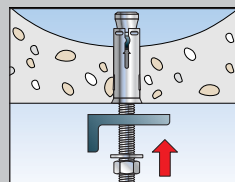
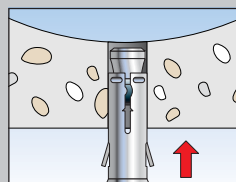
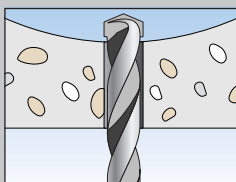
- The hollow ceiling anchor FHY is designed for use with standard bolts or threaded rods with metric threads from M6 to M10.

			FHY M 6	FHY M 8	FHY M 10
Length of hexagonal screw	min $l_s \geq$	[mm]	$39 + t_{fix}$	$45 + t_{fix}$	$54 + t_{fix}$
Length of threaded rod	min $l_b \geq$	[mm]	$62 + t_{fix}$	$68 + t_{fix}$	$77 + t_{fix}$

Examples of use.



Installation instructions



Loads.

Safe working loads¹⁾ fixing parameters and component dimensions for tension, shear and diagonal load at any angle in hollow-slab floors of prestressed concrete of strength class \geq C45/55. When dimensioning, observe the approval Z-21.1-1711 in its entirety.

Fixing type		FHY M 6			FHY M 8			FHY M 10	
Web thickness	d_w [mm]	≥ 25 < 30	≥ 30 < 40	≥ 40	≥ 25 < 30	≥ 30 < 40	≥ 40	≥ 30 < 40	≥ 40
Drill hole depth	$h_1 \geq$ [mm]	50			60			65	
Drill hole diameter	[mm]	10			12			16	
Single fixing									
Perm. F ²⁾ with	$c \geq c_{cr1,2}$ [kN]	0.7	0.9	2.0	0.7	0.9	2.0	1.2	3.0
Perm. F ²⁾ with	$c = c_{min1,2}$ [kN]	0.35	0.8	1.8	0.35	0.8	1.8	1.0	2.7
Axial spacing ²⁾	$c_{cr1,2} \geq$ [mm]	150							
Min. edge distance ²⁾	$c_{min1,2} \geq$ [mm]	100							
Axial spacing	$s_{cr1,2} \geq$ [mm]	300							
Pairs of fixings³⁾									
Perm. F with	$c \geq c_{cr1,2}$ [kN]	0.7	1.4	2.6	0.7	1.4	2.6	2.0	4.8
Perm. F with	$c = c_{min}$ [kN]	0.35	1.25	2.35	0.35	1.25	2.35	1.8	4.3
Min. axial spacing	$s_{min1,2} \geq$ [mm]	70	80	100	70	80	100	80	100
Edge distance	$c_{cr1,2} \geq$ [mm]	150			150			150	
Min. edge distance	$c_{min1,2} =$ [mm]	100			100			100	
Safe working bending moment									
Grade 4.6	[Nm]	-			6.4			12.8	
Grade 5.8	[Nm]	4.4 ⁴⁾			10.7 ⁴⁾			21.4 ⁴⁾	
Grade 5.8	[Nm]	7.0 ⁴⁾			17.1 ⁴⁾			34.2 ⁴⁾	
Length of hexagon-head screw ⁵⁾	min $l_s \geq$ [mm]	$39 + t_{fix}$			$45 + t_{fix}$			$54 + t_{fix}$	
Length of threaded bolt	min $l_B \geq$ [mm]	$62 + t_{fix}$			$68 + t_{fix}$			$77 + t_{fix}$	
Installation torque	T_{inst} [Nm]	10			10			20	
Through-hole in the component to be attached	$d_f \leq$ [mm]	7			9			12	

¹⁾ The anchorage of the Cavity Fixing FHY is permissible only in hollow-slab ceilings of prestressed concrete, the width of whose cavities is not more than 4.2 times the web width. The fixing may also be used as multiple fastening for anchoring lightweight ceiling coverings and underceilings to DIN 18168 on hollow-slab ceilings of prestressed concrete, and for statically similar anchorages up to 1.0 kN/m². When external loads are suspended from the prestressed-concrete hollow-slab ceilings, the shearing loadbearing capacity must be reduced. For fastening lightweight ceiling coverings and underceilings, to DIN 18168, this reduction is not necessary.

²⁾ For edge distances $c_{min} < c \leq c_{cr}$ the permissible loads may be determined by linear interpolation.

³⁾ The permissible load applies for a pair of fixings. The permissible load for the most highly stressed fixing must not exceed the values stated for the single fixing.

For pairs of fixings with min axial distances of $s_{min1,2} < s_{1,2} < s_{cr1,2}$ the permissible load may be interpolated linearly.

The linear value at $s_{1,2} = s_{cr1,2}$ for the pair of fixings with tensile load applied, may be assumed to be twice the permissible load for the single fixing.

⁴⁾ Only threaded rods marked in accordance with the approval may be used.

⁵⁾ With hexagon bolts with shaft to DIN EN 24014, the shaft length must be $\leq t_{fix}$.

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Technical data.



FHY – steel, zinc plated

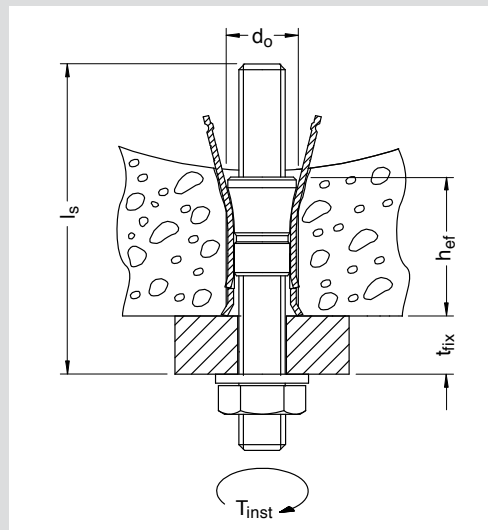
Type	Art. No.	d_o Bit ϕ mm	t_d Min. hole depth mm	h_{ef} Min. anchoring depth mm	l Fixing length mm	Thread	Insertion depth min. max. mm mm		Package set
FHY M 6	30138	10	45	30	37	M 6	37	45	50
FHY M 8	30146	12	50	35	43	M 8	43	55	25
FHY M 10	30148	16	60	40	52	M 10	52	60	20



FHY – stainless steel A4 (material: 1.4401)*

Type	Art. No.	d_o Bit ϕ mm	t_d Min. hole depth mm	h_{ef} Min. anchoring depth mm	l Fixing length mm	Thread	Insertion depth min. max. mm mm		Package set
FHY M 6 A4	30139	10	45	30	37	M 6	37	45	50
FHY M 8 A4	30147	12	50	35	43	M 8	43	55	25
FHY M 10 A4	30151	16	60	40	52	M 10	52	60	20

* Not part of approval.



d_o = bit ϕ
 h_{ef} = min. anchoring depth
 t_{fix} = max. useful length
 l_s = bolt length or length of threaded rod
 T_{inst} = insulation torque?