Hollow-ceiling anchor FHY

Specially for fixings in prestressed hollow-ceiling slabs.

OVERVIEW

Hollow-ceiling anchor **FHY**, zinc-plated steel

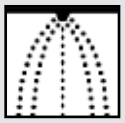
Hollow-ceiling anchor **FHY A4***), stainless steel of the corrosion resistance class III e.g. A4

*) not part of the approval

Approved for:
- Pre-stressed hollow-core concrete slabs C45/55 (only zinc-plated version)

Also suitable for:
- Concrete C12/15 to C50/60
- Natural stone with dense structure

For fixing of:
- Pipes
- Ventilation systems
- Sprinkler systems
- Consoles
- Steel constructions
- Gr atings
- Cable trays
- Gat es
- Suspended ceilings



ab M8

DESCRIPTION

- Sleeve anchor with internal thread specially for anchoring in prestressed concrete hollow ceilings
- When the screw or hexagon nut is tightened, the cone is pulled into the sleeve and expands it into the cavity or expands it in the solid material against the hole wall.
- Stainless steel version of the corrosion resistance class III e.g. A4 for outdoor use or in damp conditions (not part of the approval).

Advantages/benefits

- Suitable for cavities and solid zones of prestressed concrete hollow ceilings.
- Suitable for screws or studs with metric threads.
- The anchor can also be installed outside the cavity axis up to 5 cm from the tensioning wire.

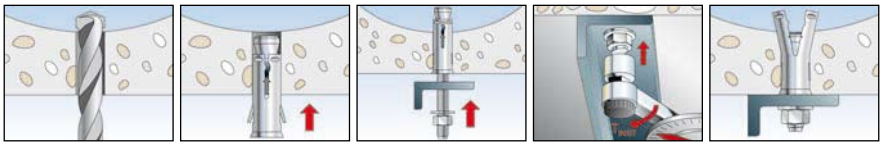
INSTALLATION

Type of installation

- Pre-positioned installation
- S tand-off installation

Installation tips

- Suitable bolts and studs can be found in the SaMontec specialist catalogue.
- Observe the required screw-in depth e_2 in the fixing when determining the bolt length l_s:
  Minimum screw-in depth e_2
  + Thickness of building component t_{fix}
  + Thickness of washer
  = Screw length

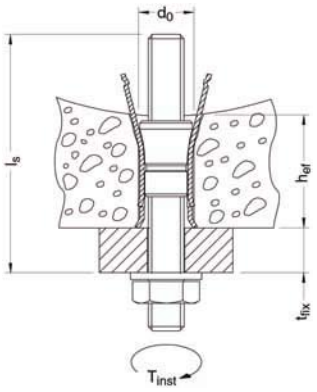


TECHNICAL DATA

Hollow-ceiling anchor **FHY**, zinc-plated steel

Hollow-ceiling anchor **FHY A4**, stainless steel of the corrosion resistance class III e.g. A4

Type	Art.-No.	approval	drill-Ø	min. drill hole depth	effect. anchorage depth	anchor length	thread	min. bolt penetration	max. bolt penetration	qty. per box
		● DIBt	d_0	t	h_{ef}	l	M	e_2	e_1	
			[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	pcs.
FHY M 6	**030138**	●	10	50	30	37	M 6	37	45	50
FHY M 8	**030146**	●	12	60	35	43	M 8	43	55	25
FHY M10	**030148**	●	16	65	40	52	M 10	52	60	20
FHY M 6 A4	**030139**		10	50	30	37	M 6	37	45	50
FHY M 8 A4	**030147**		12	60	35	43	M 8	43	55	25
FHY M10 A4	**030151**		16	65	40	52	M 10	52	60	20



LOADS

Safe working loads[1] fixing parameters and component dimensions for tension, shear and diagonal load at any angle in hollow-slab floors of prestressed concrete of strength class ≥ C50/60. 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_u	[mm]	≧ 25 < 30	≧ 30 < 40	≧ 40	≧ 25 < 30	≧ 30 < 40	≧ 40	≧ 30 < 40	≧ 40
Drill hole depth	h_1 ≧	[mm]	50			60			65	
Drill hole diameter		[mm]	10			12			16	
Single fixing										
Perm. F[2] with	$c \geqq c_{cr1.2}$	[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]	$c_{cr1.2}$ ≧	[mm]	150							
Min. edge distance[2]	$c_{min1.2}$ ≧	[mm]	100							
Axial spacing	$s_{cr1.2.}$ ≧	[mm]	300							
Pairs of fixings[3]										
Perm. F with	$c \geqq c_{cr1.2}$	[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	$S_{min1.2}$ ≧	[mm]	70	80	100	70	80	100	80	100
Edge distance	$c_{cr1.2}$ ≧	[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 ≧	[mm]	39 + t_{fix}			45 + t_{fix}			54 + t_{fix}	
Length of threaded bolt	min l_B ≧	[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 ≦	[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 $c_{min} < c \leqq c_{cr}$ 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 ≦ t_{fix}.