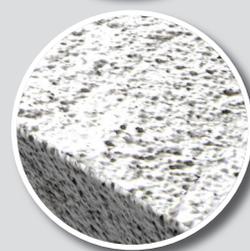




# fischer aircrete anchor FPX-I

Unique in aerated concrete.



**fischer**  <sup>®</sup>  
innovative solutions

# Aircrete anchor FPX-I – the strong internal thread anchor with unique 4-fold expansion.



**EASY**

The intelligent installation technique enables simple setting **without a torque wrench.**

**VERSATILE**

The metric internal thread enables **standard screws and threaded rods to be used** for ideal adaptation to the attachment or the stand-off installation.



**UNIQUE**

The unique square expansion sleeve ensures **secure and reliable installation without being turned itself in the drill hole** and enables a high load level.

**FAST**

The expansion by means of hexagon wrench enables **fast installation** and guarantees **automatic and 100% setting control.**

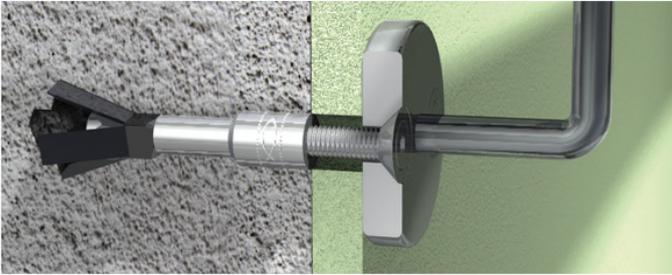


## Intelligent, fast and easy.

- The FPX-I is suitable for pre-positioned installation.
- Pre-drilling enables the anchor to be hammered in easily, even in high-strength aerated concrete. It is not necessary to clean the drill hole.
- Following optimum expansion, the hexagon wrench is automatically released from the anchor.
- When the anchor is installed, the internal thread bolt is turned and this pulls the cone into the square expansion sleeve. In the process, the aerated concrete is compressed at the four ribs and an undercut is made in the aerated concrete.

**Your advantages at a glance**

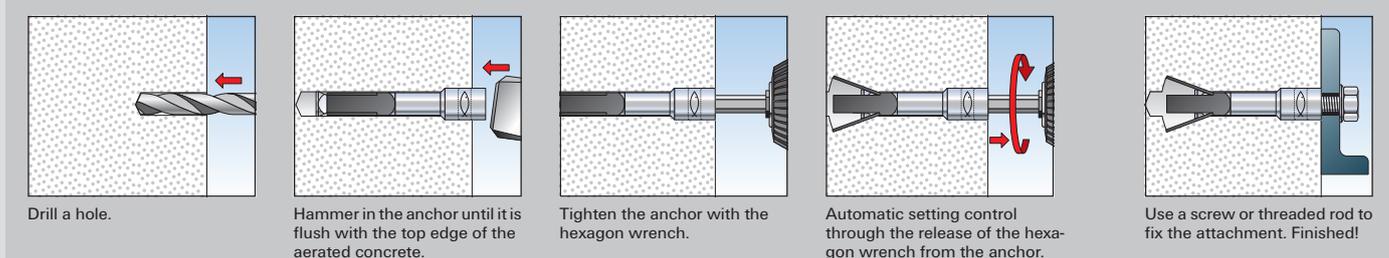
- The easy expansion by means of a cordless screwdriver or ratchet ensures **maximum installation convenience.**
- The displacement-controlled expansion of the anchor ensures **secure and reliable, uniform and effortless installation.**
- The unique 4-fold expansion of the FPX-I ensures high tension and shear loads and therefore means **fewer fixing points.**
- The first steel anchor with ETA approval and fire test certificat for fixing in aerated concrete enables **use** in safety-relevant fixings as well.



## Approvals



## Installation



# Applications, product range.

## FPX-I: The internal thread anchor for optimum flexibility in aerated concrete

### Approved for the following construction materials

- Aerated concrete masonry with compressive strength PB 1.6 to PB 6.0 N/mm<sup>2</sup>
- Aerated concrete wall and ceiling slabs with compressive strength 3.3 to 4.4 N/mm<sup>2</sup>

### Ideal for a large number of applications in dry interiors



■ Cable trays



■ Ventilation ducts



■ Pipe lines



■ Guard rails/handrails



■ Kitchen cabinets



■ Suspended ceilings

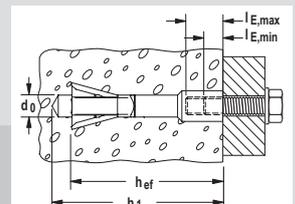
- Different attachment thicknesses possible
- Can also be used for fixings in coated (e.g. plastered) aerated concrete masonry. In this case, the anchor must be set flush-mounted with the fixing substrate (aerated concrete).
- Approved for stand-off installations/suspension elements
- Able to support loads immediately after installation
- Fire resistant according to DIN 4102 (Class A1)
- Approved from 100 mm building member thickness



Including hexagon wrench

M6

M8 - M12



### Aircrete anchor FPX-I

Product designation	Steel, zinc plated	Approval	Nominal drill hole diameter $d_0$ [mm]	Min. drill hole depth $h_1$ [mm]	Anchor length $l$ [mm]	Min. anchorage depth $h_{ef}$ [mm]	Min. screw-in depth $l_{E,min}$ [mm]	Max. screw-in depth $l_{E,max}$ [mm]	Sales unit
	Art. No.								ETA
FPX M6 I	519021	■	10	80	75	70	10	15	25
FPX M8 I	519022	■	10	80	75	70	8	15	25
FPX M10 I	519023	■	10	80	75	70	10	15	25
FPX M12 I	519024	■	10	80	75	70	12	15	25

Maximum allowable loads <sup>1)</sup> in aerated concrete.			Single anchor				Anchor groups			
			M6	M8	M10	M12	M6	M8	M10	M12
Type										
Minimum building member thickness with drill hole cleaning	$h_{\min}$	[mm]	100				100			
Minimum building member thickness without drill hole cleaning	$h_{\min}$		120				120			
Effective anchorage depth	$h_{\text{ef}}$		70				70			
Maximum tightening torque of the fixing screw	$T_{\max}$	[Nm]	3.0 <sup>5)</sup>				3.0 <sup>5)</sup>			
Min. joint distance for single anchors	$c_F$	[mm]	0 <sup>9)</sup> / 75 <sup>13)</sup> / 125 <sup>14)</sup>				-			
Min. centre-to-centre spacing <sup>2)</sup> within the anchor group and 2 single anchors <sup>15)</sup>	$s_{\min}$		100				100			
Min. edge distance <sup>2)</sup>	$c_1$		125 <sup>11)</sup>				250			
Min. edge distance <sup>2)</sup> orthogonally to $c_1$	$c_2$		188				375			
Min. intermediate spacing	a		375 (600) <sup>12)</sup>				750			
Allowable load for single anchors $F_{\text{zul}}^{3)}$ or for anchor groups with 2 or 4 anchors $F_{\text{zul},n}^{3) 6) 8)}$										
Aerated concrete masonry <sup>4) 7)</sup>	$f_{\text{ck}} \geq 1.6 \text{ N/mm}^2; \rho_m \geq 0.25 \text{ kg/dm}^3$	$f_{\text{ck}} \geq 2.0 \text{ N/mm}^2; \rho_m \geq 0.35 \text{ kg/dm}^3$	$f_{\text{ck}} \geq 4.0 \text{ N/mm}^2; \rho_m \geq 0.50 \text{ kg/dm}^3$	$f_{\text{ck}} \geq 6.0 \text{ N/mm}^2; \rho_m \geq 0.65 \text{ kg/dm}^3$	$F_{\text{zul}}^{3)}$	[kN]	0.3		0.6	
							0.4		0.8	
							0.9		1.8	
							1.4		2.8	
Aerated concrete slabs <sup>4)</sup> , cracked	$f_{\text{ck}} \geq 3.3 \text{ N/mm}^2; \rho_m \geq 0.50 \text{ kg/dm}^3$	$f_{\text{ck}} \geq 4.4 \text{ N/mm}^2; \rho_m \geq 0.55 \text{ kg/dm}^3$	0.6		1.2					
			0.8		1.6					
Aerated concrete slabs <sup>4)</sup> , non-cracked	$f_{\text{ck}} \geq 3.3 \text{ N/mm}^2; \rho_m \geq 0.50 \text{ kg/dm}^3$	0.8		1.6						
		1.2		2.4						

- 1) Includes an allowance for the partial safety factors of the resistances stipulated in the approval and a partial safety factor of the action of  $\gamma_F = 1.4$ .
- 2) Smallest possible centre-to-centre spacing or edge distance without reduction in the allowable load.
- 3) Applies to tension load, shear load and diagonal load under any angle.
- 4) Brick/block strength class  $f_{\text{ck}}$  and dry density  $\rho_m$  according to EN 771-4 and EN 12602 respectively.
- 5) If the anchor is unable to support itself against the attachment when tightened, no torque may be applied ( $T_{\max} = 0$ ).
- 6) If 4 anchors are used they are arranged in a rectangle.
- 7) In the case of a masonry joint, calculations are required to verify that the brick block is not pulled out.
- 8) Allowable total load of the anchor group.

- 9) No joint distance is required for all-over grouting of the joint with a joint width of  $\leq 12 \text{ mm}$  and a mortar compressive strength according to EN 998-2  $\geq f_{\text{ck}}$  aerated concrete.
- 10) In the case of concealed joints, the allowable total load of the anchor group must be halved and calculated as a multiple fixing in accordance with ETAG 001, Annex C.
- 11) For reinforced aerated concrete slabs with a slab width of  $\leq 700 \text{ mm}$ :  $c_1 \geq 150 \text{ mm}$ .
- 12) Value in brackets applies to aerated concrete slabs.
- 13)  $c_F$  for tension and/or shear load parallel to the ungrouted joint with a width of  $\leq 2 \text{ mm}$ .
- 14)  $c_F = c_1$  for transverse tensile force or inclined tensile force orthogonally to the ungrouted joint with width  $\leq 2 \text{ mm}$ .
- 15) The intermediate spacings and edge distances for anchor groups apply to 2 single anchors with spacing  $\leq 375 \text{ mm}$  ( $\geq s_{\min}$ ).

## Our 360° service for you.



As a reliable partner, we are there to provide help and advice whenever you need it:

- Our product range extends from chemical systems to steel anchors through to plastic anchors.
- Expertise and innovation through in-house research and development.
- Worldwide presence and active sales service in more than 100 countries.
- Qualified applications advice for economical fixings solutions in conformity with the relevant regulations and guidelines. If necessary, on site too.
- Training courses, some with certification, on your premises or in the fischer ACADEMY.
- Design and calculation software for high-quality and sophisticated fixings.

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