

Aircrete anchor FPX-I

Permissible loads¹⁾ and required component dimensions in aerated concrete masonry.
 For the design the complete current assessment ETA-12/0456 has to be considered.

Type			FPX-I M6 , M8 , M10 , M12
Effective anchorage depth	h_{ef}	[mm]	70
Permissible load²⁾ (F_{perm}) per anchor			
$f_{AAC} \geq 1,6 \text{ N/mm}^2 / \rho_m \geq 0,25 \text{ kg/dm}^3$	F_{perm}	[kN]	0.32
$f_{AAC} \geq 2,0 \text{ N/mm}^2 / \rho_m \geq 0,35 \text{ kg/dm}^3$	F_{perm}	[kN]	0.43
$f_{AAC} \geq 4,0 \text{ N/mm}^2 / \rho_m \geq 0,50 \text{ kg/dm}^3$	F_{perm}	[kN]	0.89
$f_{AAC} \geq 6,0 \text{ N/mm}^2 / \rho_m \geq 0,65 \text{ kg/dm}^3$	F_{perm}	[kN]	1.43
Component dimensions			
Minimum member thickness with drill hole cleaning	h_{min}	[mm]	100
Minimum member thickness without drill hole cleaning	h_{min}	[mm]	120
Single anchor			
Minimum spacing	a	[mm]	375
Minimum edge distance	c_1	[mm]	125
Minimum distance to joints	$c_F^{3)}$	[mm]	75 ⁴⁾ / 125
Minimum edge distance orthogonal to c_1	c_2	[mm]	190
Anchor groups⁵⁾ with 2 or 4 anchors			
Actions			shear and oblique tension only axial tension
Minimum spacing between anchor group and 2 single anchors	s_{min}	[mm]	100
Minimum edge distance	c_1	[mm]	250
Minimum spacing	a	[mm]	750
Minimum edge distance orthogonal to c_1	c_2	[mm]	375

- ¹⁾ Permissible loads of a single anchor for all load directions. The required partial safety factors for material resistance as well as a partial safety factor for load actions of $\gamma_L = 1.4$ are considered.
- ²⁾ Grade of the screw resp. threaded rod ≥ 4.8 .
- ³⁾ In case of non visible joints F_{perm} has to be divided in halve. Accurate data see ETA.
- ⁴⁾ c_F for tensile load and/or shear load parallel to the joint which is not filled with mortar with width $\leq 2 \text{ mm}$.
- ⁵⁾ $F_{perm,group} = 2 \times F_{perm,single anchor}$ valid in case of anchor groups with 2 or 4 anchors. Accurate data see ETA.

