Approved safety in aerated concrete

Pipes

Suspended ceilings

BUILDING MATERIALS

Approved for:

- Aerated concrete with compressive strength 2 to 4 N/mm²
- Aerated concrete wall or ceiling boards with compressive strength 3.3 to 4.4 N/mm²

APPROVAL / CHARACTERISTICS

ADVANTAGES

- The general building approval guarantees approved safety for use in safety-relevant applications.
- The spiral-shaped outer ribs cut a positive fit in the soft building material, thus ensuring the best pressure distribution and load-bearing capacity.
- Can be applied with a hammer - there is no need for special tools, thus saving time and money for the installation.
- The GB can also be used safely outside (e.g. in façade installation) when combined with the approved fischer safety screw in A4.

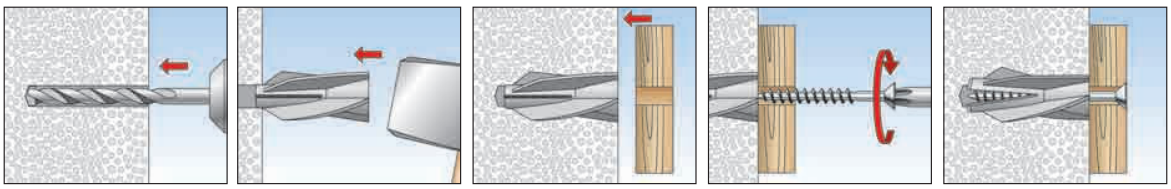
APPLICATIONS

- Suspended ceilings
- Cable trays
- Pipelines
- Guard rails
- Façade and roof constructions made of wood and metal
- Awning consoles
- Letterboxes
- Trellis

FUNCTIONING

- The GB is suitable for pre-positioned installation.
- The spiral-shaped outer ribs ensure a positive fit connection between the building material and anchor.
- The required screw length is given by: Anchor length + fixture thickness + 1 x screw diameter.
- The GB must be used with fischer safety screws to fulfil the approval and to achieve the maximum load-bearing capacity.
- GB 14 is approved for use in cracked aerated concrete.
- Use rotary drilling to create the drill hole
- Can be used in unplastered aerated concrete

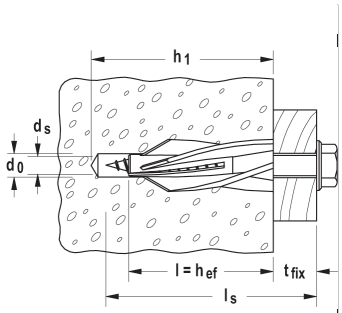
INSTALLATION



GB Aircrete anchor

TECHNICAL DATA

Aircrete anchor **GB**



Items to order only Item	Art.-No.	Approval DIBt	Drill hole diameter d_0 [mm]	Min. drill hole depth h_1 [mm]	Plug length = min. anchoring depth $l = h_{ef}$ [mm]	fischer safety screw d_s [mm]	Sales unit [pcs]
GB 8	**050491**	●	8	60	50	5	25
GB 10	**050492**	●	10	65	55	7	20
GB 14	**050493**	●	14	90	75	10	10

FISCHER SAFETY SCREW FOR GB

Items to order only Fixing type	Usable length t_{fix} [mm] min.	[mm] max.	Screw dimension * Ø x l_s	Screw material: Zink plated and passivated steel 6.8 Art.-No.	Art.-No.	Stainless steel of the corrosion resistance classe III, e.g. A4 Art.-No.	Art.-No.
GB 8	5	30	5 x 85	089230[1]	-	089240[1]	
GB 10	0	3	7 x 65	-	080404		080260
	5	23	7 x 85	089170	080405	089244	080261
	25	43	7 x 105	089172	-		
	40	58	7 x 120	089174	080407		
	60	78	7 x 140	089176	080408		
	85	103	7 x 165	089178	-		
GB 14	0	10	10 x 95	-	080412		080266
	0	20	10 x 105	089186	080413		080271
	35	55	10 x 140	089188	080415		
	60	80	10 x 165	089190	080416		

[1] Cross drive recess Z

* Further sizes on request

LOADS

Aircrete anchor GB

Highest permissible loads[1] for a single anchor in aerated concrete.
The given loads are valid for fischer- safety screws[4] acc. attached table.
For the design the complete approval Z-21.2-123 has to be considered.

Type			GB 8	GB10	GB14
Min. spacing [7]	s_{min}	[mm]	100	100	100
Min. edge distance [2]	c_{min}	[mm]	100	150	200
Min. edge distance to solidified joints [6]	c_{min}	[mm]	9	10	12
min. member thickness	h_{min}	[mm]	75	100	200[5]
Anchorage depth	h_{ef}	[mm]	50	55	75
Permissible load in the respective base material F_{perm} [3]					
Aerated concrete	≥ PB4, PP4 (G4)	[kN]	0,40	0,60	0,90
Aerated concrete	≥ P3,3 (GB3,3)	[kN]	0,30	0,50	0,80
Aerated concrete	≥ P4,4 (GB4,4)	[kN]	0,40	0,60	0,90
Tensile zone of aerated concrete roof- and ceiling slaps acc. DIN 4223	≥ P3,3 (GB3,3)	[kN]	-	-	0,30

[1] Required safety factors are considered.
[2] Minimum permissible edge distance.
[3] Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads and bending moments see approval.
[4] gvz and A4.
[5] The minimum member thickness of aerated concrete roof- and ceiling slaps is 150 mm.
[6] Only in aerated concrete walls.
[7] Minimum possible axial spacing while reducing the permissible load.