Approved safety in aerated concrete

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

APPROVALS

ADVANTAGES

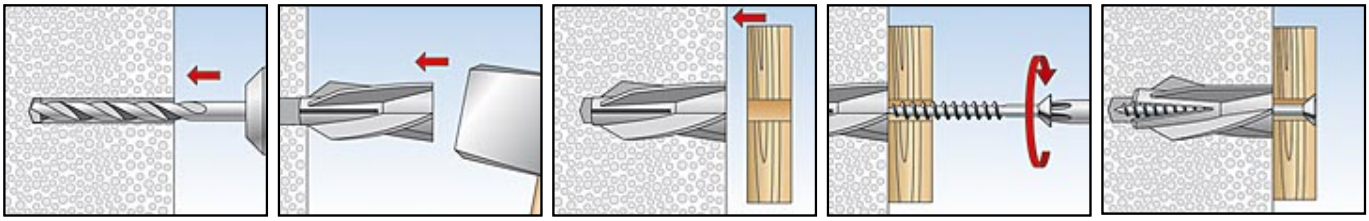
- The general building approval guarantees approved safety for use in safety-relevant applications.
- The spiral-shaped outer ribs cut a positive fit in the soft building material, thus ensuring the best pressure distribution and load-bearing capacity.
- Can be applied with a hammer - there is no need 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 (only GB 14)
- Cable trays
- Pipelines
- Guard rails
- Façade and roof constructions made of wood and metal
- Anopy brackets
- Letter boxes
- Trellis

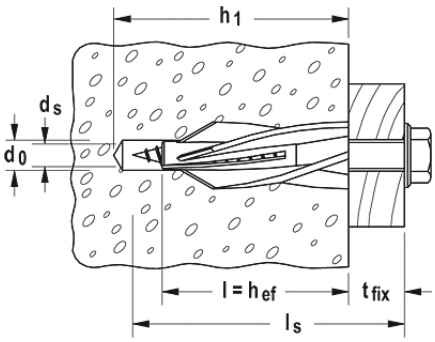
FUNCTIONING

- 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 + 1xscrew 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



TECHNICAL DATA

Aircrete anchor GB



Type	Art.-No.	DIBt-approval	Drill hole diameter d_0 [mm]	Plug length = min. anchorage depth $l = h_{ef}$ [mm]	Sales unit [pcs]	fischer safety screw $d_s \times l_s$ [mm]
GB 8	**050491**	●	8	50	25	5
GB 10	**050492**	●	10	55	20	7
GB 14	**050493**	●	14	75	10	10

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]	150 (100)[8]	200 (150)[8]	300 (200)[8]
Min. edge distance [2]	c_{min}	[mm]	100 (75)[8]	150 (100)[8]	200 (150)[8]
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} (h_v)	[mm]	50	55	75
Permissible load in the respective base material F_{perm} [3]					
Aerated concrete	PB2, PP2 (G2)	[kN]	0,20	0,25	0,40
Aerated concrete	P3,3 (GB3,3)	[kN]	0,30	0,50	0,80
Aerated concrete	≥ PB4, PP4, P4,4 (≥ G4 , 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.
8) Values in brackets apply to PB2, PP2 (G2).