

Window-fixing set

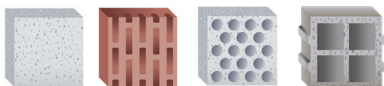
FB

Advantages



- The FB window-fixing set - consisting of an extra-long plug and an extra-long distance screw - enables secure and tension-free installation of windows and doors
- System tested by the ift Rosenheim with frame distance 20 mm
- The set is ideally suited for mounting windows and doors e.g. in thin-walled lightweight bricks with large chambers, in which normal window construction screws do not find enough hold
- The great length of the set ensures that the plug is always held in at least two webs of the brick, which guarantees good pull-out values and offers the user security
- Absorbs the thermal movements of the window, especially with large window elements - therefore no subsequent adjustment of the sash is necessary
- When fastening the window using the FB-set, there's no need for lateral spacers in the fastening area
- Outstanding twist resistance of the plug thanks to pronounced anti-rotation wings and optimum expansion over the entire plug length
- Distance screw with enlarged shank diameter for increased bending moment
- 45 mm (Ø11 mm) retaining thread - for secure fixing of timber, aluminium and PVC-U windows as well as framed doors
- Setting depth marking on the plug for quick installation

Suitable building materials



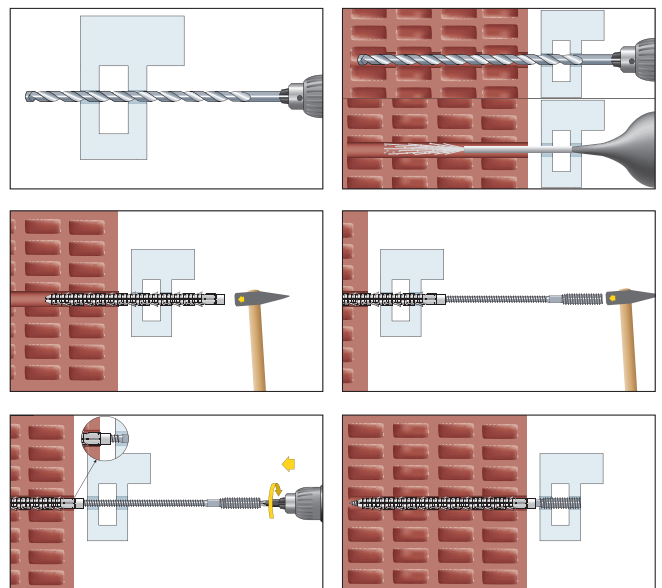
- Aerated concrete
- Hollow brick
- Hollow sand-lime brick
- Lightweight hollow concrete blocks



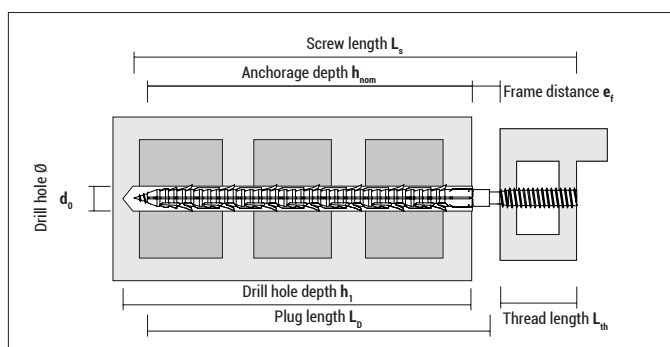
Approvals and certificates



Mounting



Window-fixings set FB



FB

Type	Art-No	d ₀ [mm]	h ₁ ≥ [mm]	h _{nom} [mm]	L _p [mm]	L _s [mm]	L _{th} [mm]	Screw drive	€ / 100 pcs	[pcs]	[pcs]
Set FB	910190280FB50	10	220	190	200	280	45	TX30		50	200

Loads for window fastening in the reveal with Set FB for various base materials

Stone type							
	Schlagmann Poroton S8	Wienerberger Poroton T8	Schlagmann Poroton S7	Wienerberger Poroton S9	Schlagmann Poroton T7	Porenbeton Ytong PP2-0,35	
Compressive strength class	N/mm ²	10	6	8	10	6	2
Tension load	F _{rec} [kN]	0,38	0,31	0,30	0,28	0,06	0,54
Shear load							
Maximum deflection 3 mm	V _{rec} [kN]	0,39	0,29	0,38	0,37	0,19	0,22

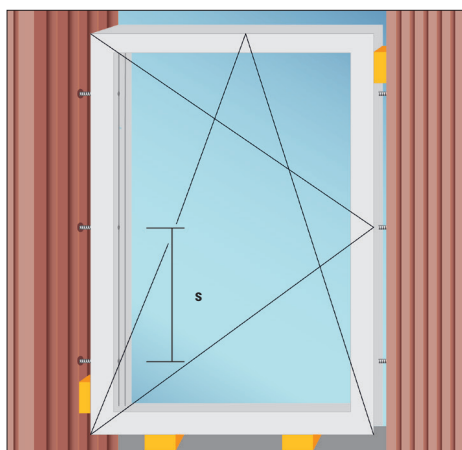
The recommended loads include the following safety factors: $\gamma_M = 2,5$ for brick, $\gamma_M = 2$ for aerated concrete.

In addition, the partial safety factor of the impact of $\gamma_F = 1,4$ is taken into account.

Spacing and edge distance

Type	min. edge distance [mm]	Frame distance e _f ≤ [mm]	Plug distance in masonry s [mm]
Set FB	130	20	depending on static requirements mind. 250 mm

The windows must be installed in accordance with the applicable regulations of the EnEV and the installation guidelines of the RAL Quality Association for Windows and Front Doors.



Example: Turn-tilt window left