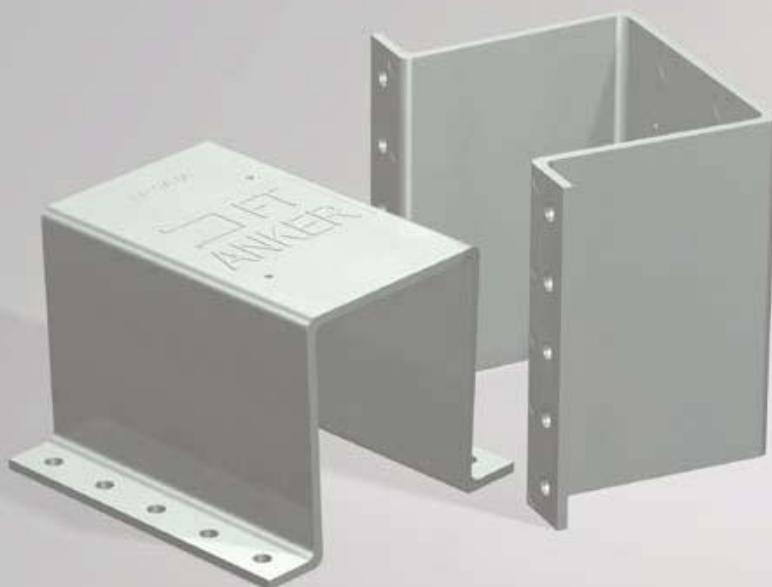


PHILIPP GROUP

PHILIPP FT Anchor



PHILIPP FT Anchor

The PHILIPP FT Anchor is used for the fixation of doors, windows and comparable components in precast concrete sandwich elements and insulated double walls. As the application is quite simple the fixation in the precast elements is done fast and easily.

Glass fibre reinforced plastic is the main constituent the FT Anchor is made of, so no thermal bridges in a sandwich element are the result. FT Anchors are available in a width of 60 and 80 mm. Thicker insulation layers are bridged by reinforcements in the bearing layer.

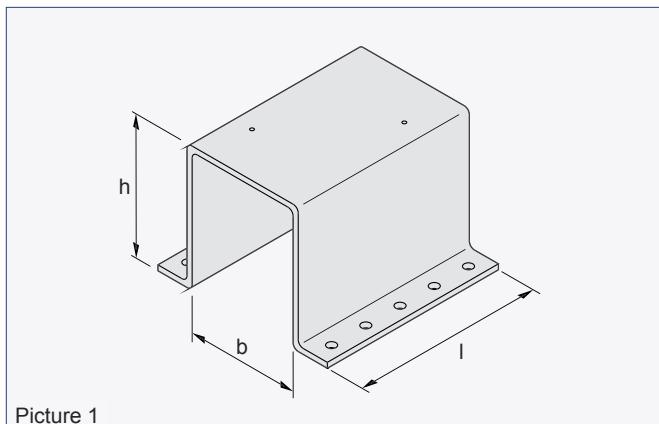
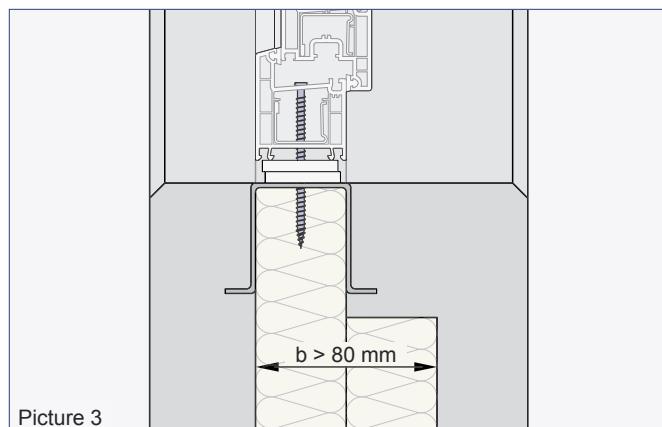
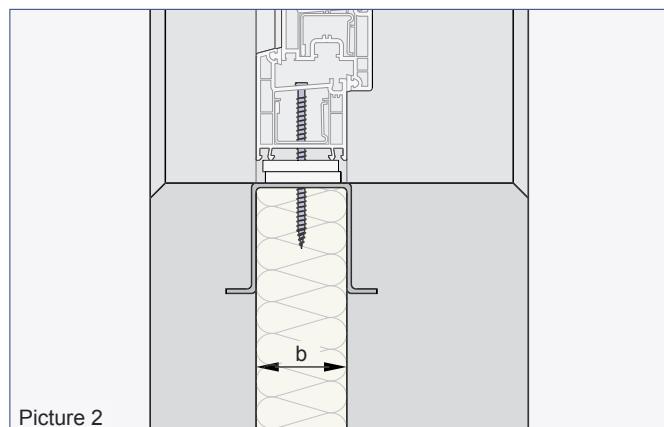


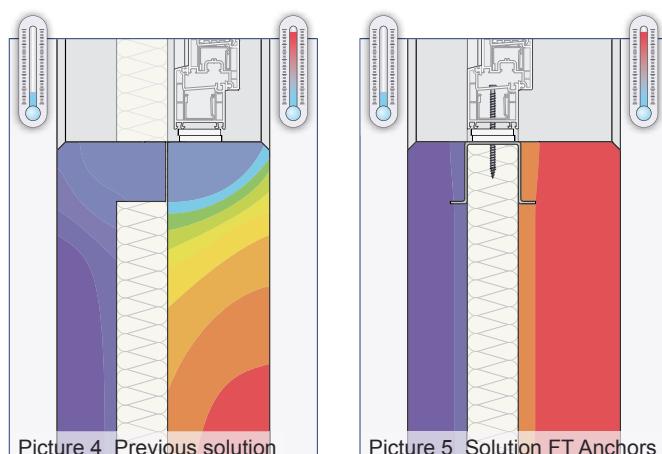
Table 1: Dimensions of the FT Anchor

Ref.-No.	b [mm]	l [mm]	h [mm]
77FTA60	60	100	73
77FTA80	80	100	73



Advantages of the window and door fixation anchor:

- **Easy installation**
already during the production of the sandwich elements
- **Noticeable time saving**
caused by fast mounting of windows and doors at the job-side.
- **No thermal bridges**
as the anchor is made of glass fibre plastic
- **Effortless and exact fixation**
of door and window elements
- **High load bearing capacity**
tested and confirmed by the Materials Testing Institute for Civil Engineering of the Technical University of Munich



Picture 5 Solution FT Anchors

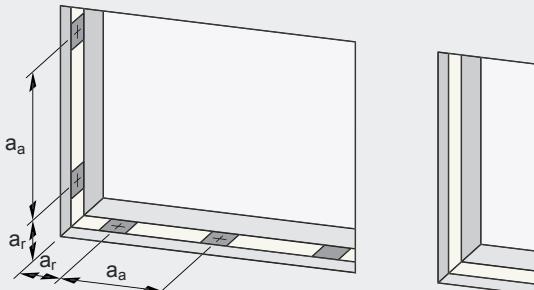
Installation conditions

Edge and centre distances

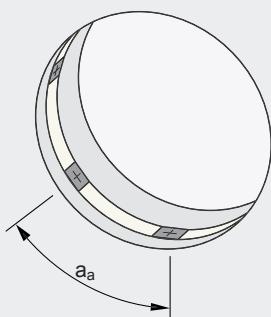
The installation of FT Anchors requires the compliance of certain edge and centre distances. Square openings require at least 8 FT Anchors (2 in each side of the opening). Depending on the opening size the number has to be increased considering the centre distance a_a . For round openings the number of anchors is determined by the centre distance a_a .

Table 2: Minimum edge and centre distances

Ref.-No.	a_r [mm]	a_a [mm]
77FTA60	150	500
77FTA80	150	500



Picture 6



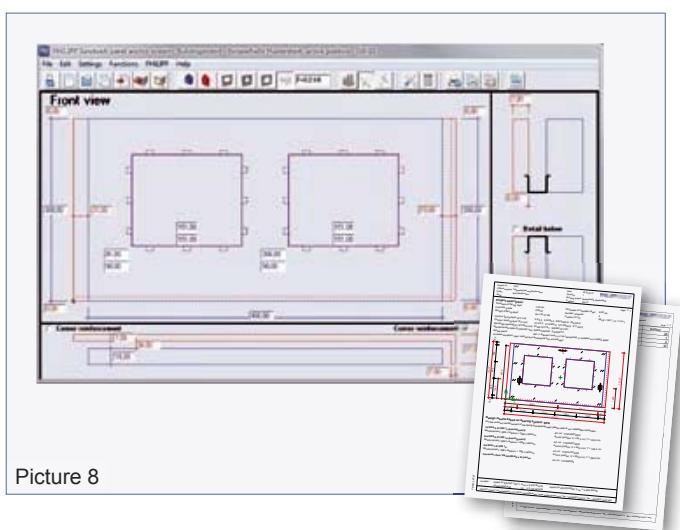
Picture 7



Edge and centre distances given here are only recommendations. The final anchor distances must be coordinated with the corresponding manufacturers of the opening elements.

Planning

For the calculation of FT Anchors in reinforced concrete sandwich elements the free-of-charge PHILIPP design software can be taken. Besides the actual design of load bearing anchors and pins the use of FT Anchors can be specified for each opening by a few clicks. However, the suggestion for the FT Anchors based on simple rules does not replace a consultation with the window and door builder in the end. A quick overview about the components needed and their number is given in a parts list either for a single panel or a complete project.



Picture 8

Fire protection

The FT-Anchor is conform to the fire resistance class HB (slow burning) related to UL94 „Tests for Flammability of Plastic Materials for Parts in Devices and Applications“ according to IEC/DIN EN 60695-11-10.

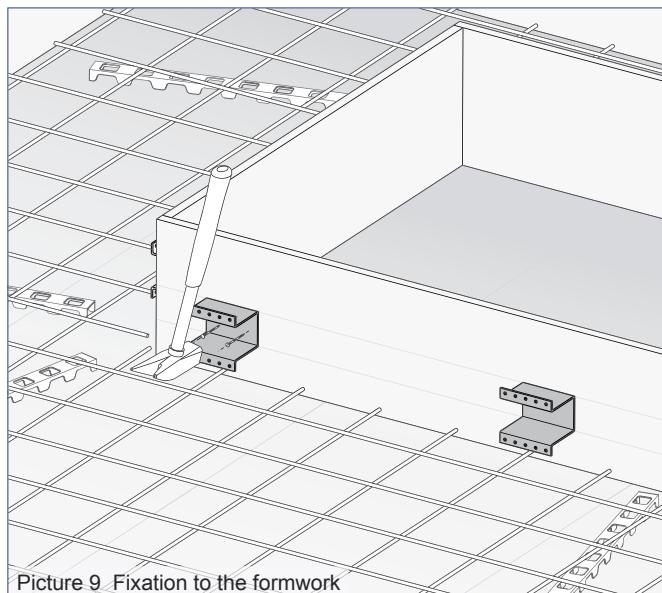
Installation

The very simple installation of the U-shaped FT Anchor is already done during the production of sandwich panels in the precast plant.

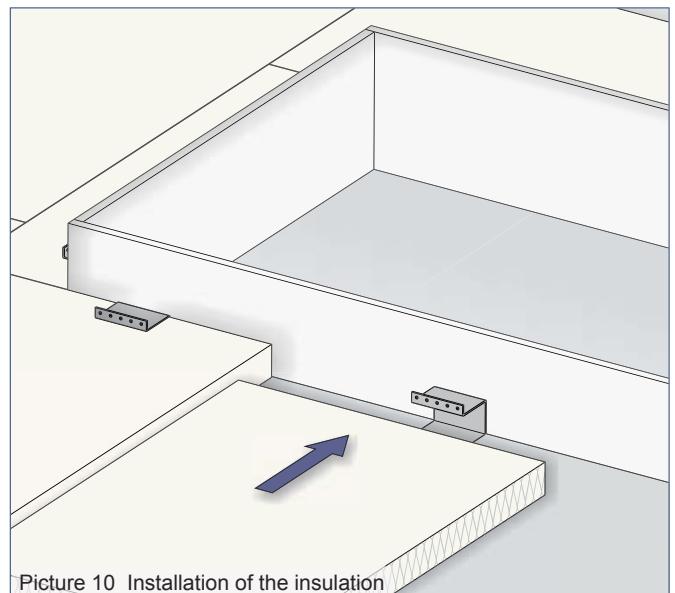
If the openings are created by a timber formwork the FT Anchors can be nailed through integrated holes with two nails onto the formwork. Then, the insulation close to the openings is not only laid on the fresh concrete but also fixed to the FT Anchor.

If a steel mould is used the FT Anchors are fixed to the insulation first, then placed flush to the opening and pressed slightly into the fresh concrete so that the perforated angle is enclosed by concrete. The further production process of the sandwich element follows the normal procedure in the plant.

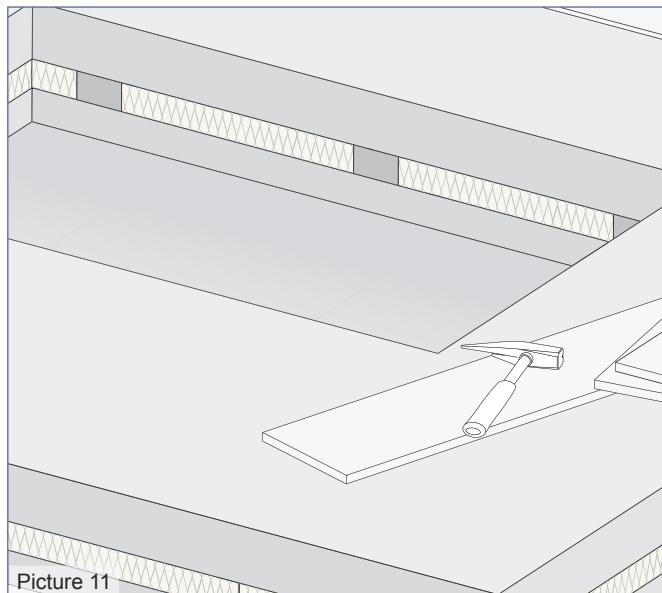
After mounting the reinforced concrete sandwich panels the opening elements can be fastened exactly and quickly with self-drilling screws in the level of the insulation.



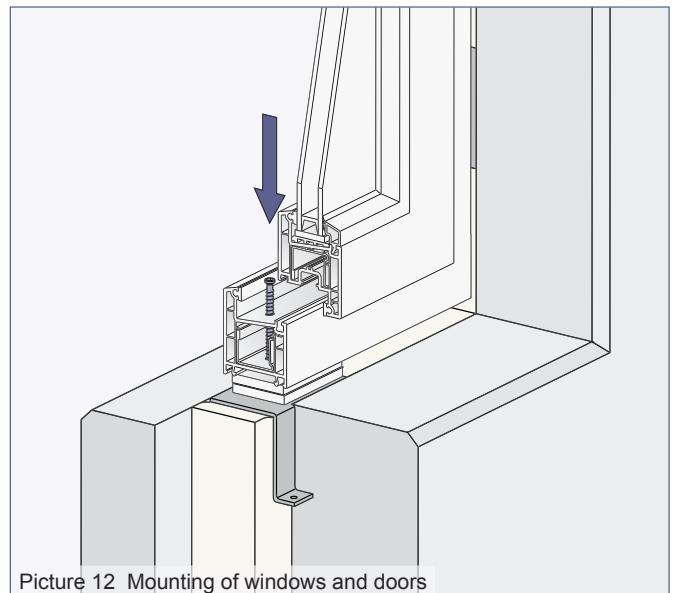
Picture 9 Fixation to the formwork



Picture 10 Installation of the insulation



Picture 11



Picture 12 Mounting of windows and doors