

7. Methods for correct installation of windows and balcony doors

7.1. Principles for installation of windows and balcony doors

There are two procedures for the installation of windows and balcony doors:

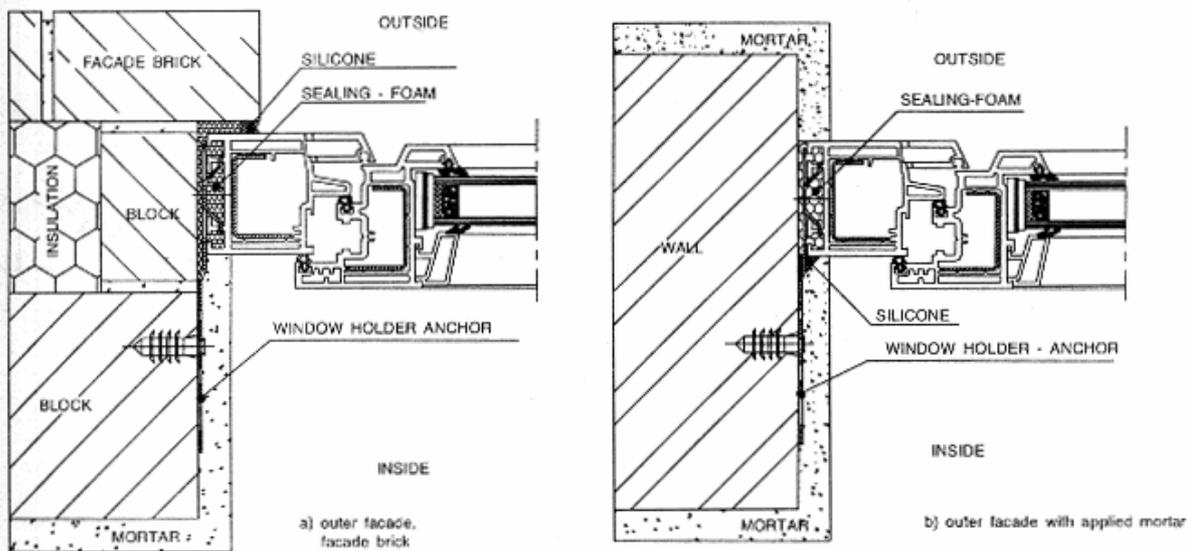
1. "Wet" installation

2. "Dry" installation

1. Wet principle for installation

a) Outer facade, facade brick

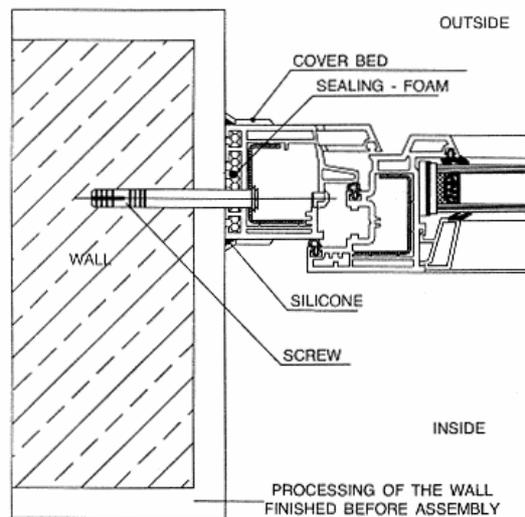
Steel anchors accomplish the fixing of windows and doors. The edges of the wall on which doors and windows are to be installed are not processed. Properly prepared opening means that "builder" measure is 2 cm larger in width and in height from the production measure, with a maximum of 4 cm. Doors and windows are installed in such way that the frame is pulled toward facade brick. After the frame and the wall are connected with steel anchors, the space between the frame and the wall is filled with expanding polyurethane foam. After the foam is hardened, its excessive quantity is cut away. After that, the space between the frame and the outer side of the wall is filled with silicone for a better seal. Before applying the mortar, place the covers for hinges and protect doors and windows with nylon or carton. The mortar is applied on the inner side after the excessive foam has been cut, so that the mortar covers the frame from 1 to 1,5 cm. Mortar must not touch the hinges. After the appliance of mortar is finished, take off protective foil from the profile. If appliance of mortar is not planned during 3 months, then the protective foil should be removed right after the installation.



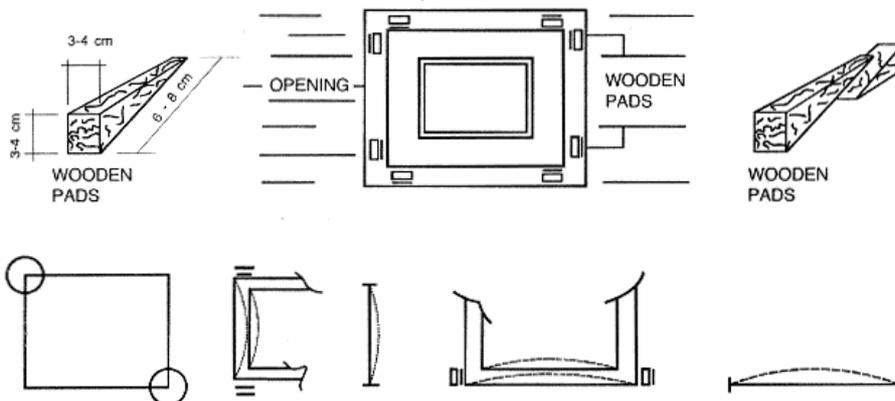
b) Mortar in the outer façade

Steel anchors accomplish fixing of doors and windows. The edges of the wall on which doors and windows are to be installed are not processed. Properly prepared opening means that "builder" measure is 2 cm larger in width and height from production measure, with a maximum of 4 cm. After the frame and the wall are connected with steel anchors, the space between the frame and the wall is filled with expanding polyurethane foam. After the foam is hardened, its excessive quantity is cut away. Before applying the mortar, place the covers of hinges and protect doors and windows with nylon or carton. The mortar is applied both on the inner and on the outer side. It is recommended that mortar covers 1 - 1,5 cm from inside and 2 - 2,5 cm from outside. After the mortar is applied take off protective foil from the profile. If appliance of mortar is not planned during 3 months, then the protective foil should be removed right after the installation.

2. Dry installation



Fixing of the frame by wooden pads in order to prevent deformations



"Dry" installation is applied when the mortar is already put on the object and when the outer facade is finished. "Builder " measure is larger for 1 cm in height and in length from production measure. After door or window is put in the opening, the frame is fixed to the wall through the main chamber of the frame.

The space between the frame and the wall is filled with expanding polyurethane foam. After the foam is hardened, any excessive quantity is cut away, and space between the frame and the outer and the inner side of the wall is filled with silicone. After that it is necessary to place cover bed both on the inner and on the outer side. It is also necessary to take off protective foil from the profile and to place covers for hinges.

7.2. Types of windows

Lately, modern and efficient window systems have reached the market and have been already introduced in building construction or rehabilitation. These window systems are very efficient from the energy saving point of view. The remarkable advances in the performance of windows in recent years are based mainly on technological developments in glass coatings and insulated glazing assemblies.

Examples of efficient windows

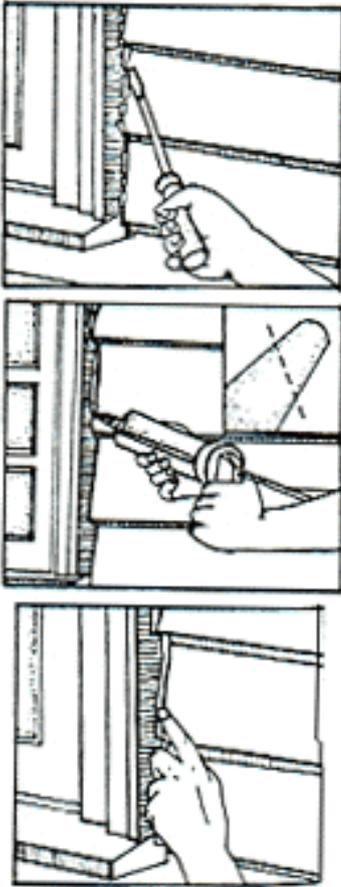


This window system is provided with a thermal resistant barrier that is achieved with a polyamide bridge of 18 mm.



For this window system the thermal resistant barrier is achieved with a polyamide bridge of 32-36 mm. Furthermore, the interior air space is filled with expanded polyurethane insulation to greater enhance the thermal resistance of the system. The system also uses specially designed gaskets for improved weather resistance.

Caulk



Caulk keeps a house tightly sealed. It should be applied where different materials meet, like window and door frames. It is very useful even for cracks thinner than a pencil. For best results, apply a small bead and smooth it out with a moistened finger.

First, clean out any old caulk or debris. Then cut the tip off the tube of caulk, place in a caulk gun and begin to apply, holding the gun at a 45 degree angle. Once applied, moisten your finger and smooth the caulk.