

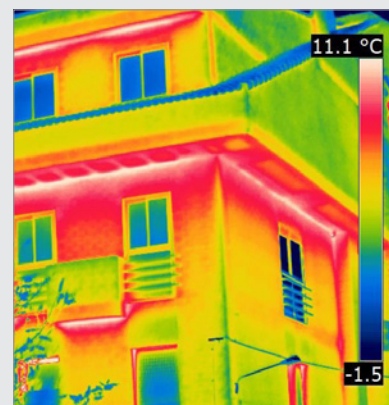
DOORS, WINDOWS AND STRUCTURE

Modern doors and windows, just like the materials used in construction casings, have seen enormous developments in energy performance over the years. The most delicate aspect is properly connecting the elements, which is crucial in avoiding the formation of condensation and moulds.

PRIMARY NODE AND SECONDARY NODE



When designing the placement of doors and windows, it is a good idea to think in terms of primary and secondary nodes. The **PRIMARY NODE** is the first joint installed between the structure and the subframe. The **SECONDARY NODE** is the joint installed between the false frame and the door/window. This distinction is useful in order to properly design using the **three-level method**.

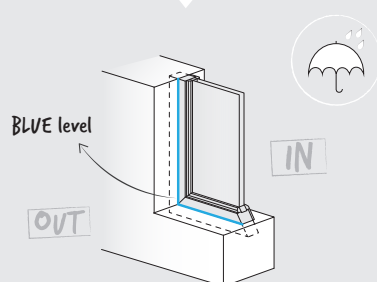


Thermographic analysis makes it possible to visualise any problems with water or air infiltration, identifying thermal bridges that require action.

THREE LEVELS OF PROTECTION

The **three level method**, which is used often in most European countries, identifies thermal and acoustic insulation levels for proper placement of doors and windows. To obtain maximum performance, it is important to take care in all design stages. rothoblaas offers specific solutions for each of the three levels.

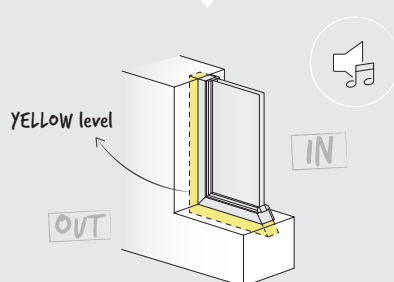
BLUE LEVEL



This is the most external level, that guarantees protection against weather. If not properly treated, it can create infiltration problems that lead to the formation of condensation and mould.

• **ROTHOBLAAS RECOMMENDS:** PROTECT, PLASTER BAND OUT, BYTUM BAND, MULTI BAND, FLEXI BAND, EASY BAND, FROST BAND, FACADE BAND UV, FRONT BAND UV 210

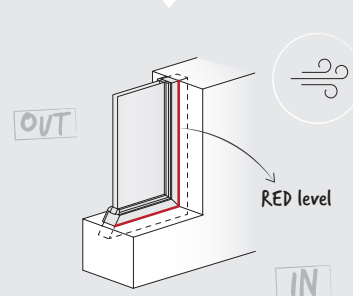
YELLOW LEVEL



Intermediate level, which must guarantee thermal/acoustic performance and mechanical fixing. Problems can arise from the fact that frequently the materials that insulate well against noise are not equally effective against cold.

• **ROTHOBLAAS RECOMMENDS:** FRAME BAND, HERMETIC FOAM, KOMPRI BAND, CONSTRUCTION SEALING, UNIVERSAL GEL, SEALING FOAM

RED LEVEL

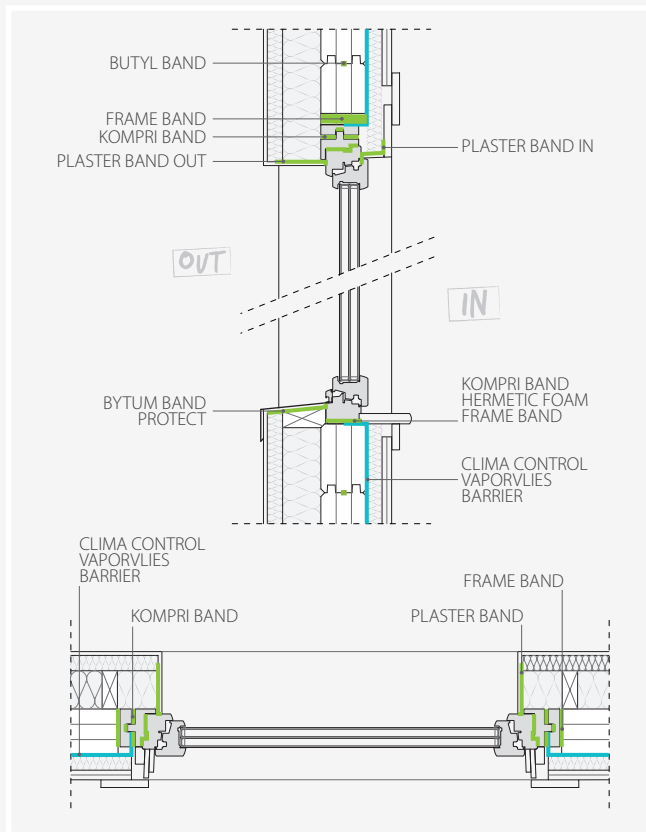


Most internal level, generally the most neglected. Must guarantee airtightness to avoid formation of condensation in installation joints, which could damage the insulating solutions used in the primary node.

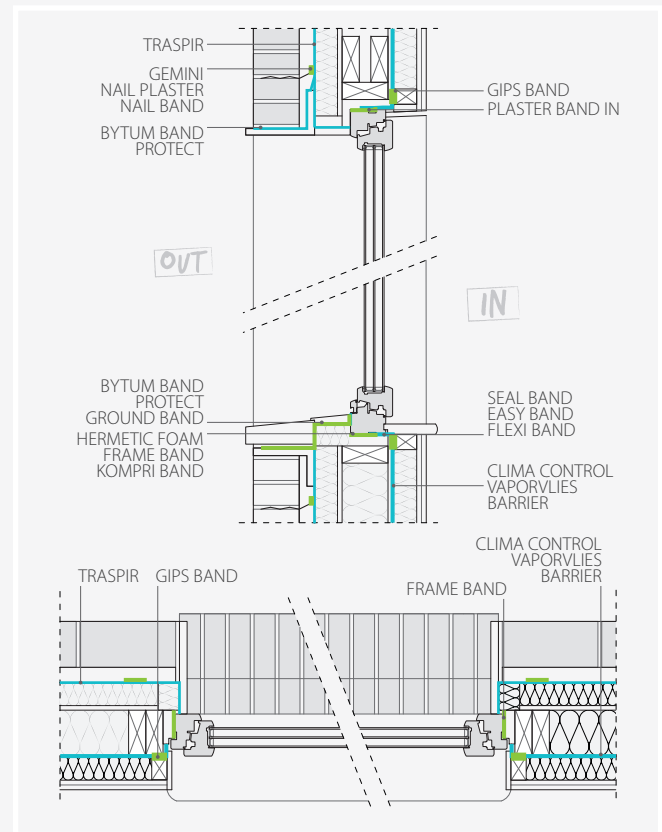
• **ROTHOBLAAS RECOMMENDS:** PLASTER BAND IN, MULTI BAND, SEAL BAND, EASY BAND, FLEXI BAND, FROST BAND

DETAIL 1 | B_2/8_C*

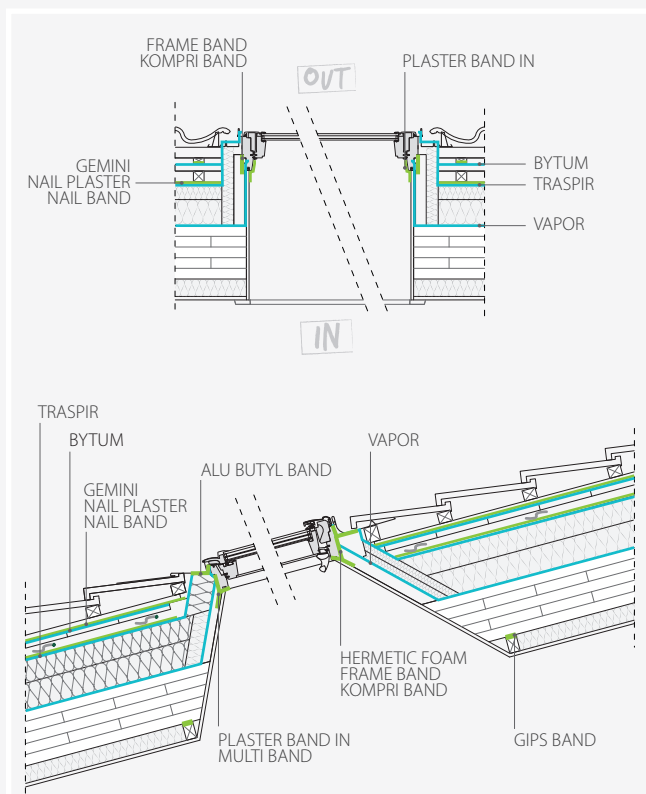
Doors/windows: Blockhaus with external plastered coating

**DETAIL 2** | T_2/8_P*

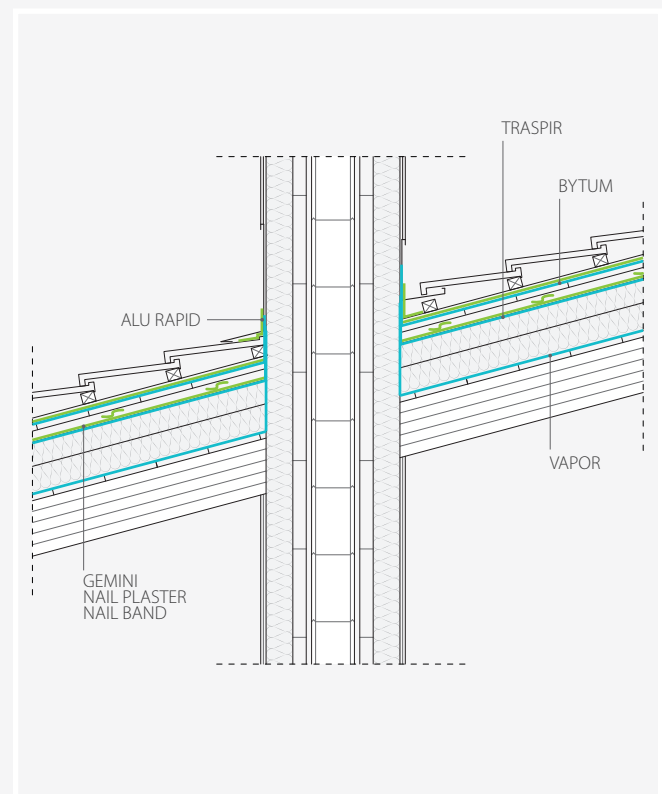
Doors/windows: Platform frame with ventilated facade and external coating in brickwork

**DETAIL 3** | R_T_1/6/9_B*

Window on roof: roof floor made of XLAM (Cross Laminated Timber)

**DETAIL 4** | R_X_1/6/9_C*

Chimney: beam structure and double boarding

* NOTE: Consult the complete library of building details at www.rothoblaas.com