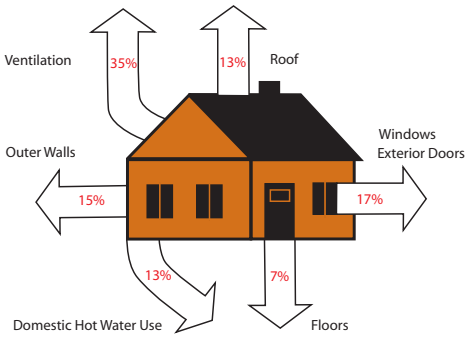
Passive windows, i.e. especially energy efficient windows

Kalesy passive windows significantly save heating energy costs and ensure a warm and cozy ambience even during very cold winter evenings. This can also be felt next to the windows that do not emit cold anymore.

Estimated HEAT LOSS

In the private buildings that are built following the building standards in effect in Estonia



* By Estonian standard EVS 837-1:2003 window maximum thermal conductivity is fixed as U-2,1 W/m²K.

Dear Home-Owner!

As it can be seen from the presented schema, from the windows and doors of a new private building built following the building standards effective in Estonia, approximately 17% of the heat escapes straight to the outside. Depending on the type of heating the heating expenses for a building of 150 m² are approximately 20,000 to 40,000 kroons annually.
Investing in Kalesy's HTP-10 passive window products instead of standard HTP-1 window products, you reduce the heat loss of the windows of your house to 11%. Considering the rapid rise of the prices of thermal energy, this kind of an investment pays back the 30%* higher acquisition price in just 8 years.

* If the price of standard HTP-1 windows in case of a 150 m² house is 100,000 kroons, using the Kalesy HTP-10 passive windows the investment sum will be around 130,000 kroons.

In case of older buildings we are even speaking of 30-50% of warmth that is just "vented" out. With the current heating prices, the heating cost of an older house of 150 m² total area reaches a yearly 30,000-50,000 kroons. As curious as it may seem, the investment in Kalesy's HTP-10 passive windows (130,000 kroons) is earned back witin 6-8 years (investing in standard windows HTP-1 the pay-back period would also be 6-8 years, since the heat loss is bigger). In the long perspective changing the windows of old houses can save a fortune.

Like it can be seen from the calculations, changing the windows of old houses is one of the most beneficial investments – unlike investing in business shares, debentures and other securities. Due to the rapid rise of heating expenses the risk level of the investment is 0, which is a risk level not offered by any bank or fund manager.

Inspecting the adjoining drawings, the details that change Kalesy's HTP-10 passive windows into a highly profitable investment but seem irrelevant at the first sight, will surely not be left unnoticed.

And most importantly – Kalesy's HTP-10 passive windows guarantee, in addition to smaller heating bills, also a comfortably warm and cozy atmosphere even during very cold winter nights. By the way, this also applies to the areas close to the windows which do not emit cold anymore. The only things you will miss are beautiful frost flowers on the windows, because due to the excellent thermal insulation of the windows they simply will not appear.

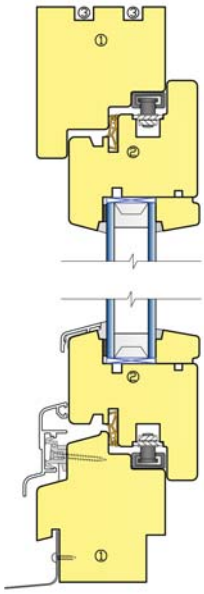
We hope you make the right choice!

NB! All the calculations are approximate and based on Kalesy's 12 years of experience producing windows and doors. Exact calculation of the pay-back period of the investment depends on the complexity of windows and the characteristics of each building.

For Your Information: Some window producers advertise the thermal insulation of their windows showing the data on thermal conductivity of glass package. In reality the thermal insulation of glass package and the window as a whole are two different things.
If the thermal conductivity of glass package is calculated from the centre of the glass (not taking into account the thermal conductivity of the edges of glass packet), then while calculating or testing the thermal conductivity of the whole window all the properties and technical details of the window set are taken under consideration:
- type of window
- type of window material and density
- thermal conductivity of the glass package
- thermal conductivity of the edges of the glass package
- perimeter of the glass package and the depth of glazing in
- thermal conductivities of the window-frame and sash profiles and their surface
- existence of compensation gasket
- number of main gaskets and their technical properties

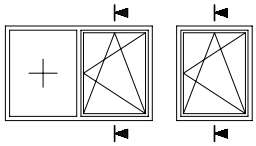
Tip! You should always ask the window seller how they have calculated the thermal conductivity of their window set, or if they have a certificate of testing.

STANDARD **TIMBER WINDOW** HTP-1



- window thermal conductivity U-1,6 W/m²K*
- glass thermal conductivity U-1,4 W/m²K
- 1 x seal
- 2 x glass **26mm** (4mm clear + 4mm clear/LowE)
- 1 x 18mm aluminium glass spacer profile
- 1 x air filling

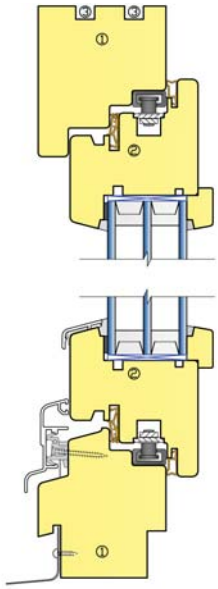
① window frame
② window sash
③ assembly foam grooves (at the sides and upper edge of the window frame)



* By Estonian standard EVS 837-1:2003 window maximum thermal conductivity is fixed as U-2,1 W/m²K

NB! For even more effective protection against weather influencees it is possible to install aluminium profiles on the external side of the wooden window.
The window insulation data remain unchanged.

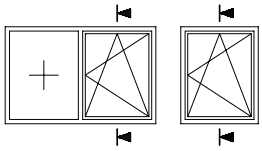
SPECIAL **TIMBER WINDOW** HTP-10



PASSIVE WINDOW
KALESY

- window thermal conductivity U-0,82 W/m²K*
- glass thermal conductivity U-0,6 W/m²K
- 2 x seal
- 3 x glass **42mm** (4mm clear/LowE + 4mm clear + 4mm clear/LowE)
- 2 x 15mm Swisspacer - synthetic composite material glass spacer profile
- 2 x argon filling

① window frame
② window sash
③ assembly foam grooves (at the sides and upper edge of the window frame)



* By Estonian standard EVS 837-1:2003 window maximum thermal conductivity is fixed as U-2,1 W/m²K

NB! For even more effective protection against weather influencees it is possible to install aluminium profiles on the external side of the wooden window.
The window insulation data remain unchanged.