

### WHAT MAKES A FAKRO **ROOF WINDOW BETTER?**

FAKRO roof windows are designed to provide a focal point for any room whether you use them individually or in combinations. Their stylish appearance is matched by the highest standard of manufacturing and finishing which means you can rest assured they will go on looking good for years to come. Our windows offer a perfect combination of style, sustainability, security and long design life. To achieve such high performance involves ongoing refinement and improvement to every roof window that we design.



#### **Premium Close Grained Redwood Timber**

The pine we use offers the clearest visual evidence of our roof window quality. Not only does its close grain look stylish, we obtain timber from FSC® certified sources.



#### Choice of Internal Finish

**FAKRO** offers two types of roof window for rooms in which high levels of humidity are created. You have the choice of either white polyurethanecoated pine or PVC in white, golden oak and pine finishes.



#### **Automatic Controlled Ventilation**

The FAKRO V40P automatic vent which is installed in FAKRO pine roof windows is activated by changes in atmospheric pressure. It provides the optimum balance of fresh air regardless of weather conditions.



#### **Exceptional Security**

FAKRO's TopSafe® system gives confidence and peace of mind that our roof windows offer exceptional burglary resistance. TopSafe provides additional hinge and lock reinforcement to prevent the sash from being forced.



What really sets FAKRO windows apart is their low level of heat loss. Unlike some manufacturers who provide U-values just for glazing units, FAKRO provides information for the whole window. When comparing our performance with other products you will see how our non-vented, quadruple glazed FTT U8 Thermo has a single glazing unit area and a U-value of 0.58W/m<sup>2</sup>K which leads the market.



Our easy to use "bracket fix" installation system enables windows to be fitted either to rafters or battens and sarking.



**C**Lifetime glazing unit hail resistance warranty

#### **Performance Guarantees**

Whether buying natural pine, PU-coated pine or PVC, FAKRO offers a 10 year warranty for all windows and a 20 year warranty on glazing units. We also offer a no quibble lifetime warranty against damage by hail stones.



#### We Don't Just Do White

FAKRO roof windows can be manufactured in any colour from the RAL classic palette.

That's over 200 colours customers can specify to special order for their chosen projects. Our standard natural pine, white acrylic, PU coated and PVC roof windows can be received from stock within three days.





## CERTIFICATES













One of the key factors differentiating manufacturers from one another is certification of products. At FAKRO we continually look for ways to innovate and improve our designs, not just with new roof windows but existing ones. In 2012 this yet again enabled us to set an industry standard as we achieved Passive House certification of our industry leading quadruple-glazed FTT U8 Thermo. The FTT U8 offers an amazing U-value of 0.58 W/m2K and provides the ideal solution for airtight designs.

NBS Plus - FAKRO specification clauses are available via NBS Plus. This enables concise, technically accurate and up-to-date information in relation to our extensive range of roof windows and roofing accessories to be copied and pasted.

In the same way, we led the market by becoming the first roof window manufacturer to secure BBA certification - as long ago as 2002. Today, many more of our products are accredited including our popular ranges of centre pivot, top hung and pivot windows.

This includes products in conservation style and the highly thermally efficient FTT U6 triple-glazed window while, for specifiers and buyers in Ireland we also have Irish Agrément Board (IAB) certification.

FAKRO are the only roof window manufacturer to carry both NSAI & BBA accreditations.

Our roof windows offer scope for you to buy or specify products using timber from sustainable sources; indeed we are the only such manufacturer to offer FSC® certification for the higher quality, close-grain pine which we use. We also design all windows to be stripped down for recycling of all parts which, combined with the use of sustainable timber, shows the extent of our commitment to environmental issues.

CE marking provides a passport that enables a construction product, irrespective of its origin, to be legally placed on the market of all EU member states. Unlike some manufacturers, FAKRO declares full details of performance for all points which make up a CE mark, yet more evidence that our products exceed minimum standards for health, safety and economy of energy.





# HIGHLY ENERGY EFFICIENT PIVOT WINDOWS



- Special roof windows designed for energy-efficient and passive buildings. The glazing unit is embedded in a specially designed sash frame. The wooden profiles are wider compared to a standard window.
- There are five gaskets used in the window. The window construction minimizes the phenomenon of thermal bridging and ensures better window insulation.



- The pivot windows with the axis of rotation above the centre of the window, so even a tall person can easily walk up to the window edge.
- Handle positioned in the base of the sash and equipped with two-step micro-opening.



 The sash can be rotated through 180° and locked allowing safe and easy cleaning of the outer pane.



• Increased burglary resistance- topSafe system.



 ThermoPro technology - the solutions introduced ensure improved quality and parameters of roof windows, thus increasing their energy-efficiency performance, providing greater durability, ensuring excellent tightness and facilitating the installation process.



• Wide range of additional accessories.



• Suitable for roof pitches 15-70°.





highly energy-efficient glazing unit U6  $\mathbf{U_w} = \mathbf{0.80W/m^2K}$  with standard flashing,

**U**<sub>w</sub>=**0.71W/m²K** when installed with Thermo flashing,



highest quality pine wood, glued in layers, vacuum impregnated,



FTT U6 - double coated wood with ecological acrylic lacquer in natural colour,



FTT/U U6 - three coats of polyurethane varnish ideal for creating a durable and smooth finish in white on the surface of the frame. Designed for rooms with periodically increased humidity (kitchens, bathrooms).





passive U8 glazing unit,



**U**<sub>w</sub> = **0.58W/m**<sup>2</sup>**K** the warmest roof window with a single glazing unit available on the market .
Supplied with **Thermo flashing** 



as standard equipped with XDK set, which consists of thermo-insulating XDP kit and air-tight XDS collar,



highest quality pine wood, glued in layers, vacuum impregnated,



FTT U8 - double coated wood with ecological acrylic lacquer in natural colour,



FTT/U U8 - three coats of polyurethane varnish ideal for creating a durable and smooth finish in white on the surface of the frame. Designed for rooms with periodically increased humidity (kitchens, bathrooms).



Designed for passive house buildings, Passive House certified,



#### **BALCONY WINDOW - GALERIA**



• An innovative, large roof window whose sashes when opened create a balcony.



● The upper top hung sash opens upwards, while the lower sash can be tilted forwards, allowing easy access to the balcony recess. The sash when rotated through 0°-45° is supported by an innovative supporting mechanism which allows leaving the open sash in any position within this range.



 Handle positioned in the base of of the upper sash and equipped with two-step micro-opening.



• The sash can be rotated through 180° and locked allowing safe and easy cleaning of the outer pane.



● Increased burglary resistance – topSafe system.

 ThermoPro technology - the solutions introduced ensure improved quality and parameters of roof windows, thus increasing their energy-efficiency performance, providing greater durability, ensuring excellent tightness and facilitating the installation process.



• Highest quality pine wood, glued in layers, vacuum impregnated.



• Double coated wood with ecological acrylic lacquer in natural colour.

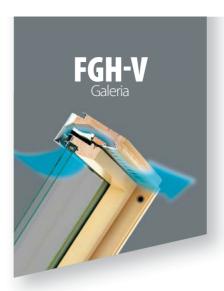


 Three coats of polyurethane varnish ideal for creating a durable and smooth finish in white on the surface of the frame.
 Designed for rooms with periodically increased humidity (kitchens, bathrooms)
 A wide range of accessories.





 Installation in roof pitches between 35 and 55 degrees. Installation in a roof structure without L-shaped wall is recommended.





automatic V40P air-inlet



Both sashes are equipped with safe P2 glazing

upper sash can be rotated smoothly up to an angle of 45°.

Side safety barriers are integrated into the bottom sash and slide out during opening. When closing the lower sash, balcony rails are hidden inside the window and are not visible above the roof surface.





automatic V40P air-inlet



Both sashes are equipped with safe P2 glazing



upper sash can be rotated smoothly up to an angle of 45  $^\circ\!.$ 

Side safety barriers are integrated into the bottom sash and slide out during opening. When closing the lower sash, balcony rails are hidden inside the window and are not visible above the roof surface.



barriers when closed are concealed under the window flashing elements, they do not collect dirt or spoil aesthetics of the roof.



Made to order Balcony window available only with installation performed by authorized service



Combining FGH-V balcony window with other FAKRO windows, e.g. FDY-V can be carried out using K\_\_/G flashings.

BALCONY WINDOW	GALERIA
windows external dimensions [cm]	94x255
effective glazing area [m²]	1.07
	0,60
FGH-V P2 U <sub>w</sub> =1.5 W/m <sup>2</sup> K	+
FGH-V/U P2	

U<sub>w</sub> - heat transfer coefficient

FLASHINGS	
windows external dimensions [cm]	94x255
<b>ELV/G</b> for bitumen shingles and slates up to 10mm thickness	+
EZV-A/G for corrugated roofing material	+
EHN-A/G for high profile roofing material	+
EHN-AT Thermo/G with additional insulation for high profile roofing material	+



# CENTRE PIVOT WINDOW WITH DOUBLE GLAZING UNIT



• Widely used window with the hinge situated in the middle of the window height.



Handle positioned in the base of the sash for easy operation.

Equipped with two step micro-opening.



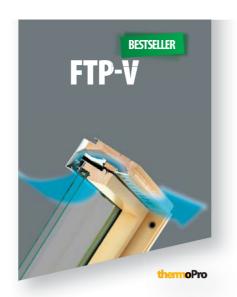
 The sash can be rotated through 180° and locked allowing safe and easy cleaning of the outer pane.



- Wide range of additional accessories.
- The possibility of installing electric control.



• Suitable for roof pitches 15-90°.





automatic V40P air-inlet,



topSafe system with increased burglary resistance,



thermoPro technology increases durability and roof windows parameters,



U3 energy-efficient glazing unit,



safe glazing unit P2,



highest quality pine wood, glued in layers, vacuum impregnated,



double coated wood with ecological acrylic lacquer in natural colour.

#### **CENTRE PIVOT WINDOW** Models GLAZING STRUCTURE INSTALLATION PITCH OPTION 1 OPTION 2 INNER GAS Uw Ug 1.3 W/m<sup>2</sup>K FTP-V P2 780 x 980 780 x 1180 Double Glazed 1.1 W/m<sup>2</sup>K 15 – 90° Argon 15 – 90° 15 – 70° 0.97 W/m<sup>2</sup>K 0.8 W/m<sup>2</sup>K FTP-V U5 780 x 980 Tripple Glazed $0.5 \text{ W/m}^2\text{K}$ 780 x 1180 Krypton 780 x 1180 FTT U6 Thermo 780 x 980 Tripple Glazed Argon $0.5 \text{ W/m}^2\text{K}$ FTT U8 Thermo 780 x 980 780 x 1180 Quadruple Glazed $0.58 \text{ W/m}^2\text{K}$ 15 – 70° $0.3 \text{ W/m}^2\text{K}$ Krypton

# NEW DIMENSION OF INNOVATION

Innovation is the DNA of FAKRO and the main driving force of the company's development. It's a philosophy of unconventional thinking, thanks to which the new solutions expand functionality and enhance product quality. FAKRO has redefined roof windows by introducing an automatic ventilation flap V40P, the topSafe system which strengthens the construction of the window, or thermoPro technology which increases the quality and parameters of the windows.

By focusing on development and innovation, FAKRO contributes to creating comfortable living conditions for people around the world.



#### topSafe

#### **SYSTEM TOPSAFE**

INCREASED SECURITY

Roof windows have to ensure safety of use and protect against unauthorised access to the room from the roof. The special system of the window structure reinforcement topSafe significantly improves resistance of roof windows to break-in attempts and protects against the sash opening under foot pressure if inadvertently stepped on.

The topSafe system consists of:

- Innovative- installation system of specially shaped hinges,
- Metal element strengthening the locking system,
- Metal steel bar, making it difficult to break the window using tools



#### **V40P**

#### **AUTOMATIC V40P AIR INLET**

Positioned in the top part of the frame. At a pressure difference of 10Pa air inlet capacity is up to 49m³/h depending on the window width. The capacity rises up to the point where the optimum value is achieved. If the pressure difference continues to grow, the airflow capacity stays on the same stable level. An elastic, pneumatic flap deflects, limiting the amount of inflowing air by reducing the air inlet duct area e.g. when strong gusts of wind appear and in the winter time.



#### thermoPro

#### THERMOPRO TECHNOLOGY

The roof windows are manufactured using thermoPro technology. The solutions introduced ensure improved quality and parameters of windows. ThermoPro technology increases energy-efficiency performance, provides greater durability, ensures excellent tightness and facilitates the installation process of roof windows.

#### **BETTER THERMAL INSULATION OF WINDOWS**

- Reduced heat loss and lower heating bills
- New version of low emission coating on the glass
- Introduction of insulation inserts in the bottom corners of the sash aimed at enhancing window's energy-efficiency performance

#### **GREATER WINDOW TIGHTNESS IN TERMS OF AIR PERMEABILITY**

Windows manufactured using thermoPro technology feature 3rd and 4th tightness class according to EN12207, thus reducing the amount of air penetrating into the room. It is particularly important for mechanical ventilation.

#### **GREATER WOOD DURABILITY THANKS TO WATER DRAINAGE CHANNELS**

Special water drainage channels are introduced in the lower corners of the frame to discharge water from condensation and potential leakage caused by, e.g. damaged external aluminium profiles. Wooden profiles are less exposed to the moisture, which adds to their durability.

#### **EASIER INSTALLATION GREATER COMFORT OF WORK**

New brackets facilitate installation work and increase the ability to adjust roof windows during their installation. In addition, the use of Torx screws streamlines the installation process of roof windows.



#### **TYPES OF WINDOW PROFILES STRUCTURE**

Windows should be chosen based on to the humidity level in the room.



## Wood with colourless acrylic coating

The basic material for the production of windows is specially selected high quality pinewood, glued in layers. The wood is vacuum impregnated and lacquered with eco-friendly acrylic lacquer in natural colour. Such windows find their destination in most of rooms in the attic.



FAKRO obtains wood from forests with planned forestry economy and uses in the production process eco-friendly materials which do not contain harmful substances.



Wood with white polyurethane layer

For rooms with periodically elevated humidity levels (kitchens, bathrooms) we recommend wooden windows coated with three layers of white polyurethane lacquer to create durable and perfectly smooth surface. Visible parts of the window such as bolts or locking elements are made of plastic in white colour which add to its aesthetics. Handle in silver colour.



**Aluminium clad-PVC** 

Aluminium clad - PVC windows are intended for rooms with increased humidity (bathrooms, bathing salons). Multi-chamber PVC profiles are strengthened from the inside with galvanized steel. The plastic used in the window does not absorb any moisture and the window itself is durable and corrosion free. The PVC profiles are classified with class A - the highest by EN 12608 standard. Windows are also available in golden oak (GO) and pine (PI) veneer.

Selected windows are made in innovative profile joining technology V-PERFECT.











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