



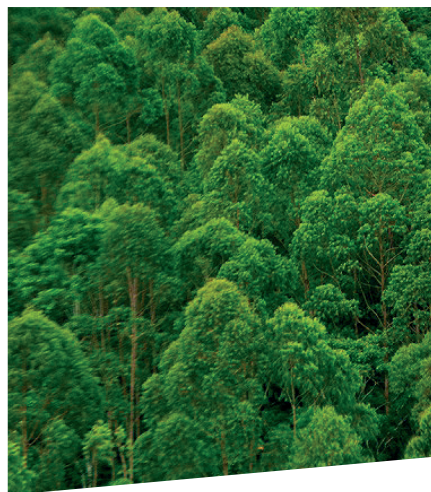
Eco-friendly FAKRO

in harmony with Mother Nature

FAKRO is one of the most innovative companies in Poland, holding over 170 patents and patent applications. It also sets a good example of ecological approach to business in which modernity goes hand in hand with care for the natural environment. FAKRO, as a company actively operating in the construction industry, has been applying its eco policy for many years now with regard to manufactured products and the production system itself, being aware that consumer demands grow together with increasing awareness of the society in environmental issues. "FAKRO is a company with a 30-year history that focuses on energy-efficiency and ecology since its inception. Our priority are conscious actions to protect the environment. **Both FAKRO products and the process of their production are energy-efficient and eco-friendly**", commented by Janusz Komurkiewicz, FAKRO Management Board Member for Marketing.

Wood from certified forests

The basic raw material used for manufacturing FAKRO roof windows is pinewood. Its value as an ecological, natural and at the same time the most safe building material for human health has been known for generations. Wood is the most renewable raw material. This natural material is sourced from sustainable forest areas certified by FSC® and/or PEFC. FAKRO products made of this wood are marked with the FSC® certificate. This is evidence of compliance with ecology principles in forest production processes. Customers purchasing FAKRO



products made of wood can be sure that it comes from forests managed with respect for nature and the communities living in its area, simply following the principles of Good Forest Practice.

Green production process

Having care for the environment in mind, FAKRO opts for wooden and aluminium structure in the production of roof windows. The sash and frame edges are covered with an aluminium profile to ensure protection against moisture, rain or UV radiation. In order to meet the expectations of the modern market, FAKRO implements solutions that satisfy the needs of customers, while taking care of the natural environment. The window made of plastic is designed in such a way that it can be easily recycled in the future. FAKRO does not use plywood-polyurethane structure in the manufacture of PVC roof windows since separating the polyurethane layer from plywood is difficult and therefore very expensive, which in practice means no possibility of recycling.

Natural raw materials

Care for the natural environment is also reflected in the choice of measures used to protect wood. In order to reduce the emission of volatile organic compounds, FAKRO mainly uses eco-friendly water-based varnishes.



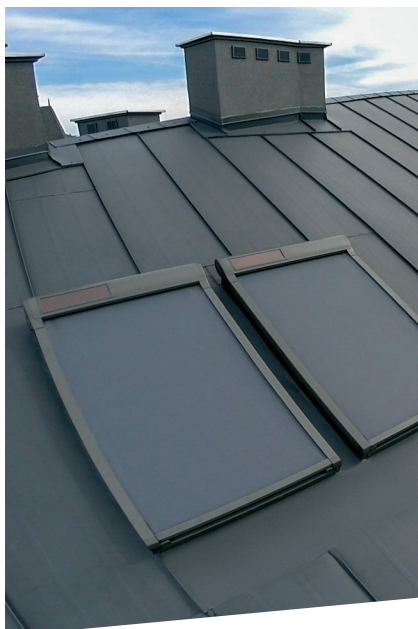
We use natural, ecological and specially selected sheep wool for thermal insulation which thanks to its high density and elasticity accurately fills the gaps around the window. The application of such flexible material is a universal way of insulating a roof window, irrespective of the size of the mounting opening.

Energy-efficient windows

One of the important objectives taken into consideration when designing products is their impact on nature. Energy-efficiency is one of the priorities in the FAKRO philosophy. Consequently, FAKRO products are energy-efficient and eco-friendly, contributing to the protection of the Earth's non-renewable natural resources. The company has been offering roof windows equipped with double and even triple chamber glazing units for many years now. They allow for rational management of heat energy and reduce heating bills. Savings can be increased by using Thermo flashings and the XDK set of insulating collars, further insulating the window from the outside. FAKRO product range also includes highly energy-efficient FTT U8 Thermo window with a U_w value of $0.58W/m^2K$, which is the "warmest" roof window available on the market. The product supplied and assembled with the EHV-AT Thermo flashing is designed for energy-saving and passive construction.

Awning blinds that protect against overheating

FAKRO awning blinds intended for roof and vertical windows effectively stop the heat outside the window and simultaneously provide residents with a supply of natural light. The research carried out by FAKRO shows that awnings protect against overheating up to 8 times more efficiently than commonly used internal blinds. In practice, this results in an internal temperature drop of up to $10^{\circ}C$. This is because awning blinds absorb solar radiation before it reaches the glazing and emit the heat outside, thus protecting the interior against excessive heat gain. However, this is not their only advantage as they ensure additional protection against heat loss when pulled down on cooler days. Thanks to their use, the heat transfer coefficient of the very window improves by up to a dozen or so percent, thus saving energy used to heat apartments or houses. Awning blinds are therefore an all-year round product that



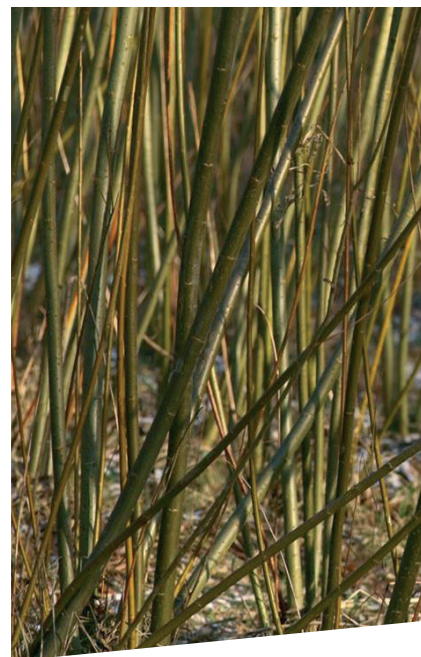
significantly reduces energy-consumption.

Production waste management

FAKRO applies specific European standards and principles, a special hierarchy of conduct in waste management. The company strives to prevent waste formation by minimising its quantity and taking such measures as recycling, recovering, neutralising and storing. Waste that cannot be recovered is transferred to the nearest recipient with appropriate permit for its disposal and neutralisation. This is in line with the so-called proximity principle. The Company's employees also have to follow internal waste management instructions, with particular emphasis on segregation. FAKRO uses wood waste generated during the production process without environmentally harmful emissions. What is more, production and office spaces in all FAKRO Group plants are heated in an eco-friendly manner.

Green FAKRO

Think green – this slogan has been the motto of FAKRO for years as we develop eco-friendly activities also in the field of the Company's functioning. An important issue is the modernisation of the heating system, where the source of energy is biomass acquired from the production process waste mixed with



chips of energy willow. FAKRO grows its own plantation of this ecological raw material, increasing its area by approx. 4 ha each year. Currently, the plantation occupies a surface similar to the area of 42 full-size football pitches – over 30 ha. Each hectare of energy willow provides several dozen tons of dry matter each year. Willow cultivation results in annual growth of 20 - 25 tons of matter per one hectare. As many as 335 tons of chips of energy willow were harvested last season. The calorific value of willow chips with 30% humidity is about 12 MJ/kg. For this reason, one hectare can produce more or less as much energy as a few tons of hard coal. The cost of obtaining 1 GJ of thermal energy from willow chips is nearly two times lower when compared to using natural gas and three times lower than heating oil. The benefits of using this alternative and renewable energy source are measurable both in ecological and economic aspects. FAKRO implements the assumptions of Europe 2020 strategy. According to them, 20% of energy should come from renewable energy sources. Pro-ecological actions are also carried out through thermal modernisation of buildings and reducing the consumption of electricity used to illuminate work areas. For this purpose, all newly built production halls are equipped with LED light sources to achieve a suitable amount of light with reduced energy consumption.