

EPP as the key to innovation and sustainable development in FLOWAIR products

CONTEXT

FLOWAIR, a leader in the HVAC industry, has been using expanded polypropylene (EPP) technology in its devices for over 12 years, combining a modern technological approach with environmental responsibility. The company has opted for EPP to achieve three strategic goals:

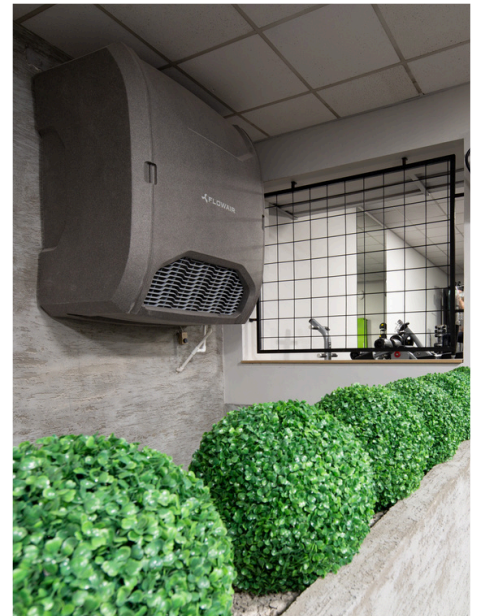
- Reducing the weight of devices, which facilitates transport and installation and lowers logistics costs.
- Improve insulation and mechanical parameters, which affects the energy efficiency and durability of products.
- Reduce CO₂ emissions by using lighter and more environmentally friendly materials

PROPOSAL

FLOWAIR has replaced traditional steel casings in its devices with lightweight and durable EPP components. This has enabled the company to achieve significant technological and environmental benefits that distinguish its products on the HVAC market.

Advantages of EPP in FLOWAIR products:

- **Lightweight:** EPP casings significantly reduce the weight of the units, making them easier to install and transport.
- **Thermal and acoustic insulation:** EPP provides excellent insulation properties, supporting the energy efficiency of HVAC systems.
- **Mechanical and chemical resistance:** The material is resistant to moisture, chemicals and mechanical damage, which increases the durability of the equipment.
- **Recyclability:** EPP is suitable for recycling, making it an environmentally friendly material.



USE OF EPP IN FLOWAIR PRODUCTS

- **OXeN – ventilation with heat recovery**

The OXeN unit housing is made entirely of EPP, which has reduced its weight to 75–82 kg. This means that it can be installed by a single installer without the use of heavy equipment. EPP also provides excellent thermal and acoustic insulation, which translates into high energy efficiency and comfort of use.

- **LEO – water heater**

EPP casings in LEO heaters have reduced the weight of the units to just 10.4 kg in the lightest models. This solution facilitates installation, increases resistance to mechanical damage and improves thermal insulation.

- **LEO Cool – cooling and heating in one**

Thanks to the use of EPP, LEO Cool device casings weigh between 23 and 36 kg, which facilitates their transport and installation. This material also ensures quiet operation, energy efficiency and high resistance to mechanical damage.

- **Luna – compact heating and ventilation unit**

EPP plays a key structural role in the Luna unit, providing rigidity, thermal and acoustic insulation. This makes the unit not only energy efficient, but also aesthetically pleasing and compact, ideal for offices and commercial spaces.

Like OXeN, Luna has been awarded the prestigious Red Dot Design Award, which highlights its innovation and high quality.



RESULTS



CO₂ emission reduction: The production and transport of equipment with EPP enclosures generate almost 50% less CO₂ emissions compared to equipment with steel enclosures.



Lower device weight: EPP enclosures are significantly lighter (e.g. 2 kg compared to 23 kg for steel), which reduces transport and assembly costs.



Higher energy efficiency: Thanks to their excellent insulating and mechanical properties, FLOWAIR devices are more energy-efficient and durable.



The use of expanded polypropylene in FLOWAIR products is an example of an innovative approach to HVAC equipment design. Thanks to EPP, the company has not only improved the technical parameters of its products, but also reduced their environmental impact, setting new standards in the industry.

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About KNAUF INDUSTRIES

We specialise in the production of moulded components made of expanded polystyrene (EPS) and expanded polypropylene (EPP). We are experts in the production of components made of expanded plastics and elements manufactured using plastic injection moulding.

We have the knowledge and experience to create packaging and technical parts for various sectors, such as food processing, construction, industry and automotive.

Trust our experience and innovative solutions to optimise your projects and meet industry expectations. Together we can achieve success!

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