

SKAWEN

Riga Mill Project



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A Modern Industrial Ventilation Solution

The Riga Mill project is an innovative industrial ventilation initiative focusing on energy efficiency and durability in the food production sector. Located in Riga, Latvia, the project was completed in 2024. The facility processes oats, and its ventilation systems must handle challenging environmental conditions, including dusty, humid, and corrosive air.

Key Project Details

- **Location:** Riga, Latvia.
- **Completion Year:** 2024.
- **Industry:** Food production – oat processing.
- **Ventilation Type:** Industrial rooftop ventilation.
- **Installed Units:** Two rooftop ventilation systems (Model SKW RUAR 10.10).
- **Airflow Capacity:** 2x90,000 m³/h, among the largest in its class.
- **Energy Efficiency:** 300 kW energy recovery from warm and humid process exhaust air.
- **Weight:** Each unit weighs 4,600 kg, designed for long-term use.



Highlights and Solutions

- 1. Composite Casing:**
 - Constructed with C4 corrosion-resistant material, the system withstands the humid, dusty, and abrasive air from oat milling processes, ensuring durability and reduced maintenance costs.
- 2. RunAround Energy Recovery System:**
 - Captures heat from the exhaust air and uses it to preheat supply air, achieving high energy efficiency.
- 3. Installation Setup:**
 - All ventilation units are mounted on the production building's rooftop at a height of 30 meters, optimizing space utilization and system performance.
- 4. Optimal Air Pressure:**
 - The system operates with a total pressure of 500 Pa, ensuring a balance between energy efficiency and ventilation capacity.



Installation Process

Overcoming Challenges with Precision

The installation phase of the Riga Mill project presented several challenges due to the size and complexity of the equipment, the height of the installation site, and the specific demands of oat milling operations. The process required meticulous planning and coordination among different teams to ensure success.

Installation Highlights:

- 1. Rooftop Setup at 30 Meters:**
 - All units were installed on the production building's rooftop at a height of **30 meters**, requiring the use of specialized cranes and lifting equipment to handle the 4,600 kg units safely.
 - Precision was critical to position the units correctly within the limited space and to connect them seamlessly to the existing production systems.
- 2. Customized Equipment Delivery:**
 - The ventilation units were delivered in modular sections to accommodate transport limitations and rooftop access.
 - The modules were assembled on-site, ensuring they fit the production building's design and infrastructure.
- 3. Handling Harsh Process Air:**
 - The processed air in oat milling is **humid, dusty, highly corrosive, and abrasive**, which necessitated the use of **C4 corrosion-resistant composite casing**. During installation, special attention was paid to sealing and connecting components to maintain resistance to these harsh conditions.

4. Coordination Among Teams:

- The project brought together construction, ventilation, electrical, and mechanical engineering teams. Each team played a critical role in ensuring the successful installation and integration of the ventilation systems.

5. Energy Recovery Integration:

- The **RunAround system**, which recovers heat from the process exhaust air, was integrated during installation.

6. Testing and Commissioning:

- Once the units were installed, a comprehensive testing phase began. This included verifying airflow capacities, ensuring energy recovery efficiency, and calibrating the system to handle the harsh environmental conditions of oat milling.
- The commissioning process ensured that the system met the project's performance and efficiency targets.

The Riga Mill installation showcases how complex ventilation projects can be executed with precision and innovation. By combining robust equipment with careful planning, the project has transformed the facility into a model of energy efficiency and operational reliability, meeting the unique demands of the food production sector.

This successful installation highlights Skawen's commitment to delivering tailored solutions that excel in challenging industrial environments.

About Skawen Sweden AB

The main supplier and developer for the Riga Mill ventilation system is Skawen Sweden AB, a company specializing in modern ventilation solutions. Despite being a relatively young player in the market, operating for five years, Skawen has already gained a reputation for its innovative approach and ability to manage entire projects—from design to delivery and commissioning.

Skawen's Strengths:

- **Comprehensive Approach:** Skawen oversees the entire process, ensuring quality at every stage.
- **Quality and Durability:** The company focuses on solutions meeting the highest industrial standards.'
- **Global Expertise:** With manufacturing facilities in Tallinn, Estonia, Skawen serves clients across European markets.

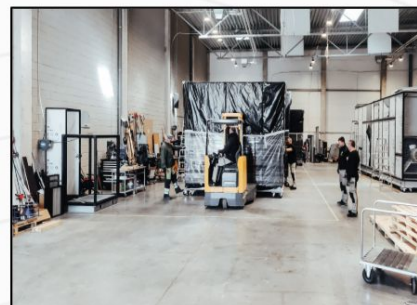
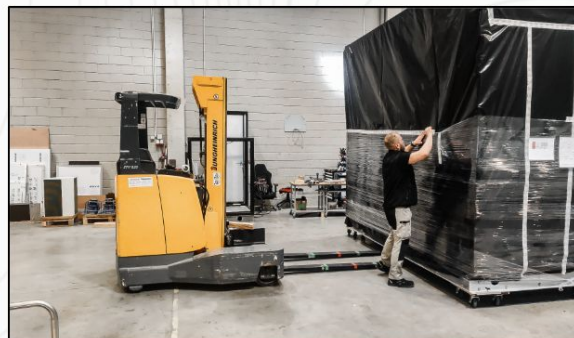
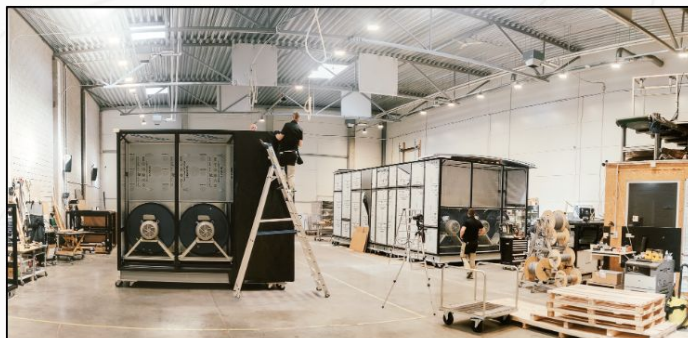


Impact and Significance

The Riga Mill project demonstrates how modern ventilation technology can meet the complex needs of the industrial sector. With its energy recovery capacity of 300 kW and high airflow capability, the system supports sustainable operations while adhering to the specific demands of food processing facilities.

This project is a testament to Skawen's ability to deliver innovative engineering solutions, ensuring both environmental sustainability and operational efficiency.

Transportation process





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with cutting-edge solutions.**

Contact us

www.skawen.com

info@skawen.com



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