

Atlas Copco Vacuum enables sustainable practices for energy-efficient buildings

Region: Porsgrunn, Norway

Sector: Construction

Benefit: Up to 50% energy savings

Isola, based in Norway is a company that provides insulation products for the construction industry with a focus on sustainability and efficiency. They aim to contribute to sustainable economic growth by being a socially responsible promoter of the construction industry in the development of climate-efficient buildings. Isola invests in its development expertise and keeps up to date on climate and environmental trends, building practices and authority requirements. They have a high focus on contributing to the fight for dry, healthy, and energy-efficient buildings.

Challenge:

Isola believes in producing products and construction materials that contribute to a better environment. The process of making those products is important as well. Through the development of their insulation materials, they seek to simplify everyday life for the end-users of their products. Sustainability and energy-efficiency are core targets they seek to achieve in their daily production operations.

Isola used two roots blower vacuum pumps that were consuming considerable energy and high levels of heat. Being located close to a residential area, the noise generated from these pumps at their production site was an environmental and well-being challenge.

Solution:

To meet their goal of energy-efficient and sustainable practices, Isola chose the Atlas Copco GHS 2002 VSD⁺ oil-sealed screw vacuum pump with HEX@™ controller. The GHS 2002 VSD⁺ features a new design for better performance, optimal oil separation, a smaller footprint, and the innovative new HEX@™ vacuum pump controller. Vacuum is needed for extrusion and thermoforming processes. The level of vacuum required is variable depending on the status of the process. The variable speed of the GHS VSD⁺ pumps are an ideal solution since they have great turndown ratio linked to increased energy efficiency.

Due to the high temperature of these processes, Atlas Copco recommended the Energy Recovery System that allows Isola to recover the dissipated heat. Most of the electrical energy that is used by a vacuum solution is converted into heat - up to 90%. The integrated energy recovery system can recover up to three quarters of that power input in the form of hot water.

Due to the Industry 4.0 capabilities of the GHS VSD⁺ series, Isola can remotely consult the status of their

vacuum system, start, and stop the machine, or change the setpoint via any device, for instance their smartphone or their PC.

They just need to connect the vacuum pump by LAN to the company's network to access the pump's user interface.



Atlas Copco GHS 2002 VSD⁺ oil-sealed screw vacuum pump and HEX@™ controller

Outcome:

In line with Isola's production philosophy, the Atlas Copco GHS VSD⁺ vacuum pumps deliver efficient vacuum with minimal impact on the environment. The new installation is very quiet, around 30dB less than the previous installation. Atlas Copco not only keeps Isola happy, but the neighbors too. In addition, Isola can reduce their energy usage whilst using the energy to heat the water needed for their production facility.

Since Isola's need for vacuum fluctuates depending on different factors such as process changes or even the time of day. The variable speed technology allows these pumps to closely follow that demand. No unnecessary vacuum is produced, no energy is wasted.

With the arrival of the HEX@™ controller the system can be monitored remotely and allows the Atlas Copco team to assist whenever needed. Equipped with the latest generation controller HEX@™, Isola benefits from the connected controller. Their system can be monitored remotely and allows the Atlas Copco team to assist whenever needed. Isola can expect extra energy cost savings and a high return on their investment. With Atlas Copco's intelligent vacuum solutions, they can continue their operations in a sustainable manner.

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To know more about the Atlas Copco GHS VSD⁺ vacuum pump with HEX@™, scan the QR code.