

CASE STUDY

FOOD & BEVERAGE



Clean compressed air for the cream of the spinach crop

Oil-free compressors from CompAir have helped Germany's largest frozen food warehouse process over 90,000 tonnes of fresh vegetables a year, for use in the production of ready meals.

Most of the production at the iglo works in Reken, Westphalia consists of spinach products, so hygiene standards are of the essence to eliminate product spoilage.

Overview

- ▶ **Client**
MVV Energiedienstleistungen West GmbH
- ▶ **Location**
iglo works, Reken, Germany
- ▶ **Application**
Frozen food production
- ▶ **Products**
Oil-free DH compressors featuring PureAir™ technology
- ▶ **Customer Benefits**
Reliable, clean compressed air with excellent efficiency

Application Details

The power and supply systems at the iglo plant have been gradually audited over the past few years with a view to reducing costs and saving resources and the decision was taken to modernise the compressed air system. MVV Energiedienstleistungen West GmbH (MVV), the contractor responsible for the supply and distribution of power at the iglo plant, chose two CompAir oil-free DH compressors to replace the existing compressed air system.

"The existing compressors required too much maintenance and were expensive to operate, particularly under partial load," says Andrew Bernemann, MVV's operations manager at the Reken location.

"Energy efficiency and excellent life cycle costs were important when choosing the new compressors, but the emphasis was also placed on the reliable generation of clean, oil-free compressed air as it is used as plant and process air for food production," says Andrew Bernemann.

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Benefits at a glance

- ▶ **Reliable, clean, oil-free air**
- ▶ **Low power consumption and high efficiency**
- ▶ **Eliminates maintenance and environment costs associated with oil and oil filter changes**
- ▶ **Reduced lifetime operating costs and fast payback times**

With this in mind, the decision was taken to use CompAir DH compressors. Featuring PureAir technology, these compressors generate totally oil-free compressed air. Water is used to lubricate, seal and cool the compression process, providing low compression temperatures – contributing to reduced power consumption.

The simple construction of the DH compressors, using fewer wear-prone parts, has resulted in lower maintenance time and costs, allowing iglo to benefit from less production downtime and increased efficiency. Downstream of the compressors are ultra- fine filters and a desiccant dryer that removes minute particles from the compressed air as well as eliminating moisture. A volume flow meter sends measured values to the control room in the iglo plant to allow operators to monitor consumption.

According to Andrew Bernemann, “The new, incredibly efficient machines represent an investment that will pay for itself through increased efficiency, reduced primary energy consumption and low maintenance costs. Totally oil-free compressed air generation means that we can guarantee maximum production reliability for our customer.”

About CompAir’s DH Series

CompAir’s range of oil-free compressors are designed to provide complete air purity and reduce cost of ownership for manufacturers, with energy savings of up to 25%. In contrast to conventional ‘oil-free’ compressor technologies, which often have oil in the gearbox, filters and pumps, compressors in the DH range do not contain a single drop of lubricating oil. Instead, high quality water injection lubricates, cools and seals the compression process, providing low operating temperatures of just 60°C, compared to some conventional

compressors which can operate at up to 200°C. This can help reduce power consumption and improve efficiency further.

The design, bearing technology and materials used, make the compressors extremely resistant to wear and also significantly reduce both maintenance and operating costs. Unlike other compressors, which can incorporate numerous components such as seals and bearings, CompAir’s DH models are constructed with fewer parts, resulting in a simpler construction that minimises maintenance time and costs. Coupled with having no oil or oil-laden parts to dispose of appropriately and responsibly, this can significantly reduce lifetime operating costs.

Compressors in the DH range are available with variable-speed drive technology that matches compressor flow to plant demand with great efficiency. This means that the unit produces the correct volume of air required by the application at all times. On average, this provides a saving of 25% on annual energy costs, compared to a typical fixed speed compressor.



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Andrew Bernemann, Operations Manager, MVV