

RELY ON EXCELLENCE

RoTechBooster for Compressors in Natural Gas Storage

New solution improves ecological and economical balance.



The Etzel oil and gas cavern system is situated southwest of Wilhelmshaven, not far from the North Sea coast. A vast salt dome houses the more than 70 caverns which store crude oil and natural gas at depths between 900 and 1,700 meters. Etzel is integrated in the northwest European oil and gas pipeline network and makes a significant contribution to the safe and reliable supply of gas to Germany and all of Europe.



The natural gas is stored during the summer, and when the demand increases during the winter it is brought back to the surface and fed to the network. At the heart of these processes are compressors which pressurize the natural gas at a storage pressure of up to 200 bar (2,900 PSI).

Uniper Energy Storage GmbH markets gas storage capacities at 12 locations in Europe. The company operates the facilities which store and withdraw the natural gas in Etzel.



The challenge: Compressor standstills

Intermittent compressor operation is a characteristic that experience shows leads to seal problems, because the seals are no longer protected from unfiltered process gas during standstill. Only continuous operation purges the seals with clean filtered gas from the compressor discharge to protect them from unrefined process gas.

Depressurizing the compressor keeps the gas seals dry and clean during standstill. This releases the natural gas in the compressor and the pressure drops in the machine. Because of the pressure compensation between the process and atmosphere, there is no risk of contaminated gas accessing

the seals. However, applying this method releases greater amounts of greenhouse gases to the environment, not to mention the considerable costs incurred due to natural gas losses.

CASE STUDY

- **Reference:** Oil and gas cavern system (Etzel, Germany)
- **Client:** Uniper Energy Storage GmbH
- **Industry:** Oil & Gas
- **Challenge:** Seal contamination due to intermittent operation. Venting the compressor to prevent this releases a large amount of natural gas to the environment.
- **EagleBurgmann services:** Consulting, engineering and implementation of a reliable seal gas supply during all conditions.
- **Technical solution:** RoTechBooster®



The solution: RoTechBooster

The EagleBurgmann RoTechBooster is the best technical and optimal environmental solution. The innovative booster has been proven in numerous applications and generates a continuous, stable flow of gas to supply clean and dry gas to the seals during standstill. The rotating principle enables long operating periods along with 24,000 hour maintenance intervals. This allows a pressurized standstill compressor for several days, weeks, or months with confidence the seals are protected.

Uniper Energy Storage successfully fitted six compressors with the new technology. The end user carried out the project management for integrating the RoTechBoosters into the existing facilities and EagleBurgmann provided consultation, engineering and the RoTechBooster system.

In addition to Etzel, EagleBurgmann RoTechBoosters were also installed at the Uniper Bierwang and Epe, Germany locations.

Advantages of RoTechBoosters

The RoTechBooster ensures abundant, reliable, and consistent seal gas flow, through fluctuating operating conditions; thus, clean and dry gas is supplied to the gas seal in every situation.

- Simple to set-up, easy to operate
- High reliability and availability
- Unlimited continuous operation
- Avoid seal failures
- Low maintenance costs
- Energy efficient
- Eliminates the concern of unreliable external seal gas source



Result

Implementing the RoTechBooster, eliminated the need to vent the compressor during standstill for prevent seal contamination, a true added value was generated. This considerably improved the entire plant economic feasibility and ecological assessment.

The procurement costs for the EagleBurgmann RoTechBooster were recovered through extended maintenance cycles, lower maintenance costs, greater compressor availability and a significant reduction of lost gas.



Further information
on RoTechBooster

EagleBurgmann – at the leading edge of industrial sealing technology

Our products are used wherever safety and reliability count: in the industries of oil & gas, refineries, petrochemicals, chemicals, pharmaceuticals, food, energy, water and many more. About 6,000 employees contribute their ideas, solutions and dedication every day to ensure that customers around the globe can rely on our seals. With our modular TotalSealCare Service, we emphasize our strong customer orientation and offer custom-tailored services for every need. **Rely on excellence.**

eagleburgmann.com
info@eagleburgmann.com

