

RoTechBooster for compressors in natural gas storage

The Etzel oil and gas cavern system is situated not far from the North Sea coast, southwest of Wilhelmshaven. 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.

Uniper Energy Storage GmbH markets gas storage capacities at 12 locations in Europe. The company operates the technical plants which store and withdraw the natural gas in Etzel. 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 level of up to 200 bar (2,900 PSI).

The challenge: Compressor standstills

Discontinuous operation is characteristic of the compressors which, as experience has shown, can lead to problems because the shaft seals are no longer protected from contaminated process gas during standstills. Only continuous operation purges the seals with filtered, clean gas from the pressure side of the compressor and does not permit contact with unrefined process gas.

Depressurizing the compressor will keep 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,



The EagleBurgmann RoTechBooster can be integrated into any existing system.

not to mention the considerable costs incurred due to the loss of natural gas.

The solution: EagleBurgmann RoTechBooster

The EagleBurgmann RoTechBooster is the technically best, and economically optimal, 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 and maintenance intervals. This can also keep a compressor pressurized for over several days, weeks, and months without the booster requiring maintenance.

Uniper Energy Storage successfully fitted six compressors with the new technology. The project management for integrating the existing plants was carried out by the end user; EagleBurgmann provided the engineering and delivery of the RoTechBooster systems. In addition to Etzel, EagleBurgmann RoTechBoosters are also in use at the Uniper locations of Bierwang and Epe, Germany.

The procurement costs of the EagleBurgmann RoTechBooster are balanced by greater savings through longer maintenance intervals, and consequently less maintenance costs, greater availability of the compressors and a significant minimization of gas losses.

By replacing the old boosters no longer suitable for continuous operation with the EagleBurgmann RoTechBooster, a true added value was generated. This considerably improved the economic feasibility and ecological assessment of the entire plant.



EagleBurgmann RoTechBooster – compact unit for the reliable supply of gas to compressor seals during pressurized standstill.