

KrinnAir CO2 Reducer

Art.Nr.: HA100019



KrinnAir CO2 Reducer according to DIN EN 12021

The fully automatic, internally piped and wired CO2 compact system has a defined operating mode, which was technically not yet possible. Especially by the combination of CO2 adsorption and regeneration by nitrogen, which is available as a waste product at the NITROX membrane plant.

The nitrogen is heated by means of compressed air heating and used for regeneration and drying of the drying medium. The KrinnAir CO2 reduction ensures extremely reliable CO2 reduction and drying of compressed air. This results in an increase in the overall efficiency of NITROX production and at the same time increases the efficiency and lifetime of the NITROX membrane.

The integrated particle filter allows a service life of 500 hours. The filter element is validated and certified according to quality standard ISO 12.500-1: 2007.

With the stand-alone ""stand alone"" control, the use of this KrinnAir CO2 reduction system can be used universally. Almost complete independence from screw compressor, diaphragm system and high pressure compressor. The connection is made by means of three flexible hoses.

CO2 is absorbed and regenerated with nitrogen from the membrane

The supercharged compressed air flows into the processing system at an excess pressure of 7 to 10 bar at the compressed air inlet. The compressed air is dried and treated without oil. At the compressed air outlet, dry and oil-free compressed air is available for the CO2 process and for NITROX generation.

The cleaned compressed air flows from the bottom upwards through a container filled with drying agent. The quantity of drying agent binds CO₂ and is sufficiently dimensioned to absorb the CO₂ over a defined period of time. In parallel, the second drying agent container is regenerated from top to bottom in countercurrent. This is done with a relaxed nitrogen (approx. 85%), which is available as residual gas from the NITROX oxygen membrane.

CO₂ is removed prior to NITROX production.

Before entering the NITROX membrane, the pressure is reduced and the compressed air is heated. In the NITROX membrane, oxygen and nitrogen are defined separately in the hollow fiber membrane and produced to the desired NITROX breathing gas mixture according to DIN EN 12021.

The residual nitrogen cleans the CO₂-saturated drying agent in the subsequent step. With a low residual pressure, the CO₂ from the drying agent is absorbed again and discharged via the silencer.

The system can be integrated into any NITROX system and can be retrofitted at any time.

Delivery:

- Functional and modern housing for basic installation
- Version in stainless steel V2A, powdercoated RAL9010
- Piping of compressed air, nitrogen pipe in galvanized steel Particle filter with manual drain
- Protection of pressure vessels with safety valve, pressure gauge by means of manometer
- Nitrogen heating with automatic temperature control and monitoring
- Maintenance-friendly housing with detachable side plates
- Integrated electrical cabinet complete wired IP54

- Optional: CO₂ sensor with potential-free alarm contact and acoustic signal
- Optional: humidity sensor with alarm function and acoustic signal

Each system is subjected to a test run in our factory. A test certificate confirms the successful acceptance.

The nitrox system described corresponds to the CE standard and the Machinery Directive 2006/42 / EC CE standard.

Specification

Volume: cc