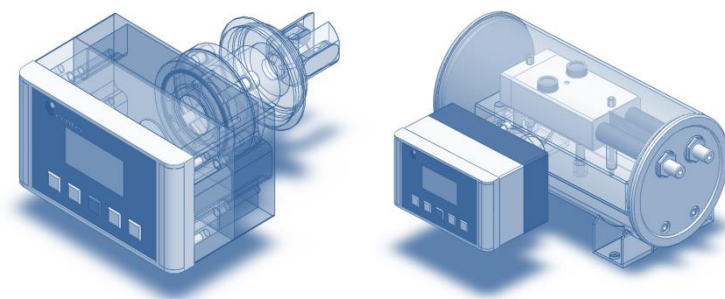


The Centec Group

Centec is a privately owned group of companies. From conventional power plants to solar energy and biofuel – there is a broad range of applications for our automated process skids. We are a leading supplier of water purification and deaeration technologies. Automated CIP-systems designed and manufactured by Centec are installed around the globe. Centec technology includes a range of high precision process sensors for accurately measuring critical product properties such as the concentration of acidic and caustic solutions and O₂ content. The largest energy groups in the world and numerous power plants are among our key customers.



Accuracy. Reliability. Centec.

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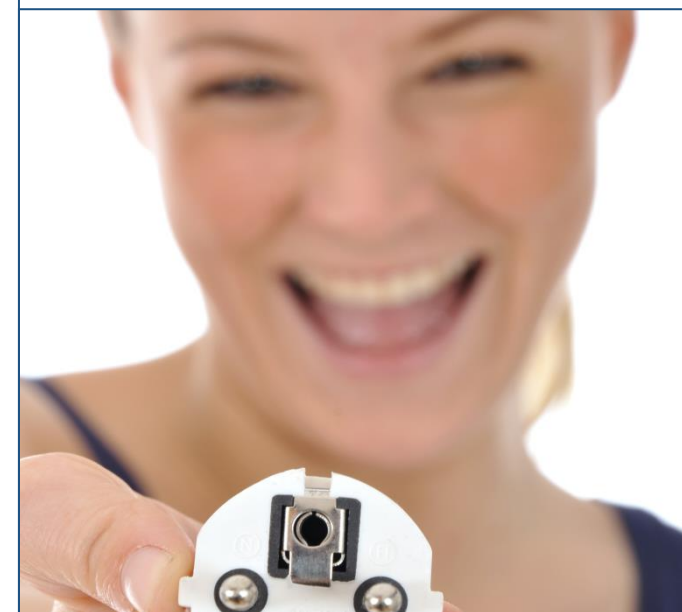
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DeGAS-C

Cold Column Deaeration

Centec Energy Systems



Automated
process skids
and high precision
sensors from a
single source.
Centec.

DeGaS-C

The Principle

The Centec column deaeration system DeGaS-C is a modular skid for removing oxygen from water at ambient temperature. The presence of even low O₂ levels can cause serious corrosion damage by forming oxides. For treatment in DeGaS-C, the liquid is injected at the top of the column. The column contains a matrix of structured packing comprising thin corrugated metal plates arranged so that the liquid takes multiple paths as it flows downwards through the column. This maximizes the transfer surface and the contact time between the liquid and the strip gas; CO₂ or N₂ may be used. The strip gas is fed into the bottom and flows upwards inside the column. The large partial pressure difference of O₂ forces the oxygen out of the liquid into the gas phase. This fundamental scientific principle is described by "Henry's Law". At the top of the column the removed O₂ leaves the system together with the undissolved CO₂ or N₂. The resultant deaerated liquid is slightly carbonated or nitrogenated depending on the strip gas used. O₂ content monitoring can be done with accurate OXYTRANS optical sensing technology developed and manufactured by Centec.

Technical Data

| | |
|--------------------------|--|
| Capacity | 1 - 200 t/h |
| Residual Oxygen | < 10 ppb |
| Pressure of Operation | 0 - 8 bar |
| Temperature of Operation | ambient temperature |
| Temperature of CIP | max. 85 °C |
| Material | 1.4301/1.4404 AISI 304/316L |
| Cooling Medium | glycol, ice water, ammonia, brine |
| PLC | SIMATIC S7 |
| Options | in-line O ₂ measurement pre-filtration disinfection |



The Centec production is certified according to ISO 9001.

- **Application Specific and Energy Efficient**
extensive contact between liquid and strip gas
subsequent disinfection of liquid possible
- **Modular Design with Standard PLC**
skid mounted for easy installation and start-up
sturdy execution and largely maintenance-free
- **Hygienic Execution and Full CIP Capability**
- **Outstanding Price-Performance-Ratio**

Experience. Expertise. Centec.

Particle Pre-Filtration · Disinfection · Water Softening & Demineralization · Ultrafiltration · Reverse Osmosis
Electro Deionization · WFI Distillation · Membrane Deaeration · Column Deaeration · Vacuum Deaeration
Multi Component Mixing · Additive Dosing · Flash Pasteurization · Cleaning-in-Place · Pure Steam Generation

