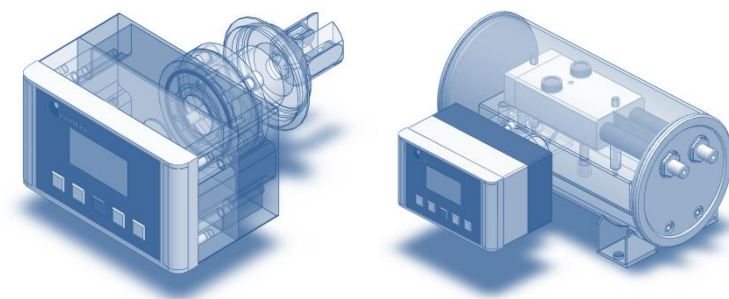


## The Centec Group

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 O<sub>2</sub> content. The largest energy groups in the world and numerous power plants are among our key customers.



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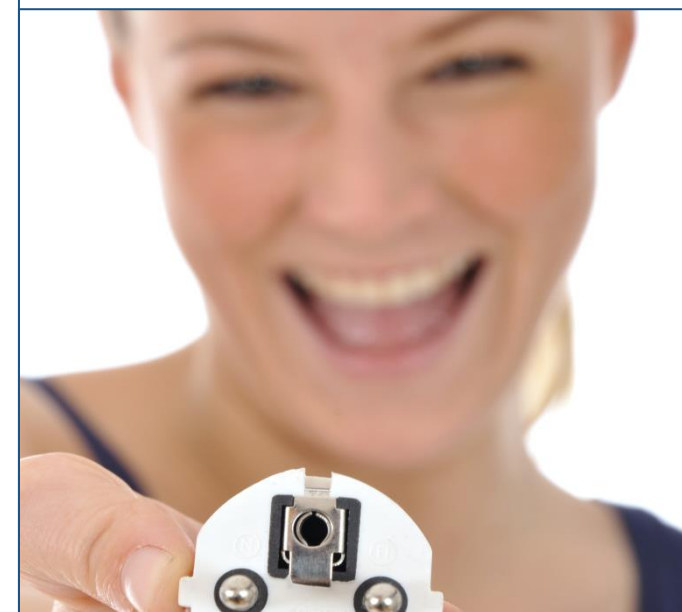
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# DeGas-H

## Hot Column Deaeration

### Centec Energy Systems



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

# DeGaS-H

## The Principle

The Centec column deaeration system DeGaS-C is a modular skid for removing oxygen from water heated to about 75 °C. The presence of even low O<sub>2</sub> 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; CO<sub>2</sub> or N<sub>2</sub> may be used. The strip gas is fed into the bottom and flows upwards inside the column. The large partial pressure difference of O<sub>2</sub> 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 O<sub>2</sub> leaves the system together with the undissolved CO<sub>2</sub> or N<sub>2</sub>. The resultant deaerated liquid is slightly carbonated or nitrogenated depending on the strip gas used. O<sub>2</sub> 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	8 - 95 °C
Temperature of CIP	max. 95 °C
Material	1.4301/1.4404 AISI 304/316L
Heating Medium	steam
Cooling Medium	glycol, ice water, ammonia, brine
PLC	SIMATIC S7
Options	in-line O <sub>2</sub> measurement pre-filtration disinfection

The Centec production is certified according to ISO 9001.



- **Application Specific and Energy Efficient**  
reduced solubility of oxygen in hot water  
simultaneous disinfection of liquid  
excellent heat regeneration performance
- **Modular Design with Standard PLC**  
skid mounted for easy installation and start-up
- **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

