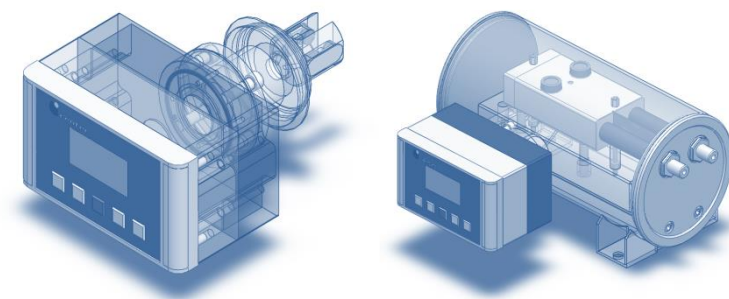


The Centec Group

Centec is a privately owned group of companies. A core business for us is customized systems for the production and distribution of high purity water and water for injection (WFI) for pharmaceutical and biotechnological plants in accordance with GMP and FDA guidelines. We are an experienced partner for pure steam generation, CIP- and SIP-processes as well as for services related to product preparation. 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 pharmaceutical groups in the world are among our key customers.



Accuracy. Reliability. Centec.

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ADOS

Additive Dosing

Centec Pharma Systems



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

ADoS

The Principle

The Centec additive dosing system ADoS is used for the continuous and accurate addition of small amounts of liquid ingredients into a main stream. There are a large number of applications in pharmaceutical industry, e.g. adding acids, caustics, colours or chemicals. Since the number of additives can be extended to meet individual needs, the compact ADoS skid provides a high degree of flexibility in pharmaceutical manufacturing. For process control, sophisticated in-line sensors developed and manufactured by Centec are applied to determine product characteristics such as oxygen and the concentration of acids and caustics. Reliable flow meters and pneumatic control valves permanently monitor and adjust the mass ratios and guarantee repeatable results and minimum product loss. The modular design of the process units allows the easy expansion, e.g. for the production and mixing with deaerated water or the sterilization of the finished product.

Technical Data

Capacity	1 - 150 m ³ /h
Pressure of Operation	0 - 20 bar
Temperature of Operation	2 - 85 °C
Temperature of CIP	up to 85 °C
Material	1.4404/1.4435/... AISI 316L/... electropolishing possible
Surface Finish	Ra < 0,4 possible
Ferrite Content	< 1 % possible
PLC	SIMATIC S7
Options	in-line measurement of O ₂ and concentrations water treatment flash pasteurization

The Centec production is certified according to ISO 9001.



- **Application Specific and Energy Efficient**
exceptional accuracy even for extremely small amounts
excellent repeatability and minimum product loss
- **Modular Design with Standard PLC**
skid mounted for easy installation and start-up
- **In Compliance with USP, ASME, GMP, FDA, ISPE**
- **Completely Qualified (DQ, IQ, OQ)**
- **Low Operating and Maintenance Costs**

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

