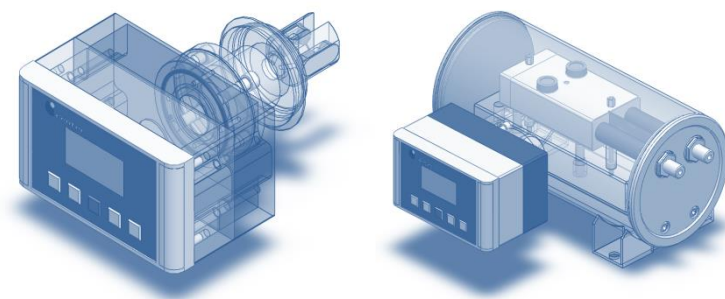


The Centec Group

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.

Germany

Centec GmbH
Wilhelm-Röntgen-Strasse 10
63477 Maintal
Tel.: +49 6181 18 78 0
Fax: +49 6181 18 78 50
info@centec.de

Czech Republic

Centec automatika s.r.o.
Pekařská 8/601
155 00 Praha 5
Tel.: +420 257 084 111
Fax: +420 235 518 701
prodej@centec.cz

USA

Centec LLC
P. O. Box 820
Germantown, WI 53022-0820
Tel.: +1 262 251 8209
Fax: +1 262 251 8376
info@centec-usa.com

UK

Centec UK
Stalworths, The Street
Great Tey, Colchester, Essex, CO6 1JS
Tel.: +44 1206 21 19 21
Fax: +44 1206 21 19 16
info@centec-uk.com

Serbia

Centec Serbia
Bogdana Žerajića 34/III
11000 Beograd
Tel.: + 381 11 358 11 24
Fax: + 381 11 358 11 24
info@centec.rs

India

Centec RRR Systems & Sensors Pvt Ltd
RRR House, Plot 80, Sector 23
Turbhe Naka, Navi Mumbai - 400 705
Tel.: +91 22 2783 3655 & 2783 1348
Fax: +91 22 2783 4814
mail@centecrrr.com

Brazil

Centec América Latina Ltda
Rua Mexico 148 conj. 1004 Centro
20031 142 Rio de Janeiro
Tel.: +55 21 2223 2066
centelatina@terra.com.br

CIP & SIP

Cleaning-in-Place & Sterilization-in-Place

Centec Pharma Systems



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

CIP & SIP

The Principle

CIP and SIP units are applied for fully automatic cleaning and disinfection of valves, pumps, tanks, piping systems and filling machines. Where most stringent hygienic standards apply, sterilization-in-place (SIP) with chemicals or steam takes place after cleaning-in-place (CIP). Cleaning and sterilisation regimes are always adapted to each client's very specific requirements. Some parts of the plant may be cleaned only with water, while other parts might require detergents, acids and caustic solutions. Detergents can be rejected after use ("total loss CIP") or recovered and stored for re-use ("batch CIP"). Centec provides a large variety of CIP and SIP systems. They can be small and mobile or large and stationary – including storage vessels for water and detergents. No matter how complex the requirements may be, Centec has the appropriate solution and extensive expertise in this field. All CIP and SIP systems are designed in such a way that optimal cleaning and disinfection is ensured, with the lowest consumption of detergents, water and energy. Based on highly accurate conductivity and temperature sensors and reliable flow meters, Centec CIP and SIP units stand for efficient and consistently thorough results.

Technical Data

Capacity	according to requirements
Cleaning Media	acid, caustic, additives, steam
Pressure of Operation	0 - 7 bar
Temperature of Operation	2 - 85 °C (liquid) up to 165 °C (steam)
Material	1.4404/1.4435/... AISI 316L/... electropolishing possible
Surface Finish	Ra < 0,4 possible
Ferrite Content	< 1 % possible
PLC	SIMATIC S7
Options	detergent and water storage



The Centec production is certified according to ISO 9001.

- **Application Specific and Energy Efficient**
cleaning concept perfectly adapted to requirements
optimal cleaning at lowest consumption of resources
- **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*

