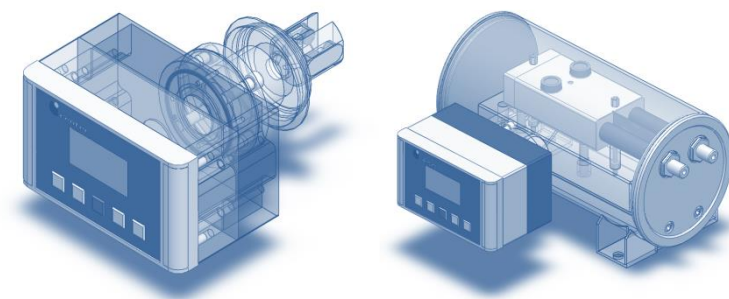


## The Centec Group

Centec is a privately owned group of companies. Based on extensive know-how, we are a specialist for automated process skids for high precision dosing – even of smallest quantities. For media supply we offer water purification and pure steam generation systems. CIP- and SIP-units designed and manufactured by Centec are widely used in chemical industries. 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 chemical 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

**REVOTEC**

**Reverse Osmosis**

**Centec Chemistry Systems**



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

# REVOTEC

## The Principle

The Centec reverse osmosis (RO) system REVOTEC is used for water purification. RO is the reversal of natural osmosis. If a semipermeable microporous membrane is placed between pure water and water with dissolved ions (salts) osmosis will come into play. The pores of the membrane only allow the passage of H<sub>2</sub>O, but not of salts, viruses, bacteria and larger molecules. Osmotic pressure due to a concentration difference causes the pure water to pass through the membrane to dilute the solution on the impure side. This will continue until osmotic equilibrium is reached. In the REVOTEC unit this process is reversed. In order to separate pure water from water containing dissolved salts and solids, pressure is applied to the contaminated water. When the applied pressure overcomes the natural osmotic pressure, pure water will pass through the membrane into the pure water side. The purified water (permeate), is practically free of all impurities. Cross-flow technology minimises fouling by quickly removing the impure water (concentrate). However, depending on the feedwater quality, pre-treatment may be required to prevent scaling and chemical attack by oxidizing agents like chlorine.

## Technical Data

Capacity	1 - 150 m <sup>3</sup> /h
Residual Conductivity	< 1,1 µS/cm (20°C) possible
Pressure of Operation	0 - 30 bar
Temperature of Operation	2 - 35 °C
Temperature of CIP	max. 85 °C
Material	epoxy/PP/PE 1.4301/1.4404 AISI 304/316L
PLC	SIMATIC S7
Options	pre-filtration softening & demineralization electro deionization disinfection



The Centec production is certified according to ISO 9001.

- **Application Specific and Energy Efficient**  
execution in various materials available  
double stage REVOTEC for highly purified water (HPW)  
water pre-treatment technologies on demand
- **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*

