

ROTEC L

REVERSE OSMOSIS UNIT

The ROTEC L reverse osmosis system covers large volumes of water: it can supply a broad bandwidth from 2.5 m³/h to 12 m³/h.

We are happy to offer systems with higher capacity on request.

Features:

- Low energy consumption with high yield
- Fully automatic reverse osmosis
- Highly efficient membrane system
- Completely preassembled
- Reliable operating mode with product flow value monitoring
- Simple start-up

Components:

- Stainless steel frame
- 5 µm fine filter
- Vertical, multi-step high-pressure GPR pump
- Pressure pipes
- Reverse osmosis membrane
- Parameter monitoring
- Programmable logic control with remote monitoring and connection to control stations
- All required fittings and measuring instruments for configuration of the system and control of hydraulic parameters

Operating conditions:

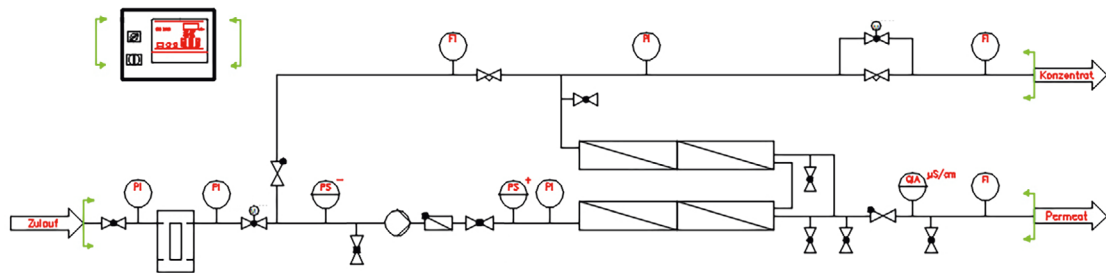
The requirements for the water inflow to the systems are listed below:

| | |
|----------------------------------|---|
| Inlet pressure | 2-6 bar |
| Temperature range | 5-40° C |
| pH-range | 2-11 during operation 1-12 during cleaning |
| Colloid index (SDI 15) | < 3 |
| Permeate counterpressure | max. 0.3 bar in complete stop |
| Free chlorine (Cl ₂) | < 0.5 mg/l |
| Iron (Fe) | max. 0.1 mg/l |
| Manganese (Mn) | max. 0.05 mg/l |

Further operating conditions are listed under the required operating conditions for reverse osmosis systems.



Process diagram



Example diagram

Technical data:

| Type | | ROTEC L2500 | ROTEC L4500 | ROTEC L6500 | ROTEC L8500 | ROTEC L10000 | ROTEC L12000 |
|--------------------------|----------------------------------|-----------------------|-------------|-------------|----------------------|--------------|--------------|
| Permeate volume** | m³/h | 2.5 | 4.5 | 6.5 | 8.5 | 10 | 12 |
| Inlet quantity** | m³/h | 3.1 | 5.62 | 8.13 | 10.6 | 12.5 | 15 |
| Concentrate volume** | m³/h | 0.61 | 1.12 | 1.62 | 2.12 | 2.5 | 3 |
| Operating mode | | Reverse osmosis | | | | | |
| Yield | % | 75-80 | | | | | |
| Salt detention* | % | > 96 | | | | | |
| Operating pressure* | bar | 12-14 | | | | | |
| Electrical connection | | 400V 50Hz 5.5kW | | | 400V 50Hz 11kW | | |
| Membrane type* | | BW30 HRLE 440 | | | | | |
| Number of membranes | | 2 | 4 | 6 | 8 | 10 | 12 |
| Number of pressure pipes | | 1 | 2 | 3 | 4 | 5 | 6 |
| Activation | | - | 1:1 | 1:1:1 | 2:1:1 | 2:1:1:1 | 2:1:1:1:1 |
| Connection | Input Permeate Concentrate | DN40 DN40 DN25 | | | DN50 DN40 DN25 | | |
| Dimensions* | Length (mm) | 2 800 | | | | | |
| | Width (mm) | 1 000 | | | | | |
| | Height (mm) | 2 100 | | | | | |

*All data are approximate values

**For standard conditions