



Field of Application:

- Laboratory-, Industrial- and Medical Applications

Special Features:

- Ready-to-connect reverse osmosis system
- Compact microprocessor control
- fully wired to control the entire water treatment
- Stainless steel frame to hold the individual components
- Digital conductivity and temperature measurement
- Flow meter for concentrate, permeate, electrolyte
- Automatic restart after power failure
- Fault display for feed water pressure
- Cyclical flushing device to protect against germs during standstill

Standard Frame System:

For the desalination of pre-treated water according to the German Drinking Water Ordinance based on the principle of reverse osmosis. A previous water analysis is necessary for the system calculation.

Technical Data*

| | |
|-------------------------------------|---|
| Electrical Connection | 230 V / 50 Hz |
| Connection Power | 2,1 kW - 2,5 kW |
| RO Diluate Output | 60 l/h - 440 l/h |
| Work Pressure | up to 14 bar |
| perm. Feed Water Temp. min./max. | +5°C / +25°C |
| perm. Ambient Temperature min./max. | +5°C / +30°C |
| | |
| Feed Water Pressure | 4-6 bar |
| | |
| Desalination Rate | 99% |
| WCF rate | max. 75% |
| EDI Quality | < 1 µS/cm (abhängig v.d. Rohwasserqualität) |
| | |
| Dimensions (WxHxD) | 800 x 1750 x 650 mm |

***We reserve the right to make changes to products or technical specifications.**

| Item Numbers | | | | | | |
|--------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | HA-RO basic 80 EDI | HA-RO basic 120 EDI | HA-RO basic 200 EDI | HA-RO basic 300 EDI | HA-RO basic 400 EDI | HA-RO basic 500 EDI |
| Item Number | 10106785 | 10106840 | 10106841 | 10106842 | 10106843 | 10106844 |

| Electrical Connection | | | | | | |
|-----------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | HA-RO basic 80 EDI | HA-RO basic 120 EDI | HA-RO basic 200 EDI | HA-RO basic 300 EDI | HA-RO basic 400 EDI | HA-RO basic 500 EDI |
| Nominal Voltage | 230 V | | | | | |
| Frequency | 50 Hz | | | | | |
| Pre-Fuse | 16 A | | | | | |
| Current Consumption | 9,6 A | 10,7 A | 12,0 A | 12,0 A | 14,3 A | 14,3 A |
| Connected Load | 1,8 kW | 2,0 kW | 2,2 kW | 2,2 kW | 3,4 kW | 3,4 kW |

| Hydraulic Connection | | | | | | |
|----------------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | HA-RO basic 80 EDI | HA-RO basic 120 EDI | HA-RO basic 200 EDI | HA-RO basic 300 EDI | HA-RO basic 400 EDI | HA-RO basic 500 EDI |
| Feed Water Pressure min./max. | 4,0 - 6,0 bar | | | | | |
| Feed Water Temperature min./max. | 5 – 25 °C | | | | | |
| Feed Water Connection | DN20 | | | | | |
| Connections Permeate/Conzentrate | DN15 | | | | | |
| Membrane Elements | 1 | 1 | 1 | 1 | 2 | 2 |

| Product Water | | | | | | |
|--------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | HA-RO basic 80 EDI | HA-RO basic 120 EDI | HA-RO basic 200 EDI | HA-RO basic 300 EDI | HA-RO basic 400 EDI | HA-RO basic 500 EDI |
| Diluate Output (at 15°C) | 60 l/h | 100 l/h | 170 l/h | 260 l/h | 350 l/h | 440 l/h |

| Dimensions | |
|------------------------|-----------|
| Height | 1750 mm |
| Width | 800 mm |
| Depth | 650 mm |
| Weight (without Water) | 130 kg |
| Location | |
| Ambient Temperature | 5 – 30 °C |

Structure of the Reverse Osmosis System:

- **Base Frame made of stainless steel** with front panel to accommodate all components
- **Pre-Filter** with 5 µm filter cartridge, inlet and outlet manometer for monitoring the differential pressure
- **High pressure pump** in vertical design
- **Membrane Modules** with composite membranes in GRP pressure pipes with inliner
- **Fittings:**
 - Inlet solenoid Valve
 - Pressure Switch for dry running Protection
 - Flow meter for Permeate, Diluate and Concentrate
 - Manometer for Pump and Concentrate Pressure
 - Flow rate adjustment Valves
- **Elektrodeionization Module:** for further processing of the permeate in diluate
- **Control Technology:** Microprocessor control with two-line text display
- **Inputs:** 12 digital Inputs (u.a. Hardness Measurement, Pump Failure, Inlet Pressure, Flow, external Release)
- **Outputs:** 8 digital Outputs (Pumps, Solenoid Valves, EDI, Collective Error Message etc.)
- **Internal Fieldbus:** Communication with conductivity transmitters
- **Conductivity- and Temperature Measurement**

Options:

- Digital Flow Measurement
- Individually adjustable limit value monitoring of conductivity and temperature limit values as well as permeate, diluate and ring circulation quality

Accessories:

- Hardness Controller 10008033
- 3 µm Pre-Filter 10001005 Microfiber
- 5 µm Pre-Filter 10001006 wrapped
10001040 Microfiber
- Visual Alarm 10107748

Other machine options available on request!