

WRO ROH

CWP 100 –
Water for dialysis



The WRO ROH model of the CWP 100 System uses two reverse osmosis units in series for water purification, providing superior water quality.

It also features automated heat disinfection of the clinic's water distribution system in one simple and convenient procedure. The dialysis machines can also be integrated, provided that they are designed to tolerate hot water. This integrated procedure assures that no link in the hygienic chain will be broken, assuring a high microbiological quality of the dialysis fluid at all times.

The unit's water saving system monitors variations in water consumption and automatically adjusts the reject flow to match the actual usage. As a result, less water is consumed.

Due to the user-friendly control panel, machine operation is very simple. The compact design and low noise level allow for installation close to the dialysis clinic.

The WRO ROH is available in four different capacities (WRO101ROH, 102ROH, 103ROH and 104ROH) to suit the needs of the individual clinic. Furthermore, the smaller units can be upgraded to larger capacity by adding more membrane modules.

The unit can be run in parallel with a supplementary unit for additional capacity and back-up.

Free-standing additional heating units are also available in cases where more hot water is required during the integrated heat procedure.

WRO ROH – The obvious link in the hygienic chain

Technical data - WRO ROH

Pure Water

Minimum capacity in liters/minute at a pure water outlet pressure of 200 kPa:

Model	101	102	103	104
+ 5°C	4	9	15	17
+10°C	5	11	17	19
+15°C	6	12	18	21
+20°C	7	13	19	23

Quality

Depends on inlet water quality. If potable water is used and the system is properly maintained, the following rejection rates will be obtained:

Total dissolved salts:	> 95%
Bacteria (CFU) & endotoxins:	> 99%
Water conversion factor:	max. 75%

Water Supply

Model	101	102	103	104
Min. input, l/min	20	30	40	50
Min. input pressure, kPa	100	100	150	250
Max. input pressure:	500 kPa (all models)			
Temperature:	+5°C to +25°C *			

* Maximum +20°C if peracetic acid is used for disinfection

Quality

Potable water should be used. Additional pretreatment is normally necessary. Membrane and machine life expectancy depend on inlet water quality. It is recommended not to operate the CWP outside the following limits:

Hardness	< 1	dH
Iron	< 0.1	mg/l
Manganese	< 0.1	mg/l
Chloride	< 100	mg/l
Silica	< 25	mg/l
Total dissolved salts	< 1500	mg/l
Chlorine	< 0.1	mg/l
Fouling index (S.D.I.)	< 5	

Drain Requirements

Required capacity in liters/minute:

Model	101	102	103	104
	20	30	40	50

Maximum flow occurs during flushing.

Connections

Inlet: PVC female union, fits to pipe OD 25 mm
Drain from heating tank: PP female union, fits to pipe OD 32 mm (heat resistant)
Drain from RO/RO-unit: PP female union, fits to pipe OD 32 mm.
Drain from tray: 1/2" female thread
Pure water outlet & return: 3/4" thread

Membranes

Membrane material: Modified polyamide, thin film composite
Membrane configuration: Spiral wound
pH-tolerance: 2 - 11

Power Supply

Mains voltage: 230/400 V, 50Hz, three-phase (five wires); other voltages on request.

Power rating: RO/RO-unit: 3.3 kW
Heating unit, 101-102: 7.0 kW
Heating unit, 103-104: 9.0 kW
Fuse: 10 AT + 16 AT (slow blow)

Ambient Temperature

Shipping and storage: -10°C to +40°C
Operation: +5°C to +35°C

Dimensions

Model	101	102	103	104
Depth**(mm):	670	670	670	670
Width (mm):	2030	2030	2220	2600
Height (mm):	2010	2010	2010	2010

500 mm extra space is required on both sides of the unit.

** Including handle, 40 mm

Effective volume in heating tank (liters)

Model	101	102	103	104
	260	260	330	330

Weight

Model	101	102	103	104
Unit (kg):	565	595	670	720
Unit + packing (kg):	830	850	940	1085
Operation (kg):	885	925	1080	1150

Measuring Ranges

Temperature: 0 - 100 °C (±10%)

Flow:

Inlet water: 3 - 40 l/min (±10%)
Reject flow: 0.2 - 15 l/min (±10%)
Return flow: 0.2 - 20 l/min (±10%)

Conductivity:

Inlet water: 100 - 1000 µS/cm (±15%)
Pure water: 2 - 200 µS/cm (±15% or ±1,5 µS/cm if < 10 µS/cm)

Logging Interface

RS 232, 9 pin male
According to EIA 232 C

Optional free-standing heating tank

Tank volume (litres):	260	330
Depth (mm):	670	670
Width (mm):	810	1000
Height (mm):	2010	2010



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CE 0086 This product is CE-marked in accordance with the requirements in EC Council Directive 93/42/EEC of 14 June 1993 concerning medical devices.

The information herein may be subject to change without further notice. For further information and operating instructions, please refer to the operator's manual.