



HemoRO 4 ONE

SINGLE REVERSE OSMOSIS SYSTEM
WITH HEAT DISINFECTION



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A safe, continuous supply of dialysis water is now available in a high performing, low maintenance system.

Thanks to multiple built-in safety features – including internal heat disinfection – HemoRO 4 ONE fulfills the rigorous requirements of home and acute dialysis, ensuring the utmost in patient safety.

This portable solution is ideal for dialysis centers or ICUs in need of mobility, as well as patients who wish to carry out their dialysis treatments in the comfort of home.

Decalcification with innovative tabs

Reduced operating noise with sound-insulated aluminum housing

Built-in wheels

Reduced footprint

Removable handle

5,7" colored touch screen





SAFE

- Semi-automated heat disinfection ensures high water quality and microbiological safety for dialysis
 - Heat disinfection of reverse osmosis (RO) membrane, permeate path, and connection hoses with $>80^{\circ}\text{C}$ hot water
- Easy to decalcify with innovative tabs
 - No softener needed for hard water up to 15°dH ($2,67\text{ mmol/l}$) without affecting water quality or safety
 - Higher security and better performances
 - No handling of citric acid solution required
- Short connection cables to minimize exposure to environmental contaminants
- Internal leakage monitoring to protect against water damage
- Pre-treatment accessories:
 - Ultrafiltration membranes that offer extra protection from microbials and endotoxins
 - Water softener
 - Water leakage detector
- Sampling set accessory ensures a straightforward and standardized microbiological sampling
- Multiple access levels for end users and maintenance personnel

Provides up to **70 l/h** of dialysis water at inlet temperature of 10°C (2,5 bar counter-pressure).
No softener needed for hard water up to **15°dH ($2,67\text{mmol/l}$)**.

MOBILE

- Robust metal housing and compact design (69 x 31,5 x 26,5 cm)
- Lightweight: 35 kg (dry), 40 kg (wet)
- Easy to move thanks to built-in wheels and handle
- Optional trolleys (small or large) for easier handling and transport, especially for frequent movements or long distances

EASY TO USE

- Ready within 10 minutes
- Disinfect with the push of a button
- Low noise operation so it can be used beside the patient without any disturbance
- 14,5 cm touch screen for easy to read, instant access to settings and main functions
- Integrated SD-card stores data for maintenance and service purposes
- USB and Ethernet connectivity
- Low care and maintenance requirements
- Can be mounted to a wall for convenience



Possible combinations

HemoRO 4 ONE : ECO

	Inflow	Feed water pressure	
(50 l/h)	> 200 l/h	> 1,5 bar (dyn.)	< 8,0 bar (stat.)
+ with pre-filter	> 200 l/h	> 2,5 bar (dyn.)	< 8,0 bar (stat.)
+ with pre-filter system	> 200 l/h	> 4,5 bar (dyn.)	< 8,0 bar (stat.)
+ with softener	> 300 l/h	> 2,0 bar (dyn.)	< 8,0 bar (stat.)
+ with pre-filter system and softener	> 300 l/h	> 4,5 bar (dyn.)	< 8,0 bar (stat.)

HemoRO 4 ONE : MAX

	Inflow	Feed water pressure	
(70 l/h)	> 250 l/h	> 2,5 bar (dyn.)	< 8,0 bar (stat.)
+ with pre-filter	> 250 l/h	> 3,5 bar (dyn.)	< 8,0 bar (stat.)
+ with pre-filter system	> 250 l/h	> 5,5 bar (dyn.)	< 8,0 bar (stat.)
+ with softener	> 350 l/h	> 3,5 bar (dyn.)	< 8,0 bar (stat.)
+ with pre-filter system and softener	> 350 l/h	> 6,0 bar (dyn.)	< 8,0 bar (stat.)

Conformity declared with directive 93/42/EEC concerning medical devices.
 We reserve the right to make technical changes.

Product range overview

HemoRO 4 ONE is available in 2 ranges: ECO and MAX

ECO

- 70 l/h peak flow*
- 70 l/h permanent on soft water supply*
- 50 l/h permanent on hard water supply*

MAX

- 70 l/h permanent flow*

	HemoRO 4 ONE ECO	HemoRO 4 ONE MAX	HemoRO 4 ONE	Small trolley	Large trolley	1x Pre-filter	3x Pre-filter	Softener	Water guard
230 V, 50 Hz, CEE 7/7	01HRO415XXNXX-UG	01HRO417XXNXX-UG	•						
	01HRO415XXNXS-UG	01HRO417XXNXS-UG	•	•					
	01HRO415XXNXM-UG	01HRO417XXNXM-UG	•		•		•	•	
	01HRO415XXNXL-UG	01HRO417XXNXL-UG	•		•		•	•	•
	01HRO415XXN1X-UG	01HRO417XXN1X-UG	•			•			
	01HRO415XXN1S-UG	01HRO417XXN1S-UG	•	•		•			
	01HRO415XXN3X-UG	01HRO417XXN3X-UG	•				•		
	01HRO415XXN3S-UG	01HRO417XXN3S-UG	•	•			•		
115 V, 60 Hz, NEMA 5-15P	01HRO415CCNXX-UG	01HRO417CCNXX-UG	•						
	01HRO415CCNXS-UG	01HRO417CCNXS-UG	•	•					
	01HRO415CCNXM-UG	01HRO417CCNXM-UG	•		•		•	•	
	01HRO415CCN1X-UG	01HRO417CCN1X-UG	•			•			
	01HRO415CCN1S-UG	01HRO417CCN1S-UG	•	•		•			
	01HRO415CCN3X-UG	01HRO417CCN3X-UG	•				•		
	01HRO415CCN3S-UG	01HRO417CCN3S-UG	•	•			•		
	230 V, 60 Hz, CEE 7/7	01HRO415DXNXX-UG	01HRO417DXNXX-UG	•					
01HRO415DXNXS-UG		01HRO417DXNXS-UG	•	•					
01HRO415DXNXM-UG		01HRO417DXNXM-UG	•		•		•	•	
01HRO415DXN1X-UG		01HRO417DXN1X-UG	•			•			
01HRO415DXN1S-UG		01HRO417DXN1S-UG	•	•		•			
01HRO415DXN3X-UG		01HRO417DXN3X-UG	•				•		
01HRO415DXN3S-UG		01HRO417DXN3S-UG	•	•			•		

Other configurations, accessories, and spare parts are available upon request.

Technical specifications

		Specification 230 V	Specification 115 V
Dimensions	Measurements (W x H x D)	315 x 875 x 300 mm	315 x 875 x 300 mm
Weight	Dry weight	35 kg	35 kg
	Operating weight	< 45 kg	< 45 kg
Performance data	Dialysis water capacity at 10 °C and 2.5 bar counter pressure	50 l/h ^{A,B} , 70 l/h ^{A,C}	50 l/h ^{A,B} , 70 l/h ^{A,C}
	Dialysis water pressure	3 bar / 0.3 MPa	3 bar / 0.3 MPa
	Retention rate	99% NaCl	99% NaCl
	Noise level	< 50 dB	< 50 dB
Water connections	Feed water	Hose stem D8	Hose stem D8
	Dialysis water	Nipple type 103 DN6	Nipple type 103 DN6
	Waste water	Hose stem D8	Hose stem D8
Electrical data	Mains plug	CEE 7/7 ^D	NEMA 5-15P ^D
	Mains voltage	230 V AC 50 Hz	115 V AC 60 Hz
	Protective conductor cross-section area	1.5 mm ^B	18 AWG
	Building main fuses	16 A, RCD I _{ΔN} = 30 mA	B-15A acc. to UL489, RCD 30 mA type A or B
	Power consumption	1.5 kW	1.2 kW
	Protection class	I	I
	Protection type	IP21	IP21
Feed water	Quality	Drinking water ^E	Drinking water ^E
	Inflow, see possible combinations	200 l/h ^B , 250 l/h ^C	200 l/h ^B , 250 l/h ^C
	Feed water pressure, see possible combinations	> 1.5 bar / 0.15 MPa ^B > 2.5 bar / 0.25 MPa ^C < 8.0 bar / 0.8 MPa	> 1.5 bar / 0.15 MPa ^B > 2.5 bar / 0.25 MPa ^C < 8.0 bar / 0.8 MPa
	Hardness	< 15 °dH / 2.45 mmol/l	< 15 °dH / 2.45 mmol/l
	Blocking index/SDI	< 3	< 3
	Conductivity	100 to 2,000 μS/cm	100 to 2,000 μS/cm
	Iron	< 0.05 mg/l	< 0.05 mg/l
	Free chlorine	< 0.1 mg/l	< 0.1 mg/l
	Temperature range	5 to 30 °C	5 to 30 °C
pH	6.5 to 8.5	6.5 to 8.5	
Waste water	Free drainage	max. 50 cm above device top edge	max. 50 cm above device top edge
Environmental conditions	Transport / storage temperature	1 to 45°C	1 to 45°C
	Operating temperature	5 to 35°C	5 to 35°C
	Relative air humidity	max. 90%	max. 90%
	Installation altitude	< 2,000 m above NHN ^F	< 2,000 m above NHN ^F

A. Applies to soft water feed

B. Applies to REF 01HR040NE2 and REF 01HR040NE2C

C. Applies to REF 01HR040NE and REF 01HR040NEC

D. A switchable permanent connection must be provided in home dialysis environments

E. Using permeate as feed water is forbidden

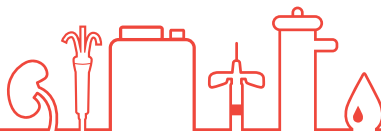
F. NHN: German reference "Normalhöhenull" (normal height zero)

Nipro Renal Care is part of Nipro Corporation Japan, a leading global healthcare company established in 1954. With over 28.000 employees worldwide, Nipro serves the Medical Device, Pharmaceutical, and Pharmaceutical Packaging industries.

Nipro Renal Care is a global market leader with over 5 decades providing renal solutions for dialysis and dialysis-related treatment. We specialize in developing dialysis machines, water treatment systems, and a comprehensive portfolio of disposable medical equipment.

In order to address the needs of patients, healthcare professionals, and procurement managers alike, Nipro Renal Care is driven by innovation and patient safety to offer the highest quality products that optimize time, effort, and costs.

BECAUSE EVERY LIFE DESERVES AFFORDABLE CARE



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