



HemoRO 4 ONE

SINGLE REVERSE OSMOSIS SYSTEM
WITH HEAT DISINFECTION



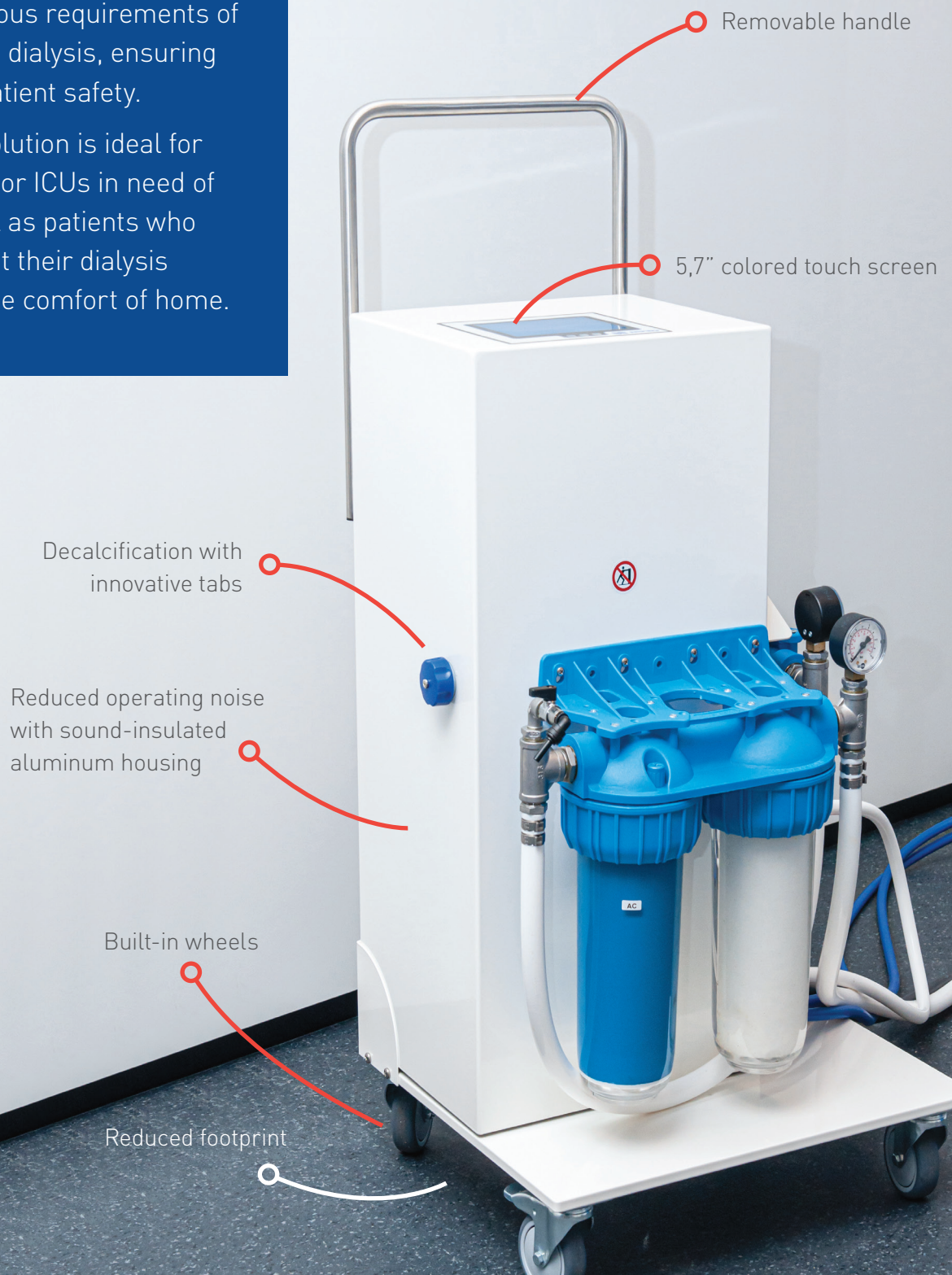
HemoRO 4 ONE

SINGLE REVERSE OSMOSIS SYSTEM WITH HEAT DISINFECTION

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.





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

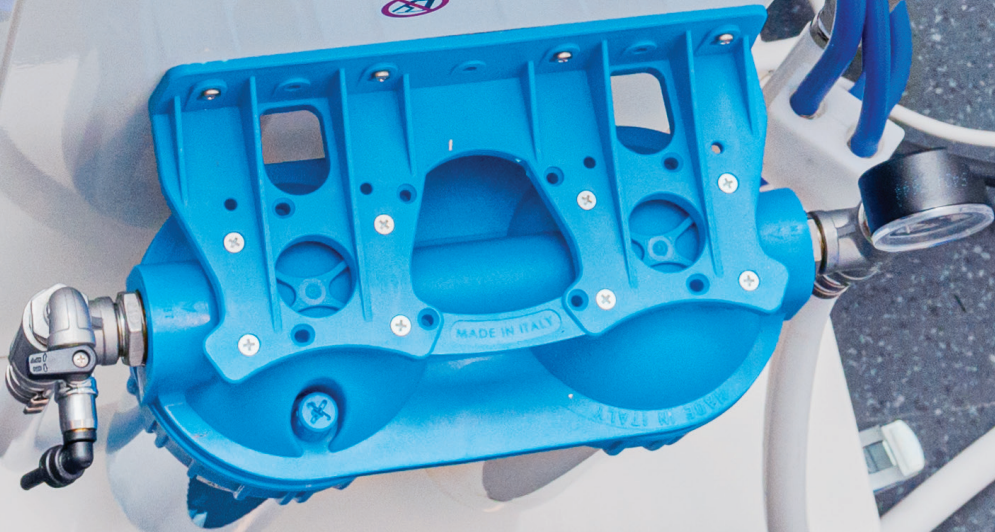
- Ready within 10 minutes
- Disinfect with the push of a button
- Low noise operation so it can be used beside the patient without any disturbance
- 14,5 cm touch screen for easy to read, instant access to settings and main functions
- Integrated SD-card stores data for maintenance and service purposes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



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Standby

NIPRO



MADE IN ITALY

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 33,000 employees worldwide, Nipro serves the Medical Device, Pharmaceutical, and Pharmaceutical Packaging industries.

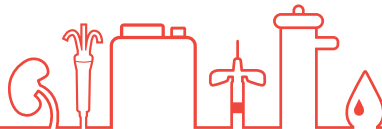
Nipro Renal Care is a global market leader with over 5 decades providing renal solutions for dialysis and dialysis-related treatment. We specialize in developing dialysis machines, water treatment systems, and a comprehensive portfolio of disposable medical equipment.

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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Nipro Australia Pty Ltd : Suite 2.02, Level 2, 657 Pacific Hwy, St Leonards NSW 2065 | T: +61 2 9437 9000 or 1800 451 737 | info@niproaustralia.com.au | niproaustralia.com.au

Nipro Medical Europe : European Headquarters, Blokhuisstraat 42, 2800 Mechelen, Belgium | T: +32 (0)15 263 500 | www.nipro-group.com

Nipro Corporation Japan : 3-9-3 Honjo-nishi, Kita-ku, Osaka 531-8510, JAPAN | T: +81 6 6372 2331 | www.nipro.co.jp