

# PHOENIX ONE PHOENIX ONE DS

WATER TREATMENT FOR DIALYSIS



# PHOENIX ONE PHOENIX ONE DS

REVERSE OSMOSIS

PHOENIX ONE



## SAFE, HYGIENIC, COST EFFECTIVE

### REDUCED NOISE SYSTEM

Total noise level has been reduced to approximately 55 dB.

### REDUNDANT CONSTRUCTION AND MANUAL EMERGENCY OPERATION

Continuous permeate production ensured thanks to redundant pressure increasing pumps and manual emergency operation.

### LOW ENERGY MODULE

Low pressure polyamide membranes achieves energy savings of more than 25%.

### FULLY AUTOMATED MODULE RINSING

Automatic high-speed rinsing program reduces biofouling and blockages.

### USE OF HIGH-PERFORMANCE SYNTHETIC MATERIALS

Polyvinylidene fluoride (PVDF) and polypropylene natural (PP-N) piping significantly reduce the formation of biofilms due to their extremely smooth inner surfaces and water-repelling lotus effect. Materials used are corrosion-free and conform to FDA standards and are USP class VI tested.

### BCF® WELDING TECHNOLOGY

Bead and Crevice-Free welding technology (BCF) allows for a smooth and homogenous connection.

### INTELLIGENT WATER-SAVING TECHNOLOGY

Unique water-saving technology automatically adjusts the potable water consumption. Remote access (optional) enables control and monitoring of operational parameters.

# OPTIMIZATION OF WATER TREATMENT AND COSTS WITH NIPRO'S PROACTIVE SERVICE

PHOENIX ONE DS



## CONTINUOUS MONITORING

- Continuous surveillance, recording and analysis of monitoring systems for optimal performance, ensuring reduced energy and water consumption for long-lasting savings on operational costs.
- Annual quality report based on system parameters.

## AUTOMATIC ERROR MESSAGING

- Email notification on alarms for water treatment, heat sterilization device, or softener are directly sent to our Technical Service or an alternative address.

## COST EFFECTIVE REMOTE ACCESS

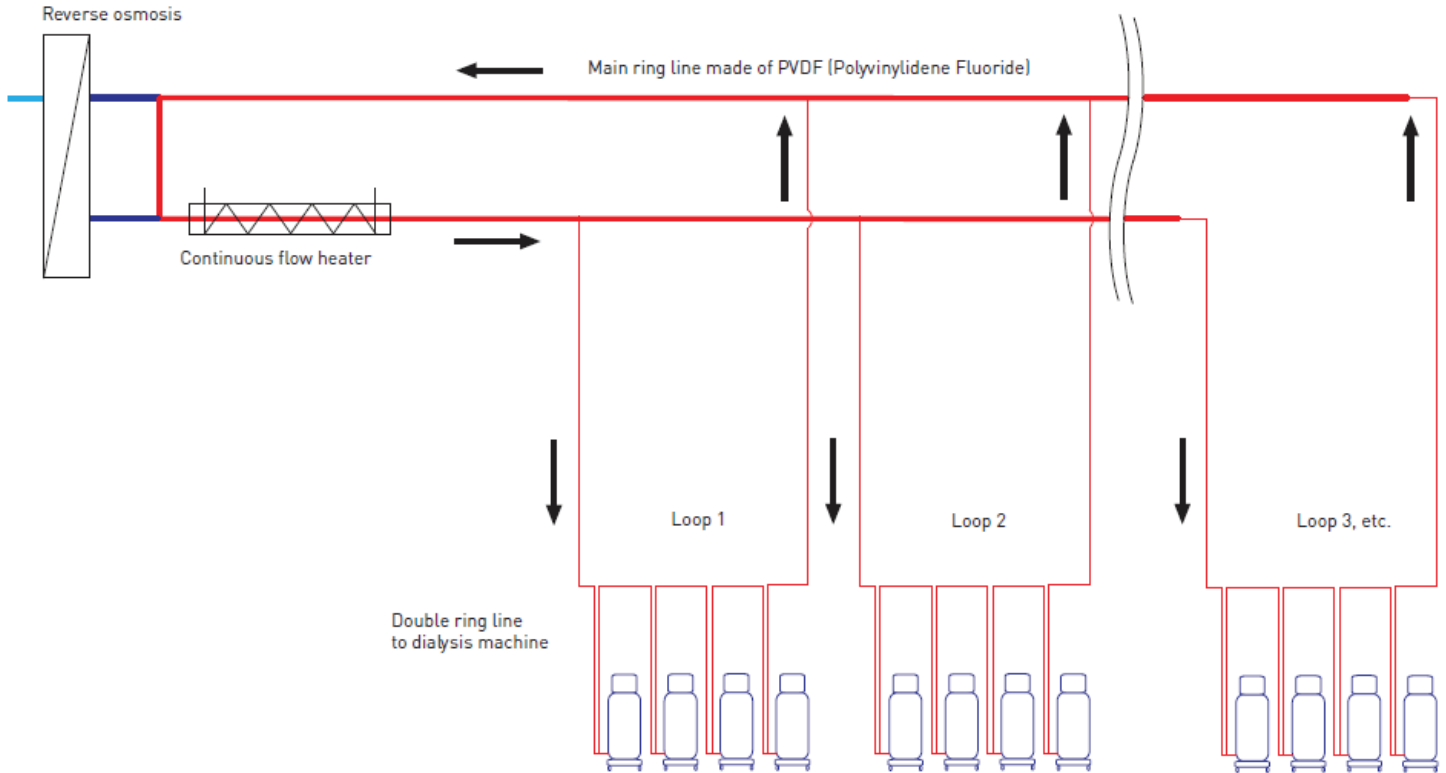
- Remote access allows easy modification to programs or parameter settings, error analysis, and software updates.
- Reduced spontaneous service calls.
- Thanks to the connected unit, our Technical Service and authorized personnel can gain access at any time and from any location.

## SIMPLE OPERATION

- User-friendly interface for easy access by healthcare professionals and dialysis technicians.
- Touch screen panel with key daily routine functions displayed.

# PATENTED PHOENIX MULTI-LOOP SERVICE CONCEPT

Dead zone-free permeate supply to dialysis machines



## PHOENIX MULTI-LOOP

The presence of biofilm can cause serious complications for dialysis patients. It can also limit and deteriorate a water treatment system because of poor water quality. For this reason, Nipro designed its multi-loop system to prevent biofilm formation.

Starting from the main ring line made of PVDF, the permeate supply is achieved through individual loops. Up to 6 dialysis machines can be connected to the loop. By virtue of their small diameter, connection lines between the main loop and dialysis machines maintain a permanent highspeed flow, even when the dialysis machines are turned off. Therefore, the entire circuit is safeguarded from biofilm formation.



## DESIGN

For all of our products, we give special consideration to the consistent use of standard construction components. This ensures a quick and cost effective replacement delivery in case of a malfunction.

Special attention is given to construction components that are subject to wear and tear.

## PREVENTION

All relevant system parameters are regularly monitored and recorded by means of the Nipro remote monitoring system. Malfunctions can be identified early and the necessary steps can be initiated in a proactive and timely manner.

Regular maintenance and safety controls ensure faultless operation over the long-term.

## SUPPORT

Personal support, 24 hours a day, 365 days a year. Through the automatic error messenger, our Technical Service is notified directly.

Support may also be provided to operators and technicians. With technical training and remote access, users can be guided to solutions, thereby avoiding the potential for erroneous decisions.

## FULL SERVICE CONTRACT\*

- Annual maintenance in accordance with maintenance protocol
- Safety controls every two years
- Continuous system monitoring via remote access
- Necessary replacement parts for repairs
- Travel and work costs for maintenance, Safety controls, and service calls
- Nipro Proactive Service

## MAINTENANCE AND MONITORING CONTRACT\*

- Annual maintenance in accordance with maintenance protocol
- Safety controls every two years
- Weekly system monitoring via remote access
- Travel and work costs for maintenance and Safety controls
- Nipro Proactive Service

## YOUR PARTNER FOR CUSTOM INSTALLATIONS IN DIALYSIS CENTERS

- Reverse osmosis systems
- Hot water sterilization systems (flow heater and tank solutions)
- Permeate ring lines made of PVDF and Polytetrafluoroethylene (PTFE)
- Central concentrate supply
- Media supply systems
- Dialysis system walls
- Furnishing of dialysis centers
- Professional planning and construction of dialysis centerse

\* Please contact your local Nipro representative for more information. Details found on back.



## PHOENIX ONE IS A SINGLE STAGE RO, WHEREAS THE PHOENIX ONE DS IS A DOUBLE STAGE RO. THE DOUBLE STAGE RO ENSURES:

- Full redundancy in case of breakdown of one RO stage. Electronic motor valves facilitate immediate use of the remaining RO stage.
- The highest dialysis water purity.
- No water waste. Waste water from the second stage gets reused in the first stage.

Phoenix One+ FH / Phoenix One DS+ FH	Phoenix One+ / Phoenix One DS+
Flow heater disinfection with instant water heater	Hot water disinfection with tank
<ul style="list-style-type: none"> <li>• Heat disinfection of the loop with instant water heater.</li> <li>• Efficient and cost effective disinfection since only the loop is heated.</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated hot water disinfection of the loop and dialysis machine with hot water tank.</li> <li>• Minimized energy consumption, as the permeate is only produced on request instead of continuously stored in the tank.</li> </ul>

## TECHNICAL SPECIFICATIONS

### Phoenix One - Single Stage RO

	Phoenix One	Phoenix One+ FH	Phoenix One+
Permeate capacity	700 - 2800 l/h	700 - 2800 l/h	700 - 2800 l/h
Measurements [LxWxH]	1330 x 800 x 1650 1330 x 800 x 1650 [5 modules or more]	1830 x 800 x 1650 1830 x 920 x 1650 [5 modules or more]	1830 x 800 x 1650 1830 x 920 x 1650 [5 modules or more]
Transport weight	280 - 410 kg	290 - 335 kg	320 - 360 kg
Maximum weight in operation	500 kg	450 kg	800 kg [290 kg/m <sup>2</sup> ]
Energy supply	CEE 400 V AC / 50 Hz	CEE 400 V AC / 50 Hz	CEE 400 V AC / 50 Hz
Energy consumption	max. 7 k	max. 16 kW	max. 13 kW
Fuse	3 x automatic circuit breaker K25a	3 x automatic circuit breaker K25a	3 x automatic circuit breaker K25a
Water supply	Potable water, connection G1A	Potable water, connection G1A	Potable water, connection G1A
Drain	HT 50, max. 5 cm clearance above floor level	HT 50, max. 5 cm clearance above floor level	HT 50, max. 5 cm clearance above floor level

### Phoenix One DS - Double Stage RO

	Phoenix One DS	Phoenix One DS+ FH	Phoenix One DS+
Permeate capacity	700 x 2800 l/h	700 x 2800 l/h	700 x 2800 l/h
Measurements [LxWxH]	1900 x 950 x 1800 mm	1900 x 950 x 1800 mm	1900 x 950 x 1800 mm
Transport weight	280 - 410 kg	280 - 410 kg	280 - 410 kg
Maximum weight in operation	500 kg	500 kg	500 kg
Energy supply	CEE 400 V AC / 50 Hz	CEE 400 V AC / 50 Hz	CEE 400 V AC / 50 Hz
Energy consumption	max. 7 kW	max. 7 kW	max. 7 kW
Fuse	3 x automatic circuit breaker K16a	3 x automatic circuit breaker K16a	3 x automatic circuit breaker K16a
Water supply	Potable water, connection G1A	Potable water, connection G1A	Potable water, connection G1A
Drain	HT 50, max. 5 cm clearance above floor level	HT 50, max. 5 cm clearance above floor level	HT 50, max. 5 cm clearance above floor level

Water treatment systems of the Phoenix One DS and Phoenix One family are approved as Class IIb medical products in accordance with EC Medical Devices Directive 93/42/EEC.

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