

BIOPURE HX2[®]

Double Pass Water Purification System with Automatic Heat Disinfection

GENERAL INFORMATION

This direct feed double pass reverse osmosis system is designed specially to meet stringent international hemodialysis water requirements. The BioPure HX2 double pass system ensures the highest water quality, while the added feature of automatic hot water disinfection simplifies bacteria control.

The BioPure HX2 reverse osmosis system is designed to meet ANSI/AAMI 13959, and CAN/CSA/ISO 13959 water standards. The system holds a FDA cleared claim to purify pre-treated water using reverse osmosis for making dialysate for hemodialysis applications and a Class III Device Licence in Canada. The automated heat disinfection process allows for greater bacteria control while reducing the need for chemical usage. Less down time and a safer work environment lead to greater peace of mind.

SYSTEM FEATURES

- Meets ANSI/AAMI 13959 and CAN/CSA/ISO 13959 specifications
- Single skid, space saving design
- Direct feed double pass RO design with single pass capability
- Automatic Hot Water disinfection program along with Semi-Automatic Chemical Cleaning and Disinfection programs
- Four (4) independent modes of disinfection: 1st Pass RO, 2nd Pass RO, Distribution and Point of Use
- All pharmaceutical grade 316L stainless steel tubing and <25Ra wetted surfaces.
- All welds are visually inspected
- Tri-clamp connections aid in sanitary design
- Automatically adjusts product flow and reject flow based on feed water quality for water conservation
- Two Pump VFD design for energy conservation
- Built in electric heater and low noise air compressor (40 dB) to minimize utility requirements
- Disinfection Holding Tank (100 US gallons) able to provide hot purified water to dialysis machines for complete disinfection
- Meets Analytical Norms to CAN/CSA-ISO 11663
- Fast installation and start-up



ELECTRICAL/ INSTRUMENTATION

- High Efficiency Motors with Variable Frequency Drive
- Allen-Bradley CompactLogix PLC
- NEMA 4/12 Main Control Panel
- Large 25.4 cm (10") Allen-Bradley HMI colour touch screen for easy operation
- 10.9 cm (4.3") colour remote touch screen station
- USB ports for data logging & optional printer hook up
- Ethernet compatible for remote monitoring and troubleshooting.
- Compliant to IEC/EN61326-1 – Electrical Emissions and ANSI/UL 61010-1, CAN/CSA C22.2 # 61010-1 Standard for Safety – Part 1

Technical Data

Product Specifications

BioPure HX2® Reverse Osmosis System

Model Number	HX2P-05	HX2P-11
Nominal Product Flow Rate at 77°F (25°C)	11.3 lpm (3 US gpm) to 26.5 lpm (7 US gpm)	26.5 lpm (7 US gpm) to 56.7 lpm (15 US gpm)
Dry/Wet Weight	2,504 lbs (1,138 kg)/2,671 lbs (1,214 kg)	3,234 lbs (1,470 kg)/3,684 lbs (1,675 kg)
Power	208,460,575VAC / 3PH / 60HZ, 41kW. Power selected at time of order.	
Dimensions (of Assembled Unit)	Wide - 421.6 cm (166"), Depth - 94 cm (37"), Height - 208.3 cm (82") (Dimensions include Hot Water Disinfection/Chemical Cleaning Holding Tank)	

Purified Hot Water Disinfection/Chemical Cleaning Holding Tank

Tank Volume	378 litres (100 US gal)
Weight - Dry/Wet	381 lbs (173kg)/1,214 lbs (551kg)
Material	304SS Stainless Steel & Insulated Jacket with 304SS Cladding
Tank Rating	Atmospheric

Note: 2nd pass permeate pressure may not exceed 721 kpa (90 psig). Membrane permeate flow may vary +/- 10%. Performance is based on potable, pre-treated, tempered water.

Operational Parameters

BioPure HX2 Reverse Osmosis System

Production	16,353 to 81,765 lpd (4,320 to 21,600 US gpd) @ 25°C (77°F)
Recovery	50-95%
Motor Horsepower	7.5 & 5.0, hp
Element	Thin Film Composite Polyamide Sanitary Membrane, 8"x 40"
Nominal Rejection	95.0-99.9% of All Ionic Material
Connections	Feed 1 ½- Inch Flange, Product 1-Inch Tri-Clamp, Loop Return 1-Inch Tri-Clamp, Drain 2-Inch Flange, Cooling Valve ½- Inch FNPT
Materials	All Critical Wetted Materials Are 316L Stainless Steel And Inert Plastics

Note: Detailed analysis of the feed water will dictate the components needed, if any, in pre- or post-treatment of the BioPure HX2 RO unit. This will help assure a constant supply of water, meeting Health Canada & AAMI Dialysis Water Quality Standards. Pre-treatment and distribution systems or loop sold separately.



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