

# **INDION<sup>®</sup> HEMO**

Ultrapure Water for Artificial Kidney Dialysis





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### **Ultrapure Water for Artificial Kidney Dialysis**

Water, an integral part of the dialysis facility is mixed with dialysate concentrate in large quantities to form the dialysate. Traces of mineral contaminants and bacterial endotoxins in water can enter into the patient's blood causing nausea, vomiting, muscle weakness, severe headache, skin flushing and low or high blood pressure. Hence, water purity is vital for safe and effective dialysis treatment.

**INDION® HEMO** with its unique features, provides ultrapure water which meets AAMI standards (Association for the Advancement of Medical Instrumentation)

## **Process**

Pre-treatment may be required on the basis of inlet feed water and outlet quality to be achieved.

### **The system treats water in several stages:**

- 1) **Hot Water Sanitizable Reverse Osmosis (HSRO):** The process produces high purity water with minimal dissolved solids, particulate colloidal and organic matters. It also significantly reduces heavy metals like aluminium, and bacterial endotoxins, viruses & cyst.
- 2) **Hot Water Sanitizable Endotoxin Cartridge filter (ECF):** It is used for disinfecting the system, eliminating use of chemicals. It is also used to remove the traces of microorganisms making the water pure & completely safe for dialysis treatment.
- 3) **UV System:** Provides complete protection to eliminate microorganisms.

## Features

- Single pass & double pass sanitary RO designs  
- with options of pre-treatment & capacities
- Hot water sanitizable RO Membranes and ECF
- UV system post ECF
- In- built multipurpose sanitisation with heater & spray ball
- Sanitary design for all equipments & components
- Touch screen display (10 inches)
- Fully automated PLC controlled system with safety interlocks
- Skid-mounted modular system
- All piping are of electro-polished stainless steel with  $Ra < 0.8\mu$



## Technical Specifications

### Single Pass RO

Model	INDION HEMO-400	INDION HEMO-1000	INDION HEMO-1500
Type	AUTO	AUTO	AUTO
Average Product Flow (LPH)	400	1000	1500
Maximum Permissible TDS Feed (PPM)	150		
Permeate Conductivity ( $\mu S/cm$ )	<20		
<b>Microbiological Level</b>	<b>Standard</b>		<b>Action Level</b>
Colony Forming Units	<100 CFU/ml		$\geq 50$ CFU/ml
Endotoxin Units	<0.25 EU/ml		$\geq 0.125$ EU/ml
Minimum Feed Pressure Required at Pump Inlet ( $kg/cm^2$ )	Not less than 1.0		
Cartridge Housing	SS316L		
Cartridge	PP		
Conical Micron Filter	SS316 L		
Membrane	Hydramem HSRO		
Pressure Tube	SS316L		
Endotoxin Removal Filter Housing MOC	SS316L		
Endotoxin Removal Filter MOC	Polysulfone		
Indion UV System MOC	SS 316 L		



## Double Pass RO with Pre-treatment

Model	INDION HEMO-400	INDION HEMO-1000	INDION HEMO-1500
Type	AUTO		
Average Product Flow (LPH)	400	1000	1500
Maximum Permissible TDS Feed (PPM)	1500		
Permeate Conductivity (μS/cm)	<20		
Microbiological Level	Standard	Action Level	
Colony Forming Units	<100 CFU/ml	=50 CFU/ml	
Endotoxin Units	<0.25 EU/ml	=0.125 EU/ml	
Minimum Feed Pressure Required at Pump Inlet (kg/cm²)	Not less than 1.0		
Conical Micron Filter	SS316 L		
Auto Multigrade Filter MOC	Composite Fiber Glass		
Auto Activated Carbon Filter MOC	Composite Fiber Glass		
Auto Softener	Composite Fiber Glass		
Cartridge Housing MOC	SS316L		
Cartridge Filter MOC	PP		
Multi Purpose Tank With Heater and Spray Ball	SS316L		
Membrane	Hydramem HSRO, BWRO		
Pressure Tube	SS316L + Composite Fiber Glass		
Endotoxin Removal Filter Housing MOC	SS316L		
Endotoxin Removal Filter MOC	Polysulfone		
Indion UV System MOC	SS 316 L		

Our state-of-the-art manufacturing facilities are ISO 9001, ISO 14001 & ISO 45001 certified

To the best of our knowledge, the information contained in this publication is accurate. Ion Exchange (India) Ltd. maintains a policy of continuous development and reserves the right to amend the information given herein without notice. Please contact our regional/branch offices for current product specifications.

**INDION** is the registered trademark of Ion Exchange (India) Ltd.



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#### Manufacturing Units

India - Ankleshwar | Hosur | Patancheru | Rabale | Verna | Wada

Overseas - Bangladesh | Indonesia | Saudi Arabia | UAE

All India Service and Dealer Network

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