

PRODUCT DATA SHEET



NIPRO CJ-R011

DOUBLE-STAGE REVERSE OSMOSIS WATER
TREATMENT EQUIPMENT FOR HEMODIALYSIS



WATER TREATMENT FOR HEMODIALYSIS

- Double stage
- Professional and structural design
- 10-inch operation interface
- Real-time remote monitoring of the operating status
- One-touch automatic chemical disinfection
- Optimized design of the dead space well controlling bacterial contamination
- Single reverse osmosis membrane can be operated in an emergency
- Online monitoring conductivity meter
- Real-time remote monitor function
- Adjustable range of constant pressure in the loop
- Programmable timer to automatically switch on and off the system
- Operation and fault records are saved in real-time
- One-touch operation, automatic system flush + standby pulse flush
- Intelligent water saving technology

PRODUCT COMPLIANCE

- The device complies with the following norms, directives, and regulations:
 - US Hemodialysis Water Standards: ANSI/AAMI/ISO 23500-3:2019
 - CE-MDR
 - Spanish Ministry of Health
 - ISO13485, ISO9001, ISO1400, ISO45001

MATERIALS USED

- Membrane housing material: Stainless Steel 304 as standard
- Loop Material: PEX

ADDITIONAL ACCESSORIES AND OPTIONAL ITEMS

- Pretreatment (Prefilter, Softener and carbon filter) | Heat disinfection | Endotoxin filter
- Online chlorine monitoring | Online water hardness monitor | U-shaped connection tube

UPGRADABLE ITEMS

- Grundfos booster pump | Grundfos high-pressure pump
- 316L stainless steel shell membrane | 316L stainless steel ward piping

PRODUCT RANGE



1-NRO-CJ-ROII-600



1-NRO-CJ-ROII-1000



1-NRO-CJ-ROII-1500



1-NRO-CJ-ROII-2500



1-NRO-CJ-ROII-3000



1-NRO-CJ-ROII-4500

PRODUCT RANGE OVERVIEW

Reference Code (NIA)	Description	Suitable for Number of Beds	Product Dimensions			Device Lifetime
			Length (cm)	Width (cm)	Height (cm)	
1-NRO-CJ-ROII-600	Water Treatment Equipment for Hemodialysis 600L/H	5-12	154.0	88.0	173.5	10
1-NRO-CJ-ROII-1000	Water Treatment Equipment for Hemodialysis 1,000L/H	12-20	154.0	88.0	173.5	10
1-NRO-CJ-ROII-1500	Water Treatment Equipment for Hemodialysis 1,500L/H	20-30	154.0	88.0	173.5	10
1-NRO-CJ-ROII-2500	Water Treatment Equipment for Hemodialysis 2,500L/H	30-50	154.0	88.0	173.5	10
1-NRO-CJ-ROII-3000	Water Treatment Equipment for Hemodialysis 3,000L/H	50-70	198.0	88.0	173.5	10
1-NRO-CJ-ROII-4500	Water Treatment Equipment for Hemodialysis 4,500L/H	70-90	198.0	88.0	173.5	10

KEY DIFFERENCES

Model	600	1000	1500	2500	3000	4500
Water Production Capacity @ 25°C (77°F) (L/H)	600	1,000	1,500	2,500	3,000	4,500
Flow Rate for Raw Water (L/H)	> 3,000	> 4,800	> 7,200	> 12,000	> 14,500	> 21,600
Size of Membrane	4040	4040	8040	8040	8040	8040
RO Membrane - Primary	4	5	2	3	4	5
RO Membrane - Secondary	2	3	1	2	3	3
Permeate Flow Rate	≥ 600L/H	≥ 1,000L/H	≥ 1,500L/H	≥ 2,500L/H	≥ 3,000L/H	≥ 4,500L/H
Permeate - Velocity	≥ 1.0 m/s (DN15)	≥ 1.0 m/s (DN20)	≥ 1.4 m/s (DN20)	≥ 1.3 m/s (DN25)	≥ 1.5 m/s (DN25)	≥ 1.2 m/s (DN25)
Power Supply	< 4,600VA	< 5,400VA	< 7,000VA	< 9,400VA	< 11,850VA	< 11,850VA

TECHNICAL PARAMETERS

Raw Water

Content	Value/Range
Pressure	0.15Mpa < Pressure < 0.50Mpa
Inlet Water	Drinking tap water in compliance with the Chinese National Standard GB 5749-2022
Temperature	5 - 35°C (41-95°F)
Conductivity	< 500µs/cm @ 25°C (77°F)
Dissolved CO2	< 30ppm
pH	6.0 < pH < 9.0
Total Organic Carbon (TOC)	< 2,000ppb (ng/g)
Water Hardness in CaCO3	< 300ppm
Silicon Dioxide (SiO2)	< 30ppm
Free Chlorine	≤ 2ppm
Total Chlorine	≤ 3ppm
Chlorine Dioxide	≤ 0.8ppm

Treated Water

Content	Value/Range
Organic Substances Removal Rate	> 99%
Recovery Rate	40% - 85% (adjustable)
Salt Rejection Rate	≥ 99% @ 25°C (77°F) *In case raw water pH is 7.0
Total Organic Carbon (TOC)	< 50ppb (ng/g)
Total Bacterial Count	< 50 CFU/ml
Endotoxin	< 0.125 EU/ml
Silicon Dioxide (SiO2) Retention Rate	> 99.9%
Conductivity	≤ 10µs/cm @ 25°C (77°F)

Environmental Conditions

Content	Value/Range
Location	For indoor use only
Floor	Dry and flat ground
Operating Temperature	5°C - 40°C (41°F - 104°F)
Relative Humidity	≤ 80%
Atmospheric Pressure	70kPa - 106kPa
Main Voltage	Three-phase five-wire AC~380V±10% (including neutral wire and grounding) 50Hz
Noise Level	< 65-70dB at 1 meter distance from machine



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