

PORTABLE REVERSE OSMOSIS

800 GPD PORTABLE RO SYSTEM

A portable reverse osmosis (RO) system is a compact and efficient water purification unit designed to provide high-quality water suitable for medical applications. Locally manufactured versions of these systems offer a cost-effective and accessible solution, especially for hospitals and intensive care units (ICUs) where reliable and sterile water is critical for patient care and equipment sterilization. These units are designed for mobility, easy installation, and minimal maintenance, ensuring uninterrupted water supply with optimal purity, meeting the stringent standards required in clinical settings.

Portable Reverse Osmosis System for ICU Use Locally Manufactured | Compliant with DOH & AAMI Standards

Core Control & Monitoring

- PLC Control: Schneider TM221CE24R Series Programmable Logic Controller
- Visual Monitoring: Real-time system status display
- Digital TDS/Conductivity Meters: For raw and product water quality monitoring

Filtration & Purification System

- **Sediment Filters:**
 - 10" Slim 5 Micron Pre-RO Sediment Filter
 - 10" Slim 0.22 Micron Bacteria Filter
- **RO Membrane:**
 - ULP 4021 Membrane with 90% rejection rate
 - Average Permeate: 4–5 LPM
 - Capacity: 600–800 GPD (conservative)
- **Pre Filtration:**
 - • Sediment Filter: 10" Slim, 10 Microns – removes particulates
 - • Carbon Block Filter: 20" Slim – reduces chlorine, taste, and odor
 - • Water Softener Cartridge: 20" Slim – reduces hardness (calcium & magnesium).

Mechanical Components

- **Pump:** 1.5 HP Horizontal Pump, 5 Impellers
- **Storage:** 3.2-Gallon RO Water Pressurized Tank
- **Distribution:**
 - RO Loop System
 - 2 HD Machine Outlets
 - Recirculating System for consistent flow
- **Valves & Safety:**
 - Low and High Pressure Switches
 - Feed Water Release Valve
 - Auto-Flushing Function to extend membrane life

Key Advantages

- Automated, user-friendly operation
- Real-time maintenance alerts for consumables
- Compact and portable design
- Designed for stable pressure and reliable water quality
- Fully compliant with AAMI and Department of Health standards



Description

This locally manufactured portable reverse osmosis (RO) system is specifically designed to meet the stringent requirements of intensive care units (ICUs), in compliance with the Department of Health and AAMI Water Quality Standards. At the heart of the system is a Schneider TM221CE24R Series Programmable Logic Controller (PLC), which ensures precise control and reliable automation of operations.

The system features integrated visual monitoring for quick and easy assessment of its operational status. A built-in 3.2-gallon pressurized tank ensures stable and continuous water pressure, which is critical for dialysis and other ICU-related applications.

Engineered for versatility and user convenience, the system includes intelligent reminders for regular replacement of consumables. This proactive feature plays a vital role in maintaining optimal performance and preventing downtime.

What truly sets this system apart is its thoughtful design—combining safety, compliance, and functionality to exceed client expectations. With its robust build and advanced monitoring capabilities, it offers a superior solution for critical healthcare environments.



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