

# Thermo Scientific Barnstead Pacific RO water purification systems

The Barnstead Pacific RO system is a modularly designed laboratory reverse osmosis system specifically developed for functional and economical production of high-purity water.



## ROUTINE LABORATORY WORK:

- Rinsing lab glassware
- Supplying autoclaves, water baths, and incubators
- Preparing and diluting buffers and reagents
- General biotechnology

### Product Features

- Five system options with permeate flows of 3, 7, 12, or 20, or 40 L/h
- Space-saving design allows system to sit on the laboratory bench or be mounted on the wall
- RO membrane removes organic and inorganic contaminants, microorganisms, particles and colloids
- Simple system upgrade accommodates future pure water capacity requirements

### Reliable operation

- Microprocessor control offers automatic operation with continual monitoring of all important parameters

### Easy-to-operate clear display

- Resistivity/conductivity clearly displayed on large back-lit control panel that tilts for optimum viewing
- Status of current operating mode clearly indicates “production”, “stand-by”, or “cleaning” modes
- Reservoir fill-level shown as %

### Integrated feed water monitoring

- Good quality feed water is a prerequisite for high purity water and extends cartridge service life

### GLP-compliant documentation

- Real-time clock records system errors and faults
- Ongoing data storage collects four weeks information displayed in clear text
- Operating system is code-protected to prevent unauthorized changes to system settings
- RS-232 interface with adjustable sender interval allows for customized timing of data transmission of measured values and faults to a PC or data printer
- Cell constant of 0.16 cm<sup>-1</sup> ensures precise conductivity measurements

### Pacific RO pretreatment

- Two 10 inch (25.4 cm) cartridge filter housings with a 5 µm prefilter + activated carbon to prevent entry of particles > 5 µm and high concentrations of free chlorine. Also includes hardness stabilizer cartridge which binds calcium and prevents its precipitation.

### Worry-free pure water storage

- Reservoir are constructed of pigment-free polyethylene
- Conical bottom allows for easy cleaning, disinfecting and complete emptying

# flexible configurations

## for your RO water needs

### Quick Look Comparison

|                                      | Pacific RO<br>3 L/hr<br>systems | Pacific RO<br>7 L/hr<br>systems | Pacific RO<br>12 L/hr<br>systems | Pacific RO<br>20 L/hr<br>systems | Pacific RO<br>40 L/hr<br>systems |
|--------------------------------------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Pure water production at 15°C , L/h  | 3                               | 7                               | 12                               | 20                               | 40                               |
| Salt retention, %                    | 98                              | 98                              | 98                               | 98                               | 98                               |
| Retention, bacteria and particles, % | 99                              | 99                              | 99                               | 99                               | 99                               |

### Feed Water Requirements\*

|                                       |  |
|---------------------------------------|--|
| Source                                | Potable tap water that has been softened or hardness stabilized                                      |
| Silt density index (SDI)              | < 5, With higher values, a pretreatment (model no. 09.4000 must be installed upstream of the system) |
| Conductivity, $\mu\text{S}/\text{cm}$ | < 1500   |
| Prefiltration                         | 5 $\mu\text{m}$ + activated carbon   |
| Free chlorine, mg/L                   | < 0.1  |
| pH-range                              | 4-11   |
| Temperature, C°                       | 2-35   |

\*complete list of feed water specifications can be found in the operational manual



## Thermo Scientific Barnstead Pacific RO water purification system (continued)

| Storage Reservoir |                               |                               |
|-------------------|-------------------------------|-------------------------------|
| Volume            | Material                      | Dimensions                    |
| 30 L              | Polyethylene, opaque to light | 23.5 x 14.9 in (598 x 380 mm) |
| 60 L              |                               | 35.9 x 14.9 in (912 x 380 mm) |

| Pacific RO Product Specifications |                         |                   |                      |  |             |
|-----------------------------------|-------------------------|-------------------|----------------------|--|-------------|
| Operating pressure, psi (bar)     | Electrical requirements | Power consumption | Feed water connector | Dimensions W x D x H                     | Temperature |
| 29-87 (2-6)                       | 90-240 V, 50/60Hz       | 0.1 kW            | 3/4" NPT             | 14.6 x 13 x 23.7 in (372 x 330 x 603 mm) | 2-35°C      |

| Ordering Table   | Pacific RO 3                                  | Pacific RO 7 | Pacific RO 12 | Pacific RO 20     | Pacific RO 40     |
|--|---|--------------|---------------|-------------------|-------------------|
| <b>Pacific RO Systems*</b><br>All systems have an integrated wall bracket and include an RO membrane and pressure regulator  | 50132385                                      | 50132386     | 50132387      | 50132388          | 50132389          |
| <b>Required Accessories</b>  |   |              |               |                   |                   |
| <b>Pacific RO Pretreatment</b><br>Includes two 10 inch (25.4 cm) cartridge housings, a 5 µm prefilter + activated carbon cartridge and hardness stabilizer cartridge                                       | 09.4000                                       | 09.4000      | 09.4000       | 09.4000           | 09.4000           |
| <b>Pacific RO Reservoir</b><br>Choose a reservoir that fits your needs   | See "Storage Reservoir Options" the next page |              |               |                   |                   |
| <b>Optional Accessories</b>  |   |              |               |                   |                   |
| <b>Water watcher</b><br>Alerts the user to leaks. Available as 230V, 50Hz only.  | 16.0129                                       | 16.0129      | 16.0129       | 16.0129           | 16.0129           |
| <b>Hand Dispenser Kit</b><br>Hand dispenser with 3 meter cord that connects to tank. Use only with a tank equipped with a pressure pump (06.5034, 06.5064, 06.5084). Ships with a 0.2 micron final filter. | 50138221                                      | 50138221     | 50138221      | 50138221          | 50138221          |
| <b>Replacement Consumables</b>   |   |              |               |                   |                   |
| <b>Reverse Osmosis membrane</b><br>Pacific RO 3, 7, 12 only require a single RO membrane. Pacific RO 20 and 40 require two membranes as indicated.   | 22.0046                                       | 22.0046      | 22.0046       | 22.0046 (order 2) | 22.0087 (order 2) |
| <b>5µm prefilter + activated carbon 10 inch cartridge</b>  | 06.5201                                       | 06.5201      | 06.5201       | 06.5201           | 06.5201           |
| <b>Hardness stabilizing 10 inch cartridge</b>  | 06.5452                                       | 06.5452      | 06.5452       | 06.5452           | 06.5452           |
| <b>Cleaning solution</b>   | Europe/Asia Pacific                           | 09.2202      | 09.2202       | 09.2202           | 09.2202           |
|  | North America/Latin America                   | CMX25        | CMX25         | CMX25             | CMX25             |



| Storage Reservoir Options for Pacific RO                                |                                      | 30 L     | 60 L     | 100 L    |
|---|--------------------------------------|----------|----------|----------|
| <b>Reservoir</b>  | with level display                   | 06.5033  | 06.5063  | 06.5083  |
|   | with level display and pressure pump | 06.5034  | 06.5064  | 06.5084  |
| <b>Required Accessories</b>   |                                      |          |          |          |
| <b>Sterile overflow for reservoir</b>                                   |                                      | 06.5001  | 06.5001  | 06.5001  |
| <b>Vent filter</b><br>Choose the vent filter for your application needs | Sterile filter, 0.2 µm               | 50135142 | 50135142 | 50135142 |
| <b>Optional Accessories</b>   |                                      |          |          |          |
| <b>UV lamp assembly for the reservoir with lamp, 230V, 50Hz only</b>    |                                      | 06.5006  | 06.5006  | 06.5006  |
| <b>Wall mounting bracket</b>  |                                      | 06.5015  | 06.5016  | na       |
| <b>Replacement Consumables</b>  |                                      |          |          |          |
| <b>Replacement UV lamp (Reservoir)</b>                                  |                                      | 09.5002  | 09.5002  | 09.5002  |