

# The Culligan® M1 Series **Reverse Osmosis System**



### **EXAMPLES OF MARKETS SERVED:**

**AGRICULTURE** ASSISTED LIVING **AUTOMOTIVE BIO-PHARMACEUTICAL** 

**BOTANICALS BOTTLED WATER PLANTS** 

**CASINOS** 

CHEMICAL PROCESSING COMMERCIAL BUILDINGS

DAIRIES

**EDUCATIONAL FACILITIES** 

ENERGY/POWER/ COGENERATION **ELECTRONICS** GOVERNMENT

**GROCERY** FOOD/BEVERAGE **HEALTH CLUBS** HOTELS/LODGING

HOSPITALS/HEALTHCARE INK/DYE PRODUCTION

LABORATORIES

LAUNDRY

MANUFACTURING

MARINE **MILITARY** 

MULTI-UNIT HOUSING

**MUNICIPALITIES** 

PLATING/COATING

**PRINTING** 

PULP/PAPER

OIL/PETROLEUM/GAS **TEXTILE** 

THEME PARKS UNIVERSITIES

VEHICLE WASH

# **Excellent water quality is a smart business** decision

The M1 Reverse Osmosis System is a cost effective water treatment solution with enhanced features, which help reduce operating and post treatment costs. The M1 Reverse Osmosis system helps you reduce maintenance costs by reducing contaminants\* from your water that affect taste and clog equipment. Control your installation costs by using a system configured for your unique needs. Keep your operating costs low with an easy-to-use electronic controller.

The M1 RO is part of the Culligan Matrix Solutions™ that combine durable and efficient equipment, systems experience, and technical experts who understand your unique requirements. From planning your system to installing your water treatment equipment, Culligan Matrix Solutions offer options that help deliver the quality of water to meet your needs. Consult with a Culligan representative to create your solution.

\*contaminants may not necessarily be in your water

### **Culligan Matrix Solutions Advantages:**

- Simple System Integration
- Global Product Platform
- Flexible Configurations
- Quick Delivery/Easy Installation
- Culligan CP+ Controller





**Solutions** 









Distribution Storage Solutions Solutions

#### **System Specifications**

| Specification  | US                   | Metric                              |  |
|--|----------------------|-------------------------------------|--|
| Inlet Pressure (dynamic)                             | 20-50 psig           | 1.4 — 3.5 bar                       |  |
| Maximum<br>Operating Pressure                        | 95—225 psig          | 6.6 — 15.5 bar<br>115<br>60 Hz<br>1 |  |
| Power<br>Voltage<br>Frequency<br>Phase               | 115<br>60 Hz<br>1    |                                     |  |
| Feed Water<br>Temperature                            | 33–100° F            | 1-40° C                             |  |
| Turbidity, maximum                                   | < 1 NTU              | < 1 NTU  3 - 11  0 mg/l  2500 mg/l  |  |
| pH Range   | 3 – 11               |                                     |  |
| Chlorine, max.                                       | 0 mg/l               |                                     |  |
| Total Dissolved Solids, max.                         | 2500 mg/l            |                                     |  |
| Silt Density Index<br>Well Water<br>Surface<br>Water | < 3<br>< 5           | < 3<br>< 5                          |  |
| Iron, maximum  | < 0.1 mg/l           | < 0.1 mg/l                          |  |
| Salt Rejection, nominal                              | > 98 %               | > 98 %                              |  |
| Product Water Hard-<br>ness                          | < 1% Raw<br>Hardness | < 1% Raw<br>Hardness                |  |

#### **Examples of RO Applications**

- Ice Production/Drinking Water Reduces scaling, improves taste and clarity
- Steam Production Reduces scaling and maintenance
- Humidification Reduces scaling and dustina
- Misting Reduces scaling and help extend equipment life
- Pretreatment for High Purity Systems Reduces regeneration requirements
- Reclaim/Recycling Water conservation
- Washing and Rinsing Improves performance, spot-free rinses

### **Standard Features**

- Wall Mount Design
- Rotarty Vane Pump
- Inlet Solenoid Valve
- Pretreatment Sediment Filter
- Concentrate and Recirculation Throttling Valves
- Pressure Indicators
- FRP Membrane Housings
- Rotameter style flow meters
- Culligan CP Control Panel
  - Level Control input
  - Pretreatment Lockout
  - Startup Flush/timed Flush
  - Low pressure auto-restart
  - Indicator Lights

#### **Optional Features & Accessories**

- Multi-Stage Pretreatment Filters
- Storage Tanks
- Level Controls
- Chemical Feed Pumps

- Ultraviolet Sterilization
- Pressurized Storage System
- Floor Stand
- Global Power Platform

- 220 v/50 HZ
- Additional Customization Available on request
- Auto Shut Down on High Product TDS

### **M1 Reverse Osmosis System**

| Model | Nominal Capacity* (gpm/lpm) | Nominal Capacity* (gpd/m³/h) | Module Qty & Size | Nominal System Recovery (%) | Motor HP - KW | Dimension L x W x H (inches-milimeters) |                 |
|-------|-----------------------------|------------------------------|-------------------|-----------------------------|---------------|---|-----------------|
| M1-1S | 0.17                        | 250                          | (1), 2.5"x 21"    | 25                          | 1/3           | 37 x 10 x 37.75                         |                 |
|       | 0.65                        | 0.04                         |                   |                             | 0.25          | 940 x 254 x 959                         |                 |
| M1-2S | 0.35                        | 500                          | (2), 2.5"x 21"    | 25                          | 1/3           | 37 x 10 x 37.75                         |                 |
|       | 1.31                        | 0.08                         |                   |                             | 0.25          | 940 x 254 x 959                         |                 |
| M1-3S | 0.52                        | 750                          | (3), 2.5"x 21"    | 50                          | 1/3           | 37 x 10 x 37.75                         |                 |
|       | 1.97                        | 0.12                         |                   |                             | 0.25          | 940 x 254 x 959                         |                 |
| M1-4S | 0.69                        | 1000                         | (4), 2.5"x 21"    | 50                          | 1/3           | 37 x 10 x 37.75                         |                 |
|       | 2.63                        | 0.16                         |                   |                             | 0.25          | 940 x 254 x 959                         |                 |
| M1-2L | 0.83                        | 1200                         | (2), 2.5"x 40"    | 2.5"x 40" 50                | 3/4           | 37 x 10 x 46.25                         |                 |
|       | 3.15                        | 0.19                         |                   |                             | 0.56          | 940 x 254 x 1175                        |                 |
| W1.01 | 1.18                        | 1700                         | (3), 2.5"x 40"    | 50                          | 3/4           | 37 x 10 x 46.25                         |                 |
| M1-3L | 4.47                        | 0.27                         |                   |                             | 0.56          | 940 x 254 x 1175                        |                 |
| M1-4L | 1.53                        | 2200                         | (4), 2.5"x 40"    | (4) 2 5" 40"                | F0.           | 3/4                                     | 37 x 10 x 46.25 |
|       | 5.78                        | 0.35                         |                   | 50                          | 0.56          | 940 x 254 x 1175                        |                 |
| M1-1F | 1.39                        | 2000                         | (1), 4 x 40       | (1), 4 x 40 25              | 3/4           | 37 x 10 x 46.25                         |                 |
|       | 5.26                        | 0.32                         |                   |                             | 0.56          | 940 x 254 x 159                         |                 |
| M1-2F | 2.78                        | 4000                         | (2), 4 x 40       | (2) 4 :: 40                 |               | 3/4                                     | 37 x 10 x 46.25 |
|       | 10.52                       | 0.63                         |                   | 50                          | 0.56          | 940 x 254 x 159                         |                 |

<sup>\*</sup>Nominal capacity based on new RO membranes operating on a properly pretheated feed water of 500 ppm IDS as NaCl, 77 °F (25 °C), Sit Density Index (SDI) below 3, and supplying water to atmosphere. Productivity will vary depending on the actual feed water quality and temperature.

# Finally, an end-to-end solution from a single source.











## Place your commercial and industrial water treatment needs in the hands of a global leader.

For over 75 years, Culligan has made better water. Our global network, comprised of 800+ dealers and international licensees in over 90 countries, is dedicated to addressing your water-related problems. As a worldwide leader in water treatment, our sales representatives and service technicians are familiar with the local water conditions in your area. Being global and local position us to deliver customized solutions to commercial and industrial water issues that affect your business and your bottom line.

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