

# The Marlo Reverse Osmosis System

Reverse Osmosis (RO) is one of the most convenient and economical methods of reducing unwanted contaminants in your drinking water. Reverse Osmosis is the process by which water molecules are forced, by water pressure through a semipermeable membrane. Most of the impurities and other contaminants are rinsed to the drain while the refined water is routed to a special holding tank.

The advantages of the Marlo Reverse Osmosis system are that they combine high quality water with flexibility. These systems can be installed on well or municipal water systems, to bring RO water to the country or urban home. The Thin Film Composite (TFC) reverse osmosis membrane rejects a high percentage of impurities to bring you the most advanced RO technology at an affordable price. Here's how it works.

Water first enters the RO system through the Sediment/Carbon Prefilter. This specialized filter not only protects the automatic shut-off and membrane from clogging with debris, but also filters out chlorine, to protect the refined TFC membrane.

Water then travels to the operational center of the system – the TFC membrane. This is where the “Reverse Osmosis” of the Marlo RO system happens.

After the membrane, water is then routed to the holding tank, ready for use. When you turn on the included faucet and draw water, it then goes through its final stage of filtration. The water travels through the Activated Carbon Filter to remove any remaining tastes and odors before reaching your glass. This carbon imparts the final “sweet” polish to your water.



## Features

- Delicious sparkling-clear drinking water.
- Pristine flavorful coffee, tea and juice.
- Clean-rinsed fresh fruits and vegetables.
- Better-tasting soups, sauces and meals when prepared with RO water.
- Cost-effective. The daily cost of bottled water will no longer be a concern.
- Convenient. Fresh, clean water, ready at your tap.

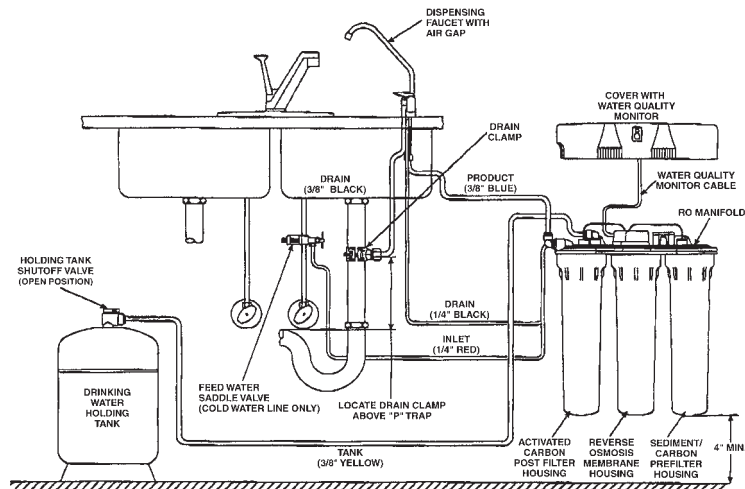
## Marlo Reverse Osmosis Under Sink Installation Diagram

### Quality Reverse Osmosis Drinking Water For:

- Drinking Water
- Ice Cubes
- Coffee & Tea
- Aquariums
- Low Sodium Diets
- Humidifiers
- Plants & Flowers
- Steam Irons
- Juices
- & Other Beverages

### The Marlo Reverse Osmosis Drinking Water System will reduce the following contaminants\*:

- Arsenic (Pentavalent) <sup>5</sup>
- Barium
- Cadmium
- Chromium (Hexavalent)
- Chromium (Trivalent)
- Copper
- Cyst
- Fluoride
- Lead
- Nitrate <sup>7</sup>
- Nitrite <sup>7</sup>
- Radium 226/228 <sup>6</sup>
- Selenium
- TDS (Total Dissolved Solids)



## Marlo Reverse Osmosis Performance Specifications

### Membrane Rating

Membrane Production <sup>1</sup>	produces 35 ± 7 gpd (106-159 Lpd)
Membrane TDS Reduction	95% minimum

### System Rating

System Production <sup>2</sup>	produces 13 gpd (49 Lpd) See performance data sheet for more information.
System TDS Reduction	90%+typical
System Recovery Rating <sup>2</sup>	33%
System Efficiency Rating <sup>2</sup>	17%

### Incoming Water Specifications

Water Pressure Range	40-100 psig (280-690 kPa)
Maximum Total dissolved solids (TDS)	2000 ppm (mg/L)
Water Temperature Range	40-100°F (4-38°C)
pH Range	4-11 Optimum rejection at pH: 7.0 - 7.5
Maximum Hardness	less than 10 gpd (170 mg/l) or soften
Maximum Iron	less than 0.1 ppm (mg/l)
Maximum Manganese	less than 0.05 ppm (mg/l)
Hydrogen Sulfide	none
Chlorine Restriction <sup>3</sup>	see note
Bacteria Restriction <sup>4</sup>	water source must be potable

- 1 Industry standards measure R.O. Membranes performance with no backpressure on the product water, at 50 psig (345kPa) and 77°F (25°C). Further conditions on the above are 350 ppm TDS. Production rate and TDS reduction figures are for a new Membrane that has been rinsed for 24 hours. The production rate of a new Membrane can decrease by 10% per year or more, depending upon the scaling and fouling tendencies of the Feed Water.
- 2 Measured at 50 psig, 77°±2° F, 751 mg/l TDS per section 6.7 of NSF/ANSI Standard 58. Recovery rating means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed. Efficiency rating means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage.
- 3 Chlorine will damage a TFC Membrane. The Sediment/Carbon Prefilter Cartridge will reduce chlorine from the incoming water. Change cartridge every 6 months, more often if the water contains more than 1 ppm chlorine.
- 4 Do not use with water that is microbiologically unsafe or of unknown quality, without adequate disinfection before or after the system.
- 5 This system has been tested for the treatment of water containing pentavalent arsenic (also known as As(V), As(+5), or arsenate) at concentrations of 0.30 mg/L or less. This system reduces pentavalent arsenic, but may not remove other forms of arsenic. This system is to be used on water supplies containing a detectable free chlorine residual at the system inlet or on water supplies that have been demonstrated to contain only pentavalent arsenic. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic. Please see the Arsenic Facts section of the Performance Data Sheet for more information.
- 6 The reduction of Radium was verified by using Barium as a surrogate under NSF/ANSI Standard 58.
- 7 This system is acceptable for treatment of influent concentrations of no more than 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater.