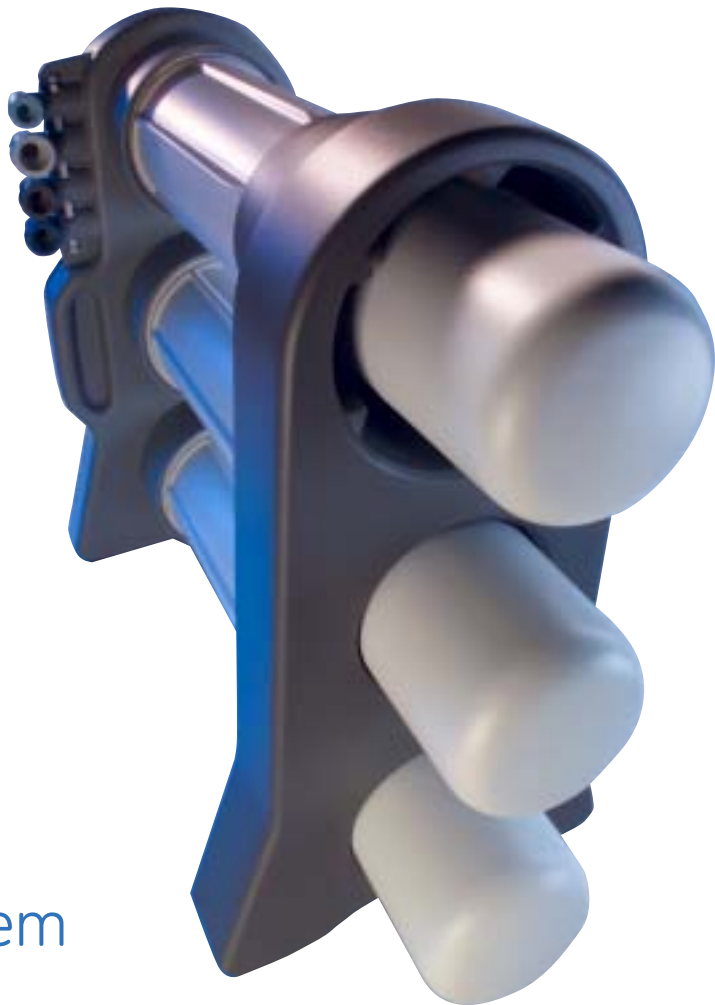


GE Infrastructure  
Water & Process Technologies



Merlin™  
Point-of-Use  
Drinking Water System



imagination at work

# Merlin point-of-use Reverse Osmosis System

## The biggest innovation in home RO technology in 30 years!

**We've done it again.** GE Infrastructure Water & Process Technologies has achieved a revolutionary breakthrough in the water treatment industry. Out-of-the-box thinking and years of research have produced a totally new point-of-use drinking water system.

The new Merlin RO System features continuous-flow water production, so a storage tank is no longer required. The unit operates on line pressure, which eliminates the need for an electrical

pump in most applications. The patented high-production, low-energy membrane reduces impurities in up to 720 gallons (2,725 liters)\* of water per day! **This high-capacity performance creates new opportunities for commercial applications – at the price of a residential system.**

**Big innovation, bigger opportunities.**

### Like no other system!

- Continuous flow – no storage tank necessary
- Uses line pressure only (>40 psi/2.76 bar)
- 1/2 gpm (1.89 lpm) permeate rate @50 psi (3.44 bar) + 77°F (25°C)
- Requires no pump, no electricity (>40 psi/2.76 bar)
- Compact design – fits easily under sink
- Water Quality Association Gold Seal – NSF/ANSI 58 Certified
- Consistent membrane efficiency
- Complete product literature and training support
- Consistent high recovery system means less water going to drain
- Multiple dispensing locations off one system

\*At 50 psi (3.44 bar), 77°F (25°C)

**TOUGH STUFF**  
High-durability Noryl® and polypropylene plastic construction provide years of dependable service

**ALL THE RIGHT CONNECTIONS**  
Engineered for the fewest number of connection points – less chance of leaks

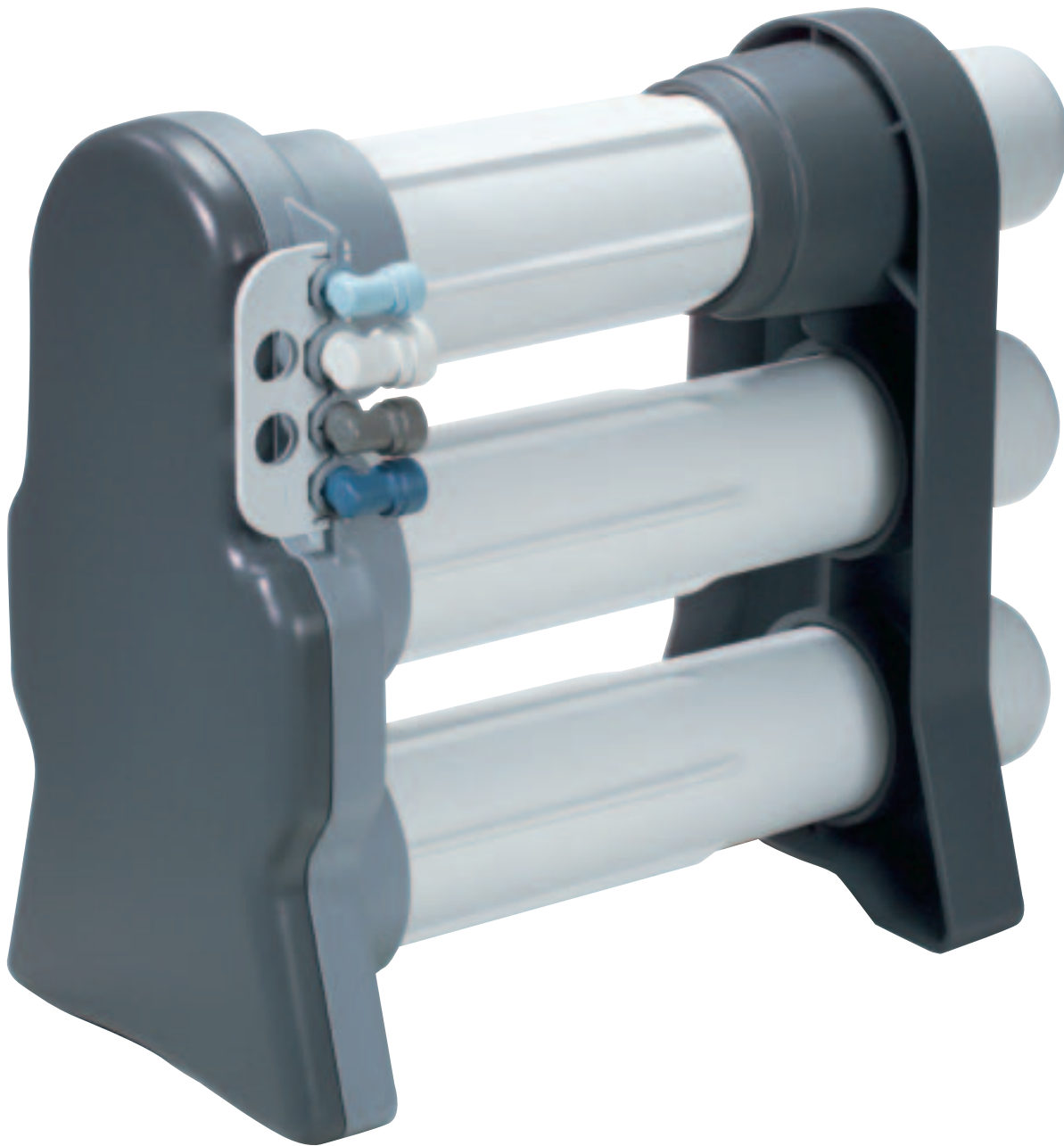
**NO TANKS!**  
Loss of tank pressure and contamination worries are eliminated

**SLEEK, GOOD LOOKS**  
Contemporary, appliance-style design creates consumer appeal

**NEVER RUNS DRY**  
Continuous permeate water flows at 1/2 gpm (1.89 lpm)



Tested and Certified by the Water Quality Association according to NSF/ANSI 58



**IT'S A SNAP**

Quick-latch snaps into place and locks down all four tubing connectors in one easy step

**STEADY STREAM OF INCOME**

Custom replacement components will be made available only through professional channels

**BUILT-IN CONVENIENCE**

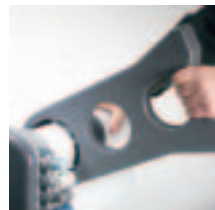
System's support leg also serves as a handy sump wrench

**AT YOUR SERVICE**

Custom high-flow faucet (with air gap) developed specifically for this system

**FITS IN NICELY**

Stand-alone compact profile takes up less space than other bulky systems



# A world of possibilities

Safe, clean water is in the news and on the minds of today's consumers. The Merlin Reverse Osmosis System addresses those concerns. Water treatment professionals will now have a truly innovative product that opens doors and provides homeowners with effective, economical solutions.

The commercial market also presents unique opportunities for growth. The Merlin RO System is fully capable of serving a variety of applications such as restaurants, pubs, water coolers, ice-makers, aquariums and more – all at a price point well below current commercial systems.



## How does your current system compare?

	Merlin RO	Standard RO
Average Daily Production Rate*	720 gpd	10-50 gpd
Water Storage Tank	None needed	Integral part of system
Install Time	1 Hour	Up to 4 Hours*
Designed for Use with Refrigerator Ice Makers	Yes	No
System Efficiency**	25-33%	As little as 5%
Dispensing Locations	2+	1-2

\*Based on inlet conditions of 50 psi (3.44 bar), 77°F (25°C).

\*\*Efficiency rating is identical to recovery rating when the system is tested without a storage tank or when a storage tank is bypassed.

## Performance Specifications<sup>†\*</sup>

Specification	Minimum	Maximum	Average
Permeate Flow Rate**	0.33 Gallons/Minute (1.25 Liters/Minute)	0.75 Gallons/Minute (2.84 Liters/Minute)	0.50 Gallons/Minute (1.89 Liters/Minute)
TDS Rejection (NaCl)**	90%	99%	93%

<sup>†</sup>Based on 50 psi (3.44 bar), 77°F (25°C), 750 mg/L NaCl, 25% recovery.

\*Specifications based on GE Osmonics internal test data.

\*\*For complete WQA test results to NSF/ANSI 58 Standard, see Merlin product data sheet P/N 1263717.

## Minimum and Maximum Operating Conditions

Condition*	Minimum	Maximum
Inlet Pressure	40 psi (2.76 bar)	80 psi (5.52 bar)
Inlet Temperature	40°F (4.44°C)	100°F (37.78°C)
Inlet TDS	50 mg/L	2,000 mg/L
Inlet Hardness	0 mg/L - (0 grain)	171 mg/L - (10 grain)
Inlet Chlorine	0 mg/L	1.0 mg/L
Inlet Iron	0 mg/L	.1 mg/L
Inlet Manganese	0 mg/L	.05 mg/L

\*System is designed for use on potable water sources only.

## Tubing/Fitting Dimensions

- Inlet Tubing** → 4 feet of 1/2" natural tubing  
(1.22 meters of 12.7 mm natural tubing)
- Concentrate Tubing** → 4 feet of 3/8" black tubing  
(1.22 meters of 9.53 mm black tubing)
- Permeate Tubing** → 4 feet of 3/8" blue tubing  
(1.22 meters of 9.53 mm blue tubing)
- Drain Tubing** → 3 feet of 1/2" red tubing  
(for airgap installation) (0.91 meters of 12.7 mm red tubing)
- Drain Connection** → 3/8" or 1/2"  
(9.53 mm or 12.7 mm)
- Carbon Post Filter** → 3/8" quick disconnect fittings  
(9.53 mm quick disconnect fittings)

## Inlet Connectors

- Option 1** → 3/8" x 3/8" x 1/2" tee  
(9.53 mm x 9.53 mm x 12.7 mm tee)
- Option 2** → 1/2" x 1/2" x 1/2" tee  
(12.7 mm x 12.7 mm x 12.7 mm tee)
- Option 3** → 14 mm x 14 mm x 12.7 mm tee
- Option 4** → 15 mm x 15 mm x 12.7 mm tee

## Filter/Membrane Performance Specifications

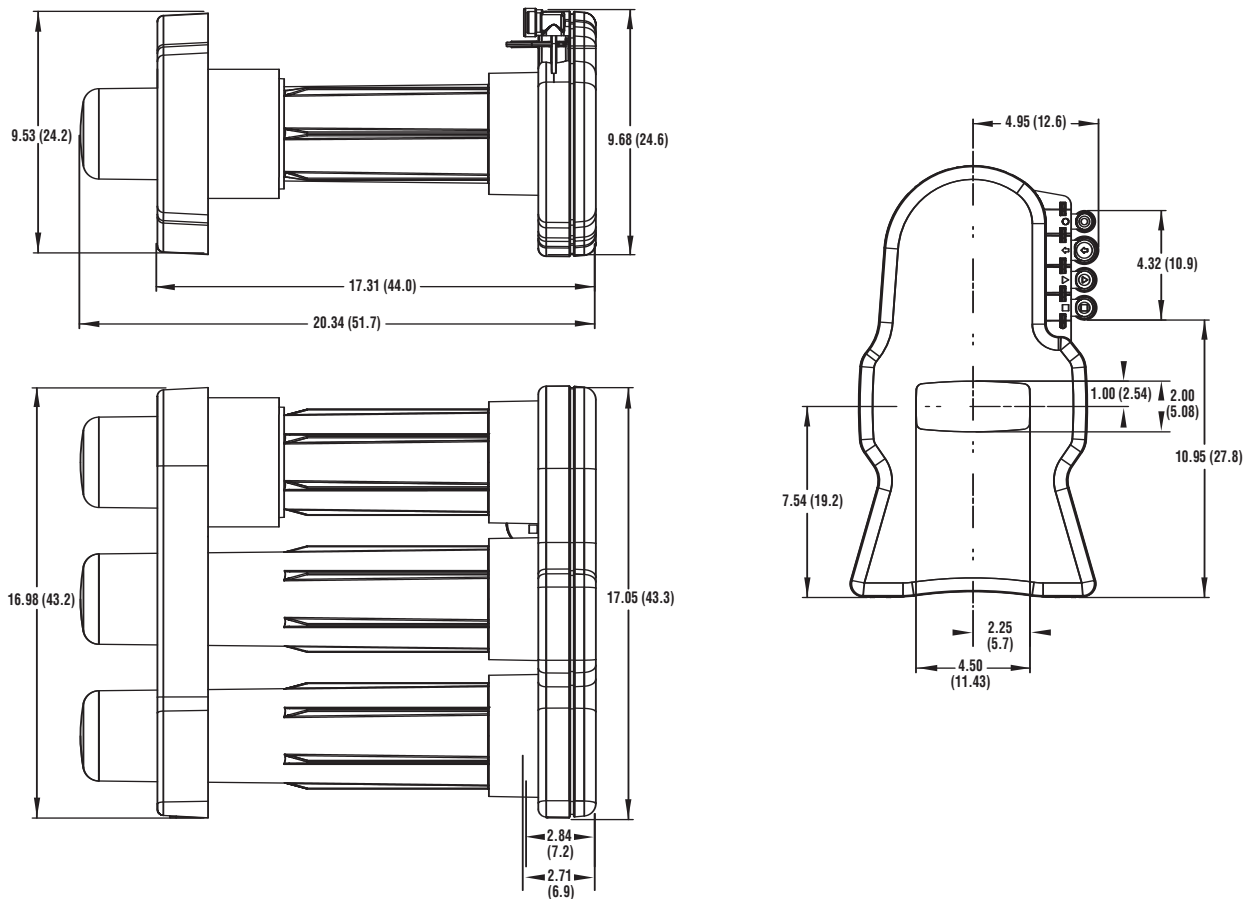
Filter Type	Dimensions		Flow Rate*	Average Life
	Length	Diameter		
Carbon Prefilter	17.0" (43.2 cm)	2.9" (7.4 cm)	3.75 GPM (14.2 LPM)	6 months (5,000 gal) (18,925 liters)
RO Element	18.75" (47.6 cm)	3.16" (8.0 cm)	0.25 GPM (0.95 LPM)	2-4 years
Carbon Postfilter	10.5" (26.7 cm)	2.6" (6.6 cm)	.750 GPM (2.8 LPM)	6 months

\*Based on: 50 psi (3.44 bar), 55°F (25°C), 750 mg/L NaCl, 25% Recovery, 1.0 mg/L inlet chlorine

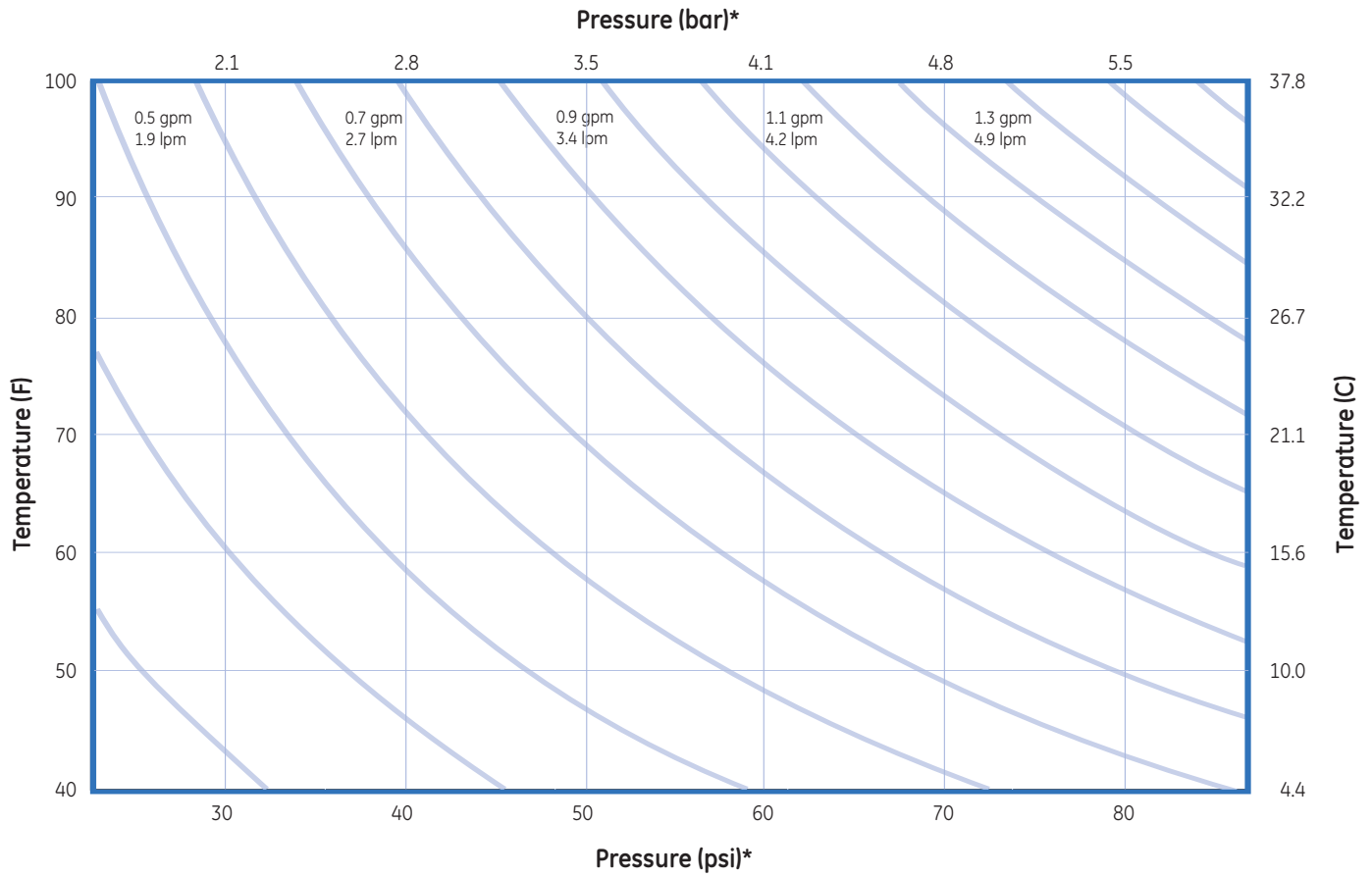
## Options

- Booster Pump → For low pressure applications
- Membrane Rinse System → Permeate flushing accumulator
- Ice Maker Installation Kit → Connections to 1/4" ice maker line
- 10-micron Sediment Prefilter → For commercial applications and non-chlorinated water supplies

## Outline Dimensions – Inches (cm)

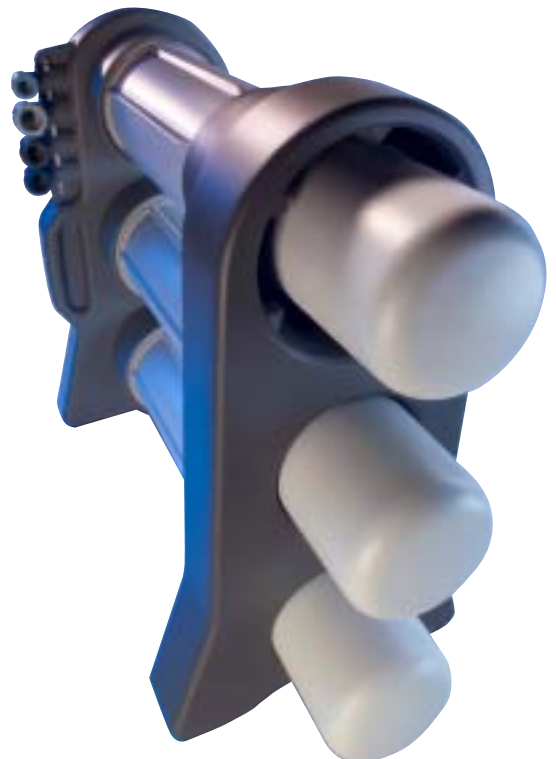


## Estimated System Flow Rate (GPM) Temperature vs. Pressure @750ppm NaCl/RO



\*Pressure measured at membrane element inlet.

**Flow Adjustment Based on TDS**  
 Estimated Flow Change from  
 750ppm NaCl/RO =  $-0.0002 \text{ (TDS)} + 0.15$





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This system has been tested according to NSF/ANSI 58 for reduction of substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 58. The substances are: Arsenic, Barium, Cadmium, Chromium (Hexavalent), Chromium (Trivalent), Copper, Fluoride, Lead, Nitrate, Nitrite, Radium 226/228, Selenium and TDS.



This product incorporates  
**Genuine John Guest**  
Component Parts,  
for High Quality and Reliability



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