



**Installation Instructions**  
**Model RO-4**  
**Reverse Osmosis System**  
***With “Quick Change” Cartridges***

# Reverse Osmosis Drinking Water System Installation Instructions

## Notice:

Residential reverse osmosis systems require 40 psi water pressure to function properly. Furthermore, RO storage tanks have only 7 psi pressure to send filtered water from the storage tank to the faucet. Therefore, place the storage tank near the faucet or icemaker connection. (Keep within five feet if possible.) Otherwise, a delivery or booster pump may be required between the storage tank and faucet.

## Components

- RO manifold
- Pre-filter for sediment
- Pre-filter, carbon
- RO membrane
- Post filter, Granular Activated Carbon
- Tubing
- Saddle valve for waste water
- Flow restrictor (goes on drain line)
- Storage tank shut-off valve
- Angle stop valve for feed water (1/4")
- Quick connect faucet adapter (connects tubing to the faucet)



Typical Under Sink Installation

## Optional

Faucet (chrome or brushed nickel). Use Teflon tape.

## Installation overview

### Step Requirements

First: Shut off flow to cold water line

- 1 Install manifold in your cabinet below the kitchen sink
- 2 Install dedicated faucet by kitchen sink. (9/16" hole for non-air gap faucet.)
- 3 Install angle stop valve on the cold water line for feed water. (Use Teflon tape.)
- 4 Install saddle valve for waste water on the sink's drain pipe.  
Note: Place saddle valve on horizontal pipe if garbage disposal is used.
- 5 Install cartridges in proper order
- 6 Install tank shut off valve on storage tank (be sure to use Teflon tape).

## IMPORTANT

Use a tube cutter to cut tubing at right angles. This is essential, using "quick connect" fittings!

## Tube Connections

Feed Water  
Orange  
Tubing  
(Connect to the fitting near the "Sediment" cartridge.)



To Drain – Black Tubing  
(Connect drain line to the flow restrictor.)

To Faucet  
Blue Tubing  
(Connect to the fitting near the "Post Carbon" cartridge.)

To Tank – Yellow Tubing  
(Connect to fitting after the ASO valve.)  
Be sure to remove plug from this fitting.

### Good Idea #1

Check the pressure in your storage tank prior to installation. When the tank is empty, 7 psi pressure is required. If the pressure is too low, add air with a hand or electric air pump.

Important: Do not exceed 7 psi. Otherwise, water production will be limited. Note: Pressure is checked at the factory, prior to shipment.



Checking pressure in storage tank. 7 psi is required.



Adding air to the storage tank with air pump.

### Good Idea #2

Prefill the storage tank with tap water prior to arriving at the job site. This will allow you to check for leaks and show your customer water running from the faucet. **Be sure to drain down the tank twice before using the RO water.**



**For best results, arrive with storage tank full (using tap water).**

## Reverse Osmosis Drinking Water System Start-Up Procedures

- Check system to verify all components are correctly installed.
- Slowly open inlet valve on the angle stop valve.
- Slowly open tank shut-off valve on the storage tank.
- Check system thoroughly for leaks. If any leaks are found, shut off both inlet and tank valves and correct the issue.
- You will hear the water running to drain while the unit is running. Once the water stops running, the tank is full.

**Note:** Water literally trickles through the membrane, so do not open the faucet until tank is full.

- It may take two hours or longer to fill the tank. (The tank is full when no water is running to drain.)
- Once the tank is full, open the faucet to flush the system. (If you see black carbon fines in the water, this is normal.) Let the tank empty.
- When the tank is empty, shut off the faucet and allow the tank to refill one more time.
- When the tank is full, open faucet to empty the tank a second time.
- When the tank is empty, shut off faucet and allow tank to refill.
- After two flushings, the system is fully operational and the water is safe to drink.
- For questions, contact Safety Zone Water.

### Dedicated faucet

Mount the dedicated faucet next to the sink. Tubing is  $\frac{1}{4}$ ". Faucets are available in chrome and brushed nickel. Be sure to select the faucet required for your installation.

Notice: Air bubbles may appear in your water after installation for a period of time. This is normal and will be resolved.



## Specifications

### Safety Zone RO-4 Reverse Osmosis Systems

#### General

Daily production rate	50 GPM
Typical flow sequence	Sediment cartridge Pre-Carbon block cartridge RO membrane cartridge Storage tank Post GAC carbon cartridge Dedicated faucet

#### Cartridge specifications

Sediment	Five micron spun polypropylene
Pre-carbon	Five micron carbon block
Reverse osmosis membrane	Thin film composite
Post-carbon	Granular activated carbon
Storage tank (included)	Metal – Capacity 3.2 gals.
Faucet options (additional)	Chrome, non-air gap Brushed nickel, non-air gap Chrome, air gap Brushed nickel, air gap

#### Replacement cartridges

Cartridge	Use (Removal)	Capacity (Gals.) TDS Reduction	Flow Rate (GPM)	Rated Life (Average Use)	Rated Life (Heavy Use)
Sediment	Sediment, particulate	2,500	0.5	12 mos.	6 mos.
Pre-carbon	Chlorine, chemicals	2,500	0.5	12 mos.	6 mos.
Membrane	Total dissolved solids	90%-95% reduction	n/a	3 yrs.	2 yrs.
Post-carbon	Taste & odors	2,500	0.5	12 mos.	6 mos.

Note: Capacities are based on local water conditions, degree of pre-filtration and use.

#### Other Specifications

Working pressure	40-125 psi
Temperature	39°F-100°F
pH	5-10
Turbidity	<1.0 NTU
Hardness	<300 ppm
Chlorine	0-3 ppm

#### Removes / Reduces

- Harmful chemicals
  - VOCs
  - Trihalomethanes
  - Bacteria
  - Cysts
  - Viruses
  - Chlorine
  - Taste & odors
  - Microplastics
  - "Forever chemicals"
- Lead
  - Mercury
  - Fluoride
  - Sodium
  - Pharmaceuticals
  - Arsenic
  - Nitrates
  - And more!
  - PFOA
  - PFOS

**Dimensions (L x W x D):** 13" x 11.5" x 5".

#### Limited Warranty

Systems come with a one (1) year limited warranty. Filter elements and membranes come with a quality guarantee only. See warranty for full details. For technical assistance call 352-492-9516.