

BWS175 Simple Install Guide

OptiPure

Access manuals, spec sheets and additional educational materials for foodservice water treatment at our website.
www.optipurewater.com

❖ General Information

Service Contact

For local maintenance and service information, please contact your nearest Authorized Service Representative. Service inquiries may be directed to technical support at:

OptiPure
101 South Gary Avenue, Suite A
Roselle, IL 60172 USA
Phone #: 972.881.9797

E-mail correspondence to: techsupport@optipure.net


Environmental Conditions

The BWS175 is certified to operate under the following conditions:

1. Altitude up to 6562 ft (2000 m).
2. Ambient Temperature of 40° - 105° F (5° - 40° C).
3. Maximum Relative Humidity 80% at 88° F (31° C).
4. Installation Category II.
5. Pollution Degree II.
6. Indoor use only, protect from elements.

Safety Instructions

1. Please read and follow these instructions when connecting and using the system.
2. Securely bolt processor to wall before operating.
3. Avoid cross-connections and install on cold water supply only.
4. Use approved air gaps when connecting to drain lines.
5. Do not exceed system pressure rating and use water hammer arrestors when water hammer is evident.
6. Turn off feedwater supply before filter or membrane cartridge replacement.

 **WARNING:** Cancer and Reproductive Harm-
www.P65Warnings.ca.gov



2.5 gals. Storage Tank Shown

❖ Installation Requirements

Operating a system on water supplies outside of the parameters listed below may lead to premature membrane failure. This product is for commercial use only and must be installed and maintained in accordance with manufacturer's guidelines and local regulatory plumbing codes.

Operating Parameters

Typical Membrane TDS Rejection: 97+%
Feed Temperature: 40° - 100°F (4° - 38°C)
Feed Pressure: 50 - 80 psi (3.4 - 5.5 bar) at 1 gpm
Production (at 77°F, 60 psi to atmosphere): 175 gpd (7.3 gph)
Recovery: Up to 33%

IMPORTANT NOTE: The production rate is strictly dependent on feedwater temperature and pressure.
For example: Operating pressure of 30 psi will reduce production by 50%, or 48°F feedwater will reduce production by 50%.

Location

The system should be installed indoors, within 25 feet of the equipment water is being supplied to, and protected from the elements. Do not let the processor or storage tank freeze or be exposed to rain or direct sunlight.

Feed Water Connection

An adequate flow and pressure of water to the unit is essential for successful operation.

Drain

A drain should be located within 10 feet of the system. Drain must allow a minimum flow of 2 gals./min. Compliance with most local plumbing codes requires installation of an approved air gap in the drain line. The drain connection should be accessible for system set-up and service.

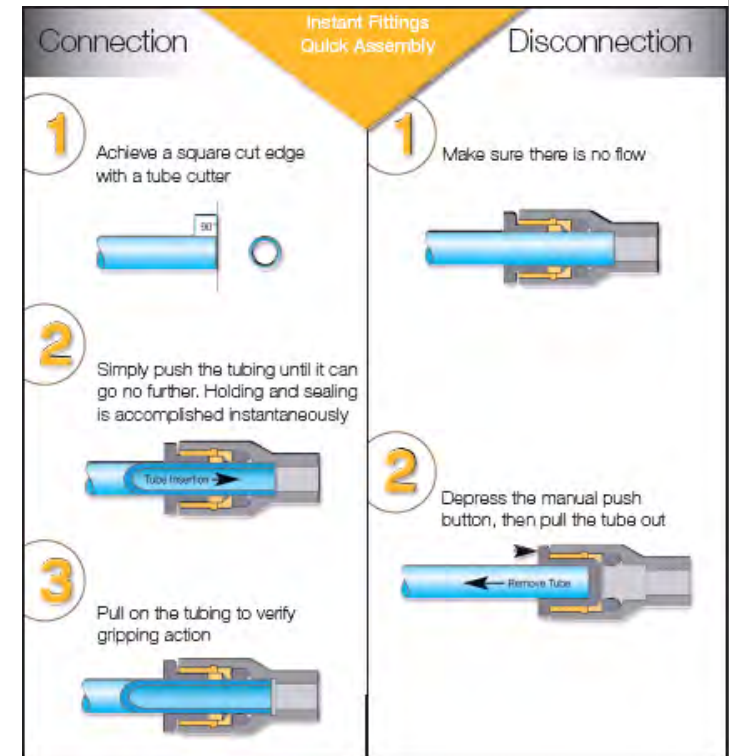
Feedwater Chemistry

Feed TDS: Up to 1200 ppm
Feed pH: 6 - 10
Hardness: 12 grains or less
Free Chlorine: <2 mg/L
Iron (Fe): 0.1 mg/L maximum
Turbidity: <0.05 NTU
Manganese: 0.05 mg/L maximum
Hydrogen Sulfide: 0.0 mg/L

Note: The presence of silica or flocculants such as alum or cationic polymers in the feedwater may cause membrane fouling and may require special pretreatment. Please note that membrane failure due to fouling is not covered by the warranty.

Storage Tank

The tank must be located within 10 feet of the water processor. The floor beneath the storage tank should be smooth, clean and free of sharp objects that could puncture the bottom of the tank.



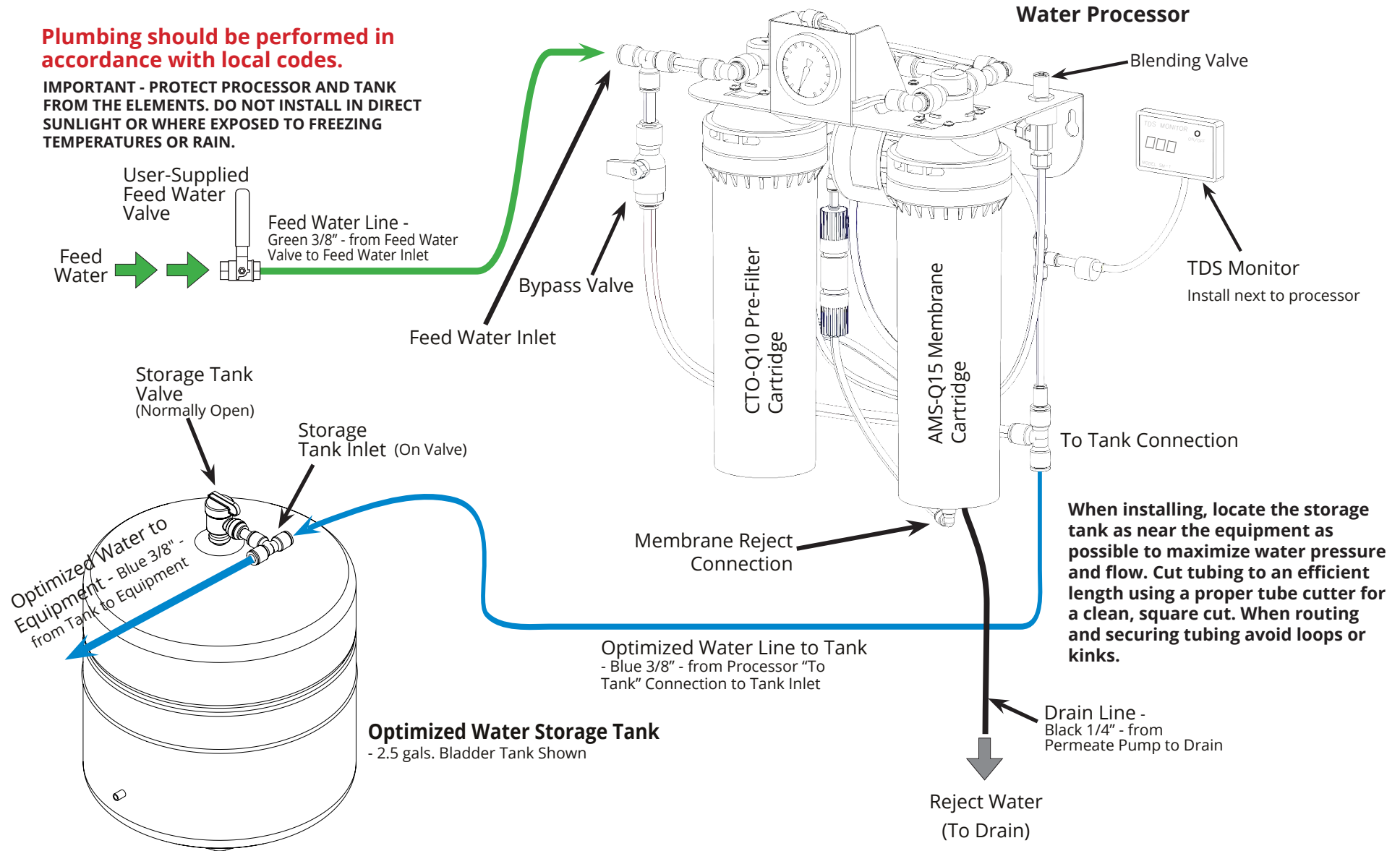
Optimized Water Lines to Equipment

Tubing, piping and associated fittings used to connect optimized water to equipment should be food grade material with a minimum pressure rating of 75 PSI. Non-metal, plastic pipe or reinforced hose or tubing are recommended. For distribution runs longer than 15 feet use larger inside diameter tubing or hose to minimize pressure drop.

❖ BWS175 Installation Diagram

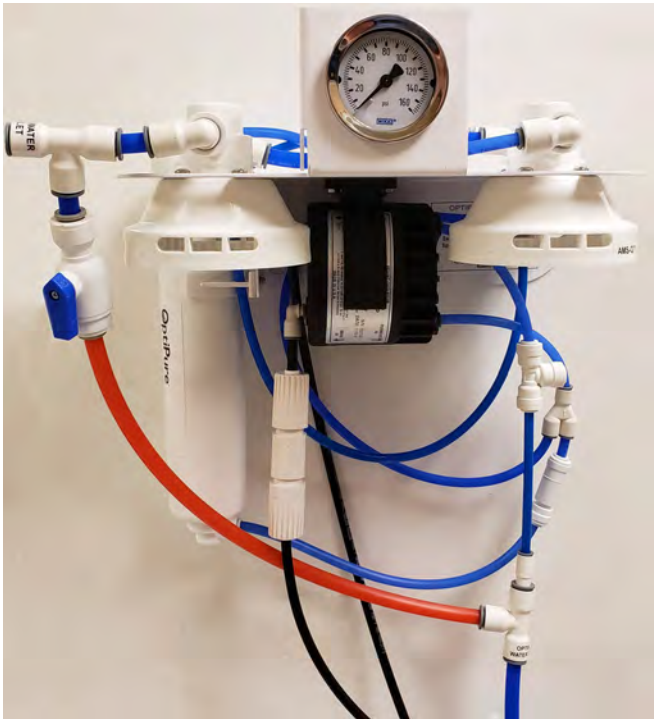
Plumbing should be performed in accordance with local codes.

IMPORTANT - PROTECT PROCESSOR AND TANK FROM THE ELEMENTS. DO NOT INSTALL IN DIRECT SUNLIGHT OR WHERE EXPOSED TO FREEZING TEMPERATURES OR RAIN.



❖ Mount Processor

Mount the system with the Pre-Installed Drain Line (1/4" black), Bypass Assembly (3/8" red), and Blend Valve Assembly (1/4" blue) as shown below.



Step 1

Attach the system with 2 screws (user supplied) through the attachment keyholes shown below. Use anchors or attach directly to studs. Be sure to allow at least 3" clearance below cartridges for removal.

Use Keyholes in Bracket



❖ Install Membrane

Step 2a

Insert the AMS-QT15 Membrane into the center head and rotate it to the right 1/4 turn to lock.



Step 2b

Remove the plug from the fitting at the bottom of the Membrane and insert the end of the black tubing coming from the lower left part of the Permeate Pump.

Attention: Warranty will be void if this step is not performed properly.

❖ Install the Pre-Filter

Step 3

Insert and lock the CTO-Q10 Cartridge into the Pre-Filter Head as shown.

NOTE: The pre-filter head has a built-in shut off valve. When the filter is removed, water will not flow. When the filter is installed, water will flow to the system.



❖ Make Drain Connection Step 4

Route and connect the loose end of 1/4" black (DRAIN) tubing coming from Permeate Pump on processor to a suitable drain; cut to length and fasten to the wall and at the drain connection. (Some locations may require an approved air gap. Optional OptiPure Air Gap available, part number: 164-89905)



❖ Make Feed Connections Step 5a

Install the Feedwater Adapter (from the installation kit) into the user-supplied 1/2" Feedwater Supply Valve. (Do not over-tighten.)

Step 5b

Connect a piece of 3/8" green tubing to the Feedwater Supply Valve. Connect the other end to the Feedwater Inlet on processor.



❖ Install Tank Valve and Tee Assembly



Step 6

Install the Tank Valve – hand tighten. Cut a piece of 3/8" tubing 1 1/2" to 2" long and install the 3/8" Tee as shown above. Ensure the Valve is CLOSED.



❖ Make Optimized Water Connections

Follow instructions below and proceed to next step.



Step 7a

Connect a piece of 3/8" blue tubing to the Optimized Water Fitting from the processor. Connect the other end to the Tank Tee as shown below.

Step 7b

The remaining connection at the Tank Tee is the Optimized Water Outlet. Connect a piece of 3/8" blue tubing to the Tank Tee. This will later be the water supply connection to downstream equipment.

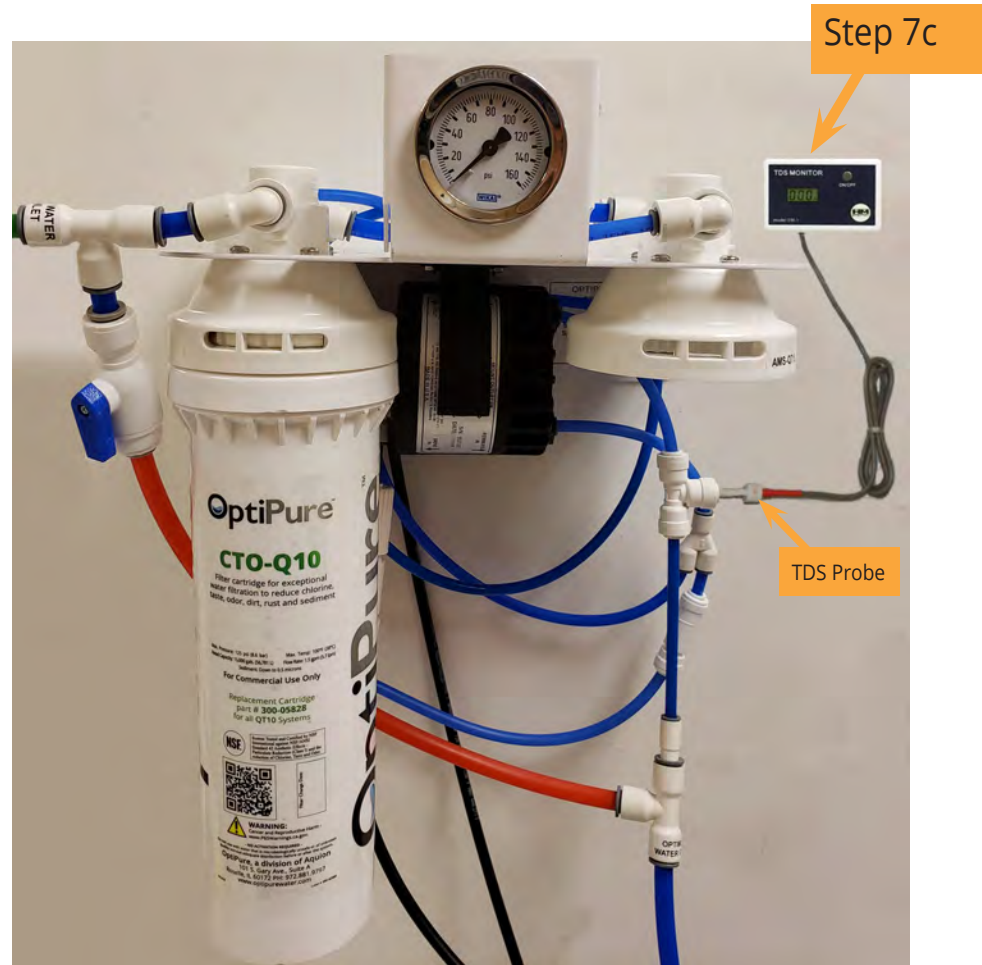
Do not connect to equipment at this time.

❖ Make TDS Monitor Connection

Installing the TDS monitor.

Step 7c

Install TDS Monitor next to the RO processor using sticky tape with Velcro (supplied with monitor). Connect TDS Probe to 1/4" tee fitting located right before Optimized Water to Storage Tank fitting connection.



❖ Flush the System

Step 8

Temporarily route the 3/8" blue tube from the Optimized Water Outlet on the Storage Tank Line to a drain or sink.



Step 9a

Ensure Bypass Valve is CLOSED.

Step 9b

Ensure Tank Valve is CLOSED.

Step 10

Open the Feed Valve. Allow water to flow to drain until all air is purged from the system. Close the Feed Valve after flushing.

Note: During normal operation the water flow alternates between the optimized water line and the drain line. You will notice that the water flow pulses when the system is making water.



❖ Set Blending Valve & Connect to Equipment

Step 11

Set blending valve to desired optimized water TDS:

- Close the Storage Tank valve and run optimized water line to drain temporarily.
- Push the "on/off" button on the water quality monitor. It will display the optimized water's TDS (total dissolved solids) in PPM (parts per million).
- To increase Optimized water TDS turn the blending valve knob counter-clockwise, this will increase the amount of filtered water blending with the re-mineralized RO water.
- To decrease Optimized water TDS turn the blending valve knob clockwise, this will decrease the amount of filtered water blending with re-mineralized RO.
- Once the desired TDS is obtained allow the system to run for several minutes periodically checking the TDS. Make smaller incremental adjustments as necessary until the TDS "target" is achieved.

Step 11a

Route and secure the 3/8" blue tube from the Optimized Water Outlet on the Tank to the downstream equipment connection.



Step 11b

Make the connection to the equipment. Connect ONLY the treated/steam water connection at the equipment. Do not connect to the drain/condensate supply.

Step 12

Turn the Tank Valve to the OPEN position. The installation is complete and the system is ready to be placed into service.



❖ Place in Service

Step 13

OPEN the Feed Supply Valve and check for leaks. Allow time for the tank to fill before using connected equipment (this could take 30 minutes to several hours depending on the tank capacity).



❖ Quick Tank Fill

If a water supply to downstream equipment is immediately needed, the storage tank can be quickly filled.

Simply OPEN the Bypass Valve and un-filtered water will flow directly into the storage tank. When the tank is full, or a desired level is reached, CLOSE the Bypass Valve. The system is now in normal operating mode and the optimized water will flow to the tank.

IMPORTANT: Do not leave the system in bypass. This could result in damage to the downstream equipment.



❖ Operation

The system operates normally when water, under pressure, is supplied to the system. Typical filter replacement is every 6 months (CTOS-Q10 and ILMA-10.14). Typical membrane replacement is every 24 months (AMS-QT10) or less, based on water quality.

EMERGENCY BYPASS

In the event the water supply or pressure to downstream equipment becomes inadequate OPEN the Built-In Bypass Valve and resume normal use of equipment. When finished using equipment return the Valve to the CLOSED position. DO NOT leave the system in bypass mode for prolonged periods of time.

IMPORTANT: Leaving the system in bypass could cause damage to downstream equipment. If the problem persists contact your OptiPure dealer for assistance.



❖ SHUT OFF WATER TO SYSTEM

Step 1

Close Feed Water Supply Valve.



OR

Be sure Bypass Valve is closed and turn pre-filter cartridge 1/4 turn to the left .



Step 2

Close the Storage Tank Valve.



The water is now shut off and the system is ready for filter or membrane replacement or other maintenance.

To return to normal operation reverse these steps.