



# 00HC-2060 OPERATION & MAINTENANCE MANUAL



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## **1.0 USER INFORMATION**

### **1.1 INTRODUCTION**

This system is designed to pretreat and purify water for use in health care applications. The system is shipped with required water treatment components. If the system will be running without softened water, the PT401 Antiscalant system will need to be connected to the side of the RO. This Operation Manual was written specifically for the RO3 model, storage tank and DI polisher. Your system was thoroughly tested and in excellent condition when it was shipped to you. However, because damage during shipment is possible, please unpack and carefully inspect the system as soon as you receive it. Please notify AmeriWater if any problems are encountered.

**Please read the Operations Manual before using the system.** Contact AmeriWater Customer Service with any questions at 1-800-535-5585 Monday through Friday 8:00 a.m. to 5:00 p.m. Eastern Time. For after-hours emergencies call 1-800-535-5585 and follow the instructions on the recorded message. Our on-call technician will return your call as soon as possible. This entire Operations Manual should be read before operating or servicing the system. This Operations Manual should then be kept near the system and used as a reference and troubleshooting guide.

## 1.2 SYSTEM SPECIFICATIONS

Electrical Power Requirements	2X 115VAC 1PH Dedicated 20 Amp GFI service 2X 208VAC 3PH Dedicated 20 Amp w/ disconnect
Connections	RO Feed = 3/4" Plain hose RO Product = 1/2" Plain hose RO Drain = 3/4" Plain hose Distribution Pump 1" FPT & MPT
Shipping Weight Operating Weight	650 lbs. 1200 lbs.

**Note:** For specifications on system components related to electrical requirements, system pressures and voltage draws, please refer to listed component manuals listed below.

For 00HC-2003 Silex, refer to Manual 98-0006

For 00HC-0097 Healthcare Storage Tank, refer to Manual 098-0001

For 00MRO3X402 RO, refer to Manual 098-0002

For 0084-0006 Chemical Injection System, refer to 98-0092

## 2.0 SYSTEM INSTALLATION AND STARTUP

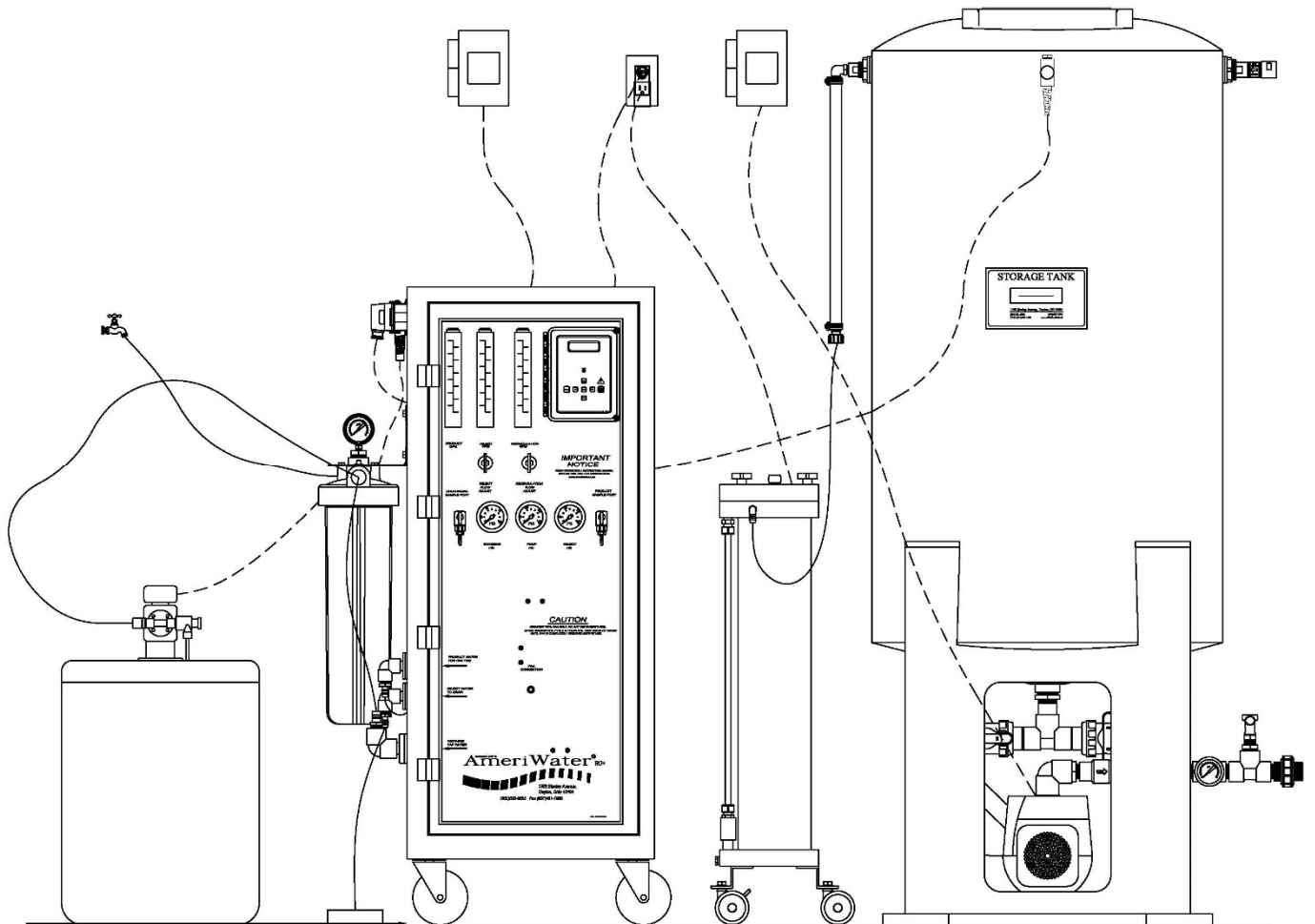


Figure 2.1

**CAUTION:** Local plumbing and electrical codes must be observed.

## **2.1 PRE-INSTALLATION REQUIREMENTS**

1. Utility requirements;
  - a. Plumbing:  $\frac{3}{4}$ " ball valve with NPT threads and dynamic pressure of at least 20 PSI at 10 GPM.
  - b. Electrical: Two (2) 115 Volt, Dedicated 15 AMP, single phase, GFI service.  
Two (2) 208 Volt, Dedicated 20 AMP, three phase, GFI service.
2. Hot and cold city/tap water supply line flushed and free of debris before equipment installation.
3. Floor drain within 4 feet of the RO/DI system capable of handling up to 10 GPM flow.
4. Supply piping to the washer/disinfector/sterilizer system(s) within 3 feet of the RO/DI distribution pump with a shut off valve.
5. Access space of 1 foot on each side and behind the water treatment equipment with a 3 foot aisle in front of the equipment or required to meet local codes.

## **2.2 RO**

1. Locate RO first, then connect from the RO outlet to the Silex inlet.
2. Route the product water hose from the RO behind the RO to connect to the Silex hose inlet.
3. Install carbon pre-filtration cartridges (2 ea.)

## **2.3 ANTI-SCALANT**

1. Locate the Anti-Scalant to the left of the RO.
2. Connect Anti-Scalant pump outlet to the injection point post pre-filters, but before the inlet to the RO (See illustration below)

PT401  
INJECTION  
POINT



3. Refer to manual 98-0092 for startup instructions.

## **2.4 SILEX**

1. Locate the Silex to the right of the RO, just before the storage tank.
2. Refer to manual 98-0006 for Silex bag installation.
3. Connect from Silex outlet to inlet of storage tank.

## **2.5 STORAGE TANK**

1. Locate the storage tank on a firm, level foundation. For seismic requirements, drill (4) 5/8" diameter holes into the concrete through the mounting holes in the storage tank feet a minimum of 4" deep. Install (4) 5/8" diameter, HILTI KB-TZ Expansion anchors through the 4 holes on the pads to anchor into the ground. A minimum of 4 threads for each anchor must be below the concrete prior to application of 60 ft-lbs of torque.
2. Connect the Silex outlet hose to the storage tank's inlet.



3. Connect the discharge from the pump to the distribution piping.
4. Run the float – switch quick disconnect to the RO and lock in place.

## **2.6 STARTUP**

1. If you purchased a blend valve (00HC-5001) as an option, install according to instructions found in 098-0135. Ensure that the blend valve is flushed thoroughly before continuing with subsequent steps.
2. Connect the blend valve (optional) to the RO3X. Install the RO3X, per instructions found in 098-0002. Ensure that you run the RO to drain for 2 hrs. prior to use.
3. Set the stroke rate of the PT401 Antiscalant (“Chemical Injection System – 0084-0006), per instructions found in 98-0002.
4. Connect the RO3X to the Silex (00HC-2003). Install the Silex, per instructions found in 98-0006. Ensure that you run all product water to drain until quality light turns green.
5. Connect Silex to Storage Tank (00HC-0097). Install the Storage Tank, per instructions found in 098-0001.
5. Connect Storage Tank Pump to distribution piping. Direct end of distribution piping to floor drain and turn on the pump to flush any remaining debris from the distribution loop, itself. Warning: Do not allow debris to enter the Storage Tank.
6. While flushing the loop, verify that the RO cycles on and off automatically based on float position.
7. If the loop is dead-ended, verify that the pump is deactivated during times of no water usage.

## 2.5 SYSTEM FLOW DIAGRAM

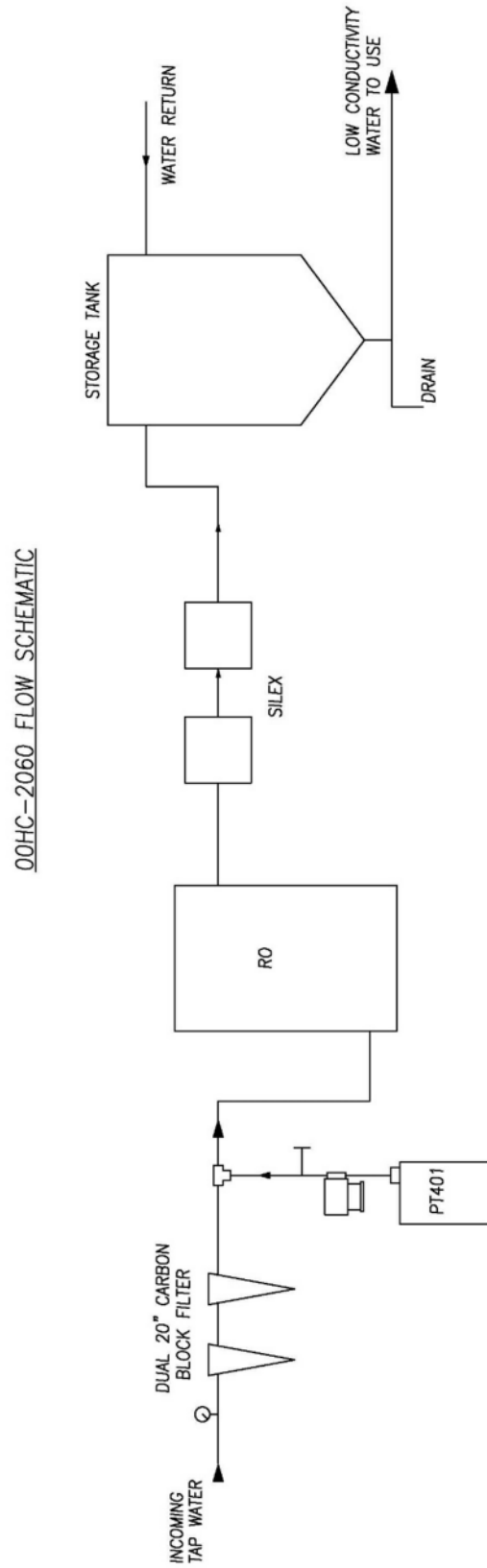


Figure 2.2

## **3.0 OPERATION AND MONITORING**

### **3.1 OPERATION**

Once the system has been started, the RO will continue to make water until the high-level float switch is tripped on the storage tank. At this point, the RO will be placed into standby (tank full) until the mid-level float switch is tripped.

Once the mid-level float is tripped, the RO will re-initialize and begin to produce water again.

In the event that the conductivity is above the pre-determined set-point, an alarm will sound.

The storage tank will still operate as normal.

### **3.2 BYPASS PROCEDURE**

This system has a bypass option. The bypass can be used to repair or maintenance any part of the system. Use the option of bypassing the system, when you have to remove or maintenance any component of your system (RO, Silex or Storage Tank Distribution Pump). By using the bypass, you can still receive city water to your process loop while you repair or maintenance your system components.

#### **Important note:**

If you have a return flow line coming back to the storage tank, when using the bypass the returning water from your process will overflow the tank as the distribution pump is not removing any water from the tank.

1. Turn off the POWER to the RO and Distribution Pump.
2. Shut off the water supply to the system.
3. Remove the RO water inlet hose from the source.
4. Retrieve the bypass hose and install to the incoming water supply.
5. Connect the CPC connector into the fitting just after the pump on the storage tank.

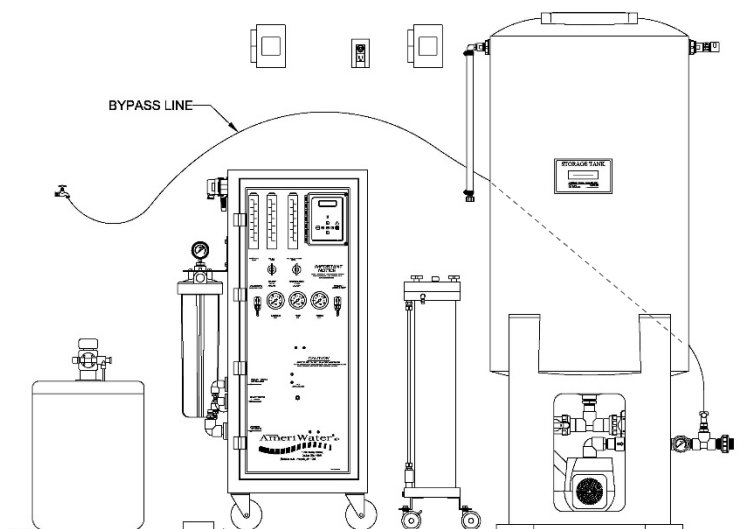


Figure 3.1

6. Turn on the water to begin bypass operation.

### **3.3 MONITORING**

Fill out the monitoring log prior to each use. Having this information available will help to quickly diagnose issues related to performance. Failure to carry out the daily monitoring and maintenance at the indicated intervals will result in reduced performance of the RO system and may void the warranty.

1) DATE									
<b>RO PERFORMANCE (DURING WATER FLOW)</b>									
2) Temperature ( <b>41°F – 90 °F</b> )									
3) Product flow ( <b>3.00 – 5.50 GPM</b> )									
4) Pump PSI ( <b>150 - 275 PSI</b> )									
5) Filter Pressure Drop ( <b>&lt;10 PSI</b> )									
6) Hour Meter Reading									
7) Chlorine Test ( <b>maximum 0.1 PPM</b> )									
8) Product Water Quality Reading ( <b>Factory set at &lt;50 µS/cm</b> )									
9) Verify light on DI Polisher is Green									
10) Verify that the distribution pump is not in alarm									
<b>DI EXCHANGE</b>									
11) Carbon Block Filter Cartridges ( <b>Carbon break through or Δ Pressure 10 PSI</b> )									
12) Clean or Replace the Membrane ( <b>Based on &gt;10% loss of product quality or flow</b> )									
13) Add PT401 Antiscalant ( <b>When container is half full</b> )									
14) DI Polisher Resin Change ( <b>Based on quality indicator light turning red</b> )									
INITIALS									

#### **4.0 TROUBLESHOOTING GUIDE**

For 00HC-2003 Silex refer to Manual 98-0006

For 00HC-0097 Healthcare Storage Tank refer to Manual 098-0001

For 00MRO3X402 RO refer to Manual 098-0002

For 0084-0006 Chemical Injection System refer to 98-0092

#### **5.0 SYSTEM SPARE PARTS LIST**

Consumables and Replacement Parts

For 00HC-2003 Silex refer to Manual 98-0006

For 00HC-0097 Healthcare Storage Tank refer to Manual 098-0001

For 00MRO3X402 RO refer to Manual 098-0002

For 0084-0006 Chemical Injection System refer to 98-0092

#### **6.0 WARRANTY POLICY**

This product is covered under the standard AmeriWater warranty policy. For specific terms and conditions, please contact your AmeriWater Sales Representative.