

# BRASSMASTER PLUS+

## STS-400

### Dealkalizing Filter Installation / Operation Manual



**BrassMaster and BrassMaster Plus Technical Video Library:**

<http://watercontrolinc.com/residential-technical-support/residential-technical-videos>

BrassMaster technical videos show how to set up or remove the control module. If returning your control module to be repaired/replaced, please use the (downloadable) [Remanufactured Module Order Form](#).

# Installation Procedure

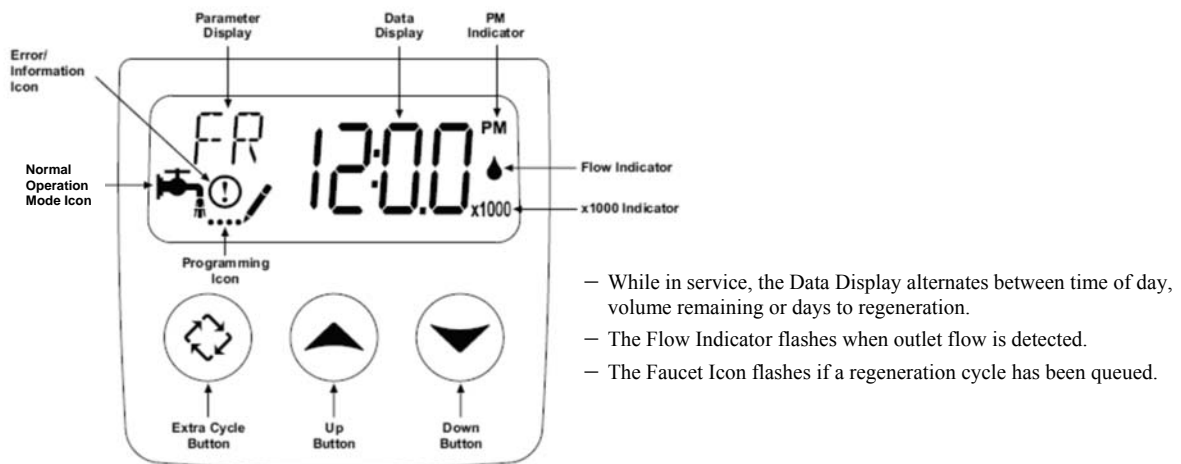
1. **Identify installation location for water softener.** Piping should be such that all household water, with the exception of outside hydrants, flows through filter. This system and installation must comply with state and local laws and regulations.
2. **Connect water piping.** This unit has been supplied with a manually operated bypass device which enables the filter to be isolated from the water service lines for maintenance and service, and also maintain the continuity of the water supply when the filter is disconnected. *Important: Make all sweat-solder connections within 6 inches of filter before applying threaded fittings to supplied bypass valve. Overheating may cause damage to valve.* Turn supplied bypass valve to “Bypass” position and make connections to household water lines. Leave unit in “Bypass” position until startup procedure.
3. **Connect drain line.** Remove barbed drain line fitting from parts bag. Apply thread seal tape to threads and turn into the female threaded opening on the back side of the control valve. Connect 5/8” drain line (supplied in parts bag) to barbed end of drain line fitting and run to a nearby drain. Be sure not to submerge drain line end into drain, as an 1 1/2” minimum air gap must be maintained to prevent potential backflow hazard. Firmly secure at drain while maintaining a minimum 1 1/2” air gap (See detailed drawing on back side of piping diagram).
4. **Connect brine line.** Connect 3/8” brine line (supplied in parts bag) to fitting on brine tank, and on the control valve. Tighten both fittings with an adjustable wrench.
5. **Install brine tank overflow line.** Install overflow fitting (supplied in parts bag) into hole in side of brine tank. An owner-supplied overflow line should then be attached and run to a nearby drain. *Failure to run overflow line could cause flooding and water damage should the brine tank overflow.*
6. **Connect to electrical power source.** Connect power cord to a separate 120v, 15 amp, ground fault interrupt (GFI) outlet.

**Proceed to start-up procedure.**

Note: This system is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without disinfection before or after the system.

# Start-Up Procedure

## *Placing unit into service*



- **Fill the mineral tank with water:** Press and hold the extra cycle button for 5 seconds. Display will indicate step 1, which is the backwash cycle (as shown above). Once the display indicates step 1, slowly open bypass valve and let water run to the drain for approximately 5 minutes. This will bleed any air from the system and flush it to the drain. After approximately 5 minutes, manually index the valve through the remaining cycles as follows:
- **Push the extra cycle button** once to advance the valve to regen step 2
- **Push the extra cycle button** once to advance the valve to regen step 3
- **Push the extra cycle button** once to advance the valve to regen step 4

At regen step 4, allow the control to automatically complete step 4 (brine refill) and return to service. This will place the correct amount of water in the brine tank for start-up.

The unit is now pressurized with water and ready for service.

**Proceed to setting current time of day.**

# Start-Up Procedure

## Setting current time of day



### Setting Current Time / Day

1. Press either the Up or Down buttons to adjust current time of day by one digit. Push and hold either up or down set button to adjust current time of day display by several digits.

## User programming

User Programming Mode Options		
Abbreviation	Parameter	Description
DO	Day Override	The timer's day override setting
RT	Regeneration Time	The time of day that the system will regenerate (meter delayed, timeclock, and day-of-week systems)
H	Feed Water Hardness	The hardness of the inlet water—used to calculate system capacity for metered systems
RC	Reserve Capacity	The fixed reserve capacity

### User Programming Mode Steps (Refer to chart above for user mode indications)

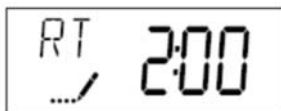
1. Press the Up and Down buttons for five seconds while valve is in service. Display will enter programming mode. (Note: Timer will discard any changes and exit programming mode if any button is not pressed for sixty seconds.)



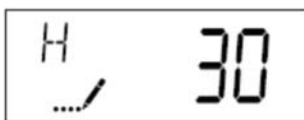
2. **Set Day Override:** This setting specifies the maximum number of days between regeneration cycles. System will regenerate regardless of usage if the days since last regeneration cycle equals the day override setting. For dealkalizer filters, this setting is factory set at 3. This will allow for the correct amount of water usage allowed between regeneration cycles.

# Start-Up Procedure

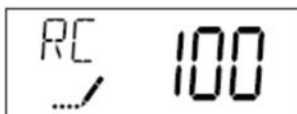
## User programming (cont'd)



- 3. Adjust Regeneration Time:** Press the Extra Cycle button to advance to next option. This setting determines the time of day that the unit will enter the regeneration cycle. The most common / default setting is 2:00 AM. *IMPORTANT: This regeneration time should be offset from any water softener's regeneration time by at least 2 hours to insure adequate regeneration pressure.*



- 4. Set Water Hardness:** Press the Extra Cycle button to advance to next option. For dealkalizer filters, this setting is factory set at 25. This will allow for the correct amount of water usage allowed between regeneration cycles.



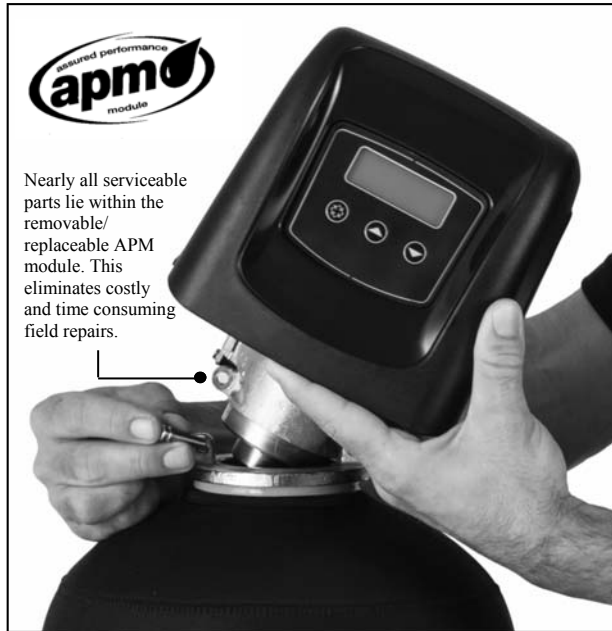
- 5. Set Fixed Reserve Capacity :** Press the Extra Cycle button to advance to next option. Set the Fixed reserve capacity for the household. This is the amount of water needed in reserve to reach the delayed regeneration time. Standard setting is 50 gallons for each person in the household.

**Control programming is now complete. Press the extra cycle button, and the control will exit from the programming mode and resume normal operation.**

## Sanitization of Unit

After complete installation of unit, dilute 1/2 cup of unscented laundry bleach in 3 gallons of water, and add to brine tank. Initiate a manual regeneration by depressing the extra cycle button. Allow the unit to complete its cycle and advance to the "Service" position. The unit is now sanitized and ready for operation.

# Maintenance / Warranty Information



All BrassMaster and BrassMaster Plus water softeners feature the Assured Performance Modular (APM) design. If you experience a failure of any valve component, the brass module can be easily removed and replaced with a factory remanufactured replacement module.

Reference the BrassMaster and BrassMaster Plus Technical Video Library on our website (link is provided below) for detailed steps on how to remove the module. The required (downloadable) form to have your module repaired/replaced is also located at this site. Please contact your dealer or Water Control Corporation for module support.

## Salt Maintenance

You must keep salt in the tank. The salt tank operates best when the salt level is below half full. If the tank is filled more than that the salt pellets may "bridge". The salt pellets wedge against each other and do not fall into the water at the bottom. Bridging will eventually provide no salt to make brine. The softener will recharge but not recondition the media. A salt bridge can be broken up using a broom handle or similar rod. Carefully pound it into the salt and the pellets will collapse. After loosening the salt pellets wait 2 hours and start a regeneration. A second recharge may be needed to fully recondition the media. You should only use sodium chloride pellet salt for water softeners. Other types of salt (rock or snow melting) will contain dirt and chemicals that will affect your water softener.

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For factory module support contact:  
Water Control Corporation  
7150 143<sup>rd</sup> Ave NW • Ramsey, MN 55303  
Phone: 1-866-405-1268 • Fax: 763-427-5665  
[www.watercontrolinc.com](http://www.watercontrolinc.com)

# Official Warranty

## Water Control Corporation

### BrassMaster Plus Series Water Softeners and Filters

#### Limited Warranty

Water Control Corporation warrants the control valve to be free of manufacturers defects for a period of 5 (five) years from the date of installation, and the fiberglass reinforced mineral tank, and plastic brine tank, to be free from leaking due to manufacturers defects for a period of 5 (five) years. We will, at our discretion, repair or replace defective products. This warranty does not include any costs associated with removal of defective products, or installation of replacement products. All replacement parts will be provided FOB Ramsey, MN. This warranty is transferable.

#### DISCLAIMER OF IMPLIED WARRANTIES

Water Control Corporation makes no warranties except those expressly stated in this document. To the extent permitted by the laws of the applicable state, **ALL WARRANTIES CONTAINED IN THIS DOCUMENT ARE EXPRESSLY IN LIEU OF, AND WATER CONTROL CORPORATION EXPRESSLY DISCLAIMS, ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

#### WHAT IS NOT COVERED BY THESE WARRANTIES

1. Conditions and damages resulting from any of the following:
  - Wear caused by unfavorable water conditions
  - Improper installation, delivery, or maintenance
  - Any repair, modification, alteration, or adjustment not authorized by the manufacturer or an authorized servicer
  - Misuse, abuse, accidents, or unreasonable use
  - Improper setting of any control
  - Incorrect electric current, voltage, or supply
2. Warranties are void if the original serial numbers have been removed, altered, or cannot be readily determined.
3. The cost of service or service call to:
  - Correct installation errors
  - Instruct the user on proper use of the product
  - Transport the product to the servicer
4. Any costs associated with removal of defective products, or installation of replacement products.
5. Consequential, special, or incidental damages sustained by any person as a result of the breach of these warranties. Some states do not allow the exclusion or limitation of consequential or incidental damages, so the above exclusion may not apply to you.



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