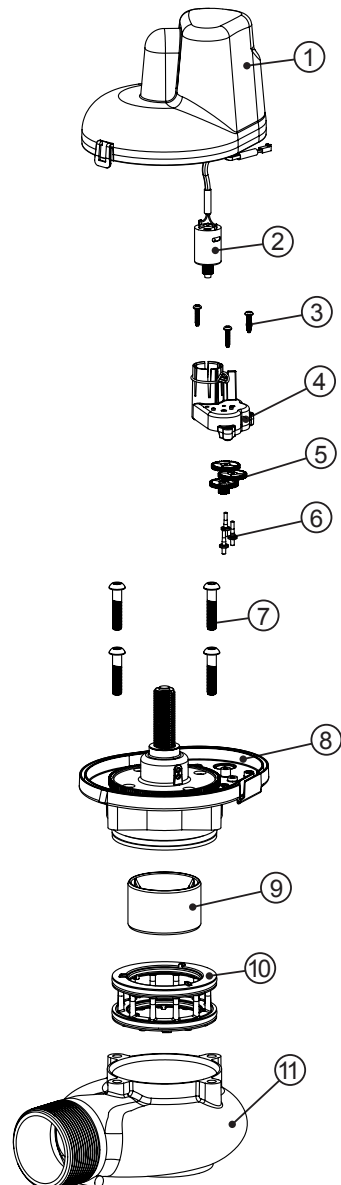
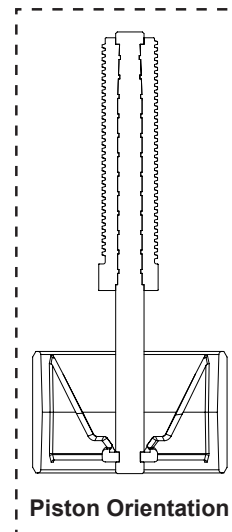


**Order No. V3099 • Description: NO HARDWATERBYPASS 3INMXF NPT or
Order No. V3099BSPT • Description: NO HARDWATERBYPASS 3INMXF BSPT**

Drawing No.	Order No.	Description	Quantity	
			V3099	V3099BSPT
1	V3696	WS3 MAV COVER	1	1
2	V3476	WS MOTOR ASY 8 FT	1	1
3	V3592	SCREW #8-1 PHPN T-25 SS	3	3
4	V3262-01	WS 1.5&2ALT/2BY REDUCGEARCVASY	1	1
5	V3110-01	WS1 DRIVE REDUCING GEAR PLAIN	3	3
6	V3264	WS2 BYPASS REDUCTION GEAR AXLE	3	3
7	V3789	SCREW 3/8-16 X 1.75 BHCS SS (7/32" hex allen wrench required)	4	4
8	V3085	WS3 MAV DRIVE CAP ASY	1	1
9	V3695-01	WS3 MAV PISTON	1	1
10	V3888	WS3 NHWBY STACK ASY	1	1
11	V3830-01	WS3 NHWBY M X F BODY NPT	1	N/A
	V3830BSPT-01	WS3 NHWBY M X F BODY BSPT	N/A	1



•Operating Pressures:
20 PSI Minimum / 125 PSI Maximum
•Operating Temperatures:
40°F Minimum / 110°F Maximum



**Order No. V3099 • Description: NO HARDWATERBYPASS 3INMXF NPT or
Order No. V3099BSPT • Description: NO HARDWATERBYPASS 3INMXF BSPT**

Clack Item Number	Software Minimum Rev Level	Before using V3099 or V3099BSPT with WS2H or WS3 control valves, press and hold the ▲ and ▼ buttons to enter the first level of diagnostics, then press the ▲ and ▼ buttons again to enter the valve history screens. Screen #4 will show the main board software level and screen #5 will show the system board software level.
V3242-01BOARD (Main PC Board)	215.04	
V3243-01BOARD (System PC Board)	1.11	

HYDROCARBONS SUCH AS KEROSENE, BENZENE, GASOLINE, ETC., MAY DAMAGE PRODUCTS THAT CONTAIN O-RINGS OR PLASTIC COMPONENTS. EXPOSURE TO SUCH HYDROCARBONS MAY CAUSE THE PRODUCTS TO LEAK. DO NOT USE THE PRODUCT(S) CONTAINED IN THIS DOCUMENT ON WATER SUPPLIES THAT CONTAIN HYDROCARBONS SUCH AS KEROSENE, BENZENE, GASOLINE, ETC.

**OPERATING PRESSURES: 20 PSI MINIMUM / 125 PSI MAXIMUM
OPERATING TEMPERATURES: 40°F MINIMUM / 110°F MAXIMUM**

Service or Installation of Motor: Do not lubricate the motor or the gears. To install the motor, move the spring clip loop to the right and hold. Gently turn the motor while inserting so that the gear on the motor meshes with the gears under the drive gear cover. Release the spring clip loop and continue to rotate the motor until the motor housing engages the small plastic bulge inside the drive bracket motor retainer. Reconnect the motor plug to the two-pronged jack on the PC board labeled "BYPASS". If the motor will not easily engage with the drive gears when reinstalling, lift and slightly rotate the motor before reinserting.

If the control valve manual does not include instructions for setting up the software for No Hard Water Bypasses (NHWB), Separate Source (SEPS), or Twin Tank Operation (ALT A and ALT b) please contact your local equipment supplier for current copies of the instructions.

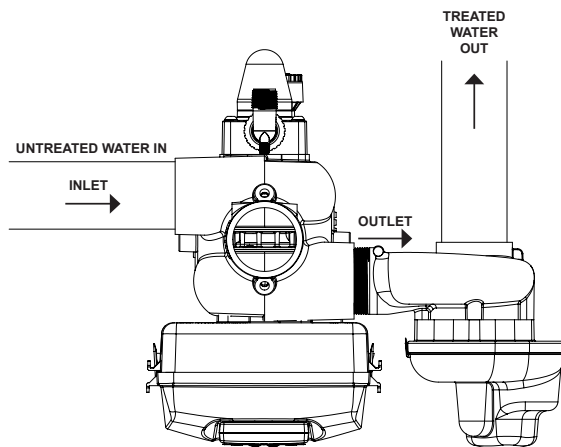
Approximately 1' of cable length should be allowed for weaving a cable through a back plate. Try to allow sufficient slack in cables so cables may be zip tied to plumbing lines to prevent the cables from being accidentally pulled. No more than two cables may be woven through one back plate slot. To help prevent damage to cables, allow solder joints to cool or solvent cement joints to cure after completing the various service, drain and regenerant plumbing connections. Thread the various cables through the appropriate back plate(s) and connect as described in the bullet points below.

- The 8' No Hard Water Bypass valve motor cable must be threaded through the back plate and connected to the two pin connector labeled "BYPASS" on the control valve board.
- The 15' water meter cable must be threaded through the back plate and connected to the three pin connection labeled "FLOW" on the control valve board.
- The 15' AC Adapter or power cable must be threaded through the back plate of all control valves. The AC adapter should be installed to a properly grounded (not switched) outlet.

Note: Reference software manual for meter options.

No Hard Water Bypass:

The NHWBY will be driven closed before the first regeneration cycle that is not FILL, SOFTENING or FILTERING, and be driven open after the last regeneration cycle that is not FILL. If the control valve enters into an error state during regeneration mode, the NHWBY will remain in its current state until the error is corrected and reset.



Caution:

No Hard Water Bypass installation prevents water from entering the downstream plumbing. If a downstream plumbing device or local code requires an uninterrupted water supply, design the installation to accommodate.