

**Order No. V3069FF-01 • Description: MOTOR ALT VLV 1/125 F-F 3 WIRE or
Order No. V3069MM-01 • Description: MOTOR ALT VLV 1/125 M-M 3 WIRE**

Please refer to the Programming and Front Cover manual for your control valve to confirm software compatibility.

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.

Boards	2-Wire Alternator Cable	3-Wire Alternator Cable	
	Meter on each valve (typically seen on 1" and 1.25" valves)	One Meter serves both valves (typically seen on 1.5" and 2" valves)	Meters on each valve or one meter serving both valves
EE	518.3 or lower	518.3 or lower	519.0 or higher
EI	616.6 or lower	616.6 or lower	618.3 or higher

Note: For customers that have a 3-wire cable, but need a 2-wire cable, cut the Black wire back on each end to make a 2-wire cable. For customers that need a 3-wire cable any of the following cables could be used:

- V3474 WS ALT CONNECT CORD 8FT BLK
- V3475-12 WS2H/3 SYSCONNECTCORD 12FT RED
- V3475-24 WS2H/3 SYSCONNECTCORD 24FT BLUE
- V3475-36 WS2H/3 SYSCONNECTCORD 36FT YELLOW

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

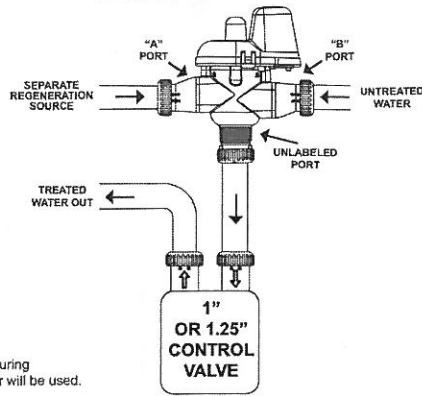
Service or Installation of Motor: Do not lubricate the motor or the gears. To install the motor, move the spring clip loop to the right and hold. Gently turn the motor while inserting so that the gear on the motor meshes with the gears under the drive gear cover. Release the spring clip loop and continue to rotate the motor until the wires are horizontal and the motor housing engages the small plastic bulge inside the drive bracket motor retainer. Reconnect the motor plug to the two-pronged alternator jack on the lower left side of the PC board. 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.

To bring in additional cables through the back plate first locate the strain relief knock out on the inside of the back plate. Use a punch and hammer to remove the knock out. Up to two cables can be woven on each side of the strain relief, determine if you need to break out one or both tabs for your additional cables this can be done with a needle nose pliers. Now you may bring in the additional cables through the knock out hole in the back plate and connect each additional wire to the proper location on the control valves PC board. This will allow you to better determine how much slack you will need in the cable before weaving them into the strain relief. Once cables are weaved into the strain relief you can then use the V3805 strain relief cover kit(s) that is provided. Follow the instructions for installing the strain relief cover kit. 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.

- For twin tank operation, the 8' interconnect cable must be threaded through the back plates and connected to the three pin connector labeled INTERCONNECT CABLE on both the ALT A and ALT b control valves. The 8' interconnect cable is not used for No Hard Water Bypass (NHWB) or Separate Source (SEPS) operation.
- The 8' alternator valve motor cable must be threaded through the back plate and connected to the two pin connector labeled DRIVE on the control valve board.(for twin tank operation connect to ALT A).
- When used, the 15' water meter cable must be threaded through the back plate and connected to the three pin connection labeled METER on the control valve board.
- The 15' AC Adapter or power cable must be thread through the back plate of all control valves. The AC adapter should be installed to a properly grounded (not switched) outlet.

Separate Source Regeneration: Must use V3069FF-01
 The MAV will be driven closed (i.e. let water flow from A port to Unlabeled Port) before the first regeneration cycle, and be driven open (i.e. let water flow from B port to Unlabeled Port) after the last regeneration cycle. If the control valve enters into an error during regeneration mode, the MAV will remain in its current state until the error is corrected and reset.

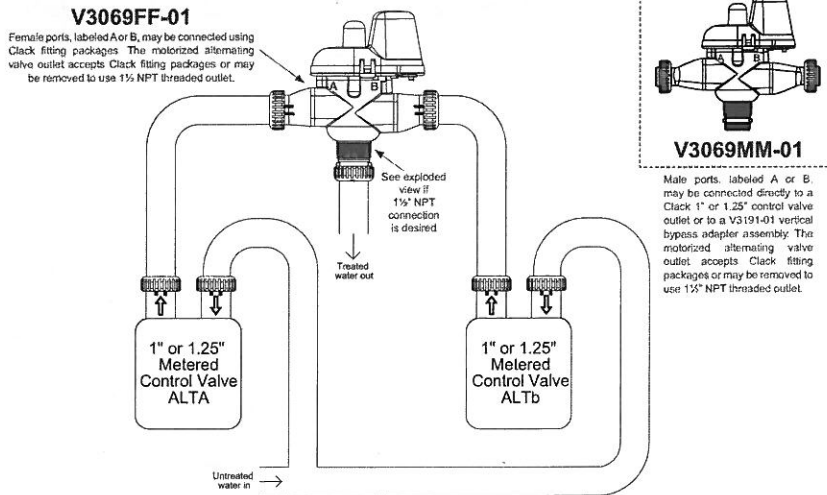


Note:
 If there is a treated water demand during regeneration, separate source water will be used.

Twin Tank Alternator:

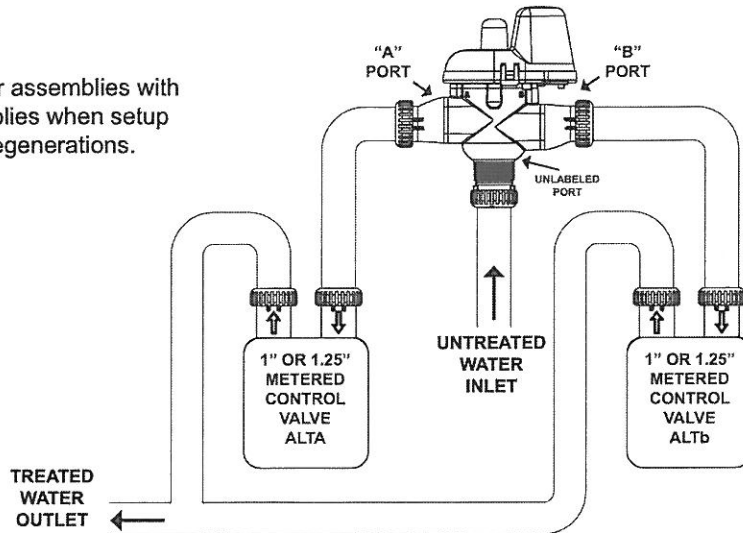
If the control valve manual does not include instructions for setting up the software for No Hard Water Bypasses (NHWB), Separate Source (SEPS), or Twin Tank Operation (ALT A and ALT b) please contact your local equipment supplier for current copies of the instructions. If the control valve is in an error state during regeneration mode, the MAV will close the B port and keep open the A port until the error is corrected and reset.

REGENERATION WITH HARD WATER



REGENERATION WITH SOFT WATER

Note:
 Replace all V3003 meter assemblies with V3003-02 meter assemblies when setup with soft/treated water regenerations.



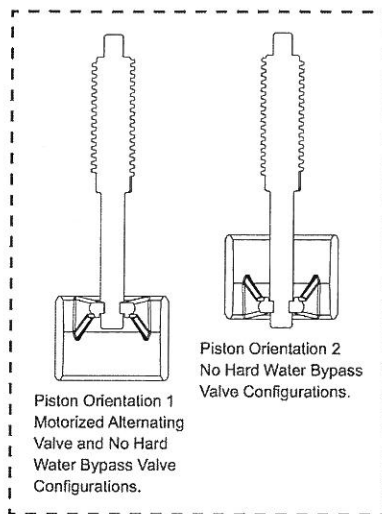
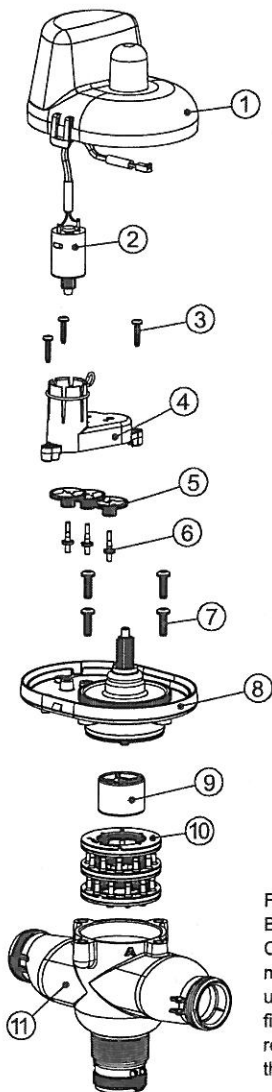
Motorized Alternating Valve & No Hard Water Bypass Valve Configurations

	Plumbing Connections		Piston Orientation		Software Selection		Piston/Valve Position Flow	
	Port A	Port B	1	2	Control Valve 1	Control Valve 2	Up	Down
	From Control Valve 1	From Control Valve 2	Use	Not Applicable	ALTA	ALTB	Flows from Port A to Unlabeled Port	Flows from Port A to Unlabeled Port
Twin Tank Alternator Operation	From Control Valve 1	To Outlet	Use	Not Applicable	ALTA	ALTB	Flows from Port A to Unlabeled Port	Flows from Port A to Unlabeled Port
	From Control Valve 2	To Outlet	Use	Not Applicable	ALTB	ALTA	Flows from Port A to Unlabeled Port	Flows from Port A to Unlabeled Port
Separate Source Operation	From Regeneration Source	To Control Valve	Use	Not Applicable	SEPS		Flows from Port A to Unlabeled Port	Flows from Port A to Unlabeled Port
	From Control Valve	Plugged	Not Applicable	Use	nHbP		Open: Flows from Port A to Port B	Closed
No Hard Water Bypass Operation	Plugged	To Outlet	Use	Not Applicable	nHbP		Flows from Port B to Unlabeled Port	Closed
	To Outlet	From Control Valve	Not Applicable	Use	nHbP		Flows from Port A to Unlabeled Port	Closed
	Plugged	To Outlet	Use	Not Applicable	nHbP		Flows from Port A to Unlabeled Port	Closed
	Plugged	To Outlet	Use	Not Applicable	nHbP		Flows from Unlabeled Port to Port B	Closed

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

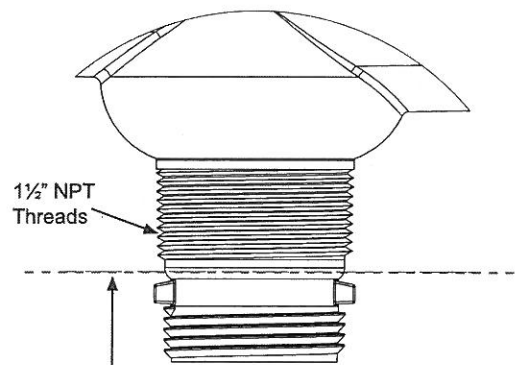
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Order No. V3069MM-01 • Description: MOTOR ALT VLV 1/125 M-M 3 WIRE**

Drawing No.	Order No.	Description	Quantity	
			V3069FF-01	V3069MM-01
1	V3073	MAV/NOHWBY COVER ASY	1	1
2	V3476	WS MOTOR ASY 8 FT	1	1
3	V3592	SCREW #8-3/4 PHPN T-25 SS	3	3
4	V3262-01	WS1.5&2ALT/2BY REDUCGEARCVRASY	1	1
5	V3110	WS1 DRIVE REDUCING GEAR 12X36	3	3
6	V3264	WS2 BYPASS REDUCTION GEAR AXLE	3	3
7	V3527	SCREW 1/4-20 X 3/4 BHSCS SS	4	4
8	V3072	MAV/NOHWBY 1/125/15 DRIVE ASY	1	1
9	V3506-01	MAV/NOHRD 1/125/15 PISTON	1	1
10	V3074	MAV/NOHWBY 1/125/15 STACK ASY	1	1
11	V3504FF	MAV BODY 1/125 ASY F-F	1	N/A
12	V3504MM	MAV BODY 1/125 ASY M-M	N/A	1
13	V3151	WS1 NUT 1 QC	N/A	2
14	V3150	WS1 SPLIT RING	N/A	2
15	V3105	O-RING 215	N/A	2
Not Shown	V3474	WS ALT CONNECT CORD 8FT BLK	1	1

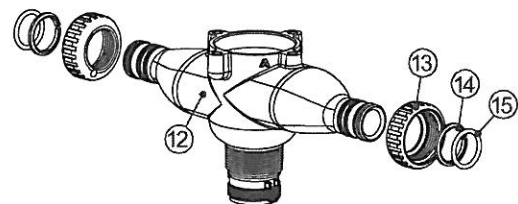


Female ports, labeled A or B, may be connected using Clack fitting packages. The motorized alternating valve unlabeled port accepts Clack fitting packages or may be removed to use 1/2" NPT threaded outlet.

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



Quick Connect Nut Threads can be cut off to allow access to 1/2" NPT Threads. Deburr and clean edge after cutting.
NOTE: Teflon tape is required when using the 1/2" NPT Threads.



Male ports, labeled A or B, may be connected directly to a Clack 1" or 1.25" control valve outlet or to a V3191-01 vertical bypass adapter assembly. The motorized alternating valve outlet accepts Clack fitting packages or may be removed to use 1/2" NPT threaded outlet.



Per bombole diametro max 16"