

Control Valves, Fittings and Accessories



WS1EE TWIN ALTERNATING CONTROL VALVE

28 gpm



27 gpm

*valves shown with optional accessories

27 gpm

1" & 1.25" WATER SPECIALIST VALVE SPECIFICATIONS









SPECIFICATIONS	WS1	WS1TT	WS1.25
	WS1, CS, EE, SD, SP, TC	EE, SD, SP	WS1, CS, EE, SD, SP, TC
Service @ 15 psi drop	27 gpm	28 gpm	34 gpm
	(includes meter and bypass)	(includes meter and bypass)	(includes meter and bypass)
Backwash @ 25 psi drop	27 gpm	15 gpm	32 gpm
	(includes bypass)	(includes bypass)	(includes bypass)
Tank Applications: Softener Filter (1)	6" - 21" diameter	6" - 21" diameter	6" - 21" diameter
	6" - 21" diameter	6" - 16" diameter	6" - 24" diameter
Inlet/Outlet Fitting Connections	1" - 1.25" NPT	1" - 1.25" NPT	1" - 1.25" NPT
	³ ⁄ ₄ " - 1.5" Sweat	³ ⁄ ₄ " - 1.5" Sweat	³ ⁄ ₄ " - 1.5" Sweat
	³ ⁄ ₄ " - 1.5" Solvent	³ ⁄ ₄ " - 1.5" Solvent	³ ⁄ ₄ " - 1.5" Solvent
	³ ⁄ ₄ " - 1" SharkBite®	³ ⁄ ₄ " - 1" SharkBite®	³ ⁄ ₄ " - 1" SharkBite [®]
Valve Material Cycles Regeneration	Fiber Reinforced Composite Up to 6 Downflow/Upflow	Fiber Reinforced Composite Up to 6 Downflow/Upflow	Fiber Reinforced Composite Up to 6 Downflow/Upflow
Operating Pressures Operating Temperatures	20 - 125 psi	20 - 125 psi	20 - 125 psi
	40° - 110° F	40° - 110° F	40° - 110° F
Meter: Flow Rate Range	0.25 - 27 gpm	0.25 - 27 gpm	0.25 - 34 gpm
Distributor Pilot	1.050" O.D. Pipe	1.050" O.D. Pipe	1.32" O.D. Pipe
	¾" NPS	¾" NPS	1" NPS
Drain Line Connection	3/4" Male NPT Standard	3/4" Male NPT Standard	3/4" Male NPT Standard
	1" Male NPT Optional	1" Male NPT Optional	1" Male NPT Optional
Brine Line Connection	3/8" Liquifit Fitting 1/2" O.D. Poly Tube Compression	3/8" Liquifit Fitting 1/2" O.D. Poly Tube Compression	3/6" Liquifit Fitting 1/2" O.D. Poly Tube Compression
Mounting Base Options	2½" - 8 NPSM	2½" - 8 NPSM	2½" - 8 NPSM
Height From Top of Tank	73/8"	73/8"	73/8"
Shipping Weight	4.5 lbs.	16 lbs.	4.5 lbs.

^{1.} Filter tank size calculated @ 10 gpm of backwash per square foot of bed area Valves shown with optional bypass.

1.5" & 2" WATER SPECIALIST VALVE SPECIFICATIONS









WS1.5P EE, SD, SP	WS1.5 EE, SD, SP	WS2 EE, SD, SP	WS2QC EE, SD, SP
60 gpm (includes meter)	70 gpm (includes meter)	115 gpm (includes meter)	125 gpm (includes meter)
43 gpm	52 gpm	80 gpm	85 gpm
12" - 24" diameter 12" - 24" diameter	12" - 24" diameter 12" - 30" diameter	12"- 48" diameter 12"- 36" diameter	12" - 48" diameter 12" - 36" diameter
QC to 1.5" NPT	1.5" Female NPT	2" Female NPT	2" Female NPT
Fiber Reinforced Composite Up to 6 Downflow/Upflow	Lead Free Brass Up to 6 Downflow/Upflow	Lead Free Brass Up to 6 Downflow/Upflow	Lead Free Brass Up to 6 Downflow/Upflow
20 - 125 psi 40° - 110° F	20 - 125 psi 40° - 110° F	20 - 125 psi 40° - 110° F	20 - 125 psi 40° - 110° F
0.5 - 75 gpm	0.5 - 75 gpm	1.5 - 150 gpm	1.5 - 150 gpm
1.90" O.D. Pipe 1.5" NPS	1.90" O.D. Pipe 1.5" NPS	1.90" O.D. Pipe 1.5" NPS	2.375" O.D. Pipe 2" NPS
QC to 1" NPT Elbow QC to 1.5" NPT Straight	1.25" Female NPT with 3/4" Male NPT Standard 1" Male NPT Optional	1.5" Female NPT	1.5" Female NPT
3/4" Female NPT 1/2" O.D. Poly Tube Compression	3/4" Female NPT 1/2" O.D. Poly Tube Compression	1" Male NPT elbow 3/4" x 1" Solvent elbow 1/2" O.D. Poly Tube Compression	1" Male NPT elbow 3/4" x 1" Solvent elbow 1/2" O.D. Poly Tube Compression
4" - 8 UN	4" - 8 UN	4" - 8 UN	Quick Disconnect 4" - 8 UN 6" Flange Side Mount
10.7"	9.5"	7.5"	with 4" - 8 UN QC Base is 11.2" with 6" Flange QC Base is 11.3"
9 lbs.	21 lbs.	29 lbs.	29 lbs.

2" & 3" WATER SPECIALIST VALVE SPECIFICATIONS







SPECIFICATIONS	WS2H	WS3	
Service @ 15 psi drop Backwash @ 25 psi drop	125 gpm (includes meter) 125 gpm	250 gpm (includes meter) 220 gpm	
Tank Applications: Softener Filter (1)	18" - 63" diameter 18" - 48" diameter	18" - 96" diameter (1) 18" - 63" diameter	
Inlet/Outlet Fitting Connections	2" Female NPT	3" Female NPT	
Valve Material Cycles Regeneration	Lead Free Brass Up to 9 Downflow	Lead Free Brass Up to 9 Downflow	
Operating Pressures Operating Temperatures	20 - 125 psi 40° - 110° F	20 - 125 psi 40° - 110° F	
Meter: Flow Rate Range	1.5 - 125 gpm	3.5 - 350 gpm	
Distributor Pilot	2.375" O.D. Pipe 2" NPS	3.5" O.D. Pipe 3" NPS	
Drain Line Connection	2" Female NPT	3" Female NPT	
Brine Line Connection	1" Male NPT elbow ¾" x 1" Solvent elbow	1" Male NPT elbow ¾" x 1" Solvent elbow	
Mounting Base Options	Quick Disconnect 4" - 8 UN 6" Flange Side Mount	Quick Disconnect 6" Flange Side Mount	
Height From Top of Tank	with 4" - 8 UN QC Base is 11.5" with 6" Flange QC Base is 11.6"	with 6" Flange QC Base is 12.5"	
Shipping Weight with Meter	50 lbs.	57 lbs. (no meter)	

^{1. 18&}quot; - 63" diameter with standard injectors, to 96" with Brine Pump





WS1 SD/SP



WS1TT SD/SP



WS1.25 SD/SP



WS1.5 SD/SP



WS2 SD/SP



WS2QC SD/SP





Note: When disposing of batteries follow local and state regulations.

BATTERY SPECIFICATIONS 2 OPTIONS FOR OPERATION

SP Model: 6 AA nickel metal hydride batteries rechargeable for SP model SD Model: 6 "D" cell alkaline batteries (disposable when discharged) for SD model - "D" batteries not included



SP CHARGING SPECIFICATIONS 2 OPTIONS FOR OPERATION

- Amorphous silicon solar panels capable of three tilt angles
- DC power supply with 15VDC output 500mA

CLACK CONTOLLER SPECIFICATIONS











SPECIFICATIONS	WS1	cs	тс	EE
WS Valves Available	WS1, WS1.25	WS1, WS1.25	WS1, WS1.25	WS1, WS1.25, WS1.5P, WS1.5, WS2, WS2QC, WS1TT
Display Type	LCD	LCD	LCD	LCD
Volume Range (Gallons)	20 - 50,000	20 - 50,000	N/A	20 - 1,500,000
Diagnostics/History	Yes	Yes	No	Yes
Comm. Cable Port	No	No	No	1
Cycle Codes	Created Based on Programming	Yes P1 - P91	Yes P0 - P9	No
Cycle Times Adjustable	No	No	No	Yes
DP Input	No	No	Yes	Yes
Motor Drive Output	No	No	No	1
"Relay Driver or Relay Output"	No	No	No	1 - Relay Driver
Remote Communications	No	No	No	No
External Programming	Configurator	Configurator	Configurator	Configurator
Data Extraction	No	No	No	No
Electrical Supply Voltage	100 to 120VAC	100 to 120VAC	100 to 120VAC	100 to 120VAC
Supply Frequency Voltage Output Current Output	50/60Hz 15VDC 500 mA	50/60Hz 15VDC 500 mA	50/60Hz 15VDC 500 mA	50/60Hz 15VDC 500 mA
Systems Types Single Alternate Random Series Progressive Flow	Yes No No No No	Yes No No No	Yes No No No	Yes 2 Valves or SC 2 Valves or SC 2 Valves or SC 2 Valves or SC System Controller

CLACK CONTOLLER SPECIFICATIONS













SD	en en	WS2H & WS3			System
30	SP	Pod	Main Board	Added System Board	Controller (SC)
WS1, WS1.25, WS1.5, WS2, WS2QC, WS1TT	WS1, WS1.25, WS1.5, WS2, WS2QC, WS1TT	WS2H, WS3			WS1, WS1.25, WS1.5P, WS1.5, WS2, WS2QC
LCD	LCD	LCD Backlit	N/A	N/A	LCD Backlit
20 - 1,500,000	20 - 1,500,000	10 - 999,000			N/A
Yes	Yes		Yes		Yes
1	1	N/A	1	1	6
No	No	No			N/A
Yes	Yes	Yes			N/A
Yes	Yes	N/A	Yes	No	Yes
1	1	N/A	1	1	No
1 - Relay Driver	1 - Relay Driver	N/A	No	2 - Relays	2 - Relays
No	No	No			ModBus-TCP/IP
Configurator	Configurator	No		Flash Drive	
No	No	Yes			Yes
6 "D" Batteries	6 "AA" Rechargeable Nickel Metal Hydride Batteries	100 to 120VAC			120VAC
50/60Hz 15VDC 500 mA	50/60Hz 15VDC 500 mA	60Hz 18VDC 750 mA		50/60Hz 15VDC 0.5A	
Yes No 2 Valves 2 Valves No	Yes No 2 Valves 2 Valves No	N/A	Yes 2 Valves 2 Valves 2 Valves 2 Valves	Yes 2 - 4 Valves 2 - 4 Valves 2 - 4 Valves 2 - 4 Valves	Water Monitor 2 - 6 Valves 2 - 6 Valves 2 - 6 Valves 2 - 6 Valves

Inline Flow Meters



















Drain Line Flow Controls







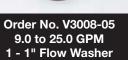


1 - 1" Flow Washer















Up to 5 - 3/4" & 4 - 1" Flow Washers





V3190-090 WS1 DLFC 09.0 gpm V3190-100 WS1 DLFC 10.0 gpm V3190-110 WS1 DLFC 11.0 gpm V3190-130 WS1 DLFC 13.0 gpm V3190-150 WS1 DLFC 15.0 gpm V3190-170 WS1 DLFC 17.0 gpm V3190-200 WS1 DLFC 20.0 gpm V3190-250 WS1 DLFC 25.0 gpm

1" & 1.25" Control Valve Fittings and Accessories

























1" & 1.25" Control Valve Fittings and Accessories























Control Valve Accessories













Control Valve Accessories

























Control Valve Accessories







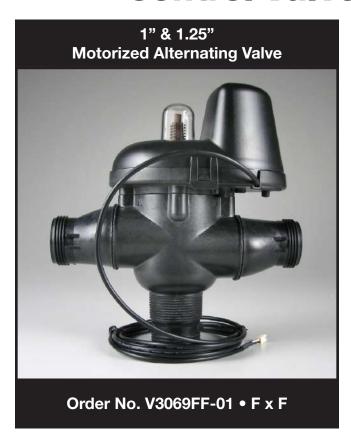


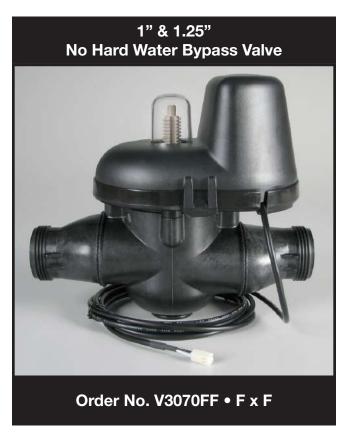


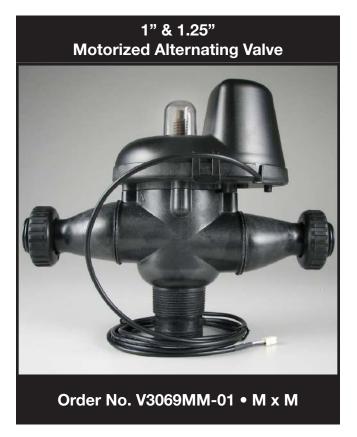


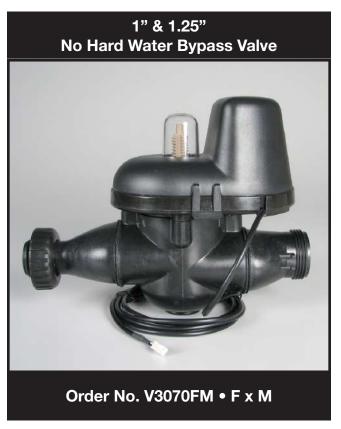


1" & 1.25" Control Valve Accessories

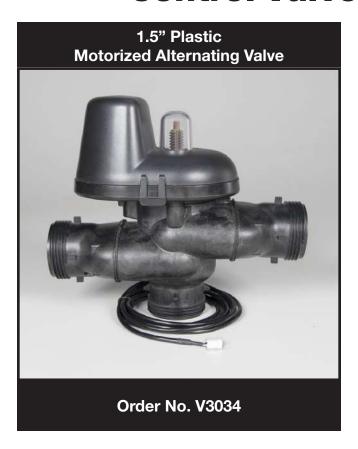


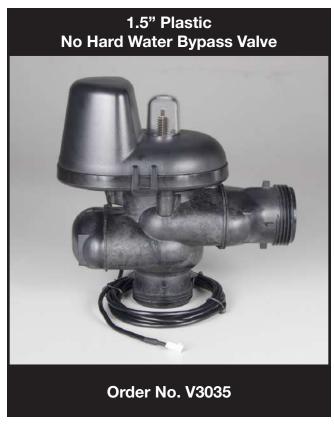


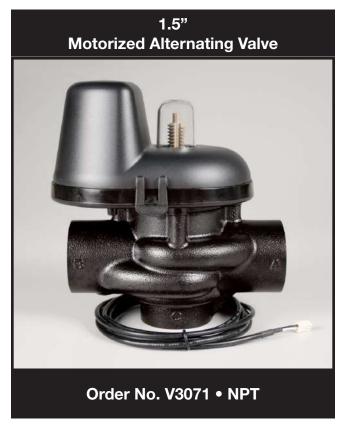


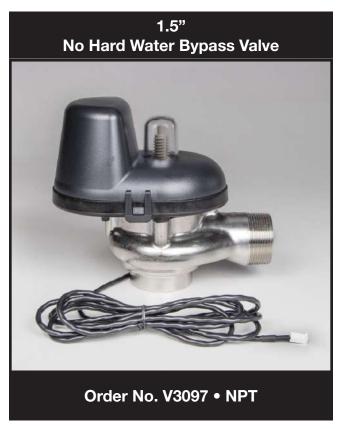


1.5" Control Valve Accessories

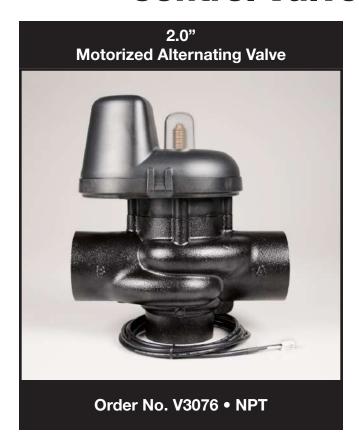




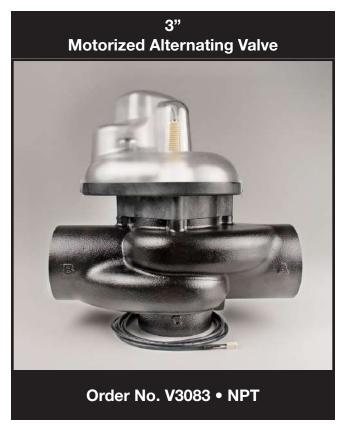


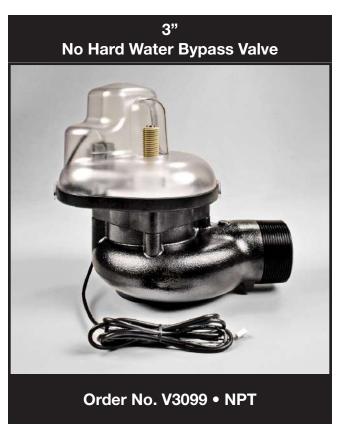


2" and 3" Control Valve Accessories











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