Clack

Control Valves, Fittings and Accessories

INTERNATIONAL



WS1EI TWIN ALTERNATING CONTROL VALVE

106 lpm • 6.36 m³/h • 28 gpm



WS1CI TWIN ALTERNATING CONTROL VALVE

106 lpm • 6.36 m3/h • 28 gpm



WS2CI/QC* 473 lpm • 28.4 m³/h 125 gpm



WS2EI/QC* WS2SQ/QC* 473 lpm • 28.4 m³/h 125 gpm



WS2H 473 lpm • 28.4 m³/h 125 gpm



WS3 946 lpm • 56.8 m³/h 250 gpm



WS1.5PCI 227 lpm • 13.6 m³/h 60 qpm



WS1.5PEI 227 lpm • 13.6 m³/h 60 qpm



WS1.5Cl 265 lpm • 15.9 m³/h 70 gpm



WS1.5EI WS1.5SQ 265 lpm • 15.9 m³/h 70 gpm



WS2CI435 lpm • 26.1 m³/h
115 gpm



WS2EI WS2SQ 435 lpm • 26.1 m³/h 115 gpm



WS1.25*
129 lpm • 7.7 m³/h
34 gpm



WS1.25CI*
129 lpm • 7.7 m³/h
34 gpm



WS1.25EI* WS1.25SQ* 129 lpm • 7.7 m³/h 34 gpm



WS1.25TC*
129 lpm • 7.7 m³/h
34 gpm



WS1*
102 lpm • 6.1 m³/h
27 gpm



WS1CI*
102 lpm • 6.1 m³/h
27 gpm



WS1EI* WS1SQ* 102 lpm • 6.1 m³/h 27 gpm



WS1TC* 102 lpm • 6.1 m³/h 27 gpm

*valves shown with optional accessories

1" & 1.25" WATER SPECIALIST VALVE SPECIFICATIONS









<u>SPECIFICATIONS</u>	WS1* WS1, CI, EI, SQ, TC	WS1TT CI, EI, SQ	WS1.25* WS1, CI, EI, SQ, TC
Service @ 1 bar/15 psi drop	102 lpm, 6.1 m³/h (includes meter and bypass)	106 lpm, 6.36 m³/h (includes meter and bypass)	129 lpm, 7.7 m ³ /h (includes meter, bypass, and 1.25" fitting kit)
Backwash @ 1.7 bar/25 psi drop	102 lpm, 6.1 m³/h (includes bypass)	57 lpm, 3.4 m³/h (includes bypass)	121 lpm, 7.3 m³/h (includes bypass)
Tank Applications: Softener Filter (1)	6" - 21" diameter 6" - 21" diameter	6" - 21" diameter 6" - 16" diameter	6" - 21" diameter 6" - 24" diameter
Inlet/Outlet Fitting Connections (2)	³⁄₄" - 1.25" Male BSPT	³¼" - 1.25" Male BSPT	³¼" - 1.25" Male BSPT
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	1.4 - 8.6 bar 4° - 43° C	1.4 - 8.6 bar 4° - 43° C	1.4 - 8.6 bar 4° - 43° C
Meter: Flow Rate Range	.95 - 102 lpm	.95 - 102 lpm	.95 - 129 lpm
Distributor Pilot	1.050" O.D. Pipe 3/4" NPS	1.050" O.D. Pipe 3/4" NPS	1.32" O.D. Pipe, 32mm O.D. 1" NPS
Drain Line Connection	34" Male NPT Standard 1" Male NPT Optional	3/4" Male NPT Standard 1" Male NPT Optional	3/4" Male NPT Standard 1" Male NPT Optional
Brine Line Connection	3/8" Brine QC Fitting 1/2" O.D. Poly Tube Compression	3/8" Brine QC Fitting 1/2" O.D. Poly Tube Compression	3/8" Brine QC 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	187mm	187mm	187mm
Shipping Weight	2 kg	7.25 kg	2 kg
Certifications and Optional Third-Party Testing	NSF/ANSI 44 NSF/ANSI/CAN 61 NSF/ANSI 372 IP54 IP55 with Weather Cover	NSF/ANSI 44 NSF/ANSI/CAN 61 NSF/ANSI 372 IP54 IP55 with Weather Cover	NSF/ANSI 44 NSF/ANSI/CAN 61 NSF/ANSI 372 IP54 IP55 with Weather Cover

^{1.} Filter tank size calculated @ 10 gpm of backwash per square foot of bed area

^{2.} See pages 10 and 11 for all available fittings for WS1, WS1TT, and WS1.25 Valves shown with optional bypass.

^{*} Optional mixing valve available.

1.5" & 2" WATER SPECIALIST VALVE SPECIFICATIONS









WS1.5P CI, EI, SQ	WS1.5 CI, EI, SQ	WS2 CI, EI, SQ	WS2QC CI, EI, SQ
227 lpm (13.6 m³/h) (includes meter)	265 lpm (15.9 m³/h) (includes meter)	435 lpm (26.1 m³/h) (includes meter)	473 lpm (28.4 m³/h) (includes meter)
163 lpm (9.8 m³/h)	197 lpm (11.8 m³/h)	303 lpm (18.2 m³/h)	322 lpm (19.3 m³/h)
12" - 24" diameter 12" - 24" diameter QC to 1.5" BSPT or NPT	12" - 24" diameter 12" - 30" diameter 1.5" Female BSPT or NPT	12"- 48" diameter 12"- 36" diameter 2" Female BSPT or NPT	12" - 48" diameter 12" - 36" diameter 2" Female BSPT or NPT
Fiber Reinforced Composite Up to 6 Downflow/Upflow	Lead Free Brass Up to 9 Downflow/Upflow	Lead Free Brass Up to 6 Downflow/Upflow	Lead Free Brass Up to 6 Downflow/Upflow
1.4 - 8.6 bar 4° - 43° C	1.4 - 8.6 bar 4° - 43° C	1.4 - 8.6 bar 4° - 43° C	1.4 - 8.6 bar 4° - 43° C
2 - 284 lpm	2 - 284 lpm	5.7 - 568 lpm	5.7 - 568 lpm
50mm O.D. or 1.90" O.D. Pipe	50mm O.D. or 1.90" O.D. Pipe	50mm O.D. or 1.90" O.D. Pipe	63mm O.D. or 2.375" O.D. Pipe
QC to 1.25" 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 and BSPT elbow ¾" x 1" Solvent elbow ½" O.D. Poly Tube Compression	1" Male NPT and BSPT elbow ¾" x 1" Solvent elbow ½" O.D. Poly Tube Compression
4" - 8 UN	4" - 8 UN	4" - 8 UN	Quick Disconnect 4" - 8 UN 6" Flange Side Mount
191mm	191mm	191mm	with 4" - 8 UN QC Base is 284.5mm with 6" Flange QC Base is 287mm
4.1 kg	9.5 kg	13 kg	14 kg
NSF/ANSI/CAN 61 NSF/ANSI 372 IP54 IP55 with Weather Cover	NSF/ANSI/CAN 61 NSF/ANSI 372 IP54 IP55 with Weather Cover	NSF/ANSI/CAN 61 NSF/ANSI 372 IP54 IP55 with Weather Cover	NSF/ANSI/CAN 61 NSF/ANSI 372 IP54 IP55 with Weather Cover

2" & 3" WATER SPECIALIST VALVE SPECIFICATIONS







<u>SPECIFICATIONS</u>	WS2H	WS3
Service @ 1 bar/15 psi drop Backwash @ 1.7 bar/25 psi drop	473 lpm, 28.4 m³/h (includes meter) 473 lpm, 28.4 m³/h	946 lpm, 56.8 m³/h (includes meter) 833 gpm, 50.0 m³/h
<u>Tank Applications:</u> Softener Filter (1)	18" - 63" diameter 18" - 48" diameter	18" - 96" diameter (1) 18" - 63" diameter
Inlet/Outlet Fitting Connections	2" Female BSPT or NPT	3" Female BSPT or NPT
Valve Material Cycles Regeneration	Lead Free Brass Up to 9 Downflow	Lead Free Brass Up to 9 Downflow
Operating Pressures Operating Temperatures	1.4 - 8.6 bar 4° - 43° C	1.4 - 8.6 bar 4° - 43° C
Meter: Flow Rate Range	5.7 - 473 lpm	13 - 1,325 lpm
Distributor Pilot	63mm O.D. Pipe or 2.375" O.D. Pipe	90mm or 3.5" O.D. Pipe
Drain Line Connection	2" Female BSPT or NPT	3" Female BSPT or NPT
Brine Line Connection	1" Male NPT and BSPT elbow 3/4" x 1" Solvent elbow	1" Male NPT and BSPT elbow 3/4" 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 292mm with 6" Flange QC Base is 294.6mm	with 6" Flange QC Base is 318mm
Shipping Weight with Meter	22.7 kg	25.9 kg
Certifications and Optional Third-Party Testing	NSF/ANSI/CAN 61 NSF/ANSI 372 IP52	NSF/ANSI/CAN 61 NSF/ANSI 372 IP52

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

SOLAR / BATTERY POWERED WALVES







WS1TT SQ



WS1.25 SQ



WS1.5 SQ



WS2 SQ



WS2QC SQ



BATTERY SPECIFICATIONS

6 AA nickel metal hydride batteries rechargeable for SQ model Note: When disposing of batteries follow local and state regulations.



SQ 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











<u>SPECIFICATIONS</u>	WS1	ТС	СІ	El
WS Valves Available	WS1, WS1.25	WS1, WS1.25	WS1, WS1.25, WS1.5P, WS1.5, WS2, WS2QC, WS1TT	WS1, WS1.25, WS1.5P, WS1.5, WS2, WS2QC, WS1TT
Display Type	LCD	LCD	LCD	LCD
Volume Range Liters m³ Gallons	20 - 50,000	N/A	.02 - 5,700	.02 - 5,700
Diagnostics/History	Yes	No	Yes	Yes
Comm. Cable Port	No	No	1	1
Cycle Codes	Created Based on Programming	Yes P0 - P9	No	No
Cycle Times Adjustable	No	No	Yes	Yes
DP Input	No	Yes	Yes	Yes
Motor Drive Output	No	No	1	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	200 to 240VAC	200 to 240VAC	200 to 240VAC	200 to 240VAC
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 2 Valves or SC 2 Valves or SC 2 Valves or SC System Controller	Yes 2 Valves or SC 2 Valves or SC 2 Valves or SC System Controller

CLACK CONTOLLER SPECIFICATIONS











60	WS2H & WS3			System
SQ -	Pod	Main Board	Relay Expansion Board	Controller (SC)
WS1, WS1.25, WS1.5, WS2, WS2QC, WS1TT	WS2H, WS3			WS1, WS1.25, WS1.5P, WS1.5, WS2, WS2QC
LCD	Monochrome Graphics	N/A	N/A	LCD Backlit
.02 - 5,700	50 - 5,000,000 10 - 999,000		N/A	
Yes		Yes		Yes
1	N/A	RJ45 Input & Output	1	6
No	No		N/A	
Yes	Yes		N/A	
Yes	N/A	Yes	No	Yes
1	N/A	1	1	No
1 - Relay Driver	N/A	Add Relay Expansion Board (Max - 2 Boards)	2 - Relays per board	2 - Relays
No	Modbus-TCP/IP		ModBus-TCP/IP	
Configurator	No		Flash Drive	
No	Yes		Yes	
6 "AA" Rechargable Nickel Metal Hydride Batteries	240VAC		200-240VAC	
50/60Hz 15VDC 500 mA	50/60Hz 24VDC 800 mA		50/60Hz 15VDC 0.5A	
Yes No 2 Valves 2 Valves No	N/A	Yes 2-16 Valves 2-16 Valves 2-16 Valves 2-16 Valves	N/A	Water Monitor 2 - 6 Valves

Inline Flow Meters























Drain Line Flow Controls









1 - 1" Flow Washer













1 - 1" Flow Washer



3/4" Flow Washers V3162-007 WS1 DLFC 0.7 gpm V3162-010 WS1 DLFC 1.0 gpm V3162-013 WS1 DLFC 1.3 gpm V3162-017 WS1 DLFC 1.7 gpm V3162-022 WS1 DLFC 2.2 gpm V3162-027 WS1 DLFC 2.7 gpm V3162-032 WS1 DLFC 3.2 gpm V3162-042 WS1 DLFC 4.2 gpm V3162-042 WS1 DLFC 4.5 gpm V3162-053 WS1 DLFC 6.5 gpm V3162-075 WS1 DLFC 6.5 gpm V3162-075 WS1 DLFC 7.5 gpm V3162-090 WS1 DLFC 9.0 gpm V3162-100 WS1 DLFC 10.0 gpm

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











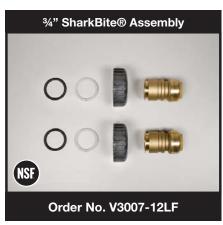














1" & 1.25" Control Valve Fittings and Accessories

























































Order No. V4276-15

Order No. V4276-36

Order No. V3475-36







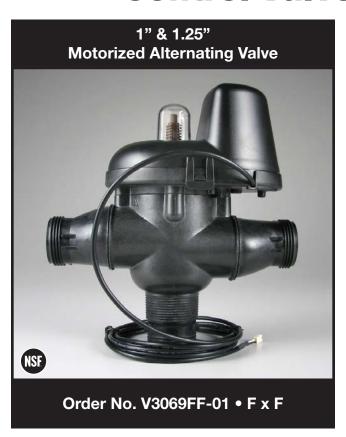


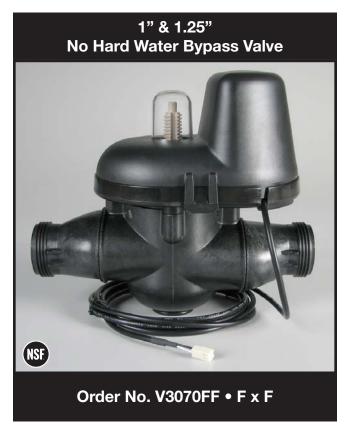


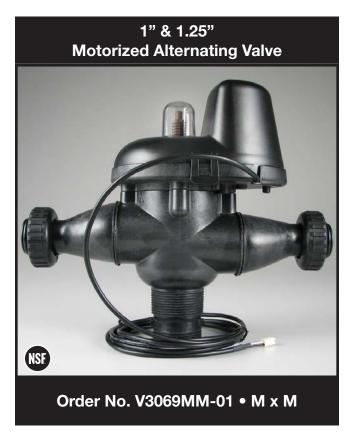


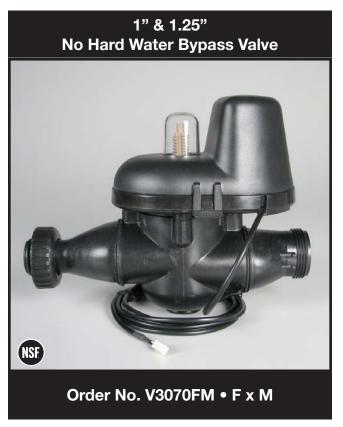


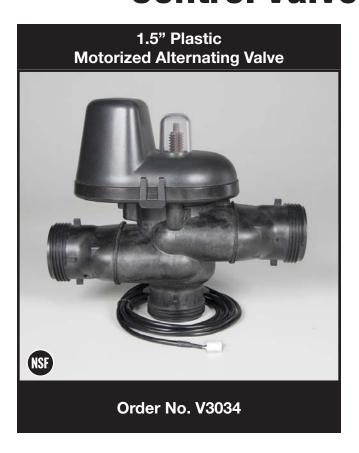
1" & 1.25" Control Valve Accessories

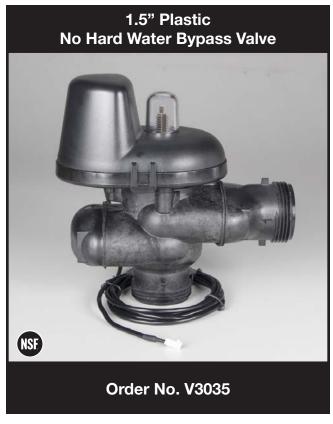
















2"

