

Clack®

WS1

WATER SPECIALIST CONTROL VALVE



- Solid state microprocessor with easy access front panel settings
- Three modes of operation; meter immediate, meter delayed, or time clock delayed
- Double backwash feature offers optimum regeneration, cleaning ability, and efficiency
- Capable of 36 pre-programmed regeneration cycles based on control valve setting
- Days override feature; 1 – 28 days available
- Backwash and brining ability to 21" diameter tanks
- Downflow/upflow regeneration
- Stores system configuration and operation data in nonvolatile memory
- Coin Cell Lithium battery back-up with an 8 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Control valve design provides optimum service and backwash rates
- Pre or Post treated water regenerant refill
- Reliable and proven DC drive
- One piece expanding seal spacer stack assembly
- Linearly reciprocating piston operation

Water Specialist 1" Control Specifications

Inlet/Outlet Fittings.....	¾" to 1.5" NPS
Cycles	up to 6
Valve Material	Glass Filled Composite
Regeneration	Downflow/Upflow

FLOW RATES

Service @15 psi drop (includes bypass and meter)	27 gpm
Backwash @ 25 psi drop (includes bypass)	27 gpm
Cv Service	7.0
Cv Backwash	5.4

OPERATING PRESSURES

Minimum/Maximum	20 psi – 125 psi
-----------------------	------------------

OPERATING TEMPERATURES

Minimum/Maximum	40° – 110°F
-----------------------	-------------

METER

Accuracy	± 5%
Flow Rate Range.....	0.25 – 27 gpm
Gallon Range.....	20 – 50,000 gallons
Totalizer	1000 - 9,999,000 gallons

DIMENSIONS & WEIGHT

Distributor Pilot.....	1.050" OD Pipe (¾" NPS)
Drain Line	¾" or 1" NPT
Brine Line	¾" or ½" OD Poly Tube
Mounting Base.....	2 ½" - 8 NPSM
Height From Top Of Tank.....	7 ¾"
Weight	4.5 lb

ELECTRICAL SPECIFICATIONS

POWER SUPPLY

	<u>U.S.</u>	<u>International</u>
Supply Voltage	100VAC to 120VAC.....	200VAC to 240VAC
Supply Frequency	50/60 Hz.....	50/60 Hz
Output Voltage	15VDC.....	15VDC
Output Current	500 mA.....	500 mA

TANK APPLICATIONS

Water Softener	6" – 21" diameter
Water Filter (1)	6" – 21" diameter

CYCLES OF OPERATION (Softener Downflow)

Cycle	Range of times minutes
1. Backwash 1 st (upflow)	6 - 12
2. Regenerate Draw/Slow Rinse (downflow)	45 - 75
3. Backwash 2 nd (upflow)	3 - 12
4. Fast Rinse (downflow)	3 - 8
5. Regenerant Refill (in service with treated water).....	As Programmed
6. Service (downflow)	

Options: Backwash Filter, Bypass, Weather Cover

Compatible with the following typical concentration of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines.

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

Clack®

WS2EE

**WATER
SPECIALIST
CONTROL
VALVE**



Certified to NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372

- 2" Top mount control valve suited for commercial/industrial applications
- Epoxy coated lead free brass valve body
- Economical stainless steel optional meter assembly
- Service flow rate of 115 gpm, backwash 80 gpm
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with an 8 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Post treated water regenerant refill
- Reliable and proven DC drive
- One piece expanding seal spacer stack assembly
- Linearly reciprocating piston operation



Optional 2" Meter

Water Specialist 2" EE Control Specifications

Inlet/Outlet (1)	2" Female NPT
Cycles	Up to 6
Valve Material	Lead free brass
Regeneration	Downflow

CONTROL VALVE FLOW RATES

Service @15 psi drop (includes meter).....	115 gpm
Backwash @ 25 psi drop	80 gpm
Cv Service	29.7
Cv Backwash	16.0

OPERATING PRESSURES

Minimum/Maximum	20 psi – 125 psi
-----------------------	------------------

OPERATING TEMPERATURES

Minimum/Maximum	40° – 110°F
-----------------------	-------------

METER SPECIFICATIONS

Accuracy	± 5%
Flow Rate Range.....	1.5 – 150 gpm
Gallon Range.....	20 – 1,500,000 gallons
Totalizer	1 – 9,999,000 gallons

DIMENSIONS & WEIGHT

Distributor Pilot	
Valve bodies with 2" Female NPT Inlet & Outlet	1.90" OD (1.5" NPS)
Drain Line Connection (drain line adapters not included)	1.5" Female NPT
Brine Line Adapters Included.....	1" Male NPT elbow, 3/4" x 1" solvent weld elbow and 1/2" OD Poly Tube Compression
Mounting Base.....	4" - 8 UN
Height From Top Of Tank.....	8.5"
Shipping Weight With Meter	29 lb

ELECTRICAL SPECIFICATIONS

POWER SUPPLY

	U.S.	International
Supply Voltage	100VAC to 120VAC ...	200VAC to 240VAC
Supply Frequency	50/60 Hz	50/60 Hz
Output Voltage	15VDC	15VDC
Output Current	500 mA	500 mA

TANK APPLICATIONS

Water Softener	12" – 48" diameter
Water Filter (2).....	12" – 36" diameter

CYCLES OF OPERATION

	Softener	Filter
Cycle	Range of time in minutes	
1. Backwash 1 st (upflow)	1-95.....	Backwash 1-95
2. Regenerate Draw/Slow Rinse (downflow)	1-180	
3. Backwash 2 nd (upflow).....	1-95	
4. Fast Rinse (downflow)	1-95.....	Rinse 1-95
5. Regenerant Refill (in service with treated water).....	0.1-99.0 or off	
6. Service (downflow)		

Options: Backwash Filter, Weather Cover

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines

1. See Distributor Pilot
2. Filter tank size calculated @ 10 gpm of backwash per square foot of bed area