

est. 1947

**DUFF** CO.

When you need it now... or don't know how

CLACK WS1.5EE

# WS1.5EE

## WATER SPECIALIST CONTROL VALVE

**NSF**

Certified to NSF/ANSI 61 and 372.

- 1.5" top mount control valve suited for mid-size commercial/industrial applications
- Epoxy coated lead free brass valve body\*
- Economical stainless steel optional meter assembly
- Service flow rate of 70 gpm, backwash 52 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 a 8 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Post treated water regenerant refill
- Patented one piece expanding seal spacer stack assembly U.S. Patent 6,402,944
- Patented linearly reciprocating piston operation U.S. Patent 6,444,127
- Reliable and proven DC drive



Optional 1.5" Meter

**DWC**  
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Products for Quality Water

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# Water Specialist 1.5" EE Control Specifications

Inlet/Outlet (1) .....	1.5" Female NPT
Cycles .....	Up to 6
Valve Material .....	Epoxy coated brass
Regeneration .....	Downflow

## CONTROL VALVE FLOW RATES

Service @15 psi drop (includes meter).....	70 gpm
Backwash @ 25 psi drop .....	52 gpm
Cv Service .....	18.1
Cv Backwash .....	10.4

## OPERATING PRESSURES

Minimum/Maximum .....	20 psi – 125 psi
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## OPERATING TEMPERATURES

Minimum/Maximum .....	40° – 110° F
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## METER SPECIFICATIONS

Accuracy .....	± 5%
Flow Rate Range.....	0.5 – 75 GPM
Gallon Range.....	20 – 1,500,000 gallons
Totalizer .....	1 – 9,999,000 gallons

## DIMENSIONS & WEIGHT

Distributor Pilot	
Valve bodies with 1.5" Female NPT Inlet & Outlet .....	1.90" OD (1.5" NPS)
Drain Line Connection (2) .....	1.25" Female NPT
Adapter Included.....	¾" Male NPT Elbow
Brine Line Connection .....	¾" Female NPT
Adapter Included.....	½" OD Poly Tube Compression
Mounting Base.....	4" - 8 UN
Height From Top Of Tank.....	7.5"
Shipping Weight With Meter .....	21 lbs.

## 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 .....	12" – 30" diameter (4)
Water Filter (3).....	12" – 30" diameter

## CYCLES OF OPERATION

Cycle	<u>Softener</u>	<u>Filter</u>
	Range of time in minutes	
1. Backwash 1 <sup>st</sup> (upflow) .....	1-95.....	Backwash 1-95
2. Regenerate Draw/Slow Rinse (downflow) .....	1-180	
3. Backwash 2 <sup>nd</sup> (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

- See Distributor Pilot.
- Casting comes with a 1.25" Female NPT drain connection. An adapter is provided to accept existing WS1 drain line ¾" Male NPT flow controls up to 10 gpm. Other drain line flow controls are available for flow rates above 10 gpm.
- Filter tank size calculated @ 10 gpm of backwash per square foot of bed area
- Requires a V3158-02 installed for a brine elbow on the control valve, use of a 454 controlled flow brine valve assembly H7070-36CF-5 or H7070-54CF-5 (designed with 5 gpm BLFC), 1" air check, or 494 brine valve assembly, and minimum ¾" hard pipe PVC brine line.