

# Clack®



## WS3

### WATER SPECIALIST CONTROL VALVE



**NSF**

Certified to NSF/ANSI 61 and 372.

- 3" top mount or side mount control valve suited for commercial and industrial applications
- Epoxy coated lead free brass valve body
- Economical stainless steel optional meter assembly
- Service flow rate 250 gpm (946 lpm) (56.8 m<sup>3</sup>/h), Backwash flow rate 220 gpm (833 lpm) (50.0 m<sup>3</sup>/h)
- Solid state microprocessor with easy access front removable POD
- Front panel display for Time of Day, Current Flow Rate, Totalizer and Volume/Days until Regeneration
- Four methods to initiate the down flow regeneration; meter delayed, meter immediate, time clock delayed, aor pressure differential
- Fully programmable regeneration cycle sequences (maximum 9)
- Fully programmable regeneration cycle times
- Pre or Post treated water regenerant refill
- Days override feature; 1-28 days available
- Capacitor back-up with up to 24 hour carry over
- Level VI 18-volt output DC power supply provides safe and easy installation
- Reliable and proven DC drive
- 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



Optional 3" Meter



Side Mount Adapter

# Water Specialist 3" Control Specifications

Inlet/Outlet (1) .....	3" Female NPT or BSPT
Cycles .....	up to 9
Valve Material .....	Lead free brass
Regeneration .....	Downflow
<b>CONTROL VALVE FLOW RATES</b>	
Service @ 15 psi/1 bar drop.....	250 gpm (946 lpm) (56.8 m <sup>3</sup> /h)
Backwash @ 25 psi/1.7 bar drop.....	220 gpm (833 lpm) (50.0 m <sup>3</sup> /h)
Cv Service.....	64.6
Cv Backwash.....	44.0
<b>OPERATING PRESSURES</b>	
Minimum/Maximum .....	20 - 125 psi (1.4 - 8.6 bar)
<b>OPERATING TEMPERATURES</b>	
Minimum/Maximum .....	40° - 110° F (4° - 43° C)
<b>METER SPECIFICATIONS</b>	
Accuracy.....	± 5%
Flow Rate Range.....	3.5 - 350 gpm (13.3 - 1325 lpm)
Volume Range .....	10 - 999,000 gallons (38 - 3,796.2 liters x1000)
Totalizer .....	1,000 - 999,999,000 gallons (3,786 - 3,785,407.9 liters x1000)
<b>DIMENSIONS &amp; WEIGHT</b>	
Distributor Pilot	
Valve Bodies with 3" Female NPT Inlet & Outlet.....	3.5" OD (3" NPS)
Valve Bodies with 3" Female BSPT Inlet & Outlet .....	90mm OD
Drain Line Connection .....	3" Female NPT/BSPT "No Groove Lock"
Brine Line Adapters Included.....	1" Male NPT elbow and ¾" x 1" solvent weld elbow
Mounting Base.....	6" Flange or Side Mount
Height From Top Of Tank with 6" Flange QC Base .....	12.5" (318mm)
Shipping Weight Without Optional Meter .....	57 lbs (25.9 Kg)
<b>ELECTRICAL SPECIFICATIONS</b>	
<b>POWER SUPPLY</b>	
	<u>U.S.</u> <u>International</u>
Supply Voltage .....	120VAC ..... 240VAC
Supply Frequency .....	60 Hz ..... 60 Hz
Output Voltage .....	18VDC ..... 18VDC
Output Current .....	750 mA..... 750 mA
<b>TANK APPLICATIONS</b>	
Water Softener .....	18" - 63" Diameter with standard injectors, to 96" with Brine Pump
Water Filter (2).....	18" - 63" Diameter
<b>CYCLES OF OPERATION</b>	
Choose up to nine regeneration cycles, in any order, with a wide range of available values:	
Cycle .....	Range of values
Backwash.....	1 - 95 minutes
Brine (draw) .....	1 - 180 minutes
Slow Rinse .....	1 - 95 minutes
Fast Rinse .....	1 - 95 minutes
Refill .....	0.1 - 99 minutes
Hold (service) .....	1 - 480 minutes

**Options: Backwash Filter**

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/407 lpm per m<sup>2</sup> of bed area

# Clack®

# WS2H

## **WATER SPECIALIST CONTROL VALVE**



Certified to NSF/ANSI 44, 61 and 372.



- 2" top mount or side mount control valve suited for commercial and industrial applications
- Epoxy coated lead free brass valve body
- Built-in Internal Flow Meter standard with all valves
- Service flow rate 125 gpm (473 lpm) (28.4 m<sup>3</sup>/h), Backwash flow rate 125 gpm (473 lpm) (28.4 m<sup>3</sup>/h)
- Solid state microprocessor with easy access front removable POD
- Front panel display for Time of Day, Current Flow Rate, Totalizer and Volume/Days until Regeneration
- Four methods to initiate the down flow regeneration; meter delayed, meter immediate, time clock delayed, or pressure differential
- Fully programmable regeneration cycle sequences (maximum 9)
- Fully programmable regeneration cycle times
- Pre or Post treated water regenerant refill
- Days override feature; 1-28 days available
- 20-volt output AC adapter provides safe and easy installation
- Reliable and proven DC drive
- 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

# Water Specialist 2" H Control Specifications

Inlet/Outlet (1) .....	2" Female NPT or BSPT/ 2.5" Groove Lock
Cycles .....	up to 9
Valve Material .....	Lead free brass
Regeneration .....	Downflow

## CONTROL VALVE FLOW RATES

Service @ 15 psi/1 bar drop (includes meter) .....	125 gpm (473 lpm) (28.4 m <sup>3</sup> /h)
Backwash @ 25 psi/1.7 bar drop .....	125 gpm (473 lpm) (28.4 m <sup>3</sup> /h)
Cv Service.....	32.3
Cv Backwash.....	25.0

## OPERATING PRESSURES

Minimum/Maximum .....	20 - 125 psi (1.4 - 8.6 bar)
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## OPERATING TEMPERATURES

Minimum/Maximum .....	40° - 110° F (4° - 43° C)
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## METER SPECIFICATIONS

Accuracy.....	± 5%
Flow Rate Range.....	1.5 - 125 gpm (5.7 - 473 lpm)
Volume Range .....	10 - 999,000 gallons (38 - 3,796.2 liters x1000)
Totalizer .....	1,000 - 999,999,000 gallons (3,786 - 3,785,407.9 liters x1000)

## DIMENSIONS & WEIGHT

Distributor Pilot	
Valve Bodies with 2" Female NPT Inlet & Outlet.....	2.375" OD (2" NPS)
Valve Bodies with 2" Female BSPT Inlet & Outlet .....	63mm OD
Drain Line Connection .....	2" Female NPT/BSPT/2.5" Groove Lock
Brine Line Adapters Included.....	1" Male NPT elbow and ¾" x 1" solvent weld elbow
Optional Adapters .....	½" or ⅝" OD Poly Tube Compression
Mounting Base.....	4" - 8 UN, 6" Flange or Side Mount
Height From Top Of Tank with 4" - 8 UN QC Base.....	11.5" (292mm)
Height From Top Of Tank with 6" Flange QC Base .....	11.6" (294.6mm)
Shipping Weight With Internal Meter.....	50 lbs (22.7 Kg)

## ELECTRICAL SPECIFICATIONS

### AC Adapter

	<u>U.S.</u>	<u>International</u>
Supply Voltage .....	120V AC.....	230V AC
Supply Frequency .....	60 Hz.....	50Hz
Output Voltage .....	20V AC.....	20V AC
Output Current .....	750 mA.....	750mA

## TANK APPLICATIONS

Water Softener .....	18" - 63" Diameter
Water Filter (2).....	18" - 48" Diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle .....	Range of values
Backwash.....	1 - 95 minutes
Brine (draw).....	1 - 180 minutes
Slow Rinse .....	1 - 95 minutes
Fast Rinse .....	1 - 95 minutes
Refill .....	0.1 - 99 minutes
Hold (service) .....	1 - 480 minutes

Options: Backwash Filter

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