Clack® pHorko® industrial water purification systems

# WS1EI TWIN ALTERNATING CONTROL VALVE

## WATER SPECIALIST CONTROL VALVE




- Service flow 106 lpm (6.36 $m^3$/h) (28 gpm), backwash flow 57 lpm (3.40 $m^3$/h) (15 gpm) with meter and bypass installed
- 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), and Tank in Service Indication
- 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/slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with a 8 hour carry over
- Backwash and brining ability to 21” diameter tanks
- Downflow or upflow brining regeneration
- 12-volt output AC Adapter provides safe and easy installation
- Treated/Soft water post fill and regeneration cycles
- 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 drives

# Water Specialist 1” EI Twin Alternating Specifications

| | |
|---|---|
| Inlet/Outlet Fittings | ¾" to 1.5” NPS |
| Cycles | up to 6 |
| Valve Material | Noryl (1) or equivalent |
| Regeneration | downflow |

**FLOW RATES**

| | |
|---|---|
| Service @15 psi/1 bar drop (includes bypass and meter) | 106 lpm (6.36 $m^3$/h) (28 gpm) |
| Backwash @ 25 psi/1.7 bar drop (includes bypass) | 57 lpm (3.40 $m^3$/h) (15 gpm) |
| Cv Service | 7.28 |
| Cv Backwash | 2.96 |

**OPERATING PRESSURES**

| | |
|---|---|
| Minimum/Maximum | 1.4 - 8.6 bar (20 psi – 125 psi) |

**OPERATING TEMPERATURES**

| | |
|---|---|
| Minimum/Maximum | 4° - 43°C (40° – 110° F) |

**METER**

| | |
|---|---|
| Accuracy | ± 5% |
| Flow Rate Range | 0.95 - 102 lpm |
| Gallon Range | 0.02 - 5,700 $m^3$ |
| Totalizer | 0.001 - 9,999,000 $m^3$ |

**DIMENSIONS & WEIGHT**

| | |
|---|---|
| Distributor Pilot | 1.050" OD Pipe (¾" NPS) |
| Drain Line | ¾” or 1” Male NPT |
| Brine Line | ⅜” or ½” OD Poly Tube Compression |
| Mounting Base | 2 ½” - 8 NPSM |
| Height From Top Of Tank | 187 mm (7 ⅜”) |
| Weight | 7.25 kg (16 lbs.) |

| **ELECTRICAL SPECIFICATIONS** | **AC Adapter** |
|---|---|
| | International |
| Supply Voltage | 230V AC |
| Supply Frequency | 50 Hz |
| Output Voltage | 12V AC |
| Output Current | 500 mA |

**TANK APPLICATIONS**

| | |
|---|---|
| Water Softener | 6” – 21” diameter |
| Water Filter (2) | 6” – 16” diameter |

**CYCLES OF OPERATION (Softener / Filter Downflow)**

| | Softener | Filter |
|---|---|---|
| Cycle | Range of time in minutes | |
| 1. Backwash 1st | 1-95 or off | Backwash 1-95 or off |
| 2. Regenerate Draw/Slow Rinse | 1-180 or off | |
| 3. Backwash 2nd | 1-95 or off | |
| 4. Fast Rinse | 1-95 or off | Rinse 1-95 or off |
| 5. Regenerant Refill | 0.1-99.0 or off | |
| 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. Noryl is a trademark of Sabic Innovative Plastics IP B.V. Company
2. Filter tank size calculated @ 10 gpm of backwash per square foot of bed area