

255 Control Valves



Pentair Water® offers a full range of Autotrol® Control Valves to meet all residential water conditioning applications.

Logix™ Series

740 Time Clock

- Simple, economic electronic time clock (chronometric)
- 7- or 99-day regeneration setting
- High efficiency regeneration sequence
- 12-volt operation
- Filter or conditioner setting in one control
- Operates 255, 263, 268 with one controller

742 Time Clock

Same features as the 740 Time Clock, plus:

- Fully programmable cycle times
- Salt setting in 1-pound increments
- Optional no-salt detector
- Operates 255, 263, 268, 278, and Magnum® IT with one controller

760 Demand

- Simple, economic electronic demand (volumetric)
- Calendar override
- 12-volt operation
- 28-day variable reserve
- High efficiency regeneration sequence
- Automatic capacity calculations
- Operates 255, 263, 268 with one controller

762 Demand

Same features as the 760, plus:

- Fully programmable cycle times
- Salt setting in 1-pound increments
- Optional no-salt detector
- Operates 255, 263, 268, 278, and Magnum IT with one controller

764 Demand

Same features as the 762, plus:

- Multi-tank applications (twin alternating, multi-tank parallel)
- Control lockout
- Remote regeneration

Specifications

Electrical

| | |
|-------------------------------------|--|
| Controller Operating Voltage | 12 Volt – AC (Requires use of Pentair Water®-supplied transformer) |
| Input Supply Frequency | 50 or 60 Hz (Controller configuration dependent) |
| Motor Input Voltage | 12 Volt – AC |
| Controller System Power Consumption | 3 Watts average |

Transformer – All Controllers

All Controllers require the use of a Pentair Water-supplied transformer.

| | | | |
|----------------------------|---|--|--|
| Transformer Output Voltage | 12 Volt – AC 400mA | | |
| Transformer Input Options | 115 Volt – AC 50/60 Hz; 230 Volt – AC 50/60 Hz; 100 Volt – AC 50/60 Hz | | |
| Transformer Plug Options | Indoor North American Plug  | Taiwan/Korea Plug  | |
| | Outdoor North American (UL Listed for outdoor use)  | Australian Plug  | |
| | Japanese Plug  | United Kingdom Plug  | |
| | | Mainland Europe Plug  | |

Additional transformers may be available – call for more information.

Design Specifications/Ratings

| | |
|--------------------------------|---|
| Valve Body | Glass-filled thermoplastic – NSF Listed material |
| Rubber Components | Compounded for cold water – NSF Listed material |
| Valve Materials Certification | WQA Gold Seal Certified to ORD 0902 and NSF/ANSI 44 Rated component for material safety |
| Weight (Valve with Control) | 4 lbs (1.8 kg) |
| Recommended Operating Pressure | 20 - 120 psi (1.38 - 8.27 bar) |
| Canada | 20 - 100 psi (1.38 - 6.89 bar) |
| Hydrostatic Test Pressure | 300 psi (20.69 bar) |
| Water Temperature | 35° - 100°F (2° - 38°C) |
| Ambient Temperature* | 35° - 120°F (2° - 48.9°C) |

*Recommend use of outdoor cover for direct sunlight applications.

Options

| | |
|--|--|
| Turbine for Demand Units | Standard manifold, 1-inch Autotrol® Turbine |
| Bypass Valve | Thermoplastic, 1-inch flow path, 1/2-inch (13mm) NPT male, drain |
| <i>Bypass Inlet-Outlet Fitting Kits:</i> | |
| Copper, Sweat Tube Adapter | 1-inch or 3/4-inch (25 mm or 19 mm) |
| CPVC, Solvent Weld Tube Adapter | 1-inch or 3/4-inch (25 mm or 19 mm) |
| Plastic NPT or BSPT Pipe Adapter | 1-inch male or 3/4-inch male (25 mm or 19 mm) |
| Stainless steel NPT or BSPT Pipe Adapter | 1-inch male or 3/4-inch male (25 mm or 19 mm) |
| Brine Refill Controls | .33 gpm (1.25 Lpm) fixed .14 gpm (.53 Lpm) fixed – optional for small tank applications |
| Compatible with Regenerants/Chemicals | Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite [†] , sodium hydroxide [†] , hydrochloric acid [†] , chlorine ^{††} and chloramines ^{††} |

[†]See owners manual for specific concentrations. ^{††}Valve for use on potable water supply.

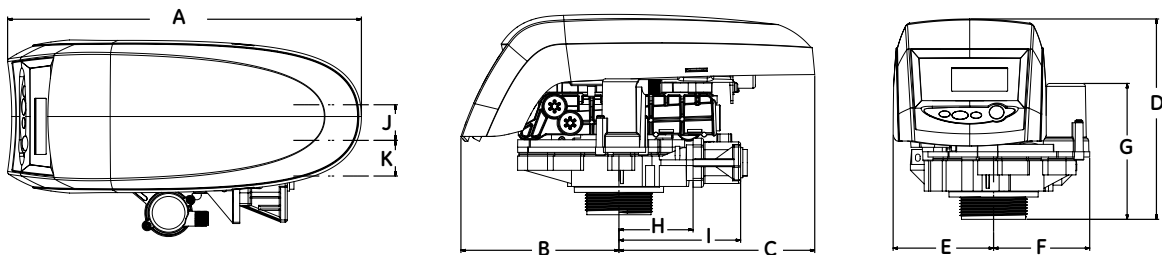


Dimensions

Valve Connections

| | | | |
|---|--|--------------------------------|--|
| Tank Thread | 2-1/2-inches – 8, male | Brine Line | 1/4-inch or 3/8-inch NPT, male; air check built into valve |
| Inlet/Outlet Manifold (brass or thermoplastic) | 1-inch NPT or BSPT, female 3/4-inch NPT or BSPT, female 3/4-inch NPT or BSPT, male (thermoplastic) 1/2-inch NPT or BSPT, male (thermoplastic) | Distributor Tube (diameter) | 1.050 inches (27 mm) or 13/16-inch (20.6 mm) |
| Drain Line | 1/2-inch (manifold dependent) | Distributor Tube (length) | 1-1/8 ± 1/8 inches (29 mm ± 3 mm) above top of tank |

Outline Dimensions



| Units | A | B | C | D | E | F | G | H | I | J | K |
|--------|------|------|------|------|------|------|------|-----|------|-----|-----|
| inches | 14.9 | 6.6 | 8.2 | 8.4 | 4.2 | 4.0 | 5.7 | 3.1 | 5.1 | 1.5 | 1.5 |
| cm | 37.8 | 16.8 | 20.8 | 21.3 | 10.7 | 10.2 | 14.5 | 7.9 | 13.0 | 3.8 | 3.8 |

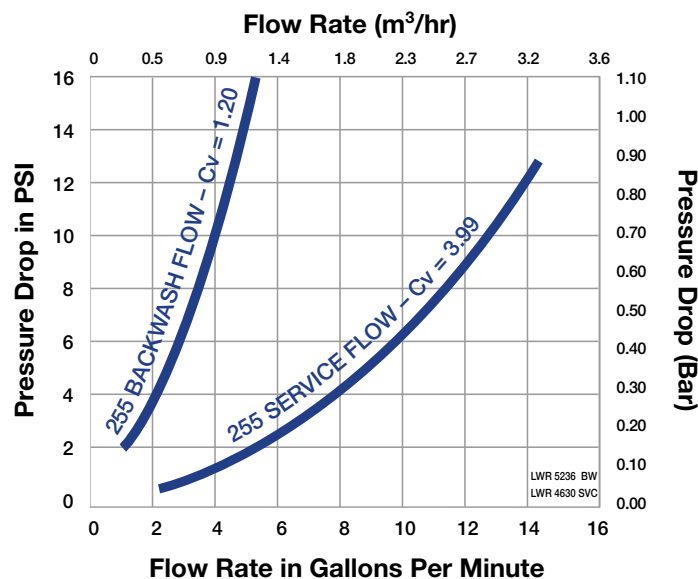
Performance

Flow Rates (Valve Only)

| | |
|-----------------------------------|-----------------------------------|
| Service @ 15 psi (1.03 bar) drop | 15.5 gpm (3.52 m ³ /h) |
| Backwash @ 25 psi (1.72 bar) drop | 6.0 gpm (1.36 m ³ /h) |
| Service | Cv = 3.99 (Kv = 3.4) |
| Backwash | Cv = 1.20 (Kv = 1.0) |

Note: Tested with a 3/4-inch brass manifold

Logix 764 Performance Flow Rate Characteristics



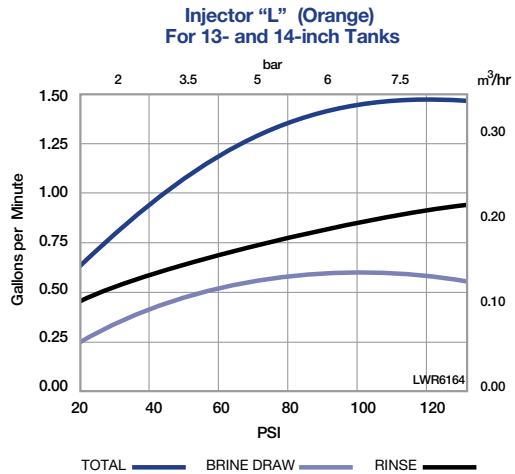
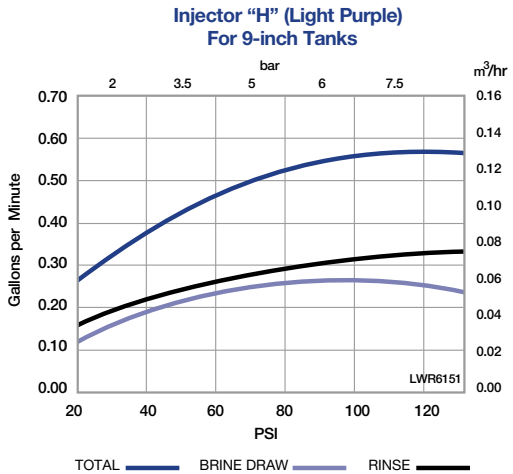
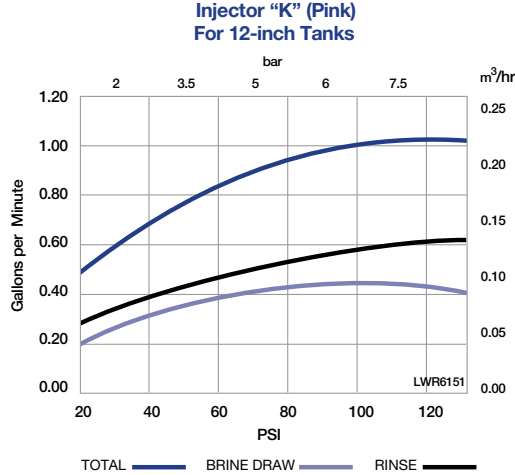
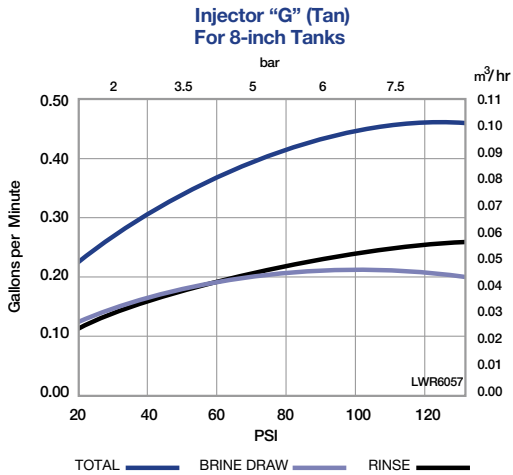
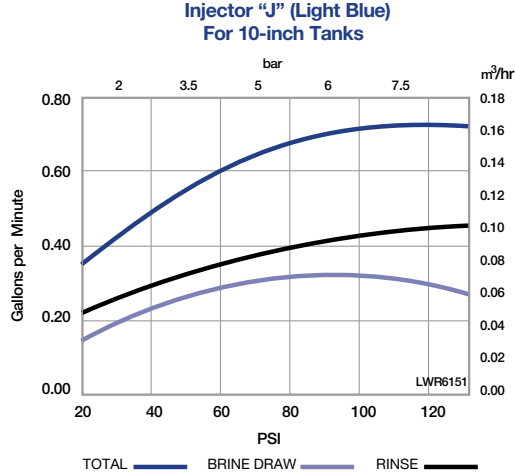
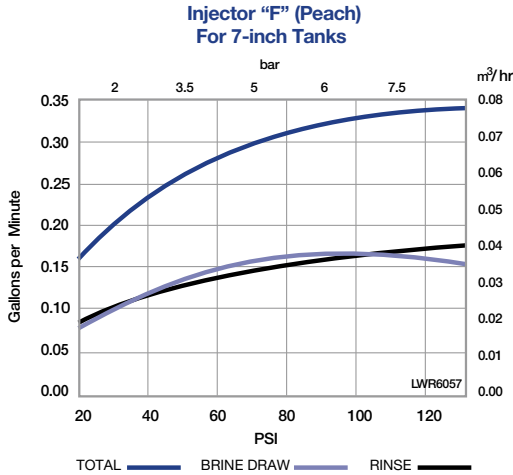
Backwash Flow Control Table

| Backwash Number* | Flow Rate (gpm) | Flow Rate (lpm) |
|------------------|-----------------|-----------------|
| 7 | 1.3 | 4.9 |
| 8 | 1.7 | 6.4 |
| 9 | 2.2 | 8.3 |
| 10 | 2.7 | 10.2 |
| 12 | 3.9 | 14.76 |
| 13 | 4.5 | 17.0 |
| 14 | 5.3 | 20.0 |

*Backwash flow controls sized for 5.0 gpm/ft².

Injector* Performance

Logix™ Series Controllers



*New injectors for high-efficiency regeneration sequence are standard with Logix Controllers.

NOTE: Actual injector performance is dependent on the resin used, tank geometry, elevated drain, etc. This injector data was taken using an empty tank (no resin).



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1018069 Rev D FE10

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