RESIDENTIAL
CONTROL
VALVES

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

Autotrol
Pentair Water

RESIDENTIAL CONTROL VALVES

255 Control Valves

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 Outdoor North American (UL Listed for outdoor use) Japanese Plug Taiwan/Korea Plug Australian 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 Canada	20 - 120 psi (1.38 - 8.27 bar) 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
Bypass Inlet-Outlet Fitting Kits:	
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††

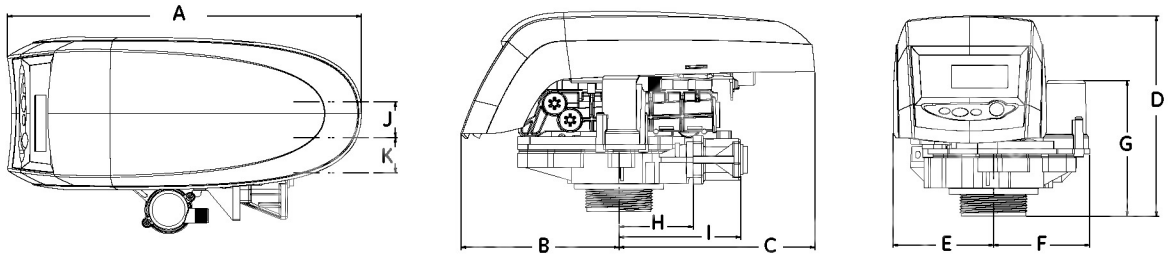
†See owners manual for specific concentrations. ††Valve for use on potable water supply.

Dimensions

Valve Connections

Tank Thread	2-1/2-inches – 8, male
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)
Drain Line	1/2-inch (manifold dependent)
Brine Line	1/4-inch or 3/8-inch NPT, male; air check built into valve
Distributor Tube *(diameter)*	1.050 inches (27 mm) or 13/16-inch (20.6 mm)
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

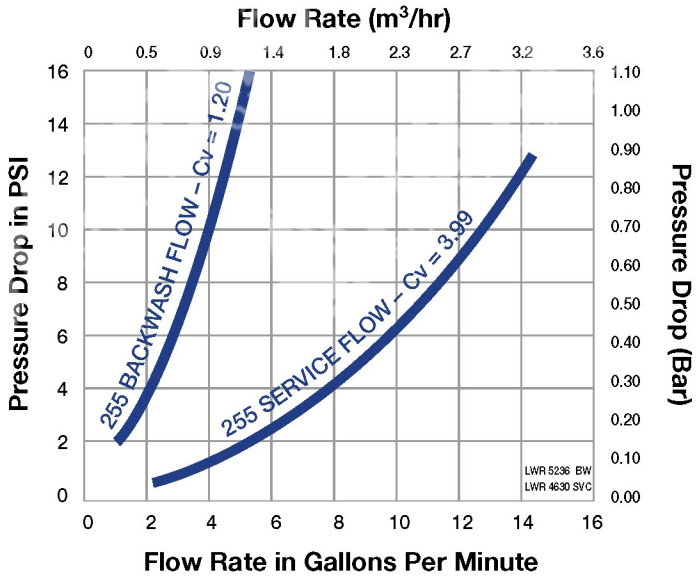
Performance

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

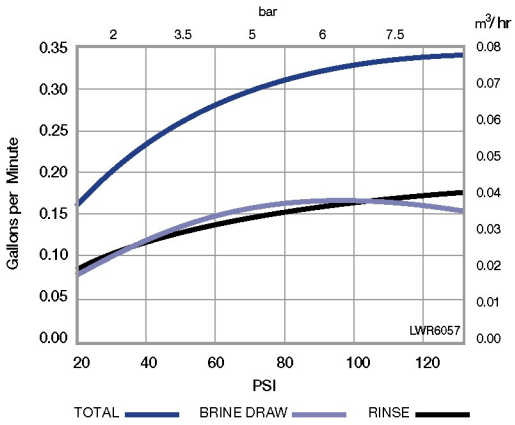
Backwash Number*	Flow Rate (gpm)	Flow Rate (lpm)
7	1.3	4.9
8	1.7	6.4
9	2.2	8.3
10	2.7	10.2
12	3.9	14.76
13	4.5	17.0
14	5.3	20.0

*Backwash flow controls sized for 5.0 gpm/ft^2.

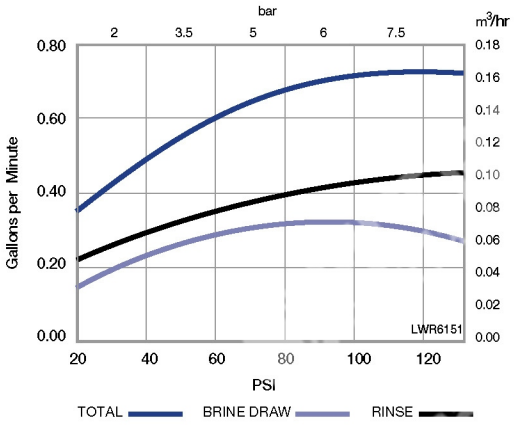
Injector* Performance

Logix™ Series Controllers

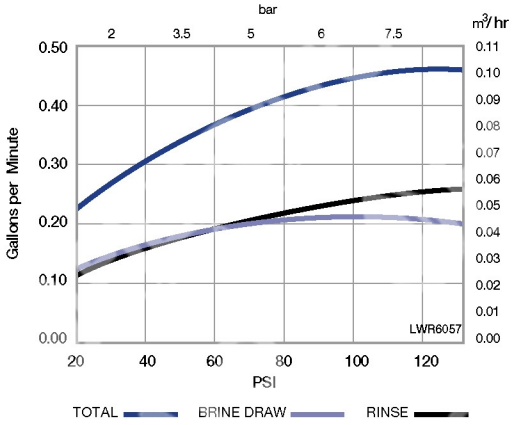
Injector "F" (Peach)
For 7-inch Tanks



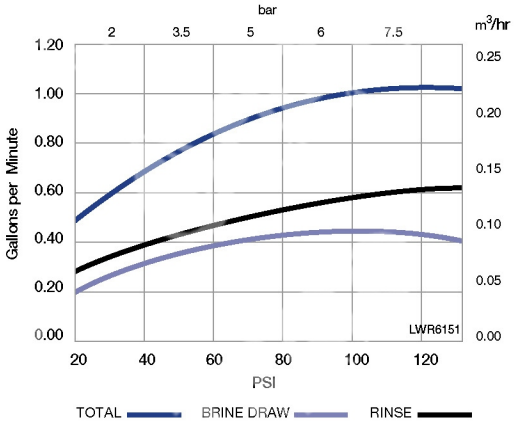
Injector "J" (Light Blue)
For 10-inch Tanks



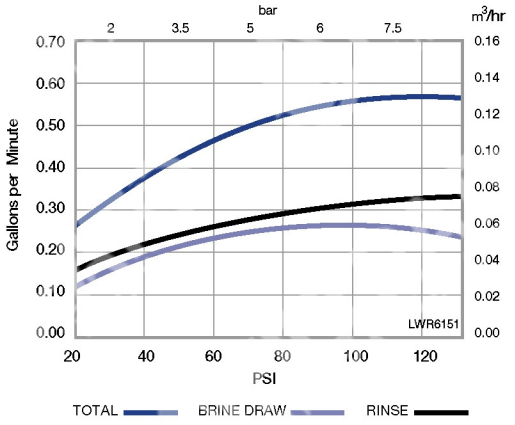
Injector "G" (Tan)
For 8-inch Tanks



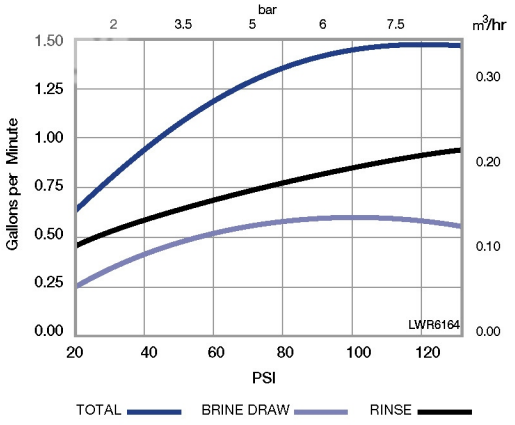
Injector "K" (Pink)
For 12-inch Tanks



Injector "H" (Light Purple)
For 9-inch Tanks



Injector "L" (Orange)
For 13- and 14-inch Tanks



*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).

Pentair Water