

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

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 	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.

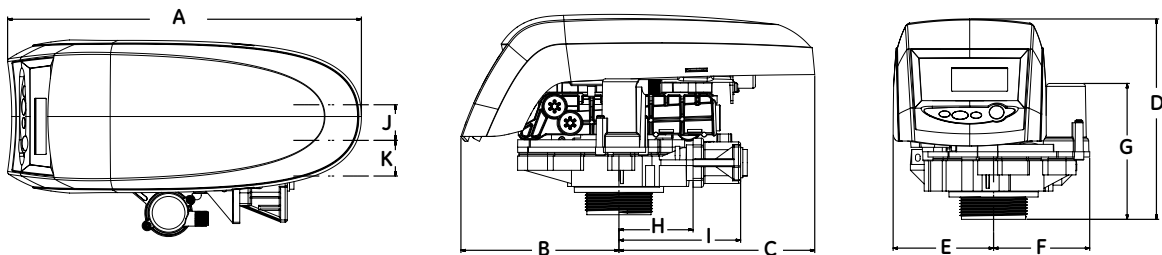


Dimensions

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

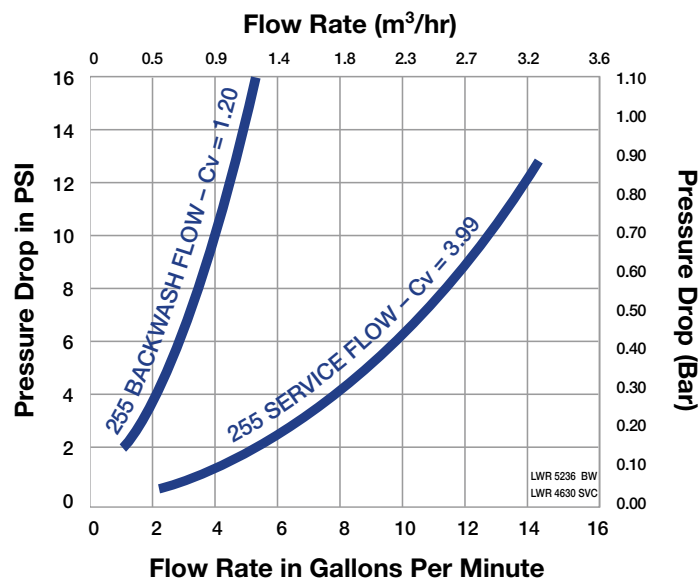
Performance

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



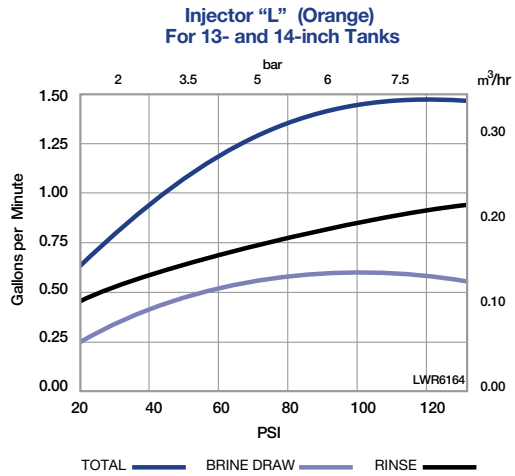
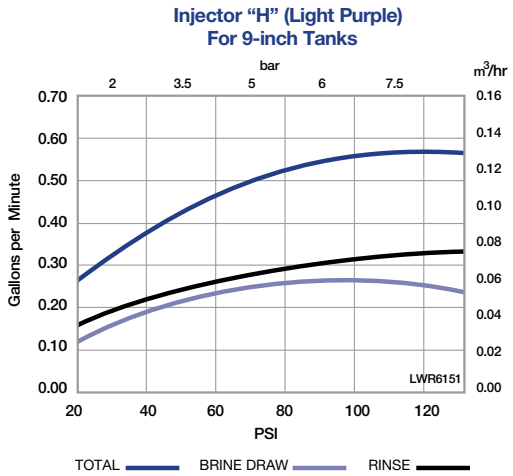
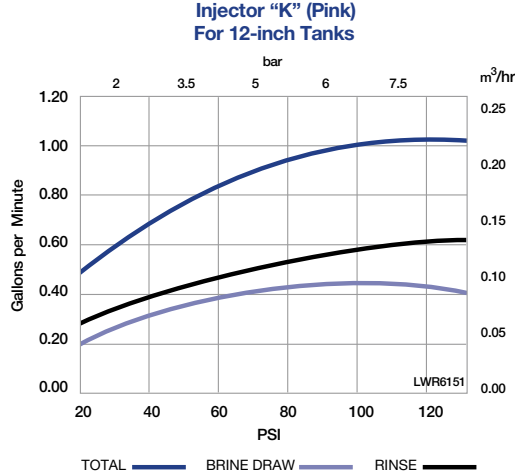
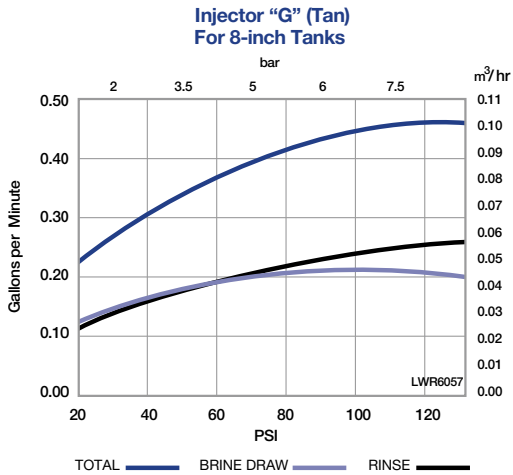
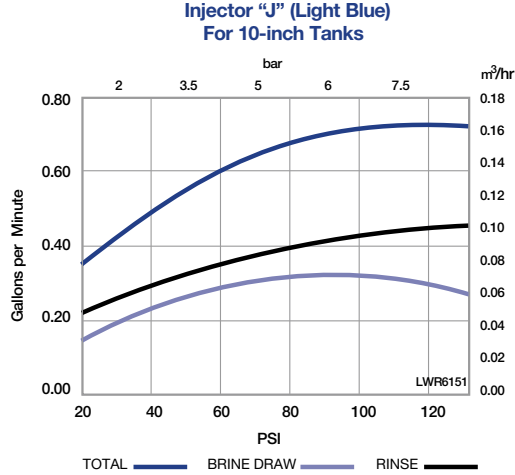
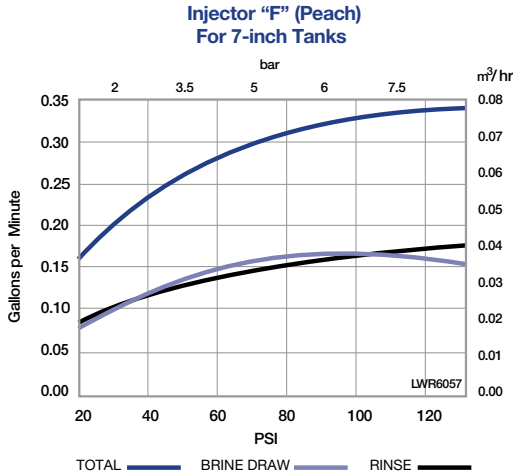
Backwash Flow Control Table

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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