

## Flow Rates and Sizing

FLOW RATE - gpm (L/min)								
Valve Model	Min Flow Rate*	Min Flow Rate (per ASSE 1017)	PRESSURE DIFFERENTIAL - psi (kPA)					
			5 psi (34 kPA)	10 psi (69 kPA)	20 psi (138 kPA)	25 psi (172 kPA)	30 psi (207 kPA)	45 psi (310 kPA)
7-102	0.5 gpm (1.9 L/min)	0.5 gpm (1.9 L/min)	1 gpm (3.8 L/min)	3 gpm (11.4 L/min)	6 gpm (22.7 L/min)	7 gpm (26.5 L/min)	8 gpm (30.3 L/min)	11 gpm (41.6 L/min)
7-200	0.5 gpm (1.9 L/min)	5 gpm (18.9 L/min)	7 gpm (26.5 L/min)	12 gpm (45.4 L/min)	18 gpm (64.4 L/min)	21 gpm (75.7 L/min)	23 gpm (83.3 L/min)	27 gpm (102.2 L/min)
7-400	0.5 gpm (1.9 L/min)	9 gpm (34.1 L/min)	18 gpm (64.4 L/min)	27 gpm (102.2 L/min)	37 gpm (140.1 L/min)	41 gpm (155.2 L/min)	44 gpm (166.6 L/min)	53 gpm (200.6 L/min)
7-500	0.5 gpm (1.9 L/min)	13 gpm (49.2 L/min)	22 gpm (83.3 L/min)	38 gpm (143.8 L/min)	50 gpm (189.3 L/min)	55 gpm (208.2 L/min)	59 gpm (223.3 L/min)	70 gpm (265 L/min)
7-700	0.5 gpm (1.9 L/min)	13 gpm (49.2 L/min)	25 gpm (94.6 L/min)	43 gpm (162.8 L/min)	57 gpm (215.8 L/min)	62 gpm (234.7 L/min)	66 gpm (249.8 L/min)	77 gpm (291.5 L/min)
7-900	0.5 gpm (1.9 L/min)	13 gpm (49.2 L/min)	30 gpm (113.6 L/min)	55 gpm (208.2 L/min)	76 gpm (287.7 L/min)	84 gpm (318 L/min)	89 gpm (336.9 L/min)	104 gpm (393.7 L/min)
7-1000	0.5 gpm (1.9 L/min)	13 gpm (49.2 L/min)	38 gpm (143.8 L/min)	67 gpm (253.6 L/min)	100 gpm (378.5 L/min)	111 gpm (420.2 L/min)	120 gpm (454.2 L/min)	140 gpm (529.9 L/min)

\*Minimum flow rate when valve is installed at or near the hot water source with recirculated tempered water and continuously operating circulating pump.

**Note:** The U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) Technical Manual, Section II, Chapter 7, Legionnaire's Disease, recommends that due to concerns about the potential for growth of Legionella bacteria in stagnant pipe runs, "Domestic hot water recirculation pumps should run continuously. They should be excluded from energy conservation measures."

### Proper Sizing

Thermostatic water controllers should be sized according to the flow capacity required from the valve, NOT the pipe size supplied to the valve. The pressure differential shown above represents the actual pressure drop across the valve to produce a given flow rate. The frictional loss associated with the valve is incorporated into the flow rate figures. For assistance and technical support in sizing and selection of the proper TempControl Thermostatic Water Controller, consult your local representative or Symmons Customer Service Department at 1-800-SYMMONS.