



SELECTING SIZE OF LEVER VALVE

The *maximum* capacity of a float or lever valve depends on its size and on the pressure difference – or drop – between the inlet and outlet when the valve is wide open. **It is recommended that a valve be selected having 50% to 100% more capacity than the**

normal demand. For example, if the normal requirement is 100 gallons per minute, a valve having 150 to 200 G.P.M. capacity should be selected. This will result in less variation in water level, and provide reserve capacity in case of low water pressure or

unusual demand. *The maximum capacity is the product of the flow per square inch of port area (Orifice Capacity) multiplied by the equivalent port area of the valve (Capacity Factor).*

MAXIMUM CAPACITIES OF NO. 773 LEVER VALVES U.S. GALLONS PER MINUTE OF WATER

Pressure Drop between Inlet and Outlet in Pounds per Square Inch

| Size Inches | 1 | 3 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | Capacity Factor |
|-------------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------|
| 3/4" | 6.5 | 11 | 14 | 20 | 25 | 29 | 32 | 35 | 38 | 41 | 43 | 46 | 50 | 54 | 58 | 61 | 65 | .17 |
| 1" | 13 | 23 | 30 | 42 | 52 | 50 | 66 | 73 | 79 | 84 | 89 | 94 | 103 | 111 | 119 | 126 | 133 | .35 |
| 1 1/4" | 19 | 33 | 42 | 60 | 73 | 85 | 95 | 104 | 112 | 120 | 127 | 134 | 147 | 159 | 170 | 180 | 190 | .50 |
| 1 1/2" | 30 | 53 | 68 | 96 | 118 | 136 | 152 | 166 | 180 | 192 | 204 | 215 | 235 | 254 | 272 | 288 | 304 | .80 |
| 2" | 61 | 106 | 136 | 192 | 235 | 272 | 304 | 333 | 360 | 384 | 408 | 430 | 470 | 508 | 544 | 576 | 608 | 1.6 |
| 2 1/2" | 95 | 165 | 212 | 300 | 368 | 425 | 475 | 520 | 562 | 600 | 638 | 672 | 735 | 795 | 850 | 900 | 950 | 2.5 |
| 3" | 133 | 231 | 297 | 420 | 514 | 595 | 665 | 728 | 786 | 840 | 892 | 940 | 1030 | 1110 | 1190 | 1260 | 1330 | 3.5 |
| 4" | 247 | 429 | 552 | 780 | 955 | 1105 | 1235 | 1353 | 1460 | 1560 | 1660 | 1750 | 1910 | 2070 | 2210 | 2340 | 2470 | 6.5 |
| 5" | 380 | 660 | 850 | 1200 | 1470 | 1700 | 1900 | 2080 | 2250 | 2400 | 2550 | 2680 | 2940 | 3180 | 3400 | 3600 | 3800 | 10.0 |
| 6" | 532 | 923 | 1192 | 1680 | 2060 | 2380 | 2660 | 2910 | 3150 | 3360 | 3570 | 3760 | 4110 | 4450 | 4760 | 5030 | 5320 | 14.0 |
| 8" | 987 | 1720 | 2215 | 3120 | 3820 | 4420 | 4930 | 5400 | 5850 | 6230 | 6530 | 6980 | 7630 | 8260 | 8830 | 9350 | 9870 | 26.0 |
| 1 sq.in. orifice Capac. | 38 | 66 | 85 | 120 | 147 | 170 | 190 | 208 | 225 | 240 | 255 | 269 | 294 | 318 | 340 | 360 | 380 | |

For other liquids divide above G.P.M. by $\sqrt{\text{specific gravity of the liquid}}$.
Capacities are in U.S. Gallons. The Imperial Gallon = 1.2 U.S. Gallons.

Orifice Capacity: Bottom line of tables shows the G.P.M. of water which will flow through a standard orifice of 1 sq. in. area at the given pressure drop. These quantities are calculated by the formula:

$$\text{G.P.M. per Sq. In.} = 38 \sqrt{\text{Pressure Drop in P.S.I.}}$$

$$= 25 \sqrt{\text{Pressure Drop in Feet}}$$

For other liquids, divide the above G.P.M. by

$$\sqrt{\text{specific gravity of liquid.}}$$

Capacity Factor: The last column at the right in the tables shows the equivalent square inches of port area of

each valve size. These capacity factors are obtained by test, not by measurement of the ports.

Capacity Factors for other types of valves are listed in the last column of each table on that page.