



# SELECTING SIZE OF FLOAT 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. 77 FLOAT 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
¾"	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 ¼"	19	33	42	60	73	85	95	104	112	120	127	134	147	159	170	180	190	.50
1 ½"	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 ½"	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.