

# CAPACITIES OF CONTROL VALVES FOR WATER

## Water Capacity Table Gallons Per Minute

### PRESSURE DROP—pounds per square inch

	1	5	10	20	30	40	50	60	80	100	125	150
½	2.7	6	9.1	13	16	19	21	25	27	31	34	39
¾	5.4	13	19	26	32	39	42	50	58	63	70	80
<b>1</b>	8	18	27	38	48	58	62	73	81	90	100	120
<b>1¼</b>	13	30	48	62	79	92	100	120	140	150	160	180
<b>1½</b>	22	48	73	99	120	150	160	190	220	240	270	300
<b>2</b>	30	67	100	140	170	210	230	270	300	350	380	420
<b>2½</b>	44	95	150	200	250	300	350	390	440	500	550	620
<b>3</b>	68	140	230	300	370	450	500	590	650	720	800	900
<b>4</b>	180	400	600	800	1000	1300	1400	1600	1800	2000	2400	2500
<b>6</b>	360	790	1200	1700	2100	2500	2700	3200	3600	4100	4800	5000
<b>8</b>	740	1700	2600	3500	4400	5400	5900	6900	7700	8800	9800	12000

**VALVE SIZES**

PRESSURE DROP IS DIFFERENCE BETWEEN INLET PRESSURE AND REDUCED PRESSURE.

### MULTIPLIERS TO BE USED

VALVE NO.	¾	1	1¼	1½	2	2½	3	4	5	6	8	10
700	.40	.40	.35	.35	.54	.44	.54	.35				
701					1.60	1.30	1.30	.90	1.00	1.00	.90	1.00
114-114R-116-116R	*	*	*	*	*	*	*	*	*	*	*	*
118-118R-119-119R	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55
11A	.60	.60	.40	.60	.40	.40	.30					

\*USE TABLE AS SHOWN

# CAPACITIES OF PRESSURE REGULATORS FOR STEAM

The capacity table has been prepared to simplify the selection of the proper size regulator for steam service.

It is based on the differences in pressure across the valve seat or inlet side of valve versus outlet side. Pressure reductions of a magnitude greater than those shown do not materially increase the quality of

steam that will flow through the valve and have not, therefore, been listed.

If the exact pressures desired are not shown, the capacity may be found by interpolation. This table is not intended for use in sizing pipe lines, but only for determining the proper size of regulating valve, as it is often the case that full pipe size

regulators are not required. Rated capacities do not increase for lower reduced pressures than shown for each inlet pressure.

**Note corrections for superheated steam and multiplier for specific valve types at bottom of page.**

## SATURATED STEAM—POUNDS PER HOUR

Inlet Pressure	Outlet Pressure	Valve Size										
		½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	6"	8"
30	2-10	130	232	432	596	1160	2030	3000	4400	7700	17800	34000
50	5-20	130	344	616	872	1600	2900	4200	6200	10800	26200	48000
	30	178	320	568	768	1500	2600	4000	5700	10000	38500	44000
60	5-25	215	392	704	960	1850	3300	4800	7000	12000	29000	60000
	40	196	352	624	880	1650	2900	4400	6300	11000	24000	52000
75	5-30	260	480	840	1160	2200	4000	5900	8500	15000	33600	70000
	50	236	424	760	1040	2000	3600	5300	7700	13000	29000	63000
100	5-50	330	600	1080	1440	2800	5000	7400	11000	18500	42000	87000
	60	320	576	1040	1400	2700	4800	7200	10500	18000	40000	85000
	80	260	464	840	1120	2200	3900	5700	8300	14000	31000	67000
125	5-60	400	736	1320	1800	3500	6200	9100	13500	23000	49400	99000
	80	380	688	1240	1680	3300	5800	8500	12500	21500	48000	97000
	100	310	560	1024	1360	2700	4800	7000	10500	17500	39700	80000
150	5-70	486	880	1584	2080	4000	7200	11000	15500	27000	60000	122000
	100	450	800	1440	1960	3800	6700	10000	14500	25000	52000	115000
	125	350	608	1120	1520	2900	5200	7700	11000	19000	43000	91000
175	5-90	560	1000	1840	2480	4800	8500	12500	18000	31000	65000	140000
	100	540	984	1760	2400	4700	8200	12000	17500	33000	64000	135000
	125	480	880	1560	2080	4200	7400	11000	15800	27000	58000	123000
	150	370	680	1200	1680	3200	5700	8400	12000	21000	44000	95000
200	5-100	600	1120	2000	2800	5200	9500	14000	21000	35000	75500	162000
	125	590	1080	1920	2640	5000	9000	13000	19000	33000	75000	150000
	150	540	984	1760	2400	4700	8200	12000	17500	30000	64000	135000
	175	410	720	1280	1760	3400	6000	9000	13000	23000	49100	110000
225	5-120	680	1200	2200	3040	5800	10500	15000	22000	38000	82000	170000
	150	660	1160	2080	2880	5500	9800	14500	21000	37000	76000	160000
	175	570	1040	1840	2480	4800	8600	13000	18500	32000	66000	140000
	200	430	760	1360	1880	3600	6400	9500	14000	24000	52000	112000
*250	5-130	770	1440	2480	3360	6700	11800	17000	25000	43000	92000	200000
	150	760	1360	2400	3280	6400	11500	16500	24500	42000	90000	190000
	175	710	1280	2240	3040	6000	10500	15700	23000	39000	83000	180000
	200	610	1100	1960	2720	5100	9200	13500	20000	34000	78000	160000
	225	450	800	1440	1960	3800	6700	10000	14500	25000	59800	110000

For Superheated steam correct figures in table as follows:

- 50° F. superheat multiply by .92
- 100° F. superheat multiply by .85
- 150° F. superheat multiply by .80
- 200° F. superheat multiply by .75
- 300° F. superheat multiply by .65

\*Capacities for regulators at pressures higher than 250 psi as well as for larger sizes consult our engineering department.

## MULTIPLIERS TO BE USED

Type of Valve	¾"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	6"	8"	10"
AA-AR	*	*	*	*	*	*	*	*	*	*	*	*	*
114-114-R	*	*	*	*	*	*	*	*	*	*	*	*	*
116-116-R	*	*	*	*	*	*	*	*	*	*	*	*	*
118-118-R	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55
119-119-R	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55
11A	*	*	*	*	*	*	*	*	*	*	*	*	*

\*Use Table as shown

## CAPACITIES OF PRESSURE REGULATORS FOR AIR

<b>AIR—STANDARD CUBIC FEET PER MINUTE</b>							
<b>Inlet Pressure</b>	<b>Outlet Pressure</b>	<b>VALVE SIZE</b>					
		<b>½"</b>	<b>¾"</b>	<b>1"</b>	<b>1¼"</b>	<b>1½"</b>	<b>2"</b>
30	2-10	44	80	145	195	385	675
50	5-20	65	115	205	290	535	965
	30	60	105	190	255	500	865
60	5-25	70	130	235	320	616	1100
	40	65	115	210	295	550	965
75	5-30	85	160	280	385	735	1330
	50	80	140	255	345	665	1200
100	5-50	110	200	360	480	935	1670
	60	105	190	345	465	900	1600
	80	85	155	280	375	735	1300
125	5-60	135	245	440	600	1170	2070
	80	125	230	415	560	1100	1930
	100	105	185	340	455	900	1600
150	5-70	160	295	530	695	1330	2400
	100	150	265	480	655	1270	2230
	125	115	200	375	505	965	1730
175	5-90	185	335	615	825	1600	2830
	100	180	325	585	800	1570	2730
	125	160	295	520	695	1400	2470
	150	125	225	400	560	1070	1900
200	5-100	200	375	665	935	1730	3170
	125	195	360	640	880	1670	3000
	150	180	325	585	800	1570	2730
	175	135	240	426	585	1130	2000
225	5-120	225	400	735	1010	1930	3500
	150	220	385	695	960	1830	3270
	175	190	345	615	825	1600	2870
	200	145	255	455	625	1200	2130
250	5-130	255	480	825	1120	2230	3930
	150	255	455	800	1090	2130	3830
	175	235	425	745	1010	2000	3500
	200	205	365	655	905	1700	3070
	225	150	265	480	655	1270	2230
275	5-140	288	506	930	1250	2430	4290
	175	275	480	880	1190	2310	4080
	200	250	445	815	1100	2130	3760
	225	215	385	700	945	1840	3240
300	5-150	315	555	1010	1360	2650	4670
	175	305	540	990	1130	2580	4560
	200	290	515	940	1270	2460	4350
	225	265	470	860	1160	2250	3970
*325	5-170	335	595	1090	1470	2850	5030
	200	325	575	1050	1420	2750	4850
	225	305	540	990	1340	2600	4590

\*Capacities for Pressure Regulators at pressures higher than 325 psi, as well as for sizes larger than 2" available on request.  
Air Capacities for valves 2½" and larger, use Table on page 16 and divide by 3.