



chlorinators

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EJECTOR NOZZLE REQUIREMENTS REGAL Series 200 and 2000 Gas Chlorinators

HYDRAULIC CONSIDERATIONS

In order to achieve proper operation of the chlorinator, it is essential that you carefully identify and consider the various factors related to installation of the ejector. These hydraulic conditions (listed below) must be known in order to create sufficient vacuum to feed the desired amount of chlorine gas.

1. BACKPRESSURE

- Backpressure is simply the total water pressure measured immediately downstream of the ejector outlet. In Figure 1, if a pressure gauge were to be installed between the ejector outlet and the water main, it would read the backpressure.
- Beware of "ASSUMING" the backpressure to be the same as the water system pressure. Pressures throughout a water system can vary greatly.
- Always consider the *maximum* backpressure.

2. SUPPLY PRESSURE

- Supply pressure is the water pressure measured at the inlet of the ejector.
- A pressure gauge should be permanently installed in the ejector supply line, as close as possible to the ejector inlet.
- The required ejector supply pressure can be obtained from any source, as long as the minimum pressure and water flow are available (See Ejector Nozzle Requirements charts on the following pages). A booster pump must be added if necessary.

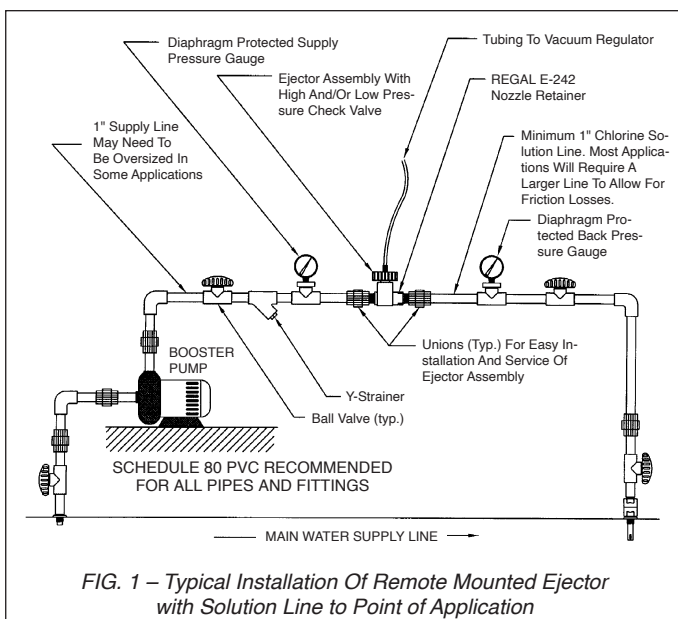


FIG. 1 - Typical Installation Of Remote Mounted Ejector with Solution Line to Point of Application

3. DIFFERENTIAL PRESSURE

- This is the difference in pressures between the ejector supply pressure and the backpressure. This is often referred to as

the pressure "drop" across the ejector.

- The differential pressure required to properly operate the chlorinator at a particular chlorine feed rate, will vary as the backpressure increases or decreases. Generally, as backpressure increases, the required differential pressure will increase.
- Water "booster" pumps are commonly used to create a differential pressure by raising the system pressure and then passing the higher pressure water through the ejector and back into the system (See Fig. 1). However, a booster pump is not always necessary to obtain the required differential pressure.

4. FRICTION LOSS

- Friction loss is a term used to describe RESISTANCE to water flowing through pipes, valves and fittings. In general, smaller pipe diameters, longer pipe length, and increased numbers of valves and fittings, will create more friction loss.
- In ejector installations, it is important to determine if any significant friction loss can occur:

EJECTOR SUPPLY - friction loss on the water supply side of the ejector will result in *lower* water pressure available.

BACKPRESSURE - friction loss between the ejector outlet and the point of chlorine solution injection, will create *higher* backpressure.

- Friction loss can be calculated from information found in standard books, such as Cameron's Hydraulic Data, or from tables published by pipe and fitting suppliers.

HOW TO USE THE EJECTOR NOZZLE REQUIREMENTS CHART

The charts on the following pages represent minimum values (Ejector Supply Pressures and Water Flow Rates through the ejector) necessary to operate a REGAL Series 200 Gas Chlorinator at each maximum metering tube (rotameter) capacity, against specific backpressures.

THE NOZZLE (or Venturi)

The nozzle in your REGAL ejector is chosen to give you the widest range of serviceability in most standard applications at the maximum chlorine gas feed rate on the metering tube. Chlorinators has designed several different sizes of nozzles. Figure 2, below, shows the location of the stamped size designation:

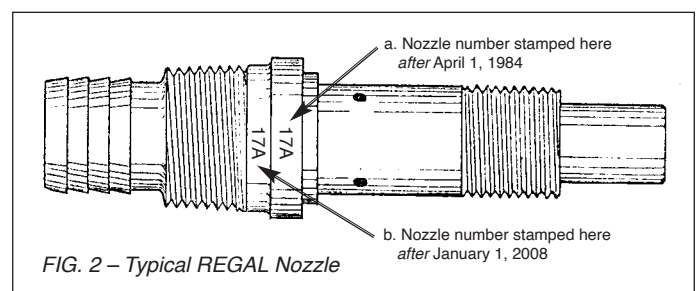


FIG. 2 - Typical REGAL Nozzle

USING THE CHARTS

To find out what hydraulic conditions you need to operate the chlorinator, follow these steps:

1. a. Determine the maximum required feed rate for the system to be treated.
- b. Refer to the Maximum Chlorine Feed Rate Charts on the following pages. Select the chart for the feed rate that is next higher than your system's required maximum. Ideally, your system's requirement should be about 50% to 75% of the chlorinator's maximum feed rate. Do not select a chart for a feed rate that exactly matches your system's requirement. Use the next higher chart. With this approach, the metering ball should be in the upper half of the metering tube for most adjustments that you might have to make.
- b. Under "EJECTOR BACKPRESSURE" locate 60 PSI (4.21 kg/cm²) and read across to the "NOZZLE No. 5A" column.
- c. The EJECTOR SUPPLY PRESSURE must be at least 94 PSI (6.61 kg/cm²) and the nozzle will require at least 10.8 U.S. GPM (0.68 l/sec.) WATER FLOW.
- d. Therefore, the DIFFERENTIAL PRESSURE necessary is 34 PSI (2.40 kg/cm²) or 94 (6.61) minus 60 (4.21).
- e. In this example, a booster pump is used to take water from the system and raise (boost) the pressure at least 34 PSI (2.40 kg/cm²).

IMPORTANT NOTE: You may not need to feed the maximum rate of gas flow on the metering tube, but you should still use the values given for that maximum capacity.

2. Using the column headed "EJECTOR BACKPRESSURE" find the maximum backpressure for your system (see definition of "backpressure" on previous page) in English units of PSIG or Metric units of (kg/cm²).
3. Follow the backpressure line across to the first column under the heading "NOZZLE".
4. Read the *required* minimum "EJECTOR SUPPLY PRESSURE" in PSIG or (kg/cm²) and immediately to the right of EJECTOR SUPPLY PRESSURE, read the *required minimum* "WATER FLOW RATE" in U.S. GPM or (liters/sec).
5. The difference between the Ejector Supply Pressure and the Backpressure is the required DIFFERENTIAL PRESSURE (see previous page).

Example: Using a water treatment system as in Fig. 1, with a pressure in the water main at the ejector of 60 PSIG maximum (4.21 kg/cm²) and a desired chlorine feed rate of 18 PPD.

- a. Use the 25 PPD chart.

NOTE: However, if another, independent water source were available that could provide the ejector with at least 94 PSI (6.61 kg/cm²) pressure at 10.8 U.S. GPM (0.68 l/sec.) that water source could be used to operate the ejector without a booster pump.

Knowing the hydraulics of the water system or application is important if:

1. A REGAL Gas Chlorinator is replacing an older, existing gas chlorinator and available hydraulic conditions do not match the specifications for the REGAL nozzle.
2. Or, an existing booster pump is not capable of providing required water flow and/or pressure.
3. Or, the water supply and/or solution pipe may be too small compared to the flow rate for the nozzle. A different nozzle may require a lesser flow for a given capacity and therefore produce less friction.

In these cases, use the chart appropriate for the Maximum Chlorine Feed Rate. Find the EJECTOR BACKPRESSURE, and look across the nozzle columns to find EJECTOR SUPPLY PRESSURE and WATER FLOW RATE which the system can meet. Use the nozzle shown at the top of that column.

NOTE: If it does not appear that your application can meet the requirements shown, contact Chlorinators.

REGAL EJECTOR NOZZLE REQUIREMENTS

Maximum Chlorine Feed Rate — 4 PPD (75 Grams/Hr.) See Note.

NOZZLE		No. 4A		No. 3A		No. 5A		No. 17A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	7 @ 1.5	0.49 @ 0.09	5 @ 1.0	0.35 @ 0.06	7 @ 2.1	0.49 @ 0.13	6 @ 2.6	0.42 @ 0.16
10	0.70	18 @ 2.7	1.27 @ 0.17	20 @ 2.0	1.41 @ 0.13	18 @ 4.0	1.27 @ 0.25	19 @ 7.0	1.34 @ 0.44
20	1.40	33 @ 3.9	2.32 @ 0.25	37 @ 2.6	2.60 @ 0.16	33 @ 5.6	2.32 @ 0.35	35 @ 10.5	2.46 @ 0.66
30	2.10	47 @ 4.9	3.30 @ 0.31	49 @ 3.2	3.44 @ 0.20	46 @ 7.3	3.23 @ 0.46	55 @ 12.6	3.87 @ 0.79
40	2.81	64 @ 5.6	4.50 @ 0.35	66 @ 3.7	4.64 @ 0.23	63 @ 8.7	4.43 @ 0.55	74 @ 14.7	5.20 @ 0.93
50	3.51	81 @ 6.3	5.69 @ 0.40	81 @ 4.5	5.69 @ 0.28	77 @ 9.6	5.41 @ 0.61	90 @ 16.2	6.33 @ 1.02
60	4.21	96 @ 7.2	6.75 @ 0.45	97 @ 5.3	6.82 @ 0.33	91 @ 11.0	6.40 @ 0.69	104 @ 17.3	7.31 @ 1.09
70	4.92	109 @ 8.3	7.66 @ 0.52	111 @ 5.7	7.80 @ 0.36	108 @ 11.8	7.59 @ 0.74	122 @ 19.5	8.58 @ 1.23
80	5.62	126 @ 8.9	8.86 @ 0.56	125 @ 6.2	8.79 @ 0.39	122 @ 12.6	8.58 @ 0.79	137 @ 20.7	9.63 @ 1.31
90	6.32	140 @ 9.4	9.84 @ 0.59	139 @ 6.5	9.77 @ 0.41	137 @ 13.7	9.63 @ 0.86	155 @ 21.8	10.90 @ 1.38
100	7.03	154 @ 9.9	10.83 @ 0.62	151 @ 6.7	10.62 @ 0.42	150 @ 14.2	10.55 @ 0.90	173 @ 23.0	12.16 @ 1.45
110	7.73	173 @ 10.3	12.16 @ 0.65	166 @ 6.9	11.67 @ 0.44	168 @ 14.9	11.81 @ 0.94	190 @ 24.0	13.36 @ 1.51
120	8.44	188 @ 10.8	13.22 @ 0.68	182 @ 7.2	12.97 @ 0.45	184 @ 15.5	12.94 @ 0.98	209 @ 25.0	14.69 @ 1.58
130	9.14	204 @ 11.0	14.34 @ 0.69	196 @ 7.5	13.78 @ 0.47	199 @ 16.2	13.99 @ 1.02	228 @ 25.6	16.03 @ 1.61
140	9.84	220 @ 11.6	15.47 @ 0.73	211 @ 7.8	14.83 @ 0.49	213 @ 17.0	14.97 @ 1.07	245 @ 26.0	17.22 @ 1.64
150	10.55	235 @ 11.8	16.52 @ 0.74	225 @ 8.1	15.82 @ 0.51	220 @ 17.5	15.47 @ 1.10	263 @ 27.4	18.49 @ 1.73
160	11.25	245 @ 12.1	17.22 @ 0.76	—	—	242 @ 18.4	17.01 @ 1.16	284 @ 28.8	19.97 @ 1.82

NOTE: GPM is U.S. Gallons. Metric is liters per sec. (l/sec.)

Maximum Chlorine Feed Rate — 4 PPD (75 Grams/Hr.) See Note.

NOZZLE		No. 13A		No. 14A		No. 15A		No. 16A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm²	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.
0	0	5 @ 1.0	.352 @ .063	4 @ 1.3	.281 @ .098	2 @ 1.9	0.14 @ .120	3 @ 2.2	.211 @ .139
10	0.70	22 @ 1.9	1.55 @ .120	18 @ 2.8	1.27 @ .212	24 @ 4.0	1.69 @ .252	20 @ 4.7	1.41 @ .297
20	1.40	32 @ 2.5	2.25 @ .158	31 @ 3.3	2.18 @ .250	41 @ 4.9	2.88 @ .309	36 @ 6.2	2.53 @ .391
30	2.10	46 @ 3.0	3.23 @ .189	47 @ 3.9	3.30 @ .295	58 @ 5.7	4.08 @ .360	56 @ 7.5	3.94 @ .473
40	2.81	61 @ 3.5	4.29 @ .221	62 @ 4.5	4.36 @ .341	74 @ 6.4	5.20 @ .403	74 @ 8.5	5.20 @ .536
50	3.51	77 @ 3.8	5.41 @ .240	77 @ 5.0	5.41 @ .379	91 @ 7.0	6.40 @ .442	87 @ 9.6	6.12 @ .606
60	4.21	90 @ 4.2	6.33 @ .259	92 @ 5.4	6.47 @ .409	107 @ 7.7	7.52 @ .486	104 @ 10.6	7.31 @ .669
70	4.92	106 @ 4.5	7.45 @ .284	106 @ 5.8	7.45 @ .439	124 @ 8.2	8.72 @ .517	120 @ 11.3	8.44 @ .713
80	5.62	120 @ 4.6	8.44 @ .290	120 @ 6.1	8.44 @ .462	141 @ 8.7	9.91 @ .549	138 @ 12.0	9.70 @ .757
90	6.32	134 @ 4.9	9.42 @ .309	135 @ 6.5	9.49 @ .492	158 @ 9.2	11.11 @ .580	155 @ 12.7	10.90 @ .801
100	7.03	149 @ 5.1	10.48 @ .322	150 @ 6.7	10.55 @ .508	173 @ 9.7	12.16 @ .612	171 @ 13.3	12.02 @ .839
110	7.73	162 @ 5.3	11.40 @ .334	164 @ 7.1	11.53 @ .538	188 @ 10.1	13.22 @ .637	188 @ 13.9	13.22 @ .877
120	8.44	178 @ 5.6	12.51 @ .353	179 @ 7.5	12.58 @ .568	205 @ 10.5	14.41 @ .662	205 @ 14.5	14.41 @ .915
130	9.14	192 @ 5.8	13.50 @ .366	192 @ 7.7	13.50 @ .583	222 @ 10.9	15.61 @ .688	221 @ 14.9	15.54 @ .940
140	9.84	207 @ 6.0	14.55 @ .379	208 @ 8.1	14.62 @ .614	238 @ 11.3	16.73 @ .713	238 @ 15.6	16.73 @ .984
150	10.55	222 @ 6.2	15.61 @ .391	223 @ 8.4	15.68 @ .636	255 @ 11.7	17.93 @ .738	254 @ 16.0	17.86 @ 1.01
160	11.25	236 @ 6.4	16.59 @ .404	237 @ 8.6	16.66 @ .652	270 @ 12.0	18.98 @ .757	270 @ 16.5	18.98 @ 1.04

Maximum Chlorine Feed Rate — 10 PPD (200 Grams/Hr.) See Note.

NOZZLE		No. 4A		No. 3A		No. 5A		No. 17A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm²	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.
0	0	10 @ 1.7	0.70 @ 0.11	10 @ 1.4	0.70 @ 0.09	9 @ 2.3	0.63 @ 0.15	8 @ 3.0	0.56 @ 0.19
10	0.70	24 @ 3.3	1.69 @ 0.21	25 @ 2.3	1.76 @ 0.15	23 @ 4.5	1.62 @ 0.28	23 @ 7.3	1.62 @ 0.46
20	1.40	35 @ 4.3	2.46 @ 0.27	41 @ 2.9	2.88 @ 0.18	34 @ 6.2	2.39 @ 0.39	37 @ 10.6	2.60 @ 0.67
30	2.10	50 @ 5.0	3.52 @ 0.32	55 @ 3.5	3.87 @ 0.22	49 @ 7.7	3.44 @ 0.49	57 @ 12.8	4.01 @ 0.81
40	2.81	64 @ 5.7	4.50 @ 0.36	68 @ 3.9	4.78 @ 0.25	64 @ 8.8	4.50 @ 0.56	76 @ 14.9	5.34 @ 0.94
50	3.51	81 @ 6.6	5.69 @ 0.42	84 @ 4.3	5.91 @ 0.27	78 @ 9.7	5.48 @ 0.61	91 @ 16.4	6.40 @ 1.03
60	4.21	96 @ 7.2	6.75 @ 0.45	97 @ 4.6	6.82 @ 0.29	93 @ 10.8	6.54 @ 0.68	106 @ 17.9	7.45 @ 1.13
70	4.92	110 @ 8.0	7.73 @ 0.50	111 @ 5.0	7.80 @ 0.32	110 @ 11.7	7.73 @ 0.74	124 @ 19.7	8.72 @ 1.24
80	5.62	125 @ 8.6	8.79 @ 0.54	125 @ 5.8	8.79 @ 0.37	122 @ 12.7	8.58 @ 0.80	139 @ 20.9	9.77 @ 1.32
90	6.32	139 @ 9.2	9.77 @ 0.58	139 @ 6.4	9.77 @ 0.40	138 @ 13.7	9.70 @ 0.86	157 @ 22.0	11.04 @ 1.39
100	7.03	154 @ 9.7	10.83 @ 0.61	153 @ 6.7	10.76 @ 0.42	151 @ 14.3	10.62 @ 0.90	174 @ 23.2	12.23 @ 1.46
110	7.73	169 @ 10.2	11.88 @ 0.64	170 @ 7.1	11.95 @ 0.45	168 @ 14.9	11.81 @ 0.94	192 @ 24.2	13.50 @ 1.53
120	8.44	183 @ 10.6	12.86 @ 0.67	183 @ 7.4	12.86 @ 0.47	184 @ 15.9	12.94 @ 1.00	213 @ 25.2	14.97 @ 1.59
130	9.14	199 @ 11.3	13.99 @ 0.71	199 @ 7.7	13.99 @ 0.49	199 @ 16.3	13.99 @ 1.03	232 @ 26.2	16.31 @ 1.65
140	9.84	214 @ 11.5	15.04 @ 0.73	212 @ 7.8	14.90 @ 0.50	212 @ 17.2	14.90 @ 1.08	248 @ 27.1	17.43 @ 1.71
150	10.55	232 @ 11.9	16.31 @ 0.75	230 @ 8.0	16.17 @ 0.51	228 @ 17.5	16.03 @ 1.10	270 @ 28.3	18.98 @ 1.79
160	11.25	245 @ 12.4	17.22 @ 0.78	242 @ 8.3	17.01 @ 0.52	241 @ 18.2	16.94 @ 1.15	288 @ 29.1	20.25 @ 1.84

Maximum Chlorine Feed Rate — 10 PPD (200 Grams/Hr.) See Note.

NOZZLE		No. 13A		No. 14A		No. 15A		No. 16A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm²	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.	PSIG @ GPM	kg/cm² @ l/sec.
0	0	10 @ 1.2	.703 @ .076	6 @ 1.7	.422 @ .107	4 @ 2.1	0.28 @ .132	5 @ 2.8	.352 @ .177
10	0.70	26 @ 2.3	1.83 @ .139	21 @ 2.7	1.48 @ .170	24 @ 3.8	1.69 @ .240	20 @ 4.9	1.41 @ .309
20	1.40	39 @ 2.7	2.74 @ .170	32 @ 3.3	2.53 @ .208	40 @ 4.8	2.81 @ .303	39 @ 6.7	2.74 @ .423
30	2.10	50 @ 3.1	3.52 @ .196	52 @ 4.0	3.94 @ .252	58 @ 5.7	4.08 @ .360	55 @ 7.8	3.87 @ .492
40	2.81	62 @ 3.5	4.36 @ .221	62 @ 4.5	4.78 @ .284	74 @ 6.3	5.20 @ .397	74 @ 9.0	5.20 @ .568
50	3.51	76 @ 3.8	5.34 @ .240	78 @ 5.0	5.91 @ .315	91 @ 7.0	6.40 @ .442	87 @ 10.2	6.12 @ .644
60	4.21	90 @ 4.2	6.33 @ .265	92 @ 5.4	7.03 @ .341	108 @ 7.6	7.59 @ .480	103 @ 11.2	7.24 @ .707
70	4.92	104 @ 4.5	7.31 @ .284	108 @ 5.8	8.16 @ .366	124 @ 8.2	8.72 @ .517	120 @ 11.8	8.44 @ .744
80	5.62	118 @ 4.8	8.30 @ .303	121 @ 6.1	9.28 @ .385	140 @ 8.7	9.84 @ .549	138 @ 12.6	9.70 @ .795
90	6.32	132 @ 5.1	9.28 @ .322	136 @ 6.4	10.48 @ .404	157 @ 9.2	11.04 @ .580	155 @ 13.2	10.90 @ .833
100	7.03	147 @ 5.3	10.34 @ .334	151 @ 6.8	11.39 @ .429	174 @ 9.7	12.23 @ .612	172 @ 13.8	12.09 @ .871
110	7.73	161 @ 5.5	11.32 @ .347	167 @ 7.1	12.51 @ .448	189 @ 10.1	13.29 @ .637	188 @ 14.5	13.22 @ .915
120	8.44	175 @ 6.0	12.30 @ .379	180 @ 7.4	13.57 @ .467	206 @ 10.5	14.48 @ .662	205 @ 15.0	14.41 @ .946
130	9.14	188 @ 6.2	13.22 @ .391	195 @ 7.7	14.69 @ .486	222 @ 10.8	15.61 @ .681	222 @ 15.6	15.61 @ .984
140	9.84	204 @ 6.4	14.34 @ .404	209 @ 8.0	15.82 @ .505	238 @ 11.3	16.73 @ .715	239 @ 16.2	16.80 @ 1.02
150	10.55	217 @ 6.6	15.26 @ .416	224 @ 8.3	16.87 @ .523	254 @ 11.6	17.86 @ .732	256 @ 16.7	18.00 @ 1.05
160	11.25	230 @ 6.8	16.17 @ .429	238 @ 8.6	18.00 @ .543	269 @ 12.0	18.91 @ .757	272 @ 17.2	19.12 @ 1.09

NOTE: GPM is U.S. Gallons. Metric is liters per sec. (l/sec.)

Maximum Chlorine Feed Rate — 25 PPD (500 Grams/Hr.) See Note.

NOZZLE		No. 5A		No. 4A		No. 3A		No. 17A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	14 @ 3.1	0.98 @ 0.20	16 @ 2.4	1.12 @ 0.15	16 @ 1.7	1.12 @ 0.11	11 @ 3.4	0.77 @ 0.21
10	0.70	28 @ 5.4	1.97 @ 0.34	35 @ 3.3	2.46 @ 0.21	35 @ 2.7	2.46 @ 0.17	26 @ 7.5	1.83 @ 0.47
20	1.40	47 @ 7.5	3.30 @ 0.47	50 @ 4.9	3.52 @ 0.31	55 @ 3.5	3.87 @ 0.22	44 @ 10.8	3.09 @ 0.68
30	2.10	62 @ 8.6	4.36 @ 0.54	66 @ 5.9	4.64 @ 0.37	75 @ 4.0	5.27 @ 0.25	59 @ 12.9	4.15 @ 0.81
40	2.81	71 @ 9.2	4.99 @ 0.58	78 @ 6.5	5.48 @ 0.41	94 @ 4.5	6.61 @ 0.28	78 @ 15.1	5.48 @ 0.95
50	3.51	81 @ 9.9	5.69 @ 0.62	94 @ 7.1	6.61 @ 0.45	106 @ 4.9	7.45 @ 0.31	93 @ 16.8	6.54 @ 1.06
60	4.21	94 @ 10.8	6.61 @ 0.68	107 @ 7.6	7.52 @ 0.48	117 @ 5.2	8.23 @ 0.33	107 @ 18.2	7.52 @ 1.15
70	4.92	109 @ 12.1	7.66 @ 0.76	117 @ 8.1	8.23 @ 0.51	131 @ 5.5	9.21 @ 0.35	126 @ 20.0	8.86 @ 1.26
80	5.62	122 @ 12.7	8.58 @ 0.80	130 @ 8.6	9.14 @ 0.54	143 @ 5.8	10.05 @ 0.37	142 @ 21.0	9.98 @ 1.32
90	6.32	139 @ 13.8	9.77 @ 0.87	142 @ 9.2	9.98 @ 0.58	156 @ 6.0	10.97 @ 0.38	161 @ 22.2	11.32 @ 1.40
100	7.03	153 @ 14.4	10.76 @ 0.91	158 @ 9.8	11.11 @ 0.62	169 @ 6.3	11.88 @ 0.40	179 @ 23.5	12.58 @ 1.48
110	7.73	168 @ 15.0	11.81 @ 0.95	174 @ 10.3	12.23 @ 0.65	179 @ 6.5	12.58 @ 0.41	195 @ 24.5	13.71 @ 1.55
120	8.44	183 @ 15.9	12.86 @ 1.00	189 @ 10.8	13.29 @ 0.68	191 @ 6.6	13.43 @ 0.42	215 @ 25.5	15.11 @ 1.61
130	9.14	199 @ 16.3	13.99 @ 1.03	204 @ 11.3	14.34 @ 0.71	204 @ 6.9	14.34 @ 0.44	235 @ 26.5	16.52 @ 1.67
140	9.84	214 @ 17.0	15.04 @ 1.07	220 @ 11.6	15.47 @ 0.73	220 @ 7.1	15.47 @ 0.45	252 @ 27.3	17.72 @ 1.72
150	10.55	220 @ 17.5	15.47 @ 1.10	235 @ 11.9	16.52 @ 0.75	235 @ 7.4	16.52 @ 0.47	273 @ 28.5	19.19 @ 1.80
160	11.25	233 @ 18.4	16.38 @ 1.16	250 @ 12.4	17.58 @ 0.78	256 @ 7.7	18.00 @ 0.49	291 @ 29.4	20.46 @ 1.85

Maximum Chlorine Feed Rate — 25 PPD (500 Grams/Hr.) See Note.

NOZZLE		No. 13A		No. 14A		No. 15A		No. 16A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	15 @ 1.6	1.05 @ .101	11 @ 2.2	.773 @ .139	6 @ 2.2	0.42 @ .139	7 @ 2.7	.492 @ .170
10	0.70	38 @ 2.7	2.67 @ .170	28 @ 3.0	1.97 @ .221	24 @ 3.8	1.69 @ .240	23 @ 5.0	1.62 @ .315
20	1.40	60 @ 3.3	4.22 @ .208	42 @ 3.7	2.95 @ .271	36 @ 4.6	2.53 @ .290	38 @ 6.1	2.67 @ .385
30	2.10	76 @ 3.6	5.34 @ .227	55 @ 4.2	3.87 @ .303	53 @ 5.4	3.73 @ .341	55 @ 7.5	3.87 @ .473
40	2.81	83 @ 4.0	6.19 @ .252	66 @ 4.9	4.64 @ .328	69 @ 6.1	4.85 @ .385	73 @ 8.6	5.13 @ .543
50	3.51	100 @ 4.4	7.03 @ .265	78 @ 5.2	5.48 @ .353	87 @ 6.8	6.12 @ .429	90 @ 9.5	6.33 @ .599
60	4.21	103 @ 4.4	7.80 @ .278	93 @ 5.7	6.54 @ .379	103 @ 7.4	7.24 @ .467	105 @ 10.3	7.38 @ .650
70	4.92	114 @ 4.6	8.44 @ .290	108 @ 6.1	7.59 @ .404	118 @ 8.0	8.30 @ .505	123 @ 11.2	8.65 @ .707
80	5.62	125 @ 4.8	9.35 @ .303	122 @ 6.5	8.58 @ .423	135 @ 8.5	9.49 @ .536	139 @ 12.0	9.77 @ .757
90	6.32	139 @ 5.4	10.05 @ .328	138 @ 6.8	9.70 @ .454	153 @ 9.0	10.76 @ .568	156 @ 12.6	10.97 @ .795
100	7.03	154 @ 5.6	10.83 @ .353	152 @ 7.3	10.69 @ .473	168 @ 9.5	11.81 @ .599	172 @ 13.2	12.09 @ .833
110	7.73	167 @ 5.8	11.74 @ .366	168 @ 7.7	11.81 @ .498	184 @ 9.8	12.94 @ .618	189 @ 13.9	13.29 @ .877
120	8.44	179 @ 6.1	12.58 @ .385	182 @ 7.9	12.80 @ .524	201 @ 10.3	14.13 @ .650	206 @ 14.4	14.48 @ .908
130	9.14	193 @ 6.3	13.57 @ .397	200 @ 8.3	14.06 @ .543	217 @ 10.8	15.26 @ .681	223 @ 15.0	15.68 @ .946
140	9.84	207 @ 6.5	14.55 @ .410	209 @ 8.5	14.69 @ .562	233 @ 11.2	16.38 @ .707	240 @ 15.6	16.87 @ .984
150	10.55	222 @ 6.7	15.61 @ .423	224 @ 8.8	15.75 @ .580	250 @ 11.5	17.58 @ .726	257 @ 16.1	18.07 @ 1.02
160	11.25	236 @ 6.9	16.59 @ .435	239 @ 9.1	16.80 @ .599	266 @ 11.8	18.70 @ .744	273 @ 16.6	19.19 @ 1.05

Maximum Chlorine Feed Rate — 50 PPD (900 Grams/Hr.) See Note.

NOZZLE		No. 17A		No. 3A		No. 4A		No. 5A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	15 @ 5.0	1.05 @ 0.32	23 @ 2.2	1.62 @ 0.14	26 @ 3.4	1.83 @ 0.21	17 @ 3.8	1.20 @ 0.24
10	0.70	29 @ 7.8	2.04 @ 0.49	56 @ 3.5	3.94 @ 0.22	57 @ 5.5	4.01 @ 0.35	38 @ 6.6	2.67 @ 0.42
20	1.40	45 @ 11.0	3.16 @ 0.69	85 @ 4.3	5.98 @ 0.27	86 @ 6.9	6.05 @ 0.44	63 @ 8.6	4.43 @ 0.54
30	2.10	61 @ 13.0	4.29 @ 0.82	108 @ 4.8	7.59 @ 0.30	111 @ 7.8	7.80 @ 0.49	83 @ 10.0	5.83 @ 0.63
40	2.81	80 @ 15.3	5.62 @ 0.97	126 @ 5.4	8.86 @ 0.34	133 @ 8.9	9.35 @ 0.56	101 @ 11.2	7.10 @ 0.71
50	3.51	97 @ 17.0	6.82 @ 1.07	146 @ 5.8	10.26 @ 0.37	147 @ 9.5	10.33 @ 0.60	112 @ 12.5	7.87 @ 0.79
60	4.21	109 @ 18.5	7.66 @ 1.17	167 @ 6.2	11.74 @ 0.39	170 @ 10.0	11.95 @ 0.63	122 @ 12.8	8.58 @ 0.81
70	4.92	129 @ 20.3	9.07 @ 1.28	189 @ 6.5	13.29 @ 0.41	187 @ 10.3	13.15 @ 0.65	136 @ 13.6	9.56 @ 0.86
80	5.62	144 @ 21.3	10.12 @ 1.34	208 @ 6.8	14.62 @ 0.43	199 @ 11.0	13.99 @ 0.69	152 @ 14.3	10.69 @ 0.90
90	6.32	164 @ 22.5	11.53 @ 1.42	225 @ 7.2	15.82 @ 0.45	213 @ 11.4	14.97 @ 0.72	166 @ 15.0	11.67 @ 0.95
100	7.03	182 @ 23.7	12.79 @ 1.49	240 @ 7.6	16.87 @ 0.48	228 @ 11.6	16.03 @ 0.73	173 @ 15.3	12.16 @ 0.97
110	7.73	199 @ 24.7	13.99 @ 1.56	261 @ 7.9	18.35 @ 0.50	232 @ 12.0	16.31 @ 0.76	183 @ 15.9	12.86 @ 1.00
120	8.44	218 @ 25.9	15.33 @ 1.63	272 @ 8.3	19.12 @ 0.52	255 @ 12.5	17.93 @ 0.79	191 @ 16.1	13.43 @ 1.02
130	9.14	238 @ 26.9	16.73 @ 1.70	293 @ 8.5	20.60 @ 0.54	265 @ 12.6	18.63 @ 0.80	206 @ 16.7	14.48 @ 1.05
140	9.84	256 @ 27.7	18.00 @ 1.75	—	—	272 @ 12.8	19.12 @ 0.81	221 @ 17.4	15.54 @ 1.10
150	10.55	277 @ 28.9	19.47 @ 1.82	—	—	285 @ 13.1	20.04 @ 0.83	233 @ 18.0	16.38 @ 1.14
160	11.25	295 @ 29.8	20.74 @ 1.88	—	—	—	—	248 @ 18.5	17.43 @ 1.17

NOTE: GPM is U.S. Gallons. Metric is liters per sec. (l/sec.)

Maximum Chlorine Feed Rate — 50 PPD (900 Grams/Hr.) See Note.

NOZZLE		No. 15A		No. 16A		No. 14A		No. 13A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	13 @ 3.1	0.84 @ .196	13 @ 3.7	.914 @ .233	10 @ 3.1	1.69 @ .196	29 @ 2.4	2.04 @ .151
10	0.70	39 @ 4.8	2.74 @ .303	31 @ 5.8	2.18 @ .366	45 @ 4.2	3.16 @ .265	65 @ 3.5	4.57 @ .221
20	1.40	53 @ 5.5	3.73 @ .347	47 @ 6.9	3.30 @ .435	63 @ 4.8	4.43 @ .303	95 @ 4.1	6.68 @ .259
30	2.10	68 @ 6.1	4.79 @ .385	59 @ 7.7	4.15 @ .486	80 @ 5.4	5.62 @ .341	111 @ 4.6	7.80 @ .290
40	2.81	82 @ 6.7	5.77 @ .423	73 @ 8.6	5.13 @ .543	94 @ 5.8	6.61 @ .366	125 @ 4.9	8.79 @ .309
50	3.51	95 @ 7.4	6.68 @ .467	89 @ 9.6	6.26 @ .606	108 @ 6.2	7.59 @ .391	138 @ 5.5	9.70 @ .353
60	4.21	108 @ 7.9	7.59 @ .498	106 @ 10.4	7.45 @ .656	120 @ 6.5	8.44 @ .410	150 @ 5.7	10.55 @ .360
70	4.92	125 @ 8.4	8.79 @ .530	123 @ 11.2	8.65 @ .707	132 @ 6.8	9.28 @ .429	161 @ 5.9	11.32 @ .372
80	5.62	142 @ 8.9	9.98 @ .562	140 @ 12.1	9.84 @ .763	143 @ 7.2	10.05 @ .454	172 @ 6.1	12.09 @ .385
90	6.32	158 @ 9.4	11.11 @ .593	158 @ 12.7	11.11 @ .801	155 @ 7.4	10.90 @ .467	185 @ 6.2	13.00 @ .391
100	7.03	174 @ 9.8	12.23 @ .618	174 @ 13.3	12.23 @ .839	166 @ 7.6	11.67 @ .479	192 @ 6.4	13.50 @ .404
110	7.73	190 @ 10.3	13.36 @ .650	191 @ 13.9	13.43 @ .877	176 @ 7.9	12.37 @ .498	205 @ 6.5	14.41 @ .410
120	8.44	206 @ 10.7	14.48 @ .675	207 @ 14.6	14.55 @ .921	190 @ 8.1	13.36 @ .511	215 @ 6.6	15.12 @ .416
130	9.14	223 @ 11.2	15.68 @ .707	224 @ 15.1	15.75 @ .953	203 @ 8.4	14.27 @ .536	224 @ 6.8	15.75 @ .429
140	9.84	240 @ 11.5	16.87 @ .726	241 @ 15.6	16.94 @ .984	214 @ 8.6	15.05 @ .543	236 @ 7.0	16.59 @ .442
150	10.55	255 @ 11.7	17.93 @ .738	257 @ 16.1	18.07 @ 1.02	228 @ 8.8	16.03 @ .568	248 @ 7.1	17.44 @ .448
160	11.25	271 @ 12.2	19.05 @ .770	275 @ 16.6	19.33 @ 1.05	241 @ 9.2	16.94 @ .593	260 @ 7.2	18.28 @ .461

Maximum Chlorine Feed Rate — 100 PPD (2000 Grams/Hr.) See Note.

NOZZLE		No. 17A		No. 5A		No. 4A		No. 3A		No. 18A	
EJECTOR BACK-PRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	23 @ 7.4	1.62 @ 0.47	27 @ 5.1	1.90 @ 0.32	50 @ 5.1	3.52 @ 0.32	59 @ 3.6	4.15 @ 0.23	19 @ 9.1	1.34 @ 0.57
10	0.70	43 @ 10.0	3.02 @ 0.63	57 @ 8.4	4.01 @ 0.53	108 @ 7.8	7.59 @ 0.49	100 @ 4.7	7.03 @ 0.30	35 @ 11.2	2.46 @ 0.71
20	1.40	57 @ 12.1	4.01 @ 0.76	93 @ 10.8	6.54 @ 0.68	165 @ 9.7	11.60 @ 0.61	148 @ 5.8	10.40 @ 0.37	50 @ 13.8	3.52 @ 0.87
30	2.10	70 @ 13.5	4.92 @ 0.85	119 @ 12.8	8.37 @ 0.81	213 @ 11.3	14.97 @ 0.71	188 @ 6.5	13.22 @ 0.41	64 @ 15.7	4.50 @ 0.99
40	2.81	84 @ 15.5	5.91 @ 0.98	143 @ 14.0	10.05 @ 0.88	251 @ 12.4	17.65 @ 0.78	242 @ 7.3	17.01 @ 0.46	76 @ 17.2	5.34 @ 1.08
50	3.51	101 @ 17.3	7.10 @ 1.09	169 @ 15.1	11.88 @ 0.95	285 @ 13.0	20.04 @ 0.82	268 @ 7.9	18.84 @ 0.50	90 @ 19.6	6.33 @ 1.24
60	4.21	113 @ 18.9	7.94 @ 1.19	188 @ 16.1	13.22 @ 1.02	—	—	—	—	106 @ 21.3	7.45 @ 1.34
70	4.92	132 @ 20.6	9.28 @ 1.30	202 @ 16.7	14.20 @ 1.05	—	—	—	—	120 @ 23.2	8.44 @ 1.46
80	5.62	146 @ 21.8	10.26 @ 1.38	220 @ 17.4	15.47 @ 1.10	—	—	—	—	137 @ 24.7	9.63 @ 1.56
90	6.32	167 @ 23.0	11.74 @ 1.45	236 @ 18.2	16.59 @ 1.15	—	—	—	—	153 @ 26.4	10.76 @ 1.67
100	7.03	185 @ 24.0	13.01 @ 1.51	261 @ 19.3	18.35 @ 1.22	—	—	—	—	168 @ 27.6	11.81 @ 1.74
110	7.73	202 @ 25.0	14.20 @ 1.58	279 @ 19.9	19.61 @ 1.26	—	—	—	—	183 @ 28.7	12.86 @ 1.81
120	8.44	220 @ 26.1	15.47 @ 1.65	295 @ 20.5	20.74 @ 1.29	—	—	—	—	202 @ 30.1	14.20 @ 1.90
130	9.14	241 @ 27.1	16.94 @ 1.71	—	—	—	—	—	—	218 @ 31.3	15.33 @ 1.97
140	9.84	260 @ 28.2	18.28 @ 1.78	—	—	—	—	—	—	235 @ 32.5	16.52 @ 2.05
150	10.55	281 @ 29.0	19.75 @ 1.83	—	—	—	—	—	—	251 @ 33.4	17.65 @ 2.11
160	11.25	298 @ 29.9	20.95 @ 1.89	—	—	—	—	—	—	272 @ 33.7	19.12 @ 2.13

Maximum Chlorine Feed Rate — 100 PPD (2000 Grams/Hr.) See Note.

NOZZLE		No. 15A		No. 16A		No. 14A		No. 13A	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	31 @ 4.3	2.18 @ .271	22 @ 5.2	1.55 @ .328	48 @ 4.2	3.37 @ .265	55 @ 3.6	3.87 @ .227
10	0.70	58 @ 5.6	4.08 @ .353	49 @ 7.5	3.45 @ .473	76 @ 5.3	5.34 @ .334	102 @ 4.4	7.17 @ .278
20	1.40	75 @ 6.4	5.27 @ .404	69 @ 8.8	4.85 @ .555	100 @ 6.0	7.03 @ .379	136 @ 5.0	10.55 @ .315
30	2.10	92 @ 7.1	6.47 @ .448	85 @ 9.7	5.98 @ .612	118 @ 6.4	8.30 @ .404	162 @ 5.4	12.73 @ .341
40	2.81	108 @ 7.7	7.59 @ .486	101 @ 10.5	7.10 @ .662	136 @ 6.8	9.56 @ .429	181 @ 5.6	14.48 @ .353
50	3.51	122 @ 8.1	8.58 @ .511	116 @ 11.2	8.16 @ .707	153 @ 7.3	10.76 @ .461	198 @ 5.9	15.90 @ .366
60	4.21	136 @ 8.6	9.56 @ .543	128 @ 11.8	9.00 @ .744	168 @ 7.7	11.81 @ .486	216 @ 6.1	17.15 @ .385
70	4.92	151 @ 8.9	10.62 @ .562	139 @ 12.3	9.77 @ .776	185 @ 8.0	13.01 @ .505	230 @ 6.4	18.14 @ .404
80	5.62	165 @ 9.3	11.60 @ .587	150 @ 12.8	10.55 @ .808	201 @ 8.3	14.13 @ .524	244 @ 6.6	19.76 @ .416
90	6.32	180 @ 9.8	12.66 @ .618	164 @ 13.4	11.53 @ .845	213 @ 8.5	14.98 @ .536	258 @ 6.7	20.67 @ .429
100	7.03	193 @ 10.1	13.57 @ .637	180 @ 14.0	12.66 @ .883	222 @ 8.8	15.61 @ .555	269 @ 7.0	21.58 @ .435
110	7.73	207 @ 10.4	14.55 @ .656	195 @ 14.5	13.71 @ .915	232 @ 9.0	16.31 @ .568	—	—
120	8.44	221 @ 10.8	15.54 @ .681	212 @ 15.0	14.91 @ .946	247 @ 9.2	17.37 @ .580	—	—
130	9.14	236 @ 11.2	16.59 @ .706	227 @ 15.5	15.96 @ .978	260 @ 9.5	18.28 @ .599	—	—
140	9.84	250 @ 11.5	17.58 @ .726	245 @ 16.2	17.23 @ 1.02	273 @ 9.6	19.19 @ .618	—	—
150	10.55	265 @ 11.8	18.63 @ .744	261 @ 16.7	18.35 @ 1.05	284 @ 9.8	19.97 @ .637	—	—
160	11.25	281 @ 12.2	19.76 @ .770	278 @ 17.2	19.55 @ 1.09	295 @ 10.0	20.74 @ .662	—	—

NOTE: GPM is U.S. Gallons. Metric is liters per sec. (l/sec.)

**Maximum Chlorine Feed Rate —
250 PPD (4900 Grams/Hr.)** See Note.

NOZZLE		No. 18A		No. 50X	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	50 @ 13.4	3.52 @ 0.85	27 @ 11.5	1.90 @ 0.73
10	0.70	70 @ 15.9	4.92 @ 1.00	37 @ 13.8	2.60 @ 0.87
20	1.40	92 @ 18.1	6.47 @ 1.14	49 @ 16.1	3.44 @ 1.02
30	2.10	103 @ 19.8	7.24 @ 1.25	68 @ 19.5	4.78 @ 1.23
40	2.81	118 @ 21.8	8.03 @ 1.38	89 @ 22.7	6.26 @ 1.43
50	3.51	130 @ 23.9	9.14 @ 1.51	109 @ 25.3	7.66 @ 1.60
60	4.21	143 @ 25.1	10.05 @ 1.58	130 @ 27.9	9.14 @ 1.76
70	4.92	158 @ 25.9	11.11 @ 1.63	148 @ 29.9	10.40 @ 1.89
80	5.62	172 @ 27.3	12.09 @ 1.72	169 @ 31.9	11.88 @ 2.01
90	6.32	183 @ 28.5	12.86 @ 1.80	192 @ 34.5	13.50 @ 2.18
100	7.03	195 @ 29.1	13.71 @ 1.84	210 @ 36.8	14.76 @ 2.32
110	7.73	211 @ 30.2	14.83 @ 1.91	228 @ 38.5	16.03 @ 2.43
120	8.44	214 @ 31.0	15.04 @ 1.96	—	—
130	9.14	238 @ 31.9	16.73 @ 2.01	—	—
140	9.84	253 @ 33.3	17.79 @ 2.10	—	—
150	10.55	272 @ 34.3	19.12 @ 2.16	—	—
160	11.25	288 @ 35.6	20.25 @ 2.25	—	—

**Maximum Chlorine Feed Rate —
500 PPD (10 Kg./Hr.)** See Note.

NOZZLE		No. 50X	
EJECTOR BACKPRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	72 @ 20.7	5.06 @ 1.31
10	0.70	89 @ 23.1	6.26 @ 1.46
20	1.40	97 @ 24.1	6.82 @ 1.52
30	2.10	105 @ 25.2	7.38 @ 1.59
40	2.81	113 @ 26.3	7.94 @ 1.66
50	3.51	125 @ 27.3	8.79 @ 1.72
60	4.21	138 @ 29.0	9.70 @ 1.83
70	4.92	155 @ 31.5	10.90 @ 1.99
80	5.62	173 @ 32.2	12.16 @ 2.03
90	6.32	192 @ 34.5	13.50 @ 2.18
100	7.03	210 @ 36.8	14.76 @ 2.32
110	7.73	228 @ 38.5	16.03 @ 2.43

**Maximum Chlorine Feed Rate — Series 2000
1000 LBS./24 HRS. (20 kg./hr.)** See Note.

EJECTOR BACK-PRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate			
		A-2920 EJECTOR - 0.563" (STD.)		A-2922 EJECTOR - 0.750"	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	15 @ 34.5	1.05 @ 2.18	8 @ 46.0	0.57 @ 2.90
10	0.70	35 @ 43.7	2.43 @ 2.76	16 @ 65.6	1.13 @ 4.13
20	1.41	58 @ 52.9	4.04 @ 3.34	30 @ 84.0	2.10 @ 5.30
30	2.11	85 @ 62.1	5.98 @ 3.92	48 @ 98.9	3.40 @ 6.24
40	2.81	115 @ 71.3	8.08 @ 4.50	67 @ 112.7	4.69 @ 7.11
50	3.52	147 @ 82.8	10.35 @ 5.22	87 @ 126.5	6.14 @ 7.98
60	4.22	-	-	108 @ 136.9	7.60 @ 8.63
70	4.92	-	-	129 @ 149.5	9.05 @ 9.43

**Maximum Chlorine Feed Rate — Series 2000
2000 LBS./24 HRS. (40 kg./hr.)** See Note.

EJECTOR BACK-PRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate			
		A-2922 EJECTOR - 0.750" (STD.)		A-2920 EJECTOR - 0.563"	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	41 @ 104.7	2.91 @ 6.60	41 @ 48.3	2.91 @ 3.05
10	0.70	48 @ 108.1	3.40 @ 6.82	78 @ 62.1	5.50 @ 3.92
20	1.41	58 @ 110.4	4.04 @ 6.96	102 @ 71.3	7.20 @ 4.50
30	2.11	68 @ 117.3	4.77 @ 7.40	124 @ 77.1	8.73 @ 4.86
40	2.81	81 @ 126.5	5.66 @ 7.98	146 @ 81.7	10.27 @ 5.15
50	3.52	97 @ 134.6	6.79 @ 8.49	-	-
60	4.22	113 @ 141.5	7.92 @ 8.92	-	-
70	4.92	130 @ 154.1	9.14 @ 9.72	-	-

Maximum Chlorine Feed Rate — 200 PPD (4000 Grams/Hr.) See Note.

NOZZLE		No. 18A		No. 17A		No. 50X	
EJECTOR BACK-PRESSURE		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate		REQUIRED Ejector Supply Pressure and Water Flow Rate	
PSIG	kg/cm ²	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.	PSIG @ GPM	kg/cm ² @ l/sec.
0	0	26 @ 9.3	1.83 @ 0.59	27 @ 7.8	1.90 @ 0.49	22 @ 8.6	1.55 @ 0.54
10	0.70	51 @ 13.8	3.59 @ 0.87	58 @ 12.4	4.08 @ 0.78	34 @ 12.7	2.39 @ 0.80
20	1.40	67 @ 16.2	4.71 @ 1.02	80 @ 14.3	5.62 @ 0.90	47 @ 15.5	3.30 @ 0.98
30	2.10	83 @ 18.4	5.83 @ 1.16	96 @ 16.1	6.75 @ 1.02	67 @ 19.3	4.71 @ 1.22
40	2.81	97 @ 20.2	6.82 @ 0.27	107 @ 17.3	7.52 @ 1.09	88 @ 22.4	6.19 @ 1.41
50	3.51	110 @ 21.8	7.73 @ 1.38	123 @ 18.9	8.65 @ 1.19	109 @ 25.3	7.66 @ 1.60
60	4.21	124 @ 23.5	8.72 @ 1.48	138 @ 20.1	9.70 @ 1.27	130 @ 27.9	9.14 @ 1.76
70	4.92	135 @ 24.4	9.49 @ 1.54	147 @ 21.0	10.33 @ 1.32	148 @ 29.9	10.40 @ 1.89
80	5.62	147 @ 25.5	10.33 @ 1.61	163 @ 22.1	11.46 @ 1.39	169 @ 31.9	11.88 @ 2.01
90	6.32	160 @ 26.7	11.25 @ 1.68	176 @ 23.4	12.37 @ 1.48	192 @ 34.5	13.50 @ 2.18
100	7.03	173 @ 27.8	12.16 @ 1.75	193 @ 24.4	13.57 @ 1.54	210 @ 36.8	14.76 @ 2.32
110	7.73	190 @ 28.9	13.36 @ 1.82	209 @ 25.5	14.69 @ 1.61	228 @ 38.5	16.03 @ 2.43
120	8.44	207 @ 30.1	14.55 @ 1.90	228 @ 26.3	16.03 @ 1.66	—	—
130	9.14	222 @ 31.3	15.61 @ 1.97	245 @ 27.3	17.22 @ 1.72	—	—
140	9.84	239 @ 32.4	16.80 @ 2.04	267 @ 28.4	18.77 @ 1.79	—	—
150	10.55	255 @ 33.4	17.93 @ 2.11	288 @ 29.2	20.25 @ 1.84	—	—
160	11.25	275 @ 34.5	19.33 @ 2.18	306 @ 30.2	21.51 @ 1.91	—	—

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