

VACUFEEED VACUUM LIQUID FEED SYSTEM EJECTOR NOZZLE REQUIREMENTS

NOTE: ALL VALUES ARE THOSE NECESSARY TO ACHIEVE SONIC REGULATED CONTROL (NOT BREAKPOINT)

Standard nozzles for each maximum feed rate are as indicated. Liquid feed systems nozzle requirements differ from gas feed systems due to the density of the fluid and its non-expansion characteristics. Many nozzle sizes may have the same pressure differential requirements due to these characteristics. However, water flow requirements will vary greatly with the different nozzle sizes. Standard nozzles have been chosen to give the best performance over a wide range of back-pressures with the greatest economy of water flow through the nozzle. Users may choose a different nozzle that meets specific water flow requirements of a booster pump or available water supply. However, C.I.T. recommends that nozzles using lower water flow than the standard for a given feed rate should not be chosen unless there is a specific reason. Better mixing of chemicals is usually achieved with higher water flows through the ejector.

Maximum feed rates indicated in METRIC UNITS (LPH) may vary from those indicated in ENGLISH units (GPH) due to rounding of significant digits on the metering tube scale.

BACK-PRESSURE AT EJECTOR OUTLET		2 GPH (8 LITERS/HR)													
		REQUIRED WATER SUPPLY PRESSURE AND WATER FLOW RATE THROUGH NOZZLE													
		NOZZLE NO. C (3)				NOZZLE NO. D (4) STANDARD				NOZZLE NO.E (5)				NOZZLE NO. G (7)	
PSI G	kg/cm ²	PSIG @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C		
0	0.00	34 @ 2.3	2.39 @ 0.15	21 @ 3.2	1.48 @ 0.20	20 @ 4.2	1.41 @ 0.26	17 @ 7.6	1.20 @ 0.48						
10	0.70	40 @ 2.4	2.81 @ 0.15	28 @ 3.5	1.97 @ 0.22	28 @ 4.6	1.97 @ 0.29	25 @ 8.6	1.76 @ 0.54						
20	1.41	52 @ 2.6	3.66 @ 0.16	46 @ 4.3	3.23 @ 0.27	47 @ 5.6	3.30 @ 0.35	47 @ 10.9	3.30 @ 0.69						
30	2.11	63 @ 3.0	4.43 @ 0.19	67 @ 5.0	4.71 @ 0.32	67 @ 6.5	4.71 @ 0.41	67 @ 12.5	4.71 @ 0.79						
40	2.81	86 @ 3.3	6.05 @ 0.21	87 @ 5.5	6.12 @ 0.35	88 @ 7.4	6.19 @ 0.47	89 @ 14.2	6.26 @ 0.90						
50	3.52	100 @ 3.5	7.03 @ 0.22	102 @ 5.8	7.17 @ 0.37	106 @ 8.1	7.45 @ 0.51	105 @ 15.0	7.38 @ 0.95						
60	4.22	121 @ 3.9	8.51 @ 0.25	122 @ 6.3	8.58 @ 0.40	123 @ 8.7	8.65 @ 0.55	124 @ 16.4	8.72 @ 1.03						
70	4.92	143 @ 4.4	10.05 @ 0.28	141 @ 6.7	9.91 @ 0.42	143 @ 9.1	10.05 @ 0.57	147 @ 17.6	10.33 @ 1.11						
80	5.62	162 @ 4.5	11.39 @ 0.28	158 @ 7.2	11.11 @ 0.45	158 @ 9.9	11.11 @ 0.62	163 @ 19.1	11.46 @ 1.20						
90	6.33	185 @ 4.7	13.01 @ 0.30	184 @ 7.6	12.94 @ 0.48	@	0.00 @ 0.00	@	0.00 @ 0.00						

BACK-PRESSURE AT EJECTOR OUTLET		5 GPH (20 LITERS/HR)													
		REQUIRED WATER SUPPLY PRESSURE AND WATER FLOW RATE THROUGH NOZZLE													
		NOZZLE NO. C (3)				NOZZLE NO. D (4)				NOZZLE NO.E (5) STANDARD				NOZZLE NO. G (7)	
PSI G	kg/cm ²	PSIG @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C		
0	0.00	34 @ 2.3	2.39 @ 0.15	21 @ 3.2	1.48 @ 0.20	20 @ 4.2	1.41 @ 0.26	17 @ 7.6	1.20 @ 0.48						
10	0.70	40 @ 2.4	2.81 @ 0.15	28 @ 3.5	1.97 @ 0.22	28 @ 4.6	1.97 @ 0.29	25 @ 8.6	1.76 @ 0.54						
20	1.41	52 @ 2.6	3.66 @ 0.16	46 @ 4.3	3.23 @ 0.27	47 @ 5.6	3.30 @ 0.35	47 @ 10.9	3.30 @ 0.69						
30	2.11	63 @ 3.0	4.43 @ 0.19	67 @ 5.0	4.71 @ 0.32	67 @ 6.5	4.71 @ 0.41	67 @ 12.5	4.71 @ 0.79						
40	2.81	86 @ 3.3	6.05 @ 0.21	87 @ 5.5	6.12 @ 0.35	88 @ 7.4	6.19 @ 0.47	89 @ 14.2	6.26 @ 0.90						
50	3.52	100 @ 3.5	7.03 @ 0.22	102 @ 5.8	7.17 @ 0.37	106 @ 8.1	7.45 @ 0.51	105 @ 15.0	7.38 @ 0.95						
60	4.22	121 @ 3.9	8.51 @ 0.25	122 @ 6.3	8.58 @ 0.40	123 @ 8.7	8.65 @ 0.55	124 @ 16.4	8.72 @ 1.03						
70	4.92	143 @ 4.4	10.05 @ 0.28	141 @ 6.7	9.91 @ 0.42	143 @ 9.1	10.05 @ 0.57	147 @ 17.6	10.33 @ 1.11						
80	5.62	162 @ 4.5	11.39 @ 0.28	158 @ 7.2	11.11 @ 0.45	158 @ 9.9	11.11 @ 0.62	163 @ 19.1	11.46 @ 1.20						
90	6.33	185 @ 4.7	13.01 @ 0.30	184 @ 7.6	12.94 @ 0.48	@	0.00 @ 0.00	@	0.00 @ 0.00						

BACK-PRESSURE AT EJECTOR OUTLET		10 GPH (40 LITERS/HR)													
		REQUIRED WATER SUPPLY PRESSURE AND WATER FLOW RATE THROUGH NOZZLE													
		NOZZLE NO. D (4)				NOZZLE NO. E (5)				NOZZLE NO. G (7) STANDARD				NOZZLE NO. H (8)	
PSI G	kg/cm ²	PSIG @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C		
0	0.00	35 @ 3.2	2.46 @ 0.20	21 @ 4.3	1.48 @ 0.27	18 @ 8.0	1.27 @ 0.50	14 @ 8.6	0.98 @ 0.54						
10	0.70	41 @ 3.5	2.88 @ 0.22	28 @ 4.4	1.97 @ 0.28	25 @ 8.4	1.76 @ 0.53	22 @ 10.0	1.55 @ 0.63						
20	1.41	52 @ 4.3	3.66 @ 0.27	47 @ 5.4	3.30 @ 0.34	47 @ 10.5	3.30 @ 0.66	43 @ 12.4	3.02 @ 0.78						
30	2.11	69 @ 5.0	4.85 @ 0.32	67 @ 6.5	4.71 @ 0.41	67 @ 12.2	4.71 @ 0.77	59 @ 14.5	4.15 @ 0.91						
40	2.81	90 @ 5.5	6.33 @ 0.35	88 @ 7.2	6.19 @ 0.45	89 @ 13.6	6.26 @ 0.86	79 @ 15.8	5.55 @ 1.00						
50	3.52	107 @ 5.8	7.52 @ 0.37	106 @ 7.9	7.45 @ 0.50	105 @ 15.1	7.38 @ 0.95	99 @ 18.2	6.96 @ 1.15						
60	4.22	125 @ 6.3	8.79 @ 0.40	123 @ 8.7	8.65 @ 0.55	124 @ 16.2	8.72 @ 1.02	119 @ 19.7	8.37 @ 1.24						
70	4.92	146 @ 6.7	10.26 @ 0.42	144 @ 8.9	10.12 @ 0.56	147 @ 16.8	10.33 @ 1.06	142 @ 21.5	9.98 @ 1.36						
80	5.62	165 @ 7.2	11.60 @ 0.45	156 @ 9.5	10.97 @ 0.60	163 @ 17.3	11.46 @ 1.09	@	0.00 @ 0.00						
90	6.33	187 @ 7.6	13.15 @ 0.48	176 @ 10.3	12.37 @ 0.65	161 @ 18.7	11.32 @ 1.18	@	0.00 @ 0.00						

BACK-PRESSURE AT EJECTOR OUTLET		25 GPH (100 LITERS/HR)													
		REQUIRED WATER SUPPLY PRESSURE AND WATER FLOW RATE THROUGH NOZZLE													
		NOZZLE NO. D (4)				NOZZLE NO. E (5)				NOZZLE NO. G (7) STANDARD				NOZZLE NO. H (8)	
PSI G	kg/cm ²	PSIG @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C	PSI G @ GP M	kg/cm ² @ L/SE C		
0	0.00	22 @ 3.2	1.55 @ 0.20	21 @ 4.2	1.48 @ 0.26	19 @ 7.6	1.34 @ 0.48	14 @ 8.6	0.98 @ 0.54						
10	0.70	30 @ 3.6	2.11 @ 0.23	30 @ 4.7	2.11 @ 0.30	26 @ 8.4	1.83 @ 0.53	25 @ 10.5	1.76 @ 0.66						
20	1.41	48 @ 4.2	3.37 @ 0.26	50 @ 5.7	3.52 @ 0.36	48 @ 10.6	3.37 @ 0.67	45 @ 12.5	3.16 @ 0.79						
30	2.11	69 @ 5.0	4.85 @ 0.32	69 @ 6.7	4.85 @ 0.42	68 @ 12.5	4.78 @ 0.79	67 @ 15.0	4.71 @ 0.95						
40	2.81	87 @ 5.4	6.12 @ 0.34	91 @ 7.6	6.40 @ 0.48	90 @ 13.9	6.33 @ 0.88	88 @ 17.3	6.19 @ 1.09						
50	3.52	107 @ 5.8	7.52 @ 0.37	109 @ 8.0	7.66 @ 0.50	106 @ 15.4	7.45 @ 0.97	102 @ 18.3	7.17 @ 1.15						
60	4.22	128 @ 6.4	9.00 @ 0.40	128 @ 8.8	9.00 @ 0.56	125 @ 17.1	8.79 @ 1.08	121 @ 19.7	8.51 @ 1.24						
70	4.92	150 @ 6.8	10.55 @ 0.43	150 @ 9.4	10.55 @ 0.59	148 @ 18.6	10.40 @ 1.17	147 @ 22.0	10.33 @ 1.39						
80	5.62	167 @ 7.2	11.74 @ 0.45	167 @ 9.8	11.74 @ 0.62	165 @ 19.1	11.60 @ 1.20	@	0.00 @ 0.00						
90	6.33	@	0.00 @ 0.00	@	0.00 @ 0.00	@	0.00 @ 0.00	@	0.00 @ 0.00						