

## Pump Size Based on Pressure & Flow

Small Plug-n-Pump (CHIE)										
208-230V/60Hz/1-Phase		(Differential Pressure- PSIG) Boost at Maximum Flow (GPM)								
Hp	Suction/Discharge Size (Threaded Connection)	20 PSIG	30 PSIG	40 PSIG	50 PSIG	60 PSIG	70 PSIG	80 PSIG	<b>LEGEND</b>  Values are Flow in GPM  2(5) = 2 pumps, 5hp each	
0.75	1" NPT	10	10	10						
1	1" NPT				10					
1.5	1" NPT					10	10	10		
1	1.25" NPT	20	20							
1.5	1.25" NPT			20	20	20				
3.0	1.5" NPT						20	20		
1.5	1.5" NPT	30	30							
1.5	1.5" NPT	40	40							
2.0	2" NPT	50								
3.0	2" NPT			50	50	40				
3.0	2" NPT	80	80							

Integrated Plug-n-Pump												
208-230V/60Hz/1 or 3 Phase		(Differential Pressure- PSIG) Boost at Maximum Flow (GPM)										
460V/60Hz/3-Phase												
Hp	Suction/Discharge Size(Flanged Connection)	20 PSIG	30 PSIG	40 PSIG	50 PSIG	60 PSIG	70 PSIG	80 PSIG	90 PSIG	100 PSIG	110 PSIG	120 PSIG
3	2"							30				
3	2"								30	20		
3	2"									30		
3	2"		60	60								
3	2"				60	50	40					
5	2"					60	60	50				
5	2"							60	50	50		
5	2"								60			
7.5	2"									60		
5	3"	100	100	90	50							
5	3"				100	90	80					
7.5	3"						100	100	80			
10	3"								100	100		
10	3"										100	90
5	3"	120	120	100								
7.5	3"				120	120						
10	3"						120	120				
2(5)	3"								120			
3	4"	150										
5	4"	180	130									
7.5	4"		180	160	130							
7.5	4"			180	150							
7.5	4"				170	140						
10	4"					180	160	140				
2(5)	4"				220							
2(7.5)	4"					200	200	200	160	120		
2(10)	4"								200	200		
2(10)	4"										200	180
7.5	4"	260	260	190								
2(5)	4"			230								
2(7.5)	4"				240	240						
2(10)	4"						240	240	210			
2(3)	6"	300										
2(5)	6"	360	240									
2(7.5)	6"		360	330	270							
2(7.5)	6"			360	310							
2(7.5)	6"				340	280						

Pipe Diameter in Inches											
GPM	0.5	0.75	1	1.5	2	2.5	3	4	6	8	
1	1.6	0.7	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
2	3.3	1.5	0.8	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0
3	4.9	2.2	1.2	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0
4	6.5	2.9	1.6	0.7	0.4	0.3	0.2	0.1	0.0	0.0	0.0
5	8.2	3.6	2.0	0.9	0.5	0.3	0.2	0.1	0.1	0.0	0.0
6	9.8	4.4	2.5	1.1	0.6	0.4	0.3	0.2	0.1	0.0	0.0
7	11.4	5.1	2.9	1.3	0.7	0.5	0.3	0.2	0.1	0.0	0.0
8	13.1	5.8	3.3	1.5	0.8	0.5	0.4	0.2	0.1	0.1	0.1
9	14.7	6.5	3.7	1.6	0.9	0.6	0.4	0.2	0.1	0.1	0.1
10	16.3	7.3	4.1	1.8	1.0	0.7	0.5	0.3	0.1	0.1	0.1
15	24.5	10.9	6.1	2.7	1.5	1.0	0.7	0.4	0.2	0.1	0.1
20	32.7	14.5	8.2	3.6	2.0	1.3	0.9	0.5	0.2	0.1	0.1
25	40.9	18.2	10.2	4.5	2.6	1.6	1.1	0.6	0.3	0.2	0.2
30	49.0	21.8	12.3	5.4	3.1	2.0	1.4	0.8	0.3	0.2	0.2
35	57.2	25.4	14.3	6.4	3.6	2.3	1.6	0.9	0.4	0.2	0.2
40	65.4	29.0	16.3	7.3	4.1	2.6	1.8	1.0	0.5	0.3	0.3
45	73.5	32.7	18.4	8.2	4.6	2.9	2.0	1.1	0.5	0.3	0.3
50	81.7	36.3	20.4	9.1	5.1	3.3	2.3	1.3	0.6	0.3	0.3
60	98.0	43.6	24.5	10.9	6.1	3.9	2.7	1.5	0.7	0.4	0.4
70	114.4	50.8	28.6	12.7	7.1	4.6	3.2	1.8	0.8	0.4	0.4
80	130.7	58.1	32.7	14.5	8.2	5.2	3.6	2.0	0.9	0.5	0.5
90	147.1	65.4	36.8	16.3	9.2	5.9	4.1	2.3	1.0	0.6	0.6
100	163.4	72.6	40.9	18.2	10.2	6.5	4.5	2.6	1.1	0.6	0.6
125	204.3	90.8	51.1	22.7	12.8	8.2	5.7	3.2	1.4	0.8	0.8
150	245.1	108.9	61.3	27.2	15.3	9.8	6.8	3.8	1.7	1.0	1.0
175	286.0	127.1	71.5	31.8	17.9	11.4	7.9	4.5	2.0	1.1	1.1
200	326.8	145.2	81.7	36.3	20.4	13.1	9.1	5.1	2.3	1.3	1.3
225	367.7	163.4	91.9	40.9	23.0	14.7	10.2	5.7	2.6	1.4	1.4
250	408.5	181.6	102.1	45.4	25.5	16.3	11.3	6.4	2.8	1.6	1.6
275	449.4	199.7	112.3	49.9	28.1	18.0	12.5	7.0	3.1	1.8	1.8
300	490.2	217.9	122.6	54.5	30.6	19.6	13.6	7.7	3.4	1.9	1.9
325	531.1	236.0	132.8	59.0	33.2	21.2	14.8	8.3	3.7	2.1	2.1
350	571.9	254.2	143.0	63.5	35.7	22.9	15.9	8.9	4.0	2.2	2.2
375	612.8	272.3	153.2	68.1	38.3	24.5	17.0	9.6	4.3	2.4	2.4
400	653.6	290.5	163.4	72.6	40.9	26.1	18.2	10.2	4.5	2.6	2.6
425	694.5	308.6	173.6	77.2	43.4	27.8	19.3	10.9	4.8	2.7	2.7
450	735.3	326.8	183.8	81.7	46.0	29.4	20.4	11.5	5.1	2.9	2.9
475	776.2	345.0	194.0	86.2	48.5	31.0	21.6	12.1	5.4	3.0	3.0
500	817.0	363.1	204.3	90.8	51.1	32.7	22.7	12.8	5.7	3.2	3.2

Flow Rate in Gallons per Minute (GPM)



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**\*\*Values represent velocity in feet per second**

**Blue = Recommended inlet/discharge velocity. Typical is 5.0 ft/s**