



# REFERENCE

## Nozzle Chart

NOZZLE SIZE	ORIFICE DIA.	40 PSI	100 PSI	250 PSI	500 PSI	600 PSI	700 PSI	800 PSI	1000 PSI	1200 PSI	1500 PSI	2000 PSI	2500 PSI	3000 PSI	3500 PSI	4000 PSI	5000 PSI
2	.034	0.20	0.32	0.50	0.71	0.77	0.84	0.89	1.00	1.10	1.22	1.41	1.58	1.73	1.87	2.00	2.24
2.5	.039	0.25	0.40	0.63	0.88	0.97	1.05	1.12	1.25	1.37	1.53	1.77	1.98	2.17	2.34	2.50	2.80
3	.043	0.30	0.47	0.75	1.06	1.16	1.25	1.34	1.50	1.64	1.84	2.12	2.37	2.60	2.81	3.00	3.35
3.5	.048	0.35	0.55	0.88	1.24	1.36	1.46	1.57	1.75	1.92	2.14	2.47	2.77	3.03	3.24	3.40	3.85
4	.052	0.40	0.63	1.00	1.41	1.55	1.67	1.79	2.00	2.19	2.45	2.83	3.16	3.46	3.74	4.00	4.47
4.5	.055	0.45	0.71	1.13	1.59	1.74	1.88	2.01	2.25	2.46	2.76	3.18	3.56	3.90	4.21	4.50	5.03
5	.057	0.50	0.79	1.25	1.77	1.94	2.09	2.24	2.50	2.74	3.06	3.54	3.95	4.33	4.68	5.00	5.59
5.5	.060	0.55	0.87	1.38	1.94	2.13	2.30	2.46	2.75	3.01	3.37	3.89	4.35	4.76	5.14	5.50	6.15
6	.062	0.60	0.95	1.50	2.12	2.32	2.51	2.68	3.00	3.29	3.67	4.24	4.74	5.20	5.61	6.00	6.71
6.5	.064	0.65	1.03	1.63	2.30	2.52	2.72	2.91	3.25	3.56	3.98	4.60	5.14	5.63	6.08	6.50	7.27
7	.067	0.70	1.11	1.75	2.47	2.71	2.93	3.13	3.50	3.83	4.29	4.95	5.53	6.06	6.55	7.00	7.83
7.5	.070	0.75	1.19	1.88	2.65	2.90	3.14	3.35	3.75	4.11	4.59	5.30	5.93	6.50	7.02	7.50	8.39
8	.072	0.80	1.26	2.00	2.83	3.10	3.35	3.58	4.00	4.38	4.90	5.66	6.32	6.93	7.48	8.00	8.94
8.5	.074	0.85	1.34	2.13	3.01	3.29	3.56	3.80	4.25	4.66	5.21	6.01	6.72	7.36	7.95	8.50	9.50
9	.076	0.90	1.42	2.25	3.18	3.49	3.76	4.02	4.50	4.93	5.51	6.36	7.12	7.79	8.42	9.00	10.06
9.5	.078	0.95	1.50	2.38	3.36	3.68	3.97	4.25	4.75	5.20	5.82	6.72	7.51	8.23	8.89	9.50	10.62
10	.080	1.00	1.58	2.50	3.54	3.87	4.18	4.47	5.00	5.48	6.12	7.07	7.91	8.66	9.35	10.00	11.18
11	.083	1.10	1.74	2.75	3.89	4.26	4.60	4.92	5.50	6.02	6.74	7.78	8.70	9.53	10.29	11.00	12.30
12	.087	1.20	1.90	3.00	4.24	4.65	5.02	5.37	6.00	6.57	7.35	8.49	9.49	10.39	11.22	12.00	13.42
12.5	.089	1.25	1.98	3.13	4.42	4.84	5.23	5.59	6.25	6.85	7.65	8.84	9.88	10.83	11.69	12.50	13.98
13	.091	1.30	2.06	3.25	4.60	5.03	5.44	5.81	6.50	7.12	7.96	9.19	10.28	11.26	12.16	13.00	14.53
14	.093	1.40	2.21	3.50	4.95	5.42	5.86	6.26	7.00	7.67	8.57	9.90	11.07	12.12	13.10	14.00	15.65
15	.096	1.50	2.37	3.75	5.30	5.81	6.27	6.71	7.50	8.22	9.19	10.61	11.86	12.99	14.03	15.00	16.77
20	.109	2.00	3.16	5.00	7.07	7.75	8.37	8.94	10.00	10.95	12.25	14.14	15.81	17.32	18.71	20.00	22.36
25	.125	2.50	3.95	6.25	8.84	9.68	10.46	11.18	12.50	13.69	15.31	17.68	19.76	21.65	23.39	25.00	27.95
30	.141	3.00	4.74	7.50	10.61	11.62	12.55	13.42	15.00	16.43	18.37	21.12	23.72	25.98	28.06	30.00	33.54
40	.156	4.00	6.32	10.00	14.14	15.49	16.73	17.89	20.00	21.91	24.49	28.28	31.62	34.64	37.42	40.00	44.72
50	.172	5.00	7.91	12.50	17.68	19.36	20.92	22.36	25.00	27.39	30.62	35.36	39.53	43.30	46.77	50.00	55.90
60	.188	6.00	9.49	15.00	21.21	23.24	25.10	26.83	30.00	32.86	36.74	42.43	47.43	51.96	56.12	60.00	67.08

## Nozzles

Nozzle # =	GPM	X	$\sqrt{\frac{4000}{\text{PSI}}}$
GPM =	Nozzle #	X	$\sqrt{\frac{4000}{\text{PSI}}}$
PSI =	$\frac{\text{GPM}^2}{\text{Nozzle}}$	X	4000

## Horsepower

$\frac{\text{GPM} \times \text{PSI}}{1460}$	=	Electric Brake HP
$\frac{\text{GPM} \times \text{PSI}}{1714}$	=	Hydraulic HP
$\frac{\text{GPM} \times \text{PSI}}{1100}$	=	Gasoline HP (Industrial Engine)
$\frac{\text{GPM} \times \text{PSI}}{900}$	=	Gasoline HP (Standard Engine)

$$\text{GPM} = \frac{\text{HP} \times 1460}{\text{PSI}}$$

$$\frac{\text{Rated GPM}}{\text{Rated RPM}} = \frac{\text{Desired GPM}}{\text{Desired RPM}}$$

$$\text{PSI} = \frac{\text{HP} \times 1460}{\text{GPM}}$$

$$\frac{\text{Motor Pulley OD}}{\text{Pump RPM}} = \frac{\text{Pump Pulley OD}}{\text{Motor RPM}}$$

$$\text{Torque} = \text{HP} \times 5252$$

$$\text{Drive Ration} = \frac{D}{d}$$