

Electric motor horsepower required to drive a pump*

Flow (gpm)	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
0.5	0.04	0.09	0.18	0.21	0.25	0.28	0.35	0.42	0.53	0.70	0.88	1.05	1.23	1.40	1.75
1.0	0.07	0.18	0.35	0.42	0.49	0.56	0.70	0.84	1.05	1.40	1.75	2.10	2.45	2.80	3.50
1.5	0.11	0.26	0.53	0.63	0.74	0.84	1.05	1.26	1.58	2.10	2.63	3.15	3.68	4.20	5.25
2.0	0.14	0.35	0.70	0.84	0.98	1.12	1.40	1.68	2.10	2.80	3.50	4.20	4.90	5.60	7.00
2.5	0.18	0.44	0.88	1.05	1.23	1.40	1.75	2.10	2.63	3.50	4.38	5.25	6.13	7.00	8.75
3.0	0.21	0.53	1.05	1.26	1.47	1.68	2.10	2.52	3.15	4.20	5.25	6.30	7.35	8.40	10.50
3.5	0.25	0.61	1.23	1.47	1.72	1.96	2.45	2.94	3.68	4.90	6.13	7.35	8.58	9.80	12.25
4.0	0.28	0.70	1.40	1.68	1.96	2.24	2.80	3.36	4.20	5.60	7.00	8.40	9.80	11.2	14.0
5.0	0.35	0.88	1.75	2.10	2.45	2.80	3.50	4.20	5.25	7.00	8.75	10.5	12.3	14.0	17.5
6.0	0.42	1.05	2.10	2.52	2.94	3.36	4.20	5.04	6.30	8.40	10.5	12.6	14.7	16.8	21.0
7.0	0.49	1.23	2.45	2.94	3.43	3.92	4.90	5.88	7.35	9.80	12.3	14.7	17.2	19.6	24.5
8.0	0.56	1.40	2.80	3.36	3.92	4.48	5.60	6.72	8.40	11.2	14.0	16.8	19.6	22.4	28.0
9.0	0.63	1.58	3.15	3.78	4.41	5.04	6.30	7.56	9.45	12.6	15.8	18.9	22.1	25.2	31.5
10	0.70	1.75	3.50	4.20	4.90	5.60	7.00	8.40	10.5	14.0	17.5	21.0	24.5	28.0	35.0
11	0.77	1.93	3.85	4.62	5.39	6.16	7.70	9.24	11.6	15.4	19.3	23.1	27.0	30.8	38.5
12	0.84	2.10	4.20	5.04	5.88	6.72	8.40	10.1	12.6	16.8	21.0	25.2	29.4	33.6	42.0
13	0.91	2.28	4.55	5.46	6.37	7.28	9.10	10.9	13.7	18.2	22.8	27.3	31.9	36.4	45.5
14	0.98	2.45	4.90	5.88	6.86	7.84	9.80	11.8	14.7	19.6	24.5	29.4	34.3	39.2	49.0
15	1.05	2.63	5.25	6.30	7.35	8.40	10.5	12.6	15.8	21.0	26.3	31.5	36.8	42.0	52.5
16	1.12	2.80	5.60	6.72	7.84	8.96	11.2	13.4	16.8	22.4	28.0	33.6	39.2	44.8	56.0
17	1.19	2.98	5.95	7.14	8.33	9.52	11.9	14.3	17.9	23.8	29.8	35.7	41.7	47.6	59.5
18	1.26	3.15	6.30	7.56	8.82	10.1	12.6	15.1	18.9	25.2	31.5	37.8	44.1	50.4	63.0
19	1.33	3.33	6.65	7.98	9.31	10.6	13.3	16.0	20.0	26.6	33.3	39.9	46.6	53.2	66.5
20	1.40	3.50	7.00	8.40	9.80	11.2	14.0	16.8	21.0	28.0	35.0	42.0	49.0	56.0	70.0
25	1.75	4.38	8.75	10.5	12.3	14.0	17.5	21.0	26.3	35.0	43.8	52.5	61.3	70.0	87.5
30	2.10	5.25	10.5	12.6	14.7	16.8	21.0	25.2	31.5	42.0	52.5	63.0	73.5	84.0	105.0
35	2.45	6.13	12.3	14.7	17.2	19.6	24.5	29.4	36.8	49.0	61.3	73.5	85.8	98.0	122.5
40	2.80	7.00	14.0	16.8	19.6	22.4	28.0	33.6	42.0	56.0	70.0	84.0	98.0	112	140
45	3.15	7.88	15.8	18.9	22.1	25.2	31.5	37.8	47.3	63.0	78.8	94.5	110	126	158
50	3.50	8.75	17.5	21.0	24.5	28.0	35.0	42.0	52.5	70.0	87.5	105	123	140	175
55	3.85	9.63	19.3	23.1	27.0	30.8	38.5	46.2	57.8	77.0	96.3	116	135	154	193
60	4.20	10.5	21.0	25.2	29.4	33.6	42.0	50.4	63.0	84.0	105	126	147	168	210

* A gasoline engine should be sized approximately 1.5 times the electric horsepower requirement.

The above chart is based on a pump efficiency of 85%. Horsepower varies directly with flow and pressure, so you can multiply to determine values not shown. Examples: For 6000psi, multiply 3000psi values by 2 or 1000psi values by 6. For 100gpm, multiply 25gpm values by 4 or 50gpm values by 2.