

PUMP DATA WORKSHEET

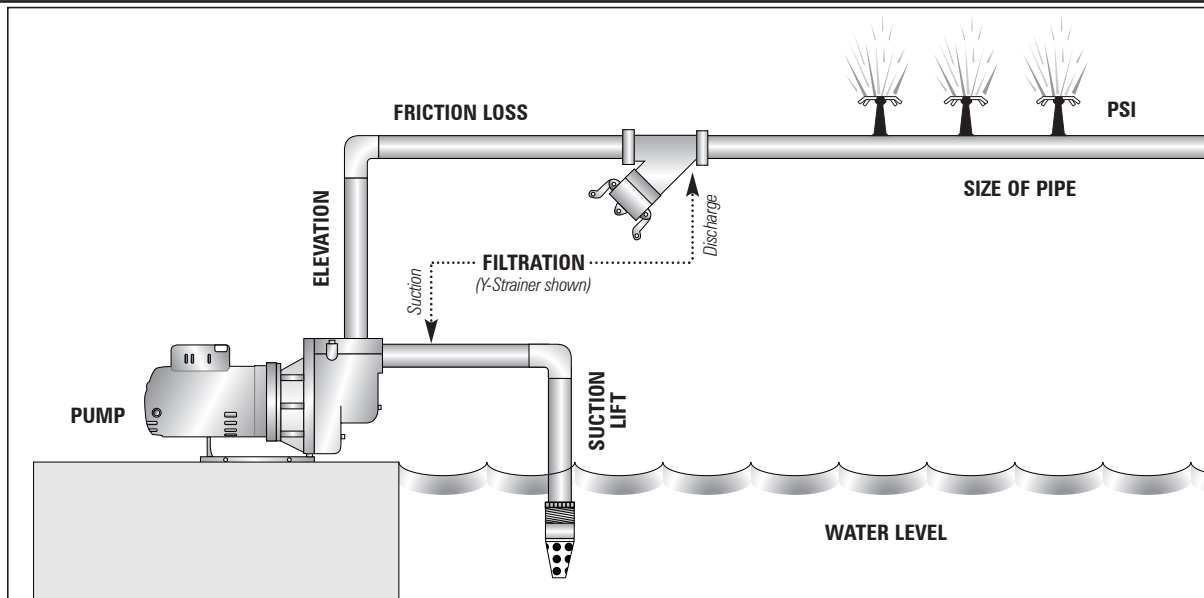
COMPANY NAME _____
ADDRESS _____
CITY / STATE / ZIP _____
CONTACT PERSON _____ **PHONE** _____

GPM **PUMPING REQUIREMENTS**
 To size a pump, first figure total gallonage needed. (For example: Irrigation system, household usage, etc.) _____ GPM

TOTAL DYNAMIC HEAD (TDH)
ELEVATION
 A. Suction Lift
 To determine suction lift, measure the distance between the water level and the pump inlet. (Total measurement in feet) _____ FEET
 B. Elevation Change
 To figure elevation, measure the distance from the pump inlet to the highest point in the system. (Total measurement in feet) _____ FEET
FRICITION LOSS
 To estimate friction loss, first determine the size of pipe used. Refer to friction loss chart on pages 2 and 3. (Total measurement in feet) _____ FEET
PSI - POUNDS PER SQUARE INCH
 Determine the pressure **required** at the end of the line of the largest zone. Convert to head in feet using the following equation. $PSI \times 2.31 = HEAD \text{ IN FEET}$ _____ FEET
TOTAL DYNAMIC HEAD (TDH)
 Total the sum of elevation, friction loss and PSI. This total equals TDH in feet. _____ TDH

MISC. **ELECTRICAL** **FILTRATION** **POWER SUPPLY**
 VOLTAGE: 110 Volt 220 V Suction Engine-driven
 PHASE: Single Phase 3 Phase Discharge Gas

H2O **WATER SUPPLY**
 Suction from Pond Pump in Well Flooded Suction Irrigation Ditch



PHONE: 800-942-4270 • FAX: 970-263-2277
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 WEBSITE: www.munropump.com

SCHEDULE 40 FRICTION LOSS FOR WATER AT 60°F PER 100 FEET OF PIPE

VALUES ARE FOR ESTIMATING PURPOSES ONLY & MAY NOT MEET NEC CODE. DESIGN SHOULD BE VERIFIED WITH A MUNRO REPRESENTATIVE.

Pipe Size	3/4"			1"			1-1/4"			1-1/2"		
	U.S. Gallons Per Minute	Head Loss Feet		VEL. Ft. Per Sec.	Head Loss Feet		VEL. Ft. Per Sec.	Head Loss Feet		VEL. Ft. Per Sec.	Head Loss Feet	
		VEL Ft. Per Sec.	Steel		Plastic	Steel		Plastic	Steel		Plastic	Steel
2	1.20	1.93	1.04	0.80	0.60	0.32						
4	2.40	6.94	3.74	1.50	2.14	1.16	0.86	0.56	0.30	0.63	0.20	0.11
6	3.60	14.70	7.95	2.20	4.54	2.45	1.29	0.85	0.46	0.95	0.56	0.31
8	4.80	25.00	13.50	3.00	7.78	4.20	1.72	1.20	0.65	1.26	0.96	0.52
10	6.00	37.80	20.40	3.70	11.70	6.32	2.15	2.04	1.10	1.58	1.45	0.78
12	7.20	53.00	28.60	4.50	16.40	8.86	2.57	3.08	1.66	1.89	2.04	1.10
15	9.00	80.00	43.30	5.60	24.80	13.39	3.17	6.54	3.53	2.37	3.09	1.67
18	10.80	112.00	60.50	6.70	34.70	18.74	3.86	6.72	3.63	2.84	4.31	2.33
20	12.00	136.00	73.50	7.40	42.10	22.73	4.29	9.13	4.93	3.15	5.24	2.83
25				9.30	63.60	34.34	5.36	11.10	5.99	3.80	7.30	3.94
30				11.10	89.20	48.17	6.43	16.80	9.07	4.72	11.00	5.94
35				13.00	119.00	64.26	7.51	23.50	12.69	5.51	14.70	7.94
40				14.90	152.00	82.08	8.58	31.20	16.85	6.30	18.30	9.88
45				16.70	189.00	102.06	9.64	50.20	27.11	7.03	23.20	12.53
50	0.56	0.05	0.02				10.70	60.40	32.62	7.87	23.40	12.64
55	0.62	0.05	0.03				11.80	72.55	39.18	8.66	34.00	18.36
60	0.67	0.06	0.03				12.90	84.70	45.74	9.44	39.60	21.38
65	0.74	0.08	0.04				13.95	99.35	53.65	10.23	45.90	24.79
70	0.78	0.08	0.05				15.00	114.00	61.56	11.02	53.00	28.62
75	0.85	0.10	0.05				16.10	129.00	69.66	11.80	60.00	32.40
80	0.89	0.11	0.06				17.20	144.00	77.76	12.59	68.00	36.72
85	0.96	0.12	0.06				18.25	161.50	87.21	13.38	75.00	40.50
90	1.00	0.13	0.07				19.30	179.00	96.66	14.71	84.00	45.36
95	1.08	0.15	0.08							14.95	93.00	50.22
100	1.11	0.16	0.09							15.74	102.00	55.08
110	1.25	0.21	0.11							17.31	122.00	65.88
120	1.33	0.23	0.12							18.89	143.00	77.22
130	1.47	0.27	0.15	0.83	0.07	0.04				20.46	166.00	89.64
140	1.56	0.30	0.16	0.90	0.08	0.04				22.04	190.00	102.60
150	1.70	0.36	0.19	0.96	0.09	0.05				23.60	218.00	117.72
160	1.78	0.39	0.21	1.03	0.10	0.06				25.20	245.00	132.30
170	1.92	0.45	0.24	1.09	0.11	0.06				26.80	275.00	148.50
180	2.00	0.48	0.26	1.15	0.13	0.07	0.73	0.042	0.02	28.40	305.00	164.70
190	2.16	0.55	0.30	1.22	0.14	0.08	0.77	0.047	0.03			
200	2.22	0.58	0.32	1.28	0.15	0.08	0.81	0.051	0.03			
220	2.44	0.70	0.38	1.41	0.18	0.10	0.89	0.061	0.03			
240	2.67	0.82	0.44	1.54	0.22	0.12	0.98	0.071	0.04			
260	2.89	0.95	0.51	1.67	0.25	0.14	1.06	0.083	0.04			
280	3.11	1.09	0.59	1.80	0.29	0.15	1.14	0.095	0.05	0.78	0.04	0.02
300	3.33	1.24	0.67	1.92	0.32	0.18	1.22	0.108	0.06	0.85	0.05	0.02
320	3.56	1.39	0.75	2.05	0.37	0.20	1.31	0.120	0.06	0.92	0.05	0.03
340	3.78	1.56	0.84	2.18	0.41	0.22	1.39	0.014	0.01	0.99	0.06	0.03
360	4.00	1.73	0.93	2.30	0.45	0.24	1.47	0.150	0.08	1.03	0.07	0.04
380	4.22	1.92	1.04	2.43	0.50	0.27	1.55	0.170	0.09	1.08	0.07	0.04
400	4.44	2.11	1.14	2.57	0.55	0.30	1.63	0.183	0.10	1.14	0.08	0.04
450	5.00	2.62	1.41	2.88	0.69	0.37	1.83	0.228	0.12	1.28	0.09	0.05
500	5.56	3.19	1.72	3.20	0.84	0.45	2.04	0.277	0.15	1.42	0.12	0.06
550	6.11	3.80	2.05	3.52	1.00	0.54	2.24	0.330	0.18	1.56	0.14	0.07
600	6.66	4.46	2.41	3.85	1.17	0.63	2.44	0.388	0.21	1.70	0.16	0.09
650	7.22	5.17	2.79	4.17	1.36	0.73	2.64	0.450	0.24	1.74	0.19	0.10
700	7.78	5.93	3.20	4.49	1.56	0.84	2.85	0.516	0.28	1.99	0.21	0.12
750	8.34	6.74	3.64	4.81	1.77	0.96	3.06	0.590	0.32	2.13	0.24	0.13
800	8.90	7.60	4.10	5.13	1.99	1.07	3.25	0.660	0.36	2.27	0.28	0.15
850	9.45	8.50	4.59	5.45	2.23	1.20	3.47	0.750	0.41	2.41	0.31	0.17
900	10.00	9.44	5.10	5.77	2.48	1.34	3.66	0.821	0.44	2.56	0.34	0.18
950	10.50	10.20	5.51	6.09	2.74	1.48	3.88	0.910	0.49	2.70	0.33	0.18
1000	11.10	11.50	6.21	6.41	3.02	1.63	4.07	0.998	0.54	2.84	0.41	0.22
1100	12.20	13.70	7.40	7.05	3.60	1.94	4.48	1.190	0.64	3.12	0.50	0.27
1200	13.30	16.10	8.69	7.69	4.23	2.28	4.89	1.400	0.76	3.41	0.58	0.31
1300	14.40	18.60	10.04	8.33	4.90	2.65	5.30	1.620	0.87	3.69	0.67	0.36
1400	15.60	21.40	11.56	8.97	5.62	3.03	5.70	1.86	1.00	3.98	0.77	0.42
1500	16.70	24.30	13.12	9.61	6.39	3.45	6.10	2.11	1.14	4.26	0.88	0.47
1600	17.80	27.40	14.80	10.30	7.20	3.89	6.51	2.38	1.29	4.55	0.99	0.53
1800	20.00	34.10	18.41	11.50	8.95	4.83	7.32	2.96	1.60	5.11	1.23	0.66
2000	22.20	41.40	22.36	12.80	10.90	5.89	8.14	3.60	1.94	5.68	1.50	0.81
2200	24.40	49.40	26.68	14.10	13.00	7.02	8.95	4.29	2.32	6.25	1.78	0.96
2400	26.70	58.00	31.32	15.40	15.20	8.21	9.76	5.04	2.72	6.81	2.10	1.13
2600				16.70	17.70	9.56	10.60	5.84	3.15	7.38	2.43	1.31
2800				18.00	20.30	10.96	11.40	6.70	3.62	7.95	2.78	1.50
3000				19.20	23.00	12.42	12.20	7.61	4.11	8.52	3.17	1.71
3200				20.80	26.80	14.47	13.00	8.58	4.63	9.10	3.51	1.90
3500				22.40	30.60	16.52	14.30	10.08	5.44	9.95	4.21	2.27
3800	2.70	0.17	0.09	24.00	34.90	18.85	15.51	13.40	7.24	10.80	4.90	2.65
4200	2.99	0.20	0.11	27.20	44.00	23.76	16.91	14.75	7.97	11.92	5.83	3.15
4500	3.20	0.23	0.12	28.80	48.80	26.35	18.30	16.10	8.69	12.80	6.70	3.62
5000	3.55	0.28	0.15	32.00	59.30	32.02	20.30	19.60	10.58	14.20	8.15	4.40
5500	3.91	0.33	0.18	35.30	70.70	38.18	22.40	23.40	12.64	15.60	9.72	5.25
6000	4.24	0.39	0.21				24.40	27.50	14.85	17.00	11.40	6.16
6500	4.62	0.45	0.24				26.40	31.80	17.17	18.40	13.20	7.13
7000	5.10	0.54	0.29				28.50	36.50	19.71	19.90	15.20	8.21
8000	5.65	0.66	0.36							22.70	19.40	10.48
9000	6.40	0.82	0.44							25.60	24.20	13.07
10000	7.11	1.00	0.54	4.56	0.34	0.18				28.40	29.40	15.88
12000	8.55	1.40	0.76	5.47	0.47	0.26				34.10	41.20	22.25
14000	9.95	1.86	1.00	6.40	0.63	0.34				39.80	54.70	29.54
16000	11.38	2.42	1.31	7.30	0.81	0.44	5.03	0.33	0.18			
18000	12.80	2.98	1.61	8.20	1.00	0.54	5.66	0.41	0.22			
20000	14.20	3.61	1.95	9.12	1.22	0.66	6.30	0.50	0.27			
22000				9.60	1.48	0.80	6.92	0.59	0.32			
24000				10.09	1.73	0.93	7.55	0.69	0.38			
26000				11.42	2.00	1.08	8.18	0.81	0.44	6.02	0.38	0.21
28000				12.75	2.27	1.23	8.80	0.94	0.50	6.48	0.43	0.23
30000							9.44	1.07	0.58	6.94	0.50	0.27
32000							10.07	1.20	0.65	7.40	0.46	0.25
34000							10.70	1.34	0.72	7.86	0.63	0.34
36000							11.32	1.50	0.81	8.33	0.70	0.38
38000							11.95	1.65	0.89	8.80	0.78	0.42
40000							12.57	1.82	0.98	9.25	0.86	0.46
42000							13.20	1.99	1.07	9.72	0.94	0.51
44000										10.18	1.01	0.55
46000										10.63	1.10	0.59
48000										11.10	1.19	0.64
50000										11.58	1.28	0.69
52000										12.01	1.38	0.75
54000										12.49	1.49	0.80
56000										12.93	1.60	0.86

