

PROJECT: Allen Solar - Dry Fire System  
 DATE: 1/10/2024

Force Main Size **6**  
 Force Main Length **1400**  
 Force Main C Value **130**  
 Static Head **5**

Insert Diameter of Force Main in inches  
 Insert Length of Force Main in Feet  
 Insert Hazen-William Friction Factor (100 to 140)  
 Insert Static Head in Feet

Flow GPM	Flow MGD	C Value	Pipe Diameter INCHES	Pipe Length FEET	Frictional Head FEET	Static Head FEET	Velocity FT/SEC	Velocity Head FEET	Total Head FEET	Dynamic Head Loss Feet	Water Hp Hp	
0	0	130	6	1400	0	5.00	0.00	0.00	5.00	0.00	0.00	
10	14,400	130	6	1400	0.02	5.00	0.11	0.00	5.02	0.02	0.01	
20	28,800	130	6	1400	0.08	5.00	0.23	0.00	5.08	0.08	0.03	
30	43,200	130	6	1400	0.16	5.00	0.34	0.00	5.16	0.16	0.04	
38	54,720	130	6	1400	0.25	5.00	0.43	0.00	5.25	0.25	0.05	
50	72,000	130	6	1400	0.41	5.00	0.57	0.01	5.42	0.42	0.07	
60	86,400	130	6	1400	0.57	5.00	0.68	0.01	5.58	0.58	0.08	
70	100,800	130	6	1400	0.76	5.00	0.79	0.01	5.77	0.77	0.10	
80	115,200	130	6	1400	0.98	5.00	0.91	0.01	5.99	0.99	0.12	
90	129,600	130	6	1400	1.22	5.00	1.02	0.02	6.23	1.23	0.14	
100	144,000	130	6	1400	1.48	5.00	1.14	0.02	6.50	1.50	0.16	
110	158,400	130	6	1400	1.76	5.00	1.25	0.02	6.79	1.79	0.19	
120	172,800	130	6	1400	2.07	5.00	1.36	0.03	7.10	2.10	0.22	
130	187,200	130	6	1400	2.40	5.00	1.48	0.03	7.44	2.44	0.24	
140	201,600	130	6	1400	2.76	5.00	1.59	0.04	7.80	2.80	0.28	
150	216,000	130	6	1400	3.13	5.00	1.70	0.05	8.18	3.18	0.31	
200	288,000	130	6	1400	5.33	5.00	2.27	0.08	10.41	5.41	0.53	
250	360,000	130	6	1400	8.06	5.00	2.84	0.13	13.18	8.18	0.83	
300	432,000	130	6	1400	11.29	5.00	3.41	0.18	16.47	11.47	1.25	5.0
350	504,000	130	6	1400	15.01	5.00	3.97	0.25	20.26	15.26	1.79	6.6
400	576,000	130	6	1400	19.22	5.00	4.54	0.32	24.54	19.54	2.48	8.5
450	648,000	130	6	1400	23.90	5.00	5.11	0.41	29.30	24.30	3.33	10.5
500	720,000	130	6	1400	29.04	5.00	5.68	0.50	34.54	29.54	4.37	12.8
550	792,000	130	6	1400	34.64	5.00	6.24	0.61	40.25	35.25	5.60	15.3
600	864,000	130	6	1400	40.69	5.00	6.81	0.72	46.41	41.41	7.04	17.9
650	936,000	130	6	1400	47.18	5.00	7.38	0.85	53.03	48.03	8.71	20.8
700	1,008,000	130	6	1400	54.12	5.00	7.95	0.98	60.10	55.10	10.63	23.9
750	1,080,000	130	6	1400	61.49	5.00	8.52	1.13	67.61	62.61	12.82	27.1
800	1,152,000	130	6	1400	69.28	5.00	9.08	1.28	75.56	70.56	15.28	30.5
850	1,224,000	130	6	1400	77.51	5.00	9.65	1.45	83.95	78.95	18.04	34.2
900	1,296,000	130	6	1400	86.15	5.00	10.22	1.62	92.77	87.77	21.11	38.0
950	1,368,000	130	6	1400	95.21	5.00	10.79	1.81	102.02	97.02	24.50	42.0
1000	1,440,000	130	6	1400	104.69	5.00	11.35	2.00	111.69	106.69	28.24	46.2
1500	2,160,000	130	6	1400	221.66	5.00	17.03	4.50	231.16	226.16	87.65	97.9
2000	2,880,000	130	6	1400	377.41	5.00	22.71	8.01	390.42	385.42	197.39	
2500	3,600,000	130	6	1400	570.30	5.00	28.38	12.51	587.81	582.81	371.49	
3000	4,320,000	130	6	1400	799.07	5.00	34.06	18.01	822.09	817.09	623.46	
4000	5,760,000	130	6	1400	1360.58	5.00	45.41	32.03	1397.60	1392.60	1413.23	
5000	7,200,000	130	6	1400	2055.92	5.00	56.77	50.04	2110.96	2105.96	2668.21	
6000	8,640,000	130	6	1400	2880.66	5.00	68.12	72.06	2957.72	2952.72	4486.19	
7000	10,080,000	130	6	1400	3831.28	5.00	79.48	98.08	3934.36	3929.36	6962.11	
8000	11,520,000	130	6	1400	4904.88	5.00	90.83	128.11	5037.99	5032.99	10188.64	
9000	12,960,000	130	6	1400	6099.03	5.00	102.18	162.13	6266.17	6261.17	14256.52	
10000	14,400,000	130	6	1400	7411.61	5.00	113.54	200.17	7616.77	7611.77	19254.84	

Force Main Volume (gal) 2055.13