

**TABLE 3 - CARRYING CAPACITY AND FRICTION LOSS FOR SCHEDULE 40 THERMOPLASTIC PIPE**  
 (Independent variables: Gallons per minute and nominal pipe size O.D. Dependent variables: Velocity, friction head and pressure drop per 100 feet of pipe, interior smooth.)

Per Minute Gallons	1 1/2 in.			2 in.			2 1/2 in.			3 in.		
	Velocity Feet Per Second	Friction Head Feet	Friction Loss Pounds Per Square Inch	Velocity Feet Per Second	Friction Head Feet	Friction Loss Pounds Per Square Inch	Velocity Feet Per Second	Friction Head Feet	Friction Loss Pounds Per Square Inch	Velocity Feet Per Second	Friction Head Feet	Friction Loss Pounds Per Square Inch
1	1.13	2.08	0.90	0.63	1.02	0.22	0.77	1.33	0.06	0.33	0.07	0.015
2	2.26	4.16	1.80	1.26	2.04	0.44	1.54	2.66	0.19	0.66	0.09	0.009
3	3.39	6.24	2.70	1.89	3.06	0.66	2.31	3.99	0.33	0.99	0.13	0.007
4	4.52	8.32	3.60	2.52	4.08	0.88	2.98	5.32	0.44	1.33	0.16	0.006
5	5.64	10.40	4.50	3.15	5.10	1.10	3.65	6.65	0.55	1.66	0.19	0.005
6	6.77	12.48	5.40	3.78	6.12	1.32	4.32	7.98	0.66	1.99	0.22	0.004
7	7.90	14.56	6.30	4.41	7.14	1.54	5.00	9.32	0.77	2.31	0.25	0.003
8	9.03	16.64	7.20	5.04	8.16	1.76	5.67	10.66	0.88	2.64	0.28	0.002
9	10.16	18.72	8.10	5.67	9.18	1.98	6.34	12.00	1.00	2.98	0.31	0.002
10	11.28	20.80	9.00	6.30	10.20	2.20	7.01	13.34	1.11	3.31	0.34	0.001
15	16.92	31.20	13.50	9.45	15.30	3.30	10.51	20.01	1.66	5.00	0.50	0.001
20	22.56	41.60	18.00	12.60	20.40	4.40	14.01	26.68	2.20	6.68	0.67	0.001
25	28.20	52.00	22.50	15.75	25.50	5.50	17.51	33.35	2.75	8.35	0.83	0.001
30	33.84	62.40	27.00	18.90	30.60	6.60	21.01	40.02	3.30	10.02	1.00	0.001
35	39.48	72.80	31.50	22.05	35.70	7.70	24.51	46.69	3.85	11.69	1.17	0.001
40	45.12	83.20	36.00	25.20	40.80	8.80	28.01	53.36	4.40	13.36	1.33	0.001
45	50.76	93.60	40.50	28.35	45.90	9.90	31.51	60.03	4.95	15.03	1.50	0.001
50	56.40	104.00	45.00	31.50	51.00	11.00	35.01	66.70	5.50	16.70	1.67	0.001
60	68.16	136.80	54.00	37.80	67.80	13.20	43.51	87.00	6.60	21.00	2.00	0.001
70	79.92	169.60	63.00	44.10	84.60	15.40	52.01	107.30	7.70	25.30	2.33	0.001
80	91.68	202.40	72.00	50.40	101.40	17.60	60.51	127.60	8.80	29.60	2.66	0.001
90	103.44	235.20	81.00	56.70	118.20	19.80	69.01	147.90	9.90	33.90	3.00	0.001
100	115.20	268.00	90.00	63.00	135.00	22.00	77.51	168.20	11.00	38.20	3.33	0.001
125	151.20	350.40	112.50	81.00	175.50	27.50	101.25	217.50	13.75	47.75	4.17	0.001
150	187.20	432.80	135.00	99.00	216.00	33.00	125.00	266.80	16.50	57.25	5.00	0.001
175	223.20	515.20	157.50	117.00	256.50	38.50	148.75	316.10	19.25	66.75	5.83	0.001
200	259.20	597.60	180.00	135.00	297.00	44.00	172.50	365.40	22.00	76.25	6.67	0.001
250	324.00	756.00	225.00	171.00	378.00	55.00	217.50	456.75	27.50	95.25	8.33	0.001
300	388.80	914.40	270.00	207.00	459.00	66.00	262.50	548.10	33.00	114.25	10.00	0.001
350	453.60	1072.80	315.00	243.00	540.00	77.00	307.50	639.45	38.50	133.25	11.67	0.001
400	518.40	1231.20	360.00	279.00	621.00	88.00	352.50	730.80	44.00	152.25	13.33	0.001
450	583.20	1389.60	405.00	315.00	702.00	99.00	397.50	822.15	49.50	171.25	15.00	0.001
500	648.00	1548.00	450.00	351.00	783.00	110.00	442.50	913.50	55.00	190.25	16.67	0.001
750	972.00	2271.60	675.00	526.50	1129.50	165.00	641.25	1320.75	82.50	271.75	25.00	0.001
1000	1296.00	3004.80	900.00	702.00	1506.00	220.00	840.00	1728.00	110.00	353.25	33.33	0.001
1250	1620.00	3738.00	1125.00	877.50	1882.50	275.00	1038.75	2135.25	137.50	434.75	41.67	0.001
1500	1944.00	4471.20	1350.00	1053.00	2259.00	330.00	1237.50	2542.50	165.00	516.25	50.00	0.001
2000	2592.00	5944.80	1800.00	1404.00	2942.40	440.00	1616.25	3324.00	220.00	678.00	66.67	0.001
2500	3240.00	7418.40	2250.00	1755.00	3625.80	550.00	1995.00	4105.50	275.00	839.75	83.33	0.001
3000	3888.00	8892.00	2700.00	2106.00	4309.20	660.00	2373.75	4887.00	330.00	1001.50	100.00	0.001
3500	4536.00	10365.60	3150.00	2457.00	4992.60	770.00	2752.50	5668.50	385.00	1163.25	116.67	0.001
4000	5184.00	11839.20	3600.00	2808.00	5676.00	880.00	3131.25	6450.00	440.00	1325.00	133.33	0.001
4500	5832.00	13312.80	4050.00	3159.00	6359.40	990.00	3510.00	7231.50	495.00	1486.75	150.00	0.001
5000	6480.00	14786.40	4500.00	3510.00	7042.80	1100.00	3888.75	8013.00	550.00	1648.50	166.67	0.001
5500	7128.00	16260.00	4950.00	3861.00	7726.20	1210.00	4267.50	8794.50	605.00	1810.25	183.33	0.001
6000	7776.00	17733.60	5400.00	4212.00	8409.60	1320.00	4646.25	9576.00	660.00	1972.00	199.99	0.001
6500	8424.00	19207.20	5850.00	4563.00	9093.00	1430.00	5025.00	10357.50	715.00	2133.75	216.67	0.001
7000	9072.00	20680.80	6300.00	4914.00	9776.40	1540.00	5403.75	11139.00	770.00	2295.50	233.33	0.001
7500	9720.00	22154.40	6750.00	5265.00	10459.80	1650.00	5782.50	11920.50	825.00	2457.25	250.00	0.001
8000	10368.00	23628.00	7200.00	5616.00	11143.20	1760.00	6161.25	12702.00	880.00	2619.00	266.67	0.001
8500	11016.00	25101.60	7650.00	5967.00	11826.60	1870.00	6540.00	13483.50	935.00	2780.75	283.33	0.001
9000	11664.00	26575.20	8100.00	6318.00	12510.00	1980.00	6918.75	14265.00	990.00	2942.50	299.99	0.001
9500	12312.00	28048.80	8550.00	6669.00	13193.40	2090.00	7297.50	15046.50	1045.00	3104.25	316.67	0.001
10000	12960.00	29522.40	9000.00	7020.00	13876.80	2200.00	7676.25	15828.00	1100.00	3266.00	333.33	0.001

FLOW CHART FOR WATER PIPE

CAUTION: Flow velocity should not exceed 5 feet per second.  
 PVC and CPVC pipe cannot be used for compressed air service.