Carrying Capacity and Friction Loss for Schedule 40 Thermoplastic Pipe

(Indepedent 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.)

Gallons per Minute	Flow Velocity (Feet Per Second)	Friction Head Loss (Ft Water/100Ft)	Friction Pressure Loss (PSI/100Ft)	Maximum Surge Pressure (PSI)	Flow Velocity (Feet Per Second)	Friction Head Loss (Ft Water/100Ft)	Friction Pressure Loss (PSI/100Ft)	Maximum Surge Pressure (PSI)	Flow velocity (Feet Per Second)	Friction Head Loss (Ft Water/100Ft)	Friction Pressure Loss (PSI/100Ft)	Maximum Surge Pressure (PSI)	Flow Velocity (Feet Per Second)	Friction Head Loss (Ft Water/100Ft)	Friction Pressure Loss (PSI/100Ft)	Maximum Surge Pressure (PSI)	Flow velocity (Feet Per Second)	Friction Head Loss (Ft Water/100Ft)	Friction Pressure Loss (PSI/100Ft)	Maximum Surge Pressure (PSI)	Flow velocity (Feet Per Second)	Friction Head Loss (Ft Water/100Ft)	Friction Pressure Loss (PSI/100Ft)	Maximum Surge Pressure (PSI)	Flow velocity (Feet Per Second)	Friction Head Loss (Ft Water/100Ft)	Friction Pressure Loss (PSI/100Ft)	Maximum Surge Pressure (PSI)
1																												
3																												
5																											2.5"	
7																									0.478	0.014	0.020	9.142
9			3"																						0.615	0.074	0.032	11.754
10	0.441	0.031	0.013	7.870																					0.683	0.090	0.039	13.060
15	0.662	0.066	0.029	11.805			4"																		1.024	0.191	0.083	19.590
20	0.883	0.113	0.049	15.740	0.511	0.030	0.013	8.420																	1.367	0.326	0.141	26.120
25	1.103	0.170	0.074	19.675	0.639	0.045	0.019	10.525																	1.708	0.492	0.213	32.650
30	1.324	0.238	0.103	23.610	0.767	0.063	0.027	12.630																	2.050	0.690	0.298	39.180
35	1.545	0.317	0.137	27.545	0.894	0.084	0.036	14.735																	2.391	0.918	0.397	45.710
40	1.766	0.406	0.176	31.480	1.022	0.107	0.046	16.840																	2.733	1.176	0.508	52.240
45	1.986	0.505	0.218	35.415	1.150	0.134	0.058	18.945																	3.075	1.463	0.632	28.770
50	2.207	0.614	0.265	39.350	1.278	0.162	0.070	21.050																	3.416	1.778	0.768	65.300
60	2.648	0.861	0.372	47.220	1.533	0.228	0.098	25.260																	4.100	2.492	1.077	78.360
70	3.090	1.145	0.495	55.090	1.789	0.303	0.131	29.470																	4.783	3.315	1.433	91.420
80	3.531	1.486	0.634	62.960	2.044	0.388	0.168	33.680																	5.466	4.245	1.835	104.480
90	3.973	1.824	0.755	70.830	2.300	0.483	0.209	37890																	6.149	5.280	2.282	117.540
100	4.414	2.217	0.958	78.700	2.555	0.587	0.254	42.100																	6.833	6.418	2.774	130600
125	5.517	3.351	1.449	98.375	3.194	0.887	0.383	52.625																	8.541	9.702	4.192	163.250
150	6.621	4.699	2.031	118.050	3.833	1.243	0.537	63.150																				
175	7.724	6.250	2.701	137.725	4.472	1.654	0.715	73.675																				
200	8.828	8.003	3.459	157.400	5.111	2.117	0.915	84.200																				
250					6.389	3.201	1.384	105.250																				
300					7.666	4.487	1.939	126.300																				
350					8.944	5.969	2.580	147.350																				
400																												
450																												
500																												
750																												
1000																												
1250																												
1500																												
1750																												

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

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