PVC Class 315 IPS Plastic Pipe

(1120, 1220) SDR 13.5 C=150

psi Loss per 100 Feet of Pipe (psi/100 ft.)

Sizes 1/2" through 6" Flow 1 through 600 gpm

Nominal Size	1/2"		3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
Pipe OD	0.840		1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625	
Avg. ID	0.6960		0.8740		1.1010		1.3940		1.5980		2.0030		2.4230		2.9510		3.7940		5.5840	
Avg. Wall	0.072		0.088		0.107		0.133		0.151		0.186		0.226		0.275		0.353		0.521	
Tolerance	0.020		0.020		0.020		0.020		0.020		0.020		0.026		0.031		0.040		0.059	
Min. Wall	0.062		0.078		0.097		0.123		0.141		0.176		0.213		0.259		0.333		0.491	
Flow (gpm)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)	Velocity (ft/s)	Loss (psi)
1	0.84	0.25	0.53	0.08	0.34	0.03	0.21	0.01	0.16	0.00	0.10	0.00	0.07	0.00	0.05	0.00	0.03	0.00	0.01	0.00
2	1.68	0.90	1.07	0.30	0.67	0.10	0.42	0.03	0.32	0.02	0.20	0.01	0.14	0.00	0.09	0.00	0.06	0.00	0.03	0.00
3	2.53	1.90	1.60	0.63	1.01	0.20	0.63	0.06	0.48	0.03	0.31	0.01	0.21	0.00	0.14	0.00	0.09	0.00	0.04	0.00
4	3.37	3.24	2.14	1.07	1.35	0.35	0.84	0.11	0.64	0.06	0.41	0.02	0.28	0.01	0.19	0.00	0.11	0.00	0.05	0.00
5	4.21	4.89	2.67	1.61	1.68	0.53	1.05	0.17	0.80	0.09	0.51	0.03	0.35	0.01	0.23	0.00	0.14	0.00	0.07	0.00
6	5.05	6.86	3.20	2.26	2.02	0.74	1.26	0.23	0.96	0.12	0.61	0.04	0.42	0.02	0.28	0.01	0.17	0.00	0.08	0.00
7	5.90	9.12	3.74	3.01	2.36	0.98	1.47	0.31	1.12	0.16	0.71	0.05	0.49	0.02	0.33	0.01	0.20	0.00	0.09	0.00
8	6.74	11.68	4.27	3.86	2.69	1.25	1.68	0.40	1.28	0.20	0.81	0.07	0.56	0.03	0.37	0.01	0.23	0.00	0.10	0.00
9	7.58	14.53	4.81	4.80	3.03	1.56	1.89	0.49	1.44	0.25	0.92	0.08	0.63	0.03	0.42	0.01	0.26	0.00	0.12	0.00
10	8.42	17.66	5.34	5.83	3.37	1.90	2.10	0.60	1.60	0.31	1.02	0.10	0.69	0.04	0.47	0.02	0.28	0.00	0.13	0.00
11	9.26	21.07	5.88	6.96	3.70	2.26	2.31	0.72	1.76	0.37	1.12	0.12	0.76	0.05	0.52	0.02	0.31	0.01	0.14	0.00
12	10.11	24.75	6.41	8.17	4.04	2.66	2.52	0.84	1.92	0.43	1.22	0.14	0.83	0.06	0.56	0.02	0.34	0.01	0.16	0.00
14	11.79	32.93	7.48	10.87	4.71	3.53	2.94	1.12	2.24	0.58	1.42	0.19	0.97	0.08	0.66	0.03	0.40	0.01	0.18	0.00
16	13.48	42.16	8.55	13.92	5.39	4.53	3.36	1.44	2.56	0.74	1.63	0.25	1.11	0.10	0.75	0.04	0.45	0.01	0.21	0.00
18	15.16	52.44	9.61	17.32	6.06	5.63	3.78	1.79	2.88	0.92	1.83	0.31	1.25	0.12	0.84	0.05	0.51	0.01	0.24	0.00
20			10.68	21.05	6.73	6.84	4.20	2.17	3.20	1.12	2.03	0.37	1.39	0.15	0.94	0.06	0.57	0.02	0.26	0.00
22			11.75	25.11	7.40	8.16	4.62	2.59	3.52	1.33	2.24	0.44	1.53	0.18	1.03	0.07	0.62	0.02	0.29	0.00
24			12.82	29.50	8.08	9.59	5.04	3.04	3.83	1.57	2.44	0.52	1.67	0.21	1.12	0.08	0.68	0.02	0.31	0.00
26			13.89	34.21	8.75	11.12	5.46	3.53	4.15	1.82	2.64	0.60	1.81	0.24	1.22	0.09	0.74	0.03	0.34	0.00
28			14.96	39.25	9.42	12.76	5.88	4.05	4.47	2.08	2.85	0.69	1.95	0.27	1.31	0.11	0.79	0.03	0.37	0.00
30			16.02	44.60	10.10	14.50	6.30	4.60	4.79	2.37	3.05	0.79	2.08	0.31	1.41	0.12	0.85	0.04	0.39	0.01
35					11.78	19.29	7.35	6.12	5.59	3.15	3.56	1.05	2.43	0.42	1.64	0.16	0.99	0.05	0.46	0.01
40					13.46	24.70	8.40	7.84	6.39	4.03	4.07	1.34	2.78	0.53	1.87	0.20	1.13	0.06	0.52	0.01
45					15.15	30.72	9.45	9.75	7.19	5.01	4.58	1.67	3.13	0.66	2.11	0.25	1.28	0.07	0.59	0.01
50					16.83	37.34	10.50	11.85	7.99	6.09	5.08	2.03	3.47	0.80	2.34	0.31	1.42	0.09	0.65	0.01
55							11.55	14.13	8.79	7.27	5.59	2.42	3.82	0.96	2.58	0.37	1.56	0.11	0.72	0.02
60							12.60	16.60	9.59	8.54	6.10	2.85	4.17	1.13	2.81	0.43	1.70	0.13	0.79	0.02
65							13.65	19.26	10.39	9.91	6.61	3.30	4.52	1.31	3.05	0.50	1.84	0.15	0.85	0.02
70							14.70	22.09	11.18	11.37	7.12	3.79	4.86	1.50	3.28	0.57	1.98	0.17	0.92	0.03
75							15.75	25.10	11.98	12.91	7.63	4.30	5.21	1.70	3.51	0.65	2.13	0.19	0.98	0.03
80							16.80	28.29	12.78	14.55	8.14	4.85	5.56	1.92	3.75	0.74	2.27	0.22	1.05	0.03
85									13.58	16.28	8.64	5.42	5.91	2.15	3.98	0.82	2.41	0.24	1.11	0.04
90									14.38	18.10	9.15	6.03	6.25	2.39	4.22	0.92	2.55	0.27	1.18	0.04
95									15.18	20.01	9.66	6.67	6.60	2.64	4.45	1.01	2.69	0.30	1.24	0.05
100									15.98	22.00	10.17	7.33	6.95	2.90	4.69	1.11	2.83	0.33	1.31	0.05
110											11.19	8.74	7.64	3.46	5.15	1.33	3.12	0.39	1.44	0.06
120											12.20	10.27	8.34	4.07	5.62	1.56	3.40	0.46	1.57	0.07
130											13.22	11.92	9.03	4.72	6.09	1.81	3.68	0.53	1.70	0.08
140											14.24	13.67	9.73	5.41	6.56	2.07	3.97	0.61	1.83	0.09
150											15.25	15.53	10.42	6.15	7.03	2.36	4.25	0.69	1.96	0.11
160											16.27	17.50	11.12	6.93	7.50	2.66	4.54	0.78	2.09	0.12
170													11.81	7.76	7.96	2.97	4.82	0.87	2.22	0.13
180													12.51	8.62	8.43	3.30	5.10	0.97	2.36	0.15
190													13.20	9.53	8.90	3.65	5.39	1.08	2.49	0.16
200													13.90	10.48	9.37	4.02	5.67	1.18	2.62	0.18
225													15.64	13.03	10.54	4.99	6.38	1.47	2.94	0.22
250													17.37	15.84	11.71	6.07	7.09	1.79	3.27	0.27
275															12.88	7.24	7.79	2.13	3.60	0.33
300															14.06	8.51	8.50	2.50	3.93	0.38
325															15.23	9.87	9.21	2.91	4.25	0.44
350															16.40	11.32	9.92	3.33	4.58	0.51
375															17.57	12.86	10.63	3.79	4.91	0.58
400																	11.34	4.27	5.23	0.65
425																	12.05	4.77	5.56	0.73
450																	12.75	5.31	5.89	0.81
475																	13.46	5.87	6.22	0.89
500																	14.17	6.45	6.54	0.98
550																	15.59	7.70	7.20	1.17
600																	17.01	9.04	7.85	1.38

Note: Dark shaded area of chart indicates velocities over 5' per second. Use with caution

The velocity values were derived using the following equation $V = \frac{0.408 \times Q_{gpm}}{d^2}$

Table are based upon the following Hazen-Williams equation: $H_f = 0.2083 \times \left(\frac{100}{C}\right)^{1.852} \times \frac{Q^{1.852}}{D^{4.8655}}$ for change in psi per foot of elevation. Pressure loss for uphill elevation and pressure gain for downhill elevation changes.