

Schedule 40 Standard Steel Pipe

C=100

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	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026	6.065
Avg. Wall	0.109	0.113	0.133	0.140	0.145	0.154	0.203	0.216	0.237	0.280
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)
1	1.05	0.91	0.60	0.23	0.37	0.07	0.21	0.02	0.16	0.01
2	2.11	3.28	1.20	0.84	0.74	0.26	0.43	0.07	0.31	0.03
3	3.16	6.95	1.80	1.77	1.11	0.55	0.64	0.14	0.47	0.07
4	4.22	11.85	2.40	3.02	1.48	0.93	0.86	0.25	0.63	0.12
5	5.27	17.91	3.00	4.56	1.85	1.41	1.07	0.37	0.79	0.18
6	6.33	25.10	3.61	6.39	2.22	1.97	1.29	0.52	0.94	0.25
7	7.38	33.40	4.21	8.50	2.60	2.63	1.50	0.69	1.10	0.33
8	8.44	42.77	4.81	10.88	2.97	3.36	1.71	0.89	1.26	0.42
9	9.49	53.19	5.41	13.54	3.34	4.18	1.93	1.10	1.42	0.52
10	10.55	64.65	6.01	16.45	3.71	5.08	2.14	1.34	1.57	0.63
11	11.60	77.14	6.61	19.63	4.08	6.06	2.36	1.60	1.73	0.75
12	12.65	90.62	7.21	23.06	4.45	7.12	2.57	1.88	1.89	0.89
14			8.41	30.68	5.19	9.48	3.00	2.50	2.20	1.18
16			9.61	39.29	5.93	12.14	3.43	3.20	2.52	1.51
18			10.82	48.87	6.67	15.10	3.86	3.97	2.83	1.88
20			12.02	59.40	7.42	18.35	4.28	4.83	3.15	2.28
22			13.22	70.87	8.16	21.89	4.71	5.76	3.46	2.72
24					8.90	25.72	5.14	6.77	3.78	3.20
26					9.64	29.83	5.57	7.85	4.09	3.71
28					10.38	34.22	6.00	9.01	4.41	4.25
30					11.12	38.88	6.43	10.24	4.72	4.83
35					12.98	51.72	7.50	13.62	5.51	6.43
40							8.57	17.44	6.30	8.24
45							9.64	21.69	7.08	10.25
50							10.71	26.36	7.87	12.45
55							11.78	31.45	8.66	14.86
60							12.85	36.95	9.44	17.45
65							13.93	42.86	10.23	20.24
70									11.02	23.22
75									11.81	26.39
80									12.59	29.74
85									13.38	33.27
90									8.59	10.96
95									9.07	12.12
100									9.55	13.33
110									10.50	15.90
120									11.46	18.68
130									12.41	21.66
140									13.37	24.85
150									10.04	11.89
160									10.71	13.40
170									11.38	15.00
180									12.05	16.67
190									12.72	18.43
200									13.39	20.26
225									9.75	8.76
250									10.84	10.64
275									11.92	12.70
300									13.00	14.92
325									8.18	4.61
350									8.81	5.29
375									9.44	6.01
400									10.07	6.77
425									10.70	7.58
450									11.33	8.43
475									11.96	9.31
500									12.59	10.24
550										
600										

Note: Dark shaded area of chart indicates velocities over 7' 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.