

FRICTION LOSS OF WATER IN FEET PER 100 FEET LENGTH OF PIPE

Based on Hazen & Williams formula using constant 100.0 sizes of standard pipe in inches.

U.S. Gallons Per Min.	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet	Velocity Feet Per Sec.	Loss in Feet
2	2.10	7.40	1.20	1.90																
4	4.21	27.00	2.41	7.00	1.49	2.14	0.86	0.57	0.63	0.26										
6	6.31	57.00	3.61	14.70	2.23	4.55	1.29	1.20	0.94	0.56	0.61	0.20								
8	8.42	98.00	4.81	25.00	2.98	7.80	1.72	2.03	1.26	0.95	0.82	0.33	0.52	0.11						
10	10.52	147.00	6.02	38.00	3.72	11.70	2.14	3.05	1.57	1.43	1.02	0.50	0.65	0.17	0.45	0.07				
12			7.22	53.00	4.46	16.40	2.57	4.30	1.89	2.01	1.23	0.79	0.78	0.23	0.54	0.10				
15			9.02	80.00	5.60	25.00	3.21	6.50	2.36	3.00	1.53	1.08	0.98	0.36	0.68	0.15				
18	1 1/2"		10.84	108.20	6.69	35.00	3.86	9.10	2.83	4.24	1.84	1.49	1.18	0.50	0.82	0.21				
20			12.03	136.00	7.44	42.00	4.29	11.10	3.15	5.20	2.04	1.82	1.31	0.61	0.91	0.25	0.51	0.06		
25					9.30	64.00	5.36	16.60	3.80	7.30	2.55	2.73	1.63	0.92	1.13	0.38	0.64	0.09		
30					11.15	89.00	6.43	23.00	4.72	11.00	3.06	3.84	1.96	1.29	1.36	0.54	0.77	0.13	0.49	0.04
35					13.02	119.00	7.51	31.20	5.51	14.70	3.57	5.10	2.29	1.72	1.59	0.71	0.89	0.17	0.57	0.06
40			3 3/4"		14.88	152.00	8.58	40.00	6.30	18.80	4.08	6.60	2.61	2.20	1.82	0.91	1.02	0.22	0.65	0.08
45							9.65	50.00	7.08	23.20	4.60	8.20	2.94	2.80	2.04	1.15	1.15	0.28	0.73	0.09
50							10.72	60.00	7.87	28.40	5.11	9.90	3.27	3.32	2.27	1.38	1.28	0.34	0.82	0.11
55							11.78	72.00	8.66	34.00	5.62	11.80	3.59	4.01	2.45	1.58	1.41	0.41	0.90	0.14
60					1"		12.87	85.00	9.44	39.60	6.13	13.90	3.92	4.65	2.72	1.92	1.53	0.47	0.98	0.16
65							13.92	99.70	10.23	45.90	6.64	16.10	4.24	5.40	2.89	2.16	1.66	0.53	1.06	0.19
70							15.01	113.00	11.02	53.00	7.15	18.40	4.58	6.20	3.18	2.57	1.79	0.63	1.14	0.21
75							16.06	129.00	11.80	60.00	7.66	20.90	4.91	7.10	3.33	3.00	1.91	0.73	1.22	0.24
80							17.16	145.00	12.59	68.00	8.17	23.70	5.23	7.90	3.63	3.28	2.04	0.81	1.31	0.27
85							18.21	163.80	13.38	75.00	8.68	26.50	5.56	8.10	3.78	3.54	2.17	0.91	1.39	0.31
90							19.30	180.00	14.71	84.00	9.19	29.40	5.88	9.80	4.09	4.08	2.30	1.00	1.47	0.34
95									14.95	93.00	9.70	32.60	6.21	10.80	4.22	4.33	2.42	1.12	1.55	0.38
100									15.74	102.00	10.21	35.80	6.54	12.00	4.54	4.96	2.55	1.22	1.63	0.41
110									17.31	122.00	11.23	42.90	7.18	14.50	5.00	6.00	2.81	1.46	1.79	0.49
120									18.89	143.00	12.25	50.00	7.84	16.80	5.45	7.00	3.06	1.17	1.96	0.58
130									20.46	166.00	13.28	58.00	8.48	18.70	5.91	8.10	3.31	1.97	2.12	0.67
140	0.90	0.08							22.04	190.00	14.30	67.00	9.15	22.30	6.35	9.20	3.57	2.28	2.29	0.76
150	0.96	0.09									15.32	76.00	9.81	25.50	6.82	10.50	3.82	2.62	2.45	0.88
160											16.34	86.00	10.46	29.00	7.26	11.80	4.08	2.91	2.61	0.98
170			10"								17.36	96.00	11.11	34.10	7.71	13.30	4.33	3.26	2.77	1.08
180											18.38	107.00	11.76	35.70	8.17	14.00	4.60	3.61	2.94	1.22
190											19.40	118.00	12.42	39.60	8.63	15.50	4.84	4.01	3.10	1.35
200											20.42	129.00	13.07	43.10	9.08	17.80	5.11	4.40	3.27	1.48
220											22.47	154.00	14.38	52.00	9.99	21.30	5.62	5.20	3.59	1.77
240											24.51	182.00	15.69	61.00	10.89	25.10	6.13	6.20	3.92	2.08
260											26.55	211.00	16.99	70.00	11.80	29.10	6.64	7.20	4.25	2.41
280													18.30	81.00	12.71	33.40	7.15	8.20	4.58	2.77
300													19.61	92.00	13.62	38.00	7.66	9.30	4.90	3.14
320													20.92	103.00	14.52	42.80	8.17	10.50	5.23	3.54
340													22.22	116.00	15.43	47.90	8.68	11.70	5.54	3.97
360													23.53	128.00	16.34	53.00	9.19	13.10	5.87	4.41
380													24.84	142.00	17.25	59.00	9.69	14.00	6.19	4.86
400													26.14	156.00	18.16	65.00	10.21	16.00	6.54	5.40
450															20.40	78.00	11.49	19.80	7.35	6.70
500															22.70	98.00	12.77	24.00	8.17	8.10
550															24.96	117.00	14.04	28.70	8.99	9.60
600																				
650															27.23	137.00	15.32	33.70	9.80	11.30
700																	16.59	39.00	10.62	13.20
750																	17.87	44.90	11.44	15.10
800																	19.15	51.00	12.26	17.20
850																	20.42	57.00	13.07	19.40
900																	21.70	64.00	13.89	21.70
950																				
1000																	22.98	71.00	14.71	24.00
1100																		15.52	26.70	10.77
1200																		16.34	29.20	11.34
1300																		17.97	34.90	12.48
1400																		19.61	40.90	13.61
1500																				
1600																				
1800																				
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2200																				
2400																				
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2800																				
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