



Water Flow Pressure Loss PSI per 100 feet of Hose

Flow of water in US gal/min	Flow of water in cu. ft./ sec.	1/2" I.D.	5/8" I.D.	3/4" I.D.	1" I.D.	1 1/4" I.D.	1 1/2" I.D.	2" I.D.	2 1/2" I.D.	3" I.D.
0.5	.001	0.4								
1.5	.003	3.02	1.01	0.42						
2.5	.005	7.75	2.58	1.08						
5	.011	27.8	9.27	3.86	0.95	0.32	0.13			
10	.022	99.5	33.2	13.8	3.38	1.14	0.47	0.12		
15	.033		71.0	29.6	7.25	2.45	1.01	0.25	0.08	
20	.044		121.0	50.3	12.4	4.15	1.71	0.42	0.14	
25	.055			76.5	18.7	6.34	2.60	0.64	0.22	
30	.066			108	26.5	8.96	3.68	0.90	0.30	0.13
35	.077			142	34.8	11.8	4.83	1.18	0.40	0.17
40	.088				44.7	15.1	6.20	1.52	0.51	0.21
45	.099				55.0	18.6	7.65	1.87	0.63	0.26
50	.110				67.5	22.8	9.35	2.28	0.78	0.32
60	.132				94.3	31.8	13.1	3.19	1.08	0.45
70	.154				126.0	42.5	17.5	4.25	1.44	0.60
80	.176					54.6	22.5	5.48	1.86	0.77
90	.198					67.5	27.8	6.80	2.30	0.95
100	.223					81.5	33.5	8.19	2.78	1.15
125	.278					124.0	50.6	12.4	4.20	1.73
150	.334						72.1	17.6	6.97	2.46
175	.390						94.5	23.1	7.83	3.23
200	.446						122.0	29.6	10.1	4.15
225	.501							36.8	12.5	5.15
250	.557							44.6	15.2	6.28
275	.613							53.3	18.1	7.45
300	.688							62.5	21.2	8.75
325	.724							72.5	24.6	10.2
350	.780							83.2	28.2	11.7
375	.836							94.5	32.1	13.3
400	.891							107.0	36.2	14.9
450	1.00								44.9	18.6
500	1.11								54.5	22.5
600	1.34								76.5	31.6
700	1.56								102.0	42.1
800	1.78								131.0	53.9
900	2.00									66.8
1000	2.23									81.4
1100	2.45									97.0
1200	2.67									114.0
1300	2.90									132.0
1400	3.12									
1500	3.34									
1600	3.56									
1800	4.01									
2000	4.45									

Note: The pressure loss experienced by a liquid flowing through a hose depends on the rate of flow, the viscosity of the liquid, the hose I.D., the smoothness of the tube and the hose length. This chart shows the relationship between the rate of flow, I.D. and pressure loss for water at 68° F with a viscosity of one centipose.

The pressure is directly proportional to the length of the hose, therefore, the data shown can be extended by use of proportions, e.g., the pressure drop for 50 feet of hose length is half that for 100 feet.



Water Flow Pressure Loss (continued) PSI per 100 feet of Hose

Flow of water in US gal/min	Flow of water in cu. ft./ sec.	4" I.D.	6" I.D.	8" I.D.	10" I.D.	12" I.D.	14" I.D.	16" I.D.
100	.223	.26						
125	.278	.40						
150	.334	.54						
175	.390	.70	.10					
200	.446	.90	.13					
225	.501	1.08	.16					
250	.557	1.34	.19					
275	.613	1.60	.24					
300	.668	1.84	.28					
325	.724	2.04	.33					
350	.780	2.30	.37					
375	.836	2.80	.44					
400	.891	3.10	.49					
425	.947	3.40	.54					
450	1.00	3.80	.60					
475	1.06	4.25	.70					
500	1.11	4.60	.78	.16				
550	1.22	5.60	.93	.18				
600	1.34	6.60	1.10	.23				
650	1.45	7.60	1.30	.27				
700	1.56	8.60	1.50	.30				
750	1.67	9.60	1.70	.34				
800	1.78	10.80	1.90	.39				
850	1.89	12.00	2.20	.44				
900	2.00		2.40	.49				
950	2.12		2.60	.54				
1000	2.23		2.80	.59	.19			
1100	2.45		3.20	.66	.23			
1200	2.67		3.70	.74	.27			
1300	2.90		4.50	.88	.31			
1400	3.12		5.30	1.10	.35	.15		
1500	3.34		6.20	1.25	.40	.17		
1600	3.56		7.00	1.40	.45	.19		
1800	4.01		8.80	1.80	.54	.24		
2000	4.45		16.50	2.20	.64	.29	.14	
2500	5.57			3.40	.98	.42	.21	
3000	6.68			4.50	1.40	.58	.29	.14
3500	7.80			6.20	1.90	.79	.39	.18
4000	8.91			8.20	2.40	1.00	.50	.23
4500	10.03			10.20	3.00	1.25	.62	.28
5000	11.14				3.80	1.50	.74	.34
6000	13.37				5.20	2.10	1.10	.46
7000	15.60				7.00	2.80	1.40	.62
8000	17.82				9.20	3.70	1.80	.80
9000	20.05				11.50	4.60	2.30	1.00
10000	22.28					5.70	2.80	1.25
12000	26.74					6.70	3.70	1.70
14000	31.19					10.00	5.00	2.40
16000	35.65					13.50	6.80	3.30
18000	40.10						8.80	4.40
20000	44.56						11.00	5.50