

System Design-Hose Selection

Friction Loss Chart For Hose (Head In Feet)

Water friction in 100 feet of smooth bore hose

For various flows and hose sizes, table gives velocity of water and feet of head lost in friction in 100 feet of smooth bore hose.

SIZE OF HOSE SHOWN ARE ACTUAL INSIDE DIAMETERS

[Divide Head in Feet by 2.31](#)

Flow In U.S. Gals. Per Min.	Velocity In Feet Per Sec.	Friction Head In Feet	Velocity In Feet Per Sec.	Friction Head In Feet	Velocity In Feet Per Sec.	Friction Head In Feet	Velocity In Feet Per Sec.	Friction Head In Feet	Velocity In Feet Per Sec.	Friction Head In Feet	Velocity In Feet Per Sec.	Friction Head In Feet
	5/8"		3/4"		1"		1-1/4"		1-1/2"		2"	
1.5	1.6	2.3	1.1	.97								
2.5	2.6	6.0	1.8	2.5								
5	5.2	21.4	3.6	8.9	2.0	2.2	1.3	.74	.9	.3		
10	10.5	76.8	7.3	31.8	4.1	7.8	2.6	2.64	1.8	1.0	1.0	.2
15	2-1/2"		10.9	68.5	6.1	16.8	3.9	5.7	2.7	2.3	1.5	.5
20	1.3	.32			8.2	28.7	5.2	9.6	3.6	3.9	2.0	.9
25	1.6	.51	3"		10.2	43.2	6.5	14.7	4.5	6.0	2.5	1.4
30	2.0	.70	1.4	.3	12.2	61.2	7.8	20.7	5.4	8.5	3.1	2.0
35	2.3	.93	1.6	.4	14.3	80.5	9.1	27.6	6.4	11.2	3.6	2.7
40	2.6	1.2	1.8	.5			10.4	35.0	7.3	14.3	4.1	3.5
45	2.9	1.5	2.0	.6			11.7	43.0	8.2	17.7	4.6	4.3
50	3.3	1.8	2.3	.7			13.1	52.7	9.1	21.8	5.1	5.2
60	3.9	2.5	2.7	1.0			15.7	73.5	10.9	30.2	6.1	7.3
70	4.6	3.3	3.2	1.3					12.7	40.4	7.1	9.8
80	5.2	4.3	3.6	1.7	4"				14.5	52.0	8.2	12.6
90	5.9	5.3	4.1	2.1	2.3	.5			16.3	64.2	9.2	15.7
100	6.5	6.5	4.5	2.6	2.5	.6			18.1	77.4	10.2	18.9
125	8.2	9.8	5.7	4.0	3.2	.9					12.8	28.6
150	9.8	13.8	6.8	5.6	3.8	1.33					15.3	40.7
175	11.4	18.1	7.9	7.4	4.5	1.8	5"		6"		17.9	53.4
200	13.1	23.4	9.1	9.6	5.1	2.3	3.3	.8	2.3	.32	20.4	68.5
225	14.7	29.0	10.2	11.9	5.7	2.9	3.7	1.0	2.6	.40		
250	16.3	35.0	11.3	14.8	6.4	3.5	4.1	1.2	2.8	.49		
275	18.0	42.0	12.5	17.2	7.0	4.2	4.5	1.4	3.1	.58		
300	19.6	40.0	13.6	20.3	7.7	4.9	4.9	1.7	3.3	.69		
325			14.7	23.5	8.3	5.7	5.3	2.0	3.7	.80		
350			15.9	27.0	8.9	6.6	5.7	2.3	4.0	.90		
375			17.0	30.7	9.6	7.4	6.1	2.6	4.3	1.0	8"	
400					10.2	8.4	6.5	2.9	4.5	1.1	2.6	.28
450					11.5	10.5	7.4	3.6	5.1	1.4	2.9	.35
500					12.8	12.7	8.2	4.3	5.7	1.7	3.2	.43
600					15.3	17.8	9.8	6.1	6.8	2.4	3.8	.60
700					17.9	23.7	11.4	8.1	7.9	3.3	4.5	.80
800							13.1	10.3	9.1	4.2	5.1	1.1
900							14.7	12.8	10.2	5.2	5.8	1.3
1000							16.3	15.6	11.4	6.4	6.4	1.6
1100							17.9	18.5	12.5	7.6	7.0	1.9
1200									13.6	9.2	7.7	2.3
1300									14.7	10.0	8.3	2.6
1400									15.9	11.9	8.9	3.0
1500									17.0	13.6	9.6	3.3
1600											10.2	3.7
1800											11.5	4.7
2000											12.8	5.7
2500											16.0	8.6
3000											19.1	12.2