

# PIPE FRICTION LOSS

## Steel Pipe: Friction Loss (In Feet Of Head) Per 100 Ft.

GPM	GPH	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
1	60	4.30	1.86	.26											
2	120	15.00	4.78	1.21	.38										
3	180	31.80	10.00	2.50	.77										
4	240	54.90	17.10	4.21	1.30	.34									
5	300	83.50	25.80	6.32	1.93	.51	.24								
6	360		36.50	8.87	2.68	.70	.33	.10							
7	420		48.70	11.80	3.56	.93	.44	.13							
8	480		62.70	15.00	4.54	1.18	.56	.17							
9	540			18.80	5.65	1.46	.69	.21							
10	600			23.00	6.86	1.77	.83	.25	.11	.04					
12	720			32.60	9.62	2.48	1.16	.34	.15	.05					
15	900			49.70	14.70	3.74	1.75	.52	.22	.08					
20	1,200			86.10	25.10	6.34	2.94	.87	.36	.13					
25	1,500				38.60	9.65	4.48	1.30	.54	.19					
30	1,800				54.60	13.60	6.26	1.82	.75	.26					
35	2,100				73.40	18.20	8.37	2.42	1.00	.35					
40	2,400				95.00	23.50	10.79	3.10	1.28	.44					
45	2,700					30.70	13.45	3.85	1.60	.55					
70	4,200					68.80	31.30	8.86	3.63	1.22	.35				
100	6,000						62.20	17.40	7.11	2.39	.63				
150	9,000							38.00	15.40	5.14	1.32				
200	12,000							66.30	26.70	8.90	2.27	.736	.30	.08	
250	15,000							90.70	42.80	14.10	3.60	1.20	.49	.13	
300	18,000								58.50	19.20	4.89	1.58	.64	.16	.0542
350	21,000								79.20	26.90	6.72	2.18	.88	.23	.0719
400	24,000								103.00	33.90	8.47	2.72	1.09	.279	.0917
450	27,000								130.00	42.75	10.65	3.47	1.36	.348	.114
500	30,000								160.00	52.50	13.00	4.16	1.66	.424	.138
550	33,000								193.00	63.20	15.70	4.98	1.99	.507	.164
600	36,000								230.00	74.80	18.60	5.88	2.34	.597	.192
650	39,000									87.50	21.70	6.87	2.73	.694	.224
700	42,000									101.00	25.00	7.93	3.13	.797	.256
750	45,000									116.00	28.60	9.05	3.57	.907	.291
800	48,000									131.00	32.40	10.22	4.03	1.02	.328
850	51,000									148.00	36.50	11.50	4.53	1.147	.368
900	54,000									165.00	40.80	12.90	5.05	1.27	.410
950	57,000									184.00	45.30	14.30	5.60	1.41	.455
1000	60,000									204.00	50.20	15.80	6.17	1.56	.500

## Plastic Pipe: Friction Loss (In Feet Of Head) Per 100 Ft.

1	60	4.25	1.38	0.356	0.11										
2	120	15.13	4.83	1.21	0.38	0.10									
3	180	31.97	9.96	2.51	0.77	0.21	0.10								
4	240	54.97	17.07	4.21	1.30	0.35	0.16								
5	300	84.41	25.76	6.33	1.92	0.51	0.24								
6	360		36.34	8.83	2.69	0.71	0.33	0.10							
8	480		63.71	15.18	4.58	1.19	0.55	0.17							
10	600		97.52	25.98	6.88	1.78	0.83	0.25	0.11						
15	900			49.68	14.63	3.75	1.74	0.52	0.22						
20	1,200			86.94	25.07	6.39	2.94	0.86	0.36	0.13					
25	1,500				38.41	9.71	4.44	1.29	0.54	0.19					
30	1,800					13.62	6.26	1.81	0.75	0.26					
35	2,100					18.17	8.37	2.42	1.00	0.35	0.09				
40	2,400					23.55	10.70	3.11	1.28	0.44	0.12				
45	2,700					29.44	13.46	3.84	1.54	0.55	0.15				
50	3,000						16.45	4.67	1.93	0.66	0.17				
60	3,600						23.48	6.60	2.71	0.93	0.25				
70	4,200							8.83	3.66	1.24	0.33				
80	4,800							11.43	4.67	1.58	0.41				
90	5,400							14.26	5.82	1.98	0.52				
100	6,000								7.11	2.42	0.63	0.08			
125	7,500								10.83	3.80	0.95	0.13			
150	9,000									5.15	1.33	0.18			
175	10,500									6.90	1.78	0.23			
200	12,000									8.90	2.27	0.30			
250	15,000										3.36	0.45	0.12		
300	18,000										4.85	0.63	0.17		
350	21,000										6.53	0.84	0.22		
400	24,000											1.08	0.28		
500	30,000											1.66	0.42	0.14	
550	33,000											1.98	0.50	0.16	
600	36,000											2.35	0.59	0.19	
700	42,000												0.79	0.26	
800	48,000												1.02	0.33	
900	54,000												1.27	0.41	
950	57,000													0.46	
1000	60,000													0.50	