



FRICTION LOSS CHARACTERISTICS

Type "K" Copper Water Tube

Loss per 100 feet of pipe in PSI C=140

Size	½"		⅝"		¾"		1"		1¼"		1½"		2"		2½"		3"		Size	
OD	06254		0.750		0.875		1.125		1.375		1.625		2.125		2.625		3.125		OD	
ID	0.527		0.652		0.745		0.995		1.245		1.481		1.959		2.435		2.907		ID	
Wall	0.049		0.049		0.065		0.065		0.065		0.072		0.083		0.095		0.109		Wall	
Flow GPM	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Flow GPM	
1	1.46	1.09	0.95	0.39	0.73	0.20	0.41	0.05	0.26	0.02	0.18	0.01	0.10	0.00					1	
2	2.93	3.94	1.91	1.40	1.47	0.73	0.82	0.18	0.52	0.06	0.37	0.03	0.21	0.01					2	
3	4.40	8.35	2.87	2.97	2.20	1.55	1.23	0.38	0.78	0.13	0.55	0.05	0.31	0.01	0.20	0.00			3	
4	5.87	14.23	3.83	5.05	2.94	2.64	1.64	0.65	1.05	0.22	0.74	0.09	0.42	0.02	0.27	0.01	0.19	0.00	4	
5	7.34	21.51	4.79	7.64	3.67	3.99	2.06	0.98	1.31	0.33	0.93	0.14	0.53	0.04	0.34	0.01	0.24	0.01	5	
6	8.81	30.15	5.75	10.70	4.41	5.60	2.47	1.37	1.57	0.46	1.11	0.20	0.63	0.05	0.41	0.02	0.28	0.01	6	
7	10.28	40.11	6.71	14.24	5.14	7.44	2.88	1.82	1.84	0.61	1.30	0.26	0.74	0.07	0.48	0.02	0.33	0.01	7	
8	11.75	51.37	7.67	18.24	5.88	9.53	3.29	2.33	2.10	0.78	1.48	0.34	0.85	0.09	0.55	0.03	0.38	0.01	8	
9	13.22	63.89	8.63	22.68	6.61	11.86	3.70	2.90	2.36	0.97	1.67	0.42	0.95	0.11	0.61	0.04	0.43	0.02	9	
10	14.69	77.66	9.59	27.57	7.35	14.41	4.12	3.53	2.63	1.18	1.86	0.51	1.06	0.13	0.68	0.05	0.48	0.02	10	
11	16.15	92.65	10.55	32.89	8.08	17.19	4.53	4.21	2.89	1.41	2.04	0.61	1.16	0.16	0.75	0.05	0.53	0.02	11	
12	17.62	108.85	11.51	38.64	8.82	20.20	4.94	4.94	3.15	1.66	2.23	0.71	1.27	0.18	0.82	0.06	0.57	0.03	12	
14			13.43	51.41	10.29	26.87	5.76	6.57	3.68	2.21	2.60	0.95	1.48	0.24	0.95	0.08	0.67	0.04	14	
16			15.35	65.83	11.76	34.41	6.59	8.42	4.21	2.83	2.97	1.22	1.70	0.31	1.10	0.11	0.77	0.05	16	
18			17.27	81.88	13.23	42.80	7.41	10.47	4.73	3.52	3.34	1.51	1.91	0.39	1.23	0.13	0.86	0.06	18	
20			19.19	99.53	14.70	52.02	8.24	12.73	5.26	4.28	3.72	1.84	2.11	0.47	1.37	0.16	0.96	0.07	20	
22					16.17	62.06	9.06	15.18	5.79	5.10	4.09	2.19	2.33	0.56	1.51	0.20	1.06	0.08	22	
24					17.64	72.92	9.89	17.84	6.31	5.99	4.46	2.58	2.55	0.66	1.65	0.23	1.15	0.10	24	
26					19.11	84.57	10.71	20.69	6.84	6.95	4.83	2.99	2.76	0.77	1.78	0.27	1.25	0.11	26	
28							11.53	23.73	7.37	7.98	5.20	3.43	2.97	0.88	1.92	0.30	1.35	0.13	28	
30							12.36	26.97	7.89	9.06	5.58	3.89	3.18	1.00	2.06	0.35	1.44	0.15	30	
35							14.42	35.88	9.21	12.06	6.51	5.18	3.72	1.33	2.40	0.46	1.68	0.19	35	
40							16.48	45.95	10.52	15.44	7.44	6.63	4.25	1.70	2.75	0.59	1.93	0.25	40	
45							18.54	57.15	11.84	19.20	8.37	8.25	4.78	2.12	3.00	0.73	2.17	0.31	45	
50									13.16	23.34	9.30	10.03	5.31	2.57	3.44	0.89	2.41	0.38	50	
55									14.47	27.85	10.23	11.97	5.84	3.07	3.78	1.06	2.65	0.45	55	
60									15.79	32.71	11.16	14.06	6.37	3.60	4.12	1.25	2.89	0.53	60	
65									17.10	37.94	12.09	16.31	6.91	4.18	4.47	1.45	3.13	0.61	65	
70									18.42	43.52	13.02	18.70	7.44	4.80	4.81	1.66	3.37	0.70	70	
75									19.74	49.46	13.95	21.25	7.97	5.45	5.16	1.89	3.62	0.80	75	
80											14.88	23.95	8.50	6.14	5.50	2.13	3.86	0.90	80	
85											15.81	26.80	9.03	6.87	5.84	2.38	4.10	1.01	85	
90											16.74	29.79	9.56	7.64	6.19	2.65	4.34	1.12	90	
95											17.67	32.93	10.09	8.44	6.53	2.93	4.58	1.24	95	
100											18.60	36.21	10.63	9.28	6.88	3.22	4.82	1.36	100	
110														11.69	11.08	7.56	3.84	5.31	1.62	110
120														12.75	13.01	8.25	4.52	5.79	1.91	120
130														13.82	15.09	8.94	5.24	6.27	2.21	130
140														14.88	17.31	9.63	6.01	6.75	2.54	140
150														15.94	19.67	10.32	6.83	7.24	2.88	150
160														17.01	22.17	11.00	7.69	7.72	3.25	160
170														18.07	24.81	11.69	8.61	8.20	3.64	170
180														19.13	27.58	12.38				