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www.thesolarbiz.com

info@thesolar.biz

(888)826-0939



Water Pipe Sizing Chart

Friction Loss in Plastic Pipe with Standard Inside Diameter (SIDR)

THIS CHART APPLIES ONLY TO: PVC pipe, Schedule 40 (160 PSI) and to PE (polyethylene) pipe with SIDR designation (most common 100 PSI black pipe)

HEAD LOSS in VERTICAL FEET per HUNDRED FEET of pipe or VERTICAL METERS per HUNDRED METERS of pipe

Nominal Pipe Diameter (Inches)

Flow Rate		1/2*	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
actual inside diameter (inches)		0.612	0.804	1.029	1.36	1.59	2.047	2.445	3.042	3.998	5.05	6.031
GPM	LPM											
1	3.8	1.13	0.14	0.05	0.02	-	-	-	-	-	-	-
2	7.06	4.16	0.35	0.14	0.05	0.02	-	-	-	-	-	-
3	11	8.55	2.19	0.32	0.09	0.05	-	-	-	-	-	-
4	15	14.8	3.7	0.53	0.16	0.09	0.02	-	-	-	-	-
5	19	22.2	5.78	0.81	0.25	0.12	0.04	-	-	-	-	-
6	23	31	7.85	1	0.35	0.18	0.07	0.02	-	-	-	-
7	27	-	10.6	1.52	0.46	0.23	0.08	0.03	-	-	-	-
8	30	-	13.4	1.94	0.58	0.3	0.09	0.05	-	-	-	-
9	34	-	16.9	2.43	0.72	0.37	0.12	0.06	-	-	-	-
10	38	-	20.3	2.93	0.88	0.46	0.16	0.07	0.02	-	-	-
11	42	-	24.3	3.51	1.04	0.53	0.18	0.08	0.03	-	-	-
12	46	-	28.6	4.11	1.22	0.65	0.21	0.09	0.04	-	-	-
14	53	-	-	5.47	1.64	0.85	0.28	0.12	0.05	-	-	-
16	61	-	-	7.02	2.1	1.09	0.37	0.14	0.06	-	-	-
18	68	-	-	8.73	2.61	1.34	0.46	0.18	0.07	-	-	-
20	76	-	-	10.6	3.16	1.64	0.55	0.21	0.08	0.02	-	-
22	83	-	-	12.5	3.79	1.96	0.67	0.25	0.09	0.03	-	-
24	91	-	-	14.9	4.44	2.31	0.79	0.3	0.11	0.04	-	-
26	99	-	-	17.3	5.15	2.66	0.9	0.35	0.14	0.05	-	-
28	106	-	-	19.7	5.91	3.05	1.04	0.42	0.16	0.05	-	-
30	114	-	-	22.1	6.72	3.46	1.18	0.46	0.18	0.06	-	-
35	133	-	-	28.3	8.94	4.62	1.57	0.62	0.23	0.07	-	-
40	152	-	-	34.5	11	5.91	1.99	0.79	0.3	0.09	0.02	-
45	171	-	-	40.7	14.2	7.37	2.49	0.97	0.37	0.12	0.04	-
50	190	-	-	46.9	17.3	8.96	3.03	1.2	0.46	0.14	0.05	-
55	208	-	-	53.1	20.4	10.7	3.6	1.43	0.55	0.16	0.06	-
60	227	-	-	59.3	23.5	12.5	4.23	1.66	0.65	0.18	0.07	0.02
65	246	-	-	65.5	26.6	14.5	4.9	1.94	0.74	0.22	0.08	0.03
70	265	-	-	71.7	29.7	16.7	5.64	2.22	0.85	0.25	0.09	0.04
75	284	-	-	77.9	32.8	19	6.4	2.52	0.97	0.28	0.1	0.05
80	303	-	-	84.1	35.9	21.2	7.21	2.84	1.09	0.32	0.12	0.06
85	322	-	-	90.3	39	23.4	8.06	3.19	1.22	0.37	0.13	0.07
90	341	-	-	96.5	42.1	25.6	8.96	3.53	1.36	0.39	0.14	0.08
95	360	-	-	102.7	45.2	27.8	9.91	3.9	1.5	0.44	0.16	0.09
100	379	-	-	108.9	48.3	30	10.9	4.3	1.66	0.49	0.18	0.12
150	569	-	-	163.3	72.5	43.6	23.1	9.1	3.51	1.04	0.37	0.16
200	758	-	-	217.7	96.7	57.9	35.2	12.2	4.62	1.43	0.53	0.21
		-	-	242.1	109	65.6	39.6	13.8	5.18	1.59	0.59	0.23
		-	-	266.5	121.2	73.3	44	15.4	5.74	1.76	0.65	0.25
		-	-	290.9	133.4	81	48.4	17	6.3	1.92	0.71	0.27
		-	-	315.3	145.6	88.7	52.8	18.6	6.86	2.08	0.77	0.29
		-	-	339.7	157.8	96.4	57.2	20.2	7.42	2.24	0.83	0.31
		-	-	364.1	170	104.1	61.6	21.8	7.98	2.4	0.89	0.33
		-	-	388.5	182.2	111.8	66	23.4	8.54	2.56	0.95	0.35
		-	-	412.9	194.4	119.5	70.4	25	9.1	2.72	1.01	0.37
		-	-	437.3	206.6	127.2	74.8	26.6	9.66	2.88	1.07	0.39
		-	-	461.7	218.8	134.9	79.2	28.2	10.22	3.04	1.13	0.41
		-	-	486.1	231	142.6	83.6	29.8	10.78	3.2	1.19	0.43
		-	-	510.5	243.2	150.3	88	31.4	11.34	3.36	1.25	0.45
		-	-	534.9	255.4	158	92.4	33	11.9	3.52	1.31	0.47
		-	-	559.3	267.6	165.7	96.8	34.6	12.46	3.68	1.37	0.49
		-	-	583.7	279.8	173.4	101.2	36.2	13.02	3.84	1.43	0.51
		-	-	608.1	292	181.1	105.6	37.8	13.58	4	1.49	0.53
		-	-	632.5	304.2	188.8	110	39.4	14.14	4.16	1.55	0.55
		-	-	656.9	316.4	196.5	114.4	41	14.7	4.32	1.61	0.57
		-	-	681.3	328.6	204.2	118.8	42.6	15.26	4.48	1.67	0.59
		-	-	705.7	340.8	211.9	123.2	44.2	15.82	4.64	1.73	0.61
		-	-	730.1	353	219.6	127.6	45.8	16.38	4.8	1.79	0.63
		-	-	754.5	365.2	227.3	132	47.4	16.94	4.96	1.85	0.65
		-	-	778.9	377.4	235	136.4	49	17.5	5.12	1.91	0.67
		-	-	803.3	389.6	242.7	140.8	50.6	18.06	5.28	1.97	0.69
		-	-	827.7	401.8	250.4	145.2	52.2	18.62	5.44	2.03	0.71
		-	-	852.1	414	258.1	149.6	53.8	19.18	5.6	2.09	0.73
		-	-	876.5	426.2	265.8	154	55.4	19.74	5.76	2.15	0.75
		-	-	900.9	438.4	273.5	158.4	57	20.3	5.92	2.21	0.77
		-	-	925.3	450.6	281.2	162.8	58.6	20.86	6.08	2.27	0.79
		-	-	949.7	462.8	288.9	167.2	60.2	21.42	6.24	2.33	0.81
		-	-	974.1	475	296.6	171.6	61.8	21.98	6.4	2.39	0.83
		-	-	998.5	487.2	304.3	176	63.4	22.54	6.56	2.45	0.85
		-	-	1022.9	499.4	312	180.4	65	23.1	6.72	2.51	0.87
		-	-	1047.3	511.6	319.7	184.8	66.6	23.66	6.88	2.57	0.89
		-	-	1071.7	523.8	327.4	189.2	68.2	24.22	7.04	2.63	0.91
		-	-	1096.1	536	335.1	193.6	69.8	24.78	7.2	2.69	0.93
		-	-	1120.5	548.2	342.8	198	71.4	25.34	7.36	2.75	0.95
		-	-	1144.9	560.4	350.5	202.4	73	25.9	7.52	2.81	0.97
		-	-	1169.3	572.6	358.2	206.8	74.6	26.46	7.68	2.87	0.99
		-	-	1193.7	584.8	365.9	211.2	76.2	27.02	7.84	2.93	1.01
		-	-	1218.1	597	373.6	215.6	77.8	27.58	8	2.99	1.03
		-	-	1242.5	609.2	381.3	220	79.4	28.14	8.16	3.05	1.05
		-	-	1266.9	621.4	389	224.4	81	28.7	8.32	3.11	1.07
		-	-	1291.3	633.6	396.7	228.8	82.6	29.26	8.48	3.17	1.09
		-	-	1315.7	645.8	404.4	233.2	84.2	29.82	8.64	3.23	1.11
		-	-	1340.1	658	412.1	237.6	85.8	30.38	8.8	3.29	1.13
		-	-	1364.5	670.2	419.8	242	87.4	30.94	8.96	3.35	1.15
		-	-	1388.9	682.4	427.5	246.4	89	31.5	9.12	3.41	1.17
		-	-	1413.3	694.6	435.2	250.8	90.6	32.06	9.28	3.47	1.19
		-	-	1437.7	706.8	442.9	255.2	92.2	32.62	9.44	3.53	1.21
		-	-	1462.1	719	450.6	259.6	93.8	33.18	9.6	3.59	1.23
		-	-	1486.5	731.2	458.3	264	95.4	33.74	9.76	3.65	1.25
		-	-	1510.9	743.4	466	268.4	97	34.3	9.92	3.71	1.27
		-	-	1535.3	755.6	473.7	272.8	98.6	34.86	10.08	3.77	1.29
		-	-	1559.7	767.8	481.4	277.2	100.2	35.42	10.24	3.83	1.31
		-	-	1584.1	780	489.1	281.6	101.8	35.98	10.4	3.89	1.33
		-	-	1608.5	792.2	496.8	286	103.4	36.54	10.56	3.95	1.35
		-	-	1632.9	804.4	504.5	290.4	105	37.1	10.72	4.01	1.37
		-	-	1657.3	816.6	512.2	294.8	106.6	37.66	10.88	4.07	1.39
		-	-	1681.7	828.8	519.9	299.2	108.2	38.22	11.04	4.13	1.41
		-	-	1706.1	841	527.6	303.6	109.8	38.78	11.2	4.19	1.43
		-	-	1730.5	853.2	535.3	308	111.4	39.34	11.36	4.25	1.45
		-	-	1754.9	865.4	543	312.4	113	39.9	11.52	4.31	1.47
		-	-	1779.3	877.6	550.7	316.8	114.6	40.46	11.68	4.37	1.49
		-	-	1803.7	889.8	558.4	321.2	116.2	41.02	11.84	4.43	1.51
		-	-	1828.1	902	566.1	325.6	117.8	41.58	12	4.49	1.53
		-	-	1852.5	914.2	573.8	330	119.4	42.14	12.16	4.55	1.55
		-	-	1876.9	926.4	581.5	334.4	121	42.7	12.32	4.61	1.57
		-	-	1901.3	938.6	589.2	338.8	122.6	43.26	12.48	4.67	1.59
		-	-	1925.7	950.8	596.9	343.2	124.2	43.82	12.64	4.73	1.61
		-	-	1950.1	963	604.6	347.6	125.8	44.38	12.8	4.79	1.63
		-	-	1974.5	975.2	612.3	352	127.4	44.			