

Pipe Size	O.D. - in.	5s	5	10s	10	20	30	STD.	40	60	XH	80	100	120	140	160	XXH
1/8	0.405	—	.035 .14	.049 .18	.049 .19	—	—	.068 .24	.068 .24	—	.095 .31	.095 .31	—	—	—	—	—
1/4	0.540	—	.049 .26	.065 .33	.065 .33	—	—	.088 .43	.088 .43	—	.119 .54	.119 .54	—	—	—	—	—
3/8	0.675	—	.049 .33	.065 .42	.065 .42	—	—	.091 .57	.091 .57	—	.126 .74	.126 .74	—	—	—	—	—
1/2	0.840	.065 .54	.065 .54	.083 .67	.083 .67	—	—	.109 .85	.109 .85	—	.147 1.09	.147 1.09	—	—	—	.187 1.31	.294 1.72
3/4	1.050	.065 .68	.065 .68	.083 .86	.083 .86	—	—	.113 1.13	.113 1.13	—	.154 1.48	.154 1.48	—	—	—	.218 1.95	.308 2.44
1	1.315	.65 .87	.065 .87	.109 1.40	.109 1.41	—	—	.133 1.68	.133 1.68	—	.179 2.17	.179 2.17	—	—	—	.250 2.85	.358 3.66
1 1/4	1.660	.065 1.11	.065 1.11	.109 1.80	.109 1.81	—	—	.140 2.27	.140 2.27	—	.191 3.00	.191 3.00	—	—	—	.250 3.77	.382 5.22
1 1/2	1.900	.065 1.28	.065 1.28	.109 2.08	.109 2.09	—	—	.145 2.72	.145 2.72	—	.200 3.63	.200 3.63	—	—	—	.281 4.86	.400 6.41
2	2.375	.065 1.60	.065 1.61	.109 2.64	.109 2.64	—	—	.154 3.66	.154 3.66	—	.218 5.03	.218 5.03	—	—	—	.344 7.47	.436 9.04
2 1/2	2.875	.083 2.48	.083 2.48	.120 3.53	.120 3.53	—	—	.203 5.80	.203 5.80	—	.276 7.67	.276 7.67	—	—	—	.375 10.02	.552 13.71
3	3.500	.083 3.03	.083 3.03	.120 4.33	.120 4.34	—	—	.216 7.58	.216 7.58	—	.300 10.26	.300 10.26	—	—	—	.438 14.34	.600 18.60
3 1/2	4	.083 3.47	.083 3.48	.120 4.97	.120 4.98	—	—	.226 9.12	.226 9.12	—	.318 12.52	.318 12.52	—	—	—	—	.636 22.87
4	4.500	.083 3.92	.083 3.92	.120 .61	.120 5.62	—	—	.237 10.80	.237 10.80	.281 12.67	.337 15.00	.337 15.00	—	.437 19.02	—	.531 22.53	.674 27.57
4 1/2	5	—	—	—	—	—	—	.247 12.55	—	—	.355 17.63	.355 17.63	—	—	—	—	.710 32.56
5	5.563	.109 6.35	.109 6.36	.134 7.77	.134 7.78	—	—	.258 14.63	.258 14.63	—	.375 20.80	.375 20.80	—	.500 27.06	—	.625 32.99	.750 38.59
6	6.625	.109 7.59	.109 7.59	.134 9.29	.134 9.30	—	—	.280 18.99	.280 18.99	—	.432 28.60	.432 28.60	—	.562 36.43	—	.719 45.39	.864 53.21
8	8.625	.109 9.91	.109 9.92	.148 13.40	.148 13.41	.250 22.38	.277 24.72	.322 28.58	.322 28.58	.406 35.67	.500 43.43	.500 43.43	.593 50.92	.718 60.69	.812 67.82	.906 74.76	.875 72.49
9	9.625	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	10.750	.134 15.19	.134 15.21	.165 18.65	.165 18.67	.250 28.06	0.307 34.27	.365 40.52	.365 40.52	.500 54.79	.500 54.79	.594 64.49	.719 77.10	0.844 89.38	1.00 104.23	1.125 115.75	1.00 104.23
11	11.750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	12.750	.156 21.07	.165 22.20	.180 24.17	.180 24.19	.250 33.41	.330 43.81	.375 49.61	.406 53.57	.562 73.22	.500 65.48	.688 88.71	.843 107.30	1.00 125.61	1.125 139.81	1.312 160.42	1.00 125.61
14	14	.156 23.07	—	.188 27.73	.250 36.75	.312 45.65	.375 54.62	.375 54.62	.438 63.50	.594 85.13	.500 72.16	.750 106.23	.937 130.85	1.093 150.81	1.250 170.37	1.406 189.29	—
16	16	.165 27.90	—	.188 31.75	.250 42.09	.312 52.32	.375 62.64	.375 62.64	.500 82.85	.656 107.60	.500 82.85	.844 136.74	1.031 164.98	1.219 192.61	1.438 223.85	1.594 245.48	—
18	18	.165 31.43	—	.188 35.76	.250 47.44	.312 58.99	.438 82.23	.375 70.65	.562 104.76	.750 138.30	.500 93.54	.938 171.08	1.156 208.15	1.375 244.37	1.562 274.48	1.781 308.79	—
20	20	.188 39.78	—	.219 46.27	.250 52.78	.375 78.67	.500 104.23	.375 78.67	.593 123.02	.812 166.56	.500 104.23	1.031 209.06	1.281 256.34	1.500 296.65	1.750 341.41	1.969 379.53	—
22	22	—	—	—	.250 58.13	.375 86.69	.500 114.92	.375 86.69	—	.875 197.60	.500 114.92	1.125 251.05	1.375 303.16	1.625 353.94	1.875 403.38	2.215 451.49	—
24	24	.218 55.37	—	.250 63.41	.250 63.47	.375 94.71	.562 140.81	.375 94.71	.688 171.45	.969 238.57	.500 125.61	1.219 296.86	1.531 367.74	1.812 429.79	2.062 483.57	2.344 542.44	—
26	26	—	—	—	.312 85.68	.500 136.30	—	.375 102.72	—	—	.500 136.30	—	—	—	—	—	—
28	28	—	—	—	.312 92.35	.500 146.99	.625 182.90	.375 110.74	—	—	.500 146.99	—	—	—	—	—	—
30	30	.250 79.43	—	.312 98.93	.312 99.02	.500 157.68	.625 196.26	.375 118.76	—	—	.500 157.68	—	—	—	—	—	—
32	32	—	—	—	.312 105.69	.500 168.37	.625 209.62	.375 126.78	.688 230.29	—	.500 168.37	—	—	—	—	—	—
34	34	—	—	—	.312 112.36	.500 179.06	.625 222.99	.375 134.79	.688 245.00	—	.500 179.06	—	—	—	—	—	—
36	36	—	—	—	.312 119.03	.500 189.75	.625 236.35	.375 142.81	.750 282.62	—	.500 189.75	—	—	—	—	—	—
42	42	—	—	—	—	—	—	.375 166.86	—	—	.500 221.82	—	—	—	—	—	—
48	48	—	—	—	—	—	—	.375 190.92	—	—	.500 253.89	—	—	—	—	—	—
54	54	—	—	—	—	—	—	.375 214.97	—	—	.500 285.96	—	—	—	—	—	—



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FORMULAS AND CONVERSIONS

Millimeters to Inches MULTIPLY BY .03937
 Centimeters to Inches MULTIPLY BY .3937
 Cubic Centimeters to Cubic Inches MULTIPLY BY .06102
 Meters to Feet MULTIPLY BY 3.2808
 Cubic Meters to Cubic Feet MULTIPLY BY 35.315
 Cubic Yards to Cubic Meters MULTIPLY BY .7646

Joules to Foot Pounds MULTIPLY BY .7375621
 Megapascals to P.S.I. MULTIPLY BY 145.038
 Kg/mm2 to P.S.I. MULTIPLY BY 1422.33

Weight per Foot (plain end pipe) (OD - wall) x wall x 10.69
 Ton (Long or Gross) 2,240 lbs
 Ton (Metric) 2,205 lbs
 Ton (Short or Net) 2,000 lbs

100% Specified Minimum Internal Yield Strength (SMYS) (Min. Yield x 2) / OD x Wall = SMYS
 Area of Cross Section 3.1416 x (OD - Wall) x Wall
 Moment of Inertia .0491 x (OD4 - ID4)

INTERNAL PIPE PROPERTIES

Circumference of ID ID x 3.1415927
 Square ft per Linear ft (ID) ID x .26179939
 Linear ft per Square ft of Surface 3.8197186 / ID
 Transverse Area ID (sq in) ID² x .78539816
 Volume of Capacity per LF
 Cubic Feet ID² x .0054541539
 U.S. Gallons ID² x .04079905

EXTERNAL PIPE PROPERTIES

Circumference of OD OD x 3.1415927
 Square ft per Linear ft (OD) OD x .26179939
 Linear ft per Square ft of Surface 3.8197186 / OD
 Transverse Area OD (sq in) OD² x .78539816
 Volume of Displacement per LF
 Cubic Feet OD² x .0054541539
 U.S. Gallons OD² x .04079905

COMMON SIZES AND API STANDARD/NOT SCHEDULED

NOM. SIZE	O.D.	wall lb/ft																
3"	3.500	.125	.156	.188	.250	.281												
		4.51	5.58	6.66	8.69	9.67												
3.5"	4.000	.125	.156	.188	.250	.281												
		5.18	6.41	7.66	10.02	11.17												
4"	4.500	.125	.156	.188	.219	.250	.281	.312										
		5.85	7.25	8.67	10.02	11.36	12.67	13.97										
5"	5.563	.156	.188	.219	.244	.275	.281	.312	.344									
		9.02	10.80	12.51	13.87	15.55	15.87	17.51	19.19									
6"	6.625	.109	.125	.134	.156	.188	.219	.250	.312	.344	.375							
		7.59	8.69	9.30	10.79	12.94	15.00	17.04	21.06	23.10	25.05							
8"	8.625	.105	.134	.172	.188	.203	.219	.264	.312	.344	.375	.438						
		9.56	12.16	15.54	16.96	18.28	19.68	23.60	27.73	30.45	33.07	38.33						
10"	10.750	.105	.134	.188	.203	.219	.279	.344	.438									
		11.95	15.21	21.23	22.89	24.65	31.23	38.27	48.28									
12"	12.750	.105	.134	.188	.203	.219	.281	.312	.344	.438	.625	.750						
		14.19	18.07	25.25	27.23	29.34	37.46	41.48	45.62	57.65	81.01	96.21						
14"	14.000	.105	.134	.188	.203	.219	.281	.344	.469	.625	2.125	2.200	2.500					
		15.60	19.86	27.76	29.94	32.26	41.21	50.22	67.84	89.36	269.76	277.51	307.34					
16"	16.000	.134	.188	.203	.219	.281	.344	.406	.438	.469	.625	.750						
		22.73	31.71	34.28	36.95	47.22	57.57	67.68	72.86	77.87	102.72	122.27						
18"	18.000	.188	.203	.250	.281	.344	.406	.469	.625									
		35.80	38.62	47.44	53.23	64.93	76.36	87.89	116.09									
20"	20.000	.250	.281	.312	.344	.406	.438	.469	.625	.750	1.000							
		52.78	59.23	65.66	72.28	85.04	91.59	97.92	129.45	154.34	203.11							
22"	22.000	.281	.312	.344	.406	.438	.469	.625										
		65.24	72.34	79.64	93.72	100.96	107.95	142.81										
24"	24.000	.281	.312	.344	.406	.438	.469	.625	.750	1.000								
		71.25	79.01	86.99	102.40	110.32	117.98	156.17	186.41	245.87								
26"	26.000	.250	.281	.344	.406	.438	.469	.562	.625	.750	1.000							
		68.82	77.26	94.35	111.08	119.69	128.00	152.83	169.54	202.44	267.25							
28"	28.000	.250	.281	.344	.406	.438	.469	.750	1.000									
		74.16	83.26	101.70	119.76	129.05	138.03	218.48	288.63									
30"	30.000	.250	.281	.344	.406	.438	.469	.750	.875	1.000	1.250	1.375	1.500					
		79.51	89.27	109.06	128.44	138.42	148.06	234.51	272.43	310.01	384.17	420.75	457.00					
32"	32.000	.250	.281	.344	.406	.438	.469											
		84.85	95.28	116.41	137.12	147.78	158.08											
34"	34.000	.250	.281	.344	.406	.438	.469											
		90.20	101.29	123.77	145.80	157.14	168.11											
36"	36.000	.250	.281	.344	.406	.438	.469	.750	.875	1.000	1.250	1.375	1.500					
		95.54	107.30	131.12	154.48	166.51	178.14	212.90	328.55	374.15	464.35	508.94	553.21					
42"	42.000	.250	.375	.500	.625	.750	.875	1.000	1.250	1.500								
		111.58	166.86	221.82	276.44	330.72	384.67	438.29	544.52	649.42								
48"	48.000	.250	.375	.500	.625	.750	.875	1.000	1.125	1.250	1.500	2.000						
		127.61	190.92	253.89	316.52	378.83	440.80	502.43	563.73	624.70	745.63	983.48						
54"	54.000	.375	.500	.625	.750													
		214.96	285.96	356.61	426.93													
60"	60.000	.375	.500	.625	.750													
		239.02	318.02	396.70	475.03													

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