

Challenger Pipe & Steel, LLC.

104 South Freya, Suite 221, White Flag Bldg.

Spokane, WA 99202

Ph: (509) 534-7473 Fx: (509) 534-4254

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Scheduled Sizes Top # = Wall Thickness, Bottom # = Wt. per foot

Pipe Size	O.D.in Inches	5	10	20	30	STD.	40	60	XH	80	100	120	140	160	XXH
3/8	.675					0.091 0.57	0.091 0.57		0.126 0.74	0.126 0.74					
1/2	.840					0.109 0.85	0.109 0.85		0.147 1.09	0.147 1.09				0.187 1.31	0.294 1.72
3/4	1.050					0.113 1.13	0.113 1.13		0.154 1.48	0.154 1.48				0.218 1.94	0.308 2.44
1	1.315					0.133 1.68	0.133 1.68		0.179 2.17	0.179 2.17				0.250 2.85	0.358 3.66
1 1/4	1.660					0.140 2.27	0.140 2.27		0.191 3.00	0.191 3.00				0.250 3.77	0.382 5.22
1 1/2	1.900					0.145 2.72	0.145 2.72		0.200 3.63	0.200 3.63				0.281 4.86	0.400 6.41
2	2.375					0.154 3.66	0.154 3.66		0.218 5.03	0.218 5.03				0.344 7.47	0.436 9.04
2 1/2	2.875					0.203 5.80	0.203 5.80		0.276 7.67	0.276 7.67				0.375 10.02	0.552 13.71
3	3.5					0.216 7.58	0.216 7.58		0.300 10.26	0.300 10.26				0.438 14.34	0.600 18.60
3 1/2	4					0.226 9.12	0.226 9.12		0.318 12.52	0.318 12.52					0.636 22.87
4	4.5					0.237 10.80	0.237 10.80		0.337 15.00	0.337 15.00		0.438 19.02		0.531 22.53	0.674 27.57
4 1/2	5					0.247 12.55			0.355 17.62						0.710 32.56
5	5.563					0.258 14.6.3	0.258 14.6.3		0.375 20.80	0.375 20.80		0.500 27.06		0.625 32.9	0.750 38.59
6	6.625					0.280 18.99	0.280 18.99		0.432 28.60	0.432 28.60		0.562 36.43		0.719 45.39	0.864 53.21
8	8.625			0.250 22.38	0.277 24.72	0.322 28.58	0.322 28.58	0.406 35.67	0.500 43.43	0.500 43.43	0.594 51.00	0.719 60.77	.812 67.82	0.906 74.76	0.875 72.49
10	10.750		0.165 18.67	0.250 28.06	0.307 34.27	0.365 40.52	0.365 40.52	0.500 54.79	0.500 54.79	0.594 64.49	0.719 77.10	0.844 89.38	1.00 104.2.3	1.125 115.75	1.00 104.23
12	12.750	0.165 22.20		0.250 33.41	0.330 43.81	0.375 49.61	0.406 53.57	0.562 7.3.22	0.500 65.48	0.688 88.71	0.844 107.42	1.00 125.61	1.125 139.81	1.312 160.42	
14	14.00		0.250 36.75	0.312 15.65	0.375 54.62	0.375 54.62	0.438 63.50	0.594 85.13	0.500 72.16	0.750 106.23	0.938 130.98	1.094 150.93	1.250 170.37	1.406 189.29	
16	16.00		0.250 42.09	0.312 52.32	0.375 62.64	0.375 62.64	0.500 82.85	0.656 107.C	0.500 S2.S5	0.844 136.74	1.031 164.98	1.219 192.62	1.438 223.85	1.594 245.48	
18	18.00		0.250 47.44	0.312 58.99	0.438 82.2.3	0.375 70.65	.0562 104.76	0.750 138..30	0.500 93.54	0.938 171.08	1.156 208.15	1.375 244.37	1.562 274.48	1.781 308.79	
20	20.00		0.250 52.78	0.375 78.67	0.500 104.2.3	0.375 78.67	0.594 123.23	0.812 166.56	0.500 104.23	1.031 209.06	1.281 256.34	1.50 296.65	1.750 341.41	1.969 379.53	
22	22.00			0.375 86.69	0.500 114.92			0.875 197.60		1.125 251.05	1.250 277.27	1.625 353.94	1.875 403.38	2.125 451.49	
24	24.00		0.250 63.47	0.375 94.71	0.562 140.81	0.375 94.71	0.688 171.45	0.969 238.57	0.500 125.61	1.219 296.86	1.531 367.74	1.812 429.79	2.062 483.57	2.343 542.44	
26	26.00		0.312 85.68	0.500 136.30		0.375 102.72			0.500 136.30						
28	28.00		0.312 92.35	0.500 146.99	0.625 182.9	0.375 110.74			0.500 146.99						
30	30.00		0.312 99.02	0.500 157.68	0.625 196.26	0.375 118.76			0.500 157.68						
36	36.00		0.312 119.03	0.500 189.75	0.625 236.35	0.375 142.81	0.750 282.62		0.500 189.75						
42	42.00					0.375 166.86			0.500 221.82						
48	48.00					0.375 190.92			0.500 253.89						
54	54.00					0.375 214.97			0.500 285.96						

Formula for Weight Per Foot

O.D. - Wall Thickness X Wall Thickness X 10.69 = WPF

This Chart Gives General Information Only and is not intended for design

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Commonly used Non-Scheduled Pipe Sizes (wt/ft. in lbs.)

Wall	.156	.188	.203	.219	.250	.277	.279	.281	.312	.344	.375	.625	.750	1.00	1.250	1.500
3 ½ O.D.	5.58	6.66						9.67								
4 ½ O.D.	7.24	8.67		10.02				12.67	13.97							
6 5/8 O.D.	10.79	12.94	13.94	15.00	17.04				21.06	23.10	25.05					
8 5/8 O.D.	14.12	16.96	18.28	19.68	22.38	24.72			27.73	30.45	33.07					
10 ¾ O.D.		21.23	22.89	24.65	28.06		31.23			38.27						
12 ¾ O.D.		25.25	27.23	29.34	33.41			37.46	41.48	45.62	49.61					
14 O.D.				32.26	36.75			41.21	45.65	50.22	54.62	89.36	106.23			
16 O.D.				36.95	42.09			47.22	52.32	57.57	62.64					
18 O.D.												116.09	138.30			
20 O.D.												129.45	154.34	203.11	250.55	296.64
22 O.D.												142.81	170.37	224.49	277.27	328.72
24 O.D.												156.17	186.41	245.87	304.00	360.79
26 O.D.												169.54	202.44	267.25	330.72	392.86
28 O.D.												182.9	218.48	288.63	357.45	424.93
30 O.D.												196.26	234.51	310.01	384.17	457.00
32 O.D.												209.62	250.55	331.39	410.90	489.07
36 O.D.												236.35	282.62	374.15	464.35	553.21
42 O.D.												276.44	330.72	438.29	544.52	649.42
48 O.D.												316.52	378.83	502.43	624.70	745.63

Formulas and Conversions

To convert Kg./mm ² to P.S.I.	Multiply by 1422.33
To convert Joules to Foot Pounds	Multiply by .7375622
To convert Megapascals to P.S.I.	Multiply by 145.038
To convert Meters to Feet	Multiply by 3.2808
To convert Millimeters to Inches	Multiply by .03937
To convert partial size Charpy result to full size equivalent.	Partial Charpy Value/ Sample size (in mm) X 10 (i.e. 19 (Ft. lb.) / 5 (mm) X 10 = 38)
To calculate square feet per linear foot of pipe. (Used to calculate pipe coating cost.)	Multiply pipe OD X .261799 (i.e. 10 3/4 X .261799 = 2.81 Sq. ft. per lf.)
To Calculate 100% of Specified Minimum Internal Yield Strength of pipe.	(2 X Min. Yield) / OD X Wall Thickness= SMYS (i.e. For 6 5/8, Std. Wall, API 5L X42 = (2 X 42,000) / 6.625 X .280 = 3,550 PSI SMYS)

Challenger Pipe & Steel *Products and Services*

**Carbon Steel Pipe to ASTM and API 5L
Specifications Seamless, ERW, Spiralweld and
DSAW Pipe O.D. Coatings, Linings and Field Joint
Material New Rolled & Welded Steel Caissons
Micro-Pile Steel Casing With A Flush Joint
Connection Large Diameter DSAW from API 5L
X52 to X65 New & Used Steel Pipe For Irrigation
Lines New & Used Steel Pipe For Trellises
Structural Pipe and Pipe Piling Water Well Casing,
Plain End and Threaded New & Used Rathole And
Conductor Casing**

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