

# WL102G – NATURAL GAS PIPE SIZES & PRESSURE RATINGS



## PE4710 / PE100

CTS Size <sup>A</sup>	OD (in)	Min. Wall <sup>C</sup> (in)	0.09	0.099	0.101	0.104	0.121
1/2	0.625	MAOP (DF=0.40)	125			125	
		MAOP (DF=0.32)	125			125	
		Equivalent DR	6.94			6.01	
		Avg ID <sup>D</sup> , in	0.434			0.405	
		Weight <sup>E</sup> , lb/ft	0.065			0.074	
3/4	0.875	MAOP (DF=0.40)	125				
		MAOP (DF=0.32)	117				
		Equivalent DR	9.72				
		Avg ID <sup>D</sup> , in	0.684				
		Weight <sup>E</sup> , lb/ft	0.096				
1	1.125	MAOP (DF=0.40)			125		125
		MAOP (DF=0.32)	89	99	101		123
		Equivalent DR	12.5	11.36	11.14		9.3
		Avg ID <sup>D</sup> , in	0.934	0.915	0.911		0.868
		Weight <sup>E</sup> , lb/ft	0.127	0.138	0.141		0.165
1 1/4	1.375	MAOP (DF=0.40)	88				
		MAOP (DF=0.32)	72				
		Equivalent DR	15.3				
		Avg ID <sup>D</sup> , in	1.187				
		Weight <sup>E</sup> , lb/ft	0.157				

## PE2708

CTS Size <sup>A</sup>	OD (in)	Min. Wall <sup>C</sup> (in)	0.090	0.099	0.101	0.104	0.121
1/2	0.625	MAOP (DF=0.40)	125			125	
		MAOP (DF=0.32)	125			125	
		Equivalent DR	6.94			6.01	
		Avg ID <sup>D</sup> , in	0.434			0.405	
		Weight <sup>E</sup> , lb/ft	0.064			0.072	
3/4	0.875	MAOP (DF=0.40)	115				
		MAOP (DF=0.32)	92				
		Equivalent DR	9.72				
		Avg ID <sup>D</sup> , in	0.684				
		Weight <sup>E</sup> , lb/ft	0.094				
1	1.125	MAOP (DF=0.40)			99		120
		MAOP (DF=0.32)	70	77	79		96
		Equivalent DR	12.50	11.36	11.14		9.30
		Avg ID <sup>D</sup> , in	0.934	0.915	0.911		0.868
		Weight <sup>E</sup> , lb/ft	0.124	0.135	0.138		0.162

MAOP <sup>B</sup>		DF =0.40	125	125	125	125	102	88	80	64
		DF =0.32	125	125	123	102	82	71	64	51
IPS Size <sup>A</sup>	OD (in)	DR	7	9	9.3	11	13.5	15.5	17	21
1/2	0.84	Min wall <sup>C</sup> , in	0.12	0.093	0.09	0.076	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	0.586	0.643	0.649	0.679	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.117	0.094	0.092	0.079	NA	NA	NA	NA
3/4	1.05	Min wall <sup>C</sup> , in	0.15	0.117	0.113	0.095	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	0.732	0.802	0.81	0.849	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.184	0.148	0.144	0.123	NA	NA	NA	NA
1	1.315	Min wall <sup>C</sup> , in	0.188	0.146	0.141	0.12	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	0.916	1.005	1.016	1.061	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.288	0.232	0.225	0.195	NA	NA	NA	NA
1.25	1.66	Min wall <sup>C</sup> , in	0.237	0.184	0.178	0.151	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	1.158	1.27	1.283	1.34	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.459	0.369	0.359	0.310	NA	NA	NA	NA
1.5	1.90	Min wall <sup>C</sup> , in	0.271	0.211	0.204	0.173	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	1.325	1.453	1.468	1.533	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.600	0.485	0.470	0.406	NA	NA	NA	NA
2	2.375	Min wall <sup>C</sup> , in	0.339	0.264	0.255	0.216	0.176	0.153	0.14	NA
		Avg ID <sup>D</sup> , in	1.656	1.815	1.834	1.917	2.002	2.051	2.078	NA
		Weight <sup>E</sup> , lb/ft	0.939	0.758	0.735	0.634	0.526	0.462	0.425	NA
3	3.50	Min wall <sup>C</sup> , in	0.5	0.389	0.375	0.318	0.259	0.226	0.206	0.167
		Avg ID <sup>D</sup> , in	2.44	2.675	2.705	2.826	2.951	3.021	3.063	3.146
		Weight <sup>E</sup> , lb/ft	2.040	1.646	1.597	1.376	1.141	1.006	0.923	0.757
4	4.50	Min wall <sup>C</sup> , in	0.643	0.5	0.482	0.409	0.333	0.29	0.265	0.214
		Avg ID <sup>D</sup> , in	3.137	3.44	3.478	3.633	3.794	3.885	3.938	4.046
		Weight <sup>E</sup> , lb/ft	3.372	2.720	2.643	2.275	1.887	1.660	1.526	1.247
6	6.625	Min wall <sup>C</sup> , in	0.946	0.736	0.71	0.602	0.491	0.427	0.39	0.315
		Avg ID <sup>D</sup> , in	4.619	5.065	5.12	5.349	5.584	5.72	5.798	5.957
		Weight <sup>E</sup> , lb/ft	7.305	5.894	5.725	4.930	4.095	3.599	3.307	2.703
8	8.625	Min wall <sup>C</sup> , in	1.232	0.958	0.924	0.784	0.639	0.556	0.507	0.411
		Avg ID <sup>D</sup> , in	6.013	6.594	6.666	6.963	7.27	7.446	7.55	7.754
		Weight <sup>E</sup> , lb/ft	12.385	9.988	9.703	8.359	6.939	6.100	5.597	4.591
10	10.75	Min wall <sup>C</sup> , in	1.536	1.194	1.152	0.977	0.796	0.694	0.632	0.512
		Avg ID <sup>D</sup> , in	7.494	8.219	8.308	8.679	9.062	9.279	9.41	9.665
		Weight <sup>E</sup> , lb/ft	19.245	15.515	15.081	12.983	10.744	9.490	8.695	7.128
12	12.75	Min wall <sup>C</sup> , in	1.821	1.417	1.371	1.159	0.944	0.823	0.75	0.607
		Avg ID <sup>D</sup> , in	8.889	9.746	9.844	10.293	10.749	11.005	11.16	11.46
		Weight <sup>E</sup> , lb/ft	27.062	21.837	21.213	18.267	15.155	13.348	12.238	10.023
14	14.00	Min wall <sup>C</sup> , in	2	1.556	1.505	1.273	1.037	0.903	0.824	0.667
		Avg ID <sup>D</sup> , in	9.76	10.701	10.809	11.301	11.802	12.086	12.253	12.59
		Weight <sup>E</sup> , lb/ft	32.635	26.329	25.571	22.030	18.279	16.082	14.763	12.093
16	16.00	Min wall <sup>C</sup> , in	2.286	1.778	1.720	1.455	1.185	1.032	0.941	0.762
		Avg ID <sup>D</sup> , in	11.154	12.231	12.353	12.915	13.488	13.812	14.005	14.39
		Weight <sup>E</sup> , lb/ft	42.629	34.384	33.398	28.777	23.872	21.005	19.269	15.789
18	18.00	Min wall <sup>C</sup> , in	2.571	2	1.935	1.636	1.333	1.161	1.059	0.857
		Avg ID <sup>D</sup> , in	12.549	13.76	13.897	14.532	15.174	15.539	15.755	16.18
		Weight <sup>E</sup> , lb/ft	53.940	43.513	42.270	36.403	30.210	26.584	24.392	19.977
20	20.00	Min wall <sup>C</sup> , in	2.857	2.222	2.151	1.818	1.481	1.29	1.176	0.952
		Avg ID <sup>D</sup> , in	13.943	15.289	15.441	16.146	16.86	17.265	17.507	17.98
		Weight <sup>E</sup> , lb/ft	66.599	53.715	52.206	44.947	37.294	32.820	30.102	24.658
22	22.00	Min wall <sup>C</sup> , in	3.143	2.444	2.366	2	1.63	1.419	1.294	1.048
		Avg ID <sup>D</sup> , in	15.337	16.819	16.985	17.76	18.544	18.992	19.257	19.78
		Weight <sup>E</sup> , lb/ft	80.591	64.991	63.167	54.391	45.149	39.712	36.433	29.858
24	24.00	Min wall <sup>C</sup> , in	3.429	2.667	2.581	2.182	1.778	1.548	1.412	1.143
		Avg ID <sup>D</sup> , in	16.731	18.346	18.529	19.374	20.231	20.718	21.007	21.58
		Weight <sup>E</sup> , lb/ft	95.916	77.365	75.172	64.735	53.726	47.260	43.369	35.525

# WL102G – NATURAL GAS PIPE SIZES & PRESSURE RATINGS



## PE2708

MAOP <sup>B</sup>		DF =0.40	125	125	120	100	80	69	63	50
		DF =0.32	125	100	96	80	64	55	50	40
IPS Size <sup>A</sup>	OD (in)	DR	7	9	9.3	11	13.5	15.5	17	21
1/2	0.84	Min wall <sup>C</sup> , in	0.120	0.093	0.090	0.076	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	0.586	0.643	0.649	0.679	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.115	0.093	0.090	0.077	NA	NA	NA	NA
3/4	1.050	Min wall <sup>C</sup> , in	0.150	0.117	0.113	0.095	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	0.732	0.802	0.810	0.849	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.180	0.145	0.141	0.121	NA	NA	NA	NA
1	1.315	Min wall <sup>C</sup> , in	0.188	0.146	0.141	0.120	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	0.916	1.005	1.016	1.061	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.282	0.227	0.221	0.191	NA	NA	NA	NA
1 1/4	1.660	Min wall <sup>C</sup> , in	0.237	0.184	0.178	0.151	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	1.158	1.270	1.283	1.340	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.450	0.362	0.352	0.304	NA	NA	NA	NA
1 1/2	1.900	Min wall <sup>C</sup> , in	0.271	0.211	0.204	0.173	NA	NA	NA	NA
		Avg ID <sup>D</sup> , in	1.325	1.453	1.468	1.533	NA	NA	NA	NA
		Weight <sup>E</sup> , lb/ft	0.588	0.475	0.461	0.398	NA	NA	NA	NA
2	2.375	Min wall <sup>C</sup> , in	0.339	0.264	0.255	0.216	0.176	0.153	0.140	NA
		Avg ID <sup>D</sup> , in	1.656	1.815	1.834	1.917	2.002	2.051	2.078	NA
		Weight <sup>E</sup> , lb/ft	0.920	0.743	0.721	0.622	0.516	0.453	0.417	NA
3	3.500	Min wall <sup>C</sup> , in	0.500	0.389	0.375	0.318	0.259	0.226	0.206	0.167
		Avg ID <sup>D</sup> , in	2.440	2.675	2.705	2.826	2.951	3.021	3.063	3.146
		Weight <sup>E</sup> , lb/ft	1.999	1.613	1.566	1.349	1.119	0.986	0.904	0.742
4	4.500	Min wall <sup>C</sup> , in	0.643	0.500	0.482	0.409	0.333	0.290	0.265	0.214
		Avg ID <sup>D</sup> , in	3.137	3.440	3.478	3.633	3.794	3.885	3.938	4.046
		Weight <sup>E</sup> , lb/ft	3.306	2.666	2.591	2.230	1.850	1.627	1.496	1.223

A. Sizes per ASTM D2513. See WL129/WL129M for pipe compound information.

B. Maximum Allowable Operating Pressures (MAOP) were calculated using a 73°F HDB of 1600psi for PE4710 and 1250psi for PE2708 using the formula listed under 49CFR192.121. Pressure ratings decrease as pipe temperature rises above 73°F (see WL118). A Design Factor (DF) of 0.4 may be used for 12" and smaller PE4710 pipe produced after January 22, 2019. Per 49CFR192, the maximum operating pressure for gas distribution pipe 12" and smaller is 125psig, and 100psig for pipe larger than 12" manufactured after July 4, 2004, and 100psig for all pipe sizes manufactured before July 4, 2004.

C. Bold values are the minimum wall thicknesses permitted by 49CFR192.121 if 0.4 DF is used. The minimum wall thickness permitted for 0.32 DF is 0.062 inches.

D. Calculated Avg ID = Avg OD – (2.12 x min wall) and is for estimating fluid flow. Pipe ID is approximate, not a specification dimension.

E. Unit weights for PE4710 were calculated using a specific gravity of 0.96. Unit weights for PE2708 were calculated using a specific gravity of 0.941.

### NOTES

- CONTACT WL PLASTICS TO CONFIRM AVAILABILITY OF SIZES AND DR'S NOT SHOWN.
- WL Plastics PE4710 gas distribution pipe is manufactured in accordance with ASTM D 2513 and DOT 49 CFR 192(6) for the underground distribution of natural gas, gaseous LPG, and yard gas.
- Gas distribution and jurisdictional gas gathering pipe is manufactured using no rework material and is stamped "GAS-NR" in the print line.
- Contact WL Plastics Customer Service about gas gathering pipe manufactured to ASTM F2619 & API 15LE.
- See WL108 for standard coil/stick length and packaging dimensions. Special coil/stick length or packaging may be available. Contact WL Plastics Customer Service for information.
- See WL101 and WL124 for fusion, mechanical and electrofusion joining information.
- See additional natural gas distribution documents under the Marketing Literature Tab at [www.wlplastics.com/natural-gas-distribution/](http://www.wlplastics.com/natural-gas-distribution/)
- See WL125 Terms and Conditions of Sale.