

# WL102G – NATURAL GAS PIPE SIZES & PRESSURE RATINGS



<b>PE4710 PRESSURE RATINGS<sup>B</sup></b>		<b>DF=0.40 DF=0.32</b>	<b>125 psi 125</b>	<b>125 125</b>	<b>125 125</b>	<b>125 123</b>	<b>125 114</b>	<b>125 102</b>	<b>122 98</b>	<b>102 82</b>	<b>NA 71</b>	<b>NA 64</b>
<b>CTS SIZE<sup>A</sup> (in)</b>	<b>AVG O.D. (in)</b>	<b>DR</b>	<b>7</b>	<b>7.3</b>	<b>9</b>	<b>9.33</b>	<b>10</b>	<b>11</b>	<b>11.5</b>	<b>13.5</b>	<b>15.5</b>	<b>17</b>
1/2	0.625	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	<b>0.090<sup>D</sup></b> 0.434 0.065	0.086 0.443 0.063	0.069 0.479 0.052	0.067 0.483 0.051	0.063 <sup>D</sup> 0.491 0.048					
3/4	0.875	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.125 0.610 0.127	0.120 0.621 0.123	0.097 0.669 0.103	0.094 0.676 0.100	<b>0.090<sup>D</sup> (DR9.7)</b> 0.684 0.096	0.080 0.705 0.086	0.076 0.714 0.083	0.065 0.737 0.072		
1	1.125	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.161 0.784 0.211	0.154 0.799 0.203	0.125 0.860 0.170	0.121 0.868 0.165	0.113 0.885 0.155	<b>0.101<sup>D</sup> (DR 11.1)</b> 0.911 0.141	0.098 0.917 0.137	0.083 0.949 0.118	0.073 0.970 0.104	0.066 0.985 0.095
1 1/4	1.375	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.196 0.959 0.314	0.188 0.976 0.303	0.153 1.051 0.254	<b>0.151<sup>D</sup> (DR9.1)</b> 1.055 .251	0.138 1.082 0.232	0.125 1.110 0.212	0.120 1.121 0.205	0.102 1.159 0.177	0.089 1.186 0.156	0.081 1.203 0.143
1 1/2	1.625	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.232 1.133 0.439	0.223 1.152 0.425	0.181 1.241 0.355	0.173D (DR9.4) 1.258 0.342	0.148 1.311 0.297	0.141 1.326 0.285	0.120 1.371 0.246	0.105 1.402 0.217	0.096 1.421 0.200	0.148 1.311 0.297
<b>IPS SIZE<sup>A</sup> (in)</b>												
1/2	0.840	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.120 0.586 0.117	0.115 0.596 0.113	0.093 0.643 0.094	<b>0.090<sup>D</sup></b> 0.649 0.092	0.084 0.662 0.086	0.076 0.679 0.079	0.073 0.685 0.076	<b>0.062</b> 0.709 0.066		
3/4	1.050	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.150 0.732 0.184	0.144 0.745 0.177	0.117 0.802 0.148	0.113 0.810 0.144	0.105 0.827 0.135	<b>0.095<sup>D</sup></b> 0.849 0.123	0.091 0.857 0.119	0.078 0.885 0.103	0.068 0.906 0.091	<b>0.062</b> 0.919 0.083
1	1.315	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.188 0.916 0.288	0.180 0.933 0.278	0.146 1.005 0.232	0.141 1.016 0.225	0.132 1.035 0.212	0.120 1.061 0.195	0.114 1.073 0.186	<b>0.101<sup>D</sup> (DR 13)</b> 1.101 0.167	0.085 1.135 0.142	0.077 1.152 0.130
1 1/4	1.660	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.237 1.158 0.459	0.227 1.179 0.442	0.184 1.270 0.369	0.178 1.283 0.359	0.166 1.308 0.337	<b>0.151<sup>D</sup></b> 1.340 0.310	0.144 1.355 0.297	0.123 1.399 0.257	0.107 1.433 0.226	0.098 1.452 0.208
1 1/2	1.900	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.271 1.325 0.600	0.260 1.349 0.580	0.211 1.453 0.485	0.204 1.468 0.470	0.190 1.497 0.442	<b>0.173<sup>D</sup></b> 1.533 0.406	0.165 1.550 0.389	0.141 1.601 0.337	0.123 1.639 0.297	0.112 1.663 0.272
2	2.375	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.339 1.656 0.939	0.325 1.686 0.906	0.264 1.815 0.758	0.255 1.834 0.735	0.238 1.870 0.692	<b>0.216<sup>D</sup></b> 1.917 0.634	0.207 1.936 0.610	0.176 2.002 0.526	0.153 2.051 0.462	0.140 2.078 0.425
3	3.500	Min wall, in Avg ID <sup>C</sup> , in Weight, lb/ft	0.500 2.440 2.040	0.479 2.485 1.968	0.389 2.675 1.646	0.375 2.705 1.593	0.350 2.758 1.499	0.318 2.826 1.376	0.304 2.856 1.321	<b>0.259<sup>D</sup></b> 2.951 1.141	0.226 3.021 1.006	0.206 3.063 0.923

<b>PE4710 PRESSURE RATINGS<sup>B</sup></b>		<b>DF=0.40 DF=0.32</b>	<b>125 125</b>	<b>125 125</b>	<b>125 123</b>	<b>125 102</b>	<b>102 82</b>	<b>88 71</b>	<b>80 64</b>	<b>71 57</b>	<b>64 51</b>	<b>NA 41</b>	<b>NA 33</b>
<b>IPS SIZE<sup>A</sup></b>	<b>AVG OD, in</b>	<b>DR</b>	<b>7</b>	<b>9</b>	<b>9.33</b>	<b>11</b>	<b>13.5</b>	<b>15.5</b>	<b>17</b>	<b>19</b>	<b>21</b>	<b>26</b>	<b>32.5</b>
4	4.500	Min wall, in	0.643	0.500	0.482	0.409	0.333	0.290	<b>0.265<sup>D</sup></b>	0.237	0.214	0.173	0.138
		Avg ID <sup>C</sup> , in	3.137	3.440	3.478	3.633	3.794	3.885	3.938	3.998	4.046	4.133	4.207
		Weight, lb/ft	3.372	2.720	2.633	2.275	1.887	1.660	1.526	1.374	1.247	1.018	0.819
6	6.625	Min wall, in	0.946	0.736	0.710	0.602	0.491	0.427	0.390	0.349	<b>0.315<sup>D</sup></b>	0.255	0.204
		Avg ID <sup>C</sup> , in	4.619	5.065	5.120	5.349	5.584	5.720	5.798	5.885	5.957	6.084	6.193
		Weight, lb/ft	7.305	5.894	5.711	4.930	4.095	3.599	3.307	2.978	2.703	2.209	1.781
8	8.625	Min wall, in	1.232	0.958	0.924	0.784	0.639	0.556	0.507	0.454	<b>0.411<sup>D</sup></b>	0.332	0.265
		Avg ID <sup>C</sup> , in	6.013	6.594	6.666	6.963	7.270	7.446	7.550	7.663	7.754	7.921	8.063
		Weight, lb/ft	12.385	9.988	9.676	8.359	6.939	6.100	5.597	5.044	4.591	3.744	3.012
10	10.750	Min wall, in	1.536	1.194	1.152	0.977	0.796	0.694	0.632	0.566	<b>0.512<sup>D</sup></b>	0.413	0.331
		Avg ID <sup>C</sup> , in	7.494	8.219	8.308	8.679	9.062	9.279	9.410	9.550	9.665	9.874	10.048
		Weight, lb/ft	19.245	15.515	15.035	12.983	10.774	9.490	8.695	7.838	7.128	5.805	4.689
12	12.750	Min wall, in	1.821	1.417	1.367	1.159	0.944	0.823	0.750	0.671	<b>0.607<sup>D</sup></b>	0.490	0.392
		Avg ID <sup>C</sup> , in	8.889	9.746	9.852	10.293	10.749	11.005	11.160	11.327	11.463	11.711	11.919
		Weight, lb/ft	27.062	21.837	21.159	18.267	15.155	13.348	12.238	11.021	10.023	8.169	6.587
<b>PRESSURE RATINGS<sup>B</sup></b>		<b>DF=0.32</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>82</b>	<b>71</b>	<b>64</b>	<b>57</b>	<b>51</b>	<b>41</b>	<b>33</b>
14	14	Min wall, in	2.000	1.556	1.501	1.273	1.037	0.903	0.824	0.737	0.667	0.538	0.431
		Avg ID <sup>C</sup> , in	9.760	10.701	10.818	11.301	11.802	12.086	12.253	12.438	12.586	12.859	13.086
		Weight, lb/ft	32.635	26.329	25.511	22.030	18.279	16.082	14.763	13.292	12.093	9.848	7.952
16	16	Min wall, in	2.286	1.778	1.715	1.455	1.185	1.032	0.941	0.842	0.762	0.615	0.492
		Avg ID <sup>C</sup> , in	11.154	12.231	12.364	12.915	13.488	13.812	14.005	14.215	14.385	14.696	14.957
		Weight, lb/ft	42.629	34.384	33.313	28.777	23.872	21.005	19.269	17.355	15.789	12.866	10.375
18	18	Min wall, in	2.571	2.000	1.929	1.636	1.333	1.161	1.059	0.947	0.857	0.692	0.554
		Avg ID <sup>C</sup> , in	12.549	13.760	13.911	14.532	15.174	15.539	15.755	15.992	16.183	16.533	16.826
		Weight, lb/ft	53.940	43.513	42.155	36.403	30.210	26.584	24.395	21.959	19.977	16.286	13.142
20	20	Min wall, in	2.857	2.222	2.144	1.818	1.481	1.290	1.176	1.053	0.952	0.769	0.615
		Avg ID <sup>C</sup> , in	13.943	15.289	15.455	16.146	16.860	17.265	17.507	17.768	17.982	18.370	18.696
		Weight, lb/ft	66.599	53.715	52.057	44.947	37.294	32.820	30.102	27.129	24.658	20.109	16.211
22	22	Min wall, in	3.143	2.444	2.358	2.000	1.630	1.419	1.294	1.158	1.048	0.846	0.677
		Avg ID <sup>C</sup> , in	15.337	16.819	17.001	17.760	18.544	18.992	19.257	19.545	19.778	20.206	20.565
		Weight, lb/ft	80.591	64.991	62.979	54.391	45.149	39.712	36.433	32.818	29.858	24.335	19.629
24	24	Min wall, in	3.429	2.667	2.572	2.182	1.778	1.548	1.412	1.263	1.143	0.923	0.738
		Avg ID <sup>C</sup> , in	16.731	18.346	18.547	19.374	20.231	20.718	21.007	21.322	21.577	22.043	22.435
		Weight, lb/ft	95.916	77.365	74.941	64.735	53.726	47.260	43.369	39.049	35.525	28.963	23.344

A. Sizes per ASTM D2513. See WL129 for pipe compound.

B. Pressure ratings were calculated for a pipe temperature of 73°F and an HDB of 1600psi 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 PE3408/PE4710 gas distribution pipe 12" and smaller is 125psig and 100psig for pipe larger than 12" for pipe manufactured after July 4, 2004, and 100psig for all pipe sizes manufactured before July 4, 2004.

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

D. Minimum wall thickness permitted under 49CFR192.121 if 0.4 DF is used. The minimum wall thickness permitted for 0.32 DF is 0.062 inches.

#### NOTES

- CONTACT WL PLASTICS PLANT CUSTOMER SERVICE TO CONFIRM AVAILABILITY AND FOR 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 the Gas Distribution brochure and additional natural gas distribution documents titled "A Comparison of PE4710 to PE2708" and "Identifying WL Plastics Gas Pipe" under the Marketing Literature Tab at [www.wlplastics.com](http://www.wlplastics.com)
- See WL125 Terms and Conditions of Sale.