

Approximate PROPANE Gas Pressure Loss Data in (Mbar / m) in Copper Tube

| Input Gross | Input Net | GAS RATE M3/HR | Pressure loss / m | Pressure loss / m | Pressure loss / m | Pressure loss / m | Pressure loss / m | Pressure loss / m | Pressure loss / m |
|-------------|-----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | | 8mm | 10mm | 12mm | 15mm | 22mm | 28mm | 35mm |
| 0.26 | 0.23 | 0.01 | 0.0028 | 0.0008 | 0.0003 | 0.0001 | 0.0000 | 0.0000 | 0.0000 |
| 0.52 | 0.47 | 0.02 | 0.0076 | 0.0021 | 0.0008 | 0.0002 | 0.0000 | 0.0000 | 0.0000 |
| 0.78 | 0.70 | 0.03 | 0.0141 | 0.0038 | 0.0014 | 0.0004 | 0.0001 | 0.0000 | 0.0000 |
| 1.03 | 0.94 | 0.04 | 0.0220 | 0.0059 | 0.0022 | 0.0007 | 0.0001 | 0.0000 | 0.0000 |
| 1.29 | 1.17 | 0.05 | 0.0313 | 0.0084 | 0.0030 | 0.0009 | 0.0002 | 0.0000 | 0.0000 |
| 1.55 | 1.41 | 0.06 | 0.0419 | 0.0112 | 0.0040 | 0.0012 | 0.0002 | 0.0001 | 0.0000 |
| 1.81 | 1.64 | 0.07 | 0.0537 | 0.0143 | 0.0051 | 0.0016 | 0.0003 | 0.0001 | 0.0000 |
| 2.07 | 1.88 | 0.08 | 0.0667 | 0.0177 | 0.0063 | 0.0019 | 0.0003 | 0.0001 | 0.0000 |
| 2.33 | 2.11 | 0.09 | 0.0808 | 0.0214 | 0.0077 | 0.0023 | 0.0004 | 0.0001 | 0.0000 |
| 2.58 | 2.35 | 0.1 | 0.0960 | 0.0253 | 0.0091 | 0.0027 | 0.0005 | 0.0001 | 0.0000 |
| 3.10 | 2.82 | 0.12 | 0.1296 | 0.0341 | 0.0121 | 0.0036 | 0.0006 | 0.0002 | 0.0001 |
| 3.62 | 3.29 | 0.14 | 0.1673 | 0.0439 | 0.0156 | 0.0046 | 0.0008 | 0.0002 | 0.0001 |
| 4.13 | 3.76 | 0.16 | 0.2088 | 0.0547 | 0.0194 | 0.0058 | 0.0010 | 0.0003 | 0.0001 |
| 4.65 | 4.23 | 0.18 | 0.2542 | 0.0664 | 0.0235 | 0.0070 | 0.0012 | 0.0003 | 0.0001 |
| 5.17 | 4.70 | 0.2 | 0.3032 | 0.0791 | 0.0280 | 0.0083 | 0.0014 | 0.0004 | 0.0001 |
| 5.68 | 5.17 | 0.22 | 0.3559 | 0.0927 | 0.0328 | 0.0097 | 0.0017 | 0.0005 | 0.0002 |
| 6.20 | 5.64 | 0.24 | 0.4120 | 0.1072 | 0.0379 | 0.0112 | 0.0019 | 0.0005 | 0.0002 |
| 6.72 | 6.11 | 0.26 | 0.4716 | 0.1226 | 0.0432 | 0.0127 | 0.0022 | 0.0006 | 0.0002 |
| 7.24 | 6.58 | 0.28 | 0.5346 | 0.1388 | 0.0489 | 0.0144 | 0.0025 | 0.0007 | 0.0002 |
| 7.75 | 7.05 | 0.3 | 0.6009 | 0.1559 | 0.0549 | 0.0161 | 0.0028 | 0.0008 | 0.0002 |
| 8.27 | 7.52 | 0.32 | 0.6705 | 0.1738 | 0.0612 | 0.0180 | 0.0031 | 0.0009 | 0.0003 |
| 8.79 | 7.99 | 0.34 | 0.7433 | 0.1925 | 0.0677 | 0.0199 | 0.0034 | 0.0010 | 0.0003 |
| 9.30 | 8.46 | 0.36 | 0.8192 | 0.2121 | 0.0745 | 0.0219 | 0.0037 | 0.0010 | 0.0003 |
| 9.82 | 8.93 | 0.38 | 0.8983 | 0.2324 | 0.0816 | 0.0239 | 0.0041 | 0.0011 | 0.0004 |
| 10.34 | 9.40 | 0.4 | 0.9805 | 0.2535 | 0.0890 | 0.0261 | 0.0044 | 0.0012 | 0.0004 |
| 10.85 | 9.87 | 0.42 | 1.0658 | 0.2754 | 0.0966 | 0.0283 | 0.0048 | 0.0013 | 0.0004 |
| 11.37 | 10.34 | 0.44 | 1.1541 | 0.2980 | 0.1045 | 0.0306 | 0.0052 | 0.0015 | 0.0005 |
| 11.89 | 10.81 | 0.46 | 1.2454 | 0.3215 | 0.1127 | 0.0330 | 0.0056 | 0.0016 | 0.0005 |
| 12.40 | 11.28 | 0.48 | 1.3397 | 0.3456 | 0.1211 | 0.0354 | 0.0060 | 0.0017 | 0.0005 |
| 12.92 | 11.75 | 0.5 | 1.4369 | 0.3705 | 0.1298 | 0.0379 | 0.0064 | 0.0018 | 0.0006 |
| 18.09 | 16.44 | 0.7 | | 0.6592 | 0.2302 | 0.0670 | 0.0113 | 0.0031 | 0.0010 |
| 23.26 | 21.14 | 0.9 | | 1.0164 | 0.3542 | 0.1028 | 0.0173 | 0.0048 | 0.0015 |
| 28.42 | 25.84 | 1.1 | | 1.4385 | 0.5006 | 0.1450 | 0.0243 | 0.0067 | 0.0021 |
| 33.59 | 30.54 | 1.3 | | 1.9227 | 0.6683 | 0.1933 | 0.0323 | 0.0089 | 0.0028 |
| 38.76 | 35.24 | 1.5 | | | 0.8566 | 0.2475 | 0.0412 | 0.0113 | 0.0036 |
| 43.93 | 39.93 | 1.7 | | | 1.0649 | 0.3073 | 0.0511 | 0.0140 | 0.0044 |
| 49.10 | 44.63 | 1.9 | | | 1.2926 | 0.3727 | 0.0619 | 0.0170 | 0.0053 |
| 54.26 | 49.33 | 2.1 | | | 1.5395 | 0.4435 | 0.0736 | 0.0201 | 0.0063 |
| 59.43 | 54.03 | 2.3 | | | 1.8050 | 0.5196 | 0.0861 | 0.0235 | 0.0074 |
| 64.60 | 58.73 | 2.5 | | | 2.0887 | 0.6009 | 0.0995 | 0.0272 | 0.0085 |
| 69.77 | 63.42 | 2.7 | | | | 0.6873 | 0.1137 | 0.0310 | 0.0097 |
| 74.94 | 68.12 | 2.9 | | | | 0.7788 | 0.1287 | 0.0351 | 0.0109 |
| 80.10 | 72.82 | 3.1 | | | | 0.8752 | 0.1445 | 0.0394 | 0.0123 |
| 85.27 | 77.52 | 3.3 | | | | 0.9765 | 0.1612 | 0.0439 | 0.0137 |
| 90.44 | 82.22 | 3.5 | | | | 1.0827 | 0.1786 | 0.0486 | 0.0151 |
| 95.61 | 86.92 | 3.7 | | | | 1.1936 | 0.1967 | 0.0536 | 0.0167 |
| 100.78 | 91.61 | 3.9 | | | | 1.3093 | 0.2157 | 0.0587 | 0.0182 |
| 105.94 | 96.31 | 4.1 | | | | 1.4296 | 0.2354 | 0.0640 | 0.0199 |
| 111.11 | 101.01 | 4.3 | | | | 1.5546 | 0.2558 | 0.0696 | 0.0216 |
| 116.28 | 105.71 | 4.5 | | | | 1.6841 | 0.2770 | 0.0753 | 0.0234 |
| 121.45 | 110.41 | 4.7 | | | | 1.8183 | 0.2989 | 0.0812 | 0.0252 |
| 126.61 | 115.10 | 4.9 | | | | 1.9569 | 0.3216 | 0.0873 | 0.0271 |
| 131.78 | 119.80 | 5.1 | | | | | 0.3450 | 0.0937 | 0.0290 |
| 136.95 | 124.50 | 5.3 | | | | | 0.3691 | 0.1002 | 0.0311 |
| 142.12 | 129.20 | 5.5 | | | | | 0.3939 | 0.1069 | 0.0331 |
| 147.29 | 133.90 | 5.7 | | | | | 0.4194 | 0.1138 | 0.0353 |
| 152.45 | 138.60 | 5.9 | | | | | 0.4456 | 0.1208 | 0.0374 |
| 157.62 | 143.29 | 6.1 | | | | | 0.4725 | 0.1281 | 0.0397 |



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|-------------|-----------|----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 160.21 | 145.64 | 6.2 | | | | | 0.4862 | 0.1318 | 0.0408 |
| 162.79 | 147.99 | 6.3 | | | | | 0.5001 | 0.1356 | 0.0420 |
| 165.37 | 150.34 | 6.4 | | | | | 0.5142 | 0.1394 | 0.0431 |
| 167.96 | 152.69 | 6.5 | | | | | 0.5284 | 0.1432 | 0.0443 |
| 174.42 | 158.56 | 6.75 | | | | | 0.5647 | 0.1530 | 0.0473 |
| 180.88 | 164.44 | 7 | 148.2402 | 37.4058 | 12.8708 | 3.6767 | 0.6021 | 0.1631 | 0.0505 |
| 187.34 | 170.31 | 7.25 | | | | | 0.6405 | 0.1734 | 0.0537 |
| 193.80 | 176.18 | 7.5 | | | | | 0.6800 | 0.1841 | 0.0569 |
| 200.26 | 182.05 | 7.75 | | | | | 0.7205 | 0.1950 | 0.0603 |
| 206.72 | 187.93 | 8 | 188.2879 | 47.4736 | 16.3243 | 4.6595 | 0.7621 | 0.2062 | 0.0637 |
| 213.18 | 193.80 | 8.25 | | | | | 0.8047 | 0.2177 | 0.0673 |
| 219.64 | 199.67 | 8.5 | | | | | 0.8483 | 0.2294 | 0.0709 |
| 226.10 | 205.54 | 8.75 | | | | | 0.8929 | 0.2415 | 0.0746 |
| 232.56 | 211.42 | 9 | 232.5721 | 58.5991 | 20.1388 | 5.7443 | 0.9385 | 0.2537 | 0.0784 |
| 239.02 | 217.29 | 9.25 | | | | | 0.9851 | 0.2663 | 0.0822 |
| 245.48 | 223.16 | 9.5 | | | | | 1.0328 | 0.2791 | 0.0862 |
| 251.94 | 229.03 | 9.75 | | | | | 1.0814 | 0.2922 | 0.0902 |
| 258.40 | 234.91 | 10 | 281.0064 | 70.7605 | 24.3065 | 6.9289 | 1.1310 | 0.3056 | 0.0943 |
| 264.86 | 240.78 | 10.25 | | | | | 1.1816 | 0.3192 | 0.0985 |
| 271.32 | 246.65 | 10.5 | | | | | 1.2332 | 0.3331 | 0.1028 |
| 277.78 | 252.53 | 10.75 | | | | | 1.2857 | 0.3472 | 0.1071 |
| 284.24 | 258.40 | 11 | 333.5156 | 83.9385 | 28.8207 | 8.2114 | 1.3392 | 0.3616 | 0.1115 |
| 290.70 | 264.27 | 11.25 | | | | | 1.3937 | 0.3763 | 0.1160 |
| 297.16 | 270.14 | 11.5 | | | | | 1.4492 | 0.3912 | 0.1206 |
| 303.62 | 276.02 | 11.75 | | | | | 1.5056 | 0.4063 | 0.1253 |
| 310.08 | 281.89 | 12 | 390.0336 | 98.1164 | 33.6757 | 9.5901 | 1.5629 | 0.4218 | 0.1300 |
| 316.54 | 287.76 | 12.25 | | | | | 1.6213 | 0.4374 | 0.1348 |
| 323.00 | 293.63 | 12.5 | | | | | 1.6805 | 0.4534 | 0.1397 |
| 329.46 | 299.51 | 12.75 | | | | | 1.7407 | 0.4695 | 0.1447 |
| 335.92 | 305.38 | 13 | 450.5013 | 113.2789 | 38.8663 | 11.0635 | 1.8019 | 0.4860 | 0.1498 |
| 342.38 | 311.25 | 13.25 | | | | | 1.8639 | 0.5027 | 0.1549 |
| 348.84 | 317.12 | 13.5 | | | | | 1.9270 | 0.5196 | 0.1601 |
| 355.30 | 323.00 | 13.75 | | | | | 1.9909 | 0.5368 | 0.1653 |
| 361.76 | 328.87 | 14 | 513.8654 | 129.4131 | 44.3876 | 12.6302 | 2.0558 | 0.5542 | 0.1707 |
| 368.22 | 334.74 | 14.25 | | | | | | 0.5719 | 0.1761 |
| 374.68 | 340.62 | 14.5 | | | | | | 0.5898 | 0.1816 |
| 381.14 | 346.49 | 14.75 | | | | | | 0.6080 | 0.1872 |
| 387.60 | 352.36 | 15 | | | | | | 0.6264 | 0.1928 |
| 394.06 | 358.23 | 15.25 | | | | | | 0.6450 | 0.1986 |
| 400.52 | 364.11 | 15.5 | | | | | | 0.6639 | 0.2044 |
| 406.98 | 369.98 | 15.75 | | | | | | 0.6831 | 0.2102 |
| 413.44 | 375.85 | 16 | 655.0932 | 164.5454 | 56.4062 | 16.0388 | 2.6078 | 0.7024 | 0.2162 |

