

Actual Pipe O.D.'s for Various Materials

Nominal pipe size can be a misleading term since pipes/tubing of the same “nominal” pipe size manufactured from different materials can have significantly different outside diameters. The chart below provides actual O.D.’s for pipe fabricated from copper (rigid pipe and soft tubing), iron pipe (black iron, typically referred to as IPS), stainless steel, wrought iron, ductile iron, PVC, CPVC, PEX and glass (fiberglass). As can be seen from the chart, not all materials are available in all sizes.

In general, black iron (IPS), stainless steel (SS), PVC, CPVC, PVDF, galvanized and wrought iron share the same O.D.’s. Copper (plumbing) pipe and PEX tubing also have the same O.D.’s. For soft copper tubing, the O.D. is actually the nominal tube size. Ductile iron and C900 / 905 have similar O.D.’s. Glass pipe is unique. Correct insulation sizes are listed on the price lists for the applicable insulation product.

| Nominal Pipe Size (in.) | ACTUAL O.D.’s | | | | | | |
|-------------------------------|-----------------------|-----------------------------|---------------|-----------------------------|-------------------|-----------------|---------------|
| | Soft Copper Tubing | Copper Pipe (Types K, L) | PEX Tubing | IPS, SS, PVC, PVDF, CPVC | Wrought Iron** | Ductile Iron | Glass Pipe |
| 1/8 | .125 | | | .405 | | | |
| 3/16 | .188 | | | | | | |
| 1/4 | .250 | .375 | .375 | .540 | .540 | | |
| 5/16 | .313 | | | | | | |
| 3/8 | .375 | .500 | .500 | .675 | .675 | | |
| 1/2 | .500 | .625 | .625 | .840 | .840 | | |
| 5/8 | .625 | .750 | .750 | | | | |
| 3/4 | .750 | .875 | .875 | 1.050 | 1.050 | | |
| 7/8 | .875 | | | | | | |
| 1 | | 1.125 | 1.125 | 1.315 | 1.315 | | 1.31 |
| 1-1/8 | 1.125 | | | | | | |
| 1-1/4 | | 1.375 | 1.375 | 1.660 | 1.660 | | |
| 1-3/8 | 1.375 | | | | | | |
| 1-1/2 | | 1.625 | 1.625 | 1.900 * | 1.900 | | 1.84 |
| 1-5/8 | 1.625 | | | | | | |
| 2 | | 2.125 | 2.125 | 2.375 | 2.375 | | 2.34 |
| 2-1/2 | | 2.625 | | 2.875 | 2.875 | | |
| 3 | | 3.125 | | 3.500 | | 3.96 | 3.41 |
| 3-1/2 | | 3.625 | | 4.000 | | | |
| 4 | | 4.125 | | 4.500 | | 4.80 | 4.53 |
| 5 | | 5.125 | | 5.563 | | | |
| 6 | | 6.127 | | 6.625 | | 6.90 | 6.66 |
| 8 | | 8.125 | | 8.625 | | 9.05 | |

*PVDF O.D. is 1.9063” **May be black or galvanized
For pipe sizes over 8.625” O.D., use sheet insulation.