

Goal:

Learn the process of measuring for inside (I) or outside (O) dimensions of a 90° bend in copper tubing and finding die-center location prior to bending

Supplies needed:

- 12" lengths of soft copper tubing
- Power or handheld lever bender
- Marker
- Square
- Pen/pencil
- Note paper

Process:

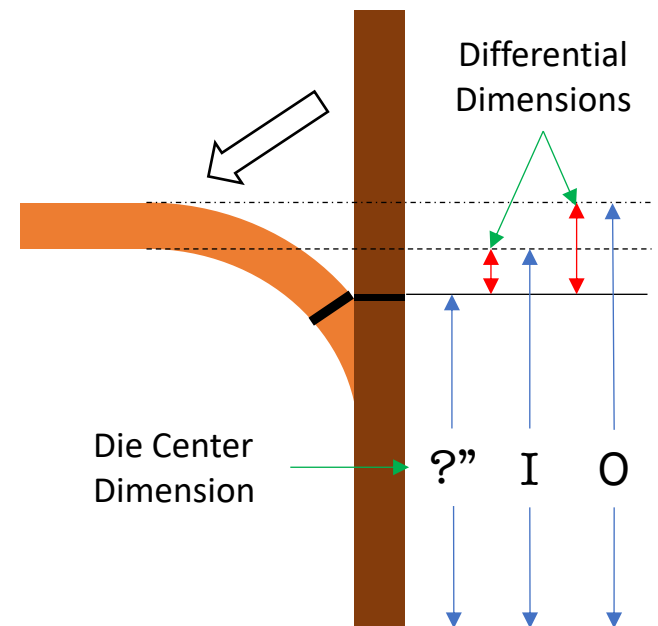
1. For each tube diameter, make a mark 6" from an end of a straight piece of tubing, this is used as die-center
2. Align the center of the bender die with the 6" mark on the tubing
3. Bend the tube to a 90° angle
4. Use a square to determine the I and O dimensions from the original end of the tubing
5. Subtract die center dimension from I and O dimensions to get differential dimensions
6. Record the difference between Die Center and I/O dimensions in Differential Dimensions table

How to use differential dimensions:

When measuring for a bend in tubing, measure for the desired I or O dimension, then mark the die center location by subtracting the differential dimension from the desired I/O dimension

Differential Dimensions

Dia	I Diff	O Diff
1/4"		
5/16"		
3/8"		
1/2"		
5/8"		
3/4"		
7/8"		



Note: Benders of differing brands may produce bends with different dimensions