



Mandrel Bent Tubing Capabilities

<u>Tube OD</u>	<u>CLBR</u>	<u>Min Straight Length between bends</u>	<u>Standard</u>	<u>Min Strght for Bead</u>	<u>Max Angle</u>
1.750	1.750	4.500	*	1.125	110
2.000	2.000	4.125	*	1.000	110
2.000	3.000	3.125		1.000	120
2.250	3.375	3.375	*	2.000	120
2.500	2.500	5.125		2.000	95
2.500	3.750	3.875	*	2.000	110
3.000	3.000	6.125		1.125	90
3.000	4.500	4.625	*	1.125	110
4.000	4.000	10.500	*	weld bead	90
5.000	5.000	13.000	*	weld bead	90

Note: All dimensions in inches.

Note: CLBR = center line bend radius, which is the bend radius measured at the exact center of the tube

Note: L-R-A = Straight Length, Rotation Angle, and Bend Angle.

Design Considerations

Standard tubing material is 0.065" wall thickness aluminized steel. Stainless steel is also available by request.

Use standard bend radius when possible.

Minimize the number of tool changes on a job.

Dimension angles as a bend from straight (outside angle).

Do not dimension lengths or angles in a non perpendicular view, instead list them only in the L-R-A table.

Drawings should include the diameter, CLBR, and X-Y-Z coordinate table. Also include the L-R-A table if available.

X-Y-Z table should be to both end points, and theoretical vertex point of the bends along the CLBR.

For beaded ends or no beaded ends add a note to the isometric view.

Standard beaded ends are 0.25" from the edge and a minimum of 0.06" height off the tube.

Rolled beads must have the "Min Strght for Bead" of straight length, or else they must be welded.

(2.0" is preferred)