



Tube Assembly Manufacturing Tolerances

Bending : Best Fit Method of Measuring

Adjusting the measured shape to best fit the theoretical desired form. Each straight section is measured to create an intersecting framework that is positioned to best satisfy every bend angle, rotation and segment length.

Bend Angle: +/- 1° Rotation: +/- 2° Segment Length: +/- .03”

Overall dimensions of bent tubes are inspected and held to looser tolerances due to the tolerance stack up associated with forming as opposed to machining. One bend or rotation will definitely affect the rest of the assembly. In order to meet the overall tolerances or ultimate fit it may be necessary to loosen the tolerances mentioned above.

Welding / Brazing :

End fittings and unions are held to +/- 2° unless otherwise specified on print which also affects the overall tolerance of the assembly due to a possible hard fit up on one or both ends.