



Bus Climate Control
York, Pa USA

Drawing No. B-247

Rev. A

Title:

**QUALITY REQUIREMENTS FOR
REFRIGERANT TUBE BENDS**

Date: 03-23-25

Sheet 1 of 2

1. **SCOPE:**

This requirement applies to bends in refrigerant tubing used in BCC products.

2. **ANGLE TOLERANCE:**

Tolerance of the angle of bend is ± 3 degrees.

3. **WALL THICKNESS:**

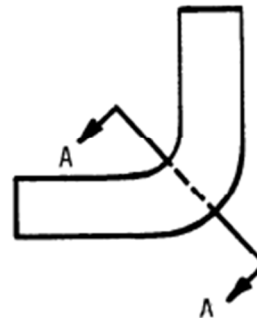
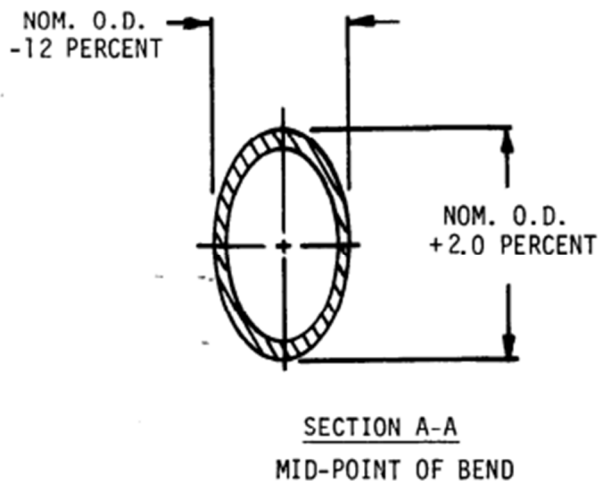
Wall thickness at any portion of the bend section shall not be thinned to less than 75 percent of the nominal tube wall thickness.

4. **INSIDE DIAMETER:**

No portion of the bent section shall have an inside diameter reduction of more than 20 percent of the nominal tube inside diameter.

5. **OVALITY:**

Ovality of the bent section shall not exceed the limit as shown below:



6. **WRINKLES:**

Objectionable wrinkles are those that reduce the diameter of the tube by more than 0.5 percent of the nominal tube diameter

EXAMPLE: For a 0.5 inch diameter tube, objectionable wrinkles are those that are greater in depth than,
 $0.005 \times 0.500 = 0.0025$ inch.



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7. DENTS:

There shall be no more than one dent per bend section. This allowable dent shall not be sharp (which could cause fracture of the metal) and shall not reduce the diameter of the tube, at the location of the dent, by more than 20 percent of the nominal tube diameter.

8. APPEARANCE:

Appearance of the tube bend shall be such that it does not detract from the perceived quality of the finished product.