# MODEL AHBQ Qual-Ekon Hairpin Bender 



The Model AHBQ Qual-Ekon Hairpin Bender is a fully automatic mandrel type bender that is designed for the production of 180 degree hairpin bends from level wound rolls of copper or aluminum tubing. This bender will process two tubes per cycle with the use of hitch type feed system and a chip free orbital type cutoff.


Tube Bender

## TRIDAN MODEL AHBQ

The production application of the TRIDAN Model AHBQ-4 is to produce hairpin bends from levelwound coiled tubing of copper or aluminum. It is a fully integrated system consisting of a Tube Straightening, Sizing, and Lubrication Section, adjustable-length Tube Feeding Section, a chipless Tube Cutoff Section, and Hairpin Bender Section. Supporting equipment include a Tube Decoiling System. The Control System is designed in such a manner that all operations are sequenced fully automatically or may be individually placed under manual control.

The Tube Straightening, Feeding, and Cutoff Sections are mounted on a machined base plate, which also serves as the top of the weldment-constructed hydraulic reservoir. This oversized reservoir is an integral part of the machine's frame, and is furnished as standard with a liquid level gauge and thermometer. The Hairpin Bender Section is mounted on a heavy-duty fully machined base frame to insure positive alignment with the Tube Straightening, Feeding, and Cutoff Section under all setup and operational conditions. The Bender Section is precisely guided on the base frame, again to insure alignment between the tubes and the bending mandrels and mandrel rods.

The Tube Decoiling System is built on a weldment frame of sufficient size and rigidity to support the number and size of coils dictated by the application.

## TECHNICAL SPECIFICATIONS

| Tube Diameters | 1/4" through 3/4"ODs (6.35/19.05mm) | Feed Speed | 90 to $120 \mathrm{Ft} / \mathrm{Min}$. (27.4/45.7Mtr/Min) |
| :---: | :---: | :---: | :---: |
| Tube Materials | Copper or Aluminum | Cutoff Time | Dependent upon tube material, diameter and, wall thickness -0.5 Sec . Average |
| Bends per Cycle | Two (2) |  |  |
| Minimum Bend Radius | Equal to Tube Outside Diameter(OD) | Tube Length Tolerance | +/- .025" per 120" length (+/-. 635 mm per 3.05 Mtrs ) |
| Maximum Bend Radius | 1.500 " $(38.1 \mathrm{~mm})$ | Tube Straightness | Better than .040 " per foot of length (3.3mm per Meter) |
| Minimum Hairpin Length | 10" (254mm) - Standard |  |  |
| Maximum Hairpin Length | 48" (1219mm) - Model AHBQ-4-48 | Tube Ovality | 1\% of Tube OD |
|  | 72 " (1829mm) - Model AHBQ-4-72 |  |  |
|  | $96 "$ (2438mm) - Model AHBQ-4-96 |  |  |
|  | 120" (3048mm) - Model AHBQ-4-120 |  |  |



