# **FABRICATION CAPABILITIES**

Deburring, Drilling, Machining, Notching, Punching, Sawing, Slotting, Stenciling





# **FABRICATION**

In addition to manufacturing tubular products, Allied Tube & Conduit offers a range of special fabrication services to provide assistance with product enhancement.

#### **Tube Laser BLM LT722**



This is a complex machine that can cut and/ or etch designs into tubular and open shape products. The laser is not limited to holes, slots and/or straight end cuts. There is no hard tooling involved in running products so this opens up the possibilities of shorter runs that can be cost effective.

- Round O.D. Max: 6.000"
- Square O.D. Max: 4" sq
- Minimum WIP Length: 132"
- Maximum WIP Length: 324"
- Maximum Finished Length: 252"
- Maximum Wt/Ft: 10 lbs

#### **CNC Bender**



The CNC machine has the ability to import files from 3D CAD directly to bender controls and reduces program development time. Bend multi radii in same part (draw and push rolling) offering more flexibility in bending tubes. Small or large volume, simple or complex, the bender will save time, space and money.

- Round O.D. Max: 3.000" 12 gauge
- Square O.D. Max: 2.250" 12 gauge
- 25% faster than hydraulic bending
- Allows for automated parts all planes
- Improves productivity and efficiency – reduced cycle times
- Improved repeatability

### **Draw Swager**



Draw Swaging gives Allied an advantage in the tubing industry with the ability to swage large squares and rectangles.

As with any ram die, the swage that is

As with any ram die, the swage that is produced is smooth and free of segment lines. These machines are capable of swaging one or both ends of the tubing.

• Square/Rectangle O.D. range:

0.625" - 4.000"

• Gauge range: 11 - 20 gauge

• Tube length range: 12" - 294"

• Length of swage: 1" - 7"

• Std length tolerance: ±1/8"

# **Large Segment Swager**



The large segment swager can swage round tubing as large as 5.000" OD, and as heavy as 8 gauge. On a segment swager, the die opens to the size of the mother tube, then squeezes the tubing down to a specific dimension. During the swaging process, some minor ridges are formed on the swaged area.

- O.D. range: 1.315" 5.000" \*Inquire regarding smaller O.D. capabilities
- Square/Rectangle O.D. range: 0.625" 1.500"
- Gauge range: 10 20\*
- Tube length range: 18" 288"
- Length of swage: 1" 8"
- Std length tolerance: ±1/8"

\* Wall thicknesses heavier than 12 gauge (.109" nominal may require a second pass to produce a swage longer than 4 inches.)

#### **Haven Model 873/875**



The Haven Tube Cutters are high-speed cutoffs that use a double cut process to re-cut tubing from mill lengths to customer-specified shorter lengths. With the Haven, there are no metal shavings to be removed after cutting. The end condition of the tubing after cutting is dimple-free with minimal burr.

- Round O.D. range: 0.500" 5.000"
- Square/Rectangle O.D. range: 0.625" 3.000"
- Gauge range: 22 8

875: 3.5" - 158"

- Finished length range\*: 873: 3.5" 120"
- WIP material length: 120" 300"Std length tolerance: ±1/16"
- Steel types: 1008 1022

\*Tube lengths up to 120" (14 gauge and lighter) can be brush de-burred in-line.

# **Ram/Segment Swager**



A ram swage is a fixed die that produces a smooth swage with no segment lines. The downside to a ram swage is that there is no adjustment in the tooling. If the wall thickness varies a little or if the O.D. is slightly larger or smaller, the fit of the swage will vary.

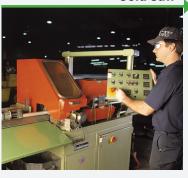
With a segment swage, there is some adjustment to accommodate variations in the weld seam height, wall thickness, and

O.D. dimensions. Because the die actually opens and squeezes the tube, you do get some ridges formed on the swage. Allied has developed a taper swage that firmly seats swaged pieces when joined.

- O.D. range: 0.706" 2.875"
- Gauge range: 14 20 in segment mode or 16 20 in ram mode

- Tube length range: 12" 300" in segment mode or 18" - 60" in ram mode
- Length of swage: 1" 3" in either segment or ram mode
- Std length tolerance: ±1/8" in both segment and ram mode
- Depending on the amount of reduction, lengths up to 300" can be swaged

#### **Cold Saw**



There are multiple cold saws currently in use at Allied. The primary function of these saws is to cut heavy wall tubing, especially cuts with a tight length tolerance. The cold saws provide precise tolerances and leave a minimal burr. Our cold saws are also capable of cutting steel bar or rod at any angle up to 90°.

- Round O.D. range: 0.500" 4.500"
- Largest square: 4.000" x 4.000"
- Largest rectangle: 2.000" x 4.000"
- Gauge range: 4 16
- WIP length range: 48" 288"
- Finished length range: 1" 288"
- Std length tolerance up to 10': ±1/32"
- Std length tolerance over 10': ±1/16"

- Steel types: 1006 1022
- Round O.D. Range: 0.500" 3.500"
- Largest Square: 3.000" x 3.000"
- Largest Rectangle: 2.000" x 3.000"
- Gauge Range: 4 16
- WIP Length Range: 48" 288"
- Finished Length Range: 1" 90"
- Std Length Tolerance up to 10': ±1/32"
- Steel Types: 1008 1022

#### Punching



Allied has punch presses ranging in size from 10 tons to 125 tons. Tubular applications of the punch press include: piercing, notching, flattening, coping, punching, slotting (with or without a mandrel) and specialty re-cutting. Flat stock and plate can be stamped to produce brackets and fittings.

# Welding



Capabilities include MIG and TIG welding of tubing and plate stock to produce custom parts.

# Other value-added services

**Assembly** 

Crimping

**Deburring** 

**End Finishing** 

**Expanding** 

**Flaring** 

**Fulfillment** 

Kanban System

Labeling

**Packaging** 

**Powder Coating** 

**Prototyping** 

Sourcing



Allied Tube & Conduit A AFC Cable Systems A Heritage Plastics A Unistrut

Unistrut Construction A Cope A US Tray A Calbrite A Calbond A Kaf-Tech

Columbia-MBF A Eastern Wire + Conduit A ACS/Uni-Fab A Cii

Power-Strut A Calconduit A Razor Ribbon A Calpipe Security

Vergokan - Flexicon - Marco

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