

## Model 660 Tube & Rod End-Finishing Machine

### **Fast, Simultaneous Deburring, Chamfering, Facing or Forming**

The Model 660 End-Finishing Machine enables even an unskilled operator to accurately finish up to 1875 ends an hour. This economical machine can cut costs by freeing lathes or other expensive machines on a wide range of work such as simultaneous inside-outside deburring, chamfering, and facing. Or, it can increase production and improved accuracy over abrasive belts, deburring wheels, or similar methods.

**Operation is simple** - one hand is always free for stock handling. Simply place the work piece through the self-centering chuck jaws, against adjustable stop, and pull the operating lever (on manual model only). This closes the chuck jaws, pivots the stop clear, and feeds the work to the rotating cutters. Overall time for chucking, machining and releasing is one second for small diameter tubes.

**Changeover is easy** - exchanging chuck inserts and tool holders with bits preset to accommodate various diameters or operations can be completed in minutes. The standard tool holder seats three bits for inside-outside deburring, chamfering, and facing. Only four sets of tools are necessary to cover the 7/16" to 2" diameter range.

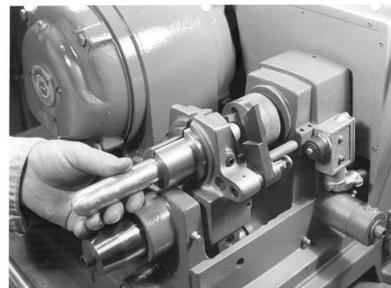
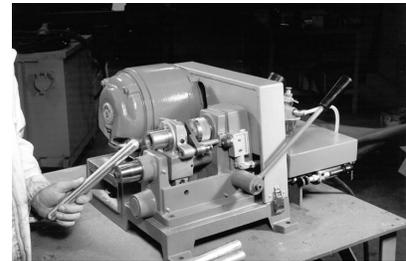
It's easy to change to any of the eight spindle speeds between **760 and 3920 RPM** for best machining finish. Speed changes can be completed in less than a minute. Fast, precise setting for the amount of stock fed into the tool is made with the adjustable depth stop. Maximum stroke is 1-1/4".



### **Air-Operated Model**

The Air-Operated Model incorporates an air motor which generally increases production 25%-30% or more. In this arrangement, an air cylinder and controls provide automatic operation.

### **Series 660-55 Spinner**



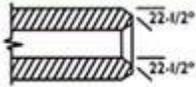
Used for closing the ends of tubes

### **PRODUCTION:**

Series 660-00, Manual, will finish approx. 1500 ends an hour

Series 660-50, Air operated, will finish approx. 1875 ends an hour.

### Typical Operations



Deburr and chamfer inside, outside and face end of tube or pipe.



Lead Chamfer or point bar stock- 22-1/2° chamfer angle



Round bar stock ends - use special tool bits

### Tool Setting Gauge

A micrometer-type tool setting gauge speeds setup by accurately locating the three bits used on the standard tool holder of the Model 660 End-Finishing Machine.



## 2 MODELS AVAILABLE

**SERIES 660-00, MANUALLY OPERATED END FINISHING MACHINE**

**SERIES 660-50, AIR OPERATED END FINISHING MACHINE**

**SERIES 660-55, END FORMING MACHINE (SPINNER)**

### ACCESSORY EQUIPMENT:

- **TOOL SETTING GAUGE** - speeds setup of standard tool holder, Micrometer settings with holder off the machine. Allows presetting only by gauging cutting position of bits for any diameter 7/16+through 2+O.D. Complete gauge, including micrometer and set screw drive.
- **VERTICAL MOUNTING BASE** - Gravity unloading of short pieces increases production (Cannot be used with coolant unit)
- **COOLANT UNIT** - includes 5 gallon tank, motor, pump, hose, Splash shields, and pan. Recommended to increase tool life when finishing stainless steel or other hard alloys.
- **1 HP MODIFICATION** - Motor has 250 - 1250 RPM range for chamfering O.D. bar stock. Required for work with Stainless Steel.

### TOOLING OPTIONS:

- **SPECIAL TOOL HOLDER ONLY** - no tool bits - Covers work for 1/8+minimum O.D. (1/16+minimum I.D.) through 5/8+maximum O.D.(9/16+maximum I.D.) NOTE: Special tool bits cut a 30-degree chamfer angle.
- **CHUCK JAW INSERTS** - One pair is required for each diameter work piece 1/8+through 2+O.D. Made of hardened steel from 9/16+O.D. through 2+O.D. SPECIFY OUTSIDE DIAMETER
- **STANDARD TOOL BITS** - Fits standard tool heads. Sizes from 7/16+minimum O.D. (5/16+ minimum I.D.) to 2+maximum O.D.
- Special tooling available for most applications
- Usually ships from Stock

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