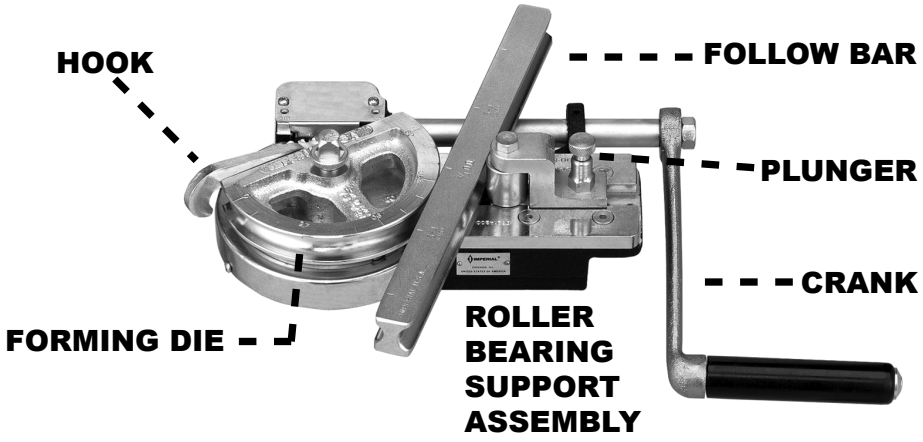
INSTRUCTIONS FOR USE
IMPERIAL® NO. 600-F WORM GEAR TUBE BENDER

For aircraft grade stainless steel (MIL-T-6845) and all other metal tubing of bending temper. For 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4" O.D. tubing.

• 50-to-1 gear ratio • Crank with revolving hand grip • Follow bar eliminates drawing action; maintains tube ovality • Adjustable pressure roller re-positions quickly • Enclosed gears • Includes tool case • Can be clamped in vise or bench mounted

O.D. Tubing	Wall Thickness	Radius to Center of Tube
1/4"	.016" to .049"	3/4"
5/16"	.020" to .065"	1"
3/8"	.028" to .083"	1-1/4"
1/2"	.035" to .083"	2"
5/8"	.042" to .083"	2-1/2"
3/4"	.049" to .083"	3"



Instructions for use:

1. Select the proper size forming die and attach securely to driving gear. The slot in bottom of the forming die must be in positive engagement with drive key. The square head screw must be tight. (The crank can be used to tighten screw.)
2. Attach the crank to the drive shaft on side of bender's base.
3. The forming die should be turned so that the zero degree calibration mark faces crank handle. The straight side of die will then be parallel with the base of bender.
4. Retract the roller bearing support assembly by lifting plunger and pulling away from forming die.
5. Insert tubing into groove of forming die and drop hook into place.
6. Confine the tubing with the follow bar, and make sure that the zero degree calibration mark on the bar coincides with the same mark on the forming die. (Note: It is important that the follow bar be placed in operating position with the correct tube size marking on top.)
7. Lift the plunger on the roller bearing support assembly and move forward until contact is made with the follow bar. (When bending small size tubing, support assembly will not quite touch follow bar.) Follow bar, tube and forming die will now be in contact with each other.
8. Turn the crank clockwise slowly and allow the roller bearing support assembly to retract until it falls into the predetermined position and locks itself securely. This can be noted by the dropping of the plunger. Then continue to turn crank clockwise until the desired degree of bend is attained.
9. To remove bent tube, simply reverse the procedure until the pressure is relieved, then retract the roller bearing support assembly.

The worm gear housing is completely filled with lubricant and needs to be inspected only at reasonable intervals. However, it is highly desirable to lubricate all other moving parts, particularly the roller bearing support assembly.

S62184 - Large Follow Bar - 5/8" & 3/4" O.D.
S62185 - Medium Follow Bar - 3/8" & 1/2" O.D.
S62186 - Small Follow Bar - 1/4" & 5/16" O.D.
S62144 - 3/4" Forming Die - includes:
Hook and Screw
S62149 - 5/8" Forming Die - includes:
Hook and Screw
S62153 - 1/2" Forming Die - includes:
Hook and Screw
S62159 - 3/8" Forming Die - includes:
Hook and Screw
S62163 - 5/16" Forming Die - includes:
Hook and Screw
S62167 - 1/4" Forming Die - includes:
Hook and Screw
S74427 - Crank Assembly
S36185 - Hex Nut for Crank Assembly
S62177 - Power Transmission
Shaft - includes:
Worm Gear
Taper Drive Pin
Thrust Washer
601-F - Replacement Base Assembly
(Bender without Mandrels
and Following Bars)
S62171 - Large Worm Gear Assy -
includes:
Key
Cap Screws (2)
S62182 - Flange Screw for Forming Dies
S62703 - Steel Carrying Case

⚠ Warning! Keep body parts away from pinch/bend areas while using. Ensure tubing is secure in tool before bending. Always wear approved eye protection. Broken materials may fly.

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