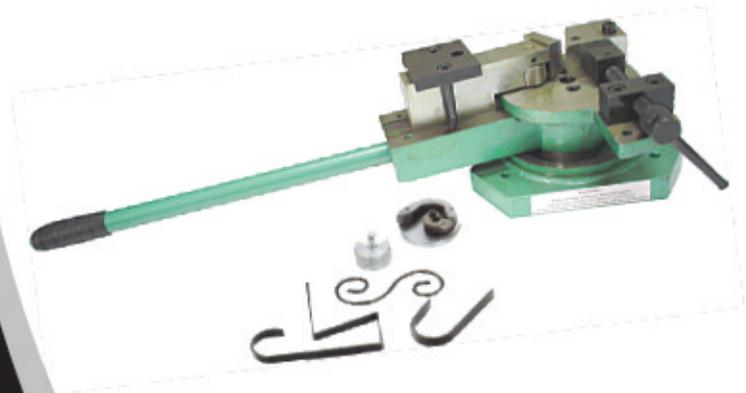




**Before Operating Your Tools,
Please Read This Instruction Carefully**



Universal Bender

**ITEM NO.61-251-139
MODEL NO . #Ub5045**

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Specifications

| | |
|-------------------------------------|--|
| Bending strength: | 28-1/2Tons per square inch (4.42Tcm ²) |
| Maximum capacities(Steel & iron): | 5/8" Round stock(16mm) |
| | 1/2" × 1/2" Square stock(10×10mm) |
| | 1-3/16" × 1/4" Strip stock(30×8mm) |
| Maximum capacities(Wrought iron): | 15/32" Round stock (12mm) |
| | 13/32" × 13/32" Square stock(10×10mm) |
| | 1-3/16" × 1/4" Strip stock (30×6mm) |
| Maximum capacities(Brass & Copper): | 5/8" ROUND STOCK(16MM) |
| | 15/32" × 15/32Square stock(12×12mm) |
| | 1-3/16" × 5/16 Strip stock (30×8mm) |
| Maximum capacities (Aluminum): | 23/32" Round stock(18mm) |
| | 19/32" × 19/32" Square stock(15×15mm) |
| | 1-3/16" × 13/32" Strip stock(30×10mm) |

♦ IMPORTANT SAFETY PRECAUTIONS

- 1.KEEP WORK AREA CLEAN.**
Cluttered areas invite injuries.Poorly lit locations. Don't expose to rain. Keep work area well lit.
- 2.CONSIER WORK AREA CONDITIONS.**
Don't use tools in damp, wet, or poorly lit locations. Don't expose to rain. Keep work area well lit.
- 3.KEEP CHILDREN A WAY.**
All children should be kept away from the work area.
- 4.STORE IDLE EQUIPMENT.**
When not in use, tools should be locked up in a dry location to inhibit rust. If possible, store in an area out of reach of children.
- 5.USE THE RIGHT TOOL.**
Don't force a small tool or attachment to do the work of a larger industrial tool. Don't use a tool for a purpose for which it was not intended.
- 6.DRDSS PROPERLY.**
Don't wear loose clothing or jewelry. Non-skid footwear is recommended when working to prevent slipping. Wear protective hair covering to contain long hair.
- 7.USE EYE PROTECTION.**
Wear approved impact goggles at all times when using this tool...
- 8.SECURE ORK.**
Use clamps or a vise to hold the work if possible. It's safer than using your hand and it frees both hands to operate the tool.

9. DON'T OVERREACH.

Keep proper footing and balance at all times. don't reach over or across machines that are running.

10. MAINTAIN TOOL WITH CARE.

Keep handles dry, clean, and free from oil and grease. Follow instructions for lubricating and changing accessories.

11. CHECK DAMAGED PARTS.

Before using any tool, any tool, any part that appears damaged should be carefully checked to determine that it will operate properly of moving parts, breakage of parts, mounting, and other conditions that may affect its operation. Any part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in the instruction manual.

12. REPLACEMENT PARTS AND ACCESSORIES.

When servicing, use only identical replacement parts. Only use accessories intended for use with this tool.

13. DON'T OPERATE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.

Read warning labels on prescription to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate machine.

14. NEVER STAND ON TOOL.

If tool is tipped over, serious injury or product damage could result.

UNPACKING

Make sure you have all parts and dies included with the Bender. Check the parts list at the end of the manual.

OPERATING PROCEDURES

Your tool is capable of many different operation. When forming angles or round shapes, the Die Mounting Plate(4) must be attached to the Spring Forming Mounting Disc(32).

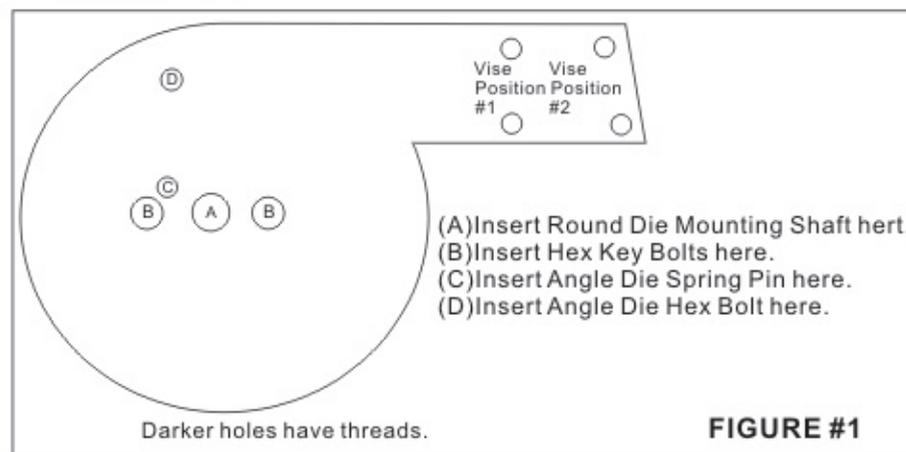
NOTE: The Metal Bender must be mounted to a secure surface before using.

Round Operations (see figure#1 on following page):

1. Make sure the Die Mounting Plate(4) is attached to the body.
2. Make sure the Stop(2) is loose.
3. MOVE THE Vise Assembly (5, 9, 15) to the rear position on the arm of the Mounting Plate.
4. Screw the Round Die Mount Shaft(28) into the Mounting Plate.
5. Set the Round Die(29) onto the Mounting Shaft.
6. Move the Bending Block Assembly (16, 17, 22-24) back all of the way. You may have to release the Bending Block Locking Plate(21) by loosening the two Hex
7. Set stock against the Round Die and close the Vise so that it clamps the work securely against the Die.
8. Move the Bending Block in until it is up against the work and its face (16) is even with the vise Face(8). Secure the Bending Block by tightening the two Bolts.
9. Move the Bending block to the left with the Handle(27) until you have achieved your desired angle bend(remember to account for " spring-back ")
10. If you wish to do repeat bends at the same area, tighten the Stop at the point where you finished making your work piece in-between the Die. Bend your stock all of the way around, and cut off excess.

OTMT

12. To make springs, loosen the Stop(2), and lift stock to be formed slightly as you bend the stock around the Die, When starting and finishing the spring, make a complete 360° ring as stated in #11.



Spiral Operation:

1. Remove the Die Mounting Plate (4) by removing the two Hex Key Bolts (14). Loosen the STOP(2).
2. Retract the Bending Block assembly (16, 17, 22-24) all of the way. Remove the Face Plate (16) by unscrewing the associated Hex Key Bolt(17). This will reveal the Bending Block Wheel(22).

For steps 3, 4, & 8, see figure #2

3. Attach the Spring Forming Mounting Disc (32) with the two Hex Key Bolts (in positions 1).
4. Place the spring Pin(25) of the Spring Forming Die "A"(31) into hole 3 and attach with the long Hex Key Bolt (26)(in position 2).

For steps 5&7, see figure#3

5. Insert the stock to be bent into the hole of Die "A".
6. Move the Bending Block Assembly forward until it contracts the stock and then tighten it in position.
7. Bent the stock until the portion being formed is about the Pin(marked) With a "P" in the figure.
8. Now put the Spring Pins(25) of Spring Forming Die "B"(30) into holes 4&5.
9. Finish your bend by wrapping completely around the Forming Die.

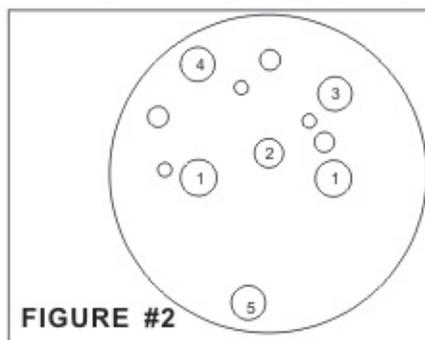


FIGURE #2

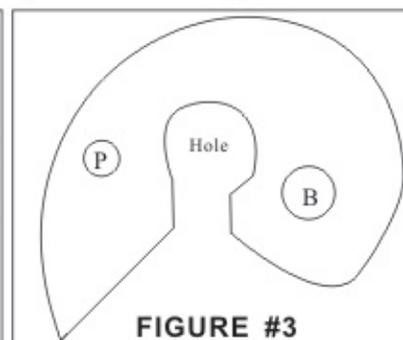


FIGURE #3

OTMT

◆ PARTS LIST

| No. | Qty. | Description |
|-----|------|----------------------------------|
| 1 | 1 | Base |
| 2 | 1 | Stop |
| 3 | 2 | Body |
| 4 | 1 | Die Mounting Plate |
| 5 | 1 | Vise Drive Screw |
| 6 | 1 | Vise Handle |
| 7 | 1 | Vise Face |
| 9 | 2 | Hex Key Bolt |
| 10 | 1 | Gauge Shaft |
| 11 | 1 | Gauge Shaft |
| 12 | 1 | Gauge Locking Screw |
| 13 | 1 | Angle Die |
| 14 | 2 | Hey Key Bolt |
| 15 | 1 | Set Screw |
| 16 | 1 | Bending block Face Plate |
| 17 | 1 | Hey Key Bolt |
| 18 | 1 | Hey Key Bolt |
| 19 | 1 | Spring Pin |
| 20 | 2 | Hey Key Bolt |
| 21 | 1 | Bending Block Locking Plate |
| 22 | 1 | Bending Block Wheel |
| 23 | 1 | Bending Block Shaft |
| 24 | 1 | Bending Block |
| 25 | 3 | Spring Pin |
| 26 | 1 | Hey Key bolt |
| 27 | 1 | Handle |
| 27 | 1 | Round Die Mounting Shaft |
| 29 | 1 | Round Die |
| 30 | 1 | Spring Forming Die"B" |
| 31 | 1 | Spring Forming Die"A" |
| 32 | 1 | Spring Forming Die Mounting Disc |

◆ PARTS DRAWING

