

GENERAL SAFETY INSTRUCTIONS

- For bending soft copper and aluminum tube only
- NOT for bending steel conduit
- Do not immerse in water or any other liquids
- Do not bend tubing that is under pressure, or that contains gases or liquids
- Always use personal safety equipment (safety glasses, gloves etc.)
- Keep bender dry and lubricate ratchet mechanism as needed
- Do not disassemble this tool or modify it in any way
- For use by qualified personnel only

SPECIFICATIONS

Mandrels	Solid, color coded aluminum pieces
Ratchet Handle Assembly	Solid, cast and machined aluminum (with quick release steel handle)
Forward & Reverse Bender Attachments	Solid, cast and machined aluminum pieces
Shoe Arms	Chrome plated steel arms with molded, color coded shoes
Storage Case	Molded plastic
Kit Weight	8.4 lb (3.8 kg)
Packaging	Color retail box

INSTRUCTIONS (FORWARD BENDS)

Swing **WIRE CATCH** away from **QUICK RELEASE HANDLE** (Fig. 3).



Fig. 3

INSTRUCTIONS (FORWARD 90° BENDS)

Select **MANDREL** from storage case and attach **END** of **STEEL DRIVE SHAFT** (Fig. 4)

From storage case, select either the 1/4"-3/8" (6-10mm) **SHOE ARM** or 1/2"-7/8" (12-22mm) **SHOE ARM** to match aluminum bender (previously installed).

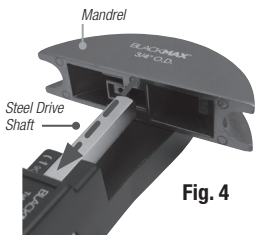


Fig. 4

Attach **SHOE ARM** to **END** of handle assembly using the **WING NUT POST** (Fig. 5). Bending **SHOES** are color coded. Ensure the appropriate size (color) faces **UP** to match the color/size of the bender (Fig 5).

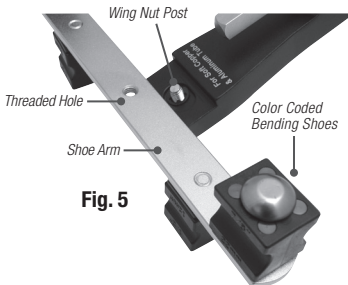


Fig. 5

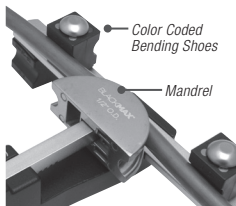


Fig. 6

Place soft copper or aluminum tube between end of **MANDREL** and **SHOES** (Fig 6).

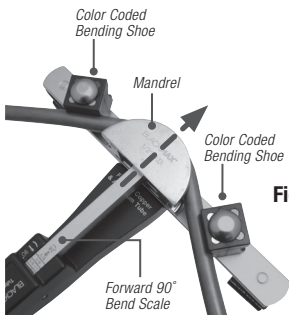


Fig. 7

INSTRUCTIONS (FORWARD 90° BENDS)

Squeeze **RATCHET HANDLE** until tube is bent to desired angle (Fig 7).

7. To make 90° **FORWARD** Bends -
Align tube diameter on **DRIVE SHAFT** with **FORWARD MARK** on **HANDLE** (See Fig. 8).
Check accuracy of bent tube with a square.

FORWARD 90° Bends



Fig. 8

8. To remove bent tube, **PULL RATCHET HANDLE** handle away from the **MAIN BODY** of the tool (Fig. 9).
9. Push tube and mandrel toward handle (Fig. 9) then pull tube out of bender

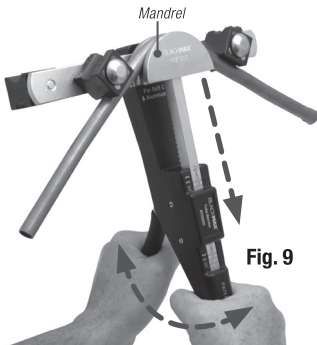


Fig. 9

INSTRUCTIONS (REVERSE 90° BENDS)

In some situations (space constraints), it may be more convenient to use the Reverse Mandrel attachments.

1. Attach **REVERSE MANDREL SHOE ARM** (Fig. 10) and **REVERSE MANDREL** arm (Fig. 11) as shown.
2. Attach aluminum **MANDREL** then small or large **SHOE ARM** to match aluminum bender (Fig. 12).
3. Insert soft copper or aluminum tube and bend to desired angle.

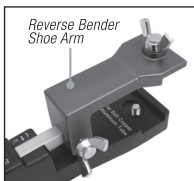


Fig. 10

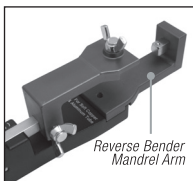


Fig. 11

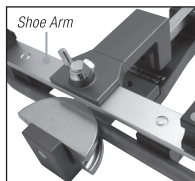


Fig. 12

4. To make 90° REVERSE Bends
- Align tube diameter mark on **DRIVE SHAFT** with **REVERSE MARK** on **HANDLE** (Fig. 13).
Check accuracy of bent tube with a square.

REVERSE 90° Bends



Fig. 13