

*Eastwood*<sup>®</sup>

DO THE JOB RIGHT.<sup>®</sup>

Item #21489

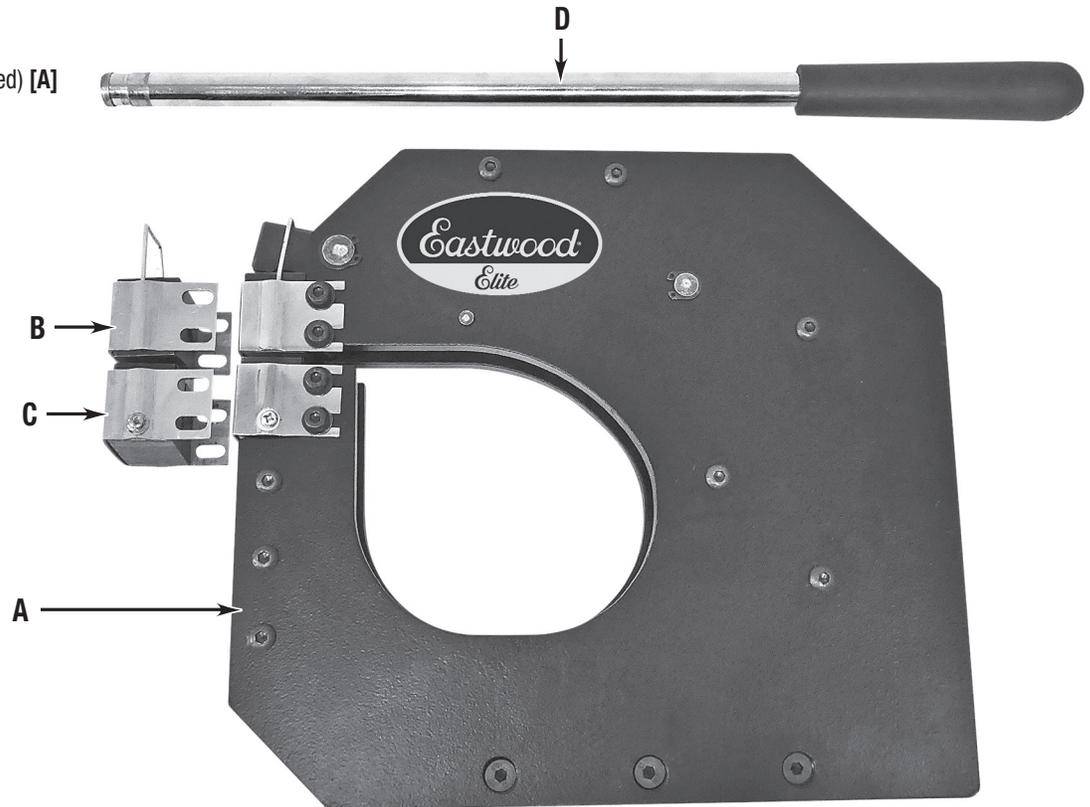
# DEEP JAW SHRINKER STRETCHER INSTRUCTIONS



The **EASTWOOD ELITE DEEP JAW SHRINKER STRETCHER** is designed for heavy-duty commercial use and features an extra-deep, 7" throat depth and wider jaws to allow working larger pieces and panels.

## INCLUDES

- (1) Body (with Shrinker Jaws installed) [A]
- (1) Upper Stretcher Jaw [B]
- (1) Lower Stretcher Jaw [C]
- (1) Handle [D]



## SPECIFICATIONS

Maximum Throat Depth: 7"

Maximum Workable Panel Width/Diameter: 14"

### Maximum Workable Material Thickness

Mild Carbon Steel: 16 Gauge

Aluminum: 16 Gauge

Stainless: 20 Gauge

Minimum Shrinking Radius: 3" (for mild carbon steel only, aluminum, high carbon steel and stainless will be greater)

## SAFETY INFORMATION

The following explanations are displayed in this manual, on the labeling, and on all other information provided with this product:

### **⚠ DANGER**

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### **⚠ WARNING**

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### **⚠ CAUTION**

CAUTION used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **⚠ NOTICE**

NOTICE is used to address practices not related to personal injury.



### **⚠ READ INSTRUCTIONS**

- Thoroughly read and understand this manual before using.
- Save for future reference.



### **⚠ WARNING INJURY HAZARD!**

- This tool has leveraged rotating components that generate greatly amplified crushing and bending forces which can quickly cause severe injury! Keep fingers and hands away from moving parts when operating.
- Tremendous external torque loads are placed on this Shrinker Stretcher during operation. This tool cannot be operated without adequate support or severe personal injury or property damage can occur if it should suddenly become dislodged or moves while in use. Before beginning ANY work with this tool, it is absolutely necessary that it be securely bolted to a solid work surface.
- Strenuous physical force may need to be applied to the Shrinker Stretcher during use. Failure to ensure proper footing can quickly result in a fall which could inflict serious personal injury or property damage. Always work in a clean, uncluttered environment.
- Be sure there is sufficient working room around the tool to allow for safe handling of various sizes of metal.
- The Shrinker Stretcher is equipped with a Handle of the proper length to provide adequate bending force. **DO NOT** add pipe, bars or any other devices which would add additional length to the Handle to increase bending force. This will exceed the design limits of the tool and can result in serious injury and/or component failure.



### **⚠ WARNING**

- Tremendous external torque loads are placed on this Shrinker Stretcher during operation. This tool cannot be operated without adequate support or severe personal injury or property damage can occur if it should suddenly become dislodged or moves while in use. Before beginning ANY work with this tool, it is absolutely necessary that it be securely bolted to a solid, level, well supported surface capable of withstanding the tremendous torque and side loads this tool is subjected to during use.



### **⚠ CAUTION CUT HAZARD!**

- Handling sharp metal can cause serious cuts. Wear thick, well-fitting work gloves to prevent cuts from handling sharp metal.



### **⚠ CAUTION EYE INJURY HAZARD!**

- Pieces of mill scale, rust and other debris may be ejected from the workpiece during operation. Wear ANSI approved eye protection while operating.



### **⚠ CAUTION**

- The Shrinker Stretcher consists of heavy metal components which can present a hand/finger pinch hazard and cause potentially serious injuries if dropped on feet. Avoid pinching hands while handling parts during assembly and wear thick, well-fitting work gloves to prevent cuts from handling sharp metal. The use of safety shoes is strongly recommended.



### **⚠ NOTICE**

- Excessive resistance while operating could indicate a defect with the workpiece material or broken or damaged Shrinker Stretcher components. To avoid injury, stop work immediately and inspect workpiece material for nicks, dents, welds, excessive scale or remaining coatings. Clean or repair as necessary or discard and begin with a new piece. Also inspect Shrinker Stretcher components for looseness or damage.

## SET-UP

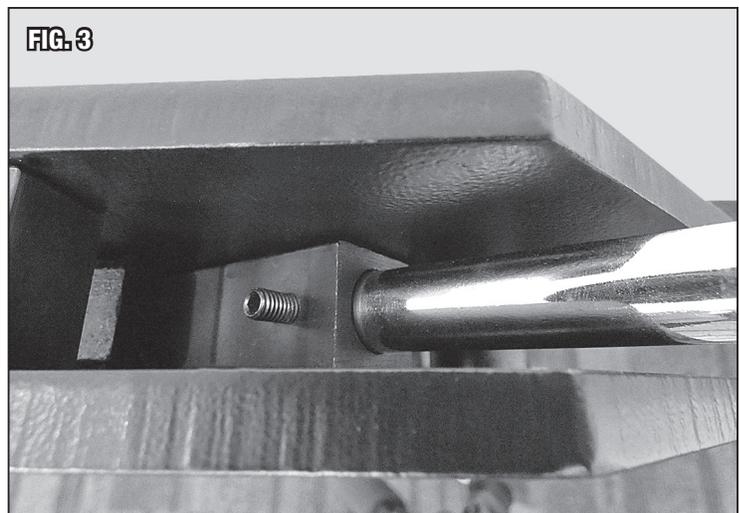
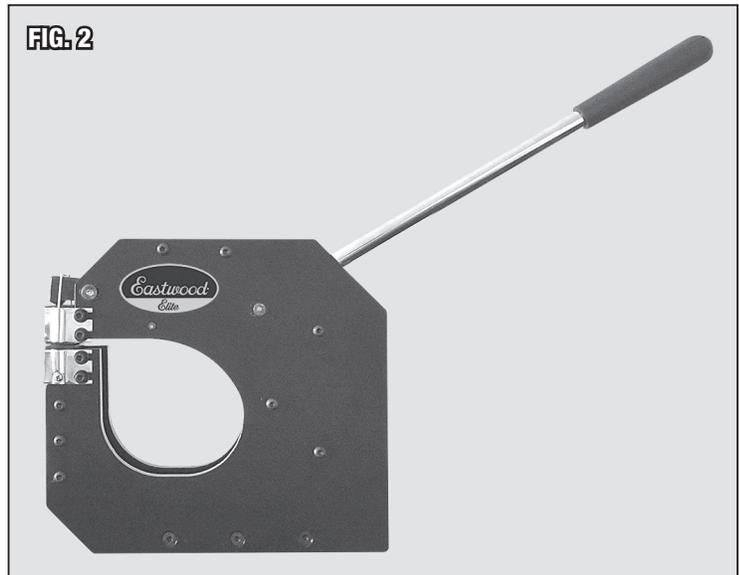
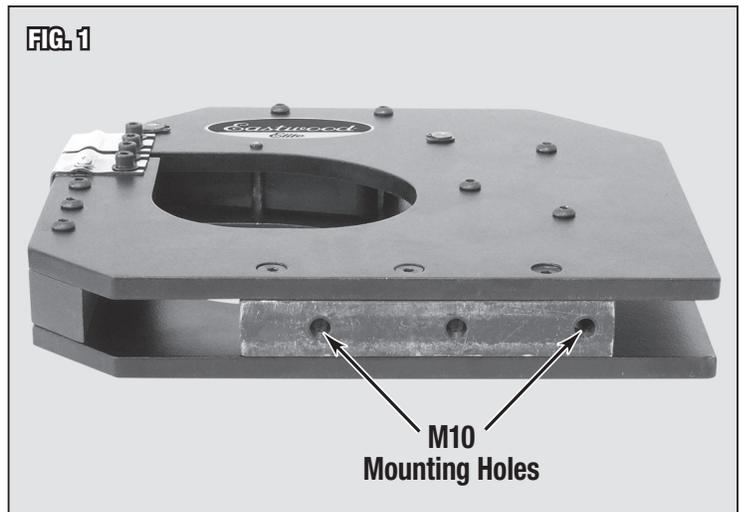
- The optionally available Eastwood Elite Deep Jaw Shrinker Stretcher Stand (#21491) is strongly suggested for mounting the Shrinker Stretcher. See Eastwood Elite Deep Jaw Shrinker Stretcher Stand instruction manual for stand mounting.
- As an alternative, a sturdy, well anchored workbench with a minimum 3/16" steel or 3/4" of a solid wood surface is recommended.
- Select a clean, level work surface with clear access to Handle and sufficient room to manipulate workpieces through the Jaws.
- With the (2) outer-most threaded holes in the base (**FIG 1**) as a guide, mark the locations and centers on a piece of paper with a pencil.
- Transfer the hole locations, then drill (2) 1/2" [12mm] mounting holes in work surface. **NOTE:** A minimum thickness of 3/16" steel or 3/4" of a solid wood surface is strongly recommended.
- Use (2) M10 x 40mm bolts (not included) and washers to secure base to work surface.  
**NOTE:** Center hole enables the use of mounting holes drilled for Eastwood #51088 Shrinker/Stretchers.

## ASSEMBLY

- Place Handle [D] into bore in Fulcrum Lever (**FIG 2**) so that the annular groove is positioned under the Set Screw.
- Using a 3mm Hex Key (not included) tighten Set Screw in Fulcrum Lever to retain Handle (**FIG 3**).

## SWITCHING JAWS

- The Upper and Lower Shrinker and Stretcher Jaws are retained by (4) Socket Head Cap Screws and washers each.



## REMOVING JAWS

- Loosen (do not remove) Upper Jaw Cap Screws (2 per side) with a 4mm Hex Key (not included) (FIG 4).
- Pull Upper Jaws away from Body and slide Wire Bail off the Actuating Bar (FIG 5).
- Loosen Lower Jaw Cap Screws (do not remove) (2 per side) with a 4mm Hex Key (not included).
- Pull Upper Jaws away from Body [A] (FIG 6).

## ATTACHING JAWS

- Slide Lower Jaws onto Body with screw slots located under Cap Screws and Washers.
- Tighten Lower Jaw Cap Screws with a 4mm Hex Key (not included).
- Slide Upper Jaws onto Body with screw slots located under Cap Screws and Washers.
- Place Wire Bail over top of Actuating Bar.
- Tighten Upper Jaw Cap Screws with a 4mm Hex Key (not included).



# OPERATION

## ⚠ WARNING

Tremendous external torque loads are placed on this Shrinker Stretcher during operation. This tool cannot be operated without adequate support or severe personal injury or property damage can occur if it should suddenly become dislodged or moves while in use. Before beginning ANY work with this tool, it is absolutely necessary that it be securely bolted to a properly anchored heavy, sturdy, workbench or stand.

## ⚠ CAUTION

The Shrinker Stretcher exerts tremendous bending and crushing forces in operation which can present a hand/finger pinch hazard and cause potentially serious injuries. Avoid moving parts while operating and wear thick, well-fitting work gloves to prevent cuts from handling sharp metal. The use of safety shoes is strongly recommended.

## ⚠ WARNING INJURY HAZARD!

The Shrinker Stretcher is equipped with a Handle of the proper length to provide adequate bending force. **DO NOT** add pipe, bars or any other devices which would add additional length to the Handle to increase bending force. This will exceed the design limits of the tool and can result in severe injury and/or component failure.

## ⚠ NOTICE

Workpiece material should be clean of any rust, burrs, nicks, welds or coatings before attempting to bend or interference and binding may occur.

- Before fabricating with the Shrinker Stretcher, pre-bend the metal to be formed to a 90° angle along its length on a sheet metal brake (The #14042 Eastwood Versa Bend 20 Inch Offset Sheet Metal Brake works well), creating a maximum flange depth that is no greater than 7" (FIG 7).
- Make a template of the piece to be formed out of medium bodied cardboard or manila folder material. Tracing the outline of the piece you want to form is critical to achieving a good fit with minimal filler use.
- Work the leading edge of the metal piece first. This "breaks down" the maximum resistance and permits easy and accurate working thereafter (FIG 8).
- Always work the piece a little at a time moving the piece through the Jaws along its entire planned length so that each area is exposed to the Jaws numerous times rather than trying to shrink or stretch "all in one bite" (FIG 9).

FIG. 7

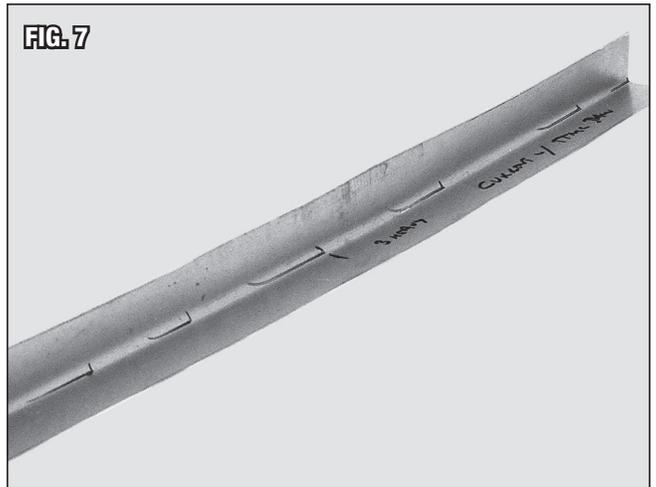


FIG. 8

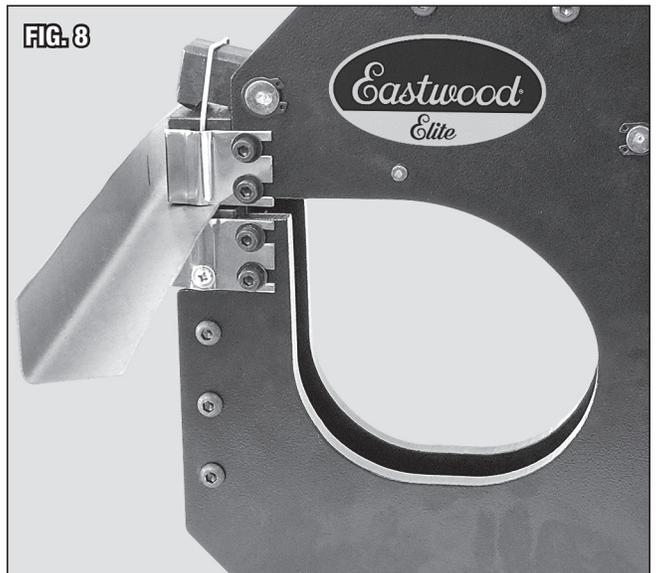
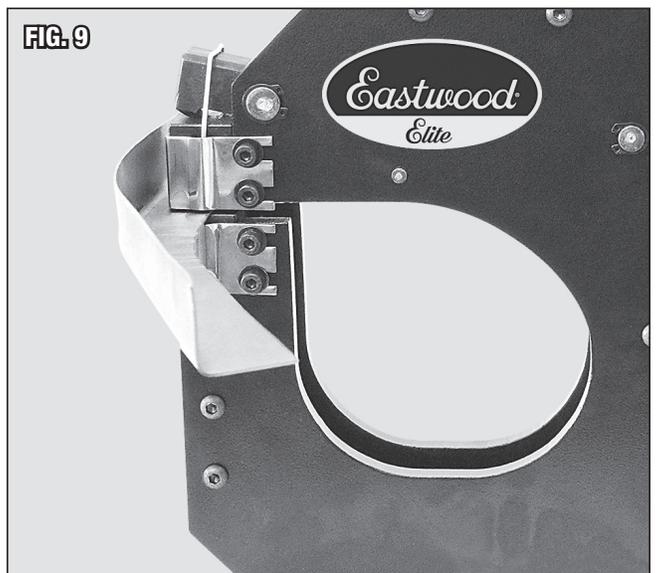


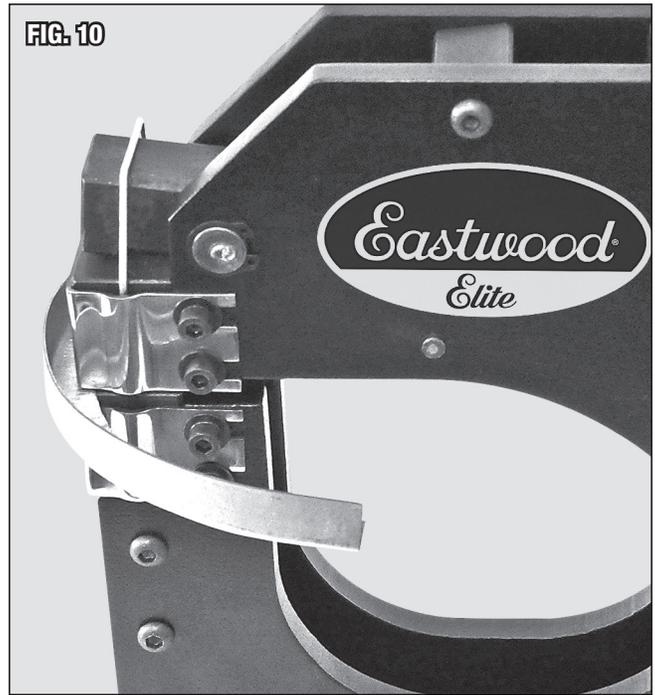
FIG. 9



### ⚠ NOTICE

For best results and maximum forming power, insert metal only halfway into the Jaws.

- The “bunching” or “pocketing” that typically occurs when shrinking can be quickly hammered out, or smoothed by inserting the metal deeper into the jaws.
- Maximum control is achieved with the pressure exerted on the handle and number of strokes used while forming the metal. Move the metal back and forth along its length until the desired radius is obtained (**FIG 10**).  
**NOTE:** The Shrinker and the Stretcher Jaws are “toothed” to allow them to grip and “push” or “pull” the metal. These teeth leave slight markings which, depending on the hardness of the metal, can be removed with an abrasive cloth or wheel.  
**NOTE:** At this point, the basic operating instructions have been described and practice using the Shrinker Stretcher on scrap material is highly recommended. As with many metal working tools, a period of “trial and error” is needed to achieve a degree of proficiency in their use. Remember, a little time and material wasted at this step will avoid disappointing results on an actual project.



## STORAGE

- Remove Handle for safety.
- Apply a thin film of light oil or rust-preventive to all bare steel areas.
- Store in a clean, dust-free, dry, dampness free area preferably covered with plastic sheeting.

## MAINTENANCE

**Maintenance should be performed before each use.**

- Clean dirt and debris from Jaw Gripping Teeth. **NOTE:** Forming aluminum will cause a buildup of aluminum in Gripping Teeth. They must be cleaned with a wire brush periodically when working with aluminum.
- Check tightness of all hardware.
- Check operation for binding. Lubricate sliding parts and pivot points periodically with medium bodied oil.  
**NOTE:** Use care to avoid getting oil on Jaw Gripping Teeth.

## OPTIONAL ITEMS

- #21491 Eastwood Elite Deep Jaw Shrinker Stretcher Stand
- #13475 Eastwood Electric Metal Shears
- #11797 Throatless Shear
- #14042 Versa Bend Sheet Metal Brake
- #20254 Eastwood 24" Slip Roll

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**If you have any questions about the use of this product, please contact**

The Eastwood Technical Assistance Service Department: 800.343.9353 >> email: [techelp@eastwood.com](mailto:techelp@eastwood.com)  
PDF version of this manual is available online >> [eastwood.com/21489manual](http://eastwood.com/21489manual)

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