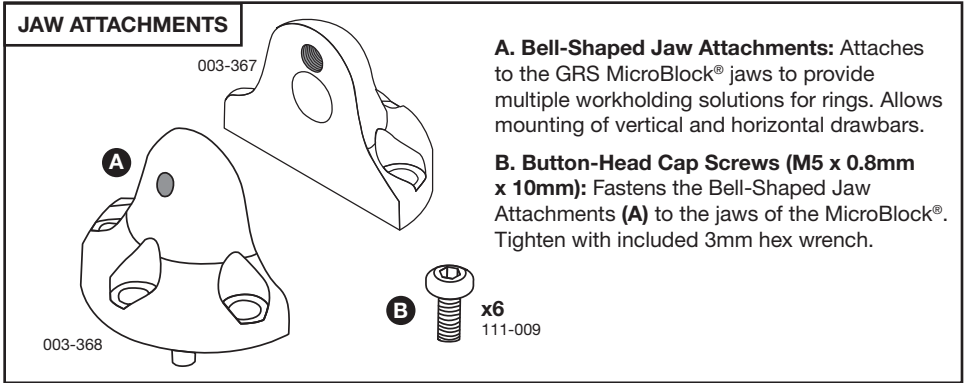


1. PARTS LIST AND DESCRIPTION

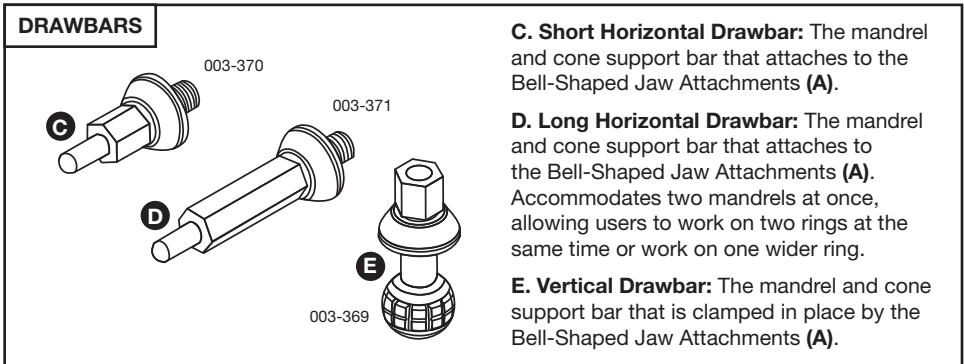
JAW ATTACHMENTS



A. Bell-Shaped Jaw Attachments: Attaches to the GRS MicroBlock® jaws to provide multiple workholding solutions for rings. Allows mounting of vertical and horizontal drawbars.

B. Button-Head Cap Screws (M5 x 0.8mm x 10mm): Fastens the Bell-Shaped Jaw Attachments (A) to the jaws of the MicroBlock®. Tighten with included 3mm hex wrench.

DRAWBARS

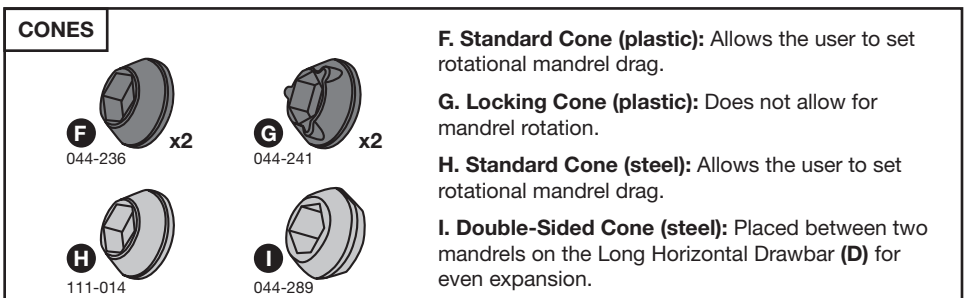


C. Short Horizontal Drawbar: The mandrel and cone support bar that attaches to the Bell-Shaped Jaw Attachments (A).

D. Long Horizontal Drawbar: The mandrel and cone support bar that attaches to the Bell-Shaped Jaw Attachments (A). Accommodates two mandrels at once, allowing users to work on two rings at the same time or work on one wider ring.

E. Vertical Drawbar: The mandrel and cone support bar that is clamped in place by the Bell-Shaped Jaw Attachments (A).

CONES



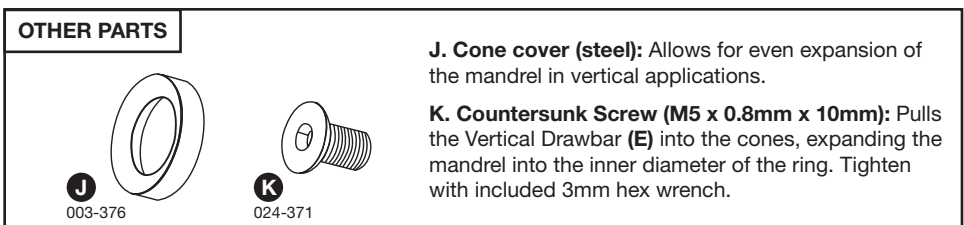
F. Standard Cone (plastic): Allows the user to set rotational mandrel drag.

G. Locking Cone (plastic): Does not allow for mandrel rotation.

H. Standard Cone (steel): Allows the user to set rotational mandrel drag.

I. Double-Sided Cone (steel): Placed between two mandrels on the Long Horizontal Drawbar (D) for even expansion.

OTHER PARTS

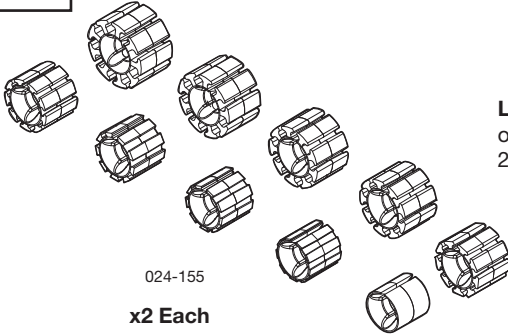


J. Cone cover (steel): Allows for even expansion of the mandrel in vertical applications.

K. Countersunk Screw (M5 x 0.8mm x 10mm): Pulls the Vertical Drawbar (E) into the cones, expanding the mandrel into the inner diameter of the ring. Tighten with included 3mm hex wrench.

1. PARTS LIST AND DESCRIPTION (CONTINUED)

MANDRELS



L. Expanding Mandrel set: Two sets of 10 different sizes, from 13.5 mm to 22.5 mm.

2. JAW ATTACHMENT INSTALLATION

FIG. 2.1

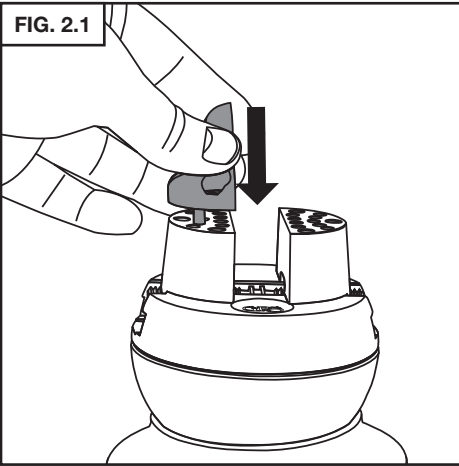


FIG. 2.2

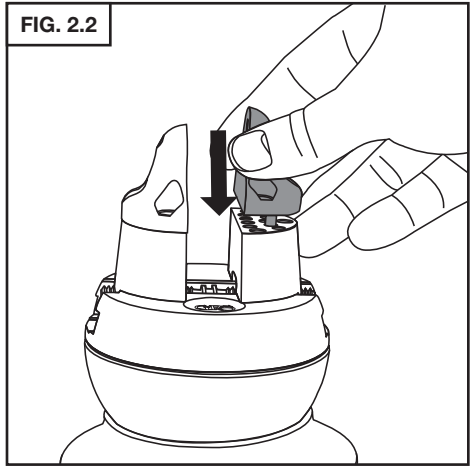


FIG. 2.3

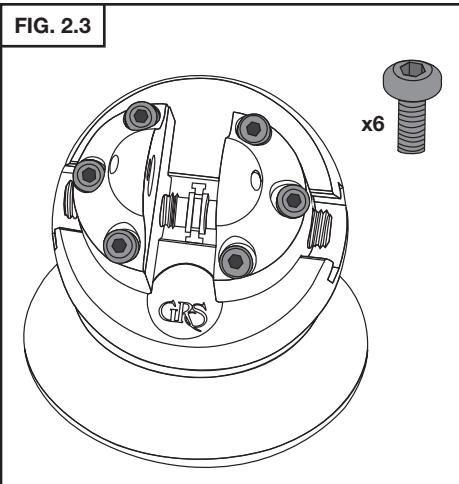
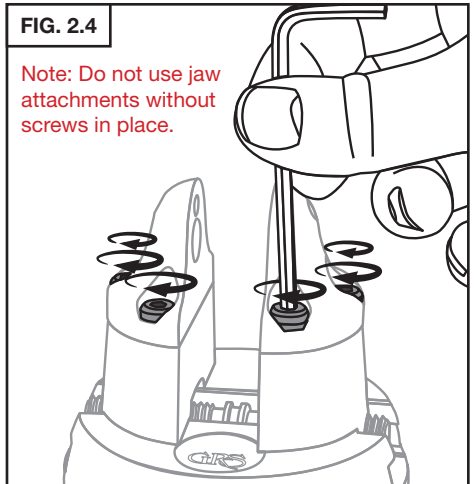


FIG. 2.4

Note: Do not use jaw attachments without screws in place.



3. SHORT HORIZONTAL DRAWBAR INSTALLATION

FIG. 3.1

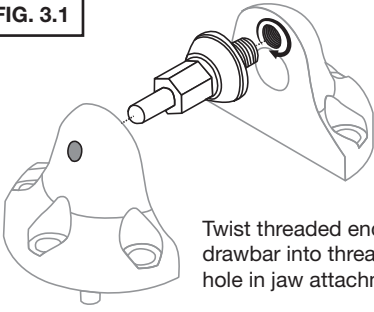


FIG. 3.2

Line up the hex shapes on the cone and drawbar before tightening.

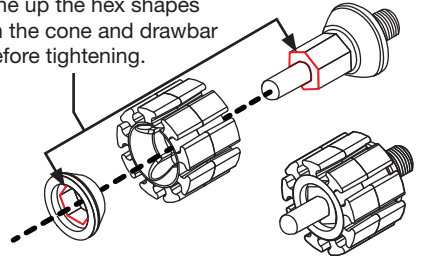


FIG. 3.3

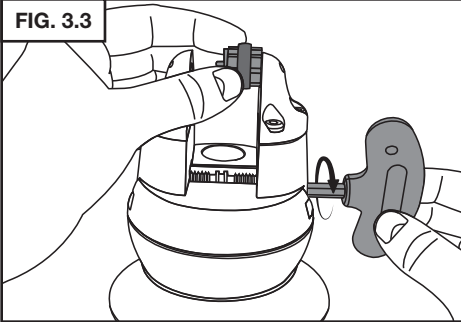
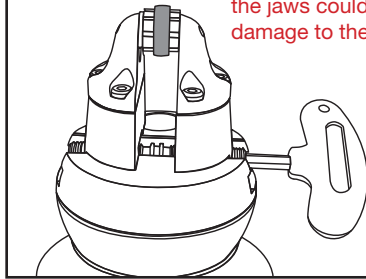


FIG. 3.4

Note: Overtightening the jaws could result in damage to the ring.



4. LONG HORIZONTAL DRAWBAR INSTALLATION

FIG. 4.1

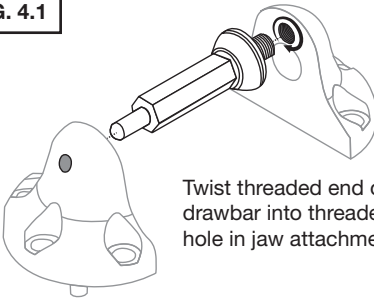


FIG. 4.2

Line up the hex shapes on the cone and drawbar before tightening.

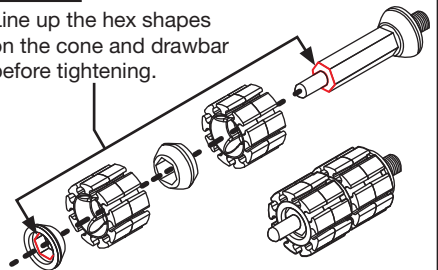


FIG. 4.3

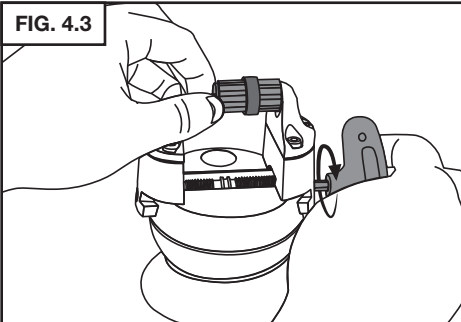
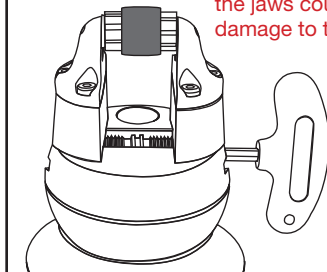


FIG. 4.4

Note: Overtightening the jaws could result in damage to the ring.



5. VERTICAL DRAWBAR INSTALLATION

