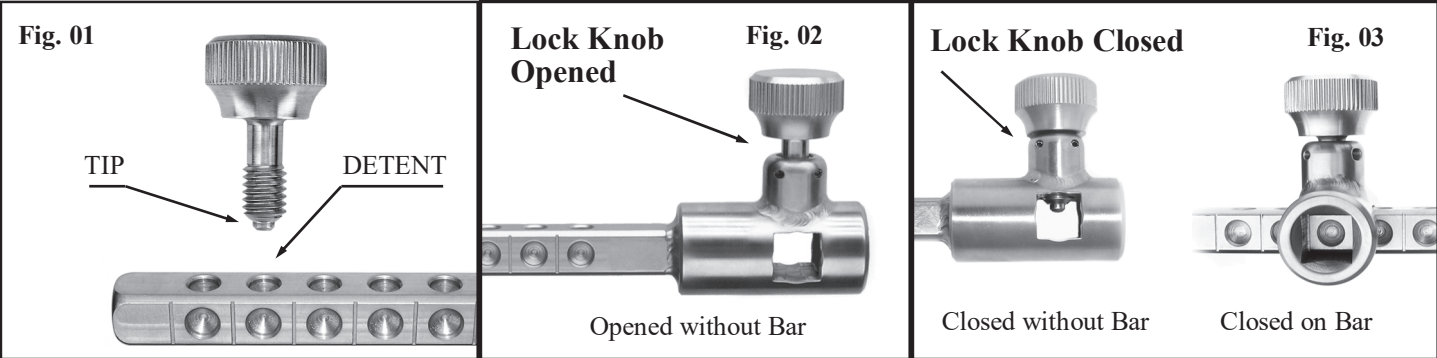


**LOCK KNOB INSTRUCTIONS:**

Lock Knob components consist of: Gearbox, Extender Bars and Coupler Tube. The nonremovable Lock Knob is used to tighten components securely on the Rultract® Systems. The Lock Knob (Fig. 01) is threaded with a knurled surface for hand tightening. The tip of the knob is designed to fit into a detent of the square bar. The Lock Knob is retained with roll pins (see p. 05).

Back out (open) the nonremovable Lock Knob until it stops (Fig. 02). Slide the component onto square bar to desired location. The Lock Knob is used to secure component. To properly secure, tip of Lock Knob must completely enter the detent as you tighten. Note closed position of Lock Knob when attached to bar (Fig. 03).



**EXTENDER BAR: #4100-39S**

To properly lock an Extender Bar in the selected position the tip of the Lock Knob must enter the detent as you tighten securely. Note Lock Knob opened (Fig. 02) and Lock Knob closed (Fig. 03).

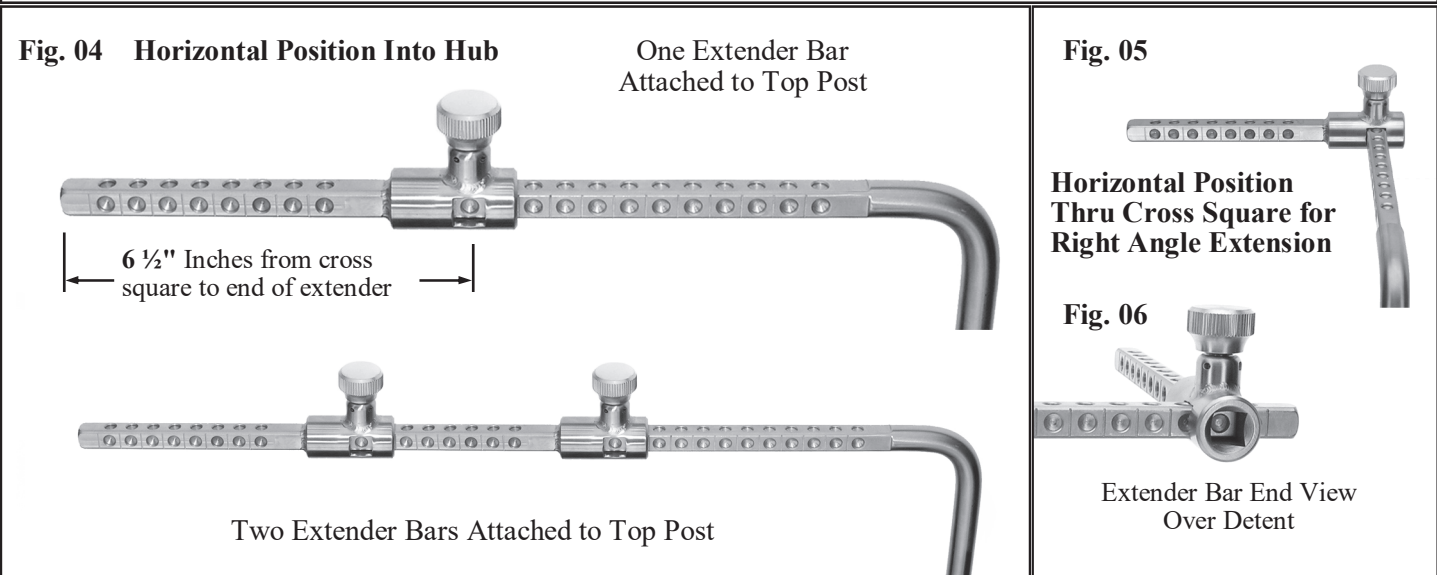
**(Fig. 04): Horizontal Position Into Hub**

Back out nonremovable Lock Knob until it stops. With Lock Knob in vertical position slide hub onto post until it stops. Hand tighten knob securely.

**(Fig. 05 & 06): Horizontal Position Thru Cross Square for Right Angle Extension**

Back out nonremovable Lock Knob until it stops. With Lock Knob in vertical position slide cross square onto post to desired location **over a detent**. Hand tighten knob securely. See Extender Bar End View Over Detent.

**CAUTION:** Lock Knob **must** be inserted in a detent for secure placement of accessories.



**ROTATING EXTENDER BAR: #4100-39TS**

The squared section of this bar rotates 360 degrees with positive locking every 12 degrees. To rotate, **loosen the attached Rotating Knob** by turning counter clockwise **until it stops**. The toothed sections are spring loaded to help separate the two halves. Once separated the squared section can be rotated freely. When the desired position is obtained, tighten the knob by turning clockwise. When tightened, the teeth mate and the unit is secure.

**(Fig. 01) Rotating Vertical Position Thru Cross Square**

Back out nonremovable Lock Knob until it stops. With Lock Knob at side position slide cross square onto post to desired location **over a detent**. Hand tighten knob securely.

**(Fig. 02) Right Angle Horizontal Position Into Hub**

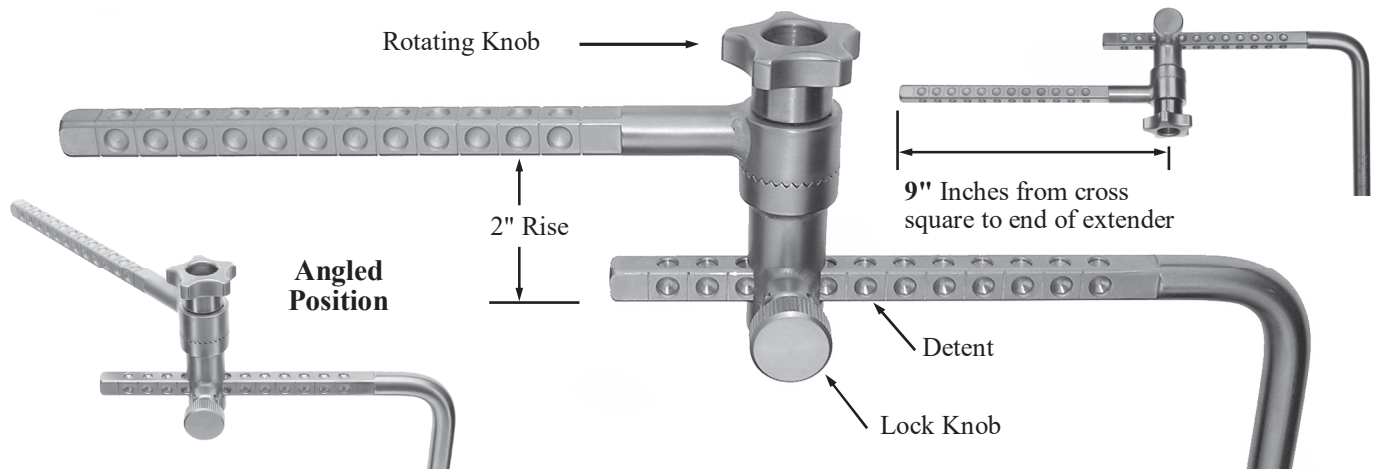
Back out nonremovable Lock Knob until it stops. With Lock Knob in vertical position slide hub onto post until it stops. Hand tighten knob securely.

**(Fig. 03) Horizontal Position Thru Cross Square**

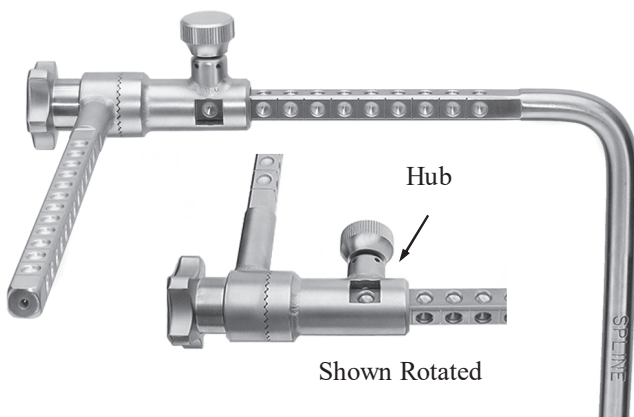
Back out nonremovable Lock Knob until it stops. With Lock Knob in vertical position slide cross square onto post to desired location **over a detent**. Hand tighten knob securely.

**CAUTION:** Lock Knob **must** be inserted in a detent for secure placement of accessories.

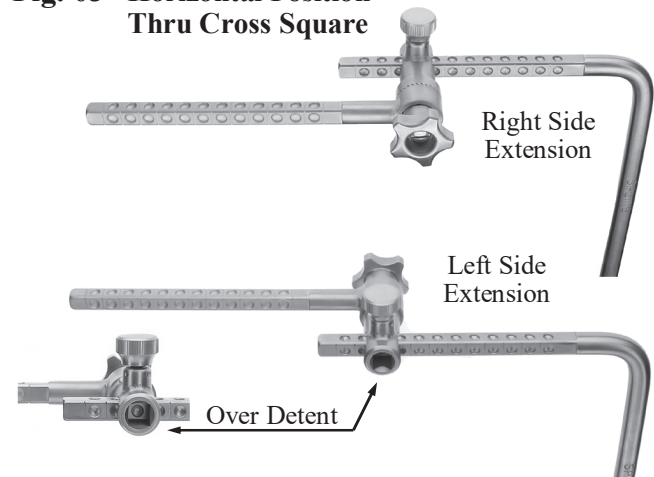
**Fig. 01 Rotating Vertical Position Thru Cross Square**  
**Gain two inches in height**



**Fig. 02 Right Angle Horizontal Position Into Hub**



**Fig. 03 Horizontal Position Thru Cross Square**



**RISER EXTENDER BAR: #4100-39R**

**(Fig. 01) Vertical Position Thru Hub**

Back out nonremovable Lock Knob until it stops. With Lock Knob in vertical position slide hub onto post to desired location **over a detent**. Hand tighten knob securely.

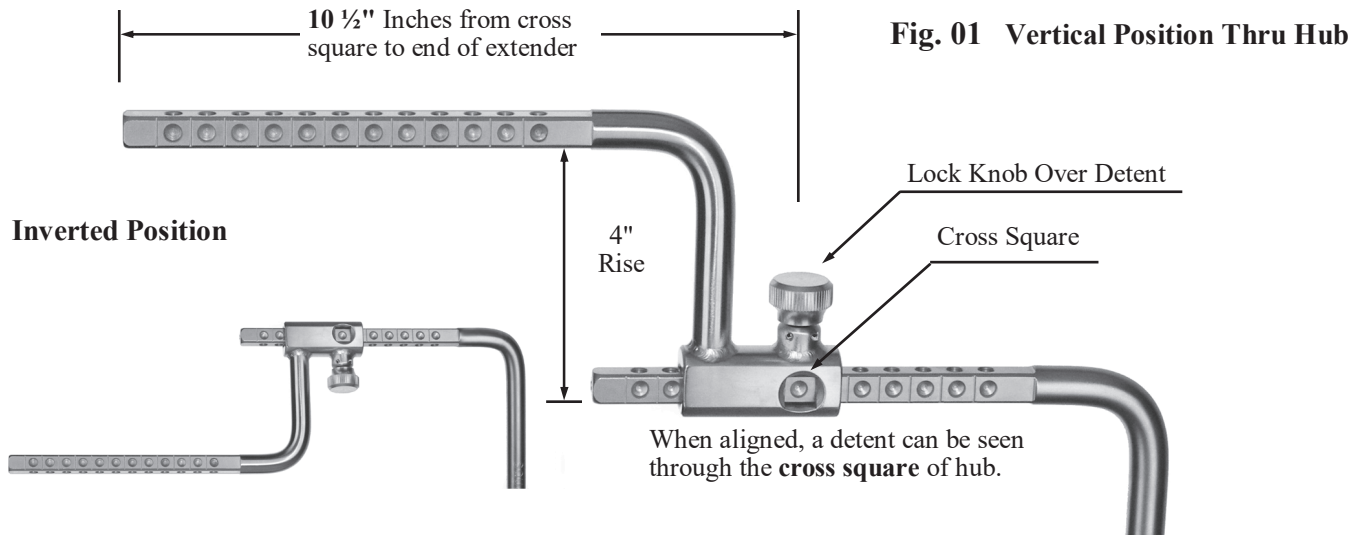
**(Fig. 02) Right Angle Vertical Position Thru Cross Square**

Back out nonremovable Lock Knob until it stops. With Lock Knob in vertical position slide cross square onto post to desired location **over a detent**. Hand tighten knob securely.

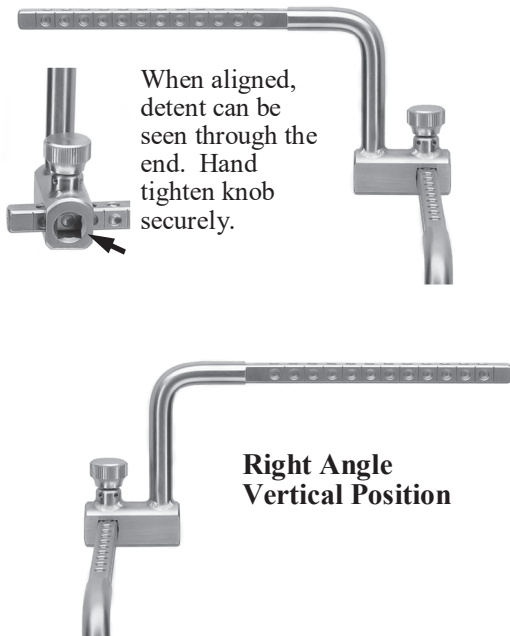
**(Fig. 03) Horizontal Position Thru Hub**

Back out nonremovable Lock Knob until it stops. With Lock Knob in the horizontal position slide hub onto post to desired location **over a detent**. Hand tighten knob securely.

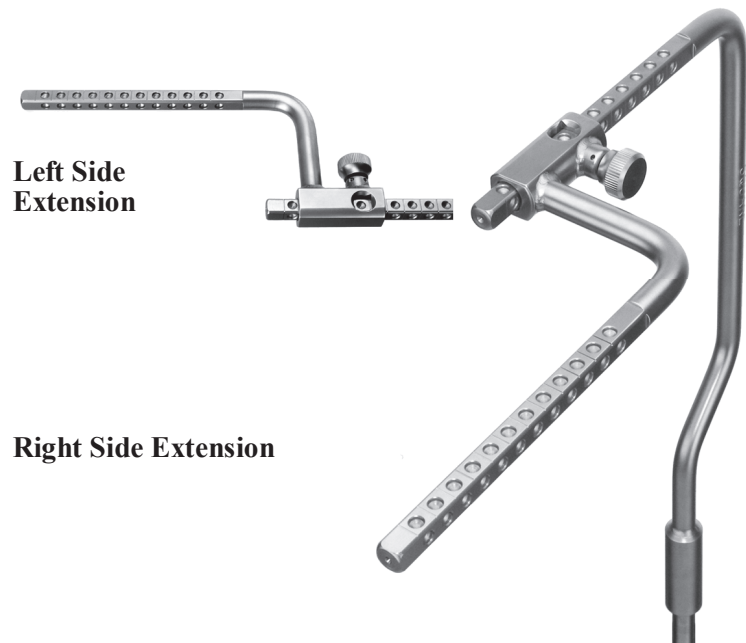
**CAUTION:** Lock Knob **must** be inserted in a detent for secure placement of accessories.



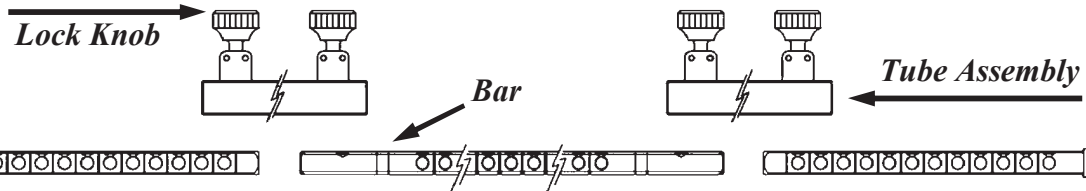
**Fig. 02 Right Angle Vertical Position Thru Cross Square**



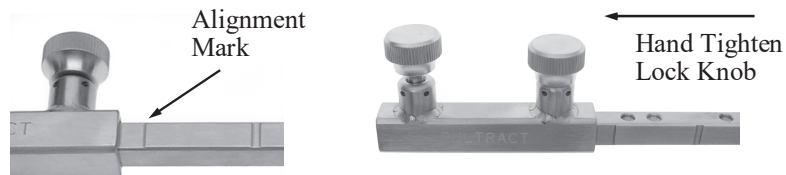
**Fig. 03 Horizontal Position Thru Hub**



The Rultract® Coupler Tube Assembly is used to connect or couple two Rultract® single side systems. This provides stability to the lifting site. The coupler center bar will accommodate the Rultract® ratchet/rake assembly and extender bar. With the two single sides locked together, multiple ratchets and/or extender bars can be placed across the assembly to provide various lift angles

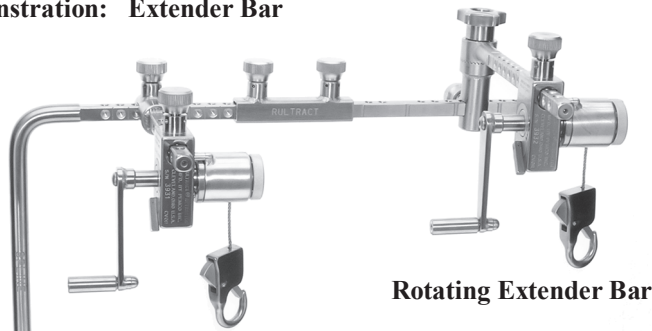


Open Lock Knobs on both Tubes. Slide one end of Bar into a Tube to the first alignment mark. This will line up the Lock Knob with detent. Hand tighten Lock Knob securely.

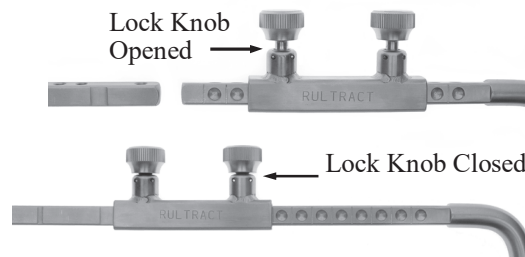


Attach Ratchet/Rake or Extender Bar to Top Post and/or Bar. Slide Tube with Bar and accessories to one Top Post. Lock Knob must line up with a detent. Hand tighten Lock Knob securely.

#### Demonstration: Extender Bar



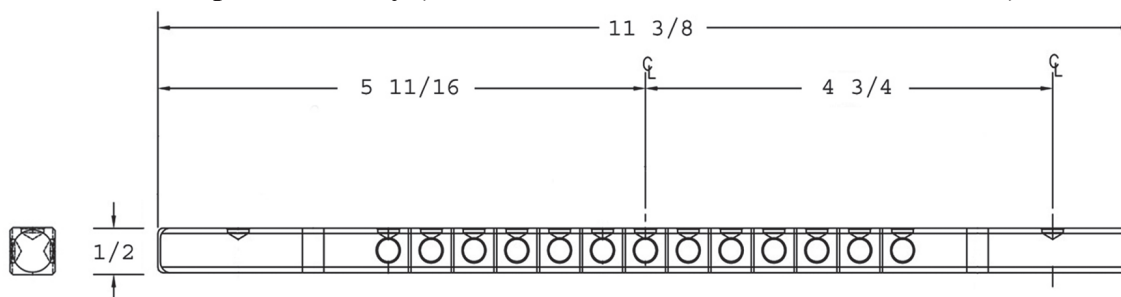
Slide second Tube over second Top Post. Align Bar with Top Post squared section. Slide Tube over Bar to first alignment mark and hand tighten Lock Knob. Position second Tube so the end lines up with an alignment mark on the Top Post. The Lock Knob must be over a detent.



**Caution:** All Lock Knobs on Tube Assembly **MUST** be aligned with a detent and securely tightened in closed position.

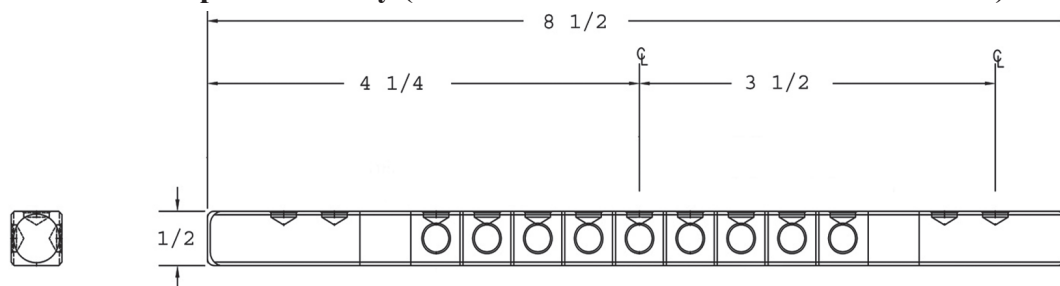
Listed Below: Which Posts and Clamps will combine for Coupler

#### 4100-59-11 Coupler Assembly (includes two Tube Assemblies and one Bar)



Coupler Part Number	Rultract Post Used	Clamp Used	Space Between Top Posts	Bar Length
4100-59-11	4100-32A	4150	13"	11 3/8"
4100-59-11	4100-32AL	4150	13"	11 3/8"
4100-59-11	4100-32A	4160	12"	11 3/8"
4100-59-11	4100-32AL	4160	12"	11 3/8"
4100-59-11	4100-32AS	4150S	13"	11 3/8"
4100-59-11	4100-32ALS	4150S	13"	11 3/8"
4100-59-11	4100-32AS	4160S	12"	11 3/8"
4100-59-11	4100-32ALS	4160S	12"	11 3/8"
4100-59-11	4100-32A	4110 w/ 4100-32C	13"	11 3/8"
4100-59-11	4100-32AL	4110 w/ 4100-32C	13"	11 3/8"
4100-59-11	4100-32AS	4110S w/4100-32CS	13"	11 3/8"
4100-59-11	4100-32ALS	4110S w/4100-32CS	13"	11 3/8"
4100-59-11	4100-32A	4110 w/ 4100-28C	13"	11 3/8"
4100-59-11	4100-32AL	4110 w/ 4100-28C	13"	11 3/8"
4100-59-11	4100-32AS	4110S w/ 4100-28CS	13"	11 3/8"
4100-59-11	4100-32ALS	4110S w/ 4100-28CS	13"	11 3/8"
4100-59-11	4100-08	4110	13"	11 3/8"

#### 4100-59-08 Coupler Assembly (includes two Tube Assemblies and one Bar)



Coupler Part Number	Rultract Post Used	Clamp Used	Space Between Top Posts	Bar Length
4100-59-08	4100-32AT	4150	9 1/2"	8 1/2"
4100-59-08	4100-32AT	4160	8 1/2"	8 1/2"
4100-59-08	4100-32AST	4150S	9 1/2"	8 1/2"
4100-59-08	4100-32AST	4160S	8 1/2"	8 1/2"
4100-59-08	4100-08R	4110	9 1/2"	8 1/2"