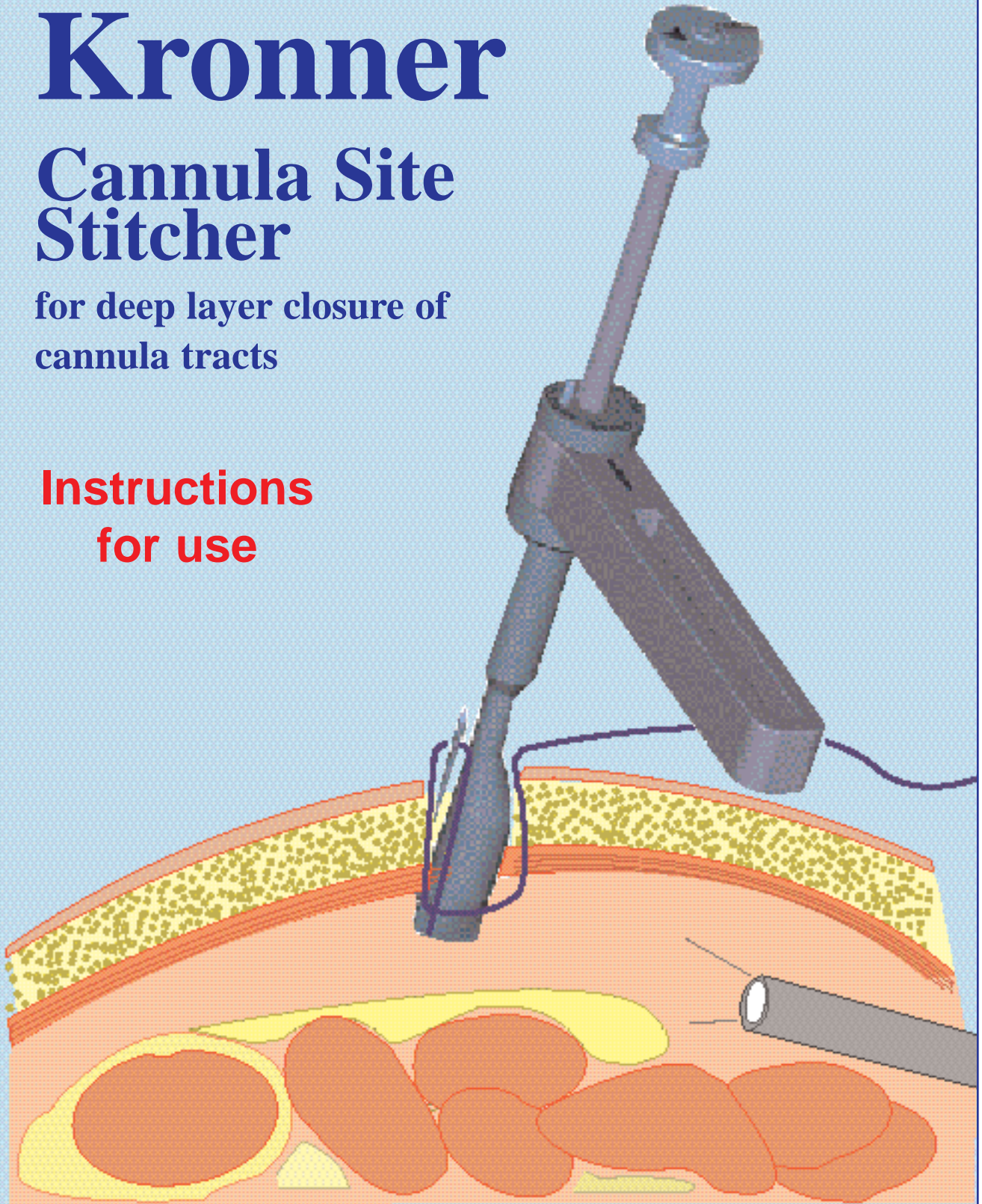


# Kronner

## Cannula Site Stitcher

for deep layer closure of  
cannula tracts

**Instructions  
for use**



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The **Kronner Cannula Site Stitcher** is a reusable instrument for rapid closure of the deep layers of ten millimeter or larger cannula tracts.

**It has the following advantages:**

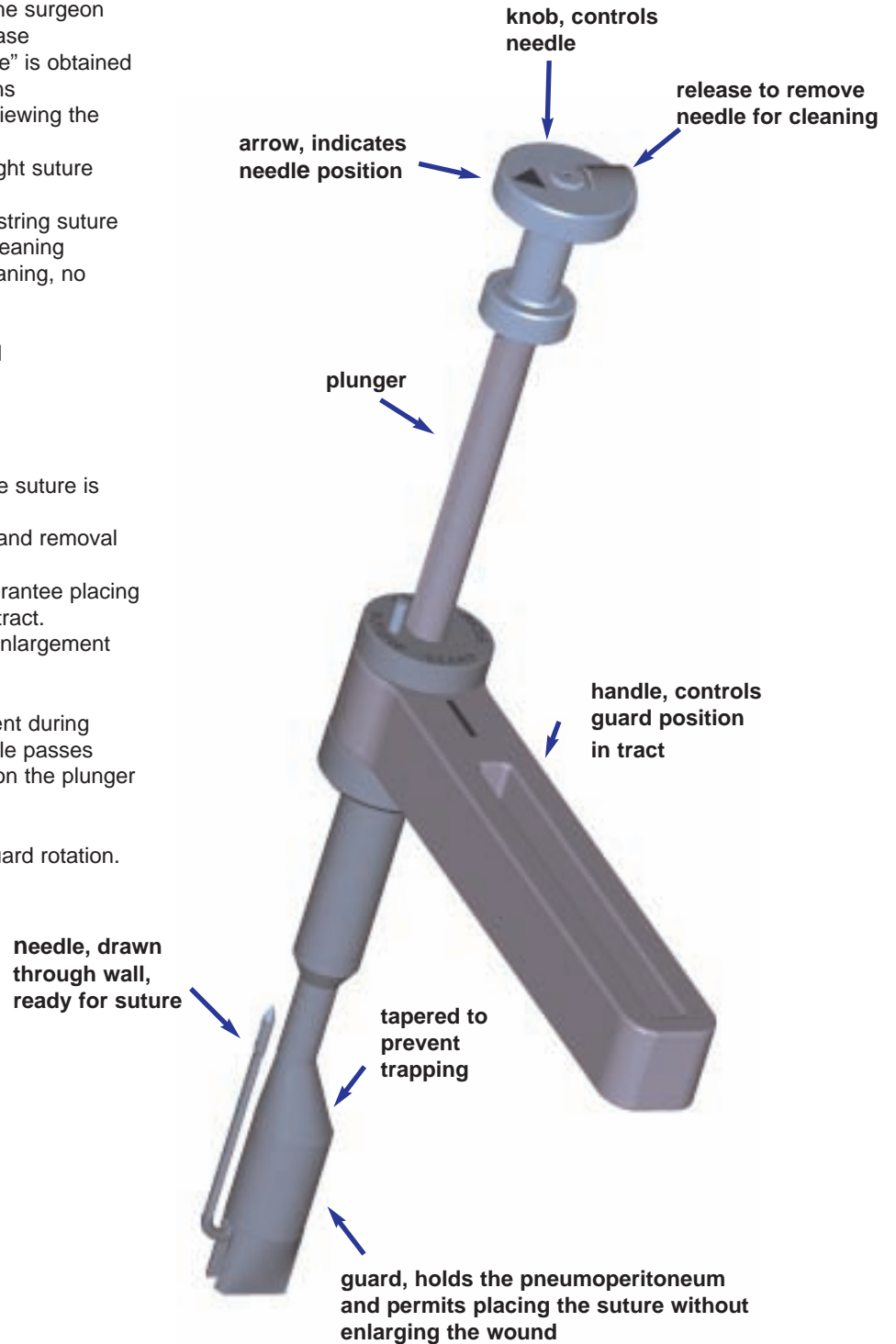
1. Wound closure in less that one minute
2. Needle directly accessible
3. Uses standard suture selected by the surgeon
4. No additional components to purchase
5. Insures that an adequate "tissue bite" is obtained
6. Needle points away from vital organs
7. No internal procedures other than viewing the needle with the laparoscope
8. Can be used to place a figure of eight suture to control bleeding
9. Can also be used to place a purse string suture
10. Irrigation ports for flushing during cleaning
11. Can be easily disassembled for cleaning, no wrenches required
12. Steam autoclavable
13. Replaceable needle, rarely required
14. Light weight, weighs only 9 ounces

**The unique guard:**

1. Holds the pneumoperitoneum as the suture is placed
2. Covers the needle during insertion and removal
3. Aligns the suture along the tract
4. Rotates exactly 180 degrees to guarantee placing the suture across the center of the tract.
4. Allows closure of the tract without enlargement of the skin wound

The needle is controlled by the instrument during insertion, removal, and for the two needle passes required to place the suture. An arrow on the plunger knob shows the needle position.

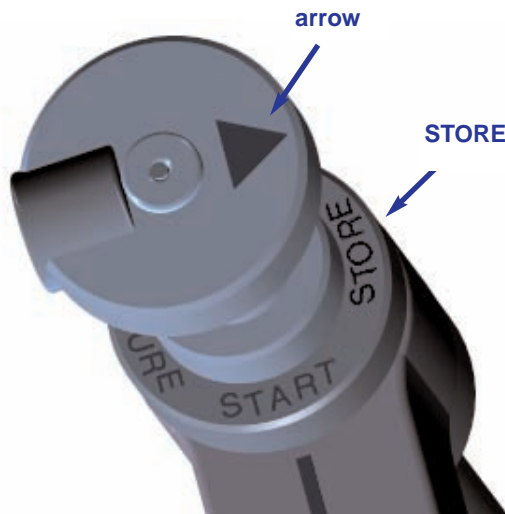
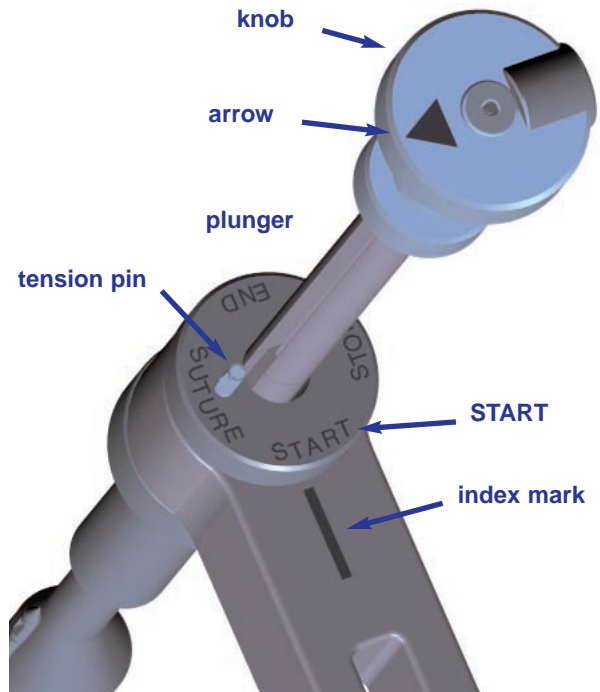
START and END identify 180 degree guard rotation.



### Before starting:

1. The guard should be in the **Start** position prior to use.

Without depressing the tension pin, turn the knob until **START** aligns with the handle index mark.



2. The needle should be in the **Store** position.

Push the plunger to fully depress the tension pin and turn the knob **COUNTER-CLOCKWISE\*** until the arrow aligns with **STORE**.

3. Pull the plunger up to fully retract the needle into the guard. It will stay in this position until deployed.

\* clockwise rotation will rotate the guard

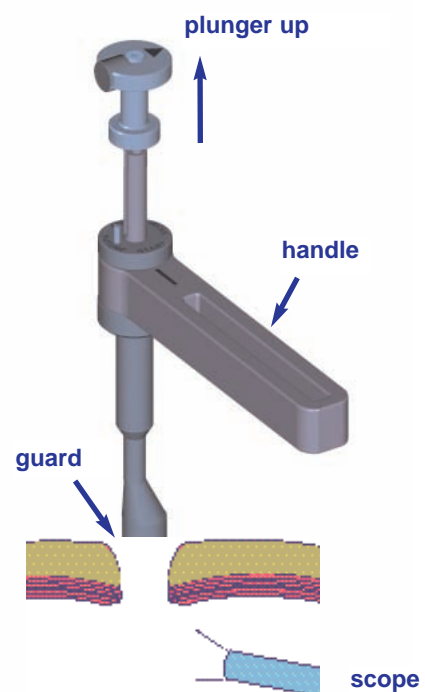
### Using the Stitcher:

1. While viewing the cannula site on the monitor, remove the cannula. Grasp the Stitcher handle and immediately insert the guard into the cannula tract.

During this step the plunger should be up to keep the needle in the retracted position.

Be sure the pneumoperitoneum is adequate for viewing the needle with the scope.

It may be necessary to make a small skin nick and possibly a fascial nick when a 10 mm cannula was used.



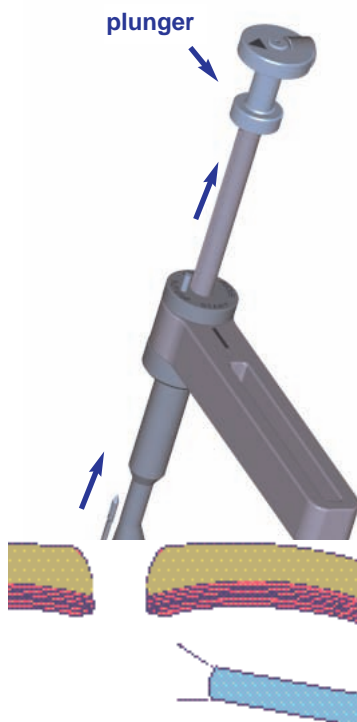
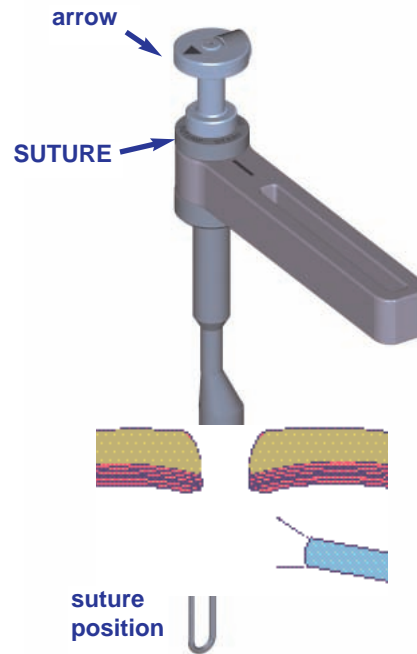
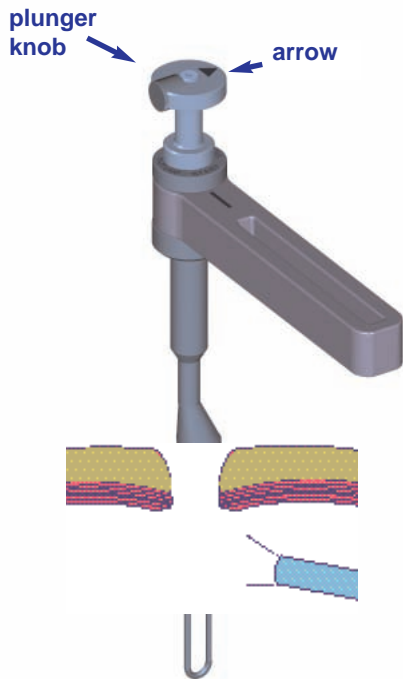
2. View the Stitcher needle on the monitor to prevent internal injury during this step.

While holding the handle **steady** to keep the Stitcher guard at the proper depth, push the plunger as far as possible to fully depress the tension pin and rotate the needle **CLOCKWISE** to the suture position.

The arrow on the plunger knob aligns with SUTURE.

Release the pressure on the tension pin.

3. Use the handle to position the needle for the first needle pass. Be sure the arrow remains aligned with SUTURE.



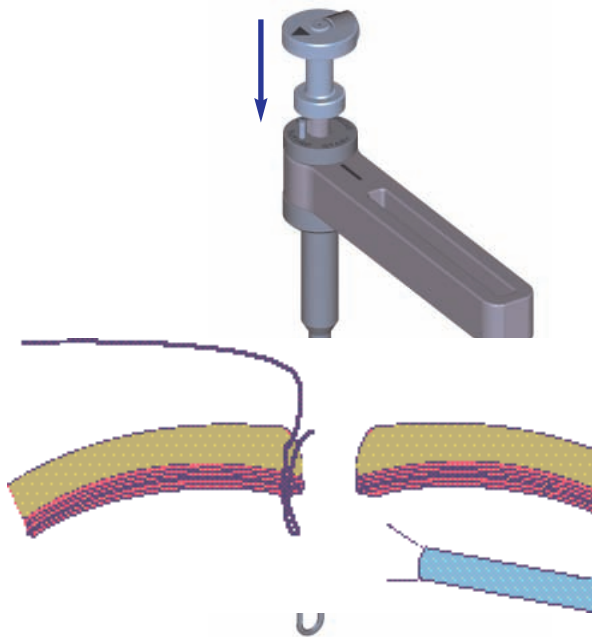
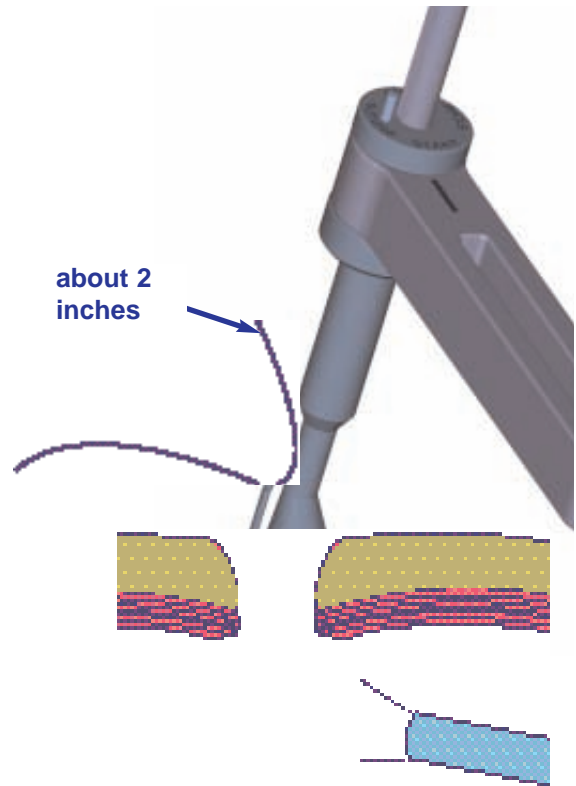
4. Hold steady to keep the guard at the selected depth and **pull up on the plunger, (not the handle)**, to bring the needle through the abdominal wall.

The needle will appear to the left of the Stitcher.

After the needle passes through the muscle layers, tilt the handle and / or retract the skin so the needle misses the skin.

5. Thread a suture through the eye of the needle, approximately 2 inches.

Thread from the outside of the needle toward the Stitcher. This will make it easy to identify the short end during suture removal from the eye.



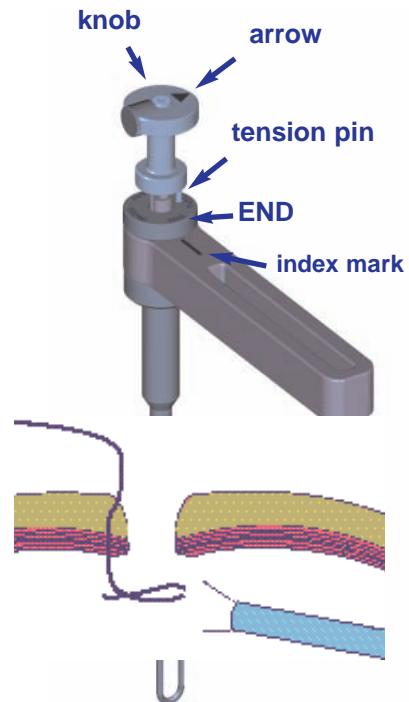
6. Hold the handle steady to keep the guard at the proper depth. Push the **plunger** to pass the needle down through the abdominal wall.

Do not depress the tension pin.

7. Without depressing the tension pin, rotate the knob until a click is felt. This places the needle 180 degrees from the first suture pass. The arrow shows this position.

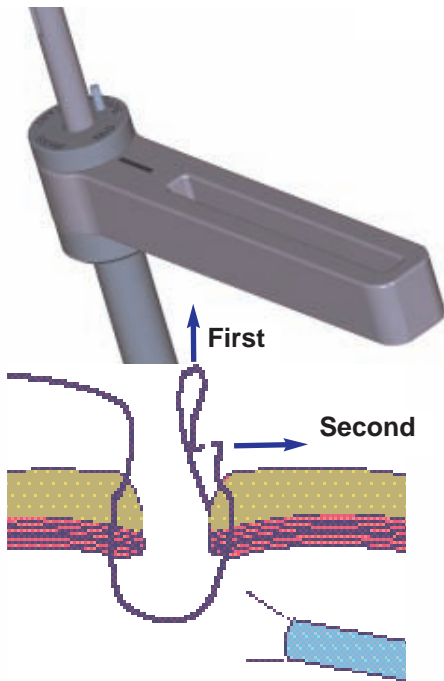
END aligns with the handle index mark.

View the needle on the monitor during this step.



8. Hold the handle steady to keep the guard at the proper depth and pull the plunger to bring the needle up through the abdominal wall.

After the needle passes through the muscle layers, tilt the handle and / or retract the skin so the needle misses the skin.



9. Suture removal:

**First**, pull the short end of the suture, (located between the needle and Stitcher), out of the wound.

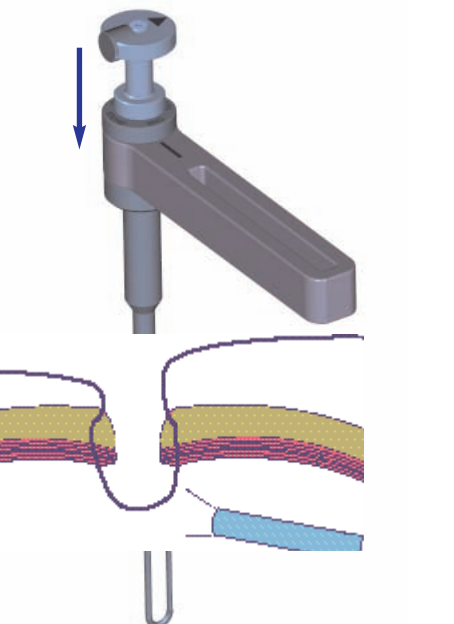
**Second**, grasp the suture on the outside edge of the needle and pull it sideways to remove it from the eye.

10. Hold the handle steady to keep the guard at the proper depth. Push the plunger to move the needle down through the abdominal wall. If this is the final suture pass, continue to push the plunger until the tension pin is depressed.

For **figure of eight sutures**:

Do not depress the tension pin. Rotate the **entire** Stitcher approximately 30 degrees and repeat steps 4 through 9.

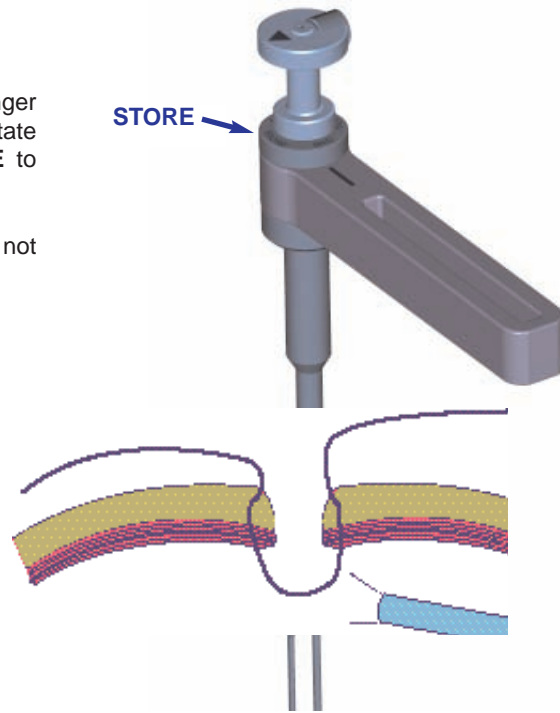
For **purse string sutures**: after step 6, rotate the **entire** Stitcher a few degrees, pull the needle up, unthread, push the needle down, repeat until the circle is complete. Remove the Stitcher and tie the purse string.



11. While holding the handle steady, push the plunger as far as possible to depress the tension pin and rotate the plunger and needle **COUNTER-CLOCKWISE** to the store position. The arrow aligns with STORE.

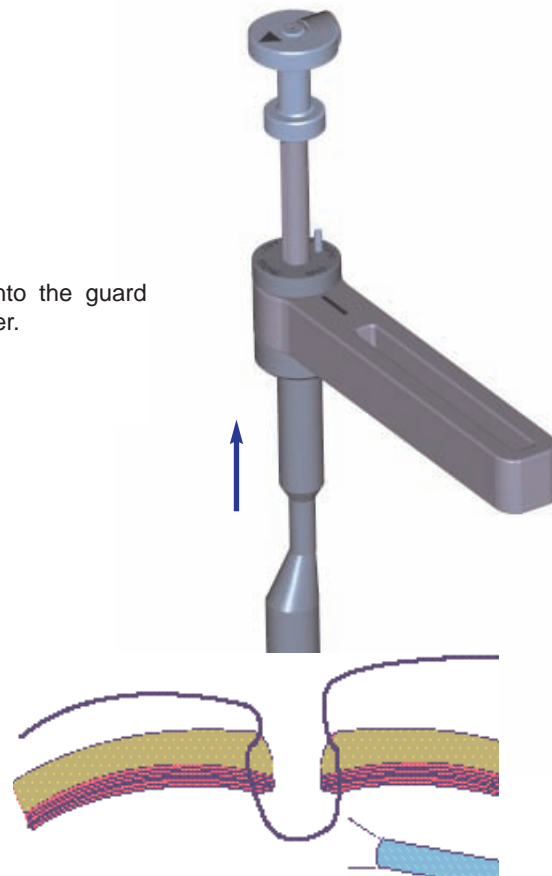
View the needle on the monitor to be sure tissue is not trapped.

Avoid trapping the suture with the needle. If the suture is trapped, secure the ends. The suture can be released from the needle after the Stitcher is removed from the tract.



12. Pull the needle into the guard and remove the Stitcher.

13. Tie the suture.



## Additional information:

1. Using the Stitcher requires two hands.
2. Use the handle to position the guard in the wound to hold the pneumoperitoneum. The guard must be held at a stable depth.
3. Use the knob and plunger to pass the needle through the abdominal wall for the two suture passes.
4. The knob and plunger is also used to **both** rotate the needle from the STORE position to the SUTURE position and to rotate the guard and needle for the two suture passes.

The needle can be rotated from the STORE position to the SUTURE position when the tension pin is fully depressed. The needle must be rotated clockwise.

When the tension pin is not depressed, rotating the plunger causes the guard to rotate. Indents insure that the guard will rotate exactly 180 degrees.

5. The suture should not be attached until the needle has been pulled up through the abdominal wall for the first suture pass.

Pull the needle straight upward until it has penetrated all layers except the fat, then tilt the Stitcher so the needle misses the skin. Retract the skin as necessary.

6. Attach the suture to the needle eye from the same direction each time, so there will be no confusion when it is pulled from the eye after the second suture pass.

7. The diameter of the guard corresponds to the outside diameter of the cannula. Most cannula have a wall thickness of approximately 2 mm. For example, a 12 mm. cannula will have approximately a 14-15 mm. outside diameter. Since the tissues stretch, the 15 mm. guard will fill the cannula tract.

8. It may be easier to pull the needle through the wall if a 2 mm nick is made in the skin.

It may be necessary to make a skin nick and possibly a fascial nick when using the Stitcher with a 10 mm. cannula, especially if the cannula has a thin metal wall.

Rotating the Stitcher a few degrees clockwise and counterclockwise may aid in inserting it into small cannula tracts.

9. Prior to use, the scrub nurse should put the Stitcher needle through a full range of motion to verify that the needle has been properly attached after cleaning.

Rotate the needle to the SUTURE position and draw it back until the transverse needle segment contacts the proximal end of the groove in the guard.

Rotate the needle to the STORE position for use.

Rotate the guard to the START position.

### To order:

**KS3-15-55 Kronner Cannula Site Stitcher**  
(15 mm guard, outer diameter)\*

**KS3-N55 Replacement Needle**  
(length 55 mm)

\*for 10-12 mm cannulae, (inner diameter)

Federal law restricts this device to sale by or on the order of a physician.

## Kronner Medical

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