

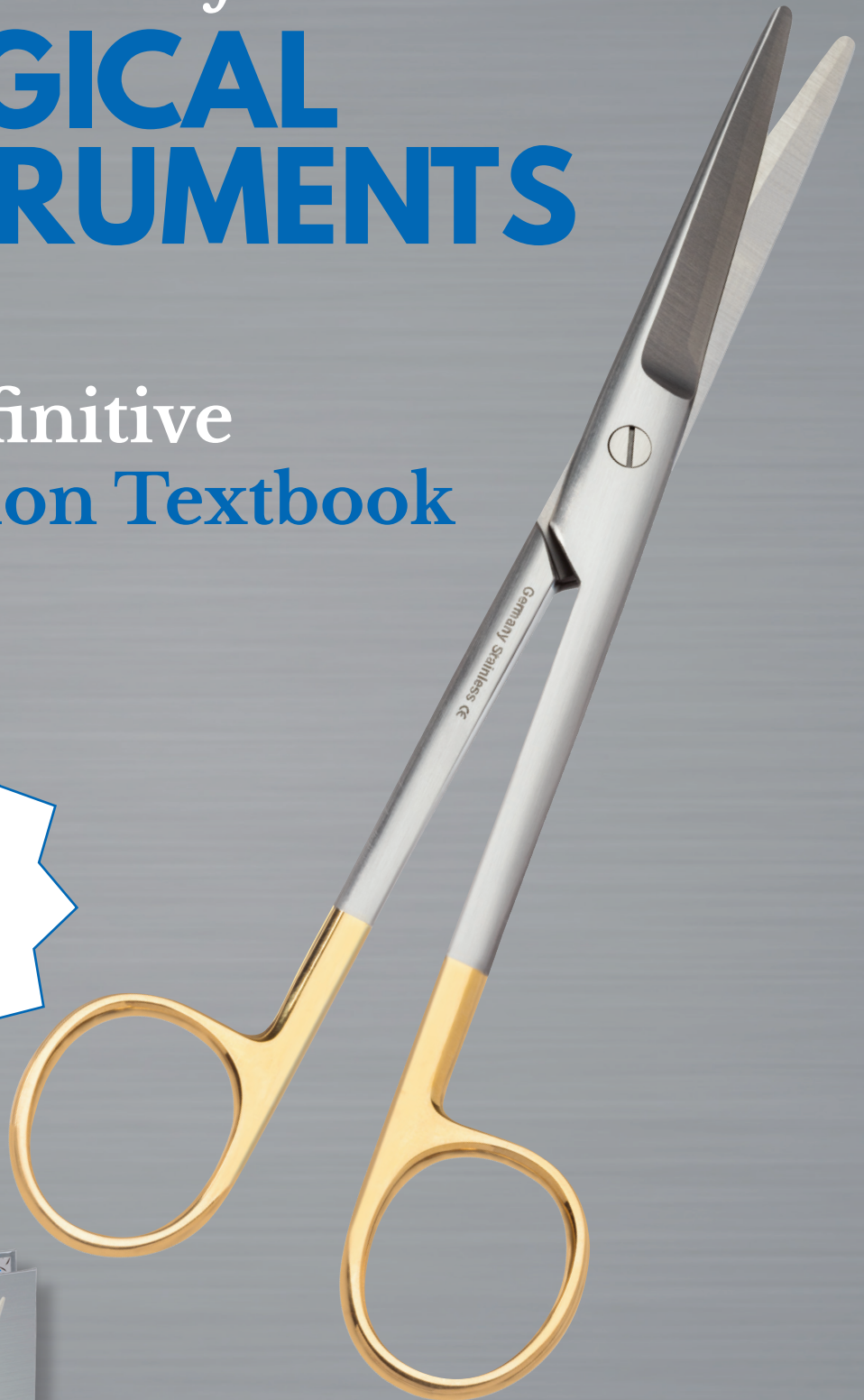
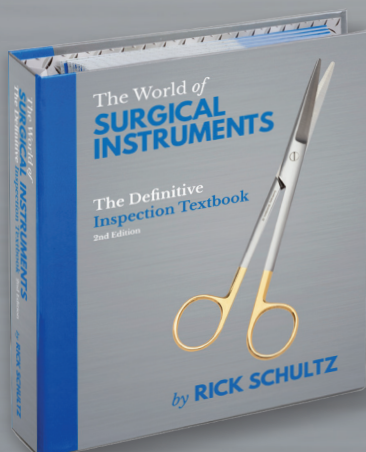
Textbook Preview

The World of **SURGICAL INSTRUMENTS**

The Definitive Inspection Textbook

3rd Edition

501
full color pages
1,198 high
resolution photos
Glossy, hard cover
Lay flat design



by **RICK SCHULTZ**

Frequently Asked Questions

Q: Do all scissors go dull?

A: Yes. Every scissor goes dull no matter what size, specialty, manufacturer, or design.

Q: Does sterilization dull a scissor?

A: Generally, no. However, when old autoclaves produce dirty steam, the scissor blade edges can become stained, which can cause the scissor not to cut.

Q: Can all scissors be sharpened?

A: Yes. Every scissor can be sharpened. Make sure the repair vendor is properly trained, especially on SuperCut scissors (black-handled).

Q: How often should scissors be tested?

A: Scissors should be tested 1 to 2 times per week. The proactive approach is picking 2 days per week as scissor testing days. Using an instrument tracking system will allow the facility to track sharpening frequency. Eventually, a large percentage of scissors will be sharp.

Q: Is the scissor testing standard red and yellow scissor test material?

A: Yes. The industry standard is to use red scissor test material for scissors longer than 4½" in overall length and yellow scissor test material for scissors that measure 4½" and shorter. Yellow scissor test material is used on 4½" scissors.

Q: Do all repair technicians know how to sharpen scissors?

A: No. Experience and proper training is key, and many times repair technicians are learning on your expensive instrument inventory. The hospital should verify how many months of training/employment the repair technician has. On average, a repair technician needs 9 to 12 months of training. This training should not be performed on the facility's inventory of instruments. You cannot teach experience.

Q: Is it true that certain scissors need to be sharpened more often?

A: Yes. The black-handled SuperCut scissor needs to be sharpened the most (quarterly) because it has a knife edge.

Q: Can scissors be over-sharpened?

A: Yes. Scissors can be over-sharpened by inexperienced repair technicians. Only send out dull scissors for sharpening. Not all scissors in a set need to be sharpened.

Q: Can serrated scissors be sharpened?

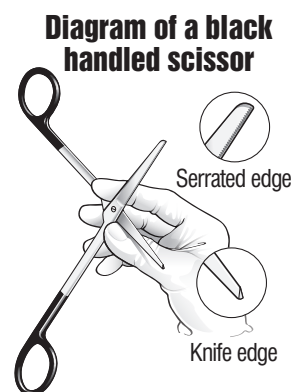
A: Yes. The repair technician should know how to sharpen a serrated scissor. But remember, experience cannot be taught. An inexperienced repair technician may not know the correct method.

Q: Do all black-handled scissors have a serrated edge?

A: No. Black-handled SuperCut scissors have the option of serrated edges or not. One serrated blade and one knife blade is the most popular configuration.

Q: Should gold-handled scissors be sharpened more often?

A: No. Gold-handled scissors stay sharper longer. They should first be tested before sending them out for sharpening.



Mayo Scissor, Tungsten Carbide

Instrument Name: Mayo Scissor, Tungsten Carbide

Also Known As: Gold Mayo

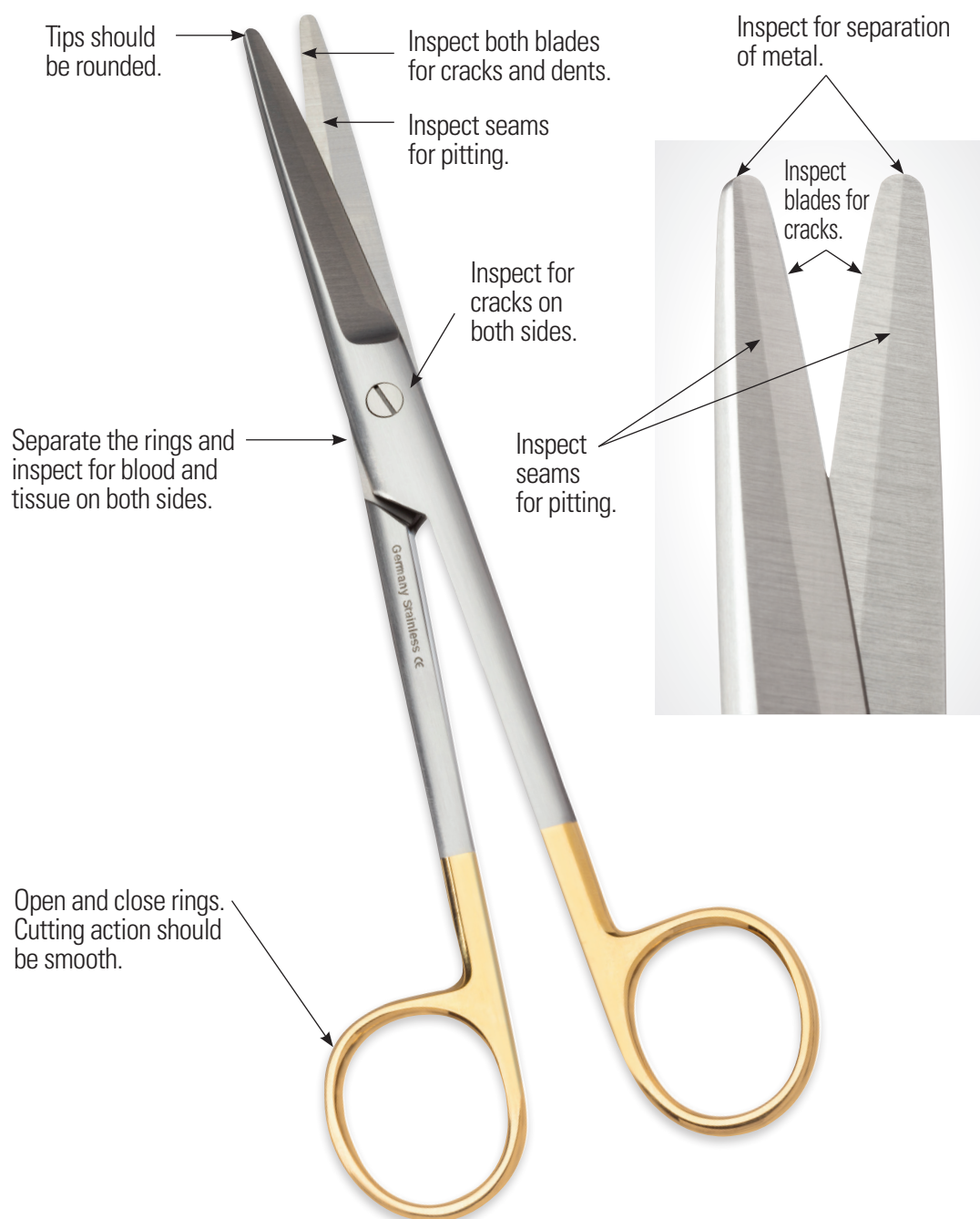
Similar Instruments with Same Inspection: All scissors

Overall Length: 5½" (14 cm), 6¾" (17.1 cm), 9" (22.9 cm), straight or curved

Instrument Use: Cutting tissue and skin

Tray Assembly Tip: Sterilize with rings slightly open

Sharpness Test Standard: Red scissor test material



Types of Needle Holders

Closed position



Olsen-Hegar



Heaney



Crile-Wood



Ryder



Mayo-Hegar,
Tungsten
Carbide



Mayo-Hegar
Standard,
non-carbide

Open position



Olsen-Hegar



Heaney



Crile-Wood



Ryder



Mayo-Hegar,
Tungsten
Carbide



Mayo-Hegar
Standard,
non-carbide

Mayo-Hegar Needle Holder, Tungsten Carbide Jaws and Standard Jaws

Instrument Name: Mayo-Hegar Needle Holder, Tungsten Carbide Jaws and Standard Jaws

Also Known As: Needle driver

Similar Instruments with Same Inspection: All other needle holders

Overall Length: 7" (17.8 cm)

Instrument Use: Driving suture needles in the suturing process

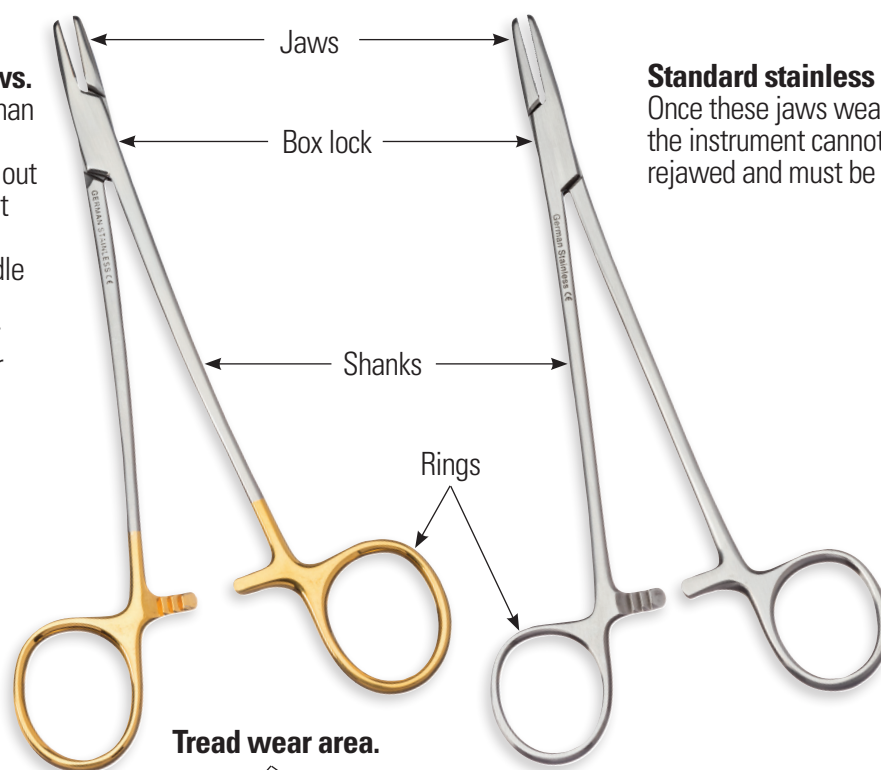
Tray Assembly Tip: Sterilize with ratchets in the open position

Tungsten carbide jaws.

- Much harder metal than stainless steel.
- The jaw tread wears out very slowly. Jaws last longer.
- Grips the suture needle better.
- When the jaws wear out, the repair vendor can simply replace.
- Tungsten carbide is indicated by 24-karat gold rings.

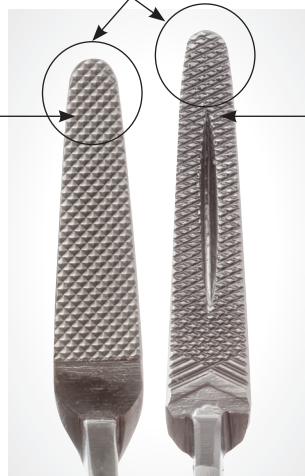
Standard stainless jaws.

Once these jaws wear out, the instrument cannot be rejawed and must be replaced.



Tungsten carbide jaw.

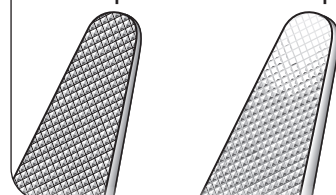
Stainless steel jaw.



Jaw Tread Wear Tungsten Carbide Jaw

Acceptable

Not acceptable



Frequently Asked Questions

Insulation
"pull test"



Q: There is a space between the insulation and the tip of the instrument. Is this okay?

A: No. The instrument must be immediately removed from service and sent out for repair. A gap can allow blood and fluids to enter under the insulation. If the abdomen is insufflated, it will cause the blood to be forced under the insulation.



Gap in insulation

Q: How is loose laparoscopic insulation visually tested?

A: To test the insulation visually, inspect the entire shaft for any nicks or cuts. Next, lightly pull back on the insulation. If the insulation slides back, the instrument is in need of re-insulation.

Q: What is the port near the handle used for?

A: This port is used to flush the instrument during the cleaning process.

Proper Flushing and Irrigation

With the distal tip underwater, connect syringe to irrigation port and draw up water from cleaning sink. Force cleaning fluids in and out of shaft.



Q: Where are the most difficult areas to clean on a laparoscopic instrument?

A: The most challenging areas to clean are the jaws and distal working portion (linkage). This is where blood and fluids can hide. Manual cleaning and the use of an ultrasonic irrigator will assist in cleaning these areas.

Q: How are laparoscopic scissors tested for sharpness?

A: Unless stated differently in the Instructions For Use (IFU), laparoscopic scissors are tested on one thickness of gift wrap tissue paper or yellow scissor test material.

Q: How is the jaw tension tested on laparoscopic graspers?

A: Gently clamp a lint-free towel with the laparoscopic grasper and pull back. The grasper should not slip from the towel.

Q: What methods can be used to prevent damage to the tips of laparoscopic instruments?

A: Using a tip protector will help protect sharp tips and delicate instruments from damage or place instruments in a secure instrument rack and tray.

Laparoscopic Claw Forcep, 10 mm

Instrument Name: Laparoscopic Claw Forcep, 10 mm

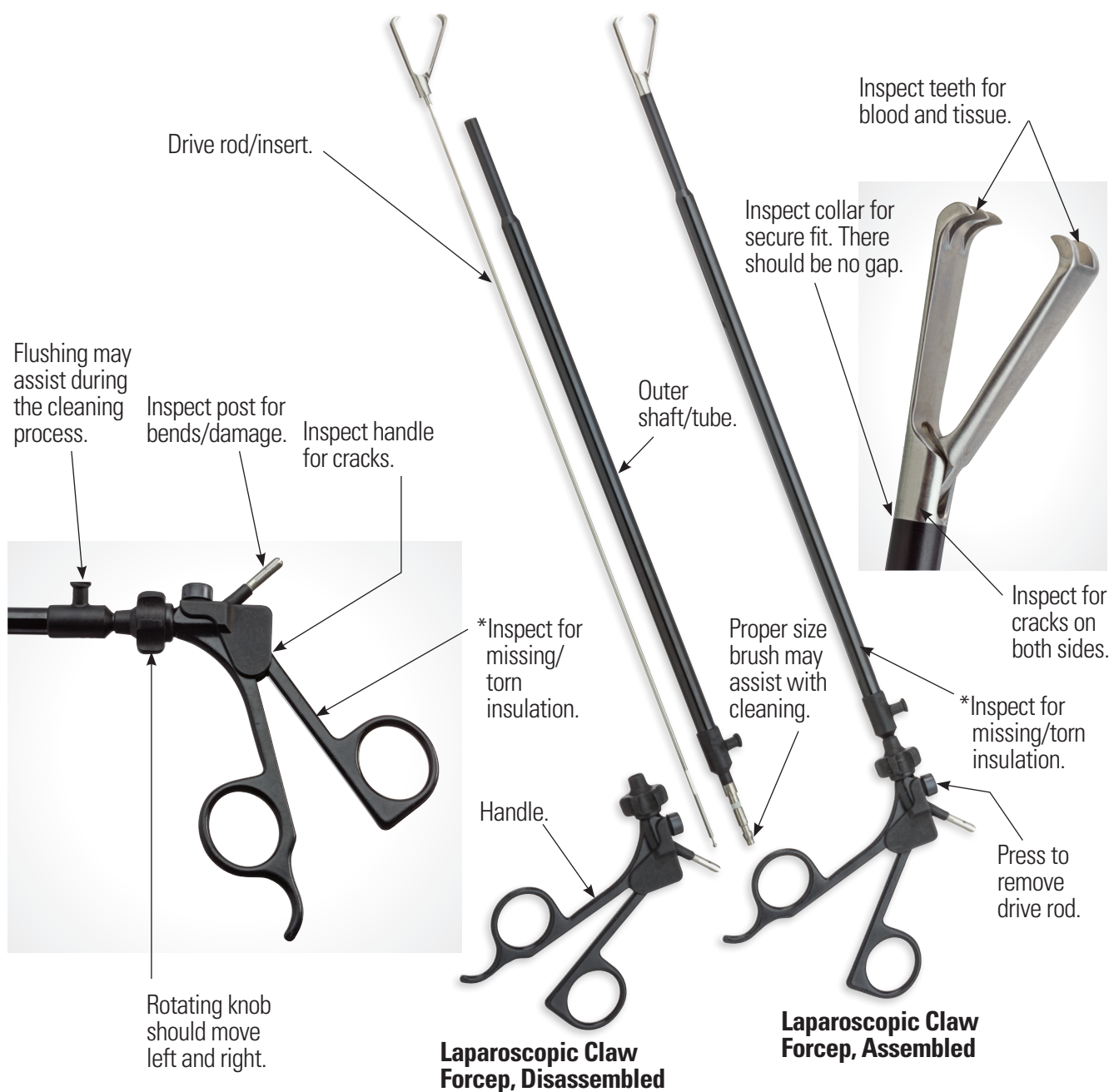
Also Known As: Claw grasper, Clickline®

Similar Instruments with Same Inspection: All three-piece laparoscopic grasping forceps

Overall Length: Shaft: 36 cm, 43 cm

Width: Diameter: 5 mm, 10 mm

Instrument Use: Grasping tissue during minimally invasive procedures



***Insulation testing may assist in locating pin holes which are usually not visible.**

Most Common Hemostats



Hartman
3 1/2"

Halsted
5"

Kelly
5 1/2"

Crile
5 1/2"
6 1/4"

**Rochester-
Pean**
5 1/2", 6 1/4",
7 1/4", 8",
9", 10"

**Ochsner
(Kocher)**
6 1/2", 7 1/4",
8", 9", 10"



Hartman

Halsted

Kelly

Crile

**Rochester-
Pean**

**Ochsner
(Kocher)**

Kelly Forcep

Instrument Name: Kelly Forcep

Also Known As: Snaps (often confused with Rochester Pean)

Similar Instruments with Same Inspection: All hemostats

Overall Length: 5½" (14 cm), half serrated jaws, straight or curved

Instrument Use: Clamping off vessels

Tray Assembly Tip: Sterilize with ratchets in the open position

Inspect both jaws for dents.
Inspect serrations for blood
and tissue.

Tips should meet
evenly with no overlap.

Separate the rings and inspect for
blood and tissue on both sides.

Inspect for cracks on
both sides.

Inspect
both jaws
for blood
and tissue.

Crile forcep
has fully
serrated
jaws.

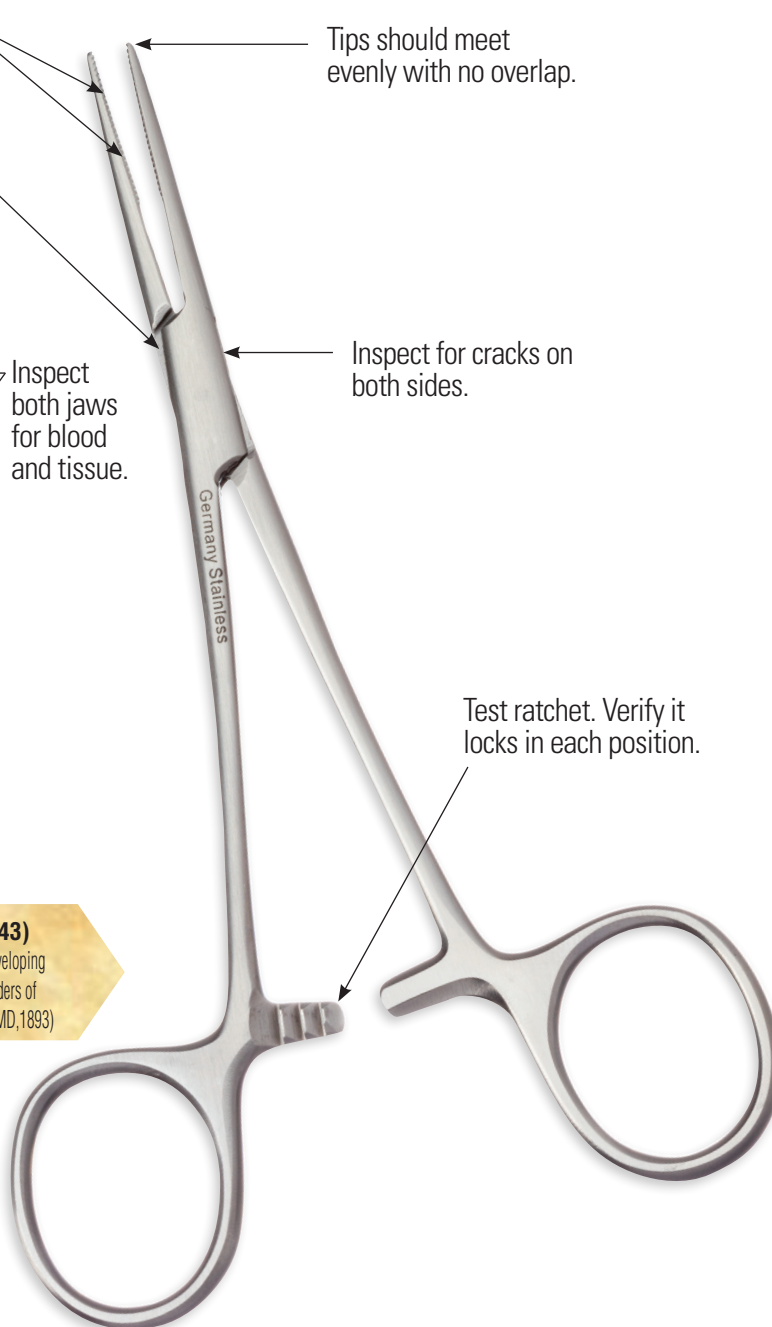
Kelly forcep
has half
serrated
jaws.

Test ratchet. Verify it
locks in each position.



Dr. Howard Atwood Kelly (1858-1943)

Credited with establishing gynecology as a specialty by developing new surgical approaches to GYN diseases. One of the founders of Johns Hopkins University School of Medicine (Baltimore, MD, 1893)



Resectoscope

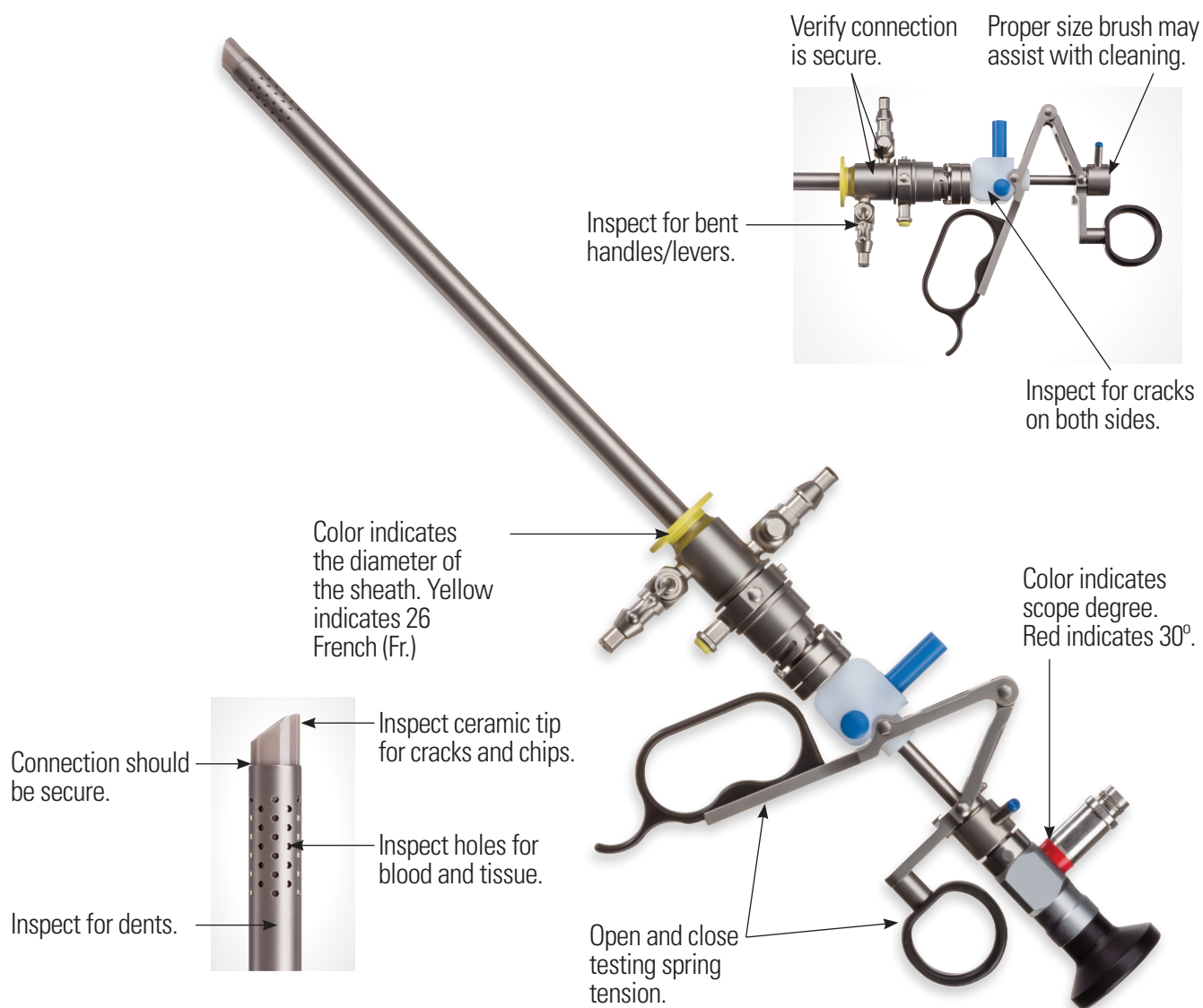
Instrument Name: Resectoscope

Also Known As: Bipolar resectoscope, Urology resectoscope

Instrument Use: Removal or biopsy of lesions of the bladder, prostate, or urethra

Tray Assembly Tip: Very delicate instrument. A protection case may reduce damage.

Resectoscope, assembled



Damaged Laparoscopic Spatula

Cause: The insulation may have been damaged during use. Over time, the insulation may become brittle and chip off.

Effect: The insulation is torn/missing. The instrument should be removed from service immediately and sent for repair. Continued use may result in the insulation dropping into the surgical site and cause a significant patient risk.

Prevention: This instrument requires visual inspection and insulation testing after every use.

Torn insulation. **REMOVE
FROM SERVICE
IMMEDIATELY AND SEND
OUT FOR REPAIR.**



The World *of* **SURGICAL INSTRUMENTS**

The Definitive **Inspection Textbook** 3rd Edition

This inspection textbook, featuring over 1,100 high-resolution images, teaches surgical instrument names, inspection points, sharpness testing, measuring, and much more. The step-by-step approach of this textbook is designed as a resource for healthcare professionals, both to increase patient safety and improve surgeon satisfaction.

Discover How To:

- » **Identify critical inspection points of surgical instruments**
- » **Properly measure surgical instruments**
- » **Know the difference between a SuperCut and a standard scissor**
- » **Assemble instrument trays to reduce repairs**
- » **Differentiate surgical grade instruments from floor grade (economy) instruments**
- » **Inspect the different types of coated instruments**
- » **Know the enemies of surgical instruments**
- » **Evaluate a surgical instrument repair vendor**
- » **Inspect needle holder jaws for wear**
- » **Test instruments for sharpness**
- » **Identify damaged instruments**



Customer Reviews, Pre-Released Version

"I was familiar with Rick's first book. We used it often in our department. This new book was a real surprise because I didn't think it could get much better. Wow, the photos and the FAQs are brilliant teaching tools. Great book."

C. A. H., CRCST, CIS — Sterile Processing Manager

"Great reference and training textbook to new personnel coming into our operating room. Easy to read, along with photos, makes this textbook a must have."

P. M. — Surgical Technician

"This book will really help the industry. Simple to read and it solves a lot of issues we have had. Great resource, great teaching."

C. T., R.N. — OR Manager

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