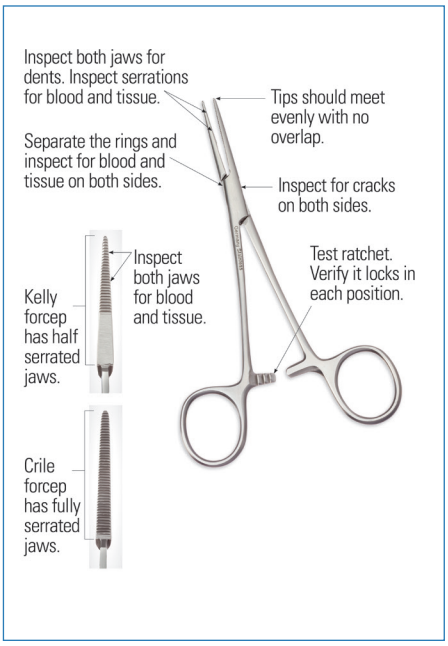
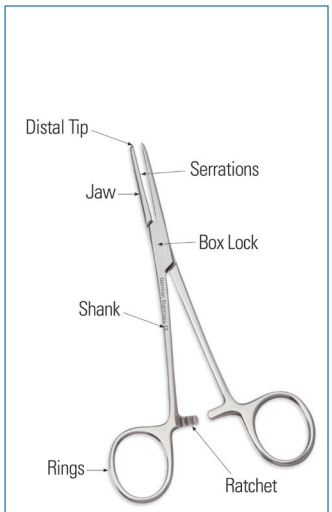
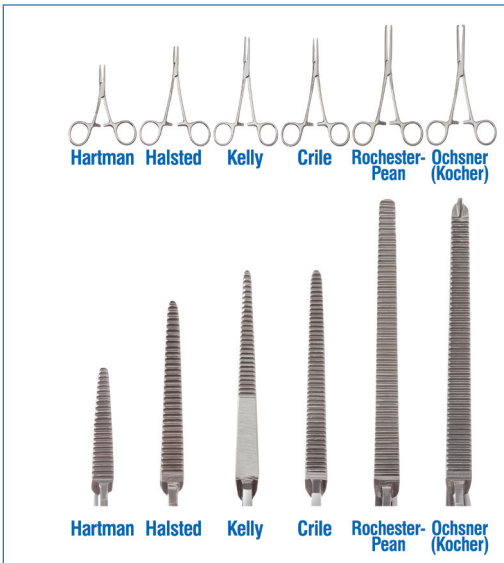
Inspecting Ring-Handled Forceps (Hemostats)

BY RICK SCHULTZ







Common Hemostats and Jaws (Details)

The hemostat is the most popular instrument category and is found in major, minor, orthopedic, soft tissue and plastic trays. The most common hemostatic forceps are the Hartman Mosquito forceps, Halsted forceps, Kelly forceps, Crile forceps, Rochester-Pean forceps and Ochsner (Kocher) forceps. Due to the volume of hemostats in any given tray, the instruments may not be inspected properly or at all.

The major components and inspection points of a hemostat are illustrated here. When inspecting each hemostat, check the entire instrument for the presence of blood. Carefully examine the jaws for dents and serrations for residual blood and tissue. Inspect both sides of the hinged area (box lock) for cracks. Confirm that the tips meet and test the ratchet.

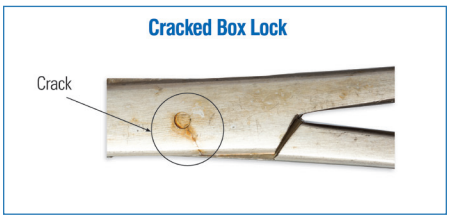
In addition to improperly inspecting all or some portion of hemostats, technicians often fail to learn the instruments' proper names. Many count sheets list the nicknames of hemostats. These nicknames should be changed to the correct names, although the nicknames may be retained in parentheses for reference.

Hemostat FAQs

Q: What is the hinged area of a hemostat called?
A: The hinged area of a hemostat is referred to as the box lock.

Q: What area of the hemostat is the most critical to inspect?
A: Always inspect both sides of the hinged area (box lock) for cracks.

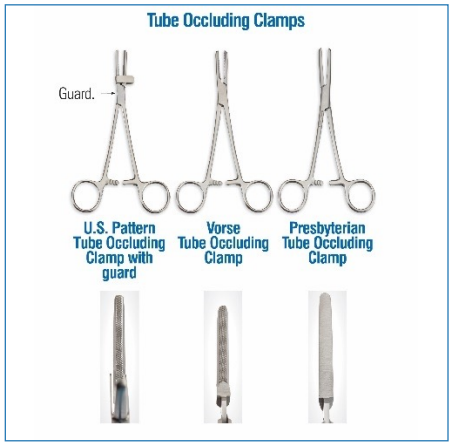
Q: How do hemostats crack?
A: Hemostats crack for a variety of reasons. Most commonly, cracks occur when over-clamping or if a hemostat undergoes sterilization with its ratchet closed.



Q: Can cracked box locks be welded or repaired?
A: No. Cracked box locks must never be welded or repaired. Doing so will result in an unstable instrument that may crack again or rust and cause patient safety issues. The instrument should be sent out for replacement, possibly under warranty.

Q: What are the most challenging parts of a hemostat to clean?
A: The most difficult parts of a hemostat to clean are the jaws and hinged area (box lock).

Q: Should rubber tubing be put on the jaws?
A: Never. It is dangerous to put rubber tubing (usually to be used as a tube occluding clamp) on the jaws of a hemostat. Only use tube clamps, which are specifically designed for this purpose.



Q: Can hemostats be used as tube clamps?
A: No. Using hemostats as tube clamps will result in bends and cracks. Tube clamps, such as Vorse or Presbyterian, are specifically designed to clamp tubes, not hemostats.

Q: Can a Kelly hemostat be substituted for a Crile?
A: No. They are different instruments and should not be substituted. A Kelly is 5½" long with a half-serrated jaw. A Crile is also 5½" long; however, its jaw is fully serrated.

Q: Can hemostats have teeth?
A: Yes. There are patterns that have teeth either at the distal tip, like the Ochsner (Kocher), or in the middle, such as the Heaney-Ballentine.

Q: If the jaws of a hemostat don't meet, can they be repaired?
A: Yes. If the jaws of a hemostat are out of alignment, the instrument should be sent out for repair. This is a common repair for hemostats.

Q: How does one test the ratchet of a hemostat?
A: First, test the ratchet by slowly locking the hemostat in each position. Misalignment can be detected by a jumping feeling when opening and closing the ratchet. Next, lock the instrument on the first ratchet and gently tap the rings on a flat work surface (such as a table, not the palm of your hand). If the ratchet holds after three or four taps, flip the instrument over and repeat the test. If a misalignment is identified or the ratchet springs open during the test, the instrument should be sent out for repair.

Q: Are there different sizes and numbers of ratchets on a hemostat?
A: Yes. The number and lengths of the ratchets vary depending on the instrument design. For example, Crile hemostats, Peers towel clamps, and Debakey forceps all have different numbers of ratchets.

Q: Should ratchets be left open postoperatively and during sterilization?
A: Yes. Ratchets should be left wide open postoperatively to allow anti-drying products, such as moisturizing/enzymatics, to be effective. Ratchets must also be left open during sterilization to allow for proper steam penetration and prevent cracking. C

Q: My repair team routinely leaves early. How can I correct this?

A: There are two options. The first is to have a meeting with the regional boss or sales manager and mandate the duration of service that you want or need. The second is to put your business out to bid, noting the required duration for service calls in your specifications.

RICK SCHULTZ, the Instrument Whisperer™, is an author, inventor, lecturer, and the retired Chief Executive Officer of Spectrum Surgical Instruments Corp. He served as contributing editor of HSPA's *Central Service Technical Manual* (fifth, sixth, seventh, eighth editions). Schultz authored the textbooks *Inspecting Surgical Instruments: An Illustrated Guide* and *The World of Surgical Instruments: The Definitive Inspection Textbook*, which was released in June 2018. In October 2021, Schultz published the veterinary medicine textbook *The World of Surgical Instruments for Animal Health*. Schultz was named HSPA's Educator of the Year in 2002 and the American Hospital Association Educator of the Year in 2006. In 2007, he was named by *Healthcare Purchasing News* as one of the 30 Most Influential People in Healthcare Sterile Processing. Schultz currently provides educational lectures to Sterile Processing professionals at HSPA's annual conferences and conducts Operating Room personnel lectures across the country.