

## Care & Maintenance of Reusable Hand Held Surgical Instruments



Every surgical instrument must be properly inspected, cleaned, lubricated and sterilized **prior to initial use** and all subsequent uses. Carefully examine each

surgical instrument for proper function and damage of any sort prior to and after each use. It is extremely important to check all working parts including blades, locks, points, stops, ratchets, screws, etc. Instruments that show any sign of damage or corrosion should be repaired or replaced prior to further use.

Instruments may only be used for their intended purpose in their respective surgical specialties by properly trained and qualified personnel. The surgeon (qualified user) shall be responsible for the proper instrument selection for each application, for obtaining the appropriate training for use, for insuring the proper care and sterilization, and for their operative use.

Sontec Instruments, Inc. does not have any control over the ultimate use of the surgical instruments and therefore, cannot accept any responsibility or liability for any damages caused by inappropriate application and use or by inappropriate sterilization and maintenance of the instruments.

**Materials Used:** Sontec Instruments are manufactured using either high quality stainless steel, titanium (including titanium alloys), or aluminum unless otherwise stated. These metals are durable and will last for years if properly used and maintained. It is the user's responsibility to ensure continuous and proper care of the surgical instruments in addition to proper preparation, cleaning, and sterilization.

**Stainless Steel:** Stainless steel provides excellent, but not complete protection from rust and corrosion. The main enemies of stainless steel are organic materials not removed immediately after use, chloride ions, common salts and other contaminants contained in tap water. The use of proper cleaners, disinfectants and distilled water cannot be overemphasized.

**Titanium:** Titanium and titanium alloys are used to make light weight instruments. These instruments can be handled and treated like stainless steel instruments. Titanium instruments are often anodized blue for color identification.

**Aluminum:** Aluminum is also used to make light weight instruments. However, only neutral, non-alkaline cleaners and fully de-mineralized water may be used with aluminum instruments.

**Tungsten Carbide:** Chemical/cold sterilization should never be used for instruments with tungsten carbide inserts/edges. The solutions used are harmful to tungsten carbide.

**Phenolic Handles:** Instruments with phenolic handles may be cared for in the same manner as the metal used for the instrument.

**Cleaning and Sterilizing Guidelines:** Sontec Instruments, Inc. has no control over the conditions or contaminants the user will subject the instruments to, therefore, it is the ultimate responsibility of the user to determine what cleaning and sterilizing methods and additional steps might be needed to properly remove all known and unknown organisms or contaminants. In all circumstances the user should closely follow the recommendations provided by the manufacturers of the cleaning/sterilizing products and equipment used.

The following are the essential steps that Sontec Instruments, Inc. recommends.

**First and Foremost** – Never allow organic materials or other contaminants to dry or get encrusted on the instrument.

**Important** – Always process dissimilar metals separately including different grades of the same metals. Do not allow instruments to stand while touching each other.

**Always** – Wear appropriate safety protection and observe applicable safety procedures when handling, cleaning, and sterilizing surgical instruments.

**Pre-cleaning/Holding** – Thoroughly rinse instruments with warm water immediately after use. If not possible to start cleaning process immediately after use, apply a neutral pH enzymatic solution for holding following the manufacturer's instructions, and then rinse thoroughly before continuing disinfecting and cleaning. Sontec Instruments recommends Ruhof™.

**Disinfecting** – Immerse instruments in a suitable disinfectant approved for use on surgical instruments following the manufacturer's instructions. Rinse instruments thoroughly after disinfecting.

**Cleaning** – Instruments must be thoroughly cleaned before sterilization and have all organic materials, stains, rust, corrosion, and other contaminants completely removed. Regardless of the cleaning method used, stubborn particles will need to be removed manually by soaking in a suitable enzymatic cleaner following the manufacturer's instructions and then brushing with a Whisk'R Brush™. All instruments should be cleaned in the open and/or disassembled position. Most rust, pitting, stains, and corrosion can be removed using a suitable surgical instrument rust and stain remover following the manufacturer's instructions. Ultrasonic or automatic washer using suitable instrument cleaners and following the manufacturer's instructions is preferred over manual cleaning alone. In all instances care should be taken to always use clean, fresh solutions and finish by thoroughly rinsing the instruments. Instruments should be completely dry before storage.

**Lubrication** – Thoroughly lubricate all working parts and joints of instruments prior to inspection and sterilization with a lubricant suitable for use on surgical instruments that will withstand the temperature used during sterilization. Some lubricants and rust inhibitors may be used during the cleaning process. Sontec recommends Ruhof™.

**Sterilization** – The most common method of sterilization is by autoclaving following the manufacturer's instructions. Some facilities use ethylene oxide gas sterilization, not recommended, but, if used, great care must be exercised with this hazardous chemical and manufacturer's instructions followed closely. Cold sterilization is not recommended because of the risk of potential damage to the instruments resulting from the lengthy chemical action required.

**CAUTION:** Autoclave temperatures should not exceed 137°C (280°F), handles, insulation, or other nonmetallic parts may be damaged.

Industry Recommended Minimum Parameters for Wrapped Steam Sterilization:

A) Pre-vacuum Type; 132°C (270°F); 3bar (28.5psi); 4-18min exposure; 30+ min dry time

B) Gravity Displacement; 121°C (250°F); 30-60min exposure; 45+ min dry time

1) The World Health Organization recommends the longest exposure times when there is concern regarding HIV, TSE, CJD, etc. contamination. It is the user's responsibility to determine what contamination exists and what procedure is appropriate to ensure proper sterilization or disposal of instrument.

2) Load size, atmospheric, and other conditions may alter specifications. If stricter specifications are required by the user, then those specifications should be used.

3) Instruments should be open and/or disassembled and carefully prepared for sterilization following the sterilization equipment manufacturer's guidelines.

4) Equipment and procedures used for sterilization should be in compliance with ANSI/AAMI ST79, ASTM-F1744 and ISO 17665, [www.a-k-i.org](http://www.a-k-i.org).

5) It is the user's responsibility to validate the sterilization process used.

**WARNING:** Do not flash sterilize (IUSS - Immediate Use Sterilization in Surgical Settings) these instruments. The instruments have not been designed for flash sterilization. Discard instruments after suspected Creutzfeld-Jakob Disease (CJD) exposure – these instruments have not been designed to withstand the chemical and thermal exposures recommended to eradicate prions.

**Storage:** Instruments should be stored individually or in a protective tray with partitions in a clean, dry location. Use Sontec Tip Covers to protect sharp tips.

**Marking:** Medi-Mark™ Tape or Sontec Sheet Tape may be used to color code instruments. Use caution when applying so as to not stretch tape or place in a location that inhibits the operation of the instrument.