



Endoscope Care & Handling

FOR RIGID SCOPES

CLEANING: The Endoscope has three optical surfaces that must be cleaned routinely to ensure both maximum transmission of illumination, and a high quality image. All should be cleaned with warm water and mild soap. If stains are still present, a mixture (1:1) of methyl alcohol and acetone may be used. A fine woven cloth or lens tissue should be used for cleaning. Dry with a soft woven cloth. By reflecting light off all optical surfaces, you can detect any foreign matter or scratches that would degrade image quality.

- **Note:** Any foreign matter present on the fiber surface after cleaning may tend to burn and discolor the surface when the high intensity lamp is in use.

Warning: High-energy radiated light emitted from illuminating fiber at the distal end of the scope may give rise to temperatures exceeding 41°C within 8 mm in front of the scope. Burns may occur if you leave the tip of the scope in direct contact with patient tissue or combustible materials. Lower the light source output when working in close proximity to the object.

- **Note:** To avoid fogging during surgery, the rear portion of the scope must be entirely free of moisture before attachment to the camera or coupler. Extreme heat from steam autoclaving and high intensity lamp will cause debris on the optical surfaces to discolor, burn, and harden. The lock of the endoscope should remain free of debris to ensure solid locking of components. Use a bristle brush with warm soapy water to clean these components.

REMOVING DEPOSITS ON OPTICAL SURFACES: Due to insufficient cleaning or foreign matter in steam, deposits may develop on the three optical surfaces during the autoclaving process. Any foreign matter remaining on the optical surfaces will reduce the optical performance of the endoscopes and may lead to a cloudy picture. These deposits can easily be removed using the biocompatible polishing paste which is enclosed in the endoscope. To remove deposits, dab some polishing paste onto a clean cotton tabbed swab. Press gently onto the optical surface to be cleaned and scrub the window in circles. Rinse the optical surfaces with tap water to remove any remaining polishing paste and clean the surfaces as instructed in chapter 2.

- **Note:** Cleaning with polishing paste should not be part of your routine cleaning procedures and should only be performed when the range – as viewed through the scope – is cloudy.

CHEMICAL DISINFECTION AND STERIS PROCESS: The Scope is immersible and should be disinfected using the process obtained from the individual chemical manufacturer. Scopes are materially compatible with the Steris process. The endoscope should be rinsed after soaking with sterile water and dried with a sterile cloth.

STERILIZATION: Be sure that the scope is cleaned thoroughly before sterilizing. The endoscopes should be sterilized or disinfected in a container which secures the instrument in place. Be sure the needle portion does not experience any force or stress which can destroy the delicate internal lenses.

GAS STERILIZATION: Follow standard hospital procedures for gas sterilization. Place scopes separately from instruments in a container approved for general use with gas sterilization (such as perforated metal tray), with gauze or loosely woven cloth inserts folded around each item and stabilized to avoid movement.





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Following 10/90 ethylene oxide/Oxyfume 2002 sterilization cycle is validated. Preconditioning Parameters:

Temperature: 55+/-2°C (131 +/-5°F)
Relative Humidity: >=35%
Vacuum: 21+/-1 in Hg
Pre-conditioning time: 1 hour
Sterilization Parameters:
Ethylene Oxide Carrier: Oxyfume 2002
Temperature: 55 +/- 2°C (131 +/- 5°F)
Relative Humidity: >=35%
Pressure (PSIG Start): 19 +/- 1 PSIG
Ethylene Oxide Concentration: 736 mg/l
Gas exposure time (full cycle)
Aeration: 11 hours at 54°C (129°F) minimum

AUTOCLAVING: Endoscopes must be carefully cleaned before autoclaving, as foreign matter will impede sterilization and harden into a crust which is difficult to remove (refer to section 2). Endoscopes which are not cleaned properly before autoclaving will experience reduced optical performances and shortened service lives. To Autoclave, place clean endoscope in a suitable sterilization tray. A suitable tray will hold the endoscope firmly but gently. The endoscope should not be allowed to be in intimate contact with the metal tray. This will result in direct heat transfer from the tray to the instrument, which can cause damage to the instrument.

Caution: Scopes cannot be steam autoclaved unless “autoclavable” is engraved on the endoscope body. Otherwise this method will permanently damage optical components.

GRAVITY STEAM STERILIZATION: Follow standard hospital procedure for gravity steam sterilization (Double wrapped in muslin) at 132°C - 135°C (270°F - 275°F) for 10 minutes.

PRE-VACUUM STERILIZATION: Follow standard hospital procedure for pre-vacuumed steam sterilization (double wrapped in muslin) at 132°C - 135°C (270°F - 275°F) for 3 minutes.

STANDARD PROCEDURES FOR STEAM STERILIZATION: If these procedures are not observed, the endoscope may be destroyed and the warranty may be voided. After completing the sterilization, the endoscope should be cooled slowly in the autoclave to room temperature. Do not immerse or rinse instruments in cold water or any other liquid to accelerate cooling.

- ◆ *These parameters have been validated to ensure sterility. Sterilizer functioning should be monitored at regular intervals with biological indicators to ensure products have been subject to sterilization conditions.*

