

# Quick Reference Handling and Cleaning Guide

## for Karl Storz Rigid Endoscopes

***Proper handling and cleaning will extend the life of your new telescope.***

*This information is not meant to replace any of the handling and cleaning instructions that are provided in our Instruction Manuals. All manuals should be read in their entirety before using any Karl Storz product.*

### Handling Tips

1. Small diameter, rigid endoscopes are fragile and must be handled with care during transport and cleaning. Each telescope contains glass fiber bundles and a series of rod lenses.
2. Padded telescope cases and special plastic telescope guards are available and provide superior protection during transport and storage.
3. Rigid endoscopes should always be picked up by the ocular (eyepiece) and never by the shaft.
4. Set the endoscope down on a flat surface to avoid accidental flexion and possible fracture of the optics.
5. Be aware of the torsional forces applied to the shaft of the telescope when in use. Avoid overflexion by partially supporting the long axis of the telescope with one hand.

### Cleaning Tips

1. Disconnect the light cable from the telescope.
2. Remove the light cable adaptors.
3. Place the telescope in a plastic container immediately after use and soak with a neutral pH enzymatic cleaning solution. Never soak a telescope in any solution, including distilled H<sub>2</sub>O, for more than 45 minutes.
4. Remove any residual blood, protein material, and contaminants with a sponge, soft cloth, or a cotton cloth applicator using a neutral pH enzymatic cleaning solution.
5. Rinse thoroughly in distilled water to remove any residual cleaning solution.
6. Clean the lenses and the fiber optic inlet post with alcohol wipes or cotton tip applicators soaked in 70% alcohol to remove any residue or film. Wipe the optical elements clean with a lint-free soft cloth.
7. Dry the entire telescope with a lint-free soft cloth or filtered, compressed air.
8. After cleaning, inspect the telescope for cleanliness and damage.  
*(Never clean Karl Storz telescopes in a ultrasonic cleaner.)*

### Sterilization/Disinfection

Rigid telescopes may be sterilized or disinfected using ETO, Sterad, Steris, or soaking in a 2.5% glutaraldehyde solution. When using glutaraldehyde, follow the manufacturer's recommendation on the container. Soak times longer than 45 minutes are not recommended. Rinse the telescope well with sterile water, especially the light guide post to avoid accumulation of glutaraldehyde and decreased light transmission. Dry well with a sterile soft cloth.

## Autoclaving

Hopkins™ telescopes bearing a ring with the inscription “*autoclav*” can be sterilized with steam up to 134° C. This procedure is not commonly employed in veterinary hospitals as it decreases the life expectancy of the scope due to strains caused by high pressure and heat.

- Clean and dry the telescope according to the directions in the instruction manual (provided with the telescope).
- Carefully place the telescope within a suitable sterilization container. The container should be positioned in the sterilizer so that there is adequate circulation and penetration of steam, air removal and condensation drainage.
- Autoclave at 134° C (272° F) for four minutes at 27psi.
- When autoclave cycle is complete, remove container from the autoclave and allow telescopes to cool to room temperature before removing top of container.

**Caution:** *Sudden changes in temperature may fracture the glass components of the telescope. Do not immediately expose telescopes to air after removal from the autoclave. Never attempt to cool telescopes by pouring cool, sterile liquid over them.*

**Important:** *Repeated steam autoclaving may have an adverse effect on the optical lens system of the telescope. It is our recommendation that the telescopes be inspected after each autoclaving cycle for damage.*

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