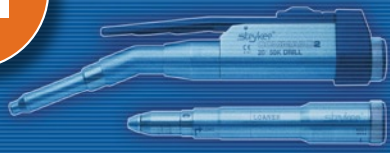


How to Maintain Your Surgical Instruments

Please refer to the complete manufacturer instructions for more information. This guide does not replace your instrument instruction manual.

1.



CLEANING

1. Remove attachments and accessories from handpiece
2. Leave hose attached and scrub the handpiece and attachments with a soft brush and mild detergent or surgical instrument cleaning solution and water
3. Rinse under running water (make sure hose is still attached and nose is pointed down)
4. Shake the handpiece and attachments free of water and wipe with a lint-free towel
5. Clean the cutting surfaces of reusable burs with water and a bur brush



6. Rinse, but do not immerse

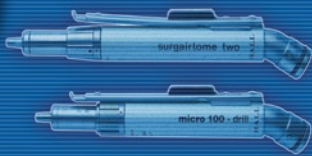


7. Run water through the inside of the bur guard



8. Clean and dry the inside of the bur guard with a Q-tip

2.



LUBRICATION

1. Most pneumatic handpieces should not be lubricated



2. The 3M (Linvatec) Minos and the Hall II need to be lubricated. Place 1 drop of lubricant in the air inlet (standpipe)

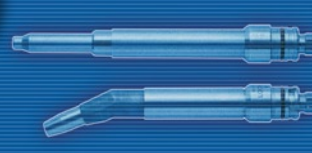


3. Certain angle attachments can be lubricated (for example, the Hall Surgical 1375-032, -033, -034, -035, -036 models). For these angle models, follow lubricant instructions, attach the angle to the handpiece and run for approximately 15 seconds



4. Ace Surgical, Codman and 3M bur guards also require lubrication. Place 1 drop of lubricant in the nose end of the bur guard

3.



TESTING

1. Test the handpiece before you sterilize it
2. Check for air leaks from the hose and handpiece
3. Check control lever and collet locking mechanism
4. The handpiece needs service if:
 - a) You can pull the bur out with your hand while it is in the lock position
 - b) You run the handpiece with proper bur and bur guard for 30 seconds and inconsistent sound frequency (grinding) is detected
 - c) Excessive heat is detected from the front of the handpiece

4.



STERILIZATION

1. Handpieces, cords, attachments and accessories must be autoclaved before first and every use
2. Separate attachments, cutting accessories and cords from handpieces prior to sterilization
3. Allow drying cycle to complete before removing handpiece from the autoclave to ensure that all moisture has been removed
4. Make sure the handpiece is completely cool and dry before operating

SUGGESTED STERILIZATION TIMES—PNEUMATIC INSTRUMENTS

METHOD	TEMPERATURE	EXPOSURE TIME	DRYING TIME
Gravity Air Displacement Sterilizer	270° F –272° F	35 minutes	8 minutes minimum
	250° F–254° F	80 minutes	8 minutes minimum
Vacuum-Assisted	272° F	3 minutes minimum	8 minutes minimum
	250° F	30 minutes min	15 minutes min (metal case), 30 minutes min (non-metal case)
EO/HCFC or EO(CO ₂)	130° F	150 minutes minimum	
Flash Autoclave	272° F	10 minutes minimum	

TIPS & GENERAL CARE

- Never immerse the handpiece, power cord, regulator or footswitch
- Do not allow water to run into the hose connection end or the nose end. Always keep the nose pointed down while cleaning. Contact with internal parts will cause corrosion
- Use distilled water for cleaning and rinsing, or at least wipe away cleaning agent and any tap water with distilled water as a final step. Tap water causes metal discoloration
- Do not clean any component in an ultrasonic cleaner or combination washer-sterilizer
- Clean and replace autoclave element filter as directed by manufacturer
- Never clean with bleach, solvents or chemical disinfectants. An enzymatic detergent is recommended
- Do not leave handpieces in steam sterilizer. Remove immediately after sterilization
- Never force handpieces to cool by immersing, wrapping in cold towel or placing in freezer
- Do not reuse burs with visible scratches or dents



ELECTRIC HANDPIECES

1. Use mild detergent, with brush or sponge to clean exterior of cable.
2. Do not immerse
3. If liquids or cleaning agents enter the cable, be sure to disassemble and clean and dry
4. Clean connector pins with Q-tip, but be careful not to bend the pins
5. Electric handpieces are permanently lubricated unless otherwise noted
6. Some manufacturers recommend lubricating the cables of electric handpieces. The cable should be disassembled, cleaned and lubricated after 8 to 10 uses.
7. Place 3 to 5 drops of Stryker mineral oil in each end of the electric cable and run for 5 to 10 seconds prior to autoclaving. If the procedure requires operation of the cable for more than 30 minutes, an additional 3 to 5 drops of Stryker Sterile oil should be added to the motor end of the cable



SUGGESTED STERILIZATION TIMES—ELECTRIC INSTRUMENTS

METHOD	TEMPERATURE	EXPOSURE TIME	DRYING TIME
Gravity Air Displacement Sterilizer	270° F –272° F	15 minutes	8 minutes minimum
	250° F–254° F	60 minutes	8 minutes minimum
Vacuum-Assisted	272° F	3 minutes minimum	8 minutes minimum

HAYES

THE LOCAL HANDPIECE REPAIR CENTER