

# SURGICAL HANDPIECES & ACCESSORIES MAINTENANCE GUIDE

## Stryker Electric Power Instruments & Hall Nitrogen-Driven Motors

This includes all sealed electric motors such as Stryker CORE Micro & Impaction drills, Hall Micro 100 system & Surgairtome Two drills\*



### PRE-CLEANING

- Pre-treat your instruments if you are not going to clean and sterilize them immediately after use. Hayes Triple Enzyme Foam Cleaner is an effective pre-cleaning treatment.

### CLEANING

- Rinse under water, keeping instrument nose down to avoid water from entering distal bur end of motor.
- Optional: Wipe with Tidy Whites wipes or manufacturer-approved cleaner and 2x2s.
- Dry completely with lint-free cloth.
- Test the handpiece by running for 5-10 seconds according to manufacturer instructions and look for proper functioning and potential heating issues.
- Disconnect and process motor separately from cord or hose. Clean electrical contacts (Stryker) with Q-tips and alcohol as needed.
- Sterilize according to manufacturer instructions.

### DON'TS

- Do not use harsh surface disinfectants, which lead to corrosion.
- Do not immerse in water or allow water (or fluid) to run into electrical connection or into the distal bur end of the handpiece. Moisture inside the handpiece could cause overheating and may cause burn injury to patient and/or user.
- Do not use solvents, lubricants or other chemicals unless otherwise specified above. The use of such products may cause the handpiece to malfunction or leak foreign material during use, resulting in contamination of the surgical site and risk of patient infection.

\* For 3M and ACE nitrogen motors, refer to manufacturer instructions.

## E-Type Surgical Motors

This includes Anthogyr, Aseptico, Stryker, Bien-Air\*, NSK, W&H & Hall motors  
Some motors require a plug before cleaning and autoclaving. Please verify manufacturer's instructions.



### PRE-CLEANING

- Pre-treat your instruments if you are not going to clean and sterilize them immediately after use. Hayes Triple Enzyme Foam Cleaner is an effective pre-cleaning treatment.

### CLEANING

- Rinse under water, keeping instrument nose down to avoid water from entering distal bur end of motor.
- Optional: Wipe with Tidy Whites wipes or manufacturer-approved cleaner and 2x2s.
- Dry completely with lint-free cloth.
- Clean connections on motor and foot control cords where they attach to control unit with alcohol and swab monthly to prevent corrosion and error messages.

### DON'TS

- Do not lubricate the motor unless otherwise specified by the manufacturer.
- Don't sterilize the motor unless you have verified with the manufacturer that you can autoclave the motor and the cord.

\*If using saline irrigation, use Bien-Air Aquacare internally and externally weekly to flush irrigation and prevent corrosion. Never run a handpiece that has not been lubricated.

## Control Units & Irrigation



- Use approved surface disinfectant or wipes to avoid discoloration and damage to unit.
- Using non-saline sterile water prevents handpiece corrosion.
- Do not change spike bag over unit to avoid short-circuiting.

## Air-Driven 45-Degree Handpieces

This includes Impact Air, Morita, Star, Kavo, NSK & Sabra 45 handpieces



### PRE-CLEANING

- Pre-treat handpiece if you are not going to clean and sterilize immediately after use. Hayes Triple Enzyme Foam Cleaner is an effective pre-cleaning treatment.

### CLEANING

- Use Tidy Whites wipes or soap and water to clean the outside of the handpiece.

### LUBRICATING

- Remove bur.
- Select the appropriate nozzle for the aerosol. This will ensure a tight seal to propel lubricant throughout the handpiece.
- Insert into swivel back-end or back of 4/5-hole handpiece and spray one second when using Hayes OneStep™ aerosol.
- When applying the lubricant into a 4/5-hole handpiece with dropper bottle, use the drive air tube only.
- Lubricate with aerosol lubricant such as Hayes OneStep lubricant, or place on lubing station, and follow manufacturer's instructions.
- Insert bur and run on an automatic lubrication machine or air station for approximately 30 seconds or until lubricant is fully purged. Remove bur before sterilizing.
- Clean chuck weekly with lube and proxy brush.

### DON'TS

- Never use harsh surface disinfectants to clean the handpiece, which leads to corrosion.

Please refer to specific manufacturer maintenance guidelines.

## Handpieces, Bur Guards & Hoses

### HANDPIECES



- Flush 1:2, 1:5 and 20:1 handpieces with aerosol lubricant using an E-type adapter between patients.
- If your 20:1 can be disassembled before cleaning, we recommend doing this.

### BUR GUARDS

- To avoid damage to inner components, do not force brush or cleaning instrument through the bur insert hole.
- All metal bur guards require cleaning with enzymatic cleaner or soap and water prior to sterilization.

### HOSES

- Hoses should be wiped down with wipes such as Tidy Whites after use, moving toward the direction of the unit to prevent potential damage to circuitry.
- Use Q-tips to clean the inside crevices of connectors on both ends.
- Hoses can be sterilized along with handpieces.
- Cords may be wrapped in towels when sterilizing or placed in baskets.



## Recommended Maintenance Products



Questions? Contact your local Hayes office for more information or to schedule STAFF TRAINING.

[www.hayeshandpiece.com](http://www.hayeshandpiece.com)

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# STERILIZATION TIPS & TECHNIQUES

- Always separate the bur guard/bur shield from the handpiece, and disconnect the cords from the motors prior to sterilization. Failure to do so may prevent sterilization, and could cause damage to the instruments, which would result in patient injury.
- Consult your sterilizer’s user manual to determine your sterilizer’s capabilities including temperatures and exposure times.

## LOADING

- Do not overload sterilizer or autoclave bags.
- When loading the sterilizer, a maximum of 50% of each bag should be covered.



## DRYING

- Do not take handpieces out of the sterilizer before completing the ENTIRE drying cycle.
- Make sure the instrument is completely dry (including internal components & electrical contacts) and at room temperature before removing from the autoclave. Failure to do so will create internal condensation and corrosion of the electrical components.
- Never force-cool the drills with cold water or alcohol spray.

# STERILIZATION & CYCLE TIMES FOR STRYKER DRILLS

## GRAVITY DISPLACEMENT & VACUUM STERILIZERS



METHOD	TEMPERATURES	MINIMUM DRY CYCLE	NOTES
Unwrapped “flash”	270° - 272°F	10 minutes gravity or 8 minutes vacuum	
Sealed paper/plastic or combined pouch	270° - 272°F	10 minutes gravity or 8 minutes vacuum	
Sealed nylon pouch	270° - 272°F	8 minutes vacuum	Use only with vacuum dry cycle
Single or double cloth wrap in an instrument tray	270° - 272°F	10 minutes gravity or 8 minutes vacuum	
Non water-permeable wrap in an instrument tray	270° - 272°F	8 minutes vacuum	Use only with vacuum dry cycle

## CASSETTE AUTOCLAVE

METHOD	TEMPERATURES	MINIMUM DRY CYCLE
Unwrapped	270° - 272°F	25 minutes
Sealed paper/plastic or combined pouch	270° - 272°F	30 minutes



**WARNING:** Failure to follow the recommended dry times can cause moisture to accumulate inside the handpiece, which could cause overheating and may cause burn injury to patient or user.