

## INSTRUMENT MAINTENANCE CHECK LIST FOR DENTAL PRACTICE

Please respect and act according to the applicable general rules and regulations for dental hand instrument maintenance procedures.

**Note!** Use LM-Servo instrument cassettes to protect the instruments and avoid sharp injuries.

**Note!** Regularly service the maintenance devices and follow all user instructions.

**Note!** Pay special attention to correct dosage and exposure.

### I PRE-CHECK

Remove residue (especially filling material residue) from the instrument blades and handles while still soft. Do not use a metal brush. A metal brush will cause scratches or damages on the instrument surface where the filling material may easily stick.

Do not use any abrasive tools for removing residue from LM Dark Diamond and LM Sharp Diamond instruments to avoid making harm to special coating and thus reduce the life time of the product.

During the sterilization process the residue may bake into the instrument handle resulting discolorations.

**Note! In case of using a thermal disinfector the steps in this guidance (see below) “II Disinfection” and “III Rinsing” are unnecessary, provided that the dirty instruments have not been stored dry longer than 4 hours.**

### II DISINFECTION

1. Do not leave dirty instruments dry – put them into a disinfecting liquid as soon as possible.
2. It is recommended to use a special disinfectant for instruments. Liquids containing chlorine, phenol or amines are not recommended.
3. Follow carefully the instructions for use given by the manufacturer of the selected disinfectant. Please note that too strong concentration of the disinfectant or too long exposure time may damage the instruments.
4. Change the disinfectant regularly according to the instructions.

### III RINSING

Immediately after the disinfection, the instruments must be rinsed carefully under running, lukewarm water.

## IV CLEANING

Always clean the instruments – disinfection or rinsing is not sufficient.

**Cleaning alternatives: Manual (A), Washing machine (B) or Ultrasonic bath (C).**

### A. MANUAL CLEANING

1. Wash carefully all parts of the instrument with a soft brush. A steel brush or other sharp or abrasive tools are forbidden as they will damage the metal blades and the silicone handles and thus reduce the life time of the product.
2. Check the pH-value of the detergent; it must be as neutral as possible. A special detergent for washing the instruments is recommended. Do not soak the instruments in detergent solution.
3. Always rinse carefully the instruments under running water after cleaning.

### B. WASHING MACHINE CLEANING (Including Thermal Disinfector)

1. If the tap water contains lime, please check if there is a lime separation in the washing machine and/or the lime dissolved by lime removal ingredient.
2. Follow carefully the instructions for use given by the manufacturer of the washing machine and of the selected programme and prefer cleaning agents with corrosion protector.
3. Ensure that the selected washing programme is effective enough.
4. Do not overload the device, as this will compromise the effectiveness of the washing programme.
5. Inspect the device regularly according to the instructions for use. Service and clean the device frequently, according to the instructions for use.
6. Remove the instruments from the washing machine or thermal disinfector immediately after cleaning. Long contact with moisture may lead to reduce of the product life time.
7. Dry the instruments carefully.

### C. ULTRASONIC BATH DEVICE

1. Follow carefully the instructions for use of the ultrasonic bath device.
2. Service and clean the device frequently, according to the instructions for use.
3. Do not overload the device.
4. The instruments must be completely covered by water.
5. Check the pH-value of the solution.
6. Set the correct time and proportioning according to the instructions for use.
7. Remove the instruments from the ultrasonic bath device immediately after cleaning.
8. Always rinse carefully the instruments after using chemical detergents.

## V DRYING

Before sterilizing in the autoclave or in the dry heat sterilizer, the instruments must be thoroughly dried.

The normal tap water may contain different chemical ingredients which may cause chemical reactions when autoclaving.

## VI CHECKING

After cleaning, check that the instruments are clean by rubbing the surface with an eraser or finger.

**Note!** It is extremely important to check that the instruments are truly clean and dry before the sterilizing procedure. If there is chemical residue on the instruments it may bake/ stick into the handle when being autoclaved / dry heat (hot air) sterilized, thus producing a strong odour or discolorations.

## VII INSPECTION AND SHARPENING

Sharpen, service and replace the instruments, if necessary.

**Note!** Do not sharpen LM Sharp Diamond instruments!

## VIII STERILIZATION

**Please follow carefully the instructions for use given by the manufacturer of the selected sterilizing device.**

1. The recommended maximum temperature in the autoclave is 134-137°C and in the dry heat device 180°C for silicone hand instruments. For LM extraction instruments, RFID-tagged DTS instruments and DTS sleeves the recommendation is 134-137°C in autoclave.

Sterilization time in 134-137°C (2 bars) is minimum 3 minutes. This is the actual sterilization time and the time to achieve the sterilization temperature need to be added.

2. Do not overload the sterilizing device.
3. The silicone handles must not touch the autoclave walls, since the temperature there might be higher.
4. Clean the device regularly according to the instructions for use. Avoid sterilizing other tools requiring oil lubrication in the same device as hand instruments. The oil vapours may damage the instruments.
5. The water used in the autoclave must be clean.
6. Check the temperature and pressure of the device according to the instructions for use.