

IMPLADENT INSTRUMENTATION CARE AND MAINTENANCE

IMPLADENT instruments are designed for the insertion of IMPLADENT dental implants and for the manipulation of all the components of the system.

The necessary prerequisite for the successful insertion of dental implants is the use of good quality and well-maintained instruments. IMPLADENT instruments are developed and manufactured according to the latest advances in the field, using high-quality materials designed for specific purposes. Non-adherence to the prescribed procedures when using the instrumentation may lead to implantation failures. LASAK recommends having a spare set of sterilized instruments at hand for each implant surgery. A visual check of all instruments should be made after each use and damaged instruments discarded.

Materials:

- IMPLADENT instruments are made from stainless steel, which is strong, hard and resistant to corrosion - provided it is kept clean.
- Cassettes for instruments are made of sterilizable plastic or anodized aluminium.

To maintain the quality of your IMPLADENT instruments it is important to adhere to the prescribed instrument care and maintenance. Disinfection and cleaning have to be done immediately following the instrument's use; Blood, pus, secretion, remains of tissue or bone must not be left to dry on the instrument. When disinfecting and cleaning the instruments use adequate protection. Long exposure of the instrument to saline solution or evaporation of saline solution on the instrument's surface may cause its corrosion or discolouration. Saline solutions, cleaning agent and disinfectant residue must be rinsed thor-

oughly with water. Corrosion may also be caused if the instrument is in contact with other instruments during cleaning or disinfection - or in contact with already-corroded instruments. Contact with hard materials such as ceramics, metal or glass may cause damage.

For sterilization in an autoclave, surgical instruments should be placed in their original plastic cassettes, which forms a part of the system and enables easy access to the sterilized instruments during surgery; also, by helping to keep the instruments in the right order the correct procedure is more easily followed.



The sterilization cassette must be correctly placed in the autoclave – i.e. the cassette should be placed in the centre and not touch the sides of the autoclave. Any other way of sterilization is unacceptable.

Sterilized instruments should be kept at room temperature, and in a dry, dust-free and disinfected place. Packages containing sterilized instruments must show the date of sterilization. If the sterilization period expires, then the instruments should be re-sterilized.

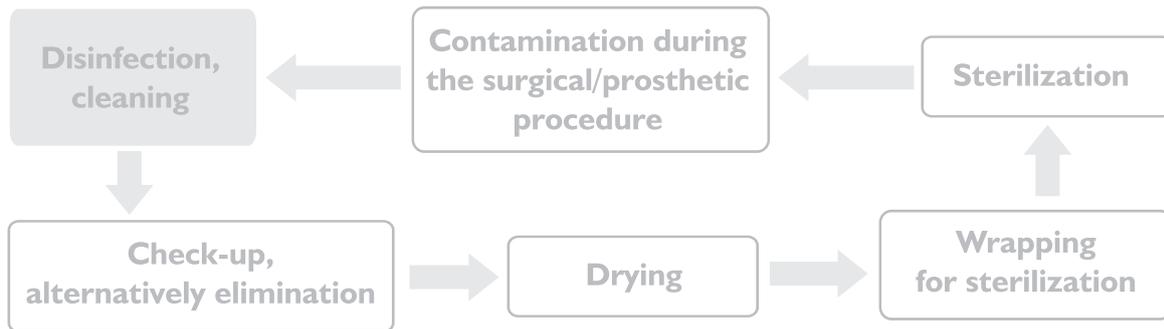
Stainless steel instruments should not be cleaned by cleaning products containing high concentrations of chlorine or oxalic acid. The plastic cassette must not be sterilized by hot air, and chemical sterilization is also not recommended. Aluminium cassettes must not be cleaned using alkaline products with a pH higher than 9. Disinfectants and cleaning products must be used in accordance with the manufacturer's instructions for use (as regards to concentration, reaction time and temperature).





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| Cycle of instrument use



| Instrument care

• **Drills, counter bores, threadformers** – disinfection and cleaning must be done immediately after use; good care must be taken especially of the cooling orifice of instruments with internal cooling. The orifice is cleaned using the cleaning wire that comes with every drill. The instrument surface is cleaned mechanically with the use of a nylon brush - and also in an ultrasonic bath where care must be taken that indivi-

dual instruments are not in contact with each other. Cleaning agent and disinfectant residue must be rinsed thoroughly with water. Also, when drying, the instruments should not touch each other. Sterilization is done in an autoclave. Any other way of sterilization is not recommended. All instruments must be handled with care, any contact of the cutting edge with hard surfaces (such as ceramics, metal or glass)

DISMANTLING THE RATCHET:



Unscrew the screw at the end of the ratchet handle by the control knob.



Ratchet body



Guide tube



Ratchet mechanism



Ratchet wheel

Pull out the ratchet mechanism with the control knob. Pull out the guide tube and the ratchet wheel from the ratchet body.



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would blunt the instrument and this could have a negative effect on the results of the implantation. The life-time of cutting instruments is limited to twenty uses – it is, therefore, recommended to record the number of uses (using the table on the last page). Blunt instruments must be replaced. Wear depends on the density of the bone being drilled, and wear may become apparent after less than twenty uses. A visual check of all instruments should be made after each use and blunt instruments discarded.

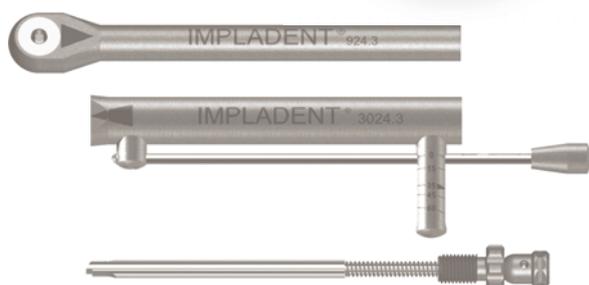
- **Ratchet** – needs to be dismantled immediately after use, disinfected, mechanically cleaned with the use of a nylon brush and then in an ultrasonic bath. Cleaning agent and disinfectant residue must be rinsed thoroughly with water. The ratchet should be reassembled only after all parts are dry and the ratchet mechanism oiled. When the ratchet is fully assembled, operation of the ratchet in both directions should be checked. Sterilization is done in an autoclave. Any other way of sterilization is not recommended. (For maintenance of the ratchet, see also the IMPLADENT surgical manual.)

- **Torque device for ratchet** – this is used to check the torque when inserting dental implants. The torque value describes the quality of the implant fixation in the bone (primary stability) and can help in decisions concerning further treatment. Its other use concerns controlled tightening of abutment screws and constructions to the prescribed torque. The torque value is expressed in Ncm (Newton centimetres).

The torque adapter is used only with the IMPLADENT ratchet (model 2004).



Mounting of torque adapter to the ratchet: Unscrew the latch



screw at the end of the ratchet handle and pull to take out the catch mechanism. The guide tube and ratchet wheel remain in the body of the ratchet; it is recommended to hold the ratchet wheel between the fingers. Connect the adapter to the ratchet body so that the arrows meet. Then push the ratchet mechanism back into the body of the ratchet, and using the fingers, tighten the screw. Check that the ratchet functions properly. The working mode of the ratchet is set up as usual, i.e. by turning the control knob through 180° for clockwise or anti-clockwise.

Instructions for use: While in use, the ratchet with the adapter has to be held at the wire's terminal end. The marked gauge calibrations are at 0, 15, 35, 45 and 60 N cm. For a correct reading, refer to the middle of the indicator wire's diameter.

Disinfection, cleaning and sterilization:

The torque adapter must always be dismantled from the ratchet after use, disinfected, and cleaned. Cleaning agent and disinfectant residue must be rinsed thoroughly with water. Dry and sterilize in an autoclave.

Calibration: The principal function of the ratchet's torque device is performed visually. In its rest position, the centre of the spring indicator wire's diameter should correspond with the mark at 0 N cm. If it does not, the torque adapter must be returned to LASAK for checking. Once a year (or after 100 inserted implants) it is recommended to send the adapter to LASAK for calibration.

- **Screw-drivers** - disinfection and cleaning must be done immediately after use, mechanical precleaning with a nylon brush and then in an ultrasonic bath. Cleaning agent and disinfectant residue must be rinsed thoroughly with water. All instruments must be handled with care, any contact of the screw-driver point with hard surfaces (such as ceramics, metal or glass) would damage the instrument. Sterilization is done in an autoclave.

- **Other instruments** - disinfection and cleaning must be done immediately after use, mechanical precleaning with a nylon brush and then in an ultrasonic bath. Cleaning agent and disinfectant residue must be rinsed thoroughly with water. Sterilization is performed in an autoclave.

