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NucleOSS™



Abutment Screw Retrieval Kit



Abutment Screw Retrieval Kit - CRH 113



Metric screws connection the implant abutments to the implant body can break due to overloading, and the broken lower portion may remain inside the implant body. NucleOSS offers an abutment screw retrieval kit to provide solutions for such situations for physicians and technicians.

Abutment Screw Retrieval Kit Features;

- Suitable for NucleOSS T6 Standard and T6 TorQ.
- The kit box is made of stainless steel. The tool holders are silicone. It consists of 4 parts:
 - 1- Centering Device,
 - 2- Hand Adapter,
 - 3- Broken Screw Removal Drill,
 - 4- Broken Abutment Removal Part.
- The broken screw removal drill is made of hard, durable stainless steel. Thanks to the sharp edges at the tip, it easily penetrates and grips the metal. It can be used with a motor or by hand.
- The centering device ensures that the screw removal mill is perfectly centered on the broken metric screw and prevents it from slipping outwards. It is made of stainless steel.
- The hand adapter is a turning adapter used for manual operation of the screw removal mill.



TO 25315
Centering
Device



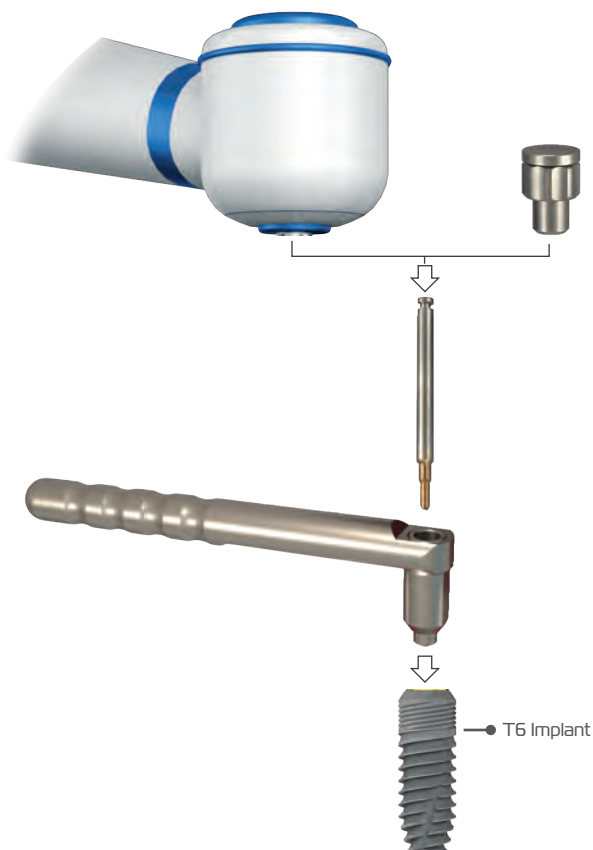
TO 25314
Hand Adapter



TO 0104
Broken Screw
Removal Drill



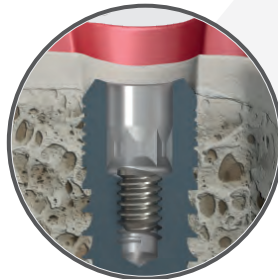
TO 0105
Broken Abutment
Removal Part



Usage of Abutment Screw Retrieval Kit - General Work Flow



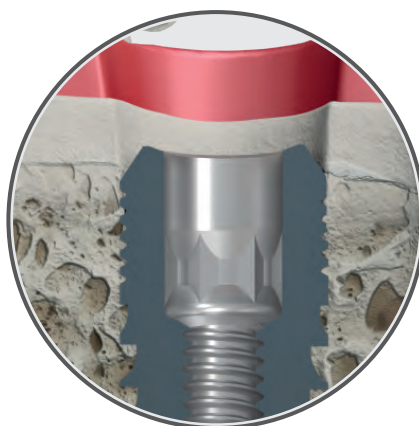
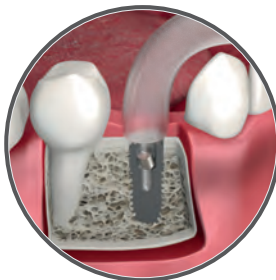
The broken screw head and abutment are removed.



The centering device is placed on the implant.



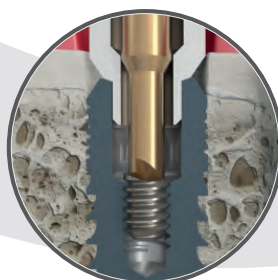
Using fluid and vacuum, the fractured screw fragment is removed from inside the implant.



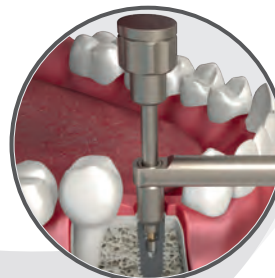
The broken screw piece comes out of the pass.



The drilling machine is turned counterclockwise.



The broken screw removal drill is connected to a hand adapter or micromotor.

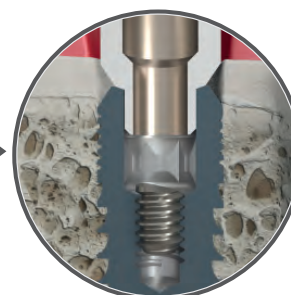


The drilling cutter is inserted into the surface of the broken screw by gently pressing it down.



The inside of the implant body, where a metric screw has broken, is cleaned with water, vacuum, and air. The centering device is carefully placed over the implant.

Note: A screw removal drilling machine should not be used without a centering device.



Method 1 - Manual Removal Method



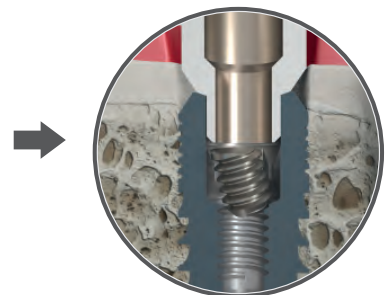
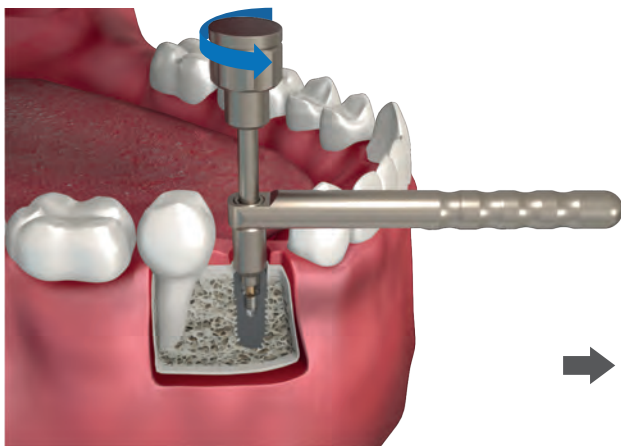
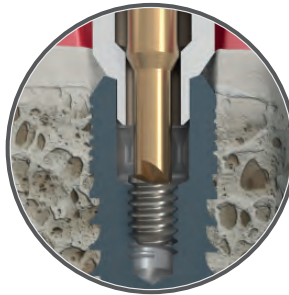
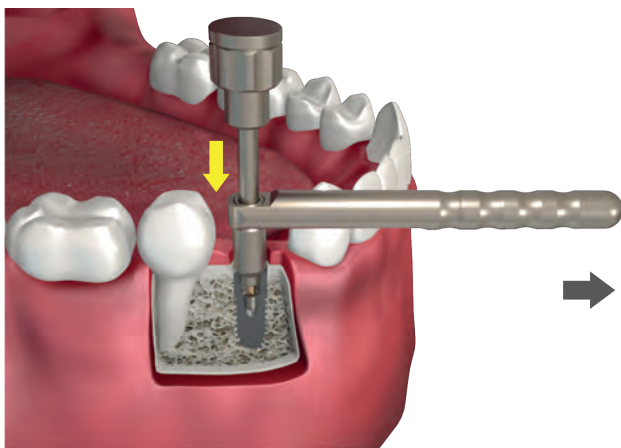
There are two ways to remove a broken screw.

Method 1 - Manual Removal:

The hand adapter is attached to the back of the screw removal milling cutter.

The broken screw removal drill is passed through the centering device and pressed onto the broken screw, ensuring that the pointed milling cutter tips gently sink into the surface of the broken screw.

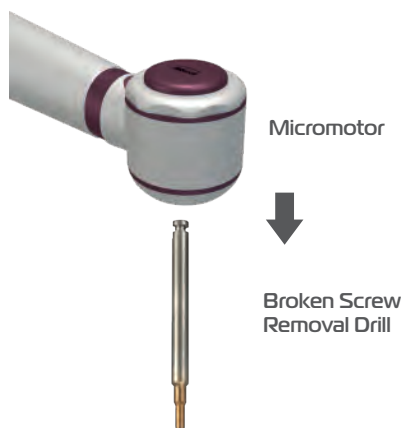
Note: It is important that the bur is embedded in the surface of the fractured screw. Otherwise, the drill will spin freely on the fractured screw surface, leading to wear on the drill tip and preventing the screw from being removed.



The drill is rotated counterclockwise with gentle pressure. No liquid is used in these steps. The rotation continues until the broken screw is removed. Then, the broken screw removal drill and centering device are removed. The broken screw is removed from the implant using vacuum and water. The implant is checked. If the screw has not come out, the procedure is repeated.



Method 2- Micromotor Removal Method



Method 2 – Removal with a micro-motor:

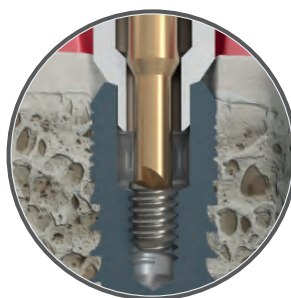
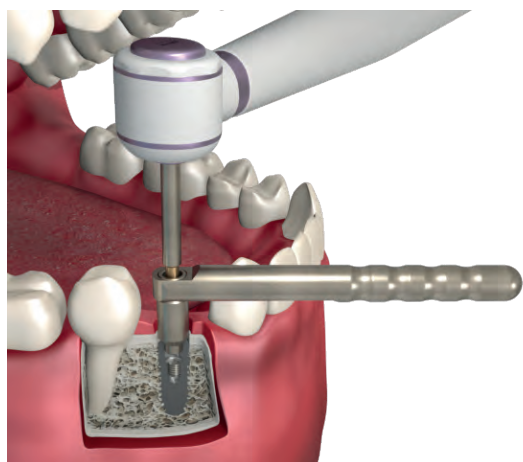
The drill is attached to the micro-motor. The micro-motor is set to rotate counterclockwise at 20-40 rpm, at its maximum torque value.

The broken screw removal drill cutter is passed through the centering device and pressed onto the broken screw, ensuring that the pointed drill tips gently penetrate the surface of the broken screw.

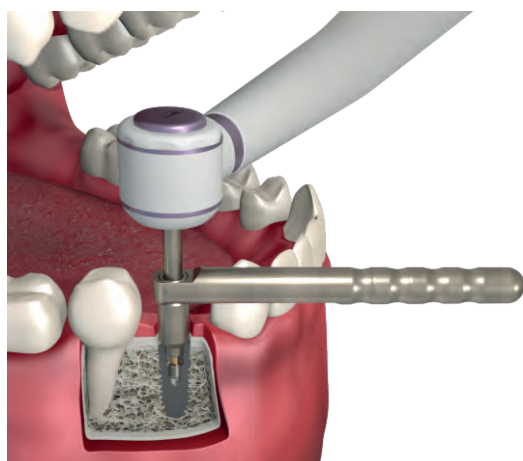
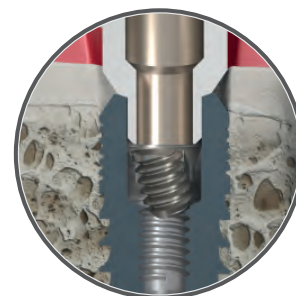
The micro-motor is started after applying pressure to the screw with the drill.

Not: If a broken screw is to be removed using a micro motor, the speed should be set to 20-40 rpm.

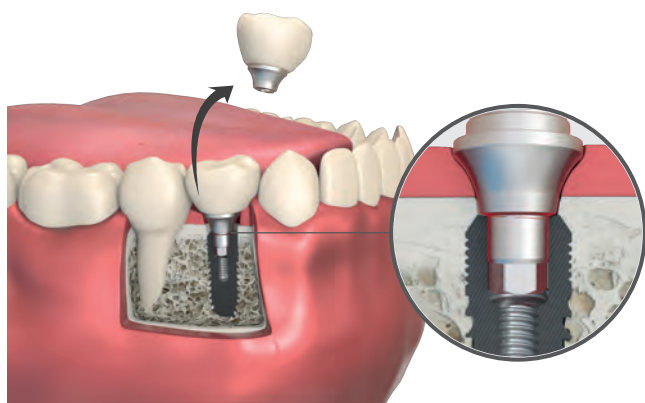
It is important that the drill is embedded in the surface of the broken screw. Otherwise, the bur will rotate freely on the broken screw surface, causing wear on the drill tip and preventing the screw from being removed.



The removal process begins with the activation of a physiotherapist. No liquids are used in these procedures. The turning motion continues until the broken screw is removed. Then, the broken screw removal drill and centering device are removed. The broken screw is removed from the implant using vacuum and water. The implant is checked. If the screw has not come out, the procedure is repeated.

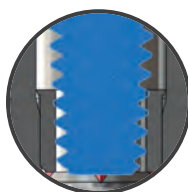


Usage of the Broken Abutment Removal Part



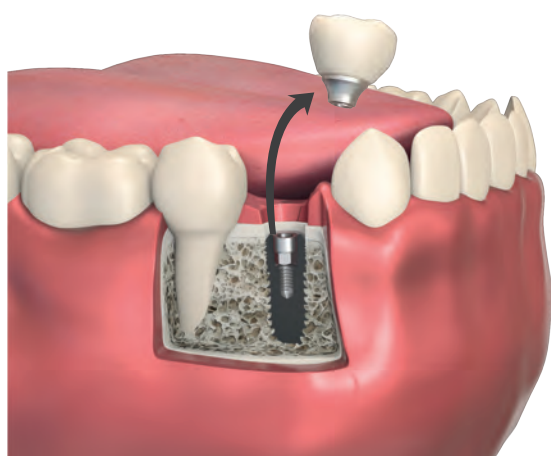
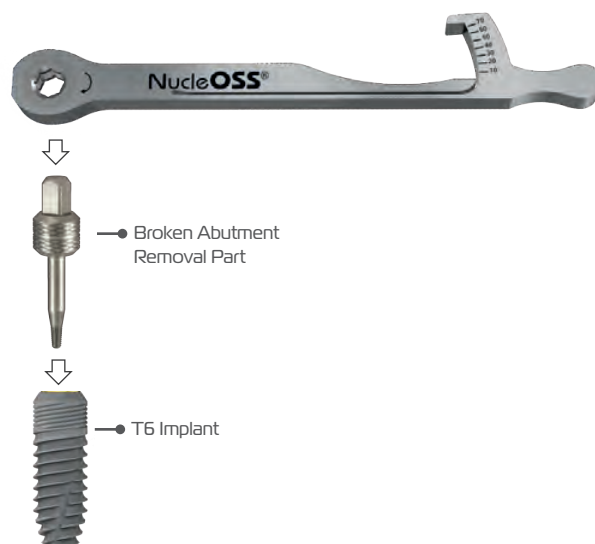
Features of the broken abutment removal part:

- Suitable for NucleOSS T6 Standard and T6 TorQ implants.
- It is supplied in the abutment screw retrieval kit.
- The broken abutment removal part is made of hard, durable stainless steel. The cutting grooves at the tip allow it to easily penetrate and grip the metal.
- It can be used with a ratchet or by hand.



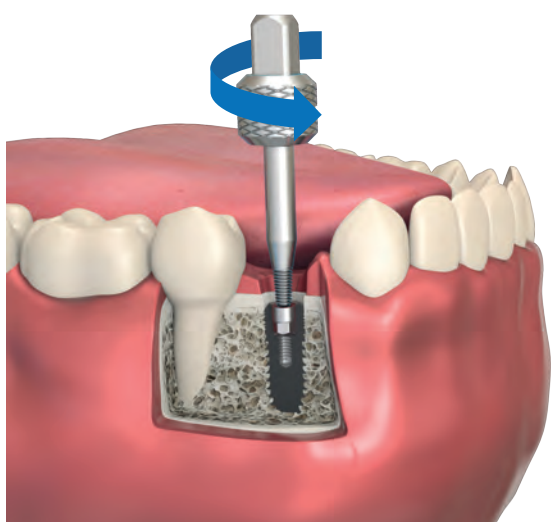
The Hex region and throat part of the abutments may break as a result of overload and the broken lower part may remain inside the implant body.

NucleOSS offers a fracture abutment removal part to provide solutions for physicians and technicians in such situations.



Before using the broken abutment removal part, the upper part of the broken abutment is removed from the implant.

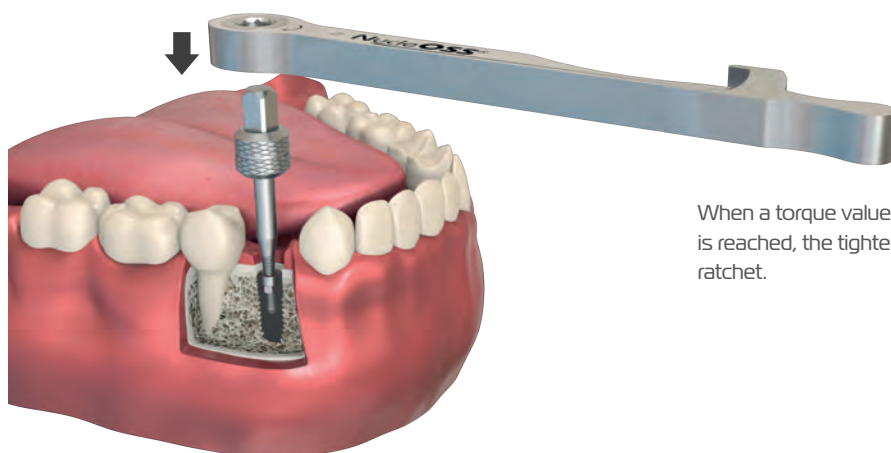
Debris in or around the abutment is cleaned by vacuuming.



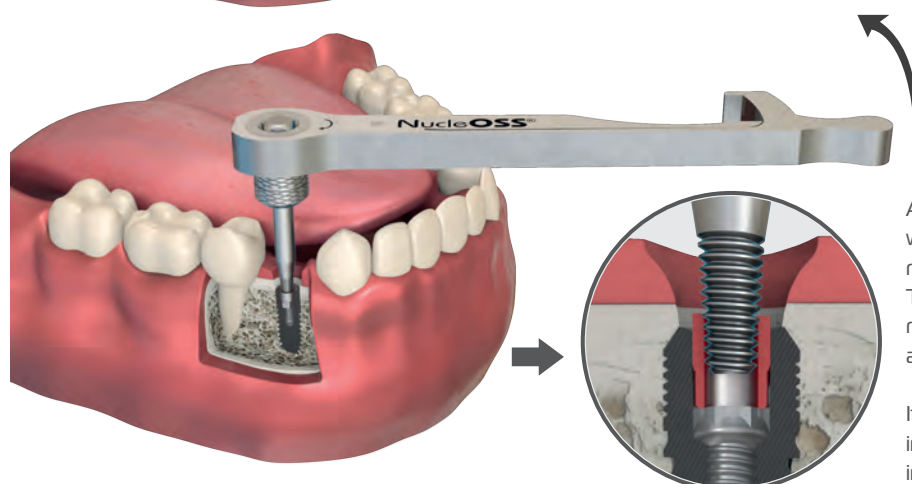
The broken abutment removal part is manually pressed against the fracture fragment remaining in the implant and rotated counterclockwise.



Usage of the Broken Abutment Removal Part

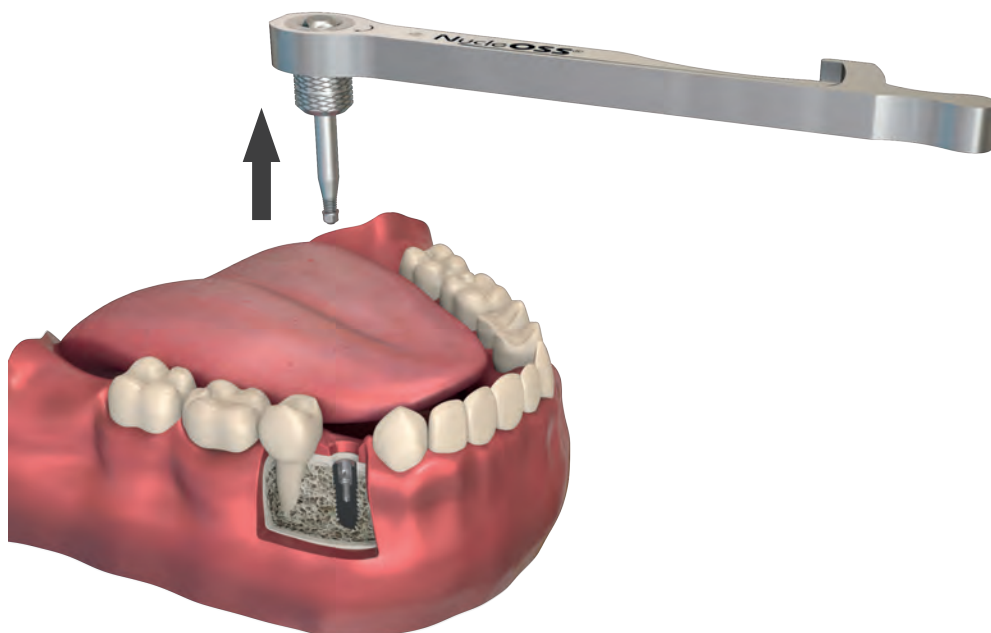


When a torque value that cannot be achieved by hand tightening is reached, the tightening process is continued with a torque ratchet.



After approximately one more turn of torque with the ratchet, the fractured abutment removal piece is pulled vertically upwards. The fractured portion of the abutment is removed from the implant along with the abutment removal piece.

If the piece does not come out of the implant, the procedure is repeated by increasing the tightening force with the torque ratchet.



Maintenance and Cleaning of Surgical Hand Tools

- Careful use of all tools is extremely important.
- Even the slightest damage to the ends of the drill adversely affects cutting performance and therefore the clinical outcome.
- Even if it is used correctly and clean, it should be taken into account that the cutting performance of the drill is reduced after a certain number of uses. (Maximum milling for NucleOSS drills is 15 times)
- Avoid contact with the ends of the drills on a hard surface other than the bone.
- Each surgical set piece should be used according to its purpose and method of use. Other uses may damage the part.
- Never allow surgical residues (blood, bone, etc.tissue residues) to dry on an tool, clean immediately after surgery.
- Clean thoroughly with only soft brushes so as not to cause wear and scratches on the tools. If necessary, remove the removable parts of the tools and clean the gaps.
- Never disinfect, clean (also ultrasound) or sterilize instruments made of different materials together.
- Use only cleaning agents and disinfectants for the material and follow the manufacturer's instructions for use.
- Rinse disinfectants and cleaning agents thoroughly with water.
- Never leave or store tools moist or wet.
- For more detailed information, please refer to the D006 NucleOSS Surgical Instruments User Manual for Cleaning and Disinfection of Surgical Instruments.

Sterilization

Şanlılar Medical Devices Med. Kim. San Tic. A. Ş. accepts no responsibility for devices initially delivered non-sterile, regardless of who performs the sterilization or by what method. Due to variations in conditions and environments, the ultimate responsibility for implementing and verifying procedures to achieve sterility rests with the user. Non-sterile surgical instruments should not be used under any circumstances.

Place properly cleaned and dried instruments into the designated slots inside the surgical set box. The surgical set is made of highly impact-resistant plastic materials suitable for autoclave sterilization. In clinical autoclaves, parts can be sterilized as a single piece without having to be removed from the box. Place the surgical set container in the autoclave bag.

Note: Do not stack boxes while performing the sterilization process, as this may affect sterilization effectiveness.

Sterilisation cycle recommended by Şanlılar Medical Devices :

Method	Moist heat sterilization according to ISO 17665:2024.
Cycle	Prevacuum
Temperature	134°C / 273.2°F
Exposure Time	3 Minutes
Basınç	2.2 bar
Pre-Vacum	3 times < 60 mbar
Minimum Drying Time	60 minutes in the enclosed chamber.

- Remove the surgical sets from the sterilizer after the cycle is complete, and place the tray on a padded surface to prevent condensation during cooling.

Note: Sterilization processes are validated in accordance with the current international standard, ISO 17665:2024.

Note: Manufacturer instructions for use for all detergents/cleaning solutions and/or equipment and accessories used in the cleaning and disinfection of the devices must be strictly followed.

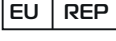
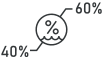
Storage Conditions and Symbol Explanations

Storage Instructions

After sterilization, store the devices in a dry, dark place, such as a closed cupboard or drawer.

Symbol Explanations

The symbols found on all Nucleoss products are as follows:

 Product catalog number	 Authorized representative	 Product lot number	 Unique device identifier
 Medical device	 Manufacturer country	 Manufacturer	 Read the user manual.
 Gamma sterilization	 Do not re-sterilize	 Don't reuse	 Not sterile
 Double sterile barrier system	 Humidity range	 Temperature range	 MR Conditional
 Distributor	 Dispersive	 Do not use if the packaging is damaged.	 Warnings
 Conformity European	 Model number	 For prescription use only.	 Contains hazardous materials 7440-02-0 Ni
- The CE mark is the manufacturer's declaration that the product meets the requirements of the applicable Medical Device Regulation (MDR) (EU) 2017/745. - Where applicable: The identification number of the Notified Body shall follow this symbol.			

NucleOSS™



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