Abutment Screw Retrieval Instruments
Instructions for use

Important: Please read.

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Description:
Single use Abutment Screw Removers, Abutment Screw Retrieval Instruments, Abutment Screw Retrieval Reverse Drills and the Screw Tap Repairs are delivered sterile. The single use instruments are for one patient and for one surgical treatment only. Please note that the Rescue Drill Guide, the Handle for Implant Rescue Collar & Drill Guide and the Handle for Machine Instruments are not delivered sterile and are reusable.

Intended use:
The instruments for abutment screw retrieval can be used if an abutment screw is broken and a part of the screw is left inside the implant screw channel. If the implant thread needs to be cleaned before placing a new screw, a screw tap repair can be used. The instruments are intended for both simple and advanced treatments.

Indication:
The instruments for abutment screw retrieval are indicated to remove broken screws for all types of Nobel Biocare connections (i.e. tri-channel, external hex, conical connection).

Contraindications:
In general, contraindications are applicable for implant surgery related procedures in patients:
– who are medically unfit for an oral surgical procedure.
– who are allergic or hypersensitive to medical grade stainless steel, high speed steel or any of their alloying components.

Warnings:
Do not use the instruments for abutment screw retrieval for any purpose other than the retrieval of a broken abutment screws and for implant thread cleaning.
Generous cooling is important when using the Abutment Screw Retrieval Reverse Drill to avoid overheating.
It is strongly recommended that the Abutment Retrieval Instruments are used only with Nobel Biocare related prosthetic components and surgical instruments as combining components with different dimensions can lead to mechanical and/or instrumental failure or damage the tissue.

Cautions:
Care and maintenance of instruments are crucial for a successful treatment. Sterilized instruments not only safeguard your patients and staff against infection but are also essential for the outcome of the total treatment.
Pre-operative hard tissue or soft tissue deficits may yield a compromised esthetic result or essential for the outcome of the total treatment.
The Rescue Drill Guides should be used when drilling to prevent damage of implant internal threads. The Abutment Screw Retrieval Reverse Drill may damage the implant internal threads and make the implant useless.

Surgical procedure:

Procedure:
Simple cases/step 1 – abutment/clinical screw broken at head and fragment rotatable.
In this case, usually no drilling is needed. Abutment/clinical screw can be removed as follows:

Instruments needed: Abutment Screw Remover (1), Handle for Machine Instruments (2).
1. Select appropriate Abutment Screw Remover according to laser marking and attach to a handpiece or a Handle for Machined Instrument (A).
2. To remove the screw shaft from the implant, place the end of the Abutment Screw Remover onto the fractured screw and rotate counter clockwise applying light pressure (B). The slow speed handpiece shall be operating in reverse mode 50rpm maximum speed. The teeth on the end of the Abutment Screw Remover are designed to grab the screw and back it out.

Advanced cases/step 2 – remaining abutment/clinical screw fragment not rotatable and either worn out head or broken at thread level.

1. Select appropriate Rescue Drill Guide based on the implant connection type and size according to laser-marking.
2. Attach the Rescue Drill Guide to the Handle for Implant Rescue Collar & Drill Guide (C) and then connect the Rescue Drill Guide to the interface of the implant (D). The Rescue Drill Guide will support the Abutment Screw Retrieval Reverse Drill to be centered on the screw and allow a secure support when drilling.
3. Select appropriate Abutment Screw Retrieval Reverse Drill according to laser-marking and connect to the handpiece (E).

Ensure the drill unit is in reverse mode. Recommended speed is 2000rpm. Perform the drilling in intervals using copious of irrigation to avoid heating the bone. During the procedure the Rescue Drill Guide can be heated by the drill so always hold the Rescue Drill Guide with the handle. To avoid shavings clogging the guide channel, release the Rescue Drill Guide and air-blast during procedure.

4A. Situation with worn out head: drill a hole to the depth of the screw head, without using the Rescue Drill Guide and the handle. Continue with step 6.

4B. Situation with broken abutment/clinical screw at thread level: drill a hole to a depth of ~1 mm into the fractured screw. Marking on the drill can be used as a support to define the depth. Image shows drill markings of 1 mm (F).

Warning: The Abutment Screw Retrieval Reverse Drill may damage the implant’s internal threads and make the implant no longer usable. This can be avoided by using the Rescue Drill Guide and not exceeding a depth of 1 mm.

Warning: Generous cooling is important when using the Abutment Screw Retrieval Reverse Drill to avoid overheating.

5. During the drilling sequence the fractured abutment/clinical screw might come loose.

6. If the fractured screw is still stuck, remove the Rescue Drill Guide and connect the Abutment Screw Retrieval Instrument to the Handle for Machine Instruments (G). Place the tip of the instrument into the hole in the screw and rotate the handle in counterclockwise direction (H). Add light pressure until the instrument grip the screw and the screw can be removed.

If the fractured screw cannot be removed with the Handle for Machine Instruments, connect the Abutment Screw Retrieval Instrument to the Manual Torque Wrench Adapter and Manual Torque Wrench Surgical in order to generate more torque. If the Abutment Screw Retrieval Instrument cannot grab the screw, do some further drilling and try again (see step 4).

7. Before a new screw is placed, it is recommended to evaluate the threads inside the implant for damage. This can be done with a guide pin, screw from an impression coping, or healing abutment. If resistance is encountered, a Screw Tap Repair may be used to re-establish the thread design (I). In this case, select the appropriate Screw Tap Repair from the instrument selection guide according to laser-marking. Connect the Screw Tap Repair to the Handle for Machine Instruments or to the handpiece. Recommended speed is 50 rpm.

8. After successful screw removal, a new screw can be inserted.
Symbols Glossary:
The following symbols may be present on the device labeling or in information accompanying the device. Refer to the device labeling or accompanying information for the applicable symbols.

 Authorized representative in the European Community

 Batch code
 Catalogue number
 Caution
 Sterilized using ethylene oxide
 Sterilized using irradiation
 Temperature limit
 Tooth number

 CE marking
 Consult instructions for use
 Contains hazardous substances
 Contains or presence of phthalate
 Upper limit of temperature
 Sterilized using steam or dry heat
 Unique Device Identifier
 Use-by date

 Date
 Date of manufacture
 Do not re-use

 Do not use if package is damaged
 Double sterile barrier system
 For prescription use only
 Health care centre or doctor

 Keep away from sunlight
 Keep dry
 Link to Online Symbols Glossary and IFU Portal

 Magnetic resonance conditional
 Manufacturer
 Medical device
 Non-pyrogenic

 Non-sterile
 Patient identification
 Patient information website
 Patient number

 Serial number
 Single sterile barrier system
 Single sterile barrier system with protective packaging inside
 Single sterile barrier system with protective packaging outside

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