

Handbook



Rescue

INSTRUMENTATION

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Disclaimer The scope of this handbook is to provide a comprehensive overview of the surgical steps. This handbook does not replace the Instructions For Use (IFU). Please review the Instructions For Use, including Indications For Use, Contraindications, Warnings and Cautions before using the products. Instructions for Use are available at: ifu.nobelbiocare.com. For a full list of article numbers and for ordering information, contact a Nobel Biocare representative.

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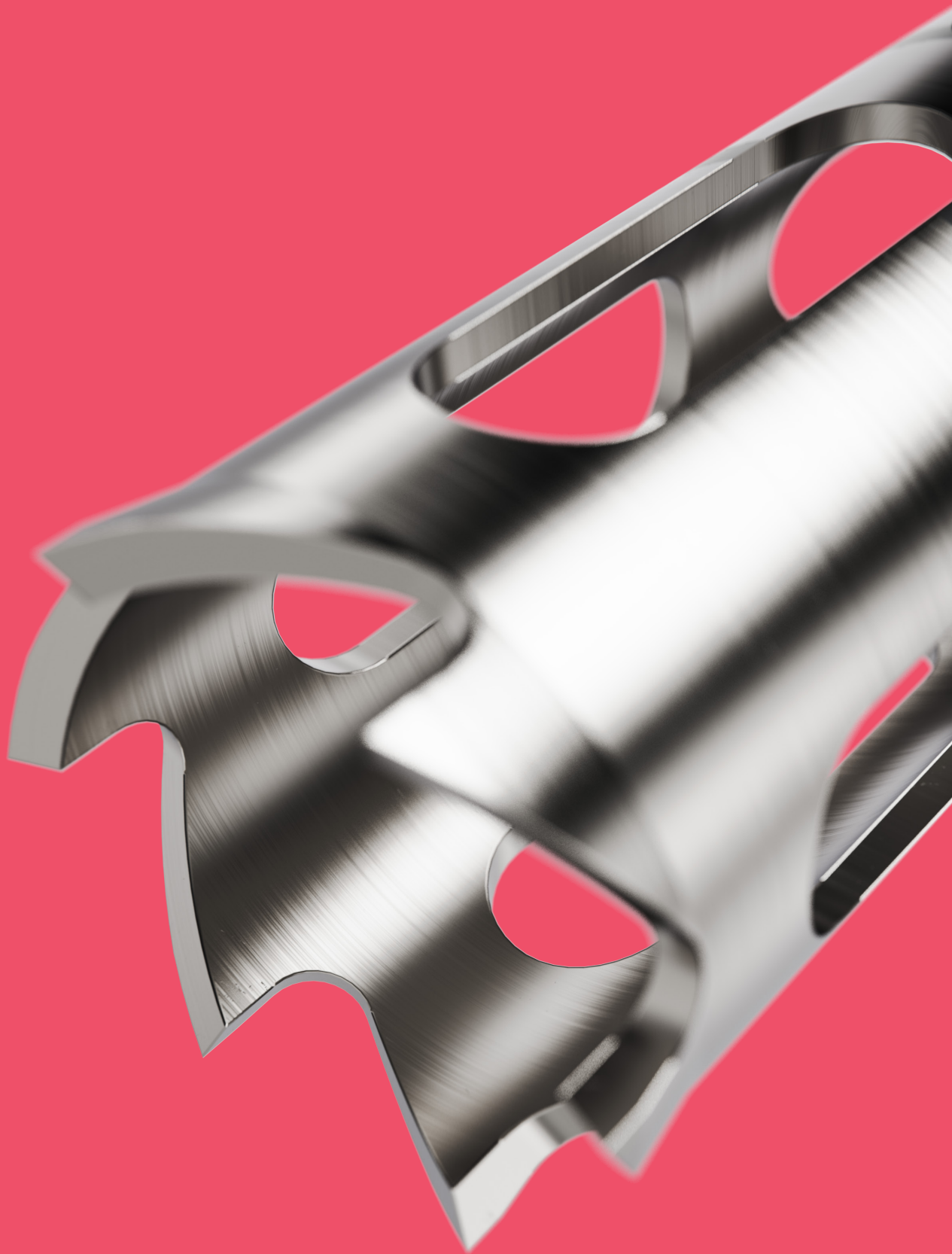
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Product overview

The retrieval instrumentation assortment consists of implant retrieval, abutment screw retrieval and abutment retrieval instruments for successfully performing safe rescue procedures for all Nobel Biocare implants and implant-based restorations.

Implant retrieval

The assortment consists of the Implant Retrieval Instrument for basic implant retrieval procedures and Trepine Drills for more advanced procedures.

Abutment screw retrieval

The assortment consists of the Abutment Screw Remover for basic abutment screw retrieval procedures and reverse drills and abutment retrieval instruments for more advanced procedures.

Abutment retrieval

The assortment consists of a general Abutment Release Pin and dedicated abutment retrieval instruments for conical connection abutments in zirconia and titanium and trioval conical connection abutments.





Implant retrieval

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Instrument selection guide

The instrument selection guide below can be used to match the correct Implant Retrieval Instrument, Implant Rescue Collar and Trepine Drill to the implant type. Implant type should be determined via patient records or standard imaging techniques prior to attempting implant retrieval.



			Implant Retrieval Instrument	Implant Rescue Collar	Trepine Drill
 Conical connection	3.0	Ø 3.0 mm	CC 3.0	–	3.2/4.0
	NP	Ø 3.5 mm Ø 3.75 mm	CC NP	–	3.8/4.6
	RP	Ø 4.3 mm Ø 5.0 mm	CC RP	–	4.4/5.2 5.2/6.2
	WP	Ø 5.5 mm	CC WP	–	5.6/6.6
 Trioval conical connection	NP	Ø 3.5 mm	TCC NP	–	3.8/4.6
	RP	Ø 4.0 mm	TCC RP	–	4.4/5.2
		Ø 4.8 mm	TCC RP	–	4.4/5.2
 Tri-channel connection	NP	Ø 3.5 mm Ø 4.3 mm*	Tri-Ch NP	Tri-Ch Ø 3.5	3.8/4.6 4.4/5.2*
	RP	Ø 4.0 mm Ø 4.3 mm Ø 5.0 mm*	Tri-Ch RP	Tri-Ch Ø 4.3	4.4/5.2 5.2/6.2*
	WP	Ø 5.0 mm Ø 6.0 mm*	Tri-Ch WP	–	5.2/6.2 6.2/7.0*
	6.0	Ø 6.0 mm	Tri-Ch 6.0	–	6.2/7.0
 External hex connection	NP	Ø 3.3 mm	Ext Hex NP	–	3.8/4.6
	RP	Ø 3.75 mm Ø 4.0 mm	Ext Hex RP	–	3.8/4.6** 4.4/5.2
	WP	Ø 5.0 mm Ø 6.0 mm	Ext Hex WP	–	5.2/6.2 6.2/7.0

*NobelReplace Platform Shift

** For a diameter 3.75 implant that has lost the flange collar the 3.8/4.6 Trepine Drill may be used, followed by a 5 mm diameter implant if sufficient bone width is available.

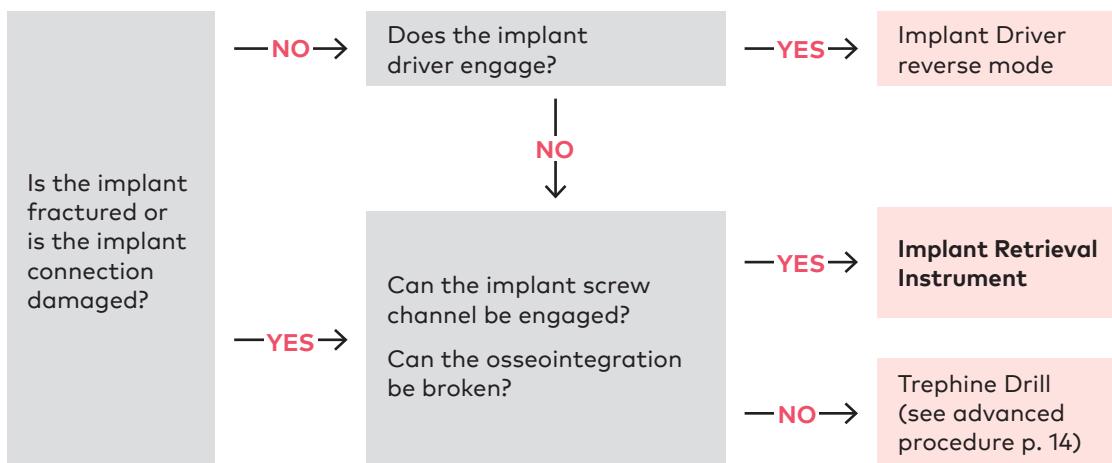
Basic procedure – Implant Retrieval Instruments

Implant Retrieval Instruments are indicated for use to remove osseointegrated dental implants with damaged connection interfaces or fractured body by engaging the implant inner threads, enabling rotation of the implant so that it can be removed.

Implant Rescue Collars are indicated for use in conjunction with Implant Retrieval Instruments for implants with an internal tri-channel connection, when the connection is collapsed and to prevent expansion of the implant collar when removing the implant.

In situations where the implant cannot be removed with the Implant Retrieval Instrument alone, due to strong osseointegration or other factors, refer to the advanced procedure on [page 15](#).

Decision tree for implant retrieval



1 Select Implant Retrieval Instrument

Select the appropriate Implant Retrieval Instrument based on the implant connection, type and size from the instrument selection guide on [page 10](#).



2 Connect Implant Retrieval Instrument

Connect the Implant Retrieval Instrument to the Manual Torque Wrench Surgical using a Manual Torque Wrench Adapter.

Ensure that the arrow on the Manual Torque Wrench Surgical is pointing in reverse mode / counterclockwise.

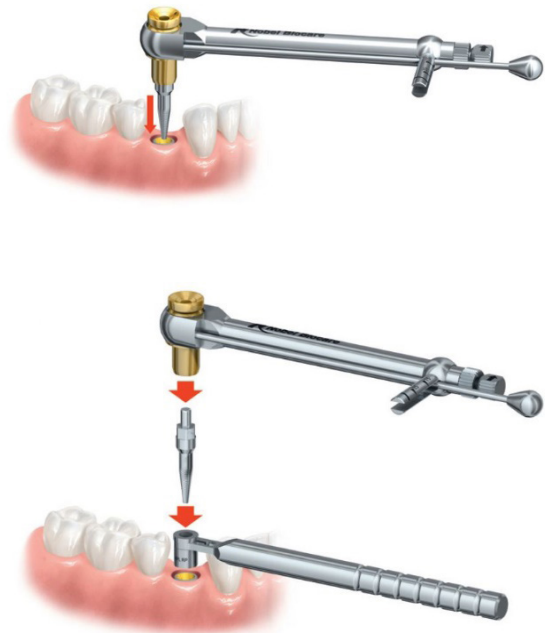
Warning Connect the Implant Retrieval Instrument to Manual Torque Wrench Adapter and Manual Torque Wrench Surgical.



3 Insert the Implant Retrieval Instrument into the implant.

Place the Implant Retrieval Instrument into the implant.

Note For removal of implants with an internal tri-channel connection that has collapsed, the Implant Rescue Collar can be connected to the Handle for Implant Rescue Collar & Guides and be placed around the implant collar to prevent expansion of the implant collar when removing the implant.



4 Unscrew implant

Unscrew the implant in a counterclockwise direction using

Warning Excessive torque on the Implant Retrieval Instrument may damage or fracture bone structures.

Note If the implant cannot be removed without applying excessive torque, please consider using a Trepine Drill.



Warning Failure to recognize actual lengths of drills relative to radiographic measurements can result in permanent injury to nerves or other vital structures. Drilling beyond the depth intended from lower jaw surgery may potentially result in permanent numbness to the lower lip and chin or lead to a hemorrhage in the floor of the mouth.

Warning Use of non-sterile device may lead to infection of tissues or infectious disease.

Caution Implant Retrieval Instrumentation must only be used with compatible Nobel Biocare instruments and components. Use of instruments and components that are not intended to be used in combination with Implant Retrieval Instrumentation can lead to product failure, damage to tissue, or unsatisfactory esthetic results.

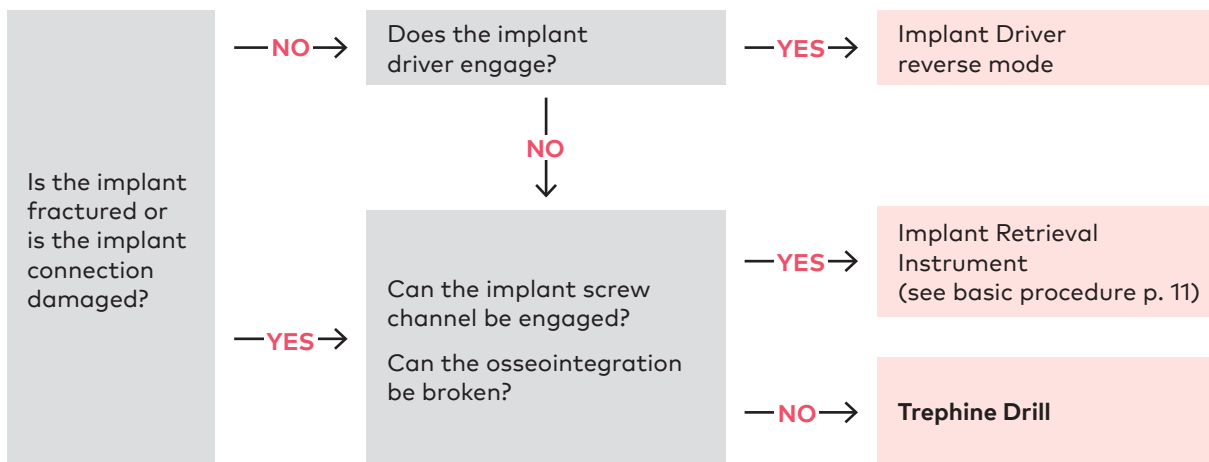
Caution Implant Retrieval Instruments and Trepine Drills are single use products and must not be reprocessed. Reprocessing could cause loss of mechanical, chemical and/or biological characteristics. Reuse could cause local or systemic infection. Implant Rescue Collars are delivered non-sterile and are intended for reuse. Prior to use clean and sterilize the product following the manual or automated procedure in the Cleaning and Sterilization Instructions.

Caution Because of the small size of the devices, care must be taken that they are not swallowed or aspirated by the patient. It is appropriate to use specific supporting tools to prevent aspiration of loose parts (e.g. gauze, dental dam, or a throat shield).

Advanced procedure – Trepine Drills

In situations where an implant cannot be removed with the Implant Retrieval Instrument due to strong bone integration or other factors, Trepine Drills are indicated for use to remove bone from around the outer diameter of an osseointegrated dental implant along its length to facilitate its removal from the bone site.

Decision tree for implant retrieval

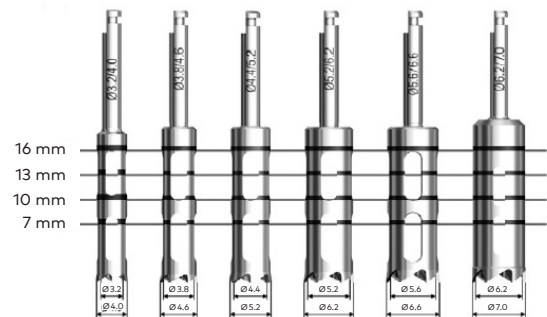


1 Select Trepine Drill

- Select appropriate Trepine Drill based on implant diameter. The Trepine Drill should be selected on basis of the inner diameter slightly exceeding the outer diameter of the implant.
- If the implant type is known, select the appropriate Trepine Drill based on the implant connection/prosthetic interface from the instrument selection guide on [page 10](#).
- If the implant type is not known, the implant diameter must first be determined using standard imaging techniques.

Note Trepine Drill depth markings are in true millimeters.

Note To avoid an oversized osteotomy, ensure that the selected Trepine Drill only slightly exceeds the implant diameter.



Instrument	Compatible implant diameter
Trepine Drill 3.2/4.0 mm	3.0 mm
Trepine Drill 3.8/4.6 mm	3.3 mm/3.5 mm/3.75 mm
Trepine Drill 4.4/5.2 mm	4.0 mm/4.3 mm/4.8 mm
Trepine Drill 5.2/6.2 mm	5.0 mm
Trepine Drill 5.6/6.6 mm	5.5 mm
Trepine Drill 6.2/7.0 mm	6.0 mm

2 Place Trepine Drill

- Remove any abutment or prosthetic components from the implant.
- Place the Trepine Drill over the implant.



3 Drilling

Start the drilling procedure using low speed (60–100 rpm) and copious irrigation. When the Trepine Drill grips into the bone, the speed can be increased (1200–1500 rpm).

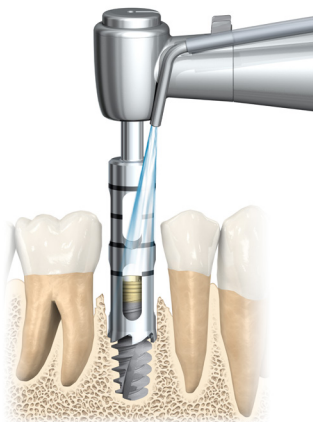
Warning Do not apply excessive pressure to the Trepine Drill as breakage can occur.

Warning During the drilling procedure, care must be taken to prevent damaging adjacent vital structures due to the increased width of the implant which is being removed. It is recommended to use the depth markings on the Trepine Drills as reference points in order to ensure that the drill does not progress deeper than planned and risk damage to vital structures.

Caution Ensure steady handling during use of the Trepine Drill as it may abruptly jump sideways before fully surrounding the implant.

Caution Copious irrigation is important when using the Trepine Drill to avoid overheating.

Note The Trepine Drill can wear out during use. If the cutting efficiency is poor, the instrument should be replaced.



4 Remove implant

Stop drilling before the full depth of the implant is reached. Wiggle back and forth to remove implant and Trepine Drill.

Note It may not be possible to immediately place an implant after using a Trepine Drill due to the size of the resulting hole and/or other factors.



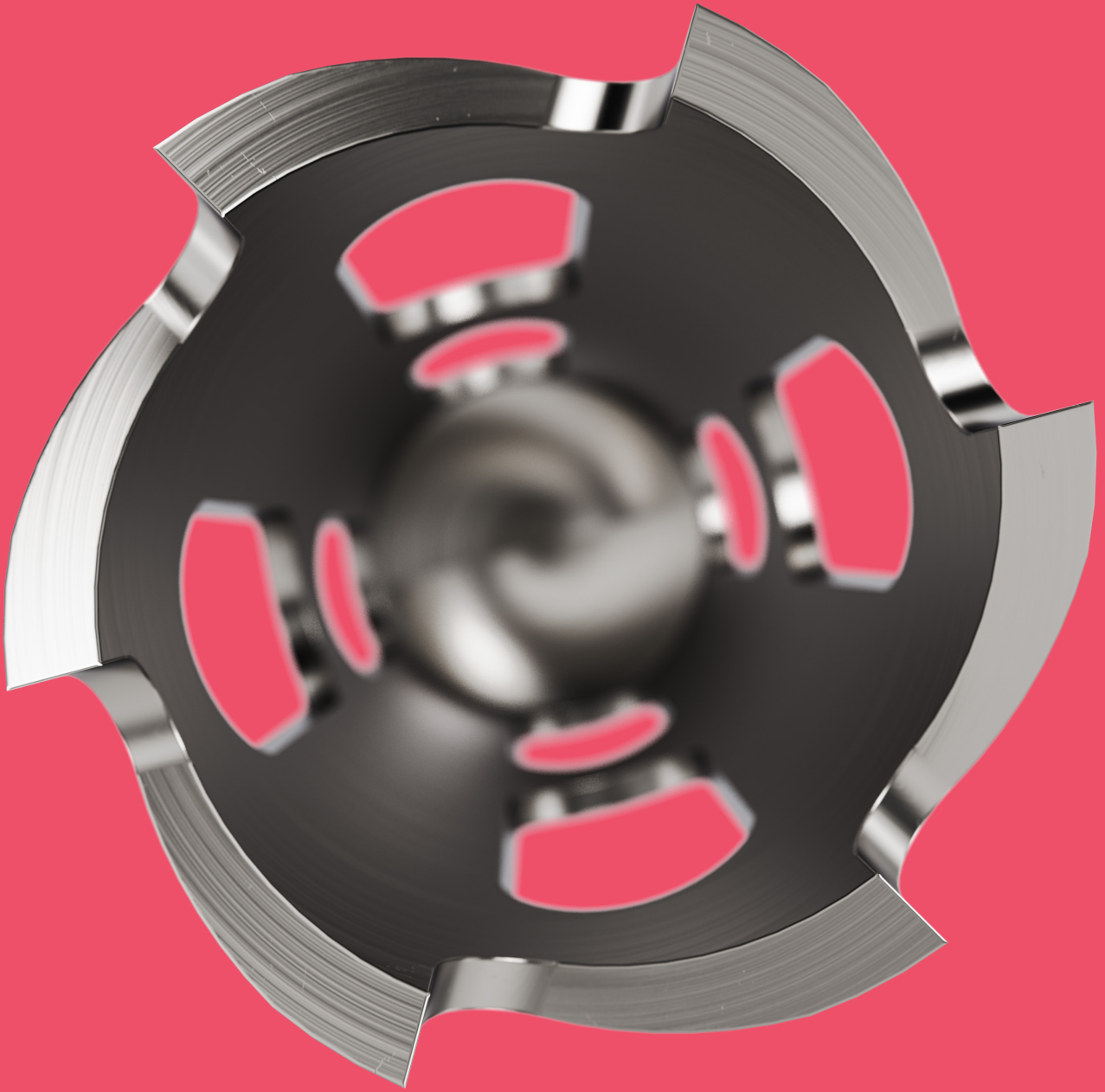
Warning Failure to recognize actual lengths of drills relative to radiographic measurements can result in permanent injury to nerves or other vital structures. Drilling beyond the depth intended from lower jaw surgery may potentially result in permanent numbness to the lower lip and chin or lead to a hemorrhage in the floor of the mouth.

Warning Use of non-sterile device may lead to infection of tissues or infectious disease.

Caution Implant Retrieval Instrumentation must only be used with compatible Nobel Biocare instruments and components. Use of instruments and components that are not intended to be used in combination with Implant Retrieval Instrumentation can lead to product failure, damage to tissue, or unsatisfactory esthetic results.

Caution Implant Retrieval Instruments and Trepine Drills are single use products and must not be reprocessed. Reprocessing could cause loss of mechanical, chemical and/or biological characteristics. Reuse could cause local or systemic infection. Implant Rescue Collars are delivered non-sterile and are intended for reuse. Prior to use clean and sterilize the product following the manual or automated procedure in the Cleaning and Sterilization Instructions.

Caution Because of the small size of the devices, care must be taken that they are not swallowed or aspirated by the patient. It is appropriate to use specific supporting tools to prevent aspiration of loose parts (e.g. gauze, dental dam, or a throat shield).



Abutment screw retrieval

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Advanced procedure – reverse drilling instruments 23

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Instrument selection guide

The instrument selection guide below can be used to match the correct abutment screw retrieval instruments to the implant type. Implant type should be determined via patient records or standard imaging techniques prior to attempting to retrieve a screw.



			Abutment Screw Remover	Rescue Drill Guide	Reverse Drill	Abutment Screw Retrieval Instrument	Screw Tap Repair	Nobel Biocare N1 Base Screw Removal Tool
 Conical connection	3.0	Ø 3.0 mm	3.0	CC 3.0	3.0/NP	3.0/NP	M1.4	-
	NP	Ø 3.5 mm Ø 3.75 mm	NP	CC NP	3.0/NP	3.0/NP	M1.6	-
	RP	Ø 4.3 mm Ø 5.0 mm	RP/WP/6.0	CC RP	RP/WP/6.0	RP/WP/6.0	M2	-
	WP	Ø 5.5 mm	RP/WP/6.0	CC WP	RP/WP/6.0	RP/WP/6.0	M2	-
 Trioval conical connection	NP	Ø 3.5 mm	3.0 NP, RP/WP/6.0	TCC NP	TCC NP/RP	TCC NP/RP	TCC NP	TCC NP/RP
	RP	Ø 4.0 mm	3.0 NP, RP/WP/6.0	TCC RP	TCC NP/RP	TCC NP/RP	TCC RP	TCC NP/RP
		Ø 4.8 mm	3.0, NP, RP/WP/6.0	TCC RP	TCC NP/RP	TCC NP/RP	TCC RP	TCC NP/RP
 Tri-channel connection	NP	Ø 3.5 mm Ø 4.3 mm*	NP	Tri-Ch NP	3.0/NP	3.0/NP	M1.8	-
	RP	Ø 4.0 mm Ø 4.3 mm Ø 5.0 mm*	RP/WP/6.0	Tri-Ch RP	RP/WP/6.0	RP/WP/6.0	M2	-
	WP	Ø 5.0 mm Ø 6.0 mm*	RP/WP/6.0	Tri-Ch WP	RP/WP/6.0	RP/WP/6.0	M2	-
	6.0	Ø 6.0 mm	RP/WP/6.0	Tri-Ch 6.0	RP/WP/6.0	RP/WP/6.0	M2	-
 External hex connection	NP	Ø 3.3 mm	NP	Ext Hex NP	3.0/NP	3.0/NP	M1.6	-
	RP	Ø 3.75 mm Ø 4.0 mm	RP/WP/6.0	Ext Hex RP	RP/WP/6.0	RP/WP/6.0	M2	-
	WP	Ø 5.0 mm Ø 6.0 mm	RP/WP/6.0	Ext Hex WP	RP/WP/6.0	RP/WP/6.0	M2.5	-

*NobelReplace Platform Shift

Note The abutment screw retrieval instruments are can be also used for the removal of broken abutment screws in NobelProcera Abutments, NobelProcera Implant Bridges and Implant Bar Overdentures, on implant level.

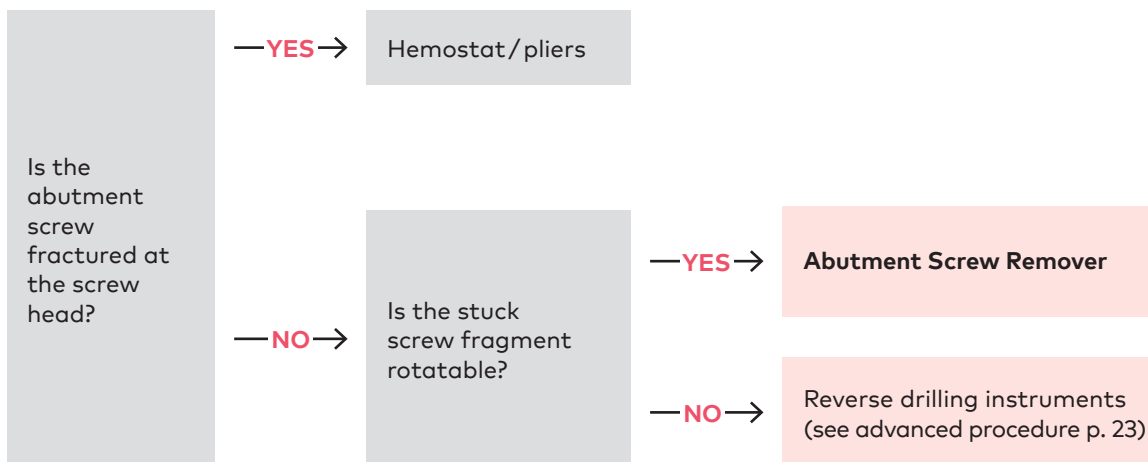
Basic procedure – Abutment Screw Remover

If the head of an abutment screw breaks, the screw fragment frequently remains as a loose piece of metal within the implant. This can often be teased out of the threaded portion of the implant using hemostats or pliers.

Abutment Screw Removers are indicated for use to rotate a broken abutment screw fragment out from a dental implant.

In situations where the Abutment Screw Remover alone cannot remove a broken screw, refer to the advanced procedure (reverse drilling) on [page 22](#).

Decision tree for abutment screw retrieval



1 Select Abutment Screw Remover

Select the appropriate Abutment Screw Remover from the instrument selection guide on [page 20](#). Attach to either a handpiece or a Handle for Machine Instruments.



2 Remove screw

- To remove the screw shaft from the implant, place the end of the Abutment Screw Remover onto the fractured screw and rotate counterclockwise while applying light pressure.
- The teeth on the tip of the instrument are designed to grab the screw and back it out.

Note For handpiece operation, ensure the drill unit is in reverse mode, maximum speed 50 rpm.



Warning Use of non-sterile device may lead to infection of tissues or infectious disease.

Caution Abutment Screw Retrieval Instrumentation must only be used with compatible Nobel Biocare instruments and prosthetic components. Use of instruments and prosthetic components that are not intended to be used in combination with the Abutment Screw Retrieval Instrumentation can lead to product failure, damage to tissue, or unsatisfactory esthetic results.

Caution The Abutment Screw Removers are single use products and must not be reprocessed. Reprocessing could cause loss of mechanical, chemical and / or biological characteristics. Reuse could cause local or systemic infection.

Caution Because of the small size of the devices, care must be taken that they are not swallowed or aspirated by the patient. It is appropriate to use specific supporting tools to prevent aspiration of loose parts (e.g. dental dam, gauze or a throat shield).

Advanced procedure – reverse drilling instruments

In situations where an abutment screw cannot be removed with the Abutment Screw Remover alone as per the basic procedure on [page 22](#), the following advanced procedure with reverse drilling instruments may be used to retrieve the screw.

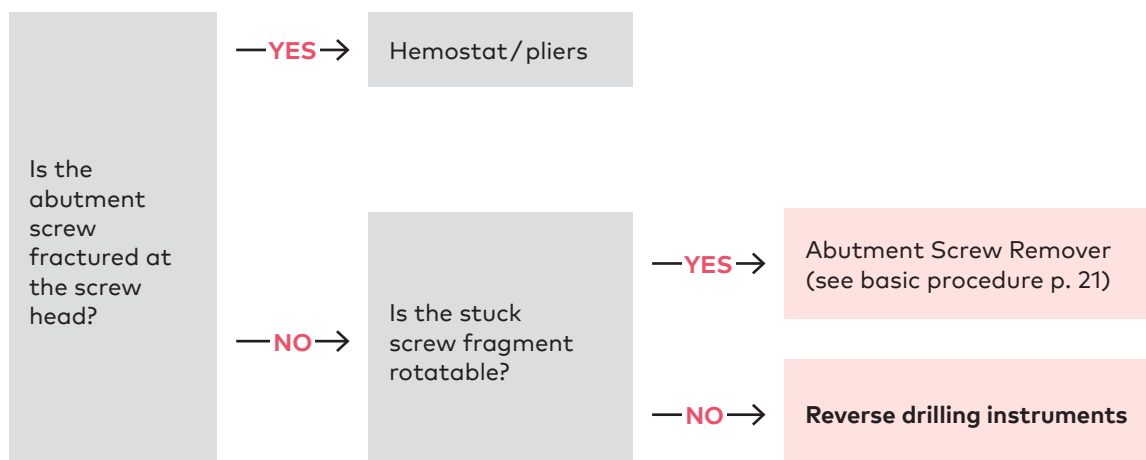
Abutment Screw Retrieval Reverse Drills are indicated for use to drill a hole in an abutment screw fragment to facilitate its removal from the dental implant using an Abutment Screw Retrieval Instrument.

Rescue Drill Guides are indicated for use to protect the implant interface and guide the Abutment Screw Retrieval Reverse Drill when drilling a hole into the screw fragment.

Abutment Screw Retrieval Instruments are indicated for use in conjunction with an Abutment Screw Retrieval Reverse Drill, in order to engage the hole in the screw fragment and to rotate the screw fragment out from the dental implant.

Screw Tap Repairs are indicated for use to remove debris from the inner threads of a dental implant, if needed, after removal of an abutment screw or screw fragment.

Decision tree for abutment screw retrieval



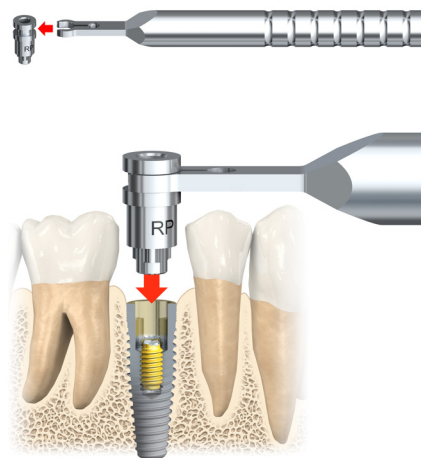
1 Select Rescue Drill Guide

Select appropriate Rescue Drill Guide based on the implant connection type and size according to laser-marking.



2 Attach Rescue Drill Guide

Attach the Rescue Drill Guide to the Handle for Implant Rescue Collar & Drill Guide and then connect the Rescue Drill Guide to the interface of the implant. 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 Reverse Drill

Select the appropriate Abutment Screw Retrieval Reverse Drill from the instrument selection guide on [page 20](#). Connect to the handpiece.

Caution Incorrect positioning of the Rescue Drill Guide may result in incorrect drill position, damage to implant connection, inability to remove screw fragment and subsequent implant retrieval.

Caution Incorrect position of the Rescue Drill Guide may result in drill fracture and aspiration of drill fragments.



4 Drill a hole

Ensure the drill unit is in reverse mode. Recommended speed is 2000 rpm. Perform the drilling in intervals using copious 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.

If the abutment screw is not broken but shows a damaged screw head connection, drill a hole to the depth of the screw head head connection, without using the Rescue Drill Guide and the Handle.

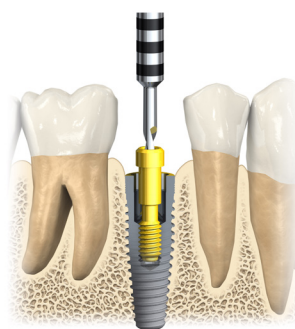
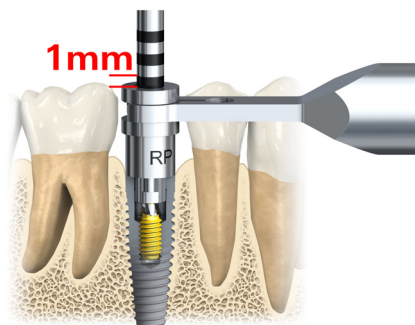
For situations where the abutment screw is broken at the thread level, drill a hole to a depth of ~1 mm into the fractured screw. Marking on the drill can be used as a support to define the depth. Image shows drill markings of 1 mm.

Note 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 by not exceeding a depth of 1 mm.

Warning Use of the Reverse Drill without a guide may result in drill fracture and aspiration of drill fragments.

Warning Copious irrigation is important when using the Abutment Screw Retrieval Reverse Drill to avoid overheating.

Warning Risk of aspiration of metal fragments/debris if irrigation/suction is not used.



5 Loose abutment screw

During the drilling sequence the fractured abutment screw might come loose.

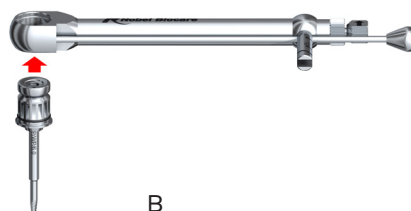
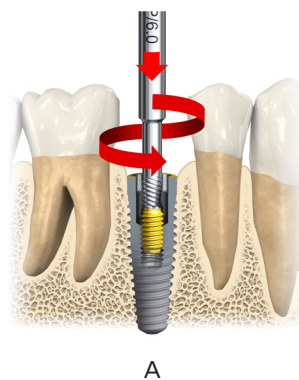
6 Connect Abutment Screw Retrieval Instrument

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.



7 Remove abutment screw

- Place the tip of the Abutment Screw Retrieval Instrument into the hole in the screw and rotate the handle in a counterclockwise direction (A). Add light pressure until the instrument grips 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
- If the Abutment Screw Retrieval Instrument cannot grab the screw, drill further and try again.



8 Clean implant threads

- 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, a screw from an impression coping, or a healing abutment. If resistance is encountered, a Screw Tap Repair may be used to remove debris from the thread. In this case, select the appropriate Screw Tap Repair from the instrument selection guide on [page 20](#).
- Connect the Screw Tap Repair to the Handle for Machine Instruments or to the handpiece. Recommended speed is 50 rpm.
- After successful screw removal, a new screw can be inserted.

Note Ensure correct alignment of screw tap repair tool in implant before applying torque.

Warning Misalignment of screw tap repair tool in implant may damage implant threads.

Warning Use of non-sterile device may lead to infection of tissues or infectious disease.

Caution Abutment Screw Retrieval Instrumentation must only be used with compatible Nobel Biocare instruments and prosthetic components. Use of instruments and prosthetic components that are not intended to be used in combination with the Abutment Screw Retrieval Instrumentation can lead to product failure, damage to tissue, or unsatisfactory esthetic results.

Caution Abutment Screw Removers, Abutment Screw Retrieval Instrument, Abutment Screw Retrieval Reverse Drill, Screw Tap Repair, and Screw Tap Repair Tool Nobel Biocare N1 TCC must not be reprocessed. Reprocessing could cause loss of mechanical, chemical and / or biological characteristics. Reuse could cause local or systemic infection.

Caution Rescue Drill Guides and Nobel Biocare N1 Base Screw Removal Tool NP/RP are delivered non-sterile and are intended for reuse. Prior to use clean and sterilize the product following the manual or automated procedure in the Cleaning and Sterilization Instructions.

Caution Because of the small size of the devices, care must be taken that they are not swallowed or aspirated by the patient. It is appropriate to use specific supporting tools to prevent aspiration of loose parts (e.g. dental dam, gauze or a throat shield).



Nobel Biocare N1™ Base Screw Removal Tool

The Nobel Biocare N1 Base Screw Removal Tool is indicated for use to facilitate the removal of the clinical screw from the Nobel Biocare N1 Base.

1 Unscrew clinical screw

Unscrew the Clinical Screw Nobel Biocare N1 Base using the Screwdriver Nobel Biocare N1 Base.

2 Connect Nobel Biocare N1 Base Screw Removal Tool

Connect the Nobel Biocare N1 Base Screw Removal Tool to the Handle For Machine Instruments or the Manual Torque Wrench Prosthetic Adapter.

3 Engage clinical screw

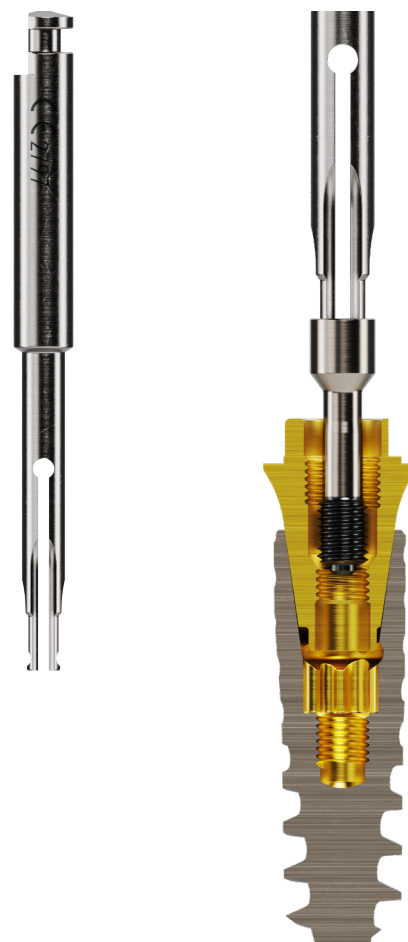
Engage the head of the clinical screw. Slightly rotating the tool while pushing can facilitate the engagement.

4 Remove clinical screw

To remove the screw, rotate the tool counterclockwise while gently lifting up.

Note The engagement between the retrieval tool and the clinical screw can be stronger than the engagement between the retrieval tool and the adapter/handle.

Note Use the Nobel Biocare N1 Base Screw Removal Tool manually.



Warning Use of non-sterile device may lead to infection of tissues or infectious disease.

Caution Abutment Screw Retrieval Instrumentation must only be used with compatible Nobel Biocare instruments and prosthetic components. Use of instruments and prosthetic components that are not intended to be used in combination with the Abutment Screw Retrieval Instrumentation can lead to product failure, damage to tissue, or unsatisfactory esthetic results.

Caution Because of the small size of the devices, care must be taken that they are not swallowed or aspirated by the patient. It is appropriate to use specific supporting tools to prevent aspiration of loose parts (e.g. gauze, dental dam, or a throat shield).

Caution Abutment Screw Removers, Abutment Screw Retrieval Instrument, Abutment Screw Retrieval Reverse Drill, Screw Tap Repair, and Screw Tap Repair Tool Nobel Biocare N1 TCC must not be reprocessed. Reprocessing could cause loss of mechanical, chemical and / or biological characteristics. Reuse could cause local or systemic infection.

Caution Rescue Drill Guides and Nobel Biocare N1 Base Screw Removal Tool NP/RP are delivered non-sterile and are intended for reuse. Prior to use clean and sterilize the product following the manual or automated procedure in the Cleaning and Sterilization Instructions.



Abutment retrieval

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Abutment Release Pin 33







Abutment Retrieval Instruments Zirconia 35

Abutment Retrieval Instruments Titanium 38

Abutment Retrieval Tool Nobel Biocare N1™ system 40

Instrument selection guide

The instrument selection guide below can be used to match the correct Abutment Release Pin, Abutment Retrieval Zirconia Instrument and Abutment Retrieval Titanium Instrument to the abutment type.

						
			Abutment Release Pin CC	Abutment Retrieval CC Zirconia	Abutment Retrieval CC Titanium	Abutment Retrieval Nobel Biocare N1
 Conical connection	3.0	Ø 3.0 mm	3.0	-	-	-
	NP	Ø 3.5 mm Ø 3.75 mm	NP	NP	NP	-
	RP	Ø 4.3 mm Ø 5.0 mm	RP/WP	RP/WP	RP/WP	-
	WP	Ø 5.5 mm	RP/WP	RP/WP	RP/WP	-
 Trioval conical connection	NP	Ø 3.5 mm	-	-	-	NP
	RP	Ø 4.0 mm	-	-	-	RP

Abutment Release Pin

The Abutment Release Pins CC are used to remove intact abutments featuring an internal conical connection that are stuck to the implant after the abutment screw has been removed.

The Abutment Release Pin CC 3.0 is indicated for use to remove intact titanium and gold alloy abutments featuring an internal conical connection with a 3.0 platform size.

The Abutment Release Pins CC NP and RP/WP are indicated for use to remove intact zirconia abutments featuring an internal conical connection with an NP, respectively RP or WP platform size.

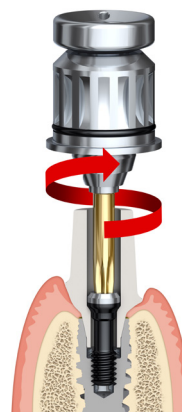
Note If the abutment cannot be removed with the Abutment Release Pin CC, the Abutment Retrieval Instrument Zirconia CC and the Abutment Retrieval Instrument Titanium may be used to remove zirconia abutments (including zirconia abutments with metal adapter) and titanium abutments, respectively. Refer to [pages 33](#) and [36](#).

1 Remove abutment screw

Remove the abutment screw using the Unigrip Screwdriver.

Note The abutment screw must be unthreaded from both the internal threads of the implant and the abutment. If the loose abutment screw is difficult to remove, use a small amount of sticky wax on the tip of the Unigrip Screwdriver, which will aid retention of the abutment screw head.

Caution Use of non-sterile device may lead to infection of tissues or infectious disease.



2 Insert Abutment Release Pin

- Select the appropriate Abutment Release Pin CC from the instrument selection guide on [page 30](#).
- Insert Abutment Release Pin into the abutment until it reaches a stop.



3 Wiggle Abutment Release Pin

Loosen the abutment from the implant by gently wiggling the Abutment Release Pin CC.



Warning Use of non-sterile device may lead to infection of tissues or infectious diseases.

Cation It is strongly recommended that the Abutment Release Pin CC is used only with compatible Nobel Biocare abutments. Use of abutments that are not intended to be used in combination with Abutment Release Pin CC can lead to product failure, damage to tissue, or unsatisfactory esthetic results.

Caution Because of the small size of the devices, care must be taken that they are not swallowed or aspirated by the patient. It is appropriate to use specific supporting tools to prevent aspiration of loose parts (e.g. gauze, dental dam, or a throat shield).

Caution Do not deviate from the described reprocessing instructions.

Caution Keep dissimilar metals separated during sterilization to resist corrosion.

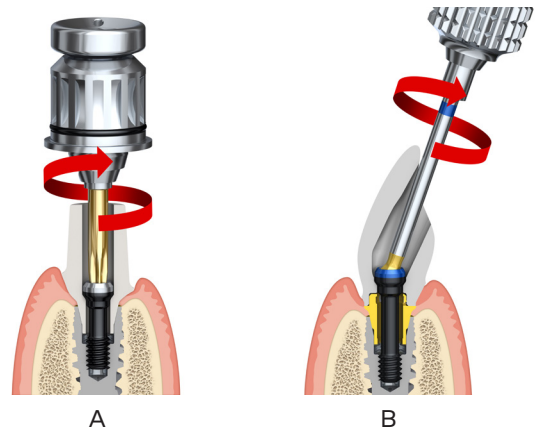
Abutment Retrieval Instruments Zirconia

The Abutment Retrieval Instrument Zirconia CC is used to remove zirconia abutments. It is comprised of two pieces: an engaging pin that is placed through the screw access hole of the zirconia abutment/prosthesis, and an activating needle that is inserted through the engaging pin. After using forceps to compress the two components, the engaging pin engages the abutment and lifts it vertically so that the abutment can be removed by hand.

1 Remove abutment screw

- For abutments without adapter (A), remove the abutment screw using the Unigrip Screwdriver.
- For abutments with metal adapter NobelProcera ASC Abutment (B), remove the abutment screw using the Omnigrip Screwdriver. The metal adapter stays in place.

Note The abutment screw must be unthreaded from the internal threads of the implant. If the loose abutment screw is difficult to remove, use a small amount of sticky wax on the tip of the Unigrip Screwdriver, which will aid retention of the abutment screw head.



2 Insert engaging pin

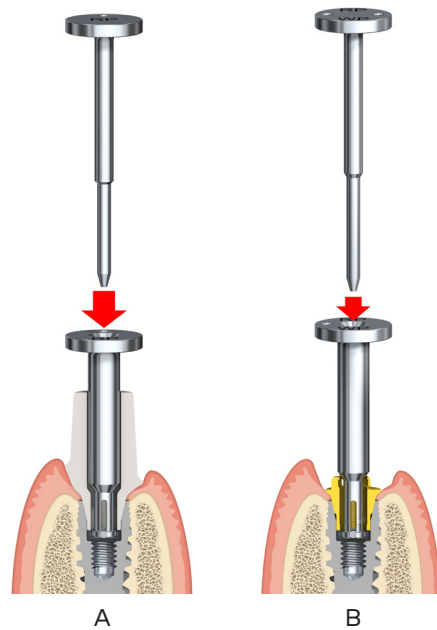
- The abutment retrieval instrument consists of two pieces, engaging pin (I) and activating needle (II).
- Insert the engaging pin into the abutment/metal adapter of the abutment until it reaches a stop.

Note The engaging pin has to be pushed in rather firmly to reach its end stop. There is first an intermediate stop that has to be passed before the pin is in final position.



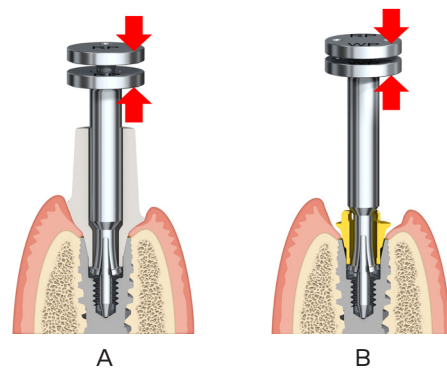
3 Assemble instrument

Assemble the instrument by inserting the activating needle.



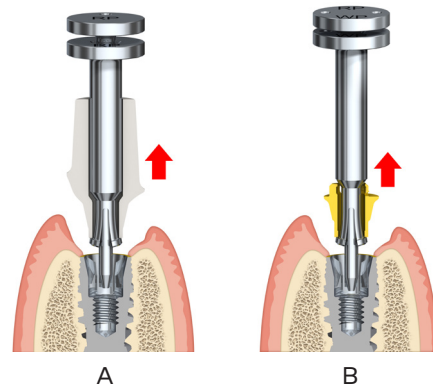
4 Squeeze instrument

Squeeze the Abutment Retrieval Instrument parts together using, e.g., a hemostat or pliers until the abutment (A) or the metal adapter (B) is released.



5 Remove abutment

Remove abutment (A) or metal adapter (B) together with the Abutment Retrieval Instrument from the implant.



6 Remove instrument

Remove the activating needle first and then pull the engaging pin from the abutment or the metal adapter by hand.

Warning Use of non-sterile device may lead to infection of tissues or infectious disease.

Caution Abutment Retrieval Instrument CC Zirconia, Abutment Retrieval Instrument/Tool CC Titanium, Abutment Retrieval Tool Nobel Biocare N1 TCC must only be used with compatible Nobel Biocare prosthetic components. Use of prosthetic components that are not intended to be used in combination with Abutment Retrieval Instrument CC Zirconia, Abutment Retrieval Instrument/Tool CC Titanium, Abutment Retrieval Tool Nobel Biocare N1 TCC can lead to product failure, damage to tissue, or unsatisfactory esthetic results.

Caution Because of the small size of the devices, care must be taken that they are not swallowed or aspirated by the patient. It is appropriate to use specific supporting tools to prevent aspiration of loose parts (e.g. gauze, dental dam, or a throat shield).

Caution Do not deviate from the described reprocessing instructions.

Abutment Retrieval Instruments Titanium

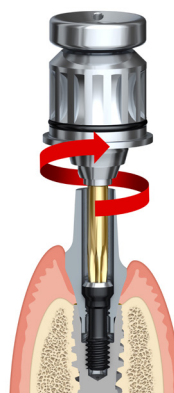
The Abutment Retrieval Instrument Titanium CC and Abutment Retrieval Tool Nobel Biocare N1 TCC are indicated for use to facilitate the removal of titanium abutments from a dental implant.

By applying torque with the screwdriver, the unthreaded portion of the pin comes into contact with the implant, which pushes the abutment up so that it can be removed by hand.

1 Remove abutment screw

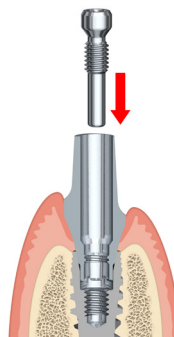
Remove the abutment screw using the Unigrip Screwdriver.

Note The abutment screw must be unthreaded from both the internal threads of the implant and the abutment. In case the loose abutment screw is difficult to remove, use a small amount of sticky wax on the tip of the screwdriver which will aid in retention of the abutment screw head.



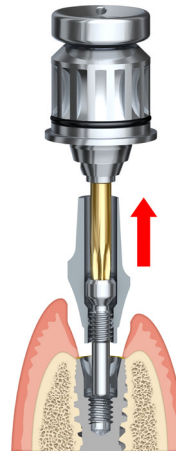
2 Insert Abutment Retrieval Instrument

Insert the Abutment Retrieval Instrument Titanium into the abutment and screw it into place using the Unigrip Screwdriver until the tip of the screw touches the bottom of the hole inside the implant.



3 Release abutment

Apply torque to the Unigrip Screwdriver or the Omnigrip Mini Screwdriver to release the abutment from the implant. Turn the screw clockwise and, as the threads of the screw are designed counterclockwise, the abutment is lifted.



Warning Use of non-sterile device may lead to infection of tissues or infectious disease.

Caution Abutment Retrieval Instrument CC Zirconia, Abutment Retrieval Instrument/Tool CC Titanium, Abutment Retrieval Tool Nobel Biocare N1 TCC must only be used with compatible Nobel Biocare prosthetic components. Use of prosthetic components that are not intended to be used in combination with Abutment Retrieval Instrument CC Zirconia, Abutment Retrieval Instrument/Tool CC Titanium, Abutment Retrieval Tool Nobel Biocare N1 TCC can lead to product failure, damage to tissue, or unsatisfactory esthetic results.

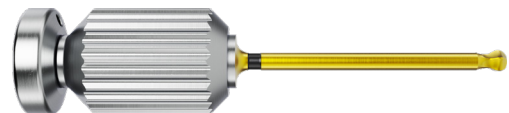
Caution Because of the small size of the devices, care must be taken that they are not swallowed or aspirated by the patient. It is appropriate to use specific supporting tools to prevent aspiration of loose parts (e.g. gauze, dental dam, or a throat shield).

Caution Do not deviate from the described reprocessing instructions.

Abutment Retrieval Tool Nobel Biocare N1™ system

1 Unscrew clinical screw

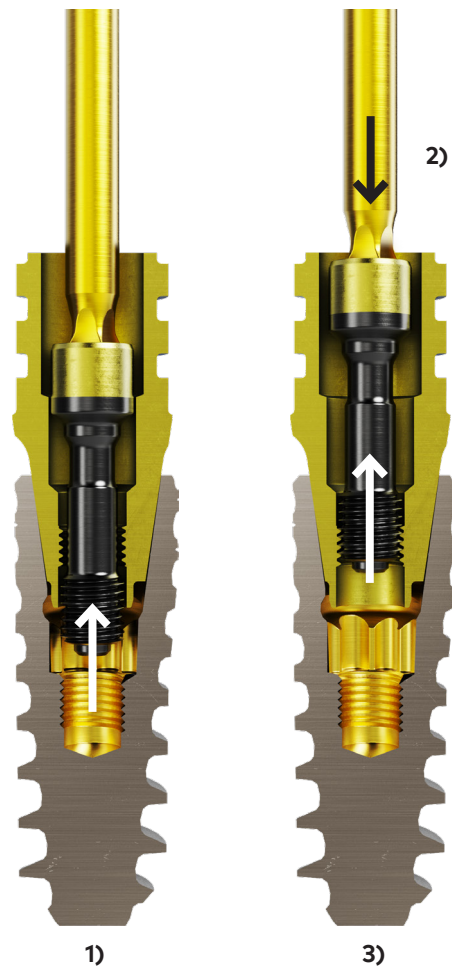
Unscrew the clinical screw using Omnigrip Mini screwdriver counterclockwise.



In some cases, the TCC abutment can be removed right after this step.

2 Re-connect screwdriver

Press the Omnigrip Mini screwdriver into the screw to gain good retention.



3 Lift screw

To remove the screw, rotate the tool counterclockwise while gently lifting up.

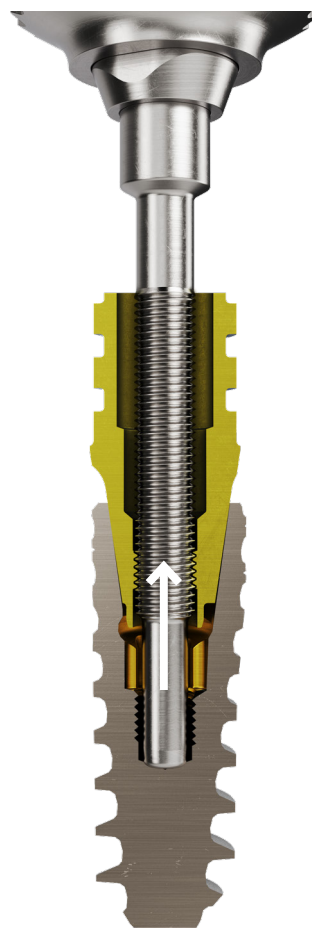
4 Engage retrieval tool

Engage the Abutment Retrieval Tool to the handle for machine instruments.



5 Insert instrument

Insert the instrument and disengage the abutment by turning clockwise. Remove the abutment.



5)

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