NobelParallel™ Conical Connection
Instructions for use

Important: Please read.

Disclaimer of liability:
This product is part of an overall concept and may only be used in conjunction with the associated original products according to the instructions and recommendation of Nobel Biocare. Non-recommended use of products made by third parties in conjunction with Nobel Biocare products will void any warranty or other obligation, express or implied, of Nobel Biocare. The user of Nobel Biocare products has the duty to determine whether or not any product is suitable for the particular patient and circumstances. Nobel Biocare disclaims any liability, express or implied, and shall have no responsibility for any direct, indirect, punitive or other damages, arising out of or in connection with any errors in professional judgment or practice in the use of Nobel Biocare products. The user is also obliged to study the latest developments in regard to this Nobel Biocare product and its applications regularly. In cases of doubt, the user has to contact Nobel Biocare. Since the utilization of this product is under the control of the user, they are his/her responsibility. Nobel Biocare does not assume any liability whatsoever for damage arising thereof. Please note that some products detailed in this Instruction for Use may not be regulatory cleared, released or licensed for sale in all markets.

Description:

Implant:
NobelParallel™ Conical Connection (CC) dental implants are made from biocompatible commercially pure grade 4 titanium with TiUnite® surface.
The implant comes with a co-packed Cover Screw made of titanium alloy Ti-6Al-4V.

Tooling:
Nobel Biocare Twist Drills, Twist Step Drills, Cortical Drills and Screw Taps are made of stainless steel with an amorphous diamond coating and should be used in conjunction with NobelParallel™ CC implants.

Indications for use:

NobelParallel™ Conical Connection implants are endosseous implants intended to be surgically placed in the upper or lower jaw bone for anchoring or supporting tooth replacements to restore patient esthetics and chewing function.

NobelParallel™ Conical Connection implants are indicated for single or multiple restorations in splinted or non-splinted applications. This can be achieved by a 2-stage or 1-stage surgical techniques in combination with immediate, early or delayed loading protocols, recognizing sufficient primary stability and appropriate occlusal loading for the selected technique.

Implants with <7mm length are for delayed loading only when appropriate stability has been achieved.

Contraindications:

It is contraindicated placing NobelParallel™ CC implants in patients:

– who are medically unfit for an oral surgical procedure.

– with inadequate bone volume unless an augmentation procedure can be considered.

– in whom adequate sizes, numbers or desirable positions of implants are not reachable to achive safe support of functional or eventually parafunctional loads.

– allergic or hypersensitive to commercially pure titanium grade 4 or titanium alloy Ti-6Al-4V (titanium, aluminium, vanadium).

Warnings:

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.

Besides the mandatory precautions for any surgery such as asepsis, during drilling in the jaw bone, one must avoid damage the nerves and vessels by referring to anatomical knowledge and preoperative radiographs.

Small diameter implants with angled abutments are not recommended for the posterior region.

Cautions:

General:
One hundred percent implant success cannot be guaranteed. Especially, non-observance of the indicated limitations of use and working steps may result in failure.

Treatment by means of implants may lead to loss of bone, biologic or mechanical failures including fatigue fracture of implants.

Close cooperation between surgeon, restorative dentist and dental laboratory technician is essential for a successful implant treatment.

It is strongly recommended that NobelParallel™ CC implants are used only with Nobel Biocare surgical instruments and prosthetic components, as combining components that are not dimensioned for correct mating can lead to mechanical and/or instrumental failure, damage to tissue or unsatisfactory esthetic results.

It is strongly recommended that clinicians, new as well as experienced implant users, always go through special training before undertaking a new treatment method. Nobel Biocare offers a wide range of courses for various levels of knowledge and experience. For more info please visit www.nobelbiocare.com.

Working the first time with a colleague, experienced with the new device/treatment method, avoids eventual complications. Nobel Biocare has a global network of mentors available for this purpose.

Before surgery:
Careful clinical and radiological examination of the patient has to be performed prior to surgery to determine the psychological and physical status of the patient.

Special attention has to be given to patients who have local or systemic factors that could interfere with the healing process of either bone or soft tissue or the osseointegration process (e.g., cigarette smoking, poor oral hygiene, uncontrolled diabetes, orofacial radiotherapy, steroid therapy, infections in the neighboring bone).

Special caution is advised in patients who receive bisphosphonate therapy.

In general, implant placement and prosthetic design must accommodate individual patient conditions. In case of bruxism or unfavorable jaw relationships reappraisal of the treatment option may be considered.

With respect to pediatric patients, routine treatment is not recommended until the end of the jaw bone growth phase has been properly documented.

At surgery:
Particular caution should be used when placing narrow platform implants in the posterior region due to risk of prosthetic overload.

All instruments and tooling used during procedure must be maintained in good condition and care must be taken that instrumentation does not damage implants or other components.

Because of the small size of components, care must be taken that they are not swallowed or aspirated by the patient.

NobelParallel™ CC implants may be tilted up to 45° relative to the occlusal plane. When used with angulations between 30° and 45°, the following applies: The tilted implant must be splinted; a minimum of 4 implants must be used when supporting a fixed prosthesis in a fully edentulous arch.

After the implant installation, the surgeon's evaluation of bone quality and initial stability will determine when implants may be loaded. Lack of adequate quantity and/or quality of remaining bone, infection and generalized diseases may be potential causes for failure of osseointegration both immediately after surgery, or after osseointegration is initially achieved.

After surgery:
To secure the long term treatment outcome it is advised to provide comprehensive regular patient follow up after implant treatment and to inform about appropriate oral hygiene.

Surgical procedure:

1. During drilling procedures bone quality should be considered (please see table **A**: recommended drill sequences are based on bone quality to ensure optimal primary stability when applying immediate function).

A NobelParallel™ CC
Recommended drill sequence based on bone quality. Drill data are stated in mm and the drills within square brackets denote as optional.

Drill sequence according to bone quality:

Platform	Implant diameter	Soft Bone Type IV	Medium Bone Type II–III	Dense Bone Type I
NP	∅ 3.75	2.0 [2.4/2.8]	2.0 2.4/2.8 Cortical Drill 3.75 [Screw Tap 3.75]	2.0 2.4/2.8 2.8/3.2 Cortical Drill 3.75 Screw Tap 3.75
RP	∅ 4.3	2.0 2.4/2.8 [3.2/3.6]	2.0 2.4/2.8 3.2/3.6 Cortical Drill 4.3 [Screw Tap 4.3]	2.0 2.4/2.8 3.2/3.6 Cortical Drill 4.3 Screw Tap 4.3
RP	∅ 5.0	2.0 2.4/2.8 3.2/3.6 [3.8/4.2]	2.0 2.4/2.8 3.2/3.6 3.8/4.2 Cortical Drill 5.0 [Screw Tap 5.0]	2.0 2.4/2.8 3.2/3.6 3.8/4.2 Cortical Drill 5.0 Screw Tap 5.0
WP	∅ 5.5	2.0 2.4/2.8 3.2/3.6 4.2/4.6 [4.2/5.0]	2.0 2.4/2.8 3.2/3.6 4.2/5.0 Cortical Drill 5.5 [Screw Tap 5.5]	2.0 2.4/2.8 3.2/3.6 4.2/5.0 Cortical Drill 5.5 Screw Tap 5.5

Note: all data is stated in mm.

Drilling must proceed at high speed (max. 2'000 rpm/min. for step/twist drills) under constant and profuse irrigation by sterile saline at room temperature. In dense bone situation drill with continuous back and forth motion.

Depth measurement system: The parallel drills have a true depth measurement system. All drills and components are marked to prepare the site to the correct depth and obtain a secure and predictable position.

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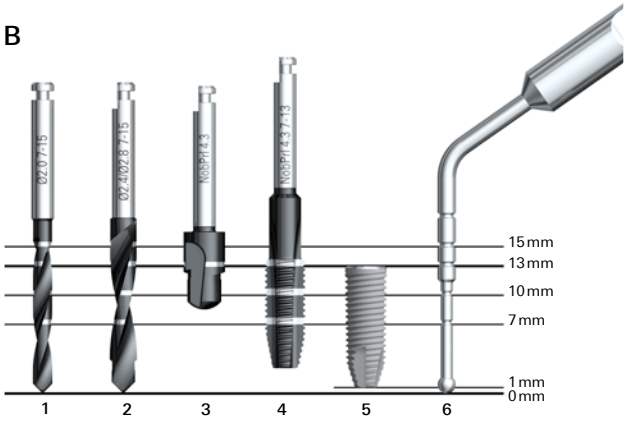
Caution: Twist/Step Drills extend up to 1mm longer than the implant when seated. Allow for this additional length when drilling near vital anatomical structures (please see image **B** for drill reference lines).

Please note that actual implant length is 0.5 mm shorter than the indicated name.

B



Note: The marks on the Twist/Step Drills indicate actual millimeter lengths and correspond to the implant collar. Final vertical positioning depends on several clinical parameters, including esthetics, tissue thickness and available vertical space.

In situations where adjacent natural teeth interfere with the contra-angle head preventing the drill from reaching the desired depth, a drill extension shaft may be used.

2. Prepare implant site. When using a flapless approach add-on soft tissue height to drill depth.
3. Measure the final depth of implant site for applicable implant length using depth probe with same measurements as Twist/Step Drills.
4. Open the implant package and pick up the implant from inner casing with implant driver (please see **C**). The implants are ideally installed with low speed, max. 25 rpm, using a drilling device.

C

Pick up of implant from inner casing with implant driver

5. Place and tighten the implant using max. **45 Ncm** insertion torque.

Caution: Never exceed insertion torque of **45 Ncm** for the implants. Over tightening an implant may lead to damage of the implant, fracture or necrosis of the bone site. If a Surgical Driver is used to insert the implant, special care needs to be taken to avoid over tightening.

If the implant gets stuck during implant installation or **45 Ncm** of insertion torque is achieved before fully seated, rotate the implant counter clockwise using drilling device (reverse mode) or manual torque wrench and remove implant from site. Replace the implant back into inner casing before proceeding further.

6. Medium and dense bone protocol:

a. In cases of a thick cortical layer or dense bone a Cortical Drill and/or a Screw Tap is mandatory to be able to get the implant fully seated and to release pressure around the implant neck.
b. Select the Cortical Drill and/or use Screw Tap matching the diameter of the implant:
   – If Cortical Drill is used: proceed with drilling at high speed max. 2'000 rpm/min and drill to appropriate depth (see image **B**).
   – If Screw Tap is used: place the screw tap into prepared implant site using low speed 25 rpm/min. and drill to appropriate depth (see image **B**). Switch the drill device with handpiece to reverse mode and remove the Screw Tap.
c. Continue with implant installation until desired position is achieved using max. **45 Ncm** of insertion torque.

7. For Immediate Function, the implant should be able to withstand a final torque between **35–45 Ncm**.
8. Depending on surgical protocol of choice, place a cover screw or an abutment and suture. See table **D** for implant specifications.

D

Implant specifications

Platform	Platform diameter	Implant diameter	Lengths
NP	∅ 3.5	∅ 3.75	7, 8.5, 10, 11.5, 13, 15, 18
RP	∅ 3.9	∅ 4.3	7, 8.5, 10, 11.5, 13, 15, 18
		∅ 5.0	7, 8.5, 10, 11.5, 13, 15, 18
WP	∅ 5.1	∅ 5.5	7, 8.5, 10, 11.5, 13, 15

Note: all data is stated in mm.

For additional information on surgical procedures please consult the NobelParallel™ CC "Procedures & products" treatment guidelines available at www.nobelbiocare.com or request latest printed version from a Nobel Biocare representative.

Materials:

NobelParallel™ CC implant: commercially pure titanium grade 4.
CC Cover Screw: titanium alloy Ti-6Al-4V (titanium, aluminium, vanadium).
Twist Drills, Twist Step Drills, Cortical Drills and Screw Taps: Stainless Steel.

Cleaning and sterilization:

NobelParallel™ CC Implants, Twist/Step Drills, Cortical Drills and Screw Taps are delivered sterile and for single use only prior to the labeled expiration date.

Warning: Do not use device if the packaging has been damaged or previously opened.

Caution: Implants, Twist Drills, Twist Step Drills, Cortical Drills and Screw Taps are single use products not intended to be reprocessed. Reprocessing could cause loss of mechanical, chemical and / or biological characteristics. Reuse could cause cross contamination.

MR safety information:

The NobelParallel™ CC implants have not been evaluated for safety and compatibility in the MR environment. It has not been tested for heating, migration, or image artifact in the MR environment. The safety of NobelParallel™ CC implants in the MR environment is unknown. Scanning a patient who has this device may result in patient injury.

For additional information on Cleaning and Sterilization and Magnetic Resonance Imaging, please consult the "Cleaning & Sterilization Guidelines for Nobel Biocare Products including MRI Information" available at www.nobelbiocare.com/sterilization or request latest printed version from a Nobel Biocare representative.

Storage and handling:

The product must be stored in a dry place in the original packaging at room temperature and not exposed to direct sunlight. Incorrect storage may influence device characteristics leading to failure.

Disposal:

Disposal of the device shall follow local regulations and environmental requirements, taking different contamination levels into account.

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Canada license exemption: Please note that not all products may have been licensed in accordance with Canadian law.

Prescription device: Rx only
Caution: Federal law restricts this device to sale by or on the order of a licensed physician or dentist.

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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


CE marking


Consult instructions for use


Contains hazardous substances

Contains or presence of phthalate

Date


Date of manufacture


Do not resterilize


Do not re-use


Do not use if package is damaged


Double sterile barrier system

Rx Only

For prescription use only


Health care centre or doctor


Keep away from sunlight


Keep dry

symbol.glossary.nobelbiocare.com
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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

Sterilized using ethylene oxide

Sterilized using irradiation


Temperature limit


Tooth number


Upper limit of temperature

Sterilized using steam or dry heat

Unique Device Identifier


Use-by date

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