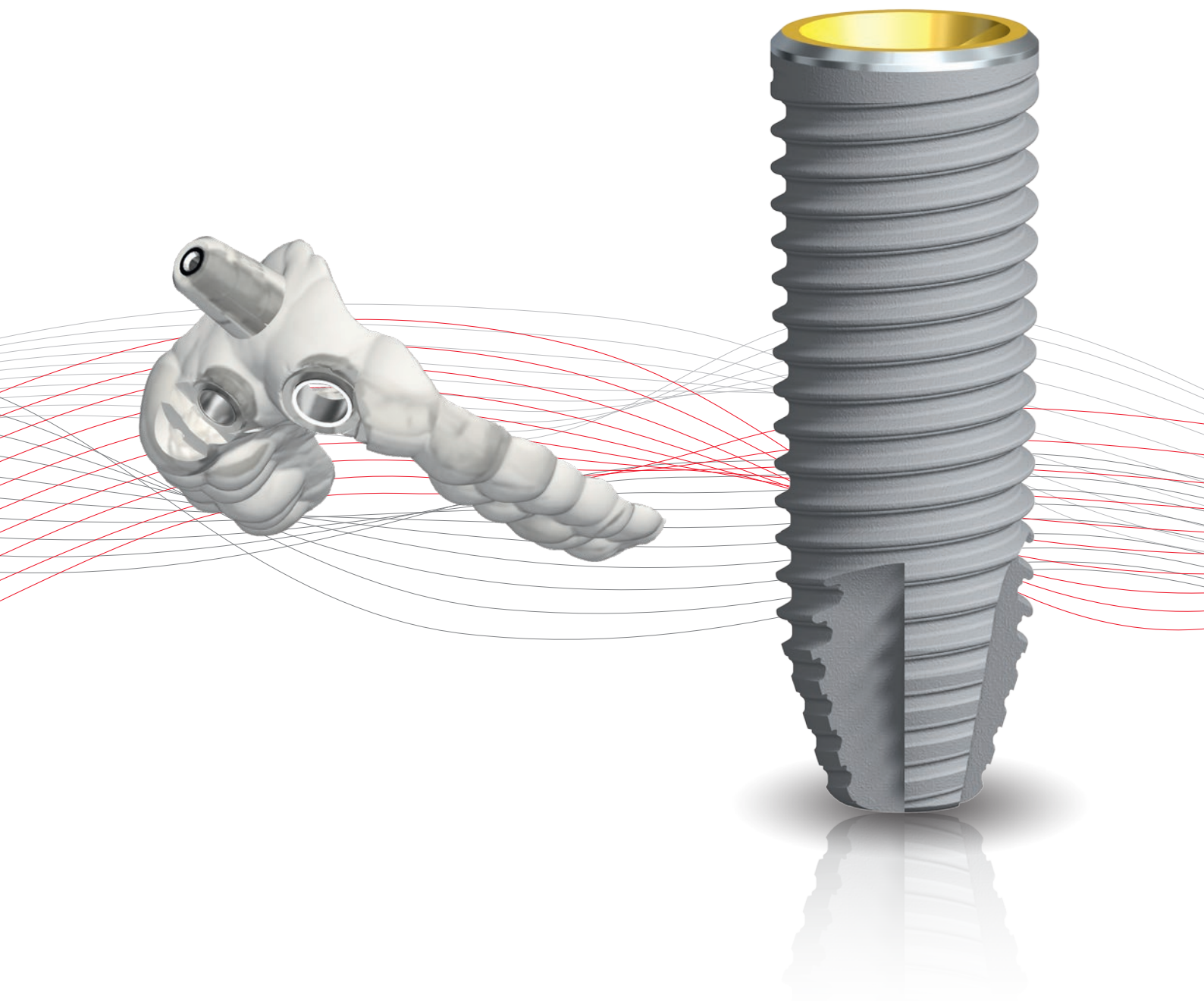


Guided surgery with
NobelParallel™ Conical Connection
NobelGuide® procedures manual



Note: In order to improve readability, Nobel Biocare does not use [™] or [®] in the running text. By doing so, however, Nobel Biocare does not waive any right to the trademark or registered mark and nothing herein shall be construed to the contrary.

Disclaimer: Some products may not be regulatory cleared/released for sale in all markets. Please contact the local Nobel Biocare sales office for current product assortment and availability.

Contents

Introduction	NobelGuide treatment workflows	4
	Surgical procedure quick guide	6
	Checklist before surgery	8
	Important considerations for implant placement	9
	Important drilling considerations	10
Pilot drilling + Freehand	Guided pilot drilling and freehand drill sequence	12
	Required instruments	14
	Surgical access	15
	Detailed drilling sequence	16
	Implant insertion	19
Fully guided	Fully guided surgery	24
	Required instruments	25
	Surgical access	27
	Detailed guided drilling sequence	30
	Guided implant placement procedure	33
	Guided implant placement – partially edentulous	34
	Guided implant placement – edentulous	36
Product information	Product overview	38
	Surgical components for guided pilot drilling	39
	Surgical components for fully guided surgery	40
	Laboratory and prosthetic components	41
	Cleaning and sterilization	42
Contact us	Customer service worldwide	44

NobelGuide treatment workflows

Single-tooth/ partially edentulous workflow

The NobelGuide treatment workflow for the partially edentulous patient allows the clinician to combine a surface scan of the mastercast and prosthetic tooth setup information with a (CB)CT scan of the patient. This (CB)CT scan can be taken at any time in the diagnostic process, and there is no need for markers or a radiographic guide to be in place during the patient scan. With this combined data in NobelClinician, important intra-oral information such as the soft tissue contour and thickness can be visualized, and preliminary treatment plans can be refined and finalized according to the desired prosthetic outcome. The user can go straight to surgery or choose, at any point in the process, to order a surgical template for either guided pilot drilling or fully guided surgery. The surgical template is designed automatically with one click using the digitized surface scan of the mastercast and is no longer a replica of a radiographic guide.

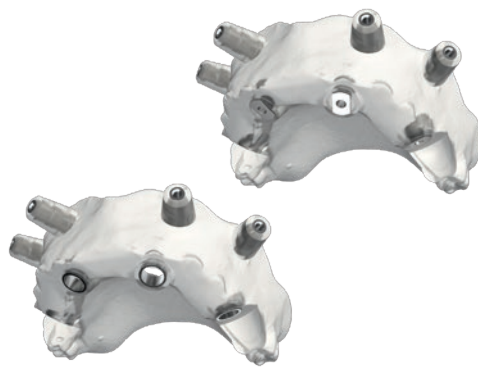
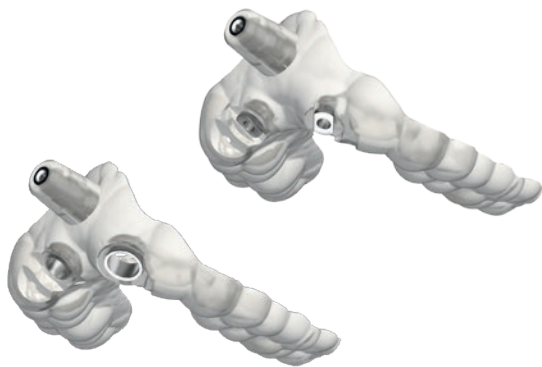
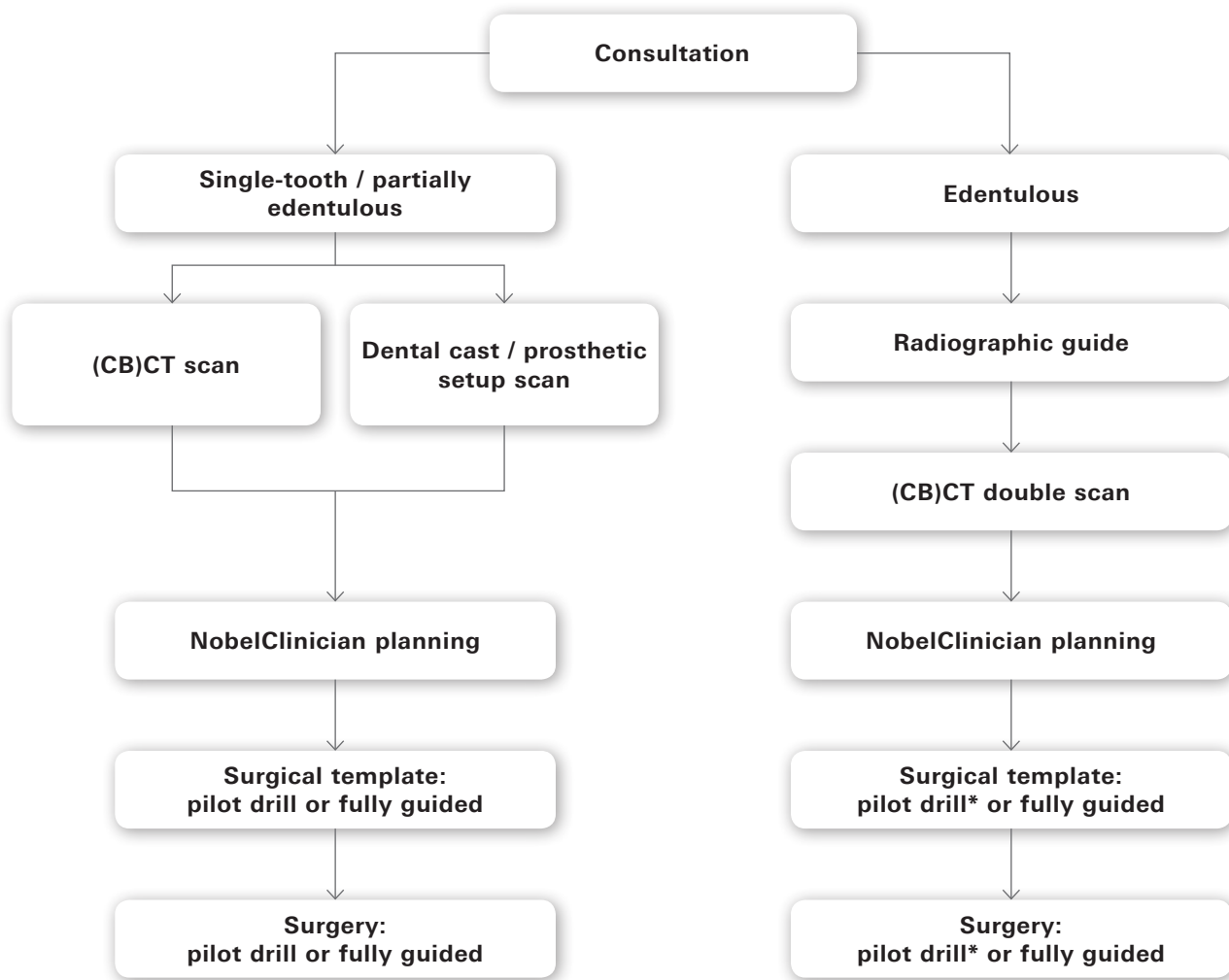
Edentulous workflow

The NobelGuide treatment workflow for the edentulous patient uses the so-called (CB)CT double scan protocol. A radiographic guide is fabricated in the dental laboratory prior to the patient scan. This is done either as a PMMA duplicate of a new diagnostic tooth setup/wax-up or a metal-free optimized denture in which radiopaque markers are placed. The patient needs to be scanned wearing this radiographic guide in the correct position. A second scan is taken of the same radiographic guide alone. These two sets of data are imported into the NobelClinician Software allowing for a prosthetic-driven treatment planning. Once the treatment plan is finalized, the user can go straight to surgery or choose, at any point in the process, to order a surgical template for either guided pilot drilling or fully guided surgery. The surgical template is automatically created in NobelClinician, based on the shape information provided by the radiographic guide. The radiographic guide therefore has to be designed in the laboratory as a prosthetic reference but the shape will also be used for the surgical template. For optimal results it is advised to use the NobelGuide Calibration Object as reference for automatic segmentation of the scanned radiographic guide. This workflow can also be used for partially edentulous patients.

Note: This manual shows the surgical procedure for guided pilot drilling and fully guided surgery with NobelParallel Conical Connection implants. Please refer to the NobelGuide Concept Manual for instructions on the procedure for preparing and ordering the surgical template.

Download it on: nobelbiocare.com/resources





* Available as of October 2015

Surgical procedure quick guide

The protocols illustrate the use of NobelParallel™ CC RP 4.3 x 13 mm implants

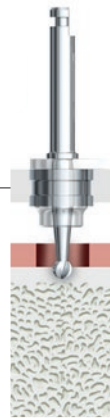
Guided pilot drilling + freehand



Depth reference
Depth Probe

OR

Depth reference
Twist Drill Ø 2.0



**Mark drill position
(if indicated)**
Guided Start Drill



Guided drilling
Guided Twist Drill Ø 2.0



Guided drilling
Guided Twist Step
Drill 2.4/2.8

Fully guided





Drilling
Twist Step Drill
2.4/2.8



Drilling
Twist Step Drill
3.2/3.6



**Cortex widening
(medium/dense)**
Cortical Drill 4.3



**Screw tapping
(medium/dense)**
Screw Tap CC 4.3



Implant placement
Implant Driver CC RP



Guided drilling
Guided Twist
Step Drill 3.2/3.6



**Countersinking
(medium/dense)**
Guided Counterbore
CC 4.3



**Screw tapping
(medium/dense)**
Guided Screw Tap
CC 4.3



Implant placement
Guided Implant
Mount CC RP

Checklist before surgery

- Confirm ID tag on surgical template corresponds with treatment ID in the NobelClinician Software (order manager)
- Confirm the surgical template corresponds with the virtual treatment plan in NobelClinician
- Confirm NobelGuide Surgical Guidelines document (shipped with surgical template)
- Print treatment plan report from the NobelClinician Software
- Verify optimal fit of the surgical template on stone model and/or clinically in the patient before treatment
- If adjustment is required, carefully modify the surgical template as required with a lab bur
- If adjusted, strengthen/reinforce the outer surface of the surgical template with a compatible resin
- Confirm that surgical index, if applicable, fits the surgical template and patient's opposing jaw when occluding
- Confirm that all required implants, surgical components and instruments have been ordered and received
- Confirm prosthetic components, if applicable
- Follow the treatment protocol from the correct patient treatment plan report from NobelClinician (implants, length / diameter, drill depths), according to the Nobel Biocare Instructions for Use (nobelbiocare.com)

Important considerations for implant placement

NobelParallel Conical Connection is an endosseous threaded dental implant made from biocompatible commercially pure grade 4 titanium with TiUnite surface.

Indications

NobelParallel Conical Connection implant restorations range from single-tooth to fixed-removable full-dental-arch over-denture applications to restore chewing function. This can be achieved by a one-stage or two-stage surgical technique in combination with immediate, early or delayed loading protocols, recognizing sufficient primary stability and appropriate occlusal loading for the selected technique. Implants also allow for bicortical anchorage in cases of reduced bone density to obtain high primary stability.

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 achieve safe support of functional or eventually parafunctional loads.
- allergic or hypersensitive to commercially pure titanium grade 4 or titanium alloy Ti-6Al-4V (titanium, aluminum, 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 during 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 damaging the nerves and vessels by referring to anatomical knowledge and preoperative radiographs.

Narrow platform: Limited interdental space. Not enough alveolar bone for an RP implant.

Regular platform: From single anterior tooth loss to full-arch restorations.

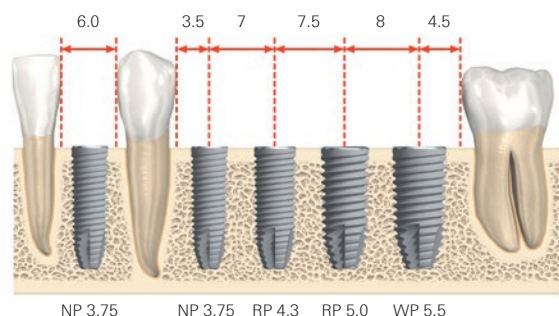
Wide platform: In molar areas a wider platform might be appropriate to maintain a proper emergence profile to support the soft tissue.

Caution

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

Minimal distances

Approximate minimal distances between implants (in mm) for restorative simplicity taking the average size of the final restoration (incisors, canines, premolars and molars) into account.



Important drilling considerations

Drills

- Drills are made of stainless steel with a diamond-like carbon (DLC) coating, which gives them their black color. They are used with external irrigation.
- Use an in-and-out motion during the drilling procedure to ensure cooling.
- Ensure the drills move freely and easily through all template sleeves and/or drill guides before any drilling (prior to surgery).
- Check that irrigation is switched on and flowing.
- Start drilling with the drill in the template sleeve and/or drill guide.
- Avoid lateral pressure on drills when drilling. Lateral pressure may damage the drill.

Maximum speed  800rpm

Caution: Drills are for single use only and must not be reprocessed. Reprocessing could cause loss of mechanical, chemical and / or biological characteristics. Re-use could cause cross contamination.

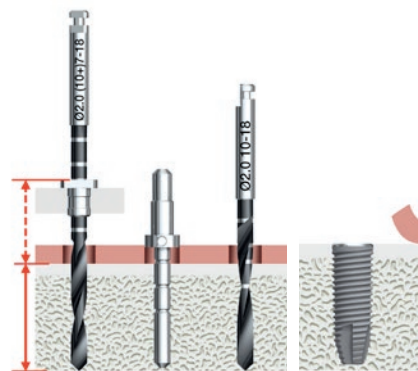
Note: Guided drills extend an additional 10mm, indicated as (10+).



Guided pilot drill

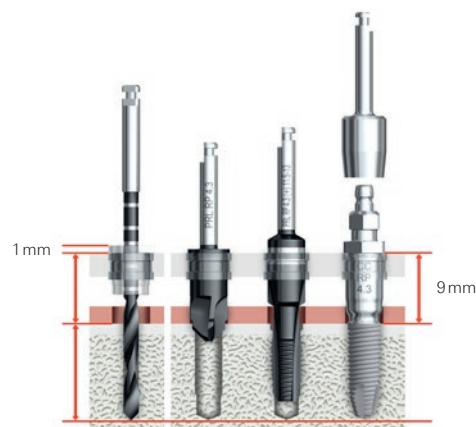
In certain clinical indications the default distance (10 mm) between planned implant (implant shoulder) and pilot sleeve is not sufficient (e.g., the implant needs to be placed deeper). In these indications the pilot sleeve collides with the surface of the bone and/or soft tissue. In order to create the surgical template, the pilot sleeve height can be adjusted in the NobelClinician Software to avoid contact with the bone and/soft tissue.

Note: Confirm the correct guided pilot drill depth by consulting the printed treatment plan report from NobelClinician and/or the NobelGuide surgical guidelines included in the surgical template package.



Fully guided

The default distance between the planned implant (implant shoulder) and the fully guided sleeve is 9 mm and the height of the Guided Drill Guides is 1 mm. The NobelGuide surgical instrumentation is designed with these measurements in mind.



Drill Stops

- Mount a drill stop on Twist Drills for a safe and accurate drilling procedure.
- Insert the Guided Twist Drill with the corresponding drill stop in a mounting hole with a depth corresponding to the planned depth of the osteotomy.
- Use the larger holes for drills \varnothing 3.4 and above.
- Tighten the screw using a Screwdriver Unigrip.
- The Drill Stop is now mounted at a height where it serves as a hard stop when drilling the desired depth through a drill guide embedded in the surgical template.



Drill Guide Handle

The drill guides are attached to the Handle for Guided Drill Guides by inserting the ball of the drill guide into the tip of the handle (see picture). The drill guide is locked into place by firmly tightening the upper part of the handle. Note that the drill guide is free to rotate in the socket of the handle before it is locked into place. This is to ensure that the drill guide and handle can be positioned so as not to interfere with other surgical instruments.

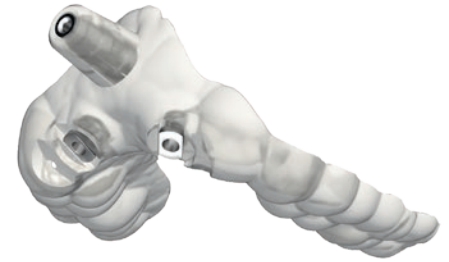
Note: Be sure to lock the drill guide into the handle outside of the patient's mouth. Because of the small sizes of the devices, care must be taken that they are not swallowed or aspirated by the patient.



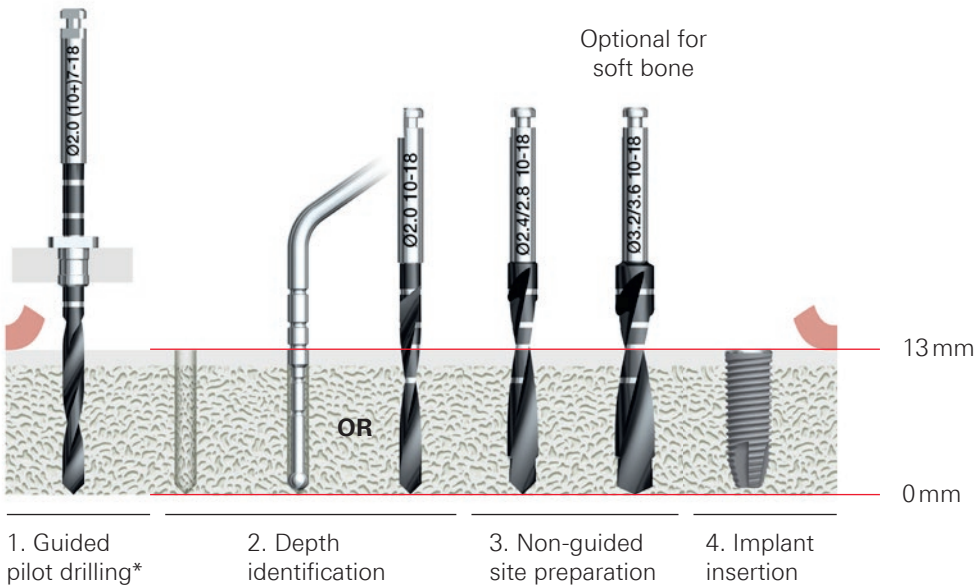
Guided pilot drilling and freehand drill sequence

Drill protocols / product reference lines

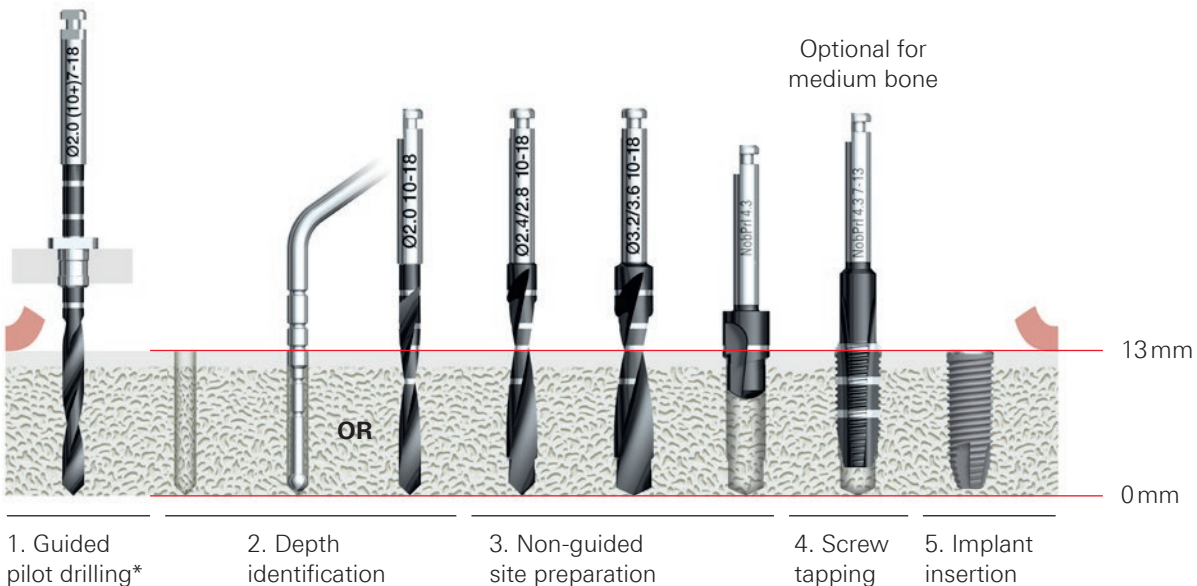
Demonstration of guided pilot drilling followed by the freehand drill protocol for a $\varnothing 4.3 \times 13$ mm implant in soft and medium / dense bone.



Soft bone



Medium / dense bone



* Confirm correct guided pilot drill depth by consulting the printed treatment plan report from NobelClinician and/or the NobelGuide surgical guidelines included in the surgical template package.

Drill protocols according to bone quality

During drilling procedures bone quality should be considered. Recommended drill sequences are based on bone quality to ensure optimal primary stability when applying Immediate Function. Drills are used to the full drilling depth. Drill data are stated in mm.

Optional Drills

The drill protocol has been developed to achieve an implant insertion torque between 35 and 45Ncm for all bone densities. This is to ensure sufficient primary stability to enable Immediate Function where appropriate.

If bone density is inconsistent (varying between medium and soft or medium and dense bone), optional drills can be added to the drill protocol to ensure the torque level does not exceed 45Ncm. These optional Twist Step Drills and Screw Taps are denoted below in parentheses.

Caution: Never exceed an insertion torque of 45Ncm for the implants. Overtightening may damage or fracture the implant and could cause necrosis of the bone site.

Platform	Implant Ø	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 are in mm and the drills within square brackets denoted as optional.

Drilling must proceed at high speed (max. 2000rpm for Twist Drills and Twist Step Drills and max. 800rpm for guided Drills) under constant and profuse irrigation by sterile saline at room temperature.

Required instruments

1. Guided pilot drilling



Guided Twist Drill Ø 2.0mm



Guided Twist Drill Ø 1.5mm



Guided Anchor Pin

} For anchoring template

2. Freehand surgery kit



NobelParallel CC Surgery Kit

3. Disposable drills and optional screw taps for selected implant dimensions and bone density*



Twist Drill Ø 2.0mm
(7–10mm, 7–15mm and 7–18mm)



Cortical Drill (if applicable)



Twist Step Drills
(7–10mm, 7–15mm and 7–18mm)



Screw Tap (if applicable)

* Please refer to page 39 for full list of available Twist (Step) Drills, Cortical Drills and Screw Taps.

Surgical access



Option 1

Perform flap elevation prior to guided drilling using the surgical template.

- Carefully position the surgical template.
- Using the first drill in the indicated drilling protocol, carefully mark the soft tissue.
- Remove the surgical template.
- Perform the incision.
- Elevate the flap by performing sub-periosteal preparation and mobilization using a raspator or elevator.
- Carefully reposition the surgical template.*
- Perform guided drilling using the selected guided pilot drills based on the treatment plan report from NobelClinician.
- Remove the surgical template.
- Continue site preparation and/or implant insertion.

Option 2

Perform guided drilling using the surgical template before performing flap elevation.

- Carefully position the surgical template
- Perform guided drilling using the selected guided pilot drills based on the treatment plan report from NobelClinician.
- Remove the surgical template.
- Perform the incision.
- Elevate the flap by performing sub-periosteal preparation and mobilization using a raspator or elevator.
- Continue site preparation and/or implant insertion.

* Ensure the exact same fit and position is achieved as before soft tissue manipulation.

Detailed drilling sequence

The illustrated drilling sequence shows the use of NobelParallel CC RP 4.3 × 13mm implants.

1 Position surgical template

- Carefully and correctly position the surgical template. Secure using anchor pins, if applicable (for details see page 27).
- Keep the surgical template stabilized at all times during the surgery.



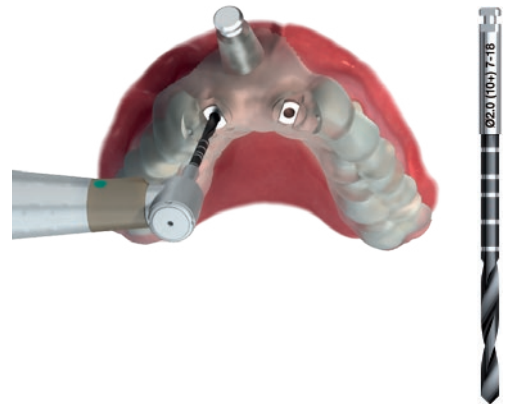
2 Drill with Pilot Twist Drill

Drill with the Guided Twist Drill $\varnothing 2.0 \times (10+)7-18$ mm to the desired depth with an in-and-out motion under profuse irrigation.

Maximum speed  800rpm

Note: Correct guided drill depth information must be confirmed by referencing the printed treatment plan report from NobelClinician and/or the NobelGuide surgical guidelines included in the surgical template package.

Caution: The guided twist drills are identified by the (10+) on the shaft. This indicates that the drills extend an additional 10mm.



3 Remove surgical template

Carefully remove the surgical template.

4 Confirm orientation

Use the direction indicator to confirm orientation and inclination of the preparation.



5 Identify osteotomy depth

- Identify reference for osteotomy depth for freehand surgery.
- Use a depth probe with depth markings or the non-guided Twist Drill Ø 2.0 (not while it is rotating) to identify the depth for freehand surgery with reference to the patient's anatomy.



6 Drill with Twist Step Drills

- Continue site preparation using Twist Step Drill Ø 2.4/2.8mm.
- Check orientation using Direction Indicator Ø 2.0/2.4–2.8mm.
- Finalize site preparation using Twist Step Drill Ø 3.2/3.6 mm (optional for soft bone).

Maximum speed  2000 rpm




7 Drill with Cortical Drill (medium to dense bone)

Finalize site preparation using Cortical Drill RP 4.3mm.

Notes:

- In cases of a thick cortical layer or dense bone, a Cortical Drill is mandatory to be able to get the implant fully seated and to release pressure around the implant neck.
- It is not recommended to use a Cortical Drill for sinus lift procedures. This is in order to maximize the potential for primary stability.

Maximum speed  2000rpm



8 Use Screw Tap (dense bone, optional for medium bone)

- In cases of a thick cortical layer or dense bone, a Screw Tap is mandatory to be able to get the implant fully seated and to release pressure around the implant neck.
- Place Screw Tap RP 4.3mm into the prepared implant site at low speed to the appropriate reference line on the implant.
- When the threads engage, allow the Screw Tap to feed without pressure to the defined depth.
- Switch the handpiece to reverse mode and back the Screw Tap out.
- Continue with implant installation until the desired position is achieved ensuring max. 45Ncm installation torque.

Low speed 25rpm 



Implant insertion

1 Unpack implant

Each implant is packaged in a sterile vial system. The outer package has a printed label with product data including diameter and length. Its cap is color-coded to identify the implant diameter. The inner casing is also marked with implant diameter and length.

- Pull the red tab to disengage the plastic shrink-rap film and unscrew the color-coded lid.
- Take out the sterile inner casing and lift off the plastic cap to gain access to implant.
- Record the implant size and LOT number on the patient's chart with the two peel-off labels from the outer vial.

Note: The Cover Screw is co-packed with the implant.



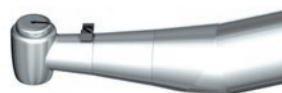
2 Choose insertion instrument

Depending on the clinical situation and accessibility, there are two different options for inserting the implant:

- A With a drilling unit and contra-angle
- B With the Manual Torque Wrench Surgical

Note: It is possible to start the implant insertion manually, using the Manual Torque Wrench.

Caution: Overtightening of the 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 overtightening.



A Drilling unit with contra-angle

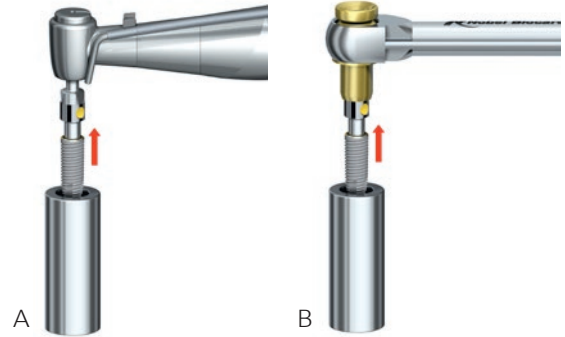


B Manual Torque Wrench Surgical

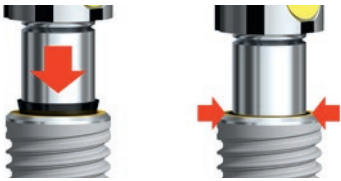
3 Pick up implant

- Connect the appropriate Implant Driver to the insertion instrument.
- Pick up the implant from the inner casing by applying light pressure on the implant driver and carefully turning the casing counter-clockwise until the Implant Driver is fully seated.

Tip: The Implant Drivers have markings to facilitate the insertion of the driver into the implant.



Caution: Make sure that the Implant Driver is fully seated.



4 Insert implant

- Begin inserting the implant into the osteotomy.
- When using a drilling unit, start inserting the implant using low speed.

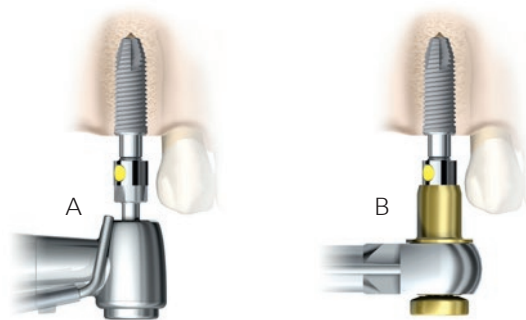
Low speed 25 rpm  Max. torque 45 Ncm

Experiencing strong resistance

If strong resistance (max 45 Ncm) is encountered at any point during insertion:

- Rotate the implant counterclockwise using the drilling device (reverse mode) or Manual Torque Wrench and remove the implant from the site. Place the implant back into the inner casing before proceeding further.
- Use the Screw Tap to widen the osteotomy as outlined in step 8 (page 18).
- Pick up and insert the implant again as outlined in steps 3 and 4 above.

Caution: Never exceed insertion torque of 45 Ncm for the implants. Overtightening 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 overtightening.



5 Tighten manually

- Connect the Manual Torque Wrench Surgical to the Manual Torque Wrench Adapter and insert the implant to the final depth.
- For Immediate Function, the implant should withstand a final insertion torque of at least 35 Ncm. Do not exceed 45 Ncm.
- Remove the Implant Driver.
- If the Implant Driver is difficult to remove, slightly rotate it counterclockwise before disengaging.



Markings for 15, 35 and 45 Ncm.

Experiencing strong resistance

If strong resistance (max 45 Ncm) is encountered at any point during insertion:

- Rotate the implant counterclockwise using the drilling device (reverse mode) or Manual Torque Wrench and remove the implant from the site. Place the implant back into the inner casing before proceeding further.
- Use the Screw Tap to widen the osteotomy as outlined in step 8 (page 18).
- Pick up and insert the implant again as outlined in steps 3, 4 and 5 above.

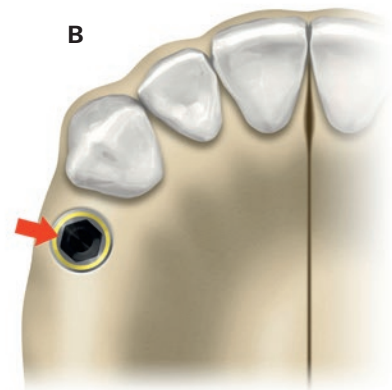
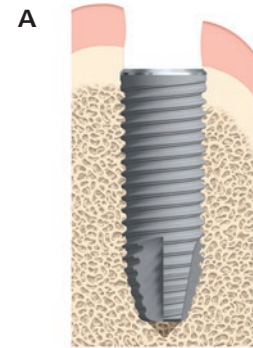
Caution: Never exceed insertion torque of 45 Ncm for the implants. Overtightening an implant may lead to damage of the implant, fracture or necrosis of the bone site. If a Surgical Driver is used to insert the implant, special care needs to be taken to avoid overtightening.

6 Final implant placement

- For maximum esthetic results, place the implant on the level of the buccal bone or 0.5 – 1 mm below (A).
- When placing the implant, align one of the black hex indicators on the implant driver parallel with the buccal wall. This ensures that one of the flat sides of the hexagon is parallel to the buccal side (B), ensuring preferred prosthetic abutment orientation.

Notes:

- The implant driver has a 3 mm height indicator to facilitate vertical implant positioning and six black lines correlating to the flat sides of the implant hexagon (C).



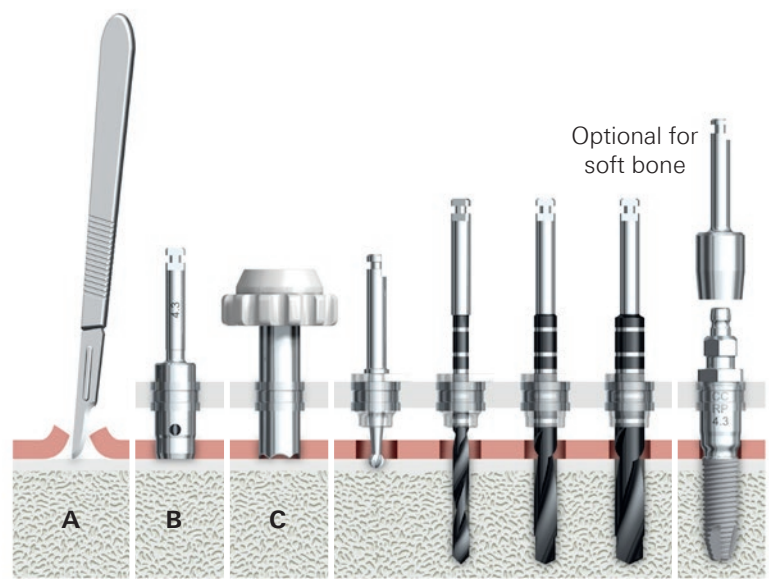
Hex and height indicators on implant driver

Fully guided surgery

Guided drill protocol

Demonstration of the guided drill protocol for a $\varnothing 4.3 \times 13\text{mm}$ implant in soft and medium / dense bone.

Soft bone

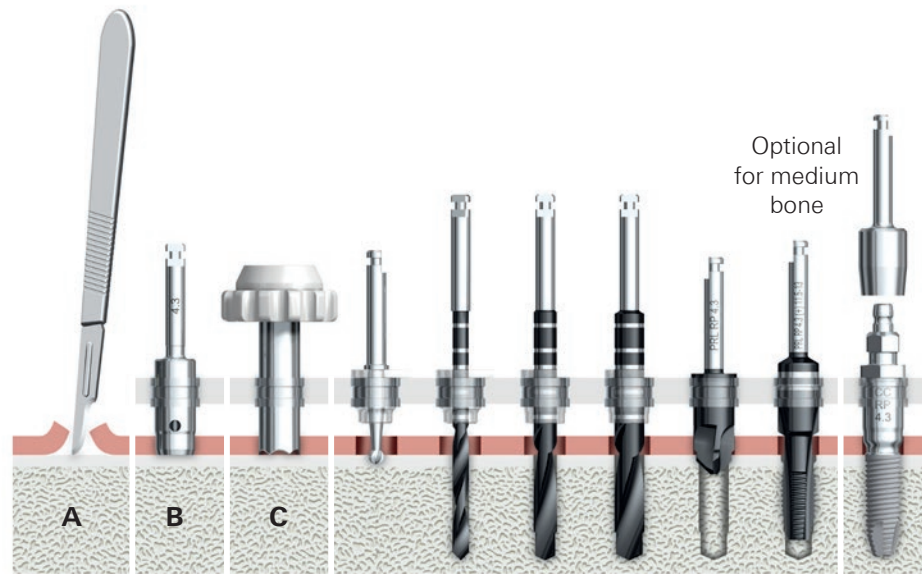


1. Surgical access options

2. Guided drilling

3. Implant insertion

Medium / dense bone



1. Surgical access options

2. Guided drilling

3. Implant insertion



Drill protocols according to bone quality

During drilling procedures bone quality should be considered. Recommended drill sequences are based on bone quality to ensure optimal primary stability when applying Immediate Function. Drills are used to the full drilling depth (top of guided drill guide as reference). Drill data are stated in mm.

Optional Drills

If bone density is inconsistent (varying between medium and soft or medium and dense bone), optional drills can be added to the drill protocol to ensure the torque level does not exceed 45 Ncm. It is recommended that the Guided Counterbore NobelParallel CC (single use) is used in medium and dense bone (maximum 800 rpm) to create adequate access for the Guided Screw Tap and/or Guided Implant Mount. The dense bone protocol is to be used when the implant cannot be fully seated.

Caution: Never exceed an insertion torque of 45 Ncm for the implants. Overtightening may damage or fracture the implant and could cause necrosis of the bone site.

NobelParallel CC guided drill sequence

Recommended drill sequence based on bone quality. Drill data are stated in mm and the drill diameters listed within brackets (–) are optional.

Implant diameter	Soft bone Type IV	Medium bone Type II–III	Dense bone Type I
∅ 3.75	2.0 [2.4/2.8]	2.0 2.4/2.8 Guided Counterbore 3.75 [Guided Screw Tap 3.75]	2.0 2.4/2.8 2.8/3.2 Guided Counterbore 3.75 Guided Screw Tap 3.75
∅ 4.3	2.0 2.4/2.8 [3.2/3.6]	2.0 2.4/2.8 3.2/3.6 Guided Counterbore 4.3 [Guided Screw Tap 4.3]	2.0 2.4/2.8 3.2/3.6 Guided Counterbore 4.3 Guided Screw Tap 4.3
∅ 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 Guided Counterbore 5.0 [Guided Screw Tap 5.0]	2.0 2.4/2.8 3.2/3.6 3.8/4.2 Guided Counterbore 5.0 Guided Screw Tap 5.0
∅ 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 Guided Counterbore 5.5 [Guided Screw Tap 5.5]	2.0 2.4/2.8 3.2/3.6 4.2/5.0 Guided Counterbore 5.5 Guided Screw Tap 5.5

Note: All data are in mm and the drills within square brackets denoted as optional.

Surgical access

The NobelGuide concept supports flap, mini-flap and flapless procedures. Flapless procedures are aided by a guided soft tissue punch. Based on the actual case, the clinician is advised to choose the preferred option at the planning stage. Thorough clinical diagnostics and inspection are needed prior to planning – for instance to diagnose availability of keratinized mucosa around the prospective implant sites.

Notes:


- The combination of tissue grafting and Immediate Function is not recommended.
- If simultaneous bone augmentation is performed, submerged healing is indicated

Flapless

The flapless procedure is the most straightforward procedure. The surgical template can remain at its initially installed position without the need to detach and re-position it again. This procedure is indicated for surgeons starting with the system, however punching of soft tissue must be clinically indicated (i.e. esthetics).

1 Position surgical template

Carefully and correctly position and secure the surgical template using the surgical index and anchor pins.

Maximum speed  800 rpm



2 Access surgical tissue

- Punch the soft tissue without removing the surgical template.
- The surgical template can be temporarily detached after punching to carefully remove the punched soft tissue. The surgical template is carefully repositioned and the anchor pins replaced into the existing anchorage holes in the bone.




Non-flapless (flap, mini-flap)

Keratinized tissue may be saved. Submerged placement of the implant is also possible (allowing for simultaneous bone augmentation procedures, etc.) by using a mini-flap or flap.

1 Position surgical template

- Prior to any manipulation of the soft tissue, securely position the surgical template using the surgical index to confirm position.
- Check for the correct initial positioning of the surgical template.
- Drill and place anchor pins. Use an in-and-out drilling motion with copious irrigation.

Maximum speed  800 rpm



2 Mark implant positions

- Mark the intended implant positions through the installed template by gently stamping the contour of the entry point of the implant using the Soft Tissue Punch.
- Use gentle force on the soft tissue using the Soft Tissue Punch.



3 Perform incision with scalpel

- Remove the anchor pins and the surgical template.
- Perform the incision, respecting the position of the implants (the shown flap design is for illustration only).



4 Elevate flap

- Perform sub-periosteal preparation and mobilization using a raspatory.



5 Modify surgical template

- In order to ensure that the surgical template can be repositioned in the correct location, or to prevent damage to the soft tissue flap, adjustment of the surgical template may be required.
- Slightly modify the fitting surface of the surgical template by relieving as much material as needed.
- After grinding, rinse with sterile physiologic liquid (saline) to remove any small particles.

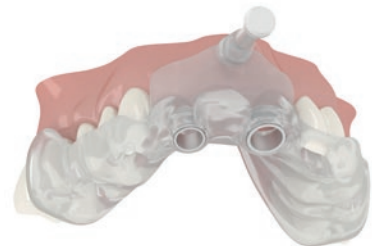
Note: Ensure adequate thickness of the surgical template is maintained at these sites.



6 Reposition surgical template

Reposition the surgical template using the surgical index and at the exact same site prepared for the anchor pins.

Note: Anchor pins may also be planned in order to assist with retracting a flap. The flanges of the surgical template itself may also be used to retain a flap.



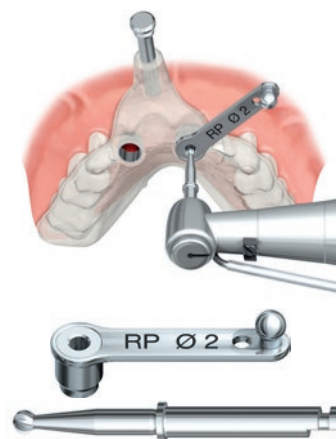
Detailed guided drilling sequence

The illustrated drilling sequence shows the use of NobelParallel CC RP 4.3 × 13mm implants.

1 Drill with Guided Start Drill

- Start drilling one implant first, from start to finish, including guided implant insertion.
- Place the Guided Drill Guide RP to Ø 2 mm in the selected template sleeve.
- Drill with the Guided Start Drill to the built-in drill stop.

Maximum speed  800rpm



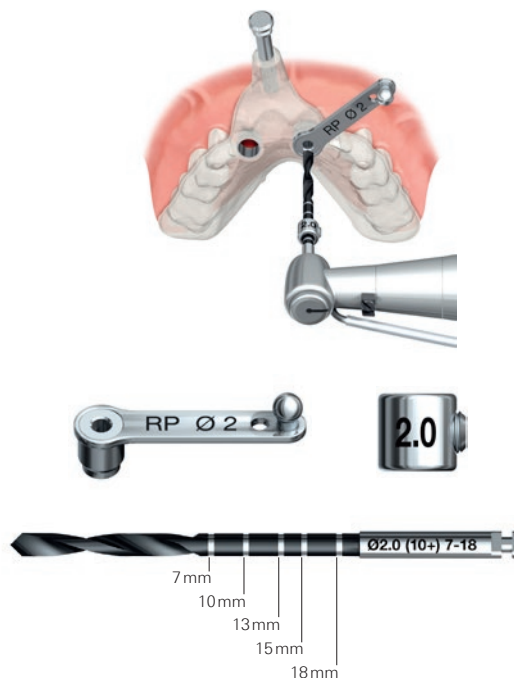
2 Drill with Guided Twist Drill

- Mount a Drill Stop Ø 2 mm on the Guided Twist Drill Ø 2 × (10+) 7–18 mm for a safe and accurate drilling procedure.
- Place the Guided Drill Guide RP to Ø 2 mm in the selected template sleeve.
- Drill with the Guided Twist Drill Ø 2 × (10+) 7–18 mm to the desired depth with an in-and-out motion under profuse irrigation using the Guided Drill Guide for guidance.

Maximum speed  800rpm


Notes:

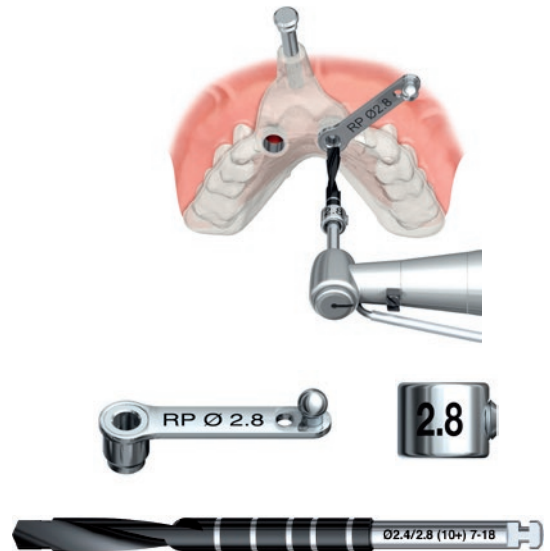
- The depth markings on the Twist Drill correspond to 7, 10, 13, 15 and 18 mm implants and should be measured while level with the Guided Drill Guide.
- When using the Twist Drills, use copious irrigation and an “in-and-out” drilling motion with emphasis on bringing the tip of the drill out of the template when preparing the site to avoid overheating.
- A (10+) indicates that the drills extend an additional 10 mm.
- During surgery maximum attention must be paid to ensure that the surgical template does not move in any direction from the correct position when being manipulated with instruments, e.g., lateral shift through inadequate handling of (pilot) drill in “knife – edge” situations or shift / deformation of surgical template due to excess vertical force application during implant installation.



3 Continue drilling

- Mount the Drill Stop Ø 2.8mm on the Guided Twist Step Drill 2.4/2.8 × (10+) 7–18mm for a safe and accurate drilling procedure.
- Place the Guided Drill Guide RP to Ø 2.8mm and drill to the stop with the Guided Twist Step Drill 2.4/2.8 × (10+) 7–18mm.
- Drill with an in-and-out motion under profuse irrigation.

Maximum speed  800rpm



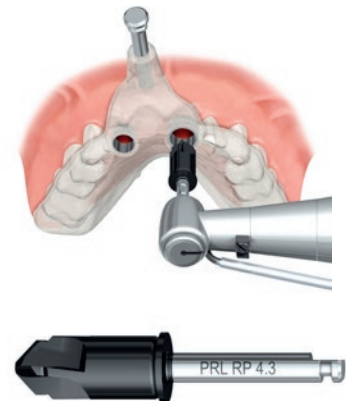
4 Use Guided Counterbore (medium to dense bone)

- Use the Guided Counterbore NobelParallel CC 4.3.
- Drill to the built-in drill stop with an in-and-out motion under profuse irrigation.

The Guided Counterbore NobelParallel CC is used prior to the Guided Screw Tap (if Screw Tap is used). This:


- Reduces compression around the neck of the implant.
- Prevents collision of the Guided Screw Tap and the Guided Implant Mount with the crest of the bone.
- Ensures full guidance is achieved.

Maximum speed  800rpm



5 Use Guided Screw Tap (dense bone, optional for medium bone)

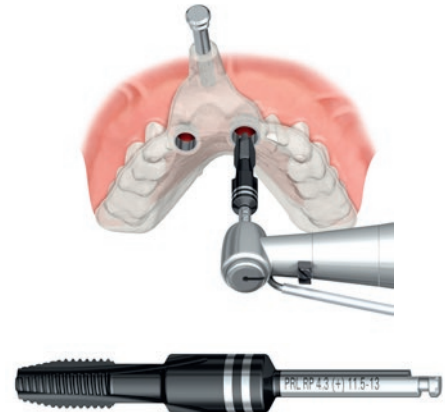
- Select the Guided Screw Tap CC 4.3 11.5–13mm.
- Place the Guided Screw Tap directly into the guided sleeve of the surgical template and prepare the site using low speed (20–45rpm) with copious irrigation.
- Switch the handpiece to reverse mode and back the screw tap out.

Low speed 25rpm 

The use of the Guided Screw Tap NobelParallel CC is indicated in medium bone situations and mandatory in hard bone situations. This is to help ensure proper seating of the implant. When using the Screw Tap, refer to the depth marks that correspond with the relevant implant length.

Notes:

- When the depth marking of the Screw Tap is aligned with the implant length, the apical portion of the osteotomy is not pre-tapped, allowing direct engagement with the tip of the implant.
- If the implant does not seat after using the Screw Tap, widen the site with the next drill on the drilling protocol, then use the screw tap again.



Guided implant placement procedure

1 Unpack implant

Each implant is packaged in a double sterile vial system. The outer package has a printed label with product data including diameter and length. Its cap is color-coded to identify the implant diameter. The inner casing is also marked with implant diameter and length.

- Pull the red tab to disengage the plastic shrink-wrap film and unscrew the color-coded lid.
- Take out the sterile inner casing and lift off the plastic cap to gain access to implant.
- Record the implant size and LOT number on the patient's chart with the two peel-off labels from the outer vial.

Note: The Cover Screw is co-packed with the implant.



2 Pick up mounted implant

- Connect the Guided Implant Mount CC RP 4.3 to the implant using a Screwdriver Unigrip and the surgical adapter from the Manual Torque Wrench.
- Make sure that the Guided Implant Mount is fully seated on the shoulder of the implant platform.
- Pick up the implant with the handpiece using the Connection to Handpiece.

Note: Guided Implant Mounts are screw-retained to ensure correct depth stop and prevent implant disconnection from Guided Implant Mount when over-torquing. However, over-torquing must be avoided at all times.



Guided implant placement – partially edentulous

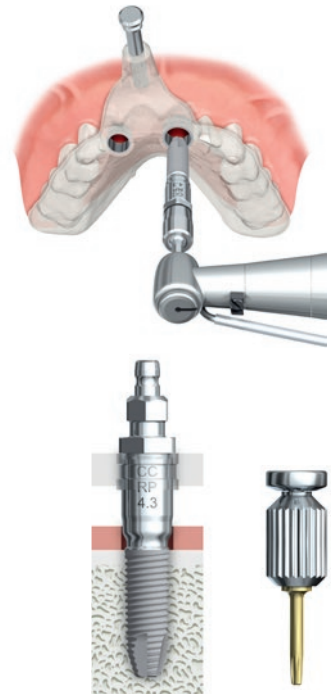
Go to page 36 to continue with guided implant placement for edentulous cases.

3 Insert the mounted implant

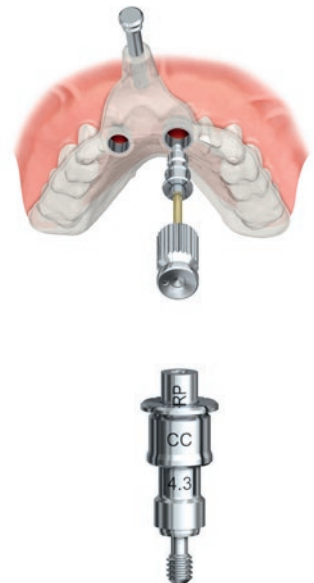
- Insert the implant until the flange of the Guided Implant Mount touches the outer surface of the guided sleeve in the surgical template. The Guided Implant Mount includes a vertical stop. Secure that the Guided Implant Mount is kept in the center of the guided sleeve during the entire insertion process.
- Avoid further tightening of the implant as it might affect the correct position of the surgical template.
- Use a Screwdriver Unigrip to remove the Guided Implant Mount(s).

Low speed 25rpm  Max. torque 45Ncm

Note: If the Guided Implant Mount is difficult to remove, gently wiggle it free using an open-end wrench or forceps

**4 Anchor the surgical template**

- Use the Guided Template Abutment CC RP.
- Tighten manually using a Screwdriver Unigrip.
- Ensure that the surgical template maintains its initial correct position for the next implant site preparation.

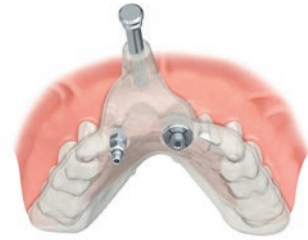


5 Place remaining implants

- Proceed with preparation of the remaining implant sites.
- Install the remaining implants according to the previously described procedure.

Notes:

- Place Guided template Abutments on the first two implants. After placement, leave the Guided Implant Mounts seated in their final position until all implants are placed.
- If only two implants are to be placed, there is no need for a Guided Template Abutment on the second implant.



6 Remove surgical template

- Once all implants are installed, remove Guided Implant Mounts and Guided Template Abutments using the Screwdriver Unigrip.
- Remove the anchor pins and the surgical template.

Note: If the Guided Implant Mount is difficult to remove, gently wiggle it free using an open-end wrench or forceps.



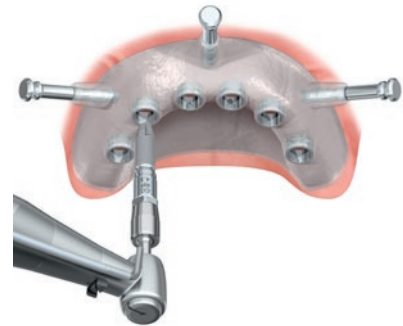
Guided implant placement – edentulous

Go to page 34 for the procedure on guided implant placement for partially edentulous cases.

3 Insert the first mounted implant

- Insert the first implant (for example in the canine position) until the flange of the Guided Implant Mount is 1 mm short of the outer surface of the surgical template sleeve.
- Leave the Guided Implant Mount in place.

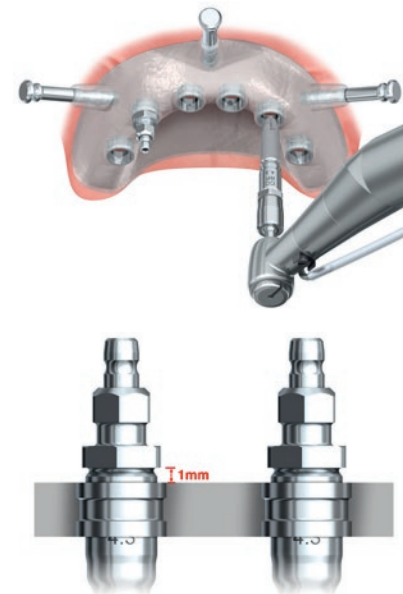
Low speed 25rpm  Max. torque 45Ncm



4 Insert the second mounted implant

- Choose the implant site strategically placed in the middle of the opposite half of the arch to obtain proper distribution.
- Prepare and insert the second implant until the flange of the Guided Implant Mount is 1 mm short of the outer surface of the surgical template sleeve.

Low speed 25rpm  Max. torque 45Ncm

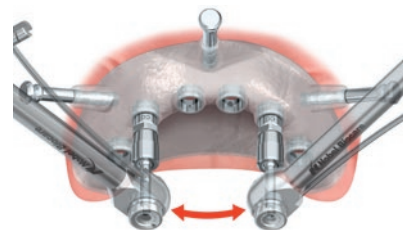


5 Finalize implant insertion

- Using the Manual Torque Wrench Surgical, carefully seat the first and second implant until the flange of the Guided Implant Mounts slightly touch the surgical template sleeve.

Note: Follow the described protocol to minimize the risk of over-torquing and to minimize movement of the surgical template.

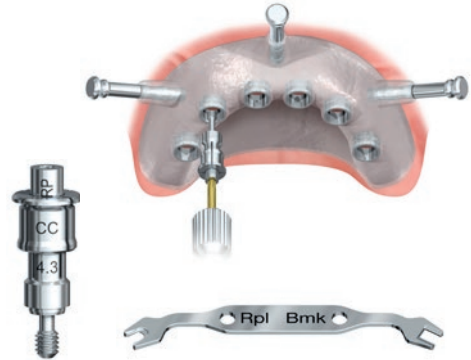
Max. torque 45Ncm



6 Anchor the surgical template

- Use the Screwdriver Unigrip to remove the Guided Implant Mounts.
- Place a Guided Template Abutment CC RP 4.3 onto each of the seated implants.
- Tighten manually using the Screwdriver Unigrip.
- Ensure that the surgical template maintains its initial correct position for the following implant site preparation.

Note: If the Guided Implant Mount is difficult to remove, you may need to gently wiggle it free using the open-end wrench or forceps.

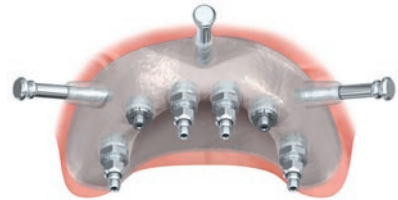


7 Install remaining implants

- Proceed with preparation of the remaining implant sites (step 1–5, page 30–32).
- Install the remaining implants until the flange of the Guided Implant Mount touches the top of the guided sleeve in the surgical template.

Notes:

- Place the Guided Template Abutments on the first two implants. After placement, leave the seated Guided Implant Mounts in their final position until all implants are placed.



8 Remove surgical template

- Once all implants are installed, remove Guided Implant Mounts and Guided Template Abutments using the Screwdriver Unigrip.
- Remove the anchor pins and the surgical template.





Notes:

- If the Guided Implant Mount is difficult to remove, gently wiggle it free using an open-ended wrench or forceps.



Product overview


STERILE R NobelParallel Conical Connection

Platform	Implant Ø	Length						
		7 mm	8.5 mm	10 mm	11.5 mm	13 mm	15 mm	18 mm
	3.75 mm	37963	37964	37965	37966	37967	37968	37969
	4.3 mm	37970	37971	37972	37973	37974	37975	37976
	5.0 mm	37977	37978	37979	37980	37981	37982	37983
	5.5 mm	37984	37985	37986	37987	37988	37989	-

Cover screw included



STERILE R Cover Screw Conical Connection

	NP	RP	WP
	36649	36650	37812



On all Nobel Biocare implants including prefabricated prosthetic components. For further information visit nobelbiocare.com/warranty

Surgical components for guided pilot drilling



For guided pilot drilling

Guided Twist Drills	7–13 mm	7–18 mm
Ø 2.0 (10+)	33107	32746



Guided Anchor Pins	
Ø 1.5 mm	30909
Ø 1.5 mm Short Shaft	34761



Guided Twist Drill ¹	
Ø 1.5 mm x 20 mm	33066



For freehand surgery

Twist Drills	7–10 mm	7–15 mm	10–18 mm
Ø 2.0	32296	32297	32299



Twist Step Drills	7–10 mm	7–15 mm	10–18 mm
Ø 2.4/2.8	32260	32261	32262
Ø 2.8/3.2	37873	34638	34639
Ø 3.2/3.6	32263	32264	32265
Ø 3.8/4.2	32275	32276	32277
Ø 4.2/4.6	37874	34582	34583
Ø 4.2/5.0	37875	37876	–



Drill Extension Shaft	
	29164



Cortical Drills	
Ø 3.75	38000
Ø 4.3	38001
Ø 5.0	38002
Ø 5.5	38003



Screw Taps	7–10 mm	7–13 mm	7–15 mm	7–18 mm
Ø 3.75	–	37990	–	37991
Ø 4.3	–	37992	–	37993
Ø 5.0	–	37994	–	37995
Ø 5.5	37996	–	37997	–



Implant Drivers	28 mm	37 mm
NP	36718	36719
RP	36720	36721
WP	37859	37860

















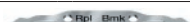




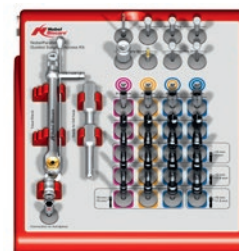
38004 NobelParallel CC Surgery Kit

Includes instruments to perform implant surgery with NobelParallel CC implants. Drills and screw taps must be ordered separately.

Surgical components for fully guided surgery



Guided Anchor Pins		Guided Twist Drill ¹			
Ø 1.5 mm	30909	Ø 1.5 mm x 20 mm		33066	
Ø 1.5 mm Short Shaft	34761	STERILE R			
					
Tissue Punches		NP	RP 4.3	RP 5.0	WP
	Guided Soft Tissue Punch 5/pkg (manual)	3222006	3222007	3222008	3222008
	Guided Tissue Punch (for machine)	37153	37154	37155	38060 ³
Guided Drill Guides		NP	RP 4.3	RP 5.0	WP
	Ø 2 mm	32814	32815	32816	32816
	Ø 2.8 mm	32817	32818	38046	38046
	Ø 3.2 mm	35882	-	-	-
	Ø 3.6 mm	-	35883	35885	35885
	Ø 4.2 mm	-	-	32825	32825
	Ø 4.6 mm	-	-	-	35886
	Ø 5.0 mm	-	-	-	32826
Guided Start Drill		Handle for Guided Drill Guide			
Ø 2.0 (10+)	37152	32813			
STERILE R					
Guided Twist Drills		7-13 mm	7-18 mm	Drill Extension Shaft	
Ø 2.0 (10+)	33107	32746		29164	
STERILE R					
Guided Twist Step Drills		7-13 mm		7-18 mm	
Ø 2.4/2.8 (10+)		35839	35844		
Ø 2.8/3.2 (10+)		35840	35875		
Ø 3.2/3.6 (10+)		35841	35876		
Ø 3.8/4.2 (10+)		35842	35877		
Ø 4.2/4.6 (10+)		35843	38045		
Ø 4.2/5.0 (10+)		37934	37945		
STERILE R					
Guided Counterbores		NP	RP 4.3	RP 5.0	WP
		38061	38062	38063	38064
STERILE R					
Guided Screw Taps		NP	RP 4.3	RP 5.0	WP
7-10 mm	38047	38050	38053	38056	
11.5-13 mm	38048	38051	38054	38057	
11.5-15 mm	-	-	-	38058	
15-18 mm	38049	38052	38055	-	
STERILE R					
Guided Implant Mounts		NP	RP 4.3	RP 5.0	WP
		38065	38066	38067	38068
					
Combined Open-end Wrench		NP	RP 4.3	RP 5.0	WP
		33247	33247	33247	33247
					
Guided Template Abutments with Screw		NP	RP 4.3	RP 5.0	WP
		38069	37158	37159	38070
					



38072 NobelParallel CC Guided Surgery Kit
Kit consists of three kit boxes for guided surgical access, guided drilling and guided implant insertion. It includes instruments for NP and RP 4.3 implants. Drills, counterbores and screw taps must be ordered separately.



33085 Guided Drill Stop Kit
Guided drill stops provide a stop 10mm deeper than regular drill stops, as the corresponding guided drills are 10mm longer than regular drills.

³ The Guided Tissue Punch for WP/6.0-sleeve (5.5) is for NobelParallel CC WP 5.5. Do not use Guided Tissue Punch for WP/6.0-sleeve (5.0) (art.no. 37155) or Guided Tissue Punch for WP/6.0-sleeve (6.0) (art.no. 37156).

Laboratory and prosthetic components

Laboratory components for fully guided procedure

	NP	RP 4.3	RP 5.0	WP
Guided Cylinder with Pin Unigrip™ Conical Connection	37172	37173	37174	37950



	NP	RP	WP
Implant Replica Conical Connection	36697	36698	37879



Healing abutments

	NP			RP			WP	
	3 mm	5 mm	7 mm	3 mm	5 mm	7 mm	3 mm	5 mm
Healing Abutment	-	-	-	-	-	-	-	-
∅ 3.2	-	-	-	-	-	-	-	-
∅ 3.6	36639	36640	36867	36643	36644	36872	-	-
∅ 3.8	-	-	-	-	-	-	-	-
∅ 5.0	36641	36642	36868	36645	36646	36873	37813	37814
∅ 6.0	-	-	-	36647	36648	36874	-	-
∅ 6.5	-	-	-	-	-	-	37815	37816
Slim Healing Abutment	-	37666	37665	-	37667	37668	-	-

	NP			RP			WP	
	3 mm	5 mm	7 mm	3 mm	5 mm	7 mm	3 mm	5 mm
Healing Abutment Bridge	-	-	-	-	-	-	-	-
∅ 4.0	36864	36865	36866	-	-	-	-	-
∅ 5.0	-	-	-	36869	36870	36871	-	-
∅ 6.0	-	-	-	-	-	-	37817	37818
Healing Abutment Anatomical PEEK							WP	
							6x7 mm	7x8 mm
							37819	37820

Temporary abutments*

	NP		RP		WP	
	1.5 mm	3 mm	1.5 mm	3 mm	1.5 mm	3 mm
Immediate Temporary Abutment	36653	36655	36654	36656	-	-
Temporary Abutment Engaging	36663	-	36664	-	37823	37824
Slim Temporary Abutment	6.5 mm	7.5 mm	6.5 mm	7.5 mm	-	-
	37671	37672	37673	37674	-	-

	NP		RP		WP	
	1.5 mm	3 mm	1.5 mm	3 mm	1.5 mm	3 mm
QuickTemp™ Abutment	36659	36657	36660	36658	-	-
Temporary Abutment Non-Engaging	36661	-	36662	-	37825	37826
Temporary Abutment Anatomical PEEK					6x7 mm	7x8 mm
					37821	37822

* Abutment screw included.



Know exactly when your surgical template will arrive
 Check the production status of your surgical templates within the NobelClinician Software, and the delivery status with our easy-to-use tracking tool. Register for MyNobel on nobelbiocare.com/mynobel to benefit from this and many other services and offerings.

Cleaning and sterilization

Sterile components

The devices delivered sterile have a “Sterile” marking on the label. See current cleaning and sterilization guidelines for details: nobelbiocare.com/sterilization.

Note: Implants must never be re-sterilized.



Implants

Implants are delivered sterile, are for single-use only. Do not use implants if the packaging has been damaged or previously opened.



Twist and Twist Step Drills, Counterbores and Screw Taps

Twist Drills, Twist Step Drills, Counterbores and Screw Taps are delivered sterile and for single use only.



Abutments and plastic copings

Multi-unit Abutments, Snappy Abutments, QuickTemp Abutments, Immediate Temporary Abutments and their respective plastic copings are delivered sterile and are for single-use only.



Non-sterile components

Care and maintenance of reusable instruments are crucial for successful treatment. Well-maintained instruments not only safeguard your patients and staff against infection, but are also essential for the outcome of the total treatment. See current cleaning and sterilization guidelines for details: nobelbiocare.com/sterilization.



NobelGuide surgical templates

The NobelGuide Surgical Template is delivered non-sterile. This is because pre-processing in the dental laboratory is needed to optionally prefabricate master casts that contain implant replicas at the planned implant locations in order to prepare provisional restorations prior to surgery. Use disinfecting agents described below.

In the laboratory:

Use ultrasonic cleaning with water and mild detergents. Rinse thoroughly with water, dry well and return to the protection bag in which it was delivered.

In the clinic:

Immediately prior to surgery: disinfect the surgical template in a high level disinfectant, according to the manufacturer's instructions (e.g. Chlorhexidine solution). Rinse thoroughly with sterile water and dry well, but not longer than 40 minutes.

Note: Do not use heat or autoclave the surgical template.



Abutments and plastic copings

Some abutments made of titanium, gold alloy, and plastic (PEEK) are delivered non-sterile. For more information refer to the label on the specific abutment. It is recommended to sterilize the abutment prior to placing it in the oral cavity. For sterilization, see current cleaning and sterilization guidelines: nobelbiocare.com/sterilization

Notes:

- If modifications have been made to the abutment, clean the abutment prior to sterilization.
- Non-sterile plastic copings should not be resterilized, as they are for single use only.

Customer service worldwide

Americas

Brazil

Nobel Biocare Brazil
Phone: 0800 16 999 6

Canada

Nobel Biocare Canada
Phone: +1 800 939 9394

Chile

Dental Biocare
Phone: +56 220 19282

Colombia

Hospimedics S.A.
Phone: +57 1 640 0608

Mexico

Nobel Biocare Mexico
Phone: +52 55 524 974 60

USA

Nobel Biocare USA
Phone: +1 800 322 5001

Asia Pacific

Australia

Nobel Biocare Australia
Phone: 1800 804 597

China

Nobel Biocare China
Phone: +86 21 5206 6655

Hong Kong

Nobel Biocare Hong Kong
Phone: +852 2845 1266

India

Nobel Biocare India
Phone: 1800 266 9998

Japan

Nobel Biocare Japan
Phone: +81 3 6717 6191

New Zealand

Nobel Biocare New Zealand
Phone: 0800 441 657

Singapore

Nobel Biocare Singapore
Phone: +65 6737 7967

Taiwan

Nobel Biocare Taiwan
Phone: +886 080 00 779

Europe, Middle East and Africa

Austria

Nobel Biocare Austria
Phone: +43 1 892 89 90

Belgium

Nobel Biocare Belgium
Phone: +32 2 467 41 70

Denmark

Nobel Biocare Denmark
Phone: +45 39 40 48 46

Finland

Nobel Biocare Finland
Phone: +358 20 740 61 00

France

Nobel Biocare France
Phone: +33 1 49 20 00 30

Germany

Nobel Biocare Germany
Phone: +49 221 500 850

Hungary

Nobel Biocare Hungary
Phone: +36 1 279 33 79

Ireland

Nobel Biocare Ireland
Phone: 1800 677 306

Italy

Nobel Biocare Italy
Phone: +39 800 53 93 28

Lithuania

Nobel Biocare Lithuania
Phone: +370 5 268 3448

Netherlands

Nobel Biocare Netherlands
Phone: +31 30 635 49 49

Norway

Nobel Biocare Norway
Phone: +47 23 24 98 30

Poland

Nobel Biocare Poland
Phone: +48 22 549 93 52

Portugal

Nobel Biocare Portugal
Phone: +351 800 300 100

Russia

Nobel Biocare Russia
Phone: +7 495 974 77 55

South Africa

Nobel Biocare South Africa
Phone: +27 11 802 0112

Spain

Nobel Biocare Spain
Phone: +34 900 850 008

Sweden

Nobel Biocare Sweden
Phone: +46 31 81 88 00

Switzerland

Nobel Biocare Switzerland
Phone: 0800 211 424

United Kingdom

Nobel Biocare UK
Phone: +44 208 756 3300

Distributor markets

Bulgaria, Croatia, Cyprus, Czech Republic, Greece, Iran, Jordan, Kuwait, Lebanon, Malta, Romania, Saudi Arabia, Serbia, Slovenia, Turkey, United Arab Emirates

Phone: +48 22 549 93 55

Introduction

Pilot drilling + Freehand

Fully guided

Product information

Appendices

