Procedures manual

Nobel Biocare™

Nobel Biocare N1™

Final RESTORATIONS

Nobel Biocare N1™ Base

20 Ncm

Tightening torque

Screwdriver Nobel Biocare N1 Base

NP 1.75 mm
300982

NP 2.5 mm
300983

NP 3.5 mm
300984

RP 1.75 mm
300985

RP 2.5 mm
300986

RP 3.5 mm
300987

Inner thread featured in Base level abutments

Trioval design of the Nobel Biocare N1 Base

3 height options (1.75 mm, 2.5 mm, 3.5 mm)

Different screw threads between NP & RP to prevent mix up of components

Procedure

The procedure below describes only the handling of the Nobel Biocare N1 Base Xeal. For restorative procedures at Base level, please refer to the following modules of the manual.

1

Select an appropriate Nobel Biocare N1 Base Xeal and connect it to the implant using the pre-assembled handle to facilitate the insertion and avoid touching the surface of the device. Remove the handle.

It is recommended to verify the final seating of the Nobel Biocare N1 Base and the components attached using radiographic imaging.

2

Tighten the Clinical Screw of the Nobel Biocare N1 Base.

If a Healing Abutment Nobel Biocare N1 Base will be placed on the Nobel Biocare N1 Base Xeal, hand-tighten the Clinical Screw Nobel Biocare N1 Base using the Screwdriver Nobel Biocare N1 Base.

If an Impression Coping Nobel Biocare N1 Base, Temporary Abutment Nobel Biocare N1 Base, or Universal Abutment Nobel Biocare N1 Base will be placed on the Nobel Biocare N1 Base Xeal, tighten the Clinical Screw Nobel Biocare N1 Base to 20 Ncm using the Screwdriver Nobel Biocare N1 Base and Manual Torque Wrench Prosthetic.

Caution Never exceed 20 Ncm tightening torque for Nobel Biocare N1 Base Xeal. Overtightening the Clinical Screw Nobel Biocare N1 Base may lead to a screw fracture.

3

If removal of the Nobel Biocare N1 Base Xeal is needed, untighten the screw using the Screwdriver Nobel Biocare N1 Base.

It is recommended to verify the final seating of the Nobel Biocare N1 Base and the components attached using radiographic imaging.

Nobel Biocare N1 Base Xeal should only be replaced in conjunction with the Clinical Screw Nobel Biocare N1 Base.

Esthetic Abutment

The Esthetic Abutment Nobel Biocare N1 is a pre-manufactured dental implant abutment which can support the placement of a cement-retained dental prosthesis.

It's available in two versions, Esthetic Abutment Nobel Biocare N1 TCC to be connected directly to the Nobel Biocare N1 Implant or Esthetic Abutment Nobel Biocare N1 Base that can be connected to the Nobel Biocare N1 Base Xeal.

20 Ncm

Tightening torque

Screwdriver Omnigrip Mini

Base level

NP 0.5 mm
301000

RP 0.5 mm
301002

Implant level

Single unit restorations

NP 1.75 mm
300938

NP 3 mm
300940

RP 1.75 mm
300942

RP 3 mm
300944

15° NP 1.75 mm
300939

15° NP 3 mm
300941

15° RP 1.75 mm
300943

15° RP 3 mm
300945

Scalloped margin designed to profile natural soft tissue contours

Available in various angulations and several collar heights

For single unit cement-retained restorations

Final restoration Conventional workflow

Steps for clinician

1

Select the appropriate abutment based on the platform.

2

Connect and tighten the abutment once the implant stability is ensured. It is recommended to verify the final abutment seating using radiographic imaging.

Caution To tighten the abutment make sure that the implant can withstand the recommended tightening torque of the abutment.

3

Tighten the abutment using the Manual Torque Wrench Prosthetic of the implant system together with the screwdriver.

Caution Do not exceed the tightening torque. Over tightening of abutment screw/clinical screw may lead to a screw fracture.

4

If modification of the abutment is necessary, remove the abutment, place it on a replica and modify it by using a carborundum disk and carbide bur.

Caution Never modify the abutment-implant connection.

Caution Do not modify the abutment intraorally.

Note Esthetic Abutment Nobel Biocare N1 Base NP and RP can be modified. However, the modification should not reduce the height from the base level below 4.5 mm.

Note Esthetic Abutment Nobel Biocare N1 TCC can be modified following the below parameters:
1.75 mm down to 5.6 mm from implant level / 3.0 mm down to 7.1 mm from implant level

5

Take a standard impression after blocking out the screw hole (e.g. with Teflon and composite).

6

Clean and remove any debris from the Esthetic Abutment.

7

Provisionalize after sealing the access hole (e.g. using Teflon and composite). Make sure there is no excess cement.

8

If an implant or base level impression protocol is followed instead of steps 5-7, transfer the position of the implant or base from the patient's mouth to the master model using Impression Copings and send it to the laboratory.

Refer to IFU1086 for detailed information on Impression Copings.

Steps for laboratory

9

Produce a working model with removable gingival material.

10

If applicable, select the Esthetic Abutment and modify it by placing it on a replica and using a carborundum disk and carbide bur.

Caution Never modify the abutment-implant connection

Note Esthetic Abutment Nobel Biocare N1 Base NP and RP can be modified. However, the modification should not reduce the height from the base level below 4.5 mm.

Note Esthetic Abutment Nobel Biocare N1 TCC can be modified following the below parameters:
1.75 mm down to 5.6 mm from implant level / 3.0 mm down to 7.1 mm from implant level

11

Fabricate a crown with conventional casting technique.

12

Veneer the crown or framework if applicable.

13

Send the crown and the Esthetic Abutment to the clinician.

Steps for clinician

14

Remove the temporary restoration if applicable.

15

If an implant level impression protocol was followed, tighten the Esthetic Abutment to the implant, otherwise use the compatible Screwdriver and Manual Torque Wrench prosthetic to verify the tightening of the abutment.

16

It is recommended to verify the final abutment seating using radio-graphic imaging.

Seat the restoration on the abutment and check the occlusion and the interproximal contacts.

17

Cement the final crown or framework using conventional procedures after sealing of access hole (e.g. using Teflon and composite). Make sure there is no excess cement.

Caution Do not use temporary cement when cementing ceramic crowns and bridges due to increased risk of micro fractures.

Universal Abutment

Final screw-retained restorative solution to be completed with in-lab milled crown or bridge.

Universal Abutment Base is available in two versions: for single units and for bridges (lasermarked with B) of up to 20° divergence between implants.

20 Ncm

Tightening torque

Screwdriver Omnigrip Mini

Base level

NP
301006

RP
301007

Single unit restorations

NP Bridge
301009

RP Bridge
301010

Multiple unit restorations

Implant level

NP 1.5 mm
300946

NP 3.0 mm
300947

RP 1.5 mm
300948

RP 3.0 mm
300949


Screw access hole
Supported by DTX Studio™ and 3Shape
4 mm post geometry
Fully anodized abutment, co-packed with color-coded screw
Inner thread securing the screw

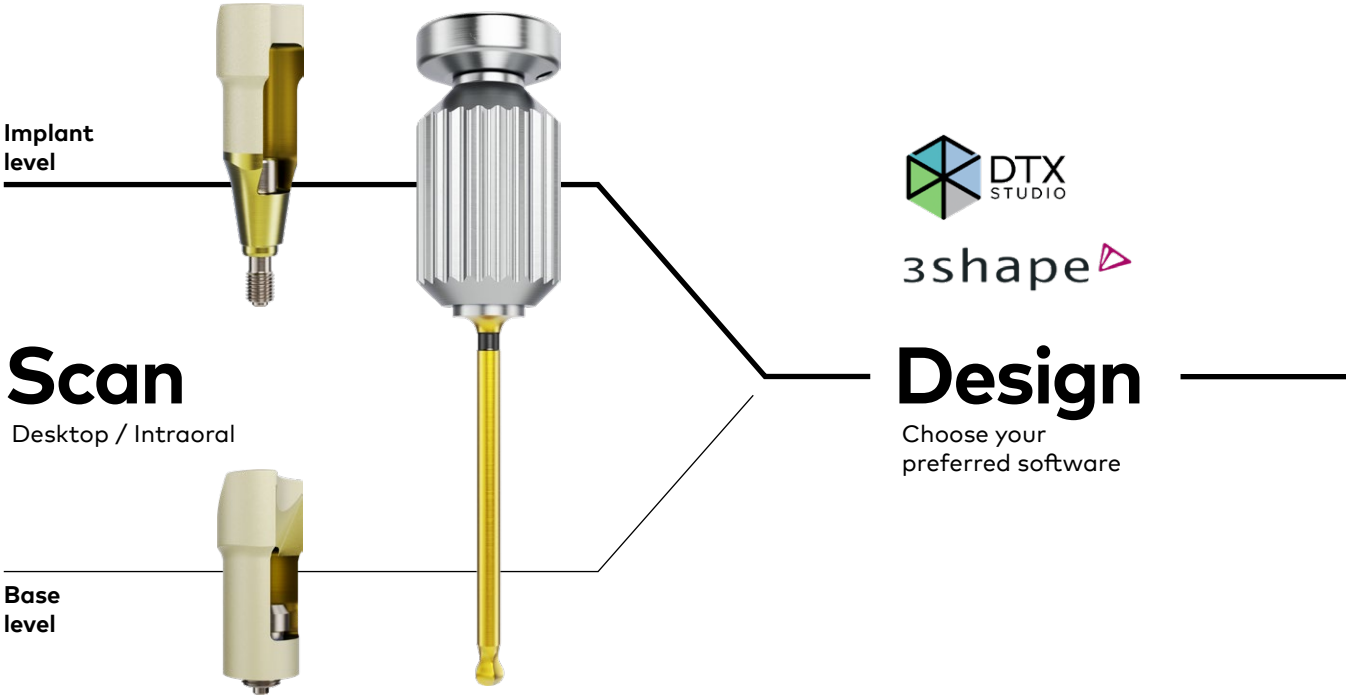
Fully digital restorative design workflow

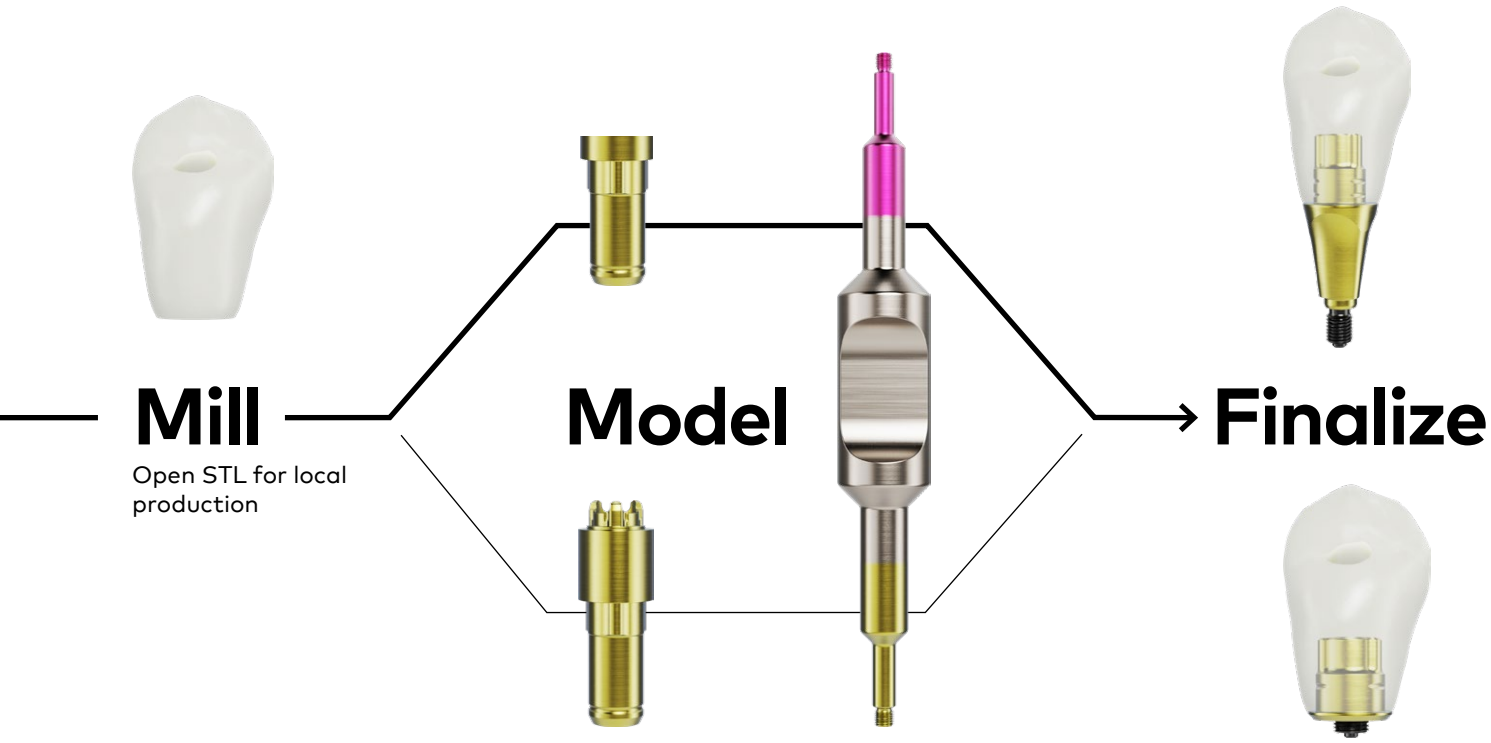
The Nobel Biocare N1 system gives the option to design and fabricate the implant restorations in a fully digital way.

Starting from the digital impression using the new Nobel Biocare N1 Position Locators, that same Position Locator Nobel Biocare N1 Base can be used in the dental laboratory with a desktop scanner.

When working with IOS, the scan data can be seamlessly transferred via DTX Studio Go into DTX Studio Lab software. Also 3Shape users have access to the Nobel Biocare libraries in order to import the scan data and design the restoration.

Thanks to a range of components as well as the software that support local production, the technician has a complete control over the restorative workflow.




Mill
Open STL for local production
Model
Finalize

The digital workflow requires the use of the following equipment and materials, following the standard procedure according to the instructions of the system provider:

Equipment/material	Minimum requirements
Scanner	Kavo LS3, 3Shape Trios or other scanners with accuracy equal or higher than 6.9 µm
Design Software	DTX Studio Lab (the implant libraries are automatically included in the software installer) or 3Shape Dental Designer (the Implant Libraries are obtained via the 3Shape server in the software).
Restorative material	Nacera Pearl Doceram Medical Ceramics Minimum wall thickness allowed: ≤0.5 mm
Milling Unit	Roland DWX 52D – Indicated for milling zirconia material – 5 axis milling technology – 30,000 rpm spindle speed

When using the digital workflow, the standard procedure according to the system provider instructions apply.

The instructions for use of the material manufacturer shall be followed. For setup, validation, use, tools, maintenance, and lifetime information on scanners, ovens, and milling units, please refer to manufacturer's instructions.

Sintering and further processing shall be done according to material manufacturer's guidelines.

Restorative design specifications:

Parameter	Specification
Angle from axis of the implant	20°
Maximum divergence between implants	N/A
Wall thickness circular	0.5 mm
Wall thickness margin	0.35 mm
Post height min.	5.2 mm
Maximum Abutment height (measured from the implant platform)	19.5 mm

Note For restorative design, follow the material manufacturer's guidelines.

Bonding procedure requires the use of following materials:

Primer	i.e. Monobond Plus by Ivoclar Vivadent
Adhesive	i.e. Multilink Hybrid by Ivoclar Vivadent
Glycerin Gel	i.e. Liquid Strip by Ivoclar Vivadent

Warning Do not use any dental cements, restorative material, scanners, components, milling units and CAD/CAM software, templates and tools other than those specifically identified for the Universal Abutment Nobel Biocare N1 and Nobel Biocare N1 Base concept.

Final restoration IOS workflow for crowns

Universal Abutment TCC
Universal Abutment Nobel Biocare N1™ Base

Steps for clinician

1

Connect and hand-tighten the scan body to the implant or base using the Omnigrip mini screwdriver.

The Position Locator should be placed with the screw channel access oriented buccally.

When installing the scan body on the base, make sure to align the parts first, before beginning to tighten the screw.

2

Take an intra-oral scan of the patient following the instructions within the scanner's software. Send the scan data to your dental laboratory.

Inform the dental laboratory about the scan body used (see table on page 19).

3

Remove the Position Locator from the patient's mouth and re-connect the temporary restoration or healing abutment.

If using the IOS Healing Abutment, leave the component in place for the healing phase.

Steps for laboratory

4

Open your CAD software and set up the case:

In DTX Studio Lab: Select **Crown on Base** (for single units only) as restoration type.

Choose the right connection type based on the information received from the clinician (see table on page 19).

Define the platform (NP or RP), restorative material to be used and your in-lab milling unit as the designated production method.

Selection of components within DTX Studio™ Lab

Scan body used*		Connection type to select in software	Position locator to select in software
Position Locator Nobel Biocare N1™ TCC NP/RP		N1 TCC	n/a
Position Locator Nobel Biocare N1™ Base Tri NP/RP		N1 Base Tri	N1 Base Tri
IOS Healing Abutment Nobel Biocare N1™ Base Tri NP/RP		N1 Base Tri	IOS N1 Base Tri (PEEK)

* Within 3Shape software when matching the scan body, use the actual product names as in the first column

5

Import the scan data into CAD software and follow the guidelines of the manufacturer. The latest DME files for 3Shape Dental Designer are obtained via the 3Shape server in the software.

When working on top of the N1 Base, indicate the Position Locator used by the clinician (see table).

When working at implant level, this is not necessary, as there is only one Position Locator option to choose.

6

If working at implant level (TCC), select the desired Universal Abutment margin height.

Proceed with restoration design, adhering to Nobel Biocare's and material manufacturer's constraints.

Violation of any of the restricted parameters will cause a hard stop in the design process.

7

Once finished, export the design file using open STL /construction file for milling.

8

If desired, design a digital model and export for 3D printing.

Final restoration IOS workflow for crowns

Steps for laboratory

9

Once the restoration is milled, finalize it following the restorative material manufacturer's instructions.

Sandblast the bonding surface of the restoration according to the parameters given by the material manufacturer (e.g. using aluminum oxide 50µm at 2 bar).

10

Clean the restoration as recommended by the bonding material manufacturer (e.g. with steam jet or in an ultrasonic bath).

The cleaned surface must not be contaminated, as this would impair the bond.

11

Connect the Universal Abutment to the replica and hand tighten with the dedicated laboratory screw.

Protect the screw channel of the Universal Abutment, e.g. using light-curable block out resin material.

Caution The use of wax in the screw channel is to be avoided.

12

Sandblast the bonding surface of the Universal Abutment with aluminum oxide 50µm at a maximum 2 bar.

No modifications other than sandblasting are to be performed (do not reduce the abutment post height or its retention elements).

Caution Do not sandblast the seating area. During the blasting procedure, use an implant replica to prevent any modification of the abutment-implant interface.

Caution Do not sandblast the seating area. During the blasting procedure, use a Base Replica to prevent any modification of the abutment/base interface.

13

Clean the bonding surface of the Universal Abutment using steam jet or an ultrasonic bath.

Note Use adhesive which is suitable for bonding zirconia structures to titanium abutments and is sterilizable. Additional primer may be used. Follow adhesive manufacturer's instructions.

14

Protect the screw channel of the Universal Abutment using light-curable block out resin material.

In order to better protect the emergence profile of the abutment, use rubber dam.

Apply a layer of primer onto the bonding surfaces of the Universal Abutment and the Zirconia restoration.

15

Once finished, export the design file using open STL /construction file for milling.

16

Apply a layer of adhesive onto the contact surfaces of the Universal Abutment and zirconia restoration.

Final restoration IOS workflow for crowns

Steps for laboratory

17

Connect the restoration to the Universal Abutment and press them lightly together making sure that the parts are fully seated and in correct orientation. Follow the adhesive manufacturer's instructions on curing/polymerization.

18

Remove the excess cement after curing/polymerization has started. In order to prevent the formation of inhibition layer, use glycerin gel on the bonding joint.

19

Once the curing/polymerization is finished, clear the screw channel.

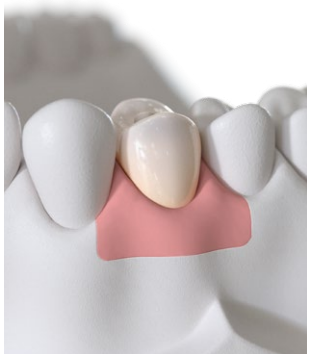
20

Unscrew the restoration from the model, connect it to the replica, polish the cementation joint carefully using rubber polishers and finalize the restoration.

Steps for clinician

21

Send the finalized restoration to the clinician along with the prosthetic screw.



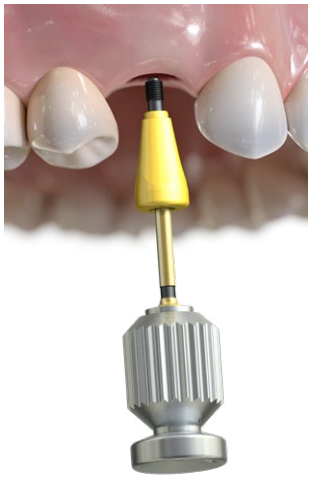
22

Upon receiving the restoration, clean and sterilize it following the instructions of the restorative material manufacturer.

Caution The final restoration and the Prosthetic Screw must be cleaned and sterilized prior to placement in the patient's mouth, according to the instructions of the material manufacturer.

23

Remove the healing abutment or the temporary restoration from the Nobel Biocare N1 Base using the Omnigrip mini Screwdriver.



24

Connect the Universal Abutment restoration to the Nobel Biocare N1 Base or N1 Implant aligning the parts first, then hand tighten the prosthetic screws

Final restoration IOS workflow for crowns

Steps for clinician

25

Tighten the restoration using the Omnigrip mini screwdriver and Manual Torque Wrench Prosthetic to 20 Ncm.

Caution Never exceed 20Ncm prosthetic tightening torque. Overtightening of the prosthetic screw may lead to a screw fracture.

Caution To tighten the abutment, the implant should be able to withstand the recommended tightening torque of the prosthetic screw.

26

It is recommended to verify the final abutment seating using radiographic imaging.

27

Block out the screw head (e.g. using Teflon tape) before closing the screw access hole with composite.

28

If removal of the restoration is needed, open the screw access and untighten the screw using the Omnigrip mini screwdriver.

Final restoration IOS workflow for bridges

Universal Abutment Nobel Biocare N1™ Base Bridge

Steps for clinician

1

Connect and hand-tighten the scan body to the base using the Omnigrip mini screwdriver.

The Position Locator should be placed with the screw channel access oriented buccally.

When installing the scan body on the N1 Base, make sure to align the parts first, before beginning to tighten the screw.

2

Take an intra-oral scan of the patient following the instructions within the scanner's software. Send the scan data to your dental laboratory.

Inform the dental laboratory about the position locator used (see table on page 27).

3

Remove the Position Locator from the patient's mouth and re-connect the temporary restoration.

If using the IOS Healing Abutment, leave the component in place for the healing phase.

Steps for laboratory

4

Open your CAD software and set up the case:

In DTX Studio Lab:

select **Bridge on Base** as restoration type

Based on the information provided by the clinician, choose the right connection type:

N1 Base Tri

Choose material and your inlab milling unit as the designated Production method.

Selection of components within DTX Studio™ Lab

Scan body used*		Connection type to select in software	Position locator to select in software
Position Locator Nobel Biocare N1™ TCC NP/RP		N1 TCC	n/a
Position Locator Nobel Biocare N1™ Base Tri NP/RP		N1 Base Tri	N1 Base Tri
IOS Healing Abutment Nobel Biocare N1™ Base Tri NP/RP		N1 Base Tri	IOS N1 Base Tri (PEEK)

* Within 3Shape software when matching the scan body, use the actual product names as in the first column

5

Import the scan data into CAD software and follow the guidelines of the manufacturer. The latest DME files for 3Shape Dental Designer are obtained via the 3Shape server in the software.

Based on the information provided by the clinician, indicate the scan body used.

6

Design the restoration, adhering to Nobel Biocare's and material manufacturer's constraints.

Violation of any of the restricted parameters will cause a hard stop in the design process.

7

Once finished, export the design file using open STL/construction file for milling.

8

If desired, design a digital model and export for 3D printing.

Final restoration IOS workflow for bridges

Steps for laboratory

9

Once the restoration is milled, finalize it following the restorative material manufacturer's instructions.

Before bonding try-in the restoration on the model with the Universal Abutments embedded in the bridge.

Sandblast the bonding surface of the restoration according to the parameters given by the material manufacturer (e.g. using aluminum oxide 50µm at 2 bar).

10

Clean the restoration as recommended by the bonding material manufacturer (e.g. with steam jet or in an ultrasonic bath).

The cleaned surface must not be contaminated, as this would impair the bond.

11

Connect the Universal Abutments to the N1 Base replicas and hand tighten with the dedicated laboratory screws.

Protect the screw channel of the Universal Abutment, e.g. using light-curable block out resin material.

Caution The use of wax in the screw channel is to be avoided.

12

Sandblast the bonding surface of the Universal Abutment with aluminum oxide 50µm at a maximum 2 bar.

No modifications other than sandblasting are to be performed (e.g. reducing the abutment post height or retention elements)

Caution Do not sandblast the abutment seating area. During blasting procedure, use a replica to prevent any modifications of the abutment/base interface.

13

Clean the bonding surface of the Universal Abutment using steam jet or an ultrasonic bath.

Caution Do not sandblast the seating area. During the blasting procedure, use a Base Replica to prevent any modification of the abutment/base interface.

14

Block out the screw channels of the abutments using light-curable block out resin material. Apply a layer of primer onto the entire bonding surfaces of the Universal Abutments and the Zirconia restoration.

Note Use adhesive which is suitable for bonding zirconia structures to titanium abutments and is sterilizable. Additional primer may be used. Follow adhesive manufacturer's instructions.

15

Connect the Universal Abutments into the restoration and press them lightly in, making sure that they are fully seated.

16

Before the adhesive has set, unscrew the restoration from the replicas and connect it to the replicas embedded in the patient model using laboratory screws.

The guiding finders of the N1 Base replicas will support finding the right orientation for the trioval Universal Abutments on top of the replica and consecutively on the Nobel Biocare N1 Base.

Final restoration IOS workflow for bridges

Steps for laboratory

17

Press the restoration lightly and evenly to the Universal Abutments, making sure it's fully seated. Follow the adhesive manufacturer's instructions on curing/polymerization.

18

Remove the excess cement after curing/polymerization has started. In order to prevent the formation of an inhibition layer, use a glycerin gel on the bonding joint.

19

Once the curing/polymerization is finished, clear the screw channels.

20

Unscrew the restoration from the model and connect it to the replicas. Polish the cementation joint carefully and finalize the restoration.

Steps for clinician

21

Send the finalized restoration to the clinician along with the prosthetic screws.

22

Upon receiving the restoration, clean and sterilize it following the instructions of the restorative material manufacturer.

Caution The final restoration and the Prosthetic Screw must be cleaned and sterilized prior to placement in the patient's mouth, according to the instructions of the material manufacturer.

23

Remove the healing abutment or the temporary restoration from the Nobel Biocare N1 Base using the Omnigrip mini Screwdriver.

24

Connect the Universal Abutment restoration to the Nobel Biocare N1 Base aligning the parts first, then hand tighten the prosthetic screws.

Final restoration IOS workflow for bridges

Steps for clinician

25

Tighten the restoration using the Omnigrip mini screwdriver and Manual Torque Wrench Prosthetic to 20Ncm.

Caution Never exceed 20Ncm prosthetic tightening torque. Overtightening of the prosthetic screw may lead to a screw fracture.

Caution To tighten the abutment, the implant should be able to withstand the recommended tightening torque of the Prosthetic Screw.

26

It is recommended to verify the final abutment seating using radiographic imaging.

27

Block out the screw head (e.g. using Teflon tape) before closing the screw access hole with composite.

28

If removal of the restoration is needed, open the screw access and untighten the screw using the Omnigrip mini screwdriver.

Restorative workflow components

Implant level

Base level

Impression components

Impression Copings / Position Locator
Nobel Biocare N1 TCC

Impression Copings/Position Locator/ IOS Healing Abutment
Nobel Biocare N1 Base

Laboratory replicas

Implant replicas
Nobel Biocare N1 TCC

Base replicas
Nobel Biocare N1 Base

Final restorative options

Universal Abutment TCC
+ locally milled crown

Universal Abutment Base + locally milled crown

Universal Abutment Base Bridge + locally milled crown

Multi-unit Abutment level

Impression Copings / Position Locator
Multi-unit Abutment

Implant replicas
Multi-unit Abutment

Universal Base Multi-unit Abutment
+ locally milled crown

Titanium Abutment Blank

The Titanium Abutment Blank Nobel Biocare N1 is an individualized dental implant abutment directly connected to the endosseous dental implant intended for use as an aid in prosthetic rehabilitation. It is designed and made individually to fit the requirements for each patient.

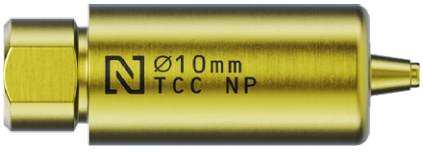
It has a pre-fabricated original connection for the Nobel Biocare N1 TCC TiUltra implants. It is available for NP and RP implant platforms.

20 Ncm

Tightening torque

Screwdriver Omnigrip Mini

Implant level



TCC NP
301211

TCC RP
301212

Laser marked with diameter and platform

Fully anodized abutment

Original Nobel Biocare N1™ TCC connection

The digital workflow requires the use of the following equipment according to the instructions of the system provider:

Equipment	Requirements
Scanner	Kavo LS3, 3Shape Trios or other scanners with accuracy equal or higher than 6.9 µm
Design Software	DTX Studio Lab (the implant libraries are automatically included in the software installer) 3Shape Dental Designer (the Implant Libraries are obtained via the 3Shape server in the software) ExoCAD (the implant libraries are downloaded via the exocad DentalCAD server in the software)
Milling Unit	CORiTEC by imes-icore

When using the digital workflow, the standard procedure according to the system provided instructions apply.

Warning Do not use any scanner, components, milling units, CAD/CAM software, templates and tools other than those specifically identified for the Titanium Abutment Blanks Nobel Biocare N1 TCC.

Design constraints

Restoration type	Min screw channel thickness (mm)	Max abutment height from implant level (mm)	Post height min–max (mm)	Diameter min–max (mm)	Minimum gingival margin height (mm)
Titanium Abutment Blank Nobel Biocare N1 TCC NP	0.38	16	4.05–15.665	3.21–9.95	0.335
Titanium Abutment Blank Nobel Biocare N1 TCC RP	0.49	16	4.05–15.665	3.49–9.95	0.335

Design constraints - Angulation

The maximum margin height at 30 degree angulation is 4.6 mm.

Maximum abutment angulation	Maximum margin height (mm)
30°	4.6 (at 30° angulation)

Final restoration
Titanium Abutment Blank

Steps for clinician

1

Take an impression according to standard clinical procedures for restorative operations and send it to your dental laboratory.

Steps for laboratory

2

Fabricate a working "master" model with base replicas and removable gingival material following conventional laboratory procedures. Ensure that all components are clean and undamaged.

3

Before mounting the Position Locator Nobel Biocare N1 TCC onto the working "master" model, ensure that it is clean and undamaged. Discard the position locator if it is deformed or if there are any scratches on the scan surface, as this can affect the accuracy of the scan.

4

Assemble the required amount of Position Locator Nobel Biocare N1 TCC onto the working "master" model and visually confirm the fit to the base replicas. Avoid any contact of the position locator(s) to the interproximal teeth. Refer to Nobel Biocare IFU1091 and IFU1087 for information regarding position locators and Nobel Biocare N1 implants.

5

Perform the scan with the dental scanner by following the scan process provided by the manufacturer.

6

Export/send the scan file to a Nobel Biocare approved dental CAD/CAM software.

Steps for clinician

7

Before mounting the Position Locator(s) into the patient mouth ensure that all components are clean and in an undamaged condition, check and discard if any scratches on the scan surface or any other deformation.

8

Assemble the required amount of Position Locator(s) onto the base in the patient mouth and confirm the fit. Avoid any contact of the position locator(s) to the interproximal teeth. Refer to Nobel Biocare IFU1091 for information regarding position locators and to IFU1087 for information regarding Nobel Biocare N1 implants.

Final restoration - Titanium Abutment Blank

Steps for clinician

9

Perform the scan procedure with the dental intra oral scanner by following the scan process provided by the manufacturer.

10

Export/send the scan file(s) to the dental CAD/CAM software

Steps for laboratory

11

Import the scan file(s) into the CAD/CAM software

12

Open the relevant CAD module and design your restoration in accordance with indications for use, following the instructions in the software tutorial, the design constraints and according to the patient's clinical needs.

13

Place the pre-milled abutment blank into the compatible DESS® blank holder.

14

Mill the designed abutment with the milling machine and tools taking into account the design constraints.

15

The milling machine manufacturer's specific instruction for use should be considered.

16

Inspect the abutment implant connection and surface of the milled abutment for any damage that may have occurred during the milling process.

Caution Do not modify or sandblast the seating area.

Final restoration - Titanium Abutment Blank

17

Clean the milled abutment with steam jet to remove any residuals.

18

Check fit of restoration on model and if adjustment of the milled abutment is needed, connect it to the implant replica using the laboratory screw.

19

If applicable, fabricate a crown or bridge with CAD/CAM technique or with conventional technique.

20

Send the milled abutment(s) and if applicable the crown/bridge to the clinician.

Steps for clinician

21

Clean and sterilize the milled abutment as per cleaning and sterilization instructions.

22

Remove the cover screw or temporary restoration from the implant if applicable. Refer to Nobel Biocare Instructions for Use IFU1016, IFU1028 or IFU1026 for more information on the cover screw or temporary restorations.

23

Place the sterilized abutment in the patient's mouth onto the Nobel Biocare N1 TCC implant.

Note It is recommended to verify the final abutment seating using radiographing imaging.

Note If any modification is necessary, use sterilized instruments in a controlled surgical environment using aseptic technique. Don't modify the restoration intraorally.

24

Screw the abutment to the implant using the Clinical Screw Nobel Biocare N1 and the Omnigrip Mini Screwdriver.

Note Tightening torque Clinical Screw Nobel Biocare N1: 20 Ncm

Caution When tightening the abutment to the implant make sure to use the Clinical Screw Nobel Biocare N1 TCC and not the laboratory screw.

Caution Do not exceed 20 Ncm when tightening the abutment to the implant. Overtightening of abutment may lead to a screw fracture and/or damage of the abutment.

25

Seat the restoration on the abutment and check the occlusion and the interproximal contacts.

26

After sealing of access hole, cement the final crown or framework using conventional procedures (e.g. using Teflon and composite) according to the manufacturer's instructions. Make sure there is no excess cement.

Multi-unit Abutments

Final implant level screw retained solutions for multiple units and full arch cases.

Featuring the same prosthetic interface as existing conical connection Multi-unit Abutment are compatible with all Nobel Biocare Multi-unit Abutment components.

Available straight and angulated 17°.

20 Ncm

Tightening torque

Screwdriver Multi-unit for straight Multi-unit Abutment

Straight

NP 1.5 mm
301044

NP 2.5 mm
301045

NP 3.5 mm
301046

RP 1.5 mm
301047

RP 2.5 mm
301048

RP 3.5 mm
301049

RP 4.5 mm
301050

20 Ncm

Tightening torque

Screwdriver Omnigrip Mini

17°

NP 2.5 mm
301051

NP 3.5 mm
301052

RP 2.5 mm
301053

RP 3.5 mm
301054

Laser marking to identify the Multi-unit Abutments TCC

Black screw to identify the straight Multi-unit Abutments TCC

Xeal surface

20 Ncm for all Multi-unit Abutments with TCC

Placement of straight Multi-unit Abutment

Steps for clinician

1

If applicable remove the Cover Screw, Healing Abutment or Temporary Abutment using the Screwdriver Omnigrip Mini by rotating it counterclockwise.

2

Select the right straight Multi-unit Abutment. Place the abutment. Use the holder to facilitate proper positioning and seating.

Remove the holder.

3

Tighten the abutment to the required torque of 20 Ncm, using the appropriate Screwdriver Multi-unit and Manual Torque Wrench Prosthetic.

It is recommended to verify the final abutment selection and seating using radiographic imaging.

Caution Never exceed recommended maximum tightening torque for the abutment screw. Overtightening of the abutment may lead to a screw fracture.

Caution To place the abutment, the implant should be able to withstand the recommended tightening torque for the abutment screw. For immediate function, the implant should be able to withstand a torque of at least 35 Ncm.

Placement of 17° Multi-unit Abutment

Steps for clinician

1

If applicable remove the Cover Screw, Healing Abutment or Temporary Abutment using the Screwdriver Omnigrip Mini by rotating it counterclockwise.

2

Select the right angulated Multi-unit Abutment. Place the abutment. Use the holder to facilitate proper position. Hand-tighten the clinical screw using Screwdriver Omnigrip Mini and unscrew the holder.

3

Tighten the abutment to the required torque of 20 Ncm, using the appropriate screwdriver and Manual Torque Wrench Prosthetic.

It is recommended to verify the final abutment selection and seating using radio-graphic imaging.

Caution Never exceed recommended maximum tightening torque for the abutment screw. Overtightening of the abutment may lead to a screw fracture.

Caution To place the abutment, the implant should be able to withstand the recommended tightening torque for the abutment screw. For immediate function, the implant should be able to withstand a torque of at least 35 Ncm.

Impression taking

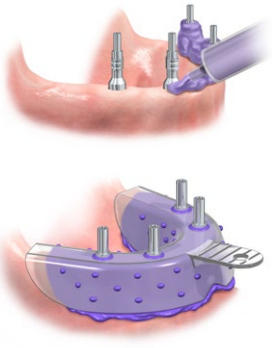
Steps for clinician

1

Select the right Impression coping based on the adopted technique: open or closed tray.

2

Take impression of abutments using open or closed impression tray technique.



3

Provisionalize or attach healing caps.

Temporization

Steps for laboratory

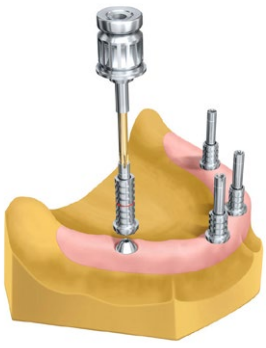
1

Fabricate a soft-tissue model using Abutment Replicas Multi-unit.

2

Use guide pins (available in 10 and 20 mm lengths) or lab screws to place Temporary Copings Multi-unit on the replicas. It is preferable to use temporary copings in titanium.

Adjust the copings if needed.



3

Fabricate an all-acrylic bridge using a high-density acrylic.

If possible, a tooth set-up should be tried in the patient's mouth before finalizing the bridge. The bridge can also be made by converting the existing denture into a bridge.

Steps for clinician

4

Insert the temporary prosthesis and tighten the prosthetic screws by alternating left and right side. Finally tighten the prosthetic screws to 15 Ncm using Unigrip Screwdriver and Manual Torque Wrench Prosthetic

Finalization

Steps for laboratory

1

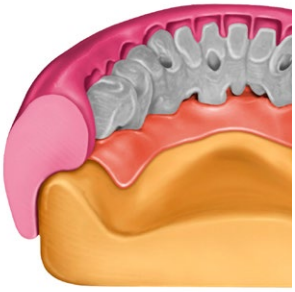
Attach abutment replicas to impression copings.

2

Fabricate a working model with removable gingival material.

3

- Create implant bridge framework using non-engaging temporary cylinders as a foundation and add pattern resin to fabricate desired framework design.
- Scan the acrylic framework using the scanner.



4

Once precision milled framework is delivered back to lab, veneering material is added for completion.

Steps for clinician

5

Remove temporary restoration if applicable.

6

Use the Screwdriver Machine Multi-unit and Manual Torque Wrench Prosthetic to verify the tightening of the straight Multi-unit Abutment to 20 Ncm. Use the Screwdriver Omnigrip Mini and Manual Torque Wrench Prosthetic to verify tightening of the angulated Multi-unit Abutment to 20 Ncm.

7

Insert final prosthesis and tighten the prosthetic screws by alternating left and right side. Finally tighten the prosthetic screws to 15 Ncm using Unigrip Screwdriver and Manual Torque Wrench Prosthetic

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