

Procera® Abutment

Introduction

- Zirconia or titanium
- Customized for superior esthetics
- Cost-effective, no need to stock pre-fabricated abutments
- Easy to make with the Procera® 3D CADDesign program or by scanning a wax-up
- Biocompatible materials guarantee excellent long-term results
- Designed to practically any angle, taper, finish line, height, width and cross-sectional form. Can also compensate for odd angles and implant alignments

Platform Options

- Brånemark System® implant system.
- NobelReplace™ implant system.
- NobelSpeedy™ implant system.
- NobelPerfect® Groovy implant system.
- Procera® Abutment Octagon for Straumann Regular neck 4.8 mm implant system.

Indications

- Single or multiple implant restorations.
- Fully edentulous or partially edentulous arch.

Clinical Procedure

Impression

Taking an impression

- Remove healing abutments.
- Place impression copings on the implants and take a standard impression.
- Your ability to accurately capture an impression is critical to correct transfer of information to the laboratory.
- Use your preferred impression material and method.
- Assemble the impression coping with an implant replica using the Screwdriver Unigrip™ and reseal into the impression.
- The laboratory should then confirm the placement of the implant replicas in the impression to allow creation of a model.

Shade Selection

It is essential to accurately document the color of the adjacent teeth according to the Vita range, since it is the pattern used for the veneering porcelain that best suits Procera® restorations.

Thereafter, the easy NobelRondo™ procedure using sample discs provides unlimited possibilities for achieving customized esthetics, (eg, the hue, chroma and value of the teeth).

For more information see the NobelRondo™ Ceramic Concept and Procedures CD or manual.

Connection

- Remove the Healing Abutment with a Screwdriver UniGrip™.
- Connect the Procera® Abutment to the implant and securely tighten the Procera® Abutment screws with a Screwdriver UniGrip™.
- Verify fit.
- Finish tightening to 35 Ncm with the manual Torque Wrench Prosthetic and the Screwdriver machine UniGrip™.
- Cement the Procera® restoration.
- Verify occlusion.
- The Procera® restoration is cemented over the customized abutments following the same basic protocol as tooth-supported crowns and fixed, partial dentures. See the Procera® Crown and Procera® Bridge cementation sections in this CD.

New interactive test – Procera® Abutment Clinical Procedure

At the end of each section, this Tutorial includes a series of multiple-choice questions that should help you to determine if you understood its key points. Simply read each question, click on the radial button with the proper answer.

- 1. Before taking an impression, what should be done first?**
 - a. Place impression copings on the implants
 - b. Remove healing abutments
 - c. Both A and B
 - d. Neither A nor B
- 2. When connecting the abutment, and after verifying the fit, finish tightening to _____ with the manual Torque Wrench Prosthetic and the Screwdriver machine UniGrip™.**
 - a. 25 Ncm
 - b. 30 Ncm
 - c. 35 Ncm
 - d. 40 Ncm
- 3. Utilize the VitaRange to accurately:**
 - a. Take an impression
 - b. Document color
 - c. Connect to the implant
 - d. All of the above
- 4. When cementing the Procera® restoration:**
 - a. Permanent cementation should be used
 - b. Temporary cementation can be used
 - c. Permanent cementation should not be used
 - d. Temporary cementation cannot be used

Answer Key

1. c. Both A and B
2. c. 35 Ncm
3. b. Document color
4. d. Temporary cementation cannot be used

Procera® Abutment

Laboratory Procedure

Modelling

- Confirm the placement of the implant replica in the impression.
- Create the model according to your standard working procedure using soft tissue material.

Regarding Procera® Abutment Wax-up

- Create the abutment in a pattern resin or a hard wax. Use a temporary component (engaging) as a foundation for the abutment pattern.
- You must respect certain dimensions in the waxed framework depending on which Procera® product you wish to fabricate:
 - For ceramic abutments NP—maximum dimensions are 4 mm x 12 mm radius x height (r x h).
 - For ceramic abutments RP/WP— maximum dimensions are 5 mm x 15 mm (r x h).
 - For titanium abutments NP—maximum dimensions are 5 mm x 12 mm (r x h).
 - For titanium abutments RP/WP —maximum dimensions are 7.5 mm x 15 mm (r x h).

Regarding Procera® Abutment CAD

To facilitate correct abutment angulation and measurements, insert a Guide Pin and T-bar into the replica.

These are contained in the Procera® Abutment 3D CADD Kit and will help you to feed correct data into the 3D CADDDesign application.

Scanning

Note that the scanning procedure is only necessary for Procera® Abutment Wax-up.

Once you have made a working model of Procera® Abutment, the next step is to scan the die to produce input data for the Procera® CAD application.

Double-click on the scanner to see more details about how to set-up and use the scanner.

Procera® Forte

For Crowns, Bridges, Abutments and Laminates
Remember!

The online step-by-step tutorial in the Procera® Forte application guides you through the complete scanning workflow.

Scanner Set-up

- Powerful magnets ensure that the base sits firmly on the base plate and that the die or jaw holders are firmly positioned on the top plate.
- Procera® Forte is controlled through the scanning software (accessed via the Procera® Software interface).
- When positioning the stylus, always handle the stylus itself. Do not hold the probe.
- Before using Procera® Forte scanner for the first time, plug-in the hardware and install the Procera® Forte scanning software on your PC (see scanner set-up instructions).
- Switch the scanner power on.
- Procera® Software must first be installed on your PC.
- Refer to the system specifications for details of the minimum PC requirements to run the software.

Log in to Procera® System

- Click the Procera® System icon.
- Log in by entering the appropriate username and password and then click 'Enter'.
- Click the Procera® Forte icon.
- When you are successfully logged in, the Procera® System front-end software will now automatically attempt to connect to Procera® Forte.
- If the scanner is found, the indicator on the toolbar will turn bright green and the scanner's serial number will be displayed in the title bar.
- Procera® Forte is now ready for use.

Note!

If you want to change scanners from Procera® Forte to Procera® Piccolo or vice-versa, close the scanning application. In the Procera® System interface, open the "Scanner Configuration" menu and select the appropriate scanner.

Initiation

- If the indicator light is orange, the scanner is in the process of booting.
- You will need to wait until it turns bright green. Note that this could take up to 2 minutes.
- If no scanner is found the indicator on the tool bar will remain dark green. If this happens, check that the USB and power are connected and that the power switch is on.

- If there is power to the scanner and the cabling is OK, there is a more serious problem. Refer to the faultfinding section in the Procera® Forte Help file.

Calibration Check

- It is recommended that you check your Procera® Forte scanner once a day, but at least once a week.
- Click the “Scanner Check” icon in the Procera® Forte Scanner software.
- Follow the instructions that appear on the screen.

Select Type of Operation

- For Procera® Abutments, select the “Single Abutment” icon from the scanner software toolbar.

Die Alignment

- Mount the abutment pattern on the appropriate platform replica attached to the holder.
- Tighten the screw that holds the abutment pattern and block the screw access channel with wax.
- Place the holder on the baseplate of Procera® Forte.
- To correctly transfer the rotational orientation of the implant platform to the produced abutment, ensure that the point on the holder is in line with the point on the baseplate.

Start/Stop Scanning

Follow the online step-by-step tutorial in the Procera® Forte application concerning the subsequent scanning process.

- Click the “Start scan” icon in the Procera® Forte software toolbar to start scanning.
- The scan starts and a 3-dimensional plot of the scanned model appears on the screen.
- Click the “Stop scan” icon to stop scanning.
- If the scan is aborted, the whole scan must be started again from the beginning.

Complete Scanning

- When the scan is complete, Procera® Forte will automatically stop and the data that has been collected will be displayed on your screen as a solid model.
- The resulting data is deemed unreliable if undercuts (red patches) appear above the margin line.
- The scanned data is saved automatically upon completion of the scan and is now available for import into the Procera® CADDDesign application.

Delete Scanning

- If you do not want to import the scanned data into the Procera® CADDDesign application, you can delete it using the “Delete job” icon, or by selecting the ‘Delete’ option from the ‘File’ menu.

Procera® Piccolo

For Crowns, Abutments and Laminates

Remember!

The online step-by-step tutorial in the Procera® Piccolo application guides you through the complete scanning workflow.

Scanner Set-up

- The scanner is controlled through the software interface.
- The probe and turntable are handled manually.
- The lever on the side, releases the turntable so that it can be set to a correct start position.
- Along with the scanner, you have received a box with a holder, a die holder, a calibration gauge and a centering pointer.
- The power switch is located at the back of the scanner.
- Ensure that all cables are connected.
- Clean the probe tip.

Log in to Procera® System

- Click on the Procera® System icon.
- Log in by using the appropriate username, password and press Enter on the keyboard.
- Click on the Procera® Piccolo Icon.
- Procera® System recognizes if a Procera® Piccolo is installed and starts the interface. An icon appears in the working task bar.

Note!

If you want to change scanners from Procera® Forte to Procera® Piccolo or vice-versa, close the scanning application. In the Procera® System interface, open the “Scanner Configuration” menu and select the appropriate scanner.

Initiation and Calibration

- After the Procera® Piccolo is switched-on, a calibration must be carried out before the first scan.
- This is automatically detected by the software.
- A message will appear in the middle of the screen.
- Click on “Calibrate” and follow the instructions on the screen.

Note!

To ensure continuous precision in the scans, regularly check Procera® Piccolo against the gauge.

Select Type of Operation

- For Procera® Abutments, select the “Single Abutment Wax-up” icon from the scanner software toolbar.

Alignment

- Mount the abutment pattern on the platform replica attached to the abutment holder.
- Tighten the screw that holds the abutment pattern and block the screw access channel with wax.
- Place the holder on the turntable of Procera® Piccolo. Ensure that the marked line on the holder is in line with the starting position (270°) both on turntable and scanner base. By doing so, you will correctly transfer the rotational orientation of the implant platform to the produced abutment.
- Check to see whether the measuring probe is in contact with the joint between the platform replica and the wax-up pattern, during an entire revolution, by placing the probe in this area and rotating the turntable manually. If it is not, the finished Procera® Abutment Titanium will have excessive material that will have to be removed, and the Procera® Abutment Zirconia will lack material.
- Position the probe below the corner of the upper level of the platform replica. It is important that the whole plane and the peripheral angle are represented in the scan, as this is the reference to the fixture level.

Start/Stop Scanning

Follow the online step-by-step tutorial in the Procera® Piccolo application concerning the subsequent scanning process.

- Click the “Start abutment” icon in the Procera® Piccolo software toolbar to start scanning.
- The scan starts and a 3-dimensional plot of the scanned model appears on the screen.
- Click the “Stop scan” icon to stop scanning.
- If the scan is aborted, the whole scan must be started again from the beginning.

Complete Scanning

- When the scan is complete, Procera® Piccolo will automatically stop and the data that has been collected will be displayed on your screen as a solid model.

- The resulting data is deemed unreliable if undercuts (red patches) appear above the margin line.
- The scanned data is saved automatically upon completion of the scan and is now available for import into the Procera® CADDesign application.

Delete Scanning

- If you do not want to import the scanned data into the Procera® CADDesign application, you can delete it using the delete icon, or by selecting the ‘Delete’ option from the ‘File’ menu.

Procera® Software

Procera® Software is used to:

- Create a production order.
- Process the scanning data in a CAD environment (Wax-up technique).
- Design a Procera® Abutment in a CAD environment (CAD technique).
- Dispatch an order for production.

Create an Order

- Whilst scanning is ongoing, click the “Order Manager” icon on the left-hand side of the Procera® Software screen.
- To create an order, follow the online step-by-step tutorial presented in the Procera® Software Order Manager application.
- To gain a general reference overview of the Order Manager application, you can also click on Help in the application’s main menu.

CADDesign application

- After creating a new order in the Order Manager, click the Procera® CADDesign application icon on the left-hand side of the Procera® Software window to finalize the design.
- Depending on your chosen lab technique, there are two design guides included in the Procera® Software CADDesign application to support the production of Procera® Abutment:
 - “Design Abutment CAD” – Design the abutment entirely in a 3D CAD environment (with no previous scanning).
 - “Design Abutment Wax-up” – select the relevant abutment system, material and platform for your waxed-up technique abutment.
- Click on the appropriate link to open the relevant

online step-by-step tutorial in the Procera® Software CADDesign application.

- To gain a general reference overview of the CADDesign application, you can also click on Help in the application's main menu.

Dispatch an Order

- Use the Procera® Software Order Manager to dispatch the order to the Nobel Biocare production facility.
- Click the "Order Manager" icon on the left-hand side of the Procera® Software screen.
- To dispatch an order, follow the online step-by-step tutorial in the Procera® Software Order Manager application.
- To gain a general reference overview of the Order Manager application, you can also click on Help in the application's main menu.

Concluding Procedure

After delivery of the Procera® Abutment from the Nobel Biocare production facility:

Ceramic Abutments

- If it is necessary to make minor adjustments, use a high-speed diamond bur or flex disc under low pressure and with copious water irrigation.
- When designing/preparing Procera® Abutment Zirconia, make sure that the thickness of the ceramic material is at least 0.8 mm. This thickness limit is applicable up to a height of 3 mm above implant level.
- After adjustments, sandblast the Procera® Abutment using two to four bars of pressure utilizing 50 µm –100 µm aluminum oxide, at an approximate distance of 10 mm.
- Clean in an ultrasonic unit.

Titanium Abutments

- If it is necessary to make minor adjustments, use a carbide bur. Rubber wheels are used for the collar part.
- Clean in a clean ultrasonic unit.

New interactive test – Procera® Abutment Laboratory Procedure

Procera® Forte Users

At the end of each section, this Tutorial includes a series of multiple-choice questions that should help you to determine if you understood its key points. Simply read each question, click on the radial button with the proper answer.

1. _____ ensure(s) that the base sits firmly on the base plate and that the die or jaw holders are firmly positioned on the top plate.
 - a. Screws
 - b. Cement
 - c. Magnets
 - d. All of the above
2. If the scanner is found, the indicator on the toolbar will turn bright green and the scanner's _____ will be displayed in the title bar.
 - a. Picture
 - b. Serial number
 - c. Name
 - d. Identification code
3. When aligning the die, tighten the screw that holds the abutment pattern and block the screw access channel with what material?
 - a. Type-4 stone
 - b. Wax
 - c. Impression material
 - d. None of the above
4. To correctly transfer the rotational orientation of the implant platform to the produced abutment, ensure that the point on the holder is in line with the point on the _____.
 - a. Top plate
 - b. Platform
 - c. Baseplate
 - d. Indicator
5. When the scan is complete, Procera® Forte will automatically stop and the data that has been collected will be displayed on your screen as a _____.
 - a. Color model
 - b. Solid model
 - c. 3-D model
 - d. Transparent model

Answer Key

1. c. Magnets
2. b. Serial number
3. b. Wax
4. c. Baseplate
5. b. Solid model

New interactive test – Procera® Abutment Laboratory Procedure

Procera® Piccolo Users

At the end of each section, this Tutorial includes a series of multiple-choice questions that should help you to determine if you understood its key points. Simply read each question, click on the radial button with the proper answer.

1. Which of the following items comes along with the scanner?
 - a. A die holder
 - b. A calibration guage
 - c. A centering pointer
 - d. All of the above
2. To abort the scanning process, which icon must be pressed?
 - a. Finish Scan
 - b. Scan Complete
 - c. Stop Scan
 - d. None of the above
3. If the measuring probe is not in contact with the joint between the platform replica and the wax-up pattern, the finished Procera® Abutment Ti will have _____ material, and the Procera® Abutment Zr will have _____ material.
 - a. Less; less
 - b. Excess; excess
 - c. Excess; less
 - d. Less; excess
4. During alignment, the probe should be positioned _____ the corner of the upper level of the platform replica.
 - a. Above
 - b. Below
 - c. Parallel to
 - d. None of the above
5. After the Procera® Piccolo is switched on, a calibration must be carried out _____ the first scan.
 - a. After
 - b. During
 - c. Before
 - d. All of the above

Answer Key

1. d. All of the above
2. c. Stop Scan
3. c. Excess; less
4. b. Below
5. c. Before