



## CAD/CAM Conical Titanium Base for crowns

The CAD/CAM Conical Ti Base, engaging, acts as a bonding base for customized, implant-supported single crown restorations with straight and angled screw channels. The CAD/CAM conical titanium base or conical titanium scan bodies may be used for in-mouth scanning (refer to the scan body usage module). Afterwards, the digitally acquired geometry is used in the modeling and fabrication of the restoration using CAD/CAM techniques.

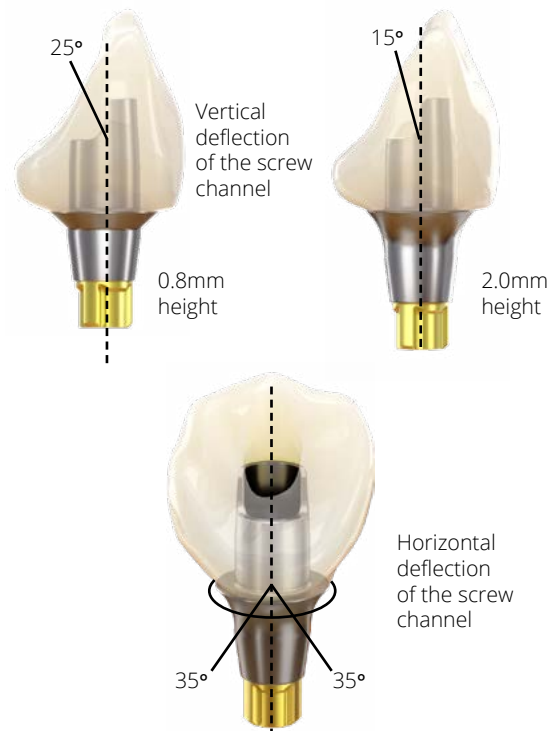
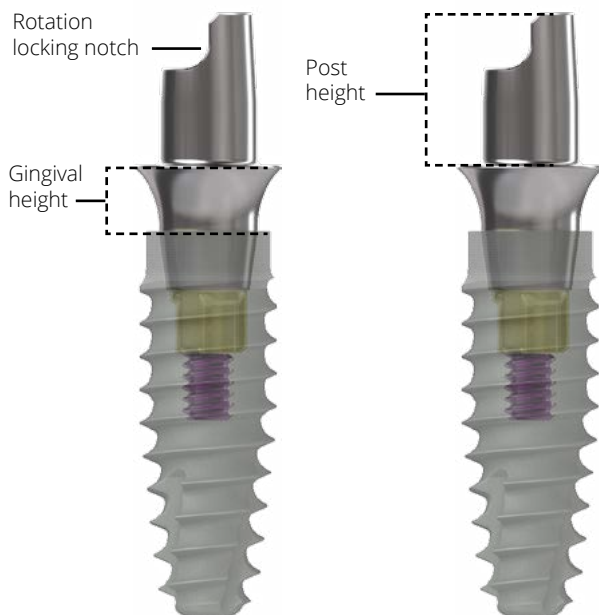
### Product Highlights:

- For narrow platform implants, the Conical Ti Base, engaging, is available in the short post height (4.7mm) and in two gingival height options (0.8mm & 2.0mm). For regular platform implants, the Conical Ti Base, engaging, is available in the tall (6.5mm) and short (4.7mm) post heights and two gingival heights (0.8mm & 2.0mm).
- Single crown restorations are secured against the rotation locking notch designed on the titanium base.
- The rotation locking notch of the titanium base must be aligned in the direction of the planned screw channel. This allows the screw channel to be vertically deflected by up to 25° from the implant axis for the 0.8mm gingival height titanium base and up to 15° for the 2.0mm gingival height titanium base. A horizontal deflection of up to 35° is possible from the longitudinal axis of the implant.



### component options

- CAD/CAM system with a BioHorizons library
- CAD/CAM Conical Ti Base, engaging (incl. CAD/CAM Ti base abutment screw)
- Conical Ballpoint Hex screwdriver or .050" (1.25mm) hex driver





## CAD/CAM Conical Titanium Base for crowns

### 1 Digitize the impression

There are two primary ways to create a digital impression:

**Option A** - The first method is to take an intraoral digital impression. For detection of the precise dental implant position during scanning, use a BioHorizons Conical Implant-level Scan Body. Ensure that the selected scan body corresponds with the dental implant's prosthetic connection size. Scan the patient's anatomy and scan body using a 3Shape Trios 5 intra-oral scanner or similar.

**Option B** - The second method is to take an implant level impression, pour a stone model, place the titanium scan body into the implant analog and scan the model using 3D tabletop digital scanner.



### 2 Design the crown

Import the digitized patient information from the intra oral scan to the design software. Select the appropriate BioHorizons library for a Conical Ti Base restoration that corresponds with the prosthetic connection and design needs. BioHorizons library files have design limitations, and the user is not allowed to exceed these limitations. Refer to the Conical Prosthetics IFU for the Conical Ti Base design limitations.

Design the zirconia superstructure in the design software.



#### Important:

The zirconia superstructure must be designed using 3Shape Dental System or similar with the appropriate BioHorizons library files installed.

BioHorizons library files can be downloaded from:  
[www.vulcandental.com](http://www.vulcandental.com).

The operation manual for 3Shape Dental System can be accessed from: [www.3shape.com](http://www.3shape.com).





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### 3 Mill the crown

**Option A:** (lab step) Once the crown is approved, send the file to a BioHorizons validated milling center.



2300 Riverchase Center, Suite 825  
Birmingham, AL 35244  
Phone: 844-484-2301  
Website: [www.vulcandental.com](http://www.vulcandental.com)  
Email: [info@vulcandental.com](mailto:info@vulcandental.com)

**Option B:** (Computer-aided manufacturing) Send the digital design file of the zirconia superstructure using hyperDENT® Classic to an imes-icore® CORITEC 150i Pro milling machine.

Manufacture the zirconia superstructure with tooling for dental zirconia according to manufacturer's instructions.

It is recommended the zirconia superstructure be produced using sagemax® NexxZr zirconia (K130991) or similar and sintered according to manufacturer's instruction.



### 4 Cement the crown

Bond the restoration to the titanium base following the cement manufacturer's indications. The milled superstructure shall be prepared for cementation according to manufacturer's instruction. Prior to sterilization, bond the milled zirconia superstructure to the Conical Ti Base using 3M™ RelyX™ Unicem 2 Automix Self-Adhesive Resin Cement Resin (K022476) or similar.



**Important:**

For single crowns with angled screw channels, the final unused CAD/CAM Ti base abutment screw must be inserted before bonding the final restoration. The abutment screw is "contained" by the restoration bonding and may not be removed or inserted after bonding.





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### Seat the final restoration

Clean and sterilize the finished restoration per BioHorizons IFU (L02085US - Instructions for Use: Conical Dental Prosthetics).



**Note:**

It is recommended to include a 30-minute cool-down period before removing the product from the sterilization bag or wrap. Remove the healing abutment or temporary prosthesis from the implant with a .050" (1.25mm) hex driver.

Make sure the implant prosthetic platform is free of bone and soft tissue. Irrigate the internally-threaded connection of the implant and dry.

Secure the titanium base abutment restoration onto the implant using the Conical CAD/CAM Ti base abutment screw. Hand tighten using the conical ballpoint hex screwdriver.



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### Verify and modify the restoration

Verify the occlusion and contacts. There should only be light contact in centric occlusion. Modify as necessary and polish after adjusting.

Take a radiograph along the long axis of the implant to ensure that the restoration is seated completely in the grooves of the implant.



**Note:**

The x-ray tube must be positioned perpendicular to the implant prosthetic platform.



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### 7 Tighten the abutment screw

Tighten the CAD/CAM Ti Base abutment using the conical ballpoint hex screwdriver to 20Ncm.



### 8 Fill the screw access channel

Place a resilient material of choice (gutta-percha, silicone or temporary filling material) into the screw access channel. This allows for easy access to the abutment screw in the future. Fill the remainder of the channel with a composite resin material of choice.

Take an x-ray for final prosthesis delivery records.

