

Implanova® Prosthetic System

1) Introduction

- a) **The entire Implanova® prosthetic system uses the exact same screw type. The length of the screw head varies depending on the indication. All final abutment/restorations must be torqued to 20Ncm using an Implanova® prosthetic torque wrench. Please note that for the final restoration, the screw/abutment must be re-torqued to 20Ncm at least 10mins after the initial torquing. If any preparations is made on the final abutment/restoration the screw/abutment must be torqued again. A single ISO hex driver is used for all prosthetic parts.**
- b) All Implanova abutments can be modified for suitable height and margin position by a carbide bur or diamond abrasive in a high speed hand piece with copious water. Final height should not be less than 4mm to secure adequate retention of crowns. The margin can be dropped down up to 1mm without reduction of diameter.
- c) All Implanova® abutments utilize the conical, 11° tapered body design to ensure tight, uniform sealing with the internal surfaces of the implant. The abutment can be placed either at the time of surgical placement of the implant fixture if initial stability is sufficient or at a later date after the implant is integrated. As an alternative, a healing cap can be placed at the time of implant placement and can be replaced with the appropriate abutment after implant integration.
- d) All Implanova® abutment components are made up of Grade 23 Titanium alloy (Ti-6Al-4V ELI) per ASTM F136.
- e) Implanova medium height abutments are typically suitable for subcrestal placed implants. Short abutments are for crestal placed implants.
- f) Implanova abutments that are designated as unibutments are those that do not have any platform on themselves and the emergence profile is created by the restoration.
- g) Implanova® abutments come in seven forms. Straight abutments come in solid, one-piece or two-piece Contoured Shoulder abutments. Solid abutments have an integrated external thread that is designed to be directly fastened into the Implanova® implant fixture without the need of an additional screw. All Implanova® Angled unibutments and Contoured Shoulder abutments attach to the Implanova® bone level implant fixture using a single size, universal abutment screw. All Implanova® abutments are compatible with and fit all Implanova® implant sizes.
Note: Angled abutments should not be used with 3mm implants. This includes TiTACH™ abutments and angled FRIDGE® unibutments.

2) Connection Compatibility

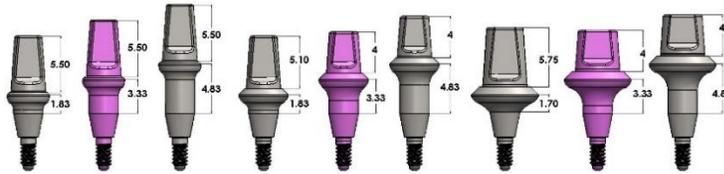
All Implanova® self-grafting, subcrestal implants are fully compatible with any Implanova®, subcrestal abutment, which

allow for about 500 different fixture-to-abutment combinations. In addition, all Implanova® self-grafting, sub-crestal implant fixtures have connections compatible with the restorative components including abutments, abutment screws, and temporary abutments that are intended for Astra Tech’s OsseoSpeed™ TX 3.5S - 4.0S implant fixtures.

Implanova® Bone Level to Astra Tech Compatibility List				
Component Type	Part #	Device Name	Manufacturer	Compatible Implanova® Bone Level Fixtures
Healing Abutment	22851	TempDesign™3.5/4.0	Astra Tech	All Bone Level Implants
Healing Abutment	22853	TempDesign™3.5/4.0 NI	Astra Tech	All Bone Level Implants
Healing Abutment	24281	Temporary Abutment 3.5/4.0	Astra Tech	All Bone Level Implants
Healing Abutment	24280	Temporary Abutment 3.5/4.0 NI	Astra Tech	All Bone Level Implants
Abutment Screw	24449	Abutment Screw Design 3.5/4.0	Astra Tech	All Bone Level Implants
Abutment	24910 - 24916	Direct Abutment™3.5/4.0	Astra Tech	All Bone Level Implants
Abutment	24917 - 24923	Direct Abutment API™3.5/4.0	Astra Tech	All Bone Level Implants
Abutment	24893 - 24898	20° UniAbutment 3.5/4.0	Astra Tech	All Bone Level Implants
Abutment	24899 - 24904	45° UniAbutment 3.5/4.0	Astra Tech	All Bone Level Implants
Abutment	24905 - 24909	Ball Abutment 3.5/4.0	Astra Tech	All Bone Level Implants
Abutment	24268 - 24272	Locator™ Abutment 3.5/4.0	Astra Tech	All Bone Level Implants

3) Stock Solid Abutments

a) **Straight Solid Prepable Abutments** are single piece, solid abutments that are designed to be used in parallelism with a placed implant fixture. Straight abutments are available in 3 diameters – Narrow (4.1mm), Standard (4.8mm), and Wide (6.5mm). They are selected based on the available space between the two adjacent teeth and the type of restoration to be used. For each abutment diameter, there are 3 different neck lengths available – Short (1.7mm), Medium (3.1mm), and Long (4.6mm) – which are designed to be used with crestal, subcrestal (1-2mm), and way subcrestal (2-3mm) implant placement levels, respectively. Due to a thick, meaty abutment center, all Straight abutments are prepable by the practitioner for specific **height and shoulder positions**. Straight abutments feature a single, hexagonal socket size that is universal to the Implanova® implant system and compatible with the Pick ‘Em Up™ Hex Drivers. Implanova® Straight abutments should be placed manually or at 20 rpm with a torque of 20 Ncm.

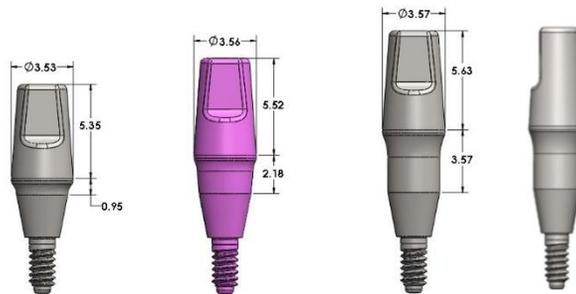


Note: Solid abutments are ideal to be used in two or more adjacent implants. In this case, the chance of screw loosening would be practically zero. Solid abutments are not recommended as single unit restorations as occlusal forces may loosen abutment-restoration unit.

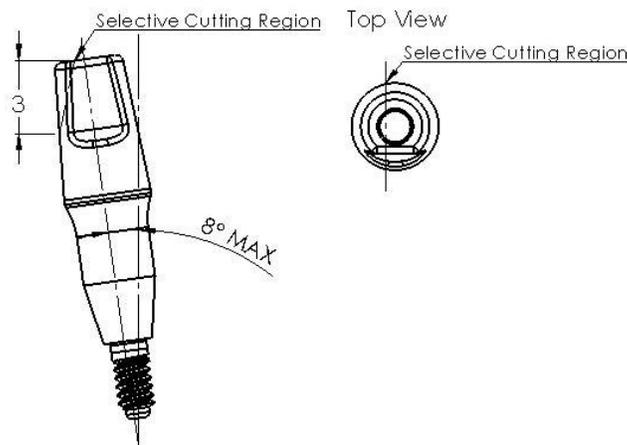
Caution: Once the abutment is screwed on the implant, it may become impossible to unscrew the abutment without unscrewing the implant with even as low as 5 N-cm force, unless the implant is integrated (6 weeks out). Therefore, if you are placing the abutment at the time of initial placement, make sure the implant is secured (larger than 30 N-cm insertion torque) and you have the correct diameter and neck length for abutment selection.

b) Straight Solid Preparable Unabutments

- i. **Straight Solid Preparable Unabutments** are specially made for the FRIDGE®. They come in three neck lengths: Short, Medium, and Long. They are not suitable for individual restorations.



- ii. When used for FRIDGE system up to 1/3 of one side can be prepped away to help the seating of the friction cap. However, the height of the unabutment must not be reduced any further as the abutment is at its minimum height.



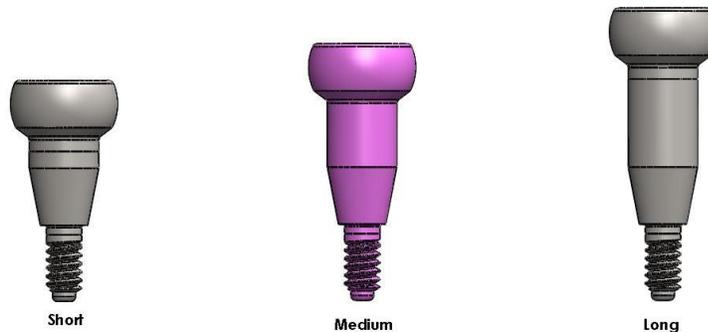
c) **Rescue Abutment**

- i. As the name implies, Implanova® sub-crestal implants are meant to be placed at sub-crestal level. Occasionally, the top of the implant becomes exposed through the mucosa. Therefore, it does not allow platform switching of regular abutments.
- ii. The rescue abutments are made to facilitate the restoration of these implants. A single rescue abutment fits all the implant diameters.



d) **TiTACH™ Abutment**

- i. **TiTACH™ Abutments** are utilized as the support fixture for TiTACH™ caps. These abutments have a rounded platform that allows the TiTACH™ cap to rotate for implant angle corrections up to 30°. Along with the abutment and its cap supplied additionally, is a silicon sleeve that prevents any acrylic from locking around the abutment. The sleeve is temporarily used until caps are picked up by acrylic.

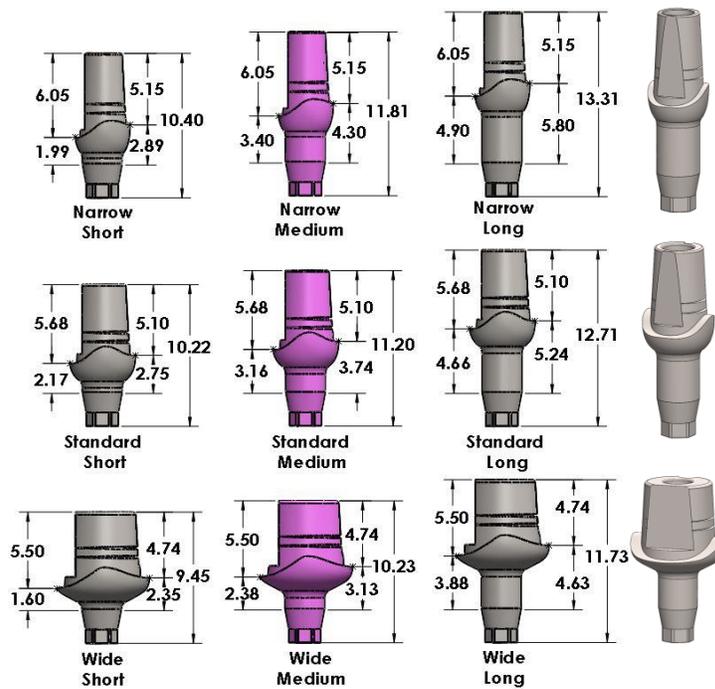


4) **Contoured Shoulder Preparable Abutments**

Contoured Shoulder Preparable Abutments are two-piece abutments that offer anatomically contoured shoulder to provide esthetic sub-crestal buccal margin while allowing supra-crestal inter proximal margins and lingual crestal margins.

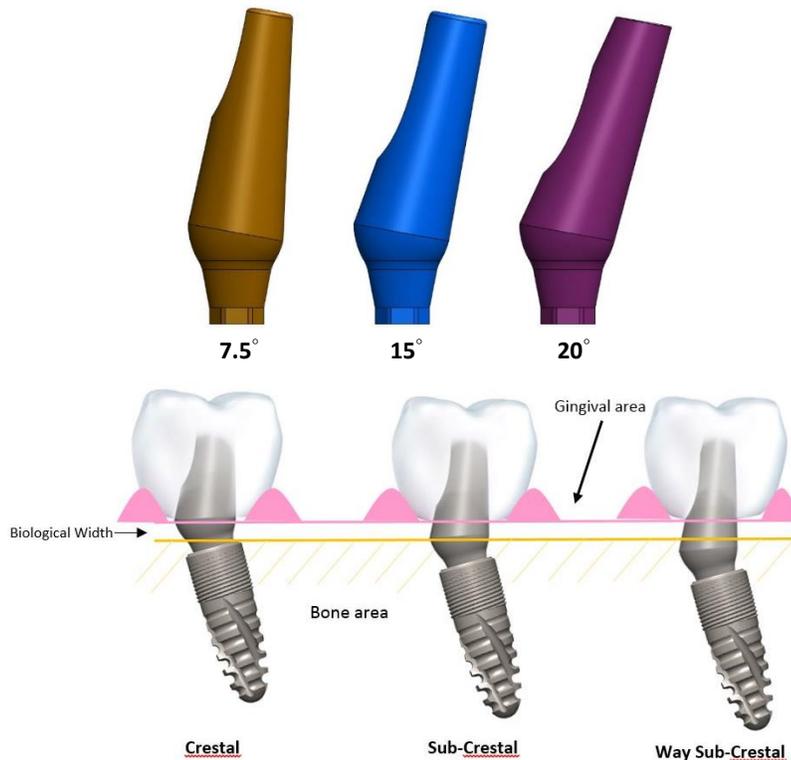
These abutments are also preparable, allowing apical preparation of the shoulder using a carbide bur or diamond abrasive.

Contoured Shoulder Preparable abutments are ideal for single unit restorations with or without adjacent natural teeth. They are also suitable for the “screwmentation” technique. They can also be used on the implant model for laboratory manufacturing of crowns.



5) Angled Universal Height Unibutments

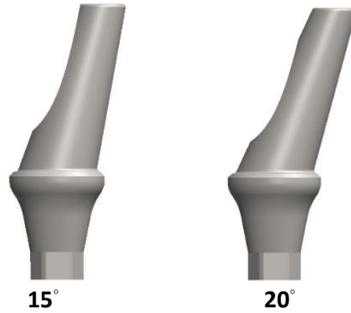
Angled Universal Height Unibutments are used to correct implant angulation up to 20°. The restoration can start from the vertical part up to the screw access. The tip of the unibutment can be shortened as necessary with a carbide bur in high speed with copious amount of water. The minimal length of unibutment to retain a restoration is 4mm. These unibutments are suitable for crestal, subcrestal and way subcrestal placed implants. They are ideal for “screwmentation” technique.



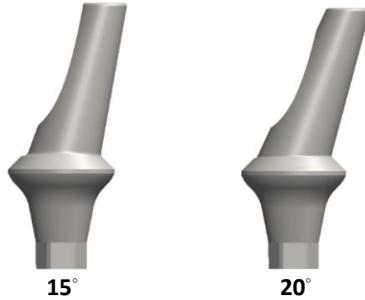
6) Angled Platform Preparable Abutments

Angled Platform Preparable abutments are for restoration of implants at 15 or 20 degree angles and in case of upper teeth when the implant is typically placed in the lingual direction compared to the axis of the desired crown.

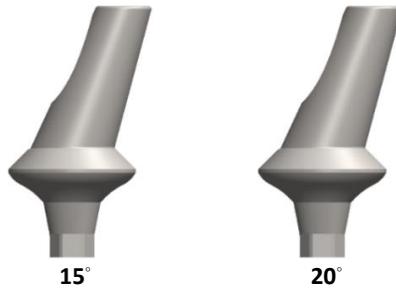
Narrow



Standard



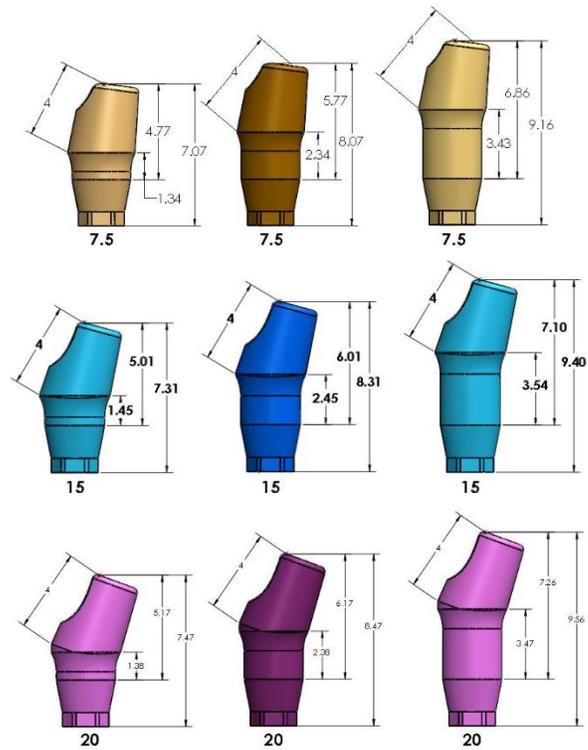
Wide



7) Angled Preparable Unabutments

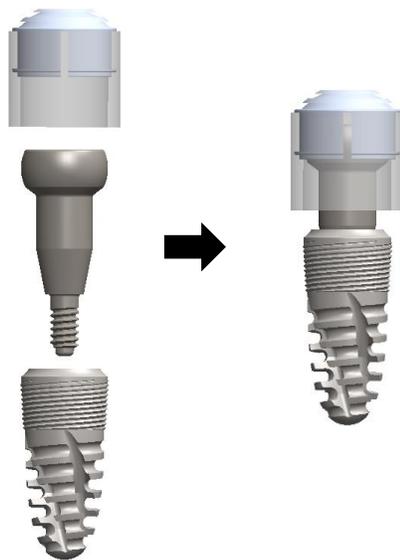
Angled Preparable Unabutments for FRIDGE® are platform-less, two-piece angled abutments that can be used to correct any implant fixture angulation up to 20 degrees. Angled unabutments have a single, universal diameter but have 3 available angulations – 7.5 degrees (Yellow), 15 degrees (Blue), and 20 degrees (Pink) – to be used depending on placement of the implant fixture. For each angulation, there are 3 different neck lengths available – Short (1.34mm), Medium (2.34mm), and Long (3.43mm) – designed to be used with crestal, subcrestal (1-2mm), and way subcrestal (2-3mm) implant placements, respectively. Implanova® Angled unabutments have a hexagonal base and can be placed in 12 different positions inside the double hexagonal implant fixture. A single screw size is used with all the

Angled abutments should be torqued to no more than 20 N-cm. They are ideal to be used for the FRIDGE® abutments. They are also suitable for the “screwmentation” technique for single or multiple units. They can also be used on the implant model for laboratory manufacturing of crowns.

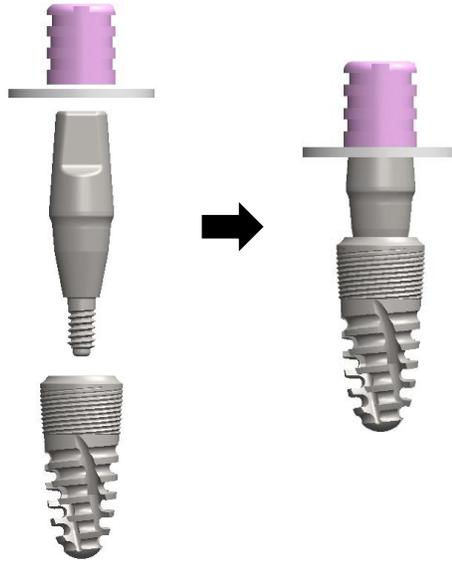


9) Attachment Systems

- a) The **Implanova® TITACH™ system** is indicated as a removable attachment of a full arch prosthesis when used in pairs and for a partial arch prosthesis singly or in pairs. Maximum of two attachments are indicated per arch. Indicated to secure a complete or partial denture on 1-4 implants. This prosthesis is removable by patients.



- b) The **Implanova® FRIDGE® system** is indicated as a fixed attachment of a full arch prosthesis when used with 4-10 implants. This prosthesis is fixed for patients and removable by dentists. This system serves as an alternative to traditional fixed-screw-retained process and eliminates the need for screws, cement, implant level impressions and other components that create a hassle for the practitioner.



10) Abutment Selection

For Cement Retained Restorations on Implanova® system

To restore two or more adjacent implants:

- i. We recommend the Straight Solid abutments. Lack of parallelism can be corrected by preparing the abutments, and the shoulders can be ideally prepared for optimum esthetics. Abutments must be torqued to 20 Ncm. The torqued and prepped abutments can now be treated like regular teeth in a routine crown and bridge protocol. Once these abutments are torqued and prepped, they must not be removed from the implants. The finished bridge may be cemented by a permanent cement/resin. Please note that at least two adjacent abutments must be restored by adjoining crowns. This is a feature that makes this protocol immune to screw loosening.
- ii. Alternatively, two or more Contoured Shoulder abutments can be placed over the implants, torqued and prepped for ideal margin position and parallelism. Although we recommend connecting two adjacent implant abutments by adjoining crowns, you can make individual crowns on adjacent Contoured Shoulder abutments.
- iii. You can make an implant level impression by using an Implanova® impression analog and send to the laboratory for custom abutment fabrication.

To restore a single implant:

- i. You can choose an appropriate Contoured Shoulder abutment and prep for optimal esthetics. This abutment can now be treated as a regular tooth in a regular crown protocol.
- ii. You can make an implant level impression and send to the laboratory. This is for the lab to custom make an abutment.

OR

- iii. You can also send to the laboratory and provide a suitable Contoured Shoulder abutment for the lab to use.

Abutment Level Impressions can be achieved by Solid abutments or two-piece abutments. If the single piece (Solid) abutments have been installed in the mouth, they have to be set to 20Ncm and prepped for shoulder height and angulation. Then, a regular crown and bridge impression technique should be made and sent to the laboratory.

IMPORTANT:

- i. Re-torque after preparation. If any abutment is prepped after torqueing, it needs to be torqued one more time after preparation – after the vibration of preparation.
- ii. Single piece abutments must not be removed from their position once the impression has been made.
- iii. It is impossible to torque the single piece abutment to the same position if they are removed from the implant.
- iv. Once the impression has been made, the lab must treat the impression much like the impression of a tooth.

b) For FRIDGE®:

- i. The Straight or Angled unibutments are specially designed to be used for the FRIDGE® system.

c) For Screw-Retained Restorations: for “screwmentation” technique

- i. Implant level impressions should be made using open or close tray impression analogs.
- ii. In the lab, Straight or Angled abutment can be placed on the implant analog and used to create the final restorations. Universal height angled unibutments are most suitable for this protocol.
- iii. The lab can bond the restoration to the abutments and deliver the abutment crown complex to the clinician for delivery.
- iv. Implant level impressions can also be made with two-piece abutments.

d) Custom Abutments

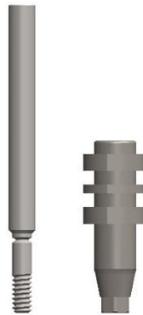
- i. Implant level impressions using closed/open tray Implanova® analogs should be made and an implant model should be fabricated using the Implanova® implant analog

11) **Impression Analogs**

- a) **Titanium Closed Tray Impression Analogs** are supplied with shorter screws so that the entire analog-screw assembly can be accommodated in an impression tray. The shape of the closed tray impression analogs allow the impression to be removed from the mouth while the analogs stay on the implant. These analogs are then connected to implant analogs and the impression-implant analog complex is carefully re-inserted into the impression to replicate the orientation of the analog.



- b) **Titanium Open Tray Impression Analogs** are supplied with longer screws so that the screw end can protrude from the perforated tray. These analogs are designed for firm retention in the set PVS material. Therefore, the impression analog must be unscrewed from the implant and the screw removed before attempting to remove the tray from the mouth. Upon the removal of the tray, the analog in the tray are fitted in implant analogs.



- c) **Titanium Implant Analogs** represent a narrow Implanova® implant coronal top and the standard Implanova® connection well. It can be used as a representative of all Implanova® implants.



Approved January 24, 2019