Keystone dental





Surgical Manual

PRIMA™

IMPLANT SYSTEM

CONTENTS

Introduction

This Surgical Manual is designed to aid clinicians and dental technicians in the placement of Keystone Dental's PrimaSolo® One-Piece Implants and PrimaConnex® Straight and Tapered Implants, as well as outline the restorative procedures for PrimaSolo One-Piece Implants.

The procedures and guidelines presented in this Manual are not intended to be a substitute for formal implant surgical or restorative training for the clinician and the dental laboratory technician. It is the responsibility of the clinician and the dental laboratory technician to determine the final protocol and component selection.

CAUTION: Federal (USA) law restricts this device to sale by or on the order of a licensed dentist or physician.

PrimaSolo One-Piece Implant Design

The PrimaSolo One-Piece Implant design consists of a threaded, tapered implant and an integrated, gold-colored abutment, which is placed in a single-stage procedure. The PrimaSolo 3.0mm narrow implant is indicated for use in the treatment of missing maxillary lateral incisors or mandibular central and lateral incisors. The implants support cement-retained restorations.

PrimaConnex Implants with 1.0mm Machined Collar

PrimaConnex Internal Connection Implant Design

The PrimaConnex Internal Connection Implant design consists of threaded, tapered and straight implants with a TiLobe™ connection. The implants support screw-retained, cement-retained, and overdenture restorations.

PrimaConnex TC Implants

Indications For Use

Keystone Dental Implant Systems are intended for use in partially or fully edentulous mandibles and maxillae, in support of single or multi-unit restorations including: cement-retained, screw-retained, and overdenture restorations, and terminal or intermediate abutment support for fixed bridgework.

Specific Intended Uses

PrimaSolo One-Piece Implants

The PrimaSolo One-Piece (3.5 - 5.0mm) Implant is a threaded one-piece implant with an integrated abutment designed for a single-stage surgical procedure and cemented restoration. The PrimaSolo One-Piece Implant is intended for immediate placement and can be restored with a temporary prosthesis in single-tooth and multiple-tooth applications with good quality bone.

The PrimaSolo One-Piece (3.0mm) Implant is a threaded one-piece implant with an integrated abutment designed for a single-stage surgical procedure. It is indicated for use in the treatment of missing maxillary lateral incisors or the mandibular central and lateral incisors to support prosthetic devices, such as artificial teeth, in order to restore chewing function in partially edentulous patients. Mandibular central and lateral incisors must be splinted if using two or more 3.0mm implants adjacent to one another.

PrimaConnex Implants with 1.0mm Machined Collar

PrimaConnex Internal Connection Implants

The PrimaConnex Internal Connection Implant is a threaded internal connection implant. It is intended for immediate placement and can be restored with a temporary prosthesis in single-tooth and multiple-tooth applications in good quality bone.

PrimaConnex TC Implants

Prosthetic Considerations

PrimaSolo

- Cement-Retained Restorations (Fixed) single and multi-unit

PrimaConnex

- Cement-Retained Restorations (Fixed) single and multi-unit
- Screw-Retained Restorations (Fixed Removable) single and multi-unit
- Implant or Bar Attachment-Retained Overdenture Restorations

Contraindications

Customary general contraindications associated with elective surgery should be considered. These include, but are not limited to: significant vascular impairment to the implant site, metabolic bone disease, clotting disorders, current treatment with therapeutic agents that may have an effect on the surgical site, surrounding tissue or normal healing responses (e.g. drug therapy, chemotherapy, radiation therapy, chronic steroid treatment, anticoagulant therapy), or other metabolic or physical disorders that interfere with bone growth, maintenance, or wound healing.

Possible Contraindications

- Chronic bleeding problems
- Psychological impairment
- Treatment with chemotherapeutic agents
- Metabolic bone or connective tissue diseases
- Treatment with corticosteroids
- Certain cardiac and vascular diseases
- Diabetes (uncontrolled)
- Tobacco usage
- Chronic renal disease
- Poor patient oral hygiene
- Bruxism
- Alcoholism

Temporary Contraindications

- Systemic infection
- Local oral and respiratory infection

Anatomical or Pathological Contraindications

- Insufficient alveolar bone width and height to surround the implant with at least one millimeter of bone
- Inadequate bone height where proper implant placement would encroach within 2mm of the mandibular canal, sinus floor, etc.
- Malignancies

Warnings

The implant placement procedure should be done under aseptic conditions with specifically designed sterile surgical instruments. A surgical drill system with internal or external irrigation is recommended for drilling the surgical site. The specific drilling sequences for placement of implants should be followed. The use of surgical guides, a depth probe, and parallel pins are recommended to aid in implant placement and positioning.

Improper techniques can cause implant failure and loss of bone. No attempt should be made to alter or modify the implant body.

The use of electrosurgical or laser instruments around metallic implants and abutments is discouraged due to the electric and/or heat conductivity of the substrate metal.

Abutments are for single use only. A previously used abutment should not be sterilized and used in a different patient.

Reduction of the abutment intraorally may transmit heat to the implant body and surrounding bone. Ample irrigation is necessary for cooling to preclude heat transfer.

Although techniques are described in the Keystone Dental Prima™ Surgical and Prosthetic Manuals, training in the placement of implants is strongly recommended. Clinicians are encouraged to attend courses to familiarize themselves with established techniques of oral implantology.

It is very important to determine the local anatomy and suitability of the available bone for implant placement. Case planning with adequate radiographs, direct palpation and visual inspection of the prospective implant site are necessary prior to treatment and implant use.

Ensure that the patient has been informed regarding implant placement and restorative procedures, homecare and implant maintenance. The patient's expectations of the final result should be clearly defined.

Adverse Reactions

Complications that can occur include: infection, bone loss, patient discomfort, implant mobility, local soft-tissue degeneration, and unfavorable implant placement or alignment. Treatment for these reactions should follow standard dental procedures as would be indicated and applied for natural dentition. These would include pain medications, antibiotics, removal from function, removal of mobile implants, and soft tissue/bone debridement and augmentation.

Implant mobility, bone loss, or chronic infection may indicate implant failure. Any implant that appears to be failing should be treated as soon as possible. If removal of the implant is necessary, any soft tissue can be curetted from the implant site and then allowed to heal in the same manner as traumatic tooth extractions.

Unfavorable implant placement or alignment may be treated with either pre-angled or customized abutments in the case of PrimaConnex®. In the event that the implant is unrestorable due to unfavorable alignment or positioning, the implant may have to be left out of function or removed/replaced.

Sterilization

All Prima™ System Implants are provided in sterile, gamma irradiated packaging with a five-year shelf life. Implants should not be used after the expiration date, as sterility cannot be assured. The inner vial and implant body are sterile unless the outer package seal has been damaged or opened. Keystone Dental recommends storing implants in a cool, dry environment. Use only sterile, powder-free, starch-free and talcum-free gloves during the procedure.

If the implant becomes contaminated by the patient's body fluids or tissues, the implant cannot be used in another patient. The implant may not be cleaned or re-sterilized for use in another patient. Do not attempt to decontaminate the implant by any in-office method.

It is important to ensure all instrumentation, surgical handpieces, and equipment have been sterilized to prevent the possible contamination of the components, the surgical system, and thus, the patient. Always remove instrumentation from its packaging prior to sterilization.

Always run a system check to ensure that the surgical motor and its components are functioning properly. Backup equipment, implants and instrumentation are recommended in case of contamination or failure of equipment or instrumentation. Surgical drills eventually become dull with use and require replacement.

Cleaning Procedure For Surgical Trays and Instrumentation

1. Disassemble the surgical kit and wash the tray using a detergent solution. Rinse the tray with water and dry thoroughly.
2. Place the instruments in a beaker of detergent solution and sonicate for approximately 10 minutes. Rinse thoroughly.
3. Remove any visible debris or bone fragments with a soft bristle brush. Rinse thoroughly.
4. Use a 22-gauge blunt needle connected to a syringe to flush water inside of the internally irrigated instruments. (A 22-gauge blunt needle is supplied with the surgical kit.)
5. Rinse the instruments with alcohol to remove soap residue and minerals. (This is important to help prevent corrosion.)
6. Blot the instruments with a towel and allow to air dry completely.
7. Return the instruments to the appropriate locations in the surgical tray.
8. Wrap the kit in a double-layer of autoclave-wrap.
9. Sterilize the kit according to the "Sterilization Table" on page 8.

CAUTION: Do not remove the surgical kit from the autoclave until the dry cycle is complete.

CAUTION: The use of hydrogen peroxide or other oxidizing agents will cause damage to the surface of the instruments. Towel or air-dry all instrumentation before sterilization. Drills and taps should be replaced when wear, a decrease in cutting performance, or signs of discoloration are noted. Keystone Dental recommends replacement of drills after approximately 20 osteotomies, depending on bone density.

Sterilization Table

1. Autoclave

121 - 124°C (~250°F) 60 minute exposure / 40 minute dry time or 132 - 135°C (~270°F) 40 minute exposure / 30 minute dry time. Do not exceed 140°C (284°F). Always use the dry cycle.

CAUTION: Remove all packaging prior to sterilization! Autoclave sterilization can only be accomplished by placing the individual components in the surgical tray, a sealed autoclave bag or in a surgical towel.

2. Dry Heat:

160°C (320°F) 120 minute exposure (minimum). Do not exceed 170°C (338°F).

NOTE: Keystone Dental does not recommend chemclave sterilization procedures as they may damage surgical trays and/or instruments.

NOTE: It is recommended that the proper biological indicators for the selected sterilization method accompany each load and that the appropriate sterile packaging be used to maintain sterility until use.

Each dental office is responsible for the proper, routine sterilization of instruments. All sterilization techniques should follow the unit manufacturer's guidelines.

Place all instrumentation and implants onto the sterile work field in the order they will be used. This makes for a natural progression through the case sequence. The surgical kit is set up in this fashion. Follow the drilling sequence in this guide.

Immediate Implant Placement

PrimaSolo® One-Piece and PrimaConnex® Internal Connection Implants

Immediate implant placement is defined by the International Congress of Oral Implantologists (ICOI) as the placement of an implant at the time of tooth extraction, into the extraction socket.

Keystone Dental SD, RD and WD PrimaSolo and PrimaConnex Implants can be placed immediately if the following criteria are observed:

- Seventy-five (75) percent of the implant engages freshly prepared bone.
- The implant supports the buccal or labial bone.
- All existing pathology in the socket must be removed and there is no acute infection. If infection is present, it must be treated appropriately and the site cleaned and allowed to heal for four to six weeks before the implant is placed.
- Labial plate is intact.
- Crown does not exceed the recommended crown-to-root ratio (1:1).
- Diameter of the implant at the crest of the extraction site should be as wide as possible to prevent tissue in-growth.

Immediate Provisionalization, Non-occlusal Load

Immediate provisionalization is defined by the International Congress of Oral Implantologists (ICOI) as a clinical protocol for the placement of an interim prosthesis, with or without occlusal contact with the opposing dentition, at the same clinical visit as implant placement.

PrimaSolo One-Piece and PrimaConnex Internal Connection Implants

Keystone Dental SD, RD and WD PrimaSolo and PrimaConnex Implants can be fitted with a temporary restoration at the time of implant placement if the following criteria are observed:

- Final implant tightening has a torque resistance of 35 - 45Ncm.
- No occlusal contacts in excursive movements and only light contact in centric occlusion.
- Good bone volume and density (recommended in Types I, II and III).
- Angulation of implant does not exceed 15°.

Surgical Guide

The implanting surgeon, the restoring dentist, and the laboratory technician should work together to produce diagnostic wax-ups and a surgical guide. This teamwork assists the implanting surgeon in the proper placement of the implant(s).

A surgical guide is used to indicate practical boundaries for the placement of implants and may prevent implants from being placed too buccal/lingually or mesial/distally. This process helps to ensure functional placement of implants and esthetic restorative results.

The implanting surgeon should communicate to the laboratory technician any conditions that may affect guide design (e.g., the type of incision that will be used, expected reflection of tissue, etc.)

Keystone Dental offers EasyGuide™ dental implant planning and placement system; a planning software that allows virtual planning of dental implant surgery cases based on the patient's CT scan data, and a service where the radiographic guide worn by the patient during the CT scan is then converted into a precise surgical guide. Please refer to the EasyGuide literature for detailed information on the products and procedures.

NOTE: PrimaSolo®: The use of a surgical guide is always recommended. However, it is especially important when placing one-piece implants. Due to the unique design, it may be more difficult to restore an implant with an integrated abutment if it is placed in a restoratively compromised position. The maximum angle for PrimaSolo 3.5 - 5.0mm Implants is 15˚ (30˚ divergence between implants). For PrimaSolo 3.0mm Implants, the maximum angle is 10˚ (20˚ divergence between implants). One-piece implants can be advantageous for both clinicians and their patients; special care should be taken when planning the case to ensure the final implant positioning allows for a successful restoration.

NOTE: PrimaConnex®: The surgical guide is often vital in determining the access point for an abutment screw through a crown. This is particularly important when the removal of anterior restorations are indicated.

Implant Sizing Overlays

Transparent Implant Sizing Overlays (100% and 125% magnification) are included in the Prima™ Surgical Kit. Overlays are used with radiographs to assist in the presurgical assessment and implant selection.

Prima Implant System Color-coding

Where possible, Prima System components have been color-coded to improve the overall ease-of-use. Color-coding makes components easier to identify, reduces chairtime and improves communication among the restorative team members. Color-coding is fully integrated between surgical and restorative components and based on the implant prosthetic table below.

PRIMACONNEX®

Prosthetic Table	Icon
3.5mm	
4.1mm	
5.0mm	

PRIMASOLO®

Prosthetic Table	Icon
3.0mm	
3.5mm	
4.1mm	
5.0mm	

Prima™ Instrumentation

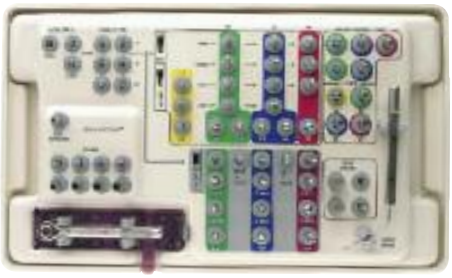
All Prima surgical instruments are provided non-sterile. Always remove the instruments from the packaging prior to sterilization. Inspect the surgical instrumentation to ensure sterility and functionality. For example, drills will become dull after many uses. Always have a backup drill sterile and available. Keystone Dental recommends drill replacement after 20 osteotomies depending on bone density.

Drilling and Tapping Procedures for Prima Implants

- Drilling speeds of 1,200 - 1,800 rpm are recommended for all Initial and Straight Drills.
- Drilling speeds for Tapered Drills are recommended not to exceed 800 rpm.
- When tapping the bone, set the tapping speed to 20 rpm.
- All drilling and tapping procedures should be performed using copious amounts of irrigation.
- Do not apply lateral pressure during drilling and tapping procedures.
- Drill the osteotomy using light pressure. When using the Initial and Straight Drills, drill in an in-and-out motion along the long axis of the osteotomy.
- When using Tapered Drills, do not use the in-and-out technique since this may inadvertently over-prepare the site. Instead, enlarge the site to the desired depth in one motion.

Prima Surgical Kit

The Prima Surgical Kit holds all the instrumentation needed to place all diameters and lengths of PrimaSolo® One-Piece and PrimaConnex® Tapered and Straight Implants. Drills and Taps are purchased as a set separately depending on the clinician's implant preference.



Prima Tapered Drill without Drill Stop

Prima Tapered Drills

All Prima Tapered Drills are color-coded and internally irrigated. They are designed to achieve maximum cutting efficiency while effectively removing bone from the osteotomy during drilling. Prima Tapered Drills are used for placement of both PrimaSolo and PrimaConnex Tapered Implants.

Prima Tapered Drill
with Drill Stop

Drill Stops for Prima Tapered Drills

All Prima Tapered Drills feature an optional removable Drill Stop which adds additional precision and simplicity to the drilling process. The position of the stop is calculated so the top of the implant will be even with the crest of the bone when fully seated. The Drill Stops are friction-fit and are easily removed for clinicians who wish to place the implant subcrestal or otherwise want additional flexibility during drilling.

Drill Stops are color-coded to match the drills.

Drill Stop Installation

Install the Drill Stop by sliding it over the cutting end of the drill with the fins facing the drill shank (latch). Press firmly until the fins of the Drill Stop are fully seated over the hub of the drill.

NOTE: Drill Stops add approximately 1mm additional width to each side of the drill and are therefore not recommended when using the Flapless Implant Placement Protocol.

PrimaConnex Straight Drill

Prima Straight Drills

All Prima Straight Drills are internally irrigated. They are designed to achieve maximum cutting efficiency while effectively removing bone from the osteotomy during drilling. They are color-coded for easy identification. The drills feature wide-band, easy-to-see laser-etched depth markings. The position of the depth markings are calculated so when the implant is placed, the top of the implant will be even with the crest of the bone. Prima Straight Drills are used to place PrimaConnex Straight Implants.

Depth Marking system and Drill Sequence Charts

For complete information on Prima instrument depth markings and drill sequences, refer to the charts in the back of this manual (pages 51 - 52).

Implant Sizing Overlays

Transparent Implant Sizing Overlays (100% and 125% magnification) are included in the Prima Surgical Kit. Overlays are used with radiographs to assist in the pre-surgical assessment and implant selection.

Prima™ Implant Selection

PrimaConnex® Internal Connection Implants

PrimaConnex Implants consist of threaded, tapered and straight designs featuring a proprietary internal connection with TiLobe™ technology for superior strength, stability, and esthetics. All PrimaConnex Implants feature the roughened Arcitexture surface. The roughened surface on PrimaConnex TC implants extends up to just below the bevel of the implant where the medialized prosthetic connection begins creating a continuous bone-to-implant surface to the apex.

Although final placement of a PrimaConnex implant is up to the discretion of the implanting surgeon, Keystone Dental has a recommended guideline. Each case should be evaluated on placement, protocol and type of implant before the osteotomy is drilled. The availability of the two versions of PrimaConnex allows the clinician to weigh the advantages of each and choose the type best suited to the individual case. Recommended placement of a PrimaConnex implant with the 1.0mm machined collar is at the crest of the ridge or slightly above, whereas the PrimaConnex TC implant is recommended for placement at the crest of the ridge or slightly below.

PrimaConnex Tapered Implant with 1.0mm Machined Collar

PrimaConnex TC Tapered Implant

Tapered Implants

PrimaConnex Tapered Implants are designed to address common anatomic conditions such as converging roots of adjacent teeth, lingual undercuts in the mandible, and labial concavities in the maxilla. By utilizing a tapered implant design in these scenarios, optimal implant placement and ideal esthetics may be more attainable.

PrimaConnex Straight Implant with 1.0mm Machined Collar

PrimaConnex TC Straight Implant

Straight Implants

PrimaConnex Straight Implants are straight-walled and self-tapping for overall treatment applications.

PrimaSolo One-Piece Implant

PrimaSolo® One-Piece Implants

The PrimaSolo One-Piece Implant design consists of a threaded, tapered implant and an integrated, gold-colored abutment which is placed in a single-stage procedure. The PrimaSolo 3.0mm implant is indicated for use in the treatment of missing maxillary lateral incisors or mandibular central and lateral incisors. The implants support cement-retained prosthetic restorations. All PrimaSolo Implants feature the roughened Arcitexture surface.

One-Piece Implant Criteria

When placing PrimaSolo One-Piece Implants, the following criteria must be observed:

- Patient has good bone volume and density.
- Adjacent teeth have healthy gingival, bone and other periodontal tissues.
- Implant site does not show any presence of inflammation or infection.
- Good and established occlusal relationship.
- Maximum 15° angulation for SD, RD and WD implants.
- 10° maximum angulation for 3.0mm implants.

PrimaSolo® and PrimaConnex® Tapered Implants

Surgical Procedures for Tapered Implant Placement
Flap Reflection Surgery

Step 1

If traditional flap reflection type surgery is desired, proceed with administering local anesthesia.

Step 2 - Incision

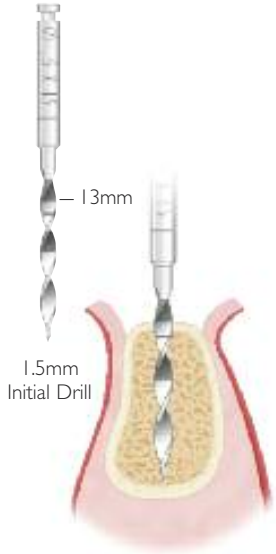
Make an incision of appropriate design for elevation of a flap. When working with the anterior mandible, locate the mental foramen and where the inferior alveolar nerve exits.

Perform alveoloplasty on the crest of the ridge, if needed, to create a more even plane in which to place the implant. Irrigation should be used for all modifications of the bone.

4.1 x 13mm PrimaSolo Implant | 4.1 x 13mm PrimaConnex Implant with 1.0mm Machined Collar | 4.1 x 13mm PrimaConnex TC Implant

Step 3 - Implant Selection

Select the appropriate implant diameter and length. For this example, a 4.1 x 13mm implant is used. The drill sequences used for other implant diameters and lengths can be found on pages 51 - 52.



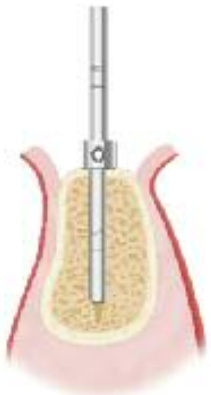
Drilling with 1.5mm Initial Drill

Step 4 - 1.5mm Initial Drill (1,200 - 1,800 rpm)

Select the 1.5mm Initial Drill. With the surgical guide in place, drill directly through the alveolar crest using the surgical guide* as a reference for proper positioning. Drill a pilot hole to the 13mm depth marking on the drill. Refer to page 51 for depth marking information.

NOTE: 1.5mm Initial Drill requires external irrigation.

**The surgical guide is not shown.*



Parallel Pin in Osteotomy

Step 5 - Parallel Pin

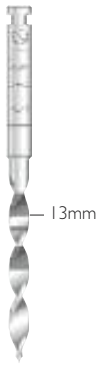
Check the orientation of the osteotomy using the 1.5mm end of the Parallel Pin. Prima 1.5/1.8mm Parallel Pins are dual-ended and can be used after the 1.5 and 1.8mm Initial Drills.

PrimaSolo Abutment Try-in

Abutment Try-in in Osteotomy

As an alternative or in addition to the parallel pin, an Abutment Try-in can be used to check for proper alignment and positioning as it relates to the surgical guide and the adjacent teeth. The PrimaSolo Abutment Try-ins exactly match the integrated abutment portion of the PrimaSolo implants and are useful to visualize the final position of the integrated abutment.

Step 6 - 1.8mm Initial Drill (1,200 – 1,800 rpm)



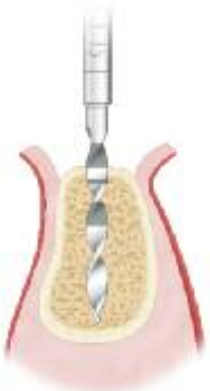
1.8mm Initial Drill

Select the 1.8mm Initial Drill. If any change is needed in trajectory, it may be corrected at this time. Drill to the 13mm depth marking on the drill.

Check the orientation of the osteotomy using the 1.8mm end of the Parallel Pin.

If placing more than one implant and parallelism is desired, insert the Parallel Pin into the 1.8mm osteotomy. Begin drilling the next site and align as the trajectory of the bone permits.

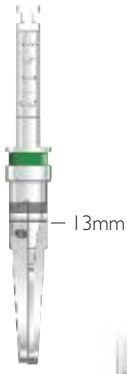
NOTE: 1.8mm Initial Drill requires external irrigation.



Drilling with 1.8mm Initial Drill

1.8mm Parallel Pin in Osteotomy

PrimaSolo® and PrimaConnex® Tapered Implants



3.5 x 13mm
Tapered Drill

Drilling with
3.5 x 13mm
Tapered Drill

Step 7 - 3.5mm Tapered Drill (800 rpm)

Select the 3.5 x 13mm Tapered Drill and proceed to enlarge the site by drilling to the 13mm depth line (or to the Drill Stop if installed – additional information on page 14).

Due to the Tapered Drill design, it is not necessary to first use the 3.0 x 13mm Tapered Drill.

NOTE: Prima Tapered Drills feature multiple depth indicators for additional drilling flexibility (countersinking the implant for example). Complete depth marking information can be found on page 51. Refer to the Drill Sequence Charts on pages 51 - 52 for complete information.

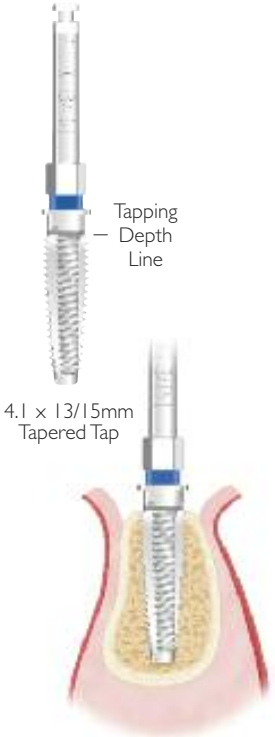
NOTE: When using Tapered Drills, do not use the in-and-out technique since this may inadvertently over-prepare the site. Instead, enlarge the site to the desired depth in one motion.

4.1 x 13mm
Tapered Drill

Drilling with
4.1 x 13mm Tapered Drill

Step 8 - 4.1mm Tapered Drill (Final Drill for 4.1mm Implant) (800 rpm)

Select the 4.1 x 13mm Tapered Drill. This is the final drill when placing either a 4.1 x 13mm PrimaSolo or PrimaConnex Tapered Implant. Drill to the 13mm depth line.



Tapping with 4.1 x 13/15mm Tapered Tap

Step 9 - 4.1 x 13/15mm Tap (20 rpm)

NOTE: Tapping is indicated in Type I dense bone. It is at the discretion of the surgical doctor whether or not to tap in Type II or III bone. Tapping in Type IV Bone is not recommended.

Place the 4.1 x 13/15mm Tapered Tap into the prepared implant site. Apply firm pressure and begin rotating the tap (20 rpm maximum). When the threads begin engaging the bone, allow the tap to feed into the site without applying additional pressure. The osteotomy should be tapped all the way to the depth marking. Reverse the tap out of the site. The site is now ready for the implant to be placed.

Do not over-tighten the tap in the site as this could damage the threads prepared in the bone and result in less than optimal immediate implant fixation.

NOTE: Due to the tap design and implant cutting efficiency, one tap is used for multiple implant lengths. These implant lengths are laser-etched on the tap shank. For example, the tap shown is used for both 13 and 15mm implant sites. Regardless of implant length, tap to the tapping depth line.

Tyvek Lid Peeled Back

Step 10 - Implant Placement

Peel back the Tyvek® lid on the outer package* and place the sterile implant vial onto the sterile field. Pre-printed Patient Chart Labels are included with each implant.

Flip open the implant vial cap to expose the PrimaSolo or PrimaConnex Implant. The implant may now be removed from the vial, delivered to the site and placed using one of the three options listed on pages 23 - 30.

Implant Vial Open

**PrimaSolo Implant packaging pictures.*

PrimaSolo® and PrimaConnex® Tapered Implants

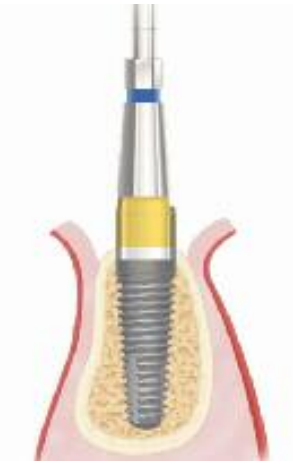
PrimaConnex Implant Positioning

If the treatment plan includes using anatomically-shaped abutments such as the angled or straight Esthetic Contour Abutments, the rotational position of the implant can be adjusted at the time of placement to ensure optimal positioning of the final abutment. This will allow the restoring clinician to take full advantage of the anatomical abutment contours and minimize the need for abutment prepping. If the clinical situation allows, adjust the final position of the implant so that any one of the six internal connection lobes faces the buccal or facial aspect.

Option 1: Motorized Implant Placement (Handpiece)

PrimaSolo Implant Driver

Implant Driver Connected to Handpiece and Removing Implant from Vial



Implant Driver Threading Implant into Osteotomy

Implant Placed

PrimaSolo® One-Piece Implants

The PrimaSolo Implant Driver attaches directly to the integrated abutment portion of the implant and will carry the implant from the vial to the site. Each diameter of implant utilizes its own specific driver.

Attach the appropriate PrimaSolo Implant Driver to the handpiece. Align the internal flat of the driver with the flat on the abutment portion of the implant and press firmly. (An identifying mark on the Implant Driver identifies the internal flat.) Remove the implant from the vial and carry it to the site.

Thread the implant into the osteotomy at approximately 20 rpm until it is snug. The implant is fully seated when the junction of the gold-colored integrated abutment portion of the implant and the machined titanium collar is level with the bone crest. Do not over-tighten the implant in the site as this could damage the threads prepared in the bone and result in less than optimal immediate fixation.

PrimaConnex Implant Driver

PrimaConnex® Internal Connection Implants

PrimaConnex Implants (Tapered or Straight) are driven into the osteotomy utilizing drivers that engage the internal connection of the implant. Each diameter implant requires its own specific driver. The Implant Driver will carry the implant from the vial to the implant site.

With the PrimaConnex Implant Driver attached to the handpiece, press lightly and rotate the driver until it engages the internal connection of the implant. Press firmly to fully engage the connection. Remove the implant from the vial and carry it to the implant site.

Thread the implant into the osteotomy at approximately 20 rpm until it is snug. Do not over-tighten the implant in the site, as this could damage the threads prepared in the bone and result in less than optimal immediate fixation.

NOTE: In some clinical situations, the clinician may prefer to use the Surgical Ratchet with Ratchet Adapter placed over the PrimaConnex Implant Driver or the Implant Driver/Ratchet that connects directly to the Surgical Ratchet without using the Ratchet Adapter to manually tighten the last few rotations and fully seat the implant. This allows for a better tactile feel during seating.

NOTE: Implants shown are PrimaConnex with 1.0mm machined collar.

Implant Driver Removing Implant from Vial

Implant Driver Threading Implant into Osteotomy

Implant Placed

Option 2: Manual Implant Placement (Surgical Ratchet)

Surgical Ratchet, Adapter, and Implant Driver

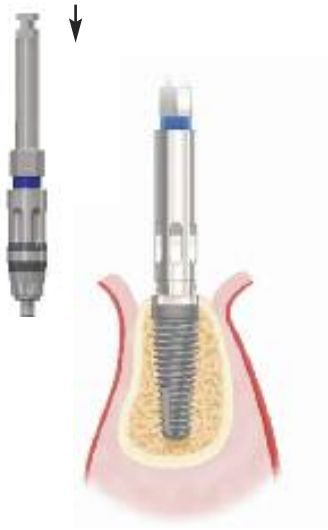
Implant Placed

PrimaSolo® One-Piece Implants

Select the Surgical Ratchet and assemble it with the Ratchet Adapter and the appropriate PrimaSolo Implant Driver. Align the internal flat of the driver with the flat on the abutment portion of the implant and press firmly. (An identifying mark on the Implant Driver identifies the internal flat.) Remove the implant from the vial and carry it to the site.

Thread the implant into the osteotomy until it is snug. The implant is fully seated when the junction of the gold-colored abutment portion of the implant and the machined titanium collar is level with the bone crest. Do not over-tighten the implant in the site as this could damage the threads prepared in the bone and result in less than optimal immediate fixation.

Surgical Ratchet, Adapter, and Implant Driver



Implant Placed

PrimaConnex® Internal Connection Implants

Select the Surgical Ratchet and assemble it with the Ratchet Adapter and the appropriate PrimaConnex Implant Driver. Press lightly and rotate driver until it engages the internal connection of the implant. Press firmly to fully engage the connection. Remove the implant from the vial and carry it to the site.

Thread the implant into the osteotomy until it is snug. Do not over-tighten as this could damage the threads prepared in the bone and result in less than optimal immediate fixation.

PrimaConnex Internal Connection Implants

(Optional) Implant Driver Direct-To-Surgical Ratchet

Select the Surgical Ratchet and assemble it with the Implant Driver/Ratchet. Press lightly and rotate driver until it engages the internal connection of the implant. Press firmly to fully engage the connection. Pull the implant from the vial and carry it to the site.

Thread the implant into the osteotomy until it is snug. Do not over-tighten as this could damage the threads prepared in the bone and result in less than optimal immediate fixation.

NOTE: Implant shown is PrimaConnex with 1.0mm machined collar.

Option 3: Manual Implant Placement (Surgical Hand Driver)

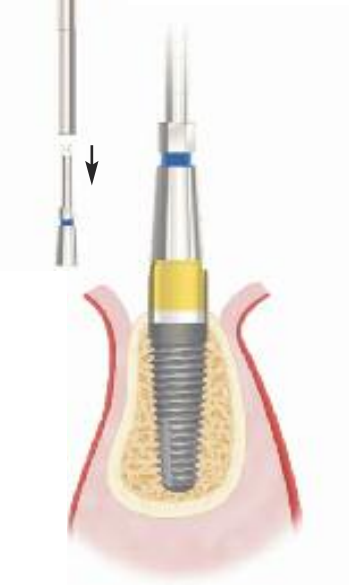
The Surgical Hand Driver is used as a hand delivery and placement option in the anterior area of the mouth. It provides a more tactile feel when placing implants.

Implant Driver Inserted Into End of Surgical Hand Driver

PrimaSolo® One-Piece Implants

With the appropriate PrimaSolo Implant Driver inserted into the end of the Surgical Hand Driver, align the internal flat of the driver with the flat on the abutment portion of the implant and press firmly. (An identifying mark on the Implant Driver identifies the internal flat.) Remove the implant from the vial and carry it to the site.

Thread the implant into the osteotomy until it is snug. The implant is fully seated when the junction of the gold-colored abutment portion of the implant and the machined titanium collar is level with the bone crest. Do not over-tighten the implant in the site as this could damage the threads prepared in the bone and result in less than optimal immediate fixation.



Implant Being Placed

Implant Driver Inserted Into End of Surgical Hand Driver

PrimaConnex® Internal Connection Implants

With the appropriate PrimaConnex Implant Driver inserted into the end of the Surgical Hand Driver, press lightly and rotate driver until it engages the internal connection of the implant. Press firmly to fully engage the connection. Remove the implant from the vial and carry it to the site.

Thread the implant into the osteotomy until it is snug. Do not over-tighten the implant in the site as this could damage the threads prepared in the bone and result in less than optimal immediate fixation.

NOTE: If placing a cover screw for a two-stage surgery, continue with Step 11 on page 29.

NOTE: If placement of a healing abutment for a one-stage surgery or immediate temporization is desired, proceed to the "PrimaConnex Soft Tissue Healing and Temporization Procedures" section of this Manual on page 47.

NOTE: Implant shown is PrimaConnex with 1.0mm machined collar.

Implant Being Seated

PrimaConnex® Internal Connection Implants

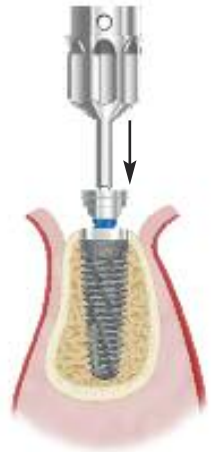
Quad Driver

Cover Screw

Step 11 - PrimaConnex Cover Screw Placement

Following implant placement, use the Swivel Head Quad Driver to remove the Cover Screw from the implant packaging. The Cover Screw is exposed by removing the silicone insert on the underside of the implant vial cap. Carry the Cover Screw to the implant and hand-tighten.

NOTE: Implant shown is PrimaConnex with 1.0mm machined collar.



Cover Screw Placement

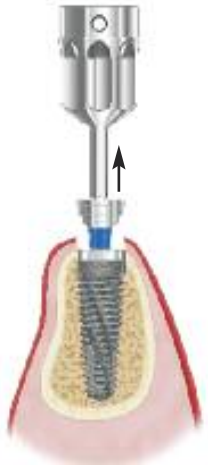
Step 12: Closure and Suturing

Close and suture the tissue flap utilizing the desired technique. Take a radiograph to use as a baseline of the implant-to-bone height for future diagnosis.

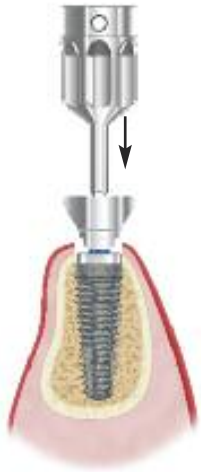
Post-operative Procedures

The patient must be instructed to follow a routine post-surgical regimen that includes ice or cold packs for 24 hours post-implantation and to consume a soft, high-nutrient diet, if possible. According to individual surgical practice, consideration should also be given to dietary supplements with high protein, high vitamin and high mineral content for up to a month as well. Anti-edema steroid therapy may be initiated prior to surgery and continued for a period of 24 hours to one week post-surgery. Antibiotic treatment may be initiated one day pre-op and up to one week post-op as the patient's condition dictates. Sutures should be removed after approximately 10 days or as an individual's soft tissue healing dictates.

If a removable prosthesis is used during this initial healing phase, it is recommended that the underside of the prosthesis be relieved. This area may be relined with a soft tissue conditioner to prevent pressure on the surgical site(s). The patient should be examined periodically using radiographic evaluations to monitor healing of the soft tissues and bone.



Cover Screw Removal with the Quad Driver



Quad Driver Placing Healing Abutment

Step 13 - PrimaConnex Second Stage Uncovery

Following the appropriate healing period, second stage uncovery can occur. With a scalpel, make a small incision to expose the implant Cover Screw. Use the Quad Driver to remove the Cover Screw and place the appropriate height and diameter Healing Abutment.

NOTE: If bone over growth prevents the Healing Abutment from fully seating on the implant, use the Bone Profiler to expose the interface. Doing so will help create the proper bone contour.

NOTE: Implants shown are PrimaConnex with 1.0mm machined collar.

PrimaConnex® Internal Connection Straight Implants

4.0 x 13mm PrimaConnex Straight Implant with 1.0mm Machined Collar

4.0 x 13mm PrimaConnex TC Straight Implant

Surgical Procedures for Straight Implant Placement
Flap Reflection Surgery

Step 1

If traditional flap reflection type surgery is desired, proceed with administering local anesthesia.

Step 2 - Incision

Make an incision of appropriate design for elevation of a flap. When working in the anterior mandible, locate the mental foramen and where the inferior alveolar nerve exits.

Perform alveoloplasty on the crest of the ridge, if needed, to create a more even plane in which to place the implant. External irrigation should be used for all modifications of the bone.

Step 3 - Implant Selection

Select the appropriate PrimaConnex Straight Implant diameter and length. In this example, a 4.0 x 13mm is used. Refer to the Drill Sequence chart on page 52 for placing other sizes.

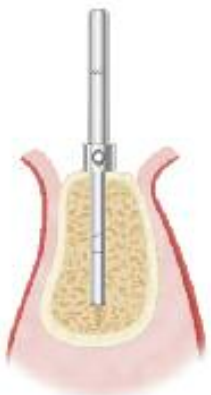
Step 4 - 1.5mm Initial Drill (1,200 – 1,800 rpm)

Select the 1.5mm Initial Drill. With the surgical guide in place, drill directly through the alveolar crest using the surgical guide* as a reference for proper positioning. Drill a pilot hole to the 13mm depth marking on the drill. Refer to page 51 for depth marking information.

NOTE: 1.5mm Initial Drill requires external irrigation.

**The surgical guide is not shown.*

Drilling with 1.5mm Initial Drill



Parallel Pin in Osteotomy

Step 5 - Parallel Pin

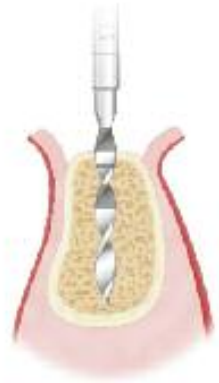
Check the orientation of the osteotomy using the 1.5mm end of the parallel pin. Prima 1.5/1.8mm Parallel Pins are dual-ended and can be used after the 1.5 and 1.8mm Initial Drills.

1.8mm
Initial Drill

Step 6 - 1.8mm Initial Drill (1,200 – 1,800 rpm)

Select the 1.8 x 15mm Initial Drill. If any change is needed in trajectory, it may be corrected at this time. Drill to the 13mm depth marking on the drill. If placing more than one implant and parallelism is desired, insert the Parallel Pin into the 1.8mm osteotomy. Begin drilling the next site and align as the trajectory of the bone permits.

NOTE: 1.8mm Initial Drill requires external irrigation.



Drilling with
1.8mm Initial Drill

PrimaConnex® Internal Connection Straight Implants

1.8/2.8mm
Step Drill

Drilling with
1.8/2.8mm Step Drill

Step 7 - 1.8/2.8mm Step Drill (1,200 – 1,800 rpm)

Select the 1.8/2.8mm Step Drill. This drill provides a smooth transition between drill diameters. It ensures that the 1.8mm implant site trajectory is maintained and expands the superior portion of the site to 2.8mm, which is the next drill in the sequence. Drill until the etched line is even with the crest of the bone.

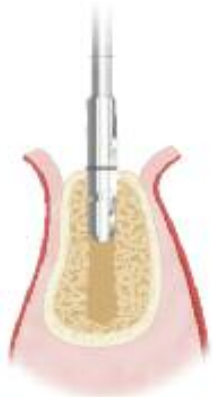
2.8 x 15mm
Straight Drill

Drilling with 2.8 x
15mm Straight Drill

Step 8 - 2.8 x 15mm Straight Drill (1,200 – 1,800 rpm)

Select the 2.8 x 15mm Straight Drill and proceed to enlarge the site by drilling to the 13mm marking on the drill.

2.8/3.3mm
Step Drill



Drilling with
2.8/3.3mm Step Drill

Step 9 - 2.8/3.3mm Step Drill (1,200 – 1,800 rpm)

Select the 2.8/3.3mm Step Drill. This drill provides a smooth transition between drill diameters. It ensures that the 2.8mm implant site trajectory is maintained and expands the superior portion of the site to 3.3mm, which is the next drill in the sequence. Drill until the etched line is even with the crest of the bone.

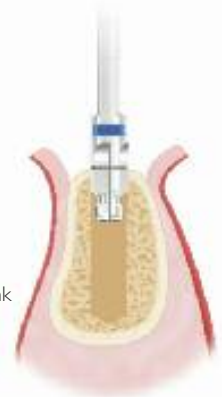
3.3 x 15mm
Straight Drill

Drilling with
3.3 x 15mm Straight Drill

Step 10 - 3.3 x 15mm Straight Drill (1,200 – 1,800 rpm)

Select the 3.3 x 15mm Straight Drill and proceed to enlarge the site by drilling to the 13mm marking on the drill.

RD Countersink
Drill



Drilling with RD
Countersink Drill

Step 11 - RD Countersink Drill (1,200 – 1,800 rpm)

Select the RD Countersink Drill. This will prepare the superior portion of the osteotomy to accept the flared neck of the implant. Drill down to the etched line at approximately the middle of the drill.

PrimaConnex® Internal Connection Straight Implants

4.0 x 15mm
Straight Tap

Tapping with 4.0 x 15mm
Straight Tap

Step 12 - 4.0 x 15mm Tap (25 – 50 rpm)

Place the 4.0 x 15mm Tap into the prepared implant site. Apply firm pressure and begin rotating the Tap (25-50 rpm). When the threads begin engaging the bone, allow the Tap to feed into the site without applying additional pressure. The osteotomy should be tapped all the way to the appropriate depth marking referenced on the Tap and then reversed out. The site is now ready for the implant to be placed.

NOTE: Use of the 4.0mm Tap is required in Type I dense bone. It is at the discretion of the surgical doctor whether or not to tap in Type II or III bone. Tapping in Type IV Bone is not recommended.

Implant Placement and Post-operative Procedures

Follow the steps for PrimaConnex Implants starting on page 24.

Soft Tissue Healing and Immediate Temporization

Follow the steps for PrimaConnex Implants on page 47.

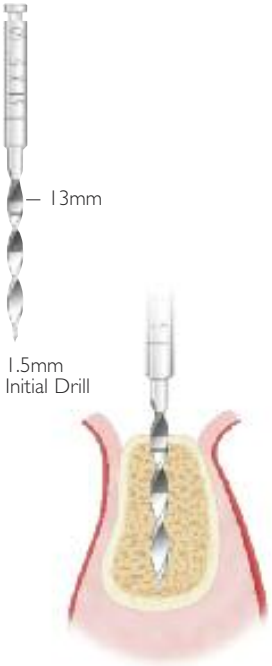
PrimaSolo® and PrimaConnex® Tapered and Straight Implants

Optional Flapless Surgery

Flapless surgery may be utilized when adequate attached gingival tissue and bone is present in addition to sufficient vestibular depth. With this technique, the second stage uncovery surgery is eliminated for PrimaConnex and a temporary restoration, or healing abutment is left protruding through the soft tissue following surgery.

Step 1

Select the appropriate Prima™ Implant diameter and length. In this example, a 4.1 x 13mm is used. Refer to the Drill Sequence charts on page 52 for placing other sizes.



Drilling with
1.5mm Initial Drill

Step 2 - 1.5mm Initial Drill (1,200 – 1,800 rpm)

After administering local anesthesia, select the 1.5mm Initial Drill. With the surgical guide* in place, pierce directly through the gingival tissue and into the alveolar crest using the surgical guide as a reference for proper positioning. Drill a pilot hole to the 13mm depth marking on the drill.

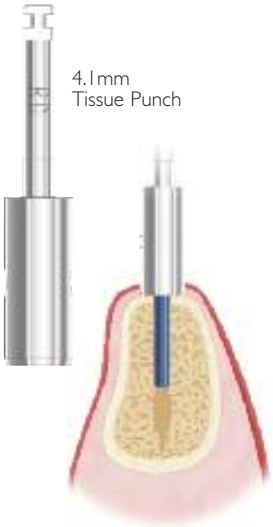
NOTE: 1.5mm Initial Drill requires external irrigation.

**The surgical guide is not shown.*

Tissue Punch Guide in
Osteotomy

Step 3 - Tissue Punch Guide

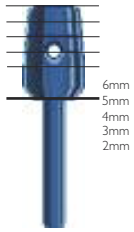
Select the RD (blue) Tissue Punch Guide and place it into the osteotomy. Check for proper alignment and positioning as it relates to the surgical guide and the adjacent teeth. The Tissue Punch Guides exactly match the integrated abutment portion of PrimaSolo implants.



4.1mm Tissue Punch Seated on Tissue Punch Guide.

Step 4 - Tissue Punch (800 rpm)

Select the RD 4.1mm Tissue Punch. Place the Tissue Punch into the handpiece and set the speed to approximately 800 rpm. Position the Tissue Punch over the Tissue Punch Guide and cut through the soft tissue down to the crest of the ridge.



Tissue Punch Guide Markings

Step 5

Remove the Tissue Punch Guide. Cut around the tissue plug using a scalpel to completely release the tissue plug from the bone.

NOTE: Visibility at the bone level can be limited when using a flapless surgical technique. To assist in placing the implant to the proper depth relative to the tissue, the Tissue Punch Guides and PrimaSolo integrated implant abutments feature matching horizontal grooves in 1mm increments.

NOTE: The Tissue Punch Guides feature three horizontal grooves in 1mm increments. By placing the Tissue Punch Guide into the site following the removal of the tissue, the tissue depth can be determined. This information will aid in selecting the proper height Healing Abutment to be placed. Details on these measurement grooves can be found on page 51.

Remaining Site Preparation Steps for:

Tapered Implants

Proceed to Steps 5-10 of the Flap Reflection technique described on pages 18 - 20 to complete the site preparation.

Straight Implants

Proceed to Steps 5-11 of the Flap Reflection technique described on pages 32 - 35 to complete the site preparation.

PrimaSolo Temporization and Restorative Procedures

Preparing the Abutment Portion of the Implant (Optional)

If the abutment requires modification, the soft tissue surgical site should be protected. Place a rubber dam over the abutment using a lower anterior-sized rubber dam clamp. Prepare the abutment following the same requirements as conventional crown and bridge dentistry.

CAUTION: When preparing the abutment, use copious amounts of irrigation to avoid heat transfer to the bone.

Bur Preparation Kit

Bur Preparation Kit*

For optimum titanium cutting efficiency, Keystone Dental offers a Bur Preparation Kit manufactured by Brasseler USA. It contains an assortment of titanium-cutting burs to perform the most common types of preparations. The following burs are included:

DESCRIPTION USA	BRASSELER ITEM NO
Football-shaped, Extra-coarse (180 micron) Diamond Bur: Used for gross reduction of occlusal/lingual surfaces.	2379.023
Tapered Round-End, Super-coarse (150 micron) Diamond Bur: Used for gross reduction and preparation of a chamfer margin.	5856.018
Tapered Flat End Super-coarse (150 micron) Diamond Bur with rounded corners: Used for gross reduction and preparation of a modified shoulder.	5847KR.018
End-cutting Diamond Bur: Used for shoulder preparations.	10839.012
Carbide Titanium-Cutting Bur: Used for general overall preparation.	H283FQ.010

**Available only in the U.S.*

Outside the U.S. Keystone Dental recommends using burs similar to those described above purchased from your local dental dealer.

PrimaSolo Temporary/Healing Caps

Sterile Temporary/Healing Caps are available for all sizes of PrimaSolo Implants and are manufactured out of PMMA (polymethylmethacrylate) material. This material will bond to all leading dental composites/acrylics used in the dental office. Temporary/Healing Caps can be used either as a foundation for a temporary abutment or as a healing cap.

NOTE: Temporary/Healing Caps may not be re-sterilized.

NOTE: The Temporary/Healing Cap has a dual function. When used as a substructure for a temporary crown, it is referred to as a "Temporary Cap" and when used by itself, it is referred to as a "Healing Cap".

Option 1: Temporization of the Implant

If the Immediate Provisionalization criteria discussed on page 10 have been met, temporization of the implant may be performed at the time of placement. If the integrated implant abutment has not been prepared, the Temporary Cap can be used as a foundation for a short-term temporary restoration. Create a temporary restoration by bonding acrylic to the Temporary Cap using the method of choice. The restoration should be out of occlusion.

Temporary Cap

The following are two of the most common techniques to fabricate a temporary:

Vacuum-formed Stent Technique

Step 1

Using the master cast, place a denture tooth in the edentulous area and then fabricate a vacuum-formed stent using .020 stent material.

Step 2

Trim the stent so it fits over the edentulous area with the Temporary Cap in place and seats onto the adjacent teeth.

Step 3

Place the temporary acrylic material of choice into the stent and insert it over the patient's adjacent teeth. (Follow the manufacturer's recommendations for curing times.)

Step 4

Remove the stent and separate it from the acrylic temporary.

Step 5

Adjust the acrylic for optimum emergence and contour.

Step 6

Adjust the bite so it is out of occlusion and polish the temporary restoration.

Step 7

Apply a minimal amount of temporary cement to the temporary restoration and place it onto the implant. Care must be taken to avoid contaminating the surgical site with cement.

NOTE: Take a post-operative radiograph to verify that no excess cement is remaining in the incision.

Temporary Shell Crown Technique

Step 1

Select the appropriate shell crown that fits over the Temporary Cap and adjust as needed.

Step 2

Using the material of choice, fill the shell crown with acrylic and insert it over the Temporary Cap into the required position. (Follow the manufacturer's recommendations for curing times.)

Step 3

Adjust the acrylic for optimum emergence and contour.

Step 4

Adjust the bite so it is out of occlusion and polish the temporary restoration.

Step 5

Apply a minimal amount of temporary cement to the temporary restoration and place it onto the implant. Care must be taken to avoid contaminating the surgical site with cement.

NOTE: Take a post-operative radiograph to verify that no excess cement is remaining in the incision.

Option 2: Healing Cap

If a temporary restoration is not being fabricated, a Healing Cap may be used to cover the abutment portion of the implant in the short term while the healing process takes place. Place the Healing Cap using a minimal amount of temporary cement. Care must be taken to avoid contaminating the surgical site with cement.

Healing Cap

NOTE: Take a post-operative radiograph to verify that no excess cement is remaining in the incision.

Final Restoration

The final restoration may be fabricated after sufficient bone healing and when the soft tissue has matured.

Final Preparation

Step 1

Remove the temporary restoration from the implant using the method of choice.

Step 2

Make the final preparation of the margins following conventional crown and bridge protocol.

Step 3

Place retraction cord into the gingival sulcus around the implant.

Final Impression

Step 1

Remove the retraction cord.

Step 2

Proceed and take a conventional crown and bridge type impression.

Step 3

After material sets, remove and send to the dental laboratory to fabricate the final crown.

Step 4

Reline and replace the temporary restoration.

Delivery of the Final Restoration

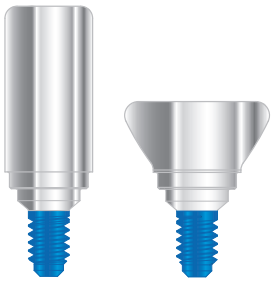
Step 1

Remove the temporary restoration using the method of choice and remove any excess cement.

Step 2

After final adjustments, cement the final restoration using a permanent or temporary cement of choice.

PrimaConnex Soft Tissue Healing and Temporization Procedures



Following the placement of a PrimaConnex Implant, soft tissues can be contoured using a titanium Healing Abutment or a custom fabricated temporary abutment. Both of these procedures are outlined on pages 47-49.

PrimaConnex Healing Abutment

A titanium Healing Abutment can be placed at the time of implant placement (single-stage surgery) to help contour soft tissues during the healing phase. Healing Abutments are available in a variety of sizes and are placed using the Quad Driver.

Immediate Temporization

If the Immediate Provisionalization criteria outlined on page 10 have been met, temporization of the implant may be performed using the PrimaConnex Temporary Abutment. The Temporary Abutment is provided sterile and manufactured out of acrylic (polymethylmethacrylate) with a titanium base. The acrylic portion will bond to all leading dental composites/acrylics allowing the clinician to create custom esthetic contours directly to the Temporary Abutment.

The following are two of the most common techniques:

Vacuum-formed Stent Technique

Step 1

Using the master cast, place a denture tooth in the edentulous area and then fabricate a vacuum-formed stent using .020 stent material.

Step 2

Place the PrimaConnex Temporary Abutment using the Quad Driver.

Step 3

Prepare the Temporary Abutment as necessary so there is adequate space for acrylic between the stent and the Temporary Abutment.

Step 4

Trim the stent so it fits over the edentulous area with the Temporary Abutment in place and relates against the adjacent teeth. Block out the abutment screw access hole to prevent acrylic from flowing inside.

Step 5

Place the temporary acrylic material of choice into the stent and place it over the adjacent teeth. (Follow the manufacturer's recommendations for curing times.)

Step 6

Remove the stent and separate it from the acrylic Temporary Abutment.

Step 7

Grind through the acrylic and into the screw access hole to gain access to the screw.

Step 8

Adjust the bite so it is out of occlusion and polish the temporary restoration.

Step 9

Remove the temporary restoration using the Quad Driver and adjust the acrylic for optimum emergence and contour.

Step 10

Proceed with the final insertion using the Quad Driver and tighten the screw to 30Ncm.

Step 11

All PrimaConnex Temporary Abutments include an occlusal plug to fill the screw access hole. The concave end of the plug is placed towards the occlusal surface. Place the occlusal plug into the screw access hole and shorten enough to allow room (1 - 2mm) for the composite. Fill the remaining portion of the screw access hole with composite. Adjust the occlusion, perform the final contour and polish with the recommended composite polishing medium.

PrimaConnex Soft Tissue Healing and Temporization Procedures

Temporary Shell Crown Technique

Step 1

Place the PrimaConnex Temporary Abutment using the Quad Driver.

Step 2

Select the appropriate shell crown that fits over the Temporary Abutment and adjust if needed.

Step 3

Grind through the shell crown to create the screw access hole.

Step 4

Block-out the screw access hole to prevent acrylic from flowing inside.

Step 5

Using the material of choice, fill the shell crown with acrylic and place it over the Temporary Abutment into the required position. (Follow the manufacturer's recommendations for curing times.)

Step 6

Adjust the bite so it is out of occlusion and polish the temporary restoration.

Step 7

Remove the temporary restoration using the Quad Driver and adjust the acrylic for optimum emergence and contour.

Step 8

Proceed with the final insertion using the Quad Driver and tighten the screw to 30Ncm.

Step 9

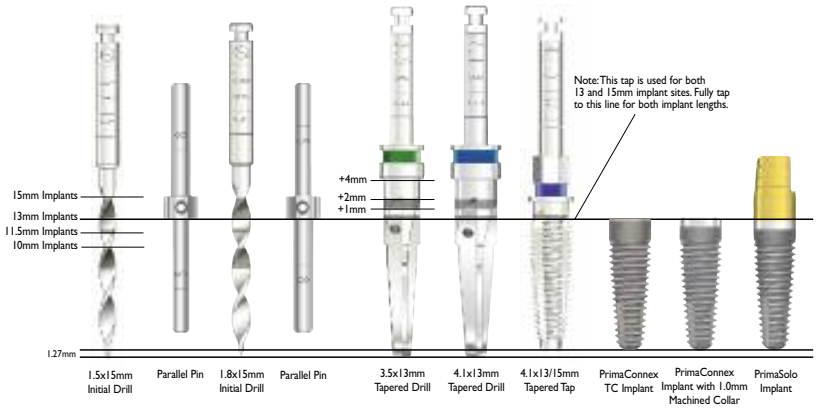
All PrimaConnex Temporary Abutments include an occlusal plug to fill the screw access hole. The concave end of the plug is placed towards the occlusal surface. Place the occlusal plug into the screw access hole and shorten enough to allow room (1 - 2mm) for the composite. Fill the remaining portion of the screw access hole with composite. Adjust the occlusion, perform the final contour and polish with the recommended composite polishing medium.

PrimaSolo® and PrimaConnex® Implants

PrimaSolo, PrimaConnex Tapered Implants

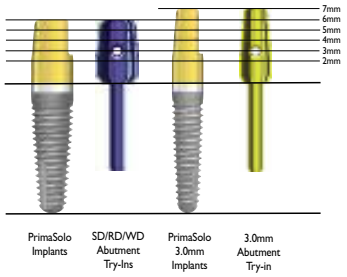
Drill Sequence and Depth Markings Information

(Sequence for a 4.1 X 13mm, RD Implant shown)*



Note: Drill bands reference the insertion depth of the corresponding implant and do not indicate actual millimeter drill length. Due to the drill design, Keystone Dental Prima Tapered Implant Drills are a maximum of 1.27mm longer than the insertion depth of the implant.

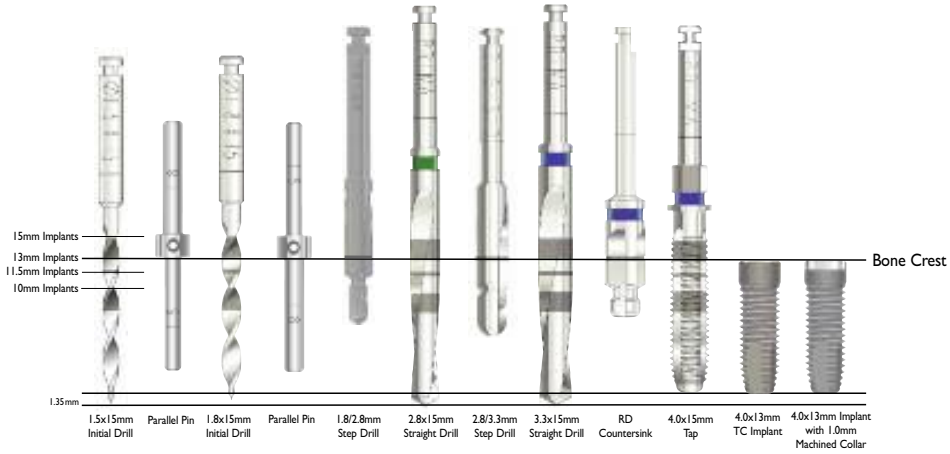
Depth Markings for PrimaSolo ®Implants and Abutment Try-ins



PrimaConnex Straight Implants

Drill Sequence and Depth Markings Information

(Sequence for a 4.0 X 13mm, RD Implant shown)*



Note: Drill bands reference the insertion depth of the corresponding implant and do not indicate actual millimeter drill length. Due to the drill design, Keystone Dental Prima Straight Implant Drills are a maximum of 1.35mm longer than the insertion depth of the implant.

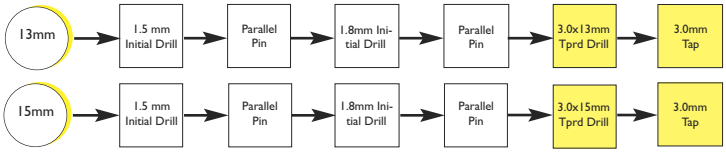
* Drill sequence charts for all Prima™ Implant sizes can be found on page 52.

NOTE: If the osteotomy is prepared to the line marked "Bone Crest," the top of the implant will be level with the crest of the bone. In the case of PrimaSolo One-Piece Implants, this is at the junction of the machined titanium collar and the gold-colored abutment portion of the implant.

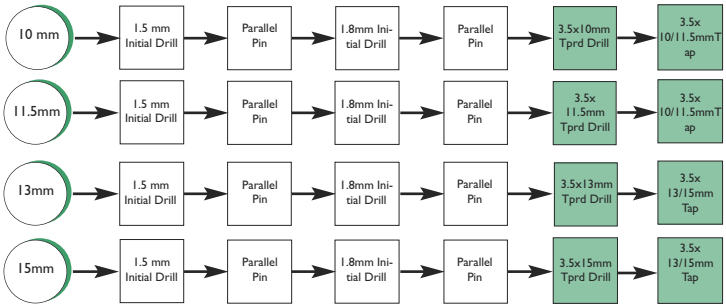
PrimaSolo, PrimaConnex Drilling Sequences - Tapered Implants

Implant Length | Drilling Sequence

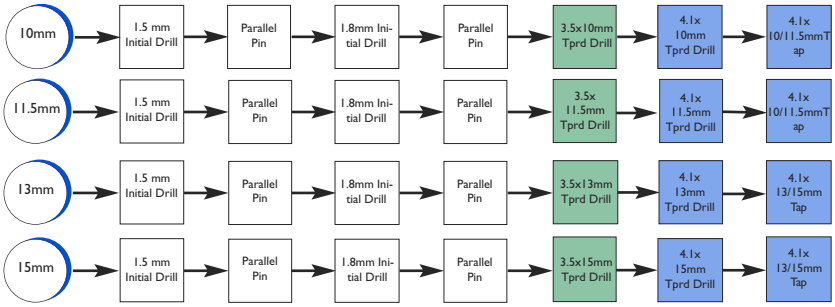
3.0mm Implants



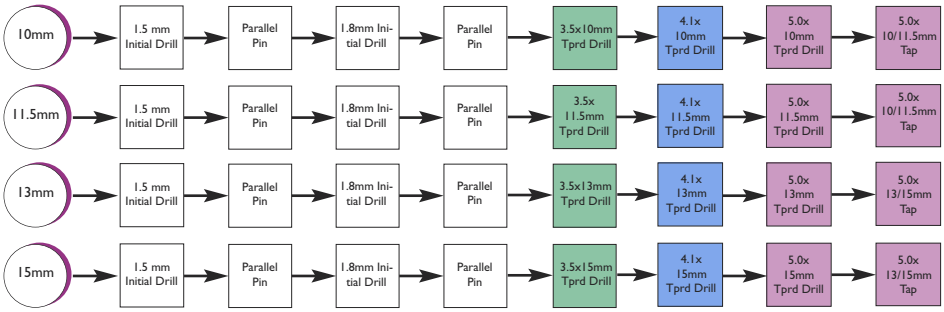
SD 3.5mm Implants



RD 4.1mm Implants

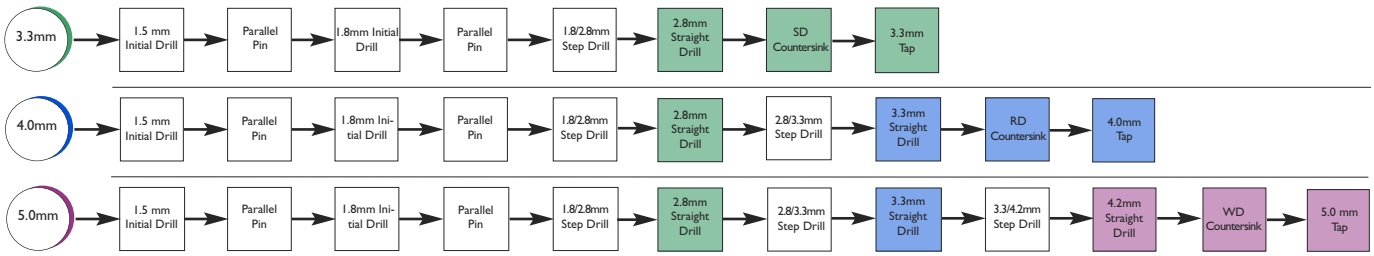


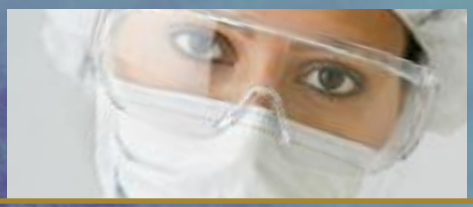
WD 5.0mm Implants



PrimaConnex Drilling Sequences - Straight Implants

Straight Implant Diameter | Drilling Sequence

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℞ Only

⚠ Caution, consult accompanying documents

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Monday-Thursday 8:00am – 8:00pm EST
Friday 8:00am – 6:30pm EST

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