

multi-unit abutments catalog & manual



simple. flexible. smart.

BIOHORIZONS[®]
SCIENCE • INNOVATION • SERVICE

multi-unit overview

full arch solutions for every scenario

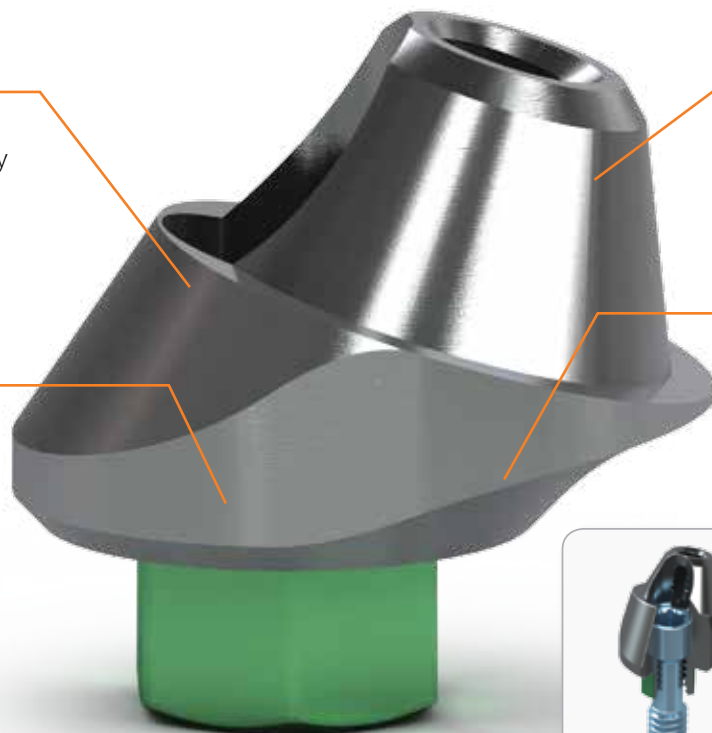
Your patients are unique, shouldn't your treatment plans be as well? The BioHorizons Multi-unit abutment system provides the tools to restore even compromised edentulous cases. With a wide variety of abutment angles, collar heights and platform diameters, no system better equips you to plan for your patients' individual needs. The abutment's intelligent design and restorative flexibility is matched only by its ease of use and surgical efficiency. The Multi-unit abutment system will provide your patients with secure, beautiful smiles.

angled multi-unit abutments

available in a wide variety of sizes and angles for difficult to restore cases

low profile

abutment emergence profiles seat easily in shallow or deep tissue without the need for additional remodeling



45° conical connection

provides maximum angulation correction to create a passive prosthetic fit

sculpted design

provides optimal soft tissue contouring with a wide variety of collar heights



retained abutment screw

for one-handed delivery of angled abutments with either an .050" Hex or Unigrip™ Driver

TeethXpress®

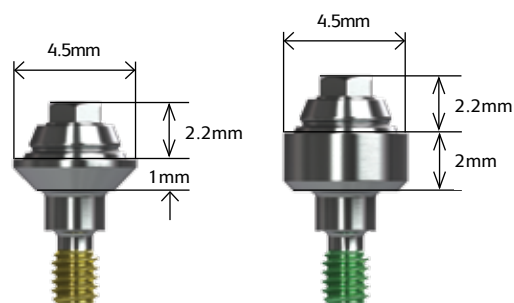
Multi-unit abutments are featured in the TeethXpress immediate load full arch restoration protocol.



multi-unit abutments

Straight Multi-unit Abutments

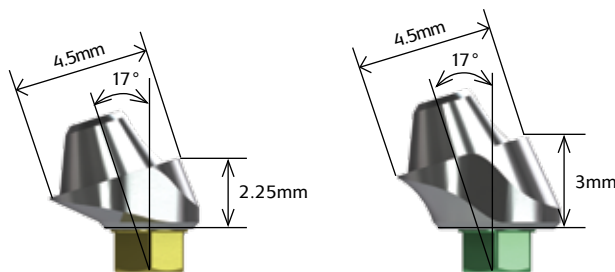
	1mm collar	2mm collar	3mm collar	4mm collar	5mm collar
3.0mm platform	TP3MU1	TP3MU2	TP3MU3	-	-
3.5mm platform	PYMU1	PYMU2	PYMU3	PYMU4	PYMU5
4.5mm platform	PGMU1	PGMU2	PGMU3	PGMU4	PGMU5
5.7mm platform	PBMU1	PBMU2	PBMU3	-	-



Straight Multi-unit abutments may be used for multiple-unit screw-retained restorations at the abutment level, cast alloy bars for overdentures and fixed/detachable (hybrid) restorations. Comes with a cover cap (PXMUCC) pre-mounted on a color-coded carrier. Final torque: 30 Ncm using a Multi-unit Hex Adapter. Titanium alloy. Carrier is high-density polyethylene (HDPE).

17° Angled Multi-unit Abutments

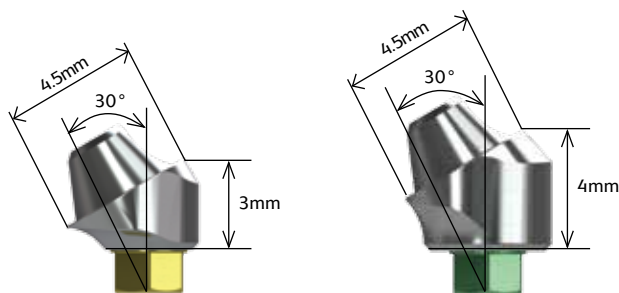
	2.25mm collar	3mm collar	4mm collar
3.0mm platform	TP3MU172	TP3MU173	-
3.5mm platform	PYMU172	PYMU173	PYMU174
4.5mm platform	PGMU172	PGMU173	PGMU174



17° Angled Multi-unit abutments may be used to angle-correct divergent implants. Use for multiple-unit restorations including: screw-retained restorations at the abutment level, cast alloy bars for overdentures and fixed/detachable (hybrid) restorations. Comes with a cover cap (PXMUCC) and pre-mounted abutment screw (PXMUAS) on a color-coded carrier. Final torque: 30 Ncm. Titanium alloy. Conveniently deliver abutment one-handed using an .050 hex or Unigrip™ driver or two handed using an angled Multi-unit carrier (MUCA).

30° Angled Multi-unit Abutments

	3mm collar	4mm collar	5mm collar
3.0mm platform	TP3MU303*	TP3MU304*	-
3.5mm platform	PYMU303	PYMU304	PYMU305
4.5mm platform	PGMU303	PGMU304	PGMU305



30° Angled Multi-unit abutments may be used to angle-correct divergent implants. Use for multiple-unit restorations including: screw-retained restorations at the abutment level, cast alloy bars for overdentures and fixed/detachable (hybrid) restorations. Comes with a cover cap (PXMUCC) and pre-mounted abutment screw (PXMUAS) on a color-coded carrier. Final torque: 30 Ncm. Titanium alloy. Conveniently deliver abutment one-handed using an .050 hex or Unigrip™ driver or two handed using an angled Multi-unit carrier (MUCA).

*available in 2015

shop online at www.biohorizons.com

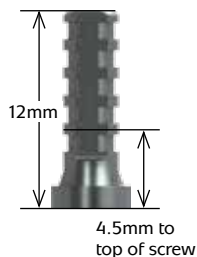
MULTI-UNIT COMPONENTS

Multi-unit Copings

PXMUTC

Titanium

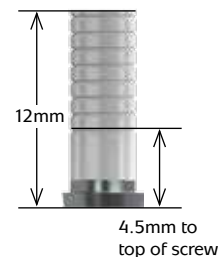
Use for fabricating acrylic temporary and final prostheses. May be trimmed for height. Packaged with prosthetic screw (PXMUPSR). Titanium alloy.



PXMUGC

Gold Custom Castable

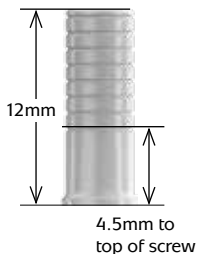
Use for fabricating metal-reinforced acrylic prostheses or bar overdentures. May be trimmed for height. Packaged with prosthetic screw (PXMUPSR). Coping has a gold alloy base with acetal resin (Delrin® or Pomalux®) sleeve.



PXMUPC

Plastic Custom Castable

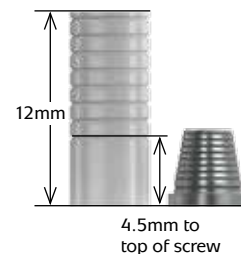
Use for fabricating metal-reinforced acrylic prostheses or bar overdentures. May be trimmed for height. Packaged with prosthetic screw (PXMUPSR). Acetal resin (Delrin® or Pomalux®)



PXMUPFC

Passive Fit

Use for fabricating metal-reinforced acrylic prostheses or bar overdentures, cemented using the passive-fit technique. May be trimmed for height. Packaged with regular and long prosthetic screws (PXMUPSR, PXMUPSL). Coping has a titanium alloy base with acetal resin (Delrin® or Pomalux®) sleeve.



Multi-unit Locators®

LMUTC-2 Locator Multi-unit Abutment w/ Ti Collar (2 pack)

LMUTC-10 Locator Multi-unit Abutment w/ Ti Collar (10 pack)

Use Male Processing Package for these collars (LMPP-2 or LMPP-10).

LMUDC-2 Locator Multi-unit Abutment w/ Delrin® Collar (2 pack)

LMUDC-10 Locator Multi-unit Abutment w/ Delrin® Collar (10 pack)

Use Locator Multi-unit Bar Processing Package listed below for these collars.



LMUBPP-2 Locator Multi-unit Bar Processing Package (2 pack)

LMUBPP-10 Locator Multi-unit Bar Processing Package (10 pack)



Locator attachments for multi-unit abutments have been designed as a free-standing option (LMUTC) for the angled multi-unit posterior sites and for castable bar-splinted applications (LMUDC). The Locator Multi-unit Bar Processing Package includes Denture Cap with Yellow Bar Processing Male, Dual Retentive Replacement Males: Clear, Pink, Blue, and Block-Out Spacer. Offered in 2 packs and 10 packs. For complete instructions, visit the Zest Anchors web site.

MULTI-UNIT COMPONENTS

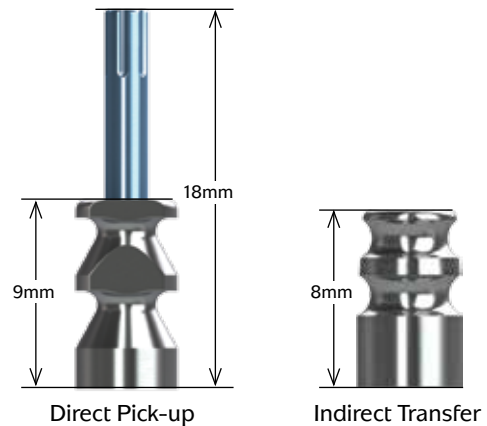
Multi-unit Impression Copings

PXMUDC Direct Pick-up Coping, Multi-unit

Use to make a direct pick-up impression (open-tray) at the abutment level. Packaged with a prosthetic screw, long (PXMUPSL). Titanium alloy. Hand tighten.

PXMUIC Indirect Transfer Coping, Multi-unit

Use to make an indirect transfer (closed-tray) impression at the abutment level. Titanium alloy. Hand tighten.



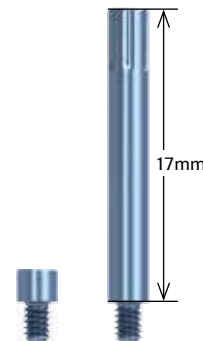
Multi-unit Coping Screws

PXMUPSR Prosthetic Screw, Multi-unit, Regular (pack of 5)

PXMUPSL Prosthetic Screw, Multi-unit, Long (pack of 5)

PXMUPSR25 Prosthetic Screw, Multi-unit, Regular (pack of 25)

For attaching copings to the Multi-unit abutments. Hand-tighten or torque to 15 Ncm with .050" (1.25mm) Hex Driver or Unigrip™ screw driver, depending on application. Titanium alloy. Included with copings where indicated but can also be ordered separately.



Multi-unit Angled Abutment Screw & Abutment Carrier

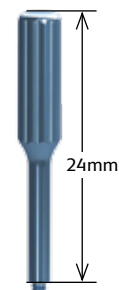
PXMUAS Abutment Screw, Multi-unit

PXMUAS25 Abutment Screw, Multi-unit (pack of 25)

For angled Multi-unit abutments only. Final torque: 30 Ncm with .050" (1.25mm) Hex Driver or Unigrip™ screw driver. Titanium alloy. Included with abutment but can also be ordered separately.

MUCA Angled Multi-unit Abutment Carrier (pack of 3)

Use to deliver angled Multi-unit abutments to the surgical site. Titanium alloy.



MULTI-UNIT COMPONENTS

Multi-unit Cover Cap

PXMUCC Cover Cap, Multi-unit

Packaged with all Multi-unit abutments. Hand-tighten with .050" (1.25mm) Hex Driver or Unigrip™ screw driver. Titanium alloy.



Multi-unit Abutment Replica & Protection Analog

PXMUAR Abutment Replica, Multi-unit

Use at lab to represent the Multi-unit/Implant assembly in the working cast. Not for use with implant-level impressions. Titanium alloy.



PXMUPA Protection Analog, Multi-unit (pack of 5)

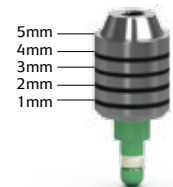
Use to protect abutment-coping interface when polishing the metal framework. Titanium alloy.



Multi-unit Try-in Abutments

Multi-unit Try-in Abutments may be used to measure tissue thickness and verify proper prosthetic seating prior to final abutment seating.

TRYTP3MU	3.0mm Multi-unit Try-in Straight Abutment
TRYPYMU	3.5mm Multi-unit Try-in Straight Abutment
TRYPGMU	4.5mm Multi-unit Try-in Straight Abutment
TRYPBMU	5.7mm Multi-unit Try-in Straight Abutment

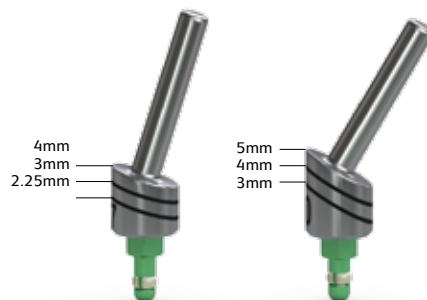


Straight abutment
Laser marking

Each Try-in is laser marked from 1 mm to 5mm to correspond with the Straight Multi-unit Abutment collar heights and can also be used as a measuring tool for other restoration types. Try-in can be carried to the site by hand or with an .050" hex driver and snaps into the implant.

TRYTP3MU17*	3.0mm Multi-unit Try-in 17° Angled Abutment
TRYPYMU17*	3.5mm Multi-unit Try-in 17° Angled Abutment
TRYPGMU17*	4.5mm Multi-unit Try-in 17° Angled Abutment

TRYTP3MU30*	3.0mm Multi-unit Try-in 30° Angled Abutment
TRYPYMU30*	3.5mm Multi-unit Try-in 30° Angled Abutment
TRYPGMU30*	4.5mm Multi-unit Try-in 30° Angled Abutment



17° Angled Abutment
Laser marking

30° Angled Abutment
Laser marking

Each Try-in is laser marked to correspond with the Angled Multi-unit Abutment collar heights. Try-in is carried to the site by the handle and snaps into the implant.

*available in 2015

shop online at www.biohorizons.com

PROSTHETIC INSTRUMENTATION

Paralleling Pins

- 144-100** Straight Parallel Pins
- 144-200** 20° Angled Parallel Pin
- 144-230** 30° Angled Parallel Pin

Use parallel pins to assess implant angulation and estimate which angled abutment is appropriate for the restoration.



Multi-unit Hex Adapters for Straight Abutments

- PXMUHAM** Manual Multi-unit Hex Adapter

Use to hand tighten straight Multi-unit abutments.

- PXMUHAH** Handpiece Multi-unit Hex Adapter

Use to torque straight Multi-unit abutments. Driven by latch-type handpiece. Do not exceed 30 Ncm.

- PXMUHAR** 4mm Square Multi-unit Hex Adapter

Use to torque straight Multi-unit abutments. Driven by 4mm square drive handwrench, ratchet, or torque wrench. Do not exceed 30 Ncm.



Manual



Handpiece



4mm Square

Torque Wrenches

- ATW** ITL Precise Adjustable Torque Wrench

Place both implants and abutments with 9 distinct torque settings (15, 20, 25, 30, 35, 40, 45, 50 and 60 Ncm). A simple twist of the handle locks in precision-engineered torque values and guarantees accuracy and repeatability. Use with 4mm square drive instruments.



- EL-C12374** Elos Adjustable Torque Wrench

Lightweight titanium design is easy to use as an adjustable torque wrench or a ratchet. Quickly disassembles for cleaning. No calibration required.



- WH-16934000** IA-400 Prosthodontic Screwdriver

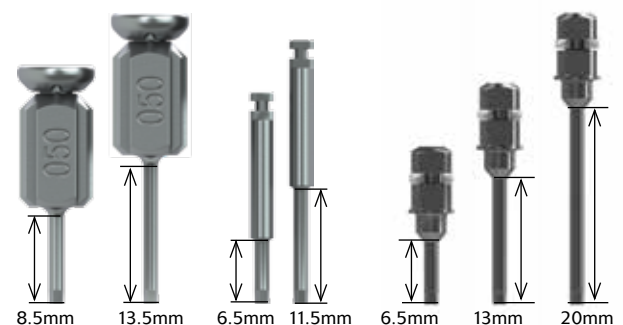
Cordless handpiece with precise torque control from 8-40 Ncm, 80:1 contra-angle handpiece with hexagon chucking system, charging station, rechargeable Li-ion battery, and power cable.



.050" (1.25mm) Hex Drivers

- 135-351** Manual Hex Driver
- 135-451** Manual Hex Driver, Long
- 134-350** Handpiece Hex Driver
- 134-450** Handpiece Hex Driver, Long
- 300-350** 4mm Square Hex Driver
- 300-351** 4mm Square Hex Driver, Long
- 300-354** 4mm Square Hex Driver, Extra Long

For installation and removal of cover caps, prosthetic and abutment screws.



Manual

Handpiece

4mm Square

shop online at www.biohorizons.com

RESTORATIVE OPTIONS

Surgical Technique for Multi-unit Abutments

BioHorizons Multi-unit abutments are intended for multi-unit screw-retained restorations including screw-retained crown and bridge, bar-overdentures and hybrids. They can accommodate highly divergent implants and are available in a variety of collar heights. Clinician judgement for any specific case must always supersede any recommendations made in this or any BioHorizons literature.

Prosthetic Options

BioHorizons provides a wide range of prosthetic components for the Multi-unit abutments. Flexibility in component selection and restorative protocol simplifies planning for any case. The 45° conical prosthetic connection is designed to ensure the prosthesis seats passively and predictably. Simply choose from a selection of titanium, passive fit, plastic or gold-plastic custom castable copings according to the clinical situation.

- Titanium Copings (PXMUTC) may be used to fabricate all-acrylic bridges
- Gold Copings (PXMUGC) or Plastic Copings (PXMUPC) may be used for standard metal-reinforced acrylic prostheses
- Passive Fit Copings (PXMUPFC) may be used for a passive cemented framework for a metal-reinforced acrylic prosthesis
- Locators may be used for either a free-standing resilient attachment connection (LMUTC) or splinted bar attachment connector (LMUDC)

The Multi-unit Prosthetic Screws, Long (PXMUPSL) may be temporarily used when trying on copings and to maintain a clear screw access channel during fabrication. Prosthetic screws (PXMUPSR) receive a final torque of 15 Ncm using a .050" (1.25mm) Hex Driver or a Unigrip™ screw driver. Multi-unit abutments receive a final torque of 30Ncm. Permanent and temporary restorations should be manufactured according to standard clinical and laboratory procedures.

BioHorizons Prosthetic Platform Coloring

Multi-unit abutment carriers are color-coded to match BioHorizons implant prosthetic platforms. To ensure compatibility:

- (1) determine the BioHorizons implant system from the patient's record (e.g. Internal, Tapered Internal, Laser-Lok 3.0)
- (2) verify that the prosthetic component is intended for that system
- (3) match the carrier color with the implant prosthetic platform.

Symbol Descriptions for Product Labeling

The diagram shows a product label for a **4.5 x 2mm Straight Multi-unit Abutment** by **BIOHORIZONS**. The label includes the following information and symbols:

- REF** PGMU2 (Reference/article number)
- LOT** YXXXXXX (Lot/batch number)
- YYMM** (Use before expiration date)
- YYMM** (Manufacture date)
- STERILE** (Sterile by gamma irradiation)
- NON-STERILE** (Non-sterile)
- Rx Only** (Caution: Federal (USA) law restricts these devices to the sale, distribution and use by, or on the order of, a dentist or physician.)
- Artwork label number** (0473)
- Internal Multi-unit Abutment 4.5 plat, 2mm Collar, Straight**
- do not re-use** (Symbol)
- see instructions for use** (Symbol)
- CE 0473** (CE mark and number)

Prosthetic platform

- 3.0mm Prosthetic Platform (Symbol)
- 3.5mm Prosthetic Platform (Symbol)
- 4.5mm Prosthetic Platform (Symbol)
- 5.7mm Prosthetic Platform (Symbol)

Single use only (Symbol)

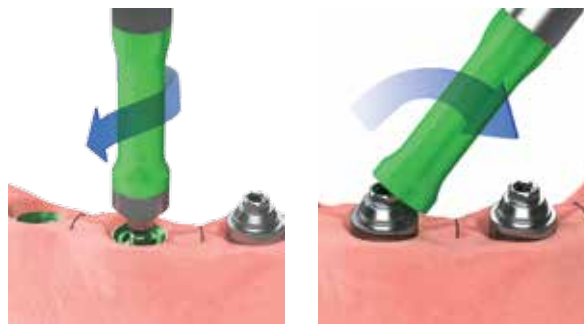
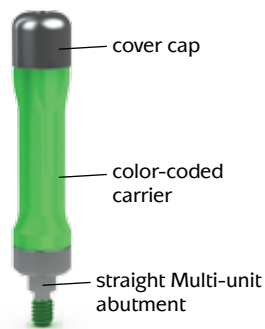
Refer to Instructions for Use (Symbol)

BioHorizons products carry the CE mark and fulfill the requirements of the Medical Devices Directive 93/42/EEC

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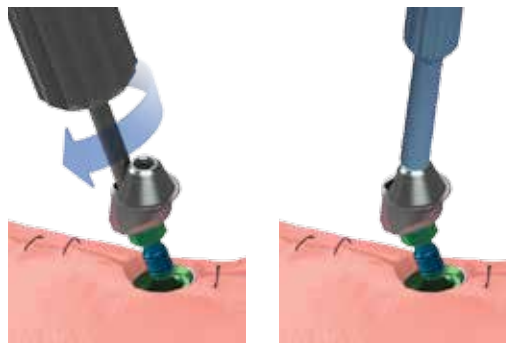
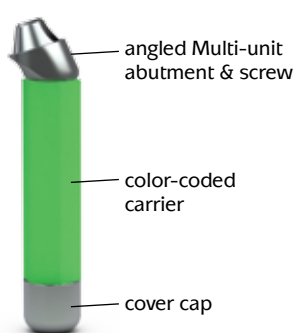
MULTI-UNIT PLACEMENT

Delivering Straight Multi-unit Abutments



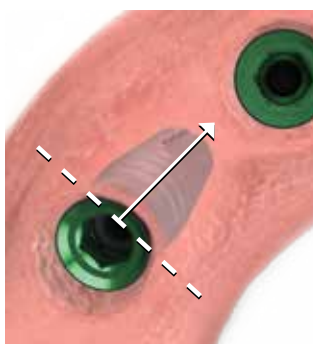
The cover cap and straight Multi-unit abutment are mounted to the color-coded carrier for easy delivery to the site. Place the abutment by threading clockwise into the implant body. Remove the carrier by bending it to the side. Seat the abutment by tightening to 30Ncm using a Multi-unit Hex Adapter.

Delivering Angled Multi-unit Abutments



The cover cap, angled Multi-unit abutment and screw are mounted to the color-coded carrier for easy delivery to the site. Engage the abutment screw with an .050" Hex or Unigrip™ screw driver and turn counterclockwise to release the abutment and screw from the carrier. Seat the abutment by threading the abutment screw clockwise into the implant body. Alternatively, the angled Multi-unit carrier can be used to place angled Multi-units in deep posterior sites. The angled Multi-unit carrier can also be used to check angulation. Tighten to 30 Ncm with a .050" (1.25mm) Hex Driver or a Unigrip™ screw driver.

Special Considerations



Special considerations for angled abutments

When placing an implant at a diverging angle, make sure to orient one internal hex flat in the direction of the implant tilt. Doing so ensures that the angled Multi-unit abutment is correctly aligned.

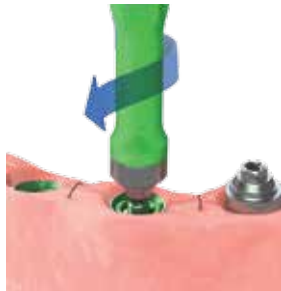


Delayed Loading (optional)

If the required initial stability for immediate loading of implants cannot be met, place the cover caps on the Multi-unit abutments for a conventional healing phase. Hand tighten only. An existing denture may be used as a temporary prosthesis when hollowed out and placed using a soft reline material.

IMMEDIATE LOAD STEPS

Immediate Temporization



- 1) Select and seat the appropriate diameter and collar height Multi-unit abutment. The margin should be 1 to 2mm supragingival. Hand tighten during healing phase and then tighten to 30Ncm after healing has occurred.



- 2) Place the temporary copings. Hand-tighten using a .050" Hex or Unigrip™ driver.



- 3) Place a sheet of rubber dam in the shape of an arch over all the temporary copings to protect the tissue during the acrylic phase.



- 4) Place holes in the denture to match the location of the temporary copings until the denture fully seats.

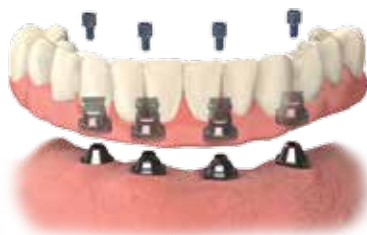


- 5) Use a flowable composite or acrylic to secure each coping to the denture while making sure to keep the screw-access holes free from composite.



- 6) Disconnect the denture, remove the flanges and fill in the voids with acrylic on the tissue side.

Deliver Denture



- 1) Place the all acrylic bridge on the Multi-unit abutments and torque the prosthetic screws to 15 Ncm.



- 2) Fill in the screw-access holes with the material of choice. Check occlusion.



- 3) Follow conventional prosthetic procedures to fabricate the final restoration.

ORDERING & WARRANTY INFORMATION

Product Support Specialist: _____

Cell phone: _____

Fax: _____

BioHorizons Lifetime Warranty on Implants and Prosthetics: All BioHorizons implants and prosthetic components include a Lifetime Warranty. BioHorizons implant or prosthetic components will be replaced if removal of that product is due to failure (excluding normal wear to overdenture attachments).

Additional Warranties: BioHorizons warranties instruments, surgical drills, taps, torque wrenches and Virtual Implant Placement (VIP) treatment planning software.

(1) Surgical Drills and Taps: Surgical drills and taps include a warranty period of ninety (90) days from the date of initial invoice. Surgical instruments should be replaced when they become worn, dull, corroded or in any way compromised. Surgical drills should be replaced after 12 to 20 osteotomies.*

(2) Instruments: The BioHorizons manufactured instrument warranty extends for a period of one (1) year from the date of initial invoice. Instruments include drivers, sinus lift components, implant site dilators and BioHorizons tools used in the placement or restoration of BioHorizons implants.

(3) VIP treatment planning software: VIP treatment planning software warranty extends for a period of ninety (90) days from the date of initial invoice. The warranty requires that VIP be used according to the minimum system requirements.

(4) Compu-Guide surgical templates: Compu-Guide surgical templates are distributed without making any modifications to the submitted Compu-Guide Prescription Form and VIP treatment plan ("as is"). BioHorizons does not make any warranties expressed or implied as it relates to surgical templates.

Return Policy: Product returns require a Return Authorization Form, which may be acquired by contacting Customer Care. The completed Return Authorization Form must be included with the returned product. For more information, please see the reverse side of the invoice that was shipped with the product.

Disclaimer of Liability: BioHorizons products may only be used in conjunction with the associated original components and instruments according to the Instructions for Use (IFU). Use of any non-BioHorizons products in conjunction with BioHorizons products will void any warranty or any other obligation, expressed or implied.

Treatment planning and clinical application of BioHorizons products are the responsibility of each individual clinician. BioHorizons strongly recommends completion of postgraduate dental implant education and adherence to the IFU that accompanies each product. BioHorizons is not responsible for incidental or consequential damages or liability relating to use of our products alone or in combination with other products other than replacement or repair under our warranties.

Compu-Guide surgical templates are ordered under the control of a Clinician. The Clinician recognizes responsibility for use. Therefore, regardless of the real or proven damages, the liability to BioHorizons is limited to the price of the product directly related to the reason for the claim.

Distributed Products: For information on the manufacturer's warranty of distributed products, please refer to their product packaging. Distributed products are subject to price change without notice.

Validity: Upon its release, this literature supersedes all previously published versions.

Availability: Not all products shown or described in this literature are available in all countries. BioHorizons continually strives to improve its products and therefore reserves the right to improve, modify, change specifications or discontinue products at any time.

Any images depicted in this literature are not to scale, nor are all products depicted. Product descriptions have been modified for presentation purposes. For complete product descriptions and additional information, visit shop.biohorizons.com.

* Heat production by 3 implant drill systems after repeated drilling and sterilization.
Chacon GE, Bower DL, Larsen PE, McGlumphy EA, Beck FM. *J Oral Maxillofac Surg.* 2006 Feb;64(2):265-9.

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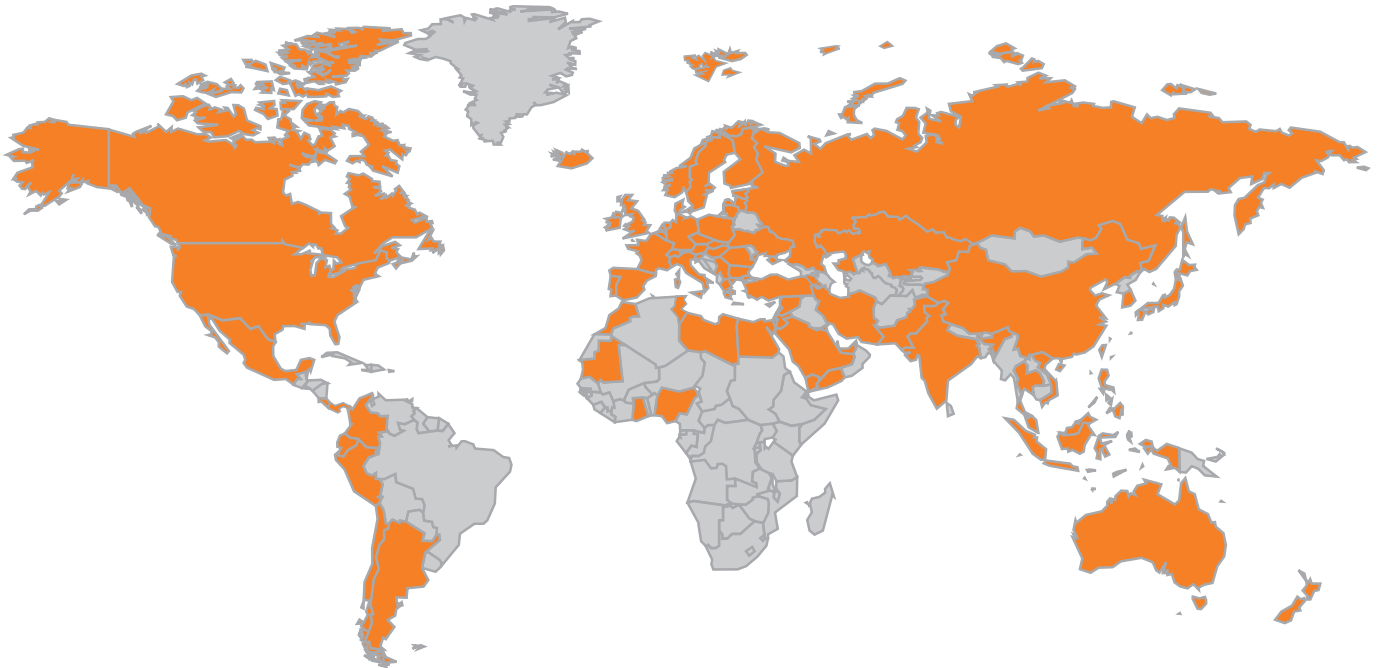
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