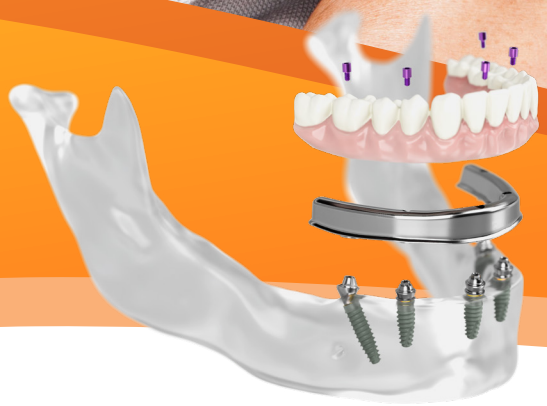
full-arch efficiency

Complete digital ecosystem with
Vulcan Custom Dental



BIOHORIZONS®

fueling full-arch efficiency

Complete solutions for streamlined full-arch workflows



Single, color-coded prosthetic platform for all full-arch cases



Final prosthetic solutions powered by Vulcan Custom Dental



Stackable surgical guides for safe, predictable surgeries



No more copings – precision engineered direct-to-multi-unit screw



Best-in-class IOS + photogrammetry digital solutions



The fastest 3D printing ecosystem

BioHorizons provides advanced digital solutions and offers an entire portfolio dedicated to serving full-arch needs.

Vulcan Custom Dental — a BioHorizons validated milling center — specializes in custom-milled prostheses for single-unit through full-arch implant restorations. Backed by engineering expertise and dedicated support, Vulcan provides customizable solutions that deliver authentic restorations and predictable outcomes.

Together, BioHorizons and Vulcan streamline surgical and restorative workflows to create a seamless experience for clinicians and patients.

full-arch efficiency

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streamline your digital full-arch workflow

Immediate provisional workflow

BioHorizons and Vulcan offer a streamlined workflow for immediate provisionals with direct-to-multi-unit restorations for efficiency and predictability in full-arch cases.

Customers can choose one of the **SimpliSmile**™ stackable full-arch solutions to help guide the placement of implants to ensure precise positioning and a seamless transition into the provisional phase.

This step ensures immediate function while maintaining proper tissue adaptation. It lays the foundation for optimized healing and esthetics before delivering the final restoration.



Place **Tapered Pro Conical** implants and **multi-unit abutments**



Capture implant placement with **MicronMapper®**



Capture soft tissue with **TRIOS®**



Send photogrammetry and patient scans to **DentaGraphiX**™ for design services



Print provisional with **SprintRay**



Lab customizes the provisional and sends back to clinician



Clinician places the provisional into the patient's mouth

Final restoration workflow

BioHorizons and Vulcan provide a workflow for final restorations that is designed to support optimal healing and long-term outcomes. This workflow is followed by immediate provisional placement to ensure that the definitive prosthesis is delivered with precision, pleasing esthetics and lasting function.

After the implants have been placed, the patient wears a provisional for several months to allow the implants to integrate and the tissue to adapt. Once this phase is complete, clinicians can seamlessly transition to the final restoration.



Capture implant placement with **MicronMapper®**



Capture soft tissue with **TRIOS®**



Send photogrammetry and patient scans to **Vulcan Custom Dental** for CAD/CAM services



Vulcan manufactures and ships to lab for final customization



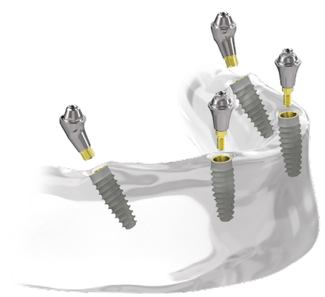
Lab customizes full-arch restoration



Clinician seats the final restoration

Fueling full-arch with Tapered Pro Conical

BioHorizons Tapered Pro Conical implant offers the 3.8mm diameter implant in two prosthetic platforms: narrow and regular. This expanded portfolio for regular length implants streamlines full-arch workflows by allowing the use of a single prosthetic platform for any full-arch case.

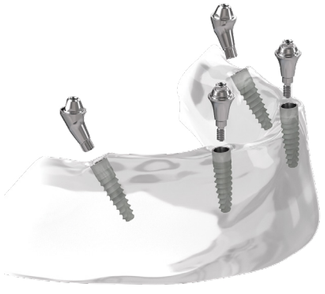




Regular platform

Surgical flexibility

Achieve optimized esthetic outcomes and conquer anatomical challenges by performing full-arch indications with all-yellow prosthetic connection implants or with all-gray prosthetic connection implants.





Narrow platform

Simplified prosthetic workflow

All abutment components are interchangeable across all implant sites to reduce cost and inventory, minimize the chance of mismatched components, streamline lab communication, and enable faster turnaround during prosthesis fabrication.

Multi-unit abutments

BioHorizons multi-unit abutments are designed to rehabilitate edentulous and partially edentulous arches.

Multi-unit abutments may be used for screw-retained restorations at the abutment-level bars for overdentures and fixed/detachable (hybrid) restorations.



SimpliSmile™

Complete case solutions with SimpliSmile

Vulcan Custom Dental's SimpliSmile is a comprehensive, modular solution that simplifies workflows by integrating treatment planning and manufacturing services, delivering a complete, all-in-one customized case to your doorstep.

SimpliSmile covers all your surgical and prosthetic needs with full-arch stackable solutions.

MagnetiX™ stackable solution

Full-arch stackable magnetic guide technology



GuidedSMILE™ stackable solution

Full-arch patented metal stackable guides





Scan to learn more about SimpliSmile.

Digital equipment that drives full-arch precision

Restoration printing with SprintRay



SprintRay is a dental 3D printer that prints most appliances in-office in less than 30 minutes.

Intra-oral scanning with Trios



The TRIOS scanner is designed to fit comfortably in every hand. On top of that, it is designed for hygiene and comes with 3Shape ScanAssist engine for perfect scan results, and TRIOS Share, for ultimate connectivity.

Photogrammetry with MicronMapper®



Comprised of a handheld camera unit leveraging photogrammetric scanning technology to capture precise 3D data across an arch

Ease of use

Precise photogrammetry in a compact, lightweight, and fast solution, essential for every All-on-X' specialist. Factory calibrated and requires no warmup or pre scan calibration.

Cost effective

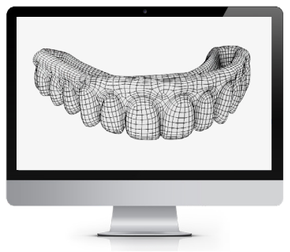
Eliminate the need for physical models, reduces chair time and overall treatment duration.

Accurate

High accuracy in measuring implant positions ensuring a proper passive-fit and function of the final prosthetic, leading to successful dental restorations.

DentaGraphiX™

Design services



DentaGraphiX design services by Vulcan Custom Dental transforms photogrammetry scans into expertly designed full-arch provisionals and final restorations through a seamless, designer-led workflow. Supported by Vulcan's collaborative expertise and digital precision, these design services streamline case planning and elevate restorative confidence — empowering clinicians to deliver esthetic, functional outcomes.

Comprehensive solutions for a seamless full-arch transformation



Vulcan bar solution with angled screw channel capabilities



Direct-to-multi-unit restoration

Custom CAD/CAM final restorations play a critical role in achieving precision, durability and esthetic excellence in dental restorations.

Vulcan specializes in manufacturing and producing these final restorations with advanced digital workflows to ensure optimal fit and function.

Throughout the process, Vulcan collaborates closely with clinicians and technicians who finalize the restorations and refine details before placement in the patient's mouth.

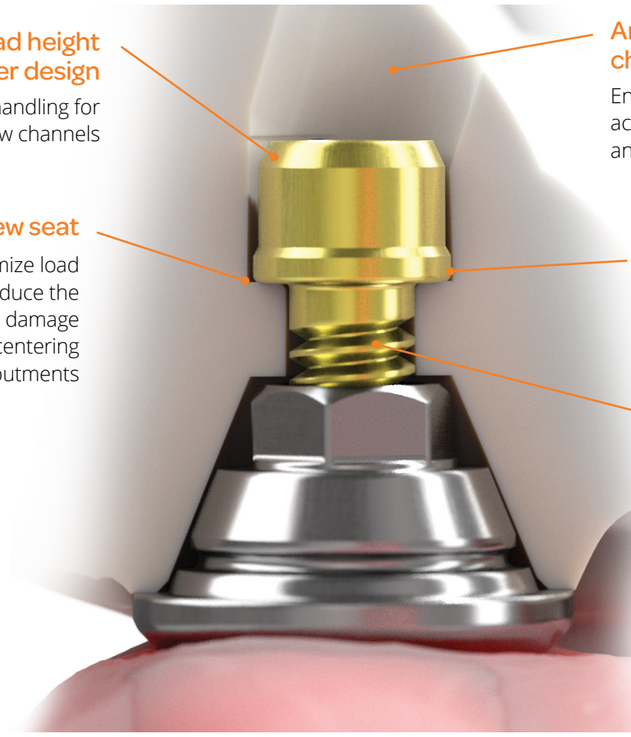
BioHorizons further supports these final restorations by providing high-quality screws that are designed to accommodate the specific restorative needs, reinforcing stability and long-term success.



Direct-to-multi-unit screw

The direct-to-multi-unit screw is a prosthetic screw designed to secure zirconia, PMMA and 3D-printed restorations directly to a multi-unit abutment without an intermediate component like a titanium base or a coping.

This innovative design allows for precise angulation, accommodating screw channel angulation up to 25° to ensure optimal placement and restorative stability.



Optimized head height & chamfer design

Improved handling for angulated screw channels

Flat screw seat

Designed to optimize load distribution, reduce the risk of restoration damage and ensure self-centering with multi-unit abutments

Angulated screw channel capability

Enhanced control of screw channel access and simplified handling of angulations up to 25 degrees

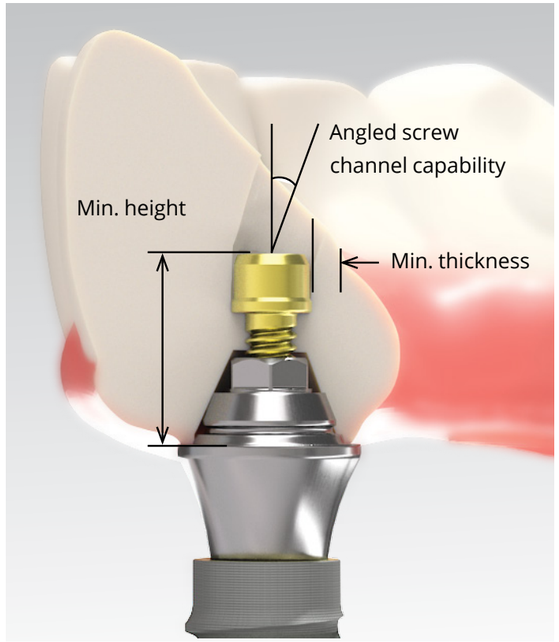
enhanced screw diameter

Greater surface area between the screw and restoration for optimal force distribution.

gold anodized

Improved esthetic outcome in anterior zones with a thin restoration wall

Direct-to-multi-unit workflow

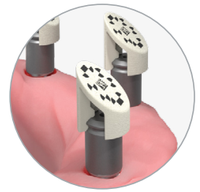


Minimum thickness	Minimum height	Angled screw channel capability
0.5mm	5mm	Up to 25°

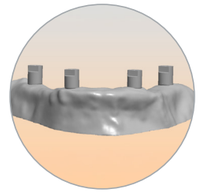
DID YOU KNOW?

Vulcan provides BioHorizons digital libraries for your digital full-arch workflow.

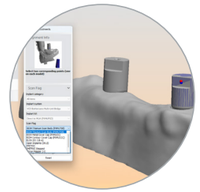
Download at:
vulcandental.com/digitallibraries



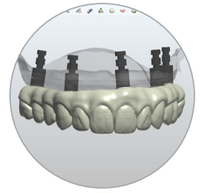
Acquire digital impression of abutment position



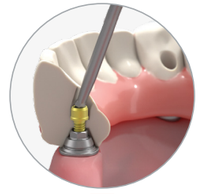
Import scans into design software



Perform scan body alignment



Design the restoration



Produce & finalize restoration



Deliver with the direct-to-multi-unit screw

Titanium bars

As the only FDA-registered contract manufacturer for BioHorizons custom titanium bars, Vulcan ensures exceptional fit and quality for implant- and abutment-level restorations. Every bar undergoes rigorous dimensional checks and a one-screw passivity test based on University of Sheffield protocols — delivering unmatched accuracy and consistency.

- Authentic implant & abutment-level titanium bars
- Precision-milled for passive fit & optimal performance
- Ti-6Al-4V ELI Titanium Alloy (Grade 23) for superior strength
- Custom design services available



Angled screw channels for bars

The angled screw channel for abutment-level bars offers a versatile and efficient solution for dental restorations. This innovative design allows for precise angulation, **accommodating angles up to 25°** to ensure optimal placement and stability of the prosthetic components.



Enhanced accessibility

Angulated screw channel provides ease of access and control.

Improved esthetics

Reduces cement-filled holes on the facial side for a natural esthetic result.

Seamless integration

Compatible with 3Shape and Exocad workflows for precision.

Increased strength & stability

Streamlined workflow with industry-leading turnaround times.

VBar™

Titanium reinforced full-contour solution

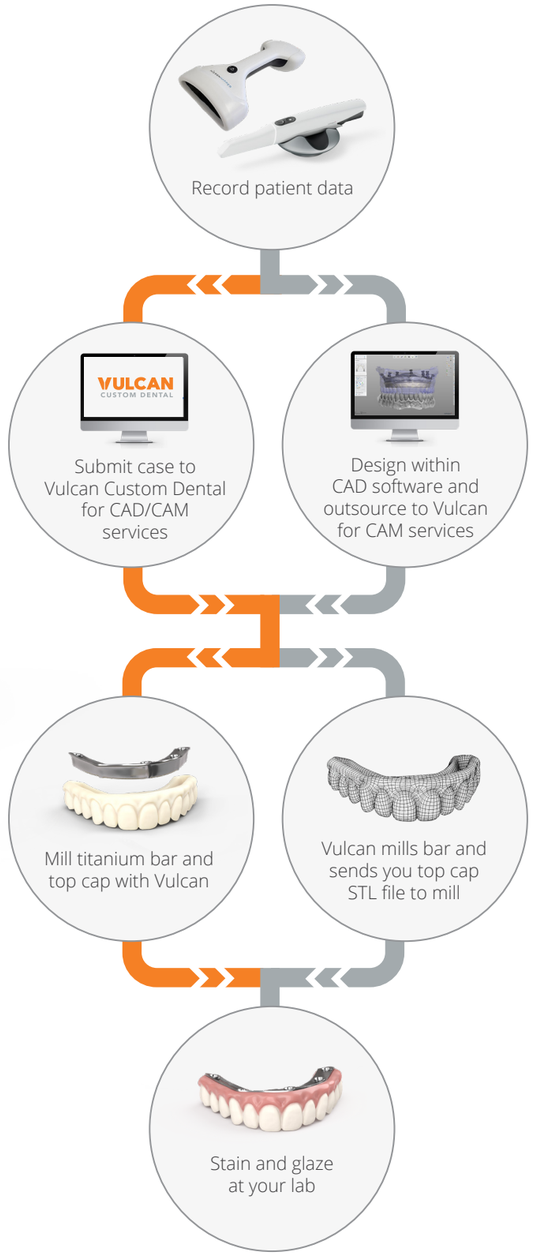
Vulcan's VBar reinforces full-contour restorations with titanium strength to ensure superior prosthetic stability.

VBar integrates seamlessly with angled screw channels and CAD/CAM bar prosthetic screws to optimize accessibility and efficiency. This combination enhances esthetics, secures retention and minimizes manual adjustments — delivering a predictable, streamlined workflow for full-arch restorations.



DID YOU KNOW?

You can send a verified model to Vulcan. Vulcan will scan it to assist with final restoration design.





CAD/CAM bar prosthetic screw

The CAD/CAM bar prosthetic screw is designed to support straight and angulated screw channels for Vulcan Custom Dental titanium bars, including VBar.™ Its retrievable feature allows clinicians to remove the screw without damaging the titanium bar.

The CAD/CAM bar prosthetic screw should be torqued to **15 Ncm** when securing it to any Vulcan abutment-level titanium bar for optimal stability and long-term performance.

Effortless full-arch integration with angled screw channels

Take your streamlined workflow even further when you integrate angled screw channels with abutment-level bars and use the BioHorizons CAD/CAM bar prosthetic screw. You and your patients will benefit from enhanced restorative predictability.

This combination optimizes esthetics, accessibility and stability while minimizing manual adjustments.



Supported drivers for new screws

BioHorizons supported drivers support the **CAD/CAM bar prosthetic screw** and **direct-to-multi-unit screw**.



Conical ballpoint driver

For angulated screw channels



.050 hex driver

For straight screw channels



DID YOU KNOW?

For seamless restorations, keep in mind the conical ballpoint driver does not retain the screw like a traditional hex driver. This distinction is especially important when delivering screws intraorally to ensure precise placement and a smooth workflow.

Digital libraries for seamless full-arch restorations

To design and mill CAD/CAM full-arch restorations with precision, labs and offices must utilize Vulcan's digital libraries, available for free download at **vulcandental.com/digitallibraries**.

Vulcan's libraries deliver seamless integration with BioHorizons authentic connections and are exclusively compatible with **3Shape** and **exocad**, the two leading design platforms in digital dentistry. This focused compatibility empowers labs and offices to efficiently design bars and restorations with enhanced accuracy, predictability and workflow confidence.





Start your case with Vulcan today!

Easily access Vulcan's design and milling services through the Vulcan Custom Portal. Registration is simple. Complete the New Account Registration form and you'll receive login details within 24 hours. Once registered, users can manage case submissions, track progress and securely upload files.

Submit a case to Vulcan
vulcandental.com

Learn how to create an account to Vulcan's Customer Portal

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