BellaTek® Bars & Frameworks
Laboratory Manual

Optimization By Design®
This Manual describes the process to submit a Work Order Form for a BellaTek Bar (formerly known as a CAM StructSURE™ Precision Milled Bar) or Framework.

This Manual is not intended to replace or supersede sound medical judgment, the clinician’s experience or training. Zimmer Biomet Dental does not provide medical advice. The clinician should use medically sound treatment planning and procedures for predictable results. For more information and recommendations, please refer to the Zimmer Biomet Dental Restorative Manual treatment planning section.
CAD/CAM Patient Specific Restorations are the future of restorative implant dentistry\(^1\)\(^2\) and BellaTek Bars and Frameworks extends the well-documented benefits\(^2\)\(^-\)\(^4\) of CAD/CAM technology to your practice. These superstructures provide simple laboratory procedures for implant overdentures, fixed-hybrid prostheses and fixed prostheses.

With precision difficult to match using conventional laboratory techniques, BellaTek Bars and Frameworks are one-piece milled titanium alloy, cobalt chrome, or commercially pure titanium structures with a passive fit. One-piece milled frameworks are significantly stronger than cast bars and do not require soldering or welding.\(^2\) The result is a durable restoration with a precise fit.

Zimmer Biomet Dental designs BellaTek Bars and Frameworks in CAD from a laboratory or clinician submitted Work Order Form and then sends the design electronically to the dental laboratory for design verification. Following a 24-hour laboratory preview period, the CAD design is transferred to a dedicated milling machine for bar or framework fabrication. Then it’s polished and ready for overdenture processing or the addition of porcelain or acrylic resin with minimal finishing required by the laboratory.

**Virtual Design**

Zimmer Biomet Dental offers virtual design and milling of bars or frameworks for laboratory technicians who wish to minimize their labor when fabricating overdenture and fixed-hybrid restorations. The design from the technician is initially made from the Work Order Form. Zimmer Biomet Dental Design Technicians create the specified design in CAD within the confines of the scanned wax denture to fit the master cast. The design is verified by the laboratory technician prior to milling.

**Copymilled Design**

Laboratory technicians can create their own bar or framework design with a resin pattern and send it to Zimmer Biomet Dental with the master cast to be scanned and milled. Using a copymilling technique, Zimmer Biomet Dental creates a one-piece titanium alloy, cobalt chrome, or CP titanium replica of the design provided, to fit the master cast.

Copymilled Frameworks are available in three biocompatible materials.\(^5\)\(^6\)

**For ceramic veneering:**
- Cobalt Chrome Alloy, certified for orthopedic surgical implants CTE \(14.1 \times 10^{-6} \text{ K}^{-1}\)
- Commercially Pure Titanium

**For acrylic finishing:**
- Titanium Alloy

**Indications:**

- Implant or abutment level interfaces (see compatibility chart)
- For use on implant overdentures, removable and fixed prosthesis with 2-10 implants
- Parallel and divergent implants up to 30°
- 4.0 mm or less of peri-implant tissue depth
- 7.0 mm or more of interarch distance
BellaTek Bars & Frameworks Provide Clinicians And Laboratories
One Solution At A Time

Clinicians...
- Truly Passive Fit
- Precision of CAD/CAM restorations as compared to cast restorations\(^2\)-\(^4\)
- No Soldered Or Welded Joints
- Lightweight

Laboratories...
- CAD/CAM Precision
- No Soldering Or Welding
- No Capital Investment
- Laboratory Design Control
- No Waxing And Casting
- Biocompatible Alloy

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**Interface Compatibility Chart**

<table>
<thead>
<tr>
<th>Description</th>
<th>Analog</th>
<th>Screw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certain(^7) 3.4 mm Implant</td>
<td>IMMILA</td>
<td>ILRGHG, ILRGHT</td>
</tr>
<tr>
<td>Certain 4.1 mm Implant</td>
<td>IILA20</td>
<td>ILRGHG, ILRGHT</td>
</tr>
<tr>
<td>Certain 5 mm Implant</td>
<td>IILAWS5</td>
<td>ILRGHG, ILRGHT</td>
</tr>
<tr>
<td>Certain 6 mm Implant</td>
<td>IILAW6</td>
<td>ILRGHG, ILRGHT</td>
</tr>
<tr>
<td>External Hex 3.4 mm Implant</td>
<td>MMILA</td>
<td>UNISG, UNIHG, UNIHT</td>
</tr>
<tr>
<td>External Hex 4.1 mm Implant</td>
<td>IILA20</td>
<td>UNISG, UNIHG, UNIHT</td>
</tr>
<tr>
<td>External Hex 5 mm Implant</td>
<td>IILAWS5</td>
<td>UNISG, UNIHG, UNIHT</td>
</tr>
<tr>
<td>External Hex 6 mm Implant</td>
<td>IILAW6</td>
<td>UNISG, UNIHG, UNIHT</td>
</tr>
<tr>
<td>Low Profile Abutment 3.4 mm</td>
<td>LPCLA</td>
<td>LPCGSH, LPCTSH</td>
</tr>
<tr>
<td>Low Profile Abutment 4.1 mm</td>
<td>LPCLA</td>
<td>LPCGSH, LPCTSH</td>
</tr>
<tr>
<td>Low Profile Abutment 5 mm</td>
<td>LPCLA</td>
<td>LPCGSH, LPCTSH</td>
</tr>
<tr>
<td>Tapered Abutment (TSV™)</td>
<td>ACTR</td>
<td>SCTS</td>
</tr>
</tbody>
</table>

Zimmer Biomet Dental reserves the right to reject any case requests with connections that do not meet regulatory standards.
Please refer to this chart when placing your orders for bars and frameworks. You may also find the BellaTek Bars and Frameworks Design Options and Interface Compatibility Chart by visiting www.zimmerbiometdental.com.

- **Hybrid Bar Design #1**
  - Fixed prosthesis
  - Metal lingual
  - Low buccal finish line
  - Titanium tissue surface

- **Hybrid Bar Design #2**
  - Fixed prosthesis
  - Metal lingual
  - Low buccal finish line
  - Titanium tissue surface

- **Wrap Around Bar**
  - Fixed prosthesis
  - Acrylic resin wraparound design
  - Adjustments possible to accommodate for changing tissue contours
  - Easy to repair and modify the acrylic resin portion of the prosthesis

- **Freeform Bar**
  - Fixed prosthesis
  - Acrylic resin wraparound design

- **DOLDER® Egg Shape Bar**
  - Removable overdenture design
  - Anterior clips allow for anterior/posterior rotation of the overdenture
  - Provides lateral stability to the overdenture

- **DOLDER U Shape Bar**
  - Removable overdenture design
  - Anterior clips allow for anterior/posterior rotation of the overdenture
  - Provides lateral stability to the overdenture

- **Hader Bar**
  - Removable overdenture design with clips that engage undercuts
  - Provides lateral stability to the overdenture
  - 4 mm between implants is needed for clips

- **Primary Bar**
  - Secure removable overdenture design
  - May be used with attachments or secondary casting
  - Bar can be designed with a 2° – 6° taper

- **Combination Primary Bar With Hader Or DOLDER Designs**
  - Combines a milled bar with Hader, Primary or Dolder Designs
  - Provides greater biting force and masticatory efficiency than conventional dentures
  - Bar can be designed with a 2°–6° taper

- **Copymilled Cobalt Chrome Framework**
  - Fixed screw-retained prosthesis, allowing veneering of user friendly CoCr porcelains with CTE 14.1 x10^-6 K^-1
  - Biocompatible Cobalt Chrome Alloy

- **Copymilled Titanium Framework**
  - Designed for fixed screw-retained prosthesis. Scanned from a Lab-designed resin pattern
  - Available in Titanium Alloy for acrylic finishing or Commercially Pure Titanium for Titanium Porcelain veneer

Select these design features on the BellaTek Bars & Frameworks Work Order Form (ZB0313).
The following information describes the Design Matrix requirements for Type I, Type II and Type III BellaTek Bars and Frameworks.

Material:
- Titanium Alloy (Ti-6Al-4V ELI).
- CP Titanium (for porcelain baked direct to bar)
- Cobalt Chrome Alloy

<table>
<thead>
<tr>
<th>Description</th>
<th>Bar Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BellaTek DOLDER® Bars - Egg Shape and U Shape</td>
<td>Type I</td>
</tr>
<tr>
<td>BellaTek Hader Bar</td>
<td>Type I</td>
</tr>
<tr>
<td>BellaTek Primary Bar</td>
<td>Type I</td>
</tr>
<tr>
<td>BellaTek Combination Primary Bar – with Hader or DOLDER Designs</td>
<td>Type I</td>
</tr>
<tr>
<td>BellaTek Hybrid Bar – Designs #1 and #2</td>
<td>Type II</td>
</tr>
<tr>
<td>BellaTek Wraparound Bar</td>
<td>Type II</td>
</tr>
<tr>
<td>BellaTek Freeform Bar</td>
<td>Type II</td>
</tr>
<tr>
<td>BellaTek Copymilled Bar Titanium</td>
<td>Type II</td>
</tr>
<tr>
<td>BellaTek Copymilled Bar Cobalt Chrome</td>
<td>Type III</td>
</tr>
</tbody>
</table>

The BellaTek Bars and Frameworks Design Matrix details the design parameters for the devices manufactured in the Zimmer Biomet Milling Center. Customers should adhere to the design specifications shown in this document when completing the BellaTek Bars Work Order Form.
Type I Bars:
Removable Prosthetic-Type Bars*

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Platform Seating Diameter</td>
<td>3.4 mm</td>
<td>6.1 mm</td>
</tr>
<tr>
<td>B Total Cylinders</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>C Bar Span Between Cylinders</td>
<td>0 mm</td>
<td>27 mm</td>
</tr>
<tr>
<td>D1 Bar Height</td>
<td>2.5 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>E Bar Width</td>
<td>1.8 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>F Distal Extension</td>
<td>0 mm</td>
<td>10.7 mm</td>
</tr>
<tr>
<td>G Cylinder Height</td>
<td>0 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>H Cylinder Diameter</td>
<td>3.4 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>J Maximum Angulation Between Cylinders</td>
<td>0°</td>
<td>30°</td>
</tr>
</tbody>
</table>

Type II Bars:
Fixed Hybrid & Copymilled Bars*

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Platform Seating Diameter</td>
<td>3.4 mm</td>
<td>6.1 mm</td>
</tr>
<tr>
<td>B Total Cylinders</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>C Bar Span Between Cylinders</td>
<td>0 mm</td>
<td>23.5 mm</td>
</tr>
<tr>
<td>D2 Bar Height</td>
<td>2.5 mm</td>
<td>22 mm</td>
</tr>
<tr>
<td>E Bar Width</td>
<td>4.0 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>F Distal Extension</td>
<td>0 mm</td>
<td>18 mm</td>
</tr>
</tbody>
</table>

Type III Bars:
Cobalt Chrome Copymilled Bars*

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Platform Seating Diameter</td>
<td>3.4 mm</td>
<td>6.1 mm</td>
</tr>
<tr>
<td>B Total Cylinders</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>C Bar Span Between Cylinders</td>
<td>0 mm</td>
<td>27 mm</td>
</tr>
<tr>
<td>D Bar Height</td>
<td>2.5 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>E Bar Width</td>
<td>1.8 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>F Distal Extension</td>
<td>0 mm</td>
<td>10.7 mm</td>
</tr>
<tr>
<td>G Cylinder Height</td>
<td>0 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>H Cylinder Diameter</td>
<td>3.4 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>J Maximum Angulation Between Cylinders</td>
<td>0°</td>
<td>30°</td>
</tr>
<tr>
<td>K Total Height</td>
<td>2.5 mm</td>
<td>22 mm</td>
</tr>
</tbody>
</table>

Minum Section Values

<table>
<thead>
<tr>
<th>Minimum Section Values</th>
<th>Minimum Bar Height (D)</th>
<th>Minimum Bar Width (E)</th>
<th>Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5 mm</td>
<td>if 4 mm</td>
<td>HORIZONTAL</td>
</tr>
<tr>
<td></td>
<td>3.5 mm</td>
<td>if 3 mm (**)</td>
<td>VERTICAL</td>
</tr>
</tbody>
</table>

* Zimmer Biomet Dental reserves the right to reject any case request that does not meet regulatory standards.

* This document can also be found by visiting www.zimmerbiometdental.com

* Sketches are representations of the bars and/or frameworks and are not intended as a design print/specification.

** For Vertical sections, minimum width of bar 4 mm (Ø) around the cylinders.
1. **Account Information**
   Please complete this section clearly. All requested information is important to ensure the necessary communication of the desired case design. Please make sure your communication is clear and timely as this is important from receipt to design verification and the delivery of the finished product.

   Incomplete information on the Work Order Form or missing case requirements may delay the delivery of the product.

2. **Preparing Your Case For Shipment**
   This section serves as a checklist for the mandatory case contents.

3. **Structure Type**
   The information in this section provides Zimmer Biomet Dental with the desired design of the BellaTek Bar or Framework for a particular type of prosthesis.

4. **Case Information**
   This section is important for the scanning and design process. Providing accurate information regarding the tooth position of the implants, implant brand and size or abutment type will expedite the process of order entry, design and completion.

5. **Design Instructions**
   Illustrations of the occlusal view for both a mandible and maxilla are provided in this section. Please sketch the BellaTek Bar or Framework with implant positions and attachment or clip positions. Please use the legend provided.

   The following cases will be returned to the laboratory:
   1. Cases with more than 10 implants
   2. Greater than 30º divergence between implants
   3. Less than 7 mm of interarch distance
   4. More than 4 mm of tissue depth

6. **Special Instructions**
   Please provide any special information necessary to ensure the proper design of the BellaTek Bar or Framework. This may include path of insertion information or malocclusion. Additional instructions are also welcome. (Please note that additional instructions do not replace the mandatory sections on the prescription form.)

7-8. **Screw And Attachment Ordering**
   This section identifies the screw preference and quantity. Please order screws for this case only. Polishing protectors and attachments are also available in this section.

9. **Certification**
   This signature denotes that the technician and clinician have verified the master cast for accuracy by trying in a verification index intraorally.

   Work order forms are also available at www.zimmerbiometdental.com.
BellaTek® Bars & Frameworks

1. Account Information (Please Print Or Type) *Indicates required fields
   * Patient ID:
   * Email:
   * Contact:
   * Bill To:
   * Account #:
   * Customer Name:

2. Preparing Your Case For Shipment
   IMPORTANT:
   • Only use new implant analogs.
   • Please do not send the articulator.
   • Missing information or components can delay your case.
   • Only use current Work Order Form online at www.zimmerbiometdental.com

3. Structure Type (See Design Options in the BellaTek Bars & Frameworks Laboratory Manual-ZBINST0005)
   Overview
   - Fixed Solutions
   - Certain® Abutment Screws Qty.
   I certify that the analog positions on the cast and the wax try-in have been verified for accuracy and that all items have been decontaminated. Please include only the following items: 
   - All items shall be interfaced to the work order form.
   - All patient data shall be de-identified. This form authorizes Zimmer Biomet Dental to fabricate the BellaTek Bar using the information provided on this Work Order. I have reviewed the applicable BellaTek Bars & Frameworks Laboratory Manual (ZBINST0005) for this product.

4. Case Information
   (See Compatibility Chart in the BellaTek Bars & Frameworks Laboratory Manual-ZBINST0005)
   - Abutment Type
   - Patient’s Right
   - To 2nd Incisor
   - To 1st Molar
   - To 2nd Molar
   - Specified in mm = __________ mm
   - Space between Tissue And Bar
   - Specify in mm = __________ mm
   - Bar Height
   - Specify in mm = __________ mm (min. height 2.5 mm)
   - Distal Extensions
   - Patient’s Left
   - To 2nd Incisor
   - To 1st Molar
   - To 2nd Molar
   - Specify in mm = __________ mm
   - Ventilator Types
   - Ventilator drill only
   - Low Pasive
   - Ventilator VKS
   - 1.4 mm 0.5 Tap for CPH10
   - 2.0 mm 0.5 Tap for UNIHT

5. Design Instructions
   (See Compatibility Chart in the BellaTek Bars & Frameworks Laboratory Manual-ZBINST0005)
   - Maximum implant divergence is 30°
   - Polished cylinders (default)
   - Cylinder + basal, palatal/lingual side or marked areas on the acrylic pattern
   - Design bar according to the drawings below.
   - Implant Position
   - No polishing is required

6. Special Instructions
   • Please see back or attached page.

7. Screw Ordering
   • I would not like to order screws at this time.
   • Certain® Abutment Screws Qty.
   • Low Profile Titanium (LPC51H)
   • Low Profile Titanium (LPC50H)
   • Certain - Implant Level, 16 mm (UNISU30)
   • External Hex - Implant Level, 15 mm (UNISU50)
   • Low Profile Abutment (LPCW5)

8. Attachment Ordering
   • LOCATOR® Bar Attachment Kit (LOCAB) Qty.
   • LOCATOR® Gold (ORCG1)

9. Certification
   • I certify that the analog positions on the cast and the wax try-in have been verified for accuracy and that all items have been decontaminated. This form authorizes Zimmer Biomet Dental to fabricate the BellaTek Bar using the information provided on this Work Order. I have reviewed the applicable BellaTek Bars & Frameworks Laboratory Manual (ZBINST0005) for this product.

Job # __________________ Issued By ____________________

Please send your BellaTek Bars & Frameworks Case to:
Biomet 3i Dental Implants - Zimmer Biomet Milling Center
Calle bioshabares, 50 • 46988 Paterna • Valencia, Spain
34-96-137-95-36/34-96-137-95-38

The information you supply will be used by Zimmer Biomet or its affiliates for administrative purposes and process in compliance with applicable data protection legislation. Zimmer Biomet or its affiliates will comply with its respective obligations under the provisions of applicable national and EU Data Protection laws, including but not limited to: (i) to keep data accurate, complete and up-to-date; (ii) to provide access to data held by us; (iii) to provide data to third parties as required by law; (iv) to ensure the security of data and to prevent unauthorized or unlawful processing of the data; and (v) to delete or otherwise destroy your data when we no longer need it for the purposes for which it was collected.

Please note that you have the right to access, correct, update, transfer, receive and request deletion of all your personal data, at any time. You can exercise these rights by contacting your Zimmer local data protection officer, by sending a request to your Zimmer local data protection officer or by sending a request to your Zimmer local data protection officer. You can also lodge a complaint with the data protection authority of your country of residence. Zimmer Biomet or its affiliates may require you to provide a copy of official identification before you can submit these requests.

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First Restorative Appointment

1. See the Zimmer Biomet Dental Restorative Manual (INSTRM) or consult the specific implant system manual for abutment placement and abutment level or implant level impression instructions.

Laboratory

2. Fabricate a soft-tissue master cast as illustrated using new, undamaged analogs. Using old, damaged or loose fitting analogs can interfere with the scanning and design process and may prevent the bar or framework from properly seating. Cases received with either damaged or insufficiently anchored analogs will be returned to the laboratory.

   NOTE: The soft-tissue material on the master cast must be applied approximately 2 mm down from the analog restorative interface. It must also be easily removable for the scanning and design process to ensure an accurate fit.

3. Place non-hexed titanium implant or abutment temporary cylinders onto the analogs and screw them into place with waxing or try-in screws. Fabricate a rigid verification index by luting the cylinders together using a light cure composite resin or autopolymerizing acrylic resin. Also, fabricate a record base with a wax occlusion rim. Return the verification index for intraoral fit verification and the wax occlusion rim for interocclusal records.
Second Restorative Appointment

4. Remove the healing abutments or caps using the proper driver. Place the wax occlusion rim into the mouth and make the interocclusal records. Place the verification index onto the implants or abutments. Place a try-in screw into the posterior-most cylinder of the verification index and finger-tighten. Visually, verify a passive fit on all interfaces. If the interfaces are subgingival, take a radiograph to verify a passive fit. Remove the screw and place it into the opposite posterior-most cylinder of the verification index and repeat. If a fit discrepancy is found, section the index and reassemble it intraorally by luting it with a resin material. Remove the index. Immediately replace the healing abutments or caps.

Laboratory

5. Verify that the analog positions on the cast are accurate using the verification index. If a fit discrepancy is found, remove the analog(s) and replace it in the cast using the corrected verification index. Articulate the casts using the interocclusal record. Set the denture teeth on the record base and return the wax denture for try in. If the analogs are not accurate in the master cast, remove the analogs from the cast, re-attach them to the verification index and re-seat the index onto the accurate analogs. Inject dental stone around the analog(s) and allow it to set. The cast is now considered to be accurate. Set the denture teeth on the record base and return the denture set-up on the record base for the wax try-in.

Third Restorative Appointment

6. Remove the healing abutments or caps and place the wax try-in into the mouth. Verify occlusion, aesthetics and phonetics. Make any necessary adjustments. If major adjustments are necessary, make a new interocclusal record and return the wax denture to the laboratory for remounting of the casts, a new set-up and a second wax try-in.
7. Place the verified wax denture on the cast and make a silicone or plaster matrix of the tooth positions. Do not remove the teeth from the wax denture. Do not ship the matrix to Zimmer Biomet Dental. If requesting fabrication of a virtual designed BellaTek Bar or Framework, go to step 11.

If requesting fabrication of a BellaTek Copymilled Bar or Framework, go to the next step.

8. **BellaTek Copymilled Bars & Frameworks**
   Place the verification index on the implant or abutment analogs and screw it into place with waxing screws. Reduce the height of the temporary cylinders using a carbide bur so that these fit within the confines of the silicone matrix. Apply a separator to the inside of the matrix of the wax denture and place it on the cast. Pour wax into the impressions of the teeth in the matrix and around the verification index. Remove the matrix and complete the wax pattern of the bar or framework on the lingual or palatal surface.

9. Flask the wax denture for processing. Boil the flask and remove the wax from the flask. Remove the verification index and remove the Temporary Cylinders from the index. Place each temporary cylinder back on the analogs with waxing screws. Process the wax denture in acrylic resin. Please use light tooth colored acrylic resin for scanning purposes.
10. Finish the resin pattern of the framework to the desired contours. Make a laboratory silicone matrix of the facial surfaces of the teeth and buccal/facial contours of the wax denture. For porcelain applications, cut the teeth back approximately 2 mm. The amount of the cut-back will be dependent on the specifics of the framework design for individual patients. Place the matrix on the cast periodically as a guide for proper contouring and cut-back contours/thickness. On the BellaTek Bars and Frameworks Work Order Form, please indicate whether it will be processed for acrylic resin or a porcelain application. The default is acrylic resin.

11. Complete the BellaTek Bars & Frameworks Work Order Form. See page 7 for an example. Package the following items securely in a box:
- Copy Of The Work Order Form
- Verified Soft-Tissue Master Cast Unmounted*
- Verified Wax Denture
- Verification Index
- Resin pattern, if copymilled bar

*Casts should be unmounted because Zimmer Biomet Dental will mount these for scanning purposes. If casts are sent mounted, some may need to have mountings removed from the cast, requiring remounting and articulating at a later point. This process may break the cast.

PLEASE DO NOT SEND:
- The Articulator
- The Opposing Cast

NOTE: All items and/or materials that have been used intraorally must be decontaminated following manufacturer’s instructions before these are sent to Zimmer Biomet Dental.
12a. BellaTek Bar Virtual Design
The soft tissue master cast and the verified wax denture are scanned and transferred into the CAD software. The BellaTek Bar is designed in CAD according to the Work Order Form provided.

12b. BellaTek Copymilled Bar Or Framework Design
The acrylic resin or framework is scanned, transferred into the CAD software and designed to match the acrylic resin or framework.

A 3D file for virtual viewing of the BellaTek Bar or Framework Design will be sent via email for a 24-hour preview and design verification.

13. Following the preview period, the design file is transferred to a milling machine for fabrication. After milling is complete, the BellaTek Bar or Framework is finished and polished per the Work Order Form. The BellaTek Bar or Framework, any requested components and case materials that are sent to Zimmer Biomet Dental are returned to the laboratory.

The laboratory may send the BellaTek Bar or Framework to the restorative dentist for intraoral try-in or set the teeth directly onto the bar. The clinician may do the framework try-in alone or combine the framework try-in with the denture tooth try-in to save one appointment. Once the try-in is completed and the framework fit and aesthetics are verified, the prosthesis may be processed in a conventional manner.

Fourth Restorative Appointment (Optional)

14. Remove the healing abutments or healing caps. Place the BellaTek Bar or Framework onto the implants or abutments. Thread a try-in screw into the posterior-most access opening until finger-tight. Visually verify a passive fit on all interfaces. If interfaces are subgingival, take a radiograph to verify a passive fit. Remove the screw and place it into the opposite posterior-most access opening of the bar or framework and repeat.

NOTE: If a fit discrepancy is detected during bar try-in, one of the following corrective measures may be used.

1. The BellaTek Bar or Framework may be sectioned and reassembled intraorally. Then the analog(s) in the master cast is (are) repositioned by the laboratory and a new bar or framework is fabricated.

2. A new impression is made and a new master cast is poured. Then, the verification steps must be repeated and a new bar or framework is fabricated.
Laboratory

15a. Hader Or DOLDER Bar Restoration
Place the wax denture onto the cast. Place the matrix onto the wax denture. Attach the teeth to the matrix. Attach the bar onto the analogs using try-in or laboratory screws. Transfer the denture teeth from the matrix directly to the bar. Attach the teeth with wax. Finish waxing the overdenture. Place the flask into the boil out tank, separate the flask and remove the wax. Block out all undercuts and access openings with wax. Place the Hader/DOLDER clips or other attachments onto the bar. Process and finish the overdenture prosthesis in a conventional manner. Polishing protectors should be in place to protect the bar interfaces during all polishing procedures. Return the definitive prosthesis to the restorative dentist for delivery.

15b. Fixed-Hybrid Restoration
Place the wax denture onto the cast. Make a lab matrix of the denture teeth positions. Remove the denture teeth from the wax denture and place them into the matrix. Attach the framework onto the analogs using try-in or laboratory screws. Place the matrix with denture teeth back onto the cast and attach the denture teeth to the framework. Finish waxing, then flask, boil out and process the fixed hybrid prosthesis with denture acrylic resin. Place the polishing protectors; finish and polish conventionally.

15c. Milled Primary And Secondary Bar Restoration
Make a lab matrix of the denture teeth positions. Remove the denture teeth from the wax denture and place into the matrix. Attach the primary bar onto the analogs using try-in or laboratory screws. Seal the access openings with wax; block-out undercuts related to the framework. Place the matrix with the denture teeth back onto the cast and wax the denture teeth to the framework. Finish waxing, then flask, boil-out and process the removeable overdenture with denture acrylic resin. Place polishing protectors; finish and polish conventionally. Return the framework and prosthesis to the restorative dentist for insertion.

15d. BellaTek Copymilled Framework
Place the BellaTek Copymilled Framework onto the cast and screw it into place using try-in screws. Place the cast on the articulator. Opaque and build porcelain on the framework or apply acrylic resin. Place the matrix on the cast periodically as a guide for proper contouring. Stain and glaze the porcelain or polish the acrylic resin.
Restorative Dentist

16a. Hader Or DOLDER Bar Restoration
Remove the healing abutments or caps from the implants or abutments. Place the bar onto the implants or abutments. Thread the abutment or retaining screws into the implants or abutments until finger-tight using the manufacturer’s recommended driver. Visually verify a passive fit on all interfaces. If the interfaces are subgingival, take a radiograph to verify a passive fit. Torque the screws to the recommended level with a torque device following the manufacturer’s instructions. Place the overdenture onto the bar engaging the attachments. Make any occlusal adjustments as needed. Instruct the patient on insertion and removal of the prosthesis and on proper oral hygiene.

16b. Fixed-Hybrid Restoration
Remove the healing abutments or caps from the implants or abutments. Place the fixed-hybrid prosthesis onto the implants or abutments. Thread the abutment or retaining screws into the implants or abutments until finger-tight using the manufacturer’s recommended driver. Visually verify a passive fit on all interfaces. If the interfaces are subgingival, take a radiograph to verify a passive fit. Torque the screws to the recommended level with a torque device following the manufacturer’s instructions. Make any occlusal adjustments as needed. Place a protective material over the screw access openings. Seal the access openings with composite resin and polish. Instruct the patient on proper oral hygiene.

16c. Milled Primary And Secondary Bar Restoration
Remove the healing abutments or caps from the implants or abutments. Place the primary bar onto the implants or abutments. Thread the abutment or retaining screws into the implants or abutments until finger-tight using the manufacturer’s recommended driver. Visually verify a passive fit on all interfaces. If the interfaces are subgingival, take a radiograph to verify a passive fit. Torque the screws to the recommended level with a torque device following the manufacturer’s instructions. Place the secondary prosthesis onto the bar, engaging the attachments. Make any occlusal adjustments as needed. Instruct the patient on insertion and removal of the prosthesis and on proper oral hygiene.

16d. BellaTek Copymilled Framework
Remove the healing abutments or caps from the implants or abutments. Place the Copymilled Bridge onto the implants or abutments. Thread the abutment or retaining screws into the implants or abutments until finger-tight using the manufacturer’s recommended driver. Visually verify a passive fit on all interfaces. If the interfaces are subgingival, take a radiograph to verify a passive fit. Torque the screws to the recommended level with a torque device following the manufacturer’s instructions. Make any occlusal adjustments as needed. Place a protective material over the screw access openings. Seal the access openings with composite resin and polish. Instruct the patient on proper oral hygiene.
First Restorative Appointment – Abutment-Level Impression

1. Remove the screw access opening restorations, unscrew and remove the provisional prosthesis from the mouth using the Large Hex Driver (PHD02N or PHD03N). Do not remove the Low Profile Abutments. To prevent accidental swallowing, thread floss through the spinner hole on the driver.

2. Select the proper Low Profile Impression Copings (LPCPIC2) and place them onto the Low Profile Abutments. Tighten the screw using the Large Hex Driver (PHD02N or PHD03N) until finger-tight.

Radiograph the interface to verify complete seating of the coping on the abutment.

3. A custom or stock open impression tray is used for the Pick-Up Impression Technique. Make small holes in the impression tray to allow access to the impression coping screw head.

4. A medium or heavy body material is recommended for the impression material in the impression tray. Use light-body impression material and syringe around the entire Low Profile Pick-Up Impression Coping (LPCPIC2).
7. Load the impression tray and seat it in the mouth. Remove impression material from the top of the screw access hole before it sets. Allow the impression material to set per the manufacturer’s instruction.

8. After the impression material has set, unscrew and remove the screws from the mouth using a the Large Hex Driver (PHD02N or PHD03N). Remove the impression from the mouth.

9. Verify that the impression material has completely adapted around each impression coping and that there is no impression material on the coping’s restorative platform. If impression material is visible on the coping’s restorative platform, this means the impression coping was not completely seated; a new impression will need to be made.

10. Place the provisional prosthesis back into the mouth and attach it by using the Gold-Tite® or Titanium Retaining Screws (LPCGSH or LPCTSH). Torque the screws to 10Ncm using the Large Hex Driver Tip (RASH3N or RASH8N) and the Low Torque Indicating Ratchet Wrench (L-TIRW). Cover the screw heads with cotton or another suitable material. Restore the access openings with composite resin. Re-evaluate and adjust the occlusion as necessary. Send the impression to the laboratory for the fabrication of a master cast.
Laboratory

11. Fabricate a soft-tissue master cast using new, unused Laboratory Analogs (LPCLA). To fabricate the master cast, place the Laboratory Analogs for Low Profile Abutments (LPCLA) onto the impression copings (LPCPIC2). There will not be hex engagement as the impression copings are not hexed. Hold the analog in place while tightening the screws with the Large Hex Driver (PHD02N or PHD03N) until finger-tight. Verify that the impression copings are completely seated on the analogs.

The use of old, damaged or loose fitting analogs can interfere with the scanning and design process and may prevent proper seating of the bar or framework. Cases received with damaged or insufficiently anchored analogs will be returned to the laboratory. If the clinician is sending the impression to a commercial laboratory to pour the impression, do not attach the analog. The dental laboratory will place the analogs.

The soft-tissue material on the master cast must be applied approximately 2 mm down from the analog restorative interface. It must also be easily removable for the scanning and design process to ensure an accurate fit.

12. Place the Non-Hexed Low Profile Temporary Cylinders (LPCTC2) onto the abutment analogs and finger-tighten into place with waxing screws (LPCWS) using the Large Hex Driver (PHD02N or PHD03N). Fabricate a rigid verification index by luting the cylinders together using a light cure composite resin or autopolymerizing acrylic resin. Also, fabricate a record base with a wax occlusion rim. Ship the verification index intact to the clinician for try-in along with the wax occlusion rim for interocclusal records.
Second Restorative Appointment – Verification Index Try-In

13. Remove the screw access opening restorations, unscrew and remove the provisional prosthesis from the mouth using the Large Hex Driver (PHD02N or PHD03N). Do not remove the Low Profile Abutments. In order to prevent accidental swallowing, thread floss through the spinner hole on the driver.

14. Place the wax occlusion rim into the mouth and make the interocclusal records. Place the verification index onto the Low Profile Abutments intraorally. Finger-tighten a Low Profile Waxing Screw (LPCWS) using the Large Hex Driver (PHD02N or PHD03N) into the posterior-most cylinder of the verification index. Visually, verify a passive fit on all interfaces. Remove the waxing screw and place it into the opposite posterior-most cylinder and repeat. If a fit discrepancy is found, section the index and reassemble it intraorally by luting it with resin material. Remove the index.

15. Place the provisional prosthesis back into the mouth and attach it by using the Gold-Tite or Titanium Retaining Screws (LPCGSH or LPCTSH). Torque the screws to 10 Ncm using the Large Hex Driver Tip (RASH3N or RASH8N) and the Low Torque Indicating Ratchet Wrench (L-TIRW). Cover the screw heads with cotton or another suitable material. Restore the access openings with composite resin. Re-evaluate and adjust the occlusion as necessary.
Laboratory

16. Verify that the master cast is accurate using the verification index. If a fit discrepancy is found, remove the inaccurately positioned analogs and replace them in the cast using the corrected verification index. Articulate the casts using the interocclusal record. Set the overdenture teeth on the record base and return the denture wax-up for try-in. If the analogs are not accurate in the master cast, remove the analogs from the cast, re-attach them to the verification index and re-seat the index onto the accurate analogs. Inject dental stone around the analog(s) and allow it to set. The cast is now considered to be accurate. Set the overdenture teeth on the record base and return it for the wax try-in.

Third Restorative Appointment – Verification Index Try-In

17. Remove the screw access opening restorations, unscrew and remove the provisional prosthesis from the mouth using the Large Hex Driver (PHD02N or PHD03N). Do not remove the Low Profile Abutments. In order to prevent accidental swallowing, thread floss through the spinner hole on the driver.

18. Place the wax denture/record base intraorally. Verify occlusion, aesthetics and phonetics. Make any necessary adjustments. If major adjustments are necessary, make a new interocclusal record and return the denture wax-up to the laboratory for remounting of the casts, a new set-up and a second wax try-in.

19. Place the provisional prosthesis back into the mouth and attach it by using the Gold-Tite or Titanium Retaining Screws (LPCGSH or LPCTSH). Torque the screws to 10Ncm using the Large Hex Driver Tip (RASH3N or RASH8N) and the Low Torque Indicating Ratchet Wrench (L-TIRW). Cover the screw heads with cotton or another suitable material. Restore the access openings with composite resin. Re-evaluate and adjust the occlusion as necessary.
Laboratory

20. Place the verified denture wax-up on the cast and make a silicone or plaster matrix of the tooth positions. Do not remove the teeth from the denture wax-up. Do not ship the matrix to the Zimmer Biomet Milling Center.

21. Log on to your BellaTek Portal account, complete the BellaTek Bar Work Order Form and send it to Zimmer Biomet Dental.

22. BellaTek Bar Virtual Design
   The soft tissue master cast and the verified denture wax-up are scanned and transferred into the CAD software. The BellaTek Bar is designed in CAD according to the BellaTek Work Order Form.

23. Once the design has been approved, the design file is transferred to a milling machine for fabrication and milling. After milling is complete, the BellaTek Bar is finished and polished per the Work Order Form. The BellaTek Bar, any requested components and case materials will be returned to the laboratory.

The laboratory may send the BellaTek Bar or Framework to the restorative dentist for intraoral try-in or to set the teeth directly onto the bar. The clinician may do the framework try-in alone or combine the framework try-in with the denture teeth try-in to save one appointment. Once the try-in is completed and the framework fit and aesthetics are verified, the prosthesis may be processed in a conventional manner.
Fourth Restorative Appointment (Optional)
Framework And Denture Teeth Try-In

24. Remove the screw access opening restorations, unscrew and remove the provisional prosthesis from the mouth using the Large Hex Driver (PHD02N or PHD03N). Do not remove the Low Profile Abutments. In order to prevent accidental swallowing, thread floss through the spinner hole on the driver.

25. Fit the BellaTek Bar onto the Low Profile Abutments intraorally. Thread a Low Profile Waxing Screw (LPCWS) using the Large Hex Driver (PHD02N or PHD03N) into the posterior-most access opening until finger-tight. Visually verify a passive fit on all interfaces. There should be no space between the BellaTek Bar and the abutments. Remove the screw and place it into the opposite posterior-most access opening of the BellaTek Bar and repeat.

NOTE: If a fit discrepancy is detected during bar try-in, one of the following corrective measures may be used.

a. The BellaTek Bar may be sectioned and reassembled in the patient replica. Then the analog(s) in the master cast will be repositioned by the laboratory and a new BellaTek Bar will be fabricated.

b. A new impression can be made and a new master cast can be poured. Then, the verification steps should be repeated and a new BellaTek Bar will be fabricated.

26. Place the provisional prosthesis back into the mouth and attach it by using the Gold-Tite or Titanium Retaining Screws (LPCGSH or LPCTSH). Torque the screws to 10 Ncm using the Large Hex Driver Tip (RASH3N or RASH8N) and the Low Torque Indicating Ratchet Wrench (L-TIRW). Cover the screw heads with cotton or another suitable material. Restore the access openings with composite resin. Re-evaluate and adjust the occlusion as necessary.
Laboratory – Fixed Hybrid Restoration

27. Place the denture wax-up and matrix on the cast. Remove the overdenture teeth and reset the teeth into the matrix. Attach the BellaTek Bar onto the analogs with the use of the Low Profile Waxing Screws (LPCWS) and finger-tighten using the Large Hex Driver (PHD02N or PHD03N). Place the matrix with the overdenture teeth onto the cast and attach the overdenture teeth to the BellaTek Bar. Finish waxing the fixed hybrid restoration. Flask the denture wax-up. Boil out the denture flask. Separate the flask and remove all wax remnants. Pack, finish and polish.

Fifth Restorative Appointment – Delivery Of Definitive Prosthesis

28. Remove the screw access opening restorations, unscrew and remove the provisional prosthesis from the mouth using the Large Hex Driver (PHD02N or PHD03N). Do not remove the Low Profile Abutments. In order to prevent accidental swallowing, thread floss through the spinner hole on the driver.

29. Place the fixed-hybrid prosthesis onto the Low Profile Abutments intraorally and thread the Gold-Tite or Titanium Retaining Screws (LPCGSH or LPCTSH) into the abutments using the Large Hex Driver (PHD02N or PHD03N) until finger-tight. Verify a passive fit on all interfaces. Adjust the denture base as needed. Adjust the occlusion regarding centric, lateral and balancing contacts. Remove the prosthesis, finish and polish only if the prosthesis was adjusted.

* The use of new Gold-Tite Retaining Screws (LPCGSH) is recommended when placing the final prosthesis.

30. Torque the Gold-Tite Screws (LPCGSH) to 10 Ncm using the Driver Tip (RASH3N or RASH8N) and the Low Torque Indicating Ratchet Wrench (L-TIRW). Place protective material over the screw heads inside the access openings. Restore the access openings with composite resin and polish.


Want More Options For Fixed & Removable Restorations? Try BellaTek Bars & Frameworks!