OSS™ Modular Arthrodesis System

Assembly Guide
Over 1 million times per year, Biomet helps one surgeon provide personalized care to one patient.

The science and art of medical care is to provide the right solution for each individual patient. This requires clinical mastery, a human connection between the surgeon and the patient, and the right tools for each situation.

At Biomet, we strive to view our work through the eyes of one surgeon and one patient. We treat every solution we provide as if it's meant for a family member.

Our approach to innovation creates real solutions that assist each surgeon in the delivery of durable personalized care to each patient, whether that solution requires a minimally-invasive surgical technique, advanced biomaterials, or a patient-matched implant.

When one surgeon connects with one patient to provide personalized care, the promise of medicine is fulfilled.
OSS™ Modular Arthrodesis System

Contents

Minimal Resection Options................................................................. 1
Canal Preparation.................................................................................. 2
Trial Selection...................................................................................... 2
Implant Assembly ............................................................................... 3
Stem Insertion .................................................................................. 7
The Locking Collar ........................................................................... 8
Ordering Information.......................................................................... 15
**Canal Preparation**

Please reference the OSS™ Resurfacing Distal Femur Surgical Technique (Part No. BOI0213.0) for suggested canal preparation technique.

**Trial Selection**

**Important Note:** The 1 cm modular arthrodesis diaphyseal connectors accept only OSS™ stems; they are not designed for use with either OSS™ segmental adapters or OSS™ diaphyseal segments. The 3 cm modular arthrodesis diaphyseal connectors are designed for use with either OSS™ segmental adapters or OSS™ diaphyseal segments.

Assemble the selected femoral stem trial to the remaining diaphyseal segment trial and insert the trial assembly into the femoral canal (Figures 3 and 4).

Connect both assemblies with the locking collar trial (Figures 5 and 6).

**Note:** Minimum replacement with the OSS™ modular arthrodesis is 8.5 cm.

**Note:** OSS™ diaphyseal segment trials are used to represent both the diaphyseal connectors and the diaphyseal segment implants.

Assemble the selected tibial stem trial to the diaphyseal segment trial and insert the trial assembly into the tibial canal (Figures 1 and 2).
Implant Assembly

**Diaphyseal Connector Construct Only**

Impact an OSS™ stem directly into a diaphyseal connector and secure with the long big head/small thread locking screw packaged with the connector (Figures 7 and 8). Repeat the process with the other diaphyseal connector.

**Note:** 3 cm Elliptical Connector is shown.

**Note:** If using the 1 cm connector, the XL big head/small thread screw must be utilized.*

* The 1 cm connector is packaged with XL big head/small thread screw.
Implant Assembly (cont.)

Diaphyseal Connector and Diaphyseal Segment Construct

Impact an OSS™ stem into an OSS™ diaphyseal segment and secure with the OSS™ small head/small thread locking screw packaged with the diaphyseal segment (Figures 9 and 10).

Note: 5 cm OSS™ Diaphyseal Segment is shown.
Thread an OSS™ stacking adapter (Figure 11) into the male taper of the diaphyseal segment/stem construct with an axle screwdriver until fully seated (Figure 12).
Implant Assembly (cont.)

Impact the selected diaphyseal connector (3 cm Elliptical is shown) onto the construct and secure with the long large head/small thread locking screw packaged with the diaphyseal connector (Figures 13 and 14).

If an additional OSS™ diaphyseal segment is required on the opposite side, repeat the process. If not, impact the remaining OSS™ stem into the final diaphyseal connector and secure with the long big head/small thread locking screw.

Note: Locking screws are required at all taper junctions.
Stem Insertion

Using contemporary stem insertion techniques, fully seat both the tibial and femoral constructs so that the external build-ups are in full contact with the respective host bone (Figure 15).
The Locking Collar

The OSS™ Modular Arthrodesis System features a locking collar comprised of two 55 mm halves: a threaded half (Figure 16) and a counter-bored half (Figure 17). The locking collars are available in three version options (Figure 18):

- 0 degrees
- 5 degrees
- 7 degrees
The 5 and 7 degree locking collars each have two internal markings to assist in correct orientation (Figure 19):

- L PROX (left proximal)
- R PROX (right proximal)

When using the angled locking collars and following the orientation markings, a variety of positions may be achieved (Figures 20 and 21).
The Locking Collar (cont.)

Place the threaded locking collar half behind each diaphyseal connector head (Figures 22–24).
Align the counter-bored locking collar half over the threaded locking collar half, making sure that the grooves on the locking collars are properly oriented (Figure 25).
The Locking Collar (cont.)

Insert the large locking collar bolt into the center hole and tighten with manual pressure until snug enough to hold the assembly together (Figures 26 and 27).
Assemble the 3.5mm hex driver into the T-handle and adjust the torque limiting position by pushing the knob in and rotating it so that the alignment line is directly across from the 55 setting.

Tighten the four small screws into the corner holes until snug. **You must** maintain even gap spacing between the collar halves. Once all four have been initially assembled and the gap is even all around, use the provided torque wrench to tighten to the prescribed 55 in-lb torque (Figure 28).

**Note:** Do **not** exceed the 55 in-lb. torque limit.
The Locking Collar (cont.)

Use the large 3/16 inch hex wrench and the anti-torque bar to tighten the large locking collar bolt and complete the assembly (Figures 29 and 30).

**Note:** Ensure the four small perimeter screws are still snug after locking collar bolt has been tightened.
## Implants

### Diaphyseal Connectors

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="1 cm Diaphyseal Connector" /></td>
<td>1 cm Diaphyseal Connector</td>
<td>CP260605</td>
</tr>
<tr>
<td><img src="image" alt="3 cm Diaphyseal Connector" /></td>
<td>3 cm Diaphyseal Connector</td>
<td>CP260607</td>
</tr>
</tbody>
</table>

### Elliptical Connectors

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="1 cm Elliptical Connector" /></td>
<td>1 cm Elliptical Connector</td>
<td>CP260606</td>
</tr>
<tr>
<td><img src="image" alt="3 cm Elliptical Connector" /></td>
<td>3 cm Elliptical Connector</td>
<td>CP260608</td>
</tr>
</tbody>
</table>

### Locking Collars

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="0 Degree Locking Collar" /></td>
<td>0 Degree Locking Collar</td>
<td>CP260600</td>
</tr>
<tr>
<td><img src="image" alt="5 Degree Locking Collar" /></td>
<td>5 Degree Locking Collar</td>
<td>CP260601</td>
</tr>
<tr>
<td><img src="image" alt="7 Degree Locking Collar" /></td>
<td>7 Degree Locking Collar</td>
<td>CP260602</td>
</tr>
</tbody>
</table>

### Screws

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Small Locking Collar Bolt*" /></td>
<td>Small Locking Collar Bolt*</td>
<td>CP260603</td>
</tr>
<tr>
<td><img src="image" alt="Locking Collar Bolt*" /></td>
<td>Locking Collar Bolt*</td>
<td>CP260604</td>
</tr>
<tr>
<td><img src="image" alt="Long Big Head/Small Thread Locking Screw**" /></td>
<td>Long Big Head/Small Thread Locking Screw**</td>
<td>CP260609</td>
</tr>
<tr>
<td><img src="image" alt="XL Big Head/Small Thread Locking Screw***" /></td>
<td>XL Big Head/Small Thread Locking Screw***</td>
<td>CP260610</td>
</tr>
</tbody>
</table>

* Packaged with Locking Collars
** Packaged and used with either 3 cm connectors
*** Packaged and used with either 1 cm connectors
### Instruments

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td>5/16 Wrench</td>
<td>CP460390</td>
</tr>
<tr>
<td><img src="image2.png" alt="Image" /></td>
<td>Torque Limiting T-handle Wrench</td>
<td>31-301850</td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td>3.5 mm Hex Head Driver Bit</td>
<td>405898</td>
</tr>
<tr>
<td><img src="image4.png" alt="Image" /></td>
<td>Anti-torque Bar</td>
<td>CP461564</td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td>Impactor Base</td>
<td>CP460623</td>
</tr>
</tbody>
</table>

### Loaner Sets

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>OSS™ Modular Arthrodesis Instruments</td>
<td>999300</td>
</tr>
<tr>
<td>–</td>
<td>OSS™ Modular Arthrodesis Implants</td>
<td>999800</td>
</tr>
</tbody>
</table>