OsseoTi® Tibial Sleeves
Vanguard® 360 Revision Knee System

The Vanguard 360 OsseoTi Tibial Sleeves are designed to treat tibial defects that are often encountered during revision knee surgeries. These sleeves offer BONE SPARING options that include a range of half and full sleeves designed to increase component fixation in the metaphyseal region.

Versatility

The OsseoTi Tibial Sleeves are designed to allow personalized bone defect management with half sleeves that can be utilized separately, together or in conjunction with a block augment. These sleeves can be positioned independently or symmetrically within the tibia, resulting in a highly effective bone conserving defect filling solution. The full sleeve option offers ease of use when a symmetrical defect is present.

In revision, balancing optimal coverage and rotation can be difficult and time consuming. When utilizing the OsseoTi Tibial Sleeves, which offer three offset options, an optimal balance between coverage and rotation is achieved.

Fixation

Tibial loosening, which has become the leading failure mode in revision knee surgeries\(^3\), can now be addressed with the OsseoTi Tibial Sleeves. Cavitary defects normally found in revision knee procedures can also be addressed due to the variety of sizing and positioning options of the OsseoTi Tibial Sleeves. Utilizing a typical highly vascularized metaphyseal region\(^4\) of the tibia, these sleeves are designed to distribute the load through biologic fixation from the tibial plateau and stem to loads closer to the joint.

Fully Instrumented Technique

The Vanguard 360 Tibial Sleeve surgical preparation is a simple, intuitive instrument system that allows the surgeon to position the tibial component for optimal placement, while offering offset options, if needed. This technique ensures that the sleeve does not drive the placement of the tibia.
OsseoTi Porous Metal Technology

Inspired by Bone™

The OsseoTi Tibial Sleeves are made from cutting edge technology by printing the metal and porous structure, creating a truly unified fully porous construct. The 3D porous structure is designed to mimic cancellous bone architecture.

OsseoTi Porous Metal Specifications

- Approximately 69% (avg.) porosity\(^1\) directly mimics the structure of human cancellous bone, promoting biological fixation through tissue ingrowth\(^2\)
- Average pore size of 475\(^1\)
- Completely interconnected porous structure\(^5\)
- Made with Ti-6Al-4V alloy using additive manufacturing

\(^*\) Animal studies not necessarily indicative of clinical performance
### OsseoTi Tibial Sleeve Augment Dimensions — Full Sleeve

<table>
<thead>
<tr>
<th>Size</th>
<th>Height (mm)</th>
<th>Width (M/L, mm)</th>
<th>Depth (A/P, mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSM</td>
<td>24</td>
<td>39</td>
<td>24</td>
</tr>
<tr>
<td>SM</td>
<td>24</td>
<td>45</td>
<td>27</td>
</tr>
<tr>
<td>MED</td>
<td>24</td>
<td>53</td>
<td>32</td>
</tr>
<tr>
<td>LRG</td>
<td>24</td>
<td>60</td>
<td>37</td>
</tr>
</tbody>
</table>

### OsseoTi Tibial Sleeve Augment Dimensions — Half Sleeve, Type A and B (shown)

<table>
<thead>
<tr>
<th>Size</th>
<th>Height (mm)</th>
<th>Width (M/L from centerline of taper, mm)</th>
<th>Depth (A/P, mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSM</td>
<td>24</td>
<td>19.5</td>
<td>21</td>
</tr>
<tr>
<td>SM</td>
<td>24</td>
<td>22.5</td>
<td>24</td>
</tr>
<tr>
<td>MED</td>
<td>24</td>
<td>26.5</td>
<td>28</td>
</tr>
<tr>
<td>LRG</td>
<td>24</td>
<td>30</td>
<td>32</td>
</tr>
</tbody>
</table>
References

1. Biomet Test Report MT7196
5. Porous Metal Structure, Interconnected Porosity Testing Summary 8/9/12

All content herein is protected by copyright, trademarks and other intellectual property rights owned by or licensed to Zimmer Biomet or its affiliates unless otherwise indicated and must not be redistributed, duplicated or disclosed, in whole or in part, without the express written consent of Zimmer Biomet.

Confidential material intended for health care professionals, the Zimmer Biomet sales force and employees. Distribution to any other recipient is prohibited.

For complete product information, including indications, contraindications, warnings, precautions and potential adverse effects, see the package insert, and Patient Risk Information at www.zimmerbiomet.com.

Zimmer Biomet does not practice medicine. The treating surgeon is responsible for determining the appropriate treatment, techniques, and products for each individual patient.

Check for country product clearances and reference product specific instructions for use.

Not for distribution in France.

©2016 Zimmer Biomet