

LIBERTAS®



HIP



**LIBERTAS® HA Femoral Stem
and Modular Femoral Head
Surgical Technique**



Pursue Life™

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LIBERTAS® HA FEMORAL STEM AND MODULAR FEMORAL HEAD SURGICAL TECHNIQUE

STEP 1: Preoperative Planning

X-Ray templates can be used over AP and lateral radiographs to help determine the correct size to restore the patient's natural anatomy.

Templates are 115% magnification.

NOTE

Templating preoperatively is a guide only, and final component sizing and positioning needs to be assessed at surgery.



Preoperative Planning

WARNING AND PRECAUTIONS

LIBERTAS Uncemented Femoral Stem, HA-coated must not be implanted with cement.

STEP 2: Surgical Approach

The LIBERTAS® Uncemented Femoral Stem is a press fit femoral stem can be used with any surgical approach that the surgeon selects and is comfortable with.



Anterolateral approach



Direct-anterior approach



Posterolateral approach

Surgical Approach

STEPS

3

4

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STEP 3: Femoral Neck Resection

The **neck resection guide** should be used in conjunction with preoperative planning to determine the level of femoral neck resection.

This can be performed in a couple of steps, depending on the surgeon's preference.

STEP 4: Femoral Canal Preparation

Use the **box osteotome** to remove the medial aspect of the greater trochanter and insert at the anterior edge of the piriformis fossa, posterior to the midline of the neck. Use the **box osteotome** in a neutral or anteverted position appropriate to the patient's anatomy.



Femoral Neck Resection



Femoral Canal Preparation

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STEP 5: Femoral Bone Punch

To further open the femoral neck without removing more bone, impact the cancellous bone using the **femoral bone punch**.

STEP 6: Femoral Canal Reamer

The **femoral canal reamer** is attached to the **T-handle** and is used to open the natural axis of the femoral canal for broach preparation. There is a choice of a 6mm or 9mm **femoral canal reamer** dependent upon the size of the stem selected during pre-operative X-ray templating.

6mm: Size 0 – 3

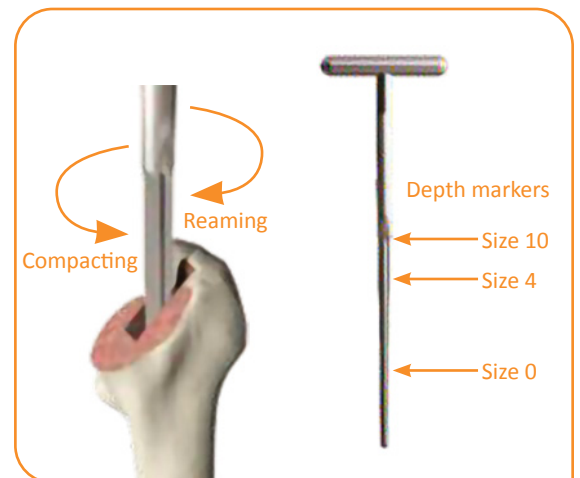
9mm: Size 4 – 10

NOTE

The **femoral canal reamer** should be rotated in counter clockwise direction to compact the cancellous bone. Turn the **reamer** in a clockwise direction to advance the **reamer** deeper into the femoral canal.



Femoral Canal Preparation



Femoral Canal Reamer

STEPS

7

8

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STEP 7: Broaching

Attach the **handle** to the smallest **broach** and insert into the femur to compact the bone. Make sure that axial alignment is maintained at all times, using progressively larger **broaches** until the desired size is achieved. To preserve the cancellous bone, a stable position must be achieved without cortical bone contact. The proximal face of the final **broach** must sit flush with the resection line of the femur. Use either the **universal handle** or **antiversion handle** to check the anteversion alignment of the **broach**.

The size of each **broach** is equivalent to the corresponding implant without HA coating. If you impact a **broach** and it fails to seat fully, the previous **broach** can be used to re-establish the correct envelope to accept the smaller stem.

STEP 8: Calcar Preparation

Locate the **calcar reamer** onto the spigot of the **broach** to remove excess bone from the resected neck. The **calcar reamer** will remove bone above 0.5mm from the face of the **broach**.

Initiate power to the **calcar reamer** prior to engagement with the bone to prevent damage to the femur.



Broaching



Calcar Preparation (optional)

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STEP 9: Trial Reduction

With the final **broach** in situ, attach the appropriate modular **trial neck** and **trial head**. Reduce the hip and assess what adjustments, if any, are required to provide stability through a full range of motion. Remove the **trial head**, **neck trial** and final **broach**.

Do not irrigate or dry the femoral canal. This will help to preserve the compacted cancellous bone quality and encourage biological fixation of the **stem**.

STEP 10: Stem Implantation

The final **broach** indicates the definitive implant size to use. The **stem** is either inserted and impacted using the **stem inserter** or inserted by hand and impacted using the **mallet**. The **stem inserter** allows for rotational stability via the recess in the **stem**. The **stem inserter** must align with the recess.

Impact the **stem** into the femoral canal so that the border of the HA coating is flush with the resection line.

STEP 11: Bone Grafting

Once the **stem** is seated, cancellous bone from the resected femoral head can be impacted around the proximal shoulder using the **femoral tamp**. This seals the femoral canal and enhances the stability of the **stem**.

Using the **trial head**, perform a trial reduction to check for joint stability and leg length.



Trial Reduction



Stem Implantation



Bone Grafting

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STEP 12: Femoral Head Impaction

Once the **acetabular cup** is implanted, ensure the trunnion is free from debris before impacting the head onto the **stem** using the **femoral head impactor**.

The hip can then be reduced and closure performed to the surgeon's preferred technique.

STEP 13: Stem Removal

If the **stem** needs to be removed, screw the **stem inserter** onto the **stem** and hammer the baseplate of the **stem inserter**, using a **mallet** to extract the **stem**.

Alternatively, the optional **slap hammer** can be screwed onto the **stem inserter** to extract the **stem**.



Femoral Head Impaction



Stem Removal

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For more information about Libertas® Hip, please contact your local representative.

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SEARCH: Maxx Ortho

Libertas® Hip System



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Carefully read all instructions and be familiar with the surgical techniques prior to use.

Please see the package insert for complete device description, product selection information, indications, contraindications, precautions, adverse effects, warnings, materials, sterilization and patient guidance associated with the Libertas® Total Hip System.

CAUTION: THIS DEVICE IS RESTRICTED TO SALE BY OR ON THE ORDER OF A LICENSED PHYSICIAN

WARNINGS: THE LIBERTAS® CEMENTED FEMORAL STEM IS INTENDED FOR CEMENTED USE ONLY.
THE LIBERTAS® HA UNCEMENTED FEMORAL STEM IS INTENDED FOR UNCEMENTED USE ONLY.

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