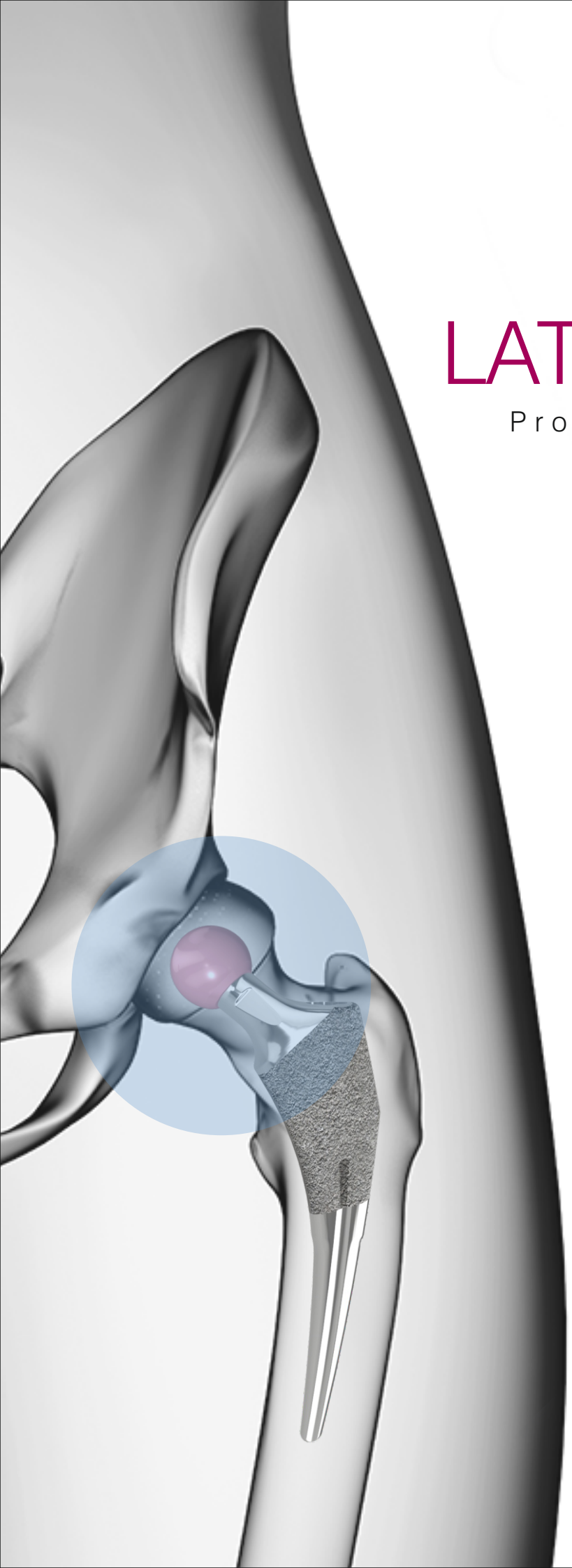
Meril

Orthopedics



# LATITUD™ | HIP SYSTEM

## Freedom of Choice

Proximally Coated Stem

Digitally signed by Poiata Vitalie
Date: 2023.10.19 10:05:36 EEST
Reason: MoldSign Signature
Location: Moldova

YES TO NEXT

# Features

Latitud™ is a next-generation, high performance hip system. It is designed to deliver an efficient, predictable and flawless clinical experience.

## Product Highlights

- Optimized proximal/distal geometry
- Enhanced proximal offloading
- Incremental sizing
- Wide range of motion
- Ideal choice for minimally invasive surgery
- Bone and soft tissue preservation
- Flexibility of Ti alloy with porous coating for natural load transfer and tissue strength[3]


1. Standard proximally coated stem

2. Distally reduced proximally coated stem

*Note:*
Both the stems are 12/14 Universal tapper and available in three different type of neck angles.

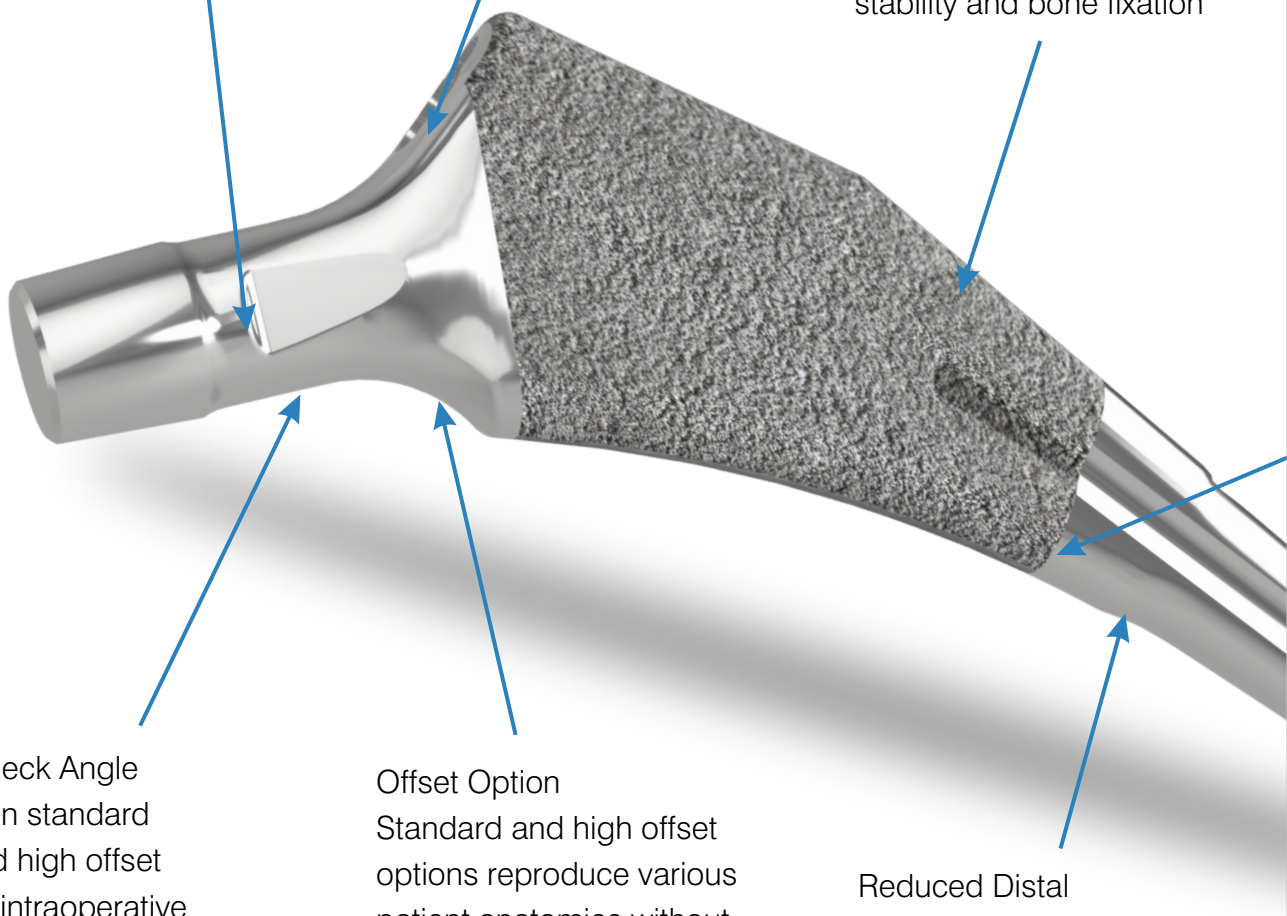
- 132° Standard
- 132° Lateral(High Offset)
- 128° Standard

# Stem (Standard & High Offset)

Polished Anterior-Posterior Neck Flats
Increase ROM by geometrically reducing the potential for impingement of the neck with the cup

Rotational Stability Insertion Hole
Provides rotational stability upon implantation

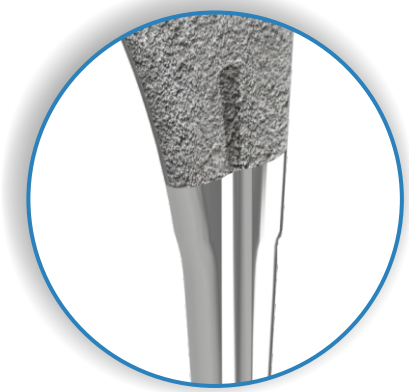
TPS Coating (Ti Growth-C)
Allows for initial scratch-fit stability and bone fixation



Optimal Neck Angle
Available in standard (132°) and high offset (128°) for intraoperative adjustment

Offset Option
Standard and high offset options reproduce various patient anatomies without lengthening the leg

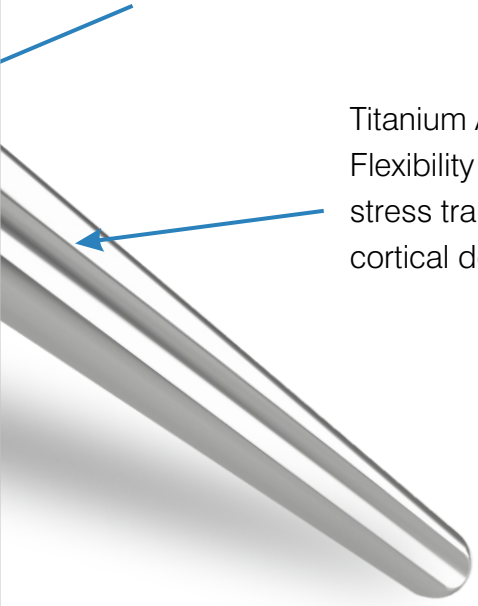
Reduced Distal Transition
Enhances implant fit in femoral canals with a proximal/distal mismatch

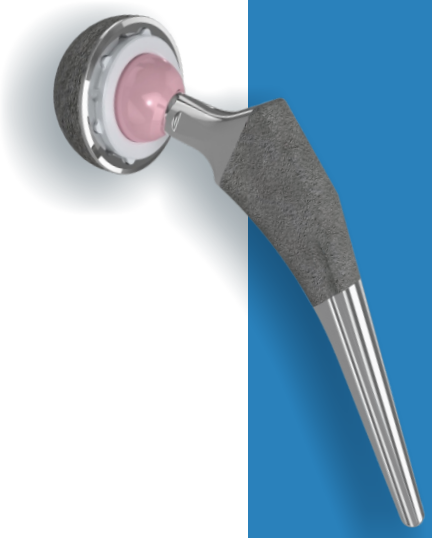


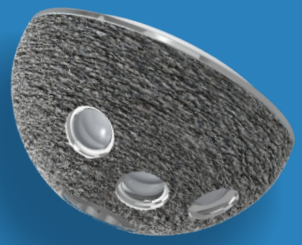
Distal Reduction

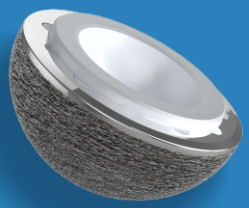
Flat Tapered Wedge
Geometry
Enhances proximal offloading and
bone preservation and provides for
rotational stability

Titanium Alloy Ti-6AL-4V
Flexibility of titanium allows for
stress transfer to preserve
cortical density





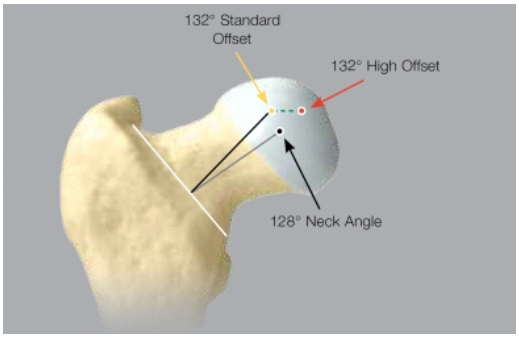


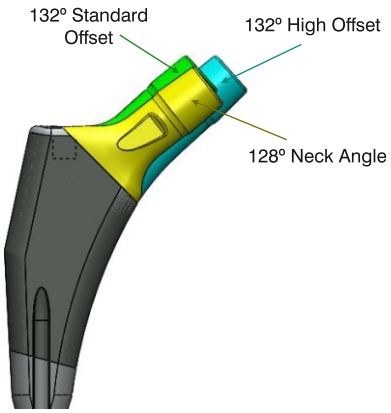


## Size Matrix

| Meril Proximally Coated Stem - Size Matrix | | | |
|---|---|---|---|
| | *132° Standard* | *132° Lateral* | *128° Standard* |
| *Standard* | 4.0 | 4.0 | 4.0 |
| | 5.0 | 5.0 | 5.0 |
| | 6.0 | 6.0 | 6.0 |
| | 7.0 | 7.0 | 7.0 |
| | 8.0 | 8.0 | 8.0 |
| *Distally Reduced* | 9.0 | 9.0 | 9.0 |
| | 10.0 | 10.0 | 10.0 |
| | 11.0 | 11.0 | 11.0 |
| | 12.0 | 12.0 | 12.0 |
| | 13.0 | 13.0 | 13.0 |
| | 14.0 | 14.0 | 14.0 |
| | 15.0 | 15.0 | 15.0 |
| | 16.0 | 16.0 | 16.0 |
| | 17.0 | 17.0 | 17.0 |
| | 18.0 | 18.0 | 18.0 |
| | 20.0 | 20.0 | 20.0 |
| | 22.0 | 22.0 | 22.0 |
| | 24.0 | 24.0 | 24.0 |

## Offset and Angle



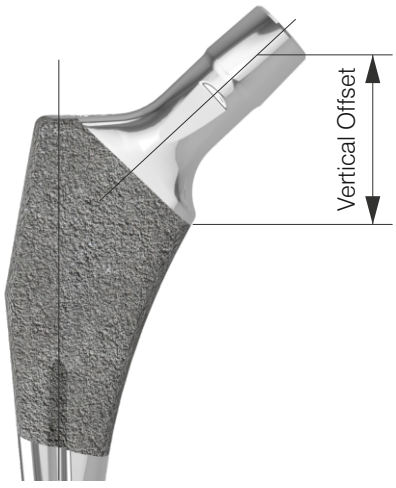

The 132° stem option has the same stem geometry, but provides a neck angle of 128° and standard neck length. These unique design features help to address femurs with more varus neck by allowing an additional offset; properly restoring hip bio-mechanics and soft tissue tensioning.

# Horizontal Offset

| Meril Proximally Coated Stem - Horizontal Offset | | | | | | |
|---|---|---|---|---|---|---|
| Size | 132° Standard | | 132° Lateral | | 128° Standard | |
| | Standard | Distally Reduced | Standard | Distally Reduced | Standard | Distally Reduced |
| 4.0 | 36.0 | | 43.8 | | 37.6 | |
| 5.0 | 36.3 | | 44.1 | | 37.9 | |
| 6.0 | 36.6 | | 44.4 | | 38.2 | |
| 7.0 | 37.1 | | 44.9 | | 38.7 | |
| 8.0 | 37.6 | | 45.4 | | 39.2 | |
| 9.0 | | 38.1 | | 45.9 | | 39.7 |
| 10.0 | | 38.6 | | 46.4 | | 40.2 |
| 11.0 | | 39.1 | | 46.9 | | 40.7 |
| 12.0 | | 39.6 | | 47.4 | | 41.2 |
| 13.0 | | 40.1 | | 47.9 | | 41.7 |
| 14.0 | | 40.6 | | 48.4 | | 42.2 |
| 15.0 | | 41.1 | | 48.9 | | 42.7 |
| 16.0 | | 41.6 | | 49.4 | | 43.2 |
| 17.0 | | 42.1 | | 49.9 | | 43.7 |
| 18.0 | | 44.8 | | 52.6 | | 44.2 |
| 20.0 | | 45.8 | | 53.6 | | 45.2 |
| 22.0 | | 46.8 | | 54.6 | | 46.2 |
| 24.0 | | 47.8 | | 55.6 | | 47.2 |

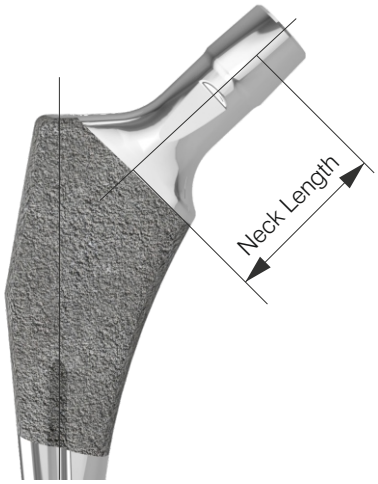

# Vertical Offset

| Meril Proximally Coated Stem - Vertical Offset | | | | | | |
|---|---|---|---|---|---|---|
| Size | 132° Standard | | 132° Lateral | | 128° Standard | |
| | Standard | Distally Reduced | Standard | Distally Reduced | Standard | Distally Reduced |
| 4.0 | 31.0 | | 31.0 | | 28.0 | |
| 5.0 | 31.0 | | 31.0 | | 28.0 | |
| 6.0 | 31.0 | | 31.0 | | 28.0 | |
| 7.0 | 31.0 | | 31.0 | | 28.0 | |
| 8.0 | 31.0 | | 31.0 | | 28.0 | |
| 9.0 | | 31.0 | | 31.0 | | 28.0 |
| 10.0 | | 31.0 | | 31.0 | | 28.0 |
| 11.0 | | 31.0 | | 31.0 | | 28.0 |
| 12.0 | | 31.0 | | 31.0 | | 28.0 |
| 13.0 | | 31.0 | | 31.0 | | 28.0 |
| 14.0 | | 31.0 | | 31.0 | | 28.0 |
| 15.0 | | 31.0 | | 31.0 | | 28.0 |
| 16.0 | | 31.0 | | 31.0 | | 28.0 |
| 17.0 | | 31.0 | | 31.0 | | 28.0 |
| 18.0 | | 33.0 | | 33.0 | | 28.0 |
| 20.0 | | 33.0 | | 33.0 | | 28.0 |
| 22.0 | | 33.0 | | 33.0 | | 28.0 |
| 24.0 | | 33.0 | | 33.0 | | 28.0 |

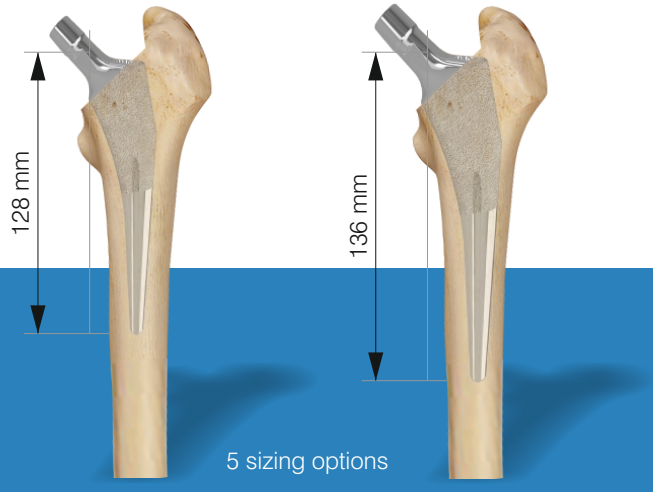


# Neck Length

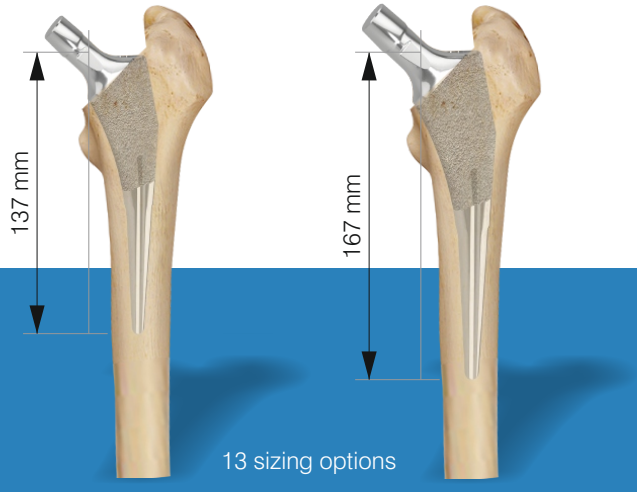
| Meril Proximally Coated Stem - Neck Length | | | | | | |
|---|---|---|---|---|---|---|
| Size | 132° Standard | | 132° Lateral | | 128° Standard | |
| | Standard | Distally Reduced | Standard | Distally Reduced | Standard | Distally Reduced |
| 4.0 | 31.5 | | 37.0 | | 30.5 | |
| 5.0 | 31.5 | | 37.0 | | 30.5 | |
| 6.0 | 31.5 | | 37.0 | | 30.5 | |
| 7.0 | 31.5 | | 37.0 | | 30.5 | |
| 8.0 | 31.5 | | 37.0 | | 30.5 | |
| 9.0 | | 31.5 | | 37.0 | | 30.5 |
| 10.0 | | 31.5 | | 37.0 | | 30.5 |
| 11.0 | | 31.5 | | 37.0 | | 30.5 |
| 12.0 | | 31.5 | | 37.0 | | 30.5 |
| 13.0 | | 31.5 | | 37.0 | | 30.5 |
| 14.0 | | 31.5 | | 37.0 | | 30.5 |
| 15.0 | | 31.5 | | 37.0 | | 30.5 |
| 16.0 | | 31.5 | | 37.0 | | 30.5 |
| 17.0 | | 31.5 | | 37.0 | | 30.5 |
| 18.0 | | 34.5 | | 40.0 | | 30.5 |
| 20.0 | | 34.5 | | 40.0 | | 30.5 |
| 22.0 | | 34.5 | | 40.0 | | 30.5 |
| 24.0 | | 34.5 | | 40.0 | | 30.5 |




## Standard



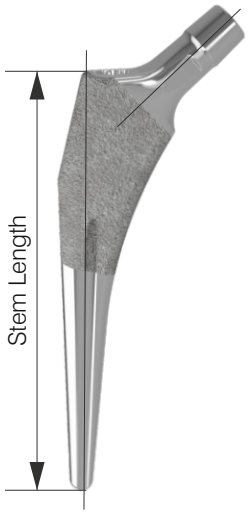

## Distally Reduced




"Multiple studies suggest that, in the patient with high quality proximal bone, proximally coated stem may provide more physiological loading without sacrificing primary implant stability."

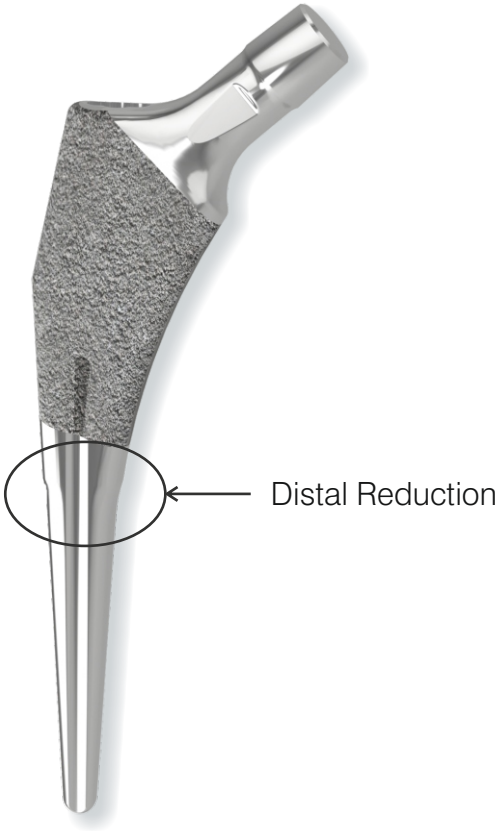
# Stem Length

| Meril Proximally Coated Stem - Stem Length | | | | | | |
|---|---|---|---|---|---|---|
| Size | 132° Standard | | 132° Lateral | | 128° Standard | |
| | Standard | Distally Reduced | Standard | Distally Reduced | Standard | Distally Reduced |
| 4.0 | 128 | | 128 | | 128 | |
| 5.0 | 130 | | 130 | | 130 | |
| 6.0 | 132 | | 132 | | 132 | |
| 7.0 | 134 | | 134 | | 134 | |
| 8.0 | 136 | | 136 | | 136 | |
| 9.0 | | 137 | | 137 | | 137 |
| 10.0 | | 140 | | 140 | | 140 |
| 11.0 | | 142 | | 142 | | 142 |
| 12.0 | | 144 | | 144 | | 144 |
| 13.0 | | 146 | | 146 | | 146 |
| 14.0 | | 148 | | 148 | | 148 |
| 15.0 | | 150 | | 150 | | 150 |
| 16.0 | | 152 | | 152 | | 152 |
| 17.0 | | 154 | | 154 | | 154 |
| 18.0 | | 156 | | 156 | | 156 |
| 20.0 | | 160 | | 160 | | 160 |
| 22.0 | | 164 | | 164 | | 164 |
| 24.0 | | 167 | | 167 | | 167 |

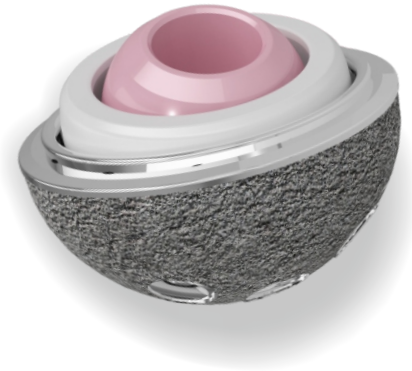



# Distal Reduction As Per Stem Sizes

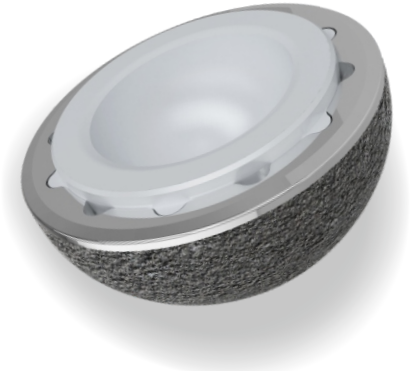
| Stem Sizes | Distal Reduction (mm) |
|---|---|
| 9.0 | 1 |
| 10.0 | 2 |
| 11.0 | 2 |
| 12.0 | 2 |
| 13.0 | 2 |
| 14.0 | 3 |
| 15.0 | 3 |
| 16.0 | 3 |
| 17.0 | 4 |
| 18.0 | 4 |
| 20.0 | 4 |
| 22.0 | 4 |
| 24.0 | 4 |



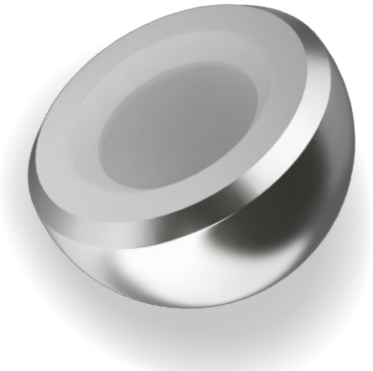
# Acetabular Cup System Options



**Dual Mobility**



**Uncemented Cup**



**Bi-polar Cup**

## Recommended Indication for Dual Mobility

1. Non-inflammatory degenerative joint disease, including osteoarthritis and avascular necrosis
2. Rheumatoid arthritis
3. Correction of functional deformity
4. Treatment of non-union, femoral neck fracture, and trochanteric fractures of the proximal femur with head involvement, unmanageable by other techniques
5. Revision of previously failed total hip arthroplasty
6. Dislocation risks

# Surgical Procedure

### Step 1: Patient Position and surgical approach

The goal of a surgical approach is to establish adequate visualization of the anatomy for stability and leg length evaluation. A number of surgical approaches can be explored for hip based on the extent of surgical experience and preference.

Fig. A

Fig. B

### Step 2: Accessing the Femoral Canal

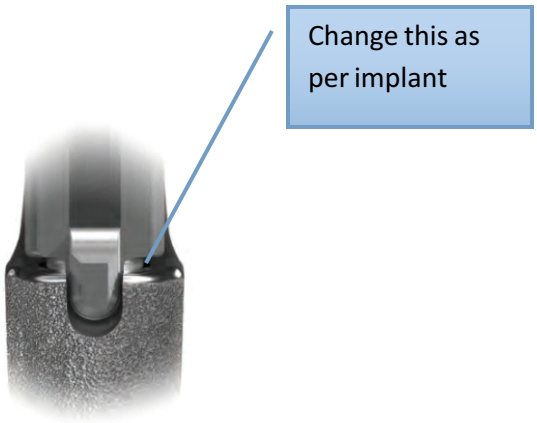
To access femoral canal, use a straight box or offset chisel; determine the orientation and access lateral section of proximal femur (Fig. A).A single starter reamer on a T-handle can be used to initiate the opening in distal femoral canal, as per the requirement found on preoperative X-rays (Fig.B).

### Step 3: Femoral Canal Preparation

Choose the smallest proximally coated Uncemented Femoral Stem broach and attach it to the broach handle by pulling back on the trigger to engage the broach. Progressively increase the broach size to enlarge the canal until the broach engages with medial and lateral cortex and cannot be advanced further or until the templated implant size is reached. (Be careful with the insertion and removal of each broach to avoid rotation and thus to preserve the version of the femoral canal)

## Step 4: Trial Reduction

Attach an appropriate magnetic neck trunnion onto the broach post. Once it's in place, take trial femoral head of desired diameter and neck length. Reduce the hip and evaluate the joint for soft tissue tension, anterior and posterior stability.




## Step 5: Stem Insertion

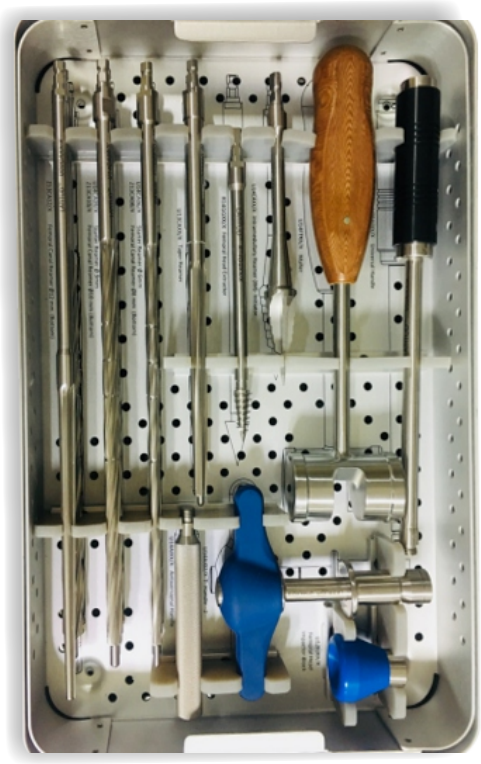
Attach an implant to the blunt-tip femoral inserter and slide it distally into the canal. Gently tap the stem inserter to seat the prosthesis until there is an audible change in its pitch to verify that the implant is fully seated.

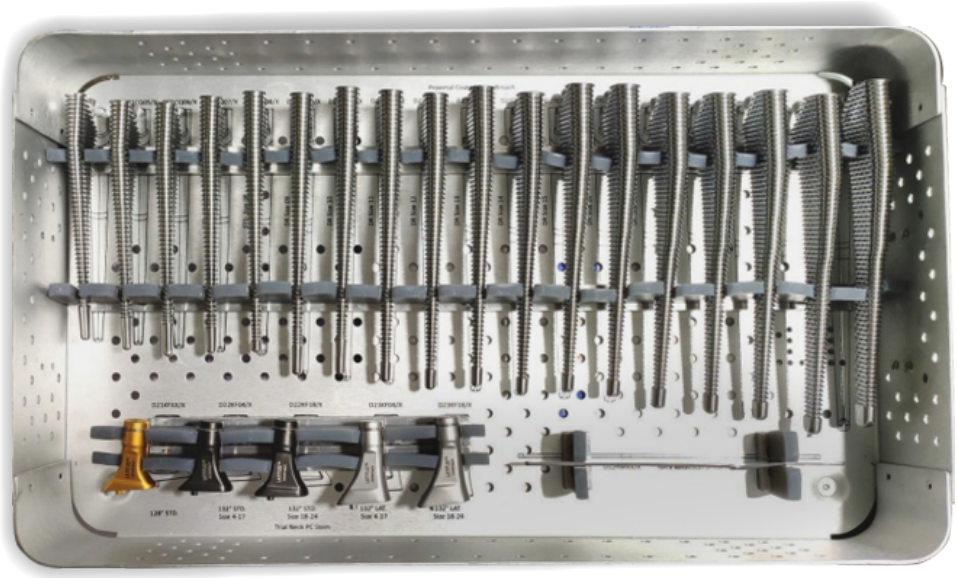
## Step 6: Final Reduction

If desired, another trial reduction can be accomplished prior to selecting the final head size and impacting the modular head onto the femoral implant. Provisional heads in seven neck lengths allow an additional trial reduction using the actual implant in order to ensure proper leg length and stability.

Warning and Precautions:
LatitudTM Proximally Coated Uncemented Femoral Stem (Ti6Al4V ELI-Coated Stem) must not implant with cement. It is intended for Press-fit uncemented use only.
Preoperative templates are provided for determining optimal component size, femoral neck resection level and appropriate neck length (Figure 2). Radiographs should include a full A/P (anterior/posterior) view of the pelvis, including the Proximal one-half of both femurs and a lateral view of the Proximal half of the affected femur.

# Instruments





# References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2. Rui B. Ruben, Joao Folgado, Paulo R. Fernandes, Three-dimensional shape optimization of hip prostheses using a multi-criteria formulation, 2007; 34 : 261-275

3. Emerson RH, Sanders SB, Head WC, Higgins L, Effect of circumferential plasma-spray porous coating on the rate of femoral osteolysis after total hip arthroplasty, 1999; 81(9): 1291-8

## Notes

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