Zimmer® NexGen® LPS-Flex Mobile and LPS-Mobile Bearing Knees

Designed for rotation and safe high flexion

zimmer
Confidence in your hands®

Exercise your options

so your patients can exercise theirs

Help restore natural knee kinematics and accommodate up to 155° of active flexion with the *NexGen* LPS-Flex Mobile and 120° of active flexion with LPS-Mobile Bearing Knee. An innovative more anterior axis of rotation for the tibial component is designed to accommodate femoral rollback during flexion.

MINIMALLY INVASIVE SOLUTIONS™ PROCEDURES

MIS implants and procedures offer solid alternatives to traditional total knee arthroplasty through innovative, minimally invasive TKA techniques that help improve patient outcomes.

- MIS Instrumentation facilitates accurate, repeatable bone cuts
- Implants with established design features meet patients' expectations
- Smaller incisions, less blood loss, and less pain

ACCOMMODATING SAFE FLEXION TO 155° OF FLEXION

The implant options of the LPS-Flex Mobile and LPS-Mobile Bearing Knee system offer more freedom to select components based on the patient's willingness and ability to achieve high flexion. Specific design features help to maintain adequate tibiofemoral contact during high flexion and provide greater clearance for the patellar tendon.

The extended posterior flanges of the LPS-Flex femoral component safely accommodate tibiofemoral contact during deep flexion of 155°

RESTORING NATURAL KINEMATICS

The LPS-Flex Mobile and LPS-Mobile Bearing Knee is a rotation-only mobile-bearing design with a more anterior axis of rotation. Matching the LPS-Flex Mobile and LPS-Mobile Bearing Knee Femoral Component with a size-specific mobile articular surface combines the stability of a posterior stabilized design with a mobile bearing component.[1,2]

A deepened anterior cut-out on the articulating surface reduces extensor mechanism tension and provides greater clearance for the patellar tendon during deep flexion. (LPS-Flex Mobile only)

A DISTINCTIVE FEMORAL COMPONENT

A deepened patellar groove facilitates patellofemoral tracking throughout the full range of motion for greater patellar stability.

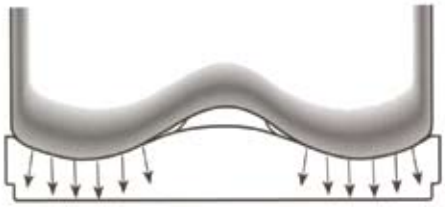
A wider intercondylar opening optimizes rotation.

Designed for deep flexion

- The extended posterior flanges of the LPS-Flex femoral component safely accommodate tibiofemoral contact during deep flexion of 155º.

Smooth patellar tracking

- A deepened patellar groove relieves pressure on the patella, reducing forces that can cause premature wear.
- At the surgeon's discretion, the patella need not be resurfaced.

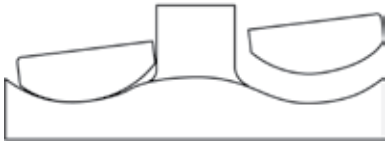


Reducing wear

The LPS-Flex and LPS femoral components feature symmetric medial and lateral femora radii that are matched to size-specific articular surfaces. These components are designed to reduce wear by increasing contact area and distributing stress more evenly.

WEAR-RESISTANT, CONFORMING ARTICULATION

A deepened anterior cut-out provides greater clearance for the patellar tendon during deep flexion. (LPS-Flex Mobile only)



Resisting edge loading

Optimally proportioned bearing spaces accommodate a large contact area on the loaded condyle and resist edge loading.

Balancing conformity with reduced stress

Increased contact and conformity help reduce polyethylene contact stresses.

Providing stability

An enhanced PS cam/spine mechanism is designed to provide the stability for range of motion up to 155° active flexion. The LPS-Flex Mobile and LPS-Mobile Bearing Knee Mobile cam/spine design increases subluxation resistance at deep flexion angles. Proportionally sized anchoring pegs on the femoral component provide additional stability.

ANTERIOR LOCATION OF TRUNNION

Replicates the anatomical center of rotation.

A central trunnion allows rotation only while resisting lift-off without direct AP translation.

Anterior stop prevents spin-out.

Reducing articular friction

- Radiused edges reduce stresses that can lead to polyethylene wear.
- Allowing only unidirectional, rotational motion potentially reduces cross-shear and consequent wear.[3]

The Mobile Tibial Plate allows internal/external total axial rotation of 50°.

Tibial Base Plate

The Fluted Stem Mobile Tibial Plate allows internal/external total axial rotation of 50° (±25°). The highly polished cobalt-chrome surface is designed to minimize articular friction and polyethylene wear. The anterior stop helps prevent the spin-outs reported with other mobile systems. The anterior location of the trunnion on the tibial base plate replicates the anatomic center of rotation and permits the mobile articular surface to rotate without excessive polyethylene overhang on the tibial plate.

The more anterior location will result in decreased medial/lateral displacement of the tibial turbecle. This will in turn reduce medial/lateral shifting of the patella corresponding to axial rotation. This reduces shear forces on the patella and its fixation and reduces the chances for maltracking (subluxation and tilting effects).

USING YOUR CHOICE OF ZIMMER INSTRUMENTS

- MIS *NexGen Multi-Reference*® 4-in-1 Instrumentation System
- MIS Intramedullary Instrumentation System
- Can make the mobile or fixed bearing decision intraoperatively

1. Andriacchi TP, Andersson GBJ, Fermier RW, et al. A study of lower-limb mechanics during stair climbing. *J Bone Joint Surg*. 1980;62-A:749-757.
2. Andriacchi TP, Galante JO. Fermier RW. The influence of total knee-replacement design on walking and stair climbing. *J Bone Joint Surg*. 1982;64-A:1328-1335.
3. Jones, V.C. et al. An experimental model of tibial counterface polyethylene wear in mobile bearing knees: The influence of design and kinematics. *Bio-medical Materials & Related Research*, 1999;9:189-196.
4. Hvid, I. et al. Trabecular bone strength patterns at the proximal tibia ephiphysis. *J Orthopaedic Research*, 1985;3:464-472.

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