

Masterfully Crafted

NOVATION[®]
Comprehensive Hip System

Tapered Femoral Stem



Exactech[®]

For the surgeon, Novation means stable reconstruction, with the best and brightest in bearing alternatives, for the widest range of anatomies. To the patient, it means a renewed outlook on life.

A MASTERFULLY CRAFTED PLAN

The Novation[®] Comprehensive Hip System design provides a system of femoral stems and surgical instrumentation that addresses a variety of situations encountered during primary total hip replacement. The system provides stable reconstruction of a wide range of anatomies and low-profile instrumentation and implants that are compatible with a multitude of surgical approaches.

A COMPREHENSIVE SYSTEM

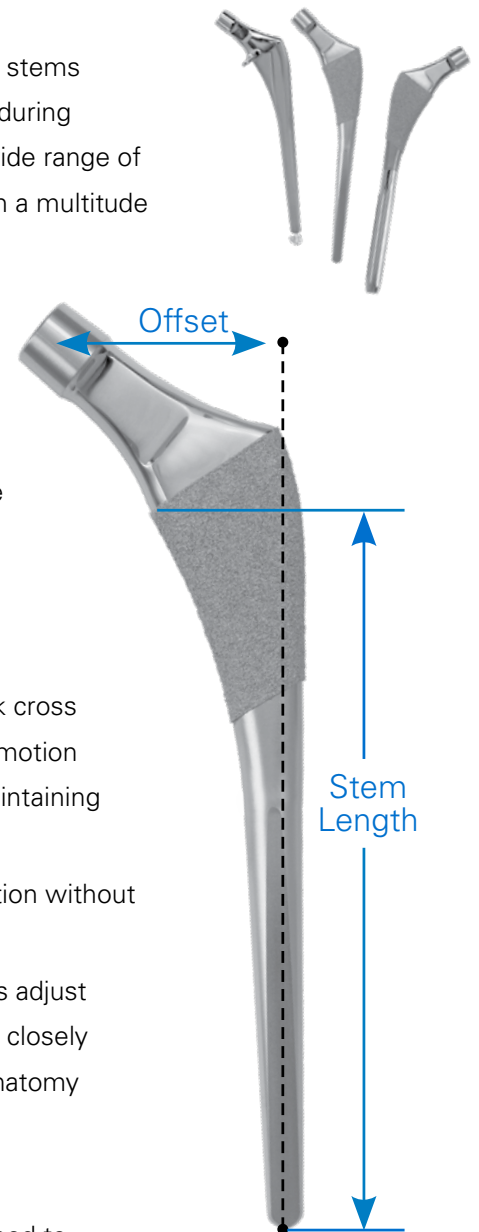
Novation Tapered Stem

Tapered stems rely on proximal fixation and three-point contact for initial stability. The dual-taper design, with a gradual taper in the M/L plane and a more rapid transition in the A/P plane is designed to accommodate the anterior bow of the femur while providing the wedge effect needed for stability.

Features

- Circumferential titanium plasma coating of 0.5mm per side (1mm total)
- Sizes 9-20 provide wide range of stem diameters to more intimately fit the femoral canal*
- The dual-taper of five degrees in the A/P plane and three degrees in the M/L plane is designed to accommodate the anterior bow of the femur
- Supports a tapered ream-and-broach technique
- Parabolic tip provides gradual stress transfer at the distal bone interface^{1,2}
- Neck flats result in 8mm neck cross section maximizing range of motion and head/neck ratio while maintaining strength³
- Two offsets provide lateralization without increasing leg length
- Multiple femoral head lengths adjust offset and leg length to more closely match the patient's normal anatomy
- Polished neck
- 12/14 femoral neck taper
- 131-degree neck angle designed to predictably restore normal anatomy^{4,5}

*Sizes 19-20 are special order



References:

1. **U.S. Patent #5,152,799.**
2. **Englehardt JA, Tomaszewski PR.** Hip stem and tip geometry a theoretical model for thigh pain. Proceedings of the 37th Annual Meeting of the Orthopaedic Research Society. 1991, p. 270.
3. **Data on file at Exactech.** 711-01-80 The Effect of Femoral Head and Neck Cross Section on Range of Motion Technical Profile
4. **Robinson RP, Simonian PT, Gradisar IM, Ching RP.** Joint motion and surface contact area related to component position in total hip arthroplasty. J Bone Joint Surg Br. 1997 Jan; 79(1):140-6.
5. **Noble PC, Alexander JW, Lindahl LJ, Yew DT, Granberry WM, Tullos HS.** The anatomic basis of femoral component Design. Clin Orthop Relat Res. 1988 Oct;(235):148-65.