Over 1 million times per year, Biomet helps one surgeon provide personalized care to one patient.

The science and art of medical care is to provide the right solution for each individual patient. This requires clinical mastery, a human connection between the surgeon and the patient, and the right tools for each situation.

At Biomet, we strive to view our work through the eyes of one surgeon and one patient. We treat every solution we provide as if it’s meant for a family member.

Our approach to innovation creates real solutions that assist each surgeon in the delivery of durable personalized care to each patient, whether that solution requires a minimally invasive surgical technique, advanced biomaterials or a patient-matched implant.

When one surgeon connects with one patient to provide personalized care, the promise of medicine is fulfilled.
Taperloc Complete Hip System

Over the past 26 years, the Taperloc Hip stem has become the industry standard in cementless hip arthroplasty. Combining this unmatched clinical success with Biomet’s commitment to product innovation, the Taperloc Complete Hip system has been introduced with design enhancements that restore leg length, stability, offset and range of motion (ROM) accurately and consistently.

Clinical Success of the Taperloc Hip System

100% Survivorship at a minimum 5 year follow-up in 49 rheumatoid patients

100% Survivorship at a 2–11 year follow-up in 114 patients 80 years old or older

99.6% Survivorship at a 12 year follow-up of 4,750 patients

99% Survivorship at a 22–26 year follow-up in 138 patients

99% Survivorship at a 12 year follow-up in 115 patients

98% Survivorship at 8–13 year follow-up in 91 patients 50 years old or younger

95% Survivorship at a 10–18 year follow-up in 89 obese patients

94% Survivorship at a 10–18 year follow-up in 99 non-obese patients
**Optimal Neck Angle**
133° neck angle increases ROM and improves stability through increased soft tissue tension 14–16

Polished Anterior-Posterior Neck Flats
Increase ROM by geometrically reducing the potential for impingement of the neck with the cup 8

Rotational Stability Insertion Hole
Provides rotational stability upon implantation

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

Clinically Proven PPS Application
Allows for initial scratch-fit stability and bone fixation 9,3,3,10

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Acetabular Options

Exceed ABT with BIOLOX®delta Ceramic Tapered Liner and 15° shell
- Improved wear resistance and mechanical strength compared to alumina ceramic.
- Increased diameters improve ROM
- 15° shell option allows more coverage
- Clinically proven PPS coating 9,17

Exceed ABT with E1
- Utilises clinically proven RingLoc mechanism
- E1 Antioxidant Infused Technology developed from clinically proven ArCom 18,19
- Ultra low wear versus standard polyethylene 20
- Range of liner types and sizes to better address clinical need:
  - Standard, Hi-Wall and 10 Degree
  - 22, 28, 32, 36 and 40 mm liners
BoneMaster Nano-Crystalline HA Coating Technology

BoneMaster is an advanced biomimetic coating technology with the biological benefits of hydroxyapatite and an enhanced needle-like nano-structure based on apatite crystals found in bone. This technology offers enhanced implant stability, reduced fibrous in-growth and increased bone density.

The unique needle-like topography of BoneMaster creates a favorable environment for osteoblast adhesion, producing faster bone integration. The 5μm thick BoneMaster coating preserves the macro-roughness and porosity of PPS (Porous Plasma Spray) Ti-alloy coating for enhanced primary and long-term fixation.

- Large head for reduced risk of dislocation
- Large ROM
- 90% – lower wear – than traditional ArCom
- Clinically proven cup design
- Available in Active Articulation and Avantage Dual Mobility System constructs

Uncoated Surface
BoneMaster Coating

Fibrous tissue
Bone tissue
Titanium
**Optimal Neck Angle**
133° neck angle increases ROM and improves stability through increased soft tissue tension.\(^{14-16}\)

**Polished Anterior-Posterior Neck Flats**
Increase ROM by geometrically reducing the potential for impingement of the neck with the cup.\(^8\)

**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.

**Rotational Stability Insertion Hole**
Provides rotational stability upon implantation.

**Clinically Proven PPS Application**
Allows for initial scratch-fit stability and bone fixation.\(^{2,3,9,10}\)

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**E1 Technology**
Infused with vitamin E, a natural antioxidant, E1 Technology defines a new class of acetabular bearings. It overcomes the limitations of remelted and annealed polyethylenes, as well as blended antioxidant polyethylenes, by maximizing ultra-low wear, high mechanical strength and true oxidative stability.\(^{30,31}\)
Titanium Alloy Ti-6Al-4V
Flexibility of titanium allows for stress transfer to preserve cortical density.

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

Taperloc Complete Reduced Distal Geometry
The Taperloc Complete stem features a reduced distal geometry in which a gradual reduction of the stem substrate occurs distal to the porous coating level. The Taperloc Complete stem’s reduced distal geometry enhances the proximal fill of the implant in the metaphysis. This particular design is the optimal choice to address a proximal/distal mismatch, which is common in a Dorr Type A femur, by properly accommodating the proximal metaphysis without the need to fit a narrow distal femoral geometry. This design enhancement is based on the traditional Taperloc Reduced Distal stem which has been clinically successfully for over 16 years.5

BoneMaster Coating
Provides enhanced implant stability,11 reduced fibrous in-growth11,12 and increased bone density12,13.

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BIOLOX® delta / E1
Material

CoCr/E1
Polyethylene

BIOLOX® delta / ArComXL
Material

Volumetric Wear Rates of 38mm Acetabular Liners30

The Taperloc Complete stem design accurately addresses a proximal/distal mismatch as seen in the x-ray above.
Surgeon Education Opportunities

The Anterior Supine Intramuscular (ASI) approach has shown many patient benefits spanning whether utilizing a specialized fracture or standard operating table. Biomet offers a number of resources for surgeons to explore the ASI approach in the manner that best suits surgeon and hospital needs.
Taperloc Complete Microplasty Stem

The Taperloc Complete Microplasty stem is built upon the strong clinical heritage of the Taperloc stem and incorporates the same design enhancements as the Taperloc Complete full length stem. This stem option has been shortened 35 mm from the standard length stem to better address minimally invasive techniques, provide an alternative to femoral resurfacing and offer a unique solution in cases where a bone conserving prosthesis is desirable.

- **BoneMaster Coating**
  - Provides enhanced implant stability, reduced fibrous in-growth and increased bone density.

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

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

- **Reduced Length**
  - Stem length reduced 35 mm to preserve soft tissues and bony structures and better accommodate minimally invasive approaches.

- **ASI Hip Instructional Courses**
  - Courses offered with standard OR and ASI specific tables
  - Led by experienced ASI faculty
  - Didactic and hands-on cadaveric training

- **Surgeon Visitation Program**
  - One-on-one experience with ASI surgeon
  - Observe live surgery
  - Discuss implant design and rationale

For more information on these opportunities, please visit biometosa.com.
With the introduction of the Taperloc Complete XR 123° stem option, the Taperloc Complete system can accommodate a larger range of offsets to better restore patient biomechanics. The adjacent chart shows the additional offsets achieved with the Taperloc Complete compared to a competitive system.

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

**123° Neck Angle**
Addresses varus anatomies or coxa vara femoral types by providing additional horizontal offset and low vertical offset for increased soft tissue tension.

**Rotational Stability Insertion Hole**
Provides rotational stability upon implantation.

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

**Clinically Proven PPS Application**
Allows for initial scratch-fit stability and bone fixation.

**With the introduction of the Taperloc Complete XR 123° stem option, the Taperloc Complete system can accommodate a larger range of offsets to better restore patient biomechanics. The adjacent chart shows the additional offsets achieved with the Taperloc Complete compared to a competitive system.**
The Taperloc Complete XR 123° stem option has the same stem geometry as the Taperloc Complete Full length and Microplasty stems, but provides a 123° degree neck angle and a shortened neck length by 2 mm. These unique design features help to address femurs with a more varus neck by allowing for additional offset to properly restore hip biomechanics and soft tissue tensioning.

**BoneMaster Coating**
Provides enhanced implant stability, reduced fibrous in-growth and increased bone density.

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

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

**Profile Options**
Available in Full Length Reduced Distal and Microplasty stem options.
References


