Taperloc Complete Hip System

BIOMET®

One Surgeon. One Patient.

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.[1] 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[2]

100% Survivorship
at a 2–11 year follow-up in 114 patients 80 years old or older[3]

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

99% Survivorship
at a 22–26 year follow-up in 138 patients[1]

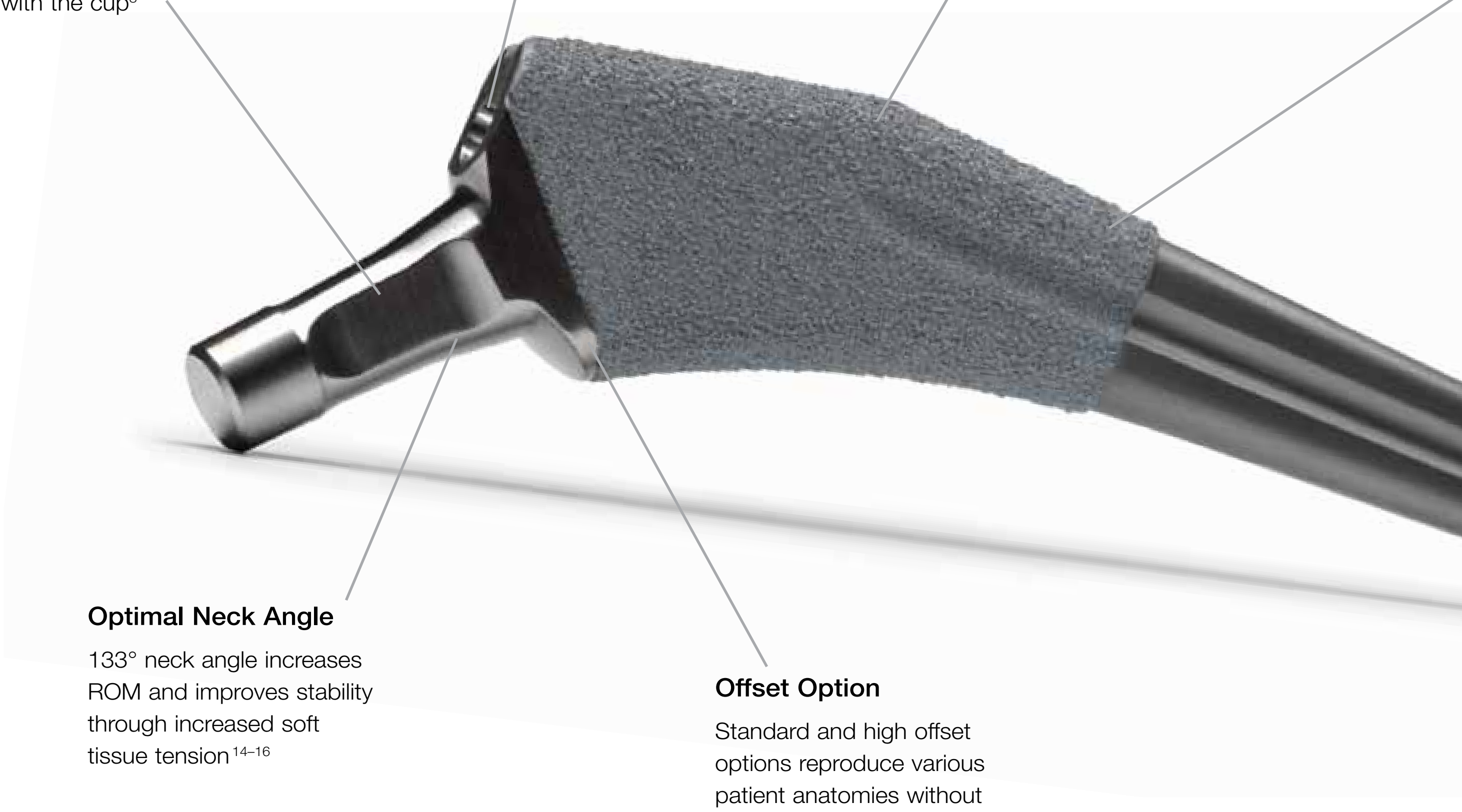
99% Survivorship
at a 12 year follow-up in 115 patients[5]

98% Survivorship
at 8–13 year follow-up in 91 patients 50 years old or younger[6]

95% Survivorship
at a 10–18 year follow-up in 89 obese patients[7]

94% Survivorship
at a 10–18 year follow-up in 99 non-obese patients[7]

Taperloc Complete Full Profile Hip Stem



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 Coating

Provides enhanced implant stability,[11] reduced fibrous in-growth[11,12] and increased bone density[12,13]

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

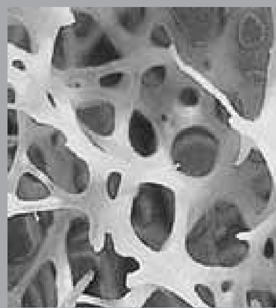
Dual Mobility Technology

- Large head for reduced risk of dislocation[21]
- Large ROM[22]
- 90% – lower wear – than traditional ArCom[23]
- Clinically proven cup design[24,25]
- Available in Active Articulation and Avantage Dual Mobility System constructs

BoneMaster Nano-Crystalline HA Coating Technology

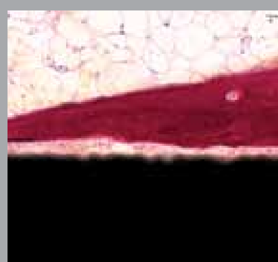
BoneMaster is an advanced biomimetic coating technology with the biological benefits of hydroxyapatite and an enhanced needle-like nano-structure based on apatite crystals found in bone.[26] This technology offers enhanced implant stability,[11] reduced fibrous in-growth[11,12] and increased bone density.[12,13]

2μm
BoneMaster coating

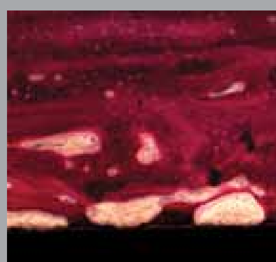


Bone

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.[27–29]



Uncoated Surface



BoneMaster Coating

- Fibrous tissue
- Bone tissue
- Titanium

Taperloc Complete Reduced Distal Hip Stem

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

Clinically Proven PPS Application

Allows for initial scratch-fit stability and bone fixation[2,3,9,10]

Optimal Neck Angle

133° neck angle increases ROM and improves stability through increased soft tissue tension[14–16]

Offset Option

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

Reduced Distal Transition

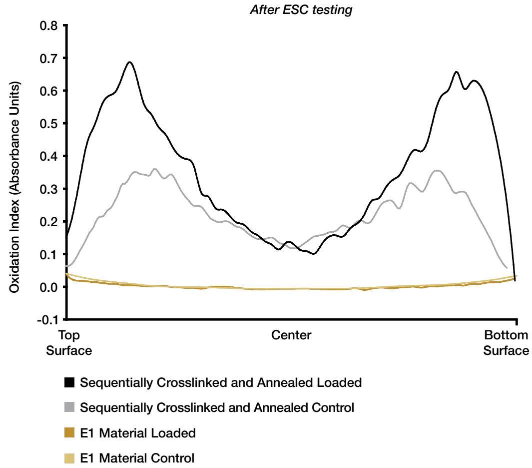
Enhances implant fit in femoral canals with a proximal/distal mismatch

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]

Oxidation Profile[30,32]

After ESC testing



BoneMaster Coating

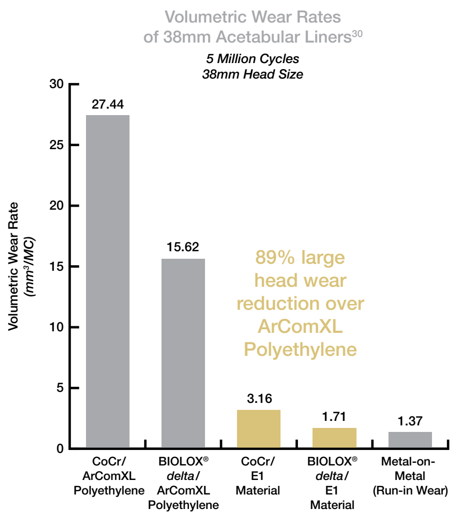
Provides enhanced implant stability,[11] reduced fibrous in-growth[11,12] and increased bone density[12,13]

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



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]

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

Taperloc Complete Microplasty Hip Stem

Surgeon Education Opportunities

The Anterior Supine Intramuscular (ASI) approach has shown many patient benefits[33–35] 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.

BoneMaster Coating

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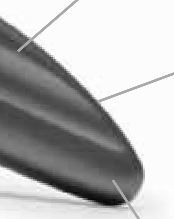
Flexibility of titanium allows for stress transfer to preserve cortical density

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.

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.

Taperloc Complete XR 123° Hip Stem

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

Clinically Proven PPS Application

Allows for initial scratch-fit stability and bone fixation[2,3,9,10]

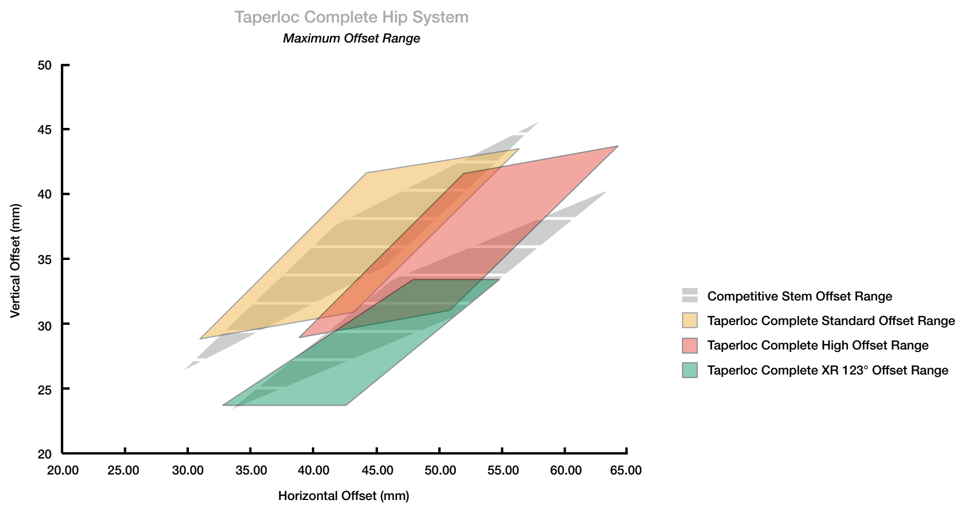
123° Neck Angle

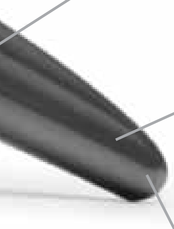
Addresses varus anatomies or coxa vara femoral types by providing additional horizontal offset and low vertical offset for increased soft tissue tension

Reduced Distal Transition

Enhances implant fit in femoral canals with proximal/distal mismatch

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.





BoneMaster Coating

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Flat Tapered Wedge Geometry

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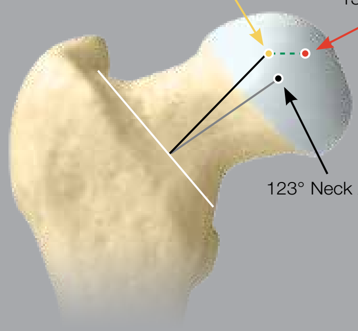
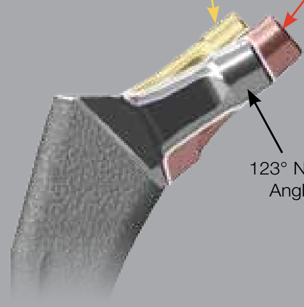
Profile Options

Available in Full Length Reduced Distal and Microplasty stem options

Taperloc Complete XR 123° Stem

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.





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