Arcos System

Simplify the Complex

The Arcos Modular Femoral Revision System meets the demands of complex hip revision surgery by offering surgeons and OR staff the ability to customise both the hip implant and its corresponding instruments in a way that addresses patient and practice needs.

The Arcos System’s three proximal and five distal geometry options provide surgeons 117 proximal/distal combinations and multiple auxiliary fixation options for various femoral defects.
Cone Proximal Body

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

Clinically Proven PPS Coating\textsuperscript{1-4}
Allows for initial scratch-fit stability and bone fixation

BoneMaster Coating
Demonstrated significantly greater bone density in Gruen zone 1 compared to identical standard HA coated implants\textsuperscript{13}

Trochanteric Reattachment Bolt Hole
Allows for reattachment of the trochanteric fragment directly to the implant, increasing stability and aiding in bony repair

Version Control
Proximal body design allows for intraoperative version adjustment independent of distal stem position

Conical Design
Allows for multiple surgical techniques and vertical offset options

STS (Splined Tapered Stem)
Distal Stem

Roller Hardening
Roller-hardened tapers provide up to three times more strength in cantilever beam testing than non-roller hardened tapers\textsuperscript{5}

BoneMaster Coating
Demonstrated significantly greater bone density in Gruen zone 1 compared to identical standard HA coated implants\textsuperscript{13}

Splined Tapered
3 degree splined tapered design transfers load distally and provides rotational stability\textsuperscript{6}

Grit Blast
Provides for potential long-term stability through bone fixation

Stem Design and Length Options
Straight stem available in 150 and 190mm lengths
Calcar Proximal Body

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

Clinically Proven PPS Coating
Allows for initial scratch-fit stability and bone fixation

BoneMaster Coating
Demonstrated significantly greater bone density in Gruen zone 1 compared to identical standard HA coated implants

Trochanteric Reattachment Bolt Hole
Allows for reattachment of the trochanteric fragment directly to the implant increasing stability and aiding in bony repair

Version Control
Proximal body design allows for intraoperative version adjustment independent of distal stem position

Calcar Shelf
Three resection options, for differing levels of bone loss, are designed to transfer load from proximal body to medial bone

Slotted Distal Stem

Roller Hardening
Roller-hardened tapers provide up to three times more strength in cantilever beam testing than non-roller hardened tapers

BoneMaster Coating
Demonstrated significantly greater bone density in Gruen zone 1 compared to identical standard HA coated implants

PPS Coating
Allows for initial scratch-fit stability and bone fixation

Anatomic Bow
Matches the natural anatomy of the femur

Coronal Slot
Designed to reduce the risk of anterior impingement, allow for extended distal fixation and reduce thigh pain

Stem Design and Length Options
Bowed stem available in 150, 200 and 250mm lengths
Bullet-tip Distal Stem

Roller Hardening
Roller-hardened tapers provide up to three times more strength in cantilever beam testing than non-roller hardened tapers

BoneMaster Coating
Demonstrated significantly greater bone density in Gruen zone 1 compared to identical standard HA coated implants

PPS Coating
Allows for initial scratch-fit stability and bone fixation

Anatomic Bow
Matches the natural anatomy of the femur

Polished Bullet-shaped Distal Tip
A gradual separation from cortex provides for reduction in distal stresses

Stem Design and Length Options
Straight stem available in 115mm length; bowed stem available in 150, 200 and 250mm lengths
ILS (Interlocking) Distal Stem

Roller Hardening
Roller-hardened tapers provide up to three times more strength in cantilever beam testing than non-roller hardened tapers.

BoneMaster Coating
Demonstrated significantly greater bone density in Gruen zone 1 compared to identical standard HA coated implants.

PPS Coating
Allows for initial scratch-fit stability and bone fixation.

Anatomic Bow
Matches the natural anatomy of the femur.

Polished Bullet-shaped Distal Tip
A gradual separation from cortex provides for reduction in distal stresses.

Distal Locking Screw Holes
Provide for initial rotational stability in complex femoral reconstruction.

Stem Design and Length Options
Bowed stem available in 200, 250 and 300mm lengths.
Broached Proximal Body

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

Clinically Proven PPS Coating\(^1-4\)
Allows for initial scratch-fit stability and bone fixation

BoneMaster Coating
Demonstrated significantly greater bone density in Gruen zone 1 compared to identical standard HA coated implants\(^13\)

Trochanteric Reattachment Bolt Hole
Allows for reattachment of the trochanteric fragment directly to the implant, increasing stability and aiding in bony repair

Version Control
Proximal body design allows for intraoperative version adjustment independent of distal stem position

Fit and Fill Design
Provides initial stability and bone contact when deficiencies are minimal

ETO (Extended Trochanteric Osteotomy) Distal Stem

Roller Hardening
Roller-hardened tapers provide up to three times more strength in cantilever beam testing than non-roller hardened tapers\(^5\)

Splined Tapered
3 degree splined tapered design transfers load distally and provides rotational stability\(^6\)

PPS Coating\(^1-4\)
Allows for initial scratch-fit stability and bone fixation

Grit Blast
Provides for potential long-term stability through bone attachment

Anatomic Bow
Matches the natural anatomy of the femur

Dual Mode Fixation
Provides biologic fixation for the trochanteric fragment and rotational stability for the intact portion of the femur when an ETO is necessary

Stem Design and Length Option
Kinked stem available in 250mm length

Bolt and Claw Auxiliary Option

The bolt and claw auxiliary implants allow the surgeon to reattach the trochanteric fragment in cases where a trochanteric osteotomy is necessary. This unique design allows for the trochanteric fragment to attach directly to the implant.
Arcos Instrumentation

Surgeon Preference

Instrumentation should not limit surgeons’ implant selection or preferred surgical technique. The Arcos Modular Femoral Revision System is designed to provide the option to use any implant combination with the surgical technique that is required to address the needs of the patient.
Enhanced Intraoperative Efficiency

Designed with common proximal implant and instrument geometries, the Arcos Platform design allows for intraoperative revision efficiency by reducing the number of instrument cases required to a number comparable to a primary hip surgery.

Modular Reamer
The proximal and distal reamer can be combined or used independently to prepare the proximal and distal portion of the femur, based on the desired surgical technique.
Arcos System – Addressing Complex Situations

Fulfilling Patient Needs

In specific cases revision hip surgery involves both the femur and acetabulum. Biomet offers implants designed for advanced fixation, low wear and dislocation resistance allowing surgeons to address the most complex revision situations.

Maximum Range of Motion: 114 Degrees

Average Lever-out Force: 198 in. lbs.

Freedom Constrained Liner
Offers high level of constraint while maintaining optimal range of motion\(^6,7,8\)
Regenerex Porous Titanium Construct Provides for Rapid Fixation in Complex Situations

Regenerex Porous Titanium Construct unites the proven clinical history of titanium\(^{12}\) with an enhanced interconnecting pore structure, resulting in a revolutionary material that provides for high levels of biologic fixation.\(^{5,10}\)

**Regenerex material provides for:**
- Average porosity of 67 percent\(^5\)
- Optimal pore size range from 100 to 600 microns (average of 300 microns)\(^5\)
- High strength and flexibility\(^5\)
- Fixation in as early as two weeks in animal studies\(^5,10\)

**Bone Integration in Similar Animal Study**
Two weeks after insertion, Regenerex implants displayed bony integration and vascularization.

![Bone Integration Graph](chart.png)

- 2 Weeks
- 4 Weeks
- 6 Weeks
- 8 Weeks
- 10 Weeks
- 12 Weeks

**Regenerex Acetabular Augments**
Designed to help maximize stability of components in complex reconstruction

**Regenerex RingLoc+ Acetabular Shells**
Provide high levels of biologic fixation combined with unparalleled locking technology\(^8-10\)

Any time the liner is removed, it is recommended that the locking ring be removed and replaced with a new one. If the liner is damaged in any way, a new liner should be utilised.

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References


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