







Contact Info





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Avaneon® Primary total hip replacement



Designed by surgeons 10A ODEP Rating

Designed and developed utilising the combined knowledge and expertise of four Consultant Orthopaedic Surgeons from the lower limb Arthroplasty Unit, Northern General Hospital, Sheffield, UK.

Design Rationale

The Avanteon® Hip System is based on the proven design principles of a double tapered, highly polished femoral stem used in conjunction with a cobalt chrome femoral head and UHMWPE flanged acetabular cup, which have provided excellent long term clinical outcomes in cemented total hip replacement. The Avanteon® Hip System is the first total hip replacement system to be included in the pilot phase of Beyond Compliance.

Modular Bipolar Head System



The Bipolar Head is available pre-assembled or modular in sizes 40mm-54mm (1mm increments), 56mm, 58mm, and *60mm (*Modular Bipolar only). It has been designed specifically to minimize the risk of the prosthesis assuming a varus position.

Design Attributes (Engineering & Specs – the "What & How Built")

- Available in pre-assembled or modular forms
- Sizes: 40-54mm (1mm increments), 56mm, 58mm, 60mm (modular only)
- Manufactured from High Nitrogen Stainless Steel (HNSS)
- Enhanced biocompatibility, fatigue strength, and corrosion resistance compared to conventional stainless steel
- Outer shell manufactured from HNSS, insert manufactured from CLP75® XLPE
- Inner articulation via Furlong® 28mm Cobalt Chrome heads with offset distances of:

o Short: 30.3mm o Medium: 33.5mm o Long: 36.7mm

Key Features (Design Intent – the "Why It's Designed This Way")

- Based on the pre-assembled JRI Bipolar Head, offering improved offset and leg length management
- Dual articulation allows improved range of motion and reduces wear on articulating components
- Designed to minimize acetabular erosion compared to physiological heads
- Specifically engineered to minimize the risk of prosthesis assuming a varus position

Key Advantages (Clinical Benefits – the "Value to Surgeon & Patient")

- Articulates directly with the native acetabulum to allow improved proprioception
- Reduction of surgical trauma to the acetabulum may improve patient rehabilitation time
- Dual-axis articulation reduces the risk of dislocation
- Simple and concise operative technique

Furlong® H-A.C Primary Stem The World's First Hydroxyapetite Ceramic Coated Stem 15A* ODEP Rating



FURLONG® H_A.C

Cementless Total Hip Replacement Implanted since 1985, and with the accolade as the world's first implanted hydroxyapatite ceramic coated stem, the Furlong® H–A.C has over 30 years supporting clinical evidence.

Rotational stability under dynamic load

Proximal body of Furlong® H-A.C. is designed to fit the metaphysis of the femur;

- Rectangular cross section of the proximal body provides rotational stability under dynamic loading
- Load transferred and transmitted by the interface between the prosthesis and cancellous bone

Absolute mechanical stability

- Cone shaped geometric transition between proximal body and cylindrical distal stem; Prevents subsidence
- Stress transfer creates 'hoop stressing' of the cortical bone providing early stable mechanical fixation

Deliberately accurate

Cylindrical distal stem;

- Provides correct angular alignment
- Deliberately over–reamed to promote preferential transfer of load to metaphysis
- Subsequent formation of 'cradling' trabeculae Natural biological fixation
- 35 years experience of naturally getting the living to bond to the inert
- JRI unique coating has high crystallinity resorbs slower
- Vacuum plasma spray (VPS) technology resists thermal cracking and gas pores to prevent delamination compared to atmospheric plasma spray (APS) adopted by many companies
- Patented Supravit® coating (200mm) is applied to Furlong® H–A.C.

Clinical Evidence - Furlong® Survivorship



Survivorship Rate
100% survival rate of the Furlong® H-A.C femoral stem for aseptic
loosening at 27 to 32 years
N.N Shah et al Bone Jt Open 2024;5(4):286-293.

ACE® Multi bearing cementlessacetabular system



ACE® Multi bearing cementless acetabular system

Designed by surgeons, the ACE® aims to provide a one cup solution that can be used with a selection of multi bearing options (BIOLOX® delta, Dual Mobility and Neutral 10° & 20° XLPE CLP75® liners) allowing intra-operative versatility and a proven clinical heritage.

The ACE® Acetabular Cup System provides you with intra-operative versatility

The Surgeon panel behind the design of the ACE® Acetabular Cup System aimed to create one cup that could be used in all situations enabling maximum intra-operative versatility. Multi-bearing options include Biolox® delta ceramic, Dual Mobility, Neutral, 10° and 20° Proprietary XLPE cross-linked polyethylene CLP75®.

To ensure patient safety and surgeon confidence, the ACE® Acetabular Cup System needed to be both reliable and built on clinically proven technology.

Revision Hip Solutions ABM Modular Revision Femoral Stem



ABM Modular Femoral Revision Stem

Based on the design of the successful Wagner style prosthesis the ABM has 8 longitudinal ridges in the distal stem to aid preservation of the cancellous bone, maintain rotational stability and provide additional strength to the implant itself. Designed to treat a wide range of indications the ABM Femoral Revision system uses precise, accurate instruments and modular components to assist the Surgeon.

Key Advantages

Designed to treat a wide range of indications the ABM Femoral Revision system uses precise, accurate instruments and modularity to assist the Surgeon.

The ABM Modular Revision Femoral Stem has a 2.5° Taper, and is available in 2 stem lengths, 155mm and 195mm.

Cone bodies are available in lengths of 70mm, 80mm, 90mm and 100mm and in diameters ranging from 19mm to 31mm.

Design Criteria

The modularity of the stems and proximal bodies provides easy adjustment of length and version of the prosthesis, thereby allowing for correct biomechanical reconstruction of the joint.

The circular cross-section and assembly design of the ABM Cone Body allows for simple adjustment of the anteversion angle of the femoral stem offering greater flexibility.

Revision Hip Solutions 3D ACT Acetabular Reconstruction System



Highly porous titanium alloy multi-hole acetabular cup and augment system created using 3D EBM printing technol

ogy ideal for both primary and more complex acetabular Paprosky I – IIIb defects. 100% pore connectivity promotes bone ingrowth and secondary biologic fixation. 3D ACT is aligned with intuitive instruments and the ability to fully trial prior to implantation.



Unlike the two-step coated surface of a traditional cup, the 3D ACT cup is naturally integrated reducing the detachment risk of the porous surface.

3D EBM Technology

TiAl6V4 Trabecular One-Piece Construct

Structural Solidity

Continuity between solid substrate and porous surface

High Porosity

600–800µm pore diameter leading to improved local vascularization, oxygenation and secure fixation

High Friction Coefficient

Cortical Bone & 1.08 Cancellous Bone 0.93

Pore Connectivity 100%

Bone ingrowth stimulation



Complete Acetabular Solution

Designed to treat Paprosky Type I - IIIB defects

3D ACT Augments

Anterior/Posterior pillar or acetabular roof deficiencies

3D ACT Buttress & Shims

Superior segmental of cavity defects

3D ACT Lotus Augments

Innovative Ischial Lysis Solution

3D ACT Restrictors

Medial wall instability