

Product Overview



Aesculap Orthopaedics

AESCULAP
Implant Systems

*A member of the **BIBRAUN** group of companies.*

Milestones in Aesculap Orthopaedics

Plasmapore® Surface							
1986	1987	1991	1992	1997	1998		
	Bicontact® Hip System	Plasmacup® Acetabular Cup	*Bicontact® Revision Stems with Distal Locking	*Modular BioloX® Ceramic Articulation	OrthoPilot® Knee Navigation		
		Columbus® Knee System		Excia® Hip Stem			
	2004	2003	2002	2000	1999		
	Metha® Short Hip Stem		*e.motion® Knee System		OrthoPilot Hip Navigation		
	MIOS® Minimally Invasive Orthopaedic Solutions.	OrthoPilot KneeSuite™ and HipSuite™	AS knee implants	OrthoPilot New Generation			*EnduRo Hinge Knee
	2005	2006	2007	2008	2009	2010	
	*Prevision® Modular Hip Revision Stem		*Plasmacup® Delta, 36 mm	univation® Unicondylar Knee Endoprosthesis	Columbus Revision Knee System		

*Currently not available for sale in the U.S.

Aesculap History

Aesculap entered the total joint replacement market in Europe in 1972. Since then, Aesculap has grown to become the 6th largest orthopaedic implant company in the world and it continues to expand its presence. In 1980, Aesculap was one of the first companies to enter the spine market with the introduction of a revolutionary product for anterior cervical fusions, the Caspar retractor and plating system. This retractor system remains the industry's gold standard.



Aesculap AG, Headquarters Tuttlingen, Germany

In order to be more responsive to its growing customer base in spine and orthopaedics, Aesculap, Inc. formed a new company, Aesculap Implant Systems, LLC. This new company focuses on these unique markets allowing for greater innovation and customer service. Aesculap Implant Systems maintains a surgeon/patient focus with the goal of improved operative procedures and patient outcomes leading to an improved quality of life.



Benchmark Factory, Orthopaedic Implant Manufacturing

OrthoPilot®

The leading navigation system



OrthoPilot

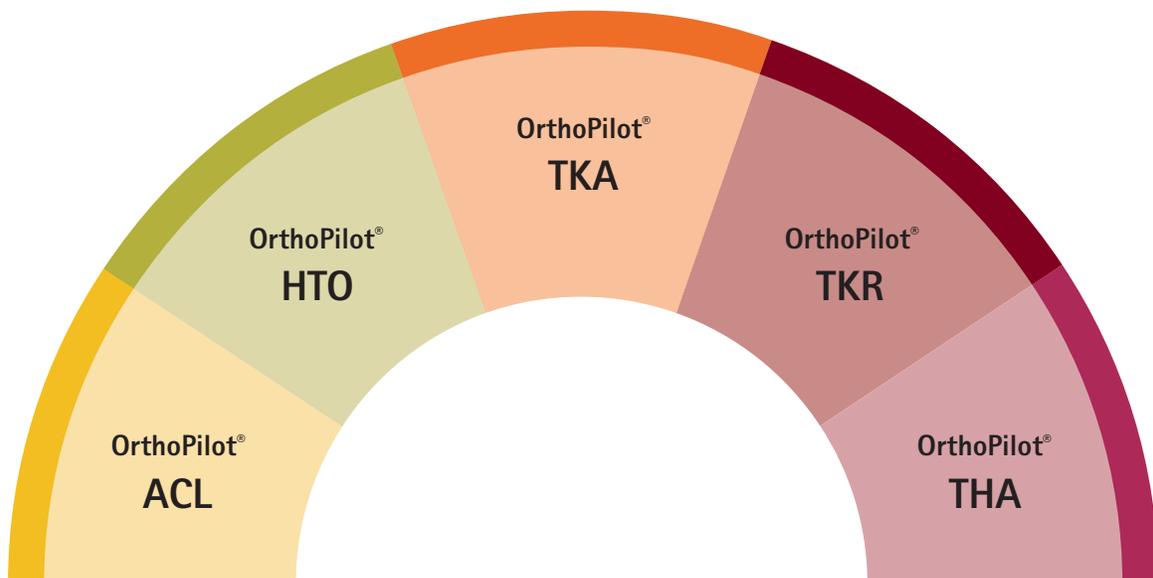
Aesculap is the pioneer in CT-free navigation. Together with clinical users, we put years of experience into the continuous development and optimization of OrthoPilot. Today, OrthoPilot sets the standard in orthopaedic navigation worldwide. The results are documented in a large number of scientific studies.

All OrthoPilot modules function simply, quickly and reliably in daily routine use. You gain integrated, ergonomic solutions from one source, including training, support and service.

- Navigation without CT or image data
- User friendly and fast navigation procedure
- Demonstrably better implant alignment
- Intraoperative documentation
- Ergonomic instruments precisely designed for the particular surgery
- Over 140,000 cases performed to date



KneeSuite™, HipSuite™ and SportsMedSuite Applications



Knee Systems

Columbus®



Columbus Knee System

The **Columbus Knee System** offers surgeons intraoperative solutions for all bicondylar indications: PCL preservation or removal, various constraint levels.

- High resection accuracy for optimum fixation
- High mediolateral stability of the femoro-patellar and femoro-tibial joints
- Designed to work with the OrthoPilot® Navigation System

AS (Alternative Surface) Coating



AS (Alternative Surface) Coated Knee Implants

AS technology is a multilayer ZrN-coating which enhances the biocompatibility of the Columbus knee. Extensive tests showed that the release of nickel, cobalt and chrome ions is below every biological reaction limit.

- Superior abrasion hardness and durability
- Optimal adhesion and biocompatibility
- Multilayer coating provides high barrier function
- No mechanical ablation

Univation®



Univation Unicondylar Knee System

Univation combines the advantages of unicondylar knee implants, navigation and minimally invasive operating techniques. An innovative cortical anchoring concept assures the solid fixation of the implant. The design of the prosthesis guarantees the maximum possible bone preservation.

- Precise and reproducible implantation with OrthoPilot® navigation
- Innovative fixation concept assures stability
- Design reproduces physiological biomechanics

Columbus Revision



Columbus Revision Knee System

The **Columbus Revision Knee System** offers an extensive portfolio of implant options to cover a wide variety of indications and to address intraoperative needs. This is the first system designed exclusively for use with the OrthoPilot TKR software.

- Variable offset stems allow for exact placement
- Cemented and cementless stem options are offered with constrained and semiconstrained polyethylene inserts
- Columbus Revision Knee System is compatible with the Columbus Primary System

POSITION HTO

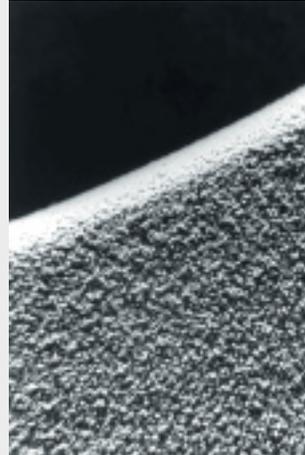


POSITION HTO Plate

The **POSITION HTO** Plate allows for a minimally invasive high tibial osteotomy. This anatomic plate design allows and supports bone growth. The broad range of spacers allow an accurate correction after osteotomy.

- Minimally invasive
- Modular spacer block in a wide range of sizes
- Angle stable and anatomic design

Plasmapore®



Plasmapore Microporous Titanium Surface

Since 1986, cementless Aesculap joint prostheses have been coated with the microporous **Plasmapore** surface.

- Rough surface gives implants primary stability
- Provides an impervious layer against wear particles from the joint space
- More than 500,000 implantations in cementless joint arthroplasty

Polyethylene



Polyethylene Implants

The Aesculap Implant Systems **Polyethylene Implant** does not contain any additional substances such as calcium stearate and is sterilized under inert gas conditions. It is manufactured using the latest process technology.

- Radiation sterilization with medium PE crosslinking
- Congruent gliding surfaces in knee arthroplasty
- Beta sterilized to reduce PE oxidation

MIOS™ Knee



MIOS (Minimally Invasive Orthopaedic Solutions)

MIOS instruments make it possible to use highly accurate OrthoPilot® navigation with minimal approaches for all our knee endoprotheses. Since the operating technique otherwise remains the same, MIOS offers exclusive advantages such as less soft tissue damage and potentially faster and better postoperative treatment.

Hip Systems

Metha®



Metha Modular/
Non-Modular Short Hip
Stem

The **Metha** short stem represents a new implant generation for prosthetic treatment of the hip joint. The proximal bone structure around the neck and greater trochanter is largely preserved. The Metha stem design and position affords high primary stability with immediate load bearing.

- Fulfills the requirements on hip joint replacement in active patients with good bone quality
- Supports less invasive surgical approaches for preservation of bone and soft tissue
- Modular necks for leg length and offset control with just a small number of implant components

Excia® M



Excia Straight Hip
System

The **Excia** prosthesis design, implantation technique and implant surface form a powerful entity for the standard treatment area. The cementless Excia basic design with the Plasmapore® μ -CaP surface and the cemented version with a distal centralizer are both implanted with one set of rasps.

- The narrow stem profile preserves bone, while the anterior/posterior flanges "fit" the proximal metaphysis
- Modern and safe instrumentation with easy preparation and handling
- Narrow 8/10 trunnion cone allows a larger range of motion
- Wingless design for easy preparation

Bipolar Head



Bipolar Head

Bipolar hips are a reliable and accepted treatment for hip fractures. Combined with the Excia® cemented or cementless hip stem, the self-centering Bipolar Head System is ideal for any partial hip replacement. The narrow trunnion on the Excia® stem significantly increases range of motion.

UniSyn



UniSyn Hip Stem

The **UniSyn** Hip Stem is characterized by options. These options are essential during revision hip surgery, and can assist the surgeon in primary hip surgeries as well. The modularity of a three-piece stem allows surgeons to precisely fit the patient's anatomy regardless of the disease state.

Biolox[®] Ceramic



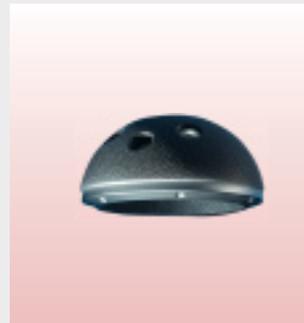
Biolox Forte and Biolox Delta

Since 1980, Aesculap Implant Systems has put its trust in **Biolox Ceramic** for high quality, low wear articulation components in hip arthroplasty.

- The bioinert alumina oxide (Al_2O_3) Biolox Forte ceramic has superior hardness and produces less polyethylene wear than metal heads
- The introduction of mixed oxides in Biolox Delta improves mechanical properties and tribology

Biolox is a registered trademark of CeramTec

Plasmacup[®]



The **Plasmacup** system has been in clinical use since 1992.

- Coated in the Plasmapore μ -CaP titanium surface with high primary and secondary stability
- Navigated by OrthoPilot[®] for implant alignment
- Polyethylene on ceramics option*

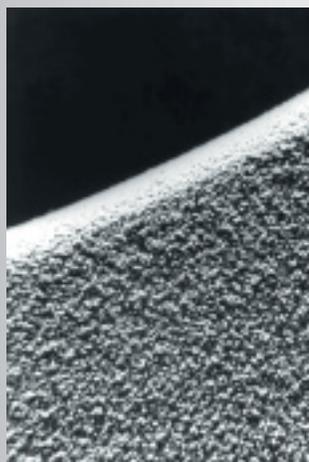
CS2 Cup



The CS2 System offers the added benefit of highly cross-linked polyethylene for reduced wear.

- Rough sintered irregular bead coating provides high primary stability.
- Neutral and hooded liners are available to maximize range of motion and stability

Plasmapore[®] μ -CaP

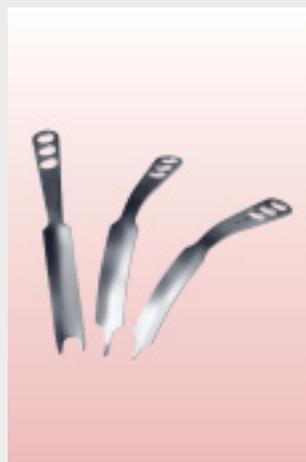


Plasmapore μ -CaP Titanium Surface with Calcium Phosphate

Since 1986, cementless Aesculap joint prostheses have been coated with the microporous **Plasmapore** surface, and since 1998 with Plasmapore μ -CaP:

- Rough surface gives implants primary stability
- μ -CaP is a thin Calcium Phosphate layer that is resorbed as ions in 12 weeks
- More than 500,000 implantations in cementless joint arthroplasty

MIOS[™] Hip



MIOS (Minimally Invasive Orthopaedic Solutions)

MIOS instruments make it possible to perform hip surgery through less invasive approaches, with the added security of the OrthoPilot Navigation System for implant alignment. The MIOS Hip retractors are suitable for various surgical approaches in hip implantation. These instruments assist the surgeon in both less invasive and standard approaches. With a variety of options, the surgeon can select the precise instrument for the surgery.

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