BiMobile Dual Mobility System

cementless & cemented

Product Rationale

System Description

Many years of experience with successful implant systems and fixation concepts as well as the latest material and coating technologies have been taken into account and used in the design of this dual mobility acetabular system. The result is the versatile Link BiMobile Acetabular Cup System.

The Link BiMobile Dual Mobility System exists in two versions:
A cementless and a cemented version. Both versions' metal shells are made from biocompatible and resilient EndoDur CoCrMo material[1,2], which creates significantly less ploye thylene abrasion than stainless steel.[3]
The inner surface is mirror polished to further minimize wear.[1,2,3]

BiMobile Dual Mobility System – Shells, cementless

The cementless Link BiMobile Acetabular Cup is available with a TiCaP double coating. The TiCaP double coating combines a highly porous surface to achieve primary fixation and an osteoconductive[4] calcium phosphate coating, which together ensure good primary and secondary implant stability.[5,6]

BiMobile Dual Mobility System – Shells, cemented

The cemented BiMobile Acetabular Cup has a SatinLink finished surface, which is well known from our SPII stems. Latitudinal and longitudinal grooves strengthen the anchoring and allow air to escape during cementing.

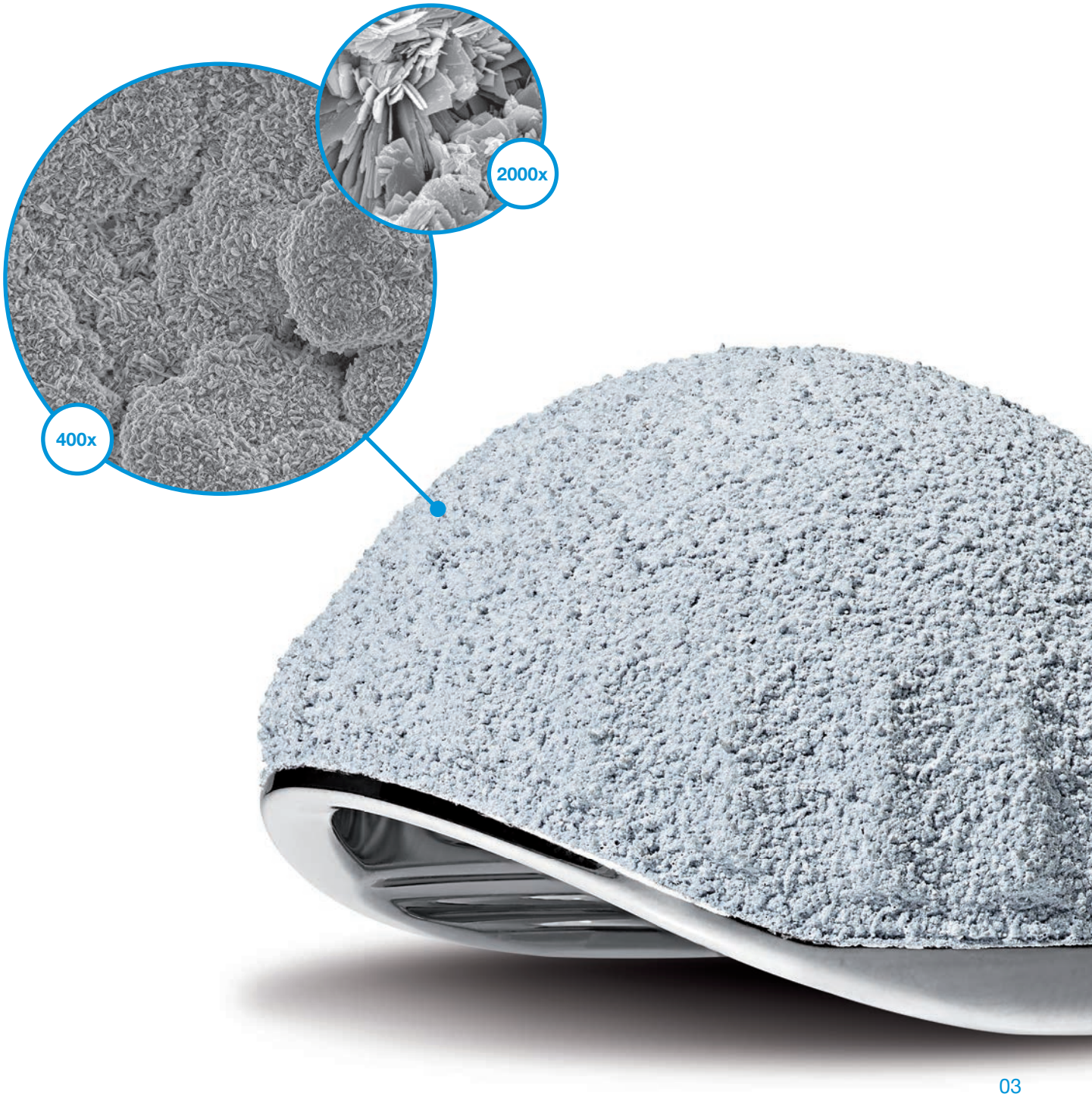
BiMobile Dual Mobility System – Liner

The self-centering inlays[20] are available in UHMWPE and E-Dur (X-LINKed Vit-E PE) and can be combined with Link prosthesis heads made of CoCrMo or ceramic with a 22 or 28 mm diameter.

TiCaP Double Coating:
Titanium (Ti)/Calcium Phosphate (CaP)

The TiCaP coating is applied by first spraying a highly porous layer titanium of approximately 450 µm* thick onto the surface of the implant using vacuum plasma technology. On top of this porous surface, an approx. 15 µm thick HX layer of mechanically stable calcium phosphate is deposited in an electrochemical process. Animal experiments have demonstrated ingrowth on 47.9% of the implant surface.[5]

* The thickness of the titanium layers varies in different types of implant depending in their topographical application.



Rough Titanium-Plasma + HX Coating → TiCaP

Double layer coating promotes bony ongrowth[4,5]

Wide size range

- 42 mm - 70 mm shell size
- 28 mm prosthesis heads starting from 48 mm shell size
- For a high ROM and a good anatomical reconstruction

Superior wear resistant shell

made out of biocompatibile and resilient EndoDur CoCrMo material[1,2,7]

Self-centering Liner

promotes even wear patterns and enhances dislocation resistance[8]

Strong retention

of prosthesis head in UHMWPE or E-Dur (X-LINKed Vit-E PE) Liner[9]

Anatomic medio-ventral cut-out

- For reduced impingement and protection of psoas tendon and femoral nerve
- For high range of motion

Adoption of well known fixation concepts

- SatinLink blasted surface
- Proven cement anchorage surface

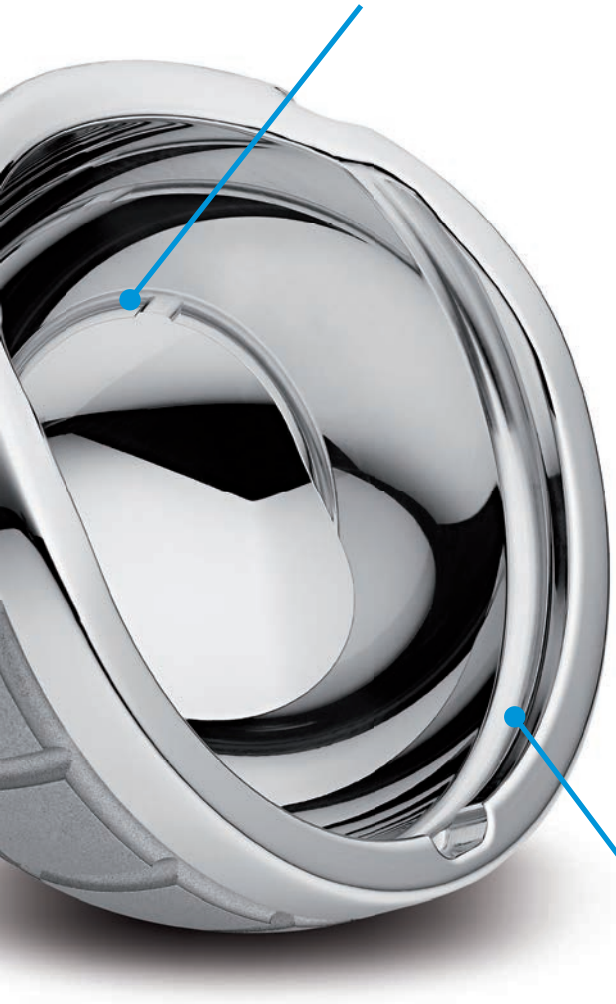
Intraoperative Flexibility
with only one instrument Set for cemented and cementless version[12,13]

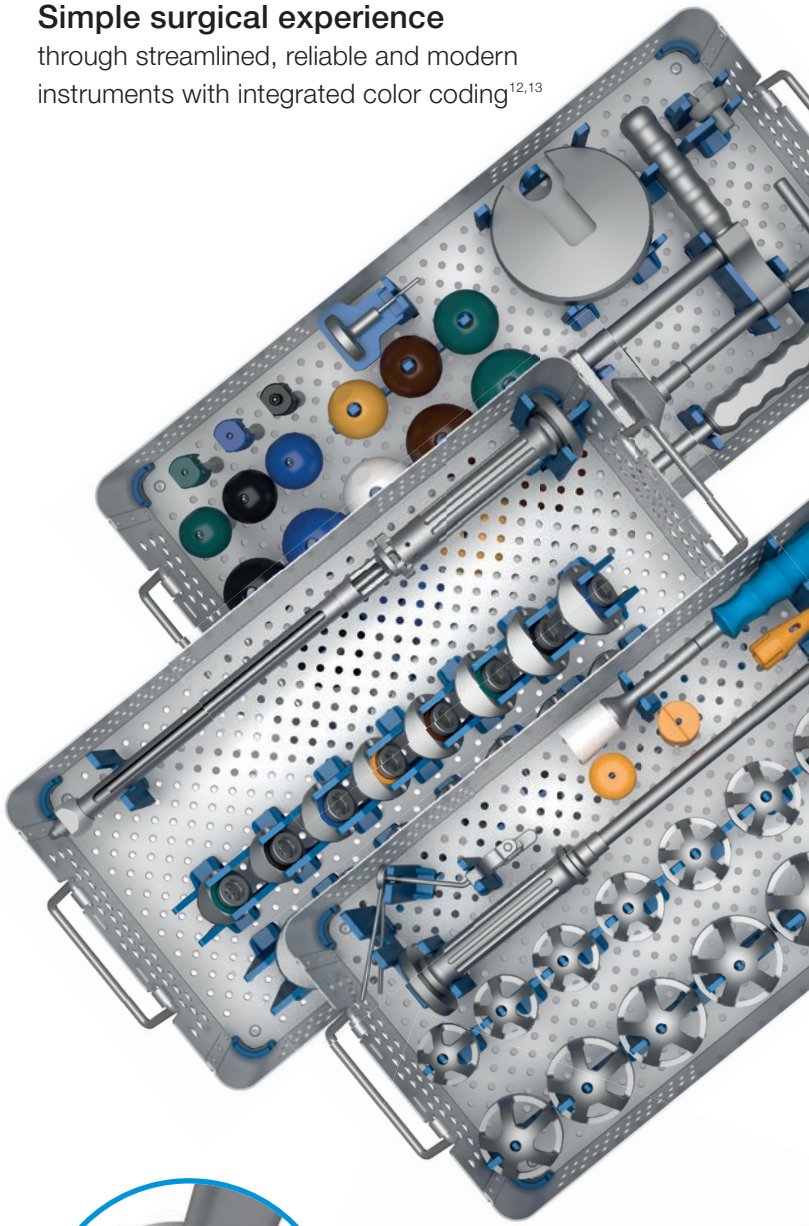
Macro structure at equator
ensures primary stability[10]

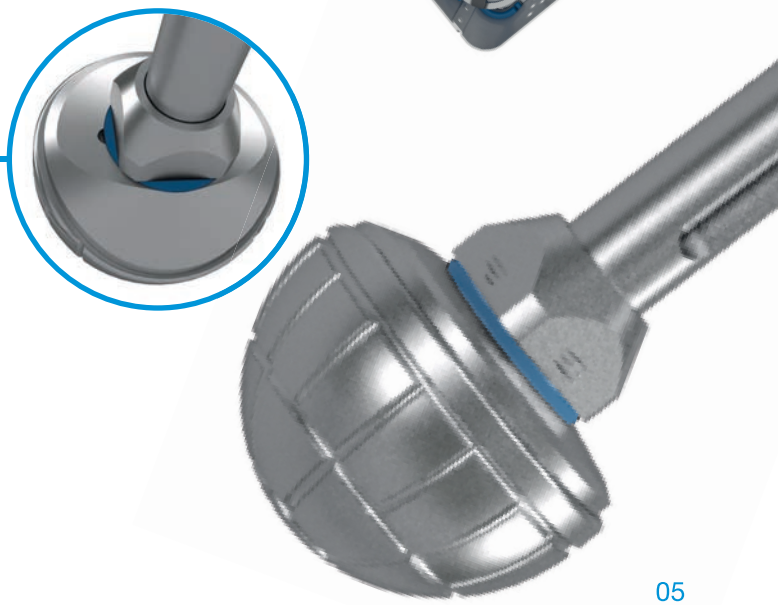
Simple surgical experience
through streamlined, reliable and modern instruments with integrated color coding[12,13]

Mirror polished inner surface
for minimized wear and a prolonged implant life[7,11]

Size-adjusted clearance
between metal shell and liner for consistent articulation[12]







Optimized instrument design
The strong impactor-implant attachment and a good visualisation of implant rim ensures a safe and reproducible implantation.[12,13]

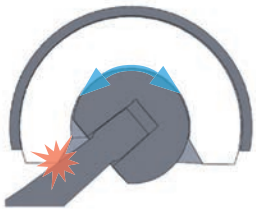
The Dual Mobility Concept

The Dual Mobility concept was developed by Prof. Gilles Bousquet in the 1970s with the aim of avoiding recurrent hip luxations.[14] The System is composed of a shell with a highly polished inner surface in which a mobile polyethylene liner having a pressed in prosthesis head is moving.

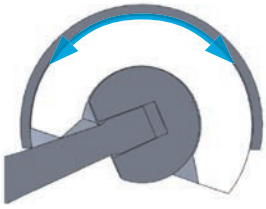
High Range of motion with less wear[15,16,17]

The concept is based on two articulating surfaces where the prosthesis head articulates with the liner and the liner with the shell.

Primary Articulation
The small prosthesis head moves inside the liner until the neck of the stem impinges the liner



Secondary Articulation
The large polyethylen Liner moves freely inside the cup. This movement only occurs in extreme movements.



Reduced risk of dislocation[16,18,19]

The combination of a small prosthesis head that is pressed into the large articulating liner incorporates a high jumping distance of Head/Liner unit in case of sub-luxation.

References (general)

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