Product Information

HI
Cementless
Threaded Cup System
HI-Cup

A successful design since 1988\textsuperscript{1,3,5}

Since the first implantation in May 1988, the HI cup has been implanted with unchanged external geometry and material. The typical features of the HI cup are its single-start flat thread and the bone-sparing parabolic shape, which leads to excellent screwing properties and high primary stability.\textsuperscript{1,2,5,6,7} Surgeons have an option of either ceramic-, REXPOL\textsuperscript{TM}- polyethylene-inserts with direct anchoring in the titanium shell.
Material and Surface
The HI cup is made of pure titanium according to ISO 5832-2. The corundum-blasted surface has a surface roughness of 4 – 8 μm.

External Geometry
The parabolic shape of the HI cup has the advantage that larger shells can be designed flatter. This leads to the smaller loss of bone substance while preparing the acetabulum.¹

Internal Geometry
Open cup pole
The HI-cup has a circular opening on the pole so that the cup can be positioned with precision in relation to the depth of implanting. If the distance between the implant and the inner surface of the bony socket is too great, e.g. in the case of protruding acetabular bone, this gap can be filled with cancellous bone. Once the cup is seated in its final position, the opening is closed with a titanium cover.

Equatorial recesses
The HI-Cup has four recesses on the equator that are used to accommodate the introducer and to prevent rotation of the PE insert.

Inserts
The standard inserts sit flush with the rim of the shell. Only two insert sizes are needed for all HI cups, which is a great advantage in terms of storage.
Thread

With threaded cups, placement is determined to a great extent by the thread. A threaded cup with an angular thread may get stuck while it is being screwed into sclerotic bone of the acetabulum after only a few turns. 

The flat thread of the HI-Cup

The thread of the HI cup is flat, which means that the teeth of the thread remain the same for their whole depth, the surfaces of the teeth run parallel to each other. This makes the cup genuinely self-tapping. Furthermore, this special thread shape enables self-centering and closely fitting implantation of the cup even in an extensively sclerotic acetabular socket, without any sticking of the thread. The last turn of the thread is continuous, thus preventing the soft tissues from being squeezed while screwing the cup into place.
Bearing

The HI cup system includes inserts for ceramic-ceramic bearing in BIOLOX® delta as well as standard and hooded inserts in REXPOL (XL-PE) and conventional polyethylene. In addition, PE constraint inserts are available, with which increased luxation stability can be achieved. All inserts can be anchored directly into the cup.
## Overview HI-Cup

### Cup
- HI LUBRICER®
- REXPOL Standard
- BIOLOX® OPTION
- BIOLOX® delta (Al2O3, ZrO2)
- Polyethylene Standard
- Polyethylene Hooded
- Polyethylene Constraint
- BIOLOX® delta Standard

### Inserts
- HI LUBRICER®
- REXPOL Insert Standard
- REXPOL Insert Hooded
- PE-Insert Standard
- PE-Insert Hooded
- PE-Insert Constraint
- BIOLOX® delta CE-Insert (Al2O3, ZrO2)

### Ball Heads
- OXINUM®
- CoCr
- BIOLOX® delta (Al2O3, ZrO2)
- BIOLOX® OPTION (Al2O3, ZrO2)

### Cup Item Nr. Size
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### Inserts Hi LUBRICER
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### Ball Heads Description
- **OXINUM®**: OXINUM Ball Head Ø28 and Ø32 for REXPOL- and PE-Insert
- **CoCr**: CoCr-Ball Head Ø28 and Ø32 for REXPOL- and PE-Insert
- **BIOLOX® delta (Al2O3, ZrO2)**: BIOLOX® delta ceramic Ball head Ø28 for BIOLOX delta-, REXPOL- and PE-Insert
- **BIOLOX® delta (Al2O3, ZrO2)**: BIOLOX® delta ceramic Ball head Ø32 for BIOLOX delta-, REXPOL- and PE-Insert
- **BIOLOX® delta (Al2O3, ZrO2)**: BIOLOX® delta ceramic Ball head Ø36 for BIOLOX delta-Insert
- **BIOLOX® OPTION (Al2O3, ZrO2)**: BIOLOX® OPTION Ball head Ø28 for BIOLOX delta-, REXPOL- and PE-Insert
- **BIOLOX® OPTION (Al2O3, ZrO2)**: BIOLOX® OPTION Ball head Ø32 for BIOLOX delta-, REXPOL- and PE-Insert
- **BIOLOX® OPTION (Al2O3, ZrO2)**: BIOLOX® OPTION Ball head Ø36 for BIOLOX delta-Insert
References

Manufacturer
Smith & Nephew Orthopaedics AG
Oberneuhofstrasse 10d
6340 Baar
Switzerland

www.smith-nephew.com

The following product information is for informational and educational purposes only. It is not intended to serve as medical advice. It is the responsibility of treating physicians to determine and utilize the appropriate products and techniques according to their own clinical judgment for each of their patients. For more information on Hi Cementless Threaded Cup System, including its indications for use, contraindications, and product safety information, please refer to the product's label and the Instructions for Use packaged with the product.

OXINIUM™ is a registered trademark from Smith & Nephew, Inc., CE0086. BIOLOX® delta, BIOLOX® forte and BIOLOX® OPTION are registered trademarks from CeramTec GmbH, Germany, CE0123.

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