

ceramys® Revision Head

Revision surgeries are high demanding situations and a big challenge for the surgeons and the implants. With the ceramys Revisions Heads we offer a solution with minimized invasiveness and increased long term stability. In case of a cup and/or hip head revision, the surgeon has the option to mount a low-wear ceramic head onto a hip stem remaining in situ.



28 mm

32 mm

36 mm



Available in four different sizes S, M, L and XL.

Revision of the hip head and the acetabular component without revision of the stem for all Mathys stems with 12/14 Euro cone.

XL heads can also be used for primary treatment in cases where additional neck length is required.

Self-explanatory packaging for a safe and reproducible application.

Combination with inlays out of UHMWPE, HXLPE (vitamys) and all Mathys ceramics.



Mathys Ceramics Experience and Competence in Bioceramics



Bionit®2

symarec®

ceramys®

ceramys® Revision Head

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Publication

¹ Al-Hajjar et al., «Wear of novel ceramic-on-ceramic bearings under adverse and clinically relevant hip simulator conditions»; J. of Biomed. Mat. Res. B: Applied Biomaterials (2013)

... together with passion!

Local Marketing Partners in over 30 countries worldwide ...

Experience and Competence

Since the early 1970s, we at Mathys have been active in the research, development and manufacture of bioceramics because we are convinced of their advantages: low abrasion rates, high strength and toughness, low risk of surface roughening, good wettability and biologically inert behaviour, making ceramics a treatment solution not only for young and active patients.



ceramys®

The nanocrystalline dispersion ceramic – ceramys – is made of a homogeneous dispersion of 20 % alumina and 80 % yttriumoxide stabilized zirconia and contains no other additives. This composition is extraordinary in the field of joint endoprosthesis. ceramys has a resistance against fracture. It offers additional solutions such as revision heads and smaller inlay sizes.

ceramys can be combined with UHMWPE, HXLPE (vitamys) and all Mathys ceramics.

Developed and produced from Mathys

Continuous research and development lead to an ongoing improvement of our existing materials. This is the key to the production of a new ceramics generation: ceramys and symarec.



symarec®

The dispersion ceramic – symarec – is made of a homogeneous dispersion of 75 % alumina and 25 % yttriumoxide stabilized zirconia and contains no other additives. Ceramics with similar composition are already on the market since 2002. symarec has a high resistance against fracture and good wear properties.

symarec can be combined with UHMWPE, HXLPE (vitamys) and all Mathys ceramics.

Resistant ceramic materials

Beside all advantages of a ceramic articulation, there is still one concern with ceramic materials: Ceramics are brittle and therefore have a residual risk of fracture. ceramys and symarec reduce this risk, due to the combination of zirconia and alumina. With the correct ceramic handling, ceramys and symarec provide safety against fracture for surgeons and patients.

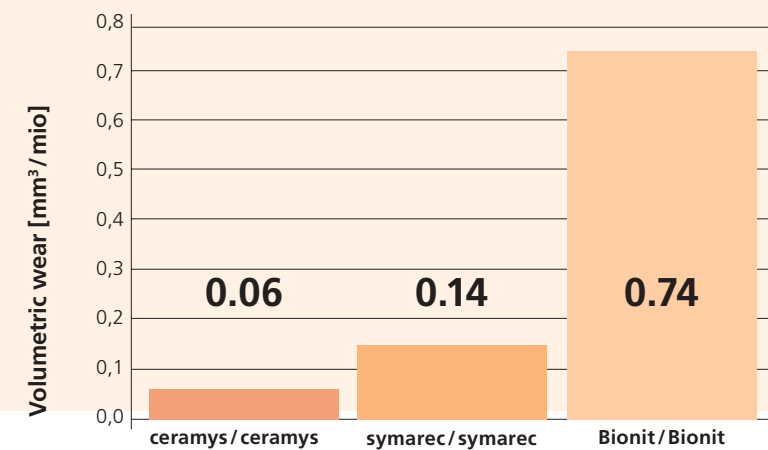


Bionit®2

Bionit is an experienced, competent and reliable alumina ceramics for joint replacements.

Bionit can be combined with UHMWPE, HXLPE (vitamys) and all Mathys ceramics.

Wear rates in hip simulator test with microseparation¹



Advantages of ceramys and symarec

- High fracture resistance
- Reduced risk of chipping and surface roughening in case of recurrent luxations
- Low wear rates under microseparation conditions
- Ageing resistant

Mathys ceramics – Material characteristics

Material characteristics	ceramys	symarec	Bionit
Al ₂ O ₃ [wt %]	20	75	100
ZrO ₂ [wt %] yttria stabilized	80	25	0
Theor. density [g/cm ³]	5,51	4,37	3.99
Average grain size [µm]	0,4	0,8	2,3
Biaxial bending strength [MPa]	≥ 900	≥ 700	≥ 350
Fracture toughness (SEVNB) [MPa√m]	≥ 7	≥ 5	≥ 3

Advantages of Bionit

- Low risk of particle induced osteolysis and loosening thanks to its hardness and wear properties in hard/soft pairings
- No allergenic reaction, due to high purity and corrosion resistance
- Good lubrication due to improved wettability, surface quality and sphericity

Burst strength of Mathys ceramic hip heads (28L) on titan taper

