

HiFi



The morphological adaptation

 **CERAVER**
EXPERIENCE - INNOVATION



The HiFit system : responding to high-priority objectives...

- **Excellent mobility** particularly in rotation and flexion
- **Full stability** in flexion as well as in extension keeping **low stress** levels
- Optimal **resistance** to **creep** and **wear**
- Stable and unconstrained patello-femoral joint
- **morphological adaptation** to all your patients...

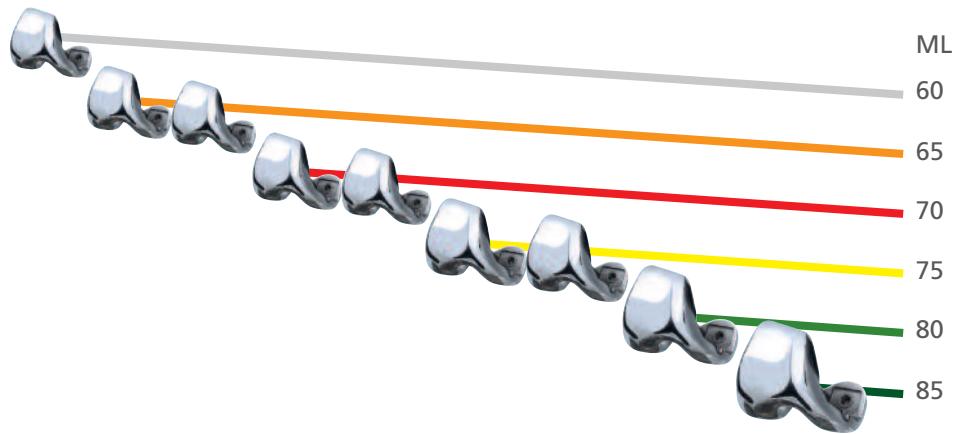
A time-defying concept
A CLINICAL FOLLOW-UP of more than 22 years.

The HiFit system is the result of more than 22 years of experience with the HERMES range which was developed in close collaboration with many knee arthroplasty surgeons.

The HiFit system
The morphological adaptation
A system adapted to your patients

The HiFit system

The morphological adaptation

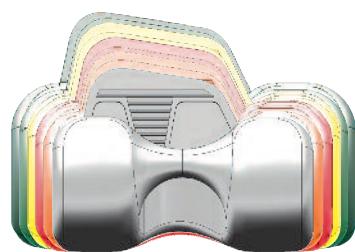
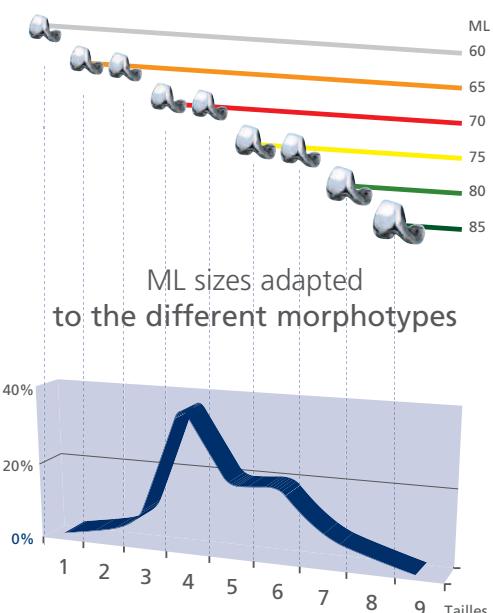


ML and AP adapted
to every patient

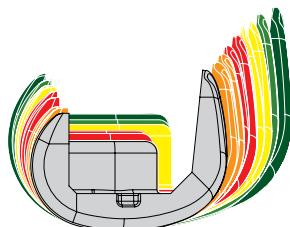


The answer to the morphological requirements of your patients

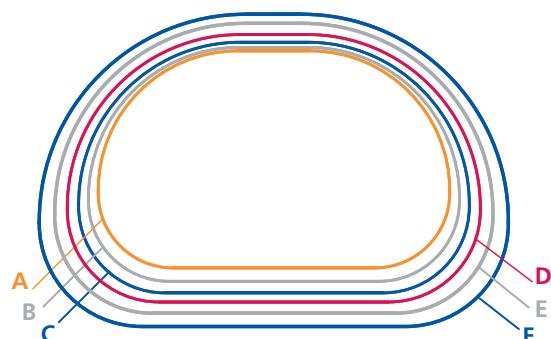
THE FEMORAL COMPONENT



9 sizes right and left



THE TIBIAL COMPONENT



6 sizes for all situations



A fully tried and tested geometry,
allows high flexion of 136°,
free rotation and minimized constraints

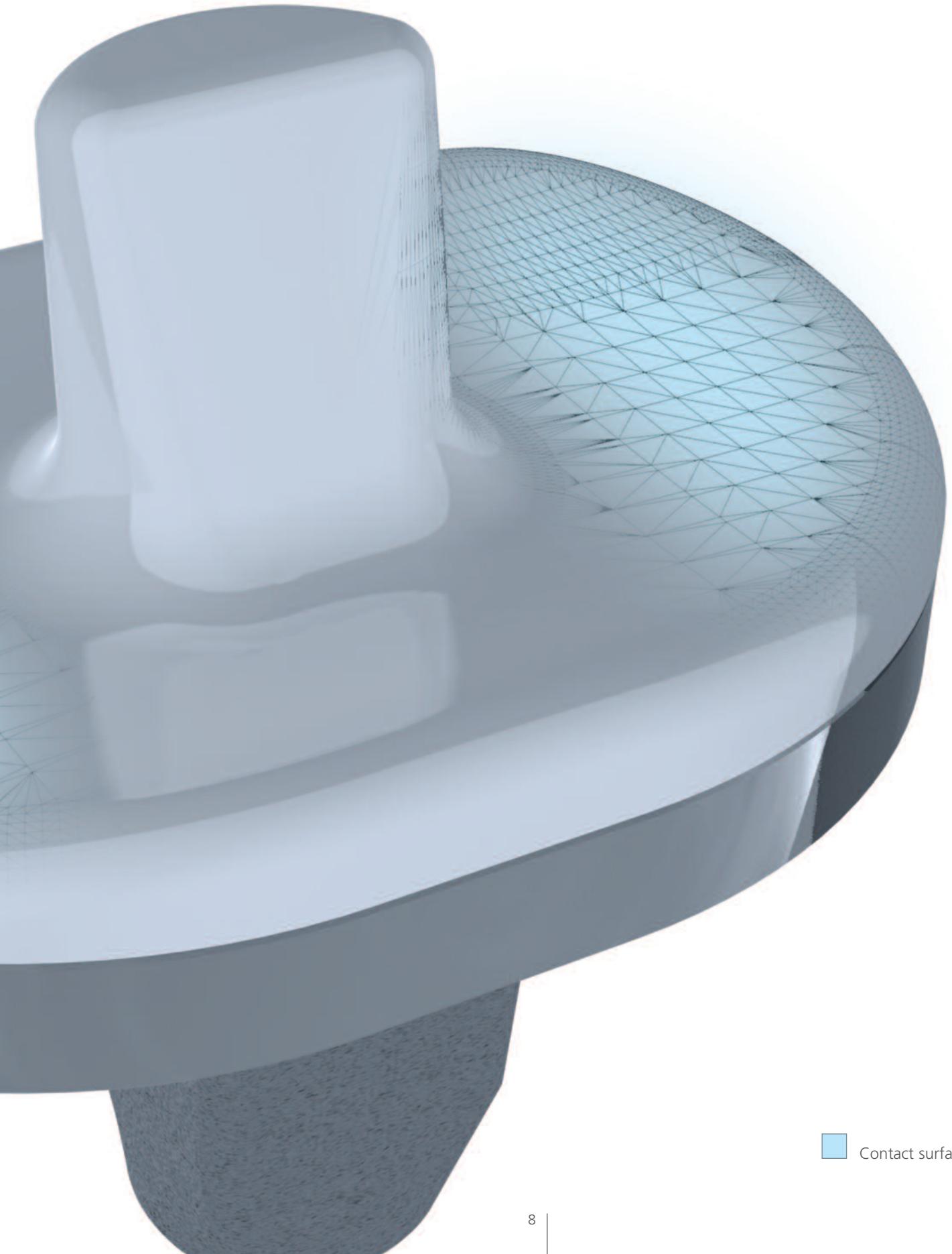


10 mm thickness

of posterior condyles, compromise between high flexion mobility
and bone stock preservation.

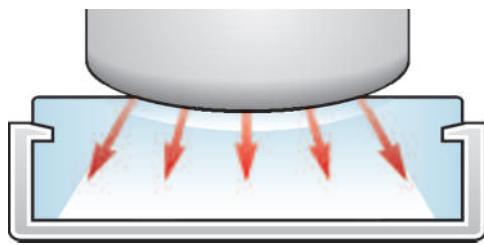
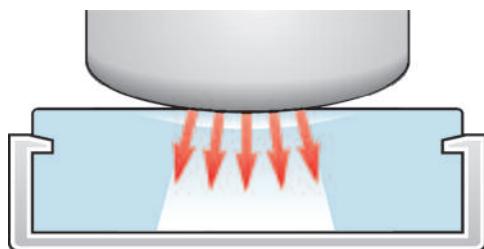
Circular section

postero-stabilization peg which allows unconstrained rotation
of the femoral component



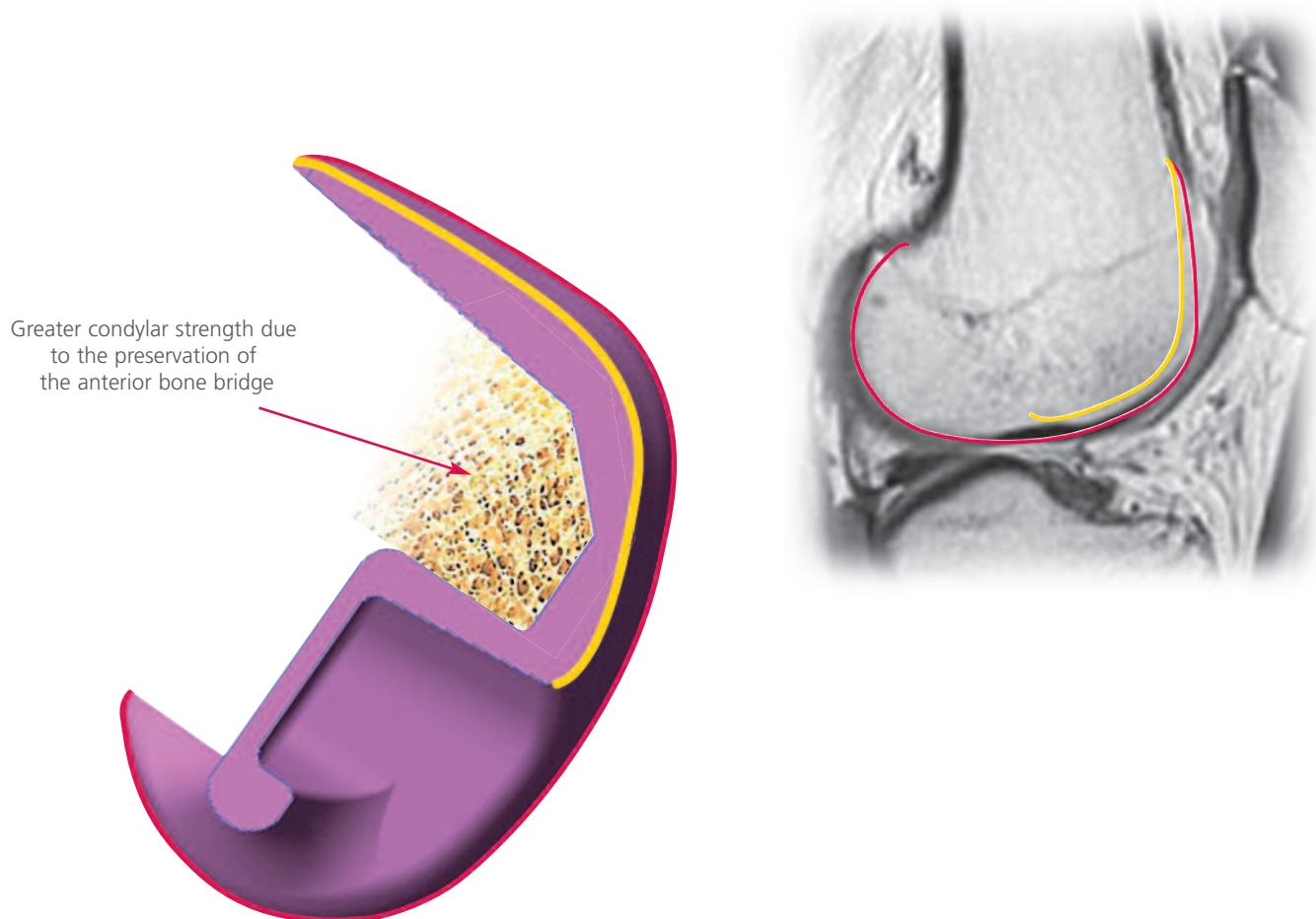
Contact surface

Low stresses
reduce polyethylene wear and
minimize solicitations at the fixation interfaces.



Using ultra high molecular weight polyethylene (UHMWPE) which is cross-linked between 25 and 40 kGy allows a “customized forging” and, consequently, the creation of “cup shaped structures” due to creep.

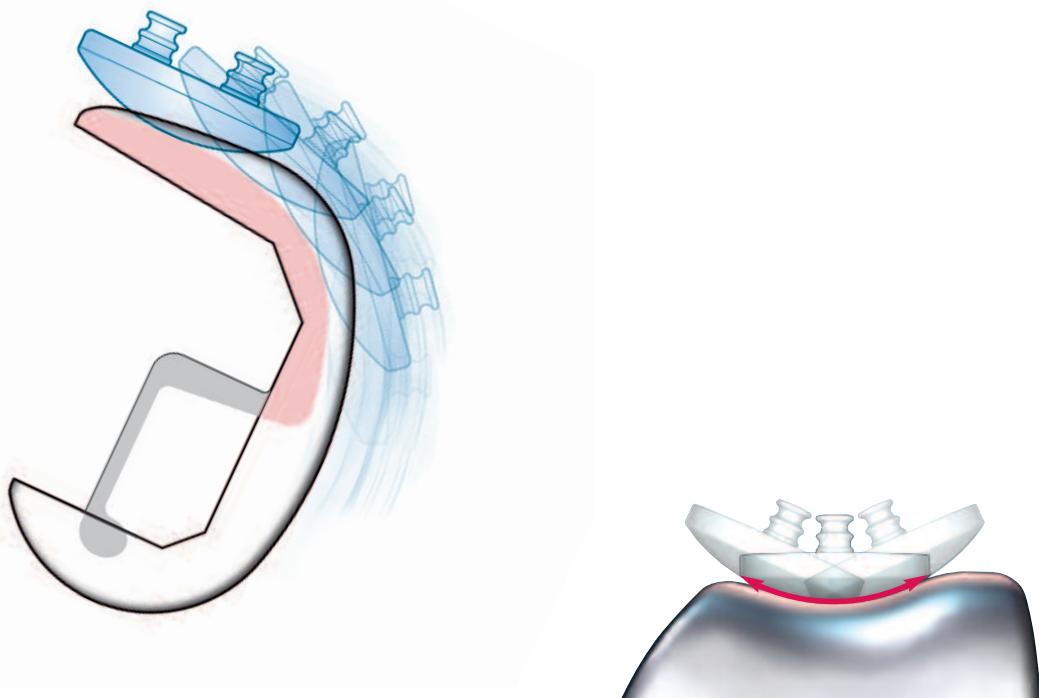
Such “cup shaped structures” depend on each patient’s weight and activity level (customized). They allow a better constraint distribution and therefore reduce polyethylene wear.



The patello-femoral prosthesis, the reference

A design tried and tested since 1976 with the **HERMES** range.

The design of the patello-femoral joint in the **HiFit** prosthesis ensures optimal contact and centering of the patella within the trochlea over the full range of motion and minimal stresses at the various interfaces.



■ Near-anatomic trochlea

The trochlear groove is deep with a 6° alignment upward and outward. The design results in reduced stresses within the natural or prosthetic patella.

■ Single radius of curvature for the patellar button and the trochlea

Ensures optimal contact whatever the component size, allowing complete interchangeability.

■ Elevated lateral trochlear ridge

Helps reducing the risk of patellar displacement and limits peak stresses within the patellar button.

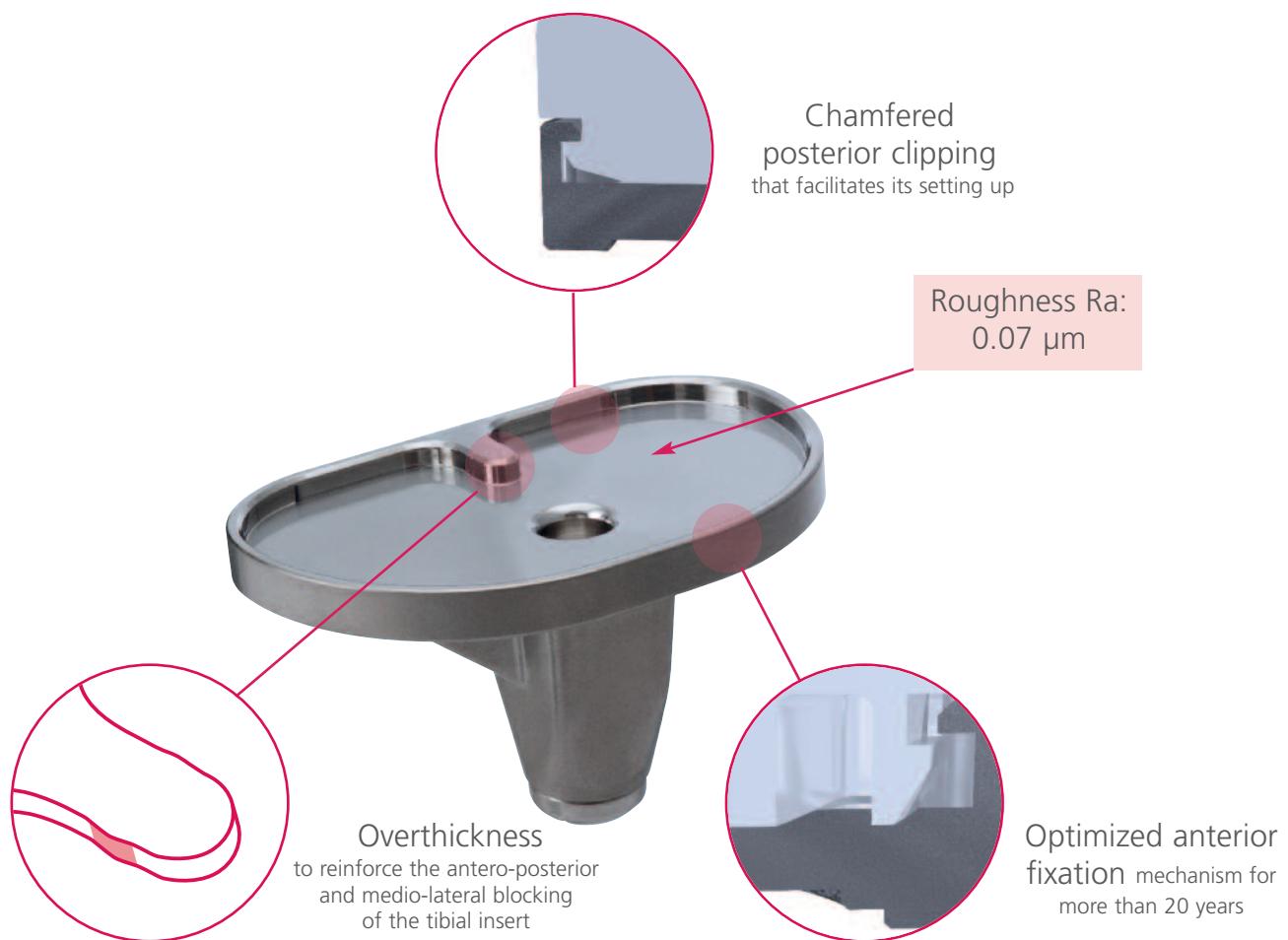
■ Optimization of patellar contact with trochlea

At full extension the trochlea is raised sufficiently to ensure contact with the patella.

The trochlear groove is inclined as far as the top of the anatomic intercondylar notch to ensure optimal contact even at maximum flexion.



The mechanism by which the tibial insert is fixed to the baseplate minimizes back-side wear.
It has been used for more than 22 years.



The HiFit system

The morphological adaptation



The morphological
adaptation

A WIDE RANGE OF KNEE ARTHROPLASTY SYSTEMS

HERMES FP



The patello-femoral

HERMES UNI



The unicompartmental

HERMES 2C



Bicruciate
conservation

HiFit
The morphological
adaptation



The postero-stabilized
prosthesis

HERMES
Revision



The postero-stabilized
revision prosthesis

CERAGYR
The ultimate
congruity



The mobile-bearing
prosthesis



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Bibliography:

1. J.M. Cloutier – L. Pilon - Arthroplastie Totale du Genou.
SOFLOT. Réunion Annuelle, Nov. 1980, (Suppl.II, Rev. Chir. Orthop., 67) (pp114 à 118) 1981.
2. T.P. Andriacchi – J.O. Galante – R.W. Fermier – The Influence of Total Knee-Replacement Design on Walking and Stair-Climbing.
The Journal of Bone and Joint Surgery, Vol.64-A, N°9, (pp 1328 à 1335), December 1982.
3. J.M. Cloutier - Results of Total Knee Arthroplasty with a Non-Constrained Prosthesis.
The Journal of Bone and Joint Surgery, Vol.65-A, N°7, (pp 906 à 919), September 1983.
4. J.M. Cloutier – P. Colombet - Arthroplastie Totale du Genou par Prothèse Non-Contrainte de Cloutier.
Acta Orthopaedica Belgica, Tome 51, Fasc. 4 (pp 498 à 519) 1985.
5. Journées Lyonnaises de Chirurgie du Genou et de Traumatologie du Sport.
Organisées par J.L. Lerat – B. Moyen – E. Brunet-Guedj, Hôpital Edouard Herriot - LYON (FRANCE) 1989.
6. D. Goutallier – J.M. Cloutier – Ph. Hernigou - La Prothèse HERMES.
Cahiers d'Enseignement de la SOFCOT - Collection dirigée par J. DUPARC N° 35. Expansion Scientifique Française. (pp 111 à 116), Mai 1989.
7. J.M. Cloutier - Long-Term Results after Non-Constrained Total Knee Arthroplasty.
Reprinted from Clinical Orthopaedics, Vol.273 (pp 63 à 65) December 1991.
8. J.M. Cloutier – P. Sabouret – A. Deghrar - Total Knee Arthroplasty With Retention Of Both Cruciate Ligaments.
JBJS – Vol 81-A N° 5 – Mai 1999.
9. J.B. Stiehl – Rd Komistek – J.M. Cloutier – Da Dennis - The Cruciate Ligaments In Total Knee Arthroplasty.
A kinematic analysis of 2 total knee arthroplasties.
The Journal of Arthroplasty vol 15-n°5 - 2000.
10. E. Pitsaer - Technique des espaces planifiés avant coupes.
Atelier CERAVER, communication Rennes SOO 2009.
11. Richard D. Komistek, Phd 1 – Pr. Herginou, Md 2 – Mohamed R. Mahfouz, Phd 1 – Mathew Anderle Bs1 – Scott A. Walker, Ms 1
In Vivo Comparison of Knee Kinematics for Subjects Implanted with the Hermes PS TKA, Ceragyr Mobile Plateau TKA, Hermes 2 cruciate TKA and Hermes UKA
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12. E. Sariati – D. Goutallier – J. Allain – C. Radier – S. Vandriesche - Reproductibilité des Gonométries en Position Couchée après Implantation d'une Prothèse Totale de Genou. Comparaison avec La Reproductibilité des Gonométries des Genoux Non Prothésés.
Revue de chirurgie orthopédique, 2008, doi :10.1016/j.rco.2008.03.036.
13. D. Goutallier * – O. Manicom * – S. Van Driessche ** - Prothèse totale de genou Hermès™ conservant les deux ligaments croisés : comparaison avec la version postérostabilisée au recul de huit ans. Total knee arthroplasty with bicruciate preservation: Comparison versus the same design posterostabilized at eight years follow-up.
* Faculté de médecine de Créteil (Paris-12), hôpital Henri-Mondor (Assistance publique-Hôpitaux de Paris), France.
** Hôpital privé Armand-Brillard, 3, avenue Watteau, 94130 Nogent-Marne, France.
Auteur correspondant. Service de chirurgie orthopédique et Réparatrice de l'Appareil Moteur Sous presse. Epreuves corrigées par l'auteur. Disponible en ligne depuis le samedi 12 juillet 2008, Doi : 10.1016/j.rco.2008.04.012, accepté le : 22 avril 2008.
14. P. Hernigou – O. Manicom – Ch. Flouzat Lachaniette – X. Roussignol – P. Filippini – A. Poignard - 15 Year Outcome of the Ceraver HERMES Posterior Stabilized Total Knee Arthroplasty : Safety of the Procedure with Experienced and Inexperienced Surgeons.
The Open Orthopaedics Journal - 2009.
15. Peter S. Walker Phd and Gokce Yildirim Msc - For Testing the Kinematics and Femoral-Tibial Contacts of Total Knee Replacements.
Department of Orthopaedic Surgery, New York University - Hospital for Joint Diseases, 212 6867500 ext 6444 peter.walker@nyumc.org - February 2011.
16. Mohamed R. Mahfouz, Phd 1 – Emam E. Abdel Fatah 1 – Giles R. Scuderi, Md 2 – Lyndsay N. Bowers, Ms 1 - Three-Dimensional Morphology of the Knee, an Ethnic Study.
(1) University of Tennessee, Knoxville, TN, USA - (2) Lenox Hill Hospital, North Shore LIJ Healthcare System, New York, NY, USA.
American Academy of Orthopaedic Surgeons, 78th Annual Meeting, 2011 San Diego, CA.



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