

# HERMES

THE POSTERIOR-STABILIZED KNEE PROSTHESIS



THE UNCONSTRAINED FIXED-BEARING KNEE

 **CERAVAR**  
EXPERIENCE - INNOVATION

PS HERMES

BENEFITS

Excellent mobility, particularly in rotation and flexion

Full stability in flexion/extension

Optimal resistance to creep and wear

Stable, unconstrained patello-femoral articulation

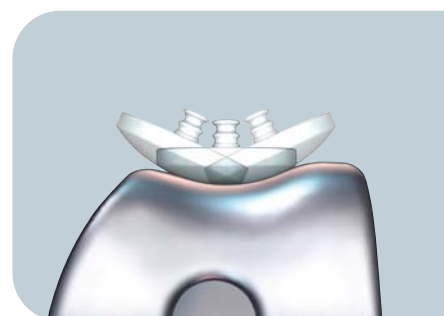


## THE UNCONSTRAINED FIXED-BEARING KNEE

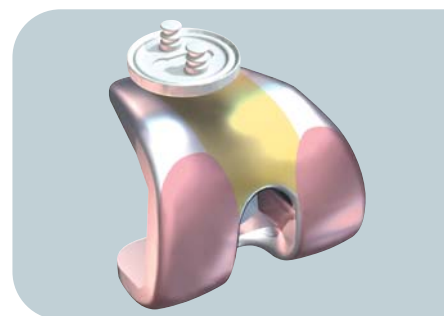
## DESIGN

**Anatomic femoral component with**

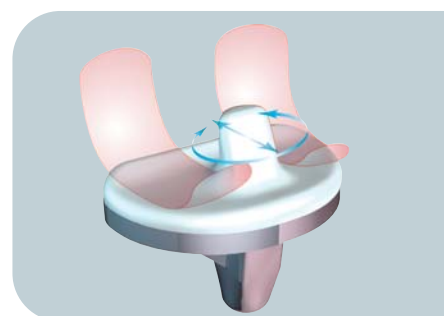
- Trochlear depth and alignment facilitating patellar contact and tracking.
- Divergent distal condyles which have large curvature radius.

**"Spherical" patellar button**

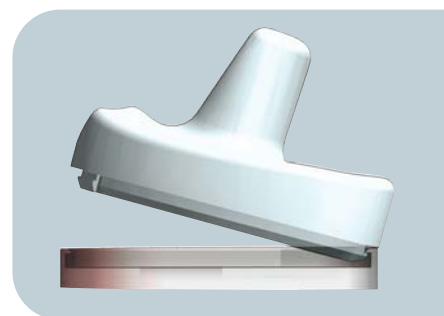
promotes improved contact with trochlea and ensures excellent patello-femoral stability.

**Central cylindrical peg**

enables automatic rotation.

**Low congruency fixed bearing**

reduces stresses at the various interfaces.

**Peripheral flange and tray fixation mechanism**

substantially reduce creep and micro-motion and, as a result, the quantity of particulate wear debris.

## SPECIAL FEATURES

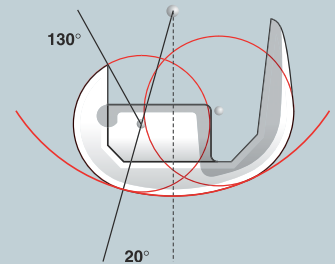
## ANATOMIC FEMORAL COMPONENT

The use of an unconstrained knee prosthesis requires the optimisation of the contact surface areas. The femoral component of HERMES PS (Posterior-Stabilised) prosthesis is anatomically designed to ensure that good contact with the polyethylene bearing is maintained.

◆ **Anatomic sagittal curvature**

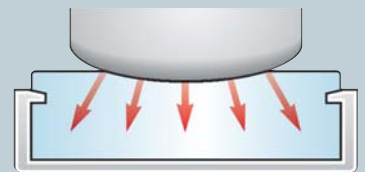
Under conditions of maximum loading, a large radius of curvature helps to ensure an extensive area of contact.

Between 20° and 130° the radius of curvature is reduced to avoid any cam effect in flexion and ensure optimal flexion/extension gaps.



◆ **Condyles with large radius of curvature**

Medio-lateral curvature ensures an extensive contact surface area between condyles and the polyethylene bearing, over the full range of motion.



## UNCONSTRAINED ARTICULATION

The HERMES PS prosthesis offers low congruency femoro-tibial articulation. This feature allows automatic rotation of the tibia and femoral roll-back on a fixed bearing, eliminating torsional and shear stresses.

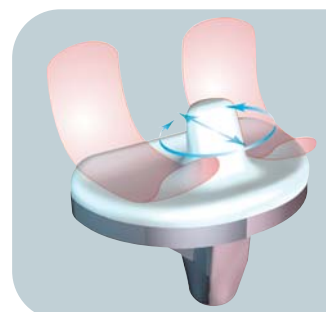
◆ **Free rotation of the tibia**

Thanks to the low femoro-tibial congruency and the central cylindrical tibial peg, the tibial tray is not subject to torsional stresses.

As a result, the HERMES PS is a rotating prosthesis with a fixed bearing.

◆ **Antero-posterior translation movement of the tibia preserved**

The position of the femoral component relative to the tibial base-plate in the antero-posterior plane is determined primarily by the patellar reaction force and the position of the joint line. Low congruency allows antero-posterior glide and so limits stresses at the interfaces.



## CLINICAL EXPERIENCE VALIDATES AN ORIGINAL DESIGN

### MOBILITY WITHOUT RISK OF DISLOCATION

#### ◆ Central posterior stabilisation

The cylindrical peg on the tibial tray acts as a central stabiliser. It ensures femoral roll-back at high flexion, lateral stabilisation and free rotation of the tibia under the femur.

The peg height substantially reduces the risk of dislocation. The congruent posterior-stabilising cam design minimises stresses within the polyethylene peg.



### LONG TERM FIXATION

#### ◆ Tray fixation

The mechanism by which the tibial tray is fixed to the base-plate and the protective support offered by the peripheral flange ensure reduced polyethylene creep and substantially reduced micro-motion of the interface.

#### ◆ Rectangular keel with fins

The keel offers an excellent anchorage for the implant. The fins, with a 30° posterior alignment, ensure that the base-plate remains securely in place under rotation and avoid the risk of tibia fracture.

#### ◆ Modular tibial base-plate

The HERMES PS base-plate is compatible with a variety of tibial extension options, both straight-stemmed and eccentric, for use in primary and revision procedures.

The femoral component and the tibial base-plate of the HERMES PS prosthesis are both available in cemented or uncemented versions. Their shape and dimensions are identical allowing the choice of option to be deferred until the end of the procedure.

#### ◆ Cemented version

The implant undersurfaces incorporate voids capable of accommodating cement under pressure during compaction, so ensuring that the implant is securely anchored.

#### ◆ Uncemented version

The implant undersurfaces are coated with porous beads whose pore size (250µm) is ideal for the bone ingrowth that ensures optimal secondary implant fixation.





## PS HERMES

## SPECIAL FEATURES

## THE PATELLO-FEMORAL PROSTHESIS, THE REFERENCE

A design tried and tested since 1979 with the **HERMES** range.

The design of the patello-femoral articulation in the **HERMES PS** prosthesis ensures optimal contact and centring 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  $6^\circ$  alignment upward and outward. The design results in reduced stresses within the natural or prosthetic patella.

◆ **Single radius of curvature for patellar button and trochlea**

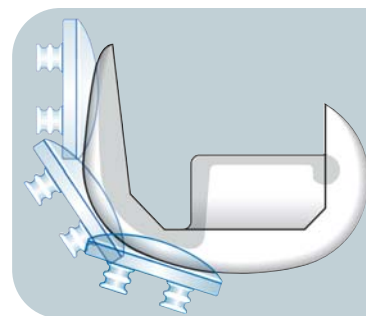
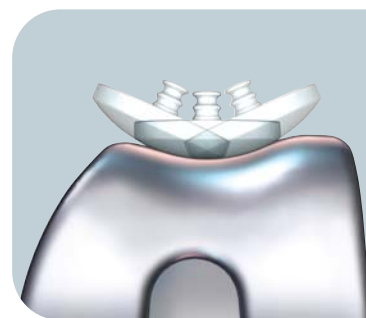
This ensures optimal contact whatever the component size, allowing complete interchangeability.

◆ **Elevated outer face**

This helps to reduce the risk of patellar displacement and limits peak stresses within the patellar button.

◆ **Optimisation 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



## HERMES PS - MOBILITY RESTORED

The **HERMES** unconstrained prosthesis restores patient joint function. Excellent long-term survival is guaranteed. The outstanding clinical and functional outcomes achieved by the **HERMES PS** since 1990 have served to confirm the merits of its design and optional features.



THE UNCONSTRAINED FIXED-BEARING KNEE

PRODUCT REFERENCES

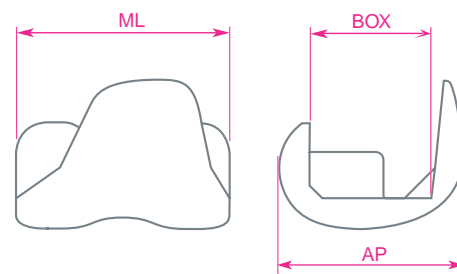
PATELLAR BUTTON - UHMWPE\* (ISO 5834/1-2)

Size	Ø 31	Ø 34	Ø 36	Ø 39
Thickness	8 mm	8 mm	9 mm	11 mm
Ref.	5090	5091	5092	5093



FEMORAL COMPONENT - cobalt chromium alloy (ISO 5832/4)

Size		1	2	3	4	5**
Ref.	AP (mm)/Box	55/34	60/39	65/44	70/49	75/54
	ML (mm)	65	70	75	80	85



CEMENTED

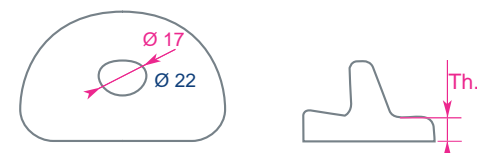
Ref.	Right	5601	5602	5603	5604	5605
	Left	5501	5502	5503	5504	5505

UNCEMENTED

Ref.	Right	5611	5612	5613	5614	5615
	Left	5511	5512	5513	5514	5515

TIBIAL TRAY - UHMWPE\* (ISO 5834/1-2)

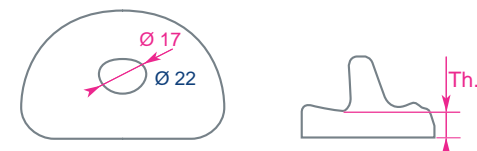
Size	0**	1	2	2 peg 3	3 peg 2	3	4	5**	
Ref.	Th. 7 mm	1965	1196	1202	1344	1345	1208	1214	1220
	Th. 9 mm	1966	1197	1203	1341	1346	1209	1215	1221
	Th. 11 mm	1967	1198	1204	1342	1347	1210	1216	1222
	Th. 13 mm	1968	1199	1205	1343	1348	1211	1217	1223
	Th. 15 mm	1969	1200	1206	1338	1384	1212	1218	1224
	Th. 20 mm	1970	1201	1207	1339	1385	1213	1219	1225



Red references Ø 17

TIBIAL TRAY (CONGRUENT +) - UHMWPE\* (ISO 5834/1-2)

Size	0**	1	2	2 peg 3	3 peg 2	3	4	5**	
Ref.	Th. 7 mm	4910	4944	4950	4974	4980	4956	4962	4968
	Th. 9 mm	4911	4945	4951	4975	4981	4957	4963	4969
	Th. 11 mm	4912	4946	4952	4976	4982	4958	4964	4970
	Th. 13 mm	4913	4947	4953	4977	4983	4959	4965	4971
	Th. 15 mm	4914	4948	4954	4978	4984	4960	4966	4972
	Th. 20 mm	4915	4949	4955	4979	4985	4961	4967	4973



Red references Ø 17

TIBIAL BASE-PLATE - titanium alloy (ISO 5832/3)

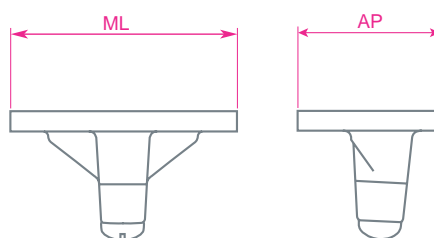
Size	0**	1	2	3	4	5**
Ref.	AP (mm)	42	42	47	51	60
	ML (mm)	65	70	75	80	90

CEMENTED

Ref.	4988	4989	4990	4991	4992	4993
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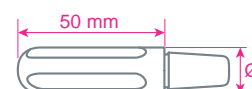
UNCEMENTED

Ref.	5190	5191	5192	5193	5194	5195
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TIBIAL EXTENSION (length 50 mm) - titanium alloy (ISO 5832/3)

Size	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19
Ref.	5080	5081	5082	5083	5084	5085	5086	5087	5088	5089



\* All UHMWPE implants are manufactured from compression moulded sheeting and sterilised by gamma irradiation in an argon gas environment (minimum dose 25 kGy).

\*\* Available on request.

## THE CERAVER KNEE RANGE

### HERMES, a total range

HERMES FP



The patella-femoral

HERMES UNI



The unicompartmental

HERMES 1C-2C



Both cruciates or posterior  
cruciate retaining

HERMES PS



The posterior-stabilized

HERMES REVISION



The revision  
posterior-stabilized

### CERAGYR

Ultimate congruency



The mobile bearing knee

### CERAVISON

Computer-assisted surgery system



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