



 **smith&nephew**
TC-PLUS[®] PRIMARY
Fixed Bearing

Product Information



PLUS SOLUTION
KNEE FAMILY

Product Overview



Anatomic patellar groove

Deep, posteriorly extended anatomic patellar groove for high stability and broad surface contact at flexion angles of up to 90°.

1

Compatibility

Femoral cuts compatibility with the RT-PLUS° System.

2

Constrained Rotating Total Knee for intra-operative switching in case of severe instability.



Cortical coverage and polished surface

Asymmetrical tibial component for complete coverage and cortical support.

3

Highly-polished supporting surface for minimal polyethylene wear.¹

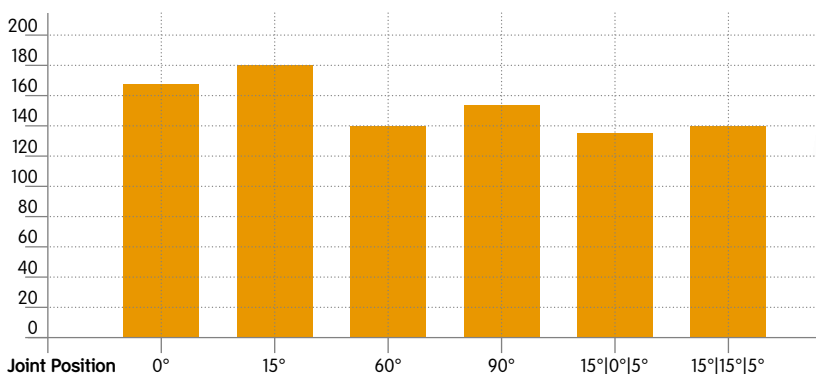
Non-cemented version of the tibial component features four screwholes sealed off with polyethylene plugs on delivery.

Contact area at various joint positions

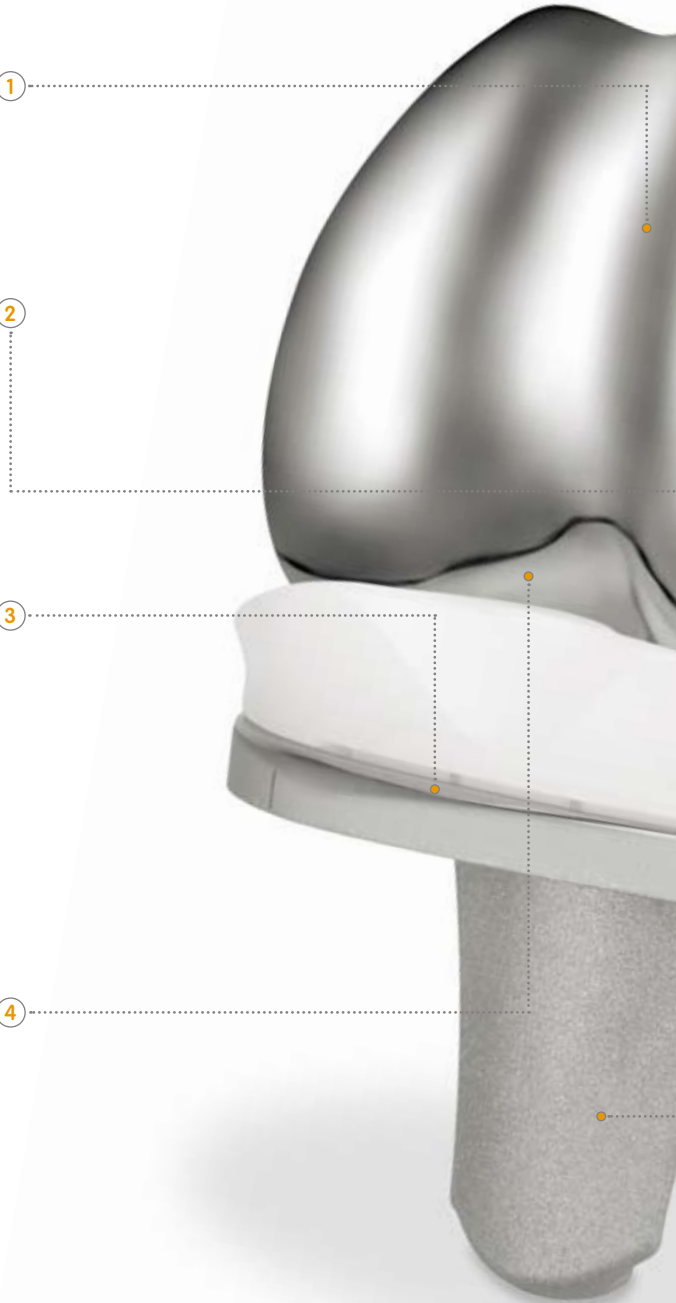
An oval, uniform pressure distribution is maintained between the femoral condyles and the tibial insert, even during physiological rotational and varus-valgus positions. Together with the high quality of the surface preparation of the tibial insert, this provides maximum protection for the polyethylene sliding surface.

4

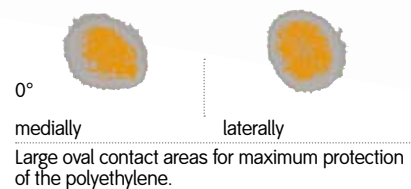
Contact Area (mm²)



flexion angle/internal or ext. rotation/varus or valgus



Pressure distribution at 0° flexion angle





Porous titanium coating

Non-cemented components with high quality, porous pure titanium coating for extensive osseointegration.



5 Pure titanium plasma sprayed coating

Highly porous pure titanium coating applied in a plasma spray process under vacuum.



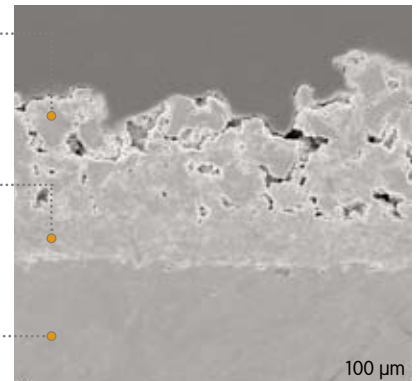
approx. 50x magnification

Section through titanium coating

Ti surface layer 200–400 μm , roughness (RT) of 150–250 μm , rough, highly porous structure – ideal preconditions for extensive osseointegration.

Ti base layer 50 μm – the plasma spray application process under vacuum ensures outstanding bonding to the substrate.

Base material CoCr.



approx. 100x magnification

6 Anchorage stability

Stability of the cemented tibial component is enhanced by the cement layer surrounding the central portion of the stem (highlighted in orange).²

The press-fit wings help minimize micromotion of the component while the cement sets.



1 | Engh, G.A., Lounici, S., Rao, A.R., Collier, M.B.: In Vivo Deterioration of Tibial Baseplate Locking Mechanisms in Contemporary Modular Total Knee Components, J. Bone Joint Surg. 83A(11), p.1660-1665, 2001

2 | Bert J., McShane M.: Is it necessary to cement the tibial stem to improve tibial implant stability in cemented TKA? Scientific Exhibit AAOS 1998.

Manufacturer

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