

Specification

Transition Hip Femoral Stem Options

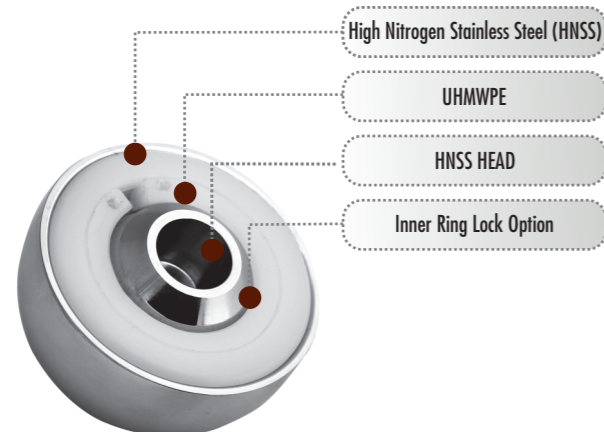
Uncemented Hip Femoral Stem Sizes	0	1	2	3	4	5	6
Stem length (mm)	115	130	140	145	150	154	160
Offset (mm)	38.1	38.7	38.8	38.1	40.8	41.4	41.8
Neck Angle	135°						

Transition Hip Acetabular Side Options

Hip Acetabular Shell (mm)	40	42	44	46	48	50	52	54	56	58	60
Hip Acetabular Liner (mm)	40	42	44	46	48	50	52	54	56	58	60
Hip Femoral Head (mm) - Option 1	22	22	28	28	28	28	32	32	32	32	36
Hip Femoral Head (mm) - Option 2	22	22	28	28	32	32	36	36	36	36	36
Hip Femoral Head Offset (mm)	0, +4, +8		-4, 0, +4, +8								

Cancellous Fixation Screw Sizes (6.5mm Dia)	1	2	3	4	5	6	7
Screw Length (mm)	20	25	30	35	40	45	50

ALTIUS™ Hip Modular Bipolar



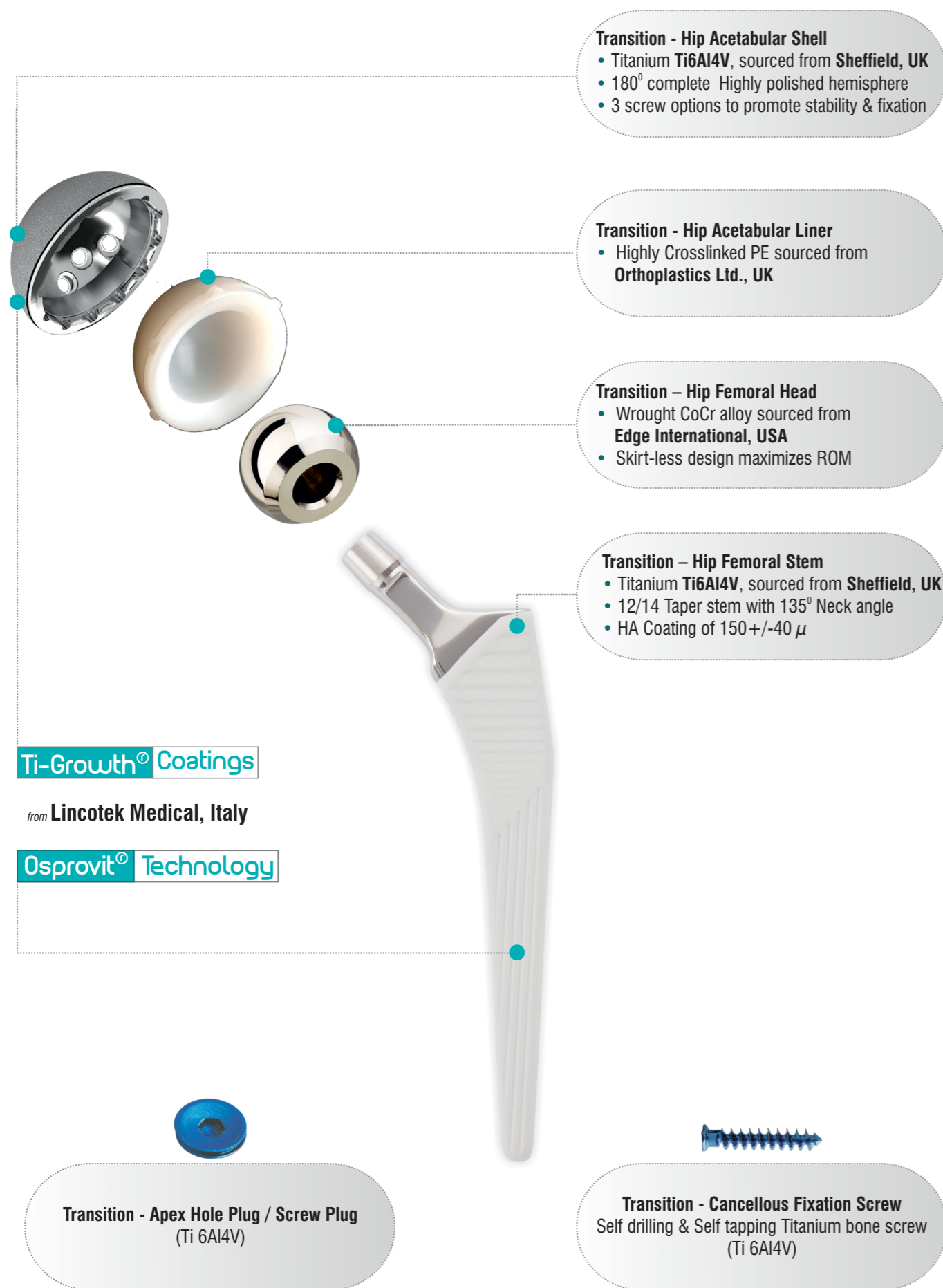
Hip Femoral Head (OD in mm) Options	38	40	42	44	46	48	50	52	54	56	58	
Hip Femoral Head Offset (in mm)	22 (0, +4, +8)			28 (-4, 0, +4, +8)								

Transition

Uncemented Hip Replacement System

Product Manual





Ti-Growth® Coatings

from **Lincotek Medical, Italy**

Osprovit® Technology

Osprovit® Technology

Transition™ stem using Osprovit® - Patented Plasma Spray Hydroxyapatite (HA) coatings from **Lincotek Medical, Italy** (Formerly Eurocoating)

Osprovit® is a slowly bioresorbable, bioactive HA coating which has a long clinical history, that guarantees its high performance and suitability for widespread applications.

Osprovit® is typically produced as the top HA layer when a double layer coating is done under vacuum. This application combines the bioactive performance of HA with the long-term mechanical stability of porous titanium.

A considerable amount of biological and clinical evidence is available to confirm the optimal biocompatibility and long-term clinical safety and efficacy of **Osprovit®**.

Ti-Growth® Coatings

Transition™ acetabular cups are Titanium Plasma Spray (TPS) Coated, which includes Ti-Growth® Coating, a patented TPS coating from **Lincotek Medical, Italy** (Formerly Eurocoating)

Designed to Allow Bone In - Growth

Designed to allow bone in-growth and is the first titanium (Ti) foam that sprayed onto **Transition™** acetabular cups.

Conventional cementless prostheses surface roughened by sandblasting, etching or plasma spray coating and allow bone apposition (on-growth) only but **Ti-Growth®** coatings, have specifically been designed to have large-sized pores (100-800μ) and high porosity (30-70%) to allow bone in-growth.

Ti-Growth® consists in a series of open and interconnected large size pores arranged in a Ti matrix.

The porosity profile of **Ti-Growth®** is not an ordered structure like porous beads, but rather a completely random structure that is rough and porous at the same time.

Advances in process control have enabled the application of thick coatings, which allows for high and interconnecting porosity that are suitable for joint replacement components.

Transition™ femoral stem design is based on a clinically proven ^{1,2,3,4,5,6} femoral stem design which was developed in France during the early 1980s by the ARTRO Group, who trained together in Lyon.

Transition™ femoral stem is a Collarless, Cementless and fully hydroxyapatite (HA) coated, available in a broad range of sizes, allowing surgeons to choose the right solution for Individual patient needs.

High performance instrumentation facilitates the Surgeon for a simple and accurate implantation with reproducible results.

KEY BENEFITS

- Proven design, Material and Fixation - Cementless tapered rectangular design, Titanium, HA coated.
- Ergonomic and efficient design and layout.
- Suitable for different anatomies and varying bone quality.
- Biocompatible, Osteoconductive surface for an enhanced bone integration.
- Polished Neck design offers an improved ROM for patients, with reduced opportunities for impingement.
- Vertical and Horizontal grooves offer Rotational and Axial stability.

References:

1. National Joint Registry for England and Wales 2011 Annual Report.
2. Australian National Joint Register 2011 Annual Report.
3. Epinette JA, Geesink RGT. Hydroxyapatite Coated Hip and Knee Arthroplasty. Expansion Scientifique Francaise. 1995. 2-7046-1470-9.
4. Epinette JA, Manley MT. Fifteen Years of Clinical Experience with Hydroxyapatite Coatings in Joint Arthroplasty. Springer-Verlag. 2004. 2-287-00508-0.
5. Geesink RGT, Manley MT. Hydroxylapatite Coatings in Orthopaedic Surgery. Raven Press. 1995. 0-7817-0005-1.
6. Hallan G, Lie SA, Furnes O, Engesaeter LB, Vollset SE, Havelin LI. Medium- and long term performance of 11516 uncemented femoral primary stems from the Norwegian arthroplasty register. J Bone Joint Surg [Br] 2007; 89(12): 1574-80.