



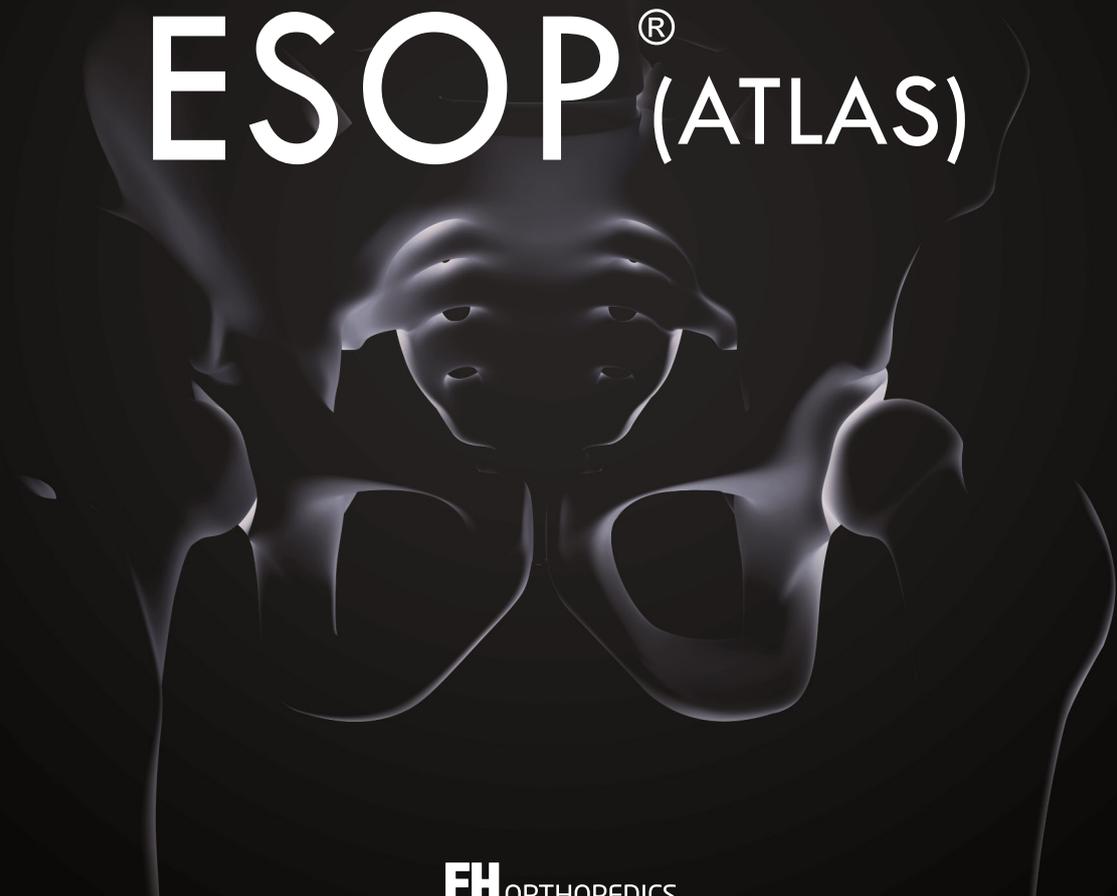
HIP



DOCUMENTATION

METAL BACK  
CEMENTLESS ELASTIC ACETABULAR CUP

ESOP<sup>®</sup> (ATLAS)



# ESOP<sup>®</sup> (ATLAS)

For more than 20 years, FH ORTHOPEDICS has specialized in the manufacturing of cementless total hip prosthesis.

The ESOP (Atlas) cup was developed using this expertise and the latest technological advances in terms of bearing, metallurgy and instrumentation.

## The concept

The ESOP (Atlas) concept was born in 1985 as a result of Dr Alain Dambreville's research. This cementless elastic cup immediately appealed to a large number of surgeons, who continue to implant several thousand every year, across the world. This success is partly due to ease of implant and to its results but also to its essential core principles:

- 1- Primary stability due to its press-fit;
- 2- Stability of the insert in the metal-back;
- 3- Secondary fixation due to surface coatings;
- 4- Thickness of the polyethylene.

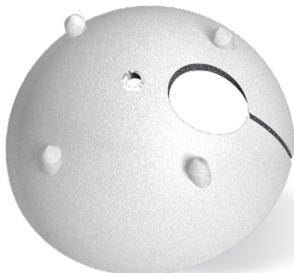
## Range and materials

The three types of ESOP (Atlas) metal-back are made out of titanium alloy, TA6V4 ELI with a constant 2.5 mm thickness. All three include:

- A slot providing the cup with the elasticity to ensure a perfect, instant press-fit and risk-free impacting for the supporting bone.
- Sand-blasting on the inside and a cylindrical area on par with the equatorial region ensuring the insert's stability.
- Hydroxyapatite coating for secondary fixation.



ESOP (Atlas) IIIP cup



ESOP (Atlas) IVP cup

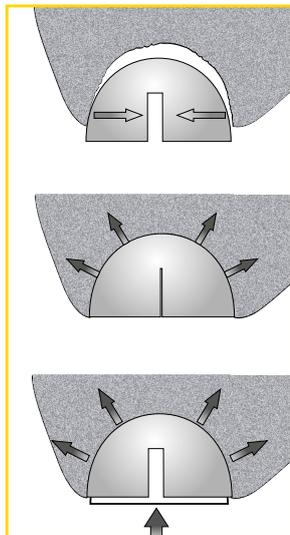


ESOP (Atlas) MS cup

- **The ESOP (Atlas) IIIP** has 4 pegs that penetrate into the receiving bone to avoid any rotation of the cup and also screw holes if screw fixation is required.
- **The ESOP (Atlas) IVP** has pegs but no screw holes.
- **The ESOP (Atlas) MS** was designed without pegs, to meet LIS (Less Invasive Surgery) requirements. Like the ESOP (Atlas) IIIP, it has 3 screw holes. The four pegs are replaced with a rougher surface coating, obtained through projection of T40 porous titanium, before the HAP.

The ESOP (Atlas) metal-back range can be combined with a wide range of highly cross-linked polyethylene (TRIANON) or conventional PE inserts, available in various internal diameters (28; 32 and 36 mm) and shapes (flat-edge; posterior wall; anti-dislocation overhang).

## Press-fit



The ESOP (Atlas) cup has a slot, which closes during impaction to facilitate penetration into the acetabulum. When the insert is impacted, this slot returns to its initial position, thus applying a major force for coaptation of the bone. Only an elastic cup allows this kind of press-fit. The elasticity of the metal-back improves transmission constraint.

Intimate osteointegration with no risk of fibrous tissue interposition as a result of using HAP, limits the risk of periprosthetic osteolysis by countering the migration of wear particles.

## PE thickness

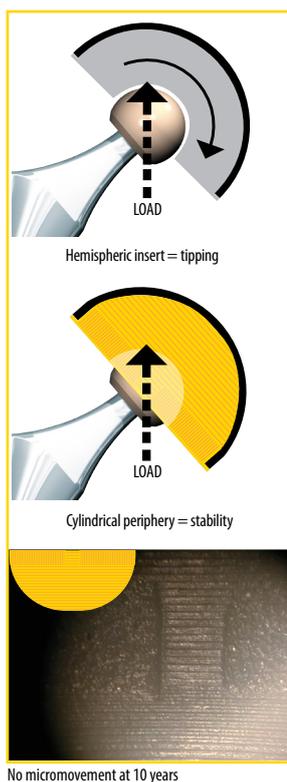
The 2.5 mm thickness of the ESOP (Atlas) cup allows polyethylene layers in traditional UHMWPE and highly cross-linked polyethylene to have a minimum thickness, and therefore provides excellent creeping resistance.

## Extreme sizes

The ESOP (Atlas) range of cups starts with diameter 46 and is available up to size 74 in the ESOP (Atlas) III P version. This wide range of sizes provides surgeons with a solution, in particular in cases of cup revision.

## Stability of the insert

The stability of the insert is, obviously, essential. To avoid the insert tilting, it has been designed with an equatorial cylindrical area and a rough internal surface on the metal-back due to sand-blasting. These technical elements have proven to be effective over the past 25 years and more than 150 000 implants. This fixation ensures there is no micro-movement of the insert within the metal-back, proven by observing the machining lines, which are still visible on inserts removed after over 10 years.



*Osteoblast fixed on an HAP coating*



## Coating

Secondary stability through surface coating has greatly improved as a result of 25 years of progress. The bioactive hydroxyapatite 120  $\mu\text{m}$  coating has already proven its effectiveness. Bone adherence to the surface of the prosthesis is rapid and long lasting, even after absorption of the hydroxyapatite (HAP) in the long term.

# PROSTHETIC COMPATIBILITY



ESOP (Atlas) IIP cup



ESOP (Atlas) IVP cup



ESOP (Atlas) MS cup

Inserts  
ESOP (Atlas)  
+  
Stainless steel  
or CoCr heads, or  
BIOLOX® FORTE®  
alumina



Hip'n go  
Cemented or cementless 130° & 122° straight stems  
(cemented 122° on request)

# DESCRIPTION AND SALES REFERENCES

SIZES	ESOP (Atlas) IIP (with screw hole)	ESOP (Atlas) IV P (without screw hole)	ESOP (Atlas) MS (without pegs)
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SIZES	S46	241 363	246 329	240 044
	S48	241 364	246 330	240 045
	S50	241 365	246 331	240 046
	S52	241 366	246 332	240 047
	S54	241 367	246 333	240 048
	S56	241 368	246 334	240 049
	S58	241 369	246 335	240 050
	S60	241 370	246 336	240 051
	S62	241 371	246 337	240 052

EXTREMES SIZES - on demand only	S64	241 372
	S66	241 373
	S68	241 374
	S70	241 375
	S72	241 376
	S74	241 377

## FIXATION SCREW\*

207 110	Ø 6,5mm - L.15mm
207 111	Ø 6,5mm - L.20mm
207 113	Ø 6,5mm - L.25mm
207115	Ø 6,5mm - L.30mm
207 117	Ø 6,5mm - L.35mm
207 120	Ø 6,5mm - L.40mm
207 122	Ø 6,5mm - L.45mm
207 123	Ø 6,5mm - L.50mm
207 125	Ø 6,5mm - L.55mm
207 127	Ø 6,5mm - L.60mm

\*supplied in non-sterile form  
with instrument set