

## REDEFINING THR: THE AMIS SYNERGY

The anterior approach, consolidated by years of clinical experience, is the only technique that follows an **intermuscular and internervous path** and therefore lowers the risk of damaging periarticular structures such as muscles, tendons, vessels and nerves.

Medacta International is the world leader for educating and supporting surgeons in their pursuit of Anterior Minimally Invasive Surgery (AMIS). **Reference Centers and Learning Centers around the world** provide the necessary AMIS education experience and Medacta offers **continuous support for surgeons**, as well as constantly improving and developing the industry's most specialised instrumentation platform.

When you use the Masterloc Hip System, you enter the Medacta International world of AMIS.

Discover:

- The definitive MIS approach: AMIS.
- Dedicated AMIS instrumentation.
- The **AMIS Mobile Leg Positioner**: the original extension table included as part of the instrumentation, which makes surgery easier and reproducible.
- The **AMIS Education Programme** based on Medacta's proven educational methods.

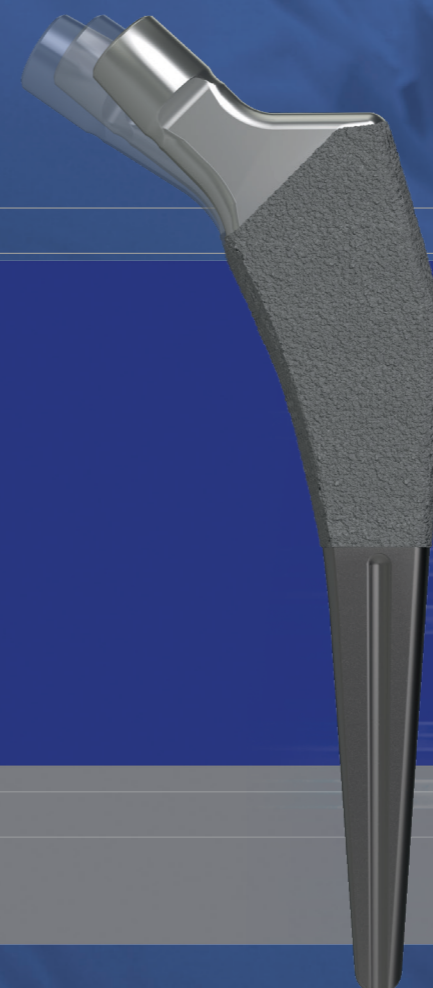
The AMIS Mobile Leg Positioner will be supplied as part of the instrumentation to help ensure effective and reliable positioning of the leg during surgery. Traction, adduction and hyperextension have never been so easy.



## REFERENCES

[1] Healy W, Tilzey J, Lorio R, Specht L, Sharma S. Prospective, Randomized Comparison of Cobalt-Chrome and Titanium Trilock Femoral Stems. J Arthroplasty. 2009;24:831-6. [2] Parvizi J, Keisu K, Hozack W, Sharkey P, Rothman R. Primary total hip arthroplasty with an uncemented tapered femoral component: a long-term study of the Taperloc stem. J Arthroplasty. 2004 Feb;19(2):151-6. [3] McLaughlin J, Lee K. Total hip arthroplasty with an uncemented tapered femoral component. J Bone Joint Surg Am. 2008 Jun;90(6):1290-6. [4] Khan W, Muntimadugu E, Jaffe M, Domb AJ (2014). Implantable Medical Devices In W Khan and AJ Domb, Focal Controlled Drug Delivery (p. 33-59). Springer New York Heidelberg Dordrecht London. [5] Friction testing of the Mpac and Versafitcup coating samples. Data on file Medacta. [6] P. Robotti, A. Sabbioni, L. Glass, B. George, Macroporous Titanium Coatings, by Thermal Plasma Spray, ITSC 2013, International Thermal Spray Conference, May 13 -15, 2013, Busan, Korea. [7] J. E. Biemond et al, In vivo Assessment of Bone Ingrowth Potential of 3-Dimensional E-Beam Produced Implant Surfaces and the Effect of Additional Treatments by Acid-Etching and Hydroxyapatite Coating, J. Biomat. Appl, published on line January 27, 2011, 0885328210391495. [8] R. Ferro de Godoy et al., In vivo Evaluation of Titanium Macro-Porous Structures Manufactured Through an Innovative Powder Metallurgy Approach. Proceedings eCM XIII: Bone Fixation, Repair & Regeneration, June 24-26, 2012, Davos, Switzerland. [9] A. Goodship et al, In-vivo Assessment of the Ingrowth Potential of Engineered Surface Topographies Produced by Spark Plasma Sintering, Proceedings 9th World Biomaterial Congress, June 1-5, 2012, Chengdu, China. [10] McLaughlin JR, Lee KR. Cementless total hip replacement using second-generation components: a 12- to 16-year follow-up. J Bone Joint Surg Br. 2010 Dec;92(12):1636-41.

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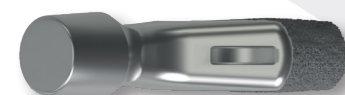
## MASTERLOC HIP SYSTEM: UNDERSTANDING TRADITION, MASTERING INNOVATION

The concept of tapered wedge femoral stems has been shown to provide **excellent implant stability in short-term, mid-term and long-term clinical studies**<sup>[1,2,3]</sup>.

The **MasterLoc Hip System** follows this philosophy, utilizing a proprietary proximal coating - **MectaGrip**, designed for initial stability and long-term fixation. It was designed to provide for a **definitive set of femoral offset options, completely independent from the leg length**, helping to achieve good restoration of the hip joint biomechanics in nearly all patient populations. With an optimized design, the MasterLoc Hip System is suitable for all MIS procedures, especially the AMIS approach.

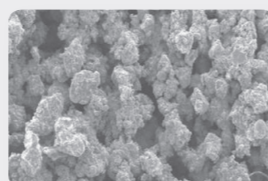
### PROGRESSIVE TRIPLE OFFSET

The **MasterLoc Hip System** offers a **unique progressive triple offset**, which allows for an easier and more effective management of the patient's femoral offset, **completely independent from the leg length**. This MasterLoc Hip System's distinct offering helps restore hip joint biomechanics in nearly all patient populations.



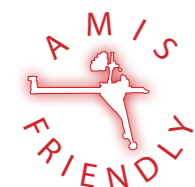
### MECTAGRIP COATING

A coating treatment consisting of a layer of commercially pure titanium, deposited through Vacuum Plasma Spray technique (VPS). This method offers a **high friction coefficient for enhanced initial stability**<sup>[5]</sup>, and the potential for **long-term fixation**<sup>[6,7,8,9]</sup> thanks to a carefully chosen porosity: open pores with pore dimensions between 100-350µm, and a continuous interconnectivity.



### AMIS-FRIENDLY DESIGN

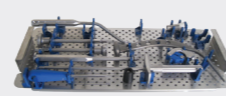
The MasterLoc Hip System is **designed to accommodate all MIS techniques**. The instruments and implants have been specifically designed to **reduce the risk of damaging soft tissues** when utilizing the MIS techniques, in particular the AMIS approach.



### SIMPLE AND REPRODUCIBLE BROACH-ONLY TECHNIQUE



One tray  
is enough



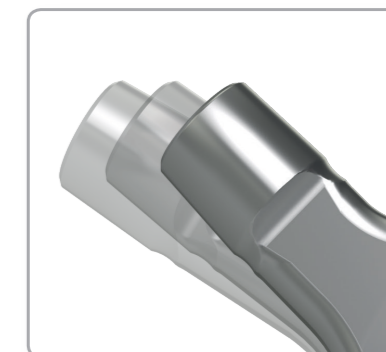
### TAPERED WEDGE DESIGN WITH A DISTALLY REDUCED SHAPE

This implant philosophy seeks to allow the implant to self-seat within the femoral canal, achieving **enhanced mediolateral stability**. Applying modern advancements to **promote bone preservation**, Masterloc Hip System features a **shortened stem length** and a **reduced distal geometry**. These features have been introduced to **enhance implant fit in the metaphysis** while also **enhancing performance** in Dorr Type A, B and C femoral canals. These advances may help **prevent unexpected distal fixation** and other fit issues demonstrated by early flat, tapered wedge hip systems<sup>[10]</sup>.

## TECHNICAL DETAILS

### MIRROR POLISHED NECK WITH REDUCED A/P GEOMETRY

The mirror polished surface of the neck minimizes soft tissue damage and liner wear, making the MasterLoc Hip System suitable for double mobility liners. Additionally, the reduced A/P geometry may increase range of motion.



### TITANIUM ALLOY

The MasterLoc Hip System is manufactured from an industry standard titanium alloy (Ti-6Al-7Nb, in accordance with ISO 5832-11). This material has been shown to have great flexibility and to be highly biocompatible<sup>[4]</sup>.

## EXTENSIVE SIZE RANGE



STANDARD

LATERALIZED

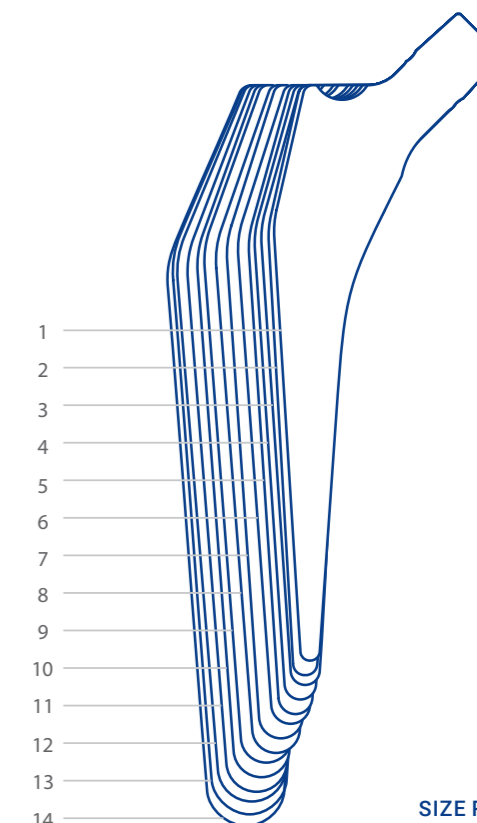
LATERALIZED PLUS

- 12 STANDARD sizes with 135° of neck-shaft angle
- 14 LATERALIZED sizes with 127° of neck-shaft angle
- 11 LATERALIZED PLUS sizes with 122° neck-shaft angle

These **three offset options** allow for an easier and more effective femoral offset management, **completely independent from the leg length**. The lateralized version adds 6 mm of femoral offset, the lateralized plus adds an additional 5 mm for 11 mm in total.



Courtesy of Dr. Jose Rodriguez, Lenox Hill Hospital, New York, USA



SIZE RANGE