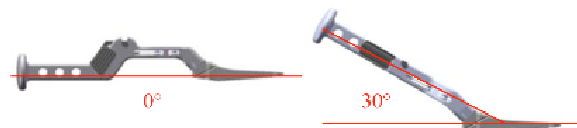


# QUADRA® SYSTEM

# QUADRA® SYSTEM

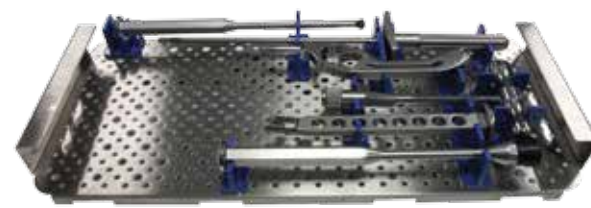
## INSTRUMENTATION

- The same tray to implant Quadra®-S, Quadra®-H, Quadra®-C\*.
- Both standard and lateralized trial necks fit onto the broaches for a **quick** and **precise** trial reduction.
- Manual and motorized broach handles.
- Offset broach handles available in left and right versions for motorized and manual use with 2 different inclinations:



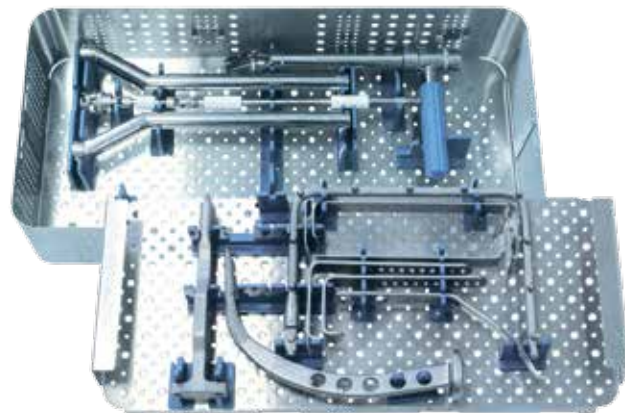
- High **quality** sharp broaches for a precise preparation of the medullary cavity.
- Monoblock motorized broaches option available to be used with femoral stem trials.

## ONE TRAY IS ENOUGH!



\* Quadra®-R instrumentation requires a different tray for dedicated broaches and trial necks.

## UPGRADE TO AMIS® INSTRUMENTATION



AMIS® is the Anterior Minimally Invasive Surgery provided and supported by Medacta® International. Add one tray to have all the specific instrumentation for the AMIS® approach.

Medacta®, in collaboration with the surgical world, has developed a set of instruments with the aim of reducing errors, reducing the learning curve and simplifying the implementation of the AMIS® technique.

You will find special retractors, reamers, cup impactors and of course special broach handles.

## REFERENCES

[1] Moreau P. Cementless HA coated Quadra® stem - 7 Years Clinical Outcomes. MORE Journal. 2012 Jan; 2:3-6. [2] Zweymüller K. 20 years of Zweymüller cement free hip endoprosthesis. Jatro Orthopédie. 1999 Dez; 5:27. [3] Dorn U, Kiss H, Engelhardt C, Dohnalek C, Steindl M, Zweymüller K. Results of Femoral Revision THR using the SIR stem: Minimum 2 years follow-up. 20 years of Zweymüller hip endoprosthesis, 4th Vienna Symposium. Zweymüller K (ed) – Bern; Göttingen; Toronto; Seattle: Huber, 2002. [4] Bonnomet F, Delaunay C, Simon P, Leleuvre Y, Clavert P, Kapandji AJ, Kempf JF. Comportement d'un tige fémorale droite en arthroplastie totale primaire non cimentée de la hanche chez les patients de moins de 65 ans. Rev de Chir Orthop 2001; 87:802-814. [5] Linner F, Böhm G, Brand G, Obenaus Ch, Klimann S. Tissue Reaction to Titanium Stems. 10 Jahre. Zweymüller. Verlag Hans Huber, 1991. [6] Böhm G, Linner F, Brand G, Obenaus Ch, Klimann S. Morphometrical findings on individual titanium stems. 10 Jahre. Zweymüller. Verlag Hans Huber, 1991. [7] Lester DK, Campbell P. 100-year-old patient with pressfit prosthesis: a postmortem retrieval study. Am J Orthop (Belle Mead NJ). 1996 Jan;25(1):30-4. [8] Hardy DC, Fraysse P, Guillemin A, Lafontaine MA, Delince PE. Bonding of Hydroxyapatite Coated Femoral Prostheses. J Bone Joint Surg Br. 1991 Sep; 73(5):732-40. [9] Hardy DC, Delince PE. Aspects Radiologiques de l'Arthroplastie Fémorale Revetue d'Hydroxyapatite et correspondance Histologiques Acta Orthop Belg. 1993; 59(1):229-334. [10] Hardy DC, Fraysse P, Delince PE. Projection d'Hydroxyapatite sur Prothèses Articulaires : Progrès ou Illusion ? Acta Orthop Belg. 1993; 59(1):98-103. [11] Fraysse P, Hardy D, Carle P, Delince P, Guillemin A, Bonel G. Histological analysis of the bone-prosthesis interface after implantation in humans of prostheses coated with hydroxyapatite. The Journal of Orthop Surg. 1993; 7(3):246-53. [12] Heidelberg Lab-Report. Orthopädische Universitätsklinik Heidelberg, 2005. Data on file: Medacta®. [13] Data on file: Medacta®. [14] (ch) JF, Schütz U, Diabiny T, Munzinger U. Revision Arthroplasty with the SIR-Revision Shaft. 20 years of Zweymüller hip endoprosthesis, 4th Vienna Symposium. Zweymüller K (ed) – Bern; Göttingen; Toronto; Seattle: Huber, 2002.

## REDEFINING THR: THE AMIS® SYNERGY

The anterior approach, strengthened by several years of clinical experience, is the only technique which follows a path both **intermuscular and internervous** 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, located throughout the world**, provide the necessary AMIS® educational experience and Medacta® offers **continuous support for surgeons**, as well as constantly improving and developing the industry's most specialized instrumentation platform.

Using Quadra® you can enter Medacta® International's world of AMIS®.

Discover:

- The definitive MIS approach: AMIS®.
- Dedicated AMIS® instrumentation.
- The **AMIS® Mobile Leg Positioner**: the original extention table included as part of the instrumentation that makes the surgery easier and reproducible;
- The **AMIS® Education Program** based on Medacta®'s proven educational methods.

**AMIS®**

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



# QUADRA® SYSTEM

A COMPLETE RANGE OF STRAIGHT STEMS



Hip

Knee

Spine

Navigation

Brochure

medacta.com



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Quadra® System Leaflet  
ref: 99.14HSC.11 us  
rev. 02  
Last update: June 2014

swiss  
made





# QUADRA® SYSTEM

# A COMPLETE RANGE OF STRAIGHT STEMS

## QUADRA® SYSTEM: A COMPLETE RANGE OF STRAIGHT STEMS

Introduced in 2003 and thousands of stems implanted each year worldwide, the Quadra® System stems have proved to be a reliable solution for hip arthroplasty.<sup>[1]</sup>

Quadra® System is a **complete** system for use in primary and revision surgery.



## PRODUCT RANGE

### QUADRA®-S & QUADRA®-H

- 11 STANDARD sizes with 135° neck-shaft angle and 7 LATERALIZED sizes with 127° neck-shaft angle.
- 5mm shorter neck sizes are available for both STANDARD and LATERALIZED versions.

### QUADRA®-C

- 8 STANDARD sizes with 135° neck-shaft angle.

### QUADRA®-R

- 10 sizes with 127° neck-shaft angle.



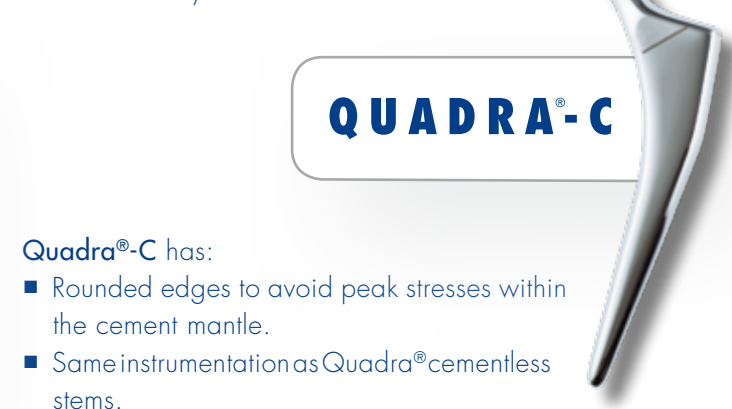
## CEMENTLESS STEMS

Straight cementless femoral stems have demonstrated, through 20 years of clinical follow-up, the ability to withstand biomechanical stresses by showing an exceptionally good survival rate.<sup>[2,3,4]</sup> The Quadra® System is comprised of 2 cementless stem options sharing all mechanical characteristics, with different surface treatments: the **Quadra®-S** is sandblasted and the **Quadra®-H** has an HA coating.



## CEMENTED STEM

**Quadra®-C** is the cemented stem available with the Quadra® System.



## CEMENTLESS LONG-STEM

**Quadra®-R** is a cementless straight long stem designed for **revision or peritrochanteric fractures**.



## MATERIAL & FINISHING

Quadra®-S and Quadra®-H are made of Titanium Niobium alloy. Titanium is an inert and biocompatible material ideal for direct interaction with the bone.<sup>[5,6,7]</sup> Titanium also presents the ideal stiffness for a cementless stem, avoiding stress shielding. Quadra®-C is made of high nitrogen stainless steel providing the ideal stiffness for a cemented solution.

**Quadra®-S Surface:** The surface has a superficial roughness between 4µm and 7µm thanks to a specific sand blasting treatment on the whole shaft.



**Quadra®-H and Quadra®-R Surface:** The surface has an 80 µm thick HA coating on the whole shaft applied after a superficial sand-blasting. The HA coating has chemical characteristics similar to the ones of the human bone.<sup>[8,9,10,11]</sup>



**Quadra®-C Surface:** Mirror polished surface for an interaction with the cement mantle.



## CONCEPT

### SHAPE

- Based on the experience of the straight, rectangular cementless stems.

### DESIGN

- **Triple taper** with trapezoidal cross section providing for axial and rotational stability with optimal anchoring to the bone.<sup>[12]</sup>

### NECK

- Multiple offset to meet the patient needs including standard, lateralised and short neck options.
- Mirror polished rounded neck to **minimize wear**.
- Suitable for Double Mobility liners.

### TAPER

- Micro threaded.
- 12/14 EUROCONE (5°42'30").
- Shortened to increase ROM and minimize wear.

### PROXIMAL FEMUR

Close contact between the stem and the cortical bone due to the tapered shape and high precision broaches.

- Stability.
- Anatomic load transfer.
- Minimized stress-shielding and potential for loosening.
- Reduced lateral shoulder ideal for MIS approaches.

### MACROSTRUCTURES

Horizontal and vertical macrostructures increase the contact surface area by 10-15%.<sup>[13]</sup>

- The proximal horizontal macrostructures increase the axial stability.
- The vertical distal macrostructures increase the rotational stability.

### DIAPHYSIS

- Sharpened edges account for an optimal primary diaphyseal fit.<sup>[14]</sup>
- Enhanced rotational stability.

### DISTAL TIP

Double tapered distal tip reduces the risk of stress peak in the diaphysis.

## QUADRA® SYSTEM: COMPLETE RANGE OF STRAIGHT STEMS

