



GLOBAL ICON™

Stemless Shoulder System

Design Rationale



ENHANCED PERIPHERAL FIXATION

The GLOBAL ICON™ Stemless Shoulder System is designed to achieve peripheral fixation where the bone quality and density has been demonstrated to be superior to central bone.^{1,2}

SURGICAL EFFICIENCY

The GLOBAL ICON Stemless Shoulder System utilizes 72% fewer surgical steps and 56% fewer instrument passes compared to a traditional stemmed shoulder prosthesis, to potentially improve OR efficiency through its simplified surgical procedure.³





BEST-FIT CIRCLE RECONSTRUCTION

The GLOBAL ICON Stemless Shoulder System offers anatomically designed humeral head sizes and a broad range of peripherally fixated Anchor Plate components to achieve the best-fit circle reconstruction for soft tissue balancing and stability.⁴

BONE-PRESERVING DESIGN

The GLOBAL ICON Stemless Shoulder System introduces a bone-preserving design, removing an average of 88% less bone than a traditional stemmed device.⁵



THE MARK OF FIXATION

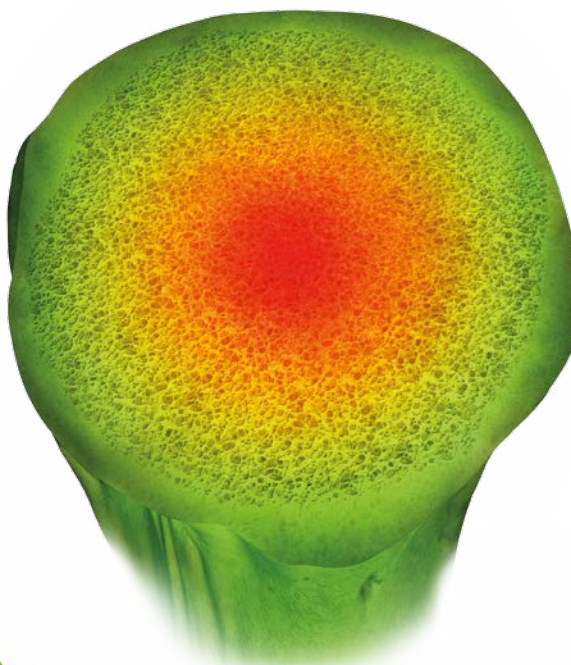




ENHANCED PERIPHERAL FIXATION



The GLOBAL ICON™ Stemless Shoulder System is designed to provide rigid metaphyseal fixation, despite the absence of a traditional stemmed component. Research and development has directed the design of the Anchor Plate, to position it in areas of the proximal humerus with the highest bone density, while providing cortical support.⁶



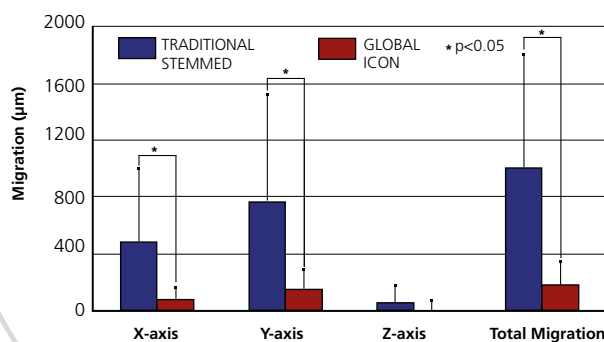
Over time an increase in radiolucency within the proximal humerus occurs, resulting in deterioration and reduction of the bone density number.¹ Barvencik et al. revealed that the peripheral portion of the humeral head, not the central region, provides the greatest stability due to the density of bone in this region.¹

RECONSTRUCTION BUILT ON A STABLE FOUNDATION

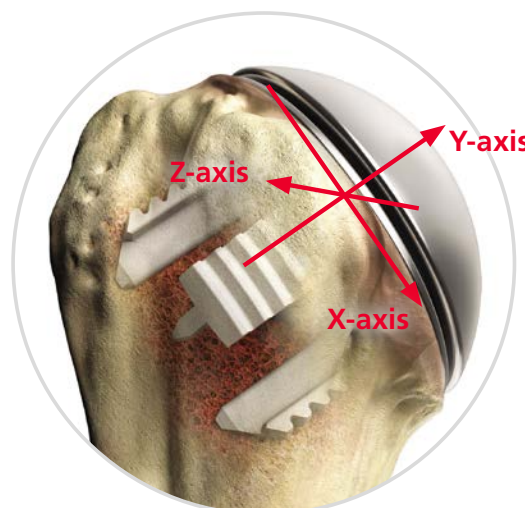
The GLOBAL ICON Stemless Shoulder System takes advantage of areas with increased bone density that seemed to be associated with improved fixation strength.^{1,2}

In a cadaveric study, the GLOBAL ICON implant demonstrated short-term stability by having significantly less early migration and equivalent micromotion when compared to a stemmed implant.^{7,8}

Traditional Stemmed Device vs.
GLOBAL ICON Stemless Shoulder System



IMPLANT MIGRATION

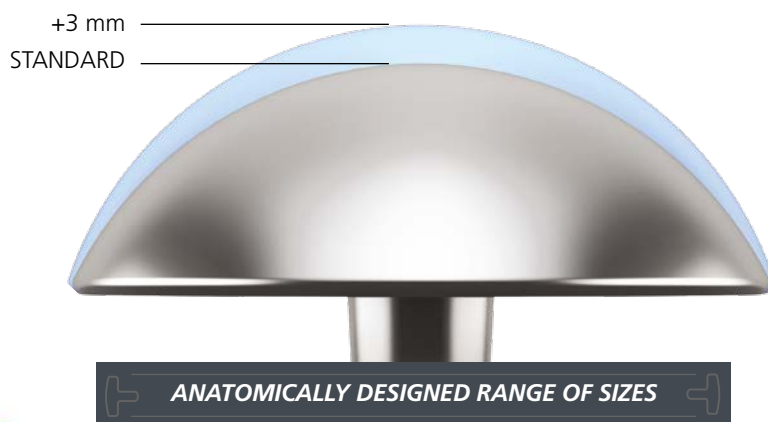


**PERIPHERAL
FIXATION
IN DENSE
PROXIMAL
BONE**

The design of the Anchor Plate engages cortical support to potentially reduce the risk of subsidence. The peripheral legs have a grooved macrostructure that is designed to resist rotation and improve fixation.

DESIGNED FOR ANATOMIC PRECISION

Through the incorporation of anatomically designed humeral head sizes and a broad range of peripherally fixated Anchor Plate components, the natural epiphyseal structure or best-fit circle reconstruction, can be created to reestablish the patient's inclination, offset and retroversion.



Accurate sizing and positioning of a prosthetic humeral head can reduce the risk of overstuffing the joint, leading to better outcomes and decreased glenoid component wear and loosening.^{4,9,10}

The standard and +3 mm humeral head sizes provide options to recreate the anatomic best-fit circle of the proximal humerus



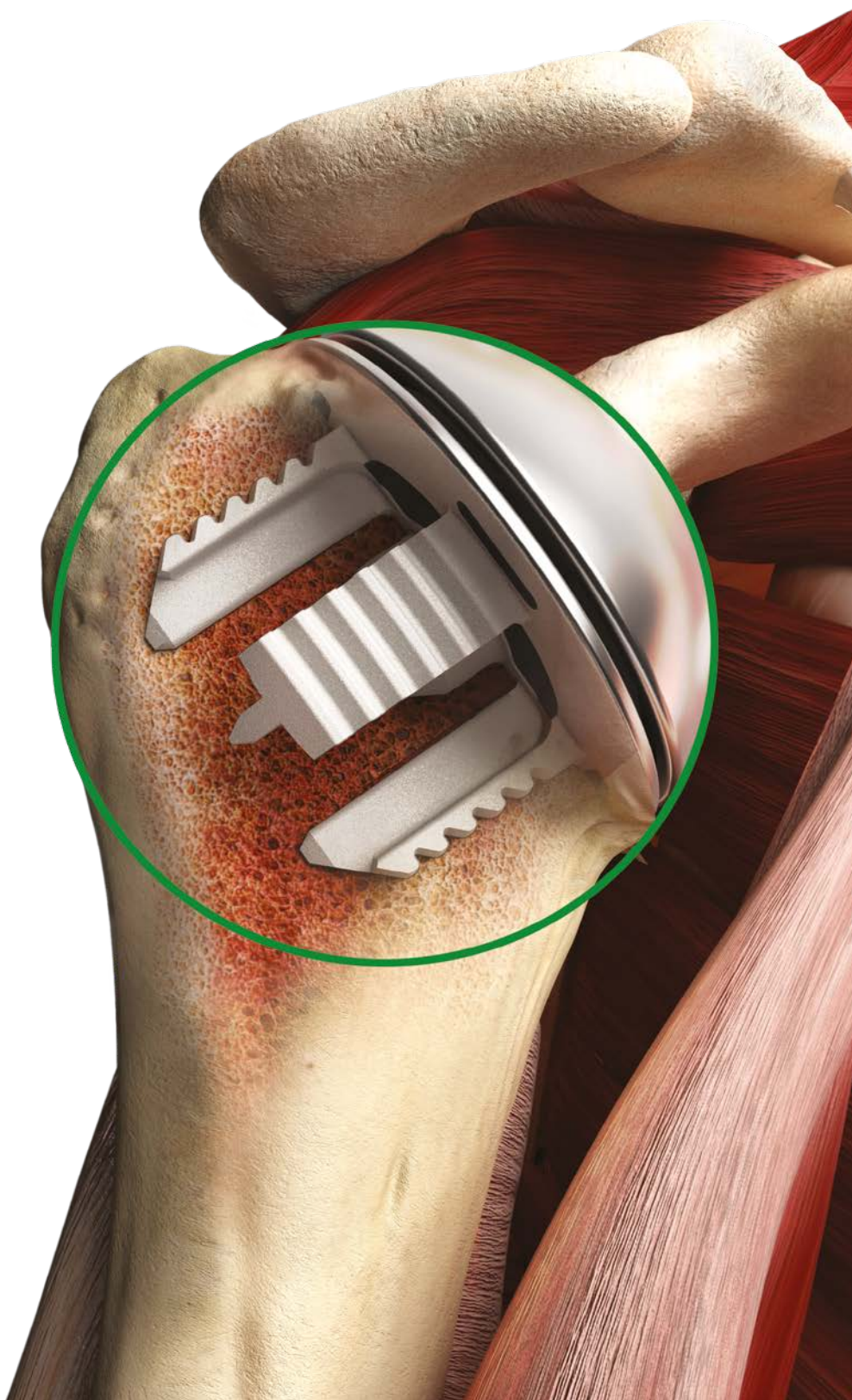
BEST-FIT CIRCLE RECONSTRUCTION



The formation of a sphere, or two-dimensional circle in the coronal plane, allows for the appropriate humeral head size to be determined, providing proper soft-tissue balancing.¹¹ The integrity of the soft-tissue components of the shoulder greatly contribute to the normal function of an anatomic shoulder replacement.¹⁰

An anatomic best-fit circle reconstruction can help restore stability and mobility of the prosthetic shoulder.¹²

The GLOBAL ICON Stemless Shoulder System is not restricted to the location of the intramedullary canal, like that of a traditional stemmed device, which may require eccentric head options to accommodate the patient's anatomy.





SURGICAL EFFICIENCY

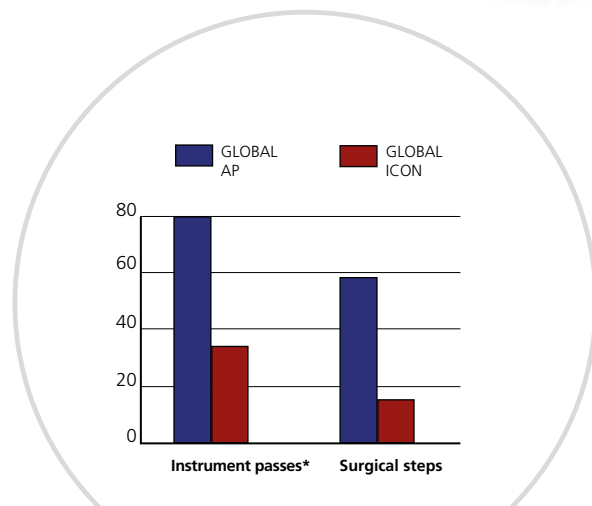


SIMPLIFIED SET-UP FOR FEWER SURGICAL STEPS



Health Care providers are looking for more intuitive and efficient solutions to shorten the learning curve of operating room (OR) teams, positively impact operative time, and reduce costs. The GLOBAL ICON Stemless Shoulder System is designed to improve efficiency in the OR through its simplified surgical procedure and streamlined instrumentation.

When compared to GLOBAL APTM, the GLOBAL ICON Stemless Shoulder System has 72% fewer surgical steps and 56% fewer instrument passes, which are key components in addressing OR efficiencies.³



COMPARISON OF SURGICAL STEPS AND INSTRUMENT PASSES FOR GLOBAL AP³ vs. GLOBAL ICON STEMLESS SHOULDER SYSTEM

*An instrument pass is defined as the number of times an instrument is handed to and from the surgeon

CREATED FOR BONE CONSERVATION

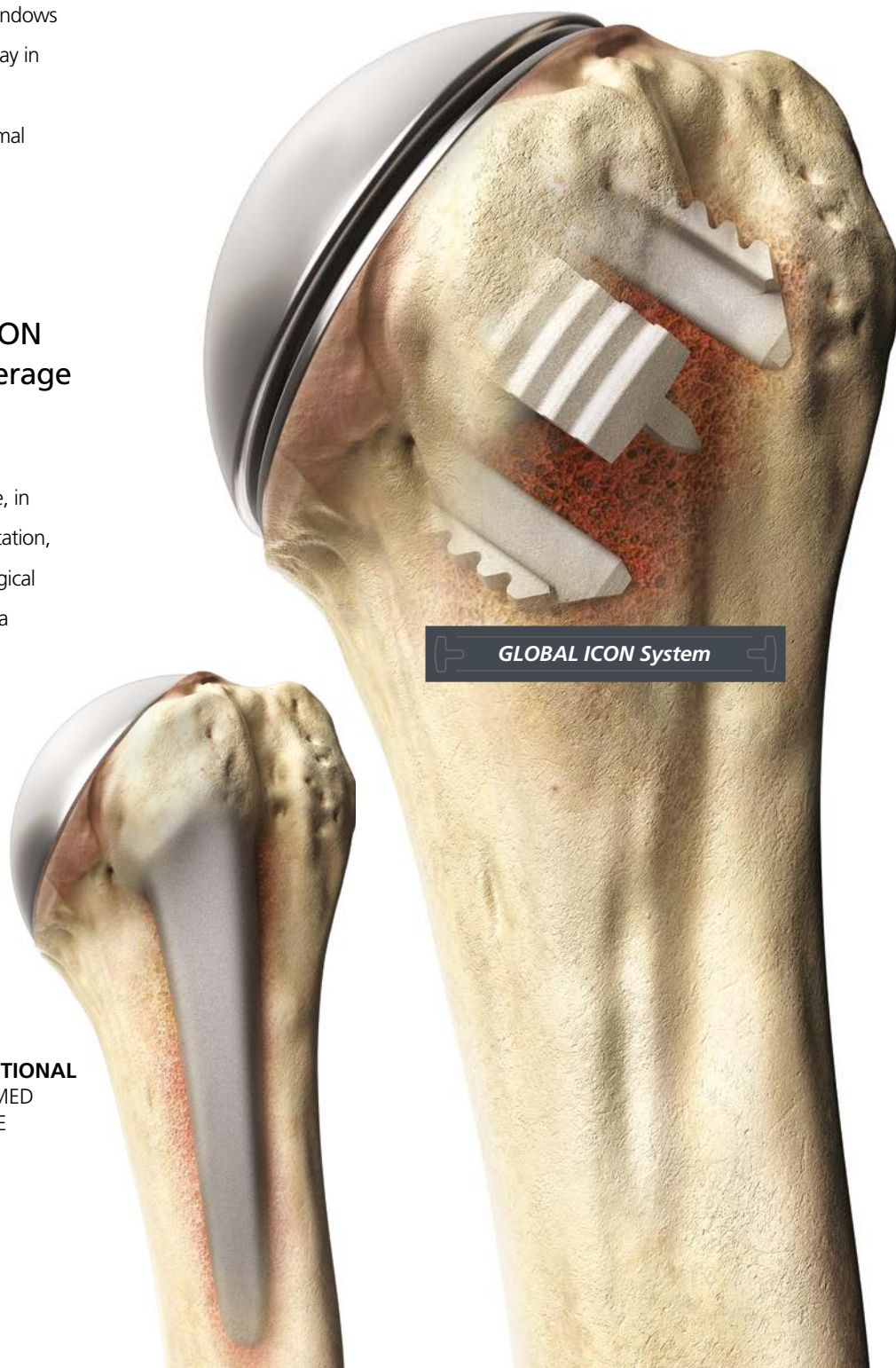
BONE-PRESERVING DESIGN

The Anchor Plate design features windows and slots, providing a guided pathway in case of a revision, where implants can be removed with minimal disruption to bone stock.

When compared to a stemmed arthroplasty device, the GLOBAL ICON System removes an average of 88% less bone.⁵

The use of a bone-conserving device, in concert with streamlined instrumentation, combines to potentially increase surgical efficiency and reduce blood loss on a primary procedure.

**TRADITIONAL
STEMMED
DEVICE**



CIRCULAR ANCHOR PLATE
FOR CORTICAL BONE
COVERAGE AND SUPPORT TO
POTENTIALLY REDUCE RISK
OF LOOSENING

SYMMETRIC DESIGN
FACILITATES ORIENTATION
OPTIONS TO ACCOMMODATE
PATIENT ANATOMY

GROOVED MACROSTRUCTURE
PROVIDING ADDITIONAL
SURFACE AREA FOR INCREASED
BONE CONTACT

HA-COATED DESIGN
ON THE UNDER
SURFACE AND LEGS

 T-SHAPED LEGS FOR ENHANCED FIXATION

FOUR STRAIGHT T-SHAPED LEGS FIT
WITHIN THE PERIPHERY OF THE PROXIMAL
HUMERUS, DESIGNED TO OPPOSE IMPLANT
SLIDING AND ROTATION





DESIGN FEATURES

STANDARD AND +3 mm HUMERAL HEAD

OPTIONS TO RECREATE THE
ANATOMICAL BEST-FIT CIRCLE
OF THE PROXIMAL HUMERUS

FEMALE MORSE TAPER

FOR INCREASED
GLENOID EXPOSURE

WITH THE ANCHOR PEG
GLENOID, THE GLOBAL ICON
SYSTEM PROVIDES A MISMATCH
RANGE OF 2-12 MM.

WINDOWS ENSURE VISIBILITY

SLOTS AND WINDOWS FOR
OSTEOTOME INSERTION TO SEPARATE
THE IMPLANT FROM THE BONE DURING
REVISION SURGERY

THE MARK OF FIXATION

References

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