

equinox[®]
SHOULDER SYSTEM



.....
ANATOMICAL.
REDEFINED.

equinox[®]
SHOULDER SYSTEM

On two days each year, daylight equals night.
Perfect balance is achieved. Such is the power of the Equinox.

Other shoulder systems have claimed "anatomical."
Exactech is raising the bar.



EQUINOXE DESIGN SURGEONS

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Anatomical. Redefined.

The primary stem allows independent adjustability of all four anatomic parameters *in situ*. The reverse shoulder is an optimized design that seamlessly integrates with the primary stem. The fracture stem's features define the next generation in four-part fracture reconstruction.

The Equinox primary shoulder reproduces the patient's anatomy *in situ* with a robust scope for intra-operative flexibility and a patented replicator plate that empower the surgeon to accurately balance the glenohumeral joint.

The Equinox reverse shoulder is an optimized design that allows for maximized range of motion, improved stability and bone conservation. Its components build off the existing Equinox primary humeral stems, which enables surgeons to convert a well-fixed stem to a reverse without stem removal.

The Equinox fracture shoulder reconstructs the patient's anatomy with a patented* anterior-lateral fin and asymmetric tuberosity beds that act as a scaffold to accurately position the greater and lesser tuberosities.

*Patent pending

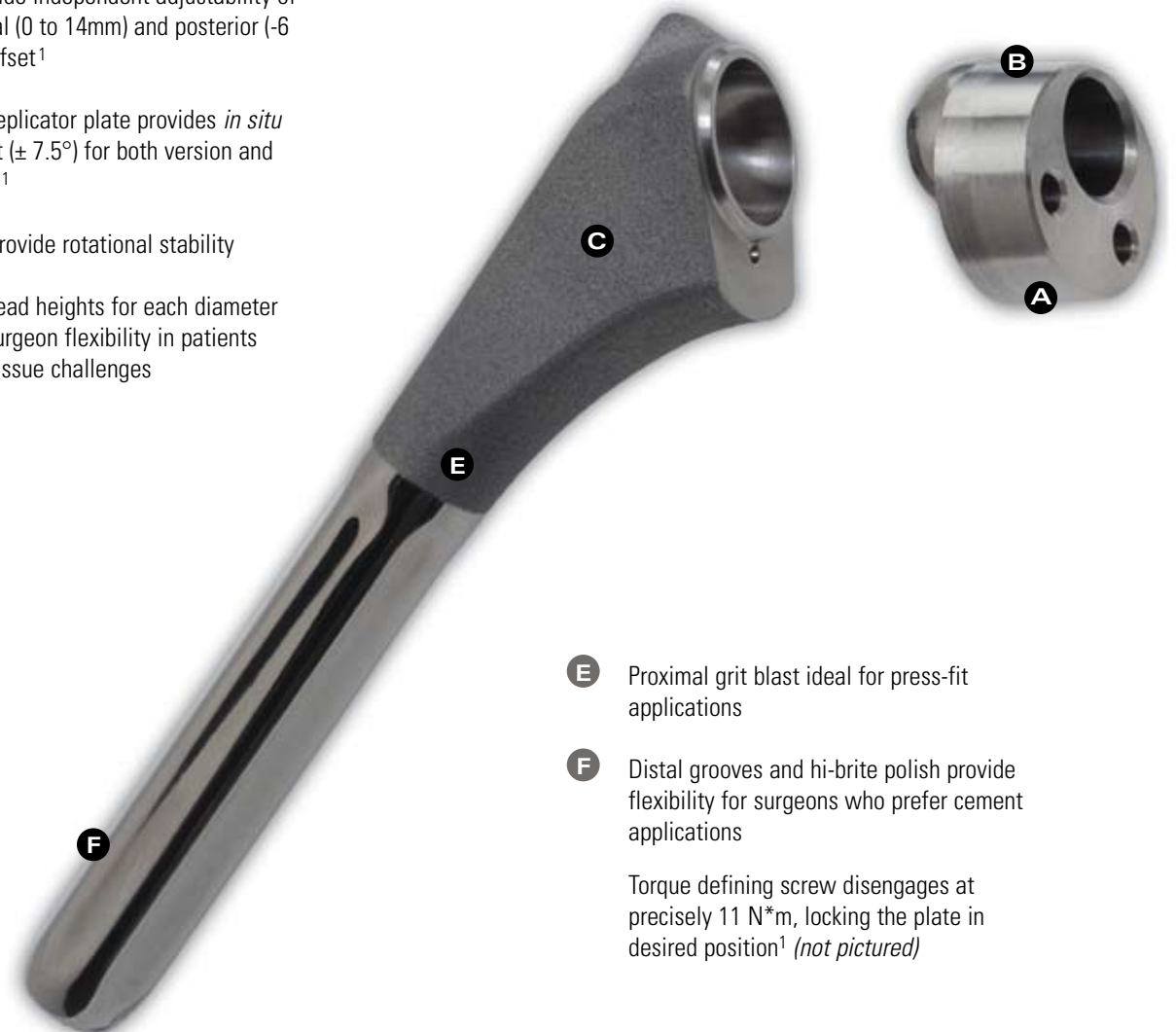


Equinox Primary Shoulder System

KEY FEATURES

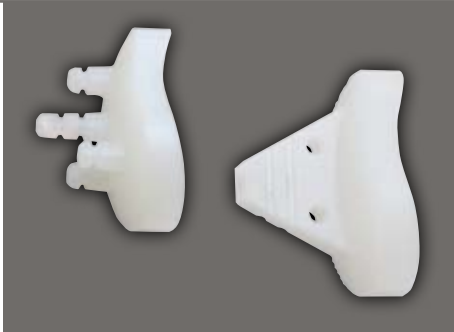
- **Anatomical. Redefined.** – Patented design allows independent adjustability of all four anatomic parameters *in situ*
- **Innovative Glenoid** – Combine any head size with any glenoid size while still optimizing radial mismatch
- **Robust Scope** – Offers intra-operative flexibility to the surgeon

- A** Two eccentricities (head and replicator plate) provide independent adjustability of both medial (0 to 14mm) and posterior (-6 to 6mm) offset¹
- B** Patented replicator plate provides *in situ* adjustment ($\pm 7.5^\circ$) for both version and neck angle¹
- C** A/P flats provide rotational stability
- D** Multiple head heights for each diameter provides surgeon flexibility in patients with soft tissue challenges



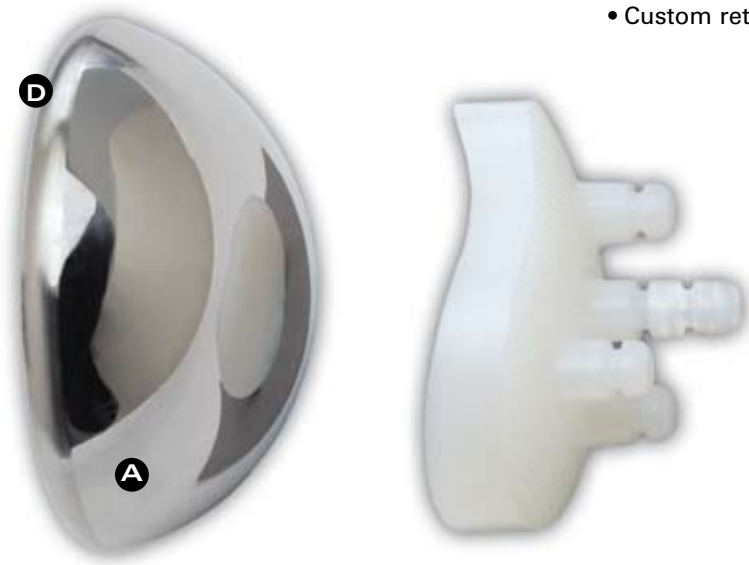
- E** Proximal grit blast ideal for press-fit applications
- F** Distal grooves and hi-brite polish provide flexibility for surgeons who prefer cement applications

Torque defining screw disengages at precisely 11 N*m, locking the plate in desired position¹ (*not pictured*)



Glenoids

- Alpha and beta glenoid curvatures enable any head size to be paired with any glenoid size while maintaining an optimal radial mismatch of approximately 5.5mm^{2,3,4}
- Anatomical pear shape design^{5,6}
- Multiple features to facilitate cement interdigitation and reduce the risk of glenoid loosening^{2,7}
- Constant peg pattern across size range
- Custom retractor set to enhance glenoid exposure



CUT AND COVER TECHNIQUE

Provides precise anatomical replication with a simple surgical technique



Cut

Cover Resection with Dual Eccentricities

Trial Reduction

Equinoxe Reverse Shoulder System

KEY FEATURES

- **Optimized Design** – Glenoid and humeral components designed to maintain center of rotation, restore anatomic tension of the remaining intact rotator cuff muscles and deltoid, and minimize scapular notching
- **Maximized ROM** – Computer analyses have predicted that the Equinoxe reverse shoulder provides as much as 50 percent increase in ROM over the Grammont design before scapular contact or notching^{8,9}
- **Improved Stability** – Large diameter glenospheres provide a larger arc of motion, greater resistance to dislocation and better tensioning of the intact rotator cuff muscles^{8,9}
- **Reversatility** – Components build off existing Equinoxe primary humeral stems, which enables surgeons to use the same surgical technique/humeral osteotomy and convert well-fixed stems to a reverse without stem removal

- A** Inferiorly Shifted Glenoid Plate – allows fixation to occur in the center of the glenoid while also ensuring inferior glenosphere overhang, thereby, eliminating/minimizing scapular notching
- B** Bone Cage – improves glenoid fixation and allows bone 'through-growth'
- C** Chamfered Glenosphere – aids in glenosphere insertion and protects any remaining intact soft tissues
- D** Extended Glenosphere Articular Surface – improves range of motion and maximizes glenosphere inferior overhang to minimize the potential for scapular notching
- E** Multiple Humeral Liner (standard and constrained), Adapter Tray and Glenosphere Options – provides intra-operative flexibility
- F** Curved Back Glenosphere/Glenoid Plate – conserves bone and converts shear forces to compressive forces





- G** Anatomical-Shaped Glenoid Plate – provides multiple options for screw insertion, which is particularly important when revising a pegged and/or keeled glenoid to a reverse
- H** Variable Angle Compression Screws – compresses the glenoid plate to the bone while providing 30 degrees of angular variability (Note: the central cage of the glenoid plate limits the angular variability to 20 degrees for converging anterior, posterior and superior screws.)
- I** Anti-Rotation Features on Humeral Liners – improves implant connection and stability
- J** Platform Humeral Stem – facilitates a revision of a primary Equinox humeral stem to a reverse.

Locking Caps – locks compression screws to the glenoid plate at a variable angle *(not pictured)*

Torque Defining Screw – locks the humeral adapter tray at 11 N*m *(not pictured)*

Equinox Fracture Shoulder System

KEY FEATURES

- **Anatomical. Redefined.** – Offset anterior-lateral fin and asymmetric tuberosity beds define the next generation in four-part fracture reconstruction
- **Patented* Anterior-Lateral Offset Fin** – Aligning fin to distal bicipital groove reproduces version^{10,11,12}
- **Grafting Window** – Allows tuberosity apposition
- **Fracture Stem Positioning Device** – Maintains prosthesis height
- **Standardized Reproducible Suture Technique** – Compresses bone fragments for a stable reconstruction

*Patent pending



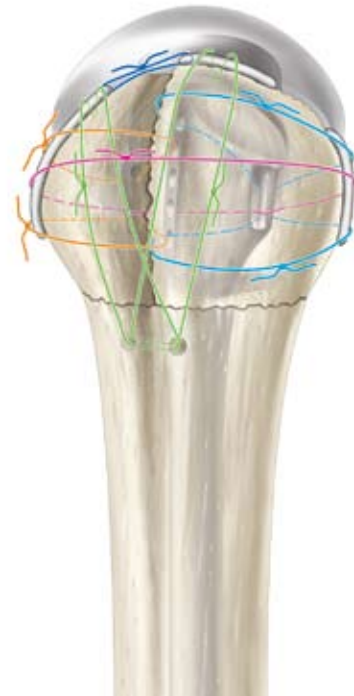
- Ⓐ Robust scope of eccentric heads provides intra-operative flexibility
- Ⓑ Patented anterior-lateral fin — aligning fin with distal portion of bicipital groove establishes version^{10,11,12}
- Ⓒ Grafting window promotes tuberosity apposition
- Ⓓ Satin finish and distal grooves facilitate cement fixation
- Ⓔ Asymmetric tuberosity beds address primary failure mode of complex fractures following hemiarthroplasty — tuberosity nonunion^{10,11,13}
- Ⓕ A/P handles — a) stable base holds tuberosities; b) easy to thread for cerclage suture technique
- Ⓖ Multiple fin holes with rounded edges provide suturing versatility
- Ⓗ Grit blast encourages bone ongrowth

PROXIMAL GEOMETRY AND SUTURE TECHNIQUE

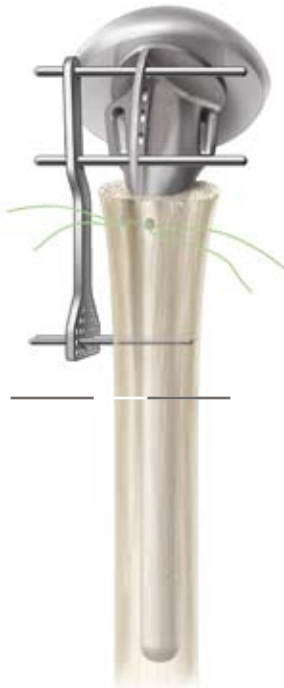
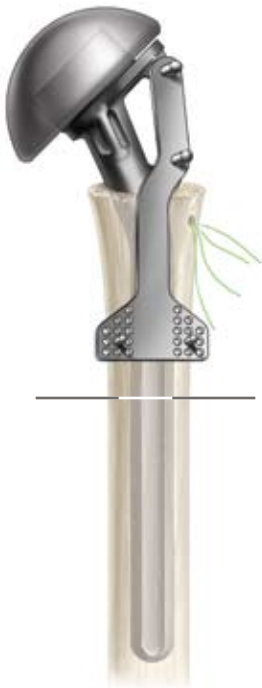


Designed to stabilize tuberosity fixation and minimize micromotion.

Points of contact for sutures have satin finish and rounded edges.



FRACTURE STEM POSITIONING DEVICE



The Fracture Stem Positioning Device maintains prosthesis height during:

- Trial reduction
- Transition from trial to final implant
- Cement polymerization

No back-table assembly required

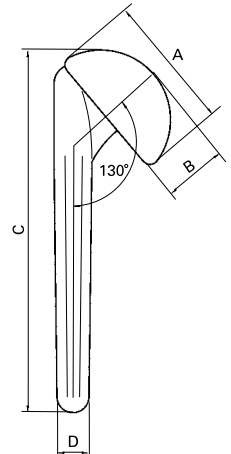
InterSpace® Shoulder

Advancing Two-Stage Revision Arthroplasty

DESCRIPTION

The InterSpace® Shoulder temporarily replaces a Total Shoulder Arthroplasty (TSA) that has been explanted due to infection. InterSpace Shoulder is a pre-formed, partial load-bearing device consisting of Gentamicin impregnated Cemex® PMMA bone cement.

REF	SPS0021K
A (Ømm)	46
B (mm)	22
C (mm)	125
D (mm)	11
Gentamicin Base	1.1g



ADVANTAGES

- Maintains joint space and allows for assisted mobility
- Enables patient mobility with partial weight-bearing*
- Facilitates permanent re-implant surgery
- Provides for predictable, consistent antibiotic release locally¹⁴
- Published data indicates that the InterSpace Shoulder improves quality of life between procedures
- Published data indicates that the InterSpace Shoulder reduces hospitalization and provides a seamless transition to physical therapy

* See package insert for guidelines on weight-bearing and mobilization.

OVERVIEW TECHNIQUE



Step 1: Remove primary components and debride completely. Take care to remove all residual bone cement.

Step 2: Apply Cemex Genta to underside of head. Peripheral placement will minimize cement extrusion into the humeral canal. DO NOT place cement directly into the humeral canal as this may hinder removal and lead to additional bone loss.

Step 3: Manually insert the InterSpace Shoulder into the humeral canal while approximating anatomical version.

Step 4: When further seating is desired, use a head-pusher for leverage. DO NOT impact the InterSpace Shoulder with a mallet directly as this can result in fracture of the device.

Step 5: Remove all extruding bone cement with a curette. Upon curing of cement, evaluate joint motion and reduce the shoulder. Close in standard fashion.

Cemex® and InterSpace® are produced by Tecres S.p.A., Italy, and are distributed in the United States by Exactech, Inc.

Equinox Primary Components

Primary Humeral Stems*

300-01-07	Humeral stem, primary, press-fit, 7mm
300-01-09	Humeral stem, primary, press-fit, 9mm
300-01-11	Humeral stem, primary, press-fit, 11mm
300-01-13	Humeral stem, primary, press-fit, 13mm
300-01-15	Humeral stem, primary, press-fit, 15mm
300-01-17	Humeral stem, primary, press-fit, 17mm

Revision Humeral Stems

306-01-08	Humeral stem, revision, 8 x 175mm
306-02-08	Humeral stem, revision, 8 x 215mm
306-02-10	Humeral stem, revision, 10 x 200mm (special order)
306-02-12	Humeral stem, revision, 12 x 200mm (special order)

Anatomic Replicator Plate

300-10-15	Anatomic Replicator Plate, 1.5mm o/s
300-10-45	Anatomic Replicator Plate, 4.5mm o/s

Torque Defining Screw

300-20-00	Torque defining screw
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Short Heads

310-01-38	Humeral head, short, 38mm
310-01-41	Humeral head, short, 41mm
310-01-44	Humeral head, short, 44mm
310-01-47	Humeral head, short, 47mm
310-01-50	Humeral head, short, 50mm
310-01-53	Humeral head, short, 53mm

Tall Heads

310-02-38	Humeral head, tall, 38mm
310-02-41	Humeral head, tall, 41mm
310-02-44	Humeral head, tall, 44mm
310-02-47	Humeral head, tall, 47mm
310-02-50	Humeral head, tall, 50mm
310-02-53	Humeral head, tall, 53mm

Expanded Heads

310-03-47	Humeral head, expanded, 47mm
310-03-50	Humeral head, expanded, 50mm
310-03-53	Humeral head, expanded, 53mm

Keeled Glenoids

314-01-02	Glenoid, keeled, alpha, small
314-01-03	Glenoid, keeled, alpha, medium
314-01-04	Glenoid, keeled, alpha, large
314-01-12	Glenoid, keeled, beta, small
314-01-13	Glenoid, keeled, beta, medium
314-01-14	Glenoid, keeled, beta, large

Pegged Glenoids

314-02-02	Glenoid, pegged, alpha, small
314-02-03	Glenoid, pegged, alpha, medium
314-02-04	Glenoid, pegged, alpha, large
314-02-12	Glenoid, pegged, beta, small
314-02-13	Glenoid, pegged, beta, medium
314-02-14	Glenoid, pegged, beta, large

Equinox Fracture Components

Fracture Stems

304-01-07	Humeral stem, fracture, left, 7mm
304-01-10	Humeral stem, fracture, left, 9.5mm
304-01-12	Humeral stem, fracture, left, 12mm
304-02-07	Humeral stem, fracture, right, 7mm
304-02-10	Humeral stem, fracture, right, 9.5mm
304-02-12	Humeral stem, fracture, right, 12mm
304-03-07	Humeral long stem, fracture, left, 7 x 200mm
304-04-07	Humeral long stem, fracture, right, 7 x 200mm

Equinox Reverse Components

Humeral Adapter Trays

320-10-00	Reverse, humeral adapter tray, +0
320-10-05	Reverse, humeral adapter tray, +5
320-10-10	Reverse, humeral adapter tray, +10

Reverse Torque Defining Screw Kit

320-20-00	Reverse, torque defining screw kit
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Reverse Humeral Liners

320-38-00	Reverse, humeral liner, 38mm, +0
320-38-03	Reverse, humeral liner, 38mm, +2.5
320-38-10	Reverse, constrained humeral liner, 38mm, +0
320-38-13	Reverse, constrained humeral liner, 38mm, +2.5
320-42-00	Reverse, humeral liner, 42mm, +0
320-42-03	Reverse, humeral liner, 42mm, +2.5
320-42-10	Reverse, constrained humeral liner, 42mm, +0
320-42-13	Reverse, constrained humeral liner, 42mm, +2.5
320-46-00	Reverse, humeral liner, 46mm, +0
320-46-03	Reverse, humeral liner, 46mm, +2.5
320-46-10	Reverse, constrained humeral liner, 46mm, +0
320-46-13	Reverse, constrained humeral liner, 46mm, +2.5

Glenospheres

320-01-38	Reverse, glenosphere, 38mm
320-01-42	Reverse, glenosphere, 42mm
320-01-46	Reverse, glenosphere, 46mm

Compression Screw/Locking Cap Kits

320-20-18	Reverse, compression screw/locking cap kit, 4.5 x 18mm, white
320-20-22	Reverse, compression screw/locking cap kit, 4.5 x 22mm, black
320-20-26	Reverse, compression screw/locking cap kit, 4.5 x 26mm, orange
320-20-30	Reverse, compression screw/locking cap kit, 4.5 x 30mm, blue
320-20-34	Reverse, compression screw/locking cap kit, 4.5 x 34mm, red
320-20-38	Reverse, compression screw/locking cap kit, 4.5 x 38mm, green
320-20-42	Reverse, compression screw/locking cap kit, 4.5 x 42mm, yellow
320-20-46	Reverse, compression screw/locking cap kit, 4.5 x 46mm, purple

Glenosphere Locking Screw

320-15-05	Reverse, Glenosphere Locking Screw
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Glenoid Plate

320-15-01	Reverse, Glenoid Plate
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* Can also be cemented.

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4. **Karduna AR, et al.** Glenohumeral joint translations before and after TSA. *J Bone Joint Surg.* 1997;79-A(8):1166-74.
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