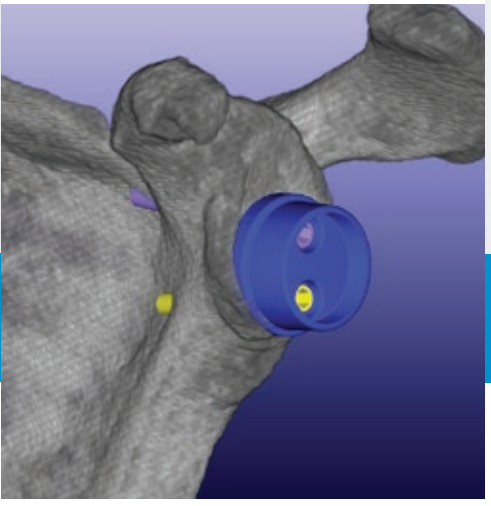
Zimmer®
PSI Shoulder
for Trabecular Metal™
Reverse Glenoid



Personalization. Precision. Performance.

zimmer
Personal Fit. Renewed Life.™

Zimmer PSI Shoulder
for Trabecular Metal Reverse Glenoid

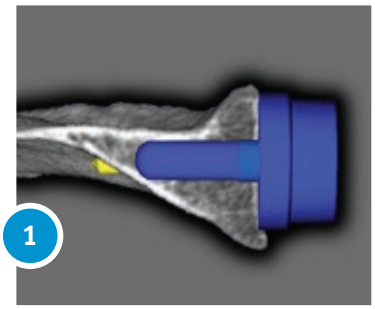
Enables you to personalize your surgical plan to your patient's unique anatomy and then execute that plan with precision, with the goal of reducing the risk of malposition and maximizing implant performance.

Personalization

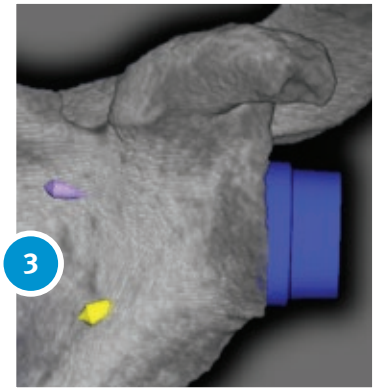
Your patient has unique needs. Based on a pre-operative CT, our 3D virtual surgery tool enables you to visualize and optimize not only implant orientation, but also bone surface preparation and fixation.

PSI Shoulder Planner

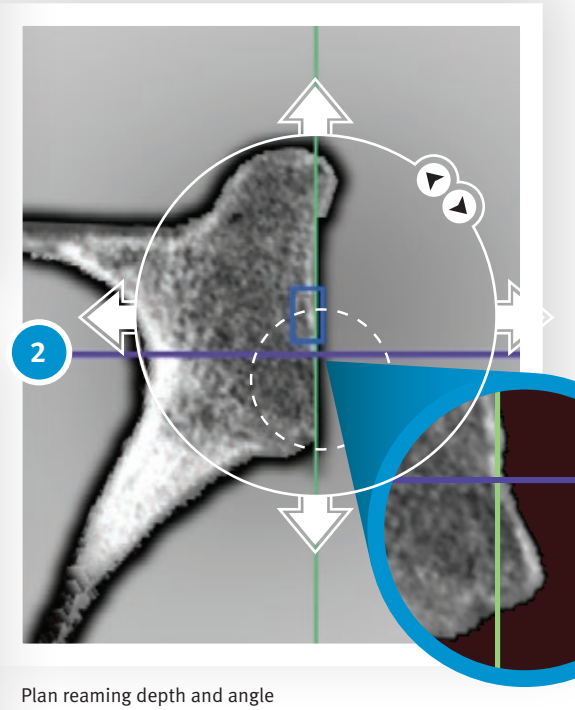
1. Enables you to see and select implant size and positioning from any angle, in high fidelity 3D
2. Allows you to specify reaming angle and depth to help enhance bone preservation and implant stability
3. Equips you to optimize screw length and trajectory to help maximize bi-cortical engagement



Plan post position within glenoid vault

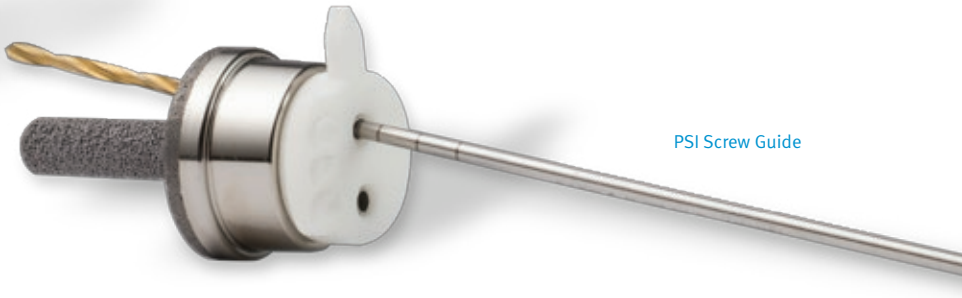


Plan screw length and angle



Plan reaming depth and angle

PSI Ream Guide



PSI Screw Guide

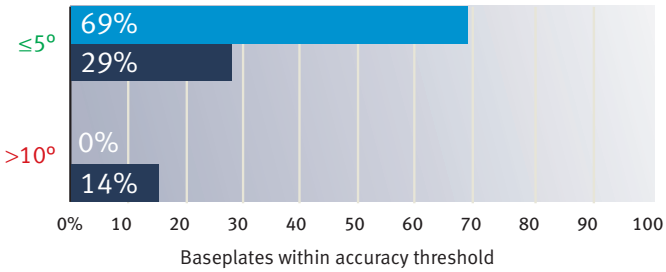
Precision

There are a lot of variables in the operating room. A complete set of PSI Instrument Guides allows you to replicate your pre-operative plan with confidence.

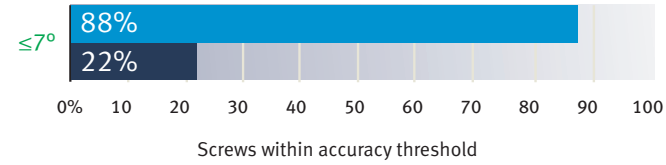
PSI Instrument Guides:

- PSI Pin Guide offers a 2-pin solution to assist in precise implant position, version and inclination
- PSI Ream Guide informs reaming angle and depth to enable preservation of cortical support bone
- PSI Roll Guide details the planned implant rotation orientation and screw entry points
- PSI Screw Guide provides the drill direction to help achieve your planned screw length and placement

Accuracy of Baseplate Version & Inclination[1]



Accuracy of Screw Trajectory[1]



PSI Non-PSI

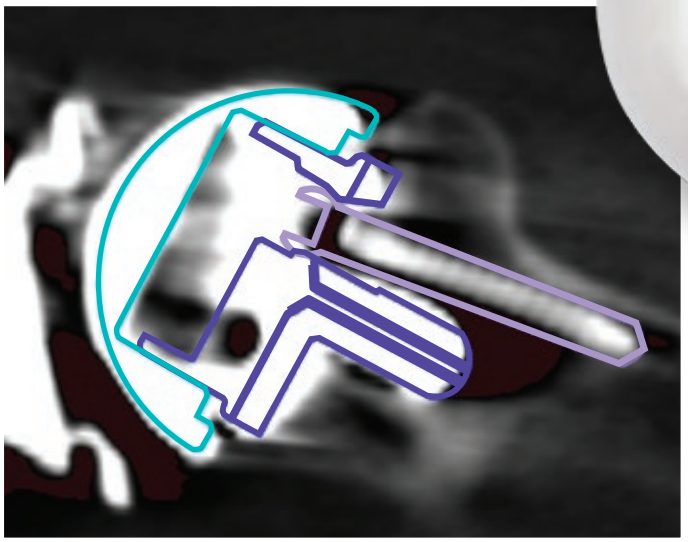
PSI Roll Guide

Performance

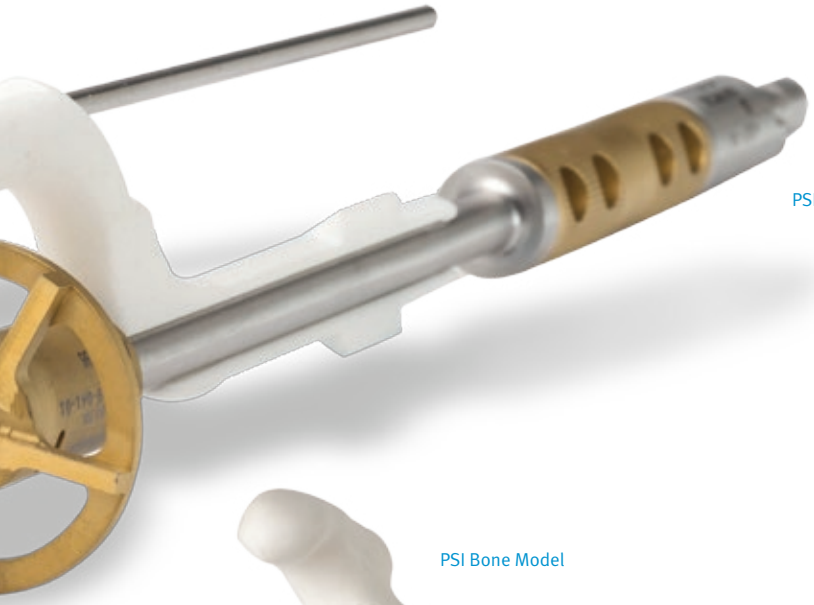
In Reverse Shoulder Arthroplasty, positioning and fixation on the glenoid side are critical to implant longevity.

- Reduced variability in implant inclination and version[1, 2] allows you to optimize joint biomechanics
- Optimized screw length and trajectory enables maximization of initial mechanical fixation[3,4]
- Enhanced long term stability by the *Trabecular Metal*, which supports biological in-growth and vascularization[5-8]

Trabecular Metal Reverse Base Plate with 30mm post size; also available in 15mm and 25mm posts.



Post Operative CT scan example showing superior screw placement achieved relative to planned position using *Zimmer* PSI.



PSI Ream Guide

PSI Bone Model

PSI Pin Guide

PSI Glenoid Bone Model

A physical model of your patient's unique glenoid provides multiple visual checkpoints for intra-operative confirmation of adherence to your pre-operative plan.

- Provides visual reference to confirm complete glenoid exposure
- Offers tactile reference to confirm PSI Pin Guide fits as planned
- Provides positioning confirmation for the two reference pins, which set up the rest of the procedure

REFERENCES:

1. Studies on Zimmer file - TR-TG120709-01 Warsaw Cadaveric Lab 2012 and TR-FB121026-01 Chicago PSI Shoulder Cadaver Lab Nov 2012. See Note 2. **2.** Hendel MD, et al. Comparison of patient-specific instruments with standard surgical instruments in determining glenoid component position. *JBJS* 2012; 94:2167-75. **3.** Hopkins AR, et al. Fixation of the reversed shoulder prosthesis. *JSES* 2008; 17: 974-980. **4.** Parsons BO, et al. Optimal rotation and screw positioning for initial glenosphere baseplate fixation in reverse shoulder arthroplasty. *JSES* 2009; 18: 886-891. **5.** Bobyn JD, et al. Characteristics of bone ingrowth and interface mechanics of a new porous tantalum biomaterial. *JBJS* 1999; 81-B: 907-914. **6.** Bobyn JD, et al. Characterization of a new porous tantalum biomaterial for reconstructive orthopaedics. Scientific Exhibition: 66th Annual Meeting of the American Academy of Orthopaedic Surgeons; 1999; Anaheim, CA. **7.** Zhang Y, et al., Interfacial frictional behavior: cancellous bone, cortical bone, and a novel porous tantalum biomaterial. *J Musculoskeletal Res*. 1999; 3(4): 245-251. **8.** Medlin DJ, et al. Metallurgical characterization of a porous tantalum biomaterial (*Trabecular Metal* Material) for orthopaedic implant applications. Presentation, Materials & Processes for Medical Devices Conference, Anaheim, CA, 2003.

NOTE:

1. *Zimmer* PSI Shoulder is compatible with both the *Trabecular Metal* Reverse Shoulder system and the Anatomic Inverse / Reverse shoulder system when used in conjunction with the *Trabecular Metal* Reverse Glenoid Baseplate. **2.** Aggregate analysis of cadaver studies (1) included 29 shoulders using Patient Specific Instrumentation. The Shoulder Planner was used in all cases. The accuracy is defined as the absolute difference in angle between pre-operative planning and post-operative CT measurements.

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