



**Zimmer®
Trabecular Metal™
Humeral Stem**



Enabling fracture healing



Simplify the puzzle

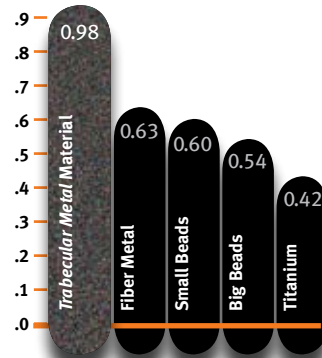
The Zimmer® *Trabecular Metal*™ Humeral Stem provides initial stability and is designed to provide long-term fixation, enabling the healing of challenging fracture cases.

Stable initial tuberosity fixation

- Exceptional initial fixation¹
- High coefficient of friction between *Trabecular Metal* Material and cancellous bone

Coefficient of Friction

High Friction Implant Stability



Trabecular Metal Technology construct provides better friction against bone when compared to alternative technologies, which increases implant stability.^{1,2}

0.98
Coefficient of Friction

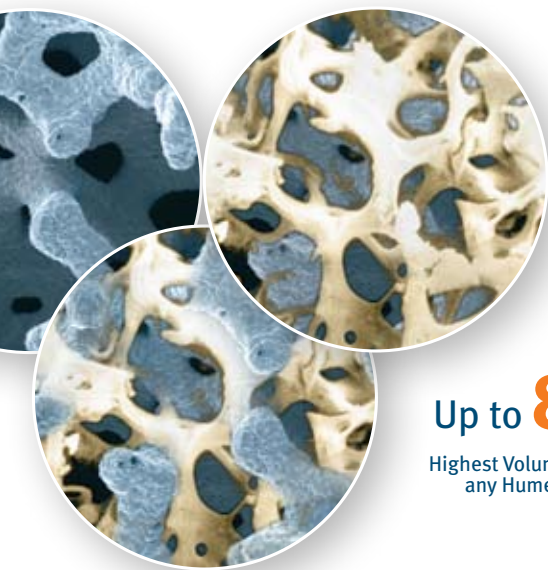
For non-machined surfaces.
Reduces risk of early implant motion¹





Trabecular Metal Material supports biologic ingrowth to facilitate fracture healing

- Enables vascularization at the fracture site
- Maximizes bone and soft-tissue ingrowth^{2,3}
- More normal bone remodeling



Flexibility to reconstruct the anatomical center of rotation and restore normal joint kinematics

- Multiple neck angles and head options to optimize anatomical reconstruction in 95% of patients⁵
- Instrumentation ensures proper stem height and version



Up to **80%**

Highest Volume of Porosity of any Humeral Stem^{2,3,4}



**Stable initial
tuberosity fixation**

***Trabecular Metal* Material
supports biologic ingrowth to
facilitate fracture healing**

**Flexibility to reconstruct the
anatomical center of rotation
and restore normal joint
kinematics**

References

1. Zhang, Y., et al., Interfacial Frictional Behavior: Cancellous Bone, Cortical Bone, and a Novel Porous Tantalum Biomaterial, *Journal of Musculoskeletal Research*, Vol. 3, No. 4: 245-251, 1999
2. Levine, B., et al., A New Era in Porous Metals: Applications in Orthopaedics, *Advanced Engineering Materials*, Vol 10 No 9, page 788-792, 2008
3. Bobyn JD, Hacking SA, Chan SP, et al. Characterization of new porous tantalum biomaterial for reconstructive orthopaedics. Scientific Exhibition: 66th Annual Meeting of the American Academy of Orthopaedic Surgeons; 1999; Anaheim, CA.)
4. Barbella, M., Materials marvels: titanium is a top choice for implants, but other materials are gaining popularity, *Orthopedic Design & Technology*, September 1, 2008
5. Pearl ML, et al. Geometric variables in anatomic replacement of the proximal humerus: How much prosthetic geometry is necessary? *J Shoulder Elbow Surg*, 2009; 18: 366-370.

Contact your Zimmer representative or visit us at www.zimmer.com



+H124974309009001/\$090803G09G

97-4309-009-00 0906-E01 2.5ML Printed in the USA ©2009 Zimmer, Inc.