



Trabecular Metal™ Glenoid



The Natural Solution to Glenoid Fixation

Designed for strength, stability and longevity.

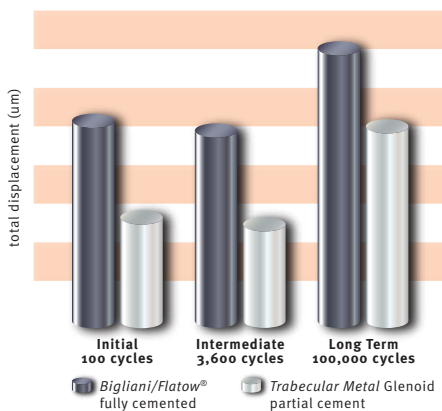
Zimmer offers surgeons the first glenoid component to hold the hope of enduring fixation. The high friction coefficient of *Trabecular Metal*™ Material plus strength and flexibility provide initial stability. *Trabecular Metal* Material's osteoconductive properties support vascularization¹ that allows for more normal bone formation and maintenance.



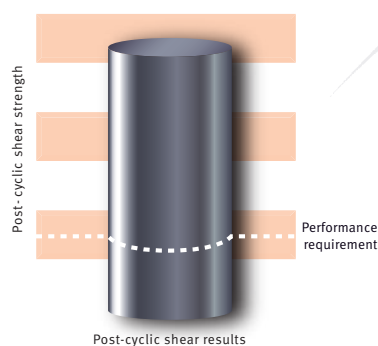
Strength and stability designed to facilitate long-term survivorship

Initial stability comparable to an all-polyethylene cemented glenoid

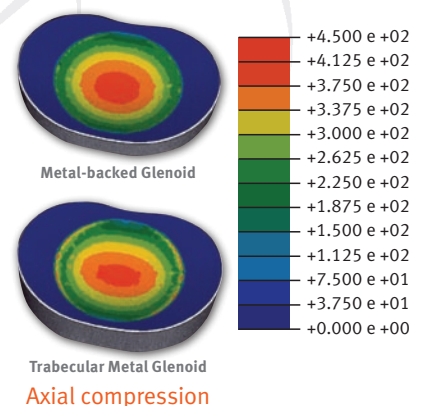
Strength and flexibility to distribute contact forces



Stability test results



Strength result was 3.5 times the test benchmark.²



Finite element analysis shows that contact stresses

Combines the proven heritage of the *Bigliani/Flatow* shoulder system with the innovation of *Trabecular Metal* Material

Compatible with both *Bigliani/Flatow* and *Trabecular Metal* Humeral stems and heads

Variable conformity of glenoid articular surface:

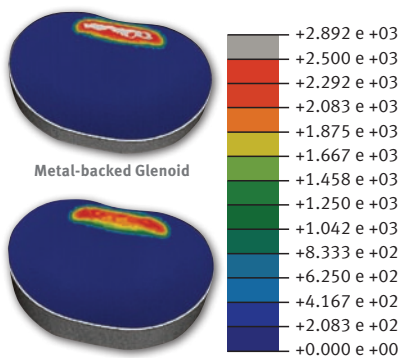
- Reduces the likelihood of edge loading (“rocking horse” effect) and polyethylene wear
- Joint stability through range of motion

The variable-conformity articular surface “behaves similarly to the natural joint” and may “control rim loading under eccentric loads when compared with a conforming glenoid.”³

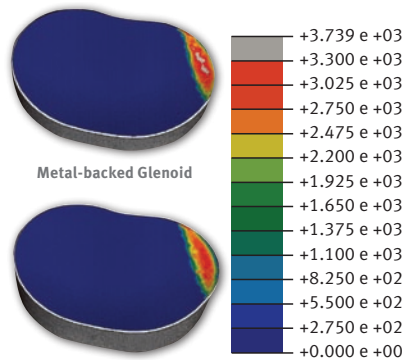


Trabecular Metal
Humeral Stem

Bigliani/Flatow
Shoulder System



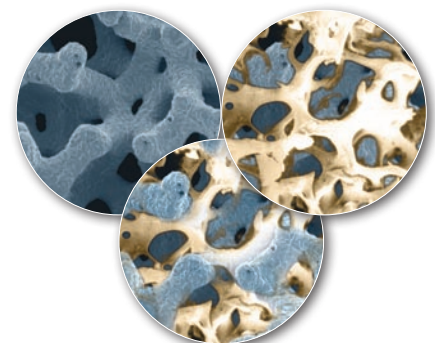
A-P translation



90° abduction

Biologic in-growth achieved through *Trabecular Metal* Material properties:

- Vascularization
- Osteoconductivity
- Promotion of more normal glenoid bone biology



Trabecular Metal properties include up to 80% porosity and completely open pores that promote biologic ingrowth.

of the Trabecular Metal Glenoid were equivalent or lower than a solid metal-backed glenoid.⁴

350%



**Strength and
stability designed
to facilitate long-term survivorship**

**Combines the proven heritage of the
Bigliani/Flatow shoulder system with
the innovation of Trabecular Metal Material**

1. Karageorgion, V. and Kablan, D.
"Porosity of 3D Biomaterial Scaffolds and Osteogenesis"
Biomaterials, 26(27):5474-91, September 2005
2. Mroczkowski, M.
"Performance Evaluation of the Trabecular Metal Glenoid" 2009.
3. Wang et al. Biomechanical evaluation of a novel glenoid design
in total shoulder arthroplasty.
J Shoulder Elbow Surg 2005;14:129S-140S.
4. Data on file at Zimmer.

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