

**Regenerex<sup>®</sup>** Porous Titanium Construct

**BIOMET<sup>®</sup>**

Knees • Hips • Extremities • Cement and Accessories • PMI<sup>®</sup> • Trauma • Technology

One Surgeon. One Patient.®

**Over 1 million times per year, Biomet helps one surgeon provide personalized care to one patient.**

The science and art of medical care is to provide the right solution for each individual patient. This requires clinical mastery, a human connection between the surgeon and the patient, and the right tools for each situation.

At Biomet, we strive to view our work through the eyes of one surgeon and one patient. We treat every solution we provide as if it's meant for a family member.

Our approach to innovation creates real solutions that assist each surgeon in the delivery of durable personalized care to each patient, whether that solution requires a minimally invasive surgical technique, advanced biomaterials or a patient-matched implant.

**When one surgeon connects with one patient to provide personalized care, the promise of medicine is fulfilled.**



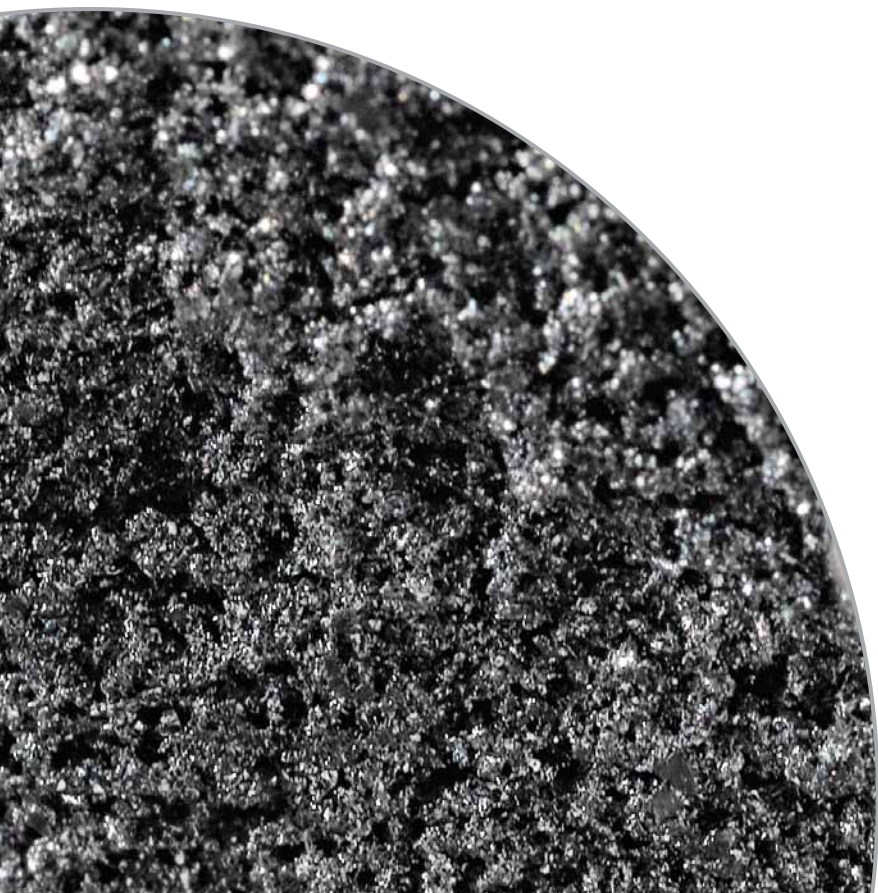
# Regenerex<sup>®</sup> Porous Titanium Construct

Clinically proven material<sup>1</sup>, advanced porous technology

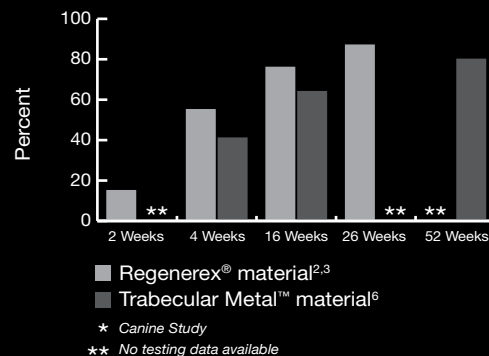
Regenerex<sup>®</sup> Porous Titanium Construct unites the proven clinical history of titanium<sup>1</sup> with an enhanced interconnecting pore structure, resulting in a revolutionary material that provides for biologic fixation.<sup>2,3</sup>

## Regenerex<sup>®</sup> material provides for:

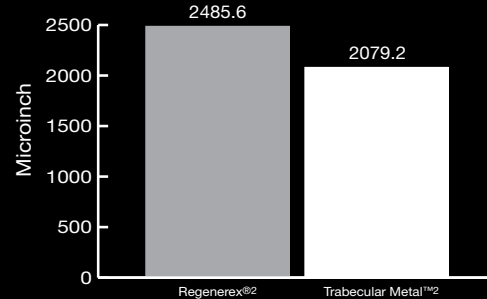
- Average porosity of 67 percent<sup>2</sup>
- Average pore size of 300 microns<sup>2</sup>
- Fixation as early as two weeks in canine studies<sup>2,3</sup>
- Compressive modulus close to that of cancellous bone<sup>2,4-5</sup>
- High compressive strength<sup>2</sup>



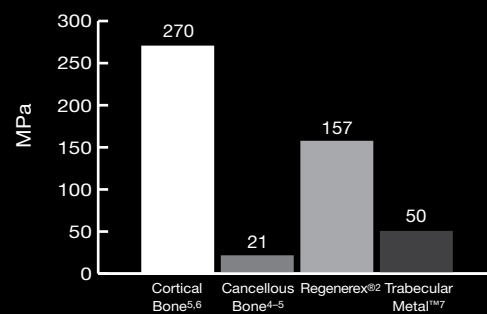
**Biologic Fixation\***  
(Into porous structure)



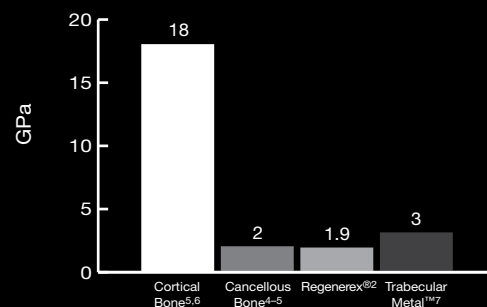
**Roughness (Ra)**



**Compressive Strength**



**Compressive Modulus**



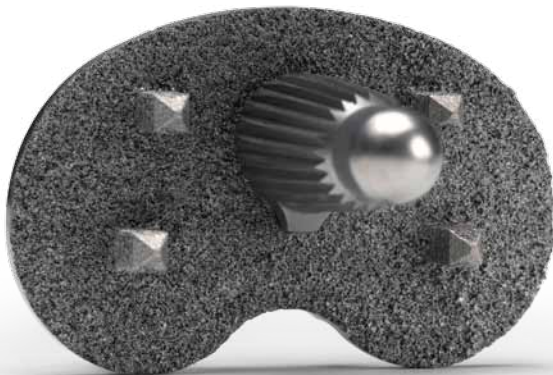
# Regenerex® Porous Titanium Construct

Clinically proven material<sup>1</sup>,  
advanced porous technology

Regenerex® Porous Titanium Construct is a revolutionary technology that may be used as a stand-alone material in certain applications, such as acetabular augments and may also be bonded to solid titanium for more complex designs, such as a modular tibial tray. Regenerex® material can be used in multiple applications, including knee, hip and shoulder reconstruction.

While each product is unique in its application, each utilizes the same Regenerex® technology that has shown superior bony fixation rates as compared to other commercially available materials in similar canine studies.<sup>2,3</sup>

Regenerex® Primary Tibial Tray



Regenerex® RingLoc®+ Modular Acetabular System



Regenerex® Modular Hybrid® Glenoid  
Central Peg

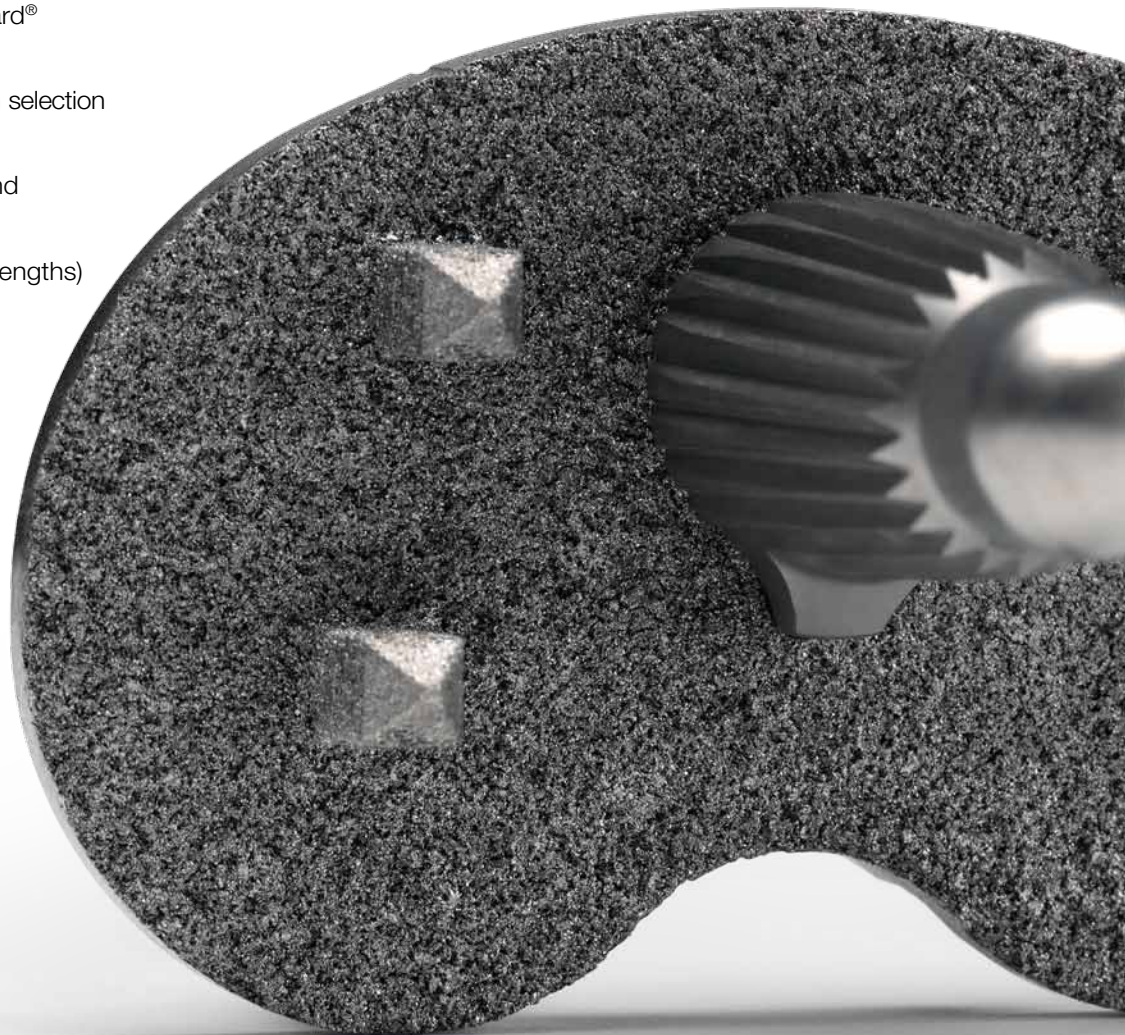




# Regenerex® Porous Titanium Construct in the Knee

The Regenerex® Primary Tibial Tray combines advanced Regenerex® technology with a clinically proven design<sup>8</sup> to allow for biologic fixation into the Regenerex® construct to provide for rigid fixation.

- Four square, non-porous peripheral pegs designed to engage firm cancellous bone for initial fixation<sup>2</sup>
- Absence of fixation screws eliminates osteolysis pathways<sup>9</sup>
- Compatible with the four primary articulations within the Vanguard® Complete Knee System
- Provides for intraoperative stem selection to match specific patient needs
  - Splined, tapered stem (40 and 80 mm lengths)
  - Cruciate fin (40 and 80 mm lengths)
  - I-beam stem (40 mm length)
  - Taper cap (20 mm length)



## The Vanguard® Complete Knee System

The Vanguard® Complete Knee System's PPS® femur, Regenerex® Primary Tibial Tray and Regenerex® Series-A Patella, provides increased options for cementless arthroplasty and personalized patient care.

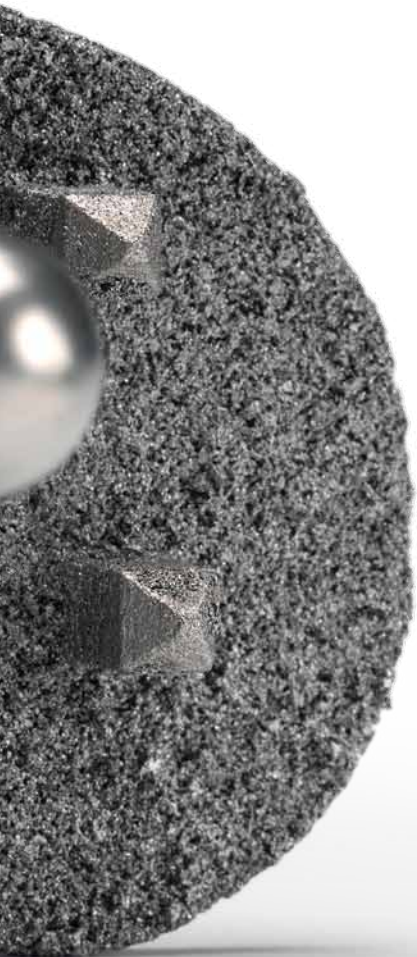
### Regenerex® Series-A Patella

- Three-peg design
- Increased inner polyethylene thickness while maintaining overall true dome patella geometry
- Maintains polyethylene thickness throughout range of sizes
- Maintains consistency of peg location throughout range of sizes



### Regenerex® Cone Augments

- Buildable components provide for intraoperative flexibility
- Address multiple bone voids
- Designed for use with the Vanguard® SSK Revision System and OSS™ Orthopaedic Salvage System





# Regenerex® Porous Titanium Construct in the Hip

The introduction of the Regenerex® RingLoc®+ Modular Acetabular System embraces the long-term clinical success of titanium in total hip reconstruction and builds on Biomet's industry-leading position for the use of titanium as the material of choice for this application. The system allows surgeons to address multiple patient types and includes implants designed for routine primary total hips to complex acetabular reconstruction.

- Unparalleled RingLoc® locking technology achieves maximum push-out and lever-out strength with lowest micromotion of independently tested competitive systems<sup>10-13</sup>
- Un-lock/re-lock mechanism allows for easy disassembly without damaging the liner\*
- Extended rim to help prevent soft tissue entrapment between liner and shell
- Available in multiple cup configurations to address individual patient needs
  - Solid
  - Limited hole
  - Multi-hole







### Regenerex® Acetabular Augments

- Designed to help maximize the stability of acetabular components
- Available in 12 sizes, each with multiple holes to maximize intraoperative fixation
- Unique design offers the option to stack augments in the most complex reconstruction cases
- Can be used in conjunction with any Biomet® acetabular component



### Regenerex® Revision Acetabular Shells

- Designed to accept a cemented all-polyethylene cup
- A 5 mm shell wall of Regenerex® material is designed to minimize stiffness and maximize bone fixation potential
- Shells accommodate up to 15, 6.5 mm bone screws to aid in fixation
- Shells are available from 54 to 76 mm in 2 mm increments

## The Regenerex® RingLoc®+ Modular Acetabular System

The Regenerex® RingLoc®+ Modular Acetabular System combines the proven RingLoc® shell design with next generation cup features and Regenerex® Porous Titanium Construct to achieve an optimal combination of strength, stability and intraoperative flexibility. This system can be used in combination with any RingLoc® liner, including E1® liners and the Freedom® Constrained System.



# Regenerex® Porous Titanium Construct in the Shoulder

The Regenerex® Modular Hybrid® Glenoid Central Peg, designed for use with the Comprehensive® Shoulder System Modular Hybrid® Glenoid base, is a revolutionary fixation option for the needs of an expanding total shoulder replacement market.

- Titanium central core for strength and modularity
- Optimal pore size allows for biologic fixation
- Peg design provides for additional resistance to shear and axial forces on the face of the glenoid<sup>2,14</sup>





## The Comprehensive® Shoulder System

The Comprehensive® Shoulder System is a seamless platform offering designed for hemi, total (shown below) or reverse shoulder arthroplasty that features unmatched stem options, advanced glenoid fixation and streamlined instrumentation, providing intraoperative flexibility and the ease of convertibility during and after surgery.





## References

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