

# G7 ACETABULAR SYSTEM



beautifully  
efficient.



**BIOMET**

# HERITAGE MEETS MODERN DESIGN

## SIMPLICITY, EFFICIENCY AND PERFORMANCE

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The G7 System is a multi-bearing acetabular platform delivering simplicity, efficiency and performance to optimize the operating room experience. With the latest technological developments in implant and instrumentation design, it offers a wide range of acetabular shell options, clinically proven fixation,<sup>1-4</sup> and advanced bearing technologies within a simple, elegant and highly flexible instrumentation platform.

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## CLINICALLY PROVEN HERITAGE

Biomet continues to expand upon its rich history of clinically successful acetabular products. The clinical experience with RingLoc and Exceed\* acetabular systems, E1 Antioxidant Infused Technology and PPS coating has provided the foundation for the development of the G7 System.

- 98%** survivorship at 15 years<sup>5</sup> - **RingLoc** Acetabular System
- 98%** survivorship at 5 years<sup>6</sup> - **Exceed ABT** Acetabular System\*
- 100%** survivorship at 3 years<sup>7,8</sup> - **E1** Antioxidant Infused Technology
- 99%** survivorship at 3 years<sup>9</sup> - **ArComXL** Polyethylene
- 99%** survivorship at 26 years<sup>10</sup> - **PPS** Porous Plasma Spray Coating

\*Not available for sale in the US.

# ENGINEERED FOR ULTIMATE PERFORMANCE

## Patent Pending Color-Coded Shell

corresponds with instrumentation and package labels to create an efficient and accurate OR environment\*

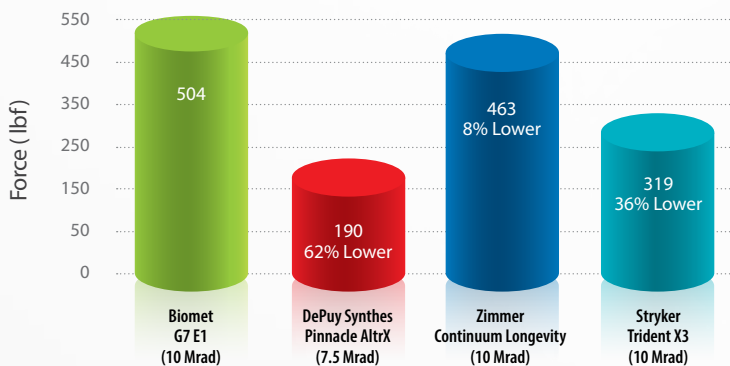
**Optimized head to shell ratio**  
facilitates the use of a 36 mm head in a 50 mm shell

## Multi-bearing Locking Mechanisms

accommodate multiple polyethylene configuration options, including Freedom Constrained Liners, for a wide spectrum of acetabular reconstructive needs

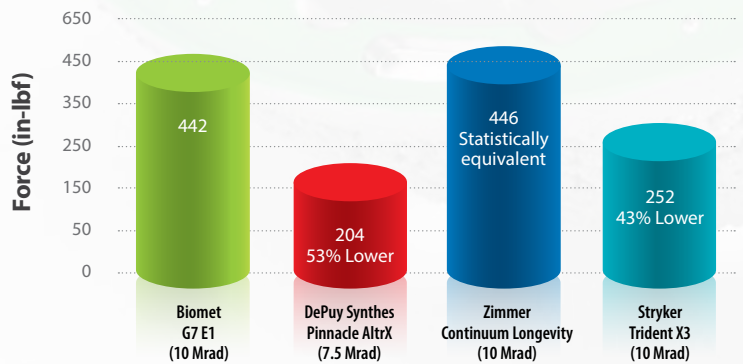


### Push Out Strength<sup>11</sup>



Push Out: Axial force required to dislodge a polyethylene liner from an acetabular shell  
All tests were performed with 54 mm acetabular shells and 32 mm acetabular liners

### Lever Out Strength<sup>11</sup>



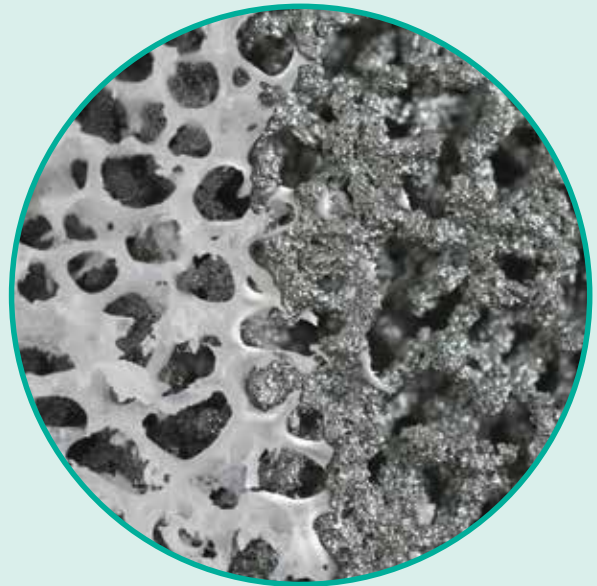
Lever Out: Disassembly force required to dislodge a polyethylene liner from an acetabular shell  
All tests were performed with 54 mm acetabular shells and 32 mm acetabular liners

\* Primary identification should be made using size and letter designations.

# OSSEOTI POROUS METAL TECHNOLOGY

## INSPIRED BY BONE

OsseoTi Porous Metal is created through the use of a proprietary additive manufacturing process, generating a porous material designed with a structure that directly mimics human cancellous bone. Clinically proven titanium (Ti6Al4V) material is used to build a fully integrated part with solid and porous regions while maintaining consistent porosity and strength to facilitate tissue ingrowth and implant stability.<sup>12</sup> When applied to the G7 system, this enables surgeons to realize the benefits of highly porous technology without compromising head to shell ratio.



- Unique porous architecture has demonstrated excellent integration with host bone as early as **4 weeks** in an animal study<sup>12\*</sup>
- Porosity of approximately **70%** directly mimics the structure of human cancellous bone
- Average **pore size of 475** microns facilitates cell migration, vascularization and bone ingrowth<sup>12\*</sup>
- Material strength between that of cancellous and cortical bone enhances biological fixation and loading of surrounding bone<sup>9</sup>

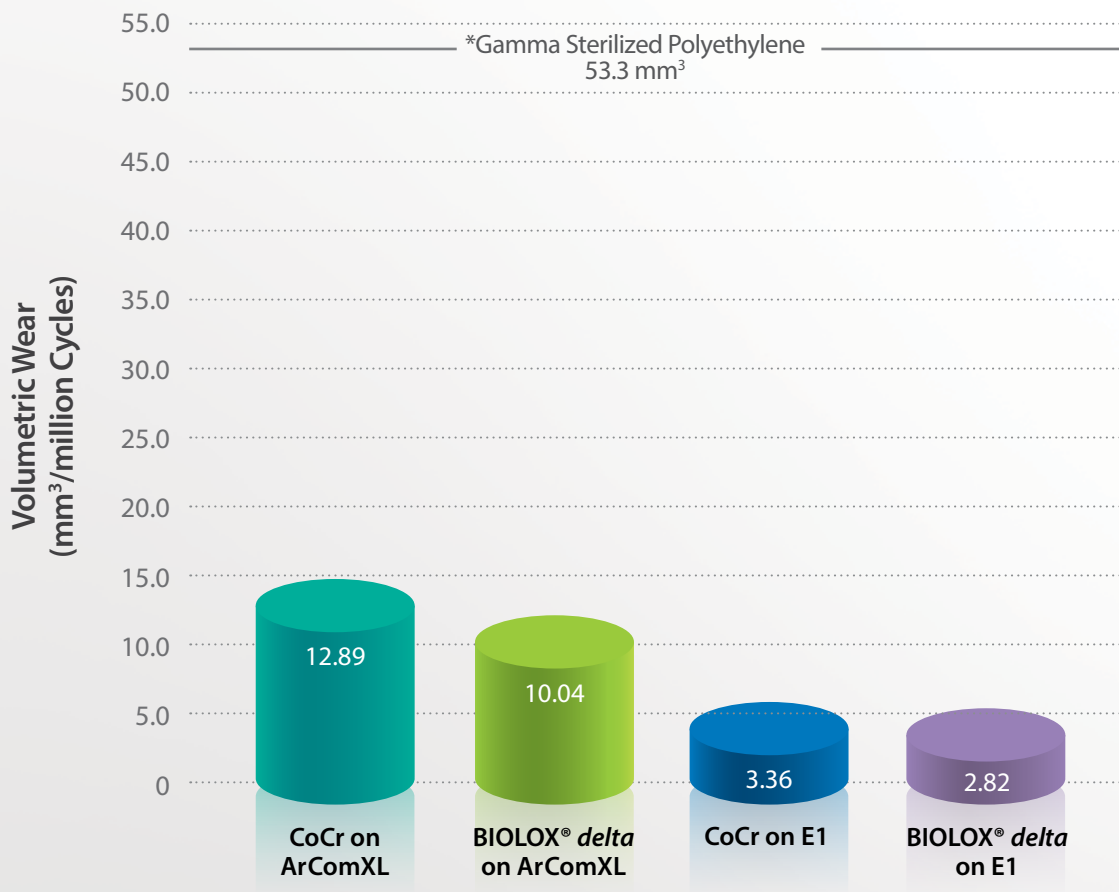
\* Animal studies are not necessarily indicative of clinical performance.

# ADVANCED TECHNOLOGY FOR INCREASED DEMANDS

The G7 Acetabular System offers a wide range of bearing options, allowing each surgeon to choose what is right for each patient.

## POLYETHYLENE WEAR<sup>9</sup>

5 million cycles on a hip simulator



<sup>9</sup>Gamma Sterilized polyethylene test performed with 28 mm bearings. April, 2007  
All other tests were performed with 62 mm acetabular shells and 44 mm bearings. Sept., 2012





### E1 ANTIOXIDANT INFUSED TECHNOLOGY

#### The Protection of Vitamin E

E1 is the only antioxidant infused bearing to use a proprietary diffusion process to maximize wear resistance,<sup>9</sup> strength and oxidative resistance.



### E1 FREEDOM CONSTRAINED LINER

#### High Constraint, Optimal Range of Motion

The Freedom Constrained liner offers both constraint and optimized range of motion. The pre-assembled constraining ring maximizes lever out force of the head and allows for easy assembly *in-situ*.<sup>13,14</sup>



### ARCOMXL HIGHLY CROSSLINKED POLYETHYLENE

#### Low Wear, High Strength, Oxidative Stability

Utilizing a patented radiation crosslinking and free radical processing method, ArComXL polyethylene offers low wear, high strength, and oxidative stability.<sup>9</sup>



# ORGANIZED

## FOR EFFICIENCY

Streamlining total hip replacement goes beyond implant design and bearing options.

Full optimization of implant and instrument delivery systems is required to improve flow and performance from implantation through sterile processing. The G7 platform introduces a number of instrumentation advancements coupled with Biomet's unique color-coding system in order to:

- › Reduce the need for a large number of trays and instruments in the OR
- › Customize instrumentation based on patient anatomy or surgeon preference
- › Simplify implant and instrument selection during surgery



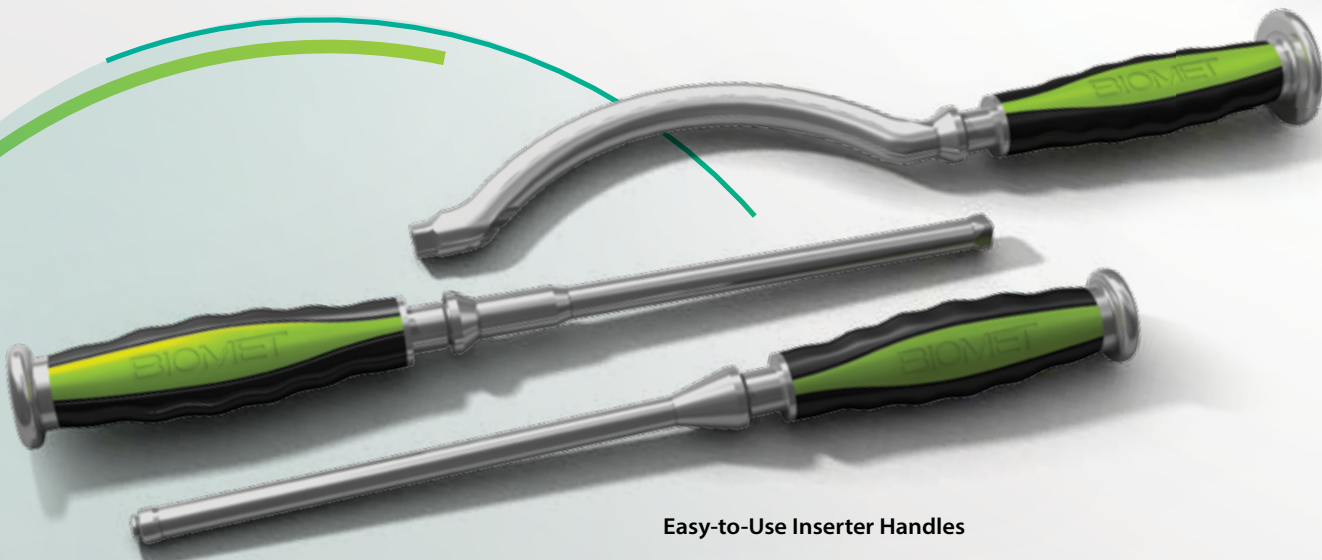
Shell Trial



Shell Packaging



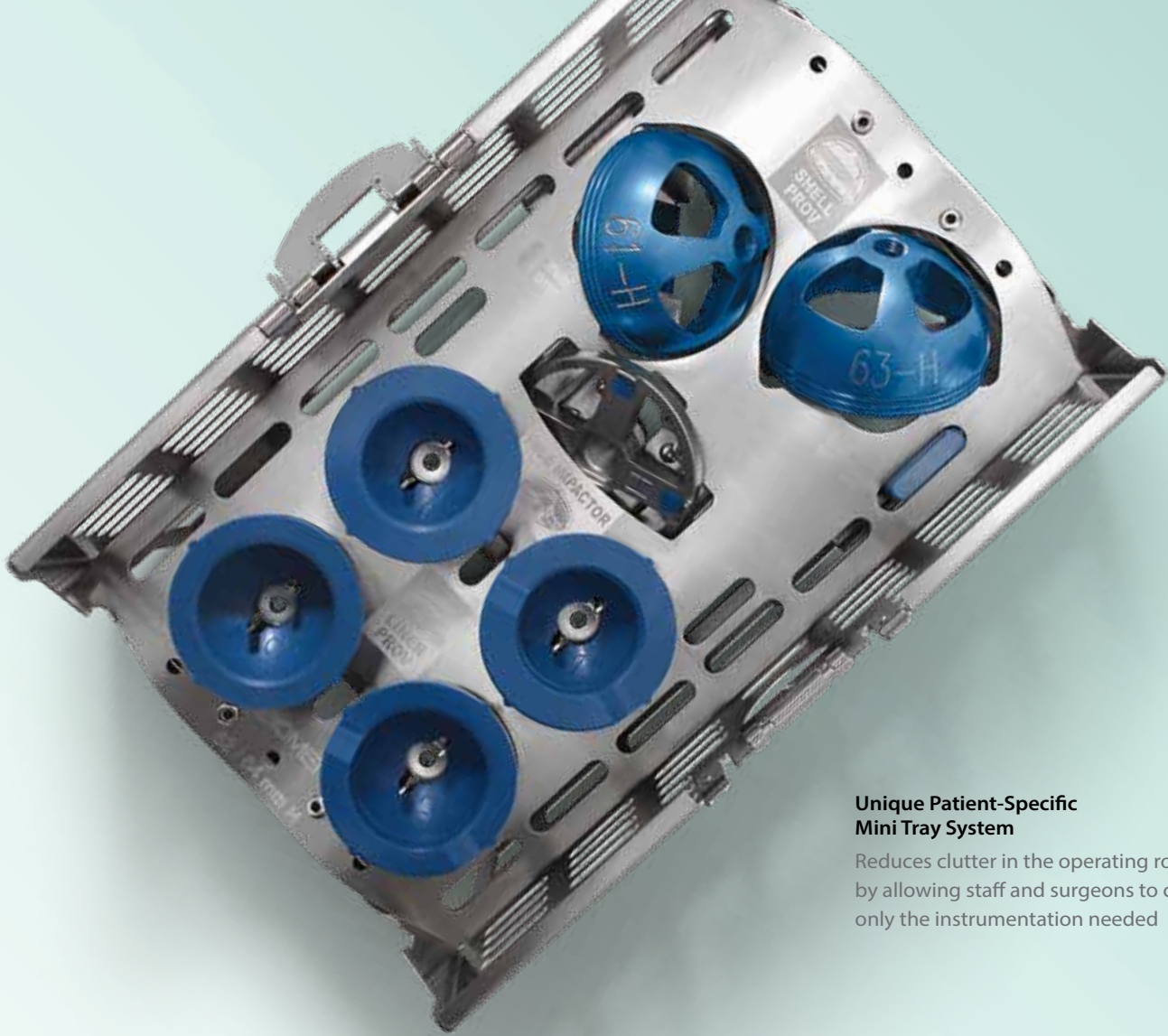
Shell Implant



### Easy-to-Use Inserter Handles

- › Transmit tactile feedback during cup insertion
- › Provide maximum control with ergonomic, comfortably-sized silicone grips
- › Offer optimal overall handle balance to minimize effect on cup placement





**Unique Patient-Specific Mini Tray System**

Reduces clutter in the operating room by allowing staff and surgeons to choose only the instrumentation needed



Face Plate Impactor



Liner Trial



Liner Packaging

# ADVANCING

## TOTAL HIP REPLACEMENT

From simple primary to complex revision arthroplasty, Biomet offers a comprehensive portfolio of total hip constructs that combine rich clinical heritage with modern technological advancements. Each of these is designed to address the distinct needs of individual patients, while simplifying surgical workflow.



# G7 SHELL PORTFOLIO

G7 shells are available in limited and multi hole designs for use in both primary and revision total hip arthroplasty. Holes are clustered to allow for placement of screws in the strongest portion of pelvic bone. Screw holes are pre-plugged in limited hole shells to avoid the migration of polyethylene debris that could potentially cause osteolysis. The plugs can be removed if supplemental fixation is desired.



## PPS Limited Hole Acetabular Shell

42–68 mm (3 Hole, pre-plugged)



## OsseoTi Limited Hole Acetabular Shell

42–52 mm (3 Hole, pre-plugged)  
54–68 mm (4 Hole, pre-plugged)



## OsseoTi Multi Hole Acetabular Shell

42–80 mm  
(number of holes increases as shell diameter increases; will not accept screw hole plugs)



## References

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## 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.**

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