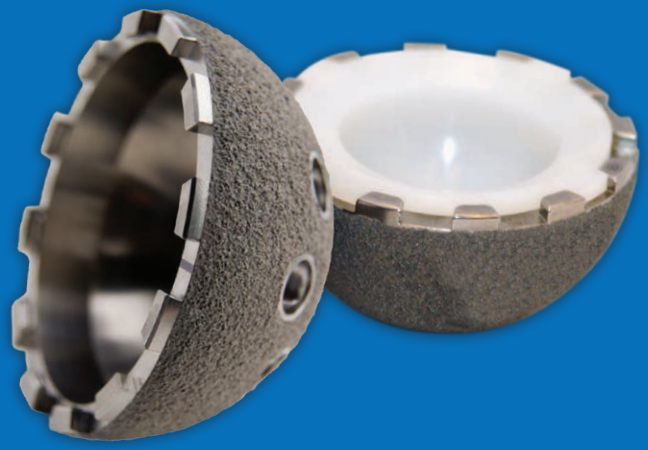
EXACTECH | HIP



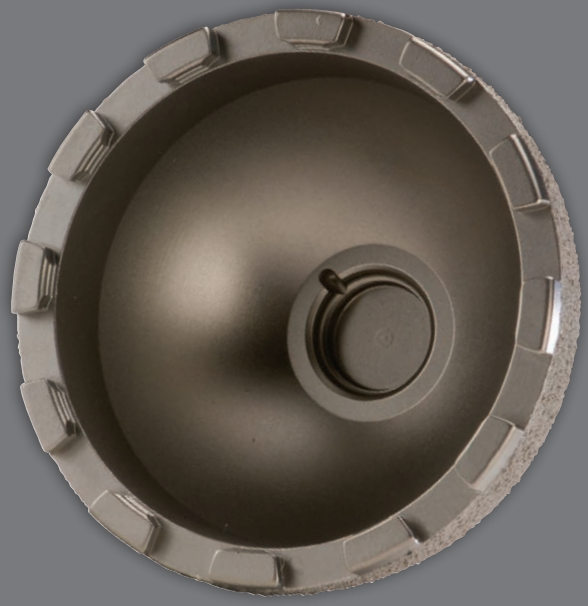
NOVATION
Comprehensive Hip System

Crown Cup

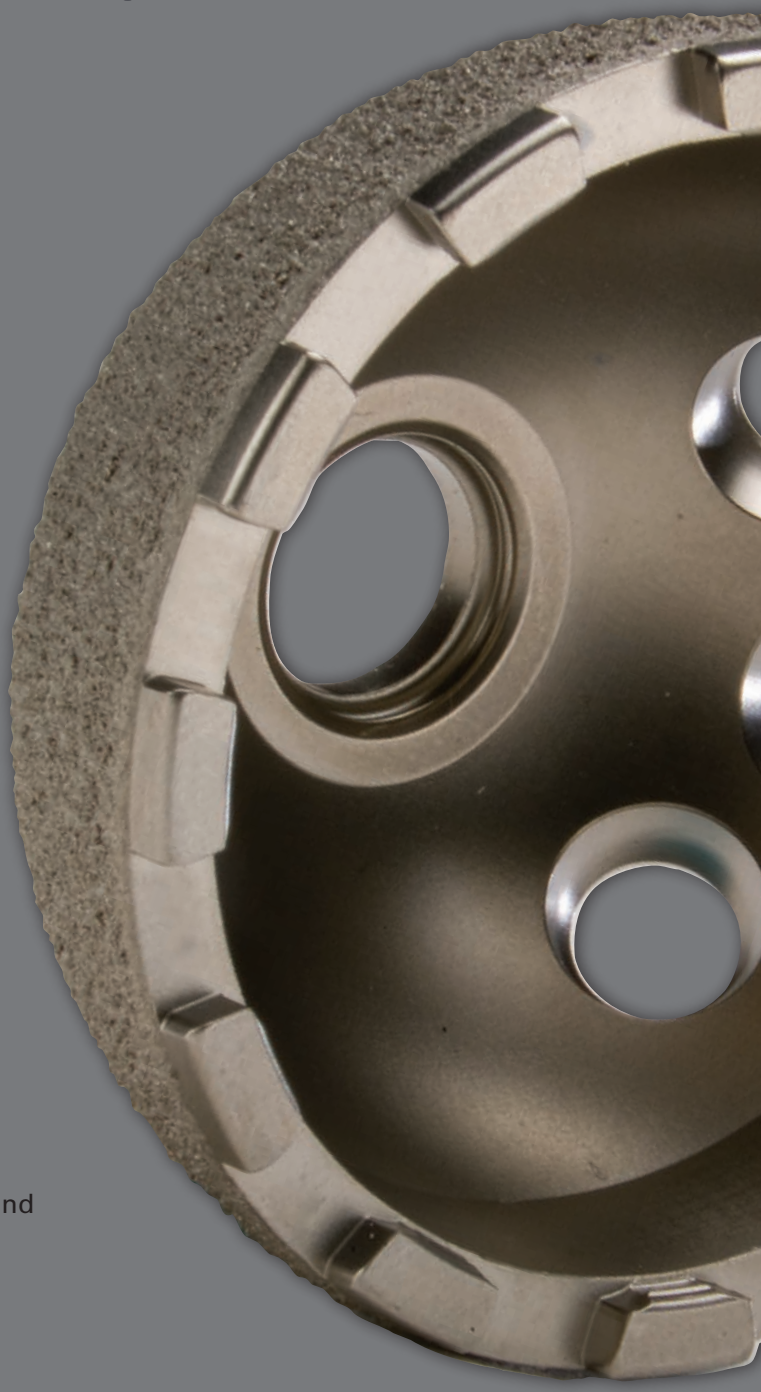
Exactech®

Renewing Innovations. *Enduring Solutions.*

Patient-Fit Options



No-Hole Cup



- **Titanium Plasma Spray Coating**
  Promotes excellent 'scratch-fit' for initial stability and proven as a bone friendly on-growth surface

- **Hemispherical-Plus Design**
  Provides for a secure press fit and maximizes range of motion

**** Shown with Rim Fixation option***

Cluster-Hole Cup

Multi-Hole Cup*

Liners

Minimum Polyethylene Thickness

Neutral Liner

Lipped Liner

10-Degree Face Changing, +5mm Lateralized Liner

+5mm Lateralized Liner

Constrained Liner

Proven Design. . . *Easy Insertion*

Design Features

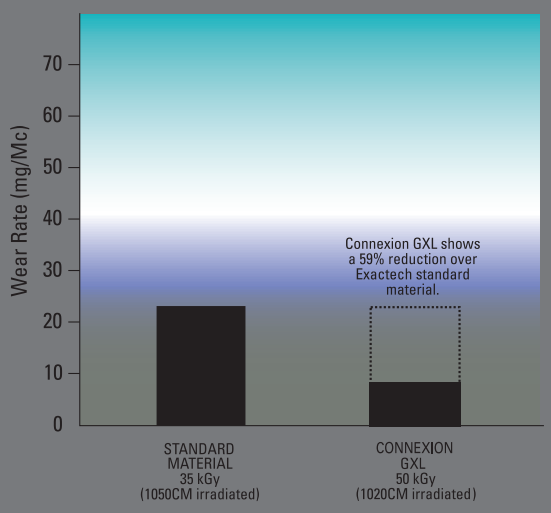
Design features work together to virtually eliminate micromotion and minimize the potential for backside wear.

You Don't Get Something for Nothing

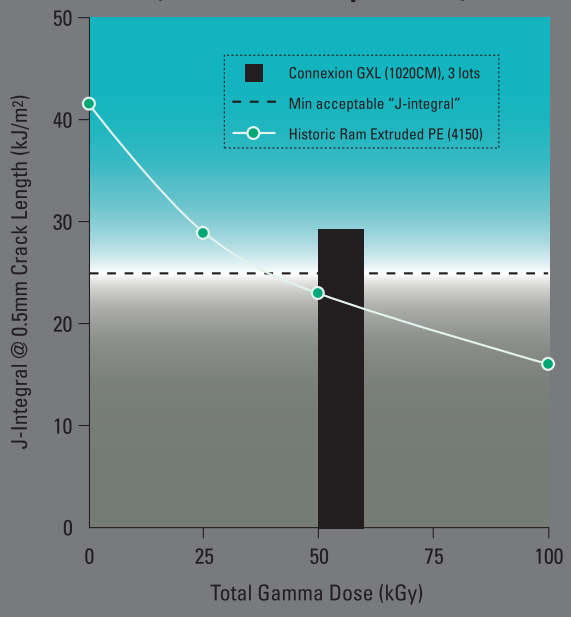
Crosslinked Technology

Many manufacturers utilize an extremely high dose of irradiation (up to 100kGy) for reducing the amount of wear debris. This, however, comes at a cost to some of the mechanical properties of this bearing surface – mainly fracture toughness. Connexion GXL® is manufactured with compression molded UHMWPE utilizing two precision split-doses of 25kGy each for a total of 50kGy. This process provides a 59 percent wear reduction over the clinically successful standard Exactech polyethylene while maintaining an acceptable level of fracture toughness.

Hip Simulator Wear Rates*



UHMWPE Fracture Toughness: 3-Point Bend "J-Integral" (10x20x90 mm Specimens)*



**J. Vernon Luck Orthopaedic Research Center – Dr. Harry McKellop; Data on file at Exactech, Inc.*

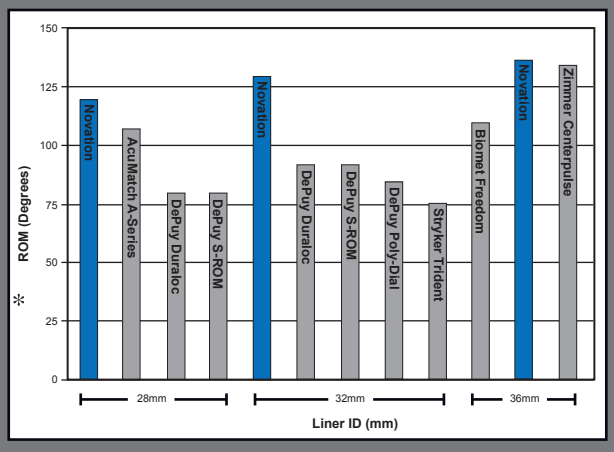
Stability . . . *in Motion*

Constrained Liner System

Increased range of motion provides stability and decreased incidence of dislocation.

Most acetabular systems on the market today have constraining mechanisms that were retrofitted to existing cup platforms. The Novation® Crown Cup® constraining mechanism was designed simultaneously to the acetabular shell allowing an optimization of both the lever-out value and the range of motion to provide an excellent option for patients that require additional constraint while maximizing the range of motion.

Four snap features actually provide mechanical fixation between the shell and constraining ring.



**These values are a mix of anatomical and click-to-click. Exactech values are unreported.*[1-7]

ROM

Providing constraint while maintaining excellent range of motion

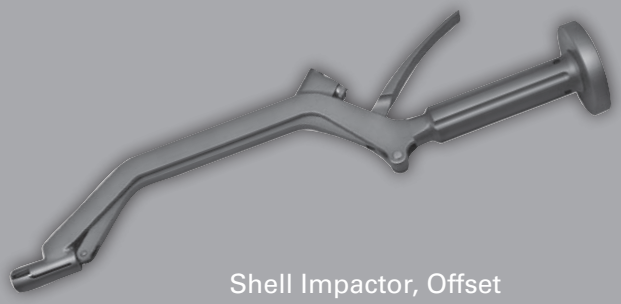
REFERENCES

1. Data on file at Exactech.
2. Biomet® Freedom® Constrained Liner Marketing Literature. http://www.biomet.com/hcp/prodpage.cfm?s=0A06&p=090E00
3. **Clyburn TA, et al.** Constrained acetabular cups: a cadaveric biomechanical evaluation. *J Arthroplasty.* 2003 Jun;18(4):466-70.
4. **Etienne G, Ragland PS, Mont MA.** Use of constrained acetabular liners in total hip arthroplasty. *Orthopedics.* 2005 May;28(5):463-9.
5. **Lombardi AV, et al.** Preliminary report on the S-ROM constraining acetabular insert: a retrospective clinical experience. *Orthopaedics.* 1991 Mar;14(3):297-303.
6. **Su EP, et al.** The Use of Constrained Acetabular Sockets. *Techniques in Orthopaedics.* 2001;16:237-44.
7. Zimmer Website: Epsilon™ Durasul® Constrained Insert. http://www.zimmer.com/z/ctl/op/global/action/1/id/8010/template/MP/prcat/M2/prod/y

Instrumentation to facilitate technique

With intuitive instrumentation, the Novation Acetabular instruments are designed to facilitate a multitude of surgical approaches and muscle-sparing techniques. For soft tissue clearance, Offset options are available for the Reamer Handle, Shell Impactor and Liner Driver. The Shell Impactor utilizes a unique, non-threaded mechanism for easy on/off attachment to the Acetabular Shell.

Chana Reamer Handle, Offset



Shell Impactor, Offset

Press-Fit Femoral Stem Options

Tapered, Splined, Element

- **Signature Neck Geometry**
  Maintained material laterally for strength and minimized material medially for increased ROM
- **Head/Neck Ratio**
  Neck cross-section is minimized, making smaller femoral heads behave as if they were larger
- **Distal Parabolic Tip**
  Provides gradual stress transfer at the distal bone interface for mitigation of thigh pain

NOVATION ACETABULAR SHELL CONFIGURATIONS

No-Hole Shell

Cluster-Hole Shell

Multi-Hole Shell (without Rim Fixation option, sizes 48-54mm)

Multi-Hole Shell (with Rim Fixation option, sizes 56-68mm)

NOVATION ACETABULAR SHELL CONFIGURATIONS

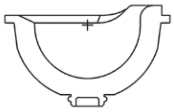
		Item Number			Item Number
Size	Group	No-Hole	Cluster-Hole	Group	Multi-Hole
48mm	1	180-00-48	180-01-48	1	180-02-48
50mm		180-00-50	180-01-50		180-02-50
52mm	2	180-00-52	180-01-52	2	180-02-52
54mm		180-00-54	180-01-54		180-02-54
56mm	3	180-00-56	180-01-56		180-03-56*
58mm		180-00-58	180-01-58		180-03-58*
60mm	4	180-00-60	180-01-60	3	180-03-60*
62mm		180-00-62	180-01-62		180-03-62*
64mm	5	180-00-64	180-01-64	4	180-03-64*
66mm		180-00-66	180-01-66		180-03-66*
68mm		180-00-68	180-01-68		180-03-68*

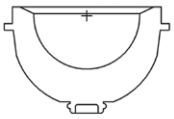
Size 40-46mm Cluster-Hole Shells and compatible liners are available as special order.
**Multi-Hole Shells, sizes 56-68mm, have Peripheral Rim Screw holes for additional fixation.*

CONSTRAINED LINER OPTIONS

Acetabular Shell Groups	Constrained Liner	Constraining Ring
Group 1	134-28-41	180-03-11
Group 2	134-32-42	180-03-12
Group 3	134-36-43	180-03-13
Group 4	134-36-44	180-03-14
Group 5	134-36-45	180-03-15

NOVATION LINER CONFIGURATIONS





	Liner Options			
Liner Grouping	Neutral	Lipped	+5mm Lateralized	10-Degree Face Changing, +5mm Lateralized
Group 1	130-28-51	132-28-51	136-28-51 or 136-32-51	138-32-51
Group 2	130-28-52 or 130-32-52	132-28-52 or 132-32-52	136-32-52 or 136-36-52	138-36-52
Group 3	130-32-53 or 130-36-53	132-32-53 or 132-36-53	136-32-53 or 136-36-53	138-36-53
Group 4	130-32-54 or 130-36-54	132-32-54 or 132-36-54	136-32-54 or 136-36-54	138-36-54
Group 5	130-32-55 or 130-36-55	132-32-55 or 132-36-55	136-32-55 or 136-36-55	138-36-55

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