

RINGLOC®
BI-POLAR
ARTICULATING HIP SYSTEM



BIOMET INC

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RingLoc® technology for maximum liner to metal shell fixation.

Biomet's proven acetabular RingLoc design continues to provide surgeons with unequaled liner stability, cup/liner congruity and maximum lever out and push out resistance. Biomet's unique RingLoc mechanism provides maximum liner to metal shell strength.

Locking mechanism provides optimal femoral head security.

Femoral head security is optimized via a uniquely engineered locking mechanism which is tightly toleranced to provide maximum pull-out strength.

The eccentric design of the Bi-Polar provides favored valgus cup positioning to minimize wear potential.

Biomet's RingLoc Bi-Polar incorporates positive eccentricity which aligns the cup with the axis of the joint reaction force to produce optimal load distribution. This also provides favored valgus cup positioning which reduces the potential for dislocation and improves the stress distribution within the acetabular cartilage.

Ease of assembly and disassembly.

Biomet's RingLoc Bi-Polar is assembled by snapping the polyethylene liner onto a femoral head and sliding the metal shell over the liner. A locking ring within the metal shell secures the assembly. A removal tool can be inserted into the periphery of the liner to remove the shell in the event disassembly is required.

The RingLoc Bi-Polar shell is manufactured from cobalt chrome alloy and is available in outer diameters of 41mm through 55mm in one millimeter increments. A 58mm shell is also available. Seven neck length options provide the surgeon with unequaled ability to restore leg length and offset. The RingLoc Bi-Polar can be assembled to any Biomet femoral component that utilizes a 28mm diameter head.



Surgical Technique – In Vivo Assembly

Step 1: Sizing the Acetabulum

Sizing is conducted utilizing provisional shells that are threaded onto the gauge handle (Fig. 1).

Step 2: Trial Reduction

Once the femoral broach/provisional is seated, the RingLoc Bi-Polar provisional components are used. The appropriate size of head/neck provisional is attached to the broach, threaded onto the provisional cup and then used as a one-piece trial component (Fig. 2).

A non-threaded head/neck provisional may also be utilized on the broach/provisional and inserted into a RingLoc Bi-Polar provisional cup which has been inserted manually into the acetabulum. Both trial options will allow evaluation of range-of-motion and joint stability, while assisting the surgeon to determine the proper neck length and cup size (Fig. 3).

Step 3: Impacting the Femoral Head

Once the femoral prosthesis is inserted, assemble the 28mm modular head (Fig. 4).

Step 4: Assembling the Polyethylene Liner

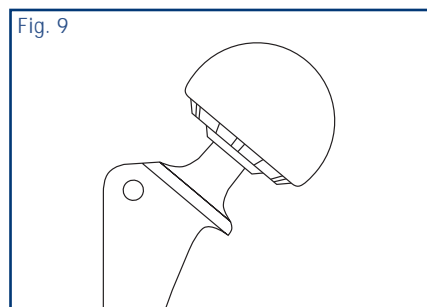
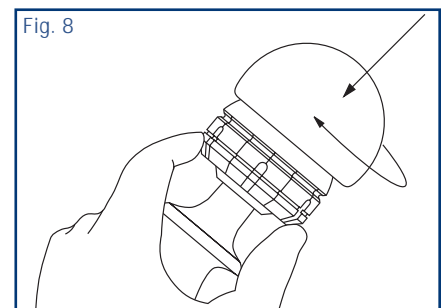
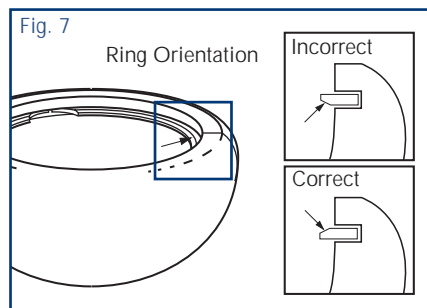
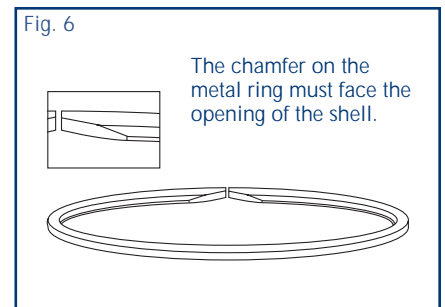
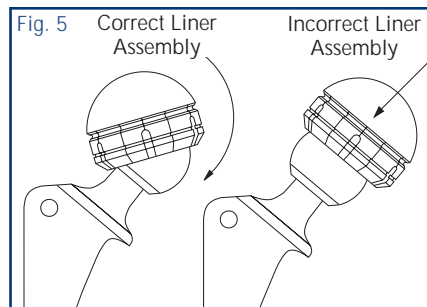
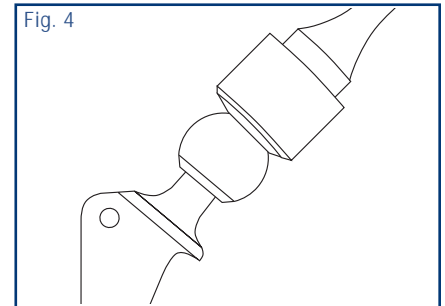
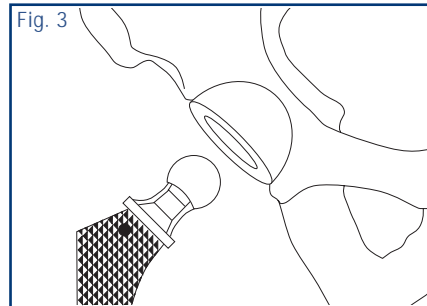
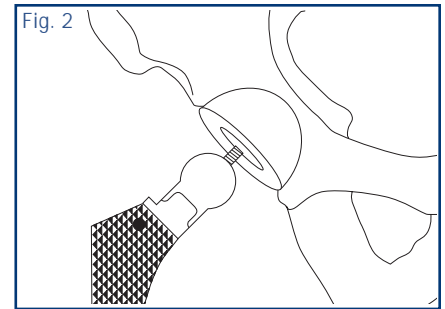
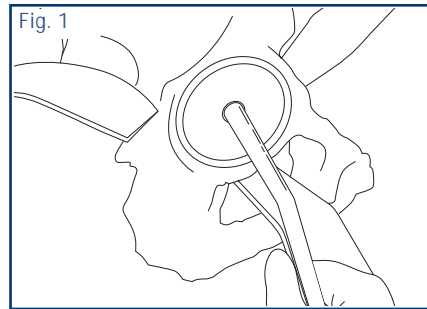
Lever the polyethylene liner onto the assembled femoral head (Fig. 5).

Step 5: Positioning the Metal Ring

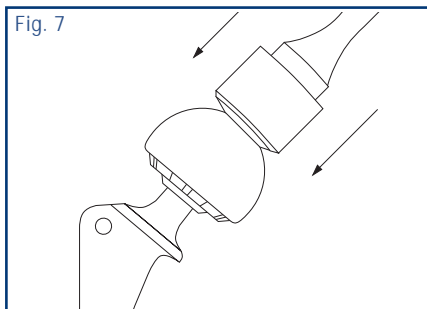
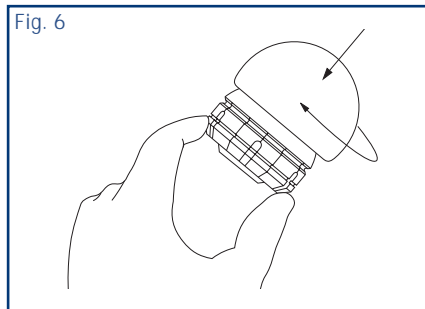
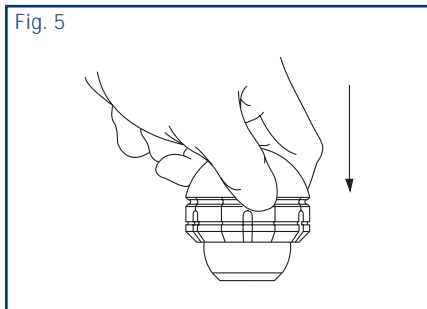
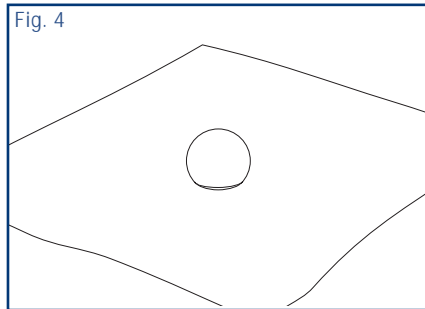
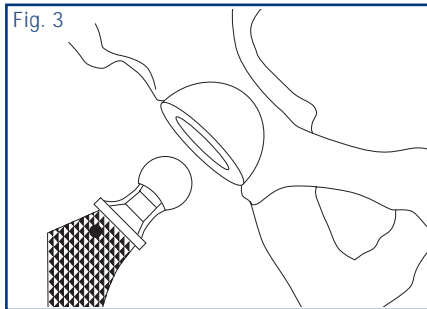
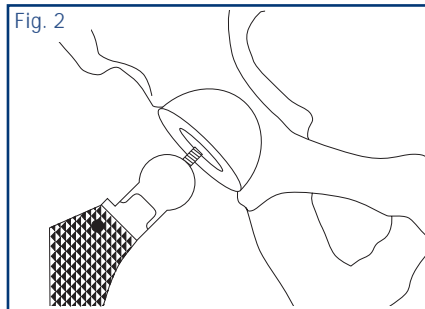
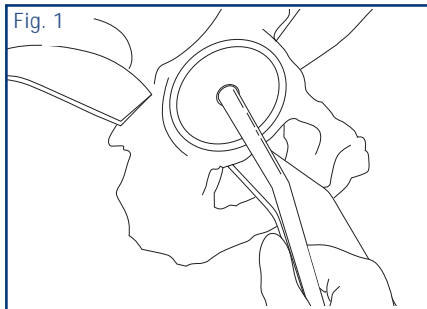
Each shell is packaged with the metal ring in position. Before assembling the metal shell on the polyethylene liner, ensure the metal ring is intact and moves in a circular motion within the groove of the metal shell. Make sure that the chamfer on the metal ring is facing toward the opening of the metal shell (Fig. 6) and is visible when looking into the shell (Fig. 7).

Step 6: Assembling the Metal Shell

Hold the liner steady against the femoral head. Twist and push the metal shell onto the liner (Fig. 8). The metal shell will be fully seated when the metal ring engages the locking groove of the polyethylene liner (Fig. 9).



Surgical Technique – Back Table Assembly



Step 1: Sizing the Acetabulum

Sizing is conducted utilizing provisional shells that are threaded onto the gauge handle (Fig. 1).

Step 2: Trial Reduction

Once the femoral broach/provisional is seated, the RingLoc® Bi-Polar provisional components are used. The appropriate size of head/neck provisional is attached to the broach, threaded onto the provisional cup and then used as a one-piece trial component (Fig. 2).

A non-threaded head/neck provisional may also be utilized on the broach/provisional and inserted into a RingLoc Bi-Polar provisional cup which has been inserted manually into the acetabulum. Both trial options will allow evaluation of range-of-motion and joint stability, while assisting the surgeon to determine the proper neck length and cup size (Fig. 3).

Step 3: Assembling the Polyethylene Liner onto the Femoral Head

Place the correct femoral head on a sterile field as shown (Fig. 4).

Using even pressure, apply the polyethylene liner over the femoral head until a “click” is heard (Fig. 5).

Step 4: Assembling the Metal Shell

While holding the liner steady, twist and push the shell onto the liner (Fig. 6).

Step 5: Assembling the Metal Shell onto the Femoral Stem

Impact the Bi-Polar onto the inserted femoral component as a unit with several taps (Fig. 7).

Biomet, as the manufacturer of this device, does not practice medicine and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any implant procedure is responsible for determining and utilizing the appropriate techniques for implanting the prosthesis in each individual patient. Biomet is not responsible for selection of the appropriate surgical technique to be utilized for an individual patient.

Step 1: Engagement of Liner Removal Tool

There are 8 removal tools which are marked with the corresponding cup sizes they will remove. Choose the correct size tool that matches the cup/liner size to be disassembled (Fig. 1).

Position the appropriately sized removal tool over the taper and push it into the slots located on the periphery of the liner (Fig. 2).

Insert the removal tool into the polyethylene liner until it is fully flush with the face of the liner (Fig. 3).

Step 2: Removal of Metal Shell

Hold the removal tool against the liner (do not allow the tool to rotate). Twist and pull the metal shell away from the liner. The tool must remain flush with the liner while the shell is being removed (Fig. 4).

Step 3: Removal of Liner

Disengage the removal tool and lever the polyethylene liner away from the femoral head (Fig. 5).

Disassembly

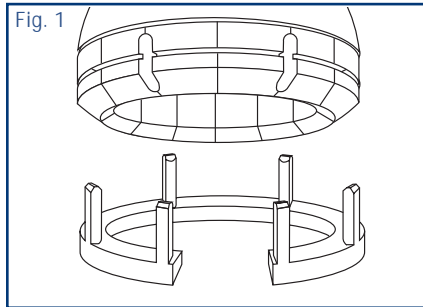


Fig. 1

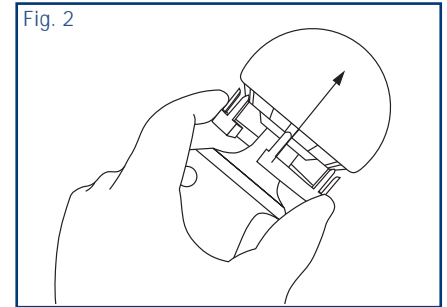


Fig. 2

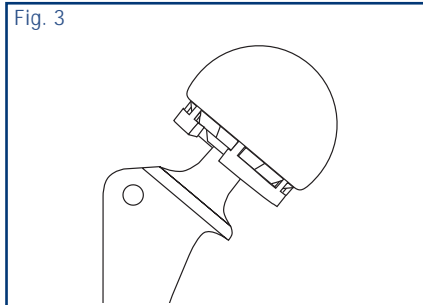


Fig. 3

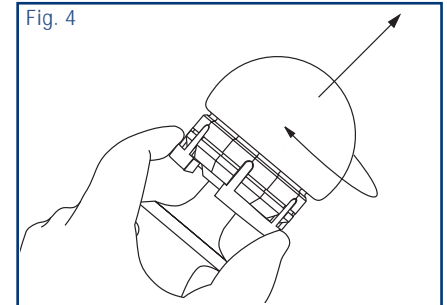


Fig. 4

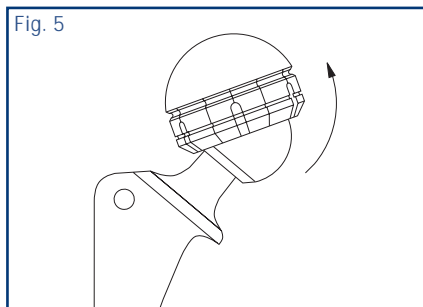


Fig. 5

Ordering Information

RingLoc Bi-Polar Prosthesis/Endo Color-Coded Provisional			
Implant	28mm Head Diameter	Provisional	Color
11-165206	41mm Shell Diameter	31-479551	Blue
11-165208	42mm Shell Diameter	31-479552	Blue
11-165210	43mm Shell Diameter	31-479553	Blue
11-165212	44mm Shell Diameter	31-479554	Green
11-165214	45mm Shell Diameter	31-479555	Green
11-165216	46mm Shell Diameter	31-479556	Green
11-165218	47mm Shell Diameter	31-479557	Green
11-165220	48mm Shell Diameter	31-479558	White
11-165222	49mm Shell Diameter	31-479559	White
11-165224	50mm Shell Diameter	31-479560	White
11-165226	51mm Shell Diameter	31-479561	White
11-165228	52mm Shell Diameter	31-479562	White
11-165230	53mm Shell Diameter	31-479563	White
11-165232	54mm Shell Diameter	31-479564	White
11-165234	55mm Shell Diameter	31-479565	White
11-165240	58mm Shell Diameter	31-479568	Rust

CoCr Femoral Heads		
Implant	28mm Diameter	Provisional
163660	-6mm	31-473526
163661	-3mm	31-473525
163662	Std.	31-473528
163663	+3mm	31-473527
163638	+6mm	31-473570
163665	+9mm	31-473529
163666	+12mm	31-473531

Threaded Head Provisionals		
For use with implant or trial prosthesis for Bi-Polar or Endo Head application.		
Implant	28mm Diameter	Color
31-482590	-6mm	Blue
31-482591	-3mm	Green
31-482592	Std.	White
31-482593	+3mm	Rust
31-482594	+6mm	Black
31-482595	+9mm	Grey
31-482596	+12mm	Brown



Ordering Information (continued)

Threaded Head/Neck Provisionals (Bi-Polar Neck Spacers) For use with broach/provisional for Bi-Polar or endo head application.		
Part No.	28mm Diameter	Color
31-473626	-6mm	Blue
31-473724	-3mm	Green
31-473627	Std.	White
31-473725	+3mm	Rust
31-473628	+6mm	Black
31-473726	+9mm	Grey
31-473629	+12mm	Brown

Provisional Head/Neck – Collarless		
Part No.	28mm Diameter	Color
31-473554	-6mm	Blue
31-473454	-3mm	Green
31-473556	Std.	White
31-473455	+3mm	Rust
31-473588	+6mm	Black
31-473456	+9mm	Grey
31-473457	+12mm	Brown

Provisional Head/Neck – Collared		
Part No.	28mm Diameter	Color
31-473568	-6mm	Blue
31-473462	-3mm	Green
31-473572	Std.	White
31-473463	+3mm	Rust
31-473576	+6mm	Black
31-473464	+9mm	Grey
31-473465	+12mm	Brown

RingLoc Bi-Polar Threaded Gauge Handle
(fits both RingLoc Bi-Polar and color coded provisionals)

31-479365

RingLoc Bi-Polar Removal Tools

31-165306 41mm
 31-165308 42mm
 31-165310 43–45mm
 31-165316 46,47mm
 31-165320 48–50mm
 31-165326 51, 52mm
 31-165330 53–55mm
 31-165340 58mm

Individual Replacement Rings

11-165300 41mm
 11-165301 42mm
 11-165302 43–45mm
 11-165303 46,47mm
 11-165304 48–50mm
 11-165305 51, 52mm
 11-165306 53–55mm
 11-165307 58mm

RingLoc Bi-Polar Instrument Storage/Sterilization Case
(Stainless Steel)

31-479285

RingLoc Bi-Polar X-Ray Templates

11-165298

