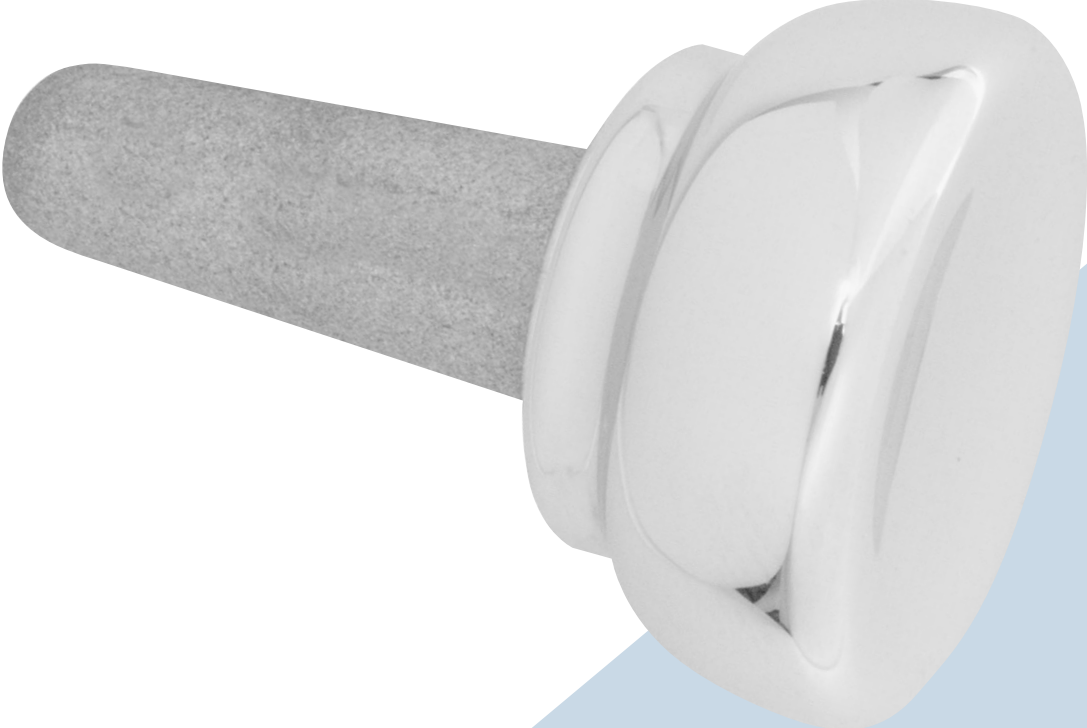


the shape, the size, the fit



Ascension® Modular Radial Head





Radiopaque prostheses allow for intraoperative verification of implant position and post operative assessment.

# anatomic design

- stem and head sizes to fit your indications and patient anatomy
- articular friendly shape – reduces edge loading on the capitellum and radial notch allows for annular ligament closure
- cementless

- Bone removal is minimized
- Critical soft tissue structures are preserved
- Alignment Awl and Guides provide accurate visual reference along the bone axis promoting restoration of anatomic bone alignment



# simplified instrumentation

- simplified instruments provide a reproducible outcome
- in-wound or back table assembly option

In Situ Assembly Instruments:  
Stem Holder and  
Head Impactor



Back Table Assembly Instruments:  
Stem Impactor and  
Assembly Plate



# surgical technique

## The Initial Incision and Capsular Exposure

Expose the radial capitellar joint using the Kocher approach through the interval between the anconeus and extensor carpi ulnaris muscles. Make a 6-7cm incision centered on the radial head **Figure 1**.

Pronate the forearm during exposure to protect the motor branch of the radial nerve that passes around the radial neck. If needed, release the origin of the anconeus subperiostally and retract it posteriorly to permit adequate exposure of the capsule. Continue the dissection to the joint capsule. Divide the annular ligament (AL) and radial collateral ligaments (RCL) longitudinally along the centerline of the head. Reflect the lateral capsule anteriorly and posteriorly to expose the radial head **Figure 2**.

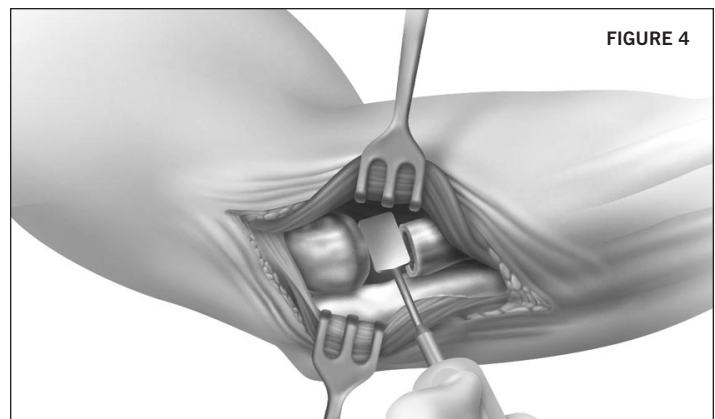
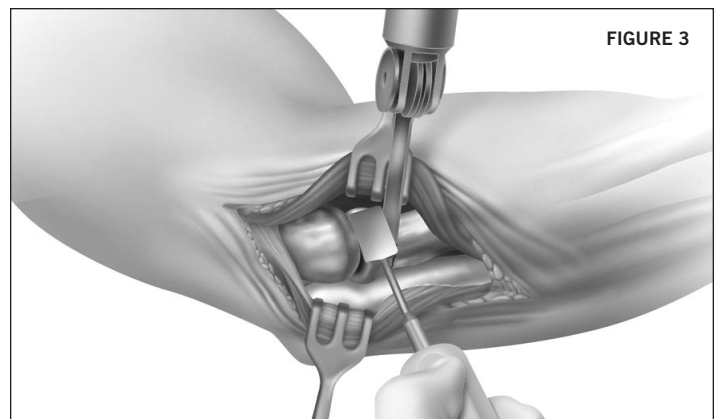
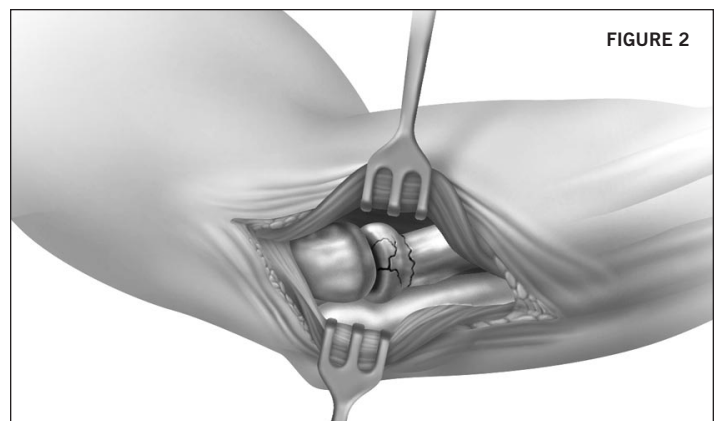
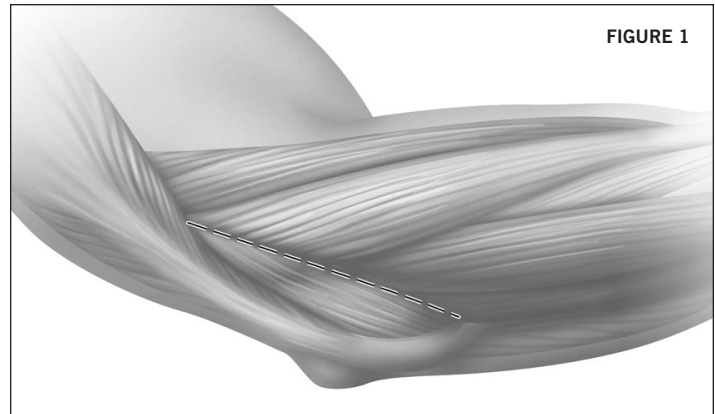
## Resecting the Radial Head

Two methods may be used to assist in resecting the radial head.

### **Radial Head Resection Guide:**

The radial head resection guide has two resection levels. Inspection of the radial head and trauma to the neck will determine if the standard or long radial head implant will be used. Prior templating of the x-ray will also assist in determining which radial head will be used. Use the normal or long Radial Head Resection Guide to mark the level of the resection **Figure 3**.

With one edge of the guide resting on the capitellum, use a surgical marker to mark the resection line on the neck of the radius by resting the tip of the marker against the distal side of the guide while rotating the forearm through supination-pronation. The resulting line should mark a plane that is perpendicular to the pronation-supination axis of the forearm. Resect the head holding the saw blade perpendicular to the axis of rotation. Reinsert the guide between the capitellum and the resection to ensure a perpendicular cut **Figure 4**.



### **External Resection Guide**

The external resection guide is intended to determine the correct resection level and orientation with respect to the pronation/supination axis of the forearm. With the proximal edge of the resection guide placed against the capitellum and resting on the neck of the radius, align the distal end of the rod with the styloid process of the ulna. After determining whether the standard or long radial head implant will be used, use a surgical marker to mark the level of resection of the head. After the level has been marked remove the guide. Resect the head holding the saw blade perpendicular to the axis of rotation. The resulting cut should be in a plane that is perpendicular to the pronation-supination axis of the forearm.

### **Intramedullary Preparation for Trial Sizers**

The medullary canal is now prepared for insertion of the Trial Sizers, which are used to select the implant size. Enter the canal with the Starter Awl using a twisting motion **Figure 5**.

The Starter Awl should be inserted only 2 cm. The Trial Sizer has an undersized stem for ease of trial insertion and to maintain the integrity of the medullary canal for the final press fit of the implant.

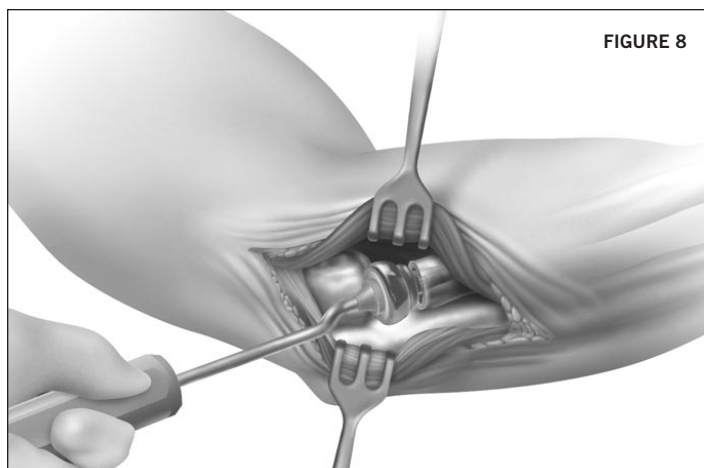
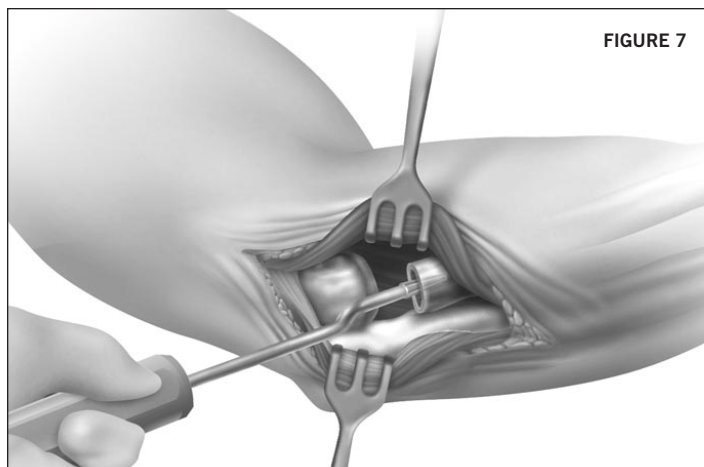
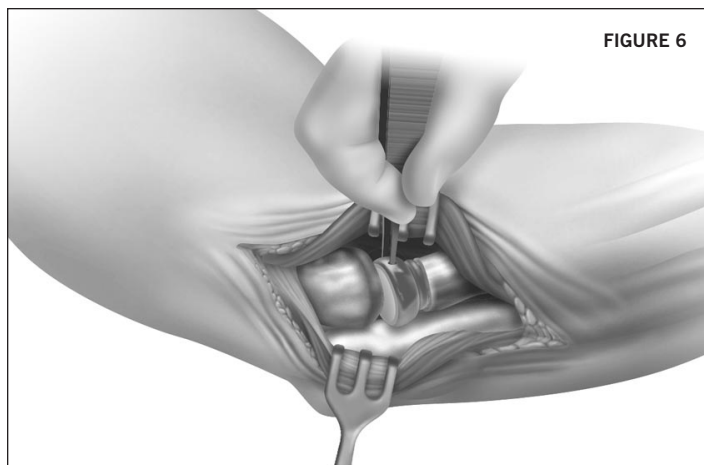
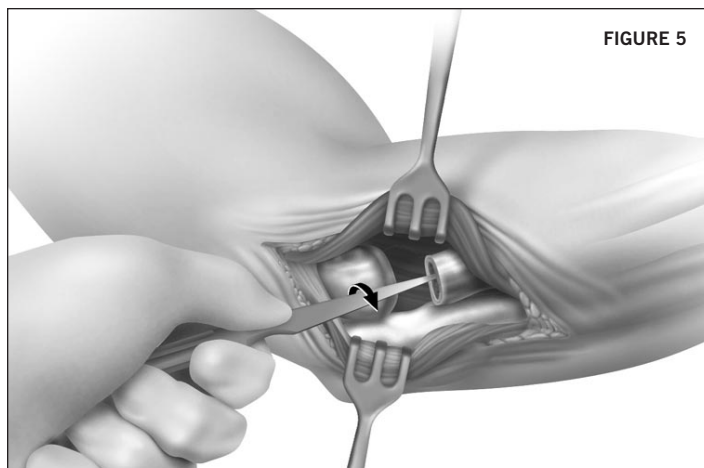
### **Trial Reduction**

Select the Trial closest in size to, but not larger than, the resected head. Insert the Trial stem into the hole created by the Starter Awl **Figure 6**.

Assess elbow stability and tracking in forearm flexion, extension and rotation. An osteotomy that is poorly-aligned will cause the Trial to be unstable during the assessment. Be sure to coapt or slightly overlap the dissected capsule edges (previously reflected anteriorly and posteriorly) to assess the fit of the AL around the head of the Sizer. The edges should meet easily. If the AL cannot wrap completely around the Sizer, a smaller implant is preferred.

### **Broach the Canal**

Once the implant size has been determined, remove the Trial and broach the canal to the selected size **Figure 7**.



Broach progressively up to the selected implant size starting with the smallest size broach. The broach should be aligned with the pronation-supination axis, perpendicular to the resection.

## Assembly and Implantation

There are two options to assemble the stem-head components.

### OR Back Table Assembly

Using the back table assembly plate, place the correct size head on the back table assembly plate. The morse taper of the implant stem is inserted into the implant head taper. Place the stem impactor over the stem. The implant taper is seated by firm impaction with a mallet.

Using finger control, insert the prosthesis stem into the prepared hole. It may be necessary to retract the radius to access the canal and allow the head to clear the capitellum. Using the head impactor provided, impact the implant until the collar abuts the osteotomy **Figure 8**.

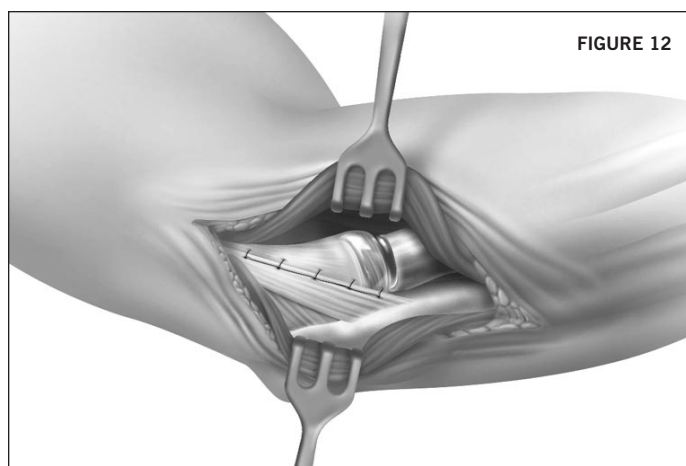
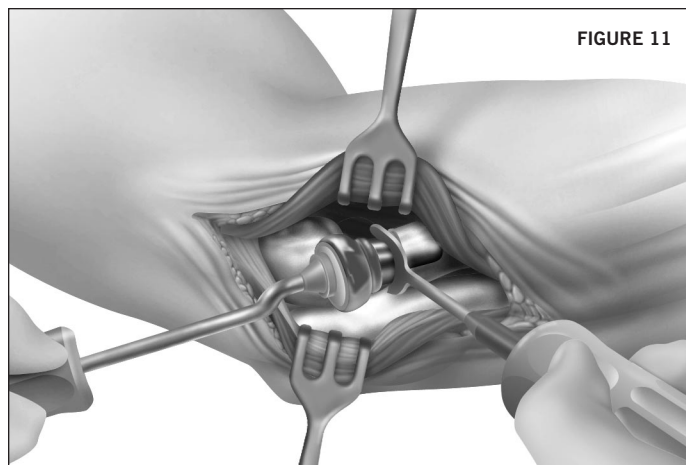
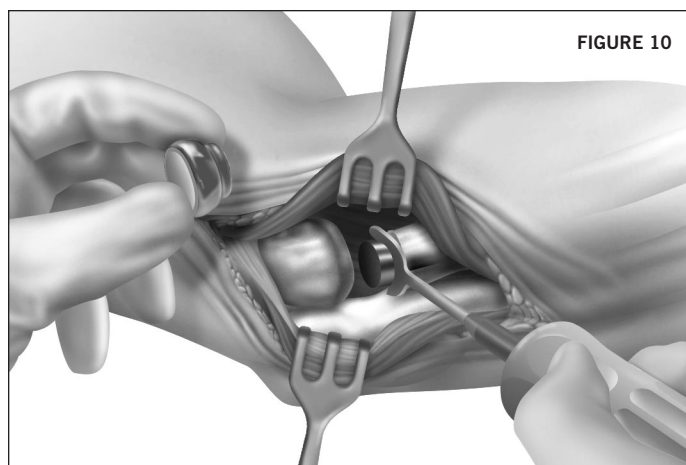
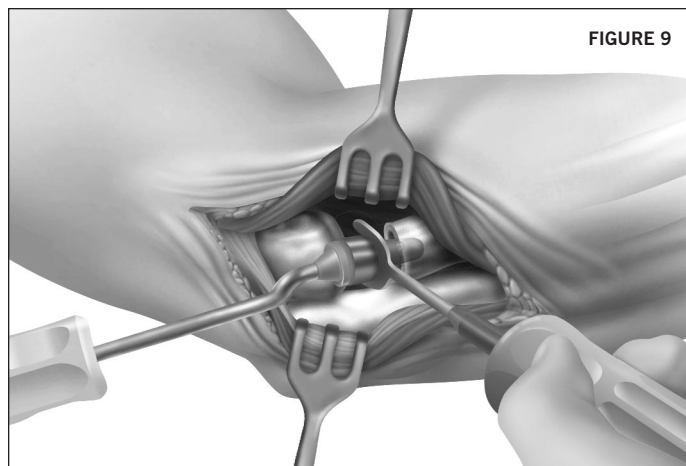
### In Situ Assembly

The Ascension Modular Radial Head can be assembled in situ. Place the correct size stem into the prepared medullary canal of the radius. Place the stem holder instrument around the collar of the stem. Using the stem impactor instrument, impact the stem into the canal until it is flush with the osteotomy **Figure 9**. Place the head component on the morse taper of the stem **Figure 10**. Seat the implant taper with firm impaction using the head impactor **Figure 11**. Remove the stem holder and impact the implant until flush with the osteotomy.

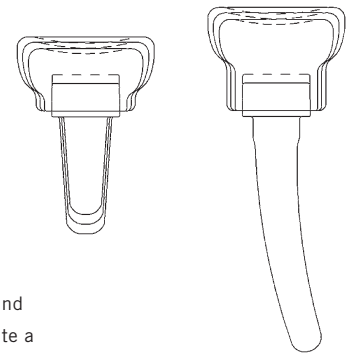
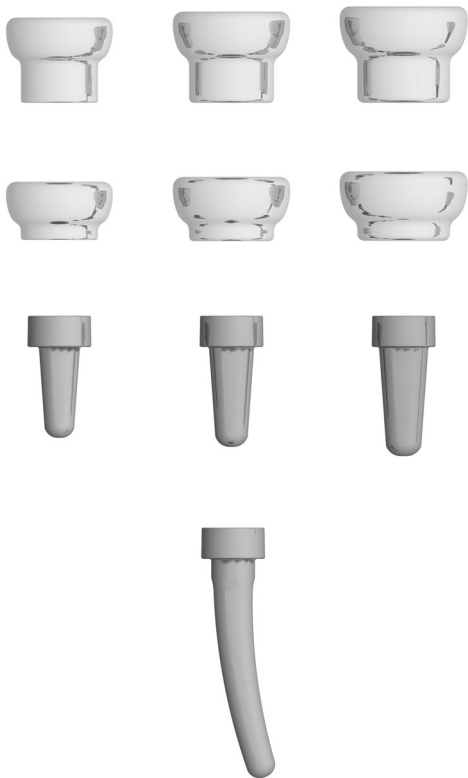
## Closure

Repair the AL and RCL **Figure 12**.

Repair the fascial interval connecting anconeus and extensor carpi ulnaris muscles. Close the skin. Splint the elbow at 90° flexion and in neutral to full pronation.



# Ascension® Modular Radial Head



Multiple head/stem sizes and configurations accommodate a broad range of patient anatomy



SIZE / COMPONENT	CATALOG NUMBER
20mm long head	MRH-350-20L
22mm long head	MRH-350-22L
24mm long head	MRH-350-24L
20mm standard head	MRH-350-20S
22mm standard head	MRH-350-22S
24mm standard head	MRH-350-24S
01 standard stem	MRH-350-01
02 standard stem	MRH-350-02
03 standard stem	MRH-350-03
04 long stem	MRH-350-04

Instrument Set	CATALOG NUMBER
	INS-350-00



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 8200 CAMERON ROAD, SUITE C140  
 AUSTIN, TEXAS 78754-3832  
 512.836.5001 512.836.6933 fax  
 CUSTOMER SERVICE: 877.370.5001 (toll-free in U.S.)  
 customerservice@ascensionortho.com  
 www.ascensionortho.com

Caution: U.S. federal law restricts this device to sale by or on the order of a physician.

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