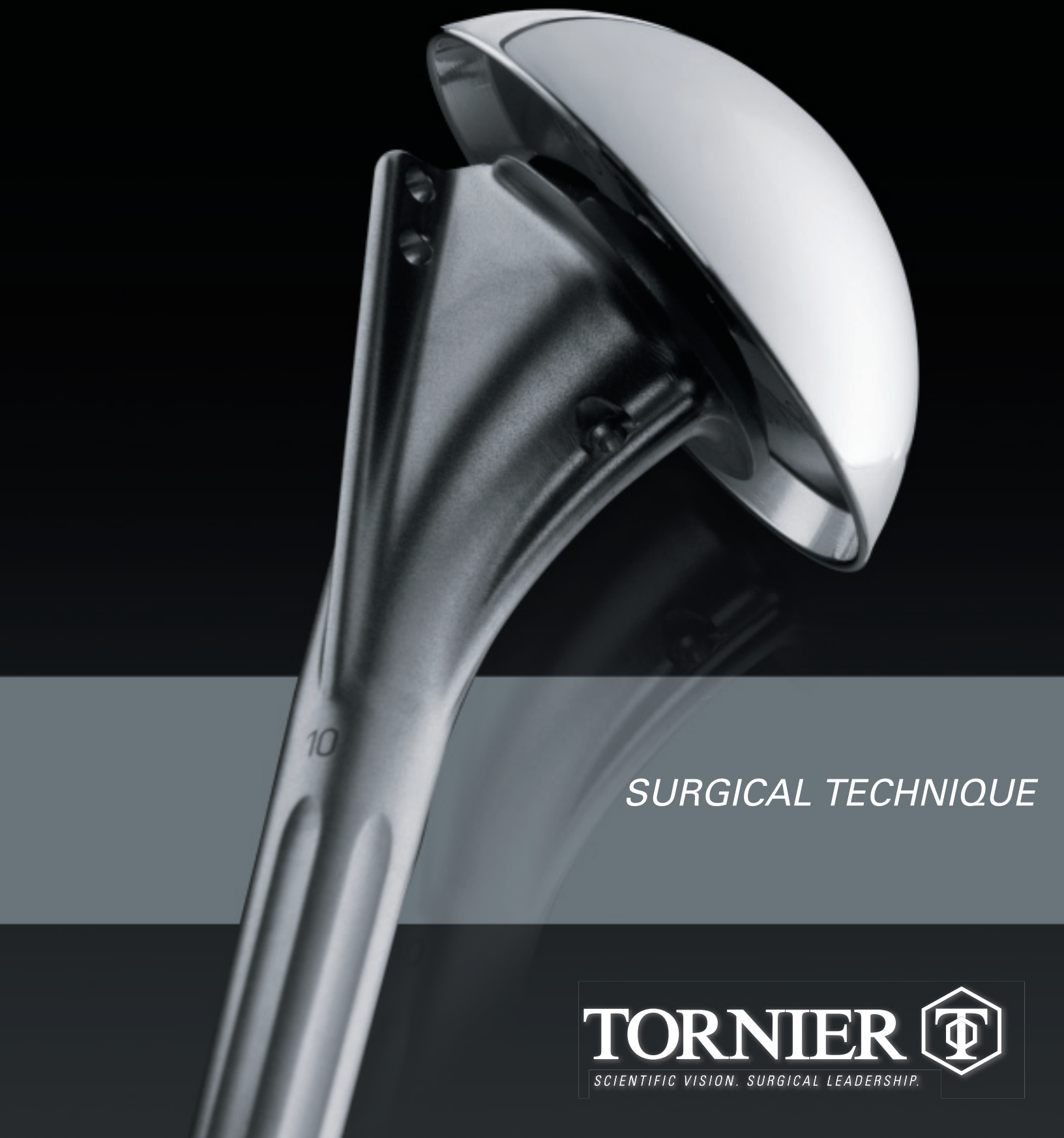
AFFINITI® Humeral

Balanced Through Simplicity



SURGICAL TECHNIQUE

TORNIER

SCIENTIFIC VISION. SURGICAL LEADERSHIP.

The Affiniti® Shoulder System was developed in collaboration with:

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Proper surgical procedures and techniques are the responsibility of the medical professional. Individual surgeon evaluation of the surgical technique should be performed based on his or her personal medical training and experience. This essential product information does not include all of the information necessary for selection and use of a device. Please see full labeling on package insert for all necessary information.

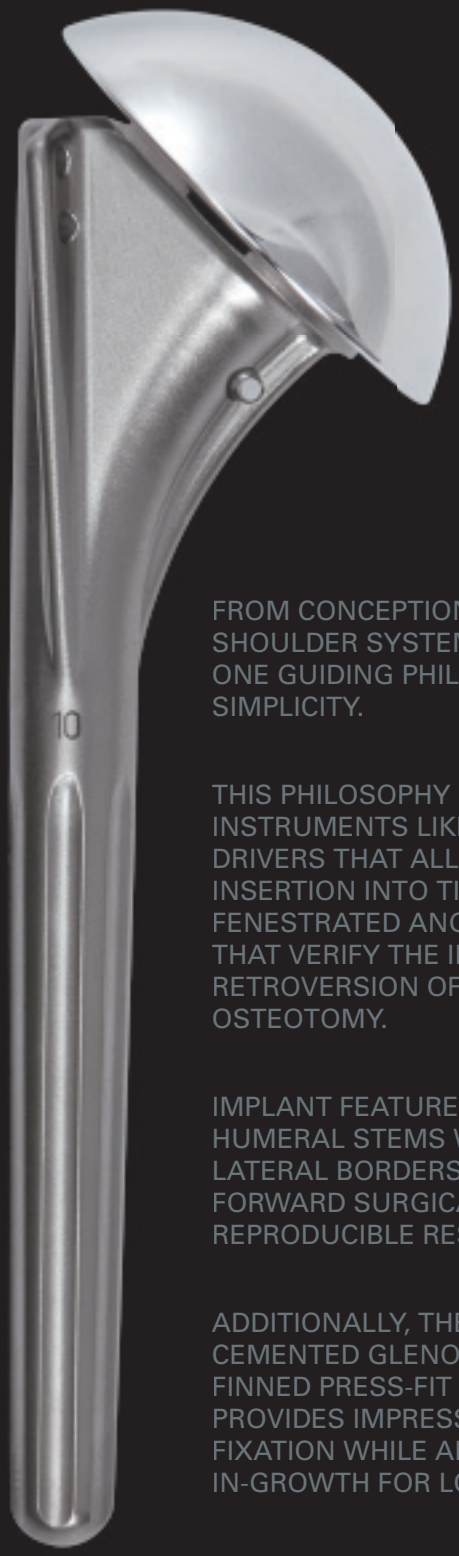
Table of Contents

Standard & Eccentric Humeral Head Options

- 5 diameters provide surgeon intra-operative choice (40, 44, 48, 52, 56mm)
- Standard and eccentric humeral head options address a broad range of patient anatomy
- Infinitely dialable eccentric heads provide optimal replication of posterior off-set
- Multiple head heights per diameter allow for proper soft tissue balancing (Standard- 15/18/21mm & Eccentric- 18/21mm)
- High integrity Morse taper for precision placement of eccentric humeral heads
- Highly polished cobalt chrome provides exceptional wear properties

Humeral Stem

- 7 diameters provide surgeon intra-operative choice (6, 8, 10, 12, 14, 16, 18mm)
- All stems are a conservative 110mm in length to allow for optimal proximal press-fit while respecting the contour of the humeral canal
- Low-profile lateral border promotes proper axial alignment and avoids tuberosity interference
- Low-profile collar maximizes articular surface coverage and minimizes the risk of subsidence
- Anterior, posterior and medial fins provide rotational stability and ensure definitive stem alignment
- High integrity reverse Morse taper maximizes access to the glenoid



FROM CONCEPTION, THE AFFINITI SHOULDER SYSTEM WAS DRIVEN BY ONE GUIDING PHILOSOPHY - BALANCED SIMPLICITY.

THIS PHILOSOPHY IS EMBODIED IN INSTRUMENTS LIKE PIVOTING REAMER DRIVERS THAT ALLOW FOR EASY INSERTION INTO TIGHT JOINTS AND FENESTRATED ANGLED OSTEOTOMES THAT VERIFY THE INCLINATION AND RETROVERSION OF THE HUMERAL HEAD OSTEOTOMY.

IMPLANT FEATURES LIKE FIXED-ANGLE HUMERAL STEMS WITH LOW-PROFILE LATERAL BORDERS PROVIDE A STRAIGHT FORWARD SURGICAL APPROACH FOR REPRODUCIBLE RESULTS.

ADDITIONALLY, THE MINIMALLY CEMENTED GLENOID FEATURES A FINNED PRESS-FIT CENTRAL PEG WHICH PROVIDES IMPRESSIVE IMMEDIATE FIXATION WHILE ALLOWING FOR BONY IN-GROWTH FOR LONG-TERM STABILITY.

THE AFFINITI SHOUDLER SYSTEM - FEEL THE DIFFERENCE.

INDICATIONS

The Affiniti Total and Hemi-Shoulder System is indicated for

- Severely painful and/or disabled joint resulting from osteoarthritis, traumatic arthritis or rheumatoid arthritis.
- Fracture/dislocation of the proximal humerus where the articular surface is severely comminuted, separated from its blood supply or where the surgeon's experience indicates that alternative methods of treatment are unsatisfactory.
- Other difficult clinical problems where shoulder arthrodesis or resection arthroplasty are not acceptable (e.g., revision of a failed primary component).

Hemi-shoulder replacement is also indicated for

- Ununited humeral head fractures
- Avascular necrosis of the humeral head
- Rotator cuff tear arthropathy

CONTRAINDICATIONS

Total or Hemi-shoulder

- Lack of quality bone to seat and support the implant, including that resulting from skeletal immaturity or osteoporosis
- Metal allergies or sensitivity
- Infection at or near the site of implantation
- Distant or systemic infection

Total Shoulder

- Lack of sufficient sound muscle or rotator cuff to seat and support the implant

Pre-Operative Planning

Pre-Operative Planning

- Four shoulder X-rays are recommended:
  1. A-P View
  2. True A-P or Grashey View
  3. Supraspinatus Outlet View (SOV)
  4. Axillary View
- CT Scan for the most accurate assessment of glenoid version.
- MRI to confirm the integrity of the rotator cuff if there is a clinical question about the cuff integrity.

Exposure

Exposure

Position the patient in a beach chair position with the operative arm draped free. For optimal access, the patient should be positioned near the edge of the operating table such that the shoulder can be fully extended. A bump can be placed under the operative shoulder to stabilize the scapula.

A delto-pectoral incision is performed. Begin at the coracoid and extend distal and lateral along the delto-pectoral groove, lateral to the axillary fold to avoid a post-operative contracture. Once the subcutaneous tissue has been divided and superficial hemostasis has been completed, the cephalic vein is identified. Carefully develop the plane between the pectoralis and cephalic vein, allowing retraction of the vein laterally with the deltoid.

Deep to this the clavipectoral fascia is observed. Release this from the coracoid to the pectoralis insertion. With the arm abducted and slightly internally rotated, the long head of the biceps is inspected. At this point extensive bicipital synovitis, loose bodies, or osteophytes in the bicipital groove should be removed.

Prior to proceeding with the exposure, the axillary nerve should be palpated. Begin with the surgeon's index finger below the coracoid. Sweep it slightly medially and inferiorly deep to the coracobrachialis, following the anterior surface of the subscapularis. As the surgeon's finger sweeps along the inferior border of the subscapularis, the axillary nerve can be palpated as a sling of material passing posteriorly around the inferior aspect of the glenohumeral joint.

Next identify the anterior circumflex vessels along the inferior border of the subscapularis. Ligate or coagulate the artery and two veins just medial to the subscapularis tendon insertion on the humerus.

The subscapularis can now be tenotomized or a lesser tuberosity osteotomy performed. For the tendon release, begin superiorly at the rotator interval and release the subscapularis tendon leaving a 1cm stump on the lesser tuberosity for later repair. Gentle external rotation of the humerus assists with developing this release. Tag the medial tendon with retention sutures to avoid medial retraction. Frequently the superior 1-2cm of the pectoralis and latissimus dorsi tendons are released to assist with further exposure.

Alternatively the subscapularis insertion on the lesser tuberosity can be preserved by performing a lesser tuberosity osteotomy and removing a small superficial portion of the tuberosity with the subscapularis attachment. This should be tagged and retracted medially.

The shoulder can now be dislocated. This is facilitated by placing a darrach retractor within the glenohumeral joint and performing gentle adduction and external rotation of the humerus. As the humeral head is fully dislocated, the inferior capsule is released up to the posterior aspect of the humeral head. Palpation and protection of the axillary nerve during this release is necessary. An anterior capsulotomy is performed with a release of the middle and inferior glenohumeral ligaments off the glenoid. Full mobilization of the subscapularis muscle is necessary to allow for a tension free reinsertion following the procedure.

Once these releases have been performed, the humeral head is fully dislocated by adduction of the arm with progressive external rotation and extension. Consider further release of the pectoralis insertion if full external rotation is not obtained. All humeral osteophytes are carefully trimmed from the humeral head. It is recommended to use a rounger to separate the interval between the osteophytes and the cortical bone.

HUMERAL HEAD OSTEOTOMY & CANAL REAMING

Two options are available for the humeral head osteotomy:

Option 1- Free hand cut using the flat plate cutting guide

Option 2- Guided cut using the intramedullary cutting guide

Option 1
Flat Plate Guide

Option 2
IM Guide

Option 1- Free Hand & Reaming

To determine the angle of resection, place the flat plate cutting guide along the anterior aspect of the arm parallel to the humeral shaft.

The guide has been designed to correspond with the stem neck angle and should be positioned with the superior lateral portion resting at the junction of the articular surface and the rotator cuff. (Fig 1)

Once the guide has been properly aligned mark the neck angle with electro-cautery.

Before cutting the humeral head, place the Crego retractor under the Biceps tendon, if it is still present, and around the proximal humerus. This will help protect the Biceps and rotator cuff tendons.

With the Crego in place cut along the previously marked neck angle (135˚).

Note: Take special care to direct the saw blade or osteotome directly towards the posterior tip of the Crego retractor. A misdirected cut has the potential to damage the rotator cuff tendons.

Fig 1

Option 1- Preparing the Humeral Canal

Using the awl tip on the smallest canal reamer create a pilot hole just medial to the supraspinatus insertion point and centered in the A-P dimension (Fig 2).

Insert the canal reamer to avoid varus or valgus alignment.

Ream the canal under hand power, incrementally increasing the size of the reamer (i.e. 6mm, 8mm, 10mm, etc.) until the reamer begins to contact the cortical wall of the humeral shaft.

Each reamer should be inserted until the distal etch line contacts the lateral portion of the cut humerus. (Fig 3)

Note: In the case of a wide humeral shaft, it is advisable to select a humeral stem size based upon the metaphysis and not the humeral canal. The primary fixation of the Affiniti stem is derived from the metaphysis press-fit.

(Continue to Preparing the Metaphysis)

Fig 2

Fig 3

Option 2- Intramedullary Guide

Intramedullary Guide Assembly

To assembly the intramedullary guide follow the instructions listed below:

* Position the clamp body so that the text (left top or right top) matches the side of the patient being operated on.

* Insert the clamp arm into the clamp body and secure with the clamp screw. (Fig 4)

* Attach the guide member to the clamp assembly and secure with the thumb screw.

* Next, attach the retroversion rod to the guide member. (Fig 5)

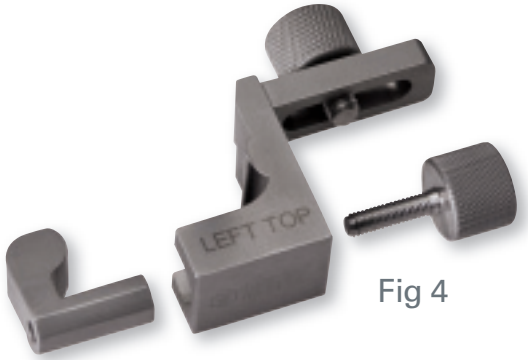


Fig 4

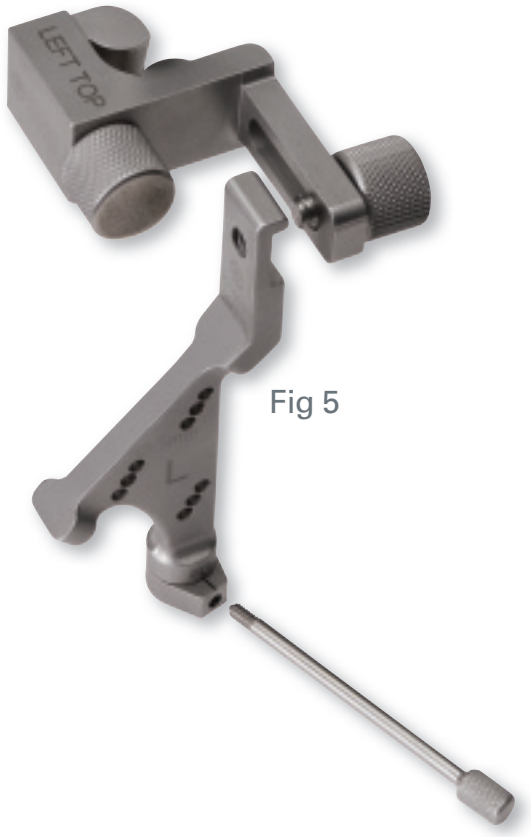


Fig 5

Use of Intramedullary Guide

Using the awl tip of the smallest canal reamer create a pilot hole just medial to the supraspinatus insertion point and centered in the A-P dimension. A Crego retractor assists in obtaining proper exposure and protects the biceps and rotator cuff tendons.

Ream the canal under hand power, incrementally increasing the size of the reamer (i.e. 6mm, 8mm, 10mm, etc.) until the reamer begins to contact the cortical wall of the humeral shaft.

Each reamer should be inserted until the distal etch line is flush with the superior cortices of the humerus.

With the appropriate size canal reamer in place attach the assembled guide to the flutes of the reamer. (Fig 6)

Note: In the case of a wide humeral shaft, it is advisable to select a humeral stem size based upon the metaphysis and not the humeral canal. The primary fixation of the Affiniti stem is derived from the metaphysis press-fit.

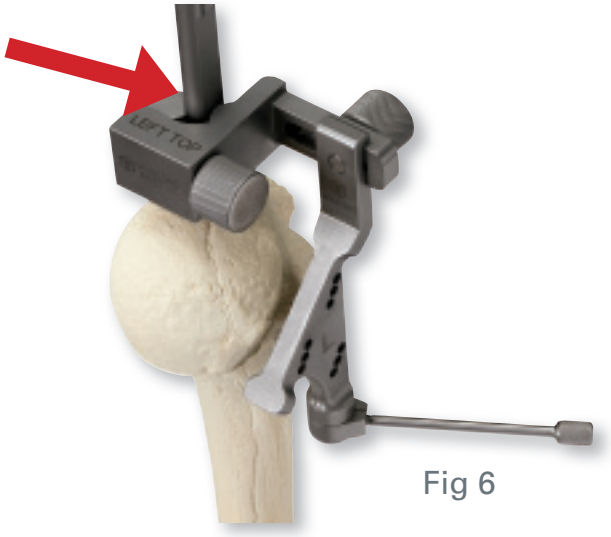


Fig 6

The guide has been designed to correspond with the stem neck angle and should be positioned with the lateral portion resting on the junction of the articular surface and supraspinatus insertion point. (Fig 7)

The resection guide may also be adjusted in the anterior and posterior plane via the second thumb screw. This allows the guide to be flush against the anterior humerus prior to cutting.

With the guide properly aligned, adjust the retroversion rod and tighten. As a reference, the retroversion has stops at 20, 30 and 40 degrees.

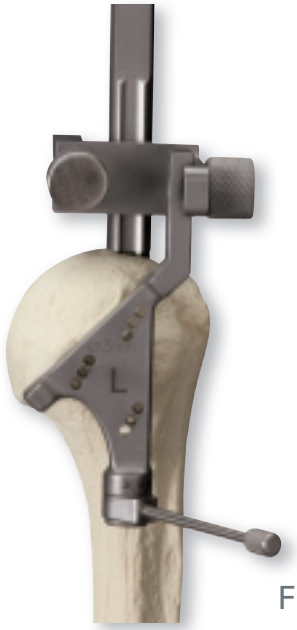


Fig 7

Rotate the guide until the retroversion rod is aligned with the forearm.

Introduce the three pins into the central holes.

Detach the guide member from the clamp arm.

Remove the clamp body and canal reamer. (Fig 8)

Place the saw blade flat along the surface of the guide member and complete the humeral head resection.

Fig 8

Note: Additional pin holes have been placed above and below the central pin holes. To adjust the height of the humeral head resection by 1mm, slide the guide member off the pins and reattach the guide using the holes above the central hole to move the guide inferiorly or below the central hole to move the guide superiorly.

PREPARING THE METAPHYSIS

With the final canal reamer in place, select the corresponding body sizing osteotome. Using the flats on the canal reamer, attach the osteotome to the canal reamer and slide it down the shaft (Fig 9).

Using the t-handle, adjust the reamer until the osteotome rests flat on the resected humerus (Fig 10). This verifies that the inclination of the resection is correct and that the osteotome will follow the retroversion selected during the humeral head resection.

Using a mallet, impact the osteotome to the depth of the window (Fig 11). Driving the osteotome into the cancellous bone creates the anterior, posterior, and medial fin tracks.

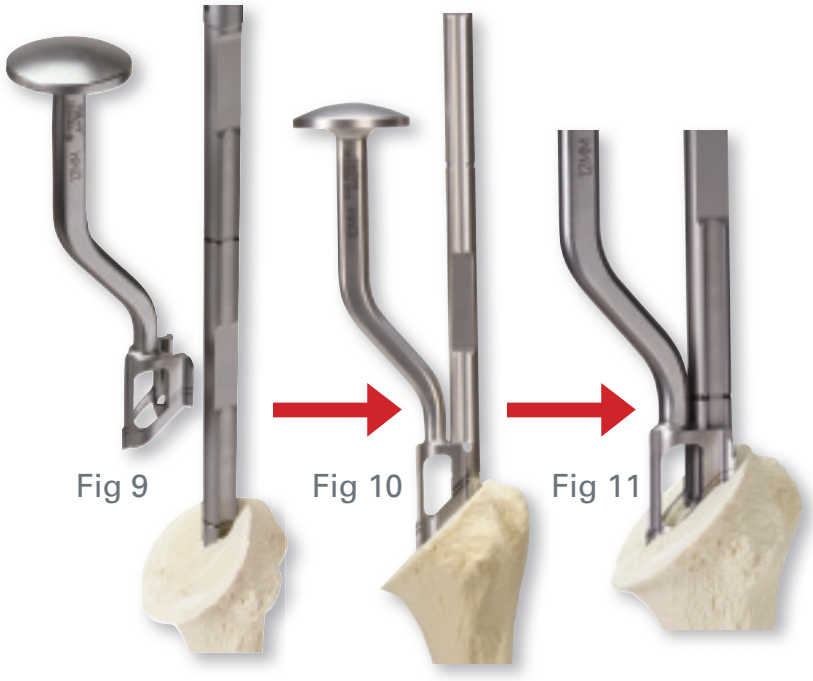


Fig 9 Fig 10 Fig 11

Remove the canal reamer and osteotome.

Using a rongeur or an osteotome, remove the outlined cancellous bone.

Select the broach size that corresponds with the previously used body sizing osteotome. Attach the broach to the humeral impactor and secure by closing the lever (Fig 12).

Be sure to align the tab of the impactor/extractor with pocket of the broach.

Fig 12

Align the fins of the broach with the tracks created by the osteotome and impact the broach until the collar rests flush on the cut humerus (Fig 13).
Do not impact the collar into the cancellous bone.

Fig 13

Notes: The broach is undersized in comparison to the final implant and provides approximately 1mm of proximal diametric press-fit.

In case of poor bone quality, it may be advisable to leave a portion of the medial bone outlined by the body sizing osteotome or add bone graft to mitigate the risk of medialization.

HUMERAL HEAD TRIAL OVERVIEW

The Affiniti Shoulder System offers both centered and eccentric humeral heads.

SIZING OPTIONS		Humeral Head Thicknesses (mm)					
		Standard			Eccentric		Trial Color
		15	18	21	18	21	
Humeral Head Diameters (mm)	40	x	x	x	x	x	Rust
	44	x	x	x	x	x	Green
	48	x	x	x	x	x	Black
	52	x	x	x	x	x	Blue
	56	x	x	x	x	x	Yellow

Chart 1

Each diameter trial head is identified with a specific color that matches the corresponding glenoid trial. Matching the colors will ensure the recommended 3mm radial mismatch.

Each humeral head diameter is offered in three standard thicknesses and two eccentric thicknesses (refer to Chart 1 for sizes).

The initial thickness of the trial head can be determined by mimicking the thickness of the resected head, except in the case of sever deformity (Fig 14).

Fig 14

Note: Due to the potential interference between the collar of the stem and the skirt on the underside of the head a small number of *eccentric* head and stem combinations may not be possible. In this case, a centered head of the same size may be used.

See reference chart on page (21)

SELECTING A HUMERAL HEAD TRIAL

With the broach in place, select the humeral head trial of the determined diameter and thickness and place it onto the broach.

Using an Eccentric Head

If the use of an eccentric humeral head trial is required, place the trial onto the broach and rotate the trial until maximum coverage is obtained (Fig 15).

Using the 3mm trial screwdriver, tighten the screw located on the articular surface of the humeral head trial (Fig 16).

Note: As a reference, the superior aspect of the humeral head should be a minimum 5 to 7mm above the greater tuberosity.

Fig 15

Trial Reduction

Reduce the humeral head trial into the glenoid.

Choosing the humeral head thickness is important for optimal results. After the shoulder is reduced, posterior force on the humeral head should allow for subluxation of 50%.

If less than 50% subluxation is possible remove the humeral head and replace it with the next thinner head of the same diameter.

If direct posterior force dislocates the humeral head remove the trial head and replace it with the next thickness humeral head of the same diameter.

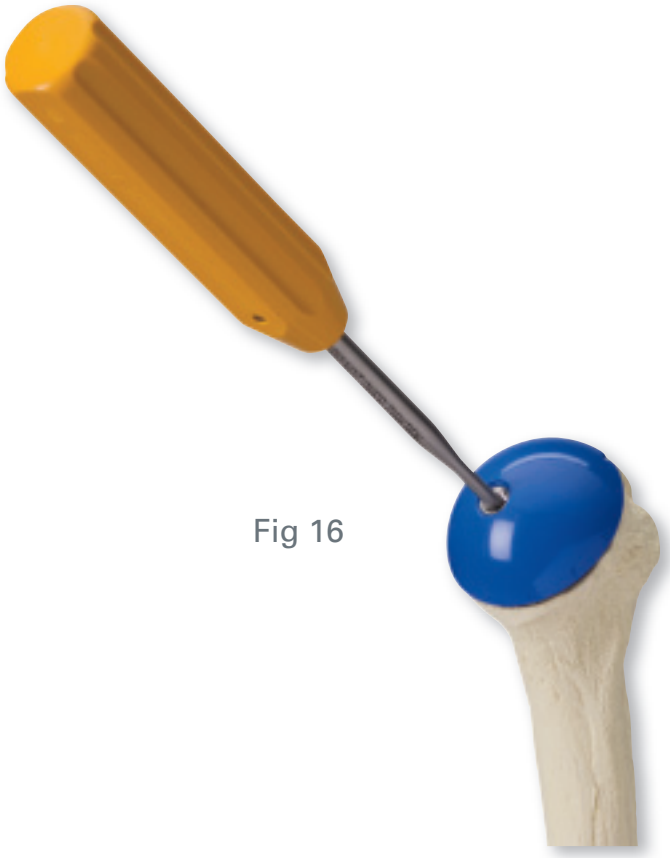


Fig 16

Mobility Testing

The arm is abducted to 90 degrees and internally rotated.

60 degrees of internal rotation should be obtained.

If less than 60 degrees internal rotation is demonstrated, further capsular release off the inferior humeral neck and glenoid are necessary for optimal function.

Removing the Trial

When the mobility test has been successfully completed, the trial head and broach should be removed.

Standard Trial Head

Remove of the trial head. If the head is difficult to remove, the head distractor can be positioned between the collar of the broach and the rim of the trial head to aid in removal.

Once the head has been removed, the humeral impactor/extractor is reattached to the broach and broach is removed from the humerus.

Be sure to align the tab of the impactor/ extractor with the pocket on the broach.

Eccentric Trial Head

With the eccentric trial head in the final position, slide the handle of the trial extractor over the ball joint and insert the tip into the humeral head trial and tighten.

Next, slide the handle up and align the shaft of the extractor with the shaft of the humerus (Fig 17).

Use the handle as a slap hammer and remove the assembly taking care to preserve the medial calcar.

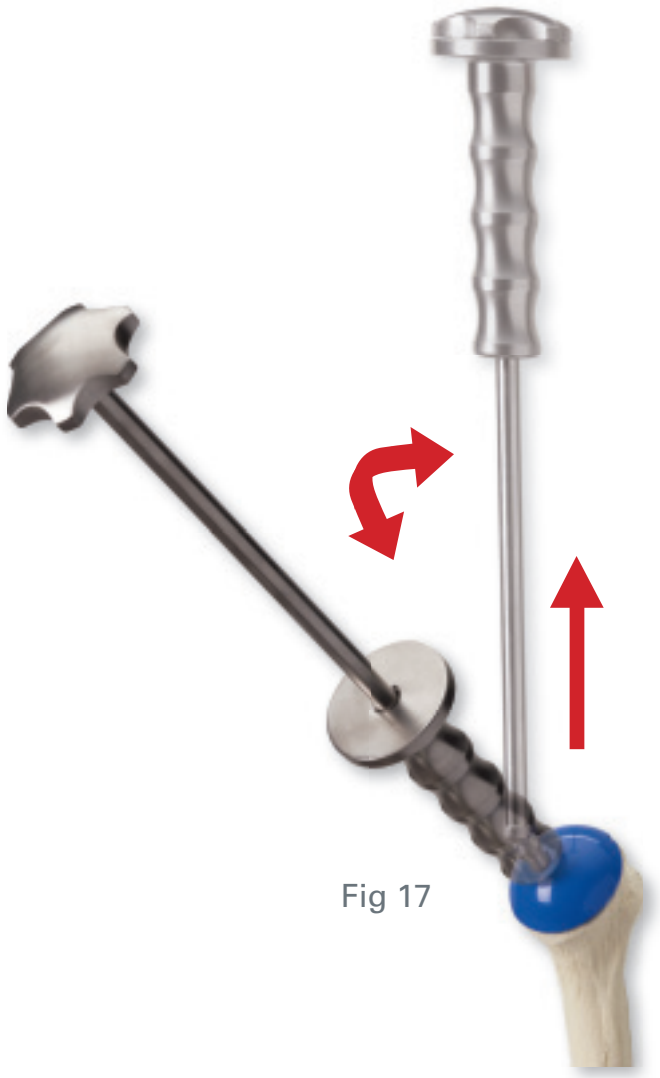


Fig 17

The assembly of the final implant varies depending on the type of humeral head selected.

Important Note: The surgeon should inspect the humeral head and humeral stem tapers for debris or blemishes before assembly. The humeral head should be assembled to the definitive stem with clean gloves in a dry environment.

When the final stem and head combination has been determined, place the definitive stem into the impaction stand. The 6, 8, 10 and 12mm stems have been designed to fit in one end of the impaction stand and the 14, 16 and 18mm stems fit in the opposite end of the impaction stand (Fig 18).

Fig 18

With the prosthesis in the stand, the collar of the stem should rest flush on the impaction stand.

Centered Head

Place the impactor tip on the impaction handle. Using the impactor and a mallet, impact the head to securely seat the Morse taper.

Eccentric Head

Turn the broach/head assembly upside-down so that the medial fin is pointing towards you and identify to which of the 12 positions on the underside of the head the medial fin points (Fig 19).

Fig 19

Orient the same size final implants so that the medial fin of the stem points to the same location on the head as determined on the broach/stem assembly.

Gently push the assembly together and place into the impaction stand. Firmly impact the head by placing the humeral impactor with the impactor tip onto the head and strike the impactor to seat the Morse taper.

The final stem is diametrically 1mm larger than the trial broach and in most cases provides for a firm press-fit without the need for cement. If the trial broach is slightly loose after impaction, use either bone graft from the resected head of the humerus or cement for fixation of the final prosthesis.

If bone graft is used, it is recommended to place the bone graft fragments into the metaphyseal region. Frequently this is placed on the medial neck which helps lateralize the final position of the stem. Use the broach and trial impactor/extractor to firmly compact the graft. **Do not advance the broach beyond the level of resection.**

The decision to use cement or a press-fit technique is based upon individual surgeon preference. In some instances it may be necessary to use cement. The cement technique will vary depending on the indication of each surgery. If cement is utilized a distal cement restrictor should be placed 1-2cm beyond the tip of the humeral stem to prevent cement extravasations into the distal humeral canal.

Fig 20

Prior to seating the final humeral assembly, the surgeon must plan the subscapularis tendon reattachment.

If the tendon was released leaving a 1cm stump attached on the lesser tuberosity, the humeral implant may be inserted directly and the subscapularis repaired to the stump utilizing multiple #2 nonabsorbable sutures in a figure eight fashion.

However, if a lesser tuberosity osteotomy was performed, drill three or four holes into the neck of the remaining humerus at the lesser tuberosity attachment point. A suture passer facilitates placing #2 nonabsorbable sutures through these holes and out through the neck of the humerus for securing the lesser tuberosity osteotomy. This must be completed prior to inserting the final humeral implant.

After the final humeral prosthesis is seated, these sutures are passed through the subscapularis tendon and around the lesser tuberosity osteotomy fragment allowing for a secure repair.

Regardless of the cement or press-fit method used, place the assembled final prosthesis down the intramedullary canal by hand. Use the impactor tip and impactor handle to seat the final assembly (Fig 20).

CLOSURE

After the final implants are in position and the shoulder has been reduced, the subscapularis is repaired to the remaining 1cm portion at the lesser tuberosity. This should be completed with #2 nonabsorbable suture.

If a lesser tuberosity oseotomy has been performed, the sutures can be passed through the holes in the anterior fin of the stem for a more secure attachment.

If a hemovac drain is utilized, it can be placed through the deltoid and beneath the conjoined tendon.

The deltopectoral interval is closed with #1 absorbable suture taking care not to injure the cephalic vein.

Skin closure is performed per surgeon preference with either suture or staples.

POST OPERATIVE REHABILITATION

Remove sling the first morning after surgery.

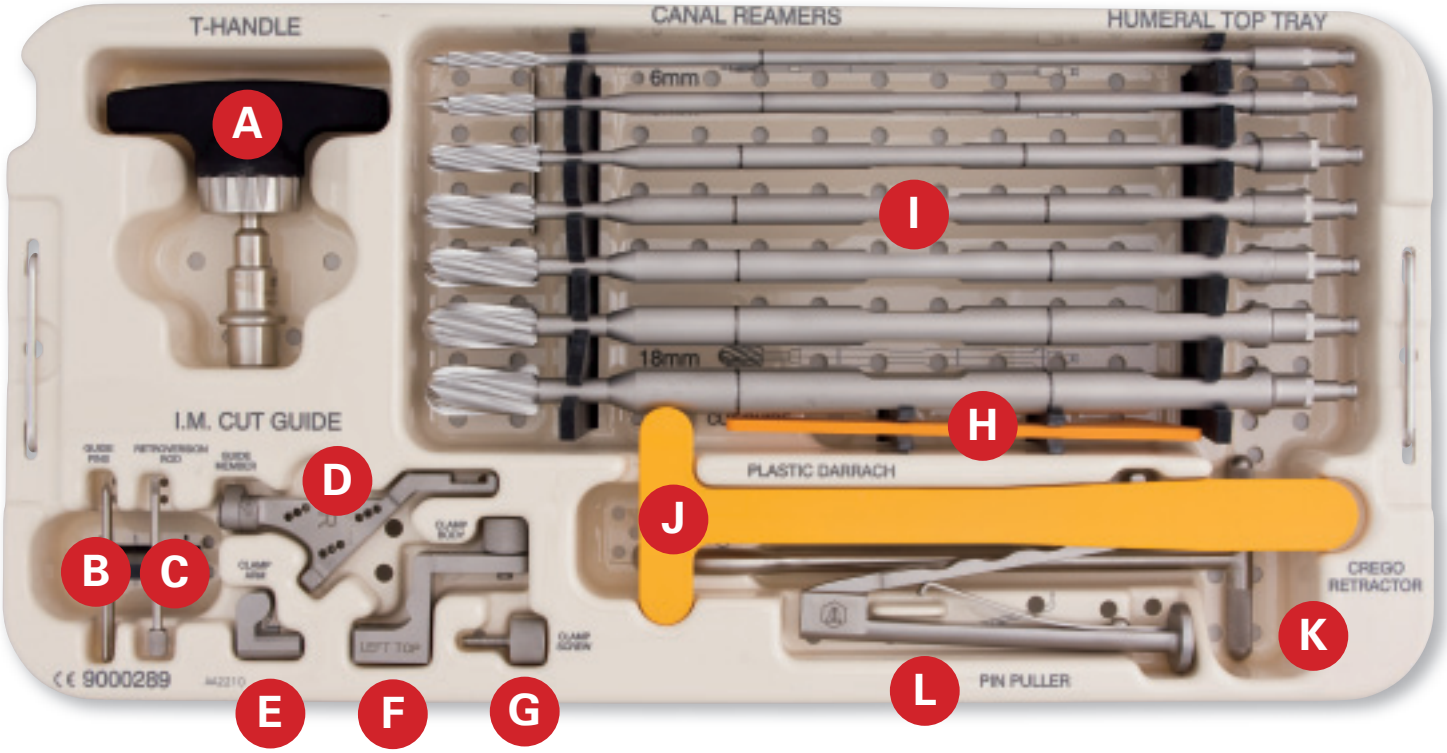
Begin active assisted forward elevation and external rotation on the first day after surgery. Place no limit to forward elevation, but limit external rotation to the side to 40 degrees.

At two weeks, begin internal rotation stretching. Encourage active use of the arm for activities of daily living.

At 8 weeks, begin active shoulder strengthening as necessary.

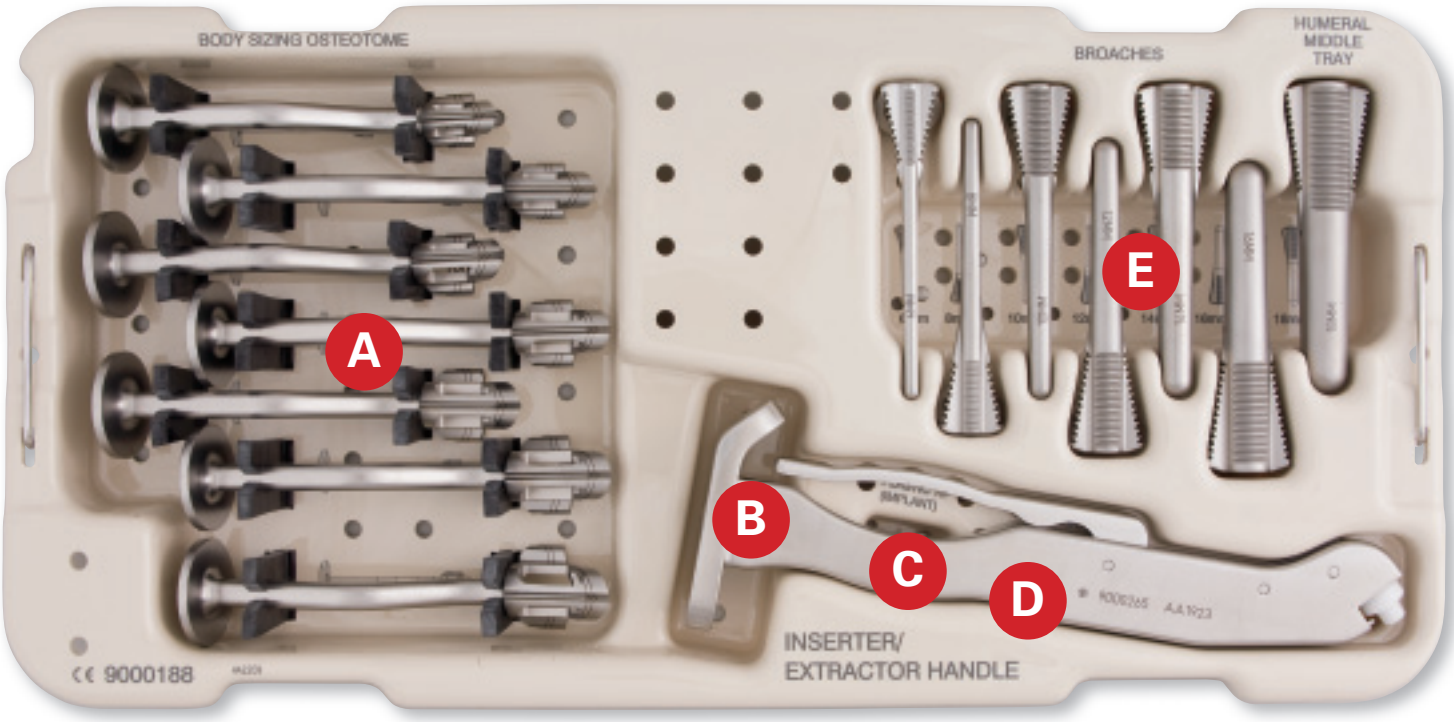
**The guidelines listed above were established by fellowship trained shoulder surgeons and provides a framework for post operative rehabilitation.

Humeral Top Tray



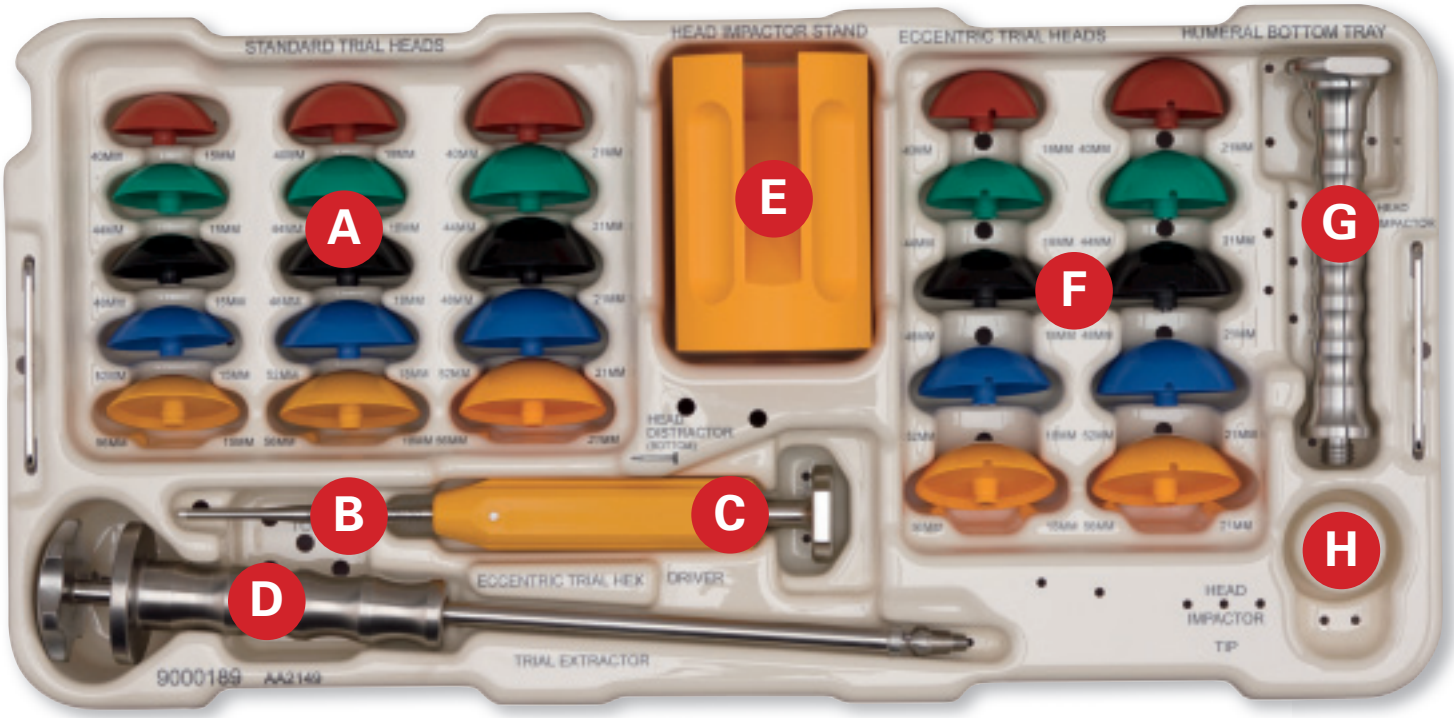
Instrument	Catalog #	Description
A	9000264	T Handle w/ Hudson End
B	9000363	IM Guide Pins
C	9000362	Retroversion Rod
D	9000361	IM Guide Member
E	9000364	IM Clamp Arm
F	9000360	IM Clamp Body
G	9000358	IM Clamp Screw
H	9000266	Humeral Flat Plate Cutting Guide
I	9000207	6mm Humeral Canal Reamer
I	9000209	8mm Humeral Canal Reamer
I	9000211	10mm Humeral Canal Reamer
I	9000213	12mm Humeral Canal Reamer
I	9000215	14mm Humeral Canal Reamer
I	9000217	16mm Humeral Canal Reamer
I	9000219	18mm Humeral Canal Reamer
J	9000381	Plastic Darrach
K	9000384	Crego Retractor
L	9000325	Affiniti Pin Puller

Humeral Middle Tray



Instrument	Catalog #	Description
A	9000326	6mm Humeral Osteotome
A	9000328	8mm Humeral Osteotome
A	9000330	10mm Humeral Osteotome
A	9000332	12mm Humeral Osteotome
A	9000334	14mm Humeral Osteotome
A	9000336	16mm Humeral Osteotome
A	9000338	18mm Humeral Osteotome
B	9000265	Humeral Impactor/Extractor
C	9000321	Plastic Tip for Humeral Impactor/Extractor
D	9000276	Metal Tip for Humeral Impactor/Extractor
E	9000206	6mm Humeral Broach
E	9000208	8mm Humeral Broach
E	9000210	10mm Humeral Broach
E	9000212	12mm Humeral Broach
E	9000214	14mm Humeral Broach
E	9000216	16mm Humeral Broach
E	9000218	18mm Humeral Broach

Humeral Bottom Tray



Instrument	Catalog #	Description
A	9000240	40 X 15 Std. Humeral Head Trial
A	9000241	40 X 18 Std. Humeral Head Trial
A	9000242	40 X 21 Std. Humeral Head Trial
A	9000244	44 X 15 Std. Humeral Head Trial
A	9000245	44 X 18 Std. Humeral Head Trial
A	9000246	44 X 21 Std. Humeral Head Trial
A	9000248	48 X 15 Std. Humeral Head Trial
A	9000249	48 X 18 Std. Humeral Head Trial
A	9000250	48 X 21 Std. Humeral Head Trial
A	9000252	52 X 15 Std. Humeral Head Trial
A	9000253	52 X 18 Std. Humeral Head Trial
A	9000254	52 X 21 Std. Humeral Head Trial
A	9000256	56 X 15 Std. Humeral Head Trial
A	9000257	56 X 18 Std. Humeral Head Trial
A	9000258	56 X 21 Std. Humeral Head Trial
B	9000324	Eccentric Head Trial Screwdriver
C	9000260	Humeral Head Distractor
D	9000261	Humeral Trial Extractor
E	9000268	Head/Stem Impactor Block
F	9000221	40 X 18 Ecc. Humeral Head Trial
F	9000222	40 X 21 Ecc. Humeral Head Trial
F	9000225	44 X 18 Ecc. Humeral Head Trial
F	9000226	44 X 21 Ecc. Humeral Head Trial
F	9000229	48 X 18 Ecc. Humeral Head Trial
F	9000230	48 X 21 Ecc. Humeral Head Trial
F	9000233	52 X 18 Ecc. Humeral Head Trial
F	9000234	52 X 21 Ecc. Humeral Head Trial
F	9000237	56 X 18 Ecc. Humeral Head Trial
F	9000238	56 X 21 Ecc. Humeral Head Trial
G	9000259	Humeral Head Impactor Shaft
H	9000359	Humeral Head Impactor Tip

Head & Stem Options		Humeral Stem Sizes						
		6mm	8mm	10mm	12mm	14mm	16mm	18mm
Eccentric Head Sizes	40 x 18	X	X					
	40 x 21	X	X	X	X			
	44 x 18	X	X	X	X			
	44 x 21	X	X	X	X	X	X	
	48 x 18	X	X	X	X	X	X	
	48 x 21	X	X	X	X	X	X	X
	52 x 18	X	X	X	X	X	X	X
	52 x 21	X	X	X	X	X	X	X
	56 x 18	X	X	X	X	X	X	X
	56 x 21	X	X	X	X	X	X	X
Standard Head Sizes	40 x 15	X	X	X	X	X	X	X
	40 x 18	X	X	X	X	X	X	X
	40 x 21	X	X	X	X	X	X	X
	44 x 15	X	X	X	X	X	X	X
	44 x 18	X	X	X	X	X	X	X
	44 x 21	X	X	X	X	X	X	X
	48x 15	X	X	X	X	X	X	X
	48 x 18	X	X	X	X	X	X	X
	48 x 21	X	X	X	X	X	X	X
	52 x 15	X	X	X	X	X	X	X
	52 x 18	X	X	X	X	X	X	X
	52 x 21	X	X	X	X	X	X	X
	56 x 15	X	X	X	X	X	X	X
	56 x 18	X	X	X	X	X	X	X
	56 x 21	X	X	X	X	X	X	X

Catalog #	Description
Standard Humeral Stems	
0020006	6mm Std Humeral Stem
0020008	8mm Std Humeral Stem
0020010	10mm Std Humeral Stem
0020012	12mm Std Humeral Stem
0020014	14mm Std Humeral Stem
0020016	16mm Std Humeral Stem
0020018	18mm Std Humeral Stem

Eccentric Humeral Heads

0020021	40 x 18 Ecc Humeral Head
0020022	40 x 21 Ecc Humeral Head
0020025	44 x 18 Ecc Humeral Head
0020026	44 x 21 Ecc Humeral Head
0020029	48 x 18 Ecc Humeral Head
0020030	48 x 21 Ecc Humeral Head
0020033	52 x 18 Ecc Humeral Head
0020034	52 x 21 Ecc Humeral Head
0020037	56 x 18 Ecc Humeral Head
0020038	56 x 21 Ecc Humeral Head

Standard Humeral Heads

0020040	40 x 15 Std Humeral Head
0020041	40 x 18 Std Humeral Head
0020042	40 x 21 Std Humeral Head
0020044	44 x 15 Std Humeral Head
0020045	44 x 18 Std Humeral Head
0020046	44 x 21 Std Humeral Head
0020048	48 x 15 Std Humeral Head
0020049	48 x 18 Std Humeral Head
0020050	48 x 21 Std Humeral Head
0020052	52 x 15 Std Humeral Head
0020053	52 x 18 Std Humeral Head
0020054	52 x 21 Std Humeral Head
0020056	56 x 15 Std Humeral Head
0020057	56 x 18 Std Humeral Head
0020058	56 x 21 Std Humeral Head

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