



# ARROW<sup>®</sup> II

Universal shoulder prosthesis

SURGICAL TECHNIQUE

ANATOMICAL



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# 1. ARROW® II implant range

## 1.1. Range description



### The ARROW® II anatomical prosthesis is available in the following configurations:

- Simple humeral prosthesis (SHA): humeral stems and eccentric humeral heads,
- Anatomical total prosthesis (cemented glenoid implant with 4 pegs) (TSA cemented): humeral stems, eccentric humeral heads and cemented glenoids,
- Anatomical total prosthesis (metal-back glenoid implant) (TSA cementless): humeral stems, humeral heads, glenoid insert, and metal-back glenoid bases.

### The instruments allow Total Shoulder Arthroplasty with consideration given to:

- Surgical approach: deltopectoral incision or superior-lateral incision,
- Prosthesis type: SHA, TCA cemented, TCA cementless.

## 1.2. Indications for use

### Simple humeral prosthesis

- Dislocation fracture or complex fracture of the proximal end of the humerus,
- Osteonecrosis of the humeral head without glenoid lesions,
- Extensive cartilaginous lesions of the humeral head without glenoid lesions,
- Centered osteoarthritis with a glenoid that does not allow for implantation of a glenoid implant,
- Osteoarthritis with a ruptured cuff, but retaining an active elevation of at least 120°,
- Post-traumatic sequela with a glenoid lesion.

### Anatomical total prosthesis (glenoid implant anchored with 4 pegs)

- Centered glenohumeral osteoarthritis,
- Rheumatoid arthritis,
- Post-traumatic sequela with a glenoid lesion.

*A functional rotator cuff is needed to use this device.*

### Anatomical total prosthesis (metal-back glenoid implant)

- Centered glenohumeral osteoarthritis,
- Post-traumatic sequela with a glenoid lesion,
- Revision for glenoid loosening,
- Loss of glenoid bone substance requiring reconstruction with a graft.

*A functional rotator cuff is needed to use this device.*

## 1.3. Use

All shoulder prosthesis implants are intended to be used for primary shoulder arthroplasty or for revision.

The cemented humeral stems are intended to be used with cement. The cementless humeral stems are intended to be used without cement, but in the event of insufficient primary fixation, only the diaphyseal portion of the stem may be cemented.

The metal-back glenoid base is intended to be used without cement and has associate cortical and cancellous bone screws.

## 1.4. ARROW® II implants list

### CEMENTED HUMERAL STEM

| Reference | Diameter | Length (mm) |
|-----------|----------|-------------|
| 267 716   | Ø6       | L90         |
| 267 717   | Ø8       | L120        |
| 268 110   | Ø8       | L170        |
| 267 718   | Ø10      | L125        |
| 267 719   | Ø12      | L130        |

### CEMENTLESS HUMERAL STEM

| Reference | Diameter | Length (mm) |
|-----------|----------|-------------|
| 267 722   | Ø8       | L120        |
| 268 111   | Ø8       | L170        |
| 267 723   | Ø10      | L125        |
| 267 724   | Ø12      | L130        |
| 267 725   | Ø14      | L135        |
| 267 726   | Ø16      | L140        |

### OFF-CENTERED HUMERAL HEAD +2

| Reference | Diameter | Height (mm) |
|-----------|----------|-------------|
| 267 727   | Ø42      | H15 +2      |
| 267 728   | Ø42      | H17 +2      |
| 267 729   | Ø45      | H16 +2      |
| 267 730   | Ø45      | H19 +2      |
| 267 731   | Ø48      | H17 +2      |
| 267 732   | Ø48      | H20 +2      |
| 267 733   | Ø51      | H18 +2      |
| 267 734   | Ø51      | H22 +2      |
| 267 735   | Ø54      | H19 +2      |
| 267 736   | Ø54      | H23 +2      |

### OFF-CENTERED HUMERAL HEAD +4

| Reference | Diameter | Height (mm) |
|-----------|----------|-------------|
| 267 737   | Ø39      | H14 +4      |
| 267 738   | Ø39      | H16 +4      |
| 267 739   | Ø42      | H15 +4      |
| 267 740   | Ø42      | H17 +4      |
| 267 741   | Ø45      | H16 +4      |
| 267 742   | Ø45      | H19 +4      |
| 267 743   | Ø48      | H17 +4      |
| 267 744   | Ø48      | H20 +4      |
| 267 745   | Ø51      | H18 +4      |
| 267 746   | Ø51      | H22 +4      |

### GLENOID INSERT

| Reference | Size |
|-----------|------|
| 267 768   | XS-S |
| 267 769   | M    |
| 267 770   | L    |

### METAL-BACK GLENOID BASE PLATE

| Reference | Size  |
|-----------|-------|
| 267 771   | S     |
| 267 772   | M     |
| 267 773   | L     |
| 267 713   | XS-LP |
| 267 714   | S-LP  |
| 267 715   | M-LP  |

### CEMENTED GLENOID

| Reference | Size  |
|-----------|-------|
| 260 522   | 44/S  |
| 260 523   | 46/M  |
| 260 524   | 48/L  |
| 260 525   | 50/XL |

### STANDARD HUMERAL INSERT

| Reference | Diameter | Height (mm) |
|-----------|----------|-------------|
| 267 747   | Ø36      | H00         |
| 267 748   | Ø36      | H05         |
| 267 749   | Ø36      | H10         |
| 267 750   | Ø39      | H00         |
| 267 751   | Ø39      | H05         |
| 267 752   | Ø39      | H10         |
| 267 753   | Ø42      | H00         |
| 267 754   | Ø42      | H05         |
| 267 755   | Ø42      | H10         |

### OFF-CENTERED HUMERAL INSERT

| Reference | Diameter | Height (mm) |
|-----------|----------|-------------|
| 267 756   | Ø36      | H00         |
| 267 757   | Ø36      | H05         |
| 267 758   | Ø36      | H10         |
| 267 759   | Ø39      | H00         |
| 267 760   | Ø39      | H05         |
| 267 761   | Ø39      | H10         |
| 267 762   | Ø42      | H00         |
| 267 763   | Ø42      | H05         |
| 267 764   | Ø42      | H10         |

### GLENOSPHERE

| Reference | Diameter |
|-----------|----------|
| 267 765   | Ø36      |
| 267 766   | Ø39      |
| 267 767   | Ø42      |

### CANCELLOUS BONE SCREW

| Reference | Size                 |
|-----------|----------------------|
| 265 473   | Ø5,5 - L24 (sterile) |
| 263 468   | Ø5,5 - L28 (sterile) |
| 263 469   | Ø5,5 - L32 (sterile) |
| 263 470   | Ø5,5 - L36 (sterile) |
| 263 471   | Ø5,5 - L40 (sterile) |
| 263 472   | Ø5,5 - L45 (sterile) |
| 263 473   | Ø5,5 - L50 (sterile) |

### CORTICAL BONE SCREW

| Reference | Size                 |
|-----------|----------------------|
| 263 476   | Ø4,5 - L32 (sterile) |
| 263 477   | Ø4,5 - L34 (sterile) |
| 263 479   | Ø4,5 - L36 (sterile) |
| 263 480   | Ø4,5 - L38 (sterile) |
| 263 481   | Ø4,5 - L40 (sterile) |

### SUTURES

| Reference | Designation                 |
|-----------|-----------------------------|
| 271 635   | FH LOOP USP 2 (black)       |
| 271 200   | FH LOOP USP 2 (blue)        |
| 271 630   | FH LOOP TAPE 2.2 mm (black) |
| 271 202   | FH LOOP TAPE 2.3 mm (blue)  |
| 271 636   | FH TAPE 2 mm                |
| 271 203   | FH LINK USP 2               |

### SINGLE USE PIN

| Reference | Dimensions |
|-----------|------------|
| 269 138   | Ø3 - L170  |

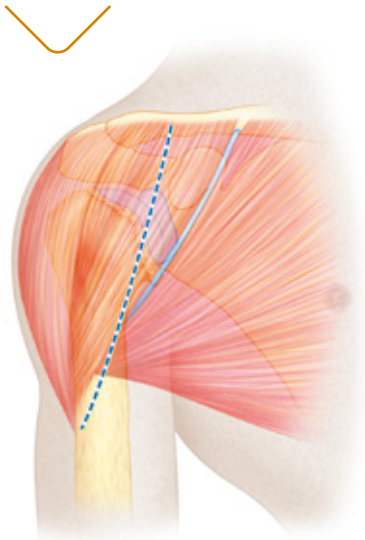
### SURGICAL TEMPLATING e-ORTHO FOR ARROW®

| Reference | Minimal quantity |
|-----------|------------------|
| 271 192   | 5                |

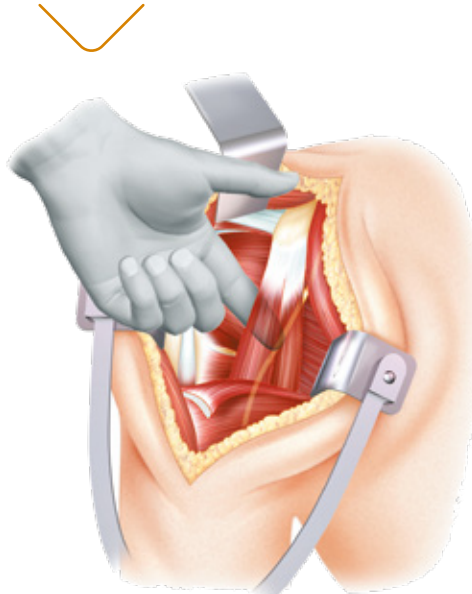


## 2. Deltopectoral incision

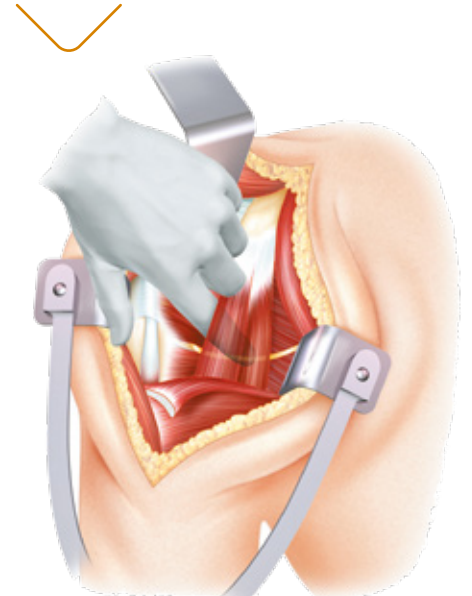
**a.** The deltopectoral incision is made from the clavicle to the superior border of the pectoralis major, along the deltopectoral groove, lateral to the coracoid. The cephalic vein is reclined laterally.



**b.** Find the position of the musculocutaneous nerve with the finger, before putting a retractor under the coracobrachialis muscle.



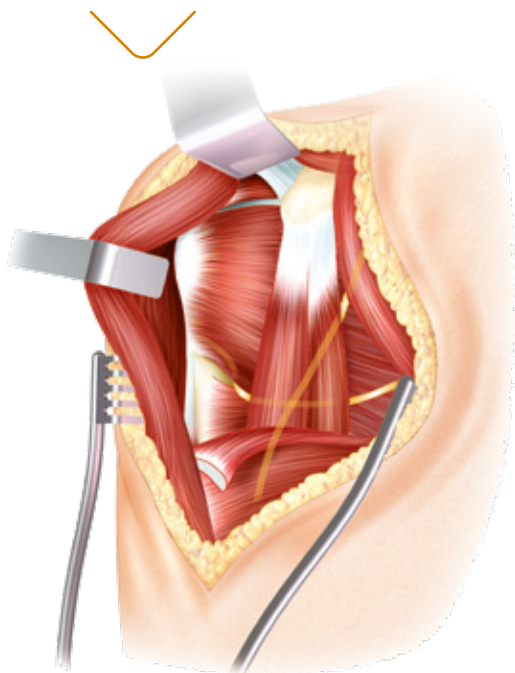
**c.** The position of the axillary nerve must be identified before sectioning the subscapularis muscle.



**d.** Free the deep surface of the deltoid by abducting and externally rotating the arm.

Do not damage the coracoacromial ligament.

Partially section the pectoralis major tendon for 1 cm (increasing external rotation).



**e.** Ligate the anterior circumflex vessels.

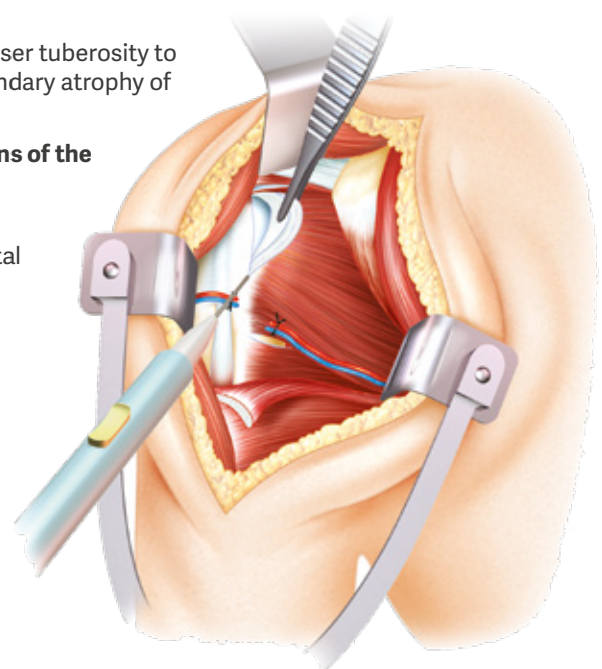
Identify the rotator interval.

**The subscapular incision can be made in three ways:**

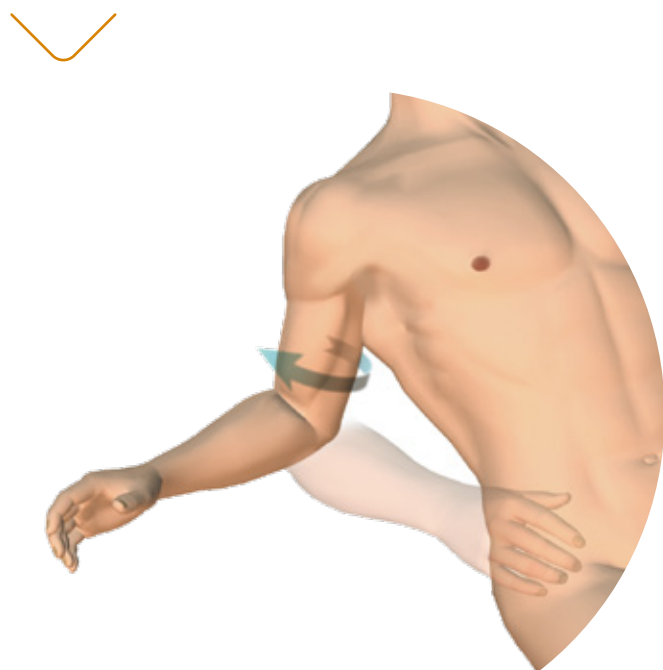
- by sectioning the subscapularis muscle at the musculotendinous junction and sectioning the articular capsule at the same point;
- if there is limited preoperative external rotation, by detaching the subscapularis tendon subperiosteally starting from the bicipital groove (identified by the long head of the biceps at the superior border of the pectoralis major);
- by osteotomy of the lesser tuberosity to reduce the risk of secondary atrophy of the subscapularis.

**In pathological conditions of the long head of the biceps:**

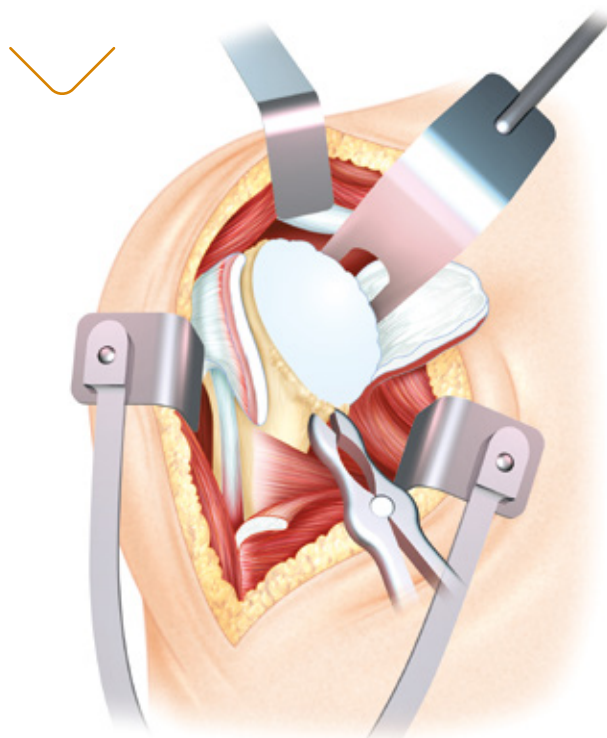
- either a tenodesis is performed in the bicipital groove,
- or a tenotomy.



f. Dislocate the humeral head in abduction and external rotation with retropulsion of the arm.



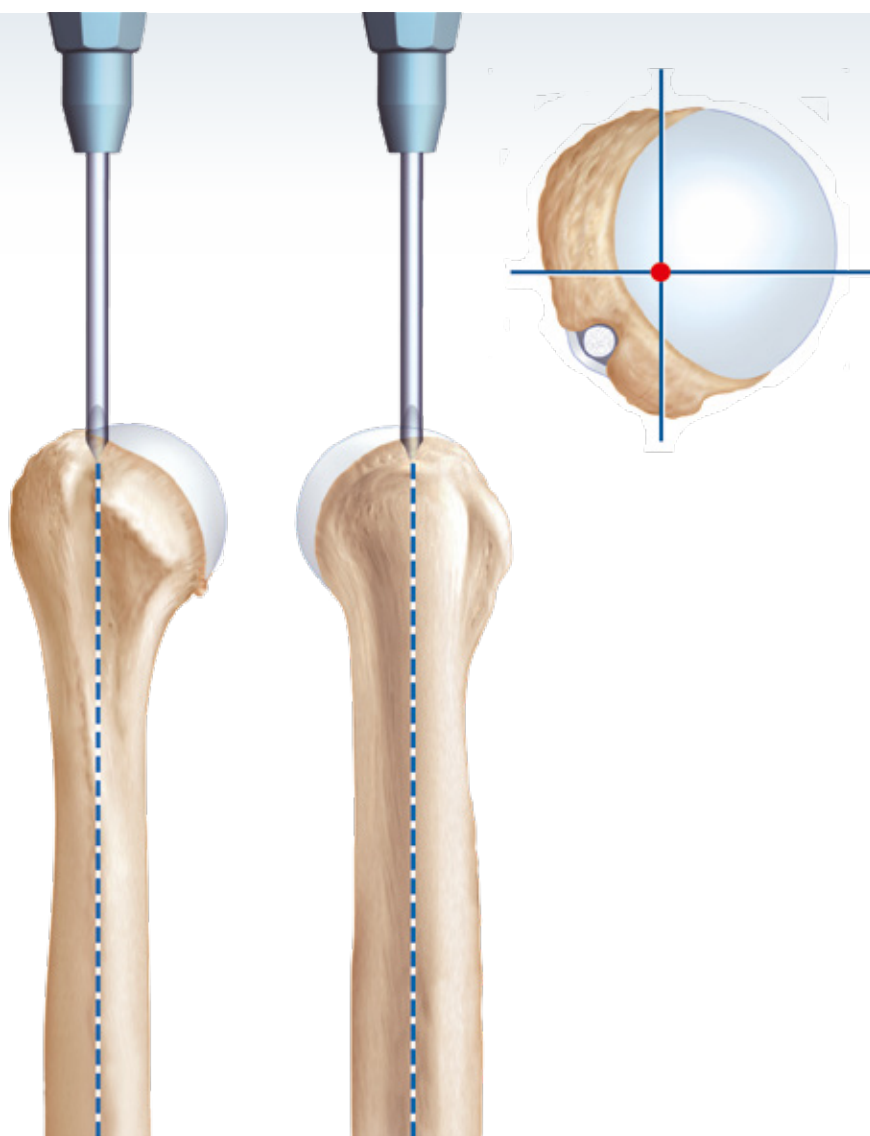
g. Dislocation is only possible if the anterior-inferior capsule and the coracohumeral ligament have been sectioned. Osteophytes on the anatomical neck of the humerus are resected using bone forceps.



### 3. Humeral preparation

The entry point for the square-point awl is at the junction between the summit of the humeral head cartilage and the greater tuberosity, about 1 cm posteriorly and medially to the bicipital groove.

If the cortical bone is thick the  $\varnothing 6$  reamer is recommended.



The length of the diaphyseal reamer allows the humeral stem to be aligned along the diaphyseal axis of the humerus in order to reduce the risk of varus/valgus malposition.



Perform diaphyseal reaming manually using increasing sizes of reamer (Ø6, 8, 10, 12, 14, 16) until there is a sensation of reaming into the cortex.



### 3.1. Use of the cutting guide

Assemble the cutting guide and the deltopectoral approach cutting block with the cutting guide screws. The guide can be used on the right or left side. The deltopectoral cutting block is positioned on the guide to clearly show the etched markings left or right side.

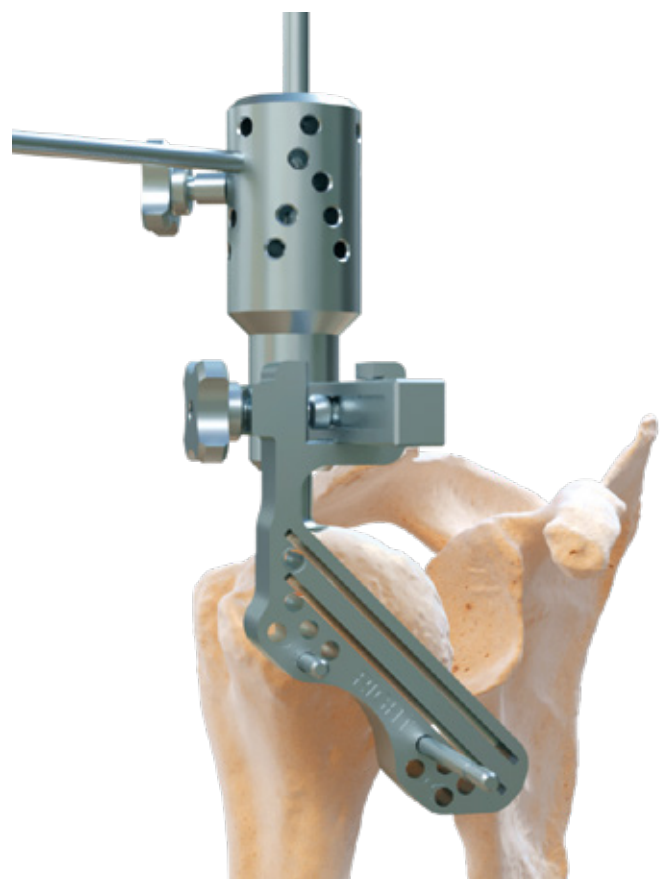
Having fixed the axis of the guide, gradually externally rotate the arm until the forearm is in line with the screwed retroversion shaft producing the angle chosen (0°, 10°, 20°, 30°, 40°). A retroversion of 20° is recommended for an anatomical prosthesis.

Put the humeral cutting guide onto the diaphyseal reamer. The top of the cut starts systematically at the summit of the head of the humerus, at the junction between the humeral head cartilage and the greater tuberosity.

With delto-pectoral approach, the superior pin is on the hollow of the anatomical neck.

The angulation of 135° is fixed. If needed, a recut is possible 5mm below the previous one.

When the depth of cut and degree of retroversion have been defined, fix the humeral cutting block with a maximum of 4 pins in the metaphysis. The pins can be impacted and removed with us of the pin holder.



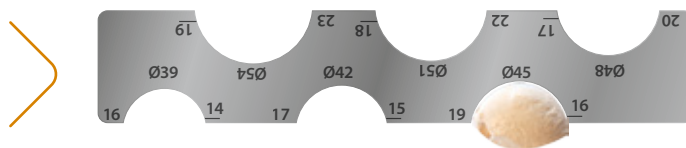
The diaphyseal reamer is then removed.

Cut the head of the humerus using an oscillating saw along the groove in the humeral cutting block with a fixed angle of 135° and the selected retroversion.



The diameter and thickness of the articular head is measured with the humeral head template.

Remove any osteophytes before measuring.



Reproduce the retroversion by aligning the forearm with the retroversion shaft (ref 261 053), fixed on the metaphyseal rasp handle. It is identical to that produced on the cutting guide.

The metaphysis is progressively prepared manually using increasing sizes of trial metaphyseal rasps.

The orientation of the metaphyseal ridges of the rasp compacts the cancellous bone and provides optimal stability for the implant.



Use the stem protector to protect the bone cutting surface during glenoid preparation

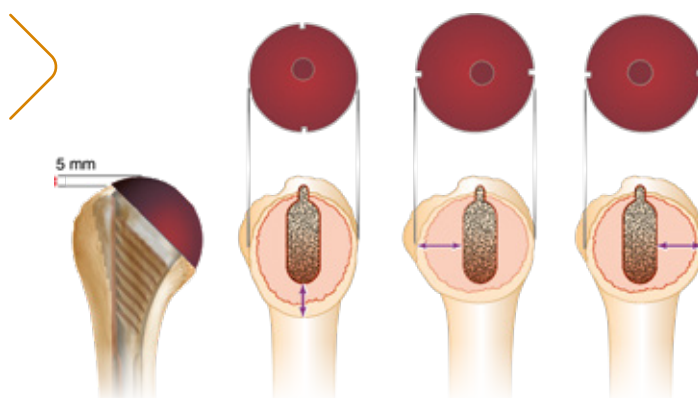
## 3.2. Choice of the humeral head

The humeral head should completely cover the bone surface of the cut humerus. By marking the reference position of the off-centered head on the bone with an electric scalpel the definitive humeral head can be similarly positioned.

Once the diameter and thickness of the humeral head has been chosen, check to see that the subscapularis can be repaired under tension (ER 30°).

There are 3 positions where the trial head of the humerus may completely cover the cut bone of the humerus.

However the top of the humeral head must be approximately 5 mm higher than the summit of the greater tuberosity.



|      |    | GLENOID  |                  |     |     |     |    |
|------|----|----------|------------------|-----|-----|-----|----|
|      |    | MISMATCH | Size             | S   | M   | L   | XL |
|      |    | Ø        | Curvature radius | 26  | 27  | 28  | 29 |
| HEAD | 39 | 19,5     | 6,5              | 7,5 | 8,5 | 9,5 |    |
|      | 42 | 21       | 5                | 6   | 7   | 8   |    |
|      | 45 | 22,5     | 3,5              | 4,5 | 5,5 | 6,5 |    |
|      | 48 | 24       | 2                | 3   | 4   | 5   |    |
|      | 51 | 25,5     | 0,5              | 1,5 | 2,5 | 3,5 |    |
|      | 54 | 27       | -1               | 0   | 1   | 2   |    |

We recommend a mismatch between 2 and 4 mm.

## 4. Glenoid preparation

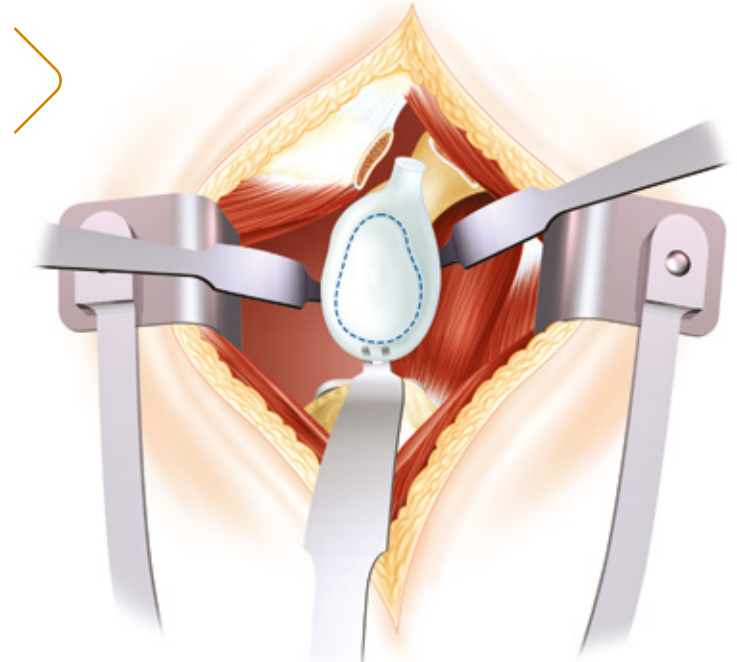
Dislocate the upper end of the humerus downwards and backwards.

Exposure of the glenoid requires 4 retractors:

- a retractor in front,
- a retractor below, at 6 o'clock,
- a retractor posteriorly, at 8 o'clock (pushing back the humerus protected by the metaphyseal rasp),
- a retractor, protecting the anterior fascicle of the deltoid.

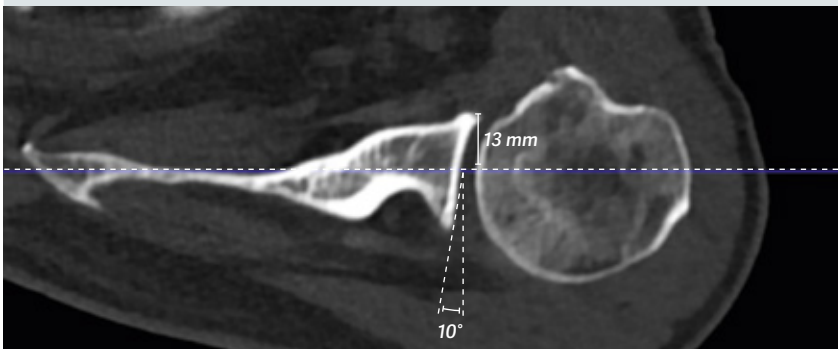
Capsulectomy and circumferential excision of the labrum (360°) helps to expose and delimit the glenoid.

The central glenoid hole is marked with the square-pointawl, using the most suitable glenoid template.



### 4.1. Guide pin positioning

#### 1 Measurements on a preoperative CT-scan

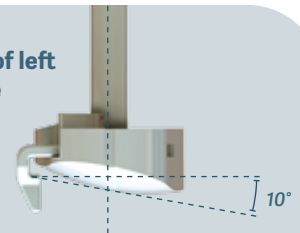


Guide choice:

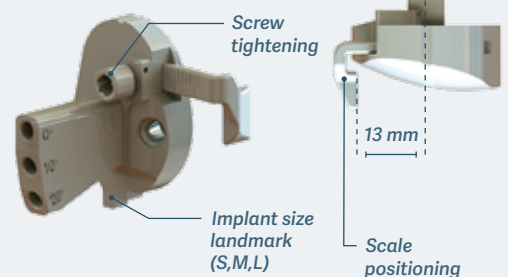
- between 0°, 10° and 20° post compensation
- Left or right

Distance on the guide

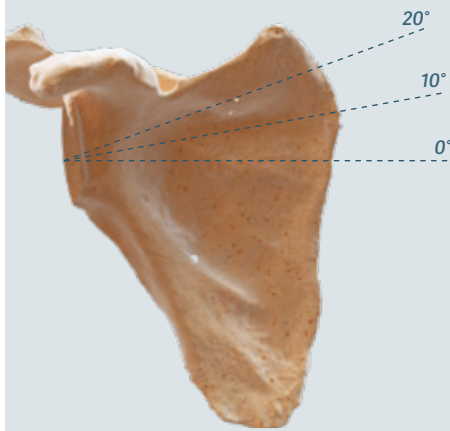
#### 2 E.g. use of left 10° guide



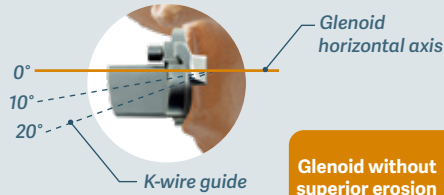
#### 3 Length adjustment



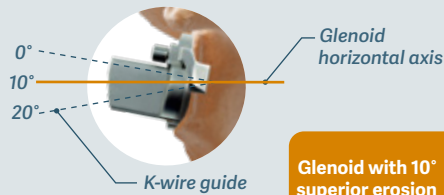
#### 4 Tilt choice



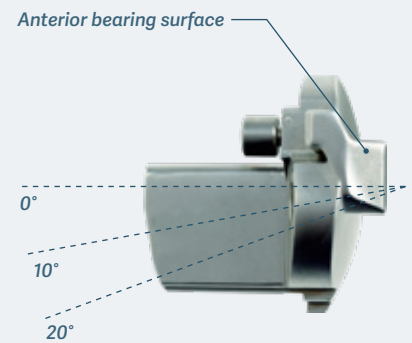
Without superior erosion, we recommend 0 or 10° tilt.



If the glenoid has a 10° superior erosion, the tilt must be chosen at:  
 - 10° to have a tilt of 0°  
 - 20° to have a tilt of 10°



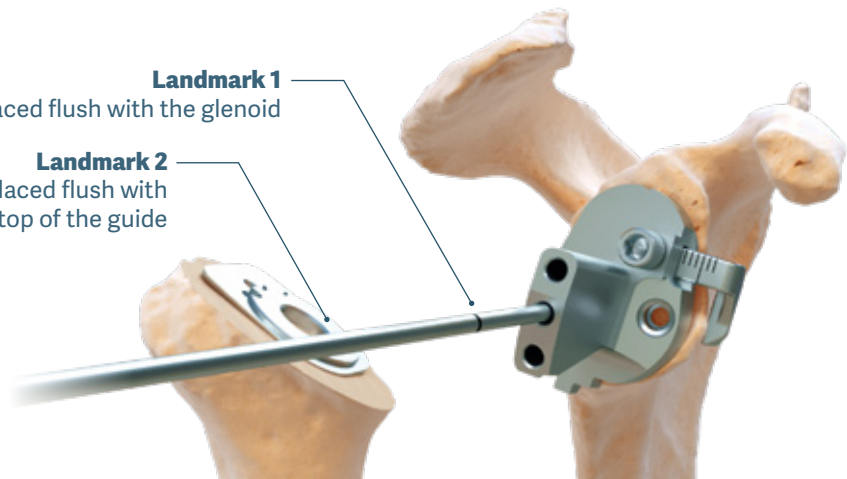
#### 5



The guide is placed on the glenoid surface. The bearing surface must be in contact with the anterior glenoid. The guide pin is inserted with the previously selected tilt.

**Landmark 1**  
to be placed flush with the glenoid

**Landmark 2**  
to be placed flush with the top of the guide



## 4.2. Glenoid bone preparation

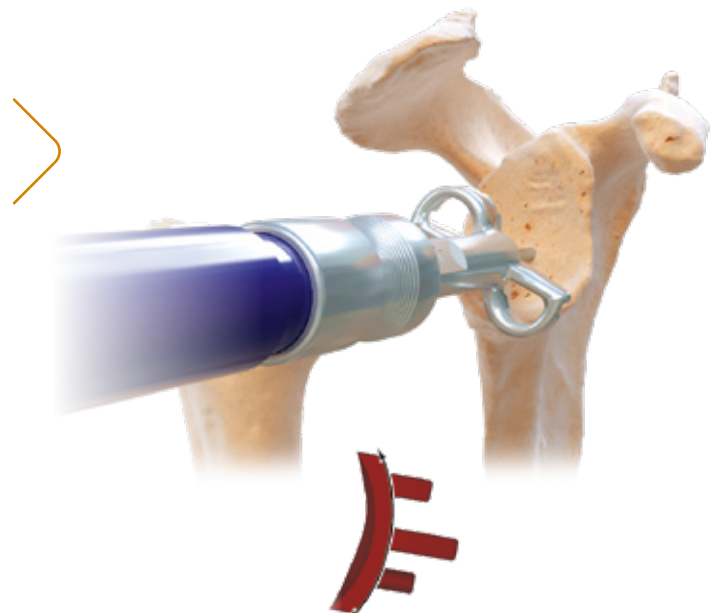
Insert the guide pin into the glenoid reamer handle.

Openwork glenoid reamer (XS/S-M-L) is used to abrade the glenoid cavity while retaining the subchondral bone.

These are assembled on the glenoid reamer handle to be power-driven or manually used with the handle.

Initiate reamer a few millimeters off the bone to avoid risk of fracture.

Reaming creates a concave surface which fits perfectly with the convex base of the glenoid implant. (cemented glenoid or metal-back glenoid plate).



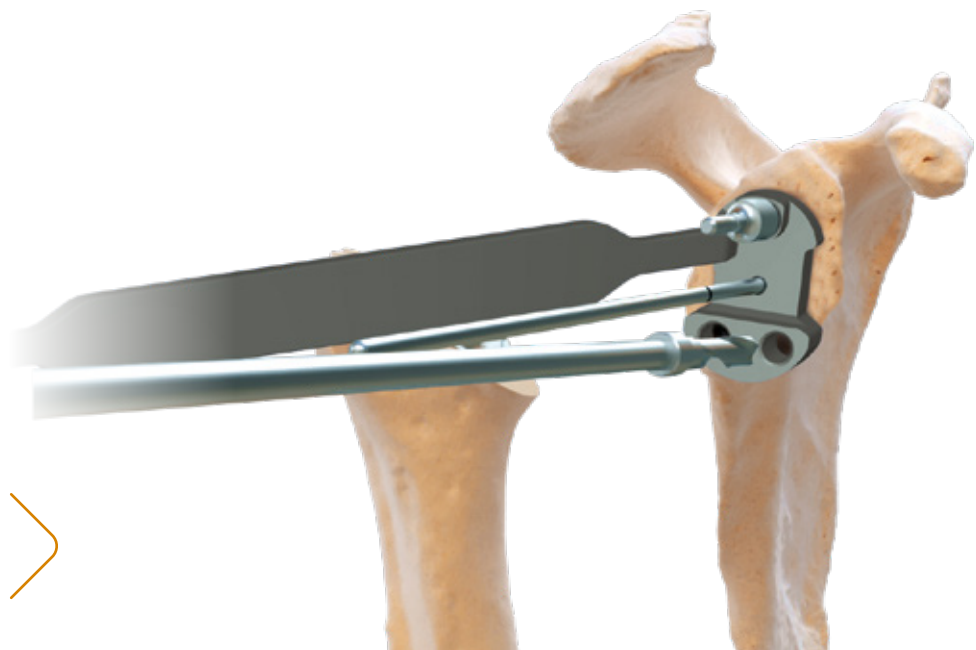
## 5. Cemented glenoid

### 5.1. Bone preparation

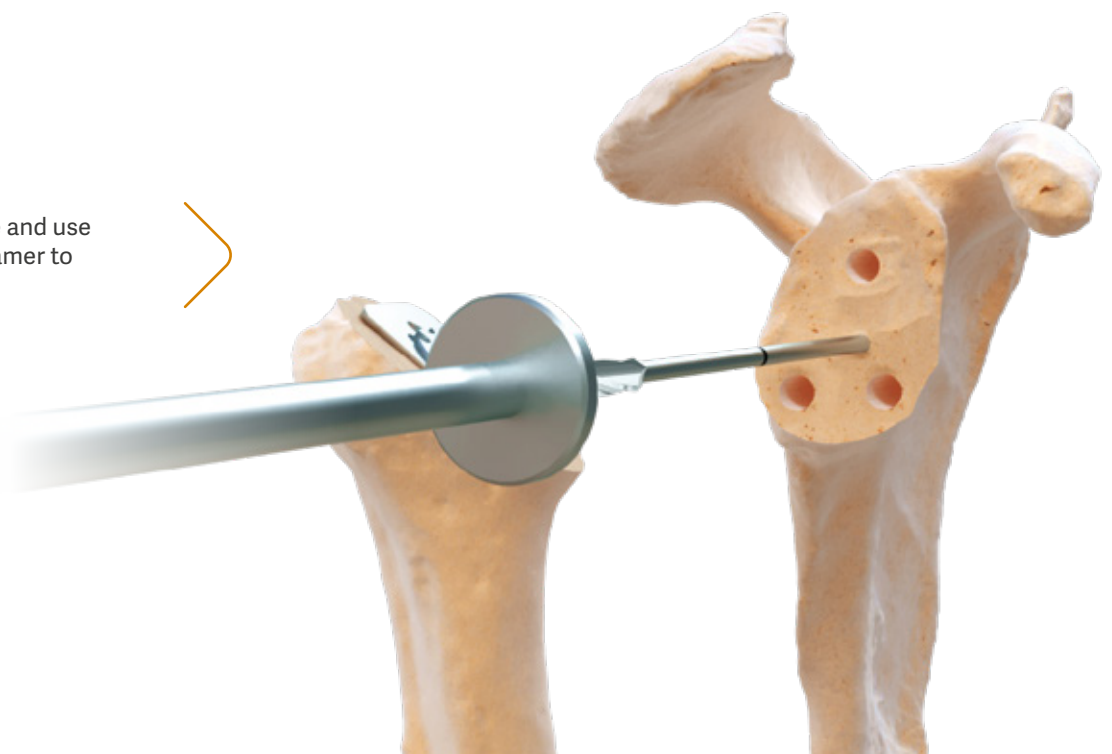
Place the glenoid template aligned with cardinal points of the glenoid. Then drill the first hole with the  $\varnothing 5$  mm stopped drill bit.



Put the fixing pin to stabilize and drill the second hole.



Remove the keel drill guide and use the cannulated tapered reamer to complete the central hole.



## 5.2. Prosthesis trial reduction

Put the chosen trial anatomical glenoid in place.

### Tests performed:

- Anterior-posterior translation of the head of the humerus should be possible relative to the glenoid cavity (half a head).
- The head of the humerus should not project beyond the rotator cuff.
- The subscapularis should be reinserted with tension allowing external rotation of the elbow relative to the body of at least 30 to 40°.



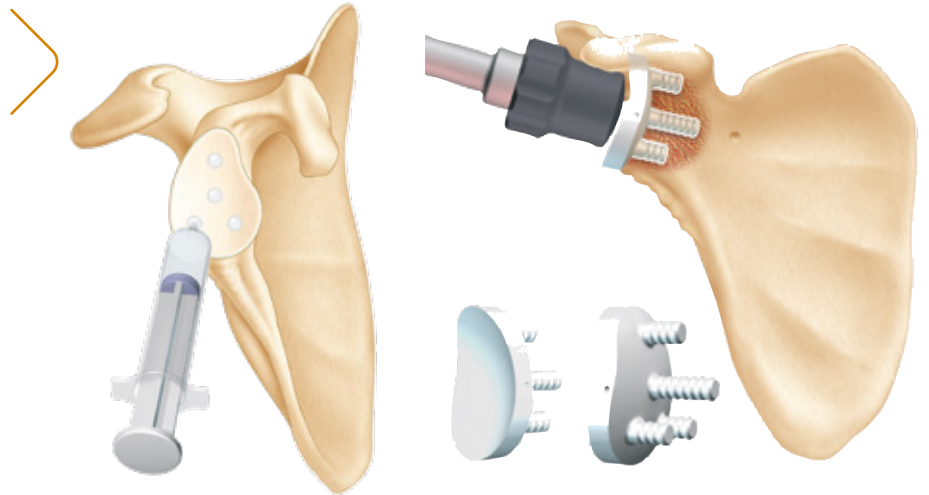
## 5.3. Definitive implants

Clean and dry the glenoid fixing holes.

Introduce a moderate amount of cement into the 4 holes using a 20 cm syringe. avoid getting cement between the bone and the back of the glenoid prosthesis.

Place the glenoid with the forceps for holding glenoid unit. Impact the cemented glenoid with impactor and glenoid impaction tip.

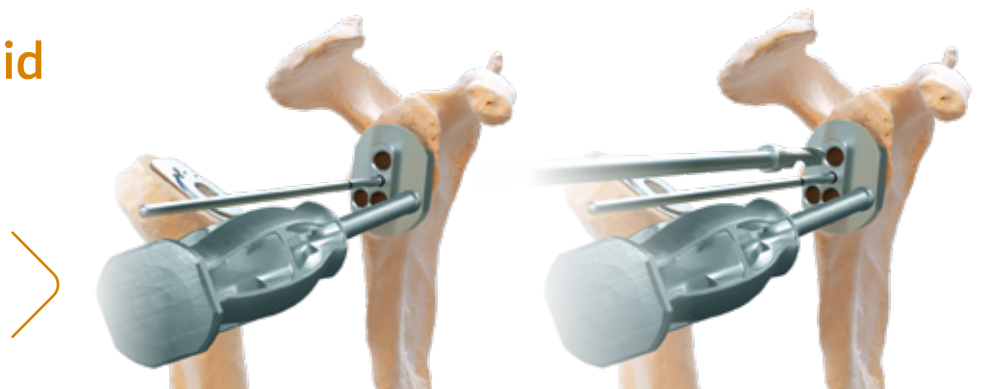
Cement the definitive glenoid component in place and maintain it there by finger pressure or using a suitable means of applying pressure.



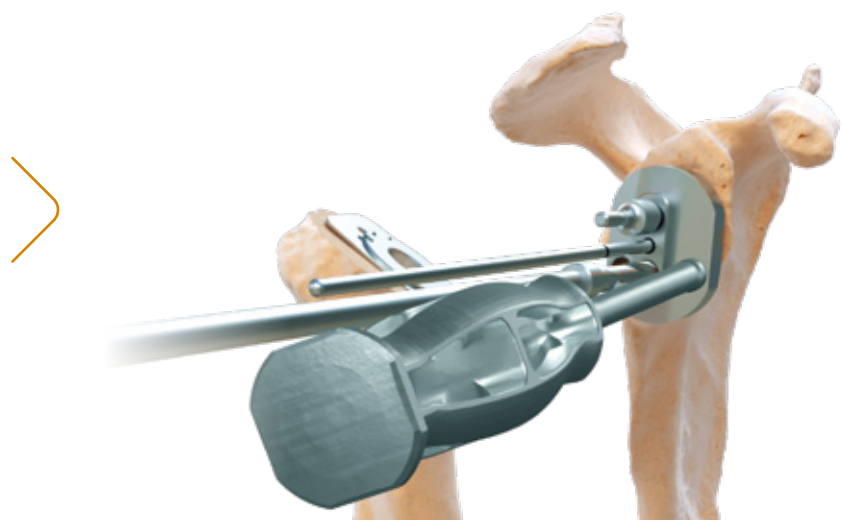
## 6. Cementless glenoid

### 6.1. Bone preparation

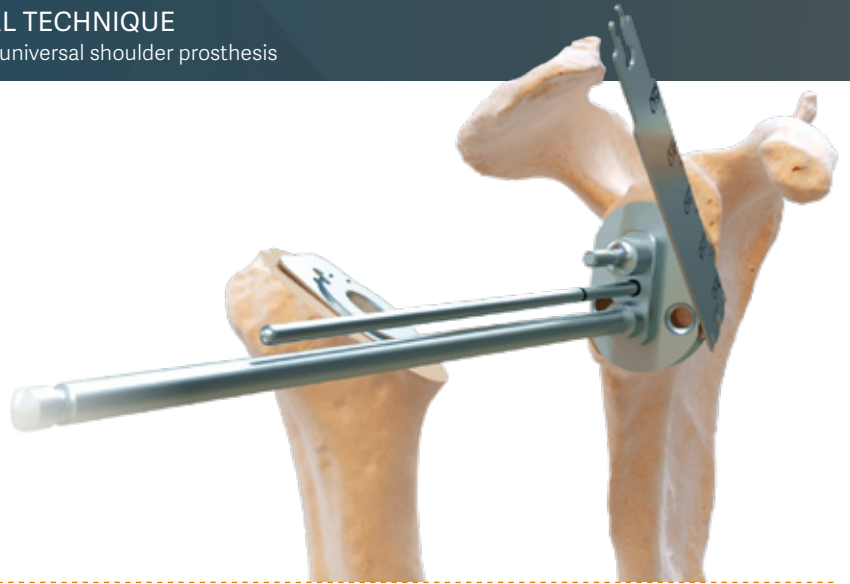
Place the glenoid template aligned with cardinal points of the glenoid. Then drill the first hole with the Ø5 mm stopped drill bit.



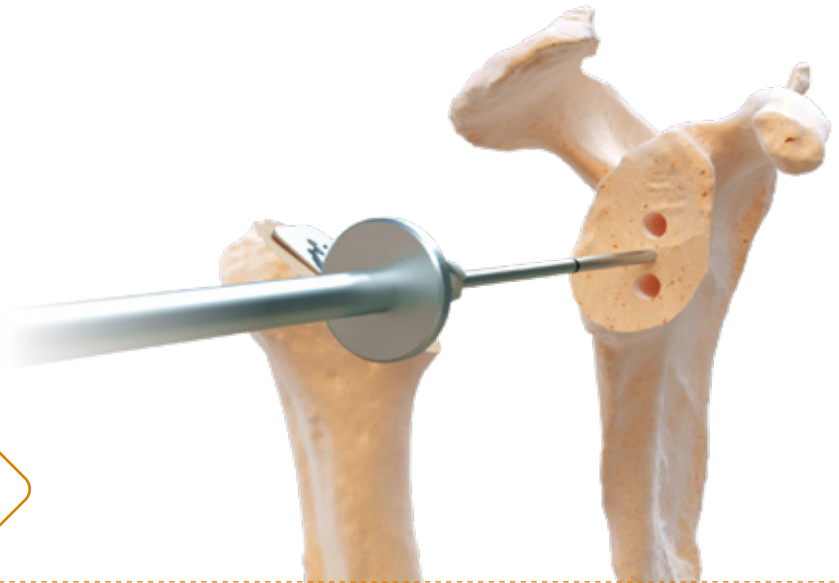
Put the fixing pin to stabilise and drill the second hole.



Use an oscillating saw to achieve an economical cut to accommodate the baseplate lateral winglet. Use the edge of the punch shield as a cutting surface.



Remove the keel drill guide and use the cannulated tapered reamer to complete the central hole.



## 6.2. Metal-back glenoid base plate trial

Put in place trial metal back with the M5 handle. Verify primary stability and metal-back sitting on the glenoid surface otherwise review the knee preparation steps.

The thickness of the metal-back trial is equal to the definitive metal-back base plate with glenoid insert included.

## 6.3. Definitive implants

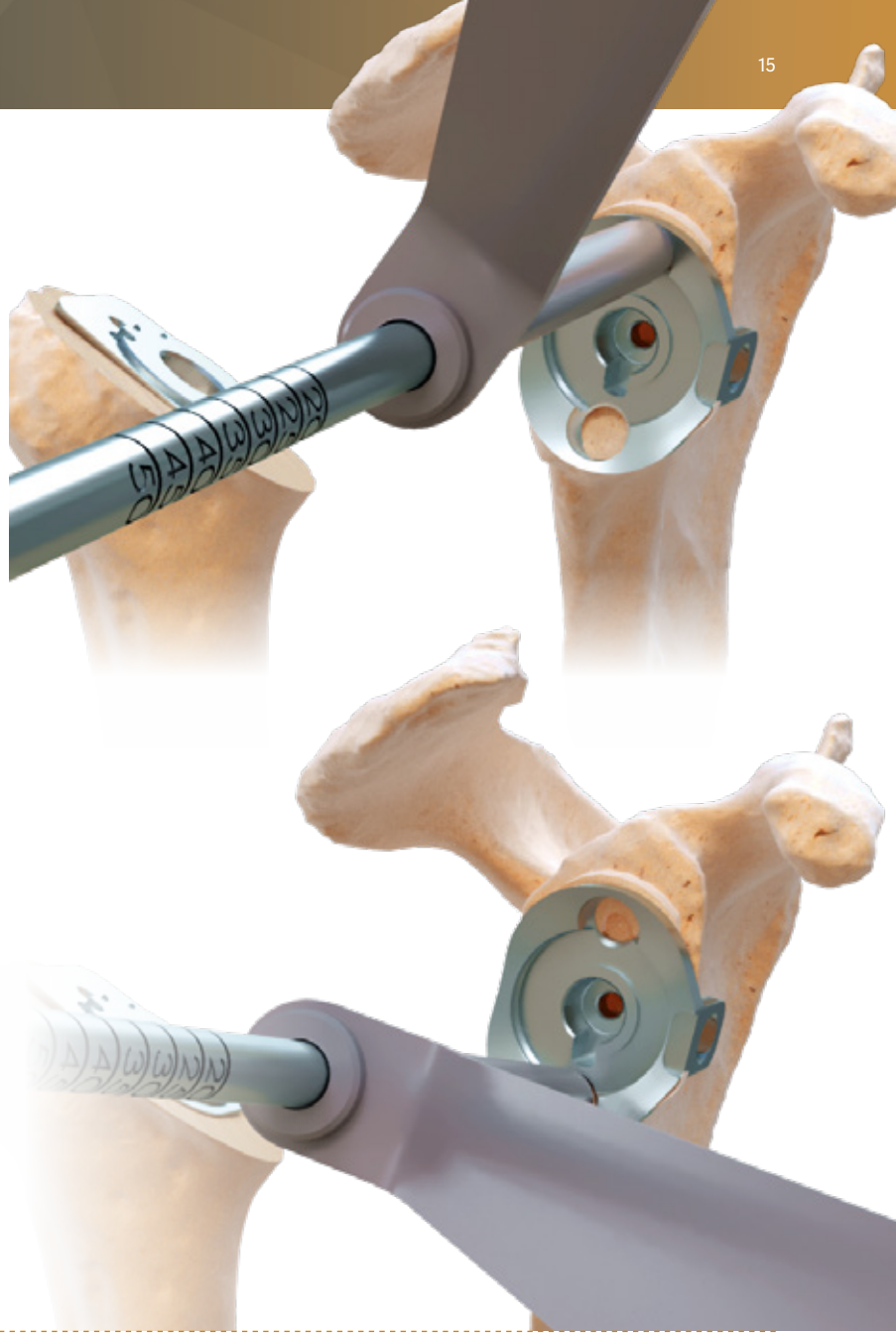
Impact the definitive metal-back glenoid base using the baseplate positioner/impactor.



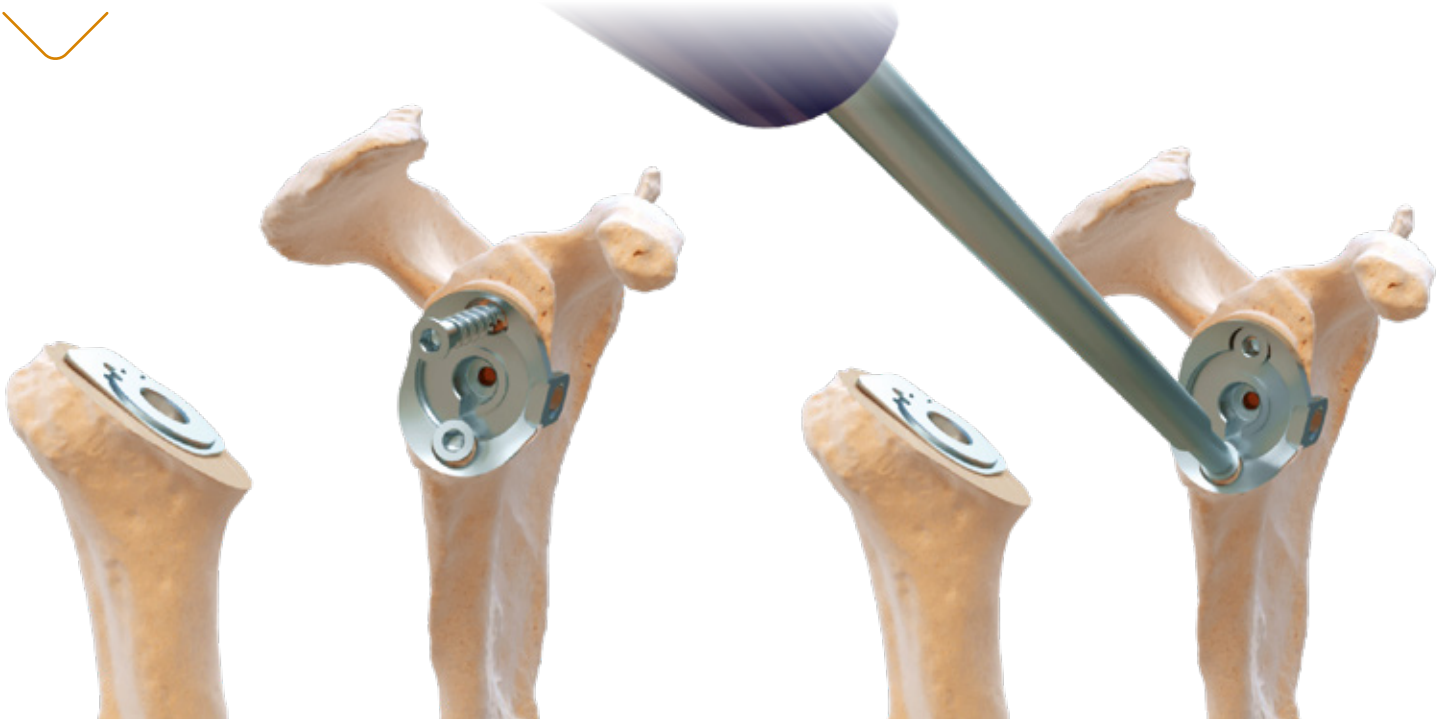
### Axial screws orientation and placement

Drill the superior and inferior holes with the  $\text{\O}3,2$  mm drill bit and screw sleeve. The best bone fixation areas can be sought because of tolerance of  $10^\circ$ .

The upper screw aims for the base of the coracoid and the lower screw aims for the pillar of the scapula.



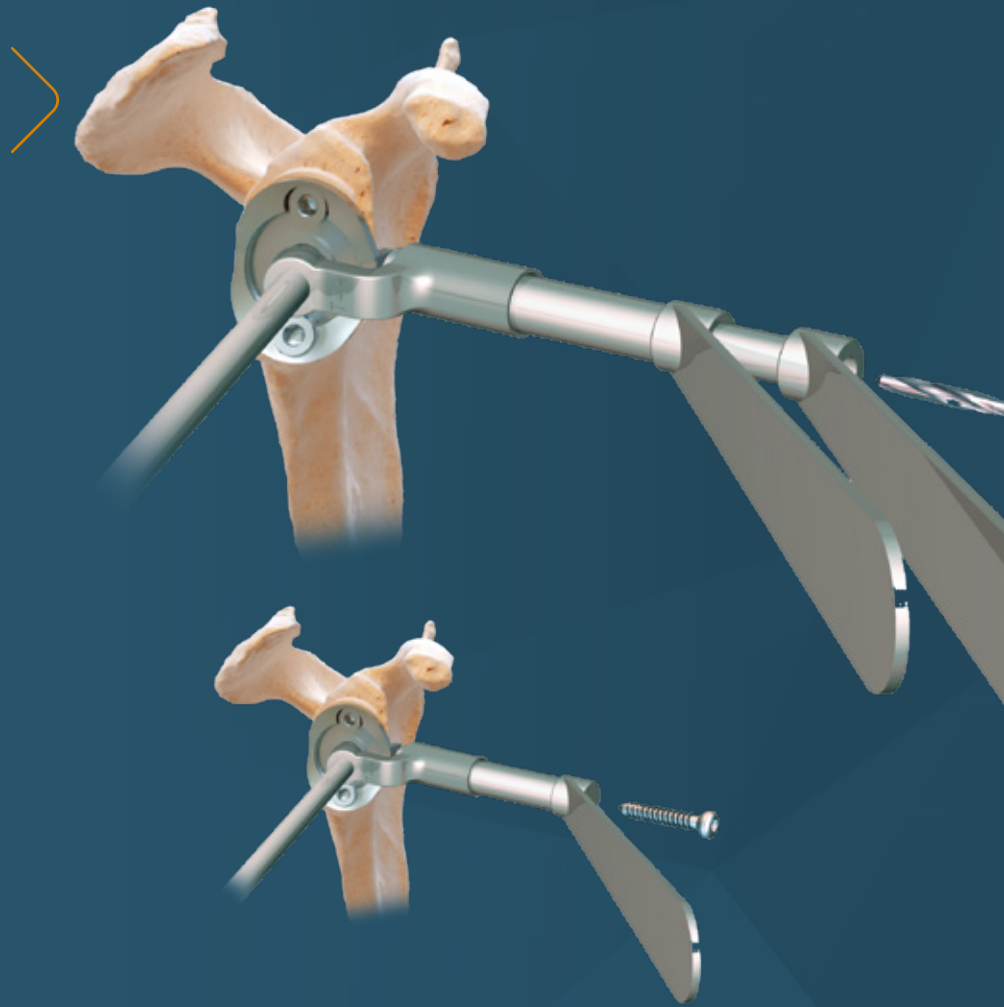
- Read screw measurement on the graduation marks on the  $\text{\O} 3,2$  drill bit or by positioning the depth gauge or reproducing e-ORTHO templating.
- Screw cancellous screws  $\text{\O} 5,5$  by using the 6 sides screwdriver.



### Option: fitting the anterior-posterior screw (optional)

This procedure is recommended for a bone graft or anterior glenoid fracture. A deltopectoral approach makes it easier. In the case of a superior-lateral approach, it could be done transcutaneously.

- Put the anterior-posterior guide for the metal-back glenoid base in place using the anterior-posterior guide handle.
- Put the screw and drill sleeves into the metal-back glenoid base sight. Drill with  $\text{Ø}3,2$  mm drill bit. The length of the screw can't be read with this drill bit.
- Remove the drill sleeve and the drill bit, insert the depth gauge and measure the length of the screw ("cortical" writing front).
- Insert and drill the cortical screw  $\text{Ø}4,5$  with the 6 sides screwdriver.



## 6.4. Glenoid insert impaction

Place the glenoid insert into the metal-back base plate and clip it with impactor and glenoid impaction tip.

*Glenoid insert and metal-back base plate must share the same size.*

|                    |      |   |   |       |      |      |
|--------------------|------|---|---|-------|------|------|
| Glenoid base plate | S    | M | L | XS-LP | S-LP | M-LP |
| Glenoid insert     | XS-S | M | L | XS-S  | XS-S | M    |



## 7. Humeral definitive implants

### 7.1. Humeral stem

Grafts of spongy bone taken from the resected head of the humerus are put into the (inferior and anterior) metaphyseal region to ensure optimal stability for the definitive humeral stem.

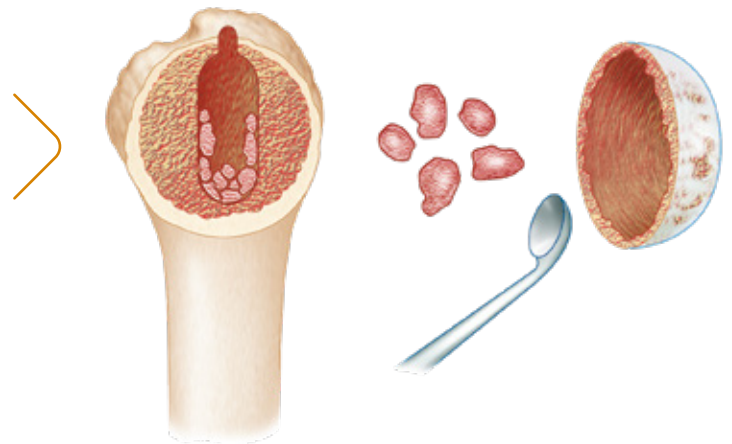
Guide the retroversion using the shaft attached to the rasp handle aligned in the axis of the forearm.

Impact the humeral stem with or without cement in the smooth diaphyseal region, until the plate arrives in contact with the cut bone of the humerus.

Cemented stem is cementable on its complete surface : metaphysis and diaphysis

#### 2 options:

- Cement the diaphyseal part of the humeral stem if the bone is osteoporotic, **OR**
- Press-fit the humeral prosthesis without cement, by using the metaphyseal cancellous bone.



### 7.2. Humeral head

Put the humeral head in place using the humeral head forceps

Humeral insert is inclined at 155° and hollowed medially to avoid glenoid notching.

Impact the definitive centered or off-centered humeral head onto the definitive humeral stem using the head impaction piece. (Reproduce the trial position by using the marks previously made on the bone with an electric scalpel.)

The humeral head covers the plate and is very closely applied onto the cut bone of the humerus.

Reduce the humeral prosthesis.



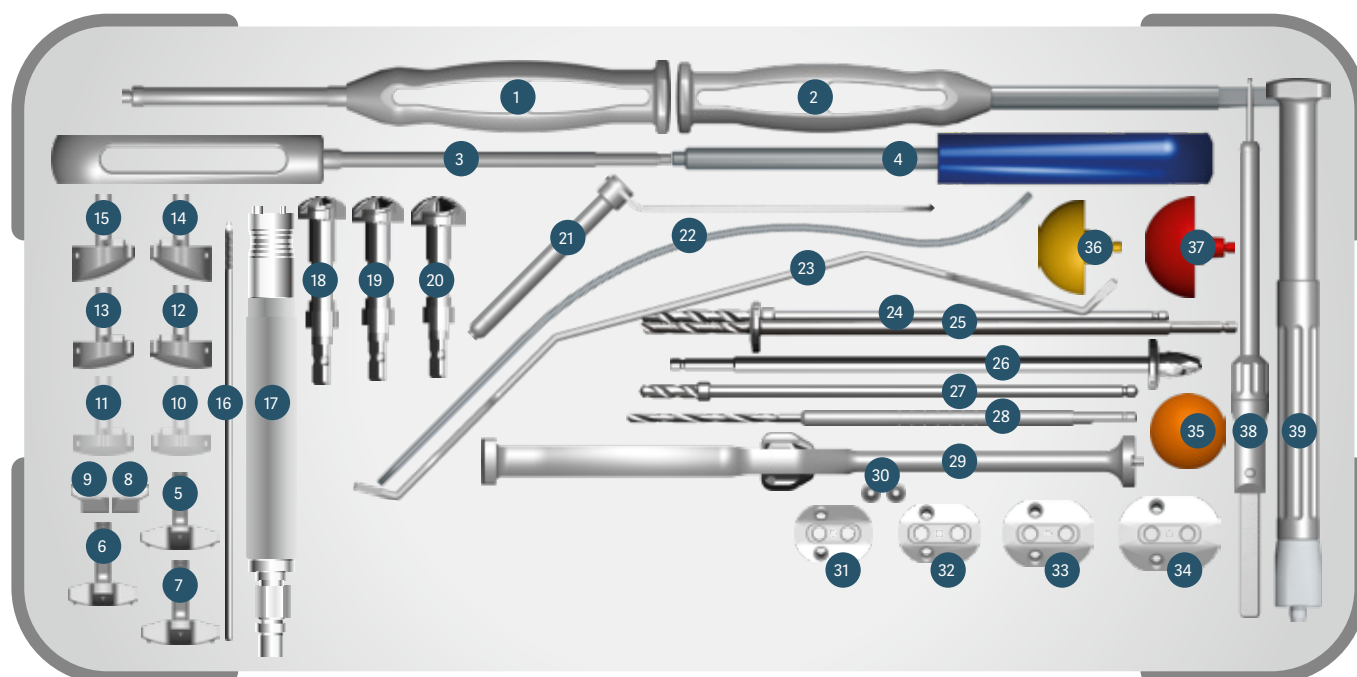
## 8. Instrumentation

### 8.1. Universal humerus



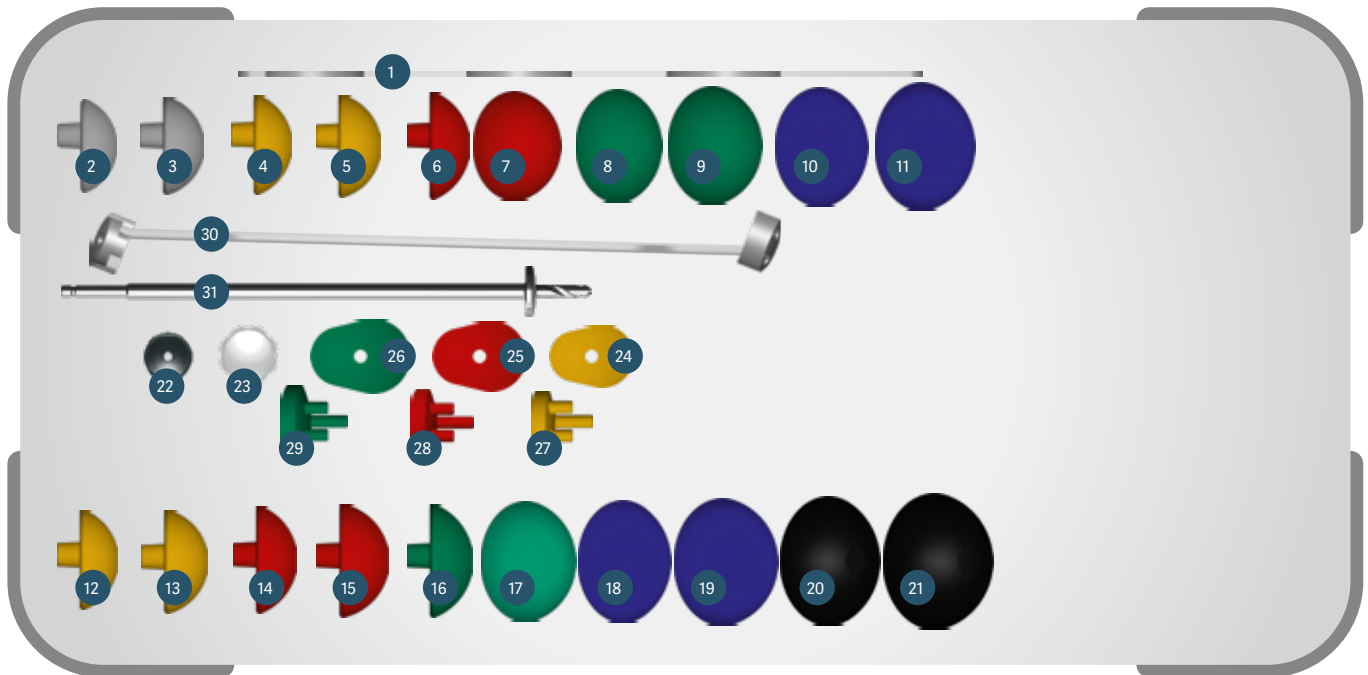
- |  |                 |   |              |
|--|-----------------|---|--------------|
| 1. ARROW® Cutting guide.....   | ref. 267 610    | 17. ARROW® Protector for metaphysis .....                     | ref. 261 845 |
| 2. ARROW® II Superior-lateral approach cutting guide .....                       | ref. 269 886    | 18. ARROW® II Broach handle.....                              | ref. 267 614 |
| 3. ARROW® II Cutting guide connecting screw.....                                 | ref. 269 887    | 19. ARROW® Head extractor.....                                | ref. 261 014 |
| 4. ARROW® II Deltpectoral approach cutting guide.....                            | ref. 269 885    | 20. ARROW® Trial rasp D6 L100.....                            | ref. 267 615 |
| 5. ARROW® Reamer holder.....   | ref. 261 054    | 21. ARROW® Trial rasp D8 L120 .....                           | ref. 267 616 |
| 6. ARROW® Drill D6.....  | ref. 261 010    | 22. ARROW® Trial rasp D10 L125.....                           | ref. 267 617 |
| 7. ARROW® Cutting guide pins .....   | ref. 264 460    | 23. ARROW® Trial rasp D12 L130 .....                          | ref. 267 618 |
|  | or ref. 261 056 | 24. ARROW® Trial rasp D14 L135 .....                          | ref. 267 619 |
| 8. FHK® Magnetic holder AO (optional)<br>(for 269 888) ( <b>OPTIONAL</b> ) ..... | ref. 269 348    | 25. ARROW® Impactor Handle .....                              | ref. 264 459 |
| 9. ARROW® AO pin driver (for 268 016) ( <b>OPTIONAL</b> ).....                   | ref. 269 239    | 26. ARROW® II Standard humeral trial insert D36 H00.....      | ref. 267 678 |
| 10. ARROW® Retroversion rod.....   | ref. 261 053    | 27. ARROW® II Standard humeral trial insert D36 H05.....      | ref. 267 679 |
| 11. ARROW® Pin extractor.....  | ref. 264 461    | 28. ARROW® II Standard humeral trial insert D36 H10.....      | ref. 267 680 |
|  | or ref. 261 831 | 29. ARROW® II Standard humeral trial insert D39 H00 .....     | ref. 267 681 |
| 12. ARROW® Reamer D6.....  | ref. 267 604    | 30. ARROW® II Standard humeral trial insert D39 H05.....      | ref. 267 682 |
|  | or ref. 266 221 | 31. ARROW® II Standard humeral trial insert D39 H10.....      | ref. 267 683 |
| 13. ARROW® Reamer D8.....  | ref. 267 605    | 32. ARROW® II Off-centered humeral trial insert D36 H00 ..... | ref. 267 687 |
|  | or ref. 261 048 | 33. ARROW® II Off-centered humeral trial insert D36 H05 ..... | ref. 267 688 |
| 14. ARROW® Reamer D10.....   | ref. 267 606    | 34. ARROW® II Off-centered humeral trial insert D36 H10.....  | ref. 267 689 |
|  | or ref. 261 049 | 35. ARROW® II Off-centered humeral trial insert D39 H00 ..... | ref. 267 690 |
| 15. ARROW® Reamer D12.....   | ref. 267 607    | 36. ARROW® II Off-centered humeral trial insert D39 H05 ..... | ref. 267 691 |
|  | or ref. 261 050 | 37. ARROW® II Off-centered humeral trial insert D39 H10.....  | ref. 267 692 |
| 16. ARROW® Reamer D14.....   | ref. 267 608    |   |              |
|  | or ref. 261 051 |   |              |

## 8.2. Universal glenoid



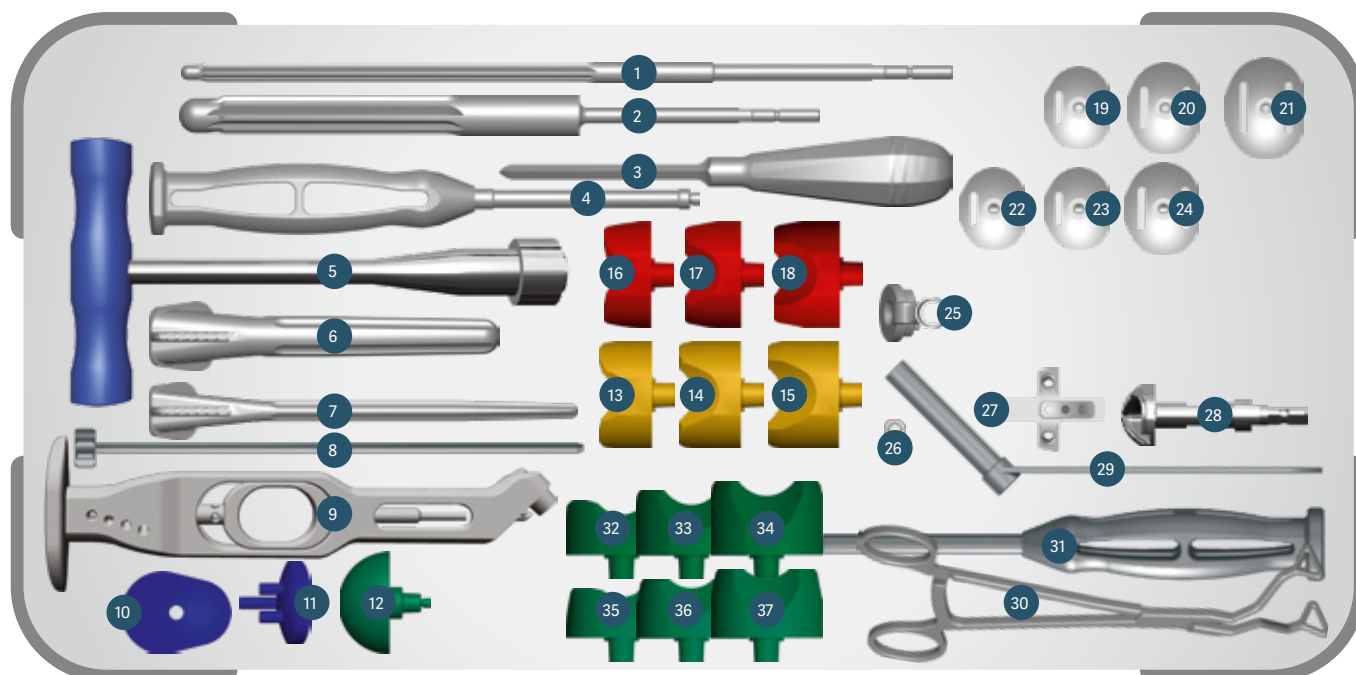
- |   |                 |  |              |
|---|-----------------|--|--------------|
| 1. ARROW® II Trial MB handle.....                   | ref. 267 667    | 20. ARROW® Cannulated reamer L.....                      | ref. 267 652 |
| 2. ARROW® chisel.....                               | or ref. 261 095 | 21. ARROW® Barrel for drill.....                         | ref. 264 479 |
| 3. ARROW® Screwdriver D3,5.....                     | ref. 270 827    | 22. ARROW® Retractor.....                                | ref. 261 059 |
| 4. ARROW® Handle for antero-posterior screw.....    | or ref. 261 100 | 23. ARROW® II Glenoid posterior retractor.....           | ref. 269 890 |
| 5. ARROW® II PTX Glenoid guide S44/S (WOS).....     | ref. 261 844    | 24. ARROW® Stopped drill bit D5 for rev. glen. base..... | ref. 264 102 |
| 6. ARROW® II PTX Glenoid guide S46/M (WOS).....     | ref. 269 892    | 25. ARROW® Cannulated stop drill D5 long peg.....        | ref. 267 649 |
| 7. ARROW® II PTX Glenoid guide S48/L (WOS).....     | ref. 269 893    | 26. ARROW® II Metal-back central peg drill bit.....      | ref. 267 662 |
| 8. ARROW® Glenoid guide stylus - right.....         | ref. 269 894    | 27. ARROW® Drill with end stop D5.....                   | ref. 261 069 |
| 9. ARROW® Glenoid guide stylus - left.....          | ref. 269 092    | 28. ARROW® V7 Dia 3,2mm drill.....                       | ref. 264 472 |
| 10. ARROW® Glenoid guide 0° post wear - right.....  | ref. 269 093    | 29. ARROW® II Glenoid base-plate impactor.....           | ref. 267 674 |
| 11. ARROW® Glenoid guide 0° post wear - left.....   | ref. 269 086    | 30. ARROW® Drilling guide fixing pins.....               | ref. 261 058 |
| 12. ARROW® Glenoid guide 10° post wear - right..... | or ref. 267 112 | 31. ARROW® II Metal-back guide XS.....                   | ref. 267 663 |
| 13. ARROW® Glenoid guide 10° post wear - left.....  | ref. 269 087    | 32. ARROW® II Metal-back guide S.....                    | ref. 267 664 |
| 14. ARROW® Glenoid guide 20° post wear - right..... | ref. 269 088    | 33. ARROW® II Metal-back guide M.....                    | ref. 267 665 |
| 15. ARROW® Glenoid guide 20° post wear - left.....  | ref. 269 089    | 34. ARROW® II Metal-back guide L.....                    | ref. 267 666 |
| 16. ARROW® Guide pin D3 L170 (OPTIONAL).....        | ref. 269 090    | 35. ARROW® II Humeral insert impactor tip.....           | ref. 267 696 |
| 17. ARROW® Reamer handle AO Stryker Zier.Hall.....  | ref. 265 423    | 36. ARROW® II Glenosphere trial D36.....                 | ref. 267 697 |
| 18. ARROW® Cannulated reamer XS-S.....              | ref. 269 147    | 37. ARROW® II Glenosphere trial D39.....                 | ref. 267 698 |
| 19. ARROW® Cannulated reamer M.....                 | or ref. 265 414 | 38. ARROW® Depth gauge.....                              | ref. 269 241 |
|   | ref. 267 650    | 39. ARROW® Glenosphere positioner/impactor.....          | ref. 269 137 |
|   | ref. 267 651    |  |              |

## 8.3. Universal anatomical



- |  |  |
|--|--|
| 1. ARROW® II Humeral head sizer.....ref. 267 621                             | 20. ARROW® II Trial humeral head offset D54 H19 offset (+2).....ref. 267 630 |
| 2. ARROW® II Trial humeral head offset D39 H14 offset (+4).....ref. 267 632  | 21. ARROW® II Trial humeral head offset D54 H23 offset (+2).....ref. 267 631 |
| 3. ARROW® II Trial humeral head offset D39 H16 offset (+4).....ref. 267 633  | 22. ARROW® Head impactor tip.....ref. 261 043                                |
| 4. ARROW® II Trial humeral head offset D42 H15 offset (+4).....ref. 267 634  | 23. ARROW® PE Glenoid impaction tip.....ref. 267 659<br>or ref. 261 081      |
| 5. ARROW® II Trial humeral head offset D42 H17 offset (+4).....ref. 267 635  | 24. ARROW® II Glenoid template XS-S.....ref. 267 644<br>or ref. 261 077      |
| 6. ARROW® II Trial humeral head offset D45 H16 offset (+4).....ref. 267 636  | 25. ARROW® II Glenoid template M.....ref. 267 645<br>or ref. 261 078         |
| 7. ARROW® II Trial humeral head offset D45 H19 offset (+4).....ref. 267 637  | 26. ARROW® II Glenoid template L.....ref. 267 646<br>or ref. 261 079         |
| 8. ARROW® II Trial humeral head offset D48 H17 offset (+4).....ref. 267 638  | 27. ARROW® II C/M trial glenoid S.....ref. 267 655<br>or ref. 261 070        |
| 9. ARROW® II Trial humeral head offset D48 H20 offset (+4).....ref. 267 639  | 28. ARROW® II C/M trial glenoid M.....ref. 267 656<br>or ref. 261 071        |
| 10. ARROW® II Trial humeral head offset D51 H18 offset (+4).....ref. 267 640 | 29. ARROW® II C/M trial glenoid L.....ref. 267 657<br>or ref. 261 072        |
| 11. ARROW® II Trial humeral head offset D51 H22 offset (+4).....ref. 267 641 | 30. ARROW® II Full PE drilling guide.....ref. 267 654                        |
| 12. ARROW® II Trial humeral head offset D42 H15 offset (+2).....ref. 267 622 | 31. ARROW® Cannulated stop drill D5.....ref. 267 648                         |
| 13. ARROW® II Trial humeral head offset D42 H17 offset (+2).....ref. 267 623 |  |
| 14. ARROW® II Trial humeral head offset D45 H16 offset (+2).....ref. 267 624 |  |
| 15. ARROW® II Trial humeral head offset D45 H19 offset (+2).....ref. 267 625 |  |
| 16. ARROW® II Trial humeral head offset D48 H17 offset (+2).....ref. 267 626 |  |
| 17. ARROW® II Trial humeral head offset D48 H20 offset (+2).....ref. 267 627 |  |
| 18. ARROW® II Trial humeral head offset D51 H18 offset (+2).....ref. 267 628 |  |
| 19. ARROW® II Trial humeral head offset D51 H22 offset (+2).....ref. 267 629 |  |

## 8.4. Option universal



- |   |  |
|---|--|
| 1. ARROW® Reamer D8 L200.....ref. 268 108<br>or ref. 257 333                                  | 18. <b>ARROW®*</b> Standard humeral trial insert D39 H10.....ref. 257 318<br>or ref. 264 500 |
| 2. ARROW® Reamer D16 L140.....ref. 267 609<br>or ref. 267 356                                 | 19. ARROW® II Trial MB glenoid base-plate S .....ref. 267 668                                |
| 3. Square awl.....ref. 264 868  | 20. ARROW® II Trial MB glenoid base-plate SC M .....ref. 267 669                             |
| 4. ARROW® II Trial MB handle.....ref. 267 667   | 21. ARROW® II Trial MB glenoid base-plate SC L.....ref. 267 670                              |
| 5. ARROW® T handle long.....ref. 261 076  | 22. ARROW® II Trial MB glenoid base-plate SC XS Long.....ref. 267 671                        |
| 6. ARROW® II Trial rasp D16 L140.....ref. 267 620   | 23. ARROW® II Trial MB glenoid base-plate SC S Long.....ref. 267 672                         |
| 7. ARROW® II Trial rasp D8 L170.....ref. 268 109  | 24. ARROW® II Trial MB glenoid base-plate SC M Long .....ref. 267 673                        |
| 8. ARROW® Retroversion rod.....ref. 261 053   | 25. ARROW® II AP screw drilling guide .....ref. 267 675                                      |
| 9. ARROW® II Broach handle.....ref. 267 614   | 26. ARROW® V7 Connecting screw for lateral guide.....ref. 264 478                            |
| 10. ARROW® II Glenoid template XL.....ref. 267 647  | 27. ARROW® II PTX glenoid guide S50/XL (WOS).....ref. 269 895                                |
| 11. ARROW® II C/M Trial glenoid XL.....ref. 267 658   | 28. ARROW® Cannulated reamer XL .....ref. 267 653  |
| 12. ARROW® II Trial glenosphere D42.....ref. 267 699  | 29. ARROW® Barrel for screw.....ref. 261 846   |
| 13. <b>ARROW®*</b> Standard humeral trial insert D36 H00 .....ref. 261 096<br>or ref. 264 495 | 30. ARROW® Glenoid inserter.....ref. 267 110   |
| 14. <b>ARROW®*</b> Standard humeral trial insert D36 H05 .....ref. 261 097<br>or ref. 264 496 | 31. <b>ARROW®</b> Glenosphere positioner/impactor.....ref. 261 101                           |
| 15. <b>ARROW®*</b> Standard humeral trial insert D36 H10.....ref. 257 317<br>or ref. 264 497  | 32. ARROW® II Standard humeral trial insert D42 H00.....ref. 267 684                         |
| 16. <b>ARROW®*</b> Standard humeral trial insert D39 H00.....ref. 261 098<br>or ref. 264 498  | 33. ARROW® II Standard humeral trial insert D42 H05.....ref. 267 685                         |
| 17. <b>ARROW®*</b> Standard humeral trial insert D39 H05 .....ref. 261 099<br>or ref. 264 499 | 34. ARROW® II Standard humeral trial insert D42 H10 .....ref. 267 686                        |
|   | 35. ARROW® II Off-centered humeral trial insert D42 H00 .....ref. 267 693                    |
|   | 36. ARROW® II Off-centered humeral trial insert D42 H05 .....ref. 267 694                    |
|   | 37. ARROW® II Off-centered humeral trial insert D42 H10 .....ref. 267 695                    |

\* **ARROW® I trial implants in case of revision**







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