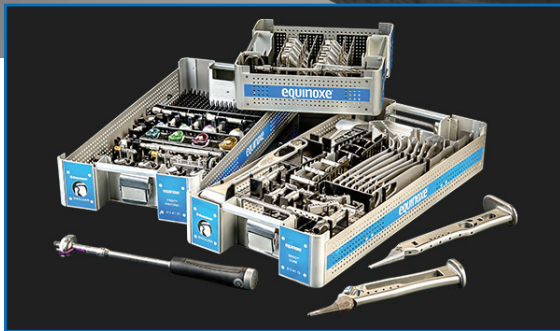


EXACTECH | EXTREMITIES

Operative Technique Addendum



equinox[®]

Operative Technique Addendum
with Equinox
Ergo Instrumentation

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PREOPERATIVE PLANNING

This document presents an addendum to Equinoxe® platform shoulder system operative technique (00-0000121) for the addition of Equinoxe Preserve stem using Equinoxe Ergo Instrumentation.

The Preserve stem is implanted using similar steps as the primary, press-fit Equinoxe humeral stem devices, however this addendum specifically addresses the steps for using the Preserve stem and its related instrumentation.

Bone quality must be considered prior to implantation to ensure that the prostheses do not subside, tilt or migrate. Bone quality is an important factor that may prevent optimal fixation.

Please refer to the Equinoxe platform shoulder system with Ergo Instruments operative technique (00-0000121) for additional information related to the preparation of the glenoid and humerus as well as implantation of the additional humeral components.

PREOPERATIVE PLANNING/PATIENT POSITIONING

After a careful history and physical examination, radiographs should be obtained to assess glenohumeral joint space narrowing, osseous deformities and glenoid wear. The following three radiographic views should be obtained:

- 1) A true A/P view of the glenohumeral joint (30 degrees external oblique)
- 2) A scapular lateral view
- 3) An axillary view.

In patients with osteoarthritis, varying amounts of posterior glenoid wear (with posterior subluxation of the humeral head) are common. If significant glenoid wear is a concern, a CT scan will be helpful to further define the bony anatomy.

Rotator cuff tears are relatively uncommon in patients with osteoarthritis. The status of the rotator cuff can be determined at the time of surgery. For this reason, MRI or ultrasonography imaging is not routinely performed, though the decision is based upon surgeon preference.

To aid in pre-operative planning, the **Equinoxe Planning App** instantly creates the scapula in 3D so implants and positioning can be selected prior to surgery.

SURGICAL APPROACH

An anterior deltopectoral incision is made beginning inferior to the clavicle and passing over the coracoid process and extending distally toward the deltoid insertion. Medial and lateral subcutaneous flaps are created, and the deltopectoral interval is identified (*Figures 1a and 1b*).

A thin fat stripe is usually located over the cephalic vein. The interval is usually developed medial to the cephalic vein, but it can also be developed laterally depending on the surgeon's preference. Branches of the cephalic vein on the approach side are cauterized, and the interval is developed inferior to superior to expose the clavipectoral fascia.

The advantage of retracting the cephalic vein with the deltoid is that the majority of the branches come from the deltoid. The disadvantage is the vein is more exposed to injury from the retractor as it crosses the superior aspect of the interval.

The subdeltoid space is mobilized with a blunt elevator. The clavipectoral fascia is incised longitudinally up to the coracoacromial ligament (which is spared), and the conjoined tendon is mobilized. A self-retaining retractor is placed with care to avoid excessive traction on the conjoined tendon. The coracoacromial ligament is identified and the subacromial space is mobilized with a blunt elevator. The subscapularis tendon insertion on the lesser tuberosity is identified along with the rotator interval. The anterior humeral circumflex vessels along the inferior border of the subscapularis muscle, the "three sisters," are cauterized extensively, and the biceps tendon is palpated in its groove. The subscapularis tendon and the capsule are tenotomized 1cm medial to the lesser tuberosity and tagged with #1 sutures.

An alternative approach is to elevate the subscapularis directly off of the bone or elevate its insertion with a thin wafer of bone (1-2mm thick) using an osteotome. The choice is based primarily on surgeon preference.

The rotator interval is divided in a lateral to medial direction up to the superior glenoid rim. With the humerus extended, adducted and externally rotated, the capsule is carefully dissected off the inferior humeral neck, protecting the axillary nerve inferiorly with a small blunt retractor placed just inferior to the capsule. The capsular releases should be performed to allow 90 degrees of external rotation. The self-retaining retractor is then repositioned to retract the subscapularis. At this point, the humeral head can be dislocated.

DETAILED OPERATIVE TECHNIQUE

PREOPERATIVE PLANNING/PATIENT POSITIONING

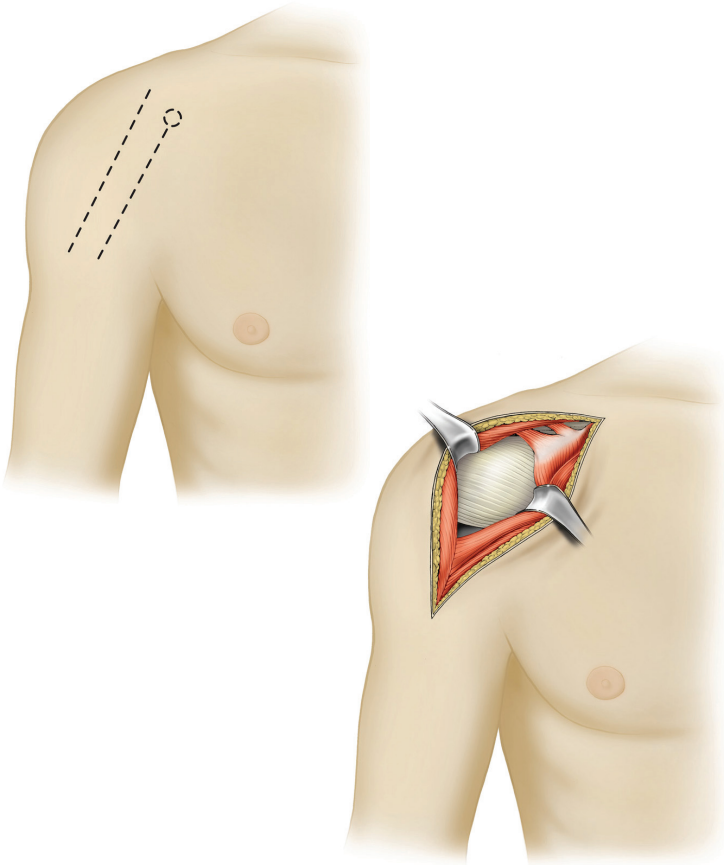


Figure 1a & 1b
Surgical Approach



Figure 2
Fixed Angle Cutting Guide

HUMERAL PREPARATION

Humeral Head Resection

Prior to the humeral head resection, all osteophytes should be removed using a rongeur. Doing so will properly expose the anatomic humeral neck; anatomic replication is facilitated by an accurate resection along the anatomic neck. Three resection options are available and should be selected based upon surgeon preference.

Note: Removing the osteophytes is imperative in order to visualize the anatomic neck.

Free Hand: Identify the anatomic neck and resect the head using a microsagittal saw.

Fixed Angle (132.5 degrees) Osteotomy Guide: Though this method is not based upon the patient's anatomy, we have provided a **Fixed Angle Cutting Guide** for surgeons who prefer this method (Figure 2).

The surgeon may attach a version rod to the guide that will align the forearm at 0, 10, 20, 30, and 40 degrees of retroversion. Three options are available for the guide:

- 1) Use the cutting surface to make a free hand resection.
- 2) Use two 66 x 3.2mm Steinmann pins to secure it to the bone.
- 3) Use the cutting surface to mark the resection line with a bovie and then use the free hand method.

With this method, the superior portion of the resection should be just medial to the rotator cuff insertion. The amount of retroversion (usually 20-40 degrees) should be determined by positioning the humerus in external rotation before the resection is made.

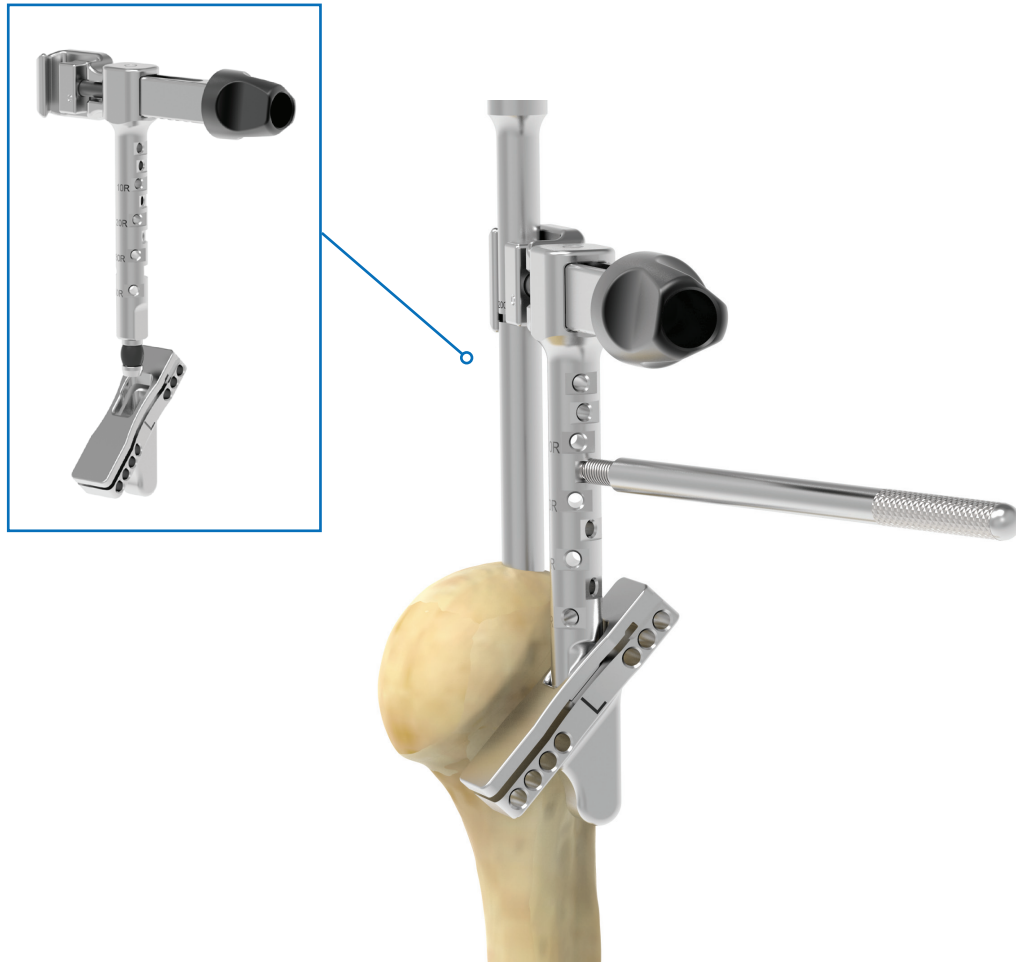


Figure 3
IM Guide and Pins

Note: The K-wire hole trajectory for both guides is straight / parallel with the cut. Avoid inserting pins off axis to prevent binding.

Note: After cutting with either guide (EM or IM) do not lever the short K-wires out of the bone.

Note: If the version rod blocks the saw, pin the guide in the preferred orientation, adjust the version rod position as needed, and finish the humeral head resection.

INTRAMEDULLARY HUMERAL CUTTING GUIDE

The Equinox **Intramedullary Humeral Cutting Guide** enables the surgeon to accurately resect the humeral head along the anatomic neck (*Figure 3*). Unlike other cutting guides, the Intramedullary Humeral Cutting Guide guide allows the surgeon to ream prior to the resection of the humeral head.

Note: If the bone is too hard to insert the reamer by hand, use a mallet to lightly tap the reamer into the canal.

Once the Preserve Starter Reamer has been inserted, attach the **IM Guide Boom** to the superior section of the reamer. After attaching the IM guide boom, slide the **IM Resection Guide** onto the distal tip of the boom until it locks in place.

DETAILED OPERATIVE TECHNIQUE

HUMERAL PREPARATION



Figure 4
Size Humeral Head

Head Size (mm)	38 Black	41 Blue	44 Brown	47 Green	50 Orange	53 Purple
Glenoid Curvature	Alpha			Beta		

Table 1

Head Color and Relationship Between Humeral Head Diameter and Glenoid Curvature



Figure 5
Insert Fluted Reamer

When the cut guide has been appropriately placed at the correct height and retroversion has been achieved utilizing the **Retroversion Rod** (choosing between 0, 10, 20, 30 and 40 degrees), two short 3.2mm Steinmann pins are used to immobilize the cut guide. Once the cut guide is securely pinned to the bone, remove the reamer and IM guide boom. After these are removed, make the humeral head cut and remove the cut guide and pins.

Note: Removing the osteophytes is imperative in order to visualize the anatomic neck.

Note: The IM Resection Guide comes with a cut slot for retained resection, for sawblades up to 1.27mm in thickness. If a retained cut is not preferred, cutting above the IM Resection Guide is also available.

Evaluate Resected Head Size

After resecting the humeral head, use a **Humeral Head Trial** to estimate both the head's diameter (circumferentially) and

height in order to determine the probable size of the modular humeral head (Figure 4). **The head diameter will determine what glenoid curvature will be used, as detailed in Table 1.**

Reaming the Humeral Shaft

The Preserve stem **Starter Reamer** has a pointed tip to facilitate the initial entry into the IM canal. The entry point is made just posterior to the bicipital groove and at the junction of the middle and upper third of the resected humeral surface. It is imperative that the reamer be inserted into the canal to the appropriate depth as indicated by the depth markers (Figure 5).

Note: To ensure adequate depth is achieved, ream until the depth marker is no longer visible.

Broaching the Humeral Shaft

Note: Bone quality must be considered to ensure proper proximal press-fit conditions and adequate stability.

DETAILED OPERATIVE TECHNIQUE

HUMERAL PREPARATION



Figure 6a
Extended Broach Insertion
with Broach Handle and
Retroversion Rod



Figure 6b
Preserve Stem
Extended Broach

The **Preserve Stem Extended Broach** can be used to facilitate the initial entry into the IM canal (*Figure 6b*). The entry point is made just posterior to the bicipital groove and at the junction of the middle and upper third of the resected humeral surface.

The Extended Broach is to be inserted into the canal to the appropriate depth dictated by the **Broach Handle** and **Broach Collar**. The Extended Broach should be impacted until contact is made between the tip of the Broach Handle and the resected bone surface (*Figure 6a*). As a visual check to assess version, the Retroversion Rod can be attached to the broach handle ("L" and "R" indicate appropriate side) and lined up with the patient's forearm (assuming the patient has a stable elbow). The Retroversion Rod can be inserted into the broach handle and will align with the forearm at 0, 10, 20, 30 and 40 degrees of retroversion.

The Broach Collar can be chosen to allow for the broach to be flush with that of the cut surface, utilizing the 0mm option. **The Broach Collar can also be chosen to utilize a -2mm feature, which will countersink the broach 2mm below the cut surface.**

Note: Only the strike surface of the Broach Handle should be used for impaction.

Note: The use of the Extended Broach aids in orientation of the implant with the IM canal (*Figure 6b*).

If the surgeon does not feel the Extended Broach provides adequate stability, then attach the next-sized broach to the **Broach Handle**, as illustrated in *Figures 7a and 7b*, respectively.



Figure 7a
Broach Insertion With Broach
Handle and Retroversion Rod

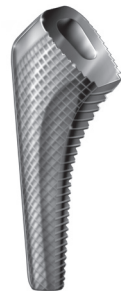


Figure 7b
Preserve Stem Broach

The **Preserve Stem Broach** should be inserted into the proximal humerus at a version consistent with that of the cut surface. The proximal humerus should be sequentially broached until sufficient stability of the broach is reached.

Note: The broaches are undersized by 1mm (total diametrical press-fit 0.5mm per side) to ensure adequate press-fit, therefore impaction is necessary to insert the stem.

Only the strike surface of the handle should be used for impaction.

Note: It is important to maintain cancellous bone. If cancellous bone cannot be maintained, then switch to a longer platform stem. **We recommend using the smallest-sized broach necessary to obtain adequate fixation in order to determine rotational stability and avoid cortical contact.**



Figure 8a
Plane Resected
Humeral Head

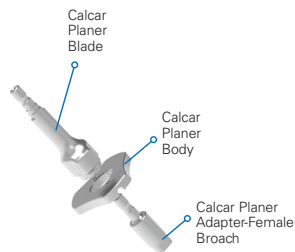


Figure 8b
Calcar Planer
Components

Planing

Planing of the resected humeral head surface is also available. Planing may be conducted off of both the broach, utilizing the **Calcar Planer Adapter-Female Broach**, or the final stem, through the final stem **Calcar Planer Adapter-Stem** (*Figures 8a & 8b*).

Note: After the humeral preparation step, the procedural steps diverge into two pathways to perform either a primary shoulder or reverse shoulder procedure. The following pages outline the steps for each path.

DETAILED OPERATIVE TECHNIQUE

FINALIZE aTSA WITH THE PRESERVE STEM

Finalize aTSA with the Preserve Stem

FINALIZE aTSA WITH THE PRESERVE STEM

Humeral Stem Insertion

Once the proximal humerus is prepared, the implant is ready to be inserted. The definitive implant will match the last broach size used. Attach the definitive implant to the **Stem Inserter** and be sure to align the dimple on the inserter with the divot on the stem (*Figure 9*).

Note: Only use finger tightening to assemble the Stem Inserter with the stem. The 3.5mm Hex Driver may be used to loosen the Stem Inserter after impaction.

For this reason, it is important that the stem be completely threaded to the Stem Inserter prior to impaction to prevent damage to the threads. Use the mallet to impact the Stem Inserter until the superior face of the stem is at the level of the resected surface. Only the strike surface should be used for impaction.

As a visual check to assess version, the Retroversion Handle can be attached to the Stem Inserter in the same manner described previously. After the humeral stem insertion step, complete the primary shoulder procedure by following the Equinox Platform Shoulder System with Ergo Instruments Operative Technique (00-0000121), starting at the humeral protector step of the primary shoulder operative technique section.

SURGICAL NOTES

- If a tendon-to-bone repair is utilized, prepare the drill holes in the proximal humerus to facilitate the subscapularis repair prior to humeral stem insertion.
 - If cement is desired, it is recommended to use an implant two sizes less than the last used broach.
-



Figure 9
Implant Insertion

Finalize rTSA with the Preserve Stem

FINALIZE rTSA WITH THE PRESERVE STEM

Reverse Trial Procedure

Utilizing the Broach as a Stem Trial

The final broach can also be utilized as a trial humeral stem. The **Reverse Tray Broach Adapter** (Figure 10) is to be placed in the broach and trialed as denoted in the Platform Shoulder System operating technique.

Trialing The Humeral Adapter Tray & Liner

As an alternative to the Reverse Tray Broach Adapter, the Humeral Tray Trial can be used. The +0mm **Humeral Tray Trial** is attached to the Humeral Broach and secured by threading the captured screw into the threads of the broach (Figure 11). This is an Ergo-specific instrument.

SURGICAL NOTES

It is critical that the Humeral Adapter Tray be oriented such that the line on the adapter tray aligns with the lateral fin of the humeral stem.

For larger offsets, **+5mm EQ Humeral Tray Trial** Spacer to add 5mm of offset (Figure 11). If more offset is needed, remove the +0mm and +5mm tray trials and attach the **+10mm EQ Humeral Tray Trial**. Combinations of trays and liners can achieve the following offsets: +0, +2.5, +5.0, +7.5, +10.0, +12.5mm, +15mm, and +17.5mm.

It is important to note that the assembled humeral component will have a humeral neck angle of 145 degrees because the liner adds 12.5 degrees to the stem's 132.5 degree neck angle.

Note: Avoid using a sliding motion when separating Tray Trials and Liner Trials.

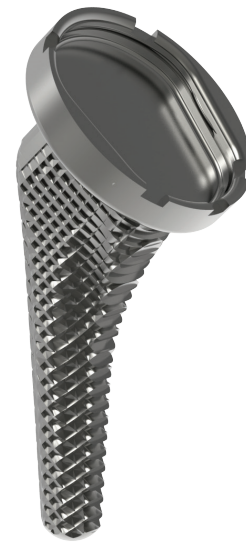


Figure 10

Trialing the Reverse Tray Broach Adapter



Figure 11

Humeral Tray Trial

DETAILED OPERATIVE TECHNIQUE

FINALIZE rTSA WITH THE PRESERVE STEM

Finalize rTSA with the Preserve Stem

INSERTING THE FINAL IMPLANT

To insert the **Humeral Liner Trial** (Figure 12) into the Trial Tray, the underside asymmetric-connecting feature should be appropriately aligned, and the liner/tray trials should be pressed together until they engage. To disengage the trials, the tip of the **Humeral Liner Removal Tool** is inserted into the recessed region of the trial tray and the instrument is turned like a key until the Humeral Liner Trials and plate trials are disengaged, thereby freeing the liner.

The stability of the implant is assessed during a trial reduction. The shoulder should be placed through a range of motion to assess the stability of the construct. While each surgeon may have their own system to assess stability, we approach the trial reduction as follows:

- 1) With reduction and arm by the side, the lateral deltoid and conjoined tendon should be under tension. The expectation is that the reduction should require more distraction to achieve than reduction of non-constrained implants.
- 2) Forward elevation and abduction should be assessed to determine that the construct is stable and the components do not impinge on bony structures.
- 3) Internal and external rotation should be assessed with the humerus at 0 and 90 degrees to assess stability. Although maximal ranges of external rotation may produce some impingement posteriorly, it should not result in instability.
- 4) With the arm at the side, there should be no evidence of impingement that results in distraction of the implants.

Note: The Tray Trial or Liner Trial may become disengaged in tight shoulders or during impingement.

If additional stability is required based upon the trial reduction, constrained liner options are provided in the same offset as the standard liners. While constrained liners will provide better stability, it is important to note they will also reduce the potential range of motion that can be achieved. If trial components are changed, additional closed reductions and assessments should be performed to confirm that the desired stability has been obtained. In the unusual situation in which the +0mm liner is too tight, the humeral liner trial can pop out from the tray trial. The humeral component should then be removed and additional bone should be resected using the methods described.

The final Humeral Adapter Tray is attached to the Humeral Stem (Figure 13) using the Reverse Torque Defining Screw.



Figure 12
Humeral Tray Trial with Liner



Figure 13
Implant Insertion

DETAILED OPERATIVE TECHNIQUE

CEMENTING THE PRESS-FIT PROSTHESIS

Alternatively, the stem, tray and liner can be assembled using the **Back Table Assembly Stand** (Figure 14) first and then placed as a unit into the humerus. The disadvantage of this technique is that further implant trialing is not possible, so it should only be used when the surgeon is confident about the thickness of the tray and liners based on the previous trialing.

Note: Verify that the stem is in the correct hole and in the correct orientation before impaction. The hole size and the stem should both face the same direction. Improper use can lead to the stem becoming stuck in the insert.

CEMENTING THE PRESS-FIT PROSTHESIS

The press-fit **Preserve Stem** (Figure 15) was designed with several features that optimize a cementless application. However, the stem has features that enable it to be cemented if desired. In this situation, a stem two sizes smaller in diameter than the broach size would provide a minimum 1mm cement mantle proximally and a minimum 2mm distally. In cases where an adequate press-fit was not achieved, the surgeon has two options. A minimized cement technique could be employed, whereby a small amount of cement is placed in the proximal canal. For example, whatever size stem is cemented in a humerus, it has to be broached to the same size.

Alternatively, in this same scenario, the surgeon could broach up a larger size to create room for a more robust proximal cement mantle and then cement a stem one size smaller than what was broached. The use of a cement restrictor is based on personal preference, however an appropriately-sized cement restrictor will improve distribution. Formal cement pressurization is avoided to decrease the possibility of humeral shaft fracture. The intramedullary canal should then be packed with a sponge to obtain adequate drying before cementing. Once the canal is prepared, the cement is mixed and injected into the canal.



Figure 14

Back Table Assembly to Lock Torque Defining Screw

Size	Color of Impactor Tip
36	Green
38	Blue
40	Purple
42	Yellow

Table 2

Impactor Tips



Figure 15

Preserve Stem

IMPLANT LISTING

CATALOG NUMBER PART DESCRIPTION

Implant Listing

300-30-06	Equinox, Preserve Stem, Size 6mm
300-30-07	Equinox, Preserve Stem, Size 7mm
300-30-08	Equinox, Preserve Stem, Size 8mm
300-30-09	Equinox, Preserve Stem, Size 9mm
300-30-10	Equinox, Preserve Stem, Size 10mm
300-30-11	Equinox, Preserve Stem, Size 11mm
300-30-12	Equinox, Preserve Stem, Size 12mm
300-30-13	Equinox, Preserve Stem, Size 13mm
300-30-14	Equinox, Preserve Stem, Size 14mm



Instrument Listing

KIT 311PSS_U

301-05-02	EQ II Broach Handle
301-05-03	Ergo Broach Collar
301-05-20	Ergo Retroversion Rod
321-05-21	Reverse Tray Trial Adapter
301-15-06	6mm Fluted Straight Ream (H Connector)
301-18-06	6mm Fluted Straight Ream (Z-H Connector)
301-32-06	Preserve Stem Broach, Size 6mm - Ergo Compatible
301-32-07	Preserve Stem Broach, Size 7mm - Ergo Compatible
301-32-08	Preserve Stem Broach, Size 8mm - Ergo Compatible
301-32-09	Preserve Stem Broach, Size 9mm - Ergo Compatible
301-32-10	Preserve Stem Broach, Size 10mm - Ergo Compatible
301-32-11	Preserve Stem Broach, Size 11mm - Ergo Compatible
301-32-12	Preserve Stem Broach, Size 12mm - Ergo Compatible
301-32-13	Preserve Stem Broach, Size 13mm - Ergo Compatible
301-32-14	Preserve Stem Broach, Size 14mm - Ergo Compatible

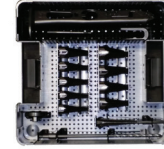


INSTRUMENT LISTING

CATALOG NUMBER	PART DESCRIPTION
303-32-06	Preserve Stem Broach, Extended Broach, Size 6mm



301-51-01	Equinox, Preserve Stem, Instrument Case
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Instrument Listing

KIT-311BT

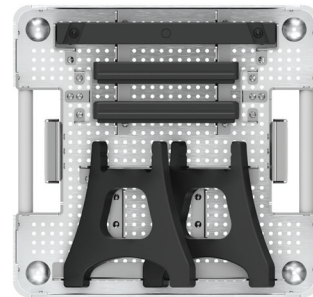
321-15-48	Back Table Assembly Stand
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321-15-49	Equinox Preserve Back Table Insert
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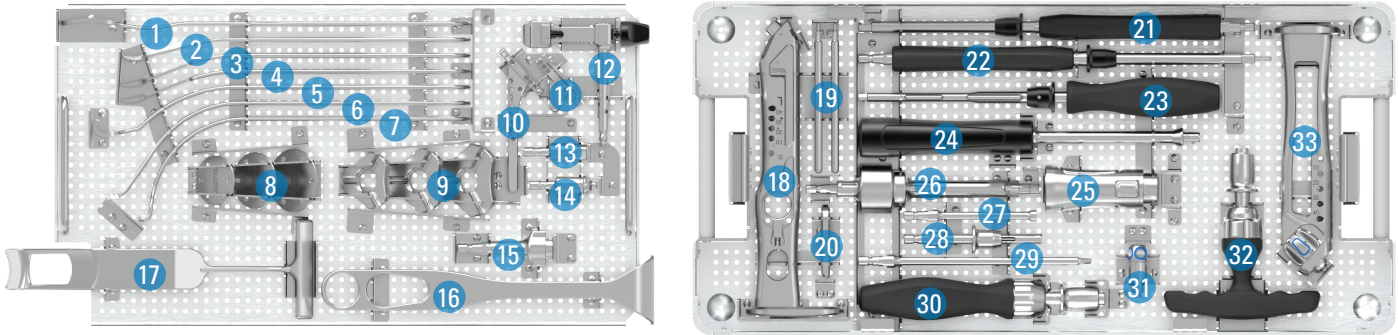


321-19-22	Primary Back Table Legs
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321-19-25	Primary Back Table Insert
-----------	---------------------------

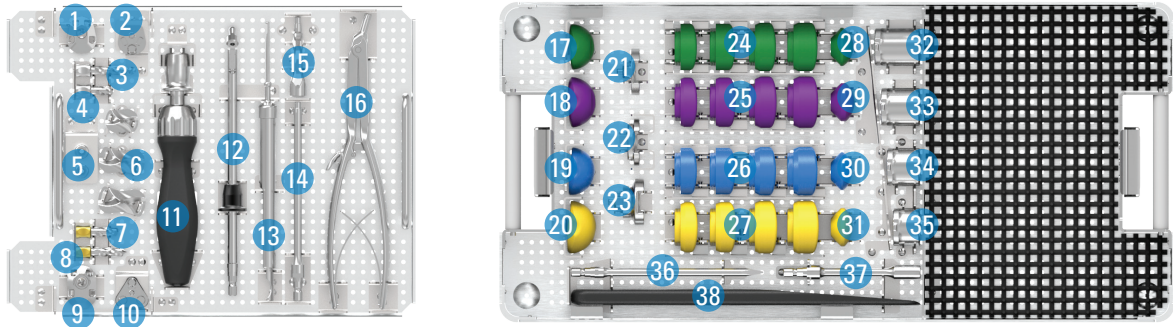


INSTRUMENT LISTING



EQUINOXE ERGO CORE INSTRUMENT TRAY (KIT-311X)

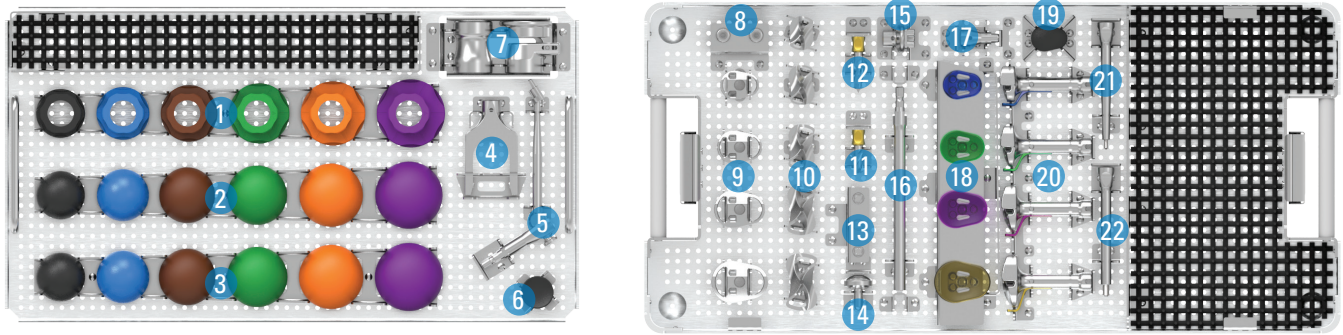
1	Darrach Retractor	317-11-03
2	Small Forked Retractor	317-21-01
3	Hohmann Retractor	317-11-06
4	Hohmann Retractor	317-11-06
5	Wolfe Retractor	317-11-08
6	Dual Point Glenoid Retractor	317-11-04
7	Humeral Head Retractor	317-11-02
8	Small Humeral Protector	301-08-21
8	Medium Humeral Protector	301-08-41
8	Large Humeral Protector	301-08-61
9	Calcar Planer Blade 44mm	301-09-44
9	Calcar Planer Blade 50mm	301-09-50
9	Calcar Planer Blade 56mm	301-09-56
10	132.5 Degree Osteotomy Guide	311-11-13
11	IM Resection Guide	311-11-14
12	IM Guide Boom	311-11-11
13	Calcar Planer Adapter - Female Broach	301-09-01
14	Calcar Planer Adapter - Stem	301-09-02
15	Calcar Planer Body	301-09-00
16	Deltoid Retractor	317-21-06
17	Klimo Fukuda Retractor	317-21-05
18	EQII Broach Handle	301-05-02
19	Version Rod	301-05-20
20	Broach Collar	301-05-03
21	Cannulated Glenoid Reamer Driver	315-50-12
22	Pilot Tip Glenoid Reamer Driver	315-50-11
23	Modular Glenoid Guide Handle	315-52-11
24	Modular Impactor Handle	321-09-05
25	Modular Counter Torque Handle	301-16-36
26	Geared Torque Screw Driver	321-16-69
27	Torque Defining Screw Removal Instrument	301-16-10
28	Glenoid Plate Coring Reamer	321-09-10
29	Hex Screw Driver 3.5mm	321-19-08
30	Non-Ratcheting Handle	301-09-90
31	Stem Extraction Tool	301-09-12
32	Ratcheting T-Handle	301-09-30
33	EQII Stem Inserter	301-09-20



EQUINOXE ERGO rTSA HUM/GLEN INSTRUMENT TRAY (KIT-321T)

1	Drill guide, Small Glenoid Plate	321-35-20
2	Insertor, Small Glenoid Plate	321-35-23
3	Small Reverse Modular Pilot Tip Drill	315-52-60
4	Small Reverse Modular Cannulated Drill	315-52-66
5	K-wire adapter (2 Kits)	315-51-10
6	Modular Reverse Reamer Starter	321-50-01
6	Modular Reverse Reamer 38mm	321-50-38
6	Modular Reverse Reamer 42mm	321-50-42
7	Modular Cannulated Central Peg Drill (2 Kits)	315-52-65
8	Modular Central Peg Drill (2 Kits)	315-52-64
9	Reverse Glenoid Baseplate Drill Guide	321-52-33
10	Glenoid Baseplate Impactor/Insertor	321-19-14
11	Ratcheting Screw Driver Handle	301-09-80
12	Adjustable Angle Drill Guide	321-19-05
13	Glenoid Screw Depth Gage	321-19-09
14	Tapered Glenosphere Insertor	321-01-57
15	Klimo Glenosphere Insertor	321-01-51
16	Glenosphere Insertor	321-01-52
17	Small Reverse Glenosphere Trial, 36mm*	321-31-36
18	Small Reverse Glenosphere Trial, 40mm*	321-31-40
19	EQ 38mm Glenosphere Trial	321-06-38
20	EQ 42mm Glenosphere Trial	321-06-42
21	EQ Humeral Tray Trial +0	321-14-00
22	EQ Humeral Tray Trial +5mm	321-14-05
23	EQ Humeral Tray Trial +10mm	321-14-10
24	Small Reverse Humeral Liner Trial, 36mm, +0*	321-36-00
24	Small Reverse Humeral Liner Trial, 36mm, +2.5*	321-36-03
24	Small Reverse Humeral Liner Trial, 36mm, +0, Constrained*	321-36-10
24	Small Reverse Humeral Liner Trial, 36mm, +2.5, Constrained*	321-36-13
25	Small Reverse Humeral Liner Trial, 40mm, +0*	321-40-00
25	Small Reverse Humeral Liner Trial, 40mm, +2.5*	321-40-03
25	Small Reverse Humeral Liner Trial, 40mm, +0, Constrained*	321-40-10
25	Small Reverse Humeral Liner Trial, 40mm, +2.5, Constrained*	321-40-13
26	38mm Humeral Liner Trial +0	321-38-00
26	38mm Humeral Liner Trial +2.5	321-38-03
26	38mm Humeral Liner Trial Constrained +0	321-38-10
26	38mm Humeral Liner Trial Constrained +2.5	321-38-13
27	42mm Humeral Liner Trial +0	321-42-00
27	42mm Humeral Liner Trial +2.5	321-42-03
27	42mm Humeral Liner Trial Constrained +0	321-42-10
27	42mm Humeral Liner Trial Constrained +2.5	321-42-13
28	Humeral Liner Impactor Tip, 36mm*	321-09-36
29	Humeral Liner Impactor Tip, 40mm*	321-09-40
30	Humeral Liner Impactor Tip 38mm	321-09-38
31	Humeral Liner Impactor Tip 42mm	321-09-42
32	Reverse Counter Torque +0 tip	321-16-00
33	Reverse Counter Torque +5 tip	321-16-05
34	Reverse Counter Torque +10 Tip	321-16-10
35	Reverse Counter Torque +15 Tip	321-16-15
36	Humeral Liner Removal Tool	321-19-11
37	rTSA Screw Starter Tool	321-16-06
38	Shoehorn/Reduction Tool	321-19-10

INSTRUMENT LISTING



EQUINOXE ERGO aTSA HUM/GLEN INSTRUMENT TRAY (KIT-311T)

1	Plate Dial 38mm	301-13-38
1	Plate Dial 41mm	301-13-41
1	Plate Dial 44mm	301-13-44
1	Plate Dial 47mm	301-13-47
1	Plate Dial 50mm	301-13-50
1	Plate Dial 53mm	301-13-53
2	Short Head Trial 38mm	311-11-38
2	Short Head Trial 41mm	311-11-41
2	Short Head Trial 44mm	311-11-44
2	Short Head Trial 47mm	311-11-47
2	Short Head Trial 50mm	311-11-50
2	Short Head Trial 53mm	311-11-53
3	Tall Head Trial 38mm	311-12-38
3	Tall Head Trial 41mm	311-12-41
3	Tall Head Trial 44mm	311-12-44
3	Tall Head Trial 47mm	311-12-47
3	Tall Head Trial 50mm	311-12-50
3	Tall Head Trial 53mm	311-12-53
4	Head Removal Tool	311-09-01
5	Replicator Alignment Handle	301-16-41
6	Humeral Head Impactor Tip	311-09-07
7	Anatomic Counter Torque 1.5/4.5 Offset Tip	301-16-37
7	Anatomic Counter Torque 0 Offset Tip	301-16-38
8	K-wire adapter (2 Kits)	315-51-10
9	Glenoid Sizer Small	315-56-02
9	Glenoid Sizer Medium	315-56-03
9	Glenoid Sizer Large	315-56-04
9	Glenoid Sizer Extra Large	315-56-05
10	Modular aTSA Reamer Extra Small	315-50-01
10	Modular aTSA Reamer Small	315-50-02
10	Modular aTSA Reamer Medium	315-50-03
10	Modular aTSA Reamer Large	315-50-04
10	Modular aTSA Reamer Extra Large	315-50-05
11	Modular Cannulated Central Peg Drill	315-52-65
12	Modular Central Peg Drill	315-52-64
13	Modular Peripheral Peg Drill (3)	315-52-62
14	Peripheral Peg Drill Guide	315-57-04
15	Cement Pressurizer Peripheral Pegs	315-57-08
16	Peripheral Peg Driver	315-52-01
17	Cement Pressurizer Central Peg	315-57-07
18	Pegged Glenoid Trial Small	315-53-02
18	Pegged Glenoid Trial Medium	315-53-03
18	Pegged Glenoid Trial Large	315-53-04
18	Pegged Glenoid Trial Extra Large	315-53-05
19	Glenoid Impactor Tip	315-57-06
20	aTSA Glenoid Impactor Small	315-55-02
20	aTSA Glenoid Impactor Medium	315-55-03
20	aTSA Glenoid Impactor Large	315-55-04
20	aTSA Glenoid Impactor Extra Large	315-55-05
21	Peripheral Peg Extractor	315-57-18
22	Central Peg Extractor	315-57-17

For additional device information, refer to the Exactech Preserve Stem Instructions for Use for information including, but not limited to, a device description, indications, contraindications, precautions and warnings. For further product information, please contact Customer Service, Exactech, Inc., 2320 NW 66th Court, Gainesville, Florida 32653-1630, USA. (352) 377-1140, (800) 392-2832 or FAX (352) 378-2617.

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