

EXACTECH | SHOULDER

Operative Technique Addendum



equinox[®]

Posterior Augment Glenoids for use
with Ergo[®] Instruments



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INTRODUCTION

POSTERIOR AUGMENT GLENOID SUGGESTED USAGE

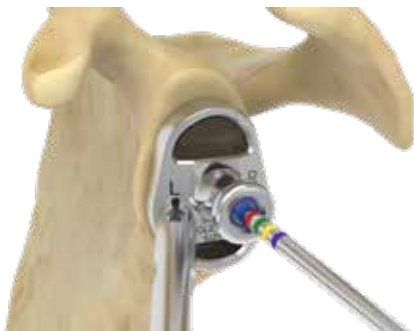
The **Posterior Augment Glenoid** is designed to minimize the removal of anterior cortical bone when reaming a posteriorly worn glenoid in order to correct its version.

Assuming the patient has posterior wear and the surgeon wants to correct the glenoid back to neutral version:

- If glenoid retroversion is less than six degrees, use the standard Glenoid implant and eccentrically ream as needed.
- If glenoid retroversion is between six degrees and 11 degrees, use the Posterior Augment Glenoid.
- If glenoid retroversion is between 12 degrees and 18 degrees, use the Posterior Augment Glenoid and eccentrically ream if there is sufficient bone stock.
- If the surgeon deems that there is insufficient glenoid bone stock to achieve fixation, bone graft.

OPERATIVE TECHNIQUE OVERVIEW

FREEHAND METHOD



A

Drill Hole for Pilot Reamer



B

Ream Glenoid Eight Degrees from Normal



C

Drill Center Hole



D

Drill Peripheral Holes



E

Trial the Posterior Augment Glenoid



F

Cement Posterior Augment Glenoid



G

Seat Cage Glenoid Component Using Spider Glenoid Impactor

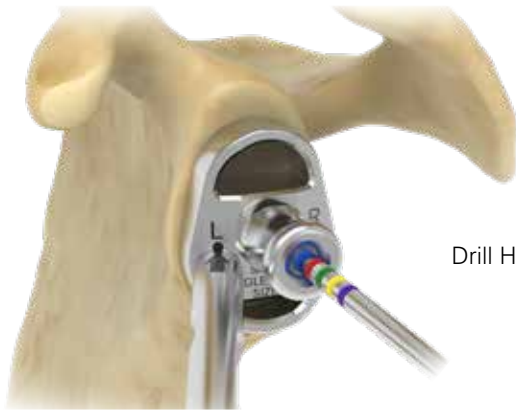


Figure 1a
Drill Hole for Pilot Reamer

Figure 1b
Establish Central Axis of
the Scapula

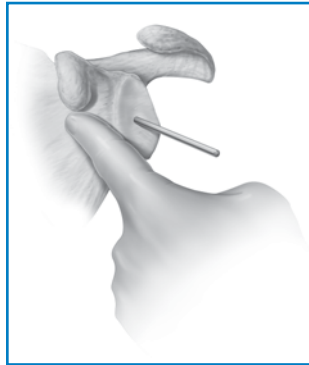


Figure 2
Modular aTSA Reamer and
Pilot Tip Driver



Figure 3
Ream Glenoid Eight Degrees
from Normal

FREEHAND METHOD

Using the 3.2mm drill bit, drill a pilot hole in the center of the glenoid at an angle consistent with the augmented implant's backside angular offset. The surgeon may use two methods to achieve this:

- 1) a standard anatomic glenoid sizer (315-56-02) and a K-wire adapter (315-51-10) to assist in targeting the axis perpendicular to the worn glenoid's surface. It is suggested that the surgeon drill to at least the blue (30mm) depth marking when making the pilot tip hole (*Figure 1a*).
- 2) The surgeon may also establish a neutral axis via Matsen's point (*Figure 1b*) and then ream at their own discretion based off of this neutral axis. For both methods, Exactech offers preoperative planning to better prepare for surgery.

Off-axis ream the glenoid using the appropriately sized reamer and the pilot tip driver. Attempt to ream the glenoid at an angle off-axis from the central axis of the scapula to match the angle of the augmented implant (*Figures 2 and 3*).

Note: Avoid applying a bending force to the pilot tip reamer or using the reamer to retract the humeral head as this may cause fracture of the pilot tip.

DETAILED OPERATIVE TECHNIQUE

FREEHAND METHOD



Figure 4
Drill Center Hole



Figure 5
Drill the Peripheral Holes



Figure 6
Insert Glenoid Trial

Drill the central hole for the Posterior Augment Glenoid using the Posterior Augment Center Hole Drill Guide and the **Non-Cannulated Center Peg Drill** (Figure 4).

FREEHAND METHOD

Drill peripheral holes for the Posterior Augment Glenoid using the Posterior Augment Peripheral Hole Drill Guide and the Peripheral Peg Drills (Figure 5). When drilling the peripheral peg holes, the Modular Peripheral Peg Drill will release and act as the holding pin for the Peripheral Hole Drill Guide, as needed.

Note: When using the Cage Glenoid: The Trials will be used to ensure that the holes were prepared to the defined depth (Figure 6). If the trial is not fully seated, re-drill holes as needed.

When implanting the glenoid component, use the Spider Impactors and ensure straight line visibility for the cage insertion (Figure 6).



Figure 7
Pressurize the Cement



Figure 8
Seat Cage Glenoid Component Using Spider
Glenoid Impactor

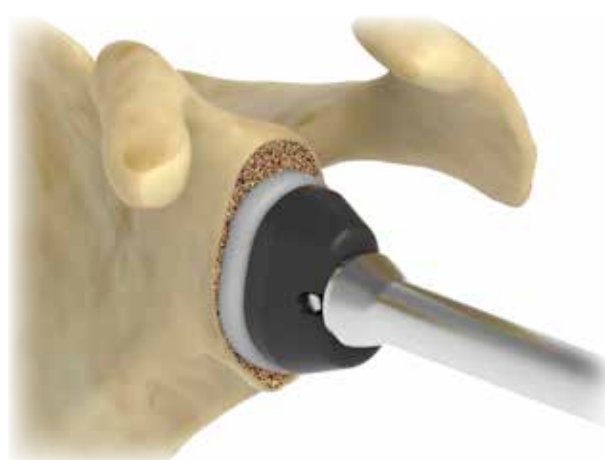


Figure 9
Impact with Glenoid Impactor Tip

Insert bone cement and pressurize using the appropriately sized cement pressurizer (e.g. central peg or peripheral peg) (Figure 7).

Implant the Posterior Augment Glenoid (Figures 8 and 9) continue with existing Ergo Primary/Reverse Operative Technique (#00-0000121).

EQUINOXE IMPLANTS

CATALOG NO. PART DESCRIPTION

314-02-22	Posterior Augment Glenoid, 8 Degree, Small, Left
314-02-23	Posterior Augment Glenoid, 8 Degree, Medium, Left
314-02-24	Posterior Augment Glenoid, 8 Degree, Large, Left
314-02-25	Posterior Augment Glenoid, 8 Degree, Extra Large, Left
314-02-32	Posterior Augment Glenoid, 8 Degree, Small, Right
314-02-33	Posterior Augment Glenoid, 8 Degree, Medium, Right
314-02-34	Posterior Augment Glenoid, 8 Degree, Large, Right
314-02-35	Posterior Augment Glenoid, 8 Degree, Extra Large, Right
314-04-22	Posterior Augment Glenoid, 12 Degree, Small, Left
314-04-23	Posterior Augment Glenoid, 12 Degree, Medium, Left
314-04-24	Posterior Augment Glenoid, 12 Degree, Large, Left
314-04-25	Posterior Augment Glenoid, 12 Degree, Extra Large, Left
314-04-32	Posterior Augment Glenoid, 12 Degree, Small, Right
314-04-33	Posterior Augment Glenoid, 12 Degree, Medium, Right
314-04-34	Posterior Augment Glenoid, 12 Degree, Large, Right
314-04-35	Posterior Augment Glenoid, 12 Degree, Extra Large, Right
314-06-22	Posterior Augment Glenoid, 16 Degree, Small, Left
314-06-23	Posterior Augment Glenoid, 16 Degree, Medium, Left
314-06-24	Posterior Augment Glenoid, 16 Degree, Large, Left
314-06-25	Posterior Augment Glenoid, 16 Degree, Extra Large, Left
314-06-32	Posterior Augment Glenoid, 16 Degree, Small, Right
314-06-33	Posterior Augment Glenoid, 16 Degree, Medium, Right
314-06-34	Posterior Augment Glenoid, 16 Degree, Large, Right
314-06-35	Posterior Augment Glenoid, 16 Degree, Extra Large, Right



314-13-22	Cage Poly Augment, Small, Left
314-13-23	Cage Poly Augment, Medium, Left
314-13-24	Cage Poly Augment, Large, Left
314-13-25	Cage Poly Augment, Extra Large, Left
314-13-32	Cage Poly Augment, Small, Right
314-13-33	Cage Poly Augment, Medium, Right
314-13-34	Cage Poly Augment, Large, Right
314-13-35	Cage Poly Augment, Extra Large, Right



CATALOG NO. PART DESCRIPTION
OPT-311EAUG Equinoxe Ergo Anatomic Augment Kit

315-63-22	Posterior Augment Trial, 8 Degree, Small, Left
315-63-23	Posterior Augment Trial, 8 Degree, Medium, Left
315-63-24	Posterior Augment Trial, 8 Degree, Large, Left
315-63-25	Posterior Augment Trial, 8 Degree, Extra Large, Left
315-63-32	Posterior Augment Trial, 8 Degree, Small, Right
315-63-33	Posterior Augment Trial, 8 Degree, Medium, Right
315-63-34	Posterior Augment Trial, 8 Degree, Large, Right
315-63-35	Posterior Augment Trial, 8 Degree, Extra Large, Right

315-66-22	Posterior Augment Trial, 12 Degree, Small, Left
315-66-23	Posterior Augment Trial, 12 Degree, Medium, Left
315-66-24	Posterior Augment Trial, 12 Degree, Large, Left
315-66-25	Posterior Augment Trial, 12 Degree, Extra Large, Left
315-66-32	Posterior Augment Trial, 12 Degree, Small, Right
315-66-33	Posterior Augment Trial, 12 Degree, Medium, Right
315-66-34	Posterior Augment Trial, 12 Degree, Large, Right
315-66-35	Posterior Augment Trial, 12 Degree, Extra Large, Right

315-68-22	Posterior Augment Trial, 16 Degree, Small, Left
315-68-23	Posterior Augment Trial, 16 Degree, Medium, Left
315-68-24	Posterior Augment Trial, 16 Degree, Large, Left
315-68-25	Posterior Augment Trial, 16 Degree, Extra Large, Left
315-68-32	Posterior Augment Trial, 16 Degree, Small, Right
315-68-33	Posterior Augment Trial, 16 Degree, Medium, Right
315-68-34	Posterior Augment Trial, 16 Degree, Large, Right
315-68-35	Posterior Augment Trial, 16 Degree, Extra Large, Right

315-27-42	8° Center Peg Drill Guide, L
315-27-43	8° Center Peg Drill Guide, R

315-29-42	12° Center Peg Drill Guide, L
315-29-43	12° Center Peg Drill Guide, R

315-31-42	16° Center Peg Drill Guide, L
315-31-43	16° Center Peg Drill Guide, R

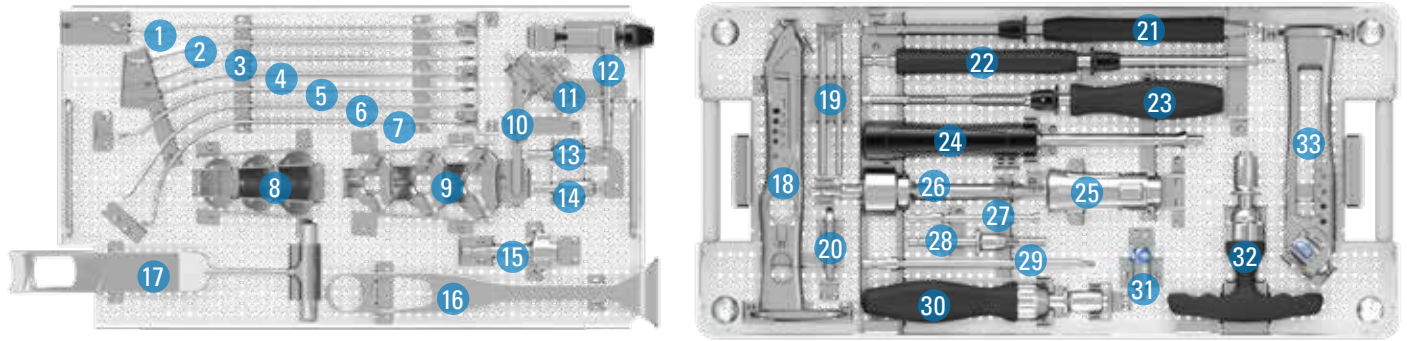
315-27-44	8° Peripheral Peg Drill Guide, L
315-27-45	8° Peripheral Peg Drill Guide, R

315-29-44	12° Peripheral Peg Drill Guide, L
315-29-45	12° Peripheral Peg Drill Guide, R

315-31-44	16° Peripheral Peg Drill Guide, L
315-31-45	16° Peripheral Peg Drill Guide, R



INSTRUMENT LISTING

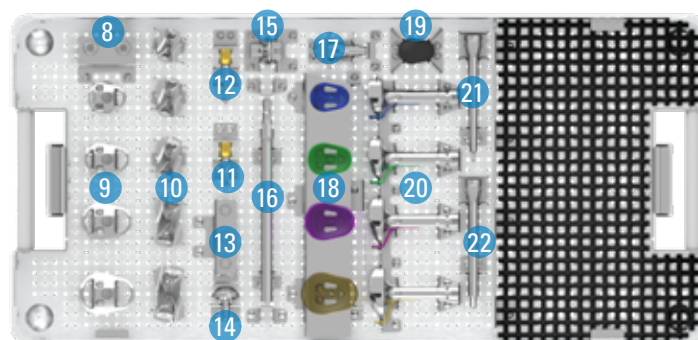


EQUINOXE ERGO CORE INSTRUMENT TRAY (KIT-311X)

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

*The Impactor Handle (321-07-05) can be used as a substitute as needed.

INSTRUMENT LISTING



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

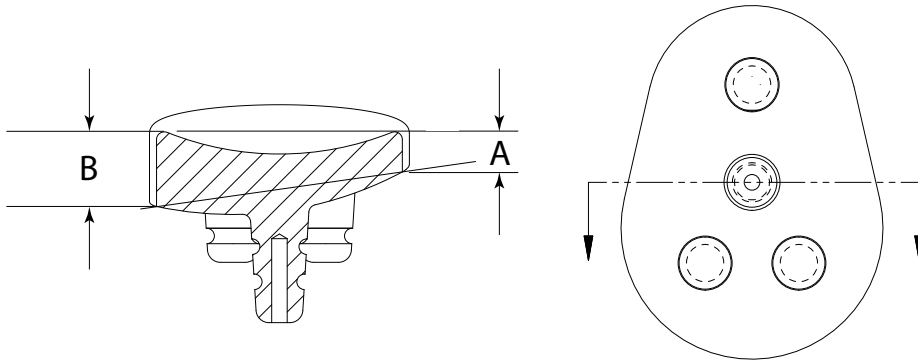
1	Plate Dial 38mm	301-13-38
1	Plate Dial 41mm	301-13-41
1	Plate Dial 44mm	301-13-44
1	Plate Dial 47mm	301-13-47
1	Plate Dial 50mm	301-13-50
1	Plate Dial 53mm	301-13-53
2	Short Head Trial 38mm	311-11-38
2	Short Head Trial 41mm	311-11-41
2	Short Head Trial 44mm	311-11-44
2	Short Head Trial 47mm	311-11-47
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

SYSTEM SPECIFICATIONS

POSTERIOR AUGMENT GLENOIDS

Posterior Augment Glenoid, 8°

8 degrees	A	B
	Anterior Edge (mm)	Posterior Edge (mm)
Small	4	6.8
Medium	4	7.3
Large	4	7.8
X-Large	4	8.3



Radial mismatch associated with glenoid/humeral head pairings

(Recommended Shaded)

Glenoid RoC	38mm HH	41mm HH	44mm HH	47mm HH	50mm HH	53mm HH
Alpha	7.72	5.87	4.27	2.66	1.05	-0.56
Beta	11.72	9.87	8.27	6.66	5.05	3.44
Post Aug S	8.27	6.42	4.82	3.21	1.60	0.00
Post Aug M	10.42	8.57	6.97	5.36	3.75	2.14
Post Aug L & XL	12.57	10.72	9.12	7.51	5.90	4.29

NOTES

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NOTES

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