EXACTECH | SHOULDER

Operative Technique Addendum

equinoxe®

Equinoxe Central Screw Baseplate (CSB)

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INTRODUCTION

This document presents an addendum to the Equinoxe Platform Shoulder System with Ergo® Instruments operative technique and the Equinoxe Small Reverse Baseplate Operative Technique Addendum. The steps described in this addendum address the steps specific to the Equinoxe CSB and related instrumentation.

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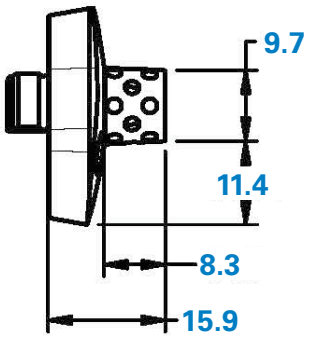
CSB DIMENSIONS

Central Screw Baseplate, Neutral



OPERATIVE TECHNIQUE OVERVIEW

Figure A
Drill Guide and 3.2mm Drill Bit Placement

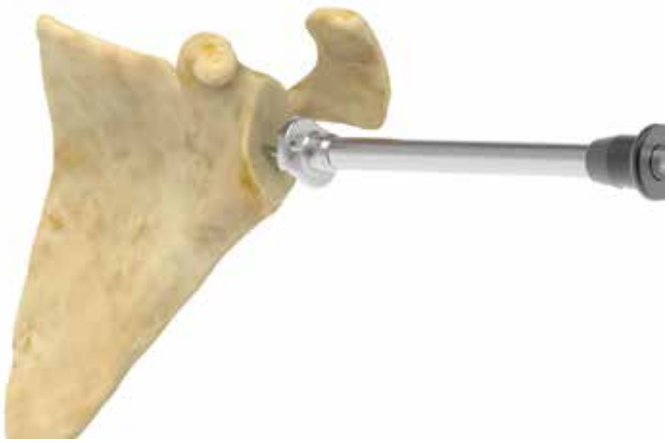


Figure B
Cannulated Reaming

Figure C
Cannulated Drilling

Figure D
Insert the Central Screw Baseplate

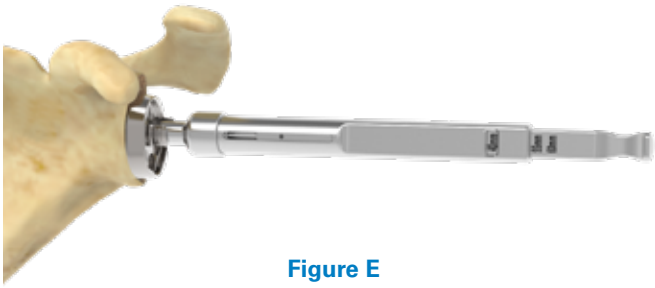


Figure E
Central Screw Hole Depth Check

Figure F
The central screw is visible through a side window of the Central Screw Baseplate inserter

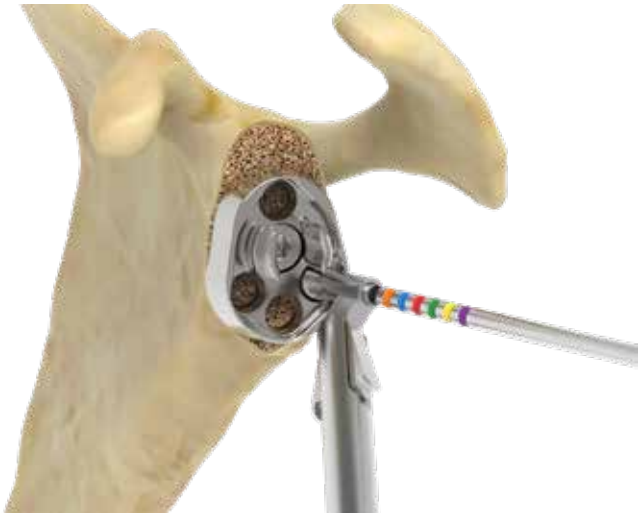


Figure G
Drill and Implant Peripheral Screws

Figure H
Manually Insert the One-Lock plate onto the Baseplate

Figure I
Tighten One-Lock Cap

Figure 1
Drill Guide and 3.2mm Drill Bit Placement

STEP 1: DRILL PILOT HOLE AND CENTRAL SCREW HOLE

The **Glenoid Plate Drill Guide (321-35-20)** should be aligned with the inferior glenoid rim to ensure the glenosphere is properly positioned in a superior-inferior position *(Figure 1)*. Connect the **Modular Glenoid Guide Handle (315-52-11)** to the Glenoid Plate Drill Guide and attach the **K-wire Adapter (315-51-10)**. Drill the pilot hole using the **CSB 3.2mm Drill Bit (321-52-11)** through the K-wire Adapter to create the pilot hole for the central compression screw.

Drill the central screw hole until contact is made with cortical bone.

The length of the Central Compression Screw is indicated by the CSB 3.2mm Drill Bit. The laser marking should be flush with the back face of the K-wire Adapter.

Leave the drill bit in position for the following steps: reaming and drilling the cage.

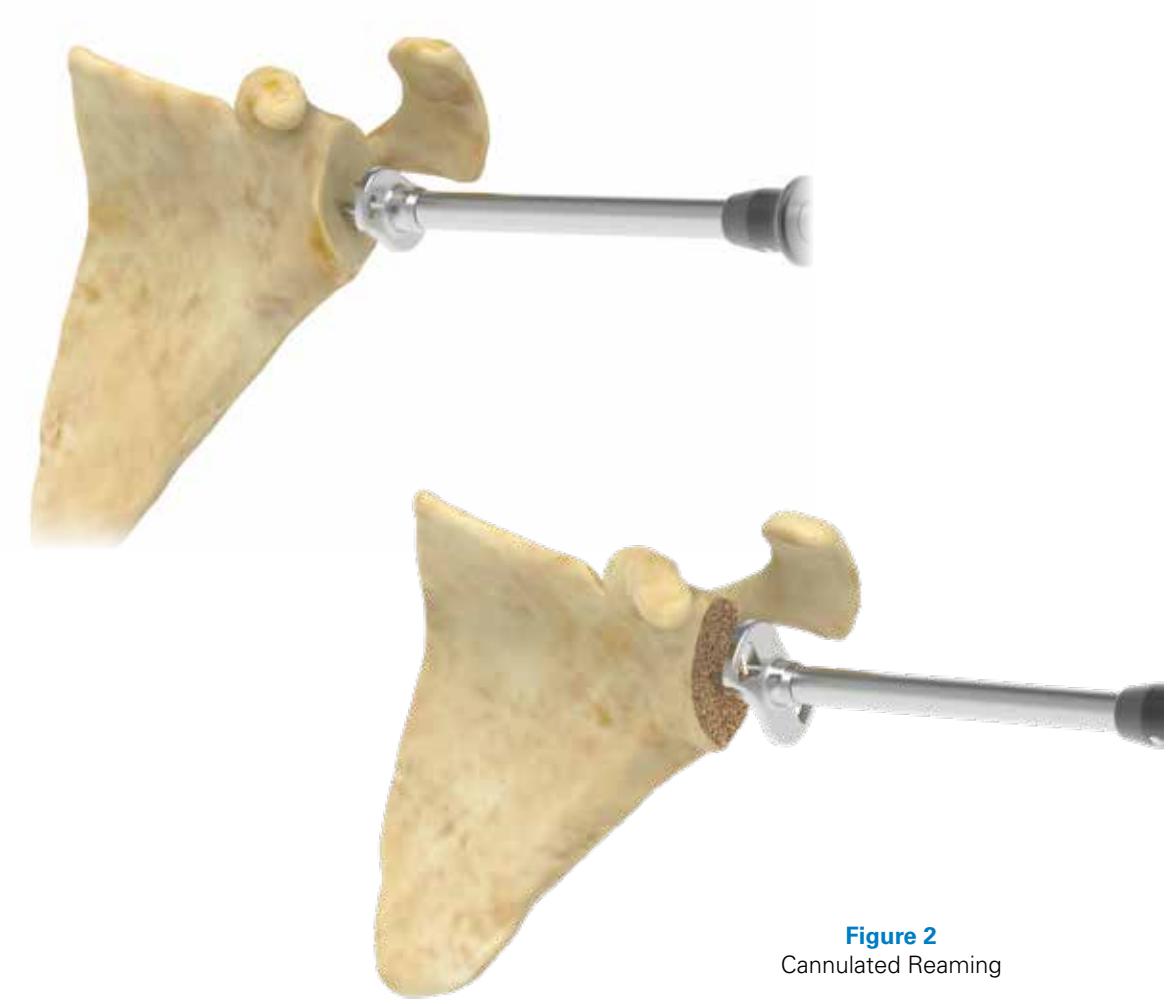


Figure 2
Cannulated Reaming

STEP 2: REAM THE GLENOID

Connect the appropriately sized **Modular Cannulated Reamer** to the **Modular Cannulated Driver (315-50-12)** *(Figure 2)*.

Reaming begins with the **Reverse Shoulder Starter Reamer (321-50-01)** and progresses to the **36/38mm Reamer (321-50-38)** and **40/42mm Reamer (321-50-42)** sizes based upon the anticipated size of the glenosphere.

Sequentially ream the glenoid over the CSB 3.2mm Drill Bit until any pre-identified glenoid erosions are corrected and the glenoid surface has been fully contoured.

Note: *Check that the reamer is engaged on the driver handle before starting.*

Note: *Start the reamer prior to engaging bone.*

Note: *Avoid applying a bending force to the CSB 3.2mm Drill Bit as this may cause fracture.*

It is critical to ream to the size of the largest potential glenosphere that the surgeon might use to ensure that the glenosphere will fit on the face of the glenoid without peripheral bony impingement (i.e. the CSB will already be fixed to the glenoid, and upsizing the glenosphere during trialing will not be possible if the corresponding reaming has not already been performed).

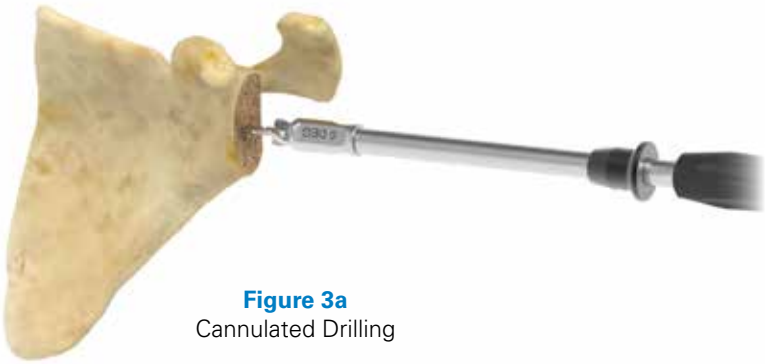


Figure 3a
Cannulated Drilling

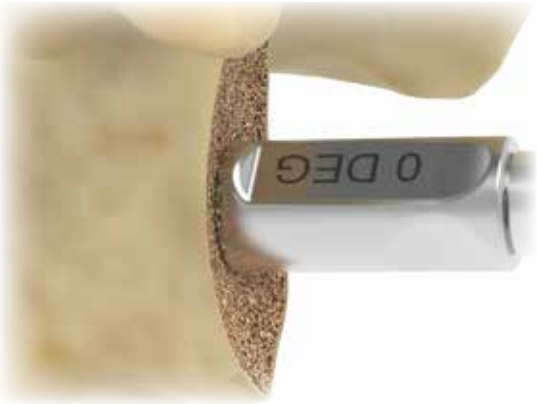


Figure 3b
Cannulated Drilling

Figure 3c
Cannulated Drilling

STEP 3: DRILL THE CAGE

Attach the **Cage Drill (321-52-66)** to the Modular Cannulated Driver *(Figure 3a)*.

Drill the CSB cage hole over the CSB 3.2mm Drill Bit *(Figures 3b and 3c)*. A built-in stop prevents over-drilling beyond the required depth for the cage.

After drilling the cage, remove the CSB 3.2mm Drill Bit.

Figure 4a
Insert the Central Screw Baseplate onto the Inserter

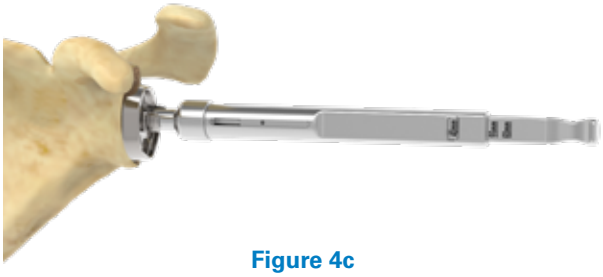


Figure 4c
Central Screw Hole Depth Check

Figure 4b
Insert the Central Screw Baseplate

Figure 4d
Depth Gauge Readings

STEP 4: IMPLANT THE CENTRAL SCREW BASEPLATE

Attach the baseplate to the **CS Baseplate Inserter (321-19-34)**, that is connected to the **Impactor Handle (321-07-15)** *(Figure 4a)*.

Align the baseplate with the cage hole and insert it onto the glenoid *(Figure 4b)*.

Re-measure the depth of the central compression screw hole with the **CSB Depth Gauge (321-19-19)** to confirm the length *(Figures 4c and 4d)*. **To ensure optimal fixation, if the Depth Gauge readings fall between sizes, always choose the larger size.**

Figure 5
Insert Central Compression Screw

Figure 6
The central screw is visible through a side window of the Central Screw Baseplate inserter

STEP 5: IMPLANT & TIGHTEN THE CENTRAL SCREW

Select the appropriate length of the **6.5mm Central Compression Screw** and insert it through the Impactor Handle and Baseplate Inserter using the **CSB Hex Driver (321-19-34)** *(Figures 5 and 6).*

Note: *When the Central Compression Screw is fully seated, the laser mark line on the end of the CSB Hex Driver will align with the back face of the Impactor Handle.*

Tighten the screw until achieving compression.

Note: *Take care to prevent debris from getting on the screw-hole as this could prevent adequate screw engagement.*

Note: *Do not overtighten the Central Compression Screw.*

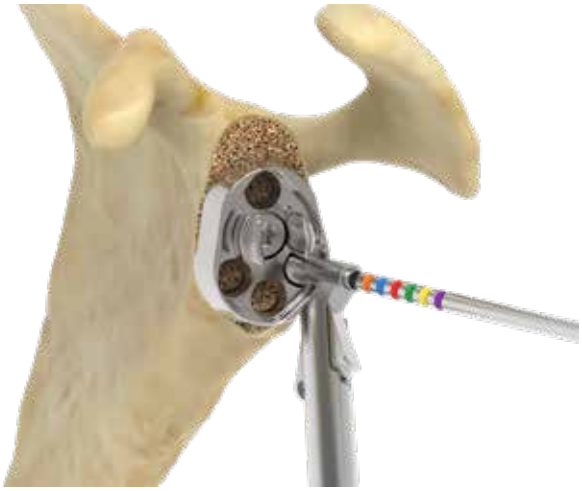


Figure 7
Drill Peripheral Compression Screw Holes

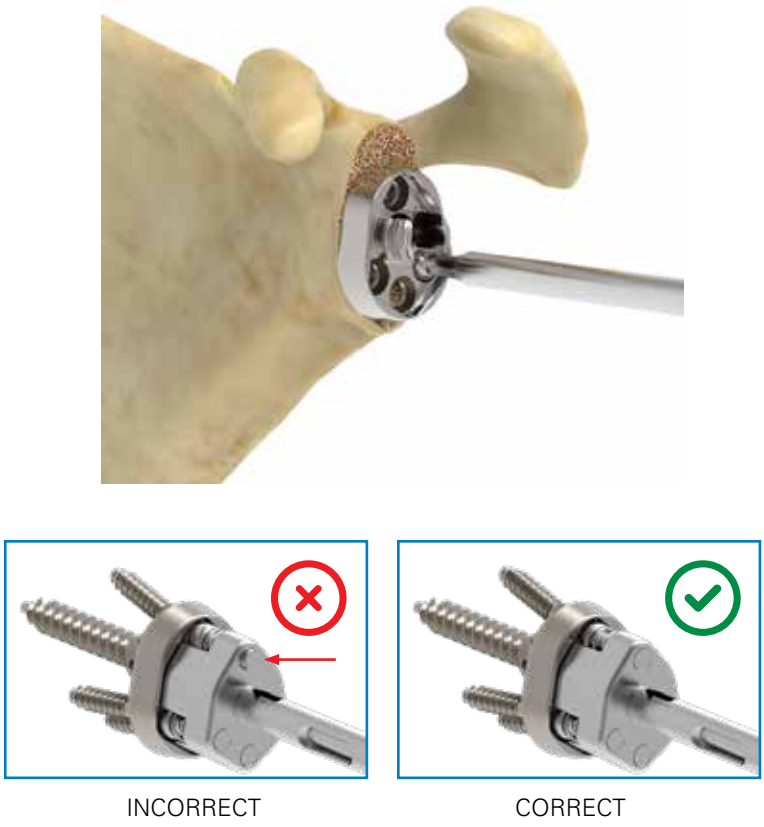


Figure 8
Implant Peripheral Screws

STEP 6: DRILL & IMPLANT THE PERIPHERAL COMPRESSION SCREWS

Note: *It is recommended to implant all four peripheral compression screws.*

The peripheral screw holes should be drilled using the **CSB Adjustable Angle Drill Guide (321-19-15)** and the **Ergo 3.2mm Drill (321-52-07)**. Each hole on the CSB allows for angular variability so the orientation of the screws can be selected to maximize bone purchase *(Figures 7 and 8)*.

Note: *The Ergo Drill Guide (321-19-05) is compatible with the CSB system but limits the angular variability. The central screw can also limit the angular variability for converging screws.*

Determine the depth of each hole using the **Glenoid Screw Depth Gauge (321-19-09)**. Select the appropriately sized Compression Screws and insert into the drilled holes. Tighten the peripheral screws to achieve fixation and compression of the CSB to the glenoid. If power is used to initially insert the screws, the final seating should be performed by hand as this will maximize fixation.

Note: *Take care to prevent debris from getting on the screw hole as this could prevent adequate screw engagement.*

The peripheral compression screws must be fully inserted to ensure the One-Lock Plate is properly seated. To check the depth of the peripheral compression screws, attach the **Peripheral Screw Depth Checker (321-19-20)** to the Modular Glenoid Guide Handle and push onto the construct. If any of the spring-loaded arms are protruding, re-tighten the corresponding screws until the front face of the instrument is completely flush *(Figure 8)*.

If necessary, re-tighten the central compression screw using the Hex driver after the peripheral screws have been inserted.

Figure 9
Manually Insert the One-Lock plate onto the Baseplate

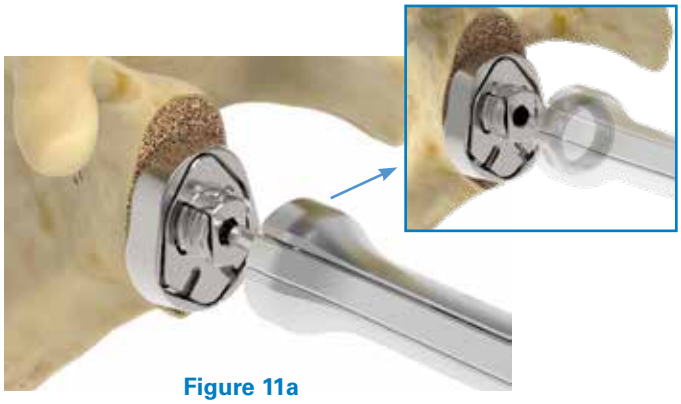


Figure 11a
Tighten One-Lock Cap

Figure 10
Place the One-Lock Cap into the Inserter

Figure 11b
Tightened One-Lock Cap

STEP 7: INSERT THE ONE-LOCK PLATE AND ONE-LOCK CAP

Ensure that all the peripheral screws are properly seated and that their heads are not protruding.

The **One-Lock Plate** can be inserted onto the baseplate using forceps or by hand *(Figure 9)*.

Load the **One-Lock Cap** onto the CSB One-Lock Cap Inserter (321-19-35) *(Figure 10)*.

Position the inserter so that it is on the same axis as the cage of the CSB. It is important that the alignment is on axis to prevent cross threading.

Tighten the One-Lock Cap *(Figure 11a)*.

Note: *Be sure that the One-Lock Plate is flush with the edge of the baseplate (Figure 11b).*

Figure 12
Insert the Glenosphere and Glenosphere Locking Screw

STEP 8: IMPLANT THE GLENOSPHERE

The appropriately-sized glenosphere is defined by implanting the largest one that can be inserted based upon exposure and the coracoacromial arch anatomy (ensuring that it was reamed up to that size during the glenoid reaming step).

Note: *Unlike circular baseplates, the anatomical shape of the Equinoxe CS Baseplate mandates that the glenosphere can only fit in one specific orientation.*

Standard and Ergo Equinoxe glenosphere inserters can be used for insertion of the Small Reverse Glenosphere Trials and Glenospheres. The Glenosphere does not have a taper connection and should not be impacted. The glenosphere is secured with a **CSB Glenosphere Locking Screw (320-55-99)** using the 3.5mm Hex Driver *(Figure 12)*.

Note: *The CSB Glenosphere Locking Screw (320-55-99) is shorter than the standard Glenosphere Locking Screw (320-15-05). These screws are not interchangeable.*

Should the implants need to be removed after implantation for any reason, follow these steps:

STEP 9: REMOVING THE CS BASEPLATE CONSTRUCT

Glenosphere Removal

Remove the CSB Glenosphere Locking Screw from the construct using the CSB Hex Driver or any other 3.5mm Hex Driver by turning the driver counterclockwise.

Once the CSB Glenosphere Locking Screw has been removed, disengage the Glenosphere by hand or using the Ergo Glenosphere Inserter (321-01-52).

Note: *The connection between the Glenosphere and the CS Baseplate is not a tapered fit.*

One-Lock Cap And Plate Removal

Using the CSB One-Lock Cap Inserter, unthread the One-Lock Cap from the CS Baseplate by turning the instrument counterclockwise until it is fully disengaged. Once the One-Lock Cap has been removed, remove the One-Lock Plate by hand or using forceps.

Screws And Baseplate Removal

Remove the peripheral screws using the CSB Hex Driver or any other 3.5mm Hex Driver. Using the CS Baseplate Inserter and CSB Impactor Handle to provide a counter torque; remove the Central Compression Screw through the CS Baseplate Inserter using the CSB Hex Driver.

Once the Peripheral and Central Screws have been removed, disengage the CS Baseplate from the bone by twisting the CS Baseplate Inserter back and forth to break off any adhesions. Extract the CS Baseplate from the glenoid bone using the CS Baseplate Inserter or forceps.

IMPLANT LISTING

CATALOG NO.	PART DESCRIPTION
320-55-01	Central Screw Baseplate
320-55-98	Central Screw Baseplate One-Lock Plate/Cap Kit
320-55-99	Glenosphere Locking Screw, Central Screw Baseplate
320-55-30	Central Compression Screw, 6.5mmx30mm
320-55-35	Central Compression Screw, 6.5mmx35mm
320-55-40	Central Compression Screw, 6.5mmx40mm
320-55-45	Central Compression Screw, 6.5mmx45mm
320-55-50	Central Compression Screw, 6.5mmx50mm
320-55-55	Central Compression Screw, 6.5mmx55mm
320-55-60	Central Compression Screw, 6.5mmx60mm

INSTRUMENT LISTING

CSB INSTRUMENTS

321-19-35	CSB One-Lock Cap inserter
321-19-18	CSB Hex Driver
321-52-11	CSB 3.2mm Drill Bit
321-19-34	CSB Inserter
321-07-15	CSB Modular Inserter/Impactor Handle
321-19-19	CSB Depth Gauge
321-52-66	CSB Cage Drill, 0 Degree
321-19-15	CSB Adjustable Angle Drill Guide
321-19-20	CSB Peripheral Screw Depth Checker

INSTRUMENT LISTING

CATALOG NO.	PART DESCRIPTION	
ERGO INSTRUMENTS		
321-35-20	Drill Guide, Small Glenoid Plate	
315-52-11	Modular Glenoid Guide Handle	
315-51-10	K-wire Adapter	
321-50-01	Modular Reverse Reamer Starter	
321-50-38	Modular Reverse Reamer, 38mm	
321-50-42	Modular Reverse Reamer, 42mm	
315-50-12	Cannulated Glenoid Reamer Driver	
321-52-07	3.2mm Drill W/AO	
301-09-80	Ratcheting Screw Driver Handle	
301-09-30	Ratcheting T-Handle	

NOTES

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For additional device information, refer to the Exactech Shoulder System–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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