SURGICAL TECHNIQUE GUIDE

IJS™-ELBOW
elbow stabilization system

As described by:
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**Indications for Use:**
The Internal Joint Stabilizer - Elbow is intended to provide temporary stabilization of the elbow joint after trauma or chronic elbow dislocation.

**Directions for Use:**
The IJS-E System is designed to address elbow joint instability procedures through a standard open lateral approach and should only be used by surgeons who have experience with the IJS-E System.

Each surgeon must evaluate the appropriateness for the use of the IJS-E System prior to and during these procedures. The following guidelines are furnished for information purposes only and are not intended to replace comprehensive training. Prior to use of the IJS-E System, the surgeon should become familiar with all information contained in this technique guide.

Please refer to the IJS-ELBOW System Instructions for Use to review the warnings, precautions and contraindications for this system.
SUPERFICIAL EXPOSURE

1

Make an incision midway between the lateral epicondyle and the olecranon.

Note:
Place the tourniquet proximal on the arm to allow for free elbow motion.

DEEP EXPOSURE

2

Perform a lateral approach to the elbow joint through the surgeon’s preferred muscle interval.
3 CENTER OF ROTATION

Locate and mark the anatomic center on the lateral capitellum.

Note: This is identified as the center of a circle that fits the curvature of the capitellum on the lateral view.

Full visualization of the lateral epicondyle to the capitellum is critical to accurately establish the anatomic center of rotation.

4 AXIS GUIDE SIZING

Open the joint by applying a varus stress allowing access to insert the proper sized Axis Guide.

The handle of the Axis Guide should be positioned in-line with the humeral shaft and into the trochlear notch, engaging the medial trochlear expansion.

Note: There are three sizes of Axis Guides available.
GUIDE WIRE ATTACHMENT

Insert the K-wire Guide into the Axis Guide so that it is close to the lateral epicondyle without making contact, and then rotate it clockwise to lock it in place.

Caution:
Avoid contacting the lateral epicondyle with the K-wire Guide as it will prevent the Axis Guide from properly engaging the medial trochlear expansion, causing the assembly to be improperly positioned.

GUIDE WIRE INSERTION

Advance the Guide-Wire (1.5mm K-wire) through the K-wire Guide and into the humerus, stopping short of the medial cortex.

Caution:
DO NOT violate the medial cortex as it may result in ulnar nerve injury.

Note:
The supplied Guide-Wires (1.5mm K-wire) are specifically designed to provide exact depth readings with the system’s Depth Gauge.
AXIS GUIDE REMOVAL

Remove the entire assembly leaving the Guide Wire (1.5mm K-wire) in place.

FLUOROSCOPIC CONFIRMATION

Confirm that the Guide Wire (1.5mm K-wire) has been inserted to the correct depth and that the axis of rotation has been properly established using fluoroscopy.
AXIS PIN MEASUREMENT

Place the Depth Gauge over the Guide Wire (1.5mm K-wire) to measure the drilling depth for the proper length of Axis Pin.

If between sizes, choose a shorter length.

Note: There are nine lengths of Axis Pin available.

AXIS PIN DRILLING

Drill over the Guide Wire (1.5mm K-wire) to the measured depth using the 2.7mm cannulated IJS-E Drill.

Remove the Guide Wire (1.5mm K-wire) after drilling.

Note: The 2.7mm cannulated IJS-E Drill has etched depth marks.
BASE PLATE POSITIONING

Position the Base Plate on the proximal aspect of the ulna.

Note:
The use of fluoroscopy will help to position the base plate.

BASE PLATE DRILLING

Drill for bicortical fixation through the sliding slot on the Base Plate using the 2.5mm drill bit, aiming towards the coronoid process and away from the radial notch.

Measure using the Depth Gauge for the appropriate length 3.5mm compression screw (Polyaxial Non Locking).

Caution:
Avoid drilling into the articular surfaces.

Note:
The center-sliding slot of the Base Plate facilitates positioning.
Insert the corresponding 3.5mm compression screw (Polyaxial Non Locking) using the T-10 Driver.

Repeat step 12 and 13 for the remaining two compression screw holes of the Base Plate.

**Caution:**
Avoid drilling into the articular surfaces.

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If the head of the Gold Locking Screw or the arrow of the Purple Locking Joint are NOT pointing proximally:
- Loosen the Purple Locking Screw and remove the Connecting Arm to flip the Purple Locking Joint 180° so that its arrow is pointing proximal.
- Then reinsert the Connecting Arm back into the Purple Locking Joint with the Gold Locking Screw also pointing proximal.
15 INSERTING THE AXIS PIN

Adjust the Connecting Arm to allow the selected Axis Pin to be inserted through the eyelet of the Boom Arm and into the humerus.

**Note:**
A needle holder or the optional Counter Torque Tool can be used to hold the Boom Arm while inserting the Axis Pin.

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16 LOCKING THE AXIS PIN

Use a needle holder or the optional Counter Torque Tool to stabilize the Boom Arm while fully tightening the Axis Pin using the T-10 Driver.

**Note:**
A needle holder or Counter Torque Tool allows for proper tightening of the Axis Pin.
ELBOW REDUCTION

Anatomically reduce the elbow joint.

Note: Shoulder rotational torque is minimized by placing the patient’s hand over their face while also greatly aiding in the reduction.

LOCKING THE CONSTRUCT

Using the T-10 Driver and a needle holder or optional Counter Torque Tool, lock the reduction by first tightening the Gold Locking Screw and then the Purple Locking Screw.

Warning: Both the Gold and Purple Locking Screws must be fully tightened to maintain the reduction.
19 FINAL FLUOROSCOPIC CONFIRMATION

Confirm that the reduction is maintained through the full ROM using fluoroscopic imaging.

20 TRIMMING THE CONNECTING ARM

Using a pin cutter, remove any excess length from the Connecting Arm that exits the Purple Locking Joint.

**Warning:**
The Connecting Arm must be trimmed as short as possible where it exits the Purple Locking Joint to minimize the potential for soft tissue irritation.
Close the incision in your normal fashion.
IJS-E System Explanting Procedure

1. LOCATING THE AXIS PIN

Palpate the lateral epicondyle to locate and mark the head of the Axis Pin.

Note:
Use of fluoroscopic imaging will aid in locating the position for each of the construct screws.

2. AXIS PIN REMOVAL

Make a stab incision over the marked area and remove the Axis Pin using the T-10 Driver.
LOCATING THE BASE PLATE

Palpate the posterior surface of the ulna to locate and mark the position of the Base Plate.

Note: Access can be gained through the previous exposure.

EXPOSING THE BASE PLATE

Make an incision to expose the Base Plate.
5 COMPRESSION SCREW REMOVAL

Using the T-10 Driver, remove the three 3.5mm compression screws (Polyaxial Non Locking).

6 CONSTRUCT REMOVAL

Remove the Base Plate construct.

Close both incisions and dress the wound in your normal fashion.
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**Bottom Tray**

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## IJS-ELBOW System (Caddy)

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