Description

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. These 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.

Indications for Use

The Internal Joint Stabilizer - Elbow is intended to provide temporary stabilization of the elbow joint after trauma or chronic elbow dislocation.
1 SUPERFICIAL EXPOSURE

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.

2 DEEP EXPOSURE

Perform a lateral approach to the elbow joint through the surgeon’s preferred muscle interval.
Open the joint by applying a varus stress allowing access to insert the largest sized Axis Guide that is appropriate for the patient.

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

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.
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 2.7mm 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.
13 **AXIS PIN MEASUREMENT**

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.

14 **CONSTRUCT ALIGNMENT**

If the head of the Proximal Locking Screw or the arrow of the Distal Locking Joint are NOT pointing proximally:

Loosen the Distal Locking Screw and remove the Distal Connecting Rod to flip the Distal Locking Joint 180° so that its arrow is pointing proximal.

Then reinsert the Distal Connecting Rod back into the Distal Locking Joint with the Proximal Locking Screw also pointing proximal.
Adjust the Distal Connecting Rod to allow the selected Axis Pin to be inserted through the eyelet of the Proximal Connecting Rod and into the humerus.

**Note:**
A needle holder or the PROTEAN Pliers can be used to hold the Proximal Connecting Rod while inserting the Axis Pin.

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Use the PROTEAN Pliers to stabilize the Proximal Connecting Rod while fully tightening the Axis Pin using the T-10 Driver.
Anatomically reduce the elbow joint.

**Warning:**
Both the Proximal and Distal Locking Screws must be fully tightened to maintain the reduction.

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

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Using the T-10 Driver and the Counter Torque Tool, lock the reduction by first tightening the Proximal Locking Screw and then the Distal Locking Screw.

**Warning:**
Both the Proximal and Distal Locking Screws must be fully tightened to maintain the reduction.
Confirm that the reduction is maintained through the full ROM using fluoroscopic imaging.

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

Warning:
The Distal Connecting Rod must be trimmed as short as possible where it exits the Distal Locking Joint to minimize the potential for soft tissue irritation.
21 DEEP CLOSURE

Reattach the origin of the lateral collateral ligament and the origin of the extensor muscle just proximal to the Axis Pin.

22 LOCKING THE CONSTRUCT

Close the incision in the usual fashion.
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.

AXIS PIN REMOVAL

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

**DRVR-UQC-T10:** Driver, Universal QC, T-10
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.
Using the T-10 Driver, remove the three 3.5mm compression screws (Polyaxial Non Locking).

Remove the Base Plate construct.

Close both incisions and dress the wound in the usual fashion.
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<tr>
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<th>Catalog #</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>HNDL-UQC-FXD</td>
<td>Handle, Quick Connect, Fixed</td>
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<td>2</td>
<td>DPGA-MDS-050</td>
<td>Depth Gauge, Med. Standard, 50mm</td>
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<td>3</td>
<td>PRT-BND-PLR</td>
<td>PROTEAN Bending Pliers</td>
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<td>4</td>
<td>CTP-PI-2233</td>
<td>Cutting Pliers</td>
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<td>DRVR-UQC-T10</td>
<td>Driver, Universal QC, T-10 *</td>
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* Not pictured
INSTRUMENT TRAY (Standard Configuration)

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<td>5</td>
<td>PANL-35160-TS</td>
<td>Screw, Cortical Non Locking, 3.5mm x 16mm, Ti</td>
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<td>IJS-ELB-ACG</td>
<td>IJS-E Axis Centering Guide</td>
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<td>IJS-EAP-25300</td>
<td>IJS-E Axis Pin, 2.5mm x 30mm</td>
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<td>KWIR-DES-15127</td>
<td>K-Wire Standard Tip, 1.5mm x 127mm</td>
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<td>IJS-E Axis Trajectory Guide, Large</td>
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<td>IJS-EDG-OKW</td>
<td>DIUS-E Depth Gauge, Over K-wire</td>
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<td>IJS-E Drill, Cann Distal Cutting, 2.7mm x 70mm</td>
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<td>Drill, 2.7mm x 40mm</td>
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<td>IJS-ELB-BPA</td>
<td>IJS-E Base Plate Assembly</td>
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