

Surgical Technique



Acumed® is a global leader of innovative orthopaedic and medical solutions.



We are dedicated to developing products, service methods, and approaches that improve patient care.



Acumed® Acu-Loc® 2 Wrist Plating System

The Acu-Loc 2 Wrist Plating System offers various plate families and screw technologies to treat multiple fracture patterns of the distal radius and distal ulna regions. Also included are the Volar Distal Radius Plates, Dorsal Distal Radius Plates, Distal Radius Fragment Specific Plates, and Volar Distal Ulna Plates.

Acumed has introduced the Acu-Loc 2 Volar Distal Radius (VDR) Plating System as the next generation in plating fixation. The system presents several new plate options, a unique two-piece locking compression screw, innovative instrumentation for fracture management, and new plate placement tools.

Some products shown and/or described may not be available in your distribution area. Please contact your local authorized Acumed distributor for any further information.

	Definition
Warning	Indicates critical information about a potential serious outcome to the patient or the user.
Caution	Indicates instructions that must be followed in order to ensure the proper use of the device.
Note	Indicates information requiring special attention.



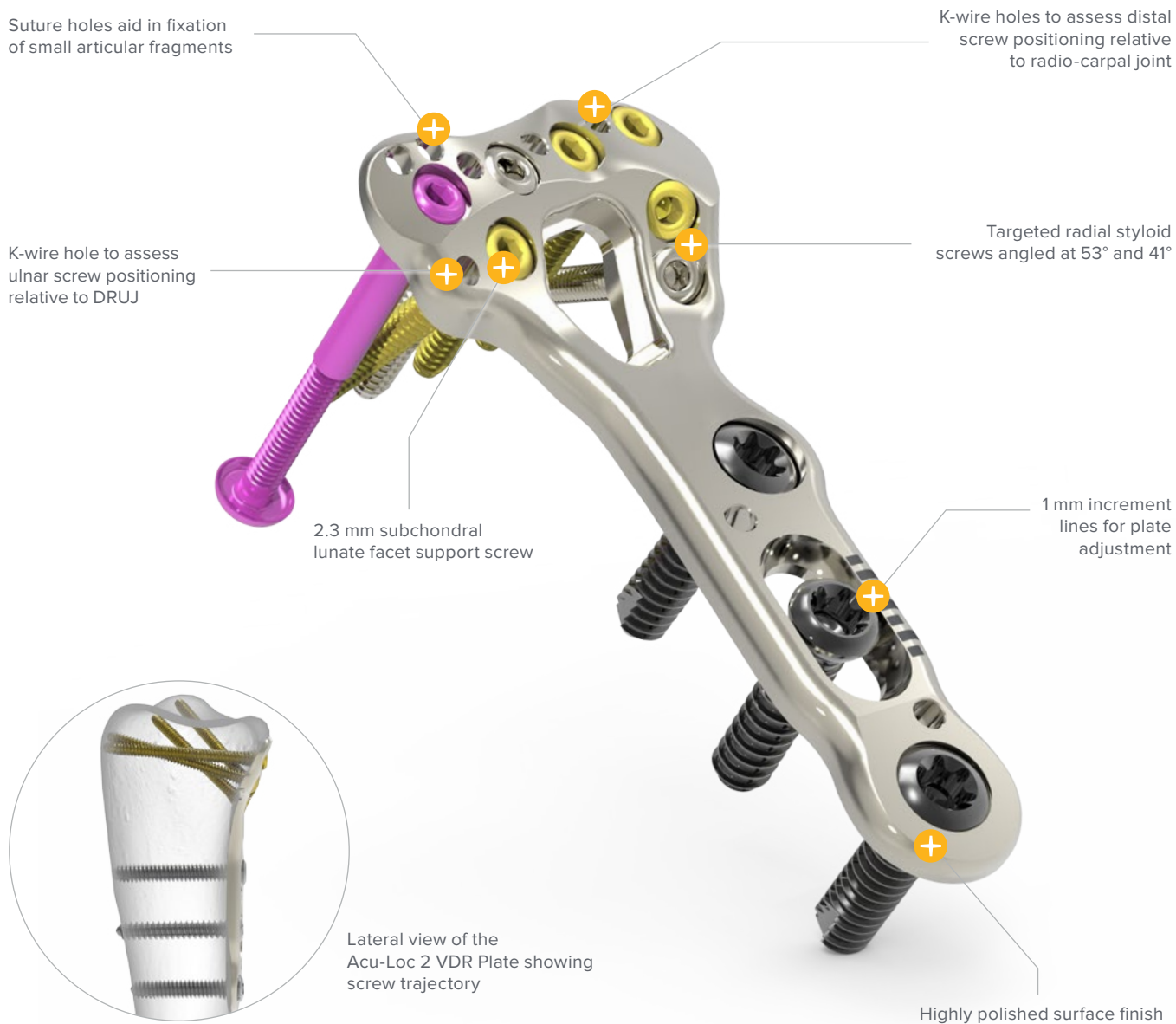
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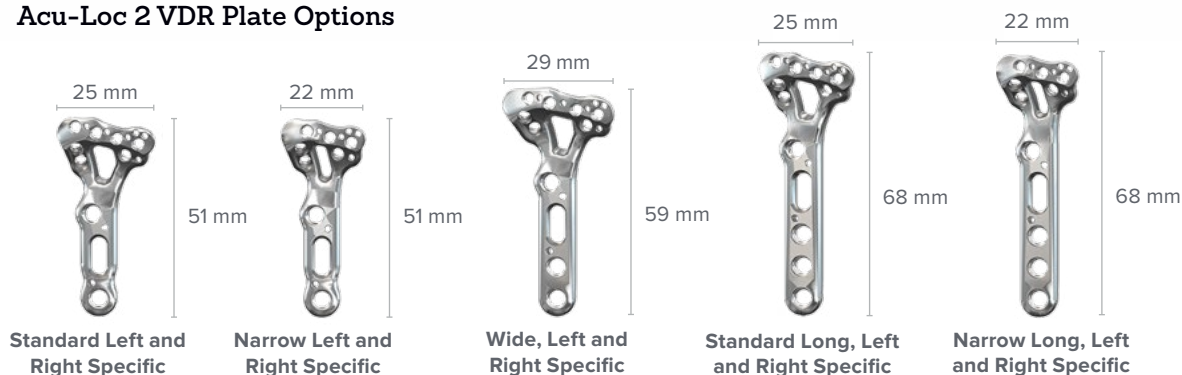
System Features

Acu-Loc 2 Volar Distal Radius (VDR) Plates

The standard Acu-Loc 2 Plate is designed to closely replicate the anatomical contours of the distal radius and may assist in restoring the original geometry.



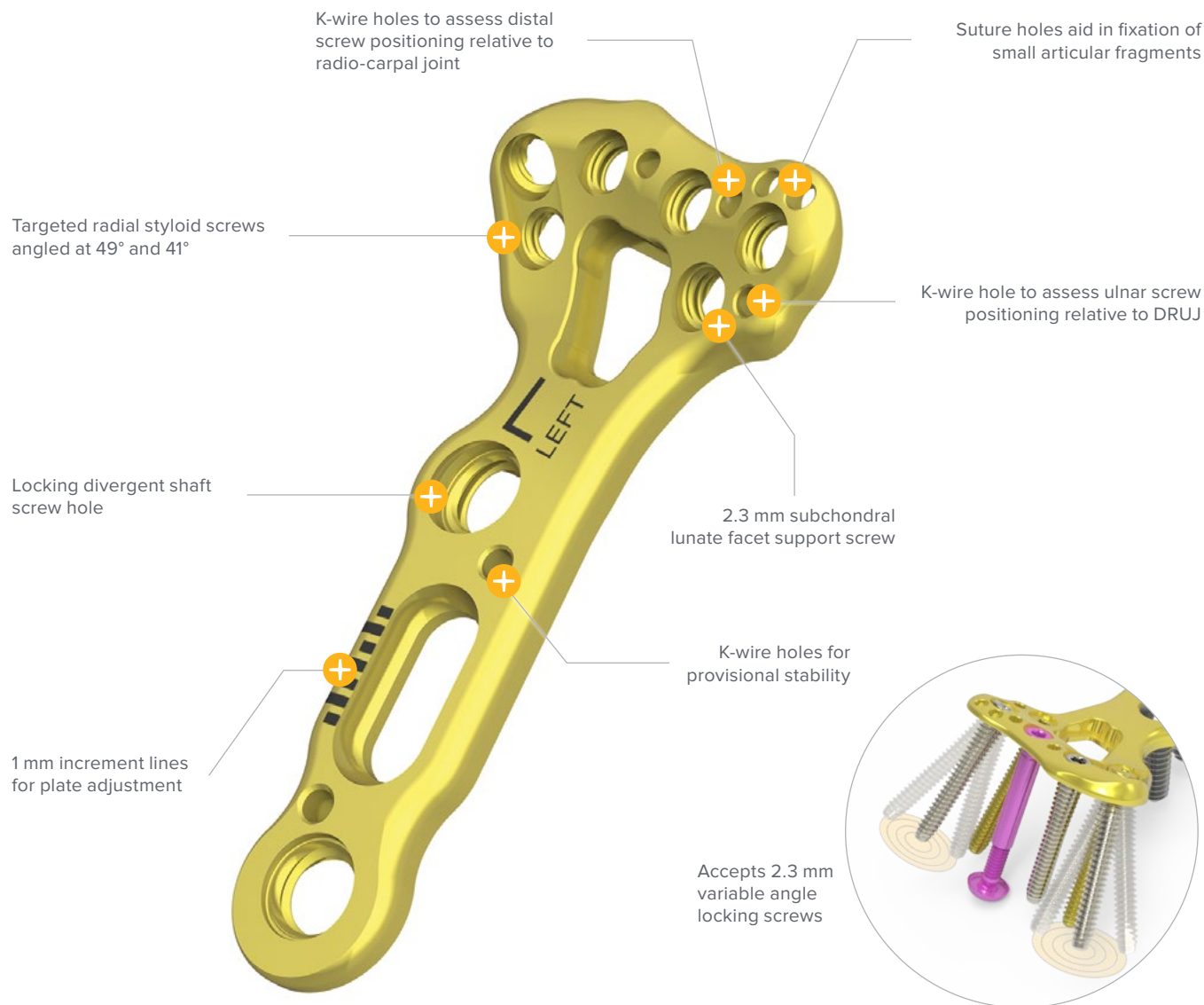
Acu-Loc 2 VDR Plate Options



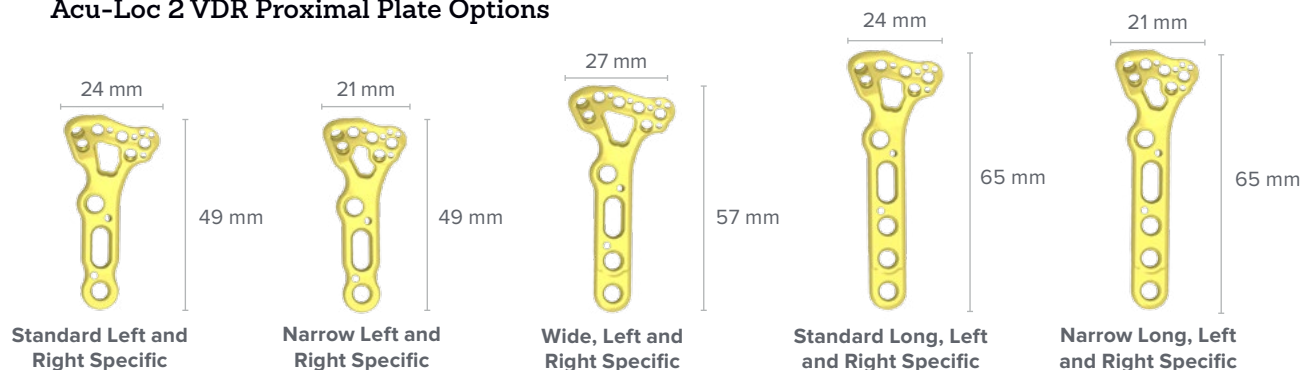
System Features [continued]

Acu-Loc 2 Volar Distal Radius (VDR) Proximal Plates

VDR Proximal Plates are designed to sit approximately 2 mm more proximal than the silver colored plates. 2.3 mm locking variable angle screws may be used in the distal row of the Acu-Loc 2 VDR Proximal Plates. These screws are provided to aid in the capture of specific fragments or to accommodate variations in patient anatomy. Please note that 2.3 mm locking variable angle screws are designed to be used with Acu-Loc 2 VDR Proximal Plates and Acu-Loc EX Plates *only* and not with any other plates.



Acu-Loc 2 VDR Proximal Plate Options



System Features [continued]

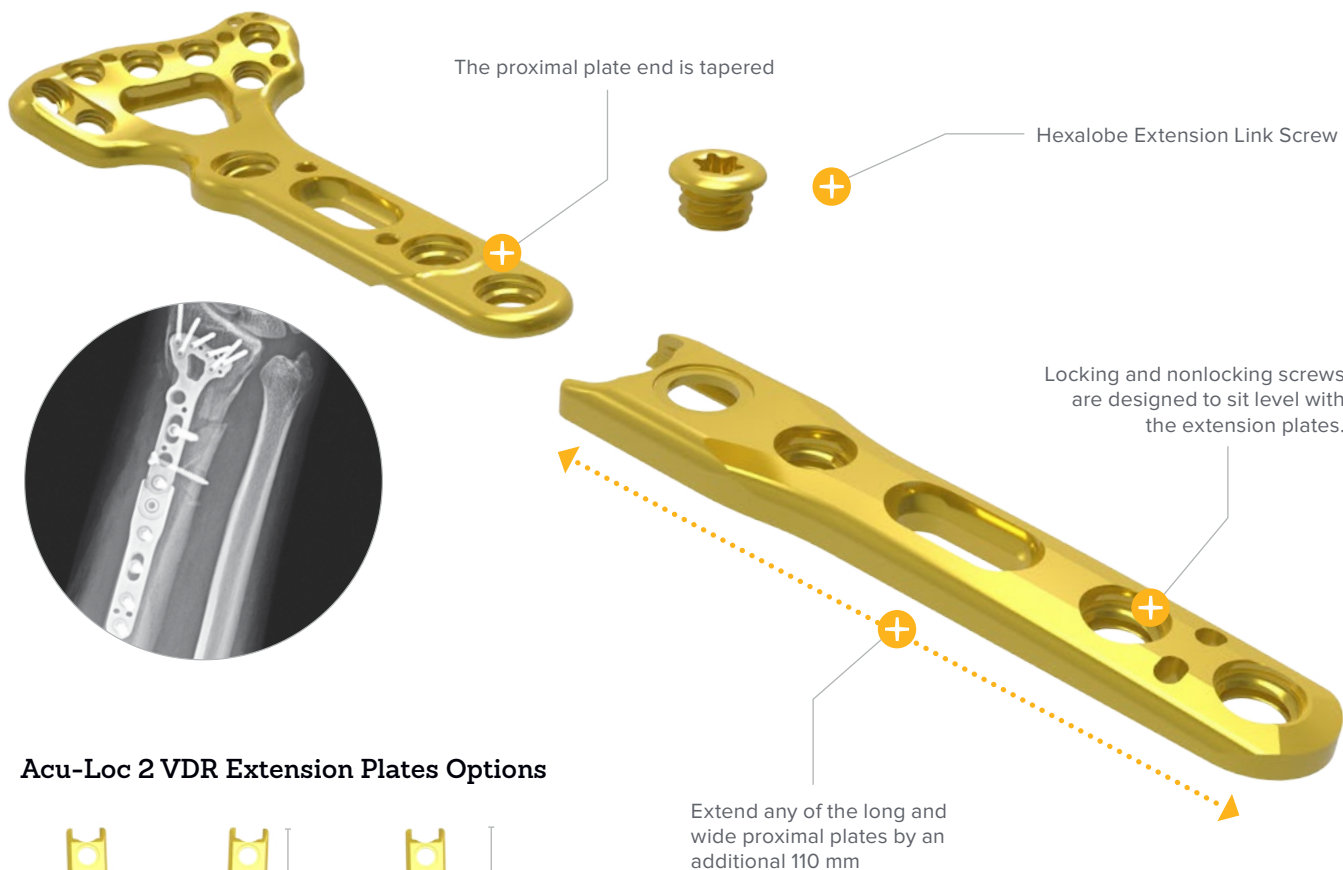
Acu-Loc 2 VDR Extension Plates

The Acu-Loc 2 VDR Plating System includes the ability to extend the Acu-Loc 2 VDR Proximal Plates. The Acu-Loc 2 VDR Extension Plates are rigidly locked with a Acu-Loc 2 VDR Plate (hex) Extension Link Screw (30-0093) or Acu-Loc 2 VDR Hexalobe Extension Link Screw (30-0100) to the following Acu-Loc 2 VDR Proximal Plates:

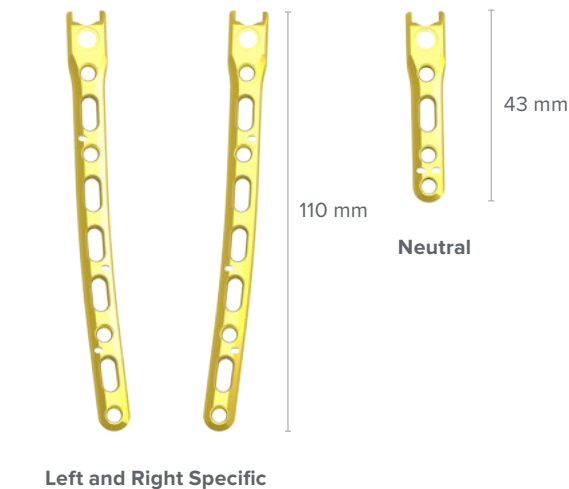
- ▶ Acu-Loc 2 VDR Proximal Standard Long Plates
- ▶ Acu-Loc 2 VDR Proximal Narrow Long Plates
- ▶ Acu-Loc 2 VDR Proximal Wide Plates

Long Extension Plates

Modular plate attachments allow surgeons to extend any of the long and wide proximal plates by an additional 110 mm. This option has both left and right plates to accommodate the radial bow. Plates are connected by a hex or hexalobe link screw.



Acu-Loc 2 VDR Extension Plates Options



Available Plate Length Combinations

Plate Lengths with Extension	Wide	Narrow Long	Standard Long
Neutral Extension	100 mm	108 mm	108 mm
Long Extension	167 mm	176 mm	176 mm

System Features [continued]

Distal Radius Fragment Specific (DRFS) Plates

The Distal Radius Fragment Specific (DRFS) Plates are designed to independently address the inherent challenges of complex fractures. Fragment-specific plating is based on the three-column theory that separates the ulnar and radial sides of the distal radius from the distal ulna. The three-column theory corresponds with the most common distal radius fracture patterns and enables anatomic reconstruction of intra-articular fracture fragments.



Volar Lunate Suture Plate

The Volar Lunate Suture Plate (70-0334) supports the volar ulnar corner of the radius. Sutures may be placed through the volar capsule and suture holes in the plate for fixation of these very small, but clinically important, bone fragments.



Radial Styloid Plate

The Divergent Radial Styloid Plate (70-0331) buttresses the radial column. Two unicortical distal screws diverge to provide subchondral bone support with one screw targeting the dorsal rim of the sigmoid notch and the other targeting the volar rim.



Dorsal Lunate and Dorsal Rim Buttress

Used for stabilizing fracture patterns that involve the dorsal lunate facet of the distal radius and the sigmoid notch, the Dorsal Lunate Plate (70-0337 or 70-0338) provides support to the lunate facet. The Dorsal Rim Buttress Plate (70-0335 or 70-0336) is positioned on the dorsal ulnar side of the radius and extends radially to support dorsal rim comminution and the radial styloid. A screw can be inserted ulnar-to-radial for further radial styloid support.

Note: If the long ulnar-to-radial styloid screw is desired in the dorsal rim buttress plate, it is recommended to use the 2.0 mm Locking Drill Guide 6–46 mm (80-0592).



Distal Radius Fragment Specific (DRFS) Plates Options



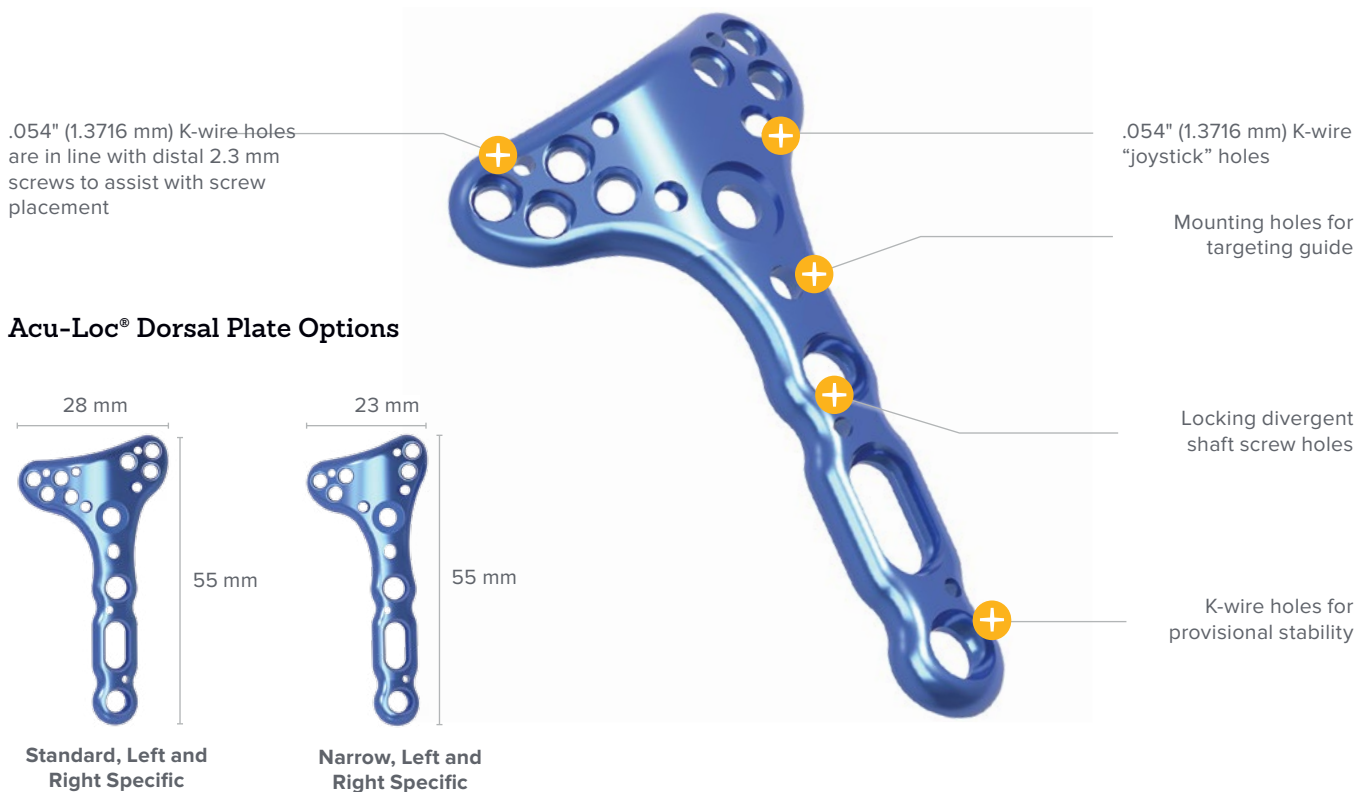
DRFS Plate Reference Chart	
Gold	Neutral
Blue	Left-specific
Green	Right-specific

System Features [continued]

Distal Radius Fragment Specific (DRFS) Plates

Acu-Loc Dorsal Plates

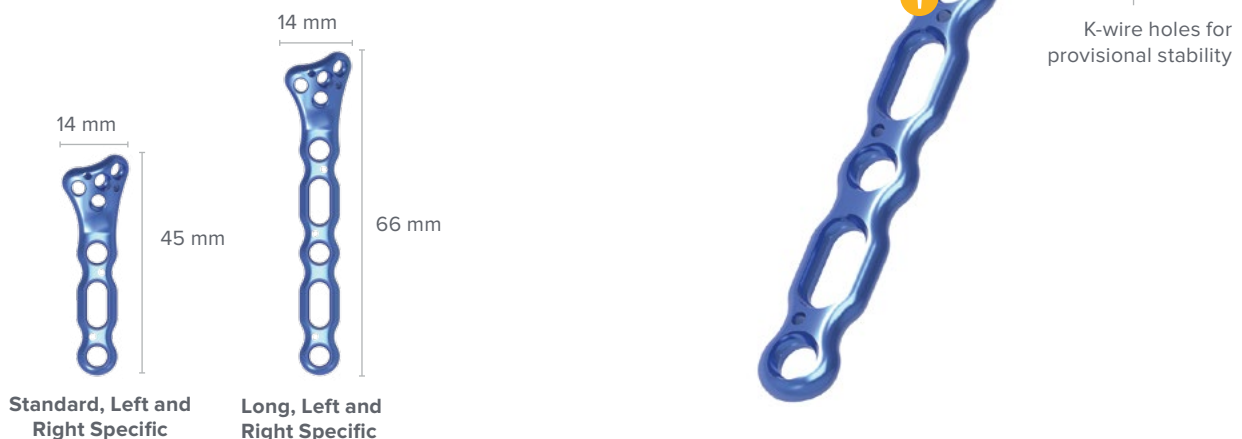
The locking Acu-Loc Dorsal Plates offer a solution to treat distal radius fractures that need to be addressed from the dorsal side.



Acu-Loc® Volar Distal Ulna (VDU) Plates

The Acu-Loc VDU Plates are designed specifically for periarticular fractures of the distal ulna. The screw positioning and angulation targets distal fragments of the ulnar head and neck.

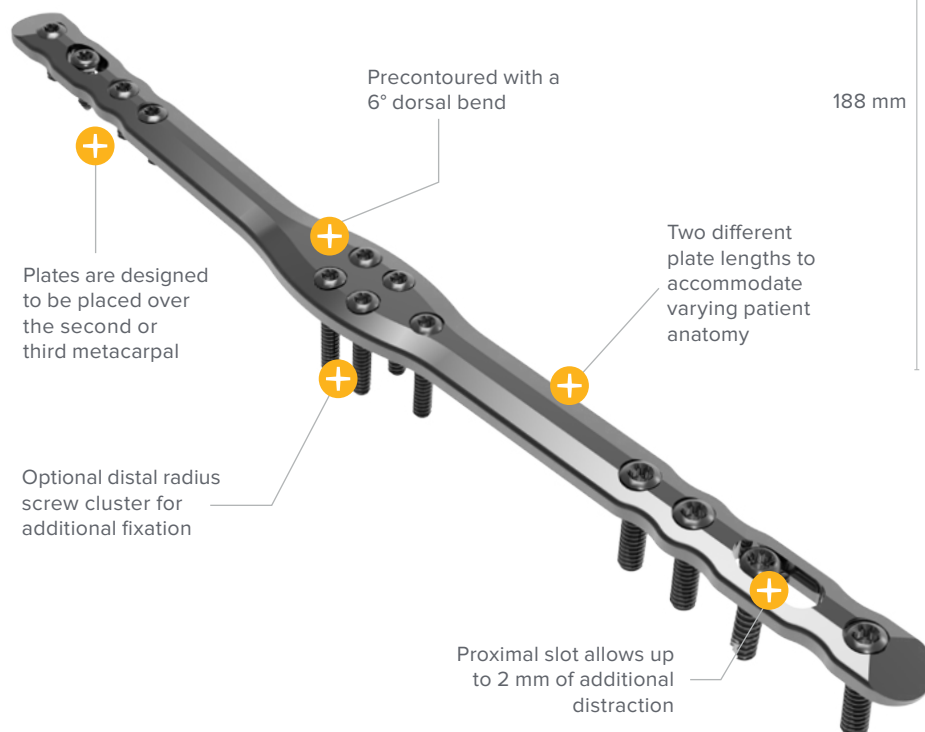
Acu-Loc VDU Plate Options



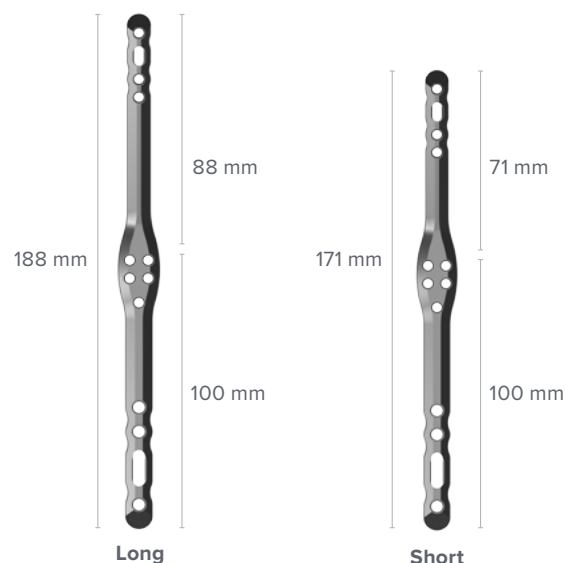
System Features [continued]

Wrist Spanning Plates

Designed to address complex distal radius fractures, these temporary fixators hold the wrist in distraction and provide ligamentotaxis while the distal radius heals.



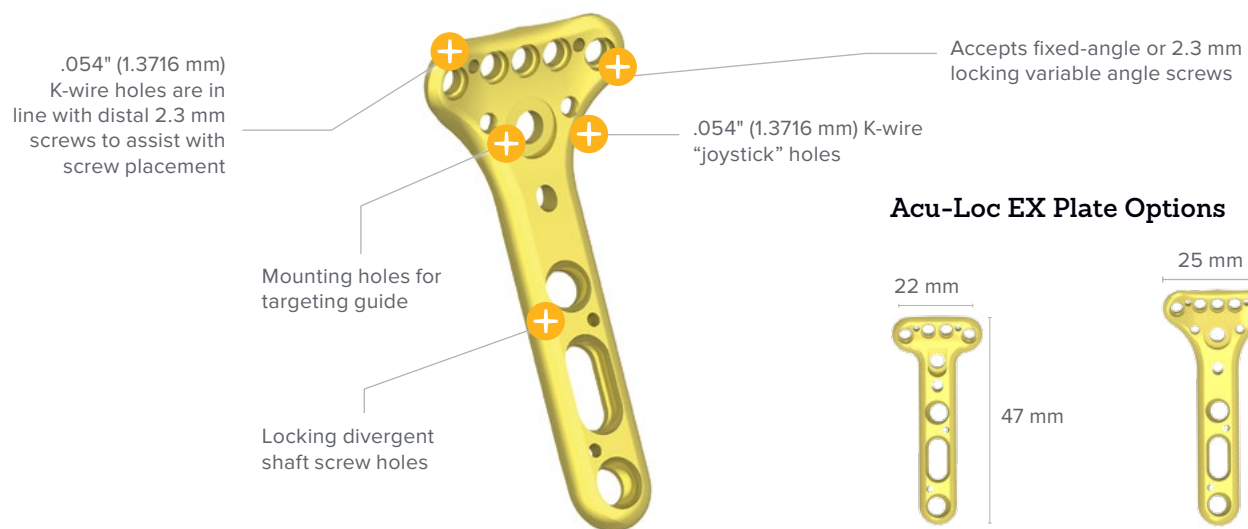
Acu-Loc Wrist Spanning Plate Options



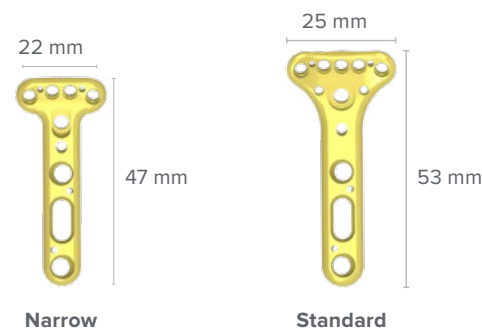
Note: The Acumed Acu-Loc Wrist Spanning Plate and 2.7 mm screws come sterile-packed. 2.7 mm instrumentation may be placed in the Acu-Loc 2 utility bin. The Acumed Acu-Loc 2 Wrist Plating System includes the 3.5 mm screws and instrumentation not included in the sterile procedure packs.

Acu-Loc Extra-articular (EX) Plates

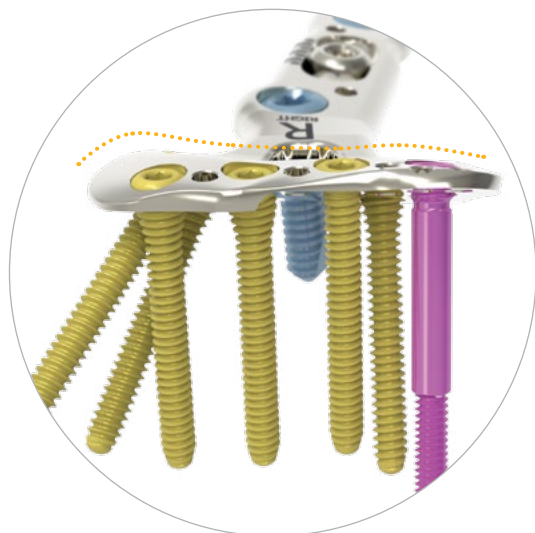
2.3 mm locking variable angle screws may be used in the distal row of the Acu-Loc EX Plates. These screws are provided to aid in the capture of specific fragments or to accommodate variations in patient anatomy. Please note that 2.3 mm locking variable angle screws are designed to be used with Acu-Loc 2 VDR Proximal Plates and Acu-Loc EX Plates only and not with any other plates.



Acu-Loc EX Plate Options



System Features [continued]



2.3 mm Screw Head Geometry

Reduced head geometry is designed to be level with the thinner plate design of the Acu-Loc 2 Volar Distal Radius Plates.

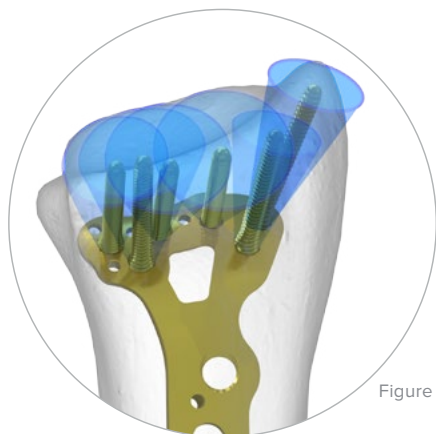


Figure 1

2.3 mm Locking Variable Angle Screw

The Acumed 2.3 mm Locking Variable Angle Screws (30-23XX) can be used in any distal hole of any of the gold colored Acu-Loc 2 VDR Proximal Plates and Acu-Loc EX Plates only. The 2.3 mm locking variable angle screw size options are 14–28 mm in 2 mm increments. The locking variable angle screws allow for a total variance of 5 mm or 15° (Figure 1). Locking variable angle screws are designed to aid in the capture of specific fragments or to accommodate variations in patient anatomy.

Note: The use of locking variable angle screw technology should not be used to compensate for suboptimal plate positioning and fracture reduction.

A conical 2.3 mm Variable Angle Drill Guide (80-0762) enables the surgeon to drill within the suggested 15° boundary (Figure 2). Fixed-angle radiolucent targeting guides come standard.

The locking variable angle screw instrumentation is color-coded orange to allow for quick identification of the proper drill, drill guide, and driver handle in the system.

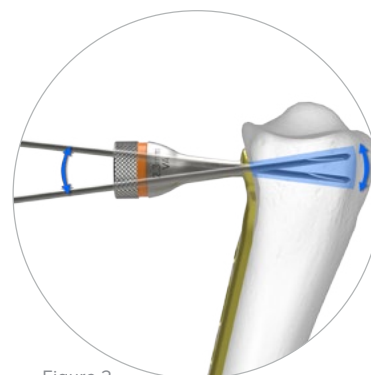


Figure 2

System Features [continued]

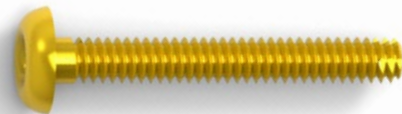
Frag-Loc® Compression Screw



Frag-Loc Compression Sleeve
(30-0370)



Frag-Loc Compression Screw
(30-0371)



Frag-Loc Compression Screw, Long
(30-0372)

The Frag-Loc Compression Screw is a two-part cannulated compression screw designed to reduce dorsal fragments to the Acu-Loc 2 VDR Plates, Distal Radius Fragment Specific (DRFS) Plates, Volar Lunate Suture Plate, Acu-Loc VDR Plates, and Acu-Loc EX Plates.

Note: The Frag-Loc Compression Screw may only be used for screw lengths of 16–24 mm and the long Frag-Loc Compression Screw, may be used for lengths of 20–28 mm.

A second 2.3 mm screw may be placed in an adjacent screw hole to prevent rotation of the dorsal bone fragment.



System Features [continued]

Key Instruments

Acu-Loc 2 KickStand Posts

With the introduction of the next generation of distal radius fixation, the Acu-Loc 2 System offers a variety of innovative instrumentation. The KickStand Posts (80-07XX) are threaded plate posts designed to assist with distal radius volar tilt correction by lifting the proximal end of the plate away from the radial shaft to form a stable platform with which to achieve distal screw fixation.

Six different KickStand post angles are offered to assist with corrective osteotomies and dorsally displaced fractures. Five of the KickStand posts are offered in finite increments of 5°, 10°, 15°, 20°, and 25° osteotomy angles. A fully threaded option for fractures allows for volar tilt correction between 5 and 30 degrees.

During an osteotomy, the desired angular correction of the volar aspect of the distal radius determines which KickStand post is selected. A 10° KickStand post will lift the plate approximately 7.5 mm. The chosen KickStand post is threaded into the locking hole just proximal of the adjustment slot of the Acu-Loc 2 VDR Plate prior to plate placement.



KickStand Post 5°
(80-0718)



KickStand Post 20°
(80-0721)



KickStand Post 10°
(80-0719)



KickStand Post 25°
(80-0722)



KickStand Post 15°
(80-0720)



KickStand Post 5–30°
(80-0731)



System Features [continued]

Key Instruments

Cannulated Locking Bolt and Targeting Guide

Cannulated locking bolt accepts the 2.0 mm Quick Release Drill, which is available across multiple Acumed product lines.

Radiopaque Positioning Posts (Distal Row) are designed to allow visualization of the distal row screws trajectory without K-wire placement.

Multiple locking bolt positions provide the ability to insert the locking bolt into any of the distal 2.3 mm screw holes of the plate.

The fracture visualization window is designed to allow access to the fracture through the targeting guide.

Radiopaque Positioning Post (Radial Styloid) is designed to assist with positioning of the plate prior to K-wire and screw fixation. Under fluoroscopy, shows the trajectory of the distal radial styloid screw prior to plate placement without drilling or K-wire placement.

A styloid K-wire guide allows insertion of a K-wire into the radial styloid to check plate positioning before final radial styloid screw placement.

The low-profile radiolucent targeting guides allow the surgeon to target and insert all distal screws. Radiopaque positioning posts have been integrated into the targeting guides to assist with plate placement under fluoroscopy.

Styloid Positioning Post: To verify plate placement, a radiopaque styloid post is utilized in an anteroposterior (A/P) view to project the trajectory of the most distal styloid screw. To align styloid screw placement, position the wrist under fluoroscopy in an A/P view and adjust the plate so that the positioning post targets the styloid tip. This verifies correct trajectory of the styloid screw prior to drilling.

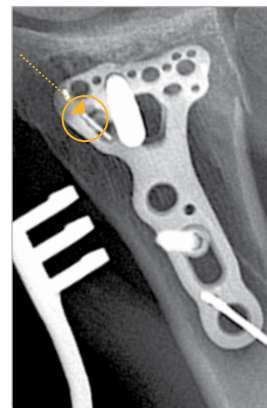


Figure 1



Figure 2

Plate Placement Instrumentation

Acu-Loc® 2 VDR Targeting Guides



Figure 1A



Figure 1B

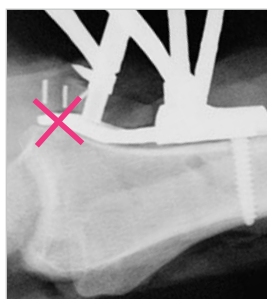


Figure 2A
Incorrect Placement

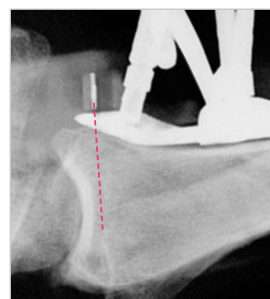


Figure 2B
Correct Placement

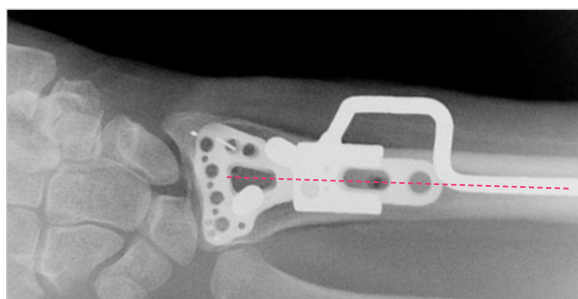
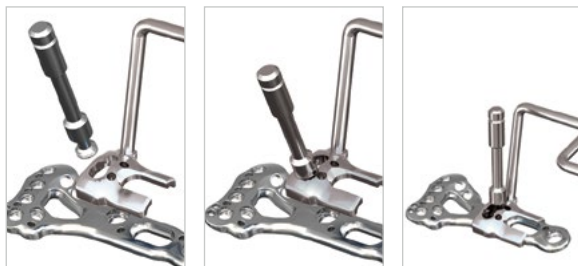


Figure 3



The low-profile radiolucent targeting guides allow the surgeon to target and insert all distal screws. Radiopaque positioning posts have been integrated into the targeting guides to assist with plate placement under fluoroscopy.

Styloid Positioning Post (figures 1A and 1B):

To verify plate placement, a radiopaque styloid post is utilized in an anteroposterior (A/P) view to project the trajectory of the most distal styloid screw. To align styloid screw placement, position the wrist under fluoroscopy in an A/P view and adjust the plate so that the positioning post targets the styloid tip. This verifies correct trajectory of the styloid screw prior to drilling.

Note: The .054" x 6" K-wire (WS-1406ST) can also be used to verify styloid screw trajectory by inserting the .054" K-Wire into .054" K-wire Guide (80-0688) through the targeting guide screw holes.

Distal Screw Placement (figures 2A and 2B):

To verify plate placement from a lateral view, line up the two parallel radiopaque posts. A single plane is created by the goal posts beneath the subchondral bone, showing trajectory of the distal screw row. If the posts do not target into the joint, then the distal screw row will not either. This can be achieved by lifting the hand in neutral rotation so that the forearm is 20 degrees to the surgical table.

The distal K-wire holes in the targeting guides and Acu-Loc 2 VDR plates allow placement of K-wires to also verify plate placement. The K-wire holes are in line with the distal screws of all Acu-Loc 2 VDR plates, allowing the surgeon to verify screw placement.

The plate's position can then be secured proximally with a .054" x 6" K-wire or Plate Tack (PL-PTACK) and distally with a .054" x 6" K-wire.

VDR Plate Positioning Handle

The VDR Plate Positioning Handle (80-0729) (Figure 3) assists with Acu-Loc 2 VDR plate placement while keeping the surgeon's hands out of the fluoroscopy beam. Under fluoroscopy, the handle should line up with the center of the plate and radial shaft to show a true A/P view. This is used to help accurately place the proximal shaft of the plate in alignment with the center axis of the radial diaphysis.

Note: The design of the Acu-Loc 2 Plate Positioning Handle maintains access to the K-wire holes and 3.5 mm screw slot on the proximal end of the Acu-Loc 2 VDR plate.

VDR Plate Positioning Handle Assembly

- ▶ The Locking Bolt 10–32 (80-0738) is threaded into the left side of the keyhole of the plate positioning handle base.
- ▶ Once engaged, the locking bolt toggles to fit left and right plates.
- ▶ Thread the locking bolt into the most distal 3.5 mm locking hole on the shaft of any Acu-Loc 2 VDR plate.

Instrument Overview

Frag-Loc® Instrumentation



Frag-Loc 2.5 mm Drill Guide
(80-0730)



Frag-Loc 1.5 mm Cannulated Driver
(80-0758)



Frag-Loc 2.5 mm Drill
(80-0724)



Frag-Loc Depth Gauge
(80-0726)



Frag-Loc Compression Sleeve
(30-0370)



Frag-Loc Compression Screw
(30-0371)



Frag-Loc Compression Screw, Long
(30-0372)



Heiss Retractor
(80-0756)



.035" x 5.75" ST Guide Wire
(WS-0906ST)

Variable Angle Instrumentation



1.7 mm Quick Coupler Semi-fluted Drill
(80-0868)



2.3 mm Variable Angle Drill Guide
(80-0762)



Mini-AO Torque Limiting Driver, 10 in-lb
(80-1008)



2.3 mm Variable Angle Drill Guide Driver
(80-0763)



2.3 mm Screw Depth Gauge 6-46 mm
(80-1356)

Instrument Overview [continued]



8" Bone Reduction Forceps
(MS-1280)



Bone Reduction Forceps 6 3/4"
(80-0723)



15 mm Hohman Retractor
(MS-46827)



**VDR Plate Positioning
Handle Assembly**
(80-0729)



**Periosteal Elevator 7.5" x 6 mm
Straight Edge**
(80-0693)



Sharp Hook
(PL-CL06)



Fragment Reduction Tool
(80-0725)



Plate Tack
(PL-PTACK)



1.5 mm Easyout, Quick Release
(80-0598)



2.5 mm Easyout, Quick Release
(80-0600)



.054" x 6" Guide Wire
(WS-1406ST)



**Medium Ratcheting Driver
Handle**
(80-0663)



**2.0 mm / 2.8 mm Thin
Drill Guide**
(PL-2118)



Depth Gauge 6-65 mm
(80-0623)



Cruciform Driver Handle
(MS-2210)



**Acu-Loc 2 VDR Targeting
Guide Locking Bolt**
(80-0682)



**Acu-Loc 2 VDR Targeting
Guide Narrow Left**
(80-0697)



**Acu-Loc 2 VDR Targeting
Guide Standard Left**
(80-0695)



**Acu-Loc 2 VDR Targeting
Guide Wide Left**
(80-0699)



**Acu-Loc 2 VDR Targeting
Guide Wide Right**
(80-0698)



**Acu-Loc 2 VDR Targeting
Guide Standard Right**
(80-0694)



**Acu-Loc 2 VDR Targeting
Guide Narrow Right**
(80-0696)



**Acu-Loc 2 VDR Proximal
Targeting Guide Narrow Left**
(80-0703)



**Acu-Loc 2 VDR Proximal
Targeting Guide Standard Left**
(80-0701)

Instrument Overview [continued]



Acu-Loc 2 VDR Proximal Targeting Guide Wide Left
(80-0705)



Acu-Loc 2 VDR Proximal Targeting Guide Wide Right
(80-0704)



Acu-Loc 2 VDR Proximal Targeting Guide Standard Right
(80-0700)



Acu-Loc 2 VDR Proximal Targeting Guide Narrow Right
(80-0702)



Acu-Loc Dorsal Plate Targeting Guide Narrow Left
(80-0154)



Acu-Loc Dorsal Plate Targeting Guide Standard Right
(80-0150)



Acu-Loc Dorsal Targeting Guide Standard, Right
(80-0151)



Acu-Loc Dorsal Targeting Guide Narrow, Right
(80-0155)



Acu-Loc EX Targeting Guide Standard
(80-0166)



Acu-Loc EX Targeting Guide Narrow
(80-0274)



Small Plate Bender
(80-0363)



2.8 mm Quick Release Drill
(80-0387)



2.0 mm Locking Drill Guide 6–46 mm
(80-0592)



2.3 mm Bone Tap
(80-0362)



2.8 mm Hexalobe Locking Drill Guide 6–65 mm
(80-0668)



T15 Stick Fit Hexalobe Driver
(80-0760)



2.3 mm Screw Sleeve, Locking Tab
(80-0727)



1.5 mm Hex Driver Tip, Locking Groove
(80-0728)



2.0 mm Locking Drill Guide 4–32 mm
(80-0249)



.054" K-wire Guide
(80-0688)



Drill Guide / Depth Gauge for 2.0 mm Drill
(MS-DG23)



Distal Radius Probe
(MS-DRPB)

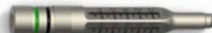


2.0 mm Quick Release Drill
(80-0318)

Optional



2.8 mm x 5" Quick Release Drill
(80-2008)



2.8 mm Locking Drill Guide 6–26 mm
(80-2006)



3.5 mm Locking Screw Bone Tap
(80-2126)

Surgical Technique Overview

Acu-Loc 2 VDR Surgical Technique

Exposure



Fracture Reduction



Plate Selection and
Placement

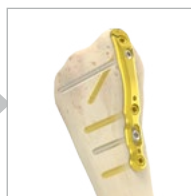


Radial Styloid Plate Surgical Technique

Incision and
Dissection



Plate Placement



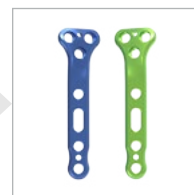
Volar Lunate Suture Plate Surgical Technique



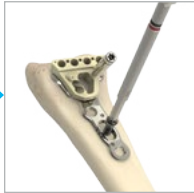
Dorsal Lunate Plate and Dorsal Rim Buttress Plate Surgical Technique



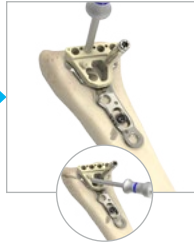
Minimally Invasive
Technique



**Proximal Screw
Placement**



Distal Screw Holes



**Proximal Screw
Placement**



**Closure and
Postoperative
Protocol**



Surgical Technique Overview

Acu-Loc Volar Distal Ulna (VDU) Plate Surgical Technique

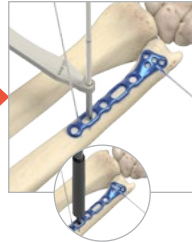
Incision and Dissection



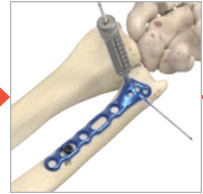
Provisional Fixation and Plate Placement



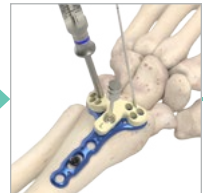
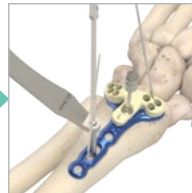
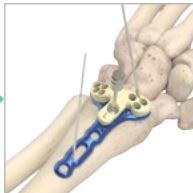
Nonlocking Proximal Screw Placement



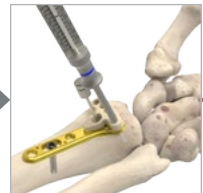
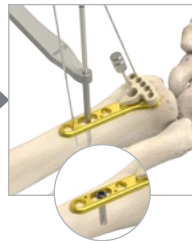
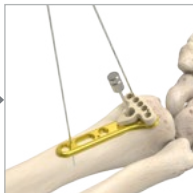
Drill Distal Screw Holes



Acu-Loc Dorsal Plate Surgical Technique



Acu-Loc Extra-Articular (EX) Plate Surgical Technique

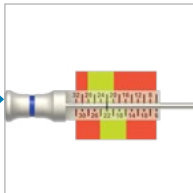


Frag-Loc® Compression Screw Surgical Technique

Drilling Bicortical



Measuring to Determine Screw Type



Drilling Unicortically

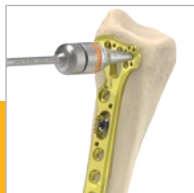


Frag-Loc Sleeve Insertion



2.3 mm Locking Variable Angle Screw Surgical Technique

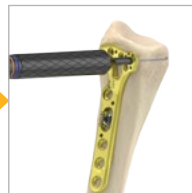
Conical Drill Guide Placement



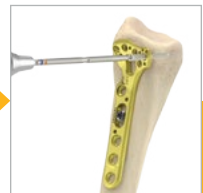
Drilling Distal Screws



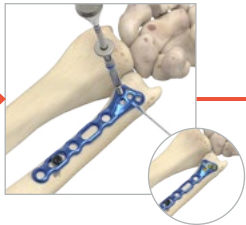
Measuring Distal Screws



Distal Screw Insertion



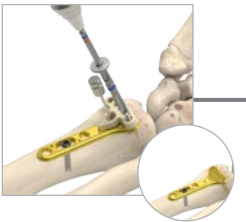
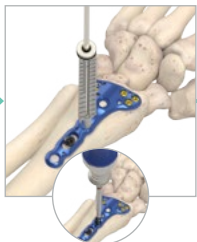
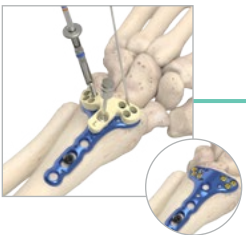
**Distal Screw
Placement**



**Proximal Screw
Placement**



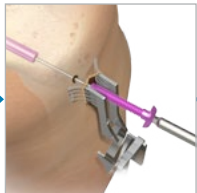
**Closure and
Postoperative
Protocol**



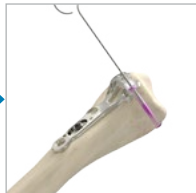
**Guide Wire
Insertion**



**Frag-Loc Wire
Insertion**



Final Confirmation



Acu-Loc 2 VDR Surgical Technique

William B. Geissler, MD

David S. Ruch, MD

Mr. Daniel J. Brown, FRCS

Acu-Loc 2 Plate Reference Chart

Silver Colored	VDR Plates offer more distal plate coverage and subchondral support
Gold Colored	VDR Proximal Plates are designed to sit approximately 2 mm more proximal than the Standard plates

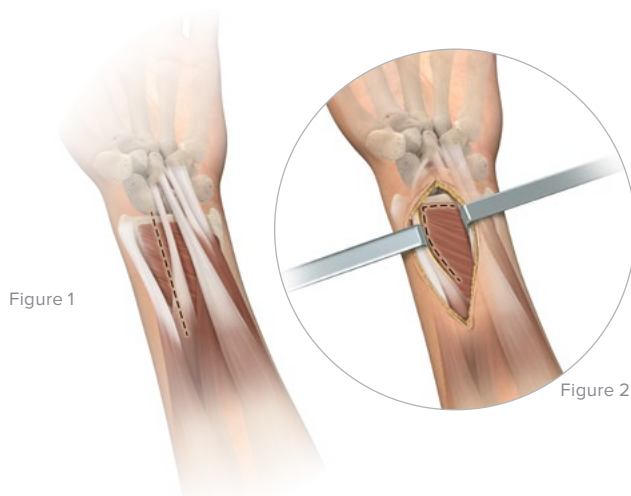


Figure 1

Figure 2

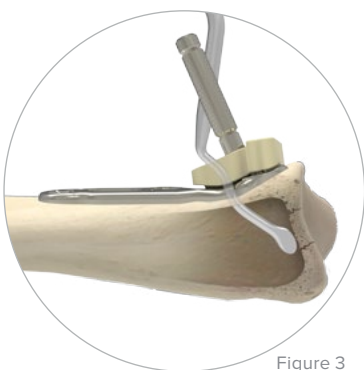


Figure 3

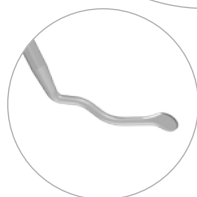


Figure 4



Figure 5

1 Exposure

Supinate the patient's forearm to expose the surgical site. To maximize exposure, place a towel under the wrist, supporting it in extension. Make a longitudinal incision approximately 6 cm in length just radial to the flexor carpi radialis (FCR) tendon to protect against injury to the palmar cutaneous branch of the median nerve.

Open the sheath and retract the FCR tendon radially to protect the radial artery. Identify the flexor pollicis longus (FPL) muscle by passive flexion/extension of the thumb interphalangeal joint and retract ulnarly to protect the median nerve. Next, identify the pronator quadratus by its transverse fibers and release radially to ulnarly to expose the fracture site.

2 Fracture Reduction

The brachioradialis may need to be released from its insertion on the radial styloid to facilitate reduction and visualization of the fracture. Reduce the fracture using manual techniques. Provisional stability can be achieved with K-wires and evaluated under fluoroscopy.

Fragment Reduction Tool (80-0725):

Use this tool for articular reconstruction. A broad mallet (Figure 4) and narrow thin (Figure 5) tip provide the ability to lift and position articular fracture fragments through the plate window when possible.

Fixating Small Volar Ulnar Corner Fragments:

This Technique uses the DRFS Volar Lunate Suture Plate (70-0334) or Acu-Loc 2 VDR Plate (70-03XX). The volar ulnar fragment is typically rotated with its capsular attachment and de-rotated under direct visualization. Multiple sutures are placed in the capsule, rotating the fragment back anatomically.

Once the fragment is de-rotated, the sutures are passed through the suture holes in the volar ulnar corner of the plate. A plate-specific nonlocking screw is placed through the oblong slot in the plate. The plate is positioned onto the distal radius, with the preferred placement confirmed using fluoroscopy. The sutures are tied, securing the volar ulnar fragment with the plate, and the remaining screws are placed.¹



Fragment Reduction Tool (80-0725)



DRFS Volar Lunate Suture Plate (70-0334)



Acu-Loc 2 VDR Plate (70-03XX)

Acu-Loc 2 VDR Surgical Technique [continued]

3 Plate Selection and Placement

The Acu-Loc 2 VDR Plate (70-03XX) is made to sit along the distal aspect of the radius to support articular fracture fragments. There are two volar plate families to select from: the Acu-Loc 2 VDR Standard Plates and the Acu-Loc 2 VDR Proximal Plates, which are designed to sit 2 mm more proximal than the standard plates. If a longer plate is needed, choose the appropriate Acu-Loc 2 VDR Extension Plate (70-0364, 70-0365, 70-0366) and assemble as described below.

Once the appropriate size plate is selected, attach the corresponding Acu-Loc 2 VDR Targeting Guide (80-06XX) or 80-07XX) using the Acu-Loc 2 VDR T-Guide Locking Bolt (80-0682). Thread the cannulated locking bolt into the proximal ulnar 2.3 mm screw hole. The plate should be placed parallel to the radial shaft.

For styloid and distal screw placement using the patented markers in the targeting guides, refer to Plate Placement Instrumentation on page 12.

Extension Plate Assembly Steps

Slide the desired Acu-Loc 2 Extension Plate (70-0364, 70-0365, 70-0366) onto the shaft of the Acu-Loc 2 Proximal Plate.

Using a 2.5 mm Quick Release Hex Driver (HPC-0025) or a T15 Stick Fit Hexalobe Driver (80-0760), insert and tighten the Hex or Hexalobe Acu-Loc 2 VDR Extension Link Screw (30-0XXX) into the distal hole of the extension plate and lock into both plates.

Assembly can be done prior to plate placement or intraoperatively.

Note: The VDR Plate Positioning Handle (80-0729) can be used at this time for plate placement. Refer to Plate Placement Instrumentation on page 12 for assembly and technique.



Figure 6

Figure 7

Available Plate Length Combinations

Plate Lengths with Extension	Wide	Narrow Long	Standard Long
Neutral Extension	100 mm	108 mm	108 mm
Long Extension	167 mm	176 mm	176 mm



Acu-Loc 2 VDR Extension Plate (70-036X)



Acu-Loc 2 VDR Targeting Guide (80-06XX or 80-07XX)



Acu-Loc 2 VDR Extension Link Screw (30-0XXX)



2.5 mm Quick Release Hex Driver (HPC-0025)



T15 Stick Fit Hexalobe Driver (80-0760)



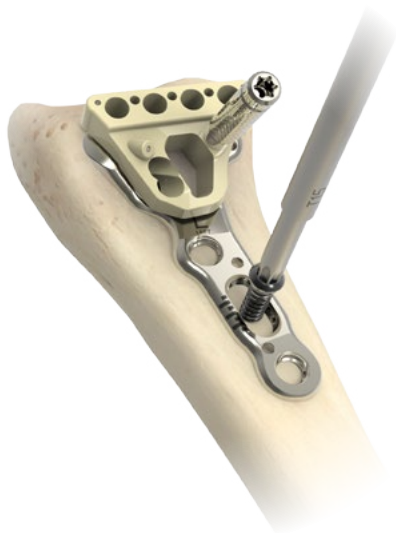
Acu-Loc 2 VDR T-Guide Locking Bolt (80-0682)



VDR Plate Positioning Handle (80-0729)

Acu-Loc 2 VDR Surgical Technique [continued]

Figure 8

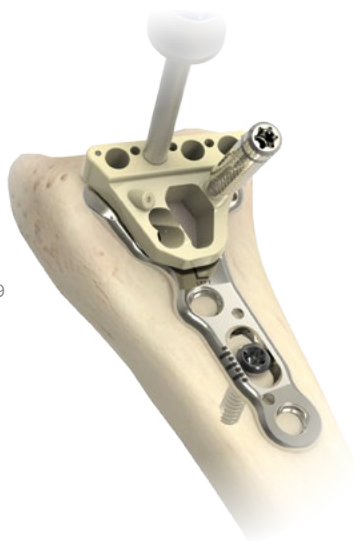


4 Proximal Screw Placement

The first screw to be placed is a 3.5 mm Nonlocking Hex or Hexalobe Screw (30-02XX or CO-31XX) through the slot in the plate. Using the 2.8 mm Quick Release Drill (80-0387) and the 2.0 mm/2.8 mm Thin Drill Guide (PL-2118), drill through the far cortex. Then measure the drill depth with the Depth Gauge 6–65 mm (80-0623). Insert a 3.5 mm nonlocking hex or hexalobe screw. The screw may need to be downsized after the plate has been reduced down to the bone.

Note: An optional 3.5 mm Locking Screw Bone Tap (80-2126) may be necessary if encountering hard cortical bone.

Figure 9



5 Distal Screw Holes

Utilizing the radiopaque positioning posts in the targeting guide, the position of the plate relative to the radio-carpal articular surface can be fine-tuned by sliding the plate proximally or distally, under fluoroscopy. If the radiopaque posts don't target the joint, the distal K-wires and 2.3 mm screws will not either. To further assess the position of the distal 2.3 mm screws relative to the radio-carpal articular surface, place a .054" x 6" K-wire (WS-1406ST) through one of the K-wire holes in the targeting guide closest to the joint and assess its location under fluoroscopy.

Upon satisfactory reduction and anatomic fit, insert the 2.0 mm Drill Guide/Depth Gauge (MS-DG23) into one of the distal screw holes and drill using the 2.0 mm Quick Release Drill (80-0318). Measure screw length by using the laser mark on the drill or Distal Radius Depth Probe (MS-DRPB) against the scale on the drill guide.

Note: Screw insertion of the proximal ulnar 2.3 mm hole should be performed after all other distal 2.3 mm screws are placed. Drilling can be performed through the locking bolt. To measure screw length, remove the locking bolt and use the drill guide and depth probe, or the orange and blue-banded 2.3 mm screw depth gauge.



3.5 mm Nonlocking Hex or Hexalobe Screw (30-02XX or CO-31XX)



3.5 mm Locking Screw Bone Tap (80-2126)



2.8 mm Quick Release Drill (80-0387)



.054" x 6" Guide Wire (WS-1406ST)



2.0 mm/2.8 mm Thin Drill Guide (PL-2118)



2.0 mm Drill Guide/Depth Gauge (MS-DG23)



Depth Gauge 6–65 mm (80-0623)



2.0 mm Quick Release Drill (80-0318)



Distal Radius Depth Probe (MS-DRPB)

Acu-Loc 2 VDR Surgical Technique [continued]

Distal Screw Options: The four options of 2.3 mm screws that can be used distally are fully threaded Locking Cortical Screws (gold), Locking Cortical Pegs (bronze), Nontoggling Cortical Screws (silver), and the Frag-Loc Compression Screw (30-037X). All 2.3 mm screws are inserted using the 1.5 mm Hex Driver Tip, the Locking Groove (80-0728), the 2.3 mm Screw Sleeve, the Locking Tab (80-0727), and the silver Cruciform Driver Handle (MS-2210).

Variable Angle Screw: 2.3 mm Variable Angle Screws may be used with the VDR Proximal Plates only. Refer to the 2.3 mm Locking Variable Angle Screw Reference Information on page 8 and the Technique on page 45.

Styloid Screw Placement: The radial styloid screws are designed to specifically target and support the radial styloid. Insert the drill guide into either styloid hole located in the dual slot on the back of the targeting guide and continue the same screw measurement and placement process for both styloid screws.

Note: It is recommended that the entire distal row and the two radial styloid holes be filled with screws.

Note: An individual 2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249) is available in the system as an alternative for drilling the distal holes. Screw length can be read using the depth probe or 2.3 mm screw depth gauge.

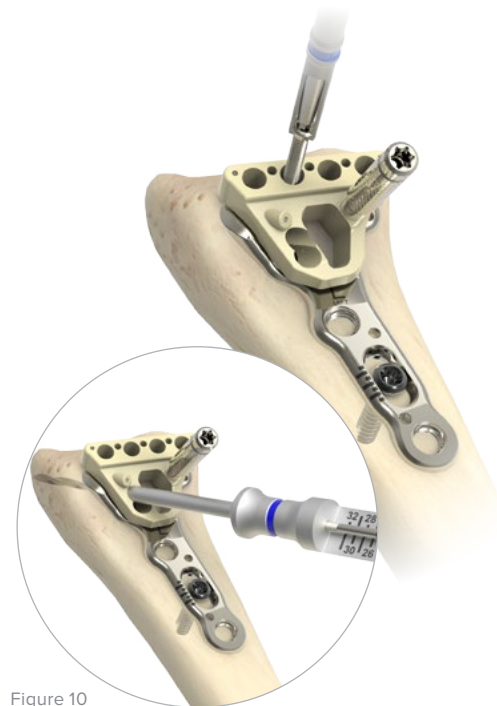


Figure 10

6 Proximal Screw Placement

Insert the threaded 2.8 mm Locking Drill Guide (80-0384 or 80-0668) into the screw hole distal to the slot, drill with the 2.8 mm Quick Release Drill (80-0387), and measure with the depth gauge. Insert the proper length 3.5 mm Locking Hex or Hexalobe Screw (30-023X or COL-30XX). Take care that the screw does not exit the bone dorsally. Using the same process, drill and place the final locking screw.

Note: 3.5 mm locking or nonlocking hex or hexalobe screws can be used in the proximal round locking holes. Depending on the bone quality of the patient and at the surgeon's discretion, 3.5 mm nonlocking hex or hexalobe screws may be preferred to use in the round locking holes.

An optional 3.5 mm Locking Screw Bone Tap (80-2126) may be necessary if encountering hard cortical bone.

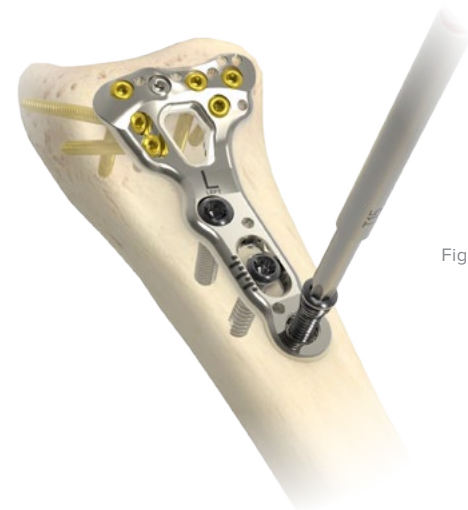
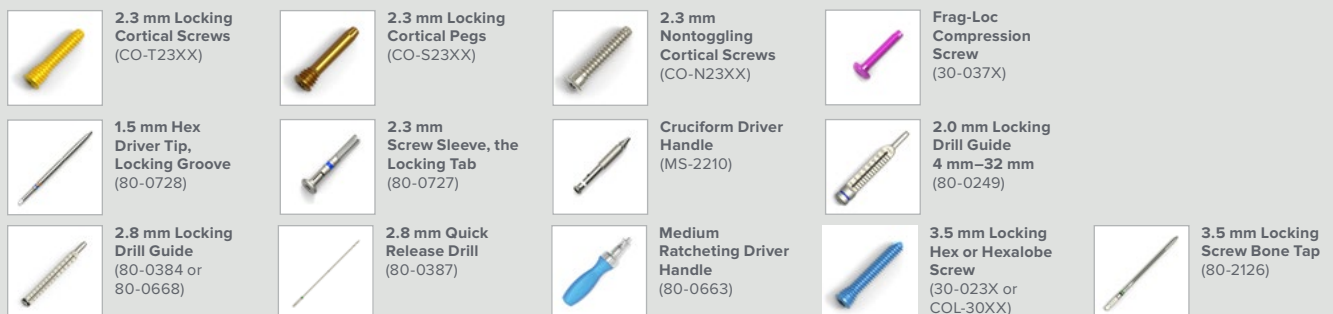


Figure 12



Acu-Loc 2 VDR Surgical Technique [continued]

Figure 13



7 Closing and Postoperative Protocol

Perform a thorough radiographic evaluation checking fragment reduction, alignment, and screw placement. Verify that there is no gap between the bone and the plate in the lateral view and that the distal screws have not penetrated the radiocarpal joint. Close the wound and support the wrist according to bone quality and stability.

Allow for early functional use of the hand and start immediate finger range of motion and forearm rotation postoperatively.

Closing and postoperative protocol are at the discretion of the surgeon.

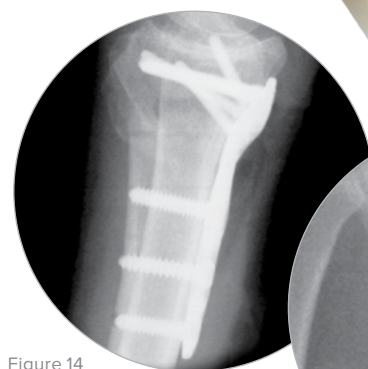


Figure 14



Figure 15

8 Optional: Implant Removal Instructions

To extract an Acu-Loc 2 VDR Plate, use the 2.5 mm Hex Driver Tip (HPC-0025) or T15 Stick Fit Hexalobe Driver Tip (80-0760) and Medium Ratcheting Driver Handle (80-0663) to remove all the 3.5 mm screws in the plate. Use 1.5 mm Hex Driver Tip, Locking Groove (80-0728) with Cruciform Driver Handle (MS-2210) for the 2.3 mm screws.

Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



2.5 mm Hex Driver Tip (HPC-0025)



T15 Stick Fit Hexalobe Driver Tip (80-0760)



Medium Ratcheting Driver Handle (80-0663)



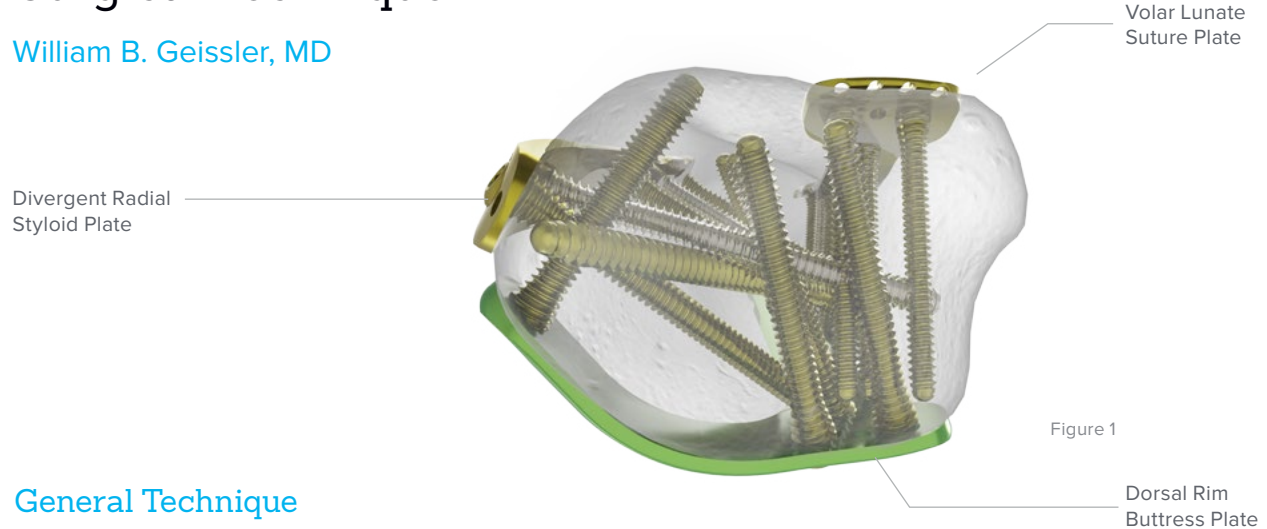
1.5 mm Hex Driver Tip, Locking Groove (80-0728)



Cruciform Driver Handle (MS-2210)

Distal Radius Fragment Specific (DRFS) Surgical Technique

William B. Geissler, MD



General Technique

Once a DRFS plate is positioned, an initial 2.3 mm Nontoggling Cortical Screw (CO-N23XX) is placed into the slot on the proximal end of the plate utilizing a 2.0 mm Quick Release Drill (80-0318) and 1.5 mm Hex Driver Tip, Locking Groove (80-0728). Screw length is determined for the plate slot by utilizing the 2.3 mm Screw Depth Gauge 6–46 mm (80-1356). The plate position is evaluated under fluoroscopy.

There are three types of 2.3 mm screws that can be used in any of the threaded screw holes of the DRFS plates (see page 12 under Distal Screw Options). Screw length can be measured by using the laser mark on the drill or Distal Radius Probe (MS-DRPB) against the scale on the locking drill guide, or 2.3 mm screw depth gauge.

Due to the multi-plate approach, screws from one DRFS plate may collide with screws from another DRFS plate. Use the longest screw possible where appropriate.

Note:

1. The 2.3 mm Bone Tap (80-0362) should be used on the proximal holes of the DRFS plates where more cortical bone is present, making screw insertion difficult and increasing the risk of screw breakage. This is especially important in younger patients who may have thicker cortical bone in this region.
2. The 2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249) from the 2.3 mm screw caddy can be used for all locking holes on the plates EXCEPT for the ulnar-to-radial styloid screw on the dorsal rim buttress plate, which may require screws greater than 32 mm in length (see Dorsal Rim Buttress Plate Placement for drill guide information, page 28).

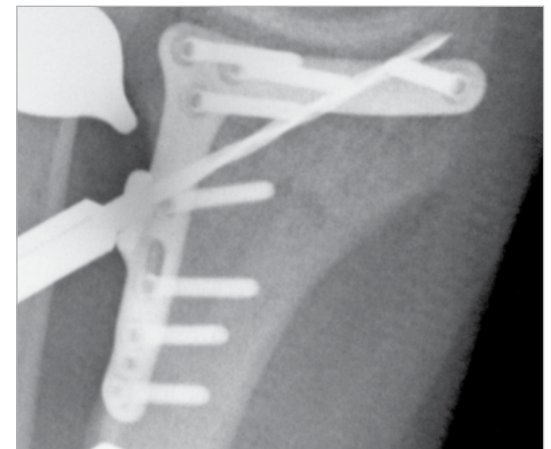


Figure 2



Figure 3



Radial Styloid Plate Surgical Technique

William B. Geissler, MD

Figure 1



1 Incision and Dissection

The Divergent Radial Styloid Plate (70-0331) may be inserted by one of two approaches. The plate may be placed on the dorsal radial aspect of the radial styloid utilizing the standard dorsal approach.

Alternatively, the plate may be inserted through an incision between the first and second extensor compartments.

Perform blunt dissection to protect the terminal branches of the dorsal sensory branch of the radial nerve. After the branch is identified and protected, open the interval between the first and second compartments and elevate the tendons.

Figure 2



2 Plate Placement

The plate is designed to sit under the first dorsal compartment tendons.

Note: To find the screw angles more easily, place the 2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249) in line with the laser band next to the hole (Figure 3).

Figure 3



Divergent Radial Styloid Plate (70-0331)



2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249)

Volar Lunate Suture Plate Surgical Technique

William B. Geissler, MD

1 Incision and Dissection

The Volar Lunate Suture Plate (70-0334) may be inserted through a standard volar flexor carpi radialis approach. (Refer to Acu-Loc 2 VDR Surgical Technique on page 20.)

Alternatively, the volar ulnar corner of the distal radius may be approached through an incision placed between the flexor tendons and the ulnar neurovascular bundle. Make an incision in line with the ring finger starting at the distal volar crease and extending proximally. Dissect down to the level of the fascia that is open in line with the incision. Identify the ulnar neurovascular bundle along the ulnar aspect of the approach and retract ulnarly. Retract the flexor tendons radially to expose the volar ulnar corner.

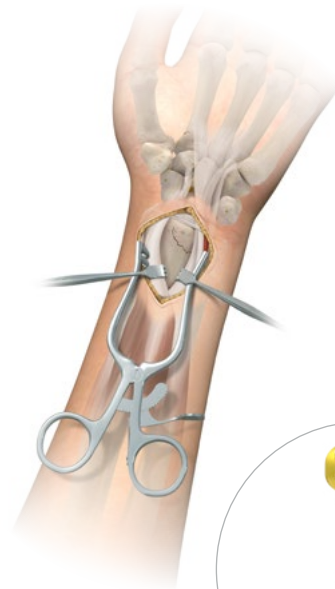


Figure 1



Figure 2

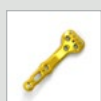
2 Plate Placement

Align the Volar Lunate Suture Plate with the medial border of the radial shaft.

If suture is needed to address small distal fragments, pass a suture through the capsule supporting the small articular fragments and through the distal suture holes in the plate. If necessary, a .054" x 6" K-wire (WS-1406ST) can be used to drill through the bone in order to pass the suture through the articular fragment.



Figure 3



Volar Lunate
Suture Plate
(70-0334)



.054" x 6"
Guide Wire
(WS-1406ST)

Dorsal Lunate Plate and Dorsal Rim Buttress Plate Surgical Technique

William B. Geissler, MD

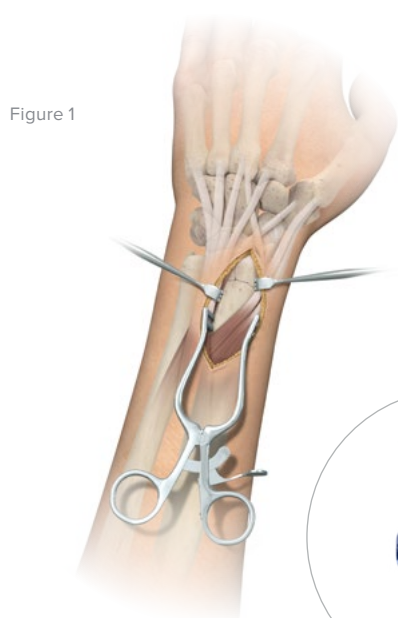


Figure 1



Figure 2



Figure 3



Figure 4

1 Incision and Dissection

Make a 6 cm incision in line with the middle finger starting just distal to Lister's tubercle and extending proximally. Carry down blunt dissection to protect the dorsal sensory branch of the radial nerve. Identify the extensor pollicis longus tendon distal in the wound and release through the third dorsal compartment. The tendon may be retracted radially or ulnarly depending on the fracture pattern.

Then subperiosteally elevate the second and fourth dorsal compartments to expose the dorsum. Ulnarly elevate the fourth dorsal compartment to the border of the distal radial ulnar joint.

Additional dissection is needed proximal to the distal radial ulnar joint (DRUJ) to accommodate the Dorsal Rim Buttress Plate (70-0335 or 70-0336) ulnar-to-radial styloid screw which extends from just proximal to the DRUJ to the radial styloid.

Elevate the second dorsal compartment from the ulnar to radial to the level of the brachioradialis.

2 Dorsal Rim Buttress Plate Placement

If it is determined that the long ulnar-to-radial styloid screw is needed, the 2.0 mm Locking Drill Guide 6 mm–46 mm (80-0592) should be threaded into the plate prior to plate placement on bone. The ulnar-to-radial styloid screw hole is located on the angled plate tab next to the slot on the plate shaft.

Initially position the plate on the dorsal ulnar side of the radius. The buttress portion of the plate should be parallel to the radial inclination.



Dorsal Rim Buttress Plate (70-033X)



2.0 mm Locking Drill Guide 6 mm–46 mm (80-0592)

Dorsal Lunate Plate and Dorsal Rim Buttress Plate Surgical Technique [continued]

3 Minimally Invasive Technique

Alternatively, the Dorsal Lunate Plate (70-0337 or 70-0338) may be inserted through a small incision directly over the fifth compartment. Make an incision in line with the ring finger centered over the distal radius.

The interval between the fourth and fifth dorsal compartment is then elevated to expose the dorsal ulnar corner of the radius.

Note: Keep in mind that the distal holes on the dorsal plates that support the lunate facet are not perpendicular to the plate, but are angled toward the volar ulnar corner of the distal radius.



Figure 5



Dorsal Lunate
Plate
(70-033X)

Acu-Loc Volar Distal Ulna (VDU) Plate Surgical Technique

William B. Geissler, MD

Acu-Loc VDU Plate Reference Chart	
Blue	Left-specific
Green	Right-specific



Figure 1

1 Incision and Dissection

The Volar Distal Ulna Plate (70-004X) was designed for fractures involving the ulnar head, ulnar neck, and fractures of the distal ulna. Usually, these injuries are associated with fractures of the distal radius. Make the incision along the distal ulnar border of the forearm between the flexor carpi ulnaris and extensor carpi ulnaris. Carry down blunt dissection to protect the dorsal sensory branch of the ulnar nerve, that may be seen on the volar distal portion of the incision. Retract the flexor carpi ulnaris radially and dissect the pronator quadratus off the anterior distal surface of the ulna. Identify the fracture site and clear fracture debris, then provisionally reduce.

2 Provisional Fixation and Plate Placement

Place the VDU plate on the volar surface of the distal ulna so that the four distal locking screws will be positioned to go into the ulnar head.

Note: It is vital that the plate is placed just proximal to the lesser sigmoid notch of the distal radial ulnar joint. In this manner, the plate should not impinge with pronation and supination of the forearm.

Place a .054" x 6" K-wire (WS-1406ST) in the proximal portion of the plate. Place a second K-wire in the distal portion of the plate to provisionally hold the plate to the bone.

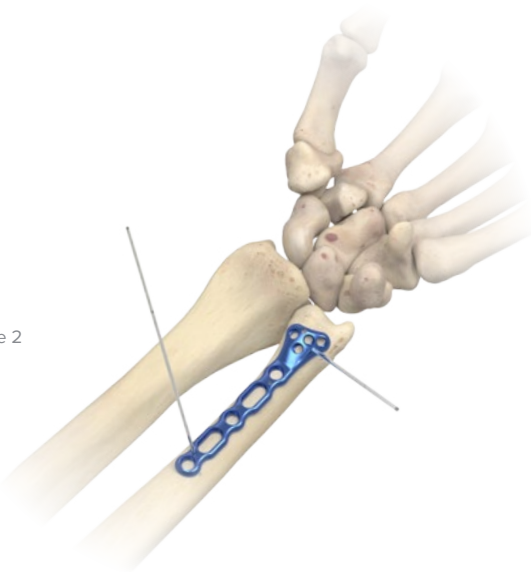


Figure 2



Volar Distal Ulna Plate (70-004X)



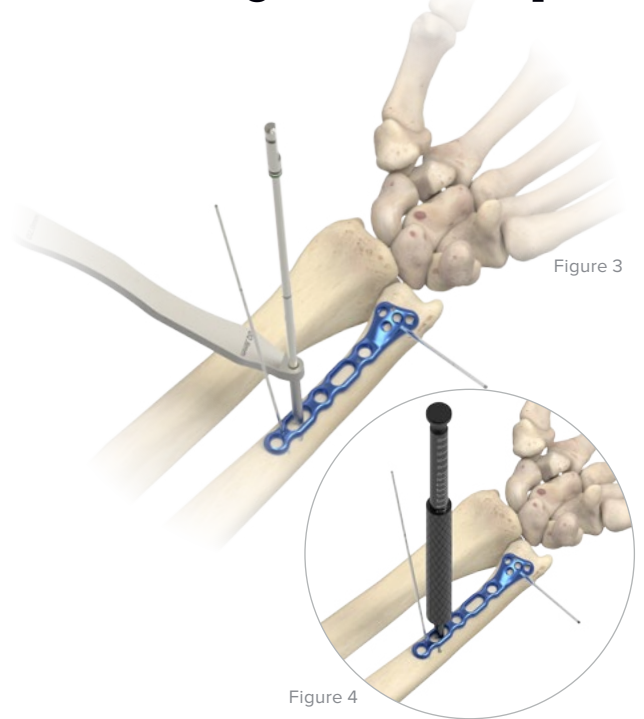
.054" x 6" Guide Wire (WS-1406ST)

Acu-Loc Volar Distal Ulna (VDU) Plate Surgical Technique [continued]

3 Nonlocking Proximal Screw Placement

Place the first 3.5 mm nonlocking hex or hexalobe screw in the center of the proximal slot in the plate.

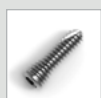
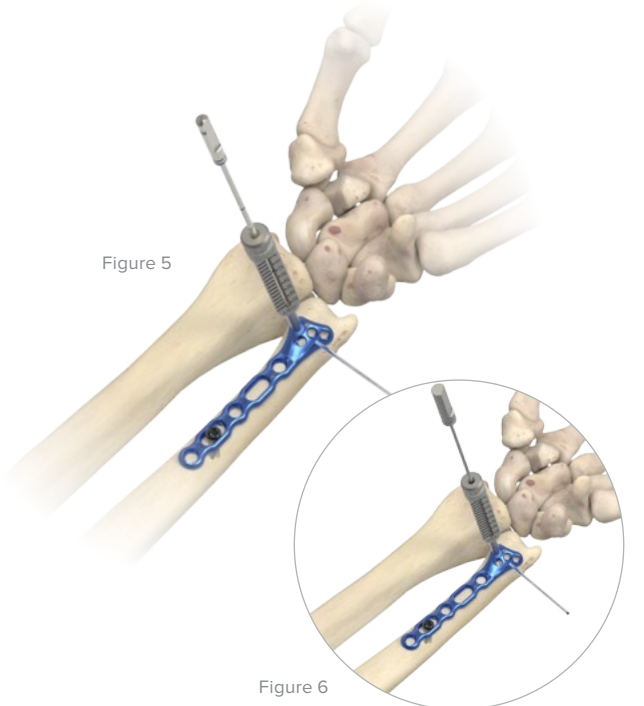
The position of the plate relative to the articular surface can then be fine-tuned by sliding the plate proximal or distal. Using the 2.8 mm Quick Release Drill (80-0387) and 2.0 mm/2.8 mm Thin Drill Guide (PL-2118), drill through the far cortex. Drill depth is measured with the Depth Gauge 6–65 mm (80-0623). Insert the appropriate 3.5 mm nonlocking hex or hexalobe screw, taking care that the screw is the proper length.



4 Drill Distal Screw Holes

Place the individual 2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249) in the most distal ulnar hole in the plate. Drill using the 2.0 mm Quick Release Drill (80-0318), then measure screw length by using the laser mark on the drill or Distal Radius Depth Probe (MS-DRPB) against the scale on the drill guide.

Note: The locking drill guide may also be attached to the selected plate prior to insertion on the back table.



3.5 mm
Nonlocking Hex or
Hexalobe Screw
(30-02XX)



2.8 mm Quick
Release Drill
(80-0387)



2.0 mm/2.8 mm
Thin Drill Guide
(PL-2118)



Depth Gauge
6–65 mm
(80-0623)



2.0 mm Locking
Drill Guide
4 mm–32 mm
(80-0249)



2.0 mm Quick
Release Drill
(80-0318)



Distal Radius
Depth Probe
(MS-DRPB)

Acu-Loc Volar Distal Ulna (VDU) Plate Surgical Technique [continued]

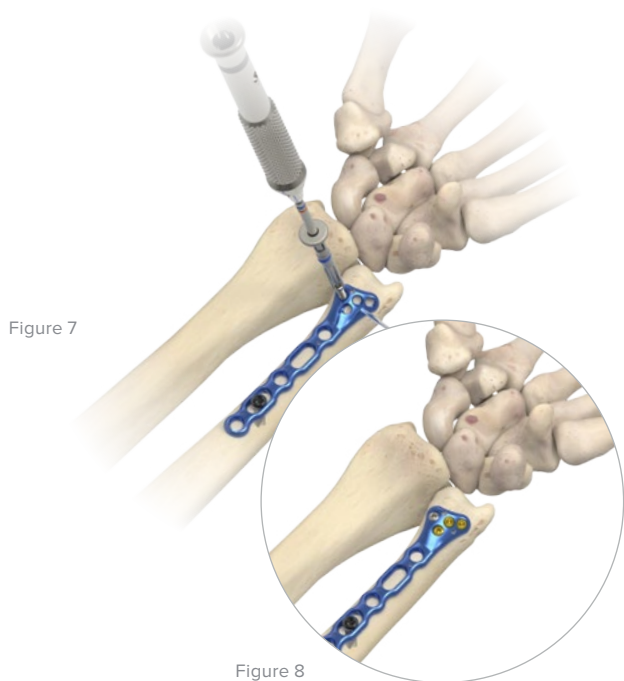


Figure 7

Figure 8

5 Distal Screw Placement

Three types of 2.3 mm screws can be used in any of the four distal holes: Locking Cortical Screws (gold), Locking Cortical Pegs (bronze), Nontoggling Cortical Screws (silver). All 2.3 mm screws are inserted using the 1.5 mm Hex Driver Tip, the Locking Groove (80-0728), 2.3 mm Screw Sleeve, the Locking Tab (80-0727), and the silver Cruciform Driver Handle (MS-2210).

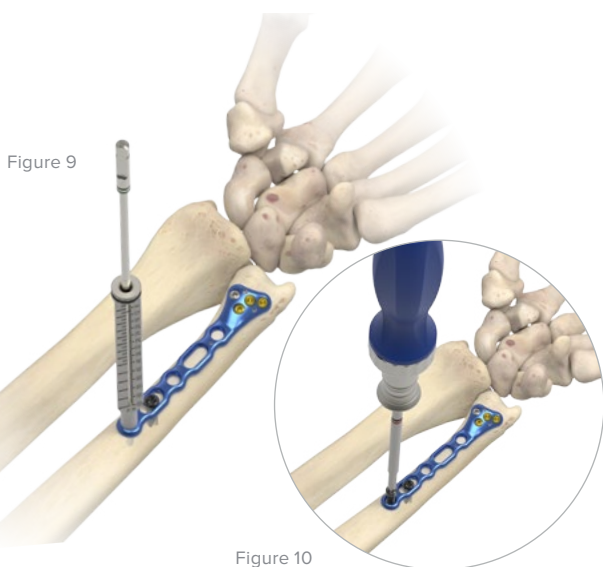


Figure 9

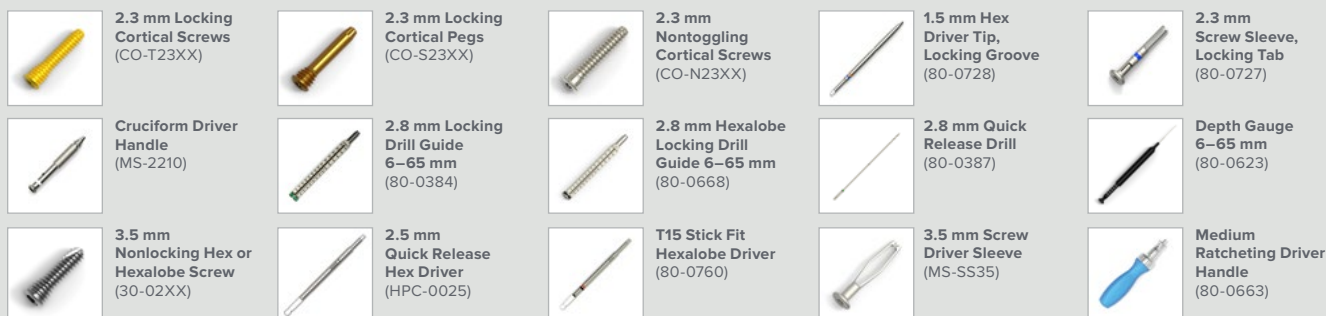
Figure 10

6 Proximal Screw Placement

Thread the threaded 2.8 mm Locking Drill Guide 6–65 mm (80-0384) or 2.8 mm Hexalobe Locking Drill Guide 6–65 mm (80-0668) in the hole just proximal to the slotted hole in the shaft of the plate. Drill with the 2.8 mm Quick Release Drill (80-0387) and measure with the Depth Gauge 6–65 mm (80-0623). Insert the proper length 3.5 mm locking hex or hexalobe screw using the 2.5 mm Quick Release Hex Driver (HPC-0025) or the T15 Stick Fit Hexalobe Driver (80-0760), the 3.5 mm Screw Driver Sleeve (MS-SS35), and the Medium Ratcheting Driver Handle (80-0663), taking care that the screw does not exit the bone dorsally.

Using the same process, drill and place the final locking screw in the remaining locking hole. Remove the proximal K-wire.

Note: 3.5 mm locking or nonlocking hex or hexalobe screws can be used in the proximal round locking holes.



Acu-Loc Volar Distal Ulna (VDU) Plate Surgical Technique [continued]

7 Closure and Postoperative Protocol

Following thorough radiographic evaluation, check alignment and rotation, then close. Start immediate finger range of motion and forearm rotation postoperatively. Allow early functional use of the hand for light activities of daily living (ADL). Support the wrist according to bone quality and stability.

Closing and postoperative protocol are at the discretion of the surgeon.

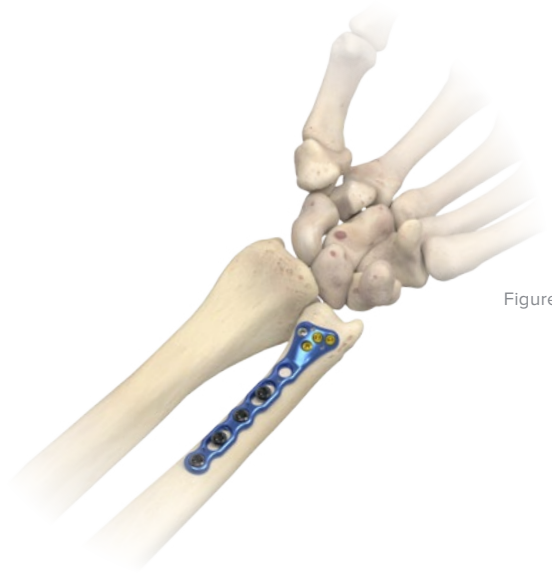


Figure 11

8 Optional: Implant Removal Instructions

To extract an Acu-Loc Volar Distal Ulna, use the 2.5 mm Hex Driver Tip (HPC-0025) or T15 Stick Fit Hexalobe Driver Tip (80-0760) and Medium Ratcheting Driver Handle (80-0663) to remove all the 3.5 mm screws in the plate. Use 1.5 mm Hex Driver Tip, Locking Groove (80-0728) with Cruciform Driver Handle (MS-2210) for the 2.3 mm screws.

Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



2.5 mm Hex Driver Tip
(HPC-0025)



T15 Stick Fit Hexalobe Driver Tip
(80-0760)



Medium Ratcheting Driver Handle
(80-0663)



1.5 mm Hex Driver Tip, Locking Groove
(80-0728)



Cruciform Driver Handle
(MS-2210)

Acu-Loc Dorsal Plate Surgical Technique

William B. Geissler, MD

Acu-Loc Dorsal Plate Reference Chart

Blue	Left-specific
Green	Right-specific



Figure 1

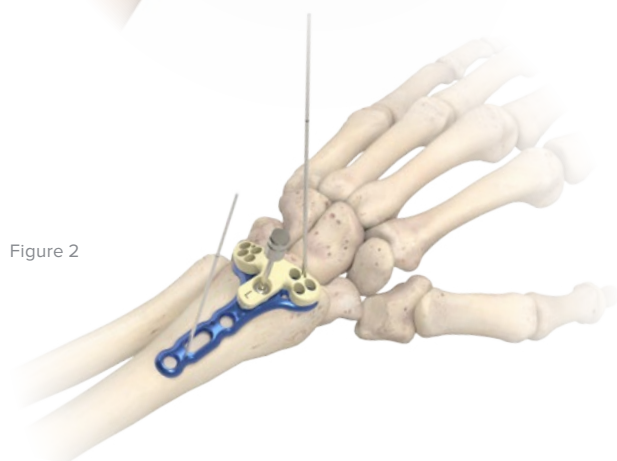


Figure 2

1 Incision and Dissection

Make the dorsal approach incision in line with Lister's tubercle and the radial border of the long finger. Carry down blunt dissection to protect the dorsal cutaneous nerve branches. Distally identify the extensor pollicis longus tendon in the wound and released through the third dorsal compartment. Then subperiosteally elevate the second and fourth compartments. Use caution when elevating the second and fourth dorsal compartments as bone fragments may have adhered to their undersurface.

A neurectomy of the posterior interosseous nerve may then be performed at the surgeon's discretion. Identify the posterior interosseous nerve on the radial aspect of the fourth compartment as it is elevated. A neurectomy is recommended on the proximal aspect of the incision to decrease neuroma pain.

2 Plate Placement and Provisional Fixation

Then anatomically reduce the fracture with traction and volar translation. The plate can be used as a buttress to help push and volarly reduce the dorsal displaced fracture fragments. The reduction of the fracture and correct plate position are verified under fluoroscopy and the plate is provisionally stabilized with K-wires. Place the proximal shaft of the plate just radial to the most convex position of the radial shaft. The appropriate right or left Acu-Loc 2 Dorsal Targeting Guide (80-015X) may be attached to the appropriate plate using the Acu-Loc Radiolucent Targeting Guide Locking Screw (80-0038) on the back table prior to insertion and then placed on the bone.



Dorsal Lunate Plate
(70-033X)



Acu-Loc 2 Dorsal Targeting Guide
(80-015X)



Acu-Loc Radiolucent Targeting Guide Locking Screw
(80-0038)

Acu-Loc Dorsal Plate Surgical Technique [continued]

3 Nonlocking Proximal Screw Placement

Place the first 3.5 mm nonlocking hex or hexalobe screw in the center of the proximal slot in the plate. The position of the plate relative to the articular surface can then be fine-tuned by sliding the plate proximal or distal under fluoroscopy. Using the 2.8 mm Quick Release Drill (80-0387) and 2.0 mm/2.8 mm Thin Drill Guide (PL-2118), drill through the far cortex. Measure drill depth with the Depth Gauge 6–65 mm (80-0623). Insert the appropriate 3.5 mm nonlocking hex or hexalobe screw, taking care that the screw is the proper length. The screw reduces the plate down to the bone and the length of the screw should be assessed under fluoroscopy following the insertion of the remaining screws. The screw may need to be downsized after the plate has been reduced down to the bone.

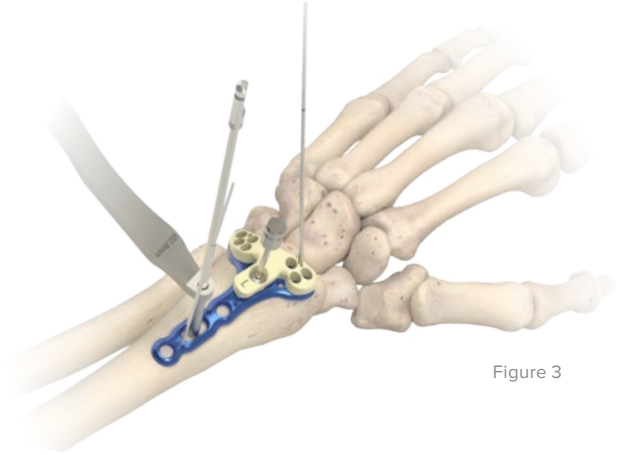


Figure 3

4 Drill Distal Screw Holes

To assess the position of the distal locking screws relative to the articular surface and the dorsum of the radius, a .054" x 6" K-wire (WS-1406ST) may be placed through the distal K-wire holes on the targeting guide and plate. The fracture reduction, plate position, and the location of the K-wire relative to the joint is assessed under fluoroscopy. If the distal K-wires do not penetrate the joint, the distal 2.3 mm screws will not either. Care should be taken not to angle the distal K-wires.

Select one of the four distal screw holes closest to the joint to drill first. Insert the 2.0 mm Drill Guide/Depth Gauge (MS-DG23) into the selected hole, followed by the 2.0 mm Quick Release Drill (80-0318). Measure the depth of the screw using the laser mark on the drill shaft and scale on the drill guide. As an alternative, the Distal Radius Depth Probe (MS-DRPB) may be used by hooking the far cortex and measuring with the laser mark on the probe.

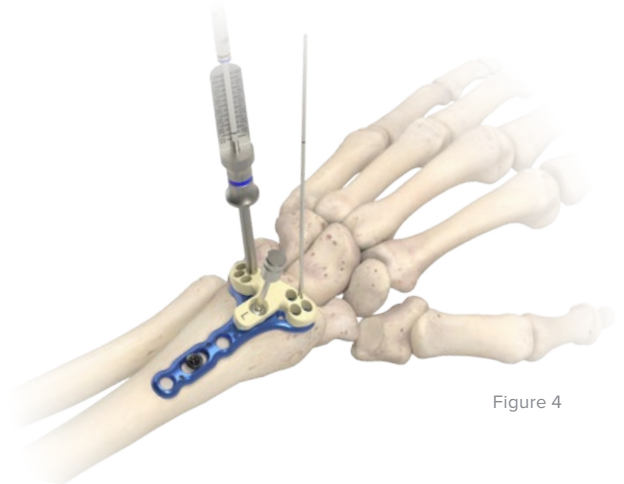
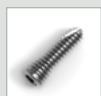


Figure 4



3.5 mm
Nonlocking Hex or
Hexalobe Screw
(30-02XX)



.054" x 6"
Guide Wire
(WS-1406ST)



2.8 mm Quick
Release Drill
(80-0387)



2.0 mm Drill
Guide/Depth
Gauge
(MS-DG23)



2.0 mm/2.8 mm
Thin Drill Guide
(PL-2118)



2.0 mm Quick
Release Drill
(80-0318)



Depth Gauge
6–65 mm
(80-0623)



Distal Radius
Depth Probe
(MS-DRPB)

Acu-Loc Dorsal Plate Surgical Technique [continued]

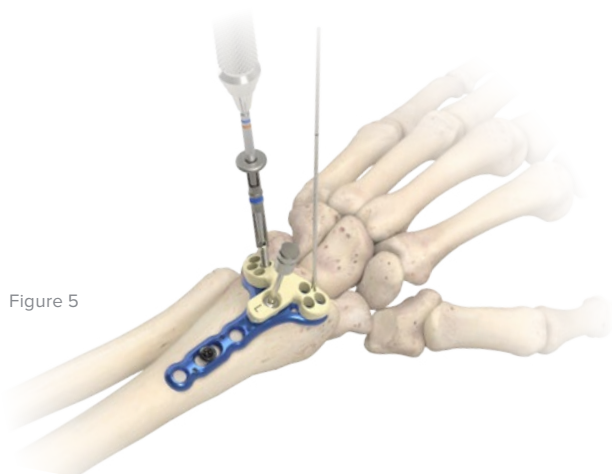


Figure 5

5 Distal Screw Placement

The three types of 2.3 mm screws that can be used in any of the eight distal holes are Locking Cortical Screws (gold), Locking Cortical Pegs (bronze), Nontoggling Cortical Screws (silver). Insert all 2.3 mm screws using the 1.5 mm Hex Driver Tip, the Locking Groove (80-0728), 2.3 mm Screw Sleeve, the Locking Tab (80-0727), and the silver Cruciform Driver Handle (MS-2210).

Note: An individual 2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249) is available as an alternative for drilling the distal screw holes. Screw length can be read using the depth probe or 2.3 mm screw depth gauge.

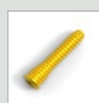


Figure 6

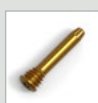
6 Proximal Screw Placement

In the second proximal locking hole, thread in the 2.8 mm Locking Drill Guide (80-0384 or 80-0668). Drill using the 2.8 mm Quick Release Drill (80-0387) and measure with the depth gauge. Insert the proper length 3.5 mm locking hex or hexalobe screw using the 2.5 mm Quick Release Hex Driver (HPC-0025) or the T15 Stick Fit Hexalobe Driver (80-0760), the 3.5 mm Screw Driver Sleeve (MS-SS35), and the Medium Ratcheting Driver Handle (80-0663). Place the final locking screw using the same process.

Note: 3.5 mm locking or nonlocking hex or hexalobe screws can be used in the proximal round locking holes.



2.3 mm Locking Cortical Screws (CO-T23XX)



2.3 mm Locking Cortical Pegs (CO-S23XX)



2.3 mm Nontoggling Cortical Screws (CO-N23XX)



1.5 mm Hex Driver Tip, Locking Groove (80-0728)



2.3 mm Screw Sleeve, Locking Tab (80-0727)



Cruciform Driver Handle (MS-2210)



2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249)



2.8 mm Locking Drill Guide (80-0384 or 80-0668)



2.8 mm Quick Release Drill (80-0387)



2.5 mm Quick Release Hex Driver (HPC-0025)



T15 Stick Fit Hexalobe Driver (80-0760)



3.5 mm Screw Driver Sleeve (MS-SS35)



Medium Ratcheting Driver Handle (80-0663)

Acu-Loc Dorsal Plate Surgical Technique [continued]

7 Closure and Postoperative Protocol

Following thorough radiographic evaluation, the wound is closed in layers. The retinacula of the second and fourth dorsal compartments are repaired. The retinaculum for the third dorsal compartment may be repaired, or the extensor pollicis longus tendon may be left out of its compartment depending on the surgeon's discretion. Immediate finger range of motion is initiated postoperatively. Forearm rotation and wrist range of motion are progressed at the surgeon's discretion according to the bone quality, fracture stability, and associated soft tissue injuries.

Closing and postoperative protocol are at the discretion of the surgeon.



Figure 7

Figure 8

8 Optional: Implant Removal Instructions

To extract an Acu-Loc Dorsal Plate, use the 2.5 mm Hex Driver Tip (HPC-0025) or T15 Stick Fit Hexalobe Driver Tip (80-0760) and Medium Ratcheting Driver Handle (80-0663) to remove all the 3.5 mm screws in the plate. Use 1.5 mm Hex Driver Tip, Locking Groove (80-0728) with Cruciform Driver Handle (MS-2210) for the 2.3 mm screws.

Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



Figure 9



2.5 mm Hex Driver Tip
(HPC-0025)



T15 Stick Fit Hexalobe Driver Tip
(80-0760)



Medium Ratcheting Driver Handle
(80-0663)



1.5 mm Hex Driver Tip, Locking Groove
(80-0728)



Cruciform Driver Handle
(MS-2210)

Acu-Loc Extra-Articular (EX) Plate Surgical Technique

William B. Geissler, MD



Figure 1

Figure 2

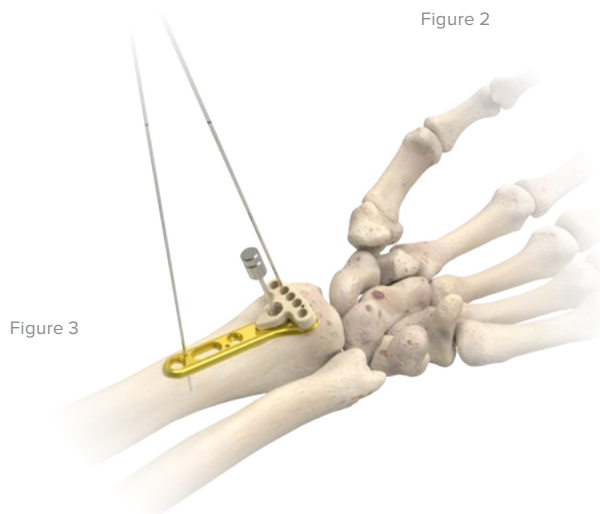


Figure 3

1 Incision and Dissection

Supinate the patient's forearm to expose the surgical site. To maximize exposure, place a towel under the wrist placing it in extension. Make a longitudinal incision approximately 6 cm in length just radial to the flexor carpi radialis (FCR) tendon to protect against potential injury to the palmar cutaneous branch of the median nerve.

Open the tendon sheath and radially retract the tendon to protect the radial artery. Identify the flexor pollicis longus by passive flexion/extension of the thumb interphalangeal joint and retract ulnarly to protect the median nerve. Next identify the pronator quadratus by its transverse fibers and release radial to the ulnar to expose the fracture site.

2 Provisional Fixation and Plate Placement

Reduce the fracture and evaluate under fluoroscopy. The brachioradialis may need to be released from its insertion on the radial styloid to facilitate reduction and visualization.

Make the plate sit along the flat metaphyseal portion of the distal radius. The appropriate targeting guide may be attached to the selected plate using the Acu-Loc Radiolucent Targeting Guide Locking Screw (80-0038). This may be done on the back table prior to insertion. Secure the plate's position proximally and distally with a .054\"/>



Acu-Loc EX
Standard or
Narrow
(70-006X)



Acu-Loc
Radiolucent
Targeting Guide
Locking Screw
(80-0038)



.054\"/>

Acu-Loc Extra-Articular (EX) Plate Surgical Technique [continued]

3 Nonlocking Proximal Screw Placement

Place the first 3.5 mm nonlocking hex or hexalobe screw in the center of the proximal slot in the plate.

The position of the plate relative to the articular surface can then be fine-tuned by sliding the plate proximal or distal under fluoroscopy. Using the 2.8 mm Quick Release Drill (80-0387) and the 2.0 mm/2.8 mm Thin Drill Guide (PL-2118), drill through the far cortex. Measure drill depth with the Depth Gauge 6–65 mm (80-0623). Insert the appropriate 3.5 mm nonlocking hex or hexalobe screw, taking care that the screw is the proper length. The screw reduces the plate down to the bone and the length of the screw should be assessed under fluoroscopy following the insertion of the remaining screws. The screw may need to be downsized after the plate has been reduced down to the bone.

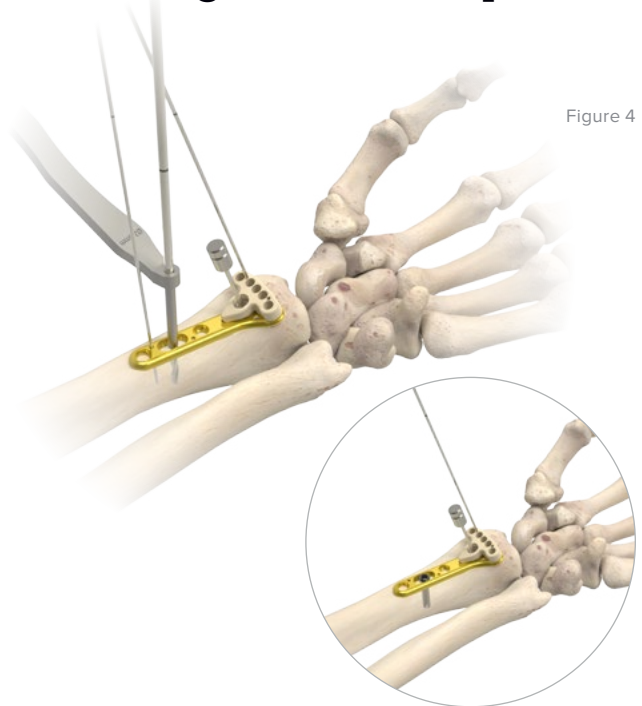


Figure 4

4 Drill Distal Screw Holes

To assess the position of the distal locking screws relative to the articular surface and the dorsum of the radius, a .054" x 6" K-wire (WS-1406ST) may be placed through the distal K-wire holes on the targeting guide and plate. Under fluoroscopy, assess the fracture reduction, the plate position, and the location of the K-wire relative to the joint.

If the distal K-wires do not penetrate the joint, the distal 2.3 mm screws will not either. Care should be taken not to angle the distal K-wires. Insert the 2.0 mm Drill Guide/Depth Gauge (MS-DG23) into one of the five distal holes followed by the 2.0 mm Quick Release Drill (80-0318). The depth of the screw is measured using the laser mark on the drill shaft and scale on the drill guide. As an alternative, the Distal Radius Depth Probe (MS-DRPB) may be used by hooking the far cortex and measuring with the laser mark on the probe.

Note: Refer to the 2.3 mm Locking Variable Angle Screw Reference Information on page 8 and the Surgical Technique on page 45.

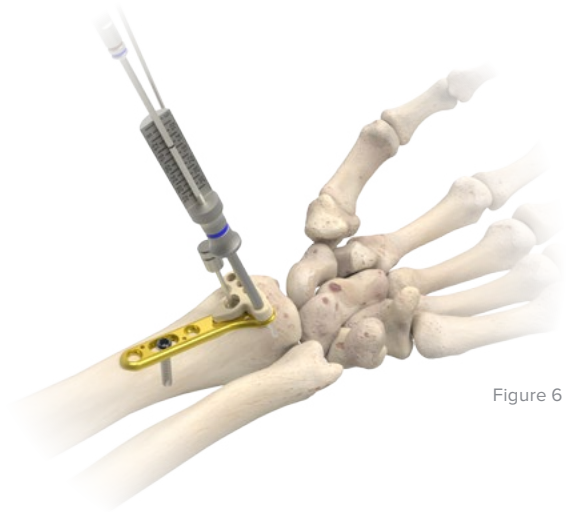
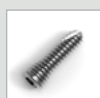


Figure 6



3.5 mm
Nonlocking Hex or
Hexalobe Screw
(30-02XX)



.054" x 6"
Guide Wire
(WS-1406ST)



2.8 mm Quick
Release Drill
(80-0387)



2.0 mm Drill
Guide/Depth
Gauge
(MS-DG23)



2.0 mm/2.8 mm
Thin Drill Guide
(PL-2118)



2.0 mm Quick
Release Drill
(80-0318)



Depth Gauge
6–65 mm
(80-0623)



Distal Radius
Depth Probe
(MS-DRPB)

Acu-Loc Extra-Articular (EX) Plate Surgical Technique [continued]

7 Closure and Postoperative Protocol

Following thorough radiographic evaluation, check alignment and rotation, then close. Start immediate finger range of motion and forearm rotation postoperatively. Allow early functional use of the hand for light activities of daily living (ADL). Support the wrist according to bone quality and stability.

Closing and postoperative protocol are at the discretion of the surgeon.



Figure 12

8 Optional: Implant Removal Instructions

To extract an Acu-Loc EX Plate, use the 2.5 mm Hex Driver Tip (HPC-0025) or T15 Stick Fit Hexalobe Driver Tip (80-0760) and Medium Ratcheting Driver Handle (80-0663) to remove all the 3.5 mm screws in the plate. Use 1.5 mm Hex Driver Tip, Locking Groove (80-0728) with Cruciform Driver Handle (MS-2210) for the 2.3 mm screws.

Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



2.5 mm Hex Driver Tip
(HPC-0025)



T15 Stick Fit Hexalobe Driver Tip
(80-0760)



Medium Ratcheting Driver Handle
(80-0663)



1.5 mm Hex Driver Tip, Locking Groove
(80-0728)



Cruciform Driver Handle
(MS-2210)

Frag-Loc® Compression Screw Surgical Technique

Figure 1



1 Drilling Bicortically

With the targeting guide attached, drill bicortically, using the 2.0 mm Quick Release Drill (80-0318) through the 2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249) or the 2.0 mm Drill Guide/Depth Gauge (MS-DG23).

Figure 2

2 Measuring to Determine Screw Type

Measure screw length using the Distal Radius Depth Probe (MS-DRPB).

Probe Guidelines:

16–24 mm—acceptable to use with the Frag-Loc Compression Sleeve (30-0370) and the Frag-Loc Compression Screw (30-0371).

20–28 mm—acceptable to use with the Frag-Loc Compression Sleeve and the Frag-Loc Compression Screw, Long (30-0372).

Caution:

- ▶ Do not use the Frag-Loc outside of 16–24 mm range.
- ▶ Do not use the Frag-Loc, Long outside of 20–28 mm range.

Figure 3

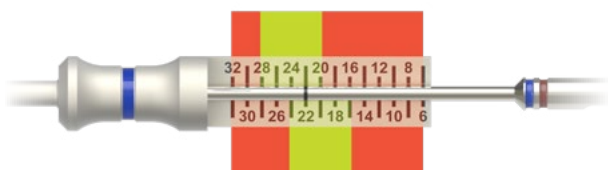


Figure 4



3 Drilling Unicortically

Drill using the Frag-Loc 2.5 mm Drill (80-0724). The shoulder of the drill must stop against top of drill guide.



2.0 mm Quick Release Drill (80-0318)



2.0 mm Locking Drill Guide 4 mm–32 mm (80-0249)



2.0 mm Drill Guide/Depth Gauge (MS-DG23)



Distal Radius Depth Probe (MS-DRPB)



Frag-Loc Compression Sleeve (30-0370)



Frag-Loc Compression Screw (30-0371)



Frag-Loc Compression Screw, Long (30-0372)



Frag-Loc 2.5 mm Drill (80-0724)

Frag-Loc® Compression Screw Surgical Technique [continued]

4 Frag-Loc Sleeve Insertion

Insert the Frag-Loc Compression Sleeve (30-0370) into the plate using the silver Cruciform Driver Handle (MS-2210) with the 1.5 mm Hex Driver Tip and Locking Groove (80-0728).

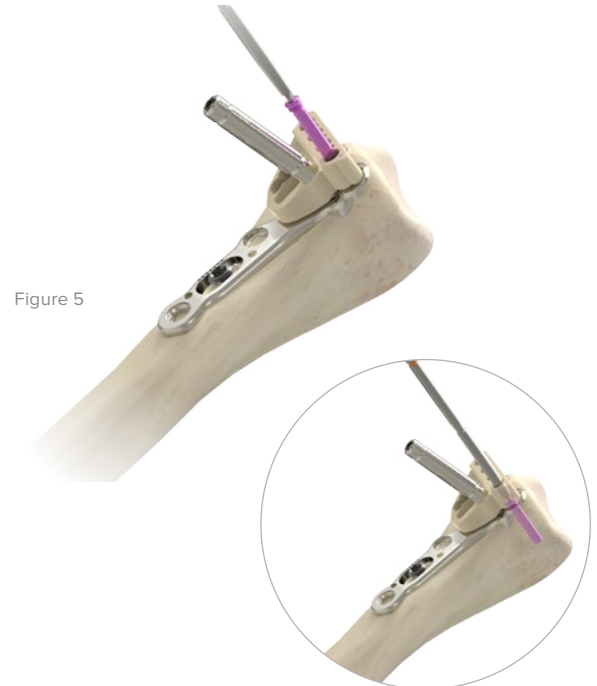


Figure 5

Figure 6

5 K-wire Insertion

Insert the .035" x 5.75" K-wire (WS-0906ST) through the Frag-Loc Compression Sleeve and dorsal skin.

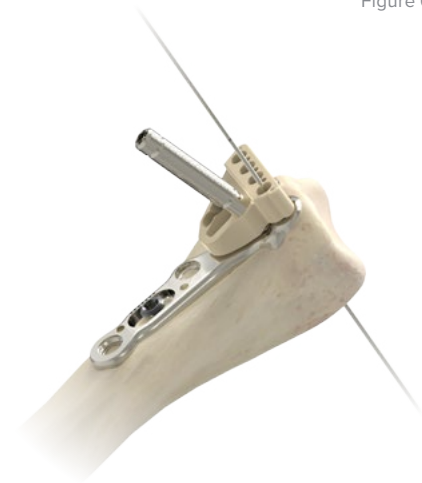
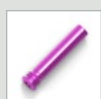


Figure 7



Frag-Loc
Compression
Sleeve
(30-0370)



Cruciform Driver
Handle
(MS-2210)



1.5 mm Hex
Driver Tip,
Locking Groove
(80-0728)



.035" x 5.75"
Guide Wire
(WS-0906ST)

Frag-Loc® Compression Screw Surgical Technique [continued]

Figure 8

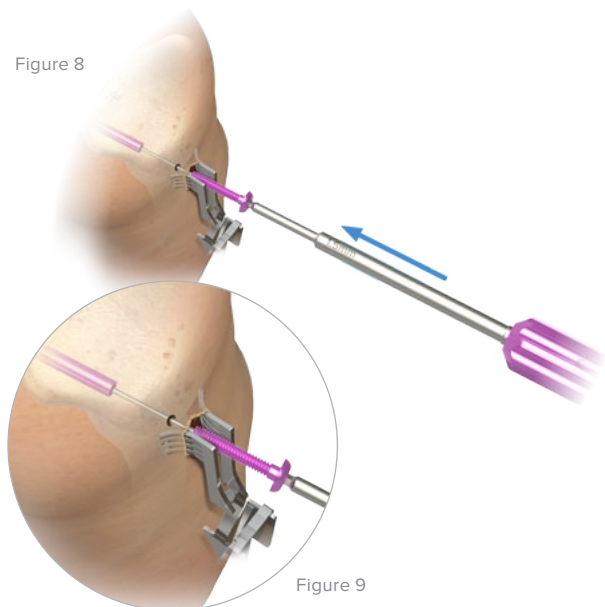


Figure 9

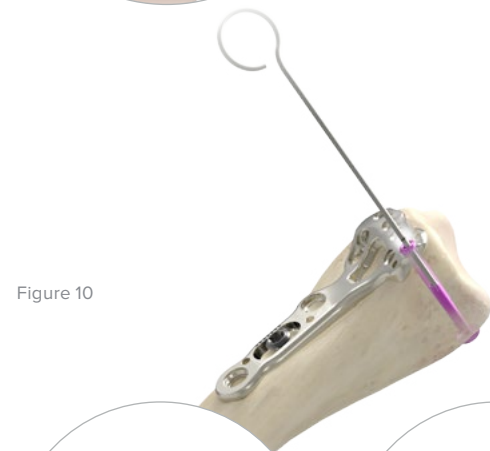


Figure 10

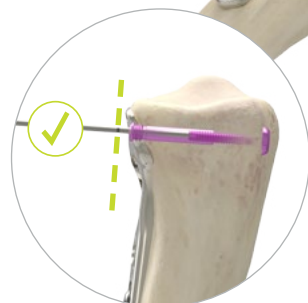


Figure 11

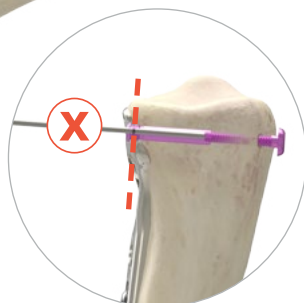


Figure 12

6 Frag-Loc Wire Insertion

Make a small incision dorsally over the K-wire and use the Heiss Retractor (80-0756) to maintain clearance of soft tissue and tendons.

Drive the Frag-Loc Compression Screw (30-0371) or the Frag-Loc Compression Screw, Long (30-0372) over the .035" x 5.75" K-wire (WS-0906ST) using the Frag-Loc 1.5 mm Cannulated Driver (80-0758).

Tighten the Frag-Loc Compression Screw into the Frag-Loc Compression Sleeve until the desired compression is achieved.

Ensure the Frag-Loc Compression Screw head is fully seated on the bone and that tendons are clear of screw head.

7 Final Confirmation

Remove the targeting guide.

Check Frag-Loc thread engagement using the Frag-Loc Depth Gauge (80-0726). The depth gauge ensures that the minimum number of threads are engaged into the Frag-Loc Compression Sleeve.

Note: A visible laser band on the depth gauge ensures acceptable Frag-Loc thread engagement.

If the depth gauge laser band is not visible, tighten the Frag-Loc Compression Screw one revolution and recheck. Repeat until the laser band is visible.

8 Optional: Implant Removal Instructions

To extract the Frag-Loc Compression Screw, use 1.5 mm Hex Driver Tip, Locking Groove (80-0728) with Cruciform Driver Handle (MS-2210).

Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.



Heiss Retractor
(80-0756)



Frag-Loc
Compression
Screw
(30-037X)



.035" x 5.75"
Guide Wire
(WS-0906ST)



Frag-Loc 1.5 mm
Cannulated Driver
(80-0758)



Frag-Loc Depth
Gauge
(80-0726)



1.5 mm Hex
Driver Tip,
Locking Groove
(80-0728)



Cruciform Driver
Handle
(MS-2210)

2.3 mm Locking Variable Angle Screw Surgical Technique

1 Conical Drill Guide Placement

If it is determined that a 2.3 mm Locking Variable Angle Screw (30-23XX) is needed, remove the radiolucent targeting guide from the plate and insert the conical 2.3 mm Variable Angle Drill Guide (80-0762) utilizing the 2.3 mm Variable Angle Drill Guide Driver (80-0763).

Disconnect the drill guide driver once the drill guide is fully engaged into the plate.

Note: The drill guide driver allows for ease of insertion of the conical drill guide. It is not needed to remove the conical drill guide.

The Acumed 2.3 mm Locking Variable Angle Screws (30-23XX) can be used in any distal hole of any of the gold colored Acu-Loc 2 VDR Proximal Plates and Acu-Loc EX Plates only.

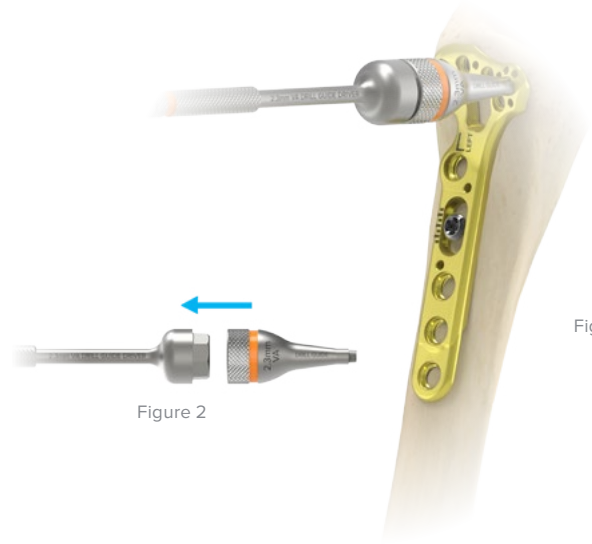


Figure 1

Figure 2

2 Drilling Distal Screws

Drill using the orange-banded 1.7 mm Quick Coupler Semi-Fluted Drill (80-0868) in the desired trajectory within the conical drill guide. Remove the conical drill guide.

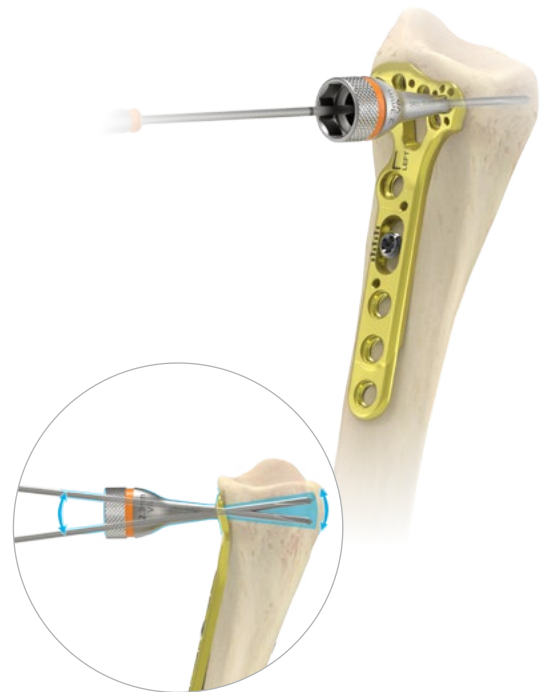


Figure 3

Figure 4



2.3 mm
Locking Variable
Angle Screw
(30-23XX)



2.3 mm Variable
Angle Drill Guide
(80-0762)



2.3 mm Variable
Angle Drill
Guide Driver
(80-0763)



1.7 mm
Quick Coupler
Semi-Fluted Drill
(80-0868)

2.3 mm Locking Variable Angle Screw Surgical Technique [continued]

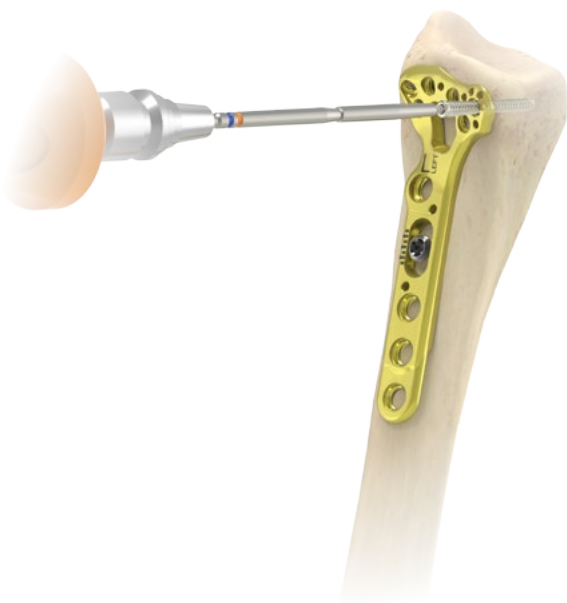
Figure 5



3 Measuring Distal Screws

Determine the screw length with the 2.3 mm Screw Depth Gauge 6–46 mm (80-1356).

Figure 6



4 Distal Screw Insertion

Select and insert the corresponding 2.3 mm Locking Variable Angle Screw (30-23XX) using the 1.5 mm Hex Driver Tip, the Locking Groove (80-0728), and the orange Mini-AO Torque Limiting Driver, 10in-lb (80-1008). Insert the screw until the torque limiting driver clicks once, indicating that the optimum insertion torque has been achieved.

Caution: Once the locking variable angle screw is fully inserted, inspect for and clear any debris from the perimeter of the screw head.

Caution: Locking variable angle screws are **one-time use only**.

Once the screw is engaged into the plate, it cannot be removed and reinserted into its original hole or any other hole of the Acu-Loc 2 VDR Proximal Plate or Acu-Loc EX Plate. If this screw is removed, it must be discarded to prevent reuse. A 2.3 mm Nontoggling Cortical Screws (CO-N23XX) must be used to replace a locking variable angle screw.

Caution: Torque Limiting Driver (TLD) usage information

Use beyond six months may lead to TLD failures that may cause the screw to not seat fully (when inserted within the conical drill guide boundaries) or cause the threads to strip.



2.3 mm Screw Depth Gauge 6–46 mm (80-1356)



2.3 mm Locking Variable Angle Screw (30-23XX)



1.5 mm Hex Driver Tip, Locking Groove (80-0728)



Mini-AO Torque Limiting Driver, 10in-lb (80-1008)



2.3 mm Nontoggling Cortical Screws (CO-N23XX)

2.3 mm Locking Variable Angle Screw Surgical Technique [continued]

5 Optional: Implant Removal Instructions

To extract the Variable Angle Screw, use 1.5 mm Hex Driver Tip, Locking Groove (80-0728) with Cruciform Driver Handle (MS-2210).

Referencing the Screw Removal Brochure (SPF10-00) may aid in implant extraction if difficulty is experienced.

Figure 7



1.5 mm Hex
Driver Tip,
Locking Groove
(80-0728)



Cruciform Driver
Handle
(MS-2210)

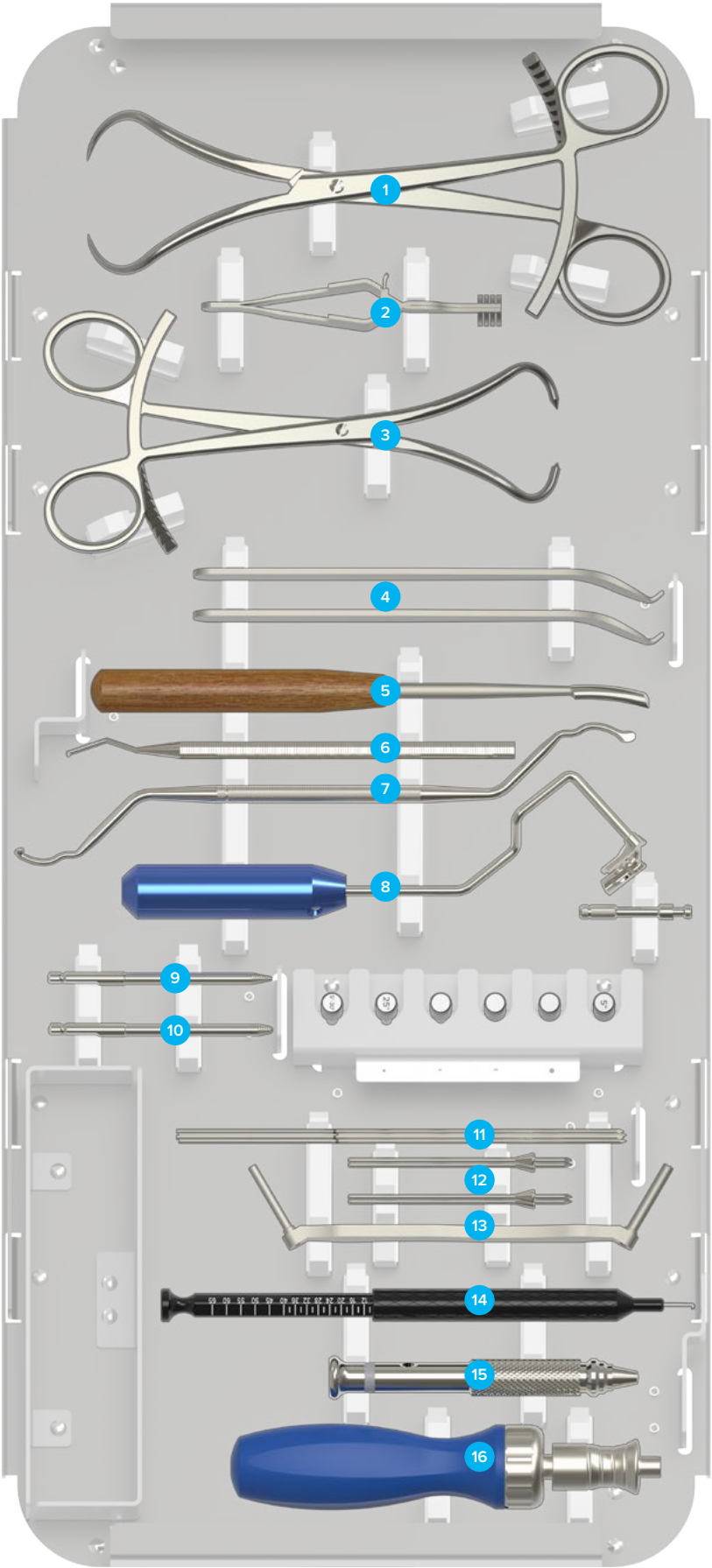
Ordering Information

Tray Components

Instrumentation

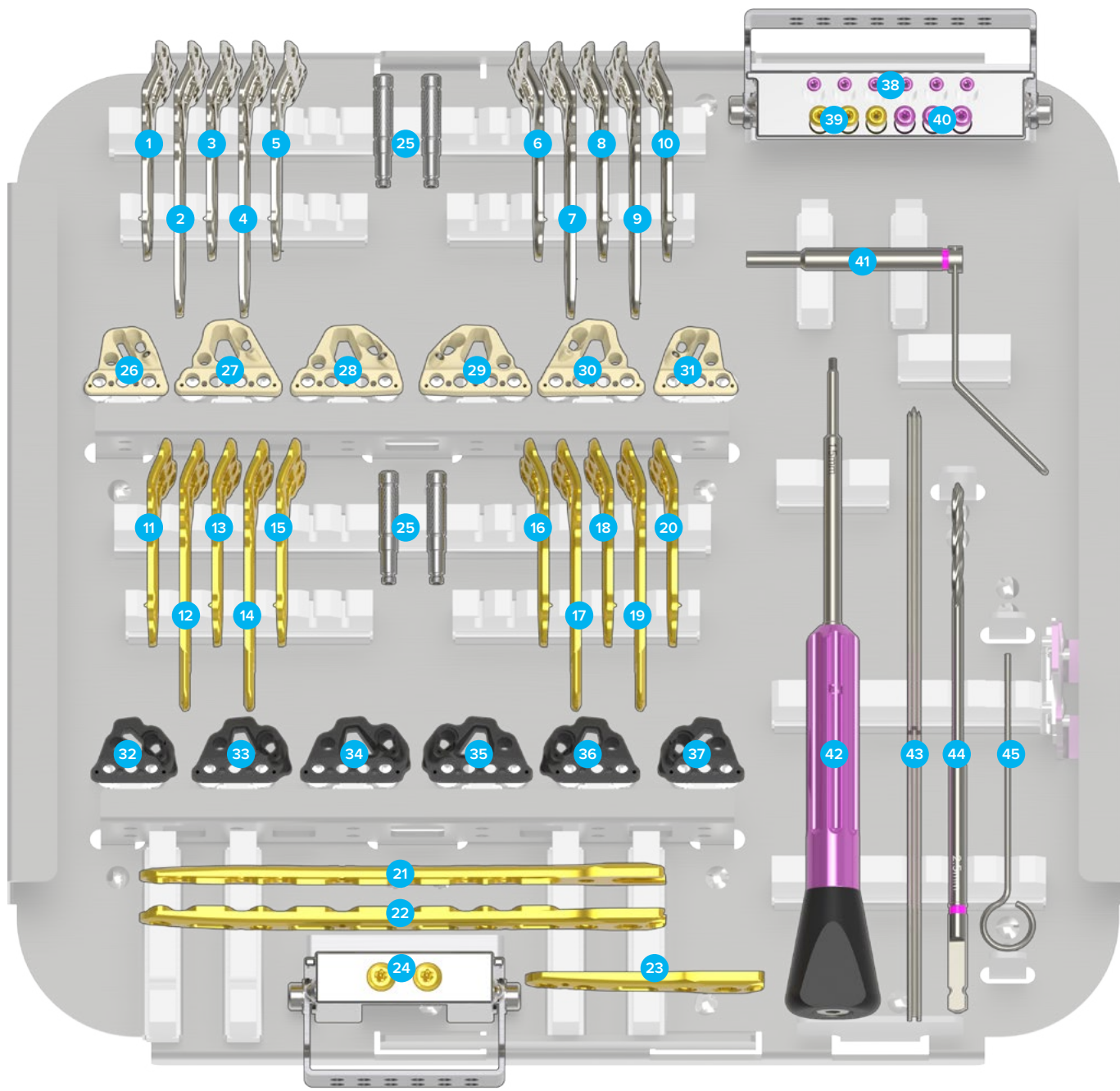
1	8" Bone Reduction Forceps	MS-1280	9	1.5 mm Easyout, Quick Release	80-0598
2	Heiss Retractor	80-0756	10	2.5 mm Easyout, Quick Release	80-0600
3	Bone Reduction Forceps 6 ¾"	80-0723	11	.054" x 6" Guide Wire	WS-1406ST
4	15 mm Hohman Retractor	MS-46827	12	Plate Tack	PL-PTACK
5	Periosteal Elevator 7.5" x 6 mm Straight Edge	80-0693	13	2.0 mm / 2.8 mm Thin Drill Guide	PL-2118
6	Sharp Hook	PL-CL06	14	Depth Gauge 6–65 mm	80-0623
7	Fragment Reduction Tool	80-0725	15	Cruciform Driver Handle	MS-2210
8	VDR Plate Positioning Handle Assembly	80-0729	16	Medium Ratcheting Driver Handle	80-0663

For information about the Acu-Loc® Wrist Spanning Plate, please contact your local authorized Acumed distributor, call 888.627.9957, or visit acumed.net.



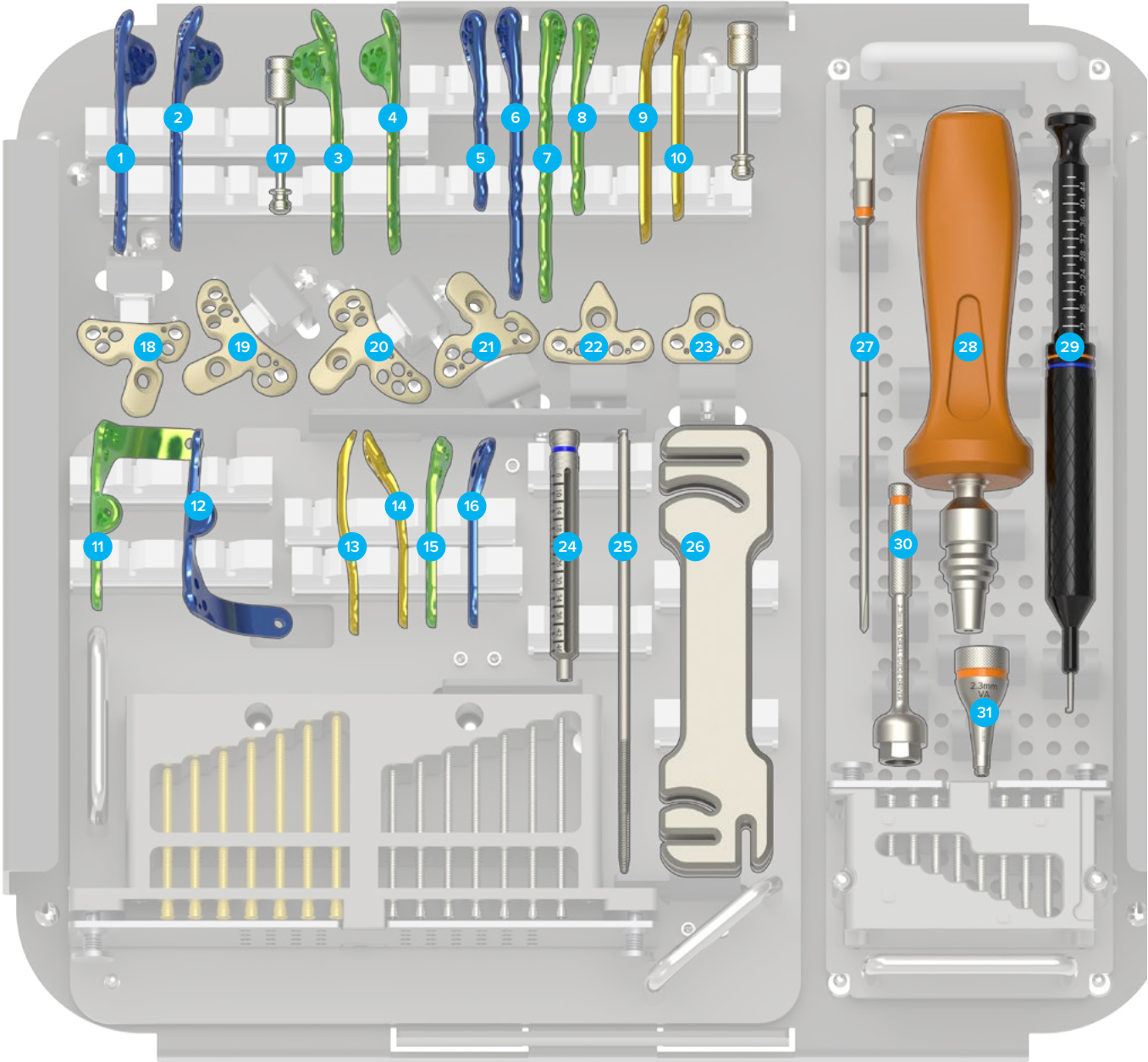
Ordering Information [continued]

Tray Components					
Acu-Loc 2 VDR Plates					
1	Acu-Loc 2 VDR Plate Narrow, Left	70-0358	25	Acu-Loc 2 VDR Targeting Guide Locking Bolt	80-0682
2	Acu-Loc 2 VDR Plate Narrow Long, Left	70-0370	26	Acu-Loc 2 VDR Targeting Guide Narrow Left	80-0697
3	Acu-Loc 2 VDR Plate Standard, Left	70-0356	27	Acu-Loc 2 VDR Targeting Guide Standard Left	80-0695
4	Acu-Loc 2 VDR Plate Standard Long, Left	70-0368	28	Acu-Loc 2 VDR Targeting Guide Wide Left	80-0699
5	Acu-Loc 2 VDR Plate Wide, Left	70-0360	29	Acu-Loc 2 VDR Targeting Guide Wide Right	80-0698
6	Acu-Loc 2 VDR Plate Wide, Right	70-0361	30	Acu-Loc 2 VDR Targeting Guide Standard Right	80-0694
7	Acu-Loc 2 VDR Plate Narrow, Right	70-0359	31	Acu-Loc 2 VDR Targeting Guide Narrow Right	80-0696
8	Acu-Loc 2 VDR Plate Standard, Right	70-0357	32	Acu-Loc 2 VDR Proximal Targeting Guide Narrow Left	80-0703
9	Acu-Loc 2 VDR Plate Narrow Long, Right	70-0371	33	Acu-Loc 2 VDR Proximal Targeting Guide Standard Left	80-0701
10	Acu-Loc 2 VDR Plate Standard Long, Right	70-0369	34	Acu-Loc 2 VDR Proximal Targeting Guide Wide Left	80-0705
Variable Angle Plates					
11	Acu-Loc 2 VDR Proximal Plate Narrow, Left	70-0352	35	Acu-Loc 2 VDR Proximal Targeting Guide Wide Right	80-0704
12	Acu-Loc 2 VDR Proximal Plate Narrow Long, Left	70-0382	36	Acu-Loc 2 VDR Proximal Targeting Guide Standard Right	80-0700
13	Acu-Loc 2 VDR Proximal Plate Standard, Left	70-0350	37	Acu-Loc 2 VDR Proximal Targeting Guide Narrow Right	80-0702
14	Acu-Loc 2 VDR Proximal Plate Standard Long, Left	70-0372	Frag-Loc® Screws		
15	Acu-Loc 2 VDR Proximal Plate Wide, Left	70-0354	38	Frag-Loc Compression Sleeve	30-0370
16	Acu-Loc 2 VDR Proximal Plate Wide, Right	70-0355	39	Frag-Loc Compression Screw, Long	30-0372
17	Acu-Loc 2 VDR Proximal Plate Standard Long, Right	70-0373	40	Frag-Loc Compression Screw	30-0371
18	Acu-Loc 2 VDR Proximal Plate Standard, Right	70-0351	Frag-Loc® Instrumentation		
19	Acu-Loc 2 VDR Proximal Plate Narrow Long, Right	70-0383	41	Frag-Loc 2.5 mm Drill Guide	80-0730
20	Acu-Loc 2 VDR Proximal Plate Narrow, Right	70-0353	42	Frag-Loc 1.5 mm Cannulated Driver Assembly	80-0758
21	Acu-Loc 2 VDR Extension Plate Long, Left	70-0365	43	.035" X 5.75" ST Guide Wire	WS-0906ST
22	Acu-Loc 2 VDR Extension Plate Long, Right	70-0366	44	Frag-Loc 2.5 mm Drill	80-0724
23	Acu-Loc 2 VDR Extension Plate, Neutral	70-0364	45	Frag-Loc Depth Gauge	80-0726
24	Acu-Loc 2 VDR Hexalobe Extension Link Screw	30-0100			



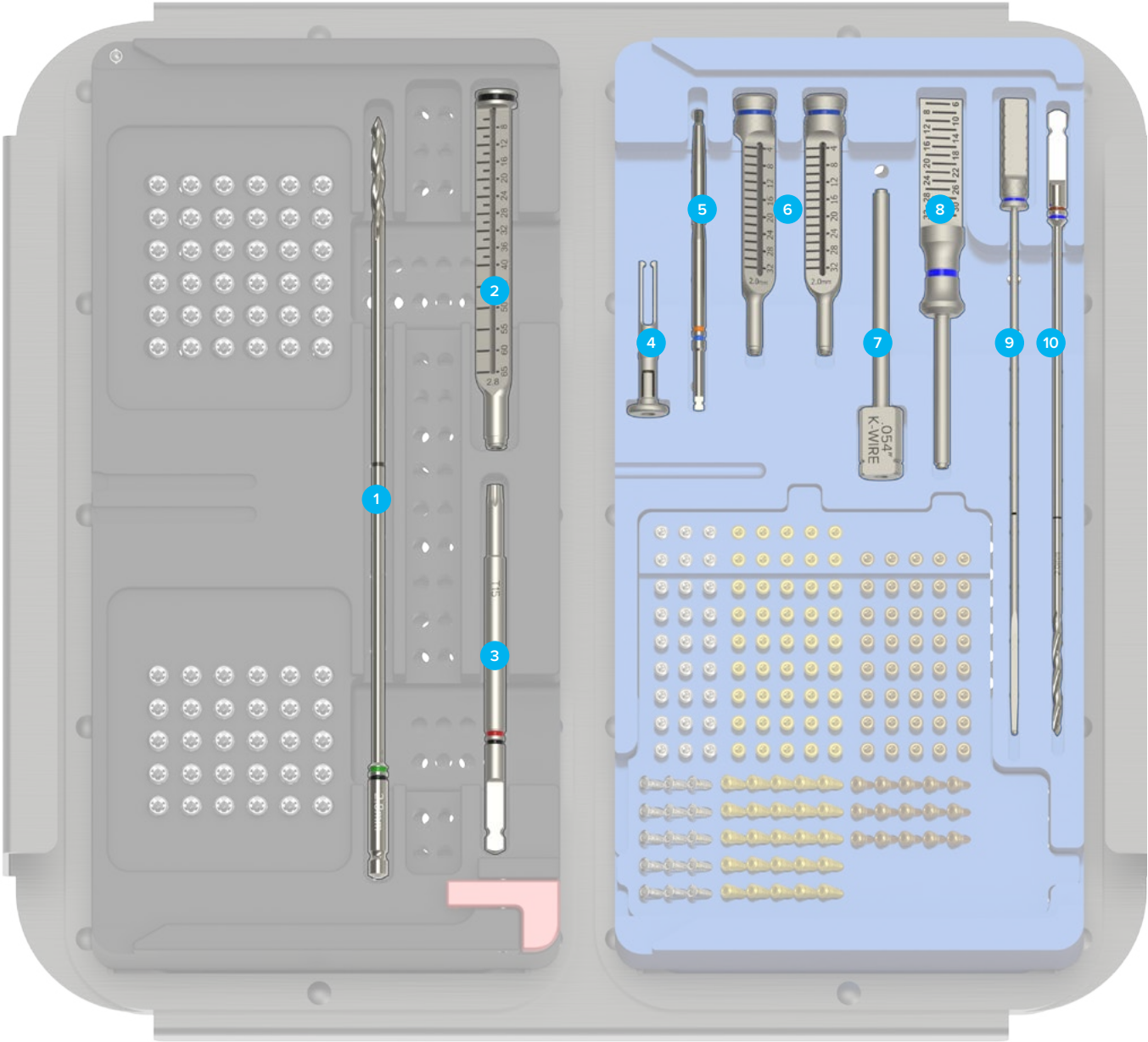
Ordering Information [continued]

Tray Components					
Acu-Loc Plates			Instrumentation		
1	Acu-Loc Dorsal Plate, Narrow, Left	70-0057	17	Locking Screw, Acu-Loc Radiolucent Targeting Guide	80-0038
2	Acu-Loc Dorsal Plate, Standard, Left	70-0055	18	Acu-Loc Dorsal Plate Targeting Guide Narrow Left	80-0154
3	Acu-Loc Dorsal Plate, Standard, Right	70-0056	19	Acu-Loc Dorsal Plate Targeting Guide Standard Right	80-0150
4	Acu-Loc Dorsal Plate, Narrow, Right	70-0058	20	Acu-Loc Dorsal Targeting Guide Standard, Right	80-0151
5	Acu-Loc VDU Plate, Standard, Left	70-0045	21	Acu-Loc Dorsal Targeting Guide Narrow, Right	80-0155
6	Acu-Loc VDU Plate, Long, Left	70-0047	22	Acu-Loc EX Targeting Guide Standard	80-0166
7	Acu-Loc VDU Plate, Long, Right	70-0048	23	Acu-Loc EX Targeting Guide Narrow	80-0274
8	Acu-Loc VDU Plate, Standard, Right	70-0046	24	2.0 mm Locking Drill Guide 6–46 mm	80-0592
9	Acu-Loc EX Standard	70-0063	25	2.3 mm Bone Tap	80-0362
10	Acu-Loc EX Narrow	70-0064	26	Small Plate Bender	80-0363
DRFS Plates			Variable Angle Instrumentation		
11	Dorsal Rim Buttress Plate, Right	70-0335	27	1.7 mm Quick Coupler Semi-fluted Drill	80-0868
12	Dorsal Rim Buttress Plate, Left	70-0336	28	Mini-AO Torque Limiting Driver, 10 in-lb	80-1008
13	Divergent Radial Styloid Plate	70-0331	29	2.3 mm Screw Depth Gauge 6–46 mm	80-1356
14	Volar Lunate Suture Plate	70-0334	30	2.3 mm Variable Angle Drill Guide Driver	80-0763
15	Dorsal Lunate Plate, Right	70-0337	31	2.3 mm Variable Angle Drill Guide	80-0762
16	Dorsal Lunate Plate, Left	70-0338			



Ordering Information [continued]

Tray Components			
3.5 mm Instrumentation		2.3 mm Instrumentation	
1	2.8 mm Quick Release Drill	80-0387	
2	2.8 mm Hexalobe Locking Drill Guide 6–65 mm	80-0668	
3	T15 Stick Fit Hexalobe Driver	80-0760	
4		2.3 mm Screw Sleeve, Locking Tab	80-0727
5		1.5 mm Hex Driver Tip, Locking Groove	80-0728
6		2.0 mm Locking Drill Guide 4–32 mm	80-0249
7		.054" K-wire Guide	80-0688
8		Drill Guide / Depth Gauge for 2.0 mm Drill	MS-DG23
9		Distal Radius Probe	MS-DRPB
10		2.0 mm Quick Release Drill	80-0318
Optional			
3.5 mm Screw Instrumentation			
	2.8 mm x 5" Quick Release Drill	80-2008	
	2.8 mm Locking Drill Guide 6–26 mm	80-2006	
	3.5 mm Locking Screw Bone Tap	80-2126	



Ordering Information

2.3 mm Screws

2.3 mm Nontoggling Cortical Screws

2.3 mm x 8 mm Nontoggling Cortical Screw	CO-N2308
2.3 mm x 10 mm Nontoggling Cortical Screw	CO-N2310
2.3 mm x 12 mm Nontoggling Cortical Screw	CO-N2312
2.3 mm x 14 mm Nontoggling Cortical Screw	CO-N2314
2.3 mm x 16 mm Nontoggling Cortical Screw	CO-N2316
2.3 mm x 18 mm Nontoggling Cortical Screw	CO-N2318
2.3 mm x 20 mm Nontoggling Cortical Screw	CO-N2320
2.3 mm x 22 mm Nontoggling Cortical Screw	CO-N2322
2.3 mm x 24 mm Nontoggling Cortical Screw	CO-N2324
2.3 mm x 26 mm Nontoggling Cortical Screw	CO-N2326
2.3 mm x 28 mm Nontoggling Cortical Screw	CO-N2328
2.3 mm x 30 mm Nontoggling Cortical Screw	CO-N2330
2.3 mm x 32 mm Nontoggling Cortical Screw	CO-N2332
2.3 mm x 34 mm Nontoggling Cortical Screw	CO-N2334
2.3 mm x 36 mm Nontoggling Cortical Screw	CO-N2336
2.3 mm x 38 mm Nontoggling Cortical Screw	CO-N2338
2.3 mm x 40 mm Nontoggling Cortical Screw	CO-N2340
2.3 mm x 42 mm Nontoggling Cortical Screw	CO-N2342
2.3 mm x 44 mm Nontoggling Cortical Screw	CO-N2344
2.3 mm x 46 mm Nontoggling Cortical Screw	CO-N2346

2.3 mm Locking Variable Angle Screws

2.3 mm x 14 mm Locking Variable Angle Screw	30-2314
2.3 mm x 16 mm Locking Variable Angle Screw	30-2316
2.3 mm x 18 mm Locking Variable Angle Screw	30-2318
2.3 mm x 20 mm Locking Variable Angle Screw	30-2320
2.3 mm x 22 mm Locking Variable Angle Screw	30-2322
2.3 mm x 24 mm Locking Variable Angle Screw	30-2324
2.3 mm x 26 mm Locking Variable Angle Screw	30-2326
2.3 mm x 28 mm Locking Variable Angle Screw	30-2328

Ordering Information

2.3 mm Screws

2.3 mm Locking Cortical Pegs

2.3 mm x 8 mm Locking Cortical Peg	CO-S2308
2.3 mm x 10 mm Locking Cortical Peg	CO-S2310
2.3 mm x 12 mm Locking Cortical Peg	CO-S2312
2.3 mm x 14 mm Locking Cortical Peg	CO-S2314
2.3 mm x 16 mm Locking Cortical Peg	CO-S2316
2.3 mm x 18 mm Locking Cortical Peg	CO-S2318
2.3 mm x 20 mm Locking Cortical Peg	CO-S2320
2.3 mm x 22 mm Locking Cortical Peg	CO-S2322
2.3 mm x 24 mm Locking Cortical Peg	CO-S2324
2.3 mm x 26 mm Locking Cortical Peg	CO-S2326
2.3 mm x 28 mm Locking Cortical Peg	CO-S2328

2.3 mm Locking Cortical Screws

2.3 mm x 8 mm Locking Cortical Screw	CO-T2308
2.3 mm x 10 mm Locking Cortical Screw	CO-T2310
2.3 mm x 12 mm Locking Cortical Screw	CO-T2312
2.3 mm x 14 mm Locking Cortical Screw	CO-T2314
2.3 mm x 16 mm Locking Cortical Screw	CO-T2316
2.3 mm x 18 mm Locking Cortical Screw	CO-T2318
2.3 mm x 20 mm Locking Cortical Screw	CO-T2320
2.3 mm x 22 mm Locking Cortical Screw	CO-T2322
2.3 mm x 24 mm Locking Cortical Screw	CO-T2324
2.3 mm x 26 mm Locking Cortical Screw	CO-T2326
2.3 mm x 28 mm Locking Cortical Screw	CO-T2328
2.3 mm x 30 mm Locking Cortical Screw	CO-T2330
2.3 mm x 32 mm Locking Cortical Screw	CO-T2332
2.3 mm x 34 mm Locking Cortical Screw	CO-T2334
2.3 mm x 36 mm Locking Cortical Screw	CO-T2336
2.3 mm x 38 mm Locking Cortical Screw	CO-T2338
2.3 mm x 40 mm Locking Cortical Screw	CO-T2340
2.3 mm x 42 mm Locking Cortical Screw	CO-T2342
2.3 mm x 44 mm Locking Cortical Screw	CO-T2344
2.3 mm x 46 mm Locking Cortical Screw	CO-T2346

Ordering Information

3.5 mm Screws

3.5 mm Locking Hexalobe Screws

3.5 mm x 8 mm Locking Hexalobe Screw	30-0232
3.5 mm x 10 mm Locking Hexalobe Screw	30-0233
3.5 mm x 12 mm Locking Hexalobe Screw	30-0234
3.5 mm x 14 mm Locking Hexalobe Screw	30-0235
3.5 mm x 16 mm Locking Hexalobe Screw	30-0236
3.5 mm x 18 mm Locking Hexalobe Screw	30-0237

3.5 mm Nonlocking Hexalobe Screws

3.5 mm x 10 mm Nonlocking Hexalobe Screw	30-0256
3.5 mm x 12 mm Nonlocking Hexalobe Screw	30-0257
3.5 mm x 14 mm Nonlocking Hexalobe Screw	30-0258
3.5 mm x 16 mm Nonlocking Hexalobe Screw	30-0259
3.5 mm x 18 mm Nonlocking Hexalobe Screw	30-0260

These implants are available non-sterile or sterile-packed. Add -S to product number for sterile products. To order, contact your local authorized Acumed distributor.

Sterile 3.5 mm Screws

3.5 mm Locking Hexalobe Screws

3.5 mm x 9 mm Locking Hexalobe Screw	30-0218-S
3.5 mm x 11 mm Locking Hexalobe Screw	30-0219-S
3.5 mm x 13 mm Locking Hexalobe Screw	30-0220-S
3.5 mm x 15 mm Locking Hexalobe Screw	30-0221-S
3.5 mm x 17 mm Locking Hexalobe Screw	30-0222-S
3.5 mm x 19 mm Locking Hexalobe Screw	30-0223-S

3.5 mm Nonlocking Hexalobe Screws

3.5 mm x 9 mm Nonlocking Hexalobe Screw	30-0224-S
3.5 mm x 11 mm Nonlocking Hexalobe Screw	30-0225-S
3.5 mm x 13 mm Nonlocking Hexalobe Screw	30-0226-S
3.5 mm x 15 mm Nonlocking Hexalobe Screw	30-0227-S
3.5 mm x 17 mm Nonlocking Hexalobe Screw	30-0228-S
3.5 mm x 19 mm Nonlocking Hexalobe Screw	30-0229-S

Ordering Information

Optional			
3.5 mm Locking Cortical Screws		3.5 mm Cortical Screws	
3.5 mm x 8 mm Locking Cortical Screw	COL-3080	3.5 mm x 10 mm Cortical Screw	CO-3100
3.5 mm x 10 mm Locking Cortical Screw	COL-3100	3.5 mm x 12 mm Cortical Screw	CO-3120
3.5 mm x 12 mm Locking Cortical Screw	COL-3120	3.5 mm x 14 mm Cortical Screw	CO-3140
3.5 mm x 14 mm Locking Cortical Screw	COL-3140	3.5 mm x 16 mm Cortical Screw	CO-3160
3.5 mm x 16 mm Locking Cortical Screw	COL-3160	3.5 mm x 18 mm Cortical Screw	CO-3180
3.5 mm x 18 mm Locking Cortical Screw	COL-3180	Acu-Loc 2 VDR Extension Plates Screws	
Instrumentation		Acu-Loc 2 VDR Plate Extension Link Screw	30-0093
2.5 mm Quick Release Hex Driver	HPC-0025		
3.5 mm Screw Driver Sleeve	MS-SS35		

References

1. Geissler WB, Clark SM. Fragment-specific fixation for fractures of the distal radius. *J Wrist Surg.* 2016; 5(1):22–30.

Notes:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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