stryker

Variax 2 Distal Radius Locking Plates

Operative technique

Volar and dorsal Fragment specific Wrist spanning



VariAx 2

Distal Radius Locking Plates

Contents

Indications and contraindications	3
Overview	4
Instrumentation	4
Implant: screw platform	11
Instrumentation	12
Implants: plate platform	14
Operative technique	26
Volar plates	26
Extended Volar plates	28
Aiming Blocks	29
Precision template	31
XXL Volar plates	34
XXS Volar plates	35
Plate Holding Reduction Clamp	37
Dorsal DR plates	38
Lateral DR plates	41
Dorsal medial DR plates	44
Dorsal lateral DR plates	47
Volar rim DR plates	50
Wrist spanning plates	53

This publication sets forth detailed recommended procedures for using Stryker devices and instruments.

It offers guidance that you should heed, but, as with any such technical guide, each surgeon must consider the particular needs of each patient and make appropriate adjustments when and as required.

Please remember that the compatibility of different product systems has not been tested unless specified otherwise in the product labeling.

WARNING

- Follow the instructions provided in our cleaning and sterilization guide (OT-RG-1).
- All non-sterile devices must be cleaned and sterilized before use.
- Multi-component instruments must be disassembled for cleaning. Please refer to the corresponding assembly / disassembly instructions.

↑ WARNING

- The patient should be advised that the device cannot and does not replicate a normal healthy bone, that the device can break or become damaged as a result of strenuous activity or trauma and that the device has a finite expected service life.
- Removal or revision of the device may be required sometime in the future due to medical reasons.

Consult Instructions for Use (www.ifu.stryker.com) for a complete list of potential adverse effects and adverse events, contraindications, warnings and precautions.

The surgeon must advise patients of surgical risks, and make them aware of adverse effects and alternative treatments.

Indications and Contraindications

VariAx 2 Distal Radius Locking Plates

The devices are non-active implants intended to provide temporary stabilization for bones or bone fragments.

Indications for use

The VariAx 2 Distal Radius implants are indicated for treatment of fractures, non-unions, malunions and deformities of the distal radius.

Contraindications

The licensed healthcare professional's education, training and professional judgment must be relied upon to choose the most appropriate device and treatment. They should warn patients about these contraindications and limitations when appropriate.

Conditions presenting an increased risk of failure include:

- Any active or suspected latent infection or marked local inflammation in or about the affected area.
- Compromised vascularity that would inhibit adequate blood supply to the fracture or the operative site.
- Bone stock compromised by disease, infection or prior implantation that cannot provide adequate support and/or fixation of the devices.
- Material sensitivity, documented or suspected.
- Patients having inadequate tissue coverage over the operative site.
- Implant utilization that would interfere with anatomical structures or physiological performance.
- Any mental or neuromuscular disorder which would create an unacceptable risk of fixation failure or complications in postoperative care.
- Other medical or surgical conditions which would preclude the potential benefit of surgery.

Instrumentation

Reduction Instruments

These tools facilitate fracture reduction and soft tissue management.



Periosteal elevator (705294)



Periosteal elevator (705295)



Straight Reduction Clamp, Broad (705297)



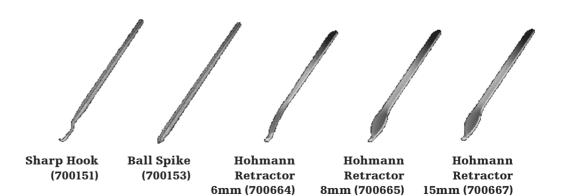
Straight Reduction Clamp (703822)



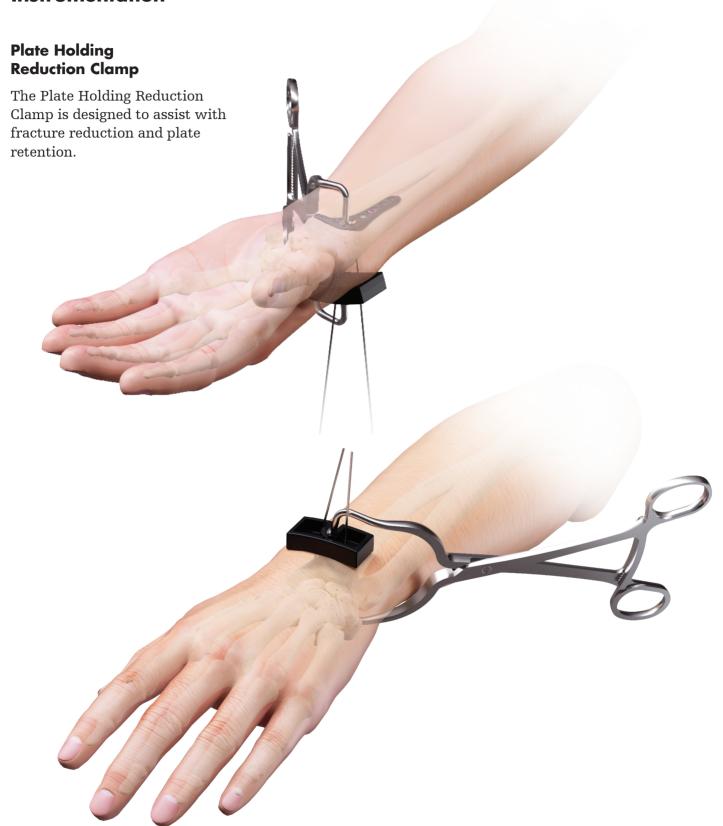
Repositioning forceps L130mm (702926)



Repositioning forceps L143mm (702932)



Instrumentation



Instrumentation

Modular Handle

VariAx 2 offers a modular handle system. This is composed of two handle grip sizes (medium and large) that can be interchanged with either a bi-directional ratcheting AO-Coupling insert or a standard AO-Coupling insert.

Both handle sizes are equipped with a spin-cap to allow insertion using a two-finger technique.

In order to disengage the insert from the handle, push down on the button on the distal part of the handle and pull the insert away from the handle.

The ratcheting insert can work in three modes: clockwise ratcheting, counterclockwise ratcheting or neutral. To switch between the different modes, simply twist the distal part of the insert to the desired driving direction.



Instrumentation

Aiming Block

There are specific Aiming Blocks for all widths of both the Volar and Extended Volar Plate.
Aiming Blocks allow for drilling in the neutral axis of the preangulated holes. The Aiming Block comes pre-assembled with a set screw that attaches to the plate via the distal threaded window hole. The Set Screw of the Aiming Block accepts the T8 screwdriver blade of the system.



- The Aiming Block can only be used with the Volar Plate and Extended Volar Plate - not the XXS, or XXL Volar Plates.
- The Precision Template can only be used with the Volar Plate - not the Extended, XXS, or XXL Volar Plates.



The Precision Template is intended to act as a positioning guide and reduction aid. The radiopaque outline of the Precision Template is designed to align with an anatomically reduced bone. The slotted K-wire holes allow for K-wires to be levered to manipulate any distal fragments. There are two radiopaque markers visible laterally that facilitate a 10° degree tilted medial lateral X-ray to confirm anatomic reduction of the DRUJ. The Precision Template is attached to the plate via the proximal threaded window hole using the Threaded Drill Tower. The Precision Template must be attached after the Aiming Block is attached to the plate.





Instrumentation

Threaded Drill Tower for T8 Holes

The Threaded Drill Tower for T8 holes can be used in any circular VariAx screw hole and the threaded window holes. The tower attaches to the plate by turning clockwise into the screw hole. The tower can be used as a fixed angle drill guide for all 2.4mm and 2.7mm screws. The tower can also be used as a joystick to aid in plate positioning. Additionally, the tower is used to fix the Precision Template to the plate.



Joystick for plate positioning and temporary fixation

The joystick for T8 holes can be used in any VariAx circular hole to aid in plate positioning.

Additionally, it can also be used to temporarily fix the plate to the bone by inserting a K-wire with a diameter up to 1.6mm through a joystick that is already engaged in the plate hole.

After inserting the joystick tip in the circular hole, turn the knob on the upper part of the joystick clockwise to fix it in the hole.

To remove the joystick, simply remove any K-wire and turn the knob counter-clockwise to disengage the tip from the hole.



Instrumentation

Depth Measurement Options

VariAx 2 offers various options to evaluate the screw length. A standard depth gauge (705170) may be used either independently or through a plate hole. All drills are scaled so that the surgeon may evaluate the screw length when using the drill through the dedicated drill guides. Screw length can also be evaluated through the Threaded Drill Tower (706620) by subtracting 15mm when reading off the calibrated drill bit.

Lastly, a SpeedGuide (703891 for 2.0 drill bit and 703888 for the Speed Guide Sleeve) is also offered that allows the surgeon to drill and measure the hole depth in one step with a single instrument.

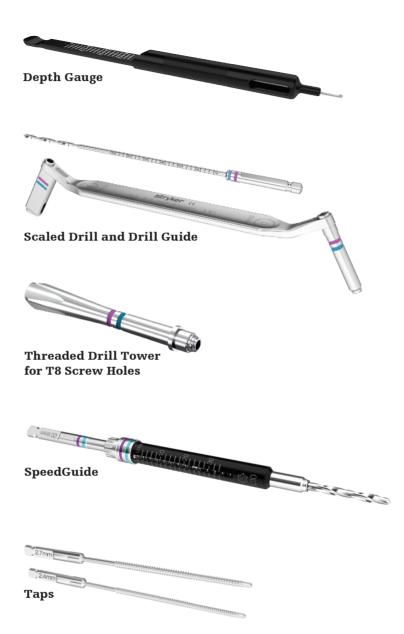
For further information on the SpeedGuide, please refer to the SpeedGuide Operative Technique.

Taps

2.4mm and 2.7mm taps (703900 for 2.4mm screws and 703889 for 2.7mm screws) are available in the system.

CAUTION

Although all screws are selftapping, it is recommended to use a tap if excessive resistance is felt during insertion or if the bone is dense.



Instrumentation

	Small Fragment	
Screw Type	2.4mm Non-locking 2.4mm Locking 2.0mm Locking Peg	2.7mm Non-locking 2.7mm Locking 2.7mm Non-Locking Partially Threaded
Color code	Blue	Purple
ORIF pilot drills		
Lag screw overdrills	<u> </u>	
ORIF pilot drill lengths	135mm	
Drill guides		

The drill guides facilitate drilling of a polyaxial or fixed-angle pilot hole for either a non-locking or locking screw. Furthermore, the opposite side of the fixed angle drill guide facilitates K-wire insertion.

Overdrills and drill guides for interfragmentary lagging techniques are available for all screw sizes. Always match the color ring marking on the drill bit with the color ring markings on the drill guide.

Implants: screw platform

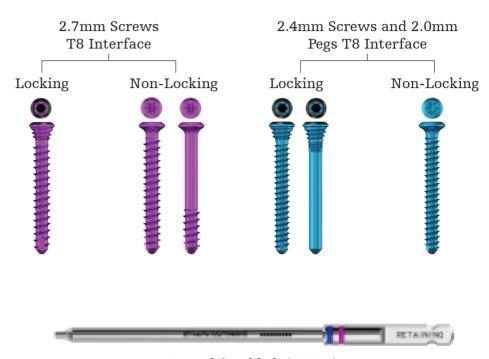
Color Coding and Screw/Peg Options

Locking and non-locking screws can be used in any round hole and in the threaded window holes

Locking screws are laser marked with a 'dot' and 'ring' marking on the screw head to differentiate them from nonlocking screws.

Pre-Angled Distal Screw Holes

The distal screw holes are angled to give a predetermined screw pattern in the distal bone block when drilling at a 0 degree angle relative to the plate hole axis. See page 17 for screw trajectories.



Screwdriver blade (703663)

Screw color coding	Screw type	Length	Interface
Plue	2.4mm screws	8–38mm	
Blue	2.0mm pegs	16-26mm	Т8
Purple	2.7mm screws	8–50mm	
	2.7 partially threaded screws	16-26mm	

CAUTION

When final tightening of the locking screw occurs, take care not to over-torque the screw. Excessive torque may damage the locking mechanism, the screw and /or the screwdriver blade.

/ CAUTION

Always match the screw color with at least one of the color ring markings.

Instrumentation

SmartLock Polyaxial Drill Guide

The polyaxial 2.0mm drill guide for T8 Screws (703684) facilitates drilling a 2.0mm pilot hole for a 2.4 or 2.7mm T8 screw or a 2.0mm peg centrically for locking or non-locking screws.

This drill guide allows for ± 15 degrees of angulation. A lip on the drill sleeve will engage and allow toggling in the hole. The range in which the drill guide toggles will create a 30-degree cone and every angle in this range will be a locking position.

Ensure the drill guide is fully engaged in the hole and is aimed in the desired direction.

This may allow the surgeon to aim where the screw / peg should be placed. Also, depending on the placement of the plate, there may be a need to angle a screw / peg out of the fracture line. Not using a drill guide may lead to drilling out of specified locking range and compromise the locking capabilities.

Fixed Angle Drill Guide

The fixed angle 2.0mm drill guide for T8 Screws (703902) facilitates drilling a 2.0mm pilot hole for a 2.4 or 2.7mm T8 screw or a 2.0mm peg centrically for locking or non-locking screws. This drill guide engages in the screw hole and only allows for drilling in the 0 degree nominal angle direction.



CAUTION

- When opting for locking screw, use of drill guides or the Threaded Drill Tower for screw hole preparation is mandatory.
- Make sure to drill perpendicular to oblong holes and the threaded window holes.
- Only use non-locking bone screws in oblong holes.
- Polyaxial Drill Guide is not to be used in threaded window holes.



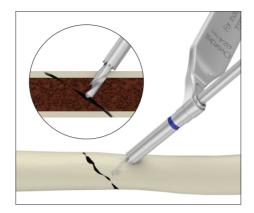
Instrumentation

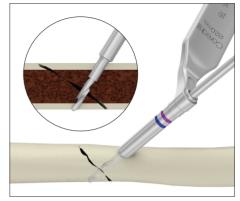
Drills & Drill Guides for Lagging

In addition to the standard Drills and Drill guides, a number of solutions are also available to perform a lag screw technique independently.

Dedicated overdrills for each screw size are available for overdrilling the near cortex when placing a lag screw independently. In addition to being marked with the actual drill diameter on the AO Coupling, these overdrills are also marked with a single color ring corresponding to the desired screw diameter. This marking matches the marking on the correct side of the lagging drill guide.

In order to insert a lag screw independently of a plate, the Independent Lag Screw Drill Guides (703688 for 2.4mm screws and 703884 for 2.7mm screws) should be used. First, the near cortex should be overdrilled using the side of the drill guide marked with a single color ring to create a gliding hole (Step #1).





Step 1

Step 2

The other side of the drill guide can then be used (marked with two color rings) by inserting the 'top-hat' end in the already drilled gliding hole and using the standard drill bit through it to drill through the second cortex (Step #2). This standard drill is scaled in order to evaluate the appropriate screw length. Upon screw insertion, this technique will serve to lag the far cortex towards the near cortex, hence applying compression.

CAUTION

Take care not to damage the plate hole when using the Independent Lag Screw Drill Guide.

Implants: plate platform

VariAx 2 Volar DR Plates



Narrow Narrow 3 Holes 4 Holes 46mm 53mm

Narrow 7 Holes **74**mm



Standard Standard Standard 3 Holes 4 Holes 7 Holes 47mm 54mm **75mm**



Wide Wide Wide 3 Holes 4 Holes 7 Holes 48mm 55mm **76mm**

VariAx 2 Extended Volar DR Plates



Narrow 3 Holes 49mm

Narrow 4 Holes 56mm

Narrow 7 Holes 77mm



Standard 3 Holes 52mm



Standard Standard 7 Holes 80mm

4 Holes

59mm



Wide 3 Holes **53mm**



Wide Wide 4 Holes 7 Holes 60mm 81mm

VariAx 2 XXS Volar DR Plates



3 Holes 30mm

Implants: plate platform

VariAx DR XXL Volar Plates

Indications

The VariAx Distal Radius System is indicated for internal fixation of the distal radius for the following conditions and procedures: intra-and extra-articular fractures (including non-union) and osteotomy (including malunion).

Contraindications

The physician's education, training and professional judgment must be relied upon to choose the most appropriate device and treatment. Conditions presenting an increased risk of failure include:

- Any active or suspected latent infection or marked local inflammation in or about the affected area.
- Compromised vascularity that would inhibit adequate blood supply to the fracture or the operative site.
- Bone stock compromised by disease, infection or prior implantation that cannot provide adequate support and/or fixation of the devices.
- Material sensitivity, documented or suspected.
- Patients having inadequate tissue coverage over the operative site.
- Implant utilization that would interfere with anatomical structures or physiological performance.
- Any mental or neuromuscular disorder which would create an unacceptable risk of fixation failure or complications in postoperative care.
- Other medical or surgical conditions which would preclude the potential benefit of surgery.





100mm

74mm

145mm

189mm

Implants: plate platform

VariAx 2 Volar DR Plate - design detail

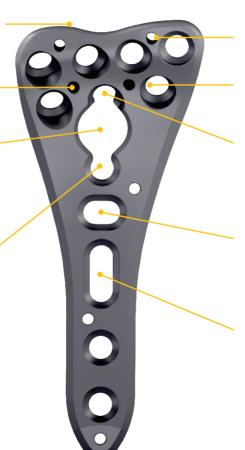
- All closed circular holes are Smartlock Polyaxial holes and accept VariAx 2 T8 locking and non-locking screws and pegs (2.4mm and 2.7mm).
- The threaded window holes are monoaxial and also accept VariAx 2 T8 locking and non-locking screws and pegs (2.4mm and 2.7mm).

Tapered distal portion to minimize plate prominence and soft tissue irritation around the watershed line.

K-wire hole to assess radial styloid screw trajectories.

Functional window for fracture visualization, bone grafting, and two supplemental screw fixation holes.

Monoaxial threaded window hole and Precision Template attachment point.



K-wire hole to assess distal ulnar screw trajectory.

Converging screw trajectory pattern for ulnar screws.

Monoaxial threaded window hole and Aiming Block set screw attachment point.

Transverse hole allows for 1.7mm radial-ulnar adjustment of the plate.

Longitudinal hole allows for 4.2mm distal-proximal adjustment of the plate.

Implants: plate platform

VariAx 2 Volar DR Plate - Screw trajectories



Narrow AP Screw Trajectories



Narrow LAT Screw Trajectories



Narrow Axial Screw Trajectories



Standard AP Screw Trajectories



Standard LAT Screw Trajectories



Standard Axial Screw Trajectories



Wide AP Screw Trajectories



Wide LAT Screw Trajectories



Wide Axial Screw Trajectories

Implants: plate platform

VariAx 2 Volar DR Plate - K-wire trajectories

K-wire	Trajectory	Rationale
1 Distal Ulnar	Parallel to Distal Ulnar Screw	 Indicator for distal ulnar screws not in articular surface. Can be used with the distal radial K-wire during the lift-off technique.
2 Distal Radial	Parallel to Distal Ulnar K-wire	• Can be used with the distal ulnar K-wire during the lift-off technique.
3 Proximal Ulnar	Parallel to Proximal Ulnar Screw	• Indicator for proximal ulnar screws.
4 Proximal Radial	Approximates Radial Styloid Screws	• Indicator for radial styloid screws.







Standard K-wire Trajectories

/ CAUTION

K-wire with Olive Stop (56-40281) is to be used only in the screw holes.

K-wire	Function
1.1mm Zebra (07-40281)	Paperclip technique
1.25mm (390157)	K-wire hole in plate
1.4mm Olive Stop (56-40281)	Screw hole in plate
1.6mm (390164)	Precision Template and Plate Holding Reduction Clamp
2.0mm (390192)	Fracture Reduction

Implants: plate platform

VariAx 2 Extended Volar DR Plate – design detail

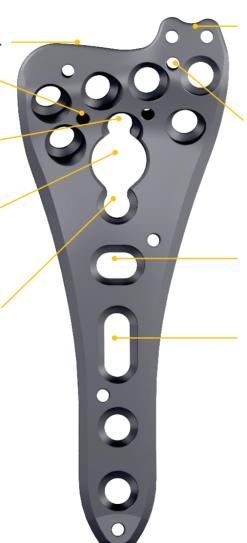
Tapered plate design to minimize plate prominence and soft tissue irritation around the watershed line.

K-wire hole to assess radial styloid screw trajectories.

Monoaxial threaded window hole and Aiming Block set screw attachment point.

Functional Window for fracture visualization, bone grafting, and two supplemental screw fixation holes.

Monoaxial threaded window hole.



Low profile pre-bent extension designed to buttress volar-ulnar corner fragments; holes allow for suture fixation.

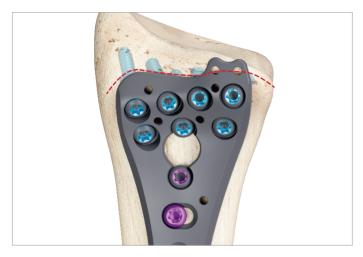
K-wire hole to assess distal ulnar screw trajectory.

Transverse hole allows for 1.7mm radial-ulnar adjustment of the plate.

Longitudinal hole allows for 4.2mm distal-proximal adjustment of the plate.

Implants: plate platform

VariAx 2 Extended Volar DR Plate - plate positioning



AP Extended Screw Trajectories



AP Standard Screw Trajectories

VariAx 2 Extended Volar DR Plate - screw trajectories



LAT Extended Screw Trajectories

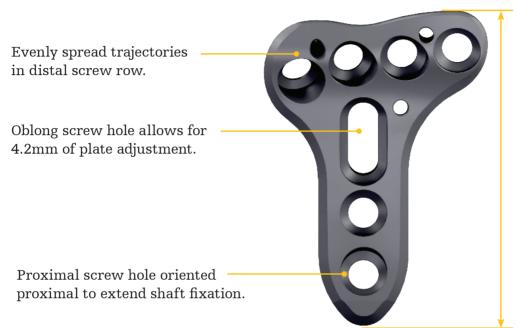


LAT Standard Screw Trajectories

K-wire trajectories of the Extended Plate follow the same pattern as mentioned on page 18.

Implants: plate platform

VariAx 2 XXS Volar DR Plate - design detail



Length of the plate is 30mm; intended to spare the pronator quadratus muscle.



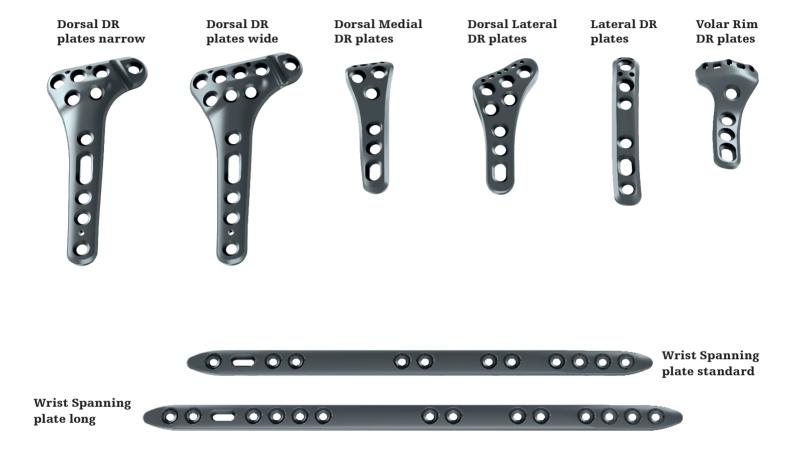
XXS AP Screw Trajectories



XXS LAT Screw Trajectories

Implants: plate platform

VariAx 2 DR Dorsal and DR Frag Specific plates



Implants: plate platform

VariAx 2 Dorsal DR Plate - design detail

Low profile plate designed to buttress the dorsal rim.

Plate bridging area between

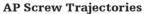
distal and shaft parts.



Radial styloid hole designed for easy contouring.

Oblong screw hole allows for 5mm of plate adjustment.



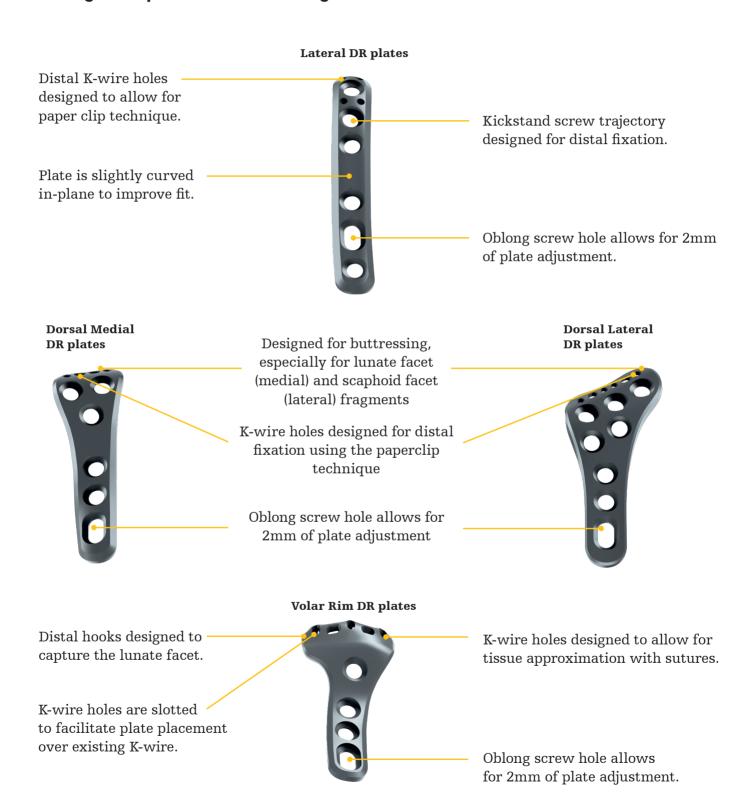




Lateral Screw Trajectories

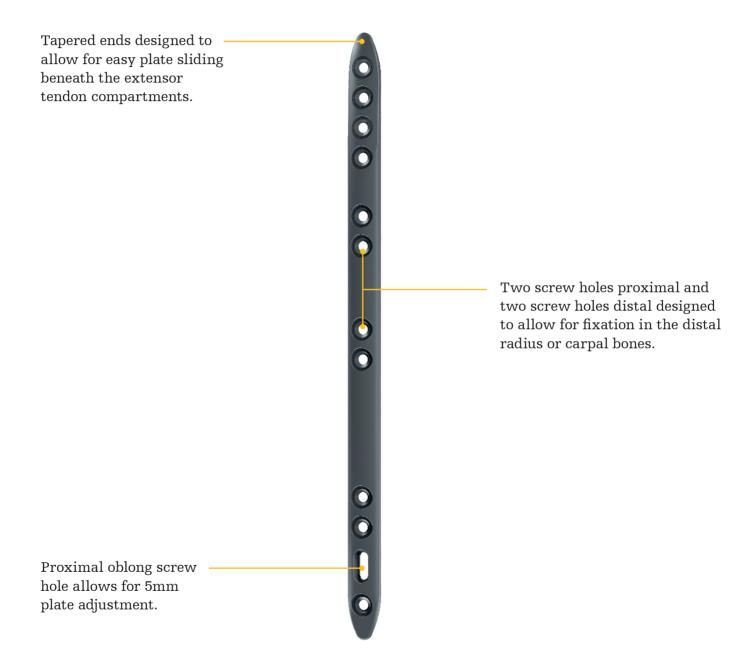
Implants: plate platform

VariAx 2 Fragment Specific DR Plates - design detail



Implants: plate platform

VariAx 2 Wrist Spanning DR Plate - design detail



Operative technique **Volar plates**

An incision is made approximately 5 – 8cm long just radial to the FCR tendon. The FCR tendon is retracted ulnarly and dissection is carried down through the floor of the FCR sheath. The Pronator Quadratus muscle is identified and dissected in its entirety off of the volar surface of the radius as an ulnarly based flap.

Once the fracture is exposed, a direct or indirect reduction technique can be used.

Temporary fixation can be achieved using K-wires, the Plate Holding Reduction Clamp, or external traction.

The plate should be placed slightly proximal to the distal edge of the radius to support the volar articular fracture fragments and to avoid inserting screws/pegs into the joint. The most distal ulnar K-wire hole (identified in the bottom figure) gives guidance to the trajectory of the most distal screws to ensure preservation of the joint space. The second-most distal radial K-wire hole gives guidance to the trajectory of both radial styloid screws.







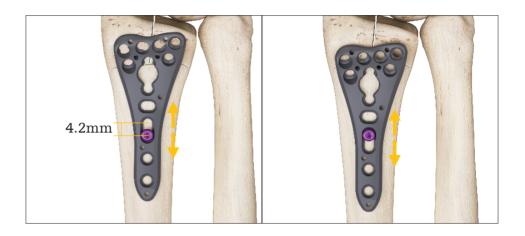
Operative technique **Volar plates**

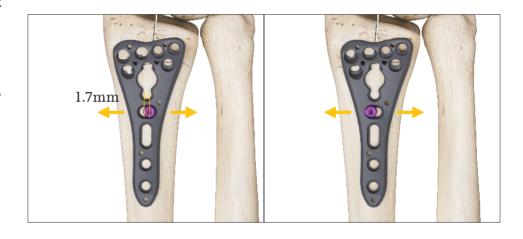
Longitudinal or transverse oblong shaft holes can be used for minor plate adjustment prior to definitive plate placement. Nonlocking screws or K-wires with Olive Stop can be used in these holes for adjustment. If using a screw, drill a pilot hole in either hole using the appropriate drill guide. Measure the depth of the hole to determine screw length using the calibrated drill bit, depth gauge, or the SpeedGuide if used. The screw can be placed but not fully tightened to allow for adjustment. The longitudinal hole allows for 4.2 mm of movement in the distal/proximal direction and the transverse hole allows for 1.7mm adjustment in the radial/ ulnar direction. If compression is needed, a non-locking screw can be placed eccentrically in the longitudinal oblong hole and compressed by pulling the plate proximally. Fill any necessary circular or threaded window screw holes with either locking screws, nonlocking screws, or locking pegs, as necessary. The position and number of screws applied depends on the type of fracture and/or reduction method.

CAUTION

Verify placement of screws and pegs by use of fluoroscopy to ensure that they do not penetrate the joint and are of appropriate length.

Close the incision.







Extended Volar plates

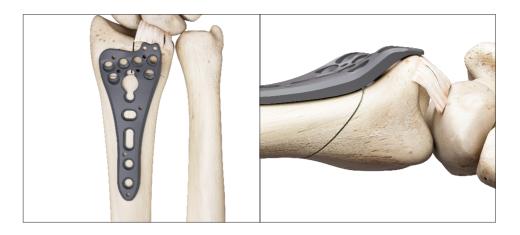
An incision is made approximately 5 – 8cm long just radial to the FCR tendon. The incision may be extended distally to allow proper placement of the Extended Volar Plate. The FCR tendon is retracted ulnarly and dissection is carried down through the floor of the FCR sheath. The Pronator Quadratus muscle is identified and dissected in its entirety off of the volar surface of the radius as an ulnarly based flap.

If the volar capsule will be sutured, the suture should be fed through the distal K-wire holes on the ulnar extension prior to placement on the bone. #2-0 or #3-0 XBraid S Sutures are suitable for use in the Extended Volar Plate.

Continue by referencing the steps of the Volar Plate procedure (page 26) following the incision and optional suture preparation.

CAUTION

Verify placement of screws and pegs by use of fluoroscopy to ensure that they do not penetrate the joint and are of appropriate length.





Operative technique Aiming blocks

Ensure the selection of the aiming block corresponds to the plate type and width being used – i.e. Volar Plate or Extended Volar Plate and narrow/standard/wide.

The aiming block can be assembled on the back table. The aiming block is fit onto the plate and is fastened to the plate by tightening the pre-assembled set screw into the distal threaded window hole. The set screw accepts the T8 screwdriver in the system. K-wires may be used through the plate-aiming block assembly for temporary fixation.

The polyaxial drill guide can be used in any hole to drill for the pre-determined trajectory. Alternatively, the Aiming Block Drill Sleeve can also be used to drill the pre-determined trajectory. The drill sleeve can be pushed through the aiming block hole. Two drill sleeves can be used concurrently to facilitate the drilling process. The SpeedGuide can also be used for fixed angle drilling and measuring.







Operative technique Aiming blocks

Measure depth with either the depth gauge, calibrated drill bits, or SpeedGuide through the plate-aiming block assembly. The screw can be inserted through the aiming block, checking placement using fluoroscopy.

To remove the aiming block, unscrew the pre-assembled set screw and remove aiming block from the plate.



CAUTION

- Aiming Block cannot be used with plates that have been intra-operatively contoured or bent.
- Pre-assembled Set Screw should not be overly tightened as this may damage the screw hole.
 Only moderate effort is needed.
- To prevent damage to the Aiming Block and/or plate, the Polyaxial Drill Guide or Aiming Block Drill Sleeves must be used for screw hole drilling. Threaded Drill Tower must not be used for screw hole drilling through Aiming Block.
- Once the Aiming Block is mounted to the plate, verify the alignment by passing a K-wire through the K-wire holes. This should be done prior to mounting the plate to the bone.





Precision template

Follow the Volar Plate operative technique for soft tissue preparation. If the Precision Template is to be used, extend the incision about 10mm in the distal radial direction. The fracture is reduced and provisionally fixed using K-wires.



The Precision Template can be assembled on the back table by placing the Precision Template on the plate. Ensure the width of the Precision Template corresponds to the matching width of the Volar DR Plate being used.



The Threaded Drill Tower is then threaded into the proximal window hole. Optional: The Aiming Blocks can be attached as part of the Precision Template and plate assembly prior to the attachment of the Precision Template.



Precision template

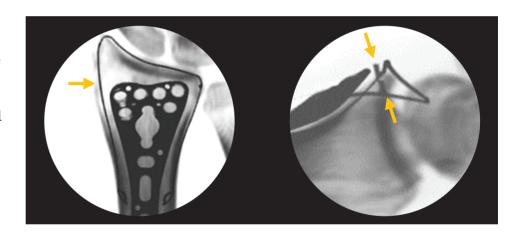
Position the construct onto the bone with the anatomical design of the Precision Template working as a tactile positioning guide. Insert K-wires through the radial slotted K-wire holes in the Precision Template for temporary fixation of the construct to the bone.



Check the position of the plate using X-ray in the AP view to confirm the radio-opaque outline is aligned to the shape of the bone and adjust as necessary. The plate position can be verified in a 10-degree tilted medial lateral X-ray by aligning the two lateral markers in the Precision Template (see the middle figure).

The radial slotted K-wire holes will allow proximal/distal adjustments in the construct as well as flexion and extension in the sagittal plane. These adjustments are done using a lateral X-ray once the AP alignment has been set.

A non-locking screw can be inserted into the oblong hole.





Precision template

It is recommended to remove the Threaded Drill Tower to access the distal screw holes once plate position is confirmed and locked in with additional K-wires or screws. Repeat drilling, measuring, and placing of locking or non-locking screws/locking pegs into the distal holes of the plate.

To remove the Precision Template and optional Aiming Block, first remove all K-wires. Then the Precision Template can be removed followed by the Aiming Block.



Precision Template cannot be used with plates that have been intra-operatively contoured or bent.







XXL Volar plates

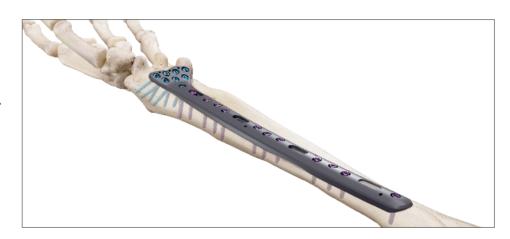
The VariAx Distal Radius XXL Volar Plate can be used for fractures extending into the midshaft where the regular Volar Plate does not allow adequate proximal fixation.

Reference the Volar Plate Operative Technique for incision steps. When making initial incision, the length of incision is dependent on the length of the fracture and the length of the plate required.

In order to access proximal screw holes for midshaft fractures requiring longer plates, the incision should be extended proximally to the necessary length.

Continue by referencing the steps of the Volar Plate technique (page 26).





XXS Volar plates

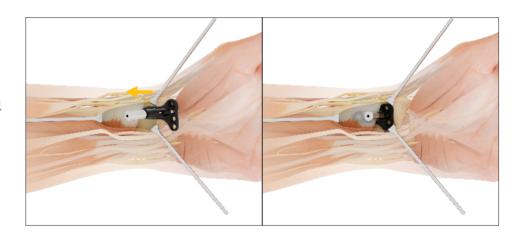
An incision is made approximately 2 – 3cm long just radial to the FCR tendon. The Pronator Quadratus (PQ) muscle is preserved.

An incision should be made alongside the distal edge of the PO muscle. The central aspect of the PO is then elevated off the radial metaphysis to allow the plate to be slid beneath the PO. The joystick (703927) can be used to aid in plate placement.

The first pilot hole can be drilled in the oblong gliding hole using the appropriate drill guide. Measure the depth of the hole to determine screw length.

A non-locking screw can be placed in the oblong gliding hole but not completely tightened to allow adjustment in the distal/proximal direction.







XXS Volar plates

Confirm plate placement by use of fluoroscopy and then tighten the screw(s).

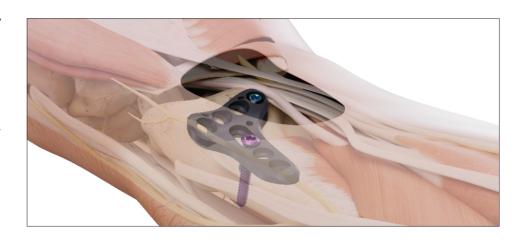
Repeat drilling, measuring, and placing of locking or non-locking screws/locking pegs into the distal holes of the plate. The position and number of screws applied depends on the type of fracture.

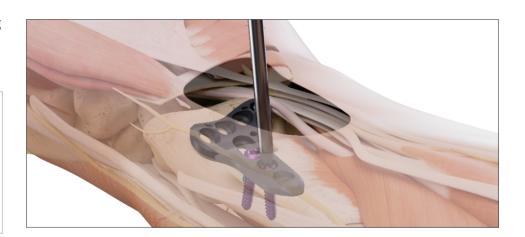
To place locking or non-locking screws in the proximal end of the plate, make a 1.5cm transverse separation of the PO muscle.

Once exposed, continue by placing locking or non-locking screws into the proximal holes.



Verify proper placement of screws and pegs by use of fluoroscopy to ensure that they do not penetrate the joint and are of appropriate length.







Operative technique Plate Holding Reduction Clamp

The Plate Holding Reduction
Clamp is designed to sit dorsally
on the soft tissue using the
Reduction Clamp Attachment.
The attachment can be transferred
to either end of the clamp by
sliding it on and off. The K-wire
holes in the attachment allow for
percutaneous fracture reduction
and fixation.

Before using the clamp, provisionally fix the plate to the bone in at least one place using either a screw or K-wire.

The volar side of the Plate Holding Reduction Clamp interfaces with the plate holes to maintain desired plate position and hold reduction.







DR Dorsal Plates

Longitudinal incision is made just ulnar to Lister's tubercle at the distal radius region.

Dissection is performed down to the extensor retinaculum. The third compartment is opened and the extensor pollicis longus is displaced radially.

The second compartment wrist extensors are subperiosteally elevated radially and the fourth compartment is subperiosteally elevated ulnarly. The terminal branches of the posterior interosseous nerve may be excised for pain reduction.

The fracture is reduced. The use of an external traction device and/or K-wire for temporary fixation may be helpful.

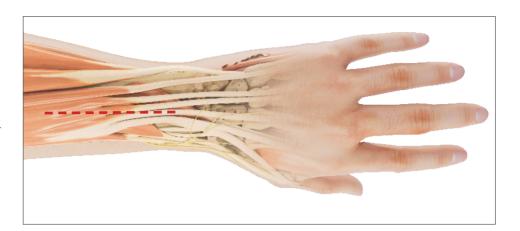
If necessary, adapt the plate for correct anatomical position. Removal of Lister's Tubercle might be necessary.

NOTICE

The distal lateral aspect of the plate can be bent along the groove with bending pliers to better match patient anatomy.

WARNING

- The plate bending pliers are designed to be used only in circular holes.
- Always attach the bending pliers to two adjacent holes to prevent deformation of the screw holes.
- Do not re-bend plates.







DR Dorsal Plates

The plate should be placed slightly proximal the distal edge of the distal radius to avoid inserting screws/pegs into the joint.

The fixed angled screw trajectory provides support to the subchondral surface for a more stable construct. The distal portion of the plate is partially thickened for better screw head protection when screws are angled within the 15 degree variable angle arc.







The first pilot hole should be drilled in the oblong gliding hole.

If required, compression of the fracture site may be achieved by pulling the plate proximally with an eccentrically placed screw in the oblong hole.



DR Dorsal Plates

Measure the depth of the hole to determine screw length.

The screw is placed in the oblong gliding hole but not completely tightened to allow adjustment of the plate in a distal or proximal direction.

Confirm proper plate positioning by use of fluoroscopy and then tighten the first screw.

Repeat drilling, measuring, and placing of locking or non-locking screws/locking pegs into the distal holes of the plate. The position and number of screws applied depends on the type of fracture.

Place locking or non-locking screws in the proximal end of the plate.



Verify placement of screws and pegs by use of fluoroscopy to ensure that they do not penetrate the joint.

Close the incision.

ACAUTION

Screw length may need to be changed after plate is fully seated on bone.





Lateral DR Plates

An incision is made along the radial column.

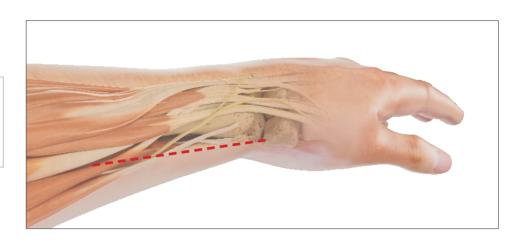
WARNING

Care must be taken to avoid injury to the superficial branch of the radial nerve.

The first dorsal compartment is released. The tendons are retracted volarly.

The brachioradialis can be elevated or the plate can be placed directly on the brachiaradialis insertion.

The fracture should be reduced and stabilized with a K-wire placed from the distal radial styloid and aimed dorsal and proximal.





The plate may be slipped over the K-wire (07-40281) and placed along the radial column.

NOTICE

The plate should sit along the radial edge of the radius.

Confirm correct plate placement by use of fluoroscopy.



Lateral DR Plates

A non-locking screw placed in the oblong hole will compress the plate to the bone. If required, compression of the fracture site may be achieved by pulling the plate proximally with an eccentrically placed screw in the oblong hole.

A non-locking screw may also be placed in the oblong shafthole, instead of using the K-wire, for preliminary fixation of the shaft portion of plate.

Fill the remaining screw holes with either locking or non-locking screws, as necessary.

K-wires may also be used in conjunction with the distal screws.





The 3 in 1 K-wire bender/cutter/inserter is used to bend K-wires distally.

It is recommended only one K-wire be placed distally at a time in order to make proper use of the K-wire Bending Pliers (64-20118).



Operative technique Lateral DR Plates

After insertion, the tamp (64-00011) and mallet (43-09830) can be used to further insert the K-wires.



Ensure the non-locking screw in the oblong shaft hole is fully tightened.

The incision is closed.

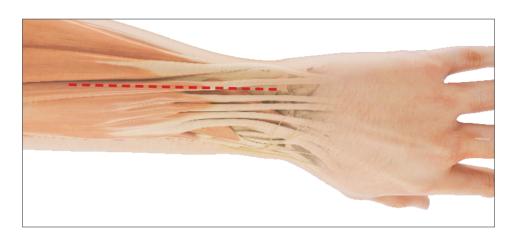


Dorsal Medial DR Plates

When plate is being used in conjunction with the lateral plate, incision is made between the 4th and 5th extensor compartments.

WARNING

Care is taken to protect the superficial radial and dorsal ulnar nerve branches.



Incise the extensor retinaculum between the 4th and 5th compartments and sub periosteally expose the dorsal ulnar portion of the radius.



The fracture should be reduced and stabilized with traction and palmar flexion of the wrist or direct pressure. Ensure dorsal and ulnar fragments are reduced with K-wire if necessary.

The K-wire may be placed through the ulnar corner fragment.

The plate is slipped over the K-wire (07-40281) and placed along the dorsal ulnar corner.

Confirm correct plate placement by use of fluoroscopy.



Operative technique Dorsal Medial DR Plates

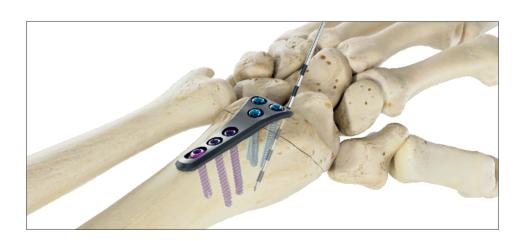
A non-locking screw placed in the proximal oblong hole will compress the plate to the bone. If required, compression of the fracture site may be achieved by pulling the plate proximally with an eccentrically placed screw in the oblong hole.



Fill the remaining screw holes, distally to proximally, with either locking or non-locking screws, as necessary.



K-wires may also be used in conjunction with the distal screws.



Operative technique **Dorsal Medial DR Plates**

The 3-in-1 K-wire bender/cutter/ inserter is used to bend K-wires distally.

It is recommended only one K-wire be placed distally at a time in order to make proper use of the K-wire bending pliers (64-20118).



Ensure the non-locking screw in the oblong shaft hole is fully tightened.

The incision is closed.



Dorsal Lateral DR Plates

Longitudinal incision is made just ulnar to Lister's tubercle at the distal radius region.

Dissection is performed down to the extensor retinaculum. The third compartment is opened and the extensor pollicis longus is displaced radially.

The second compartment wrist extensors are subperiosteally elevated radially and the fourth compartment is subperiosteally elevated ulnarly. The terminal branches of the posterior interosseous nerve may be excised for pain reduction.

The fracture should be reduced and stabilized with traction and palmar flexion of the wrist. Ensure dorsal and radial fragments are reduced with K-wire if necessary. The K-wire may be placed through the radial corner fragment.





The plate is slipped over the K-wire (07-40281) and placed along the dorsal radial corner.



Dorsal Lateral DR Plates

A non-locking screw placed in the proximal oblong hole will compress the plate to the bone. If required, compression of the fracture site may be achieved by pulling the plate proximally with an eccentrically placed screw in the oblong hole.

Fill the remaining screw holes, distally to proximally, with either locking or non-locking screws.

K-wires may also be used in conjunction with the distal screws.





The 3-in-1 K-wire bender/cutter/inserter is used to bend K-wires distally.

It is recommended only one K-wire be placed distally at a time in order to make proper use of the K-wire Bending Pliers (64-20118).



Operative technique **Dorsal Lateral DR Plates**

After insertion, the tamp (64-00011) and mallet (43-09830) can be used to further insert the K-wires.

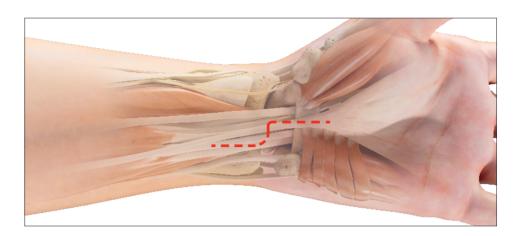
Ensure the non-locking screw in the oblong shaft hole is fully tightened.

The incision is closed.



Volar Rim DR Plates

Incision is made through a standard volar Henry approach. Alternatively, a direct medial approach may provide superior exposure. For the direct medial approach, an extended carpal tunnel approach can be used distally and incorporated proximally to form an interval between the flexor tendons and the ulnar neurovascular bundle.



The fracture should be reduced and stabilized. The volar capsule should remain in place. Ensure the volar fragments are reduced and stabilized with a K-wire if necessary. The K-wire should be placed at the distal volar rim of the lunate facet.

NOTICE

For the Volar Rim DR Plate the K-wires are used for temporary fixation.

The plate is slipped over the K-wire (07-40281) and placed above volar capsule on the volar ulnar corner.

The vertical K-wire slots allow for distal or proximal adjustment and the horizontal K-wire slots allow for lateral or medial adjustment of the plate.





Volar Rim DR Plates

Ensure distal hooks penetrate the volar capsule and stabilize volar rim fragments.

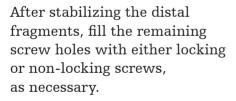


With the plate in proper position, a non-locking screw is placed in the proximal oblong hole, compressing the plate to the bone.

If required, compression of the fracture site may be achieved by pulling the plate proximally with an eccentrically placed screw in the oblong hole.



Verify placement of screws and pegs by use of fluoroscopy to ensure that they do not penetrate the joint.



The distal K-wire holes can be used for placing sutures in the volar capsule. #2-0 or #3-0, XBraid S Sutures are suitable for use in the Volar Rim plate.

Temporary K-wires can now be removed.





Operative technique Volar Rim DR Plates

Ensure the non-locking screw $\,$ in the oblong shaft hole is fully tightened.

The incision is closed.



Operative technique VariAx 2 Wrist Spanning Plates

Patient Preparation

The patient is placed in a supine position with the affected arm on a radiolucent hand fracture table.



Initial fracture reduction may be preformed by applying traction. Traction may be applied manually or with the help of a traction tower to restore the distal radius to proper length. Please see information on the Stryker Hand Traction System (07-30950).



Plate Positioning

Choose the appropriate length plate and place on the skin over the radius and over the 2nd or 3rd metacarpal until desired positioning is achieved. The wrist spanning plate is available in lengths standard (L172mm) and long (L198mm). The long plate extends more proximally and provides additional support in the radial shaft. Confirm placement with fluoroscopy. The desired placement may be marked with a marking pen.



VariAx 2 Wrist Spanning Plates

Exposure

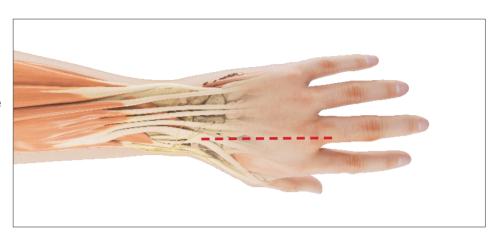
An initial incision is made over the 2nd or 3rd metacarpal. If the incision is being made over the 2nd metacarpal, continue the dissection until the Extensor Carpi Radialis Longus (ECRL) tendon is identified.



Ensure superficial radial nerve branches are protected as necessary.

Reduce the distal radius fracture with application of K-wires or other supplemental fixation if necessary.

It is recommended to make a 2nd incision over the fractured distal radius and over the carpal bones in order to obtain reduction of articular fragments and in order to control the carpus with the center holes of the plate. This second incision should start just proximal to Lister's tubercle. The second and third dorsal compartments (ECRL and ECRB as well as EPL) should be released as necessary and minimally if possible. The VariAx 2 Wrist Spanning plate will need to be placed under the EPL. If the plate is to be placed on the 3rd metacarpal, subperiosteal elevation of the fourth compartment is necessary to allow the plate to be placed along the dorsal aspect of the intermediate column of the distal radius. Bone graft may be used if necessary.





VariAx 2 Wrist Spanning Plates

The 3rd incision is made at the midline of the radius just proximal to the muscles of the abductor pollicis longus (APL) and extensor pollicis brevis (EPB) to expose the radial shaft. Incision point may need to be adjusted based on patient anatomy and fracture configuration.



If too radial, it is possible that the superficial radial nerve may be encountered at the junction of the ECRL and the brachioradialis (BR).

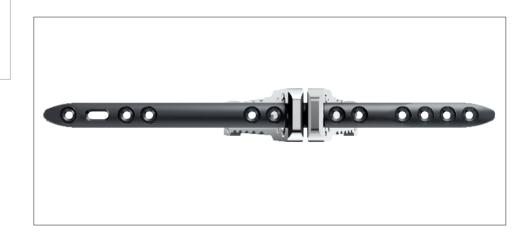
Plate Bending

Bending of the plate should be avoided. However, if a slight dorsiflexion angle of the wrist is required, the wrist spanning plate may only be bent inbetween the distal radius and carpal holes with the provided bending irons.

WARNING

- In order to reduce the likelihood of a stress riser effect and avoid reducing the fatigue properties of the implant, care should be taken to only bend the plate in between holes.
- Only moderate bending is recommended.
- Excessive plate bending may lead to failure of the plate or the locking mechanism and should be avoided.
- Do not re-bend plates.







VariAx 2 Wrist Spanning Plates

Plate Placement

Insert the plate distally to proximally under the 2nd or 4th extensor tendon compartment until the proximal end of the plate reaches the incision at the radial shaft. Blunt elevators may be utilized (705296) to create a path for the plate.

Check to ensure the wrist spanning plate is inserted with the correct orientation, with the oblong hole placed proximally.

The T8 Joystick (703927) can be used to aid in plate positioning.





Check the orientation of the wrist in neutral rotation. Check that the placement of the most distal screw holes are over the 2nd or 3rd metacarpal, and that the 4 central holes are over the carpal bones and distal radius. Use fluoroscopy as necessary.



VariAx 2 Wrist Spanning Plates

Check that traction is still adequately applied by either the Stryker Hand Traction System or surgical assistant.

The plate can be temporarily fixated to the bone by inserting a K-wire with a diameter up to 1.6mm through a Joystick that is already engaged in the plate hole, or by inserting a K-wire with Olive Stop through any of the screw holes.

Once plate placement is confirmed, the first pilot holes should be drilled in the proximal oblong gliding hole.





VariAx 2 Wrist Spanning Plates

The appropriate sized non-locking screw is placed in the proximal oblong hole in the shaft of the plate and in one of the distal locking holes. Traction application to the wrist should be maintained. Do not fully tighten screw. After alignment is satisfactory, the screws are fully tightened.

A fracture reduction clamp (703822 or 702932) may be used to control the plate's position on the radial shaft and distal radius.

Fill the remaining metacarpal and carpal screw holes with either locking or non-locking screws as necessary.





Fill the remaining distal radius and radial shaft screw holes with either locking or non-locking screws as necessary.

Remove any K-wires.

Supplemental fixation can be utilized and left in based on preference.

Close all incisions.



Operative technique Implant removal

It is recommended to remove the Wrist Spanning plate after healing is achieved.

Removal of the other VariAx 2 Distal Radius Plates is not required in general.

The additional surgical trauma and the risks associated with additional anesthesia should be individually outweighed against the potential benefits for every patient.

In the case of implant removal, the scar of the previous incision is (partly) re-opened and the screws and the plate are successively removed.



MRI Safety Information

MRI safety information



A patient with Variax 2 Distal Radius implants may be safely scanned under the following conditions. Failure to follow these conditions may result in injury to the patient.

Failure to follow these conditions may result in injury	to the patient.
Device name	VariAx 2 Distal Radius implants
Static magnetic field strength (T)	1.5 T and 3.0 T
Maximum spatial field gradient	30 T/m (3000 gauss/cm)
RF excitation	Circularly Polarized (CP)
RF transmit coil type	Integrated Whole Body Transmit Coil
Operating mode	Normal Operating Mode
Maximum whole-body SAR (W/kg)	2 W/kg (Normal Operating Mode)
Scan duration	2 W/kg whole-body average SAR for 15 minutes of continuous RF (a sequence or back to back series/scan without breaks) followed by a wait time of 15 minutes if this limit is reached, for the total scanning session duration of up to 1 hour (or 60 minutes).
MR image artifact	The presence of this implant produced an image artifact of approximately 32 mm from the VariAx 2 Distal Radius implants when imaged with a gradient echo pulse sequence and a 3.0 T MRI system.
Additional instructions	The MRI safety information provided is based on testing which did not include supplementary devices. If there are supplementary devices (i.e. plates, screws, wires, etc.) present in proximity to the VariAx 2 Distal Radius implants, this could result in additional MRI effects and the information provided above may not apply.

CAUTION

Following information is applicable only to the VariAx DR XXL Volar Plates:

The Stryker VariAx Distal Radius Plating System has not been evaluated for safety and compatibility in the Magnetic Resonance (MR) environment. It has not been tested for heating, migration or image artifacts in the MR environment.

The safety of VariAx Distal Radius Plating System in the MR environment is unknown. Scanning a patient who has this device may result in patient injury.

Drawer 1 & 2-Level Tray Frame

consisting of: Volar Plates and Instruments





Ref #	Description
941018	Lower Tray Wrist Add-on
941020	Wrist Add-on, Top Drawer Clip
1500-0005	Drawer for Modules & Screw Racks
941014	Volar Distal Radius Plate Insert, Right
941015	Volar Distal Radius Plate Insert, Left
941016	K-wire & Template Insert
941017	Reduction Clamp Insert

Drawer 1 Volar DR Plates

	011017	roddolloll diding libort		
	Ref #	Description	Length mm	Width mm
	625200	Volar DR Plate Narrow, Right, 3 Holes	46	19.7
	625201	Volar DR Plate Narrow, Left, 3 Holes	46	19.7
	625202	Volar DR Plate Narrow, Right, 4 Holes	53	19.7
	625203	Volar DR Plate Narrow, Left, 4 Holes	53	19.7
	625204	Volar DR Plate Narrow, Right, 7 Holes	74	19.7
	625205	Volar DR Plate Narrow, Left, 7 Holes	74	19.7
	625210	Volar DR Plate Standard, Right, 3 Holes	47	23
	625211	Volar DR Plate Standard, Left, 3 Holes	47	23
	625212	Volar DR Plate Standard, Right, 4 Holes	54	23
	625213	Volar DR Plate Standard, Left, 4 Holes	54	23
	625214	Volar DR Plate Standard, Right, 7 Holes	75	23
	625215	Volar DR Plate Standard, Left, 7 Holes	75	23
	625220	Volar DR Plate Wide, Right, 3 Holes	48	26.5
	625221	Volar DR Plate Wide, Left, 3 Holes	48	26.5
	625222	Volar DR Plate Wide, Right, 4 Holes	55	26.5
	625223	Volar DR Plate Wide, Left, 4 Holes	55	26.5
•••••	625224	Volar DR Plate Wide, Right, 7 Holes	76	26.5
•••••	625225	Volar DR Plate Wide, Left, 7 Holes	76	26.5

[•] All non-sterile plates, screws and drills may be ordered sterile by placing an "S" at the end of the REF Number.

Extended Volar DR Plates

R Plates			Length	Width
	Ref #	Description	mm	mm
	625230	Extended Volar DR Plate, Narrow, 3 Holes, Right	49	19.6
	625231	Extended Volar DR Plate, Narrow, 3 Holes, Left	49	19.6
	625232	Extended Volar DR Plate, Narrow, 4 Holes, Right	56	19.6
	625233	Extended Volar DR Plate, Narrow, 4 Holes, Left	56	19.6
	625234S*	Extended Volar DR Plate, Narrow, 7 Holes, Right	77	19.6
	625235S*	Extended Volar DR Plate, Narrow, 7 Holes, Left	77	19.6
	625240	Extended Volar DR Plate, Standard, 3 Holes, Right	52	23
	625241	Extended Volar DR Plate, Standard, 3 Holes, Left	52	23
	625242	Extended Volar DR Plate, Standard, 4 Holes, Right	59	23
	625243	Extended Volar DR Plate, Standard, 4 Holes, Left	59	23
····	625244	Extended Volar DR Plate, Standard, 7 Holes, Right	80	23
•••••	625245	Extended Volar DR Plate, Standard, 7 Holes, Left	80	23
	625250	Extended Volar DR Plate, Wide, 3 Holes, Right	53	26.5
	625251	Extended Volar DR Plate, Wide, 3 Holes, Left	53	26.5
	625252	Extended Volar DR Plate, Wide, 4 Holes, Right	60	26.5
	625253	Extended Volar DR Plate, Wide, 4 Holes, Left	60	26.5
•••••	625254	Extended Volar DR Plate, Wide, 7 Holes, Right	81	26.5
	625255	Extended Volar DR Plate, Wide, 7 Holes, Left	81	26.5

XXS Volar Plates



Ref #	Description	Length mm	Width mm
625260S*	XXS Volar DR Plate, R	30	21
625261S*	XXS Volar DR Plate, L	30	21

^{*} Available in sterile only.

 $[\]bullet$ All non-sterile plates, screws and drills may be ordered sterile by placing an "S" at the end of the REF Number.

Volar Aiming Blocks Ref # Description

	ItoI "	Description
	56-02020	Distal Radius Volar Aiming Block, Drill Sleeve 2.0mm
	706600	Volar DR Aiming Block, Narrow, R
32	706601	Volar DR Aiming Block, Narrow, L
	706602	Volar DR Aiming Block, Standard, R
	706603	Volar DR Aiming Block, Standard, L
42	706604	Volar DR Aiming Block, Wide, R
24.50	706605	Volar DR Aiming Block, Wide, L
Si.	706606	Extended Volar DR Aiming Block, Narrow, R
3	706607	Extended Volar DR Aiming Block, Narrow, L
	706608	Extended Volar DR Aiming Block, Standard, R
100	706609	Extended Volar DR Aiming Block, Standard, L
93	706610	Extended Volar DR Aiming Block, Wide, R
22	706611	Extended Volar DR Aiming Block, Wide, L

Precision Templates	Ref#	Description
and Instruments	706620	Threaded Drill Tower for T8 Screw Holes
	706612	Precision Template, Narrow, R
	706613	Precision Template, Narrow, L
	706614	Precision Template, Standard, R
	706615	Precision Template, Standard, L
	706616	Precision Template, Wide, R
	706617	Precision Template, Wide, L
	390192	K-wire, \emptyset 2.0mm x 150mm (pack of 10)
	390164	K-wire, Ø1.6mm x 150mm (pack of 10)
	390157	K-wire, \emptyset 1.25mm x 150mm (pack of 10)
	706618	Plate Holding Reduction Clamp
<u> </u>	703885	Depth Gauge, 2.4mm – 3.5mm Screws

Profile Profile

VariAx 2 Wrist Add-On Tray

XXL Volar DR Plates
- Not Included in the Set.
Sterile Packed Only

d in the Set. d Only	Ref #	Description	Length mm	Profile Height Distal mm	Profile Height Shaft mm
·	54-25420S Stand, Left		189	2	3
		XXL Volar DR Plate, ht (15 holes)	189	2	3
	54-25424S Stand, Left	XXL Volar DR Plate, t (11 holes)	145	2	3
•=		XXL Volar DR Plate, ht (11 holes)	145	2	3
•••••	54-25428S Stand, Left	XXL Volar DR Plate, t (8 holes)	100	2	3
	54-25430S Stand, Rig	XXI. Volar DR Plate, ht (8 holes)	100	2	3
•	54-25432S Stand, Left	XXL Volar DR Plate, t (5 holes)	74	2	3
•	54-25434S Stand, Rig	XXL Volar DR Plate, ht (5 holes)	74	2	3
·-··-·		XXL Volar DR Plate, eft (15 holes)	189	2	3
		XXL Volar DR Plate, ight (15 holes)	189	2	3
·-··		XXL Volar DR Plate, eft (11 holes)	145	2	3
•==		XXL Volar DR Plate, ight (11 holes)	145	2	3
····-		XXL Volar DR Plate, eft (8 holes)	100	2	3
•••••		XXL Volar DR Plate, ight (8 holes)	100	2	3
•••	54-25448S Narrow, L	XXL Volar DR Plate, eft (5 holes)	74	2	3
•••		XXL Volar DR Plate, ight (5 holes)	74	2	3

Drawer 2

Tray Content: Dorsal, DR Fragment Specific, Wrist Spanning, Distal Ulna plates and instruments





Ref #	Description
1500-0005	Drawer For Modules & Screw Racks
940458	Wrist Add-on Clip DR DU & Spanning Plates
940199	Insert DU Plates & Frag Spec Instruments
940198	Insert DR & Wrist Spanning Plates
940252	Reduction Instruments 3 Insert

Fragment Specific Plates

s			T41.	Profile
	Ref #	Description	Length mm	Height mm
000 000	625120	Lateral DR Plate, Short, Right	43	2
8 B 8 8 9 (0)	625121	Lateral DR Plate, Short, Left	43	2
0000 00:0	625122	Lateral DR Plate, Long, Right	56	2
6000 000	625123	Lateral DR Plate, Long, Left	56	2
CITE S	625140	Dorsal Lateral DR Plate, Short, Right	39	2
COT (S)	625141	Dorsal Lateral DR Plate, Short, Left	39	2
	625142	Dorsal Lateral DR Plate, Long, Right	49	2
	625143	Dorsal Lateral DR Plate, Long, Left	49	2
000	625130	Dorsal Medial DR Plate, Short, Right	39	2
000	625131	Dorsal Medial DR Plate, Short, Left	39	2
0000	625132	Dorsal Medial DR Plate, Long, Right	49	2
00000	625133	Dorsal Medial DR Plate, Long, Left	49	2
	625150	Volar Rim DR Plate, Short, Right	32	1.6
and a	625151	Volar Rim DR Plate, Short, Left	32	1.6
ame	625152	Volar Rim DR Plate, Long, Right	43	1.6
arm.	625153	Volar Rim DR Plate, Long, Left	43	1.6

Wrist Spanning Plates



Ref #	Description	Length mm	Profile Height mm
625106	Wrist Spanning Plate, Standard	172	3
625108	Wrist Spanning Plate, Long	198	3

[•] All non-sterile plates, screws and drills may be ordered sterile by placing an "S" at the end of the REF Number.

Dorsal Plates

Ref #	Description	Length mm	Profile Height mm
625090	Dorsal DR Plate, Narrow, Short, Right	47	2
625091	Dorsal DR Plate, Narrow, Short, Left	47	2
625094	Dorsal DR Plate, Narrow, Long, Right	58	2
 625095	Dorsal DR Plate, Narrow, Long, Left	58	2
 625098S*	Dorsal DR Plate, Narrow, X-Long, Right	69	2
625099S*	Dorsal DR Plate, Narrow, X-Long, Left	69	2
625092	Dorsal DR Plate, Wide, Short, Right	49	2
625093	Dorsal DR Plate, Wide, Short, Left	49	2
625096	Dorsal DR Plate, Wide, Long, Right	60	2
625097	Dorsal DR Plate, Wide, Long, Left	60	2
 625100S*	Dorsal DR Plate, Wide, X-Long, Right	71	2
625101S*	Dorsal DR Plate, Wide, X-Long, Left	71	2

Distal Ulna Plates

	Ref #	Description	Profile Length Height mm mm
(00000)=	625102	Distal Ulna Hook Plate, Short	47 1.5
(0000000)=	625104	Distal Ulna Hook Plate, Long	58 1.5
	625110	Distal Ulna Base Plate, Short, Right	43 1.7
(1000)	625111	Distal Ulna Base Plate, Short, Left	43 1.7
(0000000000000000000000000000000000000	625112	Distal Ulna Base Plate, Long, Right	67 1.7
···	625113	Distal Ulna Base Plate, Long, Left	67 1.7

 $[\]bullet$ All non-sterile plates, screws and drills may be ordered sterile by placing an "S" at the end of the REF Number.

^{*} Available sterile only.

Fragment Specific Instruments



Ref#

Description

Ref #	Description
43-09830	Mallet, 250g
64-00011	Tamp
07-40281	Zebra K-Wire 1.1mm (pack of 10)
56-40281	K-Wire with Olive Stop, 1.4mm (pack of 5)
64-20118	K-Wire Bending Pliers

Reduction	Instruments
	→

390192	K-wire, Ø2.0mm x 150mm (pack of 10)
390164	K-wire, Ø1.6mm x 150mm (pack of 10)
390157	K-wire, Ø1.25mm x 150mm (pack of 10)

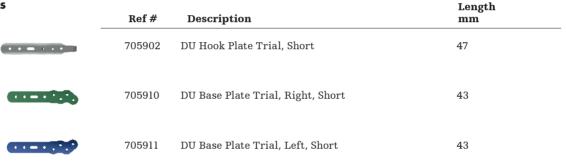
Fragment Specific Plates Trials

	Ref#	Description	Length mm	
••••	705920	Lateral DR Plate Trial, Right, Short	43	
	705921	Lateral DR Plate Trial, Left, Short	43	
	705930	Dorsal Med. DR Plate Trial, Right, Short	39	
	705931	Dorsal Med. DR Plate Trial, Left, Short	39	
	705940	Dorsal Lat. DR Plate Trial, Right, Short	39	
	705941	Dorsal Lat. DR Plate Trial, Left, Short	39	
	705950	Volar Rim DR Plate Trial, Right, Short	32	
	705951	Volar Rim DR Plate Trial, Left, Short	32	

Dorsal Plates Trials



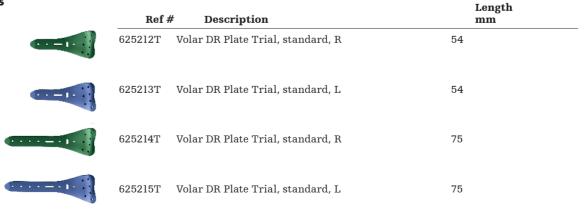
Distal Ulna Plates Trials



Wrist Spanning Plates Trial



Volar DR Plate Trials



VariAx 2 Dedicated Wrist Tray

Top Level & 4-Level Tray Frame

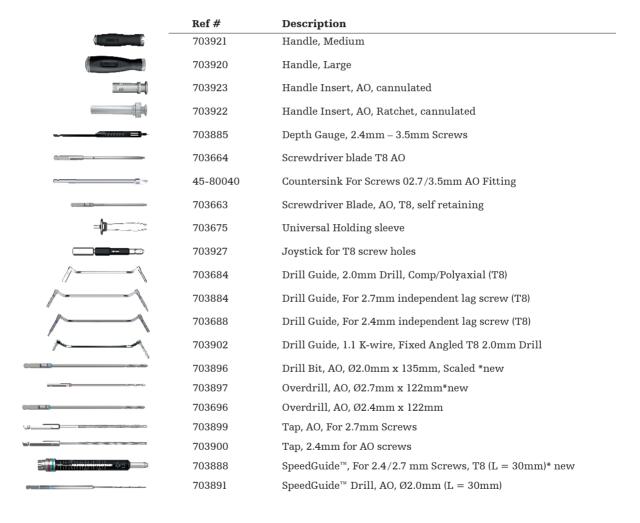
consisting of:





Ref #	Description
940213	Upper Tray Wrist
1500-0006	Lower Part, 2 Level, Detachable
940347	Wrist Tray Top Layer Clip

Instruments



VariAx 2 Dedicated Wrist Tray

Drawer 1

(8) 2.4mm and 2.7mm screws & volar plates consisting of:

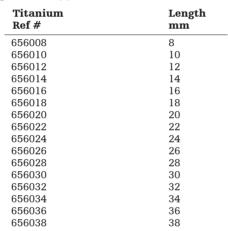




Ref #	Description
1500-0005	Drawer For Modules & Screw Racks
941014	Volar Distal Radius Plate Insert, Right
941015	Volar Distal Radius Plate Insert, Left
940348	Wrist Tray Screw Drawer Clip
940234	Screw Rack for 2.7mm Screws, T8
940235	Screw Rack for 2.4mm Screws, T8

2.4mm Locking Screw (8)





2.4 Non-Locking Screws (§)



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Titanium Ref #	Length mm
656108	8
656110	10
656112	12
656114	14
656116	16
656118	18
656120	20
656122	22
656124	24
656126	26
656128	28
656130	30
656132	32
656134	34
656136	36
656138	38

2.0mm Locking Pegs (§)

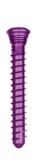


Titanium Ref #	Length mm
656616	16
656618	18
656620	20
656622	22
656624	24
656626	26

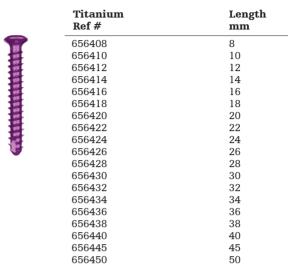
VariAx 2 Dedicated Wrist Tray

2.7mm Locking Screws (8)

2.7mm Non Locking Screws (8)



Titanium Ref #	Length mm
656308	8
656310	10
656312	12
656314	14
656316	16
656318	18
656320	20
656322	22
656324	24
656326	26
656328	28
656330	30
656332	32
656334	34
656336	36
656338	38
656340	40
656345	45
656350	50



2.7mm Non Locking Partially Threaded Screws (8)







Titanium Ref #	Length mm
656516	16
656518	18
656520	20
656522	22
656524	24
656526	26



Ref #	Description
619920	Washer

Volar DR Plates

5	Ref#	Description	Length mm	Width mm
	625200	Volar DR Plate Narrow, Right, 3 Holes	46	19.7
	625201	Volar DR Plate Narrow, Left, 3 Holes	46	19.7
	625202	Volar DR Plate Narrow, Right, 4 Holes	53	19.7
	625203	Volar DR Plate Narrow, Left, 4 Holes	53	19.7
	625204	Volar DR Plate Narrow, Right, 7 Holes	74	19.7
	625205	Volar DR Plate Narrow, Left, 7 Holes	74	19.7
	625210	Volar DR Plate Standard, Right, 3 Holes	47	23
	625211	Volar DR Plate Standard, Left, 3 Holes	47	23
- 1-2°	625212	Volar DR Plate Standard, Right, 4 Holes	54	23
	625213	Volar DR Plate Standard, Left, 4 Holes	54	23
	625214	Volar DR Plate Standard, Right, 7 Holes	75	23
	625215	Volar DR Plate Standard, Left, 7 Holes	75	23
	625220	Volar DR Plate Wide, Right, 3 Holes	48	26.5
	625221	Volar DR Plate Wide, Left, 3 Holes	48	26.5
	625222	Volar DR Plate Wide, Right, 4 Holes	55	26.5
	625223	Volar DR Plate Wide, Left, 4 Holes	55	26.5
••••••	625224	Volar DR Plate Wide, Right, 7 Holes	76	26.5
	625225	Volar DR Plate Wide, Left, 7 Holes	76	26.5

Extended Volar DR Plates



XXS Volar DR Plates



Ref #	Description	Length mm	Width mm
625260S*	XXS Volar DR Plate, R	30	21
625261S*	XXS Volar DR Plate, L	30	21

^{*} Available sterile only.

[•] All non-sterile plates, screws and drills may be ordered sterile by placing an "S" at the end of the REF Number.

Volar Aiming Blocks

	Ref #	Description
	56-02020	Distal Radius Volar Aiming Block, Drill Sleeve 2.0mm
3	706600	Volar DR Aiming Block, Narrow, R
32	706601	Volar DR Aiming Block, Narrow, L
3	706602	Volar DR Aiming Block, Standard, R
75	706603	Volar DR Aiming Block, Standard, L
	706604	Volar DR Aiming Block, Wide, R
2	706605	Volar DR Aiming Block, Wide, L
	706606	Extended Volar DR Aiming Block, Narrow, R
3	706607	Extended Volar DR Aiming Block, Narrow, L
200	706608	Extended Volar DR Aiming Block, Standard, R
	706609	Extended Volar DR Aiming Block, Standard, L
03	706610	Extended Volar DR Aiming Block, Wide, R
22	706611	Extended Volar DR Aiming Block, Wide, L

XXL Volar DR Plates - Not Included in the Set. Sterile Packed Only

r DR Plates				D C1	D C1
uded in the Set. icked Only	Ref #	Description	Length	Profile Height Distal mm	Shaft
		<u> </u>	mm	ШШ	mm
	54-25420S Stand, Left		189	2	3
		XXL Volar DR Plate, ht (15 holes)	189	2	3
	54-25424S Stand, Left	XXL Volar DR Plate, t (11 holes)	145	2	3
•		XXL Volar DR Plate, ht (11 holes)	145	2	3
	54-25428S Stand, Left	XXL Volar DR Plate, t (8 holes)	100	2	3
•••••		XXL Volar DR Plate, ht (8 holes)	100	2	3
	54-25432S Stand, Left	XXL Volar DR Plate, t (5 holes)	74	2	3
		XXL Volar DR Plate, ht (5 holes)	74	2	3
		XXL Volar DR Plate, eft (15 holes)	189	2	3
		XXL Volar DR Plate, ight (15 holes)	189	2	3
·-··-··-		XXL Volar DR Plate, eft (11 holes)	145	2	3
•=•••		XXL Volar DR Plate, ight (11 holes)	145	2	3
····		XXL Volar DR Plate, eft (8 holes)	100	2	3
•••••		XXL Volar DR Plate, ight (8 holes)	100	2	3
••••	54-25448S Narrow, L	XXL Volar DR Plate, eft (5 holes)	74	2	3
••••	54-25450S Narrow, R	XXL Volar DR Plate, ight (5 holes)	74	2	3

Drawer 2

Tray Content: Dorsal, DR Fragment Specific, Wrist Spanning, Distal Ulna plates and instruments





Ref#	Description	
1500-000	5 Drawer For Mo	dules & Screw Racks
940459	Wrist Tray Clip	DR DU & Spanning Plates
940199	Insert DU Plate	s & Frag Spec Instruments
940198	Insert DR & Wr	rist Spanning Plates
941016	K-wire & Templ	ate Insert

Fragment Specific Plates

S			Length	•
	Ref #	Description	mm	mm
000 00:0	625120	Lateral DR Plate, Short, Right	43	2
• B • • • • • • • • • • • • • • • • • •	625121	Lateral DR Plate, Short, Left	43	2
• • • • • • • • • • • • • • • • • • • •	625122	Lateral DR Plate, Long, Right	56	2
(0) (0)	625123	Lateral DR Plate, Long, Left	56	2
	625140	Dorsal Lateral DR Plate, Short, Right	39	2
COUNTRY	625141	Dorsal Lateral DR Plate, Short, Left	39	2
CITTE	625142	Dorsal Lateral DR Plate, Long, Right	49	2
	625143	Dorsal Lateral DR Plate, Long, Left	49	2
•••	625130	Dorsal Medial DR Plate, Short, Right	39	2
· · · · · · · · · · · · · · · · · · ·	625131	Dorsal Medial DR Plate, Short, Left	39	2
0000	625132	Dorsal Medial DR Plate, Long, Right	49	2
00000	625133	Dorsal Medial DR Plate, Long, Left	49	2
and	625150	Volar Rim DR Plate, Short, Right	32	1.6
and a	625151	Volar Rim DR Plate, Short, Left	32	1.6
and the	625152	Volar Rim DR Plate, Long, Right	43	1.6
anna (625153	Volar Rim DR Plate, Long, Left	43	1.6

Wrist Spanning Plates



 Ref#	Description	Length Height mm mm
625106	Wrist Spanning Plate, Standard	172 3
625108	Wrist Spanning Plate, Long	198 3

 $[\]bullet$ All non-sterile plates, screws and drills may be ordered sterile by placing an "S" at the end of the REF Number.

Profile

Dorsal Plates

Ref #	Description	Length mm	Profile Height mm
625090	Dorsal DR Plate, Narrow, Short, Right	47	2
625091	Dorsal DR Plate, Narrow, Short, Left	47	2
625094	Dorsal DR Plate, Narrow, Long, Right	58	2
625095	Dorsal DR Plate, Narrow, Long, Left	58	2
 625098S*	Dorsal DR Plate, Narrow, X-Long, Right	69	2
625099S*	Dorsal DR Plate, Narrow, X-Long, Left	69	2
625092	Dorsal DR Plate, Wide, Short, Right	49	2
625093	Dorsal DR Plate, Wide, Short, Left	49	2
 625096	Dorsal DR Plate, Wide, Long, Right	60	2
 625097	Dorsal DR Plate, Wide, Long, Left	60	2
625100S*	Dorsal DR Plate, Wide, X-Long, Right	71	2
625101S*	Dorsal DR Plate, Wide, X-Long, Left	71	2

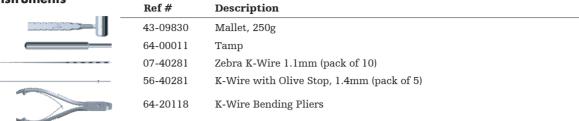
Distal Ulna Plates

	Ref #	Description	Profile Length Height mm mm	
(00000)=	625102	Distal Ulna Hook Plate, Short	47 1.5	_
(000 □0000)=	625104	Distal Ulna Hook Plate, Long	58 1.5	
(000000)	625110	Distal Ulna Base Plate, Short, Right	43 1.7	
	625111	Distal Ulna Base Plate, Short, Left	43 1.7	
(0000000000000000000000000000000000000	625112	Distal Ulna Base Plate, Long, Right	67 1.7	
(0000000000000000000000000000000000000	625113	Distal Ulna Base Plate, Long, Left	67 1.7	

 $[\]bullet$ All non-sterile plates, screws and drills may be ordered sterile by placing an "S" at the end of the REF Number.

^{*} Available sterile only.

Fragment Specific Instruments

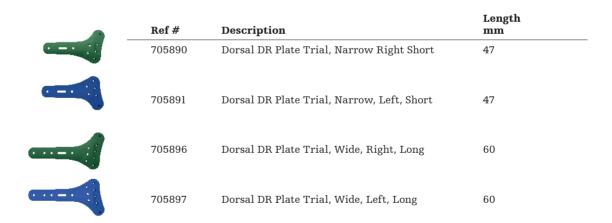


Precision Template	es	Ref #	Description
and Instruments		706620	Threaded Drill Tower for T8 Screw Holes
		706612	Precision Template, Narrow, R
		706613	Precision Template, Narrow, L
		706614	Precision Template, Standard, R
		706615	Precision Template, Standard, L
		706616	Precision Template, Wide, R
		706617	Precision Template, Wide, L
		390192	K-wire, Ø2.0mm x 150mm (pack of 10)
		390164	K-wire, \emptyset 1.6mm x 150mm (pack of 10)
		390157	K-wire, Ø1.25mm x 150mm (pack of 10)

Fragment Specific Plates Trials

tes Trials	Ref#	Description	Length mm	
	705920	Lateral DR Plate Trial, Right, Short	43	
	705921	Lateral DR Plate Trial, Left, Short	43	
	705930	Dorsal Med. DR Plate Trial, Right, Short	39	
	705931	Dorsal Med. DR Plate Trial, Left, Short	39	
	705940	Dorsal Lat. DR Plate Trial, Right, Short	39	
	705941	Dorsal Lat. DR Plate Trial, Left, Short	39	
	705950	Volar Rim DR Plate Trial, Right, Short	32	
	705951	Volar Rim DR Plate Trial, Left, Short	32	

Dorsal Plates Trials



Distal Ulna Plates Trials

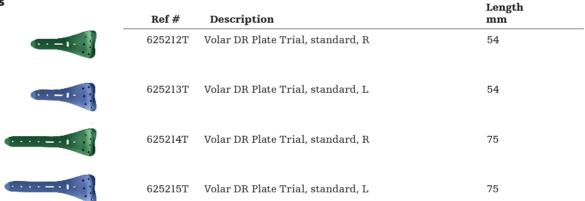
	Ref #	Description	Length mm
••••	705902	DU Hook Plate Trial, Short	47
CENTRAL	705910	DU Base Plate Trial, Right, Short	43
(II-1)	705911	DU Base Plate Trial, Left, Short	43

Wrist Spanning Plates Trial



Ref #	Description	Length mm
705906	Wrist Spanning Plate Trial, Standard	172

Volar DR Plate Trials



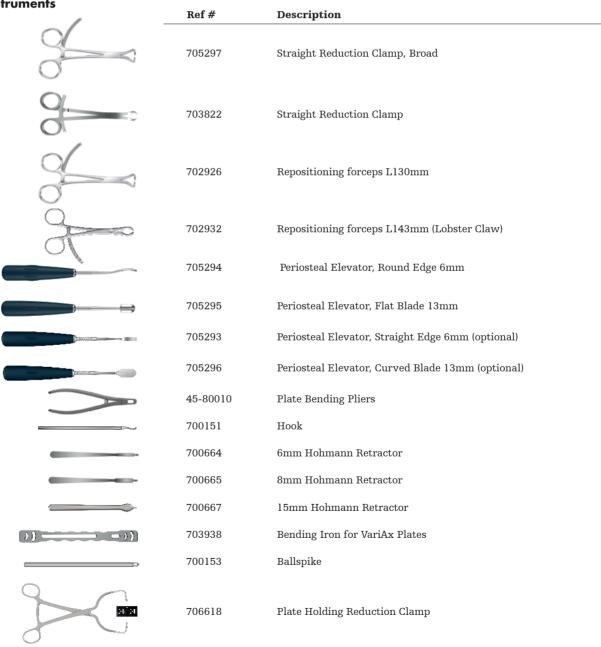
Drawer 3

Reduction Instruments, consisting of:



Ref #	Description
1500-0005	Drawer For Modules & Screw Racks
940250	Reduction Instruments 1 Insert
940251	Reduction Instruments 2 Insert
941017	Reduction Clamp Insert
940350	Wrist Tray Reduction Instrument Clip

Reduction Instruments



Notes



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