# stryker

# Distal Radius Locking Plates

## **Operative technique**

VariAx 2 DR Dorsal Plates VariAx 2 DR Fragment Specific Plates VariAx 2 DR Wrist Spanning Plates

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.

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

#### 

- 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.



# MRI Safety Information

#### **MRI** safety information

## MR

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

Device name VariAx 2 Distal Radius		
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 implant when imaged with a gradient echo pulse sequence and a 3.0 T MRI system.	
Additional instructions	<b>CAUTION</b> 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 implant, this could result in additional MRI effects and the information provided above may not apply.	

# VariAx 2

# Distal Radius Locking Plates

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# Indications and Contraindications

#### VariAx 2 Distal Radius Plating System

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 the treatment of fractures, nonunions, 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.

## Overview Implants: plate and screw platform

VariAx 2 DR Dorsal and DR Fragment Specific Plates



# Color Coding and Screw/Peg Options

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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.

Locking and non-locking screws can be used in any round hole.

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 anglerelative to the plate hole, the screw trajectories relative to the plate surface will be achieved.



#### SmartLock Polyaxial / Compression Drill Guide

Allows for  $\pm 15$  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.

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.

The 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.

Not using a drill guide may lead to drilling out of specified locking range and compromise the locking capabilities.

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



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- First fully engage the drill guide in the hole and then aim the drill in the desired direction.
- Make sure to drill perpendicular to oblong holes.
- Only use non-locking bone screws in oblong holes.

#### **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.

#### 

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

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).







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.

#### 

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

#### **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 inserts must be removed from the handles before cleaning.

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.



Large Handle (703920)



Medium Handle (703921)



Ratcheting Insert (703922)



AO Coupling Insert (703923)

#### **Depth Measurement Options**

VariAx 2 offers various options to evaluate the screw length. All drills are scaled so that the surgeon may evaluate the screw length when using the drill through the dedicated drill guides. 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. Lastly, a standard depth gauge (705170) may be used either independently or through a plate hole.

#### Taps

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

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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.

# Caled Drill and Drill Guide SpeedGuide Depth Gauge





#### 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, they 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.

## Operative technique **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.

#### 

- 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 the 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.







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- 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

# Operative technique **DR Dorsal Plates**

The plate should be placed slightly proximal to 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.



## Operative technique **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 proper 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.

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





## Operative technique Lateral DR Plates

An incision is made along the radial column.

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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.



## Operative technique 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 nonlocking 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.



## Operative technique 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.

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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 nonlocking 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.



## Operative technique 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.







## Operative technique 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 nonlocking 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.



## Operative technique 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.







## Operative technique 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 proper placement of screws and pegs by use of fluoroscopy to ensure that they do not penetrate the joint.

After stabilizing the distal fragments, fill the remaining screw holes with either locking or non-locking screws, as necessary.

The distal K-wire holes can be used for placing sutures in the volar capsule. #2-0, #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. 26



#### **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.

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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.





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.

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- 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.







#### **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.



## Operative technique 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 an Olive Stop K-wire through any of the screw holes.

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





The appropriate sized nonlocking 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.

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.







## System Components

# VariAx 2 Dedicated Wrist Tray

## Top Level & 4-Level Tray Frame

consisting of:

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

Instruments

17000

_	Ref #	Description
a.728	703921	Handle, Medium
	703920	Handle, Large
	703923	Handle Insert, AO, cannulated
	703922	Handle Insert, AO, Ratchet, cannulated
	703885	Depth Gauge for Distal Radius
	703664	Screwdriver blade T8 AO
·	45-80040	Countersink For Screws 02.7/3.5mm AO Fitting
	703663	Screwdriver Blade, AO, T8, self retaining
	703675	Universal Holding sleeve
	703927	Joystick for T8 screw holes
/	703684	Drill Guide, 2.0mm Drill, Comp/Polyaxial (T8)
	703884	Drill Guide, For 2.7mm independent lag screw (T8)
	703688	Drill Guide, For 2.4mm independent lag screw (T8)
~	703902	Drill Guide, 1.1 K-wire, Fixed Angled T8 2.0mm Drill
<u> </u>	703896	Drill Bit, AO, Ø2.0mm x 135mm, Scaled *new
x ± x ±	703897	Overdrill, AO, Ø2.7mm x 122mm*new
	703696	Overdrill, AO, Ø2.4mm x 122mm
	703899	Tap, AO, For 2.7mm Screws
	703900	Tap, 2.4mm for AO screws
	703888	SpeedGuide <sup><math>m</math></sup> , For 2.4/2.7 mm Screws, T8 (L = 30mm)*new
	703891	SpeedGuide™ Drill, AO, Ø2.0mm (L = 30mm)

 $\bullet$  All non-sterile plates may be ordered sterile by placing an "S" at the end of the REF Number.

 $\langle \widetilde{s} \rangle$  2.4mm and 2.7mm screws & volar plates consisting of:



Ref #	Description
1500-0005	Drawer For Modules & Screw Racks
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 $\left< \frac{8}{8} \right>$

nm Locking Screw 🏾 🛞			2.4 Non Locking Screws 🚷	
	Titanium Ref #	Length mm	Titanium Ref #	
7	656008	8	656108	
Ħ	656010	10	656110	
Ħ	656012	12	656112	
<b>H</b>	656014	14	656114	
Ħ	656016	16	656116	
<b>H</b>	656018	18	656118	
	656020	20	656120	
=	656022	22	656122	
Ħ	656024	24	656124	
•	656026	26	656126	
	656028	28	656128	
	656030	30	656130	
	656032	32	656132	
	656034	34	656134	
	656036	36	656136	
	656038	38	656138	

#### 2.0 mm Locking Pegs $\left< \underbrace{\$}{\$} \right>$

	Titanium Ref #	Length mm	
7	656616	16	
Π	656618 656620	18 20	
	656622 656624	22 24	
	656626	26	

2.7mm Locking Screws 🚷		2.7mm N	2.7mm Non Locking Screws		
	Titanium Ref #	Length mm	Titanium Ref #	Length mm	
8	656308	8	656408	8	
	656310	10	656410	10	
一種	656312	12	656412	12	
	656314	14	656414	14	
H	656316	16	656416	16	
H	656318	18	656418	18	
H	656320	20	656420	20	
H	656322	22	656422	22	
H	656324	24	656424	24	
E	656326	26	656426	26	
	656328	28	656428	28	
	656330	30	656430	30	
	656332	32	656432	32	
	656334	34	656434	34	
	656336	36	656436	36	
	656338	38	656438	38	
	656340	40	656440	40	
	656345	45	656445	45	
	656350	50	656450	50	

#### 2.7mm Non Locking Partially Threaded Screws



Length mm

16

Washer

 Ref #
 Des

 619920
 Wa

Description Washer

Titanium	
Ref #	
656516	
656518	
656520	
656522	
656524	
656526	
656524 656526	

#### **Drawer 2**

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



Ref #	Description
1500-0005	Drawer For Modules & Screw Racks
940459	Wrist Tray Clip DR DU & Spanning Plates
940458	Wrist Add-on Clip DR & DU Spanning Plates
940199	Insert DU Plates & Frag Spec Instruments
940198	Insert DR & Wrist Spanning Plates
	Ref #           1500-0005           940459           940458           940199           940198

#### Anatomical Dorsal Plates

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
0	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
~	• All non-ster REF Numbe	ile plates may be ordered sterile by placin r.	g an "S" at tl	ne end of the

\* Available sterile only.

#### **Anatomical Fragment Specific Plates**

Specific Plates	Ref #	Description	Length mm	Profile Height mm
0.000	625120	Lateral DR Plate, Short, Right	43	2
8 B 4 - 4 924	625121	Lateral DR Plate, Short, Left	43	2
<b>2000 00.</b> 0	625122	Lateral DR Plate, Long, Right	56	2
<u>6 6 6 6 6 6 (8</u>	625123	Lateral DR Plate, Long, Left	56	2
	625140	Dorsal Lateral DR Plate, Short, Right	39	2
	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
	625130	Dorsal Medial DR Plate, Short, Right	39	2
	625131	Dorsal Medial DR Plate, Short, Left	39	2
	625132	Dorsal Medial DR Plate, Long, Right	49	2
	625133	Dorsal Medial DR Plate, Long, Left	49	2
	625150	Volar Rim DR Plate, Short, Right	32	1.6
	625151	Volar Rim DR Plate, Short, Left	32	1.6
	625152	Volar Rim DR Plate, Long, Right	43	1.6
••••••	625153	Volar Rim DR Plate, Long, Left	43	1.6

#### Wrist Spanning Plates

	Ref #	Description	mm	mm	
	625106	Wrist Spanning Plate, Standard	172	3	
● *** ** ** ** *** *** *** *** *** ***	625108	Wrist Spanning Plate, Long	198	3	

Length

**Profile Height** 

 $<sup>\</sup>bullet$  All non-sterile plates may be ordered sterile by placing an "S" at the end of the REF Number.

Anatomical Dorsal Plates Trials	Rof #	Description	Length	
	705890	Dorsal DR Plate Trial, Narrow Right Short	47	
	705891	Dorsal DR Plate Trial, Narrow, Left, Short	47	
	705896	Dorsal DR Plate Trial, Wide, Right, Long	60	
	705897	Dorsal DR Plate Trial, Wide, Left, Long	60	

#### **Anatomical 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	

#### Wrist Spanning Plates Trial

Wrist Spanning Plates Trial	Length mm		
	705906	Wrist Spanning Plate Trial, Standard	172

### **Drawer 3**

Reduction Instruments, consisting of:

•	····· ••••••
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

Ref #	Description
1500-0005	Drawer For Modules & Screw Racks
940333	Labeling Clip Core Tray Reduction
940250	Reduction Instruments 1 Insert
940251	Reduction Instruments 2 Insert
940252	Reduction Instruments 3 Insert
940350	Wrist Tray Reduction Instrument Clip

#### **Reduction Instruments**

	Ref #	Description
	705297	Straight Reduction Clamp, Broad
	703822	Straight Reduction Clamp
	702926	Repositioning forceps L130mm
	702932	Repositioning forceps L143mm (Lobster Claw)
	705294	Periosteal Elevator, Round Edge 6mm
	705295	Periosteal Elevator, Flat Blade 13mm
	705293	Periosteal Elevator, Straight Edge 6mm (optional)
	705296	Periosteal Elevator, Curved Blade 13mm (optional)
	45-80010	Plate Bending Pliers
	700151	Hook
	700664	6mm Hohmann Retractor
	700665	8mm Hohmann Retractor
$\longrightarrow$	700667	15mm Hohmann Retractor
())	703938	Bending Iron for VariAx Plates
c	700153	Ballspike
	703818	K-Wire with Stop 2mm (pack of 5)
	390192	K-Wire 2.0mm, x 150mm (pack of 10)
	390164	K-Wire 1.6 x 150mm (pack of 10)
	390157	K-Wire 1.25mm, x 150mm (pack of 10)

## Top Level & 2-Level Tray Frame

consisting of:





Ref #	Description
940221	Upper Tray Wrist Add-on, 2 Level

### Drawer 1

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



Ref #	Description
1500-0005	Drawer For Modules & Screw Racks
940459	Wrist Tray Clip DR DU & Spanning Plates
940458	Wrist Add-on Clip DR & DU Spanning Plates
940199	Insert DU Plates & Frag Spec Instruments
940198	Insert DR & Wrist Spanning Plates

**Anatomical Dorsal Plates** 

al 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

- $\bullet$  All non-sterile plates may be ordered sterile by placing an "S" at the end of the REF Number.
- \* Available sterile only.

#### nent Specific Plates **Anatomical Frag**

gment Specific Plates	Ref #	Description	Length mm	Profile Height mm
	625120	Lateral DR Plate, Short, Right	43	2
<u>* 10 * * *;</u> ¢	625121	Lateral DR Plate, Short, Left	43	2
	625122	Lateral DR Plate, Long, Right	56	2
<u></u>	625123	Lateral DR Plate, Long, Left	56	2
	625140	Dorsal Lateral DR Plate, Short, Right	39	2
	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
	625130	Dorsal Medial DR Plate, Short, Right	39	2
(000 V C	625131	Dorsal Medial DR Plate, Short, Left	39	2
0	625132	Dorsal Medial DR Plate, Long, Right	49	2
	625133	Dorsal Medial DR Plate, Long, Left	49	2
	625150	Volar Rim DR Plate, Short, Right	32	1.6
and the second s	625151	Volar Rim DR Plate, Short, Left	32	1.6
60000	625152	Volar Rim DR Plate, Long, Right	43	1.6
course of the second se	625153	Volar Rim DR Plate, Long, Left	43	1.6

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

#### **Fragment Specific Instruments**

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

 $<sup>\</sup>bullet$  All non-sterile plates may be ordered sterile by placing an "S" at the end of the REF Number.

#### **Anatomical Dorsal Plates Trials**

Ref #	Description	Length mm	
705890	Dorsal DR Plate Trial, Narrow Right Short	47	
705891	Dorsal DR Plate Trial, Narrow, Left, Short	47	
705896	Dorsal DR Plate Trial, Wide, Right, Long	60	
705897	Dorsal DR Plate Trial, Wide, Left, Long	60	

#### **Anatomical 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	

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

## Notes

## Notes

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Content ID: VAX-ST-72, Rev. 1, 02-2024

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