

Volar Distal Radius Locking Plate



PERI-LOC[◇] Locked Plating System

Volar Distal Radius Locking Plate Surgical Technique

Table of Contents

Introduction	2
Indications	3
Plate Features	3
Patient Positioning	4
Incision	4
Fracture Reduction and Provisional Fixation	5
Plate Selection	5
Plate Positioning	6
Screw Insertion	6
3.5mm Locking Screw Technique	7
3.5mm Cortex Screw Technique	8
2.5mm Locking Screw Technique	9
2.5mm Cortex Screw Technique	10
Closure	11
Catalog Information	12

Nota Bene

The technique description herein is made available to the healthcare professional to illustrate the author's suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the specific patient.

Introduction

The PERI-LOC® Locked Plating System combines the advantages of locked plating with the versatility and benefits of traditional plates and screws. Utilizing both locking and non-locking screws, the PERI-LOC system allows for the creation of a construct that resists angular collapse and also functions as an effective fracture reduction aid.

A simple, intuitive instrument set featuring standardized drill bits and screwdrivers, along with color coded drill guides, helps make the PERI-LOC system efficient and easy to use.

The PERI-LOC Volar Distal Radius Plates are available in two head widths and varying lengths for optimal fit. Their precise screw trajectories, anatomic contour and locking capabilities provide a stable construct for predictable reconstruction of complex fractures of the radius.



Indications

The PERI-LOC[®] Volar Distal Radius Plates are indicated for fixation of fractures, non-unions and osteotomies of the radius.



Plate Features

- Two points of radial styloid fixation
- Oblong screw holes in plate head and shaft facilitate radial/ulnar and proximal/distal plate translation
- Left/right-specific
- 316L stainless steel for strength
- Locking/non-locking option in all screw holes
- Distal articular screw holes accept 2.5mm Locking and 2.5mm Cortex Screws
- Shaft screw holes accept 3.5mm Locking and 3.5mm Cortex Screws
- Standard and wide plate head options for optimal fit
- Targeting Block option for distal articular screw holes



Wide Volar Distal
Radius Plate



Standard Volar Distal
Radius Plate

Surgical Technique

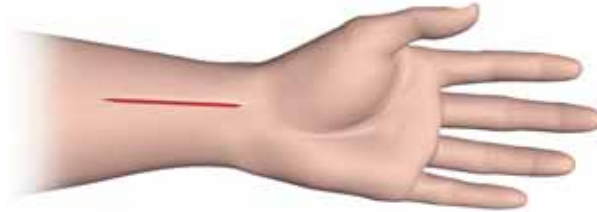
Patient Positioning

Place the patient in the supine position with the affected limb positioned to expose the surgical site. A radiolucent arm board is preferable so as not to impede fluoroscopy.



Incision

A longitudinal incision is made below the flexor carpi radialis (FCR) and the radial artery to expose the pronator quadratus. The pronator quadratus is then divided and elevated to reveal the fracture site. Care should be taken to preserve the volar wrist capsule in order to protect blood supply and soft tissue structures.



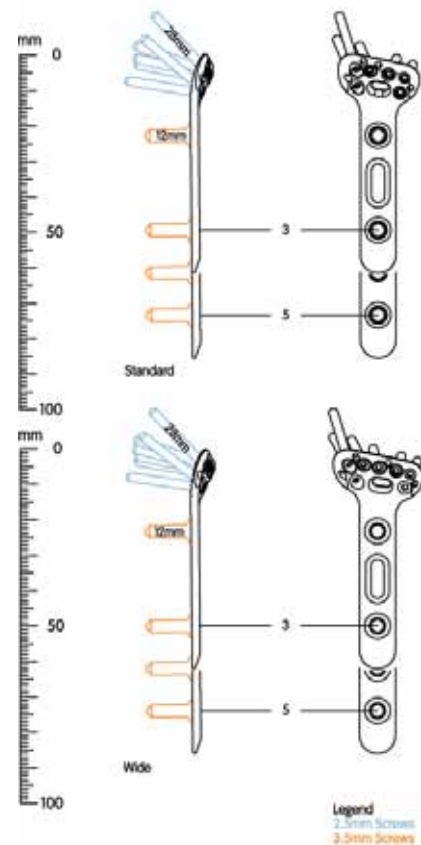
Fracture Reduction and Provisional Fixation

After exposure and debridement of the fracture site, the fracture is reduced and provisionally fixed under fluoroscopy with K-Wires, Reduction Forceps or suture fixation. Reduction aids should be placed so as not to interfere with placement of the plate.

Plate Selection

Following fracture reduction, select the Volar Distal Radius Locking Plate that best accommodates patient anatomy and fracture pattern.

Note The PERI-LOC[®] Volar Distal Radius Plate Preoperative Templates (7118-0981, 7118-0982) are available to assist with preoperative radiographic planning.



Volar Distal Radius Plate Preoperative Templates
Cat. No. 7118-0981 and 7118-0982

Plate Positioning

Attach the appropriate Drill Guide Block (7117-3489, 7117-3457, 7117-3490, 7117-3458) to the selected plate and position as desired on the distal radius.

If radial or ulnar translation of the plate is desired, the Drill Guide Block should not be attached until after the plate has been definitively placed.



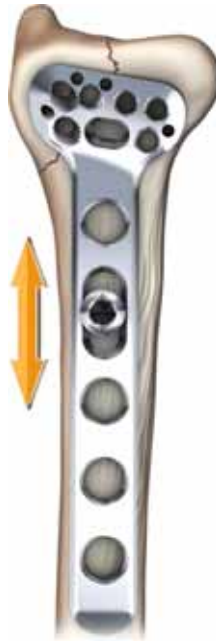
Note The 2.0mm Locking Drill Guide (7117-3459) may be used in place of the Drill Guide Block if desired.

Screw Insertion

The PERI-LOC[®] Volar Distal Radius Plate may be implanted using either a “shaft-first” or “distal-first” fixation method.

Option #1: Shaft-first Method

This technique allows for up to 5mm of proximal and/or distal plate translation prior to definitive fixation.



Option #2: Distal-first Method

This technique allows for radial and/or ulnar plate translation prior to definitive fixation.



Note If the Distal-first method is used, the Guide Block cannot be attached to the plate until after the 2.5mm Cortex Screw is fully seated in the oblong hole.

3.5mm Locking Screw Technique

Thread the 2.7mm Short Locking Drill Guide (7117-3464) into the desired shaft screw hole and drill accordingly with the 2.7mm Short Drill Bit (7117-3362).



Measure for screw length by reading the exposed calibrations of the drill bit by removing the drill guide and using the 3.5mm Short Screw Depth Gauge (7117-3523).



Attach the 3.5mm Hexdriver Shaft (7117-3488) to the Teardrop Screwdriver Handle (7117-3543) and insert the appropriate length 3.5mm Self-Tapping Locking Screw.



Note Locking screws may be inserted on power, but should always be tightened by hand in order to avoid loss of reduction, stripping of the screw head or damage to the screwdriver.

3.5mm Cortex Screw Technique

Insert the 2.0mm/2.7mm Drill Guide (7117-3462) into the desired shaft screw hole and drill accordingly with the 2.7mm Short Drill Bit.



Measure for screw length by reading the exposed calibrations off the drill bit or by removing the drill guide and using the 3.5mm Short Screw Depth Gauge.



Insert the appropriate length 3.5mm Self-Tapping Cortex Screw using the Hexdriver/Screwdriver Handle assembly.



Note If non-locking screws are to be used in the plate to gain compression, it is preferred that they be inserted prior to any locking screws.

2.5mm Locking Screw Technique

Thread the 2.0mm Locking Drill Guide through the Drill Guide Block into the desired screw hole and drill accordingly with the 2.0mm Short Drill Bit (7117-3355).



Measure for screw length by reading the exposed calibrations off the drill bit or by removing the drill guide and using the 2.5mm Short Screw Depth Gauge (7117-3463).



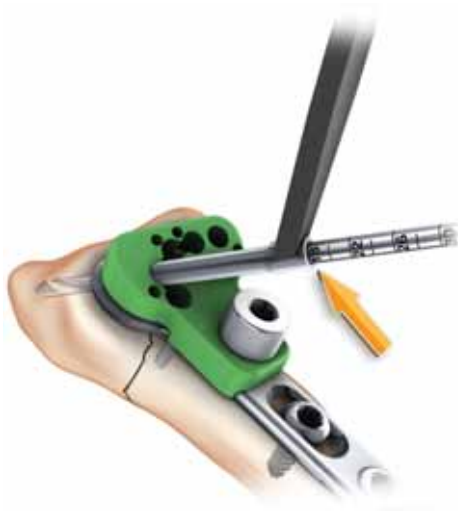
Attach the 1.5mm Hexdriver Shaft w/Holding Sleeve (7117-0036) to the Quick Coupling Handle (7117-0014) and insert the appropriate length 2.5mm Self-Tapping Locking Screw. The Drill Guide Block does not need to be removed for screw insertion.



Note Locking screws may be inserted on power, but should always be tightened by hand in order to avoid loss of reduction, stripping of the screw head or damage to the screwdriver.

2.5mm Cortex Screw Technique

Insert the 2.0mm/2.7mm Drill Guide through the Drill Guide Block into the desired screw hole and drill accordingly with the 2.0mm Short Drill Bit.



Measure for screw length by reading the exposed calibrations off the drill bit or by removing the drill guide and using the 2.5mm Short Screw Depth Gauge.



Insert the appropriate length 2.5mm Self-Tapping Cortex Screw using the 1.5mm Hexdriver/Quick Coupling Handle assembly. The Drill Guide Block does not need to be removed for screw insertion. Fill remaining screw holes as desired.



Closure

Obtain final radiographic images to confirm screw placement and fracture reduction.
Wound closure follows standard technique.



Catalog Information



PERI-LOC[®] Volar Distal Radius Implant & Instrument Set

Set No. 7181-1006

Instrument Case

Cat. No.	Description
7117-0391	Volar Distal Radius Tray
7117-0383	Lid for Volar Distal Radius Tray
7117-0393	Volar Distal Radius Screw Caddy

Disposables

Cat. No.	Description	Tray Qty
7116-1016	1.6mm x 150mm K-Wire	6 ea
7117-3355	2.0mm Short Drill Bit	2 ea
7117-3362	2.7mm Short Drill Bit	2 ea
7117-3318	3.5mm Tap	1 ea

Instruments

Cat. No.	Description	Tray Qty	Cat. No.	Description	Tray Qty
7117-3543	Teardrop Screwdriver Handle	1 ea	7117-3378	Reduction Forceps, Serated Jaw	2 ea
7117-0014	Quick Coupling Handle	1 ea	7117-3528	AO-Trinkle	1 ea
7117-3488	Hexdriver Shaft, 119mm	2 ea	7117-0103	Bending Iron, Right	1 ea
7117-0036	1.5mm Hexdriver Shaft, 64mm	2 ea	7117-0101	Bending Iron, Left	1 ea
7117-0034	Holding Sleeve	1 ea	7117-3489	Standard Drill Guide Block w/Set Screw, Left	1 ea
7117-3523	3.5mm Short Screw Depth Gauge	1 ea	7117-3457	Wide Drill Guide Block w/Set Screw, Left	1 ea
7117-3463	2.5mm Short Screw Depth Gauge	1 ea	7117-3490	Standard Drill Guide Block w/Set Screw, Right	1 ea
7117-0097	Periosteal Elevator	1 ea	7117-3458	Wide Drill Guide Block w/Set Screw, Right	1 ea
7117-3464	2.7mm Short Locking Drill Guide	1 ea			
7117-0043	Sharp Hook	1 ea			
7117-0057	Hohmann Retractor, 8mm	2 ea			
7117-3462	2.0mm/2.7mm Drill Guide	1 ea			
7117-3459	2.0mm Locking Drill Guide	1 ea			

3.5mm Self-Tapping Locking Screws

Cat. No.	Length
7182-5010	10mm
7182-5012	12mm
7182-5014	14mm
7182-5016	16mm
7182-5018	18mm
7182-5020	20mm

3.5mm Self-Tapping Cortex Screws

Cat. No.	Length
7182-4010	10mm
7182-4012	12mm
7182-4014	14mm
7182-4016	16mm
7182-4018	18mm
7182-4020	20mm

2.5mm Self-Tapping Locking Screws

Cat. No.	Length
7182-2410	10mm
7182-2412	12mm
7182-2414	14mm
7182-2416	16mm
7182-2418	18mm
7182-2420	20mm
7182-2422	22mm
7182-2424	24mm
7182-2426	26mm
7182-2428	28mm
7182-2430	30mm

2.5mm Self-Tapping Cortex Screws

Cat. No.	Length
7182-2510	10mm
7182-2512	12mm
7182-2514	14mm
7182-2516	16mm
7182-2518	18mm
7182-2520	20mm
7182-2522	22mm
7182-2524	24mm
7182-2526	26mm
7182-2528	28mm
7182-2530	30mm

Volar Distal Radius Plates

Cat. No.	Description	Length	Cat. No.	Description	Length
7182-3110	Standard, 3H, Left	62mm	7182-3114	Standard, 3H, Right	62mm
7182-3112	Standard, 5H, Left	86mm	7182-3116	Standard, 5H, Right	86mm
7180-3126*	Standard, 9H, Left	135mm	7180-3128*	Standard, 9H, Right	135mm
7182-3118	Wide, 3H, Left	62mm	7182-3122	Wide, 3H, Right	62mm
7182-3120	Wide, 5H, Left	86mm	7182-3124	Wide, 5H, Right	86mm

* Sterile only



We are proud to be a Diamond Level
Supporter of the Research and Education
of the Orthopaedic Trauma Association

**Orthopaedic Trauma &
Clinical Therapies**

Smith & Nephew, Inc.
1450 Brooks Road
Memphis, TN 38116
USA

www.smith-nephew.com

Telephone: 1-901-396-2121
Information: 1-800-821-5700
Orders/inquiries: 1-800-238-7538