

Locking Proximal Radius Plates 2.7mm

Surgical Technique



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Locking Proximal Radius Plate 2.7mm



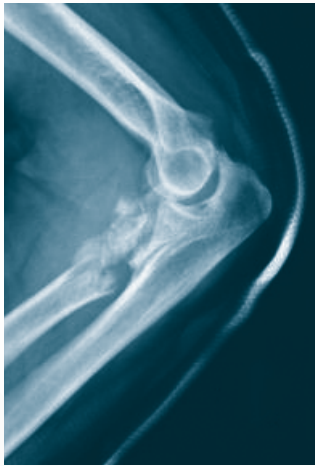
Plate features

- ◆ Nine LCP Proximal Radius Plates available to address various fracture patterns of the proximal radius
- ◆ Plates are precontoured for anatomical fit
- ◆ Combi holes allow fixation with locking screws in the threaded section for angular stability, and cortex screws in the Dynamic Compression Unit (DCU) section for distraction. A fixed-angle construct provides advantages in osteopenic bone or multifragment fractures, where traditional screw purchase is compromised.
- ◆ Carefully apply for osteoporotic bone

Additional features

- ◆ Limited-contact design shaft with 2, 3, and 4 combi-holes
- ◆ The holes in the head of the plate accept 2.4mm & 2.7mm locking screws
- ◆ The shaft holes accept 2.7mm locking screws in the threaded portion or 2.7mm cortex screws in the distraction portion
- ◆ Plates for radial head rim available in right and left plates with a 5° tilt to match the anatomy of the radial head
- ◆ Plates for radial head neck fit both the left and right side of the proximal radius

Intended Use and Indications



Intended Use

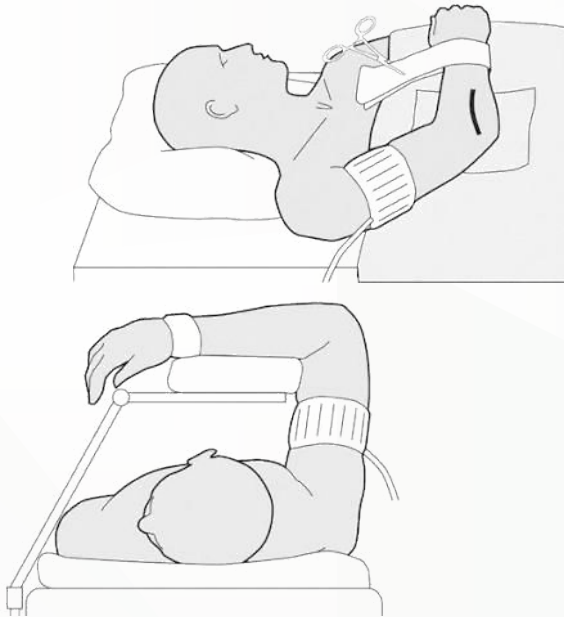
The plate and screw implants included in the Radius Plate product family are intended for temporary fixation, correction or stabilization in the radius anatomical region.

Indications

Extra-articular and intra-articular fractures of the proximal radius and multifragmented radial neck fractures.

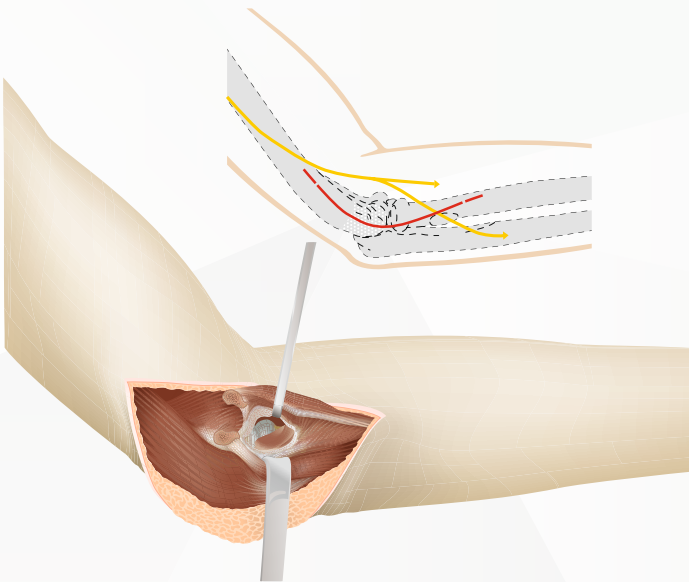
Patient position

Position the patient supine on the table. Prepare the extremity from the axilla to the hand. This allows rotation of the forearm and flexion and extension of the elbow during the operative fixation.



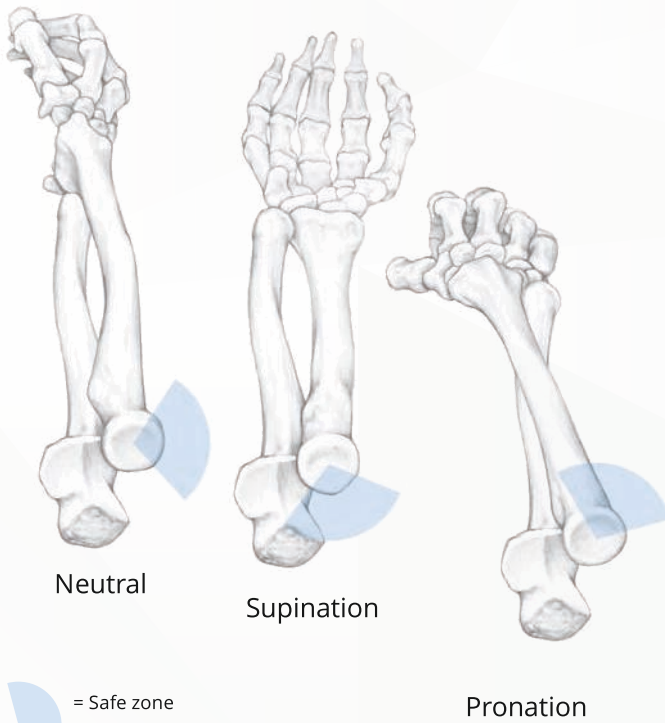
Approach

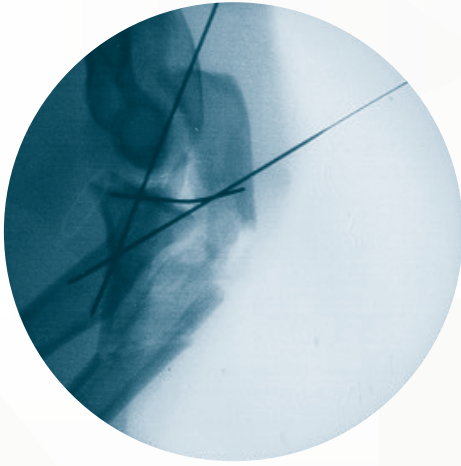
A lateral approach is most commonly used. Take care to avoid the deep branch of the radial nerve, which runs anterior to the capsule and the radial head. To minimize the risk of operative disruption of the lateral collateral ligament, the capsular incision should remain in the front of the anterior margin of the anconeus muscle and parallel to the fascial limit of the extensor carpi ulnaris. The annular ligament, a true thickening of the capsule, is opened laterally or slightly anteriorly to allow full inspection of the fragments. In selected cases, an osteotomy of the lateral epicondyle will allow an extensile approach.



Safe zone

Both plates it within the Hotchkiss safe zone which is described as an area of 105° on the radial head that is free of impingement between ulna and radius. The Hotchkiss safe zone is located on the opposite side of the radial tuberosity.





1. Reduce fracture

Perform preliminary fixation with Kirschner wires.

Precaution:

The plate reduction wires and Kirschner wires are single use items, do not re-use.



2. Apply Radial Head Plate

Instruments

735.06	Torque Limit Adapter 0.8 Nm
614T.08 &	T08 Star Driver Shaft Short for 2.4 / 2.7mm screws
614T.08A	T08 Star Driver Shaft Long for 2.4 / 2.7mm screws

After reducing the fracture, apply the plate and insert a preliminary cortex screw through the DCU portion of one of the elongated Combi holes.

Note:

The plates are precontoured to fit the anatomy of the radial head. There are no undercuts on the plates to protect the threaded holes from distortion during bending. If it is necessary to bend the plate, use bending pliers.

Precaution:

Reverse bending or use of the incorrect instrumentation for bending may weaken the plate and lead to premature plate failure (e.g. breakage). Do not bend the plate beyond what is required to match the anatomy.



3. Insert proximal screws

Instruments

735.06	Torque Limit Adapter 0.8 Nm
614T.08	T08 Star Driver Shaft Short for & 2.4 / 2.7mm screws
614T.08A	T08 Star Driver Shaft Long for 2.4 / 2.7mm screws
601.032	Drill Bits 1.8mm x 110mm for Quick Coupling T Handle

Use 2.7mm locking screws in the head of the plate.

Precaution:

Careful drilling is necessary, as interference with screws in the proximal portion of the plate is possible. In case of interference, stop drilling and use a screw of appropriate length.



4. Insert screws in the shaft of the plate

Instruments

735.06	Torque Limit Adapter 0.8 Nm
614T.08	T08 Star Driver Shaft Short for & 2.4 / 2.7mm screws
614T.08A	T08 Star Driver Shaft Long for 2.4 / 2.7mm screws

For cortex screws 2.7mm

601.033	Drill Bits 2.0mm x 110mm for Quick Coupling T Handle
601.021	Drill Bits 2.3mm x 150mm for Quick Coupling T Handle
605.027	Drill And Tap Sleeve 2.7 / 2.0mm

For locking screws 2.4mm

601.032	Drill Bits 1.8mm x 110mm for Quick Coupling T Handle
733.020	LCP Drill Sleeve For variable angle plate 2.4mm, For Drill Bits 1.8mm

Use 2.4mm and 2.7mm cortex screws and 2.7mm locking screws in the shaft of the plate.

Determine screw choice

If planning a combination of locking and cortex screws, first use a cortex screw to pull the plate to the bone.

Precaution:

If using a locking screw first, ensure that the plate is held securely to the bone, to avoid spinning of the plate as the screw locks into the plate.

Insert cortex screws

Instruments

- | | |
|---------|---|
| 601.033 | Drill Bits 2.0mm x 110mm for Quick Coupling T Handle |
| 601.021 | Drill Bits 2.3mm x 150mm for Quick Coupling T Handle |
| 601.032 | Drill Bits 1.8mm x 110mm for Quick Coupling T Handle |
| 734.027 | Tap 2.7mm Locking Screw For Quick Coupling |
| 609.005 | Depth Gauge 50mm Length for 2.4/2.7mm Screw |
| 733.020 | LCP Drill Sleeve For variable angle plate 2.4mm, For Drill Bits 1.8mm |
| 605.027 | Drill And Tap Sleeve 2.7/2.0mm |
- ◆ Use the 2.4 or 2.7 universal drill guide for an eccentric (distraction) or neutral (buttress) insertion of cortex screws.
 - ◆ For the 2.4mm cortex screw, use the 1.8mm drill bit for the threaded hole and the 2.4mm drill bit for the gliding hole. Determine the length of the screw by using the depth gauge. For 2.7mm cortex screws, use the 2.3mm drill bit for the threaded hole and the 2.7mm drill bit for the gliding hole.



Locking screw insertion with holding sleeve

Instruments

735.06	Torque Limit Adapter 0.8 Nm
614T.08	T08 Star Driver Shaft Short for & 2.4 / 2.7mm screws
614T.08A	T08 Star Driver Shaft Long for 2.4 / 2.7mm screws
613C.027	Holding Sleeve for Locking screws 2.4/2.7mm

An alternate method may be used for insertion of locking screws, using the locking screw to pull the plate to the bone. Place the holding sleeve onto the screwdriver shaft. Pick up the locking screw with the holding sleeve and insert the screw. With the locking screw still held by the holding sleeve, tighten the screw until the plate is drawn to the bone. Pull up on the holding sleeve to release the screw head, and tighten the screw until a click is heard.

Precaution:

Take care to hold the plate securely on the bone to avoid spinning the plate as the screw locks to the plate.

Postoperative treatment

Postoperative treatment with locking compression plates does not differ from conventional internal fixation procedures.

Implant removal

To remove locking screws, first unlock all screws from the plate and then remove the screws completely from the bone. This avoids rotation of the plate when removing the last locking screw.

Locking Proximal Radius Rim Plate 2.7mm (Left)

SS Code No.	Titanium Code No.	Numbers of Holes
173.02L	T173.02L	2
173.03L	T173.03L	3
173.04L	T173.04L	4

Locking Proximal Radius Rim Plate 2.7mm (Right)

SS Code No.	Titanium Code No.	Numbers of Holes
173.02R	T173.02R	2
173.03R	T173.03R	3
173.04R	T173.04R	4

Locking Proximal Radius Neck Plate 2.7mm

SS Code No.	Titanium Code No.	Numbers of Holes
172.02	T172.02	2
172.03	T172.03	3
172.04	T172.04	4



2.7mm Locking Compression Screws Star Head

(199.10 – 199.40, length 10 – 40mm)

- ◆ Threaded, conical head locks securely into the plate to provide angular stability
- ◆ Locked screws allow unicortical screw fixation and load transfer to the near cortex
- ◆ Stardrive recess mates with self-retaining screwdriver
- ◆ 10mm to 40mm lengths



2.7mm Cortex Screws (Self Tapping)

(075.08 – 075.40, length 8 – 40mm)

- ◆ For use in Combi holes in plate shaft, to provide distraction or neutral fixation
- ◆ Low-profile head in the plate holes
- ◆ Stardrive recess mates with self-retaining screwdriver
- ◆ 8mm to 40mm lengths

Instruments

612.011 Quick Coupling Handle for 3.5/4.0mm Screw 	614.T08 Shaft for Star Screw Driver T08 Tip for 3.5/4.0mm screw 
613C.027 Holding Sleeve for Locking screws 2.4/2.7mm 	601.033 Drill Bits 2.0mm x 110mm for Quick Coupling T Handle 
601.032 Drill Bits 1.8mm x 110mm for Quick Coupling T Handle 	735.06 Torque Limit Adapter 0.8 Nm 



AGC.16A Small fragment Locking Instrument and Universal Implant Set

Instruments

601.031	Drill Bits 2.0mm x 145mm for Quick Coupling T Handle
601.021	Drill Bits 2.3mm x 130mm for Quick Coupling T Handle
601.023	Drill Bits 2.5mm x 165mm for Quick Coupling T Handle
601.024	Drill Bits 2.7mm x 165mm for Quick Coupling T Handle
601.019	Drill Bits 2.8mm x 165mm for Quick Coupling T Handle
603.001	Quick Coupling T Handle
603.027	Tap 2.7mm Cortex Screw For Quick Coupling
605A.027	Universal Drill And Tap Sleeve 2.7/2.0mm
605A.035	Universal Drill And Tap Sleeve 3.5/2.5mm
606.035	Counter Sink for 3.5mm
607.035	DCP Drill Sleeve 3.5mm for use 2.5mm Drill
609.002	Depth Guage For 3.5mm To 4.0mm Screw Length 80mm
609.004	Depth Guage For 2.4mm To 2.7mm Screw Length 60mm
609.008	Open Measuring Device
610.002	Screw Forceps Self Holding
612.011	Quick Coupling Stright Handle
614.025	Shaft Small Hexagonal Screw Driver 2.5mm Tip
616.013	Universal Plate Bender
617.001	Sharp Hook
619.035	Screw Remover With Quick coupling 2.5mm Hex
655.006	Bone Curette Small 4mm x 6mm
660.010	Triple Drill Guide 2.0mm with 3hole Opposite side 1hole
660.013	K Wire Bender Iron
660.014	Universal Wire Cutter/Bender/Pilers
687.144	Self-centering Bone Holding Forceps Length 144mm
687.191	Self-centering Bone Holding Forceps Length 191mm
688.146	Reduction Forceps Serrated jaws Length 146mm
689.126	Reduction Forceps With Points Length 126mm
689.140	Reduction Forceps With Points Length 140mm
689.205	Reduction Forceps With Points Length 205mm
706.008	Retractorl 8mm wide
706.015	Retractorl 15mm wide
711.001	Periosteal Elevator Curved Blade 6mm wide
733.021	Outer Sleeve 6.0/5.0 for Plate
733.022	Drill Sleeve 2.8mm
733.023	Sleeve for K Wire 1.6mm
733.027	LCP Drill Sleeve 2.7mm, For Drill Bits 2.3mm
733.035	LCP Drill Sleeve 3.5mm, For Drill Bits 2.8mm
734.027	Tap 2.7mm Locking Screw For Quick Coupling
734.035	Tap 3.5mm Locking Screw For Quick Coupling
735.06	Torque Limit Adapter 0.8 Nm
735.07	Torque Limit Adapter 1.5 Nm
738.035	LCP Plate Holder 3.5mm Length 100mm
603A.035	Tap 3.5mm x 110mm for Quick Coupling
603A.040	Tap 4.0mm x 110mm for Quick Coupling
612A.025	Screw Driver for Holding Sleeve
613A.025	Holding Sleeve for Locking screws 3.5/4.0mm
613B.025	Holding Sleeve for Non Locking screws 3.5/4.0mm
614.T08	Shaft for Star Screw Driver T08 Tip for 2.4/2.7mm screws
614.T15	Shaft for Star Screw Driver T15 Tip for 3.5/4.0mm screws
614.020	Shaft for Hexagonal Screw Driver 2.0mm Tip for 2.4/2.7mm screws
616A.002	Bending Iron Small for Plates 2.7 and 3.5mm
616B.002	Bending Iron Small for Plates 2.7 and 3.5mm
805.007	4mm Tommy Bar
328B.15	K Wire (Double Side Trocar Tip) 1.5mm x 150mm
328B.18	K Wire (Double Side Trocar Tip) 1.8mm x 150mm
328B.20	K Wire (Double Side Trocar Tip) 2.0mm x 150mm
613C.027	Holding Sleeve for Locking screws 2.4/2.7mm
613D.027	Holding Sleeve for Non Locking screws 2.7mm



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