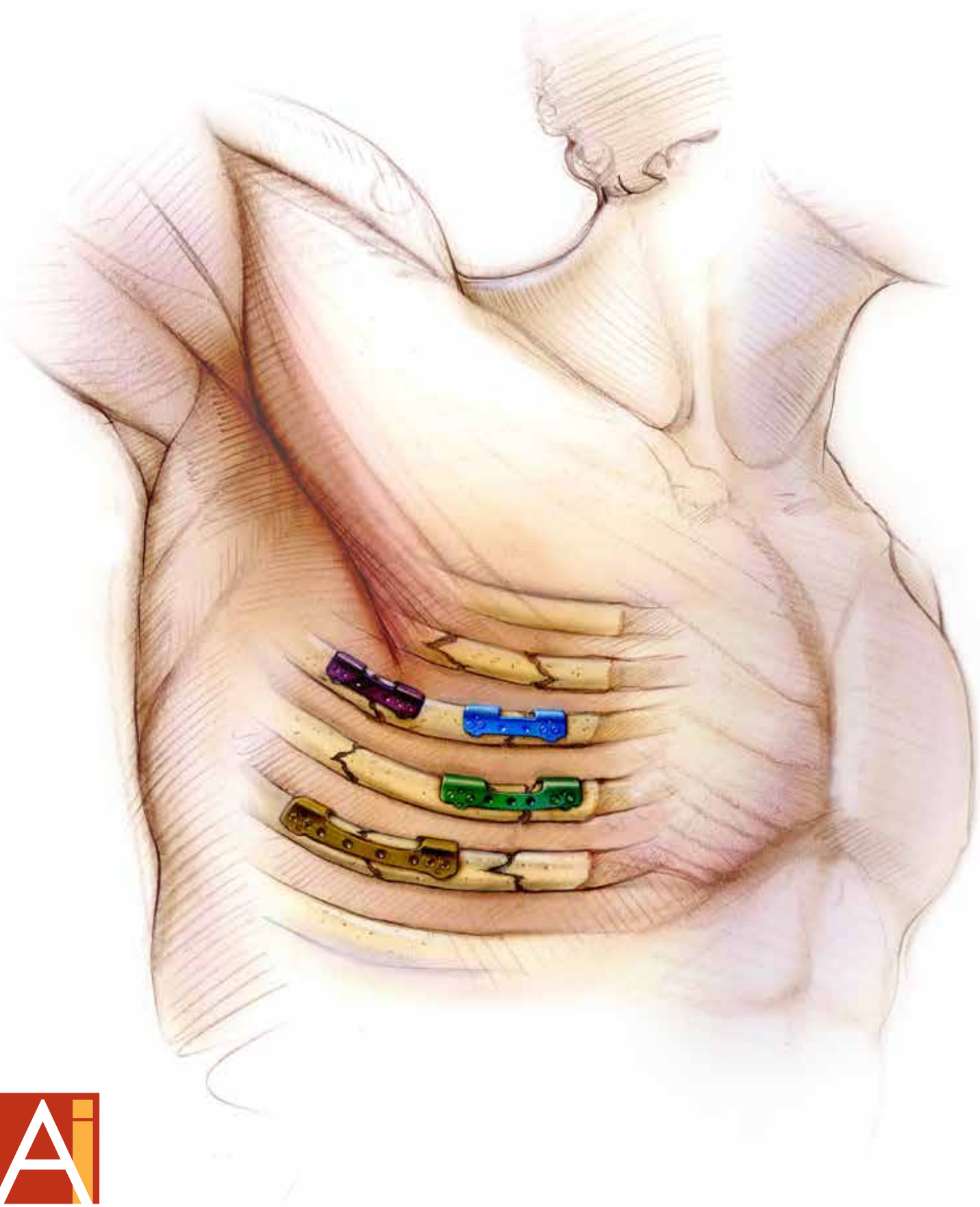


RibLoc®

Rib Fracture Plating System

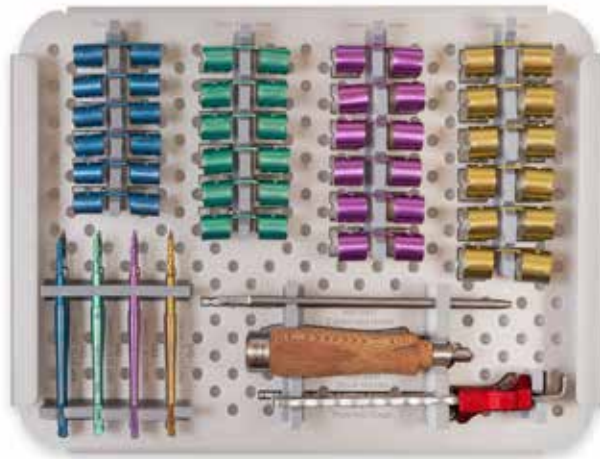


Innovative Solutions for Challenging Thoracic Procedures

RibLoc[®]

Rib Fracture Plating System

ACUTE Innovations[®] RibLoc[®] Rib Fracture Plating System is designed to be a comprehensive system of implants and instruments specifically for repairing rib fractures. The plate's unique U-shape with locking screw technology provides excellent fixation and allows for a less invasive approach.³ The precise targeting and color-coded instrumentation provide straightforward insertion that reduces OR time.





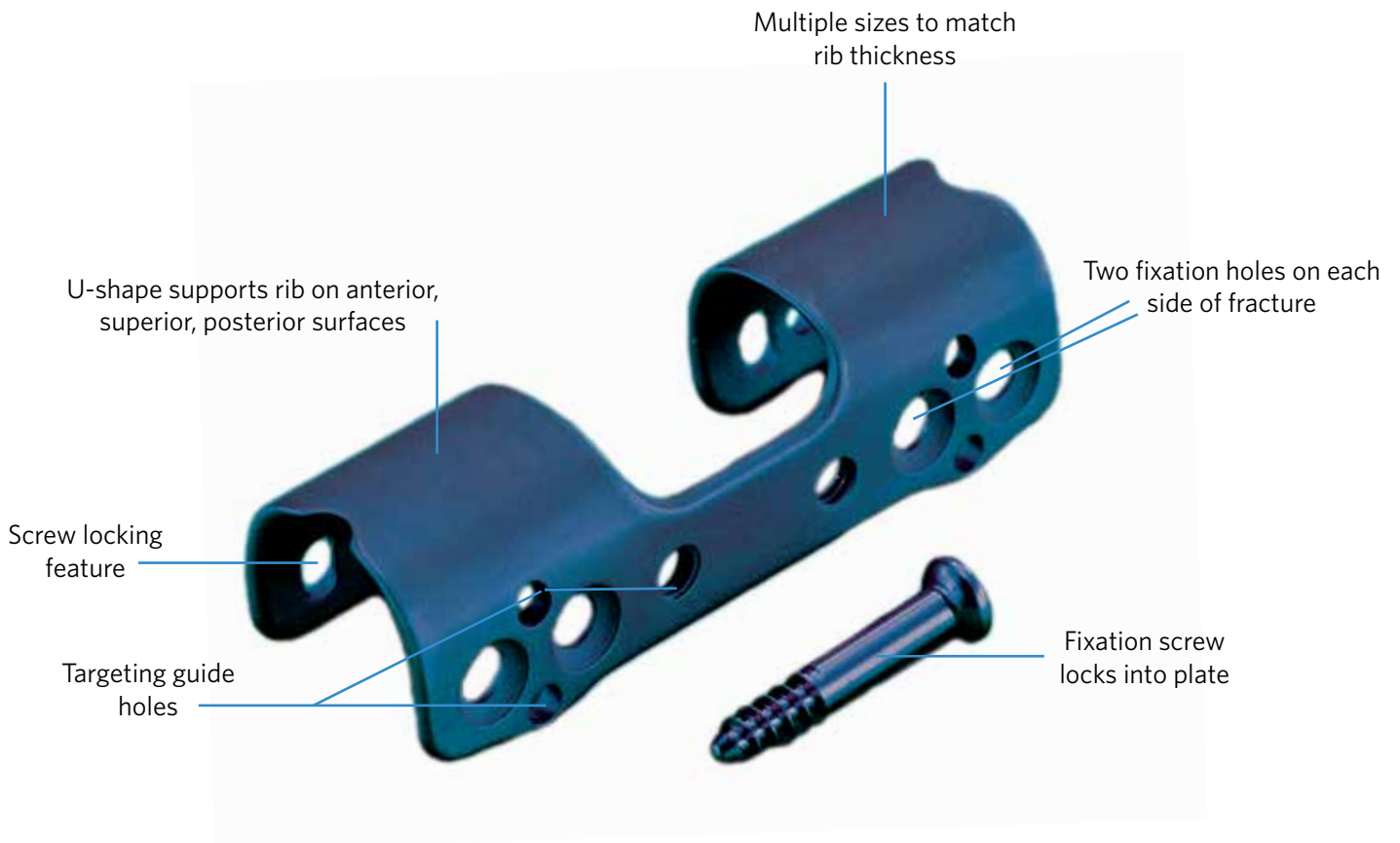
LESS INVASIVE



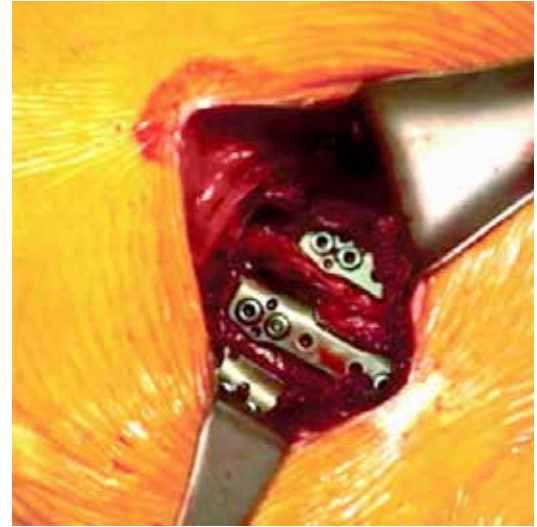
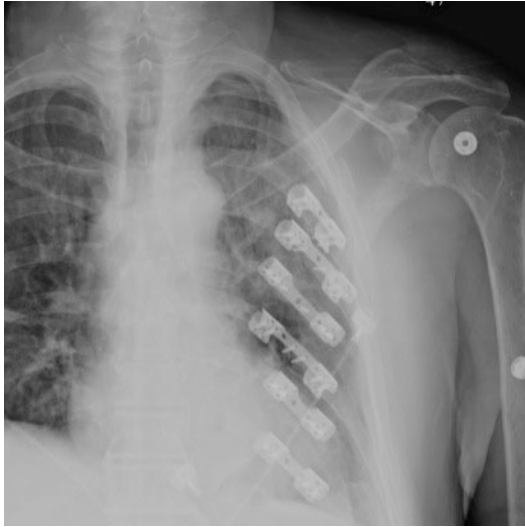
STABLE FIXATION



**COLOR-CODED
STRAIGHT-FORWARD
TECHNIQUE**



The RibLoc 46mm plate is the shortest plate on the market requiring two screws at each of the U-clips for fixation. An incision as little as 7cm has been used for installation, which can allow access to up to three ribs in the field of fractures.



The longer 61mm and 76mm plates can address oblique or fracture patterns while still allowing a small incision size.



COMMINUTED FRACTURE



OBLIQUE FRACTURE



SEGMENTAL FRACTURE



SPIRAL FRACTURE

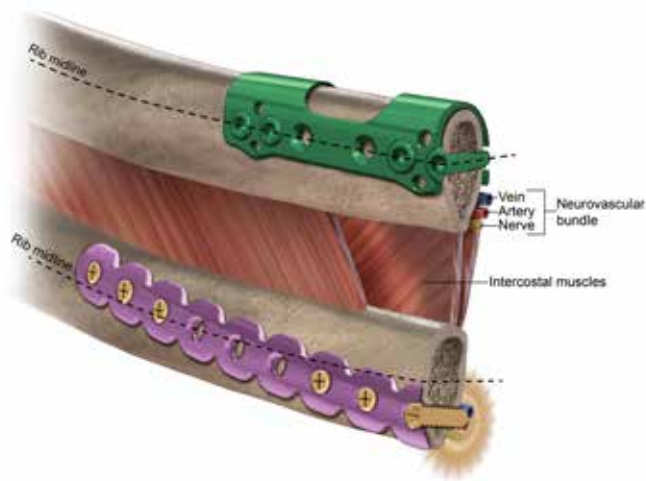
For more information about fractures and successful bone healing, visit ACUTE Innovations website www.acuteinnovations.com

The ACUTE Innovations® RibLoc® U-plate and screw system does not rely on fixation into rib bone for its strength. Instead, the RibLoc system screws engage the posterior aspect of the plate and rib to provide added stability.³



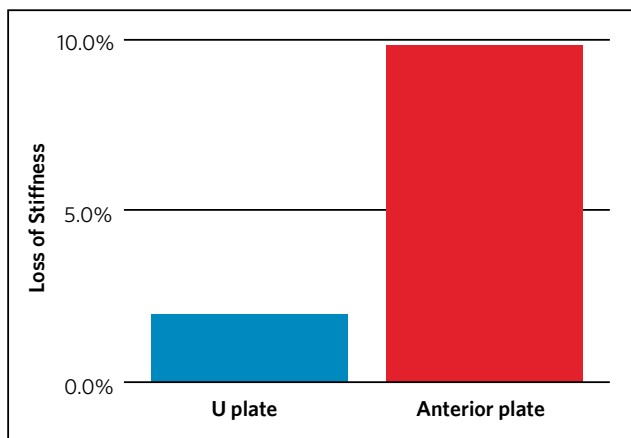
RIBLOC TECHNOLOGY

The RibLoc plate is designed so that the rib screw pulls the posterior side of the plate to the rib and locks into place.¹



RIBLOC PLACEMENT ON RIB

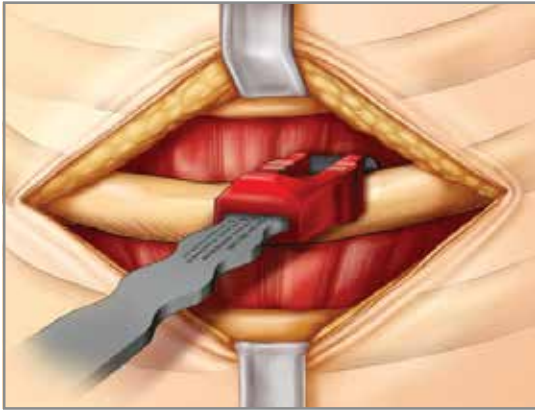
The RibLoc plate avoids impingement of the neurovascular bundle by sitting on the superior aspect of the rib and therefore locating rib midline.²



PERFORMANCE OF RIBLOC VERSUS ANTERIOR PLATING

A biomechanical study was performed using cadaver ribs plated with a 4.6cm long RibLoc plate and 4 screws. It was superior in durability to an anterior plate of over twice the length and 6 screws after only 50,000 breathing cycles (typically two days of breathing).³

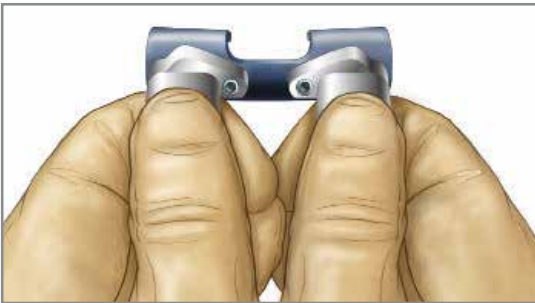
This was evaluated based on stiffness loss, as shown in the graph. Additionally, the reduced length of the RibLoc plate may facilitate a less invasive technique.³

MEASURE RIB**STEP 1**

- a) Measure the anterior/posterior rib thickness near fracture using the thickness gauge.
- b) Read the size from back or top center of red sleeve. If between sizes select the larger size.
- c) Select plate size based on rib thickness.

PREPARE THE PLATE

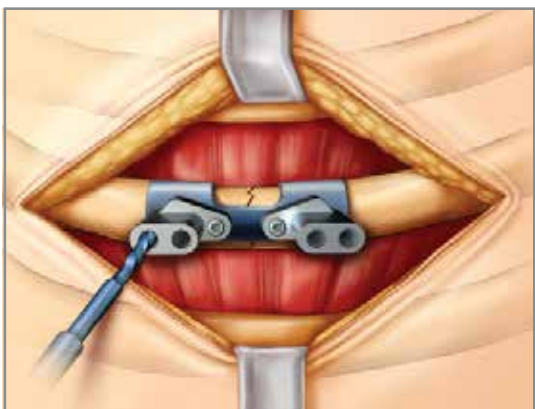
a)



b)

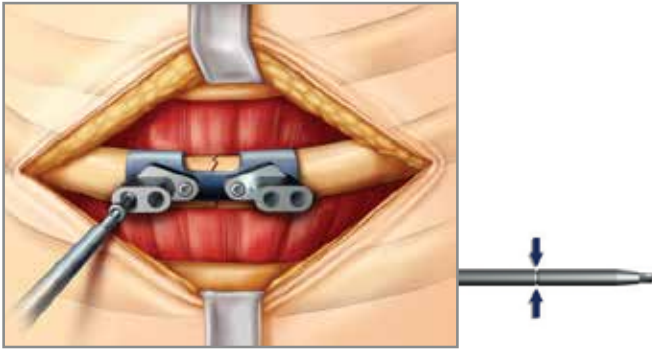
STEP 2

- a) Assemble both targeting guides to plate.
- b) Contour the plate, if necessary, by leveraging off the target guides. If more than minor adjustment is needed for a long plate (61mm or 76mm) then insert the intermediate screws into the threaded holes of the plate prior to bending.

DRILL BONE FOR SCREW INSERTION**STEP 3**

- a) Place plate onto rib, centered over fracture.
- b) Use drill or drill guide that matches the color of the plate.
- c) Insert drill bit into targeting guide barrel and advance until drill bottoms out on the guide.
- d) Use one drill bit per case and discard when finished.

INSERT SCREWS



STEP 4

- Remove drill.
- Insert screw through guide & tighten until groove on driver shaft is flush with entrance of targeting guide barrel.
- Repeat drilling and screw insertion for all four holes.

TIGHTEN SCREWS

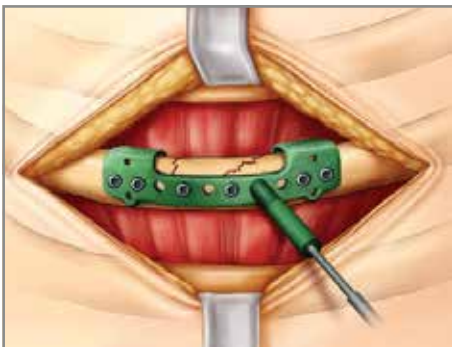


STEP 5

- Remove targeting guides.
- Sequentially tighten each set of screws until snug, do not over tighten.

LONG PLATE APPLICATION

DRILLING FOR 2.3mm SCREWS



STEP 1

- Thread corresponding colored drill guide into one of the center holes.
- Use the 2.0mm drill bit. Insert drill through drill guide, advance until drill bottoms out on the guide.
- Use one drill bit per case.

INSERT SCREWS



STEP 2

- Remove drill guide.
- Insert screws using the 1.5mm hex driver for the 2.3mm screws.
- Tighten screw until snug. Caution not to over tighten.

LONG PLATE FOR EXTREME BENDING



- a) If more than minor contouring of long plate (61mm or 76mm) is needed then insert the screws into the threaded holes prior to bending to preserve the integrity of the threads in the plate.
- b) Remove the screws after bending. Install the plate onto the rib and follow steps above.

KEYS TO SUCCESS

- a) Select the correct thickness of plate for the rib
- b) Firmly attach both targeting guides to plate
- c) Use the correct drill and screw size by matching colors
- d) Tighten screws in pairs until snug, over tightening may cause stripping
- e) Use one drill per case

Back to health. Back to work. Back to **life.**

REFERENCES

1. Data on file at ACUTE Innovations®
2. Nirula R, Mayberry JC. Rib fracture fixation: controversies and technical challenges. *Am Surg.* 2010 Aug;76(8):793-802
3. Sales JR, Ellis TJ, Gillard J, Liu Q, Chen JC, Ham B, Mayberry JC. Biomechanical testing of a novel, minimally invasive rib fracture plating system. *J Trauma* 2008; 64:1270-1274



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