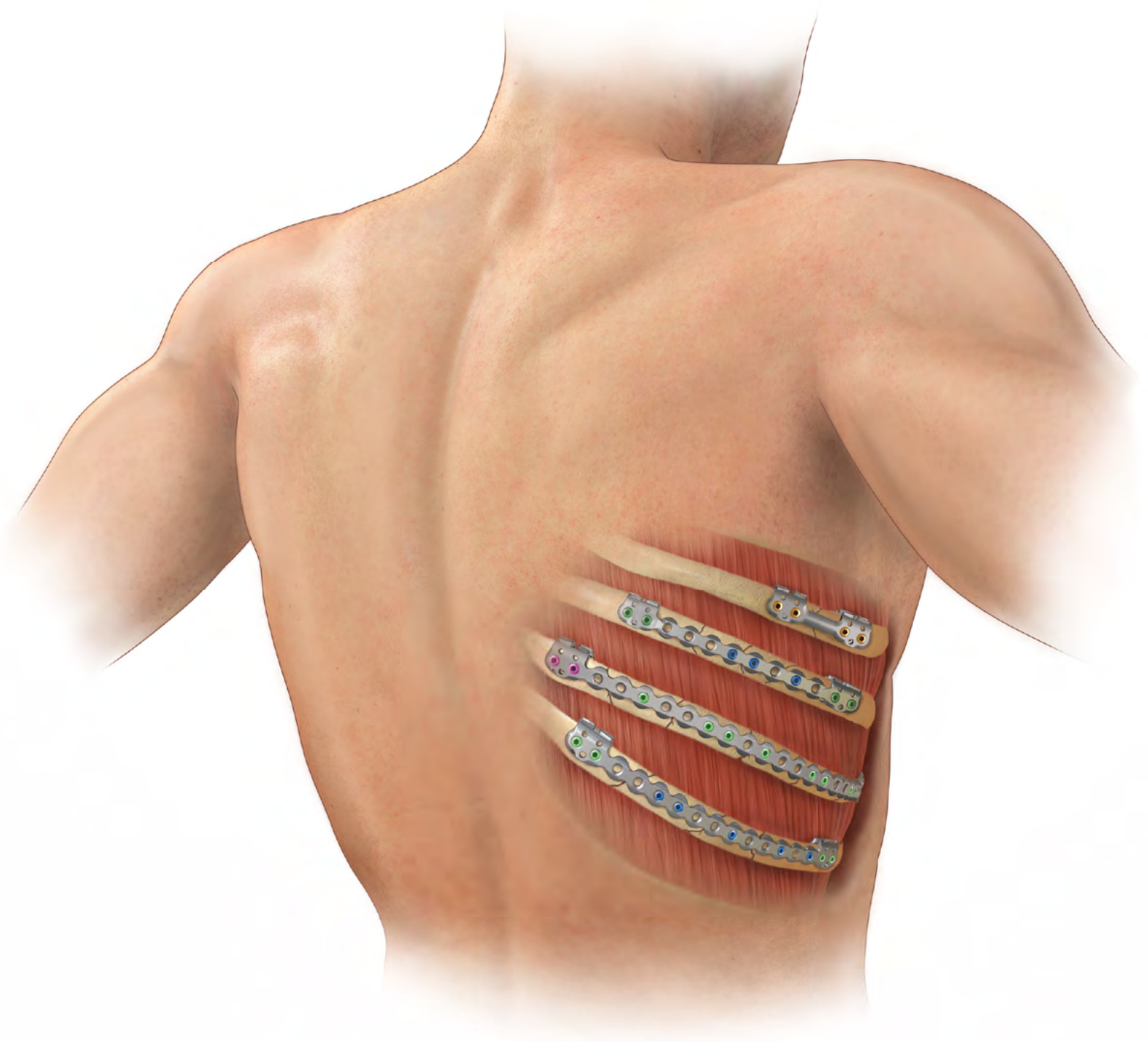
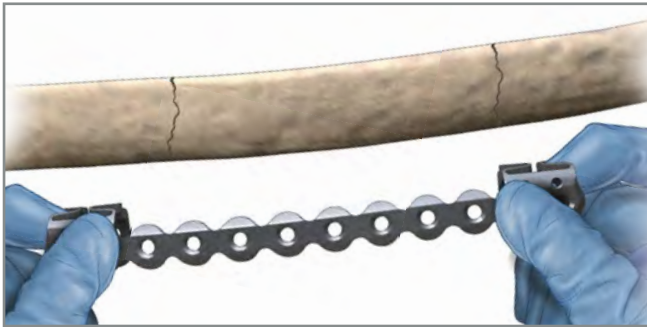


RibLoc® U+
Chest Wall Plating System

Surgical Technique



Chest Wall Plating System Surgical Technique



1 Select Plate

After exposing the fracture, select the desired plate length and prepare for placement:

- Identify the desired placement of the U-clips by holding the plate over the rib.
- At each U-clip location, make a small incision immediately superior to the rib margin.

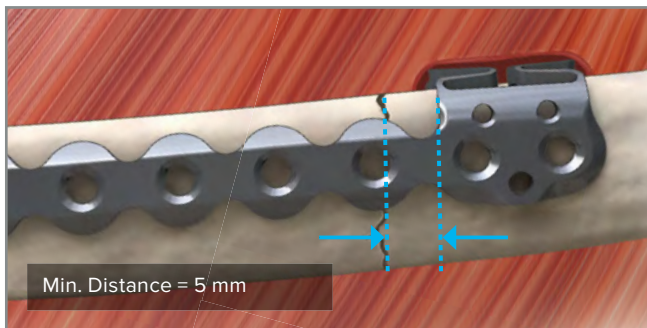
Note: Plates are available in 50 mm, 75 mm, 115 mm, 155 mm, and 215 mm lengths.

Note: Select a plate that allows a minimum distance of 5 mm between the fracture and the nearest U-clip.

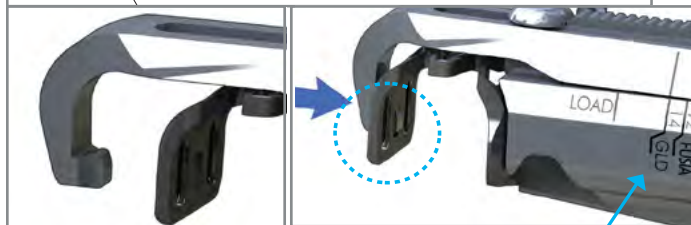
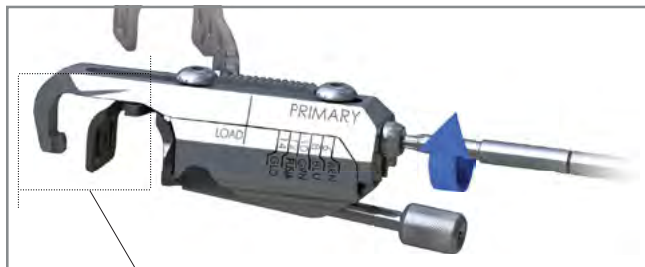
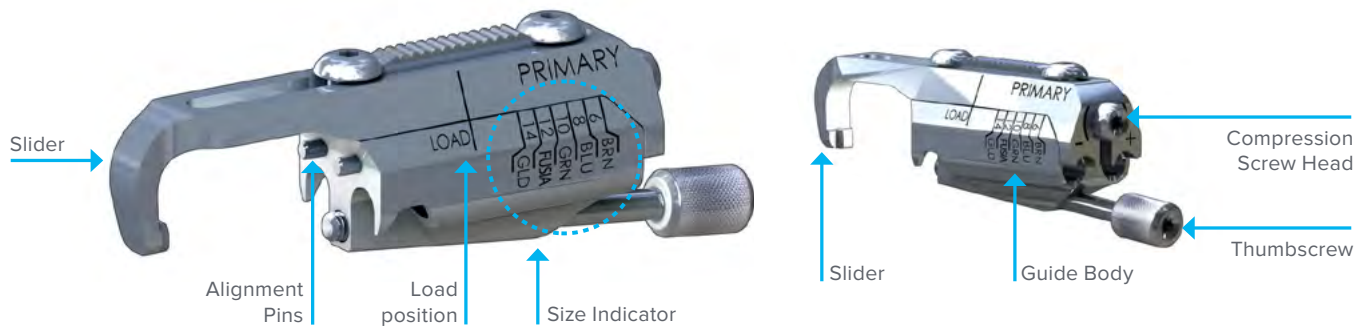
Note: A sterile-packed ruler can be used to assist in plate sizing.

Note: Contouring the plate with Acute's bending template (RBL2294) can be helpful when installing onto the rib.

Caution: Care should be used not to deform the U-clips during handling.



Chest Wall Plating System Surgical Technique [continued]



LOAD position

14 mm marking

2 Attach Primary Guides

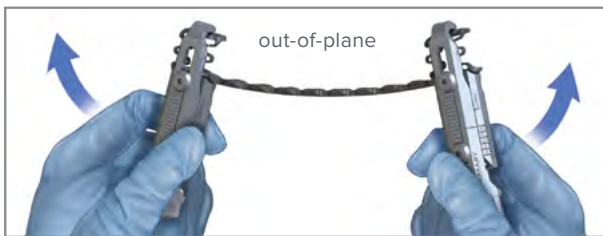
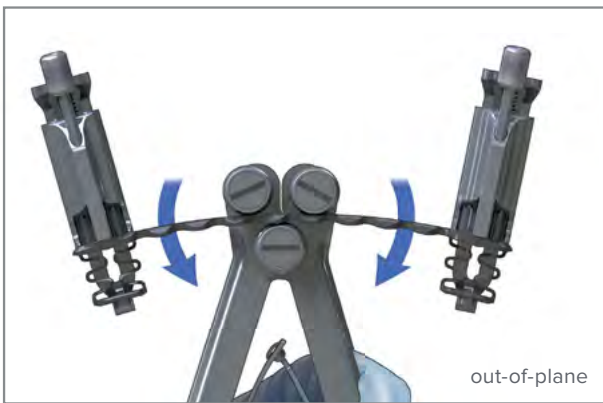
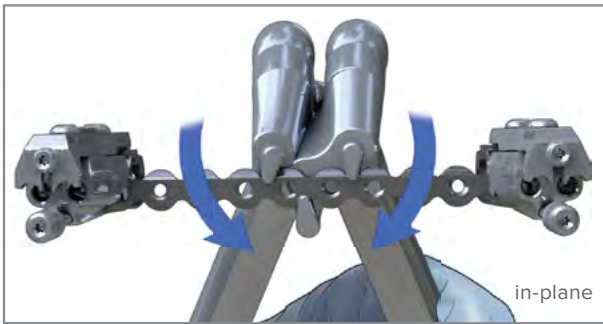
- Reset the Primary Guide to the “LOAD” position by using the driver and rotating the Compression Screw Head.
- Align the Primary Guide pins with the corresponding holes on the front of each U-clip.
- Tighten the Thumbscrew by hand to secure the Primary Guide to the plate.

- Using the driver, rotate the Compression Screw Head until the indicator reaches the 14 mm, or gold, marking and the slider engages with the posterior of the U-clip.

Note: Visually ensure the slider is engaged with the posterior rectangular slot of the U-clip. Adjust alignment by hand if necessary.

Note: Do not start compressing the U-clip at this point.

Chest Wall Plating System Surgical Technique [continued]



3 Contour Plate

If needed, contour the plate to match the rib's geometry using the bending tools provided. Place the plate over the rib throughout the bending process to assess fit.

Note: Contouring is typically needed for 115 mm, 155 mm, and 215 mm plates.

Plate contouring options:

a. Hand Benders

1. For in-plane bending, place the plate within the teardrop features. In-plane contour can be added in situ or prior to plate placement.
2. For out-of-plane bending, place the plate between the rollers.

Tip: The plate will bend in the direction of the handles.

b. Joystick Benders

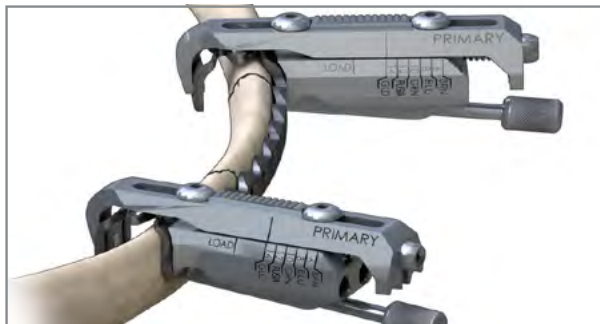
1. Thread the two benders into the plate holes on either side of the desired contour location.
2. Use the handles to bend, twist, or straighten the plate. This can be done in situ or prior to plate placement.

Tip: The Joystick Benders may be used to hold and manipulate the plate during installation and fracture reduction.

Tip: Primary Guides can also be used to bend or straighten the plate.

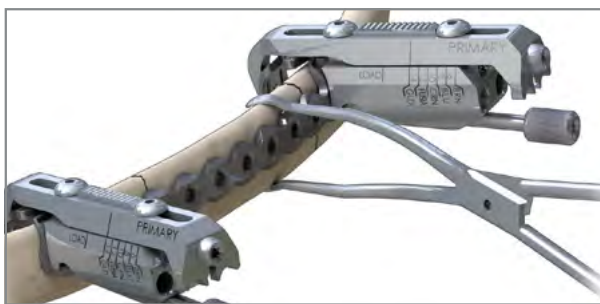
Caution: Repetitive bending of the plate at the same location may fatigue and weaken it.

Chest Wall Plating System Surgical Technique [continued]



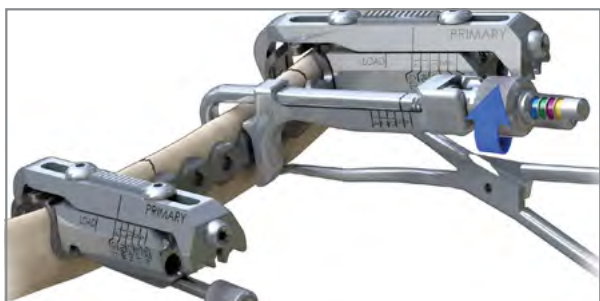
4 Plate placement

Place the plate onto the rib at the desired location.



5 Approximate Fracture

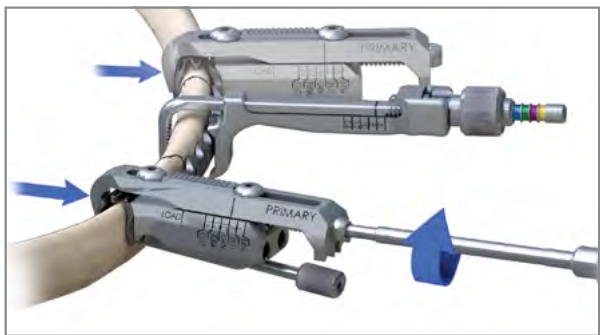
- a. Reduce the fracture and approximate any displaced rib segments using the Rib Forceps.
- b. Place the Intermediate Gauge superiorly over any rib segments to maintain reduction during drilling and screw insertion.
- c. Tighten the gauge until the plate is secured to the rib.



Intermediate Gauge



↑ Functions as a rib clamp and Intermediate Gauge



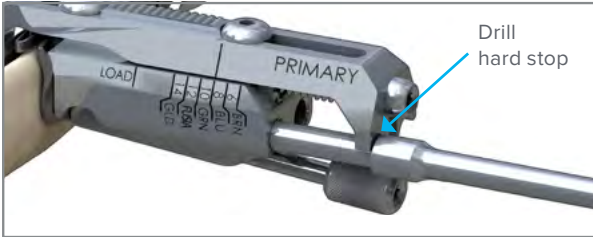
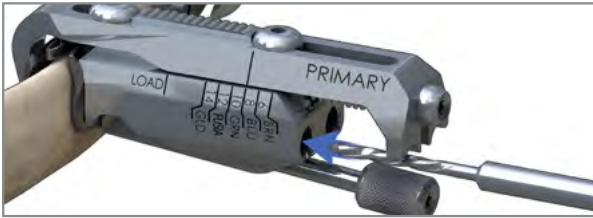
6 Compress U-Clip to Rib

Use the Primary Guide to compress the U-clip to match the thickness of the rib:

- a. Using the driver, rotate the Compression Screw Head clockwise, compressing the U-clip until it feels secure on the rib.
- b. Assess the compression of the U-clip by moving the U-clip relative to the bone. Little to no motion should be present.

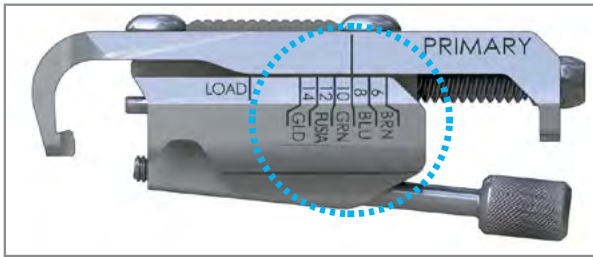
Caution: Overcompressing the U-clip may damage the bone.

Chest Wall Plating System Surgical Technique [continued]



7 Drill Primary Holes

Drill through the barrels of the Primary Guide and **advance until the drill reaches a hard stop** on the Guide Slider.



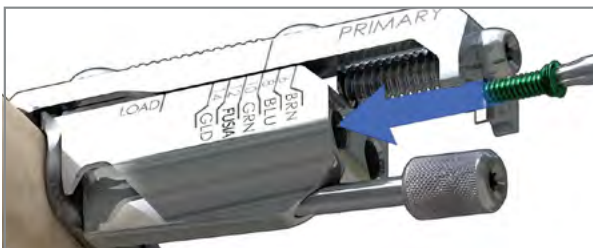
8 Place Screws in Primary Locations

Select appropriate Dual-Lock Screws:

Read the size indicator to select the appropriate screw length. If the marker is in between sizes, select the longer of the two.

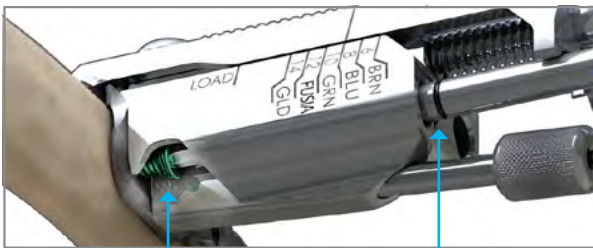
Note: The screws are color-coded to match the size indicated by the markings on the guide.

- Gold – 14 mm
- Fuchsia – 12 mm
- Green – 10 mm
- Blue – 8 mm
- Brown – 6 mm



Place screws in primary holes:

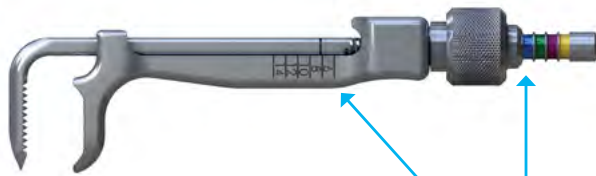
- a. Use the driver to retrieve the appropriate screw size.
- b. Place the screw down the barrel of the Primary Guide and advance until you feel a hard stop. Use the window to visually confirm the seating of the screw. The line on the driver will align with the guide body when the screw is fully seated.
- c. Repeat until all screws have been placed in U-clips.



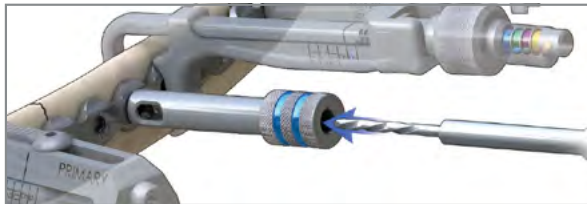
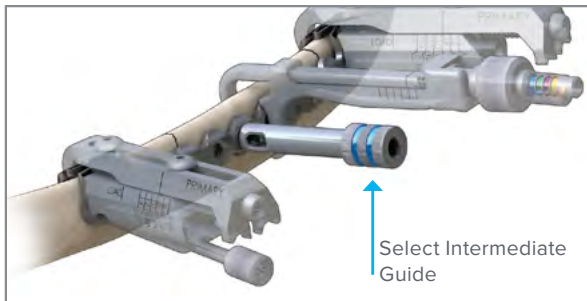
Viewing window

Alignment line

Chest Wall Plating System Surgical Technique [continued]



Size Indicator
Example: Read the size indication as 8 mm or blue



9 Place Screws in Intermediate Locations

Determine the appropriate Dual-Lock Screw size for intermediate placement.

Clamp the Intermediate Gauge next to the desired screw location and read the size in one of two places:

- a. The numerical size (6 mm, 8 mm, 10 mm, 12 mm, 14 mm) as marked on either side of the gauge.
- b. The color marking on the end of the gauge.

Note: Intermediate sizing is usually one length shorter than the primary locations.

10 Place Intermediate Guide

- a. Select the appropriately sized Intermediate Guide as indicated by the Intermediate Gauge (color-coded for size).
- b. Thread the guide into the intermediate plate hole until firmly seated.

11 Drill Intermediate Holes

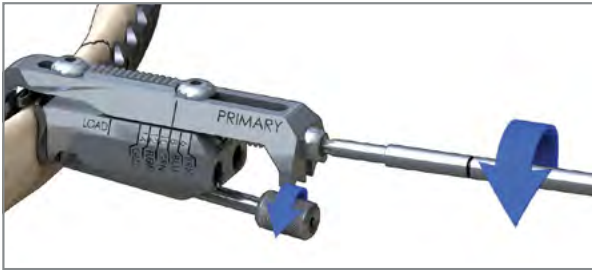
Drill through the Intermediate Guide until the drill stops.

12 Place Screws in Intermediate Holes

- a. First remove the Intermediate Guide from the plate.
- b. Insert screw until fully seated.

Note: A minimum of two screws should be used for segments measuring 2 cm or more in length. Use additional intermediate screws for extra stability as needed.

Chest Wall Plating System Surgical Technique [continued]



13 Remove Instrumentation

Remove the Primary Guides by using the driver to rotate the Compression Screw Head until the Slider returns to the LOAD position, and then release the Thumbscrew.

Additional System Information

If desired, one of the U-clips may be cut off using standard OR plate cutters. Use a minimum of three screws to secure the plate at the cut end.

Removal

For implant removal, screws may be removed with the system driver or a standard T8 hexalobe driver.



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