SternaLock® 360

Sternal Closure System

Surgical Technique

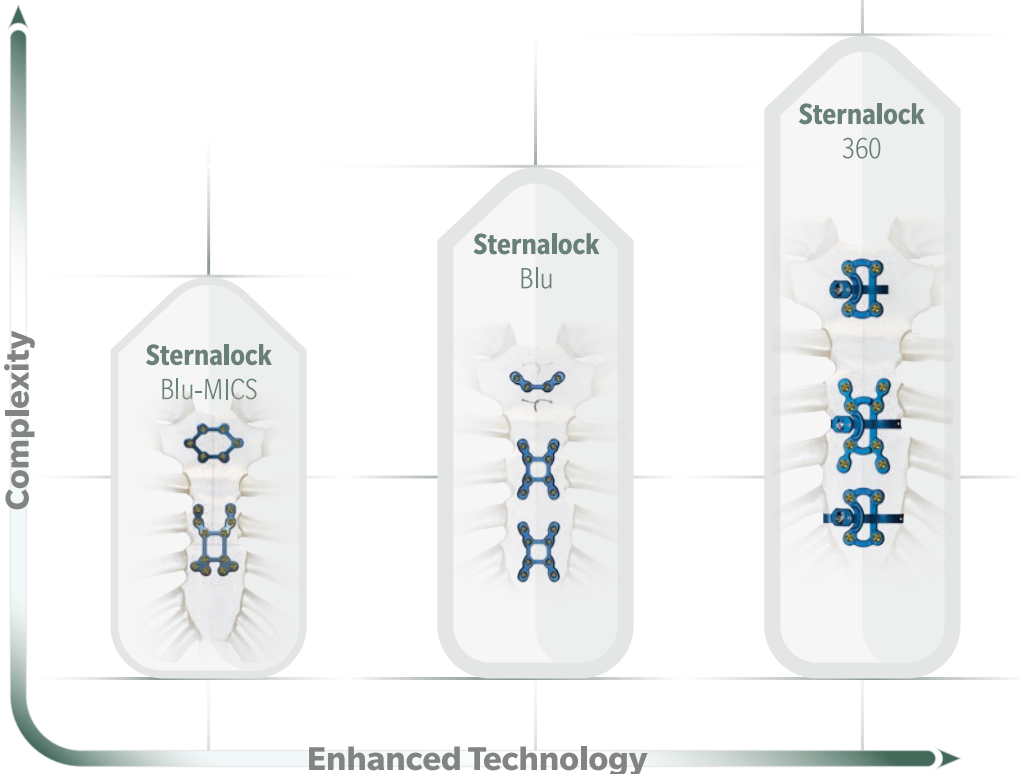
THORACIC

ZIMMER BIOMET
Your progress. Our promise.™

The right clinical system for the right patient.

Zimmer Biomet offers a complete selection of sternal-closure options based on the complexity of the procedure, a patient's needs or your closure preference. Whether you're performing minimally-invasive surgery, addressing the requirements of an osteoporotic patient or dealing with several high-risk factors, Zimmer Biomet offers an answer.

The SternaLock® 360 Sternal Closure System approximates, compresses and rigidly fixates the sternum. Each implant is a plate and band combination that provides 360-degree compression of the sternum. With a wider band, the SternaLock 360 system reduces sternal cut through and helps provide a lasting solution for patients with normal and poor bone quality.



Osteoporotic Solution

The SternaLock 360 Sternal Closure System is indicated for use in the stabilization and fixation of fractures of the sternum including sternal fixation following sternotomy and sternal reconstructive procedures, to promote fusion.

1 One system
to **approximate, compress** and **rigidly fixate** the sternum

2 Reduced sternal cut through[2]

3 Sternal closure system
for patients with normal and poor bone such as **osteoporotic bone**[1]

4 Sterile packaged* for increased OR efficiencies

SternaLock 360 vs. Wire

- Increased mechanical stability[1]
- Increased strength[1]
- Reduced sternal separation[1]
- Reduced sternal cut through[2]
- Promotes fusion in patients with normal and poor bone[3]

[1]Internal Testing Report, LT1533, Comparison of SternaLock 360 and wires in lateral testing • [2]Internal Testing Report, LT1496, Lateral compression force comparison between wires and SternaLock 360 • [3]SternaLock 360, IFU 01-50-1585. • Benchtop testing may not be indicative of clinical performance. *Only the SternaLock 360 implants are sterile packaged.

1. Measure Sternal Depth

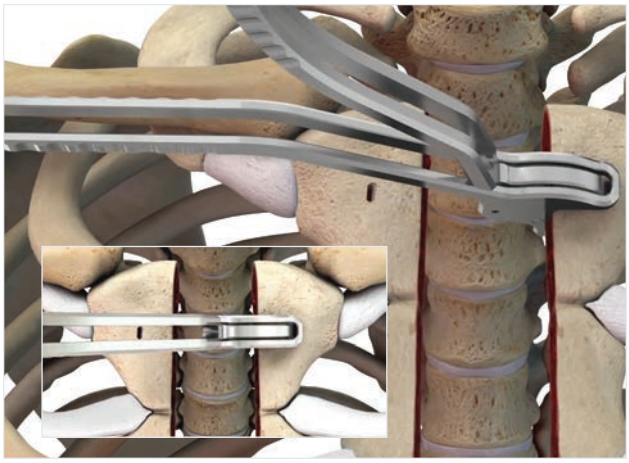
Bi-cortical measurements should be taken at the anticipated plate and band locations. Recommended device placement is trans-manubrium and para-sternal in the 3rd and 5th intercostal space.

2. Create a Trans-Manubrium Path

Use Manubrium Bone Punch to create trans-manubrium pathway. Position the instrument in the center of the manubrium with the instrument pushed all the way against the sternal edge.

Use one hand to stabilize the instrument while the other hand pushes the instrument forward.

Use the window in the handle to determine the placement of the instrument on the opposing side of the manubrium. Again, position the instrument all the way against the sternal edge. Use one hand to stabilize the instrument while the other hand pushes the instrument forward.



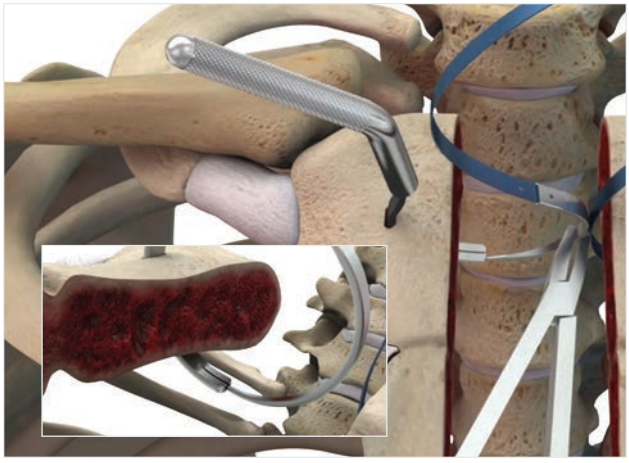
3. Pass Sternal Band Transmanubrium

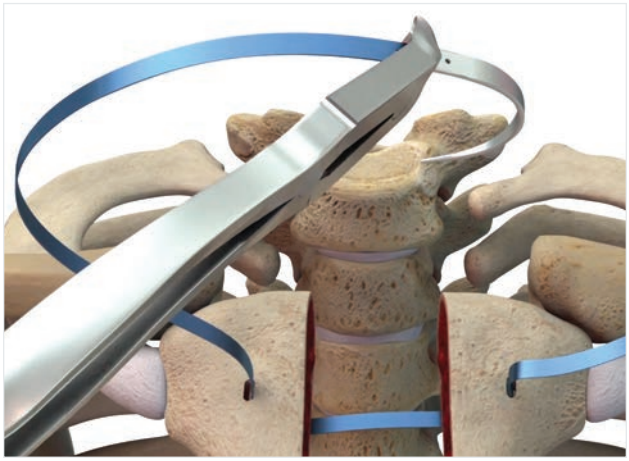
Pass needle through the path that has been created.

Avoid twisting of the band by placing your finger in the center of the band as the band is passed from the posterior to anterior cortex.

Then, position the Needle Guide in the opposing side to pass the needle from the posterior to anterior cortex. When using the instrument, push the needle into the instrument and apply continuous pressure while rotating the handle to guide the needle to the anterior cortex.

Pass Remaining Bands parasternal in the third and fifth intercostal space.



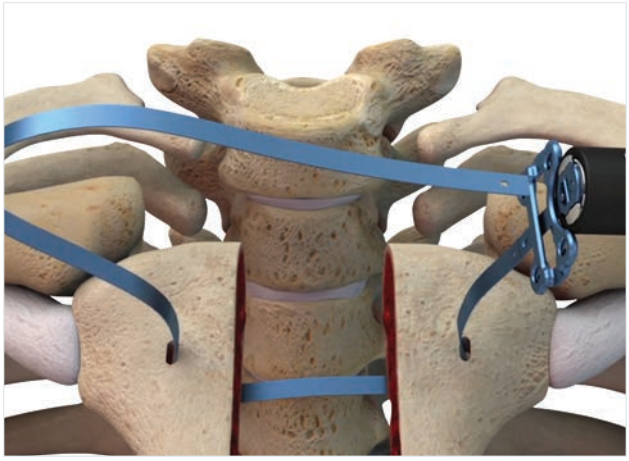


4. Remove Needles

Use a wire cutter to remove needle.

Secure sharp end by positioning a needle holder over the cut end of the band. Do not twist the band around the needle holder.

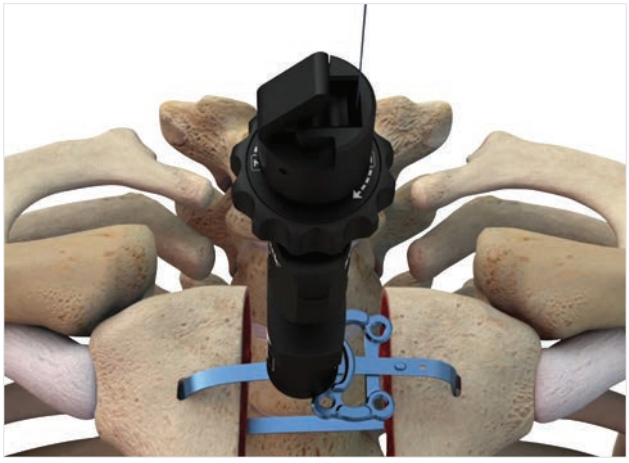
Repeat for remaining devices



5. Feed the Band Through Tensioner

Pass the cut end of the band up through the bottom of the tensioner until visible at the top of the tensioner.

Repeat for remaining devices.



6. Approximation

To gain more leverage, position the needle holder on the band as close to the top of the tensioner as possible.

Use the needle holder to pull up on sternal band while applying downward counter pressure on the tensioner to begin approximation of sternal halves.

Push thumb lock up to hold initial approximation. Repeat for remaining devices.

Sequentially tension all three devices and gradually bring the sternal halves together until full approximation is achieved.

7. Compression

Stabilize the bottom of the tensioner with one hand and with other hand begin rotating the dial (step #2) clockwise to compress sternal halves.

Visual alignment of the sternal halves is all the compression needed. Be cautious to not over compress the bone.

Repeat for remaining devices.

8. Plate Bending

Engage the threaded in-situ benders into the plate by holding the instrument perpendicular to the plate and turning clockwise until it does not turn any further.

Pull the benders in opposite direction to contour plate to the bone.

Pay close attention to positioning the plate over the center of the midline.

9. Activate The Lock and Cut The Band

One hand should stabilize "T" handle to provide counter pressure while the other hand turns paddle clockwise two full revolutions (4 half turns).

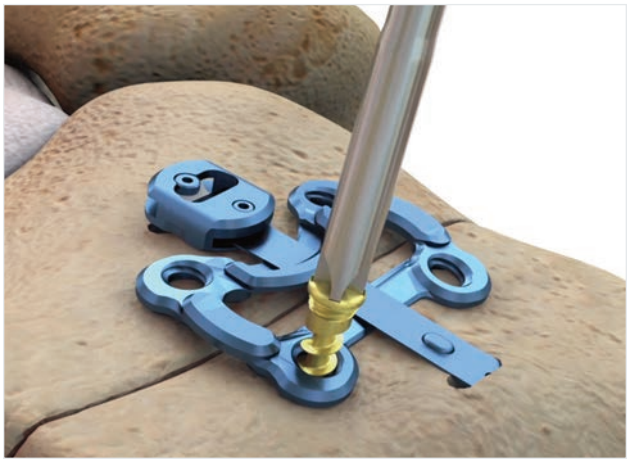
Repeat for remaining devices.

10. Disengage Tensioner From Implant

Place two fingers under the "T" handle and lift up fingers while applying downward pressure with your hand to release the tensioner from the implant.

If the tensioner does not immediately come off, simply rock it from side to side.

Repeat for remaining devices.

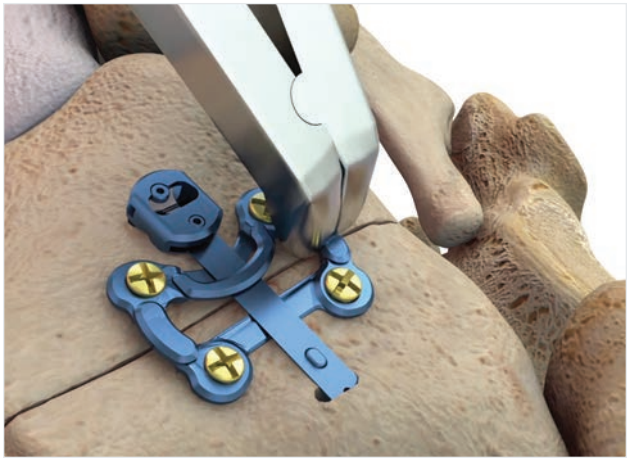


11. Rigid Fixation

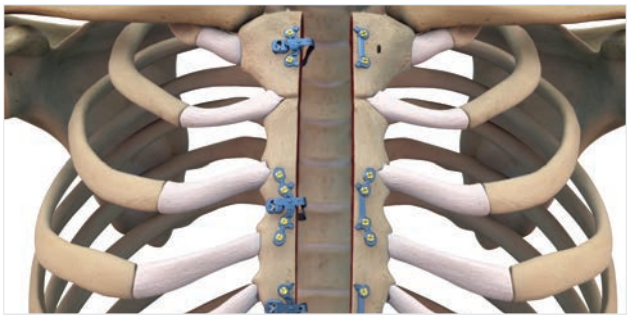
If needed, use a pair of needle holders to re-position the plate over the midline of the sternum.

Insert the appropriate length screw by turning clockwise.

Use the manual driver to fully seat and lock every screw into the plate.



Emergent Re-entry: Use wire cutters to cut the raised cuttable cross-sections of the plate and the band in the center of the plate



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For more information on SternaLock 360 and other Thoracic fixation solutions, please contact us at:

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