MatrixRIB. Stable fixation of normal and osteoporotic ribs—intramedullary splints.
Locking screws

- Screws work with self-retaining screwdriver blades to reduce cam-out
- Locking design for increased stable fixation
- One screw diameter for use with all plates and splints

Intramedullary splints

- Intramedullary splints allow minimally invasive procedures
- Three widths available (3 mm, 4 mm, 5 mm)
- Only one screw needed to secure splint

Titanium MatrixRIB Intramedullary Splints

- 04.501.010 Small, 3 mm width
- 04.501.011 Medium, 4 mm width
- 04.501.012 Large, 5 mm width
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**Indications**

The Synthes MatrixRIB Fixation System is indicated for the fixation and stabilization of rib fractures, fusions and osteotomies of normal and osteoporotic bone.

1. **Expose fractured rib**
   Expose the rib for splint head placement, to a minimum of 50 mm on the medial side of the fracture.

   Removal of the periosteum is not recommended.

   **Caution:** Avoid significant muscle division, to preserve respiratory function.

2. **Measure rib thickness**
   Insert the caliper tip through a small incision at the superior border of the rib and measure rib thickness.

   Add 1 mm to the measurement to determine appropriate screw length and drill bit with stop.

   **Caution:** Avoid damage to the nerve and vessel bundle along the inferior border of the rib.

3. **Prepare splint insertion hole**
   Insert the hook end of the drill guide into the intramedullary canal of the medial segment until it is seated fully on the rib.

   Drill monocortically using the 5.5 mm drill bit.

   Irrigate during drilling, to avoid thermal damage to the bone.

   **Notes:** Insert the hook near the superior border of the rib and drill an entry hole in the upper 2/3 of the rib.

   The small plate holding forceps can be used to clamp down the 5.5 mm drill guide during drilling.

   Ensure the lateral fracture segment can accommodate the insertion length of the splint before drilling.
4a  Approximate rib segment and select splint
Use the splint driver to fully insert a splint template through the insertion hole.

Use the mallet to assist insertion, if needed.

Notes: Use the small splint template before using the medium splint template.
If the small splint template fits snugly, select a small splint.

4b  Fully insert the splint template into the canal of the lateral fracture segment. Remove the splint template.

If the medium splint template fits snugly, select a medium splint.
If the medium splint template is loose in the canal, select a large splint.

5a  Insert splint
Thread the splint driver into the selected splint.

Insert the splint through the insertion hole, across the fracture line and into the canal of the lateral segment.
Use the mallet to assist insertion, if needed.

5b  Remove the splint driver when the splint is fully inserted, with the head of the splint seated flush on the rib.

Caution: Do not insert the splint head further once it is seated in the insertion hole.
6 Drill
Thread the drill guide into the splint. Drill, using the 2.2 mm drill bit with stop determined in Step 2.
Irrigate during drilling.
Remove the drill guide.

Caution: Do not drill deeper than necessary, to avoid risk of pneumothorax.

7a Insert locking screw
Use the depth gauge through the splint to confirm screw length.

Caution: Do not extend the tip of the depth gauge too far beyond the posterior cortex of the rib.

7b Insert the locking screw through the splint. Tighten until secure.

Caution: The tip of the screw should not extend more than 1 mm beyond the posterior cortex.