For chest wall reconstruction and deformity repair

MatrixRIB™

Product Brochure
The MatrixRIB Fixation System provides

- Anterior plating technique designed to avoid surgical disruption of intercostal soft tissues
- Stiffness of 1.5 mm MatrixRIB plate constructs is similar to cadaveric osteoporotic rib, allowing for flexibility of the rib cage
- A variety of plate options to stabilize the anterior chest wall:
  - Sternal plates to fixate sternal osteotomies,
  - Long straight plates to fixate costochondral cartilage resections from rib to sternum or across the sternum from rib-to-rib,
  - Precontoured plates to fixate rib osteotomies

Pectus Deformity Repair

Open Pectus repair that includes internal sternal chest wall support has shown to:

- Reduce the occurrence of postoperative respiratory distress caused by paradoxical chest motion of respiration
- Reduce pain
- Permit early ambulation and deeper respiration
- Maximize the extent to which the deformity is permanently corrected
Resections of defects greater than 5 cm in diameter require skeletal reconstruction to maintain physiologic respiratory function and protect vital intrathoracic organs. Flail chest and paradoxical respiration may occur without proper stabilization causing pain, respiratory distress, and/or possible long term mechanical ventilation needs.

The main goals of reconstruction are:
• Prevention of flail chest
• Maintenance of physiologic respiration
• Protection of thoracic organs
• An acceptable cosmetic result

The MatrixRIB Fixation System provides
• Stiffness of 1.5 mm MatrixRIB plate constructs is similar to cadaveric osteoporotic rib, allowing for flexibility of the rib cage
• Pre-contoured plates to fit the average rib shape, minimizing intra-operative bending
• Straight Plates capable of spanning defects up to 24 cm in length
Indications

The Synthes MatrixRIB Fixation System is indicated for use in skeletally mature patients with normal or osteoporotic bone:

Pre-contoured Synthes MatrixRIB plates (04.501.001–04.501.008) are indicated for the fixation, stabilization and reconstruction of:
- Rib fractures, fusions, osteotomies, and/or resections, including spanning gaps and/or defects
- Pectus Excavatum, Pectus Carinatum, and other chest wall deformities

Synthes MatrixRIB straight plates (04.501.096, 04.501.097) are indicated for the fixation, stabilization and reconstruction of:
- Rib and sternum fractures, fusions, osteotomies, and/or resections, including spanning gaps and/or defects
- Pectus Excavatum, Pectus Carinatum, and other chest wall deformities

Synthes MatrixRIB sternal plates, 2.8 mm thickness, (04.501.068, 04.501.069, 04.501.093, 04.501.094, 04.501.095, 04.501.103, 04.501.104) are indicated for the fixation, stabilization and reconstruction of:
- Sternum fractures, fusions, and/or osteotomies
- Pectus Excavatum, Pectus Carinatum, and other chest wall deformities

The Synthes MatrixRIB intramedullary splints (04.501.010, 04.501.011, 04.501.012) and the universal plate (04.501.009) are indicated for the fixation and stabilization of ribs.

Important: The Synthes MatrixRIB pre-contoured and straight plates are not indicated for use as permanent implants for bridging gaps after chest wall resections.

Contraindications

The MatrixRIB Fixation System is contraindicated for:
- The fixation of the sternum in acute cardiac patients, due to the potential delay if emergent re-entry is required
- Screw attachment or fixation to the clavicle or spine
- Use in patients with latent or active infection, with sepsis, or who are unwilling or incapable of following postoperative care instructions.

Warning: Metallic internal fixation devices cannot withstand activity levels and/or loads equal to those placed on normal healthy bone as these devices are not designed to withstand the unsupported stress of full weight-bearing, load-bearing, or gap-spanning, which may result in fatigue failure of the device. Additionally, using the device for spanning gaps in patients that put excessive strain on the implant (e.g. overweight or non-compliant) may further contribute to premature device failure.

Warning: These devices can break intraoperatively when subject to excessive forces or if used in a manner other than the recommended surgical technique. The surgeon should determine whether to remove the broken part based on the on associated risk. DePuy Synthes recommends that whenever possible and practical for the individual patient, the broken part should be removed.

Warning: When implants are used to bridge gaps after chest wall resections there is potential risk for herniation and adhesion of the underlying organs/soft tissue.

Warning: Medical devices containing stainless steel may elicit an allergic reaction in patients with hypersensitivity to nickel.

Please refer to the MatrixRIB surgical technique for product information, complete instructions for use, warnings, and precautions.

2 Mechanical test results may not be indicative of clinical performance. DePuy Synthes, Data on File. Rib Plate Evaluation under Exaggerated Loading Conditions. Mechanical Test Number: MT08-481.