

STRATOS



STRASBOURG
THORAX
OSTEOSYNTHESE

Reconstruction of the chest wall and sternum



THE BRIDGES FOR ALL CASES

STRATOS for reconstruction of the chest wall and sternum

Reconstruction of the chest wall or sternum becomes necessary whenever owing to tumours the affected tissue and affected parts of bone have to be removed.

Reconstruction following (partial) resection of the chest wall

Resection of the chest wall (ribs) during tumorectomy calls for not only coverage of the soft-tissue defect but also stabilisation of the chest wall.

Reconstruction following (partial) resection of the sternum

Resection of the sternum, or of the anterior chest wall, also requires not only coverage of the defect but also osseous stabilisation for restoration of the chest wall.

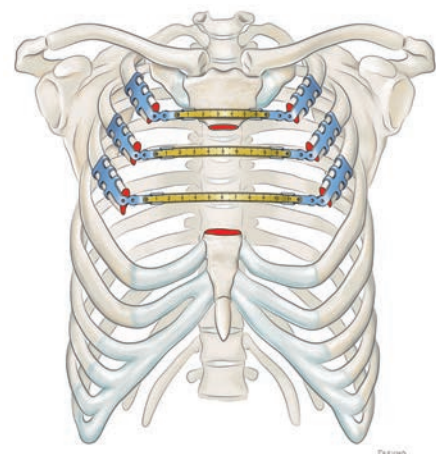
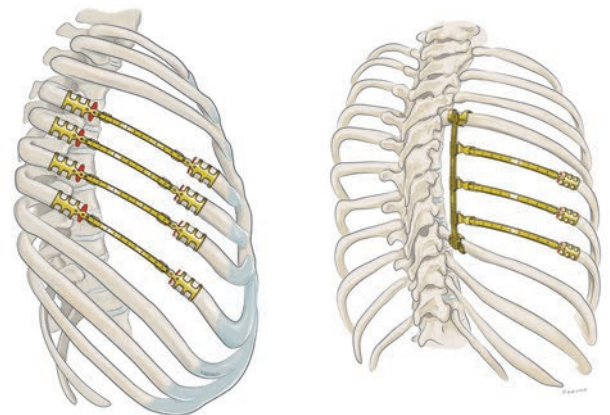
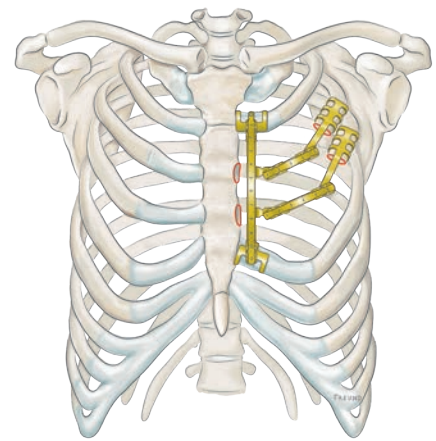
Paravertebral reconstruction

Dorsolateral resection of ribs also requires restoration of chest wall stability.

























Parasternal reconstruction

Mediolateral resection of ribs also requires restoration of chest wall stability.

STRATOS is used to stabilise the chest wall following the removal of multiple ribs or parts of the sternum, the aim being complete restoration of the chest wall.



IMPLANTS

| STANDARD |  | XL |  |
|--|---|---|---|
|  <p>012-02225 Titanium rib clip, right, 22.5°, Standard</p> |  <p>012-01225 Titanium rib clip, left, 22.5°, Standard</p> |  <p>012-04225 Titanium rib clip, right, 22.5°, XL</p> |  <p>012-03225 Titanium rib clip, left, 22.5°, XL</p> |
|  <p>012-02226 Titanium rib clip, right, 22.5°, Standard, rotatable connector</p> |  <p>012-01226 Titanium rib clip, left, 22.5°, Standard, rotatable connector</p> |  <p>012-04226 Titanium rib clip, right, 22.5°, XL, rotatable connector</p> |  <p>012-03226 Titanium rib clip, left, 22.5°, XL, rotatable connector</p> |
|  <p>012-02450 Titanium rib clip, right, 45°, Standard</p> |  <p>012-01450 Titanium rib clip, left, 45°, Standard</p> |  <p>012-04450 Titanium rib clip, right, 45°, XL</p> |  <p>012-03450 Titanium rib clip, left, 45°, XL</p> |
|  <p>012-02451 Titanium rib clip, right, 45°, Standard, rotatable connector</p> |  <p>012-01451 Titanium rib clip, left, 45°, Standard, rotatable connector</p> |  <p>012-04451 Titanium rib clip, right, 45°, XL, rotatable connector</p> |  <p>012-03451 Titanium rib clip, left, 45°, XL, rotatable connector</p> |
|  <p>014-01000 Titanium rib clip, straight, Standard</p> |  <p>014-01002 Titanium rib clip, straight, Standard, rotatable connector</p> |  <p>014-01001 Titanium rib clip, straight, XL</p> |  <p>014-01004 Titanium rib clip, straight, XL, rotatable connector</p> |
|  | <p>012-05010 Titanium rib clip, 2/1 segments, Standard, rotatable connector</p> |  | <p>012-05011 Titanium rib clip, 2/1 segments, XL, rotatable connector</p> |

CONNECTING BARS AND CONNECTORS



012-10150

Titanium connecting bar, partially serrated, 150 mm



012-10190

Titanium connecting bar, partially serrated, 190 mm



012-10230

Titanium connecting bar, partially serrated, 230 mm



012-05015

Titanium connecting bar connector, rotatable connector



014-10190

Titanium connecting bar, completely serrated, 190 mm



014-10230

Titanium connecting bar, completely serrated, 230 mm



014-10195

Titanium connecting bar, sliding function with stop, 195mm



012-05020

Titanium connecting bar connector

Application

- one implant bridge per resected rib level
- an implant bridge comprises of two titanium rib clips and one Titanium connecting bar
- the titanium rib clips are selected according to the anatomical situation and placed on the left and right sides of the rib
- after precise positioning and alignment of the Titanium rib clips the Titanium connecting bar is shortened to the particular length and introduced to the connectors of the Titanium rib clips
- the titanium rib clips are fixed in place on the rib
- the titanium connecting bar is crimped onto the connectors of the Titanium rib clips

Benefit and outcome

- stable fixation of the titanium rib clip on the costal arch, left and right
- secure connection by crimping the connectors of the Titanium rib clips to the Titanium connecting bar
- immediate functionally stable fixation of the mobilised rib level
- the patient is mobile directly after the intervention

Material

The titanium rib clips and titanium connecting bars are made of grade 2 pure titanium. The material designation of the material is 3.7035 / ASTM B 265 Gr. 2 / ASTM F 67, in accordance with DIN EN ISO 5832-2.

IMPORTANT NOTE!

Before using for the first time, it is absolutely essential to read our „Application Manual“ and our Instructions for Use. We always recommend intensive product training and briefing by MedXpert or an authorised specialist dealer prior to the first intervention using products of this system.

INSTRUMENTS

The MedXpert instrument set has been specially developed for the use of implants and is matched to the products. MedXpert implants may only be used with the instruments specified by MedXpert.

010-00010

Implant cutting pliers with exchangeable jaw inserts, 22cm

Pliers for cutting the titanium connecting bars

After deciding on the individual length the Titanium connecting bars are shortened using the implant cutting pliers. „Completely serrated“ titanium connecting bars can be shortened without any limitations.

„Partially serrated“ Titanium connecting bars may only be shortened on the left and right to such an extent that at least one serrated length of 15 mm remains on both sides, in order to enable secure crimping to the connectors of the titanium rib clips.

The rubber jaw inserts collect disconnected Titanium connecting segments.

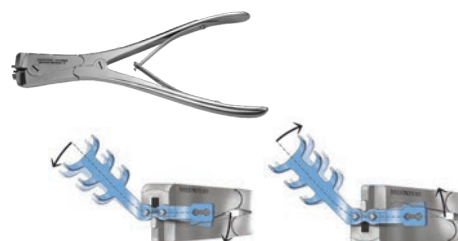


010-00020

Three-point bending pliers for rib clips, 18 cm

Pliers for longitudinal axis-adjustment of the angle of the Titanium rib clip

The two pins on the jaws of the pliers are inserted in the two drillholes of the Titanium rib clip. Longitudinal axis-alignment of the Titanium rib clip is altered by closing the pliers. Subsequent shaping is possible even if the Titanium rib clip has already been fixed in place on the rib.

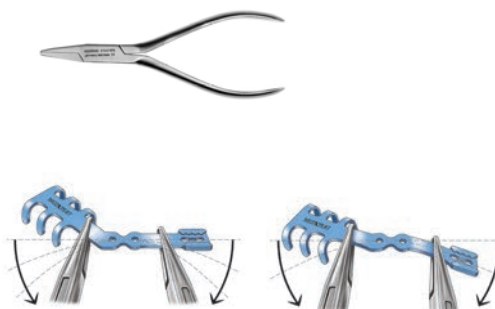


010-00025

Flat-nosed bending pliers for rib clips and connecting bars, 13.5 cm

Pliers for horizontal bending and axial torquing of the rib clips. In this procedure the pliers are used in pairs.

Removal of the implants can be performed with these pliers because the jaws are flattened on one side. The flattened jaw is slipped under the implant to be removed and then the segment is lifted and bent open carefully.



INSTRUMENTS

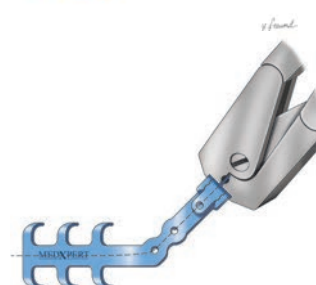
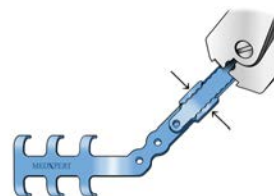
010-00030

Implant crimping pliers, 18 cm

Pliers for final closure (crimping) of the connection between Titanium rib clip and Titanium connecting bar.

The jaw of the pliers is placed on the connector at an angle of 90° and closed. In this procedure the connector is crimped to the connecting bar and the connection is made irreversible. The pliers is provided with a stop that prevents the connection from being over-pressed.

The pressing action must be repeated in at least three work steps (on the left, in the middle and on the right) over the entire length of the connector.



010-00032

Implant crimping pliers, angled 100°, 20.5 cm

Pliers for final closure (crimping) of the connection between Titanium rib clip and Titanium connecting bar.

The jaw of this pliers is provided with 100° angulation in order to be able to connect the rib clips to the connecting bars even at virtually inaccessible sites.

The jaw of this pliers is placed on the connector at an angle of 90° and closed. In this procedure the connector is crimped to the connecting bar and the connection is made irreversible. The pliers is provided with a stop that prevents the connection from being over-pressed.

The pressing action must be repeated in at least three work steps (on the left, in the middle and on the right) over the entire length of the connector.

010-00037

Rib clip fixation pliers for Standard rib clips, angled 100°, 20.5 cm

010-00047

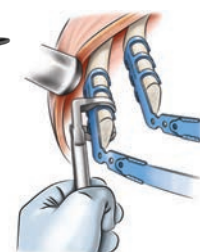
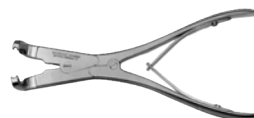
Rib clip fixation pliers for XL rib clips, angled 100°, 20.5 cm

Pliers for affixing the titanium rib clip to the rib.

The jaws of this pliers is provided with 100° angulation in order to be able to close the rib clips even at virtually inaccessible sites.

The jaws of the pliers are placed on the rib clip to be closed and then they are closed completely. After that, the segments are shaped flush onto the rib with a rotation of approx. 45° in each case.

The pliers are available for standard and XL titanium rib clips.



010-00050

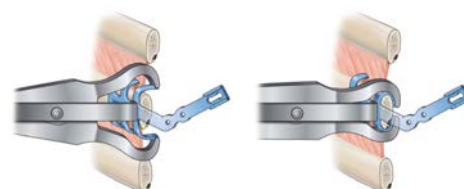
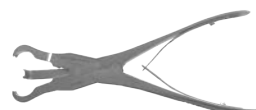
Rib clip fixation pliers, Universal

Pliers for affixing the titanium rib clip to the rib

The pliers is placed vertically on the titanium rib clip to be closed and then closed completely.

In this procedure the hold-down device presses on the titanium rib clip and keeps it in position whilst the lateral jaws shape and fix the titanium rib clip segments around the rib.

With this instrument it is possible to affix not only standard titanium rib clips but also XL ones.



INSTRUMENTS

010-00060

Rib clip fixation pliers for titanium rib clips, 2/1 segments

Pliers for fixing the Titanium rib clip, 2/1 segments, to the rib.

The pliers is placed vertically on the Titanium rib clip to be closed and then closed completely.

In this procedure the hold-down device presses on the Titanium rib clip and keeps it in position whilst the lateral claws shape and fix the titanium rib clip segments around the rib.

With this instrument it is possible to affix not only standard Titanium rib clips but also XL ones.



010-00090

Tunneling instrument, 36 cm

Instrument for the preparation of retrosternal or presternal soft-tissue tunnels in order to accommodate Titanium connecting bars.

The instrument is introduced retrosternally or presternally on the line of the mobilised ribs and the axis intended for the Titanium connecting bar. After that, the prepared Titanium connecting bar is connected to the tunneling instrument with a band and the eyelet. The tunneling instrument is retracted and the Titanium connecting bar is drawn through the tunnel with the band.

The tunneling instrument is made of soft stainless steel and can be bent so it can be adapted to suit any anatomical situation. Multiple bending does not have any impact on function or product safety.



010-00005

Sterilizing container (Polyphenylsulfone)

010-00007

Sterilizing Container (Polyphenylsulfone), half-size

Container made of PPSU (polyphenylsulfone) for the transportation and sterilization of products, implants and instruments.

For reprocessing, cleaning and disinfection of the products they must be removed from the container and introduced to the process on suitable perforated trays.

The containers can be cleaned in any automatic reprocessing program.



All bending procedures must be carried out slowly. Repeated bending of the implants must be avoided at all costs in order to prevent structural changes in the implant material.

IMPORTANT NOTE!

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