



Mandible Mesh Tray

3D prebent mandibular reconstruction mesh



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Complex mandibular defects result in functional and aesthetic disabilities. Consequently, the need for reconstruction of the mandible to primarily rehabilitate full function and secondarily normalize cosmetic deformity is generally obvious. However, mandibular reconstruction is a surgical challenge, as the mandible is highly contoured and stress bearing. The KLS Martin Mandible Mesh Tray is an implant which accounts for these problems.



Lateral view



Medial view

Indications

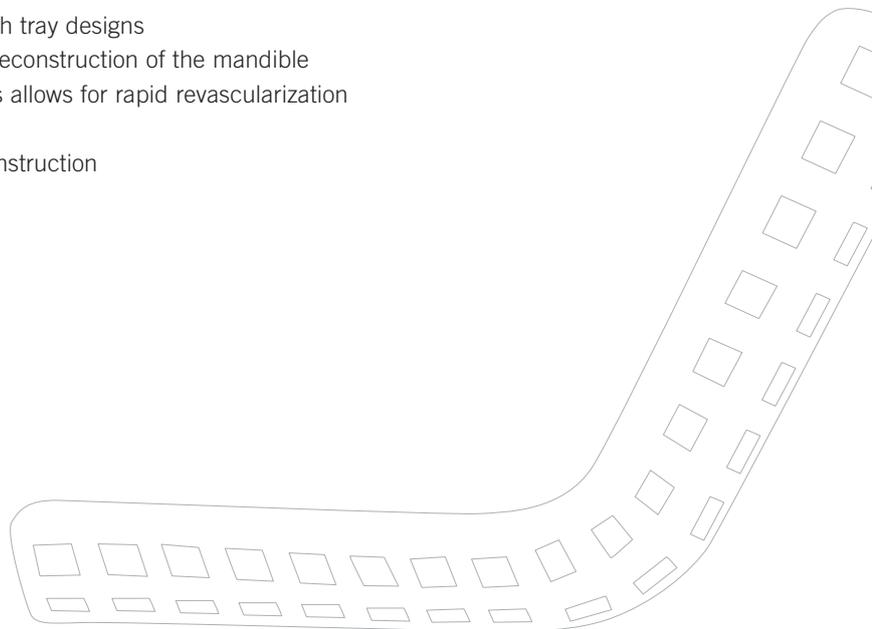
- Large mandibular discontinuity defects
- Extremely atrophic mandibles
- Marked comminuted fractures
- Mandibular asymmetries

Mandibular reconstruction in 3 dimensions

An ideal solution for large mandibular defects is the Mandible Mesh Tray. Six different mesh tray designs allow for excellent 3D reconstruction of various mandibular segments. The rigid mesh trays serve as a framework and help to maintain the shape of the graft.

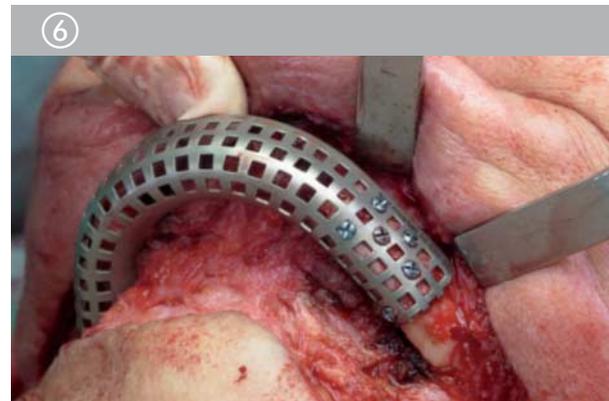
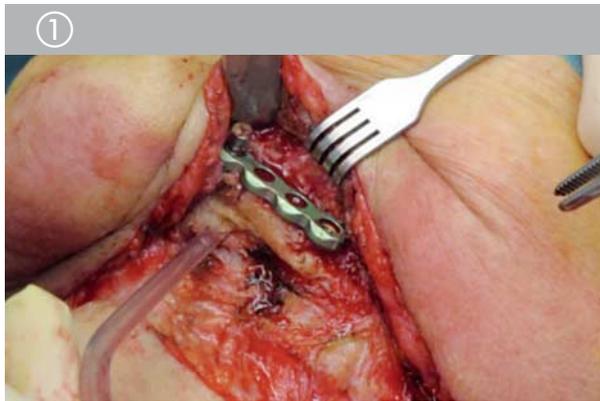
Advantages

- Available in six different mesh tray designs
- For primary and secondary reconstruction of the mandible
- Perforation of the mesh trays allows for rapid revascularization of the bone graft site
- Ideal 3D stability of the reconstruction



A proven strategy
for large mandibular defects

Where large mandibular defects exist, the use of a Mesh Tray is a good option for mandibular reconstruction. The tray perforation enables blood cells to penetrate into the bone graft site which is necessary for rapid revascularization of the bone defect.



Case study: Secondary reconstruction with a KLS Martin Mandible Mesh Tray

- 1 After tumor resection, the bone defect is bridged by a KLS Martin ThreadLock TS reconstruction plate (3.0 mm plate profile) to stabilize the mandible until the operation for secondary reconstruction follows.
- 2 X-ray of the ThreadLock TS reconstruction plate bridging the bone defect.
- 3 After removal of the ThreadLock TS reconstruction plate, secondary reconstruction can be done.
- 4 Fitting of the Mandible Mesh Tray to the patient's specific anatomy.
- 5 Adaption of the Mandible Mesh Tray to the patient's specific anatomy.
- 6 Fixation of the Mandible Mesh Tray with several 2.0-mm maxDrive® screws.
- 7 Use of a resorbable collagen membrane. The membrane is placed between soft tissue and the bone graft material.
- 8 The Mandible Mesh Tray is filled up with autologous, particulate cancellous bone and marrow.

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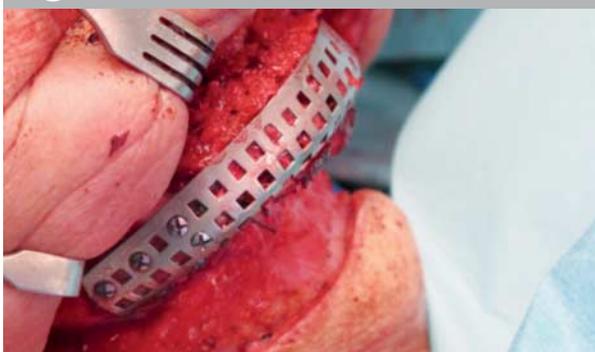
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References

- Dumbach, J., et al.,
Mandibular reconstruction with cancellous bone, hydroxylapatite and titanium mesh.
J Craniomaxillofac Surg, 22 (3), 1994, S. 151 – 155
- Her, S., et al.,
Titanium mesh as an alternative to a membrane for ridge augmentation.
J Oral Maxillofac Surg, 70 (4), 2012, S. 803 – 810
- Hou, J. S., et al.,
Application of CAD/CAM-assisted technique with surgical treatment in reconstruction of the mandible.
J Craniomaxillofac Surg, 40 (8), 2012, S. 432 – 437
- Iino, M., et al.,
Evaluation of 15 mandibular reconstructions with Dumbach Titan Mesh-System and particulate cancellous bone and marrow harvested from bilateral posterior iliac.
Oral Surg Oral Med Oral Pathol Oral Radiol Endod, 107 (4), 2009, S. 1 – 8
- Louis, P. J., et al.,
Reconstruction of the maxilla and mandible with particulate bone graft and titanium mesh for implant placement.
J Oral Maxillofac Surg, 66 (2), 2008, S. 235 – 245
- Matsuo, A., et al.,
Mandibular reconstruction using a tray with particulate cancellous bone and marrow and platelet-rich plasma by an intraoral approach.
J Oral Maxillofac Surg, 69 (6), 2011, S. 1807 – 1814
- Schug, T., et al.,
Treatment of complex mandibular fractures using titanium mesh.
J Craniomaxillofac Surg, 28 (4), 2000, S. 235 – 237
- Stringer, D. & Brown, B.,
Correction of mandibular asymmetry using angled titanium mesh.
J Oral Maxillofac Surg, 67 (8), 2009, S. 1619 – 1627
- Tidstrom, K. D. & Keller, E. E.,
Reconstruction of mandibular discontinuity with autogenous iliac bone graft: report of 34 consecutive patients.
J Oral Maxillofac Surg, 48 (4), 1990, S. 336 – 347
- Zhou, L., et al.,
Reconstruction of mandibular defects using a custom-made titanium tray in combination with autologous cancellous bone.
J Oral Maxillofac Surg, 69 (5), 2011, S. 1508 – 1518

Additional brochures



Osteosynthesis 2.0 Mini



Osteosynthesis 2.3
Fracture and Reconstruction



ThreadLock TS
Osteosynthesis 2.0 – 2.7
Fracture and Reconstruction



ThreadLock TS Smart
3D prebent reconstruction plates

Ordering details

Icon explanations

-  Titanium
-  Plate profile
-  Packing unit



50-550-01-09  

Symphysis

 = 0.6 mm



50-550-02-09  

Full

 = 0.6 mm



50-550-03-09  

Hemi, left

 = 0.6 mm



50-550-04-09  

Hemi, right

 = 0.6 mm



50-550-05-09  

Angle, right

 = 0.6 mm



50-550-06-09  

Angle, left

 = 0.6 mm

The Mandible Mesh Trays are implanted using the KLS Martin 2.0-mm Mini Screws or the 2.3-mm Fracture Screws.

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