Product Catalog

DENTAL BONE AND TISSUE REGENERATION
We all know – no single bone graft or soft tissue biomaterial can suit all medical needs, biological situations, and indications. Factors, such as indication, age, hygiene, biotype, bone height, and treatment plan, require a sophisticated approach with different, coordinated products.

To achieve optimal results, we offer you the botiss regeneration system. It includes all long-term proven biological materials (e.g., bovine, synthetic, allografts, collagen, granules, blocks, membranes, and soft tissue matrices), which can be used in various combinations for each specific indication. All products are manufactured according to the highest quality standards.

Patient's safety, ease of use and reliable treatment results – these are your and our first priorities. The products of the botiss regeneration system have proven their success in terms of safety, efficacy, and reliability in a multitude of preclinical and clinical studies and, most importantly, in the daily clinical work, with hundreds of thousands of patients treated worldwide.

We substantially invest in research and education. Unique innovations, such as mucoderm® and maxgraft® bonemaker, the concept of high-quality learning and education with the botiss academy, and our international bone & tissue days are the results of our partnership with worldwide renowned academic research institutes, global opinion leaders, and practitioners in their daily clinical environment.

We proudly welcome you to the botiss regeneration system community. We invite you to share your experiences and suggestions with us, which are precious to further improve our products or develop new product concepts.

Dr. Drazen Tadic  Oliver Bielenstein
dt@botiss.com       ob@botiss.com
**cerabone®**

**maxresorb®**

**maxresorb® inject**

**collacone® max**

**maxgraft®**

**maxgraft® bonering**

**maxgraft® cortico**

**maxgraft® bonebuilder**

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**INDICATIONS:**

- Implantology, Periodontology and Oral and CMF Surgery
- Sinus lift
- Horizontal and vertical augmentation
- Intranasal defects (1 to 3 walls)
- Peri-implant defects
- Socket and ridge preservation
- Furcation defects (class I and II)

**Properties**

- Proven natural bovine bone substitute with high long-term volume stability
- 100% pure biologic bone apatite
- Highest possible safety due to high temperature treatment
- Highly interconnected osteoconductive scaffold
- Rough surface favouring optimal cell adhesion and blood absorption
- Easy handling

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**cerabone® granules**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Particle Size</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1 x 0.5 ml</td>
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<td>1515</td>
<td>0.5 – 2.0 mm</td>
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<td>1.0 – 2.0 mm</td>
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</tr>
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<td>1521</td>
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<td>1525</td>
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**cerabone® block**

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<tbody>
<tr>
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<td>20 x 20 x 10 mm</td>
<td>1 x block</td>
</tr>
</tbody>
</table>

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**NATURAL BOVINE BONE GRAFT**

Owing to its reliability, bovine bone grafting material is the material of choice for the majority of dentists. cerabone® is a highly reliable, long-term dimensionally stable and safe bone graft.

The pronounced surface hydrophilicity of cerabone® supports a fast uptake of blood or saline, thus improving its handling. Likewise, its three-dimensional porous network enables a fast penetration and adsorption of blood and serum proteins and serves as a reservoir for proteins and growth factors. The unique manufacturing process based on high-temperature heating removes all organic and potentially antigenic components, making the material absolutely safe and free of proteins. cerabone® is the leading natural bovine bone grafting material of German origin, as demonstrated by its clinical and scientific success.
**maxresorb®**

**SYNTHETIC BIPHASIC CALCIUM PHOSPHATE**

maxresorb® is an innovative, safe, and fully synthetic bone substitute material that is characterized by controlled resorption properties and outstanding handling characteristics.

maxresorb® is composed of 60% slow resorbing hydroxyapatite (HA) and 40% fast resorbing beta-tricalcium phosphate (β-TCP). The unique synthesis-based production process ensures a completely homogenous distribution of both phases.

The special composition of maxresorb® promotes fast new bone formation, while ensuring long-term mechanical and volume stability. The osteoconductivity of maxresorb® is based on a matrix of interconnecting pores, a very high overall porosity of approx. 80% as well as its rough surface. The nano-structured surface facilitates the adsorption of blood, proteins, and stem cells, thus supporting cell differentiation and bony integration. maxresorb® is a reliable alternative to bovine bone for many indications.

**Properties**

- 60% HA/40% β-TCP
- Osteoconductive
- Ultra-high interconnected porosity
- Volume and mechanical graft stability
- Safe, reliable and sterile
- Very rough and hydrophilic surface
- 100% synthetic and resorbable

**INDICATIONS:**

Implantology, Periodontology and Oral and CMF Surgery

- Sinus lift
- Ridge augmentation
- Intraosseous defects
- Extraction sockets
- Osseous defects
- Furcation defects

**Product Specifications**

maxresorb® granules

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Particle Size</th>
<th>Content</th>
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<tbody>
<tr>
<td>20005</td>
<td>0.5 – 1.0 mm (S)</td>
<td>1 x 0.5 ml</td>
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<tr>
<td>20010</td>
<td>0.5 – 1.0 mm (S)</td>
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<tr>
<td>20105</td>
<td>0.8 – 1.5 mm (L)</td>
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<tr>
<td>20120</td>
<td>0.8 – 1.5 mm (L)</td>
<td>1 x 2.0 ml</td>
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</table>

**maxresorb® inject**

**SYNTHETIC INJECTABLE BONE PASTE**

maxresorb® inject is a highly innovative, injectable and non-hardening bone graft paste.

The unique paste material is composed of a water-based gel with nano-hydroxyapatite particles and biphasic maxresorb® granules (composed of 60% HA and 40% β-TCP), combined to provide an improved resorption profile. The active nano-HA particles provide a large surface promoting cell-biomaterial interaction. This leads to fast cellular resorption and stimulates fast new bone formation, while the maxresorb® granules support volume maintenance. maxresorb® inject is gradually replaced by mature new bone.

The highly viscous maxresorb® inject paste is moldable and allows perfect fitting to the defect contours and bonding to the surrounding bone surface.

**Properties**

- Non-hardening bone graft paste
- Injectable and easy handling
- Viscous and moldable
- Optimal fitting to defect contours
- 100% synthetic, safe and resorbable
- Active hydroxyapatite crystals

**INDICATIONS:**

Implantology, Periodontology and Oral and CMF Surgery

- Sinus lift
- Intraosseous defects
- Socket preservation
- Osseous defects
- Regeneration in small/contained defects
- Gap-filling in combination with other bone substitutes
collacone® max

**CALCIUM PHOSPHATE COLLAGEN CONE**

collacone® max is a biomimetic composite material that resembles the native human bone in its basic biphasic composition of collagen and calcium phosphate (maxresorb® granules).

While the collagenous phase provides biological signals that promote wound healing within the socket, the mineral hydroxyapatite phase ensures primary stability and complete resorption at a controlled, slow rate. collacone® max is designed to fit into the void of the extraction. collacone® max may be applied both as a protective medium and temporary void filler in the extraction socket when performing an early implantation, or as a regenerative material that assists new bone formation in the case of delayed implantation.

**Properties**
- Form-fitted cone shape for an easy application
- Adapts to the defect contours
- Maintains space and avoids soft tissue collapse
- Reduces the need for subsequent augmentative procedures
- Improves the aesthetic outcome of the final prosthesis

**Product Specifications**
collacone® max

<table>
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<tr>
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<th>Dimension</th>
<th>Content</th>
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</thead>
<tbody>
<tr>
<td>250001</td>
<td></td>
<td>height ~16 mm, width on top ~11 mm, bottom width ~7 mm</td>
<td>1 x cone</td>
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Bundle collacone® max and mucoderm® soft tissue punch

<table>
<thead>
<tr>
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<th>Content</th>
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<tbody>
<tr>
<td>257110</td>
<td>1 x collacone® max 1 x mucoderm® punch (Ø 10 mm)</td>
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</tbody>
</table>

maxgraft® is a sterile, high-safety allograft product, derived from human-donor bone, processed by Cells-Tissuebank Austria (C-TBA). C-TBA, a high-quality bone bank, is regulated, audited, and certified by the Austrian Federal Office for Safety in Health Care and fulfills the highest EU safety standards.

For experienced oral and maxillofacial surgeons, allograft bone blocks for block augmentation are the only real alternative to harvesting the patient’s own autologous bone. This helps preventing well known risks such as donor-site morbidity, infection, post-operative pain, and bone-stability loss.

The biological regeneration capability of maxgraft® allows for excellent clinical outcomes.

**INDICATIONS:**
- Implantology, Periodontology and Oral and CMF Surgery
- Socket and ridge preservation
- Intrusive defects
- Peri-implant defects
- Defects after root resection, apicectomy and cystectomy

**maxgraft® PROCESSED HUMAN ALLOGRAFT**

maxgraft® min is a sterile, high-safety allograft product, derived from human-donor bone, processed by Cells-Tissuebank Austria (C-TBA). C-TBA, a high-quality bone bank, is regulated, audited, and certified by the Austrian Federal Office for Safety in Health Care and fulfills the highest EU safety standards.

For experienced oral and maxillofacial surgeons, allograft bone blocks for block augmentation are the only real alternative to harvesting the patient’s own autologous bone. This helps preventing well known risks such as donor-site morbidity, infection, post-operative pain, and bone-stability loss.

The biological regeneration capability of maxgraft® allows for excellent clinical outcomes.

**INDICATIONS:**
- Implantology, Periodontology and Oral and CMF Surgery
- Socket and ridge preservation
- Intrusive defects
- Peri-implant defects
- Defects after root resection, apicectomy and cystectomy

**Properties**
- Natural mineralized collagen
- Preserved biomechanical properties
- Osteoconductive properties supporting natural and controlled tissue remodeling
- Bone augmentation without autograft harvesting
- No donor site morbidity
- 5 years shelf life at room temperature
- Safe and sterile

**Product Specifications**
maxgraft® cancellous granules

<table>
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<tr>
<th>Art.-No.</th>
<th>Particle Size</th>
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<td>1 x 0.5 ml</td>
</tr>
<tr>
<td>30010</td>
<td>&lt; 2.0 mm</td>
<td>1 x 1.0 ml</td>
</tr>
<tr>
<td>30020</td>
<td>&lt; 2.0 mm</td>
<td>1 x 2.0 ml</td>
</tr>
<tr>
<td>30040</td>
<td>&lt; 2.0 mm</td>
<td>1 x 4.0 ml</td>
</tr>
<tr>
<td>30030</td>
<td>2.0–5.0 mm</td>
<td>1 x 3.0 ml</td>
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maxgraft® cortico-cancellous granules

<table>
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</tr>
<tr>
<td>31010</td>
<td>&lt; 2.0 mm</td>
<td>1 x 1.0 ml</td>
</tr>
<tr>
<td>31020</td>
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<td>1 x 2.0 ml</td>
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<tr>
<td>31040</td>
<td>&lt; 2.0 mm</td>
<td>1 x 4.0 ml</td>
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maxgraft® blocks

<table>
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<th>Content</th>
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<tr>
<td>31111</td>
<td>uni-cortical 10 x 10 x 10 mm</td>
<td>1 x block*</td>
</tr>
<tr>
<td>31121</td>
<td>uni-cortical 20 x 10 x 10 mm</td>
<td>1 x block*</td>
</tr>
<tr>
<td>32111</td>
<td>cancellous 10 x 10 x 10 mm</td>
<td>1 x block</td>
</tr>
<tr>
<td>32112</td>
<td>cancellous 20 x 10 x 10 mm</td>
<td>1 x block</td>
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</table>
maxgraft® bonering

**PROCESSED ALLOGENIC BONE RING**

maxgraft® bonering is a pre-fabricated cancellous ring of human donor bone, which is placed press-fit into a trephine drill-prepared ring bed. At the same time, an implant is inserted into the ring. The bony integration of both, maxgraft® bonering and the implant, occurs via the surrounding vital bone.

### Preparation of ring bed

After determination of the position of the implant by the planator tip and the pilot drill, the ring bed is prepared with the trephine. Subsequently, the planator allows even paving of the local bone for optimal contact with maxgraft® bonering and in addition, removes the cortical layer for improved graft revascularization.

The height of maxgraft® bonering is adjustable to the defect.

### INDICATIONS:

**Implantology**
- Vertical augmentation
  (in combination with horizontal augmentation)
- Single tooth gap
- Edentulous space
- Sinus lift

**Advantages**
- One step procedure - simultaneous implant placement and bone augmentation
- Bone augmentation without autograft harvesting
- Reduced treatment time (by several months)

### Smoothing

Sharp edges should be smoothed to avoid soft tissue perforation and to support wound healing. Moreover, maxgraft® bonering should be covered with a slowly resorbable bone regeneration material (e.g. cerabone®) to fill the residual defect volume and to avoid potential adaption resorption of the graft.

### Soft tissue management

After covering of the graft with a collagen membrane (Jason® membrane), a tension-free suturing of the operation site must be assured to avoid tissue perforation and graft exposure.

### maxgraft® bonering surgical kit

With this surgical kit, botiss provides all necessary instruments to apply the maxgraft® bonering technique. The kit includes two convenient sizes of trephines, which precisely match the maxgraft® bonering diameters.

The planators allow paving of the local bone to create a congruent and fresh contact surface of the recipient site. The diamond disc and the diamond tulip help to shape the maxgraft® bonering for excellent adjustment to the local bone and for improved soft tissue healing. All instruments are made of high quality surgical steel.

### Product Specifications

**maxgraft® bonering 3.3** (Height 10 mm, recommended for implant diameters from 3.3 - 3.6 mm)

<table>
<thead>
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</thead>
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<tr>
<td>33162</td>
<td>cancellous ring, Ø 6 mm</td>
<td>1 x</td>
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<tr>
<td>33170</td>
<td>cancellous ring, Ø 7 mm</td>
<td>1 x</td>
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</tbody>
</table>

**maxgraft® bonering 4.1** (Height 10 mm, recommended for implant diameters from 4.1 mm)

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>33174</td>
<td>cancellous ring, Ø 7 mm</td>
<td>1 x</td>
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</table>

**maxgraft® bonering surgical kit**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Dimension</th>
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<tr>
<td>33000</td>
<td>maxgraft® bonering surgical kit</td>
<td>1 set</td>
</tr>
<tr>
<td>33010</td>
<td>bonering fix</td>
<td>1 x</td>
</tr>
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</table>

**Bonering fix**

Immediate implant insertion through maxgraft® bonering ensures primary stability of implant and graft.

One-stage bone augmentation and implant placement

**INDICATIONS:**

- Vertical augmentation (in combination with horizontal augmentation)
- Single tooth gap
- Edentulous space
- Sinus lift

**Advantages**

- One step procedure - simultaneous implant placement and bone augmentation
- Bone augmentation without autograft harvesting
- Reduced treatment time (by several months)

**Soft tissue management**

After covering of the graft with a collagen membrane (Jason® membrane), a tension-free suturing of the operation site must be assured to avoid tissue perforation and graft exposure.

**Bonering fix**

Smoothing

Sharp edges should be smoothed to avoid soft tissue perforation and to support wound healing. Moreover, maxgraft® bonering should be covered with a slowly resorbable bone regeneration material (e.g. cerabone®) to fill the residual defect volume and to avoid potential adaption resorption of the graft.

**Bonering fix**
maxgraft® cortico

SHELL TECHNIQUE

WITH ALLOGENIC BONE PLATES

maxgraft® cortico is a prefabricated plate made of processed allogenic bone. Similarly to
the autogenous bone, it can be used for the shell technique.

dmaxgraft® cortico was developed to avoid the donor-site morbidity and to prevent the
time-consuming harvesting and splitting of autologous cortico-cancellous bone blocks.

Preparation of the augmentation area

The proper size of the plate is estimated after the elevation of the mucosal flap or preoperatively using a digital
planning software. Using a diamond disc, the plate is then cut extraorally.

Fixation and adaption

The plate is positioned with a distance by predrilling through plate and local bone and fixation with osteosynthe-
sis screws to create a fixed compartment. It is pivotal to drill threaded holes into the cortical plates, which prevent
the plates from gliding on screw threats. Therefore, a drilling head with 0.2 mm smaller diameter than that of
the applied screws is recommended for drilling (e. g. use a 1 mm drilling head for 1.2 mm screws). To prevent
perforations of the soft tissue, sharp edges need to be removed, e.g. by using a diamond ball.

Indications:
- Vertical augmentation
- Horizontal augmentation
- Complex three-dimensional augmentations
- Single tooth gaps
- Fenestration defects

Natural bone regeneration

To facilitate osteogenesis, allogenic particles can be used to fill the defect. The preserved
human collagen provides an excellent osteoconductivity and enables a complete
remodeling. Mixing with autologous chips or particulated PRF matrices can support the
ossification.

Six months after transplantation, a superfi-
cial resorption of the plate can be seen; the
stability, however, is maintained.

Advantages
- Established augmentation technique with new material
- Significant reduction of operation time
- No donor-site morbidity
- No limitation of augmentation material

Properties
- Osteoconductive
- Natural and controlled remodeling
- Conserved biomechanical parameters

Filling and wound closure

The space between local bone and cortical plate can be filled with a variety of different particulated bone
grafting materials. Then, the augmentation area needs to be covered with a barrier membrane (Jason®
membrane, coliprotect® membrane) and a tension-free and saliva-proof closure must be applied.

Product Specifications

<table>
<thead>
<tr>
<th>maxgraft® cortico</th>
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</thead>
<tbody>
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<tr>
<td>21353</td>
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<td></td>
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</table>

More details on the surgical procedure on:

BOTISS-DENTAL.COM
1. Upload of CT/CBCT-data on www.botiss-bonebuilder.com

After registration, CT/CBCT-data of the patient can be uploaded on the botiss server. All radiological data have to be single-frame data images. The only data type suitable for 3D planning is DICOM (*.dcm).

2. Block design

botiss designers create a three-dimensional model of the radiological images and design a virtual bone transplant in consultation with the clinical user.

Indications
- Extensive bone defects
- Atrophic maxilla/mandible
- Horizontal/vertical augmentation

Advantages
- Individualized allogenic bone block
- Significantly reduced operation time
- Improved wound healing

3. Design quality check

The clinical user receives a 3D PDF file containing the virtually constructed maxgraft® bonebuilder block and has to confirm its design.

4. Individual order

The production of the block starts after the clinical user fills in the patient based order form for the bone block to the attention of botiss biomaterials.

5. Production of the individual bone block

At C-TBA the *.stl data of the design is imported into a milling machine and a block of maximally 23 x 13 x 13 mm is produced.

maxgraft® bonebuilder technology

maxgraft® bonebuilder is a customized allogenic bone block, which is individually adjusted to the bone defect. With maxgraft® bonebuilder, harvesting of autologous bone and manual adjustment of the obtained transplant is no longer required for the treatment of extensive defects. Donor site morbidity, operation time and costs can be significantly reduced.

The maxgraft® bonebuilder technology allows complex reconstruction in cases of extensive jaw atrophy.

The CT/CBCT-data of the bone defect is transferred into a 3D model based on this model botiss designs a virtual block, which matches the surface structure of the defect and allows stable implant insertion after augmentation.

Each block is designed individually according to the defect and the desired dimension of the augmentation.

The customized maxgraft® bonebuilder block allows precise horizontal and vertical reconstruction of the atrophic ridge.

The maxgraft® bonebuilder technology

CUSTOMIZED ALLOGENIC BONE BLOCK
mucoderm®
collacone®
collafleece®
collprotect® membrane
Jason® membrane
permamem®
titan pin set

mucoderm®

3D-STABLE SOFT TISSUE (COLLAGEN) GRAFT

mucoderm® is a three-dimensional, acellular collagen matrix derived from porcine dermis and has a high mechanical and volume stability. It is composed of a network of type I and III collagen that closely resembles the human connective tissue structure.

mucoderm® has a porous, native collagen structure that, after implantation, serves as an excellent scaffold for ingrowing blood vessels and cells, therefore favoring a fast revascularization and tissue integration. Through the collagen production of adhering fibroblasts and gradual degradation of the matrix, mucoderm® will be remodelled in the body’s own soft tissue within about six to nine months. Due to a multi-stage, intensive purification process, mucoderm® provides a safe alternative to autologous soft tissue transplants for many indications. Its outstanding mechanical stability facilitates easy application, manipulation and fixation.

Properties
- Rapid revascularization and integration
- Soft tissue replacement without palatal autograft harvesting
- Complete remodeling into patient’s own tissue within six to nine months
- Can be easily applied and fixed
- Can be cut into procedure-specific shape

INDICATIONS:
- Implantology,
  Periodontology and
  Oral and CMF Surgery
  - Treatment of gingival recessions
  - Soft tissue grafting in combination with GBR/GTR
  - Broadening of attached gingiva
  - Closure of extraction sockets
  - Thickening of the periimplant soft tissue

Product Specifications:

<table>
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<tr>
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<th>Size</th>
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<tr>
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<tr>
<td>702030</td>
<td>20 x 30 mm</td>
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</tr>
<tr>
<td>703040</td>
<td>30 x 40 mm</td>
<td>1 matrix</td>
</tr>
<tr>
<td>710210</td>
<td>Ø 10 mm</td>
<td>1 punch</td>
</tr>
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</table>

*Also available as bundle (Art.-No. 257110): mucoderm® soft tissue punch and collacone® max.

mucoderm® soft tissue punch
**collacone®**

**COLLAGEN HEMOSTAT (CONE)**

**INDICATIONS:**
- Implantology, Periodontology and CMF Surgery
  - Closure of extraction sites
  - Biopsy harvesting sites
  - Minor oral wounds

**Properties**
- Resorption within two to four weeks
- Stabilization of blood clot and efficient local hemostasis
- Maintains integrity in the presence of blood and during application
- Wound protection
- Supports wound healing
- Natural collagen cone

**Product Specifications**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Shape</th>
<th>Dimension</th>
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<tr>
<td>511112</td>
<td>Cone</td>
<td>height ~16 mm, width on top ~11 mm, bottom width ~7 mm</td>
<td>12 pieces (single sterile units)</td>
</tr>
</tbody>
</table>

The cone was specially formed to fit into the socket, protecting the wound area from food and bacteria. Collacone® is resorbed within about two to four weeks. The healing of the extraction socket starts with the formation of a blood coagulum, followed by the infiltration of fibroblasts and is continuously replaced, first by a provisional matrix and then by bone. The spongy structure of collacone® serves as an ideal matrix for the adhesion of fibroblasts, osteoblasts and thrombocytes, and promotes the ingrowth of blood vessels, thus supporting bony regeneration of the socket. Collacone® application is particularly beneficial in hemostatic compromised patients to prevent post-operative bleeding events.

**collafleece®**

**COLLAGEN HEMOSTAT (SPONGE)**

**INDICATIONS:**
- Implantology, Periodontology and Oral and CMF Surgery
  - Minor oral wounds
  - Biopsy harvesting sites
  - Bone block harvesting sites
  - Soft tissue transplant harvesting sites
  - Extraction sockets

**Properties**
- Highly effective hemostat
- Fast resorption by enzymatic degradation within 2-4 weeks
- Easy application
- Maintains integrity in the presence of blood and during application
- Wound protection and support of wound healing

**Product Specifications**

<table>
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<th>Art.-No.</th>
<th>Size</th>
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<tbody>
<tr>
<td>512212</td>
<td>20 x 20 mm</td>
<td>12 pieces</td>
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</table>

Collafleece® is a wet-stable sponge made of natural, porcine collagen with a highly efficient hemostatic effect. The sponge-like, porous structure induces a fast blood uptake and stabilizes the blood coagulum, thus supporting natural wound healing.

Due to its loose structure, Collafleece® is degraded within about two to four weeks. The specific effects of Collafleece® are based on the natural properties of collagen. Platelets recognize special receptors on the collagen fibrils, leading to the formation of a thrombus and the release of different signaling factors. This initiates the coagulation cascade. Due to its hemostatic properties, Collafleece® can be applied to protect wounds and to support wound healing (i.e., biopsy or transplant harvesting sites). The fast initiation of hemostasis with Collafleece® can be of particular benefit in the treatment of coagulation compromised patients.
**collprotect® membrane**

**NATIVE COLLAGEN MEMBRANE**

Collprotect® membrane is a native collagen membrane made of porcine dermis. Its multistep cleaning process ensures the removal of all antigenic and non-collagenous components, at the same time preserving its natural collagen structure.

- **Properties**
  - Membrane with native collagen structure
  - No artificial cross-linking
  - Naturally rough for cell adhesion and migration
  - Natural pores to support angiogenesis
  - Natural collagen to support blood clot and wound healing
  - Controlled degradation
  - Easy application and handling in dry or wet status

**INDICATIONS:**

- Implantology,
- Periodontology and
- Oral and CMF Surgery
  - Horizontal augmentation
  - Socket and ridge preservation
  - Sinus lift
  - Protection and covering of Schneiderian membrane
  - Fenestration and dehiscence defects
  - Intraosseous defects (1 to 3 walls)
  - Furcation defects (class I and II)

**Product Specifications**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Size</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>601520</td>
<td>15 x 20 mm</td>
<td>1 membrane</td>
</tr>
<tr>
<td>602030</td>
<td>20 x 30 mm</td>
<td>1 membrane</td>
</tr>
<tr>
<td>603040</td>
<td>30 x 40 mm</td>
<td>1 membrane</td>
</tr>
</tbody>
</table>

**Histology six weeks after implantation of collprotect® membrane in a rat model:** Blood vessels have penetrated the porous structure; collagen fibers are visible, and resorption proceeds without any inflammatory tissue response.

**SEM:** Collprotect® membrane

**SEM:** Collprotect® membrane, collagen fibre network of collprotect® membrane

**Jason® membrane**

**NATIVE PERICARDIUM GBR/GTR MEMBRANE**

Jason® membrane is a particularly thin, native collagen membrane obtained from porcine pericardium that provides a long barrier function. Owing to the unique biomechanical properties of the pericardium, the membrane exhibits a remarkable tear resistance as well as excellent surface adaptation.

- **Properties**
  - Naturally long barrier function
  - Multi-directional strength and tear resistance
  - No stickiness after hydration
  - Excellent surface adaptation
  - Can be applied dry or wet
  - Low thickness, no swelling upon hydration

**INDICATIONS:**

- Implantology,
- Periodontology and
- Oral and CMF Surgery
  - Horizontal and vertical augmentation
  - Ridge reconstruction
  - Socket and ridge preservation
  - Sinus lift
  - Protection and covering of Schneiderian membrane
  - Fenestration and dehiscence defects
  - Intraosseous defects (1 to 3 walls)
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**Product Specifications**

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<thead>
<tr>
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<tbody>
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<tr>
<td>682030</td>
<td>20 x 30 mm</td>
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</tr>
<tr>
<td>683040</td>
<td>30 x 40 mm</td>
<td>1 membrane</td>
</tr>
</tbody>
</table>

**Histology of Jason® membrane 24 weeks after implantation in a rat model:** Shows perfect integration without inflammatory reaction.

**SEM:** Jason® membrane

**SEM:** Jason® membrane, collagen structure

**Histology of Jason® membrane:** Shows perfect integration without inflammatory reaction.

**Good handling of Jason® membrane after rehydration:**

**Jason® membrane:**

**Histology:**

- No inflammatory reaction

**Product Specifications**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Size</th>
<th>Content</th>
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</thead>
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<tr>
<td>882030</td>
<td>20 x 30 mm</td>
<td>1 membrane</td>
</tr>
<tr>
<td>883040</td>
<td>30 x 40 mm</td>
<td>1 membrane</td>
</tr>
</tbody>
</table>
permamem® HIGH-DENSITY PTFE BARRIER MEMBRANE

permamem® is an exceptionally thin, non-resorbable, biologically inert and biocompatible membrane made of high-density polytetrafluoroethylene (PTFE). permamem® maintains its structural integrity both during the initial implantation and over time. Due to its small pore size the membrane acts as an efficient barrier against bacterial and cellular penetration, and may therefore be left in place for open healing in certain indications.

Open healing with permamem® in socket or ridge preservation enables maintenance of the soft tissue architecture and contours since no primary wound closure is required. Due to the missing flap closure, the mucogingival line will not be displaced and the attached/keratinized gingiva will be preserved.

Properties
- 100% synthetic PTFE barrier membrane
- Ultra-thin (~0.08 mm)
- Impervious to bacteria due to dense structure
- Easily removable due to minimal tissue ingrowth into the surface structure
- No need for primary soft tissue closure (indication-dependent)
- Easy recovery thanks to blue color
- Rounded edges for minimal tissue trauma
- Easy fixation with sutures or pins
- Either side may be placed towards the defect site

Clinical use of permamem®

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INDICATIONS:
Implantology, Periodontology and Oral and CMF Surgery
- Socket and ridge preservation (open healing)
- Horizontal/vertical ridge augmentation
- Fenestration and dehiscence defects
- Intraosseous defects (1 to 3 walls)
- Furcation defects (class I and II)

Product Specifications
permamem®

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<tr>
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<tr>
<td>803040</td>
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<td>1 membrane</td>
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</table>

CLINICAL SUCCESS

with the right regeneration concept

The indication matrix supports you in choosing the most suitable treatment concept through an intelligent querying in the navigation bar on the left-hand side. The more specified the clinical situation, the more precise is the selection of treatment concepts displayed in the right-hand section.

The matrix contains > 200 clinical cases and videos as well as handling tips and recommendations of internationally recognized clinical experts.

Share your case!

INDICATION-MATRIX.COM
During the application of modern GBR and GTR techniques, barrier membranes are indispensable to achieve reliable results.

By fixation of the barrier membrane to the local bone, the application of the particulate bone regeneration material as well as the coverage of the augmentation site by the barrier membrane can be significantly simplified.

Using the one-piece applicator, titan pins can easily be taken up from the dispenser and applied to the fixation site.

Properties
- Utterly comfortable grip-ergonomics for easy uptake of titan pins
- Functional design
- Safe and easy opening by single-hand control
- Suitable for resorbable and non-resorbable membranes

Product Specifications

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Content</th>
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<tbody>
<tr>
<td>440000</td>
<td>titan pin set</td>
</tr>
<tr>
<td></td>
<td>1x applicator</td>
</tr>
<tr>
<td></td>
<td>1x dispenser for 15 titan pins</td>
</tr>
<tr>
<td></td>
<td>1x titanium pins 3 mm (10 pieces)</td>
</tr>
<tr>
<td>440310</td>
<td>titan pins, 3 mm, 10 pcs.</td>
</tr>
</tbody>
</table>

All parts are delivered unsterile and need to be sterilized before use.
**Bone substitutes**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Particle Size</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>31040</td>
<td>&lt; 2.0 mm</td>
<td>1 x 4.0 ml</td>
</tr>
<tr>
<td>31020</td>
<td>&lt; 2.0 mm</td>
<td>1 x 2.0 ml</td>
</tr>
<tr>
<td>31010</td>
<td>&lt; 2.0 mm</td>
<td>1 x 1.0 ml</td>
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<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Particle Size</th>
<th>Content</th>
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<tbody>
<tr>
<td>31005</td>
<td>&lt; 2.0 mm</td>
<td>1 x 0.5 ml</td>
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<tr>
<td>31010</td>
<td>&lt; 2.0 mm</td>
<td>1 x 1.0 ml</td>
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<tr>
<td>31020</td>
<td>&lt; 1.5 mm [S]</td>
<td>1 x 0.5 ml</td>
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<td>31030</td>
<td>&lt; 1.5 mm [L]</td>
<td>1 x 2.0 ml</td>
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<table>
<thead>
<tr>
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<th>Content</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>30020</td>
<td>&lt; 2.0 mm</td>
<td>1 x 2.0 ml</td>
</tr>
<tr>
<td>30010</td>
<td>&lt; 2.0 mm</td>
<td>1 x 1.0 ml</td>
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<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Particle Size</th>
<th>Content</th>
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<tbody>
<tr>
<td>32112</td>
<td>cancellous</td>
<td>1 x block</td>
</tr>
<tr>
<td>32111</td>
<td>uni-cortical</td>
<td>1 x block</td>
</tr>
<tr>
<td>31112</td>
<td>uni-cortical</td>
<td>1 x block</td>
</tr>
<tr>
<td>32111</td>
<td>cancellous</td>
<td>1 x block</td>
</tr>
<tr>
<td>32110</td>
<td>cancellous</td>
<td>1 x block</td>
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<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Dimension</th>
<th>Content</th>
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<tbody>
<tr>
<td>51212</td>
<td>20 x 20 x 10 mm</td>
<td>12 Pieces</td>
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</table>

**Collagen & barriers**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Shape</th>
<th>Dimension</th>
<th>Content</th>
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<tbody>
<tr>
<td>51112</td>
<td>15 mm height, width on top ~11 mm, bottom width ~7 mm</td>
<td>10 pieces (single sterile units)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Unit</th>
<th>Content</th>
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<tbody>
<tr>
<td>172001</td>
<td>1 cone</td>
<td>1 x collagen® max, 1 x mucoderm® punch (Ø 10 mm)</td>
</tr>
</tbody>
</table>

**Instruments**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Product</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>440200</td>
<td>titan pins 3 mm</td>
<td>10 pieces</td>
</tr>
<tr>
<td>440310</td>
<td>boning fix</td>
<td>1 x</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Art.-No.</th>
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<td>1 matrix</td>
</tr>
<tr>
<td>703040</td>
<td>30 x 40 mm</td>
<td>1 matrix</td>
</tr>
<tr>
<td>710210</td>
<td>Ø 10 mm</td>
<td>1 punch*</td>
</tr>
</tbody>
</table>

*Also available as bundle (Art.-No. 257110): mucoderm® soft tissue punch and collagen® max
Innovation.
Regeneration.
Aesthetics.