Dental Hard- and Soft Tissue Regeneration

Product Catalog 2019

v007_MAR19

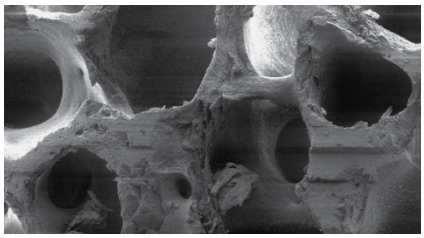
Dentegris
DENTAL IMPLANT SYSTEM

CompactBone® B.

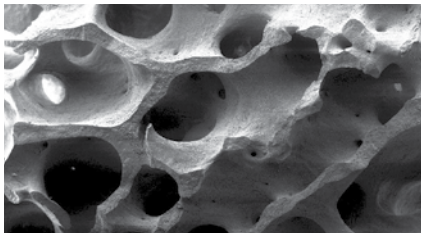
Natural Bovine Bone Substitution Material

CompactBone® B. is a highly reliable, ultrapure, natural bone substitution material made from bovine bone. The mineral composition, physical, chemical, and biological properties, and special hydrophilic surface closely resemble the characteristics of human bone.

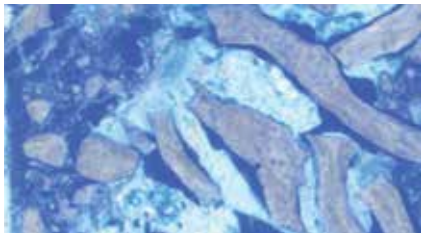
The uniquely safe high-temperature manufacturing process removes all organic components and prevents immune responses. CompactBone® B. is 100% BSE-free (1) and contains no proteins.



SEM: Natural human bone



SEM: CompactBone® B.



CompactBone® B. Histology 6 months after sinus lift: optimal integration and bone regeneration

Properties

- Natural bone substitution material made from bovine bone
- Long-term volume stability
- No inflammatory immune system reactions
- Interconnecting pore system for quick revascularization
- Slow, delayed resorption with controlled integration due to new bone growth
- Hydrophilic surface, optimal cell and platelet adhesion
- Safe and sterile
- Easy handling

Indications: Implantology, periodontology, oral and maxillofacial surgery

- Sinus lift
- Vertical augmentation
- Horizontal augmentation
- Extraction socket
- Intraossary defect
- Periimplantary defect
- Furcation defect

Product specifications

CompactBone® B. Granules (small grain size)

Item no.	Particle size	Content
BOV05S	0.5-1.0 mm	1x 0.5cc (ml)
BOV10S	0.5-1.0 mm	1x 1.0cc (ml)
BOV20S	0.5-1.0 mm	1x 2.0cc (ml)
BOV50S	0.5-1.0 mm	1x 5.0cc (ml)

CompactBone® B. Granules (large grain size)

Item no.	Particle size	Content
BOV05L	1.0-2.0 mm	1x 0.5cc (ml)
BOV10L	1.0-2.0 mm	1x 1.0cc (ml)
BOV20L	1.0-2.0 mm	1x 2.0cc (ml)
BOV50L	1.0-2.0 mm	1x 5.0cc (ml)

[1] As confirmed by the Hessian Ministry of Health

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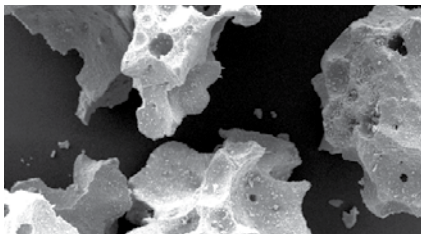
CompactBone® S.

Innovative, Biphasic Resorbable Calcium Phosphate

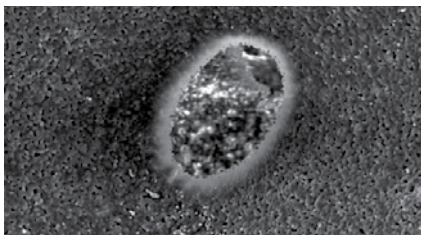
CompactBone® S. is an innovative, fully synthetic bone substitution material that is both safe and reliable. CompactBone® S. offers a closely controlled resorption profile and outstanding application properties. The synthetic, completely homogeneous composition of 60% slowly resorbable hydroxyapatite and 40% beta tricalcium phosphate (ß-TCP) results in two different activation phases. CompactBone® S. supports bone regeneration while maintaining volume and mechanical stability.

The osteoconductivity of CompactBone® S. result from the optimized matrix design of interconnecting pores with a porosity of up to 80% and pore sizes from 200 to 800 µm. The macro-porosity of CompactBone® S. provides ideal conditions for osteogenetic cell growth and promotes maximum regeneration of vital bone. The micro-porosity allows for the targeted penetration of blood, proteins, and stem cells.

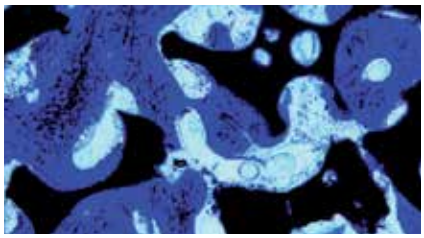
The two mineral phases do not result from mixing, but from synthesis. This guarantees controlled resorption with long-term volume stability.



SEM: CompactBone® S. Granules



SEM: Interconnecting window



Histology of CompactBone® S. 6 months after sinus lift: optimal osseous integration

Properties

- 100% synthetic
- Mechanical and volume stability
- High level of interconnecting porosity
- Hydrophilic surface
- Safe, reliable, and sterile
- 60% hydroxyapatite / 40% beta-TCP
- Osteoconductive
- Macropores 200 - 800 µm, micropores 1-10 µm

Indications: Implantology, periodontology, oral and maxillofacial surgery

- Sinus lift
- Alveolar ridge augmentation
- Extraction socket
- Intraossary defect
- Bone defect
- Furcation defect

Product specifications

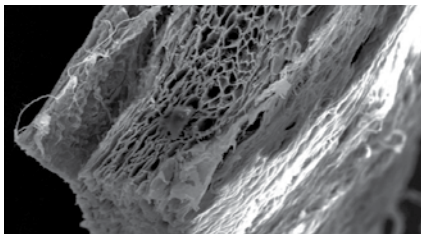
CompactBone® S. Granules

Item no.	Particle size	Content
SYN05-S	0.5-1.0mm (S)	1x0.5cc (ml)
SYN10-S	0.5-1.0mm (S)	1x1.0cc (ml)
SYN20-M	0.8-1.5mm (M)	1x2.0cc (ml)

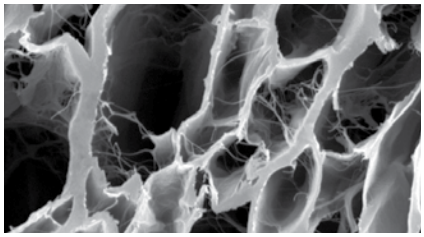
BoneProtect® Membrane

Collagen Membrane - Highly Effective, Resorbable Natural Soft Tissue

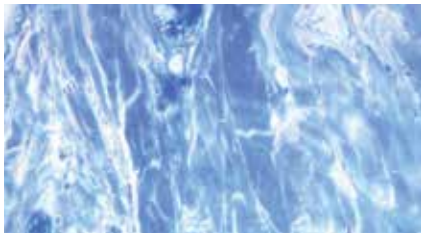
BoneProtect® Membrane is a natural collagen membrane made from porcine pericardial tissue, specifically developed and manufactured for dental tissue regeneration. BoneProtect® Membrane combines ease of use, targeted wound healing, and natural biomechanical properties for outstanding therapeutic safety. Thanks to its strong natural cross-linking properties, the tissue has a long-term adequate barrier function. Our gentle production process retains all natural properties of the pericardium. BoneProtect® Membrane has the characteristics of natural soft tissue and features a smooth side with a denser structure (labelled G) as well as a rough side that serves as a guide for cells and blood vessels.



SEM: BoneProtect® Membrane



SEM: 3D structure of BoneProtect® Membrane



Histology of BoneProtect® Membrane 4 weeks after implantation: perfect integration without inflammatory reaction; the structure of the membrane is clearly recognizable

Properties

- Long-term barrier function from 12 to more than 24 weeks
- Natural structure and minimal thickness (approx. 0.3 to 0.4 mm)
- Guided wound healing
- Easy handling; can be used in dry or wet condition
- Can be cut to size
- Not sticky when wet, only small volume increase when wet
- Quick vascularisation thanks to 3D structure
- High breaking strength in all directions
- Excellent surface adaptation
- Quick rehydration due to hydrophilic properties

Indications: Implantology, periodontology, oral and maxillofacial surgery

- Dehiscence
- Sinus lift
- Protection and coverage of the Schneider's membrane
- Extraction socket
- Preservation of the alveolar ridge
- Horizontal & vertical augmentation
- Alveolar ridge reconstruction
- Intraossary defect (1-3 sides)
- Furcation defect (classes I + II)

Product specifications

BoneProtect® Membrane

Item no.	Size	Content
MEMS	15x20mm	1 membrane
MEMM	20x30mm	1 membrane
MEML	30x40mm	1 membrane

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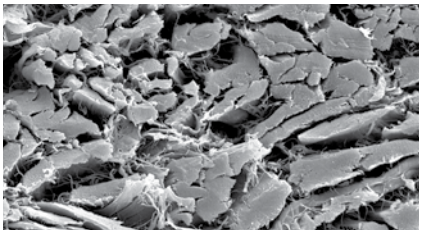
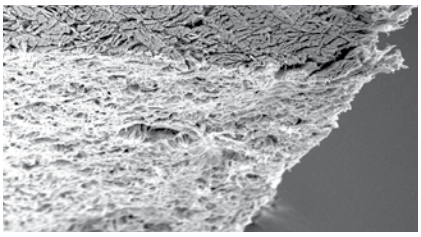
BoneProtect® Guide

Naturally Cross-Linked Collagen Membrane

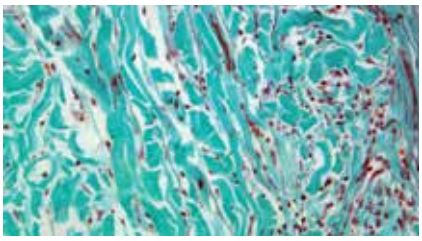
BoneProtect® Guide is a naturally cross-linked collagen membrane. Due to the rough and porous three dimensional collagen structure, controlled wound healing in combination with guided bone and tissue regeneration achieves optimal treatment results. During the regeneration process BoneProtect® Guide offers the necessary barrier function balanced with a controlled resorption time without inflammatory soft tissue reaction. The soft tissue around a BoneProtect® Guide usually heals without any problem, even if postoperative dehiscences occurs. The biologic structure of the BoneProtect® Guide surface prevents ingrowth of soft tissue, allows cells and blood vessels penetration and quick integration into the surrounding tissue. This unique biologic function provides a perfect basis for hard and soft tissue healing.



SEM: BoneProtect® Guide



SEM: BoneProtect® Guide



Histology 6 weeks after implantation of BoneProtect® Guide: blood vessels have penetrated the porous structure. collagen fibres are visible and the resorption process is ongoing without any inflammatory tissue response.

Properties

- Medium-term barrier function with resorption time of approx. 8 to 12 weeks
- Natural structure and standard thickness of approximately 0.4 to 0.6 mm
- Controlled wound healing and blood clot support
- Three dimensional natural cross-linked collagen matrix
- Cell-occlusive: preventing gingival cell invasion
- Rough and porous structure for cell and blood vessel guidance
- Can be cut to shape for specific procedures, excellent surface adaptation
- Easy handling; can be used in dry or wet condition, not sticky when wet

Indications: Implantology, periodontology, oral and maxillofacial surgery

- Horizontal and/or vertical ridge augmentation
- Preservation of alveolar ridge
- Socket preservation
- Intraossary defect (1-3 sides)
- Dehiscence defects
- Furcation defects (classes I + II)
- Fenestration defects
- Sinus lift
- Protection and coverage of the Schneiderian membrane

Product specifications

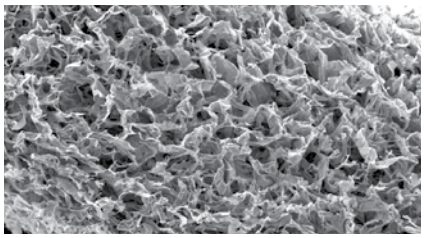
BoneProtect® Guide

Item no.	Size	Content
GUIDE-S	15x20mm	1 membrane
GUIDE-M	20x30mm	1 membrane
GUIDE-L	30x40mm	1 membrane

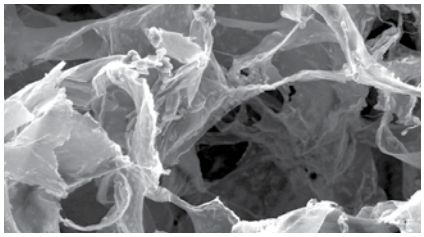
BoneProtect® Fleece

Collagen Fleece - Highly Effective, Resorbable Natural Soft Tissue

BoneProtect® Fleece is a stable haemostatic material made from natural collagen. The haemostatic effect of collagen is well known and researched and is associated with the adhesion of platelets on the collagen fibrils. This in turn leads to platelet aggregation and the release of coagulation factors, which start the coagulation cascade and initiate haemostasis. BoneProtect® Fleece offers a barrier function for 2-4 weeks.



SEM: BoneProtect® Fleece



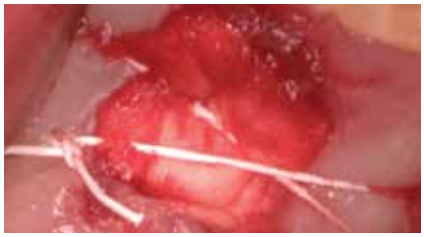
SEM: 3D structure of BoneProtec® Fleece

Properties

- Highly effective local haemostatic agent
- Highly adhesive in most environments
- Resorbable due to quick decomposition from enzyme reactions
- Easy to apply
- Stable in contact with blood

Indications: Implantology, periodontology, oral and maxillofacial surgery

- Augmentation cover
- Extraction socket
- Biopsy punch site



Clinical application of BoneProtect® Fleece

Product specifications

BoneProtect® Fleece

Item no.	Size	Content
FLEECE-12	20x20mm	12 pieces

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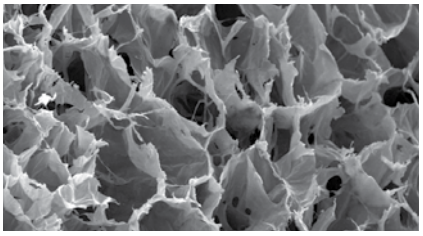
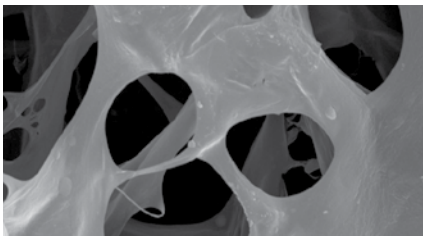
BoneProtect® Cone

Native Collagen Alveo Cone

BoneProtect® Cone is both a resorbable native collagen wound dressing cone intended to assist the wound healing process, and a nature matrix providing the structure for new bone formation. The healing of an extraction socket following tooth removal is characterized by formation and maturation of a blood clot followed by infiltration of fibroblasts to replace the coagulum and finally establishment of a provisional matrix that allows new bone tissue formation in the extraction socket. BoneProtect® Cone offers an easy, highly biocompatible and predictable socket preservation treatment concept.



SEM: BoneProtect® Cone



SEM: BoneProtect® Cone collagen fibres 3 dimensional network

Properties

- Resorption approximately 2-4 weeks
- Stabilisation of blood clot and effective local haemostatic agent
- Resorbable due to quick decomposition from enzymatic reactions
- Controlled wound healing process
- 3 dimensional matrix for tissue ingrowth
- Maintains integrity in the presence of blood and during application; easy to apply

Indications: Implantology, periodontology, oral and maxillofacial surgery

- Socket preservation
- Internal sinus lift
- Closure of grafted, extraction and biopsy sites
- Control and stop of bleeding in extraction sockets or biopsy sites
- Minor oral wounds

Clinical use of BoneProtect® Cone

Product specifications

BoneProtect® Cone

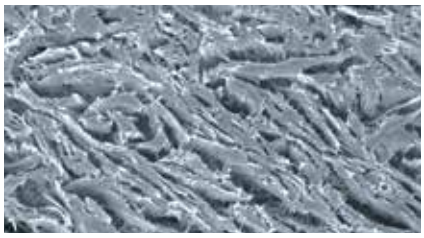
Item no.	Size	Content
CONE-12	16mm height with diameter on top ~11mm and bottom ~7mm	12 pieces (single sterile units)

[1] G. Cardaropoli et al. J Clin Periodontol 2003; 30: 809-818

MucoMatrixX®

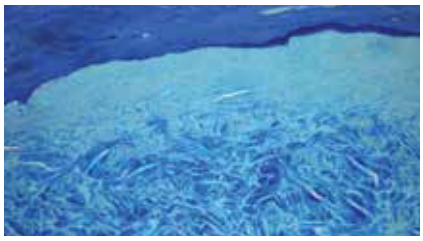
Soft Tissue Graft

MucoMatrixX® is a collagen tissue matrix derived of animal dermis that passes through a multi-step cleaning process, which removes all potential tissue rejection components from the dermis. This results into a 3-dimensional stable matrix consisting of collagen and elastin. MucoMatrixX® supports revascularisation and fast soft tissue integration and is a valid alternative for patients own connective tissue.
After placement, the patient's blood infiltrates the MucoMatrixX® graft through the three dimensional soft tissue network, bringing host cells to the soft tissue graft surface and starting the revascularisation process. Significant revascularisation can begin after implantation depending on the patient's healthy structure.



REM: MucoMatrixX®

MucoMatrixX® good handling-properties after rehydration with blood.



Histology of MucoMatrixX® 6 months after implantation. Optimal integration without infectory reactions of the MucoMatrixX®.

Properties

- 3-dimensional stable matrix derived of animal dermis
- Resorption time approx. 6-12 months
- Rapid vascularisation and integration
- Complete remodelling into patients own tissue
- Soft tissue replacement without palatal autograft harvesting
- Can be easily applied and fixed
- Can be cut to shape for specific procedures
- Thickness approx. 1.2-1.7mm

Indications: Implantology, periodontology, oral and maxillofacial surgery

- Soft tissue augmentation
- Root coverage
- Tunnel technique
- Soft tissue grafting in combination with GBR/GTR

Product specifications

MucoMatrixX®

Item no.	Size	Content
MUCO-S	15x20mm	1 piece
MUCO-M	20x30mm	1 piece
MUCO-L	30x40mm	1 piece

MucoMatrixX®
20x30mm

MucoMatrixX®
available in 3 sizes

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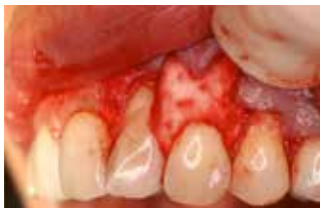
Clinical Application Examples

Implantology, periodontology, oral and maxillofacial surgery

Root recession: MucoMatrixX® case by PD Dr. Stefan Hägewald, Berlin

Clinical situation of the root recession before MucoMatrixX® placement.

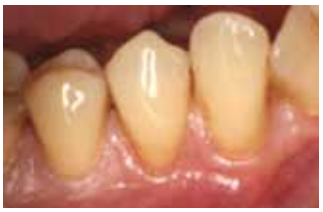


MucoMatrixX® placement over the tooth root.

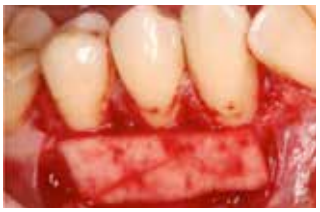
Gingival tissue was coronally repositioned, covering the MucoMatrixX® and the roots of teeth, and sutured in place.

6 months post-op view: the previously recessed roots of teeth are covered with attached pink, keratinised gingival tissue.

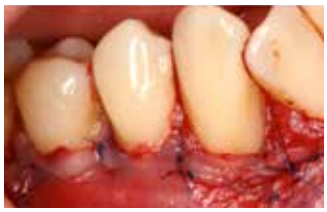
Root coverage: MucoMatrixX® case by PD Dr. Adrian Kasaj, Mainz



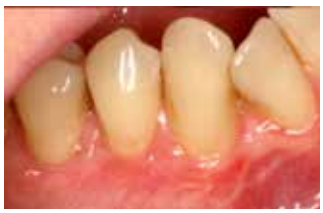
Clinical situation of the root recession before MucoMatrixX® placement.



MucoMatrixX® placement over the teeth root area.



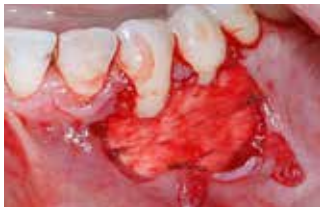
Gingival tissue was coronally repositioned, covering the MucoMatrixX® and the roots of teeth, and sutured in place.



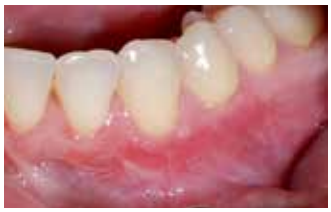
6 months post-op view: the previously recessed roots of teeth are covered with attached pink, keratinised gingival tissue.

Root coverage: MucoMatrixX® case by Dr. Roland Török, Nürnberg

Preclinical situation, root recession visible.



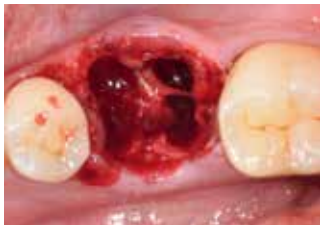
Clinical situation after MucoMatrixX® placement.



1 month post op.

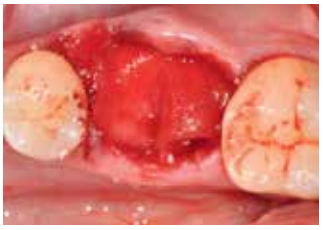
2 years post op

Socket preservation: Case by Dr. Fernando Rojas-Vizcaya, Castellón & Chapel Hill



Clinical situation after tooth removal.

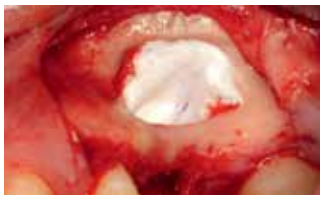
Socket filled with CompactBone® B. and buccal wall protected with BoneProtect® Guide.



BoneProtect® Guide turned down over the socket.

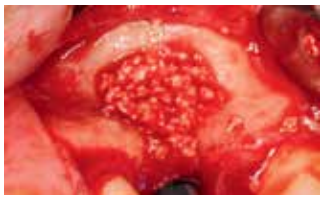
Final suturing of the socket.

Sinuslift with lateral approach: Case by Dr. Stefan Peev, Sofia

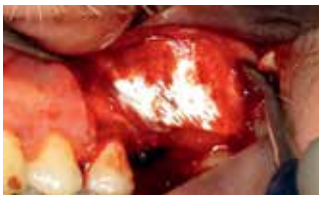


Insertion of BoneProtect® Fleece.

BoneProtect® Fleece placed on Sinus membrane.



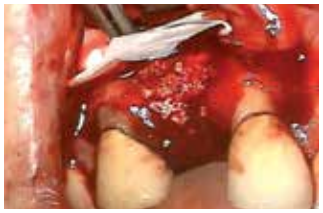
The implant is placed and the grafting cavity is filled up with CompactBone® B..



BoneProtect® Membrane is placed to close the lateral window.

Horizontal & vertical augmentation: CompactBone® B; BoneProtect® Membrane case by Dr. Marius Steigmann, Neckargemünd

Clinical application after implant insertion.



Horizontal and vertical augmentation with CompactBone® B., particle size 1-2 mm.

Coverage of the augmentation with BoneProtect® Membrane, size 20 x 30 mm.

Tension-free wound closure.

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Product Portfolio
Indication Recommendations

Products / Indikations	CompactBone® B. Granules	CompactBone® S. Granules	BoneProtect® Membrane	BoneProtect® Guide
Horizontal / vertikal augmentation	1,0-2,0mm 2,0; 5,0cc	0,8-1,5mm 2,0cc	20x30mm 30x40mm	20x30mm 30x40mm
Preservation of the alveolar ridge	1,0-2,0mm 2,0; 5,0cc	0,8-1,5mm 2,0cc	30x40mm	30x40mm
Extraction sockets / socket preservation	0,5-1,0mm 0,5; 1,0cc	0,5-1,0mm 0,5; 1,0cc	15x20mm	15x20mm
Intraossary defect (1-3 sides)	0,5-1,0mm 0,5cc	0,5-1,0mm 0,5; 1,0cc	15x20mm	15x20mm
Dehiscence				15x20mm 20x30mm
Furcation defect (classes I-II)	0,5-1,0mm 0,5cc	0,5-1,0mm 0,5cc	15x20mm	15x20mm
Fenestration defect	0,5-1,0mm 0,5; 1,0cc	0,5-1,0mm 0,5; 1,0cc	20x30mm	20x30mm
Sinus lift	1,0-2,0mm 2,0; 5,0cc	0,8-1,5mm 2,0cc	15x20mm 20x30mm	15x20mm 20x30mm
Protection of the Schneiderian membrane			15x20mm 20x30mm	15x20mm 20x30mm

Products / Indikations	BoneProtect® Fleece	BoneProtect® Cone
Socket preservation	20x20mm	1x Cone
Internal Sinus lift		1x Cone
Protection of the Schneiderian membrane	20x20mm	

Dentegris recommends for the treatment of large defects, if available, a mix of the granules with autologous bone graft.

CompactBone® S.

BoneProtect® Guide

BoneProtect® Fleece

BoneProtect® Cone

CompactBone® B.

BoneProtect® Membrane