

# Yxoss CBR<sup>®</sup> protect

Customized Bone Regeneration



Customized Solutions

marketed by

## Geistlich

the regeneration  
experts

Dense microstructure  
enables even  
easier removal



Yxoss CBR<sup>®</sup> protect

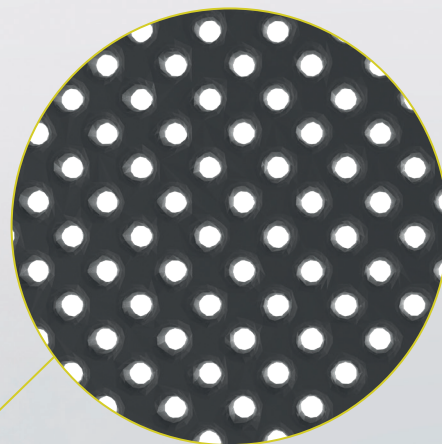




# Yxoss CBR® protect – Designed for an even easier removal

The open structure of Yxoss CBR® classic enables periosteal vascularization that is essential for bone regeneration. In certain cases, excessive bone formation in the apical part of the titanium scaffold can hamper its removal due to soft and hard tissue ingrowth. To overcome this challenge Yxoss CBR® protect features a microporous structure in the apical area which allows an even easier removal.

The periosteal blood supply continues to be promoted in the upper part of the scaffold with the open structure



**Dense microstructure for apical edge zones<sup>1</sup>**  
 › Protects the apical area from soft and hard tissue ingrowth  
 › Enables even easier removal

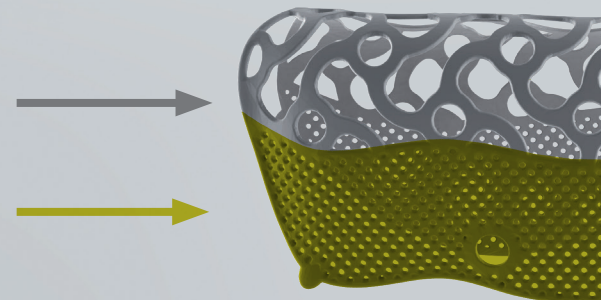
## Biological background

### Periosteal nutrition: +++

Maturation of the bone is dependent on the vascularization of the periosteal vessels

### Ingrowth of soft and hard tissue: NO

Higher occlusivity due to denser Yxoss CBR® protect structure leads to less intergrowth with tissue cells



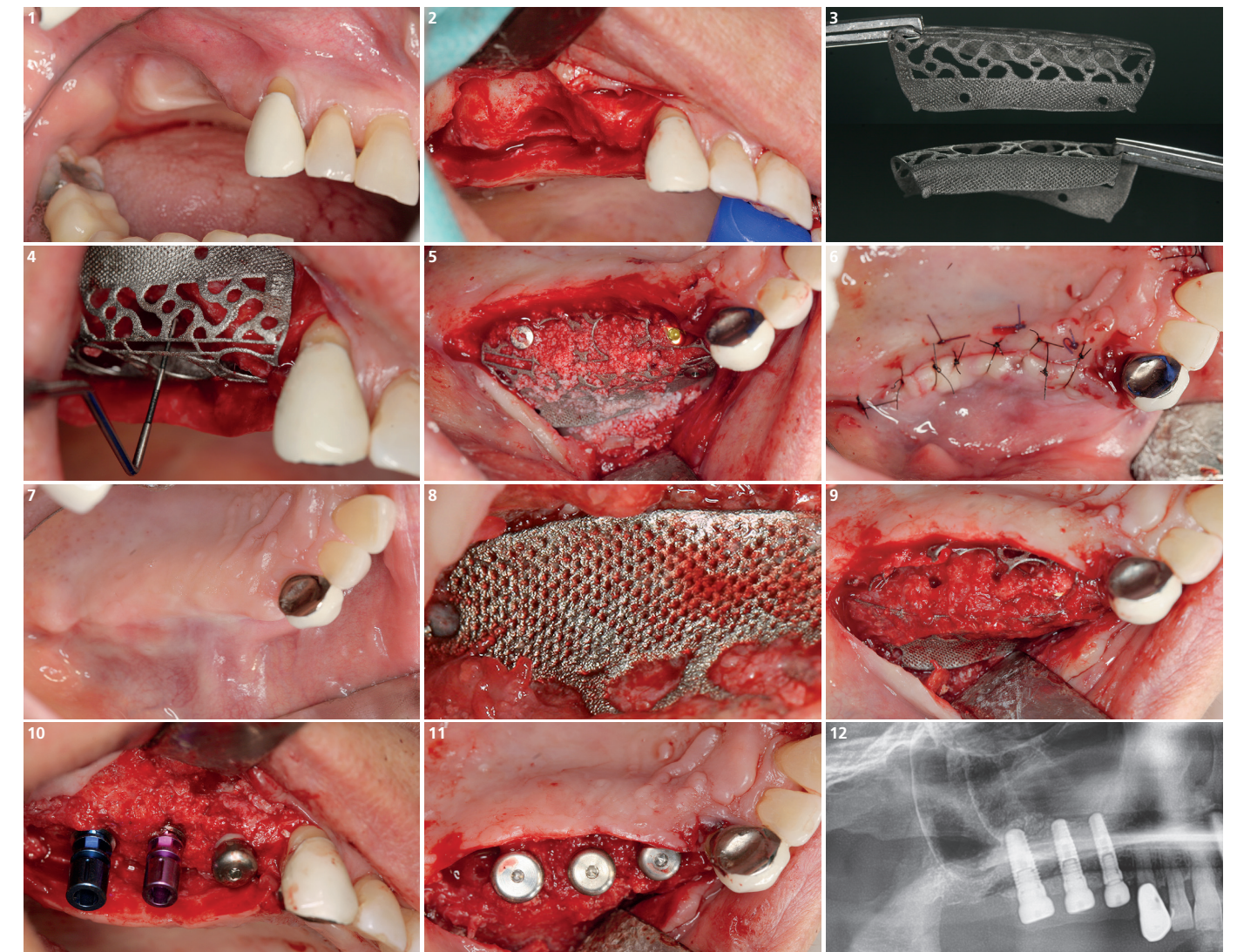
<sup>1</sup> Manufacturing result may visually differ from rendered microstructure.

Clinical benefit of Yxoss CBR® protect

# Horizontal/Vertical Defect (3 teeth gap) – Posterior Maxilla



Surgery and concept by  
Dr. Marcus Seiler MSc MSc  
(Filderstadt, Germany)



**1** Clinical baseline situation of the vertical and horizontal defect.

**2** Vertical and horizontal bone defect after surgical opening via a mid-crestal incision.

**3** 3-D printed Titanium scaffold with pre-specified fixation options in the apical area of the „protect“ structure.

**4** Try-in of Yxoss CBR® protect into the defect region. A bone defect of approx. 6 mm is revealed.

**5** The scaffold is fixed with a single FYxoss screw in the crestal area. In accordance with the backward planning one implantat could be inserted immediately (pos. 14). In addition an external sinus lift was performed.

**6** Tension-free closure of the double layer mucoperiosal flap over Yxoss CBR® protect using resorbable deep mattress and single interrupted sutures.

**7** Clinical image shows an irritation-free healing after the extensive horizontal and vertical augmentation.

**8** Yxoss CBR® protect successfully prevented hard and soft tissue ingrowth in the apical area. The bone maturation was not affected.

**9** Thanks to the Yxoss CBR® protect design the scaffold could be removed more easily after a healing period of 6 months.

**10** Fully regenerated and matured bone with implants.

**11** After inserting the two additional implants and the healing abutments the flap is closed once again.

**12** Radiographic image visualizes the implant positions within the regenerated bone.



# Yxoss CBR®

Easy ordering at  
[www.reoss.eu/myreoss](http://www.reoss.eu/myreoss)

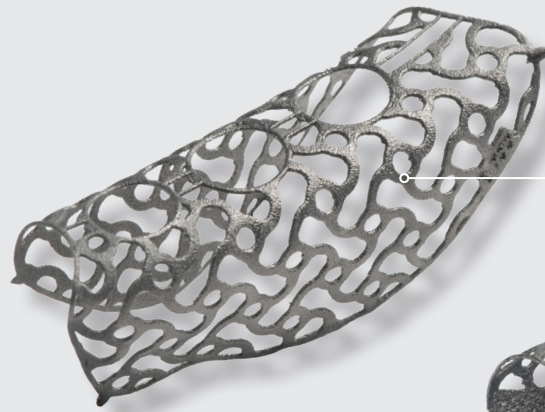


Customized Solutions

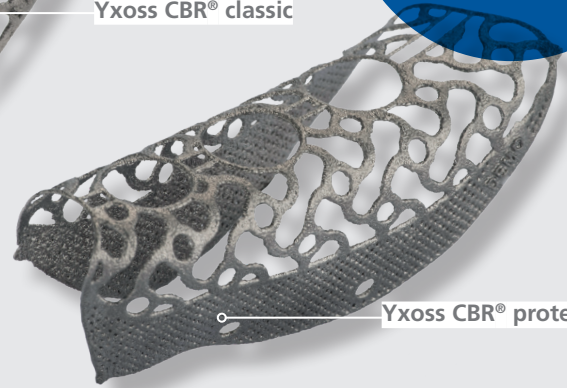
## ReOss® LLC

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**Geistlich**  
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Yxoss CBR® classic



Yxoss CBR® protect

**Yxoss CBR®** is an innovative solution for the regeneration of complex alveolar bone defects by using CBCT data in combination with 3-D printing technology. It has simplified the surgical technique for gaining new bone height and width by providing accuracy of fit, volume stability, and predictability.



## Geistlich Bio-Oss®

Stable scaffold for new bone.<sup>1,2,3,4</sup> The slow resorption of Geistlich Bio-Oss® increases the stability of the augmentation material<sup>5</sup> – the best prerequisite for long-term implant survival rates.<sup>6</sup>



## Geistlich Bio-Gide®

Stabilizes the grafted area and protects bone particles from dislocation for optimal bone regeneration.<sup>7</sup> The natural collagen structure allows homogeneous vascularization, supports tissue integration and wound stabilization.<sup>8</sup> The combination of flexibility, good adhesion, and tear resistance contribute to easy handling, in turn saving time, and simplifying the surgical procedure.<sup>9</sup>

<sup>1</sup> Orsini G et al., J Biomed Mater Res, B: Appl Biomater 74B, 2005; 448–57.

<sup>2</sup> Piattelli M et al., Int J Oral Maxillofac Implants 1999; 14: 835–40.

<sup>3</sup> Sartori S, et al., Clin Implants Res 2003; 14: 369–72.

<sup>4</sup> Traini T et al., J Periodontol. 2007 May; 78(5): 955–961.

<sup>5</sup> Orsini G et al., Oral Diseases. 2007; 19: 357–368.

<sup>6</sup> Jung R et al., Clin Oral Implants Res. 2013 Oct; 24(10): 1065–73.

<sup>7</sup> Perelman-Karmon M et al., Int J Periodontics Restorative Dent. 2012 Aug; 32(4): 459–65.

<sup>8</sup> Rothamel D et al., Clin. Oral Implants Res. 2005; 16(3): 369–378.

<sup>9</sup> Data on File. Geistlich Pharma AG, Wolhusen, Switzerland.



For more information incl. a comprehensive brochure  
with both Yxoss CBR® versions please visit:

[www.reoss.eu](http://www.reoss.eu)

[www.geistlich-pharma.com](http://www.geistlich-pharma.com)

**CAUTION:** Federal law restricts these devices to sale by or on the order of a dentist or physician. For more information on contraindications, precautions, and directions for use, please refer to the Instructions for Use at: [dental.geistlich-na.com/ifu](http://dental.geistlich-na.com/ifu)