



The Custom Approach  
for Complex Defects



# Puros<sup>®</sup> Allograft Customized Block





# Puros Allograft Customized Block



Patients with severe atrophy of the mandible or maxilla who have elected for an implant-supported restoration may benefit from customized treatment. Allogenic (human) blocks as well as autologous blocks are the choice materials for the bone graft required for these cases. The success or failure of the grafting procedure may be determined by how well the block conforms to the defect.

Puros Allograft Customized Blocks are a crucial developmental step in block grafting. A custom block is produced using CAD/CAM technology based on a CBCT/CT scan of the defect area. This makes the procedure more comfortable for your patient by reducing surgery time and minimizing the risk of complications.<sup>1</sup>

## Your Benefits

### Tutoplast® Process

- Retains osteoconductive properties due to the preservation of the natural bone matrix collagen and mineral composition, trabecular pattern, and original porosity.<sup>2,3</sup>
- Sterilized and preserved using the proprietary Tutoplast Process, customized allogenic blocks are a high-quality option for successful bone regeneration procedures.<sup>4</sup>
- In more than 40 years, over 5 million grafts have been sterilized using the Tutoplast Process without a single case of graft-related infection reported.<sup>5</sup>

### Congruent in Shape

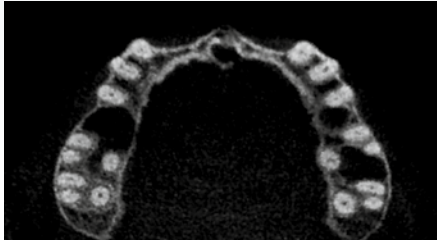
- Customized block fits precisely to defect.
- Large contact surface area improves ingrowth of blood vessels and revascularization.<sup>6</sup>

### Reduced Surgery Time

- Additional manual adjustment of the defect and of the customized block is seldom required, allowing for reduced surgery time and reduced morbidity.<sup>7</sup>

1. Schlee M, Rothamel D. Ridge augmentation using customized allogenic bone blocks: proof of concept and histological findings. *Implant Dent.* (2013) 22:212-8.  
2. Keith JD Jr, Petrungaro P, Leonetti JA, Elwell CW, Zeren KJ, Caputo C et al. Clinical and histologic evaluation of a mineralized block allograft: results from the developmental period (2001-2004). *Int J Periodontics Restorative Dent.* 2006;26:321-327.  
3. Leonetti JA, Koup R. Localized maxillary ridge augmentation with a block allograft for dental implant placement: case reports. *Implant Dent.* 2003;12:217-226.  
4. Würzler KK, Will F, Berger S. Herstellung und Anwendung CAD/CAM-gefräster, patientenspezifischer Knochenblöcke. *Implantologie Journal* (2015) 5:30-36.  
5. Data on file with RTI Surgical, Inc  
6. McAllister, B. S. Bone augmentation techniques *Journal of Periodontology* 2007;78:377-396  
7. Parthasarathy, J., 3D modeling, custom implants and its future perspectives in craniofacial surgery. *Annals of Maxillofacial Surgery* 2014;4:9-18.

# Design and Order Process



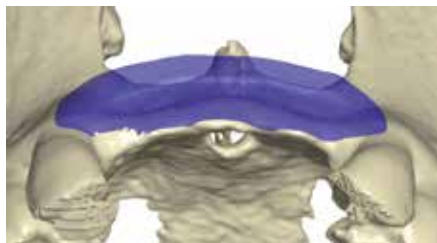
## 1. Data Submission

Fill-in the order form (ZV0504). Send the form together with CT/CBCT data (required in DICOM format) to ZimVie Dental.



## 2. Design of the Customized Block

ZimVie Dental designs the Customized Block according to the requirements written on the order form and e-mails you a 3D-PDF draft for review. Adjustments can be made to the design at any time prior to final approval.



## 3. Approval

Once the design is finalized, your approval is required to release the block for milling.



## 4. Milling of Customized Block

Puros Allograft Customized Blocks are milled from Tutoplast-processed, allogenic cancellous bone. The final block has been gamma sterilized and is provided in double-pouched, sterile packaging.

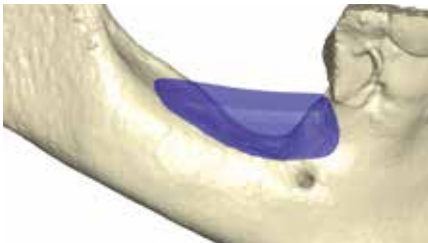
## 5. Shipment

On the order form you can order the customized block alone or together with a collagen membrane and Puros Allograft Cancellous Particles (0,25–1 mm, 0,5 cc). Once the final design has been approved (step 3), the customized block will be released from manufacturing after approximately 4–6 weeks. The expected delivery date will be confirmed to allow you to schedule surgery accordingly.

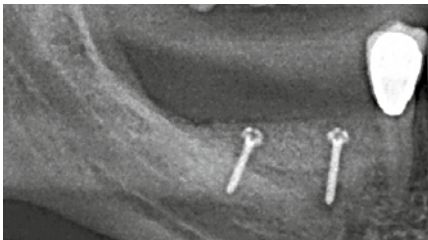
# Case



Right mandible defect, failed implants need to be removed, lateral view.



Designed block, lateral view.



Radiograph taken after block augmentation, block fixed with osteosynthesis screws.



Prosthetic restoration.

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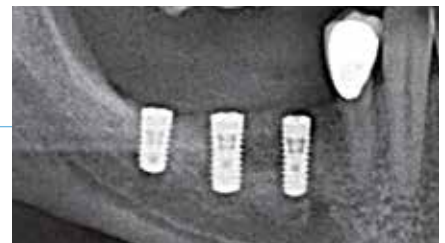
8



Three-dimensional model of the defect site, lateral view.



Puros Allograft Customized Block.



Implant placement after 6-month healing period.



1 year follow-up.

# Please Note the Following Information

## Imaging

### Preparation of Patient

- Remove temporaries and metal restorations, where possible.
- Position patient in stable position.

### Imaging Requirements

- In general, all CT/CBCT devices are suitable.
- Recommended slice thickness: 0.2 to 0.6 mm.
- Gantry angle: 0°.
- Please ensure that high-contrast imaging is achieved, particularly in the case of cancellous structures and thin residual bone (e.g. thin sinus floor).

### Scan Data

- Do not use data compression.
- Data must be provided in DICOM format only (.dicom or .dcm)\*.
- Copy the DICOM data to a storage medium (CD, DVD, USB stick) and send it to your local ZimVie Dental office or contact our Customer Service Department for more information.

## Planning and Design

### Design Draft

- ZimVie Dental will e-mail you a 3D-PDF file of the drafted customized block consisting of the block and the defect site.
- To open the PDF file, you need Adobe Acrobat Reader.
- Adjustments can be made at any time before final approval.

## Surgery

- Despite precise planning, the block may not fit as expected and minor manual adjustments may be required.
- Ensure you have the appropriate instruments (e.g., Luer, milling, piezo) available for any required manual adjustments.

## Ordering Information

Catalog Number	Description
67217	Puros Allograft Customized Block Standard, 27 x 15 x 15 mm max
67218	Puros Allograft Customized Block Large, 27,1 x 15,1 x 15,1 mm min - 60 x 30 x 30 mm max

\* Please contact your radiologist or device manufacturer if you have any questions on DICOM export.

Contact us by phone at  
**0800-652-1233 (UK)/1-800-552-752 (Ireland)**  
or visit **ZimVie.com/dental**

**ZimVie Dental Global Headquarters**

4555 Riverside Drive  
Palm Beach Gardens, FL 33410  
Phone: +1-561-776-6700  
Fax: +1-561-776-1272  
dentalCS@ZimVie.com

**Biomet 3i (UK & Ireland) Ltd**

Reading Business Centre  
Suite 807, 8<sup>th</sup> Floor Fountain House  
2 Queens Walk, Reading, Berks  
RG1 7QF, United Kingdom  
Phone (UK): 0800-652-1233  
Phone (Ireland): 1-800-552-752  
ZV.UKorders@ZimVie.com



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