

# MatrixORTHOGNATHIC™

Stable Internal Fixation for Orthognathic Surgery

## Surgical Technique



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 Image intensifier control

This description alone does not provide sufficient background for direct use of DePuy Synthes products. Instruction by a surgeon experienced in handling these products is highly recommended.

**Processing, Reprocessing, Care and Maintenance**

For general guidelines, function control and dismantling of multi-part instruments, as well as processing guidelines for implants, please contact your local sales representative or refer to:

<http://emea.depuysynthes.com/hcp/reprocessing-care-maintenance>

For general information about reprocessing, care and maintenance of DePuy Synthes reusable devices, instrument trays and cases, as well as processing of DePuy Synthes non-sterile implants, please consult the Important Information leaflet (SE\_023827) or refer to:

<http://emea.depuysynthes.com/hcp/reprocessing-care-maintenance>

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■ Notes

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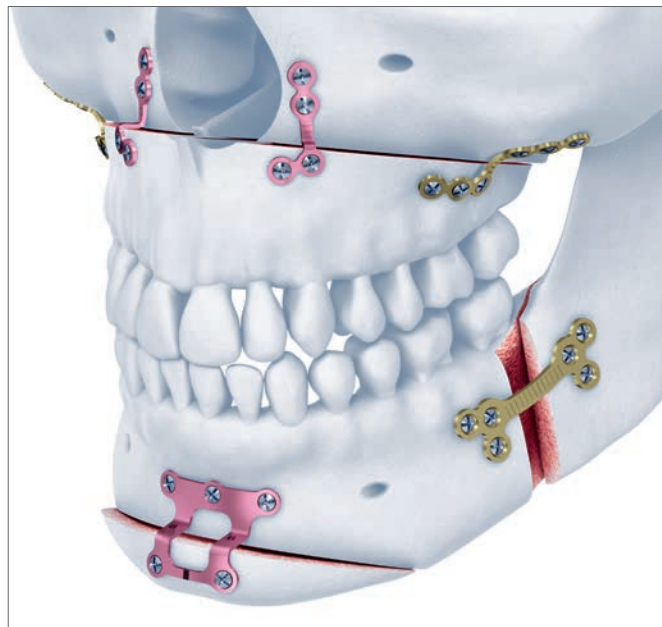
▲ WARNINGS

# MatrixORTHOGNATHIC™

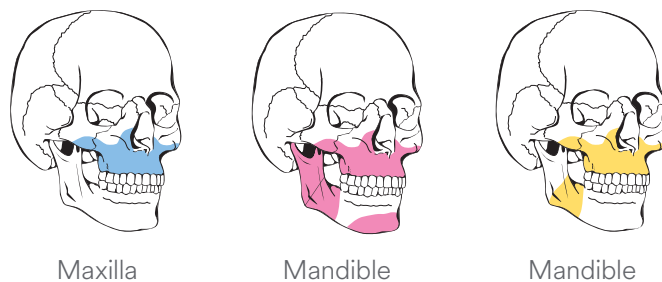
Stable Internal Fixation for Orthognathic Surgery

## Overview

MatrixORTHOGNATHIC™ is a comprehensive system that offers implants and instruments for orthognathic surgery.



- Color coding by level of plate thickness



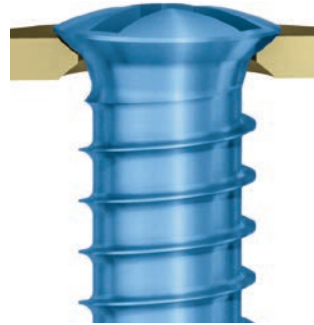
- One standard screw diameter (1.85 mm) for all orthognathic indications in the maxillofacial skeleton
- Reversible L-plates



- All screws work with all plates within each Matrix system
- One screwdriver blade for all screws within each Matrix system



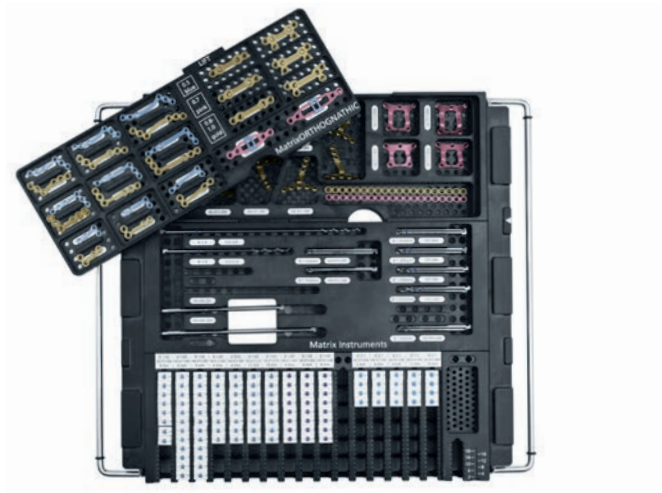
- Low plate-screw profile, where applicable
- Rounded edges on plates



- Compatible with MatrixMIDFACE™  
Ø 1.55 mm Screws
- Etched lines, in 1 mm increments, on implants provide visual aid for plate bending (where applicable)



- Implants and Instruments Module for MatrixORTHOGNATHIC™ has multiple auxiliary bins and can be configured to accommodate various combinations of plates



- Standardized instrumentation



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## MatrixORTHOGNATHIC Screws

### One standard screw diameter:

- $\varnothing$  1.85 mm screws (LeFort I\*, BSSO, Genioplasty\*)
- $\varnothing$  2.1 mm screws serve as emergency screws

### Screw designs include:

- Self-drilling (purple)
- Self-tapping (blue)
- Emergency (pink)



### Screws lengths/thread pitch include:

- 4 mm–8 mm/0.6 mm thread pitch
- 10 mm–28 mm/1.0 mm thread pitch

### Screw recess design allows for:

- Self-retention for screwdriver blades

Made from titanium alloy.

### ■ \*Notes:

- A  $\varnothing$  1.5 mm MatrixMIDFACE screw is also compatible with the MatrixORTHOGNATHIC System.
- See step “4. Fixate plate to the bone” under section “Sagittal Split Fixation – BSSO Plate” and step “4. Primary plate fixation” under section “Sagittal Split Fixation – SplitFix Plate” “Precautions” for limitations regarding mandibular applications.
- See section “Implants” for ordering information.

## MatrixORTHOGNATHIC Plates

### Maxillary plates:

- Low profile
- All plates made from commercially pure titanium



### L-plates:

- Straight and anatomic design
- Reversible design
- Bar width increases as bar length gets longer
- Etched lines, in 1 mm increments, to facilitate bending and placement
- Plates available in 0.5 mm (blue), 0.7 mm (pink) and 0.8 mm (gold) thicknesses



### Maxillary plates:

- Prebent maxillary plates with 2 mm to 10 mm offsets
- Left and right design
- For identification offset and site (L=Left or R=Right) etched on plates
- Plates available in 0.8 mm thickness (gold)



### Adaption plates:

- Plates available with 20 holes
- Plates available in 0.5 mm (blue), 0.7 mm (pink), and 0.8 mm (gold) thicknesses



### I-plates:

- Plates available in 0.5 mm (blue) and 0.7 mm (pink) thicknesses

### Sagittal split plates:

- Etched lines, in 1 mm increments, to facilitate bending and placement
- Low profile
- All plates made from commercially pure titanium



### SplitFix plates:

- Double-strut design with a low profile
- Slider allows intraoperative correction of occlusion during plate fixation
- Plates available 0.7 mm (pink) thickness



### Curved and straight BSSO plates:

- Both designs with 6 mm to 12 mm bar lengths
- Plates available in 1.0 mm (gold) thickness



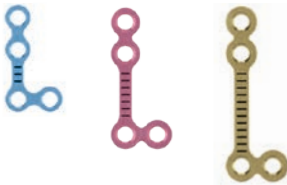
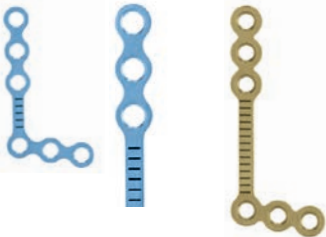

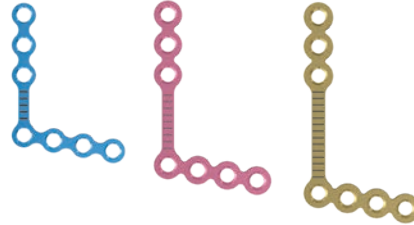
### Genioplasty plates:

- Prebent chin plates with 4 mm to 10 mm offsets
- For identification offset etched on plates
- Etched midline for centering
- Low profile
- Plates available in 0.7 mm (pink) thickness
- Plates made from commercially pure titanium

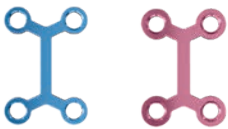















### Vertical ramus osteotomy (VRO) plates:

- Prebent VRO plates with 0 mm to 6 mm offsets
- For identification offset and site (L = Left or R = Right) etched on plates
- Left and right design
- Low profile
- Plates available in 0.7 mm (pink) thickness
- Plates made from commercially pure titanium

Implant	Picture	Recommended anatomic location	Clinical Applications
Matrix 90-degree L-Plate, 2+2 holes, reversible; 0.5, 0.7 and 0.8 mm thick		Maxilla	Orthognathic Trauma Reconstruction
Matrix L-Plate, 3+3 holes, reversible; 0.5, 0.7 and 0.8 mm thick		Maxilla	Orthognathic Trauma Reconstruction
Matrix Anatomic L-Plate, 3+3 holes, reversible; 0.5, 0.7 and 0.8 mm thick		Maxilla	Orthognathic Trauma Reconstruction
Matrix L-Plate, 4+3 holes, reversible; 0.5, 0.7 and 0.8 mm thick		Maxilla	Orthognathic Trauma Reconstruction



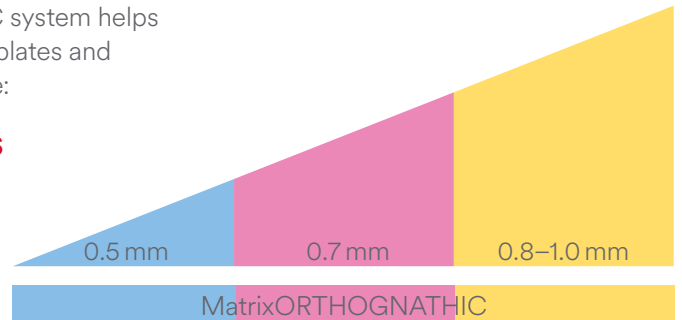
Implant	Picture	Recommended anatomic location	Clinical Applications
Matrix I-Plate, with centre space 7 mm, 2+2 holes; 0.5 and 0.7 mm thick		Maxilla	 Orthognathic Trauma Reconstruction
Matrix Maxillary Plate, pre-bent, left and right; 0.8 mm thick		Maxilla	 Orthognathic Trauma Reconstruction
Matrix Sagittal Split Plate, curved, with intersection bar, 6 holes; 1.0 mm thick		Mandible	 Orthognathic Trauma
Matrix Sagittal Split Plate, straight, with intersection bar, 4 holes; 1.0 mm thick		Mandible	 Orthognathic Trauma
Matrix SplitFix Plate, 4 holes; 0.7 mm thick		Mandible	 Orthognathic
Matrix Chin Plate, double curved, with offset, 5 holes; 0.7 mm thick		Mandible	 Orthognathic
Matrix Vertical Ramus Osteotomy Plate, with offset, left and right; 0.7 mm thick		Mandible	 Orthognathic

# MatrixORTHOGNATHIC Color Coding

The color coding of implants in the MatrixORTHOGNATHIC system helps to identify the level of thickness. The color-coding scale for plates and screws conforms to the Matrix System color-coding scheme:

## MatrixORTHOGNATHIC Plates Thickness

- Blue = 0.5 mm plates
- Pink = 0.7 mm plates
- Gold = 0.8 mm to 1.0 mm plates



## Matrix Screws

- Blue =  $\varnothing$  1.85 mm self-tapping MatrixORTHOGNATHIC screws
- Purple =  $\varnothing$  1.85 mm self-drilling MatrixORTHOGNATHIC screws
- Pink =  $\varnothing$  2.1 mm self-tapping MatrixORTHOGNATHIC emergency screws

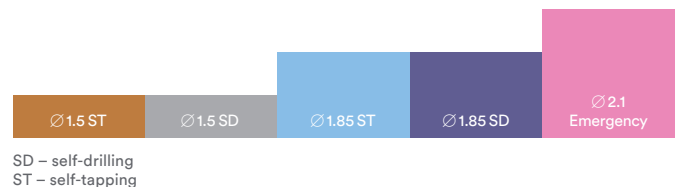
Also available:

- Bronze = self-tapping  $\varnothing$  1.5 mm MatrixMIDFACE screws
- Silver = self-drilling  $\varnothing$  1.5 mm MatrixMIDFACE screws



### Notes:

- A  $\varnothing$  1.5 mm MatrixMIDFACE screw is also compatible with the MatrixORTHOGNATHIC system.
- See step “4. Fixate plate to the bone” under section “Sagittal Split Fixation – BSSO Plate” and step “4. Primary plate fixation” under section “Sagittal Split Fixation – SplitFix Plate” “Precautions” for limitations regarding mandibular applications.
- See section “Implants” for ordering information.



### MatrixORTHOGNATHIC $\varnothing$ 1.85 mm screws

Screw diameter	Lengths	Thread pitch	Drill bit diameter
1.85 mm	4–8 mm	0.6 mm	1.4 mm
1.85 mm	10–28 mm	1.0 mm	1.4 mm, 1.5 mm*

### MatrixORTHOGNATHIC $\varnothing$ 2.1 mm screws (emergency)

Screw diameter	Lengths	Thread pitch
2.1 mm	4–8 mm	0.6 mm
2.1 mm	10–18 mm	1.0 mm

### MatrixMIDFACE $\varnothing$ 1.5 mm screws (also available)

Screw diameter	Lengths	Thread pitch	Drill bit diameter
1.5 mm	4–8 mm	0.6 mm	1.1 mm
1.5 mm	10–18 mm	0.6 mm	1.25 mm

\*A  $\varnothing$  1.5 mm drill bit can be used in dense bone to facilitate screw insertion from 12–28 mm lengths.

# The AO Principles of Fracture Management

## Mission

The AO's mission is promoting excellence in patient care and outcomes in trauma and musculoskeletal disorders.

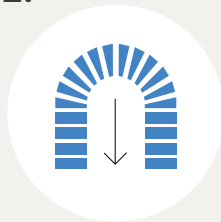
### AO Principles<sup>1,2</sup>

1.



Fracture reduction and fixation to restore anatomical relationships.

2.



Fracture fixation providing absolute or relative stability, as required by the “personality” of the fracture, the patient, and the injury.

3.



Preservation of the blood supply to soft-tissues and bone by gentle reduction techniques and careful handling.

4.



Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.

<sup>1</sup> Müller ME, Allgöwer M, Schneider R, Willenegger H. Manual of Internal Fixation. 3<sup>rd</sup> ed. Berlin, Heidelberg New York: Springer 1991.

<sup>2</sup> Buckley RE, Moran CG, Apivatthakakul T. AO Principles of Fracture Management: 3<sup>rd</sup> ed. Vol. 1: Principles, Vol. 2: Specific fractures. Thieme; 2017.

# Warnings/Precautions

## ▲ WARNINGS:

- Using an internal fixation system on patients with active or latent infection may cause potential risks which may include construct failure and deterioration of infection. It is at the physician's discretion to evaluate the patient's medical conditions and select a fixation device most appropriate for the individual patient. It is also at the physician's discretion to consider all other necessary treatment methods to effectively manage the infection.
- Confirm the quality of bone at the selected plate position. Using an internal fixation system on patients with insufficient quantity or quality of bone may cause potential risks which may include device loosening and construct failure. It is at the physician's discretion to evaluate the patient's medical conditions and select a fixation device most appropriate for the individual patient.
- These devices can break during use (when subjected to excessive forces or outside the recommended surgical technique). While the surgeon must make the final decision on removal of the broken part based on associated risk in doing so, we recommend that whenever possible and practical for the individual patient, the broken part should be removed.
- Steel may elicit an allergic reaction in patients with hypersensitivity to nickel.
- Instruments and screws may have sharp edges or moving joints that may pinch or tear user's glove or skin.
- Previous changes in the temporomandibular joint may affect surgical outcome.
- Do not excessively bend the plates as it may produce internal stresses which may become the focal point for eventual breakage of the implant.
- Do not alter the bend of the prebent plates by more than 1 mm in either direction.
- The slider is used strictly for intraoperative use only; do not leave it in situ.
- Take care to remove all fragments that are not fixated during the surgery.

## ▲ Precautions:

- Physicians should inform their patients about the implant's load restrictions and develop a plan for postoperative behavior and increasing physical loads.
- Predrilling is recommended in dense bone.
- Confirm the quality of bone at the selected plate position.
- Tighten screws in a controlled manner. Applying too much torque to the screws may cause screw/plate deformation, or bone stripping.
- Surgical implants must never be reused. An explanted metal implant must never be reimplanted. Even though the device appears undamaged, it may have small defects and internal stress patterns which could lead to breakage.
- Check instruments periodically for wear or damage.
- Replace worn or damaged instruments prior to use.
- Important considerations in achieving quality outcomes for orthognathic surgery in growing patients include accurate diagnosis, proper treatment planning, and appropriate age sequencing of procedures.\*
- Damage to developing tooth roots may result in dentoosseous ankylosis and localized dentoalveolar growth impairment.\*

\*Khechoyan D. Y. (2013). Orthognathic surgery: general considerations. *Seminars in plastic surgery*, 27(3), 133–136. <https://doi.org/10.1055/s-0033-1357109>

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Please refer to the corresponding Instructions for Use for specific information on Intended use, Indications, Contraindications, Warnings and Precautions, Potential Adverse Events, Undesirable Side Effect and Residual Risks. Instruction for Use are available at [www.e-ifu.com](http://www.e-ifu.com) and/or [www.depuysynthes.com/ifu](http://www.depuysynthes.com/ifu)

MRI Information on Torque, Displacement, Image Artifacts and Radio-Frequency-(RF-)induced heating can be found in the corresponding System Instructions for Use.

# Confirmation of Screw and Drill Bit Length

## 1. Confirm length of drill bits

The graphic case provides a slot with etched drill length markers to facilitate the confirmation of the correct drill bit length. Choose a drill bit. Place it in the slot (in place of the screw) as shown in the image under Section 2 below. Make sure that the stop of the drill bit (shoulder) rests against the inner edge at the lower end of the slot (see image under Section 2 below). Read the number adjacent to the drill bit tip to identify the drill bit's length.

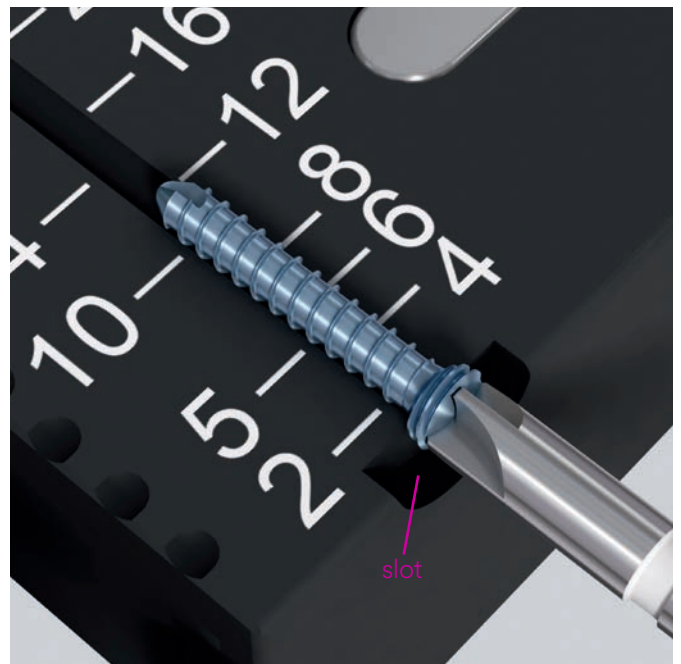


## 2. Confirm length of the screws for plate fixation (Matrix Screws)

### Instruments

03.503.201/202/203	Screwdriver Shafts Matrix-MIDFACE, short, self-holding, with Hexagonal Coupling, lengths 52/76/96 mm
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The graphic case provides a slot with etched screw length markers to facilitate the confirmation of the correct screw length. Choose a screw for plate fixation. Pick up the screw using one of the self-holding screwdriver shafts. Place the screw in the slot as shown in the image. Make sure that the bottom of the screw head rests against the bottom of the counterbore at the lower end of the slot. Read the number adjacent to the screw tip to confirm screw length.



# Maxillary/LeFort I Plate Fixation

## 1. Select plate design

After the osteotomy has been performed and the new position of the maxilla has been established, select the appropriate plate shape and thickness that suits the bony anatomy, treatment objective and the quantity and quality of bone.

L-plates and 90 degree L-plates are recommended for both medial and lateral buttress fixation.

Prebent Maxillary plates are recommended for medial buttress fixation.

Anatomic L-Plates are recommended for lateral buttress fixation.



## 2. Select and form bending template

### Instruments

03.511.360 – Bending Templates for  
03.511.362 Matrix Anatomic L-Plates, 3+3 holes

03.511.363 – Bending Templates for  
03.511.365 Matrix L-Plates, 3+3 holes

03.511.366 – Bending Templates for  
03.511.368 Matrix 90° L-Plates, 2+2 holes

Select the appropriate shape and length of bending template according to the plate selection and form it to the bony anatomy.

### ▲ Precaution:

Bending templates should not be used as an implant or drill guide for surgical planning.



### 3. Adapt plate to the bone

#### Instruments

03.503.035	Bending Pliers 3D for MatrixMIDFACE Plates
03.503.038	Bending Pliers for MatrixMIDFACE Plates
03.503.039	Plate Cutter for MatrixMIDFACE

Cut and contour the plate according to the bending template and bony anatomy using the plate cutter and the bending pliers, respectively. Bend the plate between the holes as necessary. Ensure that the plate is adapted to the bony anatomy.

#### ■ Note:

Etched lines, in 1 mm increments, to facilitate bending and placement.

#### ▲ Precautions:

- Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.
- Cut the implant adjacent to the screw holes.
- Take care to protect soft tissue from trimmed edges.

#### ▲ WARNINGS:

- Do not alter the bend of the prebent plates by more than 1 mm in either direction.
- Do not excessively bend the plates as it may produce internal stresses which may become the focal point for eventual breakage of the implant.





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## 4. Fixate plate to the bone

If pilot hole is desired, select the appropriate drill bit diameter and length (see section “MatrixORTHOGNATHIC Color Coding”) to allow for the adequate clearance of nerves, tooth buds and/or tooth roots.

Insert the appropriate length  $\varnothing$  1.85 mm Matrix screws to fixate the plate to the underlying bone.

### ■ Note:

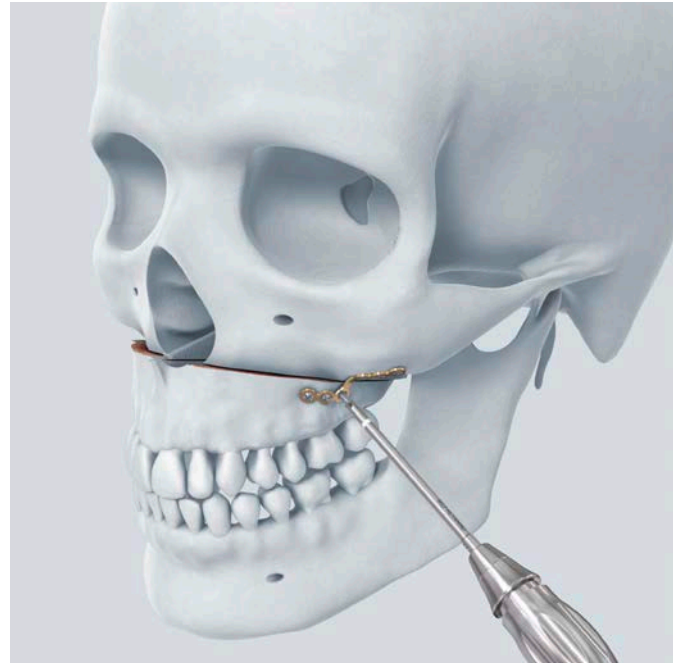
Self-tapping and self-drilling screws are available.

### ▲ Precautions:

- Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.
- Drill speed rate should never exceed 1,800 rpm, particularly in dense, hard bone.
- Higher drill speed rates can result in:
  - thermal necrosis of the bone
  - soft tissue burns
  - an oversized hole, which can lead to reduced pullout force, increased ease of the screws stripping in bone, suboptimal fixation, and/or the need for emergency screws.
- Always irrigate during drilling to avoid thermal damage to the bone.
- After implant placement is complete, irrigate and apply suction for removal of debris potentially generated during implantation or removal.
- Avoid drilling over nerve or tooth roots.
- Take care while drilling as to not damage, entrap, or tear a patient’s soft tissue or damage critical structures.
- Be sure to keep drill clear of loose surgical materials.
- Handle devices with care and dispose worn bone cutting instruments in an approved sharps container.
- Use the appropriate amount of screws to achieve stable fixation for fractures. Stable fixation requires a minimum of two screws per bone segment for osteotomies.

### ▲ WARNING:

Instruments and screws may have sharp edges or moving joints that may pinch or tear user’s glove or skin.



# Sagittal Split Fixation – BSSO Plate

## 1. Select plate design

After the sagittal split osteotomy, adjust the occlusion and the joint-bearing segment, and stabilize by intermaxillary fixation.

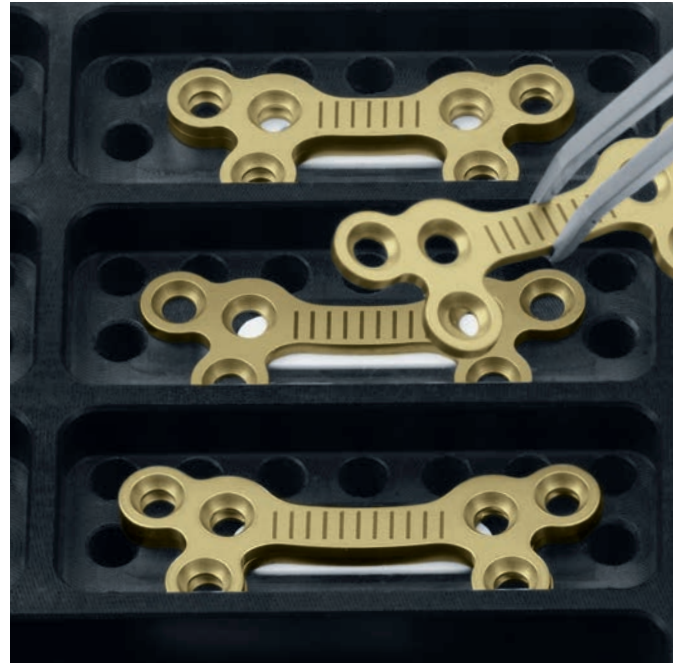
Select the appropriate plate shape that suits the bony anatomy, treatment objective and the quantity and quality of bone.

The straight and curved sagittal split plates are available for mono-cortical screw placement.

The SplitFix plate with adjustable slider is also available if intraoperative occlusal adjustments are necessary (see additional technique steps in section “Sagittal Split Fixation – SplitFix Plate”).

### ■ Notes:

- For bicortical screw placement,  $\varnothing$  1.85 mm Matrix screws are available in lengths of up to 28 mm (position screws). Pre-drill using the appropriate drill bit diameter and length (see section “MatrixORTHOGNATHIC Color Coding”) without stop.
- The 10–28 mm length screws have a larger head diameter for visibility and force transmission.



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## 2. Select and form bending template

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### Instruments

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03.511.369 – Bending Template for Matrix Plate,  
03.511.372 for sagittal split, curved, 6 holes

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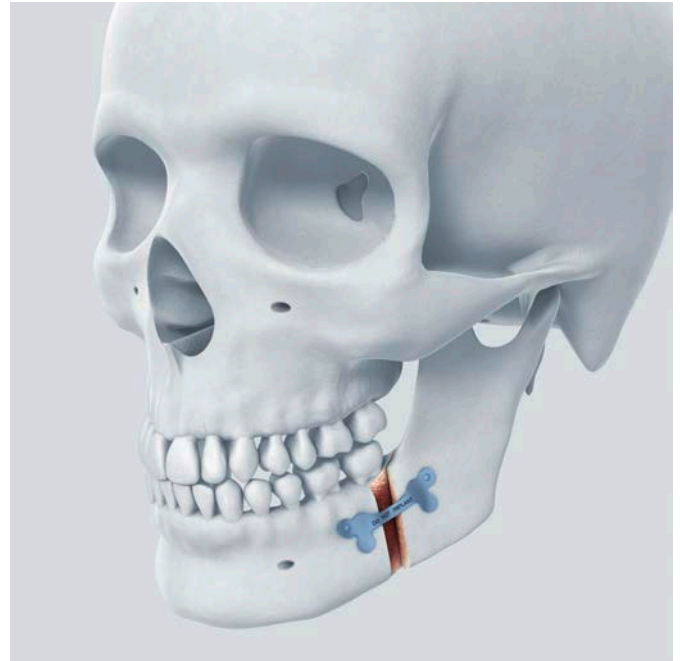
03.511.373 – Bending Template for Matrix Plate,  
03.511.376 for sagittal split, straight, 4 holes

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Select the appropriate shape and length of bending template according to the plate selection and form it to the bony anatomy.

**▲ Precaution:**

Bending templates should not be used as an implant or drill guide for surgical planning.



### 3. Adapt plate to the bone

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#### Instrument

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03.503.038      Bending Pliers for MatrixMIDFACE  
Plates (2 required)

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Contour the plate according to the bending template and bony anatomy using the bending pliers. Bend the plate between the holes as necessary. Ensure that the plate is adapted to the bony anatomy.

#### ■ Note:

Etched lines, in 1mm increments, to facilitate bending and placement.

#### ▲ Precautions:

- Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.
- Cut the implant adjacent to the screw holes.
- Take care to protect soft tissue from trimmed edges.

#### ▲ WARNING:

Do not excessively bend the plates as it may produce internal stresses which may become the focal point for eventual breakage of the implant.



## 4. Fixate plate to the bone

If pilot hole is desired, select the appropriate drill bit diameter and length (see section “MatrixORTHOGNATHIC Color Coding”) to allow for the adequate clearance of nerves, tooth buds and/or tooth roots.

Insert the appropriate length  $\varnothing$  1.85 mm Matrix screws to fixate the plate to the underlying bone.

### ■ Note:

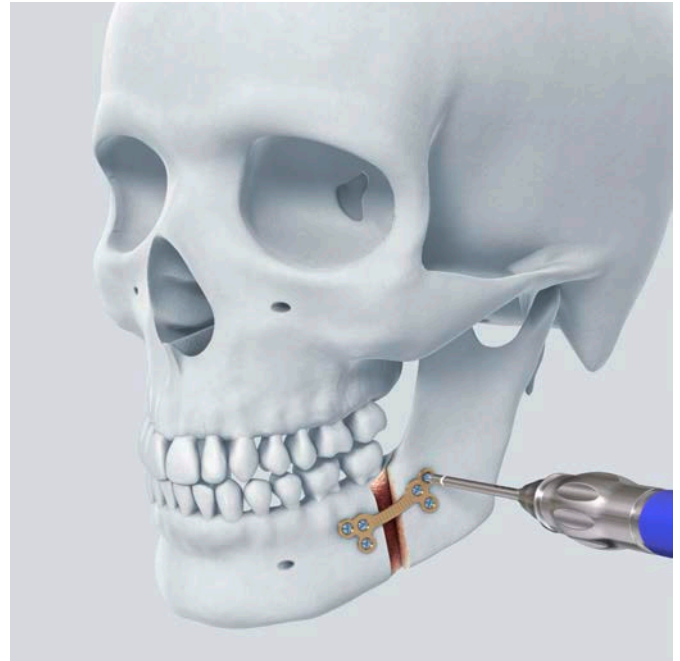
Self-tapping and self-drilling screws are available.

### ▲ Precautions:

- Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.
- Drill speed rate should never exceed 1,800 rpm, particularly in dense, hard bone.
- Higher drill speed rates can result in:
  - thermal necrosis of the bone
  - soft tissue burns
  - an oversized hole, which can lead to reduced pullout force, increased ease of the screws stripping in bone, suboptimal fixation, and/or the need for emergency screws.
- Always irrigate during drilling to avoid thermal damage to the bone.
- After implant placement is complete, irrigate and apply suction for removal of debris potentially generated during implantation or removal.
- Avoid drilling over nerve or tooth roots.
- Take care while drilling as to not damage, entrap, or tear a patient’s soft tissue or damage critical structures.
- Be sure to keep drill clear of loose surgical materials.
- Handle devices with care and dispose worn bone cutting instruments in an approved sharps container.
- The  $\varnothing$  1.5 mm MatrixMIDFACE screw is not recommended for sagittal split fixation.
- Use the appropriate amount of screws to achieve stable fixation for fractures. Stable fixation requires a minimum of two screws per bone segment for osteotomies.

### ▲ WARNING:

Instruments and screws may have sharp edges or moving joints that may pinch or tear user’s glove or skin.



# Sagittal Split Fixation – SplitFix Plate

## 1. Select plate design

The SplitFix plates with self-holding slider are available for cases in which intra-operative occlusal adjustments are necessary.

After sagittal split osteotomy, adjust the occlusion and the proximal segment, and stabilize by intermaxillary fixation. Select the appropriate SplitFix plate that suits the bony anatomy, treatment objective and the quantity and quality of bone.



## 2. Select and form bending template

### Instruments

03.511.377 – Bending template for Matrix

03.511.378 SplitFix Plate, 4 holes

Select the appropriate length of bending template according to the plate selection and form it to the bony anatomy.

### ▲ Precaution:

Bending templates not to be used as an implant or drill guide for surgical planning.



### 3. Adapt plate to the bone

#### Instrument

03.503.038      Bending Pliers for MatrixMIDFACE Plates

Contour the plate according to the bending template and bony anatomy using the bending pliers. Bend the plate between the holes as necessary. Ensure that the plate is adapted to the bony anatomy.

#### ■ Notes:

- Etched lines, in 1 mm increments, to facilitate bending and placement.
- Since the slider will not slide in the contoured section, the plate should be contoured as far proximally as possible.

#### ▲ Precaution:

Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots and the edge of the bone.

#### ▲ WARNING:

Do not excessively bend the plates as it may produce internal stresses which may become the focal point for eventual breakage of the implant.





## 4. Primary plate fixation

If pilot hole is desired, select the appropriate drill bit diameter and length (see section “MatrixORTHOGNATHIC Color Coding”) to allow for the adequate clearance of nerves, tooth buds and/or tooth roots.

Fixate the SplitFix plate to the bone by drilling and inserting the proper length  $\varnothing$  1.85 mm Matrix Screws in the specified sequence as shown in Figure 2 (1, 2, 3). Screws should be placed mono-cortically.

### ■ Note:

Self-tapping and self-drilling screws are available.

### ▲ Precautions:

- Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.
- Drill speed rate should never exceed 1,800 rpm, particularly in dense, hard bone.
- Higher drill speed rates can result in:
  - thermal necrosis of the bone
  - soft tissue burns
  - an oversized hole, which can lead to reduced pullout force, increased ease of the screws stripping in bone, suboptimal fixation, and/or the need for emergency screws.
- Always irrigate during drilling to avoid thermal damage to the bone.
- After implantation is complete, irrigate and apply suction for removal of debris potentially generated during implantation or removal.
- Avoid drilling over nerve or tooth roots.
- Take care while drilling as to not damage, entrap, or tear a patient’s soft tissue or damage critical structures.
- Be sure to keep drill clear of loose surgical materials.
- Handle devices with care and dispose worn bone cutting instruments in an approved sharps container.
- The  $\varnothing$  1.5 mm MatrixMIDFACE screw is not recommended for sagittal split fixation.
- The  $\varnothing$  2.1 mm self-tapping screw is not recommended for slider fixation.
- Use the appropriate amount of screws to achieve stable fixation for fractures. Stable fixation requires a minimum of two screws per bone segment for osteotomies.

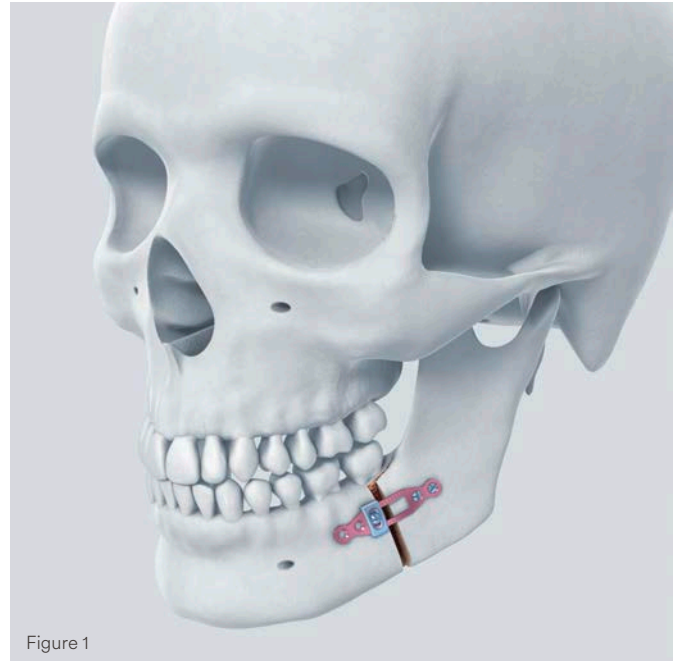


Figure 1

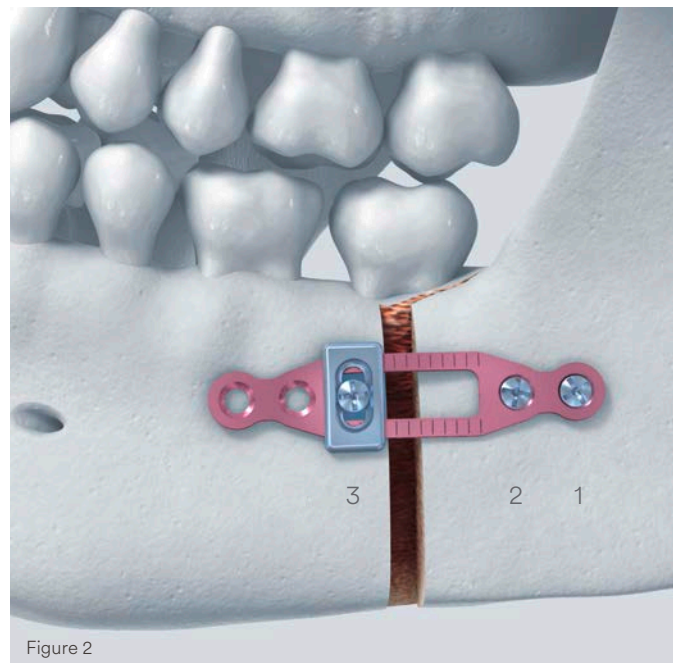


Figure 2

### ▲ WARNING:

Instruments and screws may have sharp edges or moving joints that may pinch or tear user’s glove or skin.



---

## 5. Intraoperative correction of occlusion

Release the intermaxillary fixation and inspect the occlusion. If the occlusion needs to be adjusted, loosen the screw 3 in the slider plate.

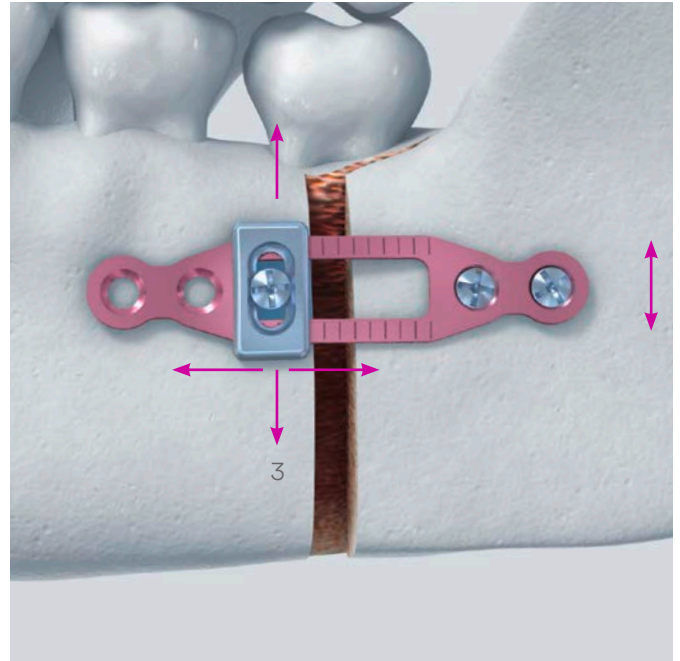
The distal bone segment can now be shifted horizontally and vertically until the occlusion has been corrected.

Retighten the screw 3 in the slider.

The process can be repeated as many times as necessary.

### ▲ Precaution:

Ensure that the desired condylar positioning has been achieved.



## 6. Final plate fixation

Using an appropriate drill bit diameter and length (see section “MatrixORTHOGNATHIC Color Coding”) to pre-drill, insert the remaining  $\varnothing$  1.85 mm Matrix screws of the appropriate length in holes 4 and 5.

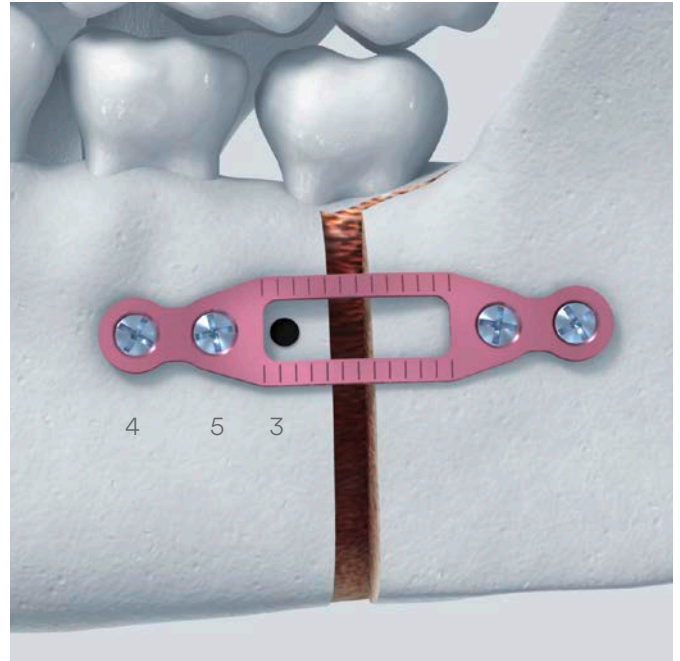
Remove the screw 3 and slider plate component. Repeat this step on contralateral side. Ensure fixation of the mandible is adequate to withstand the sagittal forces.

### ▲ Precautions:

- Drill speed rate should never exceed 1,800 rpm, particularly in dense, hard bone.
- Higher drill speed rates can result in:
  - thermal necrosis of the bone
  - soft tissue burns
  - an oversized hole, which can lead to reduced pullout force, increased ease of the screws stripping in bone, suboptimal fixation, and/or the need for emergency screws.
- Always irrigate during drilling to avoid thermal damage to the bone.
- After implantation is complete, irrigate and apply suction for removal of debris potentially generated during implantation or removal.
- Avoid drilling over nerve or tooth roots.
- Take care while drilling as to not damage, entrap, or tear a patient’s soft tissue or damage critical structures.
- Be sure to keep drill clear of loose surgical materials.
- Handle devices with care and dispose worn bone cutting instruments in an approved sharps container.
- Use the appropriate amount of screws to achieve stable fixation for fractures. Stable fixation requires a minimum of two screws per bone segment for osteotomies.

### ▲ WARNINGS:

- The slider is used strictly for intraoperative use only; do not leave it in situ.
- Previous changes in the temporomandibular joint may affect surgical outcome.
- Instruments and screws may have sharp edges or moving joints that may pinch or tear user’s glove or skin.



# Genioplasty Fixation

## 1. Select plate design

After the osteotomy has been performed and the position/advancement of the genioglossus segment has been established, select the plate size that suits the bony anatomy, treatment objective, and the quantity and quality of bone.

The present double curved Matrix chin plates are available in 4 mm to 10 mm offsets.



## 2. Adapt plate to the bone

### Instruments

03.503.038 Bending Pliers for MatrixMIDFACE Plates (2 required)

Contour the selected plate to the bone using the bending pliers. Bend the plate between the holes as necessary. Ensure the plate is adapted to the bony anatomy.

#### ■ Note:

Etched centerline helps with plate alignment on the bone.

#### ▲ Precaution:

Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.

#### ▲ WARNINGS:

- Do not alter the bend in the prebent plates to achieve more than a 1mm adjustment in either direction.
- Do not excessively bend the plates as it may produce internal stresses which may become the focal point for eventual breakage of the implant.



### 3. Fixate plate to the bone

If pilot hole is desired, select the appropriate drill bit diameter and length (see section “MatrixORTHOGNATHIC Color Coding”) to allow for the adequate clearance of nerves, tooth buds and/or tooth roots.

Insert the appropriate length  $\varnothing$  1.85 mm Matrix screws to fixate the plate to the underlying bone.

#### ■ Note:

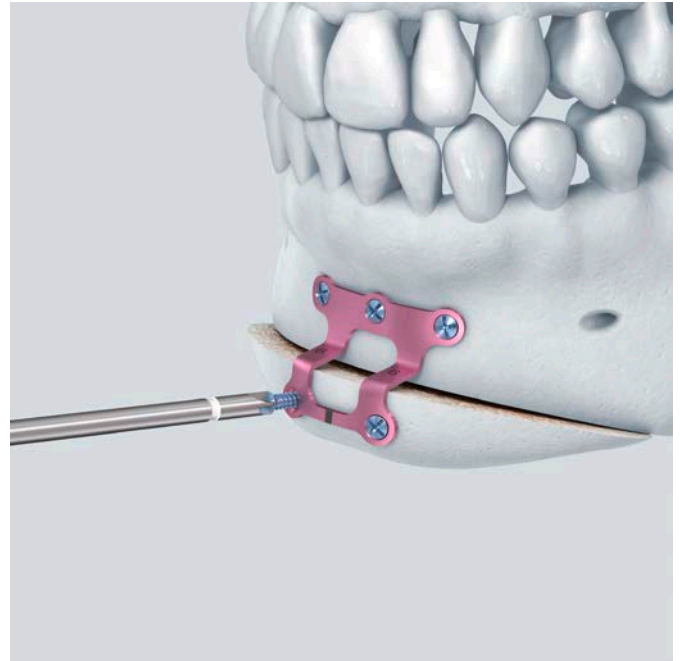
Self-tapping and self-drilling screws are available.

#### ▲ Precautions:

- Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.
- Drill speed rate should never exceed 1,800 rpm, particularly in dense, hard bone.
- Higher drill speed rates can result in:
  - thermal necrosis of the bone
  - soft tissue burns
  - an oversized hole, which can lead to reduced pullout force, increased ease of the screws stripping in bone, suboptimal fixation, and/or the need for emergency screws.
- Always irrigate during drilling to avoid thermal damage to the bone.
- After implantation is complete, irrigate and apply suction for removal of debris potentially generated during implantation or removal.
- Avoid drilling over nerve or tooth roots.
- Take care while drilling as to not damage, entrap, or tear a patient’s soft tissue or damage critical structures.
- Be sure to keep drill clear of loose surgical materials.
- Handle devices with care and dispose worn bone cutting instruments in an approved sharps container.
- The  $\varnothing$  1.5 mm MatrixMIDFACE screw is not recommended for genioplasty fixation.
- Use the appropriate amount of screws to achieve stable fixation for fractures. Stable fixation requires a minimum of two screws per bone segment for osteotomies.

#### ▲ WARNING:

Instruments and screws may have sharp edges or moving joints that may pinch or tear user’s glove or skin.

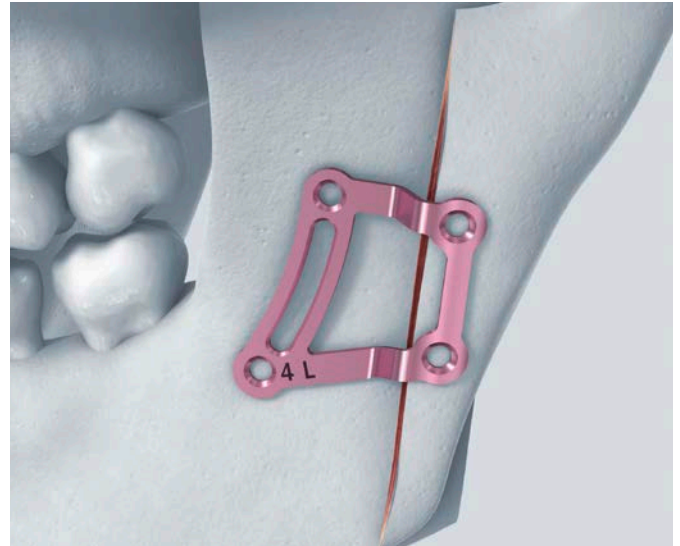


# Vertical Ramus Osteotomy Fixation

## 1. Select plate design

After the vertical ramus osteotomy has been performed, position the distal segment with the teeth wired into intermaxillary fixation on a pre-planned surgical splint. Select the appropriate plate design that suits the bony step created from the overlap of the bony segments, and the quantity and quality of bone.

The Matrix Vertical Ramus Osteotomy plates are prebent, available in left and right design and in 0 (flat), 2, 4 and 6 mm offsets.



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## 2. Adapt plate to the bone

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### Instrument

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03.503.038	Bending Pliers for MatrixMIDFACE Plates (2 required)
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---

Contour the selected plate to the bone using the bending pliers. Bend the plate between the holes as necessary.

In reducing the acute bend of the plate, the bony edge of the proximal segment can be trimmed down to enable adaptation of the plate to the bone. Ensure that the plate is adapted to the bony anatomy.

#### ▲ Precaution:

Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.

#### ▲ WARNINGS:

- Do not alter the bend in the prebent plates by more than 1 mm in either direction.
- Do not excessively bend the plates as it may produce internal stresses which may become the focal point for eventual breakage of the implant.





### 3. Primary plate fixation

To fixate the Matrix Vertical Ramus Osteotomy plate to the bone, use a 90° screwdriver (see “90° Screwdriver” Surgical Technique Guide) with an appropriate drill bit diameter and length (see section “MatrixORTHOGNATHIC Color Coding”) to pre-drill and insert the Ø 1.85 mm Matrix screws of the appropriate length in the specified sequence 1, 2, 3. The two screws on the proximal segment are fixed first. Then place the third screw at the sliding slot.

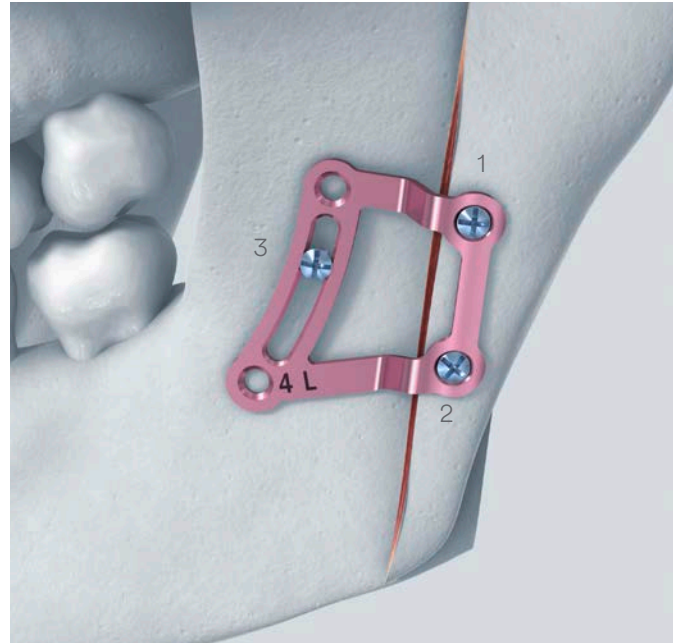
The screws placed on the proximal bone segment can be fixed bi-cortically whereas the screw placed on the distal segment is recommended to be fixed mono-cortically in the region where the path of inferior alveolar nerve may not be damaged.

#### ■ Note:

Self-tapping and self-drilling screws are available.

#### ▲ Precautions:

- Confirm that plate positioning, drill bit and screw length allow for adequate clearance of nerves, tooth buds and/or tooth roots, and the edge of the bone.
- Drill speed rate should never exceed 1,800 rpm, particularly in dense, hard bone. This corresponds to a maximum input speed of 3600 rpm (gear ratio of 2:1).
- Higher drill speed rates can result in:
  - thermal necrosis of the bone
  - soft tissue burns
  - an oversized hole, which can lead to reduced pull-out force, increased ease of the screws stripping in bone, suboptimal fixation, and/or the need for emergency screws.
- Always irrigate during drilling to avoid thermal damage to the bone.
- After implantation is complete, irrigate and apply suction for removal of debris potentially generated during implantation or removal.
- Handle devices with care and dispose worn bone cutting instruments in an approved sharps container.
- Avoid drilling over nerve or tooth roots.
- Take care while drilling as to not damage, entrap, or tear a patient’s soft tissue or damage critical structures.
- Be sure to keep drill clear of loose surgical materials.
- The Ø 1.5 mm MatrixMIDFACE screw is not recommended for vertical ramus osteotomy fixation.
- Use the appropriate amount of screws to achieve stable fixation for fractures. Stable fixation requires a minimum of two screws per bone segment for osteotomies.



#### ▲ WARNING:

Instruments and screws may have sharp edges or moving joints that may pinch or tear user’s glove or skin.



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## 4. Repeat steps for bilateral procedure

Repeat steps 1, 2, 3 on the contralateral side.

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## 5. Intraoperative correction of occlusion

Release the intermaxillary fixation and inspect the occlusion. If the occlusion needs to be adjusted, loosen the screw 3 in the plate slot.

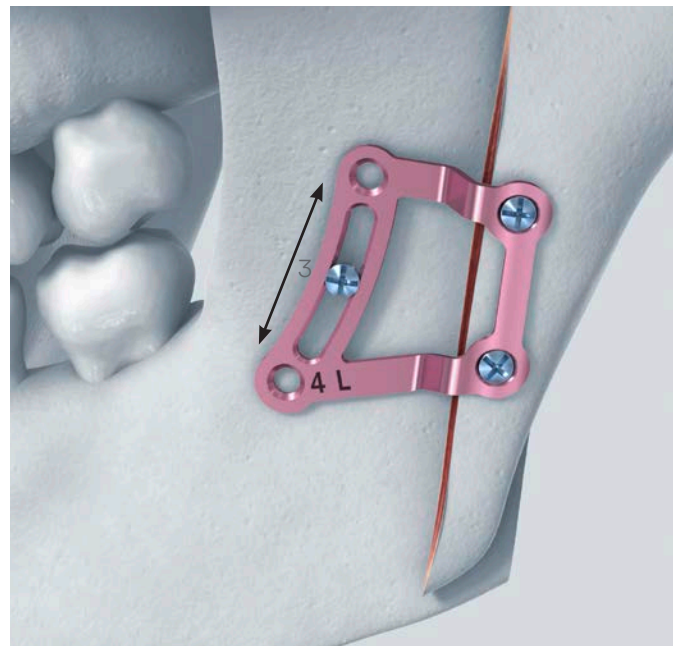
The distal bone segment can now be shifted until the occlusion has been corrected.

Retighten the screw 3 in the plate slot.

The process can be repeated if necessary.

### ▲ **Precaution:**

Ensure that the desired condylar position has been achieved.



## 6. Final plate fixation

Using a 90° screwdriver with a Ø 1.4 mm drill bit, insert the remaining Ø 1.85 mm Matrix screws of the appropriate length in holes 4 and 5. Alternatively, the screws may be inserted transorally with a standard screwdriver shaft.

**Optional: Remove the screw 3 from the plate slot.**

Repeat this step for the contra-lateral side.

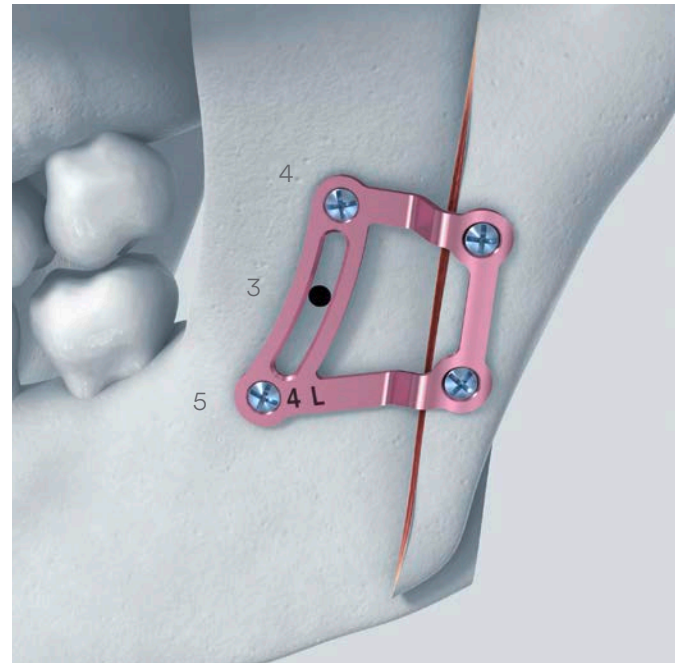
Tighten all screws to ensure fixation of the mandible is adequate to withstand the sagittal forces.

### ▲ Precautions:

- Drill speed rate should never exceed 1,800 rpm, particularly in dense, hard bone. This corresponds to a maximum input speed of 3600 rpm (gear ratio of 2:1).
- Higher drill speed rates can result in:
  - thermal necrosis of the bone
  - soft tissue burns
  - an oversized hole, which can lead to reduced pull-out force, increased ease of the screws stripping in bone, suboptimal fixation, and/or the need for emergency screws.
- Always irrigate during drilling to avoid thermal damage to the bone.
- After implantation is complete, irrigate and apply suction for removal of debris potentially generated during implantation or removal.
- Handle devices with care and dispose worn bone cutting instruments in an approved sharps container.
- Avoid drilling over nerve or tooth roots.
- Take care while drilling as to not damage, entrap, or tear a patient's soft tissue or damage critical structures.
- Be sure to keep drill clear of loose surgical materials.
- Use the appropriate amount of screws to achieve stable fixation for fractures. Stable fixation requires a minimum of two screws per bone segment for osteotomies.

### ▲ WARNINGS:

- Previous changes in the temporomandibular joint or preoperative temporomandibular disorder may affect surgical outcomes.
- Instruments and screws may have sharp edges or moving joints that may pinch or tear user's glove or skin.



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## 7. Device Removal

While the surgeon must make the final decision on implant removal, we recommend that whenever possible and practical for the individual patient, fixation devices should be removed once their service as an aid to healing is accomplished. Implant removal should be followed by adequate post-operative management to avoid refracture.

# Implants

## MatrixORTHOGNATHIC screws, Titanium alloy (TAN)\*

MatrixORTHOGNATHIC screws  $\varnothing$  1.85 mm,  
self-tapping, in clip\*\*

Art. No.	Length	Pitch
04.511.204.01C	4 mm	
04.511.205.01C	5 mm	
04.511.206.01C	6 mm	
04.511.208.01C	8 mm	
04.511.210.01C	10 mm	Coarse
04.511.212.01C	12 mm	Coarse
04.511.214.01C	14 mm	Coarse
04.511.216.01C	16 mm	Coarse
04.511.218.01C	18 mm	Coarse



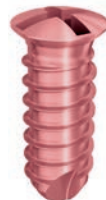
Matrix screws  $\varnothing$  1.85 mm, self-drilling, in clip\*\*

Art. No.	Length
04.511.224.01C	4 mm
04.511.225.01C	5 mm
04.511.226.01C	6 mm
04.511.228.01C	8 mm



Matrix screws  $\varnothing$  2.1 mm, self-tapping, in clip

Art. No.	Length	Pitch
04.511.234.01C	4 mm	
04.511.235.01C	5 mm	
04.511.236.01C	6 mm	
04.511.238.01C	8 mm	
04.511.240.01C	10 mm	Coarse
04.511.242.01C	12 mm	Coarse
04.511.244.01C	14 mm	Coarse
04.511.246.01C	16 mm	Coarse
04.511.248.01C	18 mm	Coarse



\* Refer to section "Screw/plate overview" for the ordering information on sterile implants and drill bits.

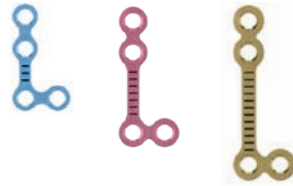
\*\* 4–12 mm screw lengths are also available in packs of 4 screws in clip. Substitute ".01C" with ".04C" in the part number to order.

MatrixMIDFACE  $\varnothing$  1.5 mm screws additionally available. See also section "MatrixORTHOGNATHIC Color Coding".

## MatrixORTHOGNATHIC plates, Commercially Pure Titanium

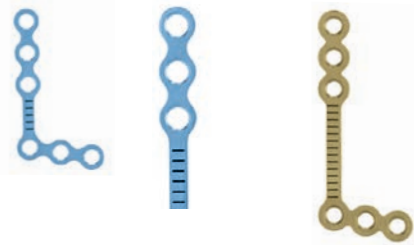
### 90° L-plates, 2 + 2 holes, reversible\*

Art. No.	Bar length	Thickness
04.511.301	short	0.5 mm
04.511.302	medium	0.5 mm
04.511.303	long	0.5 mm
04.511.304	short	0.7 mm
04.511.305	medium	0.7 mm
04.511.306	long	0.7 mm
04.511.307	short	0.8 mm
04.511.308	medium	0.8 mm
04.511.309	long	0.8 mm



### L-plates, 3 + 3 holes, reversible\*

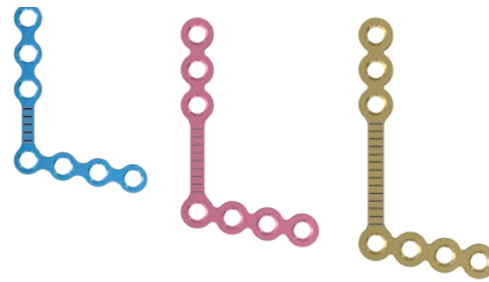
Art. No.	Bar length	Thickness
04.511.321	short	0.5 mm
04.511.322	medium	0.5 mm
04.511.323	long	0.5 mm
04.511.324	short	0.7 mm
04.511.325	medium	0.7 mm
04.511.326	long	0.7 mm
04.511.327	short	0.8 mm
04.511.328	medium	0.8 mm
04.511.329	long	0.8 mm



\*Refer to section "Screw/plate overview" for the ordering information on sterile implants and drill bits.

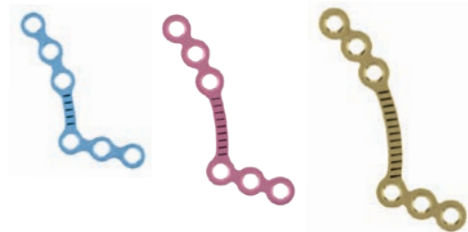
## L-plates, 4 + 3 holes, reversible

Art. No.	Bar length	Thickness
04.511.331	short	0.5 mm
04.511.332	medium	0.5 mm
04.511.333	large	0.5 mm
04.511.334	short	0.7 mm
04.511.335	medium	0.7 mm
04.511.336	large	0.7 mm
04.511.337	short	0.8 mm
04.511.338	medium	0.8 mm
04.511.339	large	0.8 mm



## Anatomic L-plates, 3 + 3 holes, reversible\*

Art. No.	Bar length	Thickness
04.511.341	short	0.5 mm
04.511.342	medium	0.5 mm
04.511.343	long	0.5 mm
04.511.344	short	0.7 mm
04.511.345	medium	0.7 mm
04.511.346	long	0.7 mm
04.511.347	short	0.8 mm
04.511.348	medium	0.8 mm
04.511.349	long	0.8 mm



## I-Plates, 2 + 2 holes

Art. No.	Intersection bar	Thickness
04.511.350	7 mm	0.5 mm
04.511.370	7 mm	0.7 mm



\* Refer to section "Screw/plate overview" for the ordering information on sterile implants and drill bits.

## Maxillary plates, prebent, thickness 0.8 mm\*

Art. No.	Shape	Offset
04.511.381	left	2 mm
04.511.382	right	2 mm
04.511.383	left	4 mm
04.511.384	right	4 mm
04.511.385	left	6 mm
04.511.386	right	6 mm
04.511.387	left	8 mm
04.511.388	right	8 mm
04.511.389	left	10 mm
04.511.390	right	10 mm



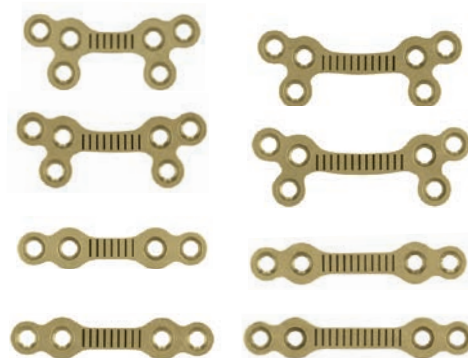
## MatrixMIDFACE Adaption Plates, 20 holes\*

Art. No.	Thickness
04.503.346	0.5 mm
04.503.376	0.7 mm
04.503.396	0.8 mm



## Sagittal split plates, thickness 1.0 mm\*

Art. No.	Shape	Bar length	Holes
04.511.401	curved	6 mm	6
04.511.402	curved	8 mm	6
04.511.403	curved	10 mm	6
04.511.404	curved	12 mm	6
04.511.421	straight	6 mm	4
04.511.422	straight	8 mm	4
04.511.423	straight	10 mm	4
04.511.424	straight	12 mm	4



\* Refer to section "Screw/plate overview" for the ordering information on sterile implants and drill bits.

**SplitFix plates, with Slider, 4 holes, thickness 0.7 mm**

Art. No.	Length
04.511.444	33 mm
04.511.445	40 mm



**Note:**

SplitFix plates and slider may be ordered separately.

04.511.443	Slider for Matrix SplitFix Plate*
04.511.441	Matrix SplitFix Plate, 4 holes, length 33 mm*
04.511.442	Matrix SplitFix Plate, 4 hole, length 40 mm*

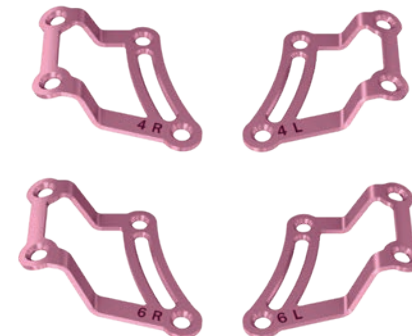
**Chin plates, double curved, 5 holes, thickness 0.7 mm\***

Art. No.	Offset
04.511.461	4 mm
04.511.462	6 mm
04.511.463	8 mm
04.511.464	10 mm



**Vertical ramus osteotomy plates, thickness 0.7 mm**

Art. No	Offset	Left/Right
04.511.501	0 mm	left
04.511.502	0 mm	right
04.511.520	2 mm	right
04.511.521	2 mm	left
04.511.540	4 mm	right
04.511.541	4 mm	left
04.511.560	6 mm	right
04.511.561	6 mm	left



\* Refer to section "Screw/plate overview" for the ordering information on sterile implants and drill bits.



# Instruments

03.511.003 Plate Holder for Matrix Plates



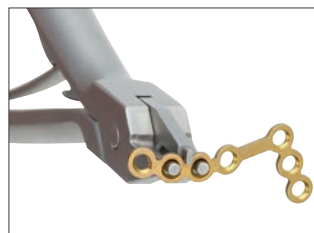
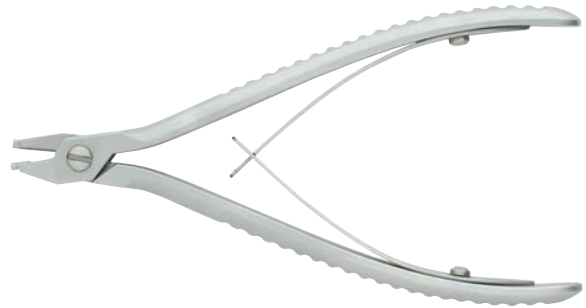
03.511.004 Matrix Screwdriver Handle, with Locking, with Hexagonal Coupling



03.503.034 Plate Holder, long



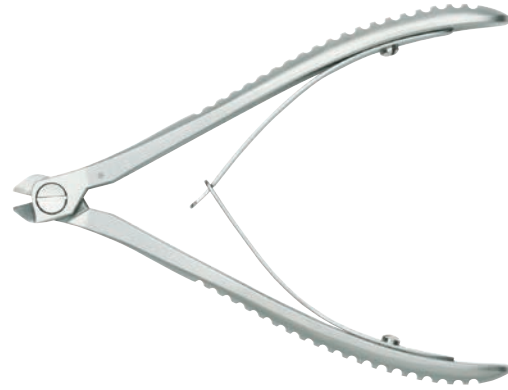
03.503.035 Bending Pliers 3D for MatrixMIDFACE Plates



03.503.038 Bending Pliers for MatrixMIDFACE Plates



03.503.039 Plate Cutter for MatrixMIDFACE



MatrixMIDFACE Screwdriver Shafts, Self-holding, with Hexagonal coupling

- 03.503.201 short, length 52 mm
- 03.503.202 medium, length 76 mm
- 03.503.203 long, length 96 mm



Matrix Drill Bits Ø 1.4 mm with Stop,

for J-Latch Coupling\*

- 03.511.244 length 44.5/4 mm
- 03.511.246 length 44.5/6 mm
- 03.511.248 length 44.5/8 mm
- 03.511.252 length 44.5/12 mm



Matrix Drill Bits Ø 1.4 mm without Stop, for J-Latch Coupling\*

- 03.511.310 length 80 mm
- 03.511.320 length 110 mm
- 03.511.330 length 125 mm



03.511.240 Matrix Drill Bit Ø 1.4 mm, length 110/32 mm, for J-Latch Coupling\*

\* Refer to section "Screw/plate overview" for the ordering information on sterile implants and drill bits.

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## Transbuccal Instruments MatrixMANDIBLE™\*

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03.511.340 Matrix Drill Bit Ø 1.4 mm,  
length 125 mm, for J-Latch Coupling,  
for Nos. 03.503.045 and 03.503.047



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03.503.045 Drill Sleeve, long, for MatrixMANDIBLE



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397.213 Cannula and Obturator 2.0



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397.211 Universal Handle for Drill Sleeves



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397.420 Cheek Retractor 2.0, for No. 397.213



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397.232 Cheek Retractor, for MatrixMANDIBLE,  
U-shaped, flexible



\* For specific information on the transbuccal instruments, refer to the MatrixMANDIBLE surgical technique.

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397.430 Cheek Retractor Ring 2.0,  
for No. 397.213



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60035258 Colour Plate, labelled\*\*



\*\* For MatrixORTHOGNATHIC, the drill depth chart shows the length of the position screw (bicortical).

## MatrixORTHOGNATHIC Bending Templates

Bending Template for Matrix Anatomic L-Plate, 3+3 holes

03.511.360	short
03.511.361	medium
03.511.362	long



Bending Template for Matrix L-Plate, 3+3 holes

03.511.363	short
03.511.364	medium
03.511.365	long



Bending Template for Matrix 90° L-Plate, 2+2 holes

03.511.366	short
03.511.367	medium
03.511.368	long



Bending Template for Matrix Sagittal Split Plate, curved, 6 holes

03.511.369	with intersection bar 6 mm
03.511.370	with intersection bar 8 mm
03.511.371	with intersection bar 10 mm
03.511.372	with intersection bar 12 mm



Bending Template for Matrix Sagittal Split Plate, straight, 6 holes

03.511.373	with intersection bar 6 mm
03.511.374	with intersection bar 8 mm
03.511.375	with intersection bar 10 mm
03.511.376	with intersection bar 12 mm



Bending Template for Matrix SplitFix Plate, 4 holes

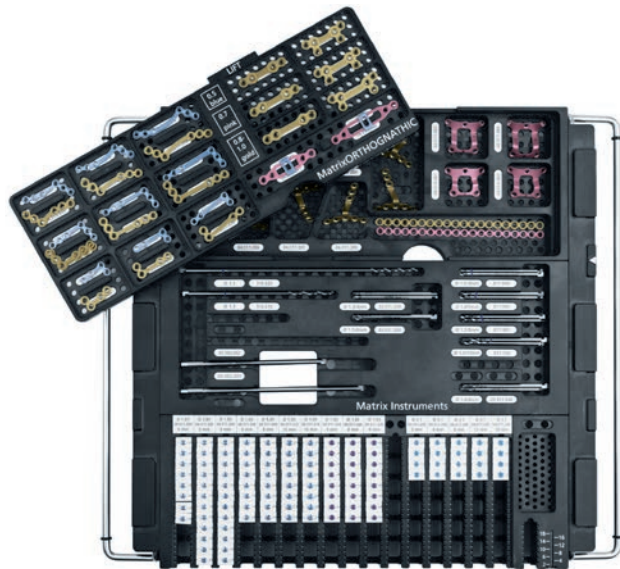
03.511.377	length 33 mm
03.511.378	length 40 mm



03.503.366 Bending Template for Adaption Plates, MatrixMIDFACE, 20 holes

# Modules

68.511.001 Module for MatrixORTHOGNATHIC Plate, Screw and Instrument Set, 3/3, with Lid, without Contents



61.503.603 Instrument Tray MatrixMIDFACE, 2/3, with Lid, without Contents



61.503.841 Instrument Tray for MatrixMANDIBLE Transbuccal Instruments, 1/3, with Lid, without Contents



# Additionally Available

## Implants

### MatrixMIDFACE Screws, Titanium Alloy (TAN)<sup>\*\*\*</sup>

#### Self-tapping screws Ø 1.5 mm, in clip

	Length	Pitch
04.503.204.01C	4 mm	
04.503.205.01C	5 mm	
04.503.206.01C	6 mm	
04.503.208.01C	8 mm	
04.503.210.01C	10 mm	coarse
04.503.212.01C	12 mm	coarse
04.503.214.01C	14 mm	coarse
04.503.216.01C	16 mm	coarse
04.503.218.01C	18 mm	coarse

#### Self-drilling screws Ø 1.5 mm, in clip

	Length
04.503.224.01C	4 mm
04.503.225.01C	5 mm
04.503.226.01C	6 mm
04.503.228.01C	8 mm

#### Self-tapping screws Ø 1.85 mm

	Length	Pitch
04.511.260	20 mm	coarse
04.511.262	22 mm	coarse
04.511.264	24 mm	coarse
04.511.266	26 mm	coarse
04.511.268	28 mm	coarse

### Transbuccal Instruments

03.511.009	Drill Sleeve, long, for MatrixORTHOGNATHIC
397.422	Transbuccal Guide 2.0/2.4/3.0

\* Refer to section "Screw/plate overview" for the ordering information on sterile implants and drill bits.

\*\* 4–12 mm screw lengths are also available in packs of 4 screws in clip. Substitute ".01C" with ".04C" in the part number to order.

### Drill bits, length 125 mm, for Nos. 03.503.045 and 03.503.047\*

	Diameter
03.511.341	Matrix Drill Bit Ø 1.4 mm, length 125 mm, for Mini Quick Coupling
03.503.476	MatrixMANDIBLE Drill Bit Ø 1.5 mm, 2-flute, for J-Latch Coupling
03.503.479	Drill Bit Ø 1.5 mm, for MatrixMANDIBLE, length 125 mm, 2-flute, for Mini Quick Coupling

## Instruments

319.520	Depth Gauge for Screws Ø 1.5 to 2.0 mm, measuring range up to 45 mm
03.503.032	Plate Holder, short
397.433	Drill Sleeve 1.5, for No. 397.422

### Screwdriver Shafts MatrixMIDFACE, with holding sleeve, with Hexagonal Coupling

03.503.205	medium, length 79 mm
03.503.206	long, length 95 mm

### Handles, with Hexagonal Coupling

311.005	small
311.006	medium
311.007	large

### Screwdriver Handle, with Hexagonal Coupling

311.023	Ratcheting Screwdriver Handle
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### Cutting Scissors

03.503.033	for Mesh Plate, short
03.503.037	for Mesh Plate, long

### Cheek Retractors

397.423	U-shaped, for No. 397.422
397.424	Ring, for No. 397.422



## Drill Bits\*

### Matrix Drill Bit Ø 1.4 mm, for Mini Quick Coupling

03.511.284	with Stop, length 44.5/4 mm
03.511.286	with Stop, length 44.5/6 mm
03.511.288	with Stop, length 44.5/8 mm
03.511.292	with Stop, length 44.5/12 mm
03.511.311	length 80 mm
03.511.321	length 110 mm
03.511.280	length 110/32 mm
03.511.331	length 125 mm

### Drill Bits Ø 1.5 mm, for J-Latch Coupling\*\*

317.640	with Stop, length 44.5/4 mm
317.660	with Stop, length 44.5/6 mm
317.680	with Stop, length 44.5/8 mm
317.720	with Stop, length 44.5/12 mm
316.510	length 80 mm
316.520	length 125 mm

### Drill Bit Ø 1.5 mm, for Mini Quick Coupling\*\*

317.740	with Stop, length 44.5/4 mm
317.760	with Stop, length 44.5/6 mm
317.780	with Stop, length 44.5/8 mm
317.820	with Stop, length 44.5/12 mm
316.710	length 80 mm
316.521	length 125 mm

### Drill Bit Ø 1.4 mm, for Quick Coupling

03.511.342	length 100 mm
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## MatrixMIDFACE Drill Bits, for J-latch Coupling

	Diameter	Length
03.503.244	1.1 mm	with Stop, 44.5/4 mm
03.503.246	1.1 mm	with Stop, 44.5/6 mm
03.503.248	1.1 mm	with Stop, 44.5/8 mm
03.503.110	1.25 mm	with Stop, 44.5/10 mm
03.503.112	1.25 mm	with Stop, 44.5/12 mm
03.503.120	1.25 mm	80 mm
03.503.121	1.25 mm	125 mm
03.503.122	1.5 mm	with Stop, 8/125

## MatrixMIDFACE Drill Bits, for Mini Quick Coupling

	Diameter	Length
03.503.284	1.1 mm	with Stop, 44.5/4 mm
03.503.286	1.1 mm	with Stop, 44.5/6 mm
03.503.288	1.1 mm	with Stop, 44.5/8 mm
03.503.140	1.25 mm	with Stop, 44.5/10 mm
03.503.142	1.25 mm	with Stop, 44.5/12 mm
03.503.150	1.25 mm	80 mm
03.503.151	1.25 mm	125 mm

\* Refer to section "Screw/plate overview" for the ordering information on sterile implants and drill bits.

\*\* A Ø 1.5 mm drill bit can be used in dense bone to facilitate screw insertion (from 12 mm lengths).

## Modules

61.511.001	Module for MatrixORTHOGNATHIC Plate, Screw and Instrument Set, with Lid, without Contents, 1/2
61.511.002	MatrixMIDFACE/ORTHOGNATHIC Instrument Tray, size 1/2, with Lid
68.505.060	MatrixORTHOGNATHIC Mini Module, for Instrument Tray, for Screwdriver 90°
61.503.600	Module MatrixMIDFACE for use with sterile implants, with Lid, without Contents, 1/3
60.511.007	Screw, Drill, Blade Insert with Non-Recessed Screw Holes For MatrixORTHOGNATHIC System

## Sets

01.505.001	Screwdriver 90°
01.505.300	Universal Screw Removal Set

## Screw/plate overview

	Pack of 1 unit	Pack of 4 units	Pack of 1 unit, sterile	Pack of 4 units, sterile
Self-tapping screws (in clips)	04.5xx.xxx.01C	04.5xx.xxx.04C (up to 12 mm screw length)	04.5xx.xxx.01S	04.5xx.xxx.04S (up to 12 mm screw length)
Self-tapping screws Ø 1.85 mm, lengths 20–28 mm	04.511.26x		04.511.26xS	
Self-drilling screws (in clips)	04.5xx.xxx.01C	04.5xx.xxx.04C	04.5xx.xxx.01S	04.5xx.xxx.04S
Emergency screws (in clips)	04.5xx.xxx.01C		04.5xx.xxx.01S	
Plates	04.5xx.xxx		04.5xx.xxxS	
Drill bits	xxx.xxx		xxx.xxxS	





Please refer to the corresponding Instructions for Use for specific information on Intended use, Indications, Contraindications, Warnings and Precautions, Potential Adverse Events, Undesirable Side Effect and Residual Risks. Instruction for Use are available at [www.e-ifu.com](http://www.e-ifu.com) and/or [www.depuysynthes.com/ifu](http://www.depuysynthes.com/ifu)

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