

# Anatomical mandibular plate on-site adjustment





With more than 20 years of clinical and industrial experience in maxillofacial surgery, Global D is now the top French company in this area.

With our R&D department providing our clients with continuous improvements, we collaborate with surgeons to design **innovative osteosynthesis product range**.

The Natural Fit plate is the result of a collaboration with maxillofacial surgeon Dr Nicolas Bedhet, drawing on his experience with over 5000 mandibles, including 2000 cases with anatomical plate conformation.

We carried out 3D modelling of **three average external cortical anatomical shapes** in the osteosynthesis area during different movements and for different types of mandible.

## The origins of the optimal mandibular plate...

The Natural Fit plate was designed to meet the requirements of an "ideal" osteosynthesis mandibular plate, namely

- Be adjustable at the osteosynthesis site without having to remove the plate and screws
- Have maximum rigidity to limit post-operative maxilla immobilisation, allow very early movement of TMJs and, during consolidation, maintain the mandibular movement desired by the surgeon, particularly when closing or lowering the mandibular angle
- Have a 3D anatomical conformation able to adapt to most types of mandible and movement, avoiding any
  additional manual conformation (thus limiting stress on the material and ensuring that the desired position and
  movement are maintained)
- Have a basilar edge conformation role on the osteotomy line
- Allow correct condylar positioning in the cavity during osteosynthesis, without compression and with the appropriate instruments



The Natural Fit anatomical plate was designed with an initial 3D conformation enabling it to be effectively fitted to the external cortical bones of most types of mandible while minimising stress on TMJs (compression or twisting).

- Rotate the condyle on an hourly basis during osteosynthesis
- to prevent posterior compression of the TMJ Follow the shape of the basilar edge to minimise the problem of basilar notches in cases of significant overhang



For effective adaptation to the external cortical bone



# Preventing stress on TMJs

Preventing stress on TMJs





### The Natural Fit plate for on-site adjustment:

- Is adjustable at the osteosynthesis site without having to remove the material 0
- Enables optimal condylar positioning without compression during osteosynthesis





Standard plate

Natural Fit anatomical plate

## Natural Fit Plate characteristics



### Available products

Natural Fit slide plate - 0.8 mm (T60)

AB training the	Colour code	Length	Max. overhang in mm	Rigidity	Left side reference	Right side reference
AB	Purple	Short	8	++	PRS4TOS3D-L	PRS4TOS3D-R
		Medium	13		PRS4TOM3D-L	PRS4TOM3D-R
		Long	15		PRS4TOL3D-L	PRS4TOL3D-R
Sterile Easytek solution (Pack containing 1 plate, 2 screws Ø 2 mm, length: 5 mm, and 2 screws Ø 2 mm, length: 6 mm)	Purple	Short	8	**	ERS4TOS3D-L	ERS4TOS3D-R
		Medium	13		ERS4TOM3D-L	ERS4TOM3D-R
		Long	15		ERS4TOL3D-L	ERS4TOL3D-R



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The Natural Fit plate and the osteosynthesis screws are Class IIb medical devices and Class I ancillary components. These products are designed and manufactured by Global D in accordance with standards ISO 13485 and ISO 9001 (G-MED certification) and directives 93/42/EEC and 2007/47/EC. The plates and screws are covered by the social security reimbursement scheme in France. For further information, please consult the instructions for use.

### Guidelines for use

The plate's long horizontal axis must be:

- Parallel to the basilar edge
- Positioned two-thirds down from the height of the horizontal branch of the mandible



### Positioning the plate on the distal fragment:

- Step 1. Position the plate using the positioning marker line then screw the 1st screw (5 mm long)\* into the lower third of the external valve, in the third plate hole, 3 mm from the distal osteotomy line
- Step 2. Screw the 2nd screw (6 mm long)\* into the most distal hole of the plate, ensuring that the plate is parallel to the basilar edge

### Synthesis of the plate on the proximal fragment:

- Step 3. Reposition the condyle and the TMJ using the plate pusher inserted into the plate notch
- Step 4. Screw the 3rd screw (6 mm long)<sup>+</sup> into the slide 3 mm from the osteotomy line to set the corpus movement
- Step 5. After releasing the intermaxillary and checking the occlusion, adjust the position of the corpus if required by slightly loosening the screw in the slide then screw the 4th screw (5 mm long)\* into the front hole

\* Plate compatible with ORTRAUTEK screws, Ø 2 mm, 5 mm (VA2KL5) and 6 mm (VA2KL6) \*\* Plate pusher reference: IPPNF











Can be adjusted by slightly loosening the screw

