

**Global D  
Therapeutic  
arsenal**

**MINITEK - MICROTEK**

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**Traumatology and reconstruction of the upper 2/3**



## Partner for your surgery

**Global D, the product of SERF® (1973) and tekka® (2000) joining forces, is a French company specialised in the design, manufacturing and sale of medical devices intended for dental, orthodontic and maxillofacial surgery.**

With **more than 15 years** of clinical and manufacturing 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 product ranges**.

Our mission is to help surgeons to work better and to optimize patient care.

### MINITEK / MICROTEK

MINITEK/MICROTEK a complete range for osteosynthesis and reconstruction of the upper two-thirds of the skull. It is in particular indicated for:

- Trauma surgery
- Closing of the cranial flaps after a neurosurgery
- Orthognatic surgery (maxillary)

The MINITEK/MICROTEK range can also be used for genioplasty only with the Chin Wing plate described page 10.

This is an **extensive range of different-shaped plates** and screws available in numerous different lengths, all **colour-coded** for easy identification.



Global D

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 Made in  
**France**

## Performance for your expertise

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### A commitment to service

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Because the patient is your priority.

Our mission: to provide you with solutions and management systems to make your work easier day to day.

Global D adapts to your practice and guarantees a responsive service.

A personalised response: marketing and administrative team provides assistance from 8.30 am to 6.00 pm from Monday to Friday (local time).

### The product commitment

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Because the product should be at the service of your practice.

Each of our product lines comprises ergonomic devices, which are adapted to the development of your technique. All of our products, which are coloured by anodic oxidation, are easily identifiable and offer an additional guarantee of safety for the patient.

### The quality commitment

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Because customer satisfaction is everybody's business.

Always attentive to the need of practitioners, our teams commit their energy to continually optimize our services, procedures, and support, above and beyond simple compliance with the regulatory standards.

To maintain the highest possible performance, we purposely sought out LNE/G-MED (a French notified body) to certify our quality system and our product lines.



CE 0459

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## **EASYTEK: The simplicity of sterile instrumentation**

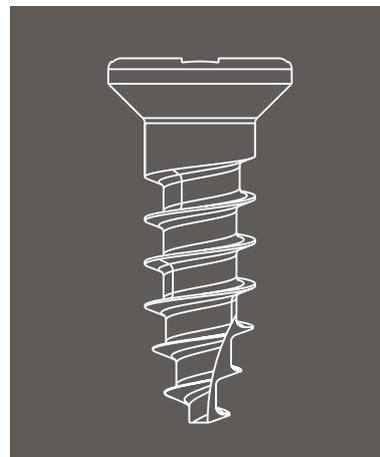
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## A self-drilling screw thread

**Global D**, with its extensive experience in maxillofacial surgery gained over the past 15 years, has set itself the mission of maximising the quality and efficacy of its osteosynthesis products, notably by developing a self-drilling thread for all of its screws.

The asymmetric thread has wider wings for better primary bone fixation. The screw tip has been sharpened to ensure the thread penetrate into the bone. In addition, the self-tap combined to the self-drilling thread sheds bone chips more easily, thereby improving screw penetration.



## Characteristics of the Minitek / Microtek range

- The choice of two diameters of self-drilling screws Ø 1.2 mm and Ø 1.5 mm
- A single screwdriver
- Malleable T40 plates (Grade II titanium - ISO 5832-2) 0.2 mm, 0.4 mm or 0.6 mm thick and with a low plate/screw profile
- A wide range of plates shapes and meshes to cover all indications
- Self-drilling screws with an asymmetrical thread and wider wings for better primary bone fixation
- A compact, ergonomic container dedicated to the closing of the cranial flaps after a neurosurgery
- A colour code for each screw diameter and the associated plates:

		Associated colours
<b>Screws</b>	Self-drilling Microtek screws - Ø 1.2 mm	
	Self-drilling Minitek screws - Ø 1.5 mm	
	Emergency Minitek screws - Ø 1.8 mm	
<b>Plates</b>	Microtek plates	
	Minitek plates	

# Minitek

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## Self-drilling screws

- Self-drilling thread
- No need for pre-drilling
- Bone preservation
- Colour code for identification of screw diameter
- Prehension shaft/screw head insured
- Stability during screwing



### Self-drilling cross-drive screws - Ø 1.5 mm

	1.5 mm	Colour code	Length	Ref. number
			4	VA1.5KL4
			5	VA1.5KL5
			6	VA1.5KL6
			7	VA1.5KL7
			9	VA1.5KL9
			11	VA1.5KL11
			13	VA1.5KL13
			15	VA1.5KL15

### Emergency self-drilling cross-drive screws - Ø 1.8 mm

	1.8 mm	Colour code	Length	Ref. number
			5	VA1.8KL5
			7	VA1.8KL7

## Straight plates



### Straight plates - 0.6 mm

0.6 mm	Colour code	Holes	Bridge	Rigidity	Ref. number
	■	2	medium	+ -	MNP2TM
			long		MNP2TL
		4	bridgeless		MNP4T
			medium		MNP4TM
			long		MNP4TL
		6	bridgeless		MNP6T
			medium		MNP6TM
			long		MNP6TL
		8	bridgeless		MNP8T
		16	bridgeless		MNP16T

## L & J-shaped plates

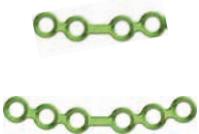


### L & J-shaped plates - 0.6 mm

0.6 mm	Colour code	Bridge	Rigidity	Ref. number L	Ref. number J
■		bridgeless	+ -	MNPL	MNPJ
		intermediate		MNPLI	MNPJI
		medium		MNPLM	MNPJM
		medium intermediate		MNPLMI	MNPJMI
		long		MNPLL	MNPJL

## Orbital plates

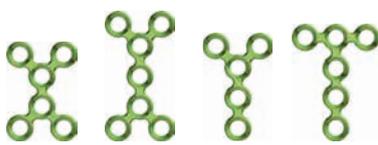
### Orbital plates - 0.6 mm

0.6 mm	Colour code	Holes	Rigidity	Ref. number
		4	+ -	MNPORB4T
		6		MNPORB6T

## Other plates



### X, Y, T-shaped plates - 0.6 mm

0.6 mm	Colour code	Shape	Holes	Rigidity	Ref. number
		X	6	+ -	MNPX6T
			7		MNPX7T
		Y	5		MNPY5T
			T		6

### Star-shaped plate - 0.6 mm

0.6 mm	Colour code	Holes	For trephine	Rigidity	Ref. number
		7	Ø10 mm	+ -	MNPETOIL10

### 3D Square, rectangular plates - 0.6 mm

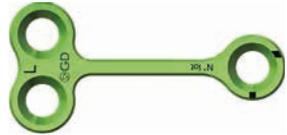
0.6 mm	Colour code	Shape of the mesh	Holes	Rigidity	Ref. number
		Square	4	+ -	MNP3D4TC
		Rectangular			MNP3D4TR

## «Chin Wing» genioplasty plates

- Global size of the plate reduced
- Two horizontal anchorages for the top valve and one for the bottom valve (optional)
- A bridge with a **square section** that enables an **easier folding**



### Chin Wing plate - 0.8 mm

0.8 mm	Colour code	Bridge length	Rigidity	Ref. number	Height in mm
		short	+ -	PGENIOWINGS	10,3
		medium		PGENIOWINGM	13,5
		long		PGENIOWINGL	16,7

Chin Wing plate (references : PGENIOWINGS, PGENIOWINGM or PGENIOWINGL), must be used with VA1.5KL4 or VA1.5KL5 screws (or VA1.8KL5 emergency screws) to avoid lesions of the dental nerve.  
The Chin Wing plate must always be placed in association with a genioplasty plate.

# Minitek Plates



Small size of the two horizontal anchorages that allow to avoid dental roots and the close nerve.  
In case of reduced space, anchorages facilitate the plate's positioning (in case of genioplasty and sagittal split at once).



Markings at the back that enable to guide the folding to reach an angulation of 90° to maintain the bottom osseous valve with the required spacing by a plan lean.

Bridge with a square section for an easy folding



Markings in the front that enable to guide the preparation of a hook to maintain the bottom osseous valve with the required spacing.

You have to put your hand around the plate to control when cutting.  
So as to hold back the fragment and avoid this one to fall on the patient's tissue..



# Microtek

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## Self-drilling screws

- Self-drilling thread
- No need for pre-drilling
- Bone preservation
- Colour code for identification of screw diameter
- Prehension shaft/screw head insured
- Stability during screwing



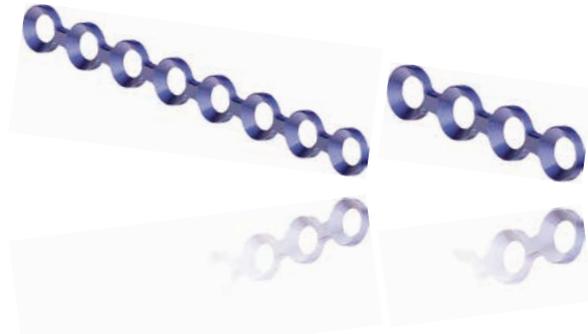
### Self-drilling cross-drive screws - Ø 1.2 mm

 1.2 mm	Colour code	Length	Ref. number
		4	VA1.2KL4
		5	VA1.2KL5
		6	VA1.2KL6
		7	VA1.2KL7
		8	VA1.2KL8
		9	VA1.2KL9
		10	VA1.2KL10
		11	VA1.2KL11
		12	VA1.2KL12

### Emergency self-drilling cross-drive screws - Ø 1.5 mm

 1.5 mm	Colour code	Length	Ref. number
		5	VA1.5KL5
		7	VA1.5KL7

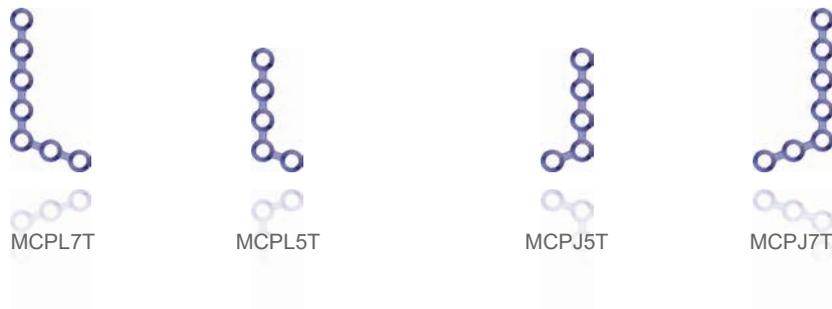
## Straight plates



### Straight plates - 0.6 mm

0.6 mm	Colour code	Holes	Bridge	Rigidity	Ref. number
		4	bridgeless	+ -	MCP4T
		6			MCP6T
		8			MCP8T
		16			MCP16T
		24			MCP24T

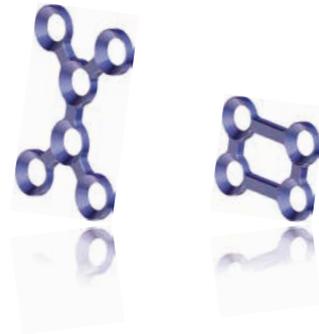
## L & J-shaped plates



### L & J-shaped plates - 0.6 mm

0.6 mm	Colour code	Bridge	Rigidity	Ref. number L	Ref. number J
		bridgeless	+ -	MCPL5T	MCPJ5T
				MCPL7T	MCPJ7T

## Other plates



### Orbital plates - 0.6 mm

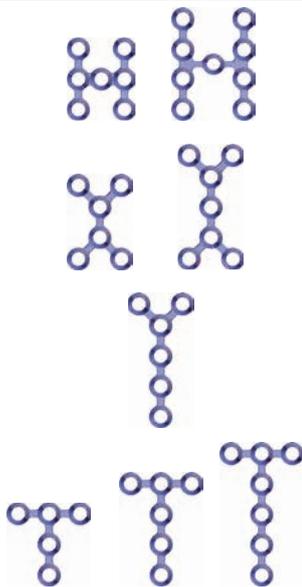
0.6 mm



Colour code	Holes	Rigidity	Ref. number
	8	+ -	MCPORB8T

### H, X, Y, T-shaped plates - 0.6 mm

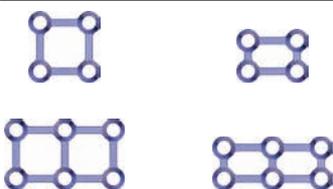
0.6 mm



Colour code	Shape	Holes	Rigidity	Ref. number
	H	7	+ -	MCPH7T
		9		MCPH9T
	X	6		MCPX6T
		7		MCPX7T
	Y	6		MCPY6T
	T	5		MCPT5T
		6		MCPT6T
		7		MCPT7T

### 3D square, rectangular plates - 0.6 mm

0.6 mm



Colour code	Shape of the mesh	Holes	Rigidity	Ref. number
	Square	4	+ -	MCP3D4TC
	Rectangular			MCP3D4TR
	Square	6		MCP3D6TC
	Rectangular			MCP3D6TR

# Orbital floor plate and meshes

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## Operating technique



### Orbital floor fractures

Orbital floor fractures, either isolated or combined with other facial bone fractures, are most commonly encountered in the case of trauma of the middle third of the face.

The objective of orbital reconstruction is to reduce the fracture and restore the initial volume and morphology of the orbit [1] [2] [4] [5].

Depending on the severity of the fracture and whether orbital reconstruction is indicated, the best aesthetic and functional results are obtained with surgical treatment carried out as soon as possible after the trauma [2] [3] [4].

Orbital floor reconstruction using a radial-shaped titanium plate is particularly suitable for repairing bone fractures of more than 1.5 cm<sup>2</sup> [4] [5]. It ensures precise anatomical reconstruction and encourages good bone stability.

### Indications

The radial-shaped titanium orbital floor plate is indicated for trauma surgery and reconstruction of the orbit:

- Stabilization and rigid fixing of the fractures of the orbital floor associated or not to a fracture of the medial side of the orbit.

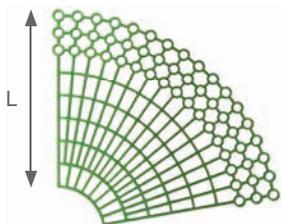
### Characteristics

Material: T40 (Grade II titanium conforming to ISO 5832-2)

- Malleable, easy to cut plate
- The radial-shaped design of the plate makes it easy to adapt to the orbital morphology and minimises cutting
- The choice of three fixation holes in each segment makes screw placement easy

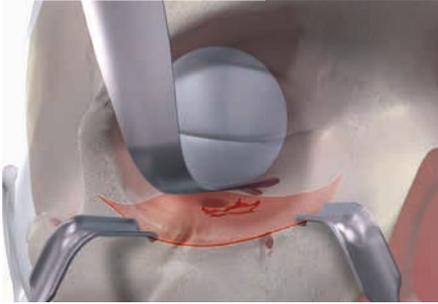
### Titanium orbital floor plate - 0.4 mm

0.4 mm



Colour code	Dimension L	Rigidity	Ref. number
	47.3 mm	+ -	PORB

## 1- Exposure



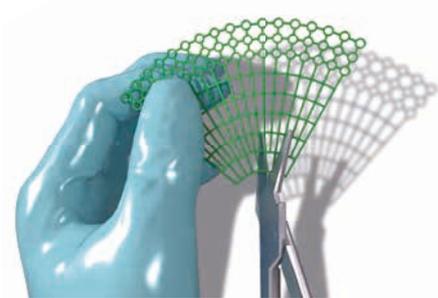
Expose the fracture using an orbital retractor\* to retract the eyeball. After exposure, perform a periosteal dissection.

It is important to retract the intraorbital soft tissues correctly.

\*The orbital retractor is not supplied by Global D. It is the responsibility of the practitioner to check that it is available before any surgery is performed.

## 2- Sizing and modelling the plate

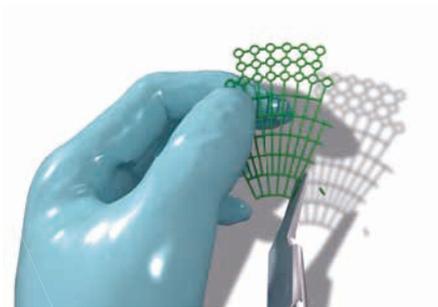
### Adjustment and modelling



Cut the plate to the anatomical size of the orbit using the cutters provided.

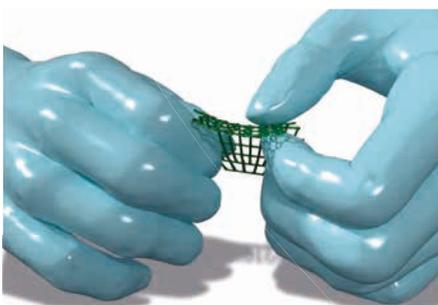
The cut plate must be wide enough to cover the entire bone defect or fracture.

Determine whether the anterior part of the mesh plate will extend over the infraorbital rim or whether fixation will be posterior to the infraorbital rim.



Trim off any sharp edges on the plate to protect the soft tissues.

Leave enough holes to ensure optimum fixation of the plate over the infraorbital rim or on the orbital floor.

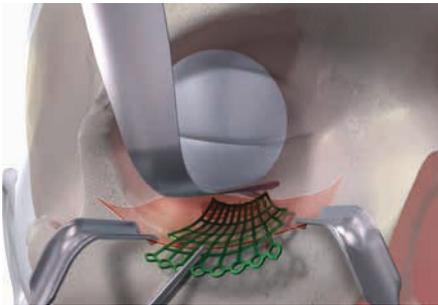


Shape the plate to match the characteristics of the orbital floor and the orbital rim and to accommodate the anatomical structures of these areas.



Do not bend a titanium osteosynthesis system plate several times in the same place and avoid inverting the folds. Doing so can cause weaknesses resulting in the medical device breaking.

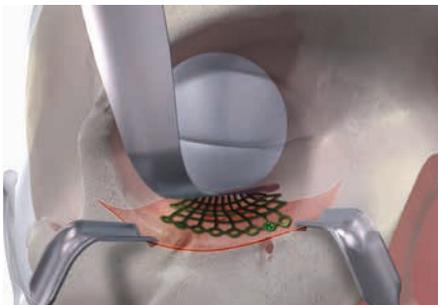
## Inserting the plate



When inserting the plate, the intraorbital soft tissues must be retracted correctly to avoid their being entrapped by the plate.

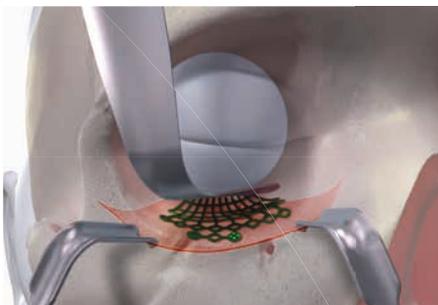
The plate must be positioned so as to obtain adequate restoration of the orbital volume and ensure stability of the orbital floor.

## 3- Implant fixation



Fix the plate using 1.2 mm or 1.5 mm diameter screws to ensure stability of the implant.

The screws must be placed on the orbital floor, just posterior to the infraorbital rim.



Alternatively, the anterior part of the mesh plate can be extended over the orbital rim and the screws inserted on the anterior face of the maxilla.

## 4- Post-operative check

After inserting the implant, perform a forced duction test to check that the plate has not created a decrease in ocular mobility.

## Ref. numbers

1. *Edward Ellis III, Yinghui Tan*  
**Assessment of internal orbital reconstructions for pure blowout fractures: cranial bone grafts versus titanium mesh**  
J. Oral Maxillofac. Surg. 61:442-453, 2003
2. *Mario Francisco Gabrielli, Marcelo Silva Monnazzi, Luis Augusto Passeri, Waldner Ricardo Carvalho, Marisa Gabrielli, Eduardo Hochuli-Vieira*  
**Orbital wall reconstruction with titanium mesh: Retrospective study of 24 patients**  
Craniomaxillofac. Trauma Reconstruction 2011; 4:151-156
3. *C. Jaquiéry, C. Aeppli, P. Cornelius, A. Palmowsky, C. Kunz, B. Hammer*  
**Reconstruction of orbital wall defects: critical review of 72 patients**  
Int. J. Oral Maxillofac. Surg. 2007; 36: 193-199
4. *Francesco Bairo*  
**Biomaterials and implants for orbital floor repair**  
Acta Biomaterialia 7 (2011) 3248-3266
5. *A. Momjian, J. Heuberger, P. Scolozzi*  
**Reconstruction orbitaire post-traumatique par grilles en titane préformées versus non préformées**  
Rev. Stomatol. Chir. Maxillofac. 2011;112:145-150

## Indications

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The titanium mesh is designed for use in reconstructive surgery, cranio-maxillofacial traumatology and in the treatment of alveolar ridge bone loss in pre-implant surgery (for the reference ME02).

### Indications in cranio-maxillofacial surgery

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- Closing of the cranial flaps after a neurosurgery
- Stabilization and fixation of cranio-maxillofacial fractures
- Overlaying bone abnormalities
- Overlaying and reconstruction of bone defects in the upper two-thirds of the skull, in particular after tumour resection or trauma:
  - Cranial vault
  - Maxillary sinus wall
  - Orbital region

### Use in cranio-maxillofacial surgery

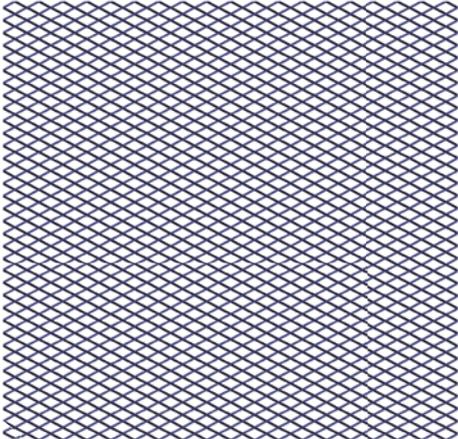
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- Using the cutters, cut a piece of titanium mesh into a straight or curved section so that it overlays the edges of the bone loss
- Shape the mesh so that it is the best possible fit for the recipient site
- Fix the mesh using as many of the associated Minitex/Microtek screws ( $\varnothing 1.2$  mm or 1.5 mm) as necessary, for optimum stabilization

## Micro mesh - 0.2 mm

- Malleable mesh
- Easy to cut
- Particularly suitable for overlaying bone defects, in particular after tumour resection
- Diamond-shaped mesh
- Grade II titanium (T40 - ISO 5832-2)

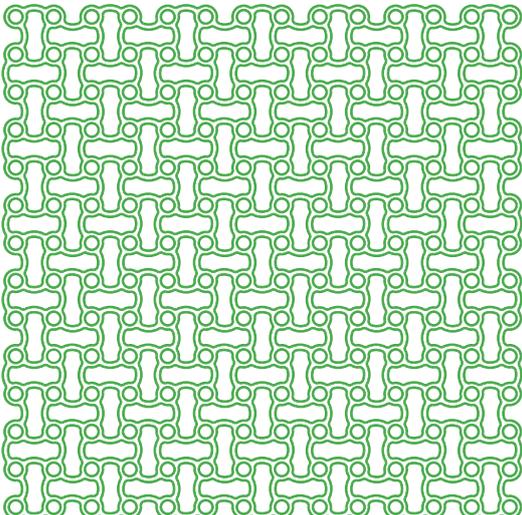
### Micro mesh - 0.2 mm

0.2 mm	Colour code	Dimensions	Rigidity	Ref. number
		60 X 60 mm	+ -	ME02

## 3D mesh - 0.4 mm

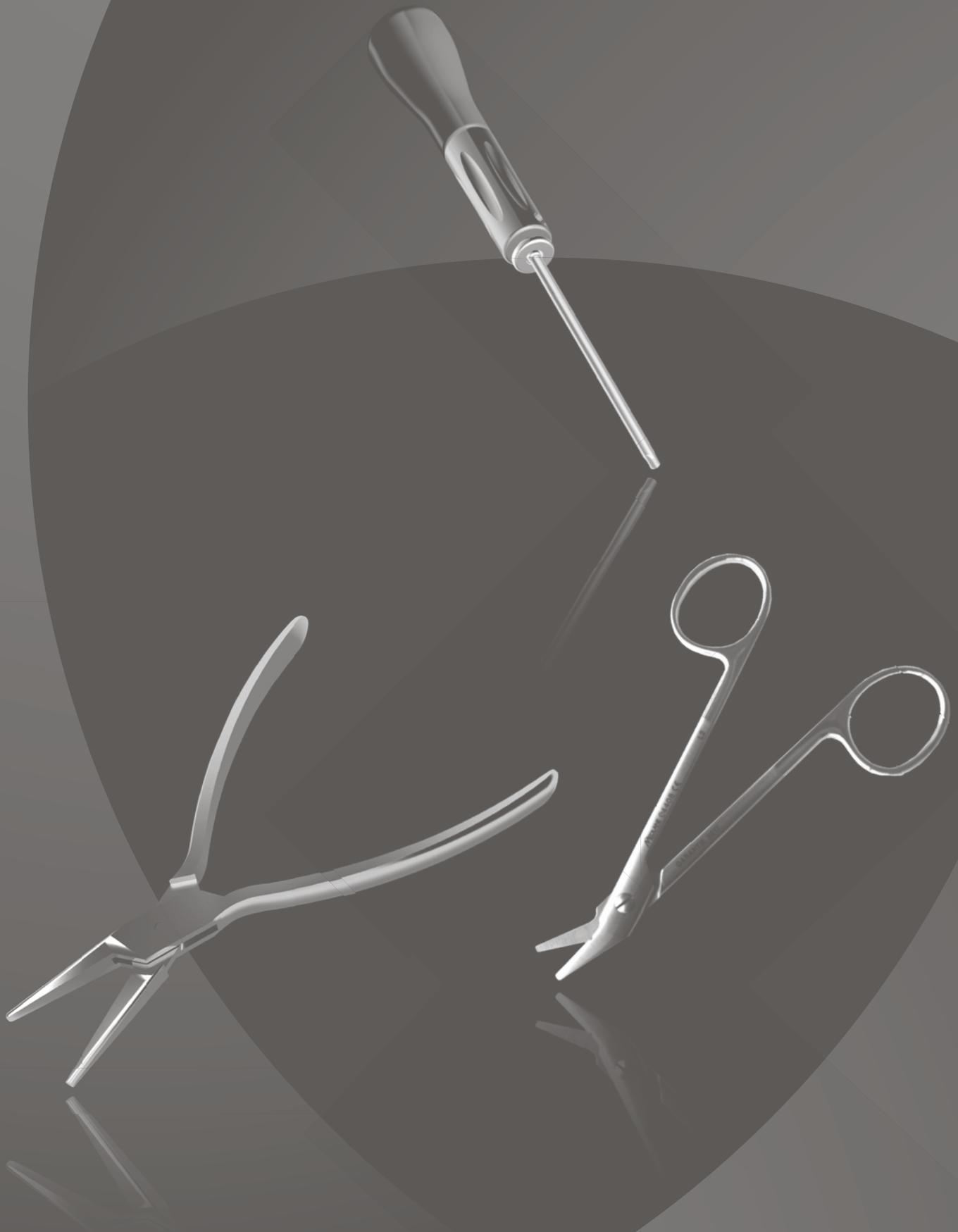
- Malleable mesh
- Easy to cut
- 3D design makes it easier to model the mesh in three dimensions, avoiding folded or overlapping areas
- Precise matching to the characteristics of each anatomical area
- Grade II titanium (T40 - ISO 5832-2)

### 3D mesh - 0.4 mm

0.4 mm	Colour code	Dimensions	Rigidity	Ref. number
		70 X 70 mm	+ -	ME04
		100 X 100 mm		ME04L

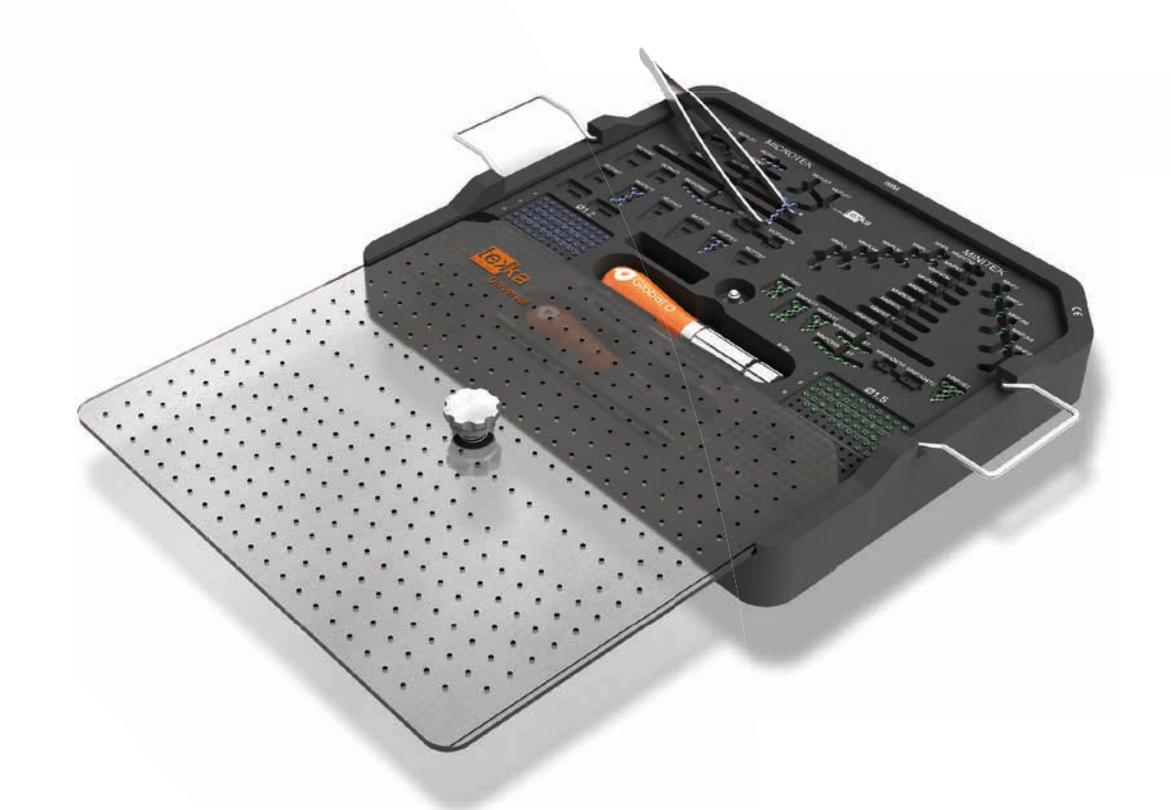
# Ancillary instruments

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## Containers

### Minitek / Microtek container - IMM



### Container dedicated to neurosurgery - CNEURO

#### Typical composition of CNEURO:

- Handles and shafts of the screwdriver
- Drill bits
- 3D mesh
- Star-shaped plate
- Minitek plates (straight, 3D square and rectangular, X, Y, T-shaped )
- Self-drilling Minitek screws  $\varnothing 1.5$  mm, length 4 and 5 mm
- Emergency Minitek screws  $\varnothing 1.8$  mm length 5 mm



## Screwdriver and shafts

### Mobile handle for self-retaining shaft

Scale 3/4



Handle	Ref. number
Mobile	MTM

### Removable and self-retaining screwdriver shafts

Shaft	Screwdriver head associated	Colour of the associated screws	Diameter of the associated screw	Ref. number
Short	cross-drive		1.2 mm	ACT1K
Long		 	1.5 mm 1.8 mm	ALT1K

## Forceps and scissors

### Modeling forceps

Scale 3/4



Shape	Ref. number
Flat	PPM

### Holding forceps

Scale 3/4



Ref. number
PPH-2

### Scissors for titanium meshes



Ref. number
CISEAUX_MAILLE_TI

## Drill bits

### Standard drill bits

	Colour ring	Colour code of the associated screw	Diameter of the associated screw	Drill stop	Total length	Ref. number
	■	■	1.2 mm	5 mm	50 mm	FO0.8B5
				8 mm		FO0.8B8
	■	■ ■	1.5 mm 1.8 mm	5 mm		FO1.1B5
				15 mm		FO1.1B15

### Drill bits with dental tip

	Colour ring	Colour code of the associated screw	Diameter of the associated screw	Drill stop	Total length	Ref. number
	■	■	1.2 mm	9 mm	35 mm	FOS0.8
	■	■ ■	1.5 mm 1.8 mm	12 mm		FOS1.1

## The concept

To meet your expectations and the requirements for traceability, Global D provides an ergonomic sterile packaging solution.

We provide a selection of the most commonly used combinations of osteosynthesis plates and screws, specifically designed for maxillofacial surgery.



List of existing combinations on request.

## The pack

Each pack can hold one or several plates.

The **screw holder** is packed inside the lidded double blister and can hold up to 12 screws.

This system enables an easy and secure self-retaining prehension of the screws.



### A sterile pack dedicated to neuro surgery

- Specially dedicated to neurosurgery. This sterile pack (Ref. number ETMN2TL-Kx) is indicated for the closing of cranial flaps.
- It contains 3 Minitex straight plates 2 holes of 0.6 mm thickness and 6 self-drilling screws of Ø1.5 mm length 4 or 5 mm.
- In addition, only the mobile screwdriver handle and the self-retaining shaft axe are required in terms of instrumentation.

## The advantages

### Traceability

The information concerning manufacturing, product Ref. number and batch numbers is easily identifiable.

Each pack contains 4 self-adhesive labels specifically designed for the clinic/hospital and patient medical files. All the information is therefore preserved enabling reliable and effective traceability of the implanted products.



### Simplicity & Usability

- The “ready to use” solution of sterile products
- Optimization of preparation costs (cleaning, disinfection, sterilization)
- Ease of handling and storage optimization
- Clear and legible labelling
- Adhesive tapes under the pack for stable fixation to the table enabling easy impaction of the screws



### Security

- Double packaging, sterilized using gamma rays
- Sterilization indicator
- CE marking
- Traceability via batch number

These products are medical devices of class I, IIa or IIb and carry the EC marking in accordance with Directive 93/42/EEC. It is possible that medical devices presented are not available for sale in all countries. Please contact the sales department of Global D for more information on product availability.

Please check the instructions before use. If in doubt please contact the sales department of Global D.

The instructions may in some cases be dematerialized. For that, a QR code and a URL link are provided on the label of the device. Print instructions are still available for every request within 7 days. The request must be made to the following address: [quality@globald.com](mailto:quality@globald.com)

## Fields of application

Implantology

Pre-implant surgery

Orthognathic surgery

Reconstructive surgery

Facial trauma surgery

Tumor surgery

Cranio-facial surgery

Orthodontics

Training



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