

medartis

PRECISION IN FIXATION

SURGICAL TECHNIQUE

# MODUS Midface 0.9/1.2



**MODUS**

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For further information regarding the MODUS product line visit [www.medartis.com](http://www.medartis.com)

# Introduction

## Product Materials

Product	Material
Plates	Pure titanium, titanium alloy
Screws	Pure titanium, titanium alloy,
Instruments	Stainless steel, PEEK, aluminum, Nitinol, silicone or titanium
Containers	Stainless steel, aluminum, PEEK, polyphenylsulfone, polyurethane, silicone

## Indications

### MODUS

Maxillofacial fractures, osteotomies and reconstructive procedures

- 0.9/1.2 System
  - fractures and reconstructions in the midface

## Contraindications

- Preexisting or suspected infection at or near the implantation site
- Known allergies and/or hypersensitivity to implant materials
- Inferior or insufficient bone quality to securely anchor the implant
- Patients who are incapacitated and/or uncooperative during the treatment phase
- Blocking of growth plates with plates and screws

## Color Coding

System Size	Color Code
0.9	Red
1.2	Red

### Plates and Screws

Special implant plates and screws have their own color:

Implant plates gold	Fixation plates (fixation)
Implant screws gold	Cortical screws (fixation)

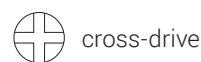
## Possible Combination of Plates and Screws

Plates and screws can be combined within one system size:

### 0.9/1.2 Fixation Plates






















- 0.9 Cortical Screws, cross-drive
- 1.2 Cortical Screws, cross-drive

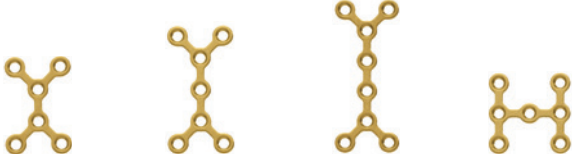

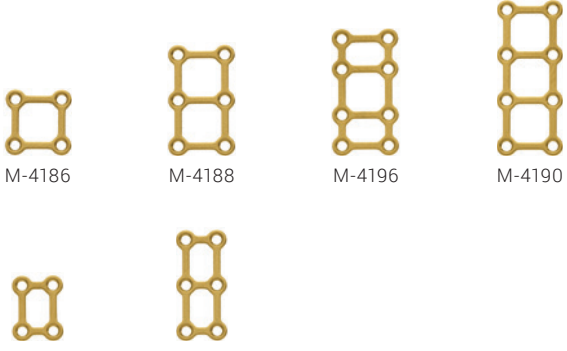
## Symbols



# System Overview

The implant plates of the MODUS Midface 0.9/1.2 System are available in the following designs:

Description	Examples	Plate Thickness	System	Rigidity
Straight plates	 M-4100  M-4102  M-4120	0.5 mm	0.9/1.2	Rigid
	 M-4104			
	 M-4106			
L-Plates	 M-4122  M-4124  M-4108  M-4110	0.5 mm	0.9/1.2	Rigid
	 M-4126  M-4128  M-4130  M-4132			
Y-Plates	 M-4140  M-4142  M-4114  M-4152	0.5 mm	0.9/1.2	Rigid
T-Plates	 M-4134  M-4136  M-4138  M-4112	0.5 mm	0.9/1.2	Rigid

Description	Examples	Plate Thickness	System	Rigidity
X-Plates and H-Plate	 <p>M-4144      M-4146      M-4116      M-4148</p>	0.5 mm	0.9/1.2	Rigid
Curved Plates	 <p>M-4118      M-4154</p>	0.5 mm	0.9/1.2	Rigid
Grid Plates	 <p>M-4186      M-4188      M-4196      M-4190</p> <p>M-4192      M-4194</p>	0.5 mm	0.9/1.2	Rigid

# Instrument Application

## General Instrument Application

### Cutting

The “cut before bending” principle applies. MODUS 0.9/1.2 plates can be cut with the plate cutting pliers M-2110.

Ensure that there are no remaining plate segments in the cutting pliers (visual check). Hold the implantable plate segment with your hand during and after cutting. Insert the plate into the open cutting pliers. The hole countersinks must face upward.

#### Warning

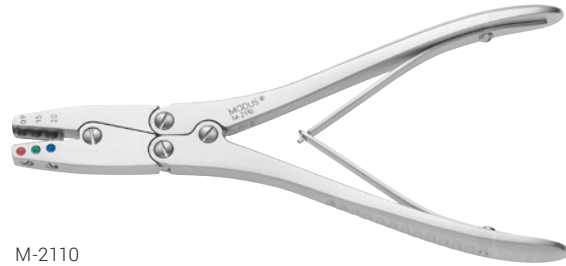
Wrong cutting of the plate may result in sharp edges and lead to injuries of the surrounding tissue.

To facilitate the insertion of the plate, support the cutting pliers gently with your middle finger.

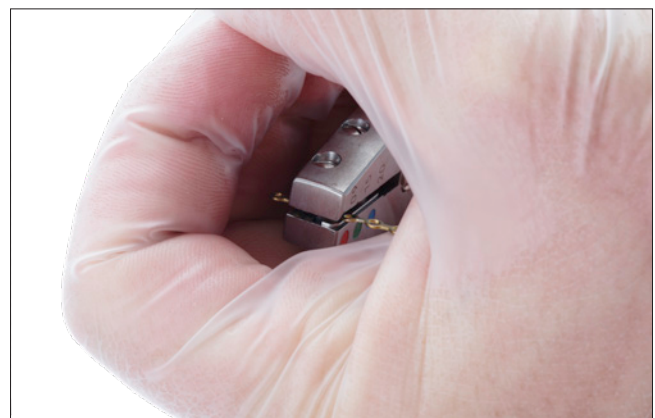
The desired cutting line is given by the pin which matches the plate hole. Place the plate over the pin before cutting. The cutting process rounds off the cut edge. The visible part of the plate corresponds to the desired plate length.

#### Caution

When cutting with pliers, keep your hand loosely around the pliers to ensure that no parts fly off.



M-2110



## Bending

If required, the plates can be bent with the plate bending pliers (M-2181, M-2100 and M-2150).

### Warning

Wrong bending of the plate may lead to impaired functionality and postoperative construct failure.



M-2181  
0.9/1.2 Plate Bending Pliers, Three Prongs



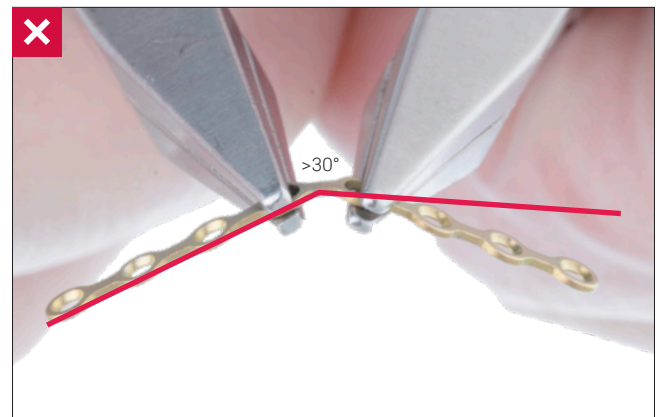
M-2100  
0.9-2.0 Plate Bending Pliers, Flat Nose



M-2150  
0.9-2.0 Plate Bending Pliers with Vario Pin

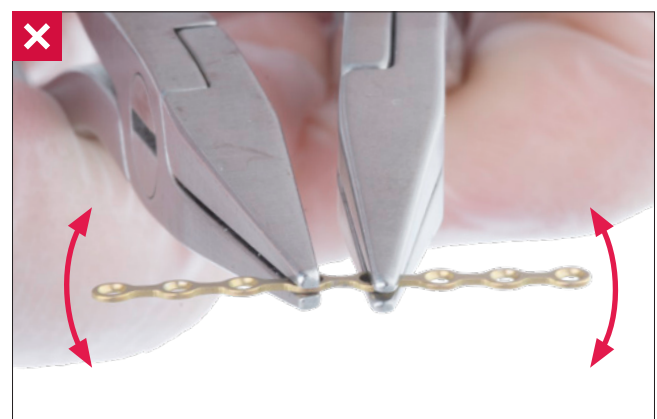
### Warning

Do not bend the plate by more than 30°. Bending the plate further may deform the plate holes and may cause the plate to break postoperatively.



### Warning

Repeatedly bending the plate in opposite directions may cause the plate to break postoperatively. Always use the provided plate bending pliers to avoid damaging the plate holes. Damaged plate holes prevent correct and secure seating of the screw in the plate and increase the risk of system failure.



## Drilling

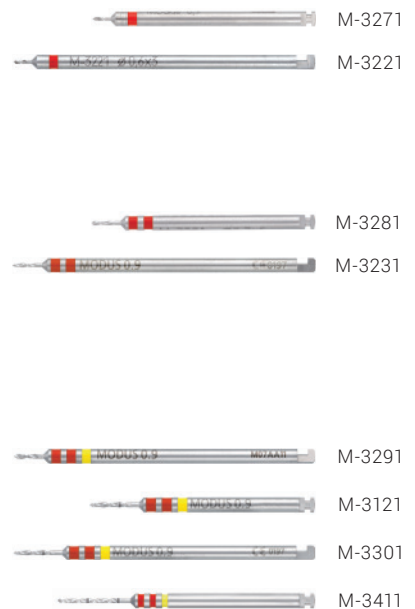
Color-coded twist drills are available for every MODUS system size. All twist drills are color coded with a ring system.

System Size	Color Code
0.9	Red
1.2	Red

### Core Hole Drills

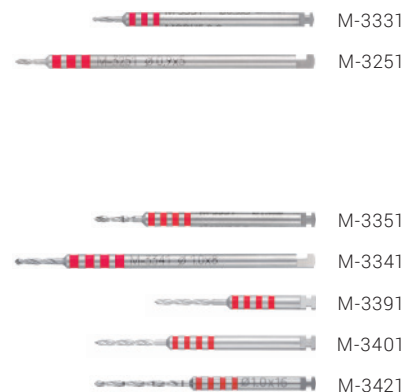
Drills for screws  $\varnothing$  0.9 mm

Dental	Stryker	Drill stop
one red ring	one red ring	
M-3271	M-3221	3 mm
Drill $\varnothing$ 0.6 mm	Drill $\varnothing$ 0.6	
Dental	Stryker	Drill stop
two red rings	two red rings	
M-3281	M-3231	5 mm
Drill $\varnothing$ 0.7 mm	Drill $\varnothing$ 0.7 mm	
Dental	Stryker	Drill stop
two red rings and one yellow	two red rings and one yellow	
	M-3291	5 mm
M-3121	M-3301	8 mm
M-3411		12 mm
Drill $\varnothing$ 0.75 mm	Drill $\varnothing$ 0.75 mm	



Drills for screws  $\varnothing$  1.2 mm

Dental	Stryker	Drill stop
three red rings	three red rings	
M-3331	M-3251	5 mm
Drill $\varnothing$ 0.9 mm	Drill $\varnothing$ 0.9 mm	
Dental	Stryker	Drill stop
three red rings	three red rings	
M-3251	M-3341	8 mm
M-3391		12 mm
M-3401		12 mm
M-3421		16 mm
Drill $\varnothing$ 1.0 mm	Drill $\varnothing$ 1.0 mm	





## Drilling with Drill Guide

The twist drills below for screws Ø 0.9 and 1.2 mm can be guided by the drill guide (M-2191). This protects the surrounding tissue from direct contact with the drill.



M-2191

### Drills for use in combination with the drill guide

Drills for screws Ø 0.9 mm

Dental two red rings and one yellow	Stryker two red rings and one yellow	Drill stop
M-3321	M-3311	12 mm
Drill Ø 0.75 mm	Drill Ø 0.75 mm	



M-3321

M-3311

### Drills for use in combination with the drill guide

Drills for screws Ø 1.2 mm

Dental three red rings	Stryker three red rings	Drill stop
M-3371	M-3361	12 mm
Drill Ø 1.0 mm	Drill Ø 1.0 mm	



M-3371

M-3361

## Screw Pick-Up

The screwdriver handle (M-2501) is compatible with the screwdriver blades (M-2511, M-2521). The screwdriver blade M-2521 features a self-holding cross-drive blade. The screwdriver blade M-2511 is compatible with the tension sleeve (M-2551) for screw retention.



M-2501  
Screwdriver Handle



M-2521  
Screwdriver Blade, Self-Holding



M-2511  
Screwdriver Blade

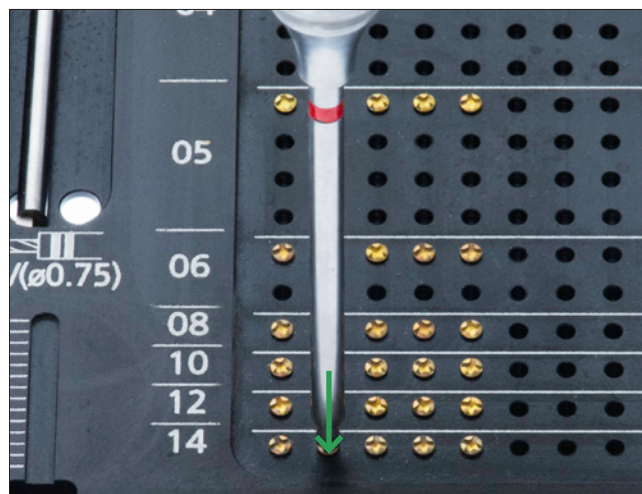


M-2551  
Tension Sleeve for M-2511

To remove the screws from the implant container using the self-holding screwdriver blade (M-2521), insert the screwdriver blade perpendicularly into the screw head of the desired screw and pick up the screw with axial pressure.

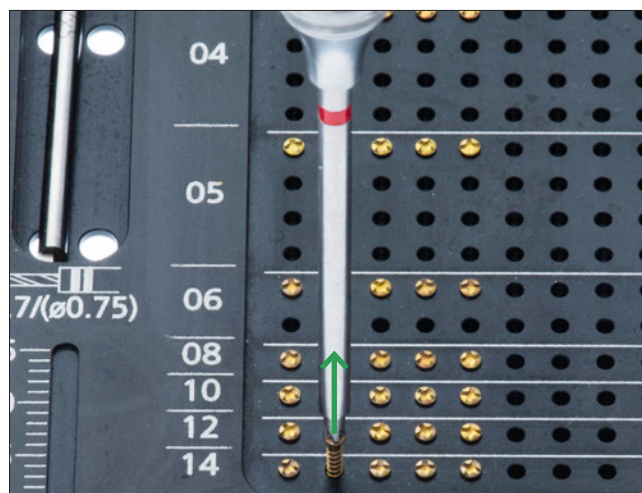
### Notice

The screw will not hold without axial pressure.

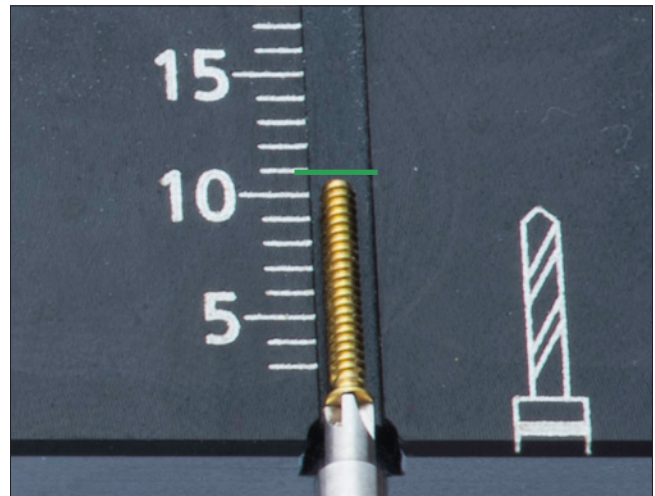


### Caution

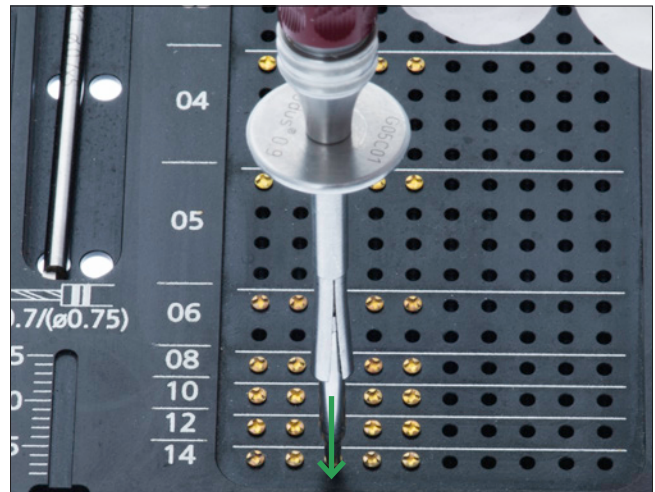
Vertically extract the screw from the compartment. Picking up the screw repeatedly may lead to permanent deformation of the self-retaining area. Therefore, the screw may no longer be able to be picked up correctly. In this case, a new screw has to be used.



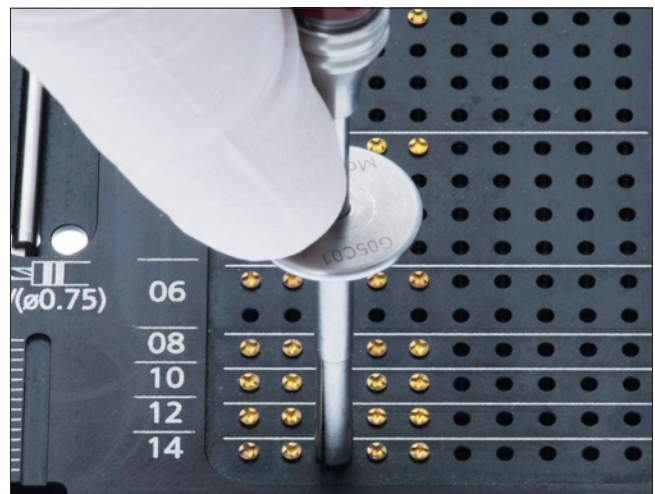
The screw length is checked with the measuring module and read at the end of the screw.



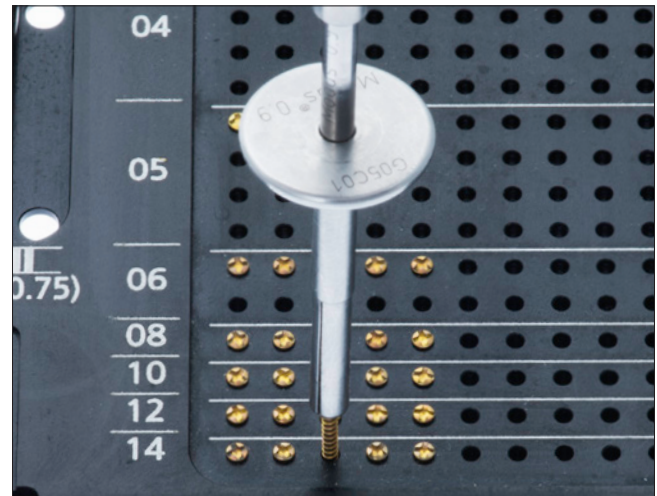
To remove the screws from the implant container using the screwdriver blade (M-2511) in combination with the tension sleeve (M-2551), insert the screwdriver blade perpendicularly into the screw head of the desired screw.



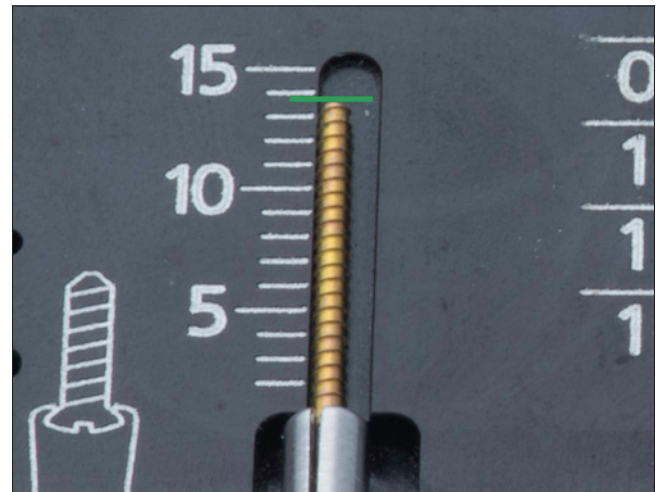
Slide the tension sleeve over the screwhead.



Vertically extract the screw from the compartment



The screw length is checked with the measuring module designed for the use with the tension sleeve (M-2551).



# Explantation

## Explantation of MODUS 0.9/1.2 Implants

Use the appropriate screwdrivers to remove the screws to explant MODUS implants. It is recommended that the implants are removed by using only original MODUS instruments.

### **Caution**

When removing the screws, ensure that any bone ingrowth in the screw head has been removed, that the screwdriver/screw head connection is aligned in axial direction, and that a sufficient axial force is used between blade and screw.

# Implants, Instruments and Containers

## 0.9 Cortical Screws, Cross-Drive

Material: Titanium (ASTM F67)



Length	Art. No.	Piece / Pkg	Art. No.	Piece / Pkg
2 mm	M-5100.02/1	1	M-5100.02	5
3 mm	M-5100.03/1	1	M-5100.03	5
4 mm	M-5100.04/1	1	M-5100.04	5
5 mm	M-5100.05/1	1	M-5100.05	5
6 mm	M-5100.06/1	1	M-5100.06	5
7 mm	M-5100.07/1	1	M-5100.07	5
8 mm	M-5100.08/1	1	M-5100.08	5
9 mm	M-5100.09/1	1	M-5100.09	5
10 mm	M-5100.10/1	1	M-5100.10	5

## 1.2 Cortical Screws, Cross-Drive

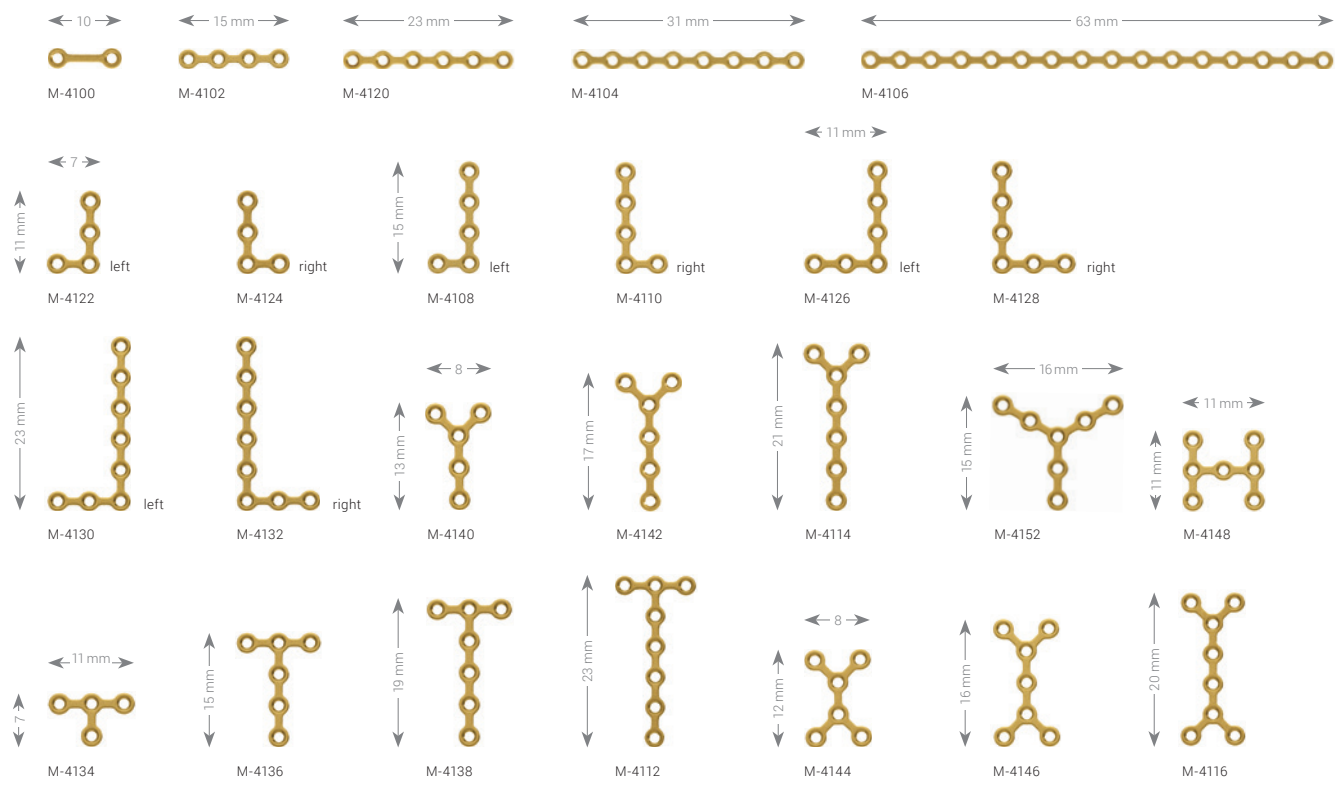
Material: Titanium (ASTM F67)  
\*Titanium Alloy (ASTM F136)



Length	Art. No.	Piece/Pkg	Art. No.	Piece/Pkg
2 mm	M-5110.02/1	1	M-5110.02	5
3 mm	M-5110.03/1	1	M-5110.03	5
4 mm	M-5110.04/1	1	M-5110.04	5
5 mm	M-5110.05/1	1	M-5110.05	5
6 mm	M-5110.06/1	1	M-5110.06	5
8 mm	M-5110.08/1	1	M-5110.08	5
10 mm	M-5110.10/1	1	M-5110.10	5
12 mm*	M-5110.12/1	1	M-5110.12	5
14 mm*	M-5110.14/1	1	M-5110.14	5

# Cranial Plates

Material: Titanium (ASTM F67)  
Plate thickness: 0.5 mm

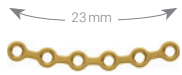


Art. No.	Description	Holes	Piece / Pkg
M-4100	straight	2	1
M-4102	straight	4	1
M-4120	straight	6	1
M-4104	straight	8	1
M-4106	straight	16	1
M-4122	L left 90°	4	1
M-4124	L right 90°	4	1
M-4108	L left 90°	5	1
M-4110	L right 90°	5	1
M-4126	L left 90°	6	1
M-4128	L right 90°	6	1
M-4130	L left 90°	8	1
M-4132	L right 90°	8	1
M-4140	Y	5	1
M-4142	Y	6	1
M-4114	Y	7	1
M-4152	Y	7	1
M-4148	H	7	1
M-4134	T	4	1
M-4136	T	6	1
M-4138	T	7	1
M-4112	T	8	1
M-4144	X	6	1
M-4146	X	7	1
M-4116	X	8	1

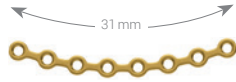


## Orbital Plates

Material: Titanium (ASTM F67)  
Plate thickness: 0.5 mm



M-4118

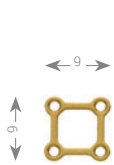


M-4154

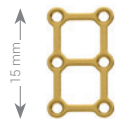
Art. No.	Description	Holes	Piece / Pkg
M-4118	curved	6	1
M-4154	curved	8	1

## Grid Plates

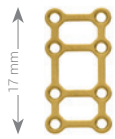
Material: Titanium (ASTM F67)  
Plate thickness: 0.5 mm



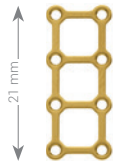
M-4186



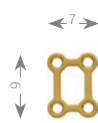
M-4188



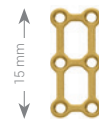
M-4196



M-4190



M-4192



M-4194

Art. No.	Description	Holes	Piece / Pkg
M-4186	square	4 (2x2)	1
M-4188	square	6 (3x2)	1
M-4196	rectangular	8 (4x2)	1
M-4190	square	8 (4x2)	1
M-4192	rectangular	4 (2x2)	1
M-4194	rectangular	6 (3x2)	1



## Twist Drills for Screws Ø 0.9 mm

### Ø 0.6 mm



M-3271



M-3221

### Ø 0.7 mm



M-3281



M-3231

### Ø 0.75 mm



M-3291



M-3121



M-3301



M-3411



M-3321



M-3311

Art. No.	Description	Ø Twist Drill	Stop	Length	Drill Shaft End	Piece / Pkg
M-3271		0.6	3 mm	37 mm	Dental	1
M-3221		0.6	3 mm	50 mm	Stryker J-Latch	1
M-3281		0.7	5 mm	37 mm	Dental	1
M-3231		0.7	5 mm	50 mm	Stryker J-Latch	1
M-3291		0.75	5 mm	50 mm	Stryker J-Latch	1
M-3121		0.75	8 mm	37 mm	Dental	1
M-3301		0.75	8 mm	50 mm	Stryker J-Latch	1
M-3411		0.75	12 mm	42 mm	Dental	1
M-3321	for drill stop guide M-2191	0.75	12 mm	80 mm	Dental	1
M-3311	for drill stop guide M-2191	0.75	12 mm	93 mm	Stryker J-Latch	1

Twist Drills for Screws  $\varnothing$  1.2 mm (and for Gliding Hole  $\varnothing$  0.9 mm) $\varnothing$  0.9 mm

M-3331



M-3251

 $\varnothing$  1.0 mm

M-3351



M-3341



M-3391



M-3401



M-3371



M-3361



M-3421

Art. No.	$\varnothing$ Twist Drill	Stop	Length	Drill Shaft End	Piece / Pkg
M-3331	0.9	5 mm	37 mm	Dental	1
M-3251	0.9	5 mm	50 mm	Stryker J-Latch	1
M-3351	1.0	8 mm	37 mm	Dental	1
M-3341	1.0	8 mm	50 mm	Stryker J-Latch	1
M-3391	1.0	12 mm	27 mm	Dental	1
M-3401	1.0	12 mm	37 mm	Dental	1
M-3371	1.0	12 mm	80 mm	Dental	1
M-3361	1.0	12 mm	93 mm	Stryker J-Latch	1
M-3421	1.0	16 mm	37 mm	Dental	1

## Depth Gauge



M-2161

Art. No.	Description	Length	Piece / Pkg
M-2161		156 mm	1

## Drill Stop Guide, Adjustable



M-2191

Art. No.	Piece / Pkg
M-2191	1

## Screwdriver 0.9 / 1.2



M-2551



M-2501



M-2521



M-2511

Art. No.	Interface	Description	Length	Piece / Pkg
M-2551		tension sleeve for M-2511		1
M-2501		screwdriver handle		1
M-2521	⊕	screwdriver blade, self-holding	54 mm	1
M-2511	⊕	screwdriver blade for M-2551	57 mm	1

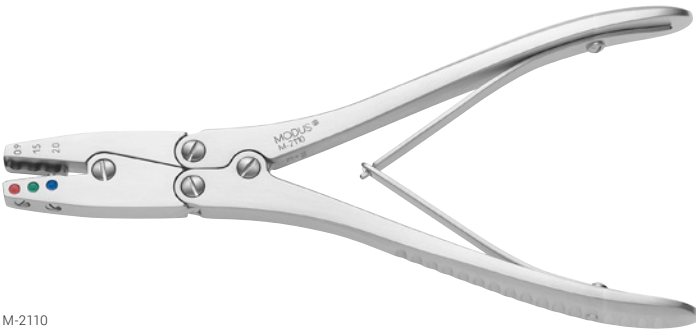
## Plate Holding and Positioning Instrument



M-2171

Art. No.	Length	Piece / Pkg
M-2171	190 mm	1

## Plate Cutting Pliers



M-2110



M-2170



M-2140

Art. No.	Description	Length	Piece / Pkg
M-2110	Vario complete	185 mm	1
M-2170	large	180 mm	1
M-2140	small	140 mm	1

## Plate Bending Pliers



M-2181



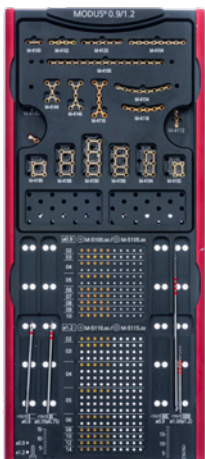
M-2100



M-2150

Art. No.	Description	Length	Piece / Pkg
M-2181	three prongs	115 mm	1
M-2100	flat nose	130 mm	1
M-2150	with Vario Pin 0.9 / 1.2 – 2.0	120 mm	1

## Cases and Trays



M-6301



M-6170

Art. No.	Description	Length	Piece / Pkg
M-6301	implant container MODUS 0.9/1.2 incl. lid M-6170	110 × 244 mm	1
M-6170	lid for implant container MODUS	102 × 244 mm	1

## Sterilizing Trays for Instruments



M-6151



M-6159

Art. No.	Description	Piece / Pkg
M-6151	small	1
M-6159	for optional instruments, small	1

## Lids for Sterilizing Trays for Instruments



M-6169

Art. No.	Description	Piece / Pkg
M-6161	for M-6151/M-6159	1
M-6169	for M-6151	1

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