medartis

PRECISION IN FIXATION

SURGICAL TECHNIQUE

MODUS 2 90° Screwdriver

MODUS

Contents

For further information regarding the MODUS 2 product line visit www.medartis.com

Introduction

Product Materials

Product	Material
Instruments	Stainless steel (handles: silicone), PEEK, aluminum, titanium, Nitinol
Container	Stainless steel, aluminum, PEEK, polyphenylsulfone, polyurethane, silicone

Intended Use

Surgical treatment of organic hard tissue

Color Coding

Screw Diameter	Color Code
1.2	Red
1.5	Green
1.8	Yellow
2.0	Blue
2.3	Brown
2.5	Purple

Plates and Screws

Special implant plates and screws have their own color:

Implant plates gold	Fixation plates (rigid)
Implant plates blue	Fixation plates (semi-rigid)
Implant plates silver	TriLock plates (locking)
Implant screws gold	Cortical screws (fixation)
Implant screws silver	TriLock screws (locking)

Possible Combination of the 90° Screwdriver

1.2 Cortical Screws, HexaDrive 4
1.5 Cortical Screws, HexaDrive 4
1.8 Cortical Screws, HexaDrive 4
2.0 Cortical Screws, HexaDrive 6
2.0 TriLock Screws, HexaDrive 6
2.3 Cortical Screws, HexaDrive 6
2.3 TriLock Screws, HexaDrive 6
2.5 TriLock Screws, HexaDrive 6

Symbols


HexaDrive


SpeedTip


TriLock

Instrument Application

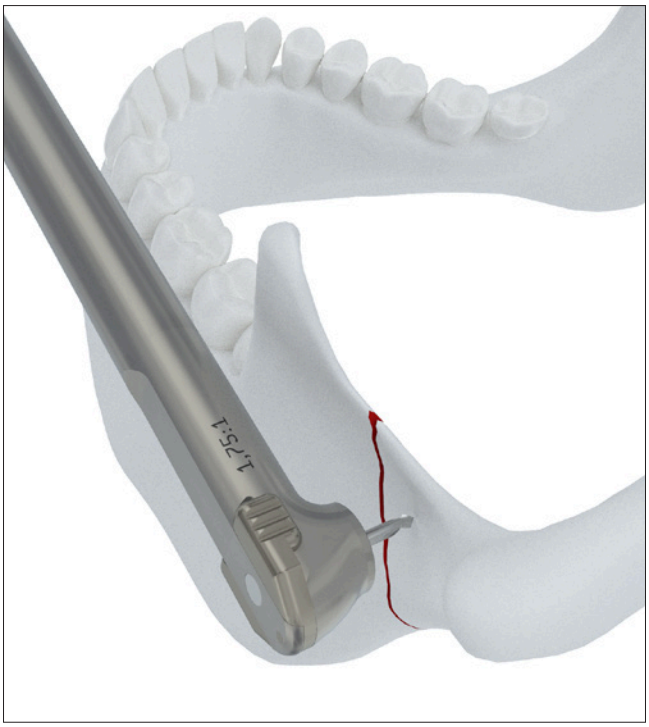
Specific Instrument Application

90° Screwdriver

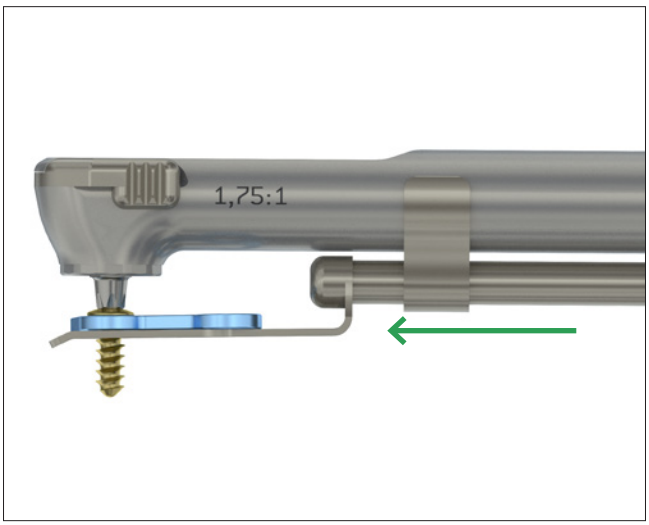
The 90° screwdriver facilitates the intraoperative placement of screws and plates in areas which are difficult to reach.

1. Predrilling
For predrilling, the 90° screwdriver can be attached to the motor. The first hole can be drilled in the desired position.

Safety note
The maximum permitted drive speed of 1'750 rpm must not be exceeded.

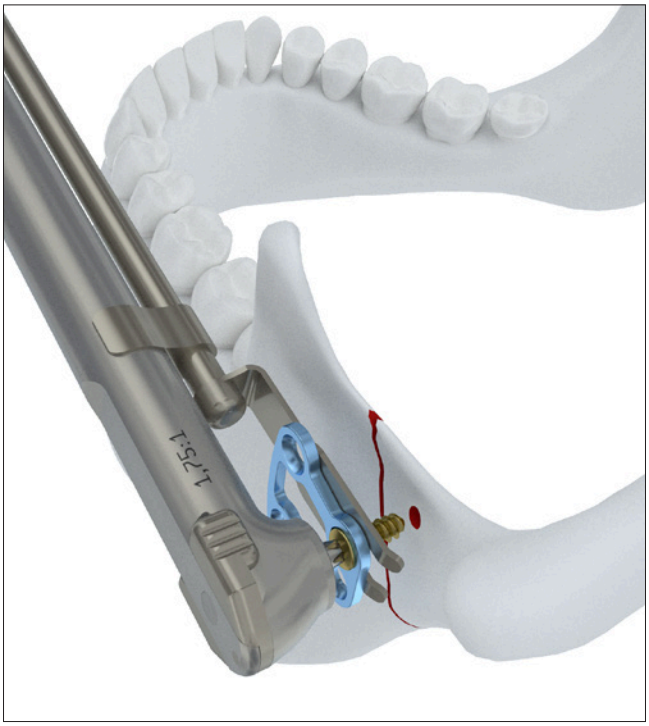


2. Clamping of the screw and the plate
Pick up the screw and place the corresponding plate hole over the screw. Then push the screwholding fork forward to secure the screw and the plate in position.



3. Insertion of the implants

For the implantation of the first screw, the rotation knob (M-2443) or the torque limiting knob (M-2438) are attached to the 90° screwdriver. Plate and screw are inserted and the screw is placed in the predrilled hole. For non-locking screws: once the screw has purchase, retract the plate holding fork and continue to insert the screw.
When using a TriLock plate and screw, the screw holding fork has to be retracted and the plate has to be pushed down to the bone before inserting the screw. Rotating the screw in the TriLock screw hole will engage the locking mechanism.

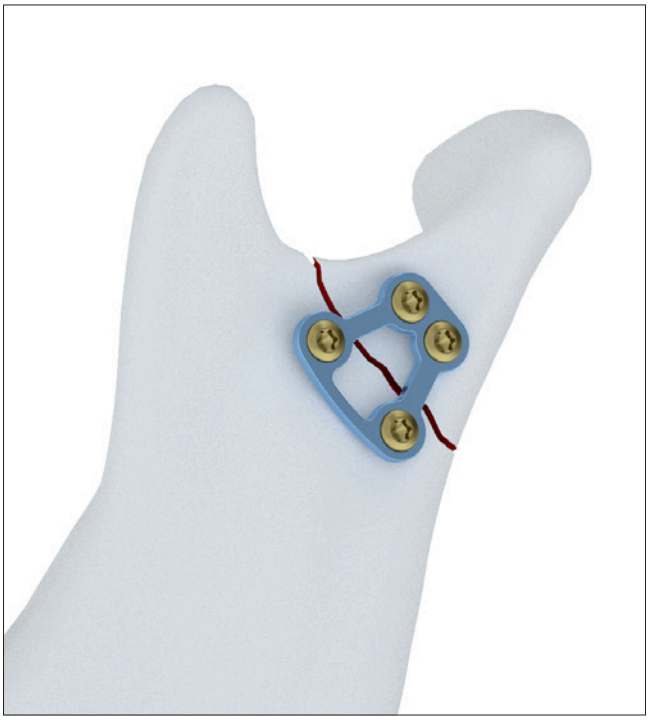


Note

In the rear position, the screwholding fork can be turned 90° to the left or right.

4. Placement of additional screws

Additional screws are placed as described above.
The screw can be held on the screwdriver blade with the screwholding fork.



Explantation

Explantation of MODUS 2 Implants

Use the appropriate screwdrivers to remove the screws to explant MODUS 2 implants.

Only original MODUS 2 instruments are recommended for the explantation of MODUS 2 implants.
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 an axial direction, and that a sufficient axial force is used between blade and screw.

TriLock Locking Technology

Correct Application of the TriLock Locking Technology

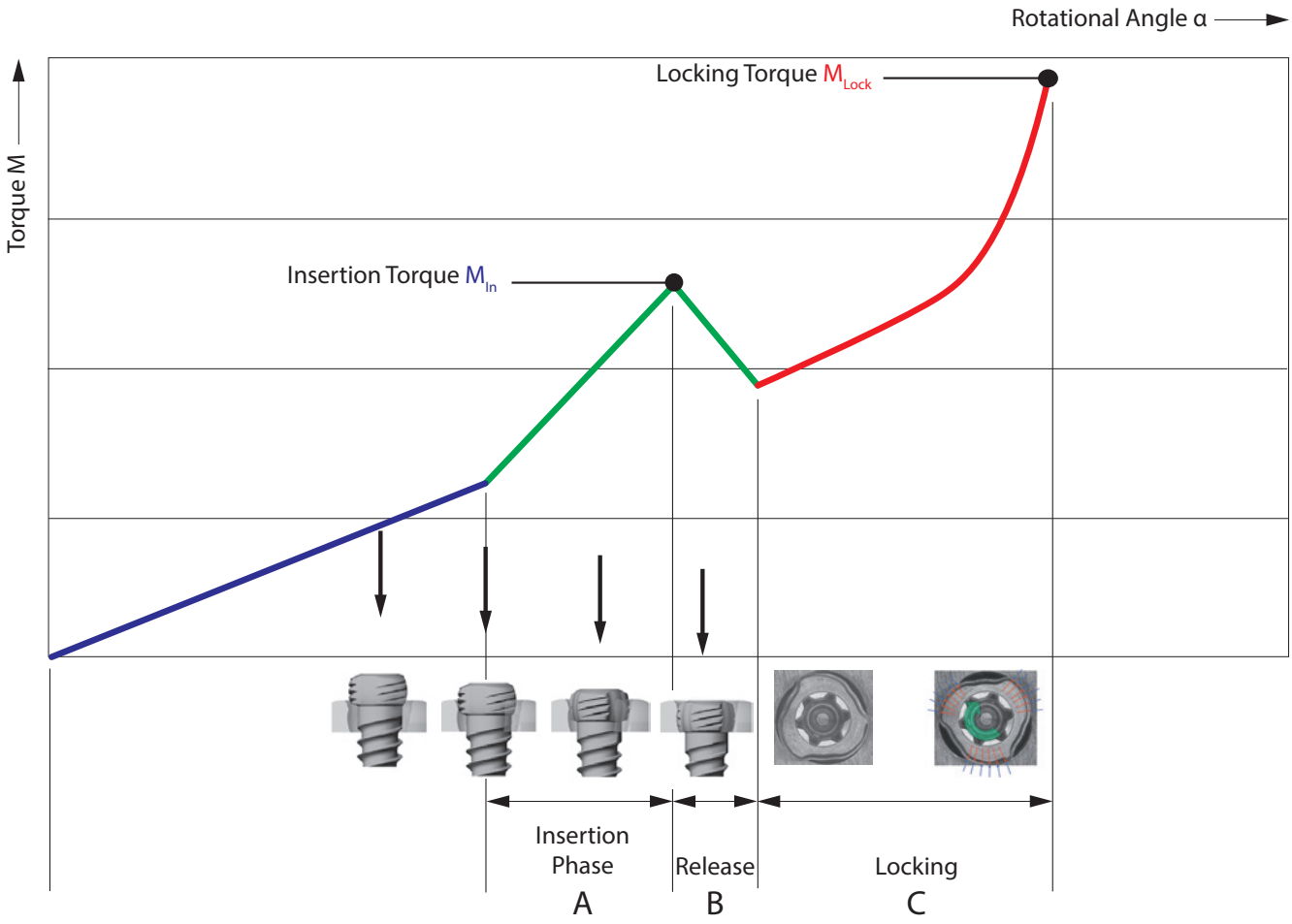
The screw is inserted through the plate hole into a predrilled canal in the bone. An increase of the tightening torque will be felt as soon as the screw head gets in contact with the plate surface.

This indicates the start of the “Insertion Phase” as the screw head starts entering the locking zone of the plate (section “A” in the diagram). Afterwards, a drop of the tightening torque occurs (section “B” in the diagram). Finally the actual locking is initiated (section “C” in the diagram) as a friction connection is established between screw and plate when tightening firmly.

The torque applied during fastening of the screw is decisive for the quality of the locking as described in section “C” of the diagram.

Notice

TriLock screws can be tightened either with the rotation knob (M-2443) or the torque limiting knob (M-2438).



Correct Locking (± 15°) of the TriLock Screws

Correct locking occurs only when the screw head is locked flush with the locking contour (fig. 1 and 3).

However, if there is still a noticeable protrusion (fig. 2 and 4), the screw head has not completely reached the locking position. In this case, the screw has to be retightened to obtain full penetration and proper locking. In case of poor bone quality, a slight axial pressure may be necessary to achieve proper locking.

After having reached the locking torque (MLock), do not further tighten the screw, otherwise the locking function cannot be guaranteed anymore.

Correct: LOCKED

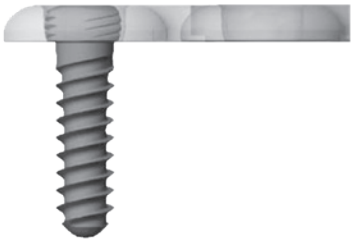


Figure 1

Incorrect: UNLOCKED

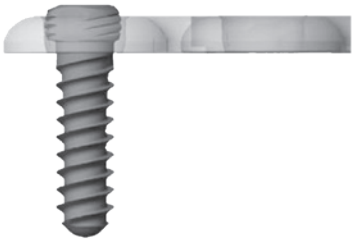


Figure 2

Correct: LOCKED

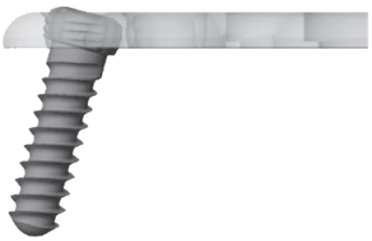


Figure 3

Incorrect: UNLOCKED

Figure 4

Instruments and Containers

90° Screwdriver

M-2440

M-2441

Art. No.	Description	Length	Pieces / Pkg
M-2440	screwdriver complete with screwholding fork M-2442 and rotation knob M-2443	320 mm	1
M-2441		253 mm	1

Handles

M-2443

M-2438

Art. No.	Description	Length	Pieces / Pkg
M-2443	rotation knob	67 mm	1
M-2438	torque limiting knob	58 mm	1

Screwholding Fork

Art. No.	Description	Length	Pieces / Pkg
M-2442	removable	128 mm	1

Screwdriver Blades

M2-2578

M2-2612

Scale 2:1

Art. No.	Interface	Description	Length	Shaft End	Pieces / Pkg
M2-2578	HD6	self-holding	11.5 mm	W&H	1
M2-2612	HD4	self-holding	11.5 mm	W&H	1

Scale 1:2

Twist Drills Ø 1.0 mm (Core Hole 1.2 Screws)

M2-3522

M2-3532

Art. No.	STERILE	Stop	Length	Shaft End	Pieces / Pkg
M2-3522	M2-3522S	5 mm	14 mm	W&H	1
M2-3532	M2-3532S	7 mm	16 mm	W&H	1

Twist Drills Ø 1.2 mm (Core Hole 1.5 Screws)

M2-3542

M2-3552

Art. No.	STERILE	Stop	Length	Shaft End	Pieces / Pkg
M2-3542	M2-3542S	5 mm	14 mm	W&H	1
M2-3552	M2-3552S	7 mm	16 mm	W&H	1

Twist Drills Ø 1.5 mm (Core Hole 1.8 and 2.0 Screws)

M2-3529

M2-3539

M2-3549

M2-3559

Art. No.	STERILE	Stop	Length	Shaft End	Pieces / Pkg
M2-3529	M2-3529S	5 mm	14 mm	W&H	1
M2-3539	M2-3539S	7 mm	16 mm	W&H	1
M2-3549	M2-3549S	9 mm	18 mm	W&H	1
M2-3559	M2-3559S	13 mm	22 mm	W&H	1

Twist Drills Ø 1.9 mm (Core Hole for 2.3 Screws)

M2-3569

M2-3579

Art. No.	STERILE	Stop	Length	Shaft End	Pieces / Pkg
M2-3569	M2-3569S	7 mm	16 mm	W&H	1
M2-3579	M2-3579S	13 mm	22 mm	W&H	1

Twist Drills Ø 2.0 mm (Core Hole for 2.5 Screws)

M2-3589

M2-3599

Art. No.	STERILE	Stop	Length	Shaft End	Pieces / Pkg
M2-3589	M2-3589S	7 mm	16 mm	W&H	1
M2-3599	M2-3599S	13 mm	22 mm	W&H	1

Cases, Trays

Scale 1:4

M2-6002.001 with M2-6002.004 and M2-6002.005 (excl. instruments)

Art. No.	Description	Width	Pieces / Pkg
M2-6002.001	case for MODUS 2, 90° Screwdriver	240 mm	1
M2-6002.004	instrument tray for MODUS 2, 90° Screwdriver	240 mm	1
M2-6002.005	module blades & drills MODUS 2, 90° Screwdriver	240 mm	1
M-6727	lid for implant and instrument case 240 × 240mm	240 mm	1

Scale 1:2

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