mis® | SEVEN®

A self-tapping internal hex. implant by mis

MAKE IT SIMPLE

MIS Warranty:

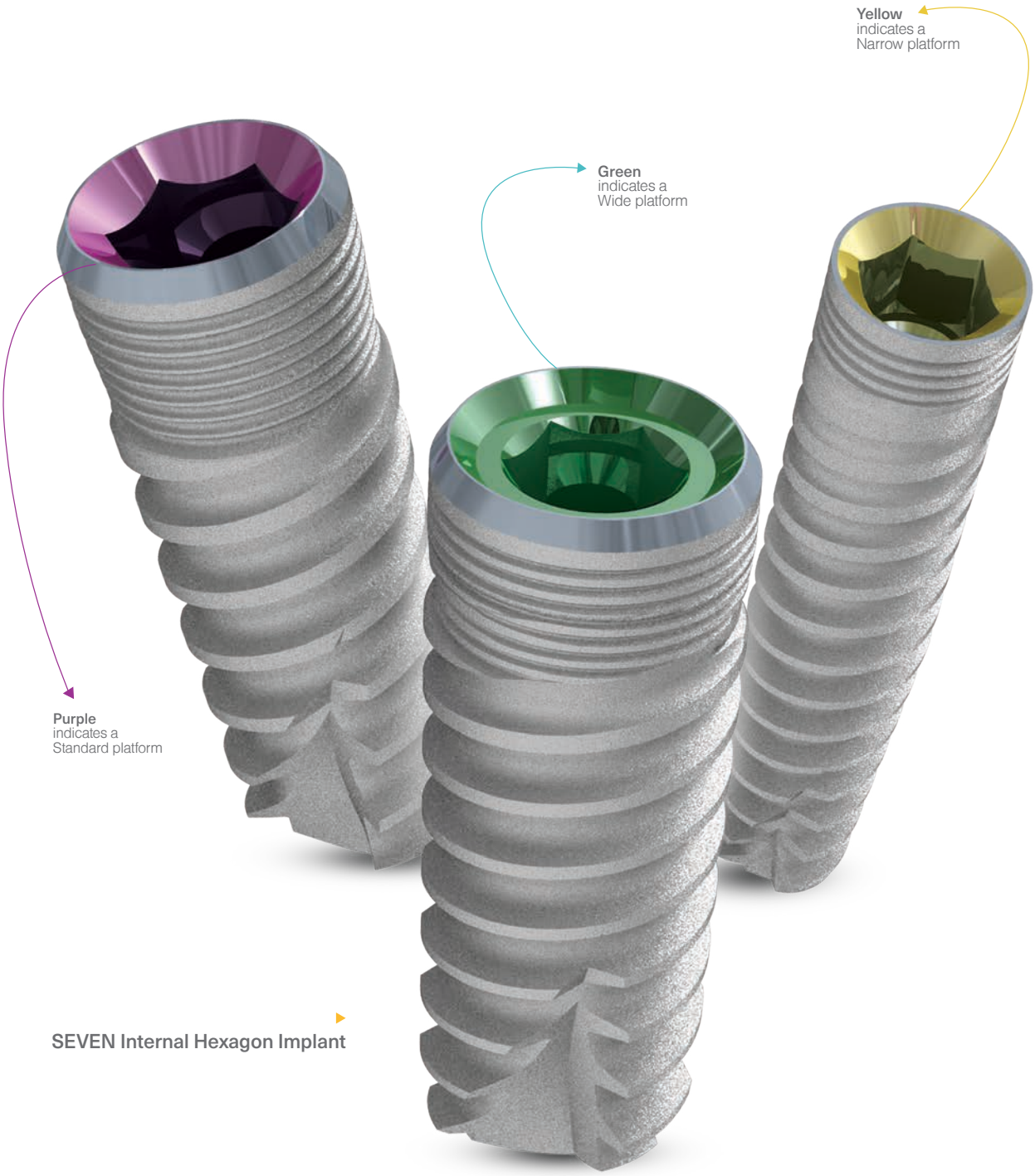
MIS exercises great care and effort in maintaining superior quality products. All MIS products are warranted to be free from defects in material and workmanship. However, should a customer find fault with any MIS product while using it according to the instructions, the defective product will be replaced.

Warning: MIS products should be used by licensed dentists only.

Table of Contents.

MIS scientists and engineers are continually seeking superior materials, technologies and procedures with the aim of developing quality products designed to make implant dentistry effective, safe and simple. The SEVEN implant system is the result of an extensive research and development process, offering a truly innovative solution with a unique combination of surgical and restorative benefits.

Advantages.

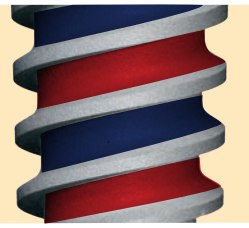

Yellow
indicates a
Narrow platform
Green
indicates a
Wide platform
Purple
indicates a
Standard platform
SEVEN Internal Hexagon Implant

Internal hex.

MIS SEVEN implants feature a color-coded internal hex. connection, assuring proper implant abutment seating, anti-rotational engagement, resistance to lateral forces, excellent esthetic results and more.

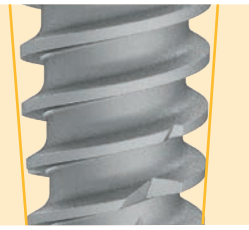
Micro-rings

Micro-rings on the implant neck improves BIC (Bone-To-Implant-Contact) at the crestal zone, and reduces pressure on the cortical bone to minimize resorption at the implant neck.



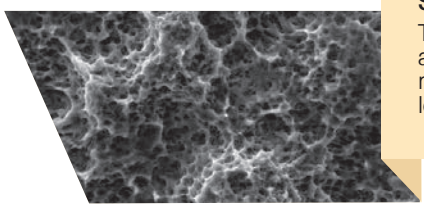
Dual thread

The dual thread doubles the implant insertion rate (2.40mm), allowing for a simpler and faster implant placement. The thread design also contributes to high initial stability properties.



Conical shape

Conical, root-shaped geometry and a unique thread design ensure superior primary stability, offering the ultimate choice for a wide range of clinical cases and loading protocols.

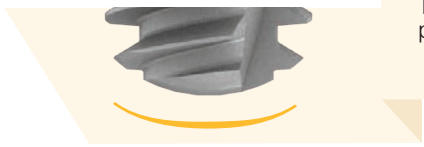


Surface

The surface roughness and micro-morphology is a result of sand-blasting and acid-etching. This MIS established surface technology has provided millions of patients and clinicians with excellent osseointegration results and long-lasting clinical success.

Three spiral channels

Three spiral channels at the apical end of the implant support the self-tapping properties. The channels also collect and amass bone chips in the course of insertion, supporting efficient osseointegration and long-term stability.



Domed apex

The dome-shaped apex prevents over-insertion for safer implant placement procedures.

Screw type implants range
Narrow Platform

Length	6mm	8mm	10mm	11.50mm	13mm	16mm
Ø3.30 mm			MF7-10330 	MF7-11330 	MF7-13330 	MF7-16330 

Surgical Tools

MT-HSI10
Short insertion tool, internal hex.

MT-HLI10
Long insertion tool, internal hex.

MT-NRH10
Long ratchet adapter internal hex. narrow platform

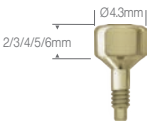
MT-SRH20
Short insertion tool internal hex.

MT-LRH20
Long insertion tool internal hex.

Implant Cover Screw and Healing Caps

MC1-00330

MH-N2330
MH-N3330
MH-N4330
MH-N6330
MH-N8330

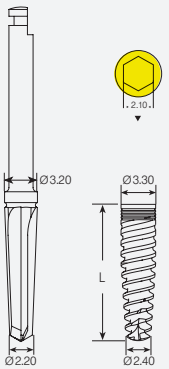


MH-52330
MH-53330
MH-54330
MH-55330
MH-56330

SEVEN®

NARROW

Ø3.30mm
Narrow Platform

Catalog No.	Dimensions	
MF7-10330	Ø3.30mm length 10mm	
MF7-11330	Ø3.30mm length 11.50mm	
MF7-13330	Ø3.30mm length 13mm	
MF7-16330	Ø3.30mm length 16mm	

Titanium Alloy Ti 6Al 4V ELI

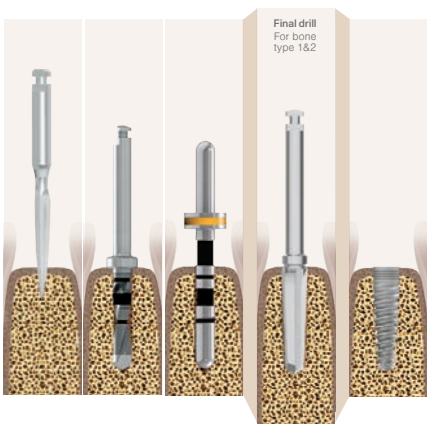
Sand-Blasted and Acid-Etched

Final Drill

Each implant is supplied with a single-use final drill corresponding to the correct diameter and length, allowing a short and safe drilling procedure.

Ø3.30mm Implant Procedure

Drilling Speed (RPM)	1200-1500	900-1200		200-400	15-25
Diameter	Ø1.90	Ø2.40	Ø2.40	Ø2.20 Ø3.20	Ø3.30



Do not use the final drill for bone type 3&4

The drilling sequence is illustrated using a 13mm implant.

Procedure recommended by MIS cannot replace the judgment and professional experience of the surgeon.

SEVEN®

STANDARD

Screw type implants range
Standard Platform

Length	6mm	8mm	10mm	11.50mm	13mm	16mm
Ø3.75 mm		MF7-08375 	MF7-10375 	MF7-11375 	MF7-13375 	MF7-16375 
Ø4.20 mm	MF7-06420 	MF7-08420 	MF7-10420 	MF7-11420 	MF7-13420 	MF7-16420 

Surgical Tools

MT-HSI10
Short insertion tool, internal hex.

MT-HLI10
Long insertion tool, internal hex.

MT-SRH20
Short insertion tool internal hex.

MT-LRH20
Long insertion tool internal hex.

Implant Cover Screw and Healing Caps

MC1-00375

MH-03375
MH-04375
MH-05375
MH-06375

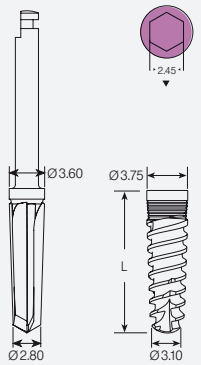
MH-A3375
MH-A4375
MH-A5375
MH-A6375

MH-53375
MH-54375
MH-55375
MH-56375

SEVEN®

STANDARD

Ø3.75mm
Standard Platform

Catalog No.	Dimensions	
MF7-08375	Ø3.75mm length 8mm	
MF7-10375	Ø3.75mm length 10mm	
MF7-11375	Ø3.75mm length 11.50mm	
MF7-13375	Ø3.75mm length 13mm	
MF7-16375	Ø3.75mm length 16mm	

Titanium Alloy Ti 6Al 4V ELI

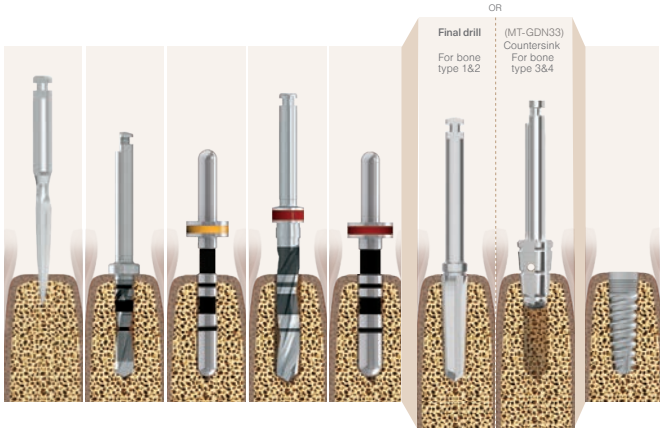
Sand-Blasted and Acid-Etched

Final Drill

Each implant is supplied with a single-use final drill corresponding to the correct diameter and length, allowing a short and safe drilling procedure.

Ø3.75mm Implant Procedure

Drilling Speed (RPM)	1200-1500	900-1200		500-700		200-400	200-500	15-25
Diameter	Ø1.90	Ø2.40	Ø2.40	Ø2.80	Ø2.80	Ø2.80 Ø3.60	Ø3.75	Ø3.75



Do not use the final drill for bone type 3&4

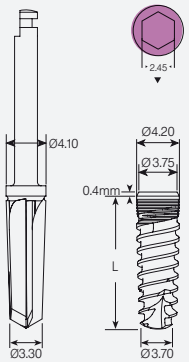
The drilling sequence is illustrated using a 13mm implant.

Procedure recommended by MIS cannot replace the judgment and professional experience of the surgeon.

SEVEN®

STANDARD

Ø4.20mm
Standard Platform

Catalog No.	Dimensions	
MF7-06420	Ø4.20mm length 6mm	
MF7-08420	Ø4.20mm length 8mm	
MF7-10420	Ø4.20mm length 10mm	
MF7-11420	Ø4.20mm length 11.50mm	
MF7-13420	Ø4.20mm length 13mm	
MF7-16420	Ø4.20mm length 16mm	

Titanium Alloy Ti 6Al 4V ELI

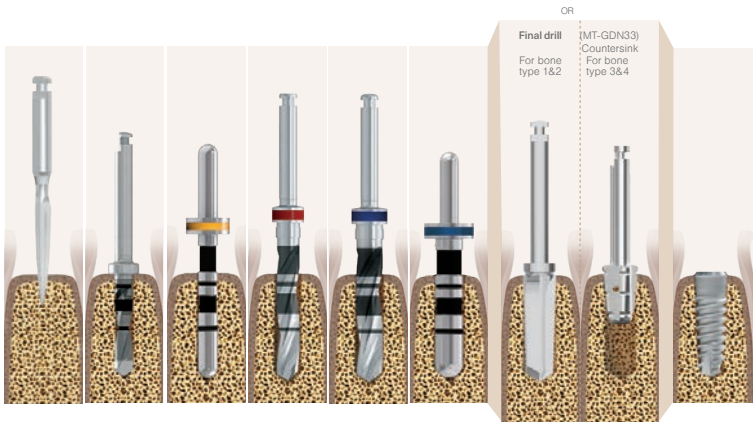
Sand-Blasted and Acid-Etched

Final Drill

Each implant is supplied with a single-use final drill corresponding to the correct diameter and length, allowing a short and safe drilling procedure.

Ø4.20mm Implant Procedure

Drilling Speed (RPM)	1200-1500	900-1200		500-700	400-700		200-400	200-500	15-25
Diameter	Ø1.90	Ø2.40	Ø2.40	Ø2.80	Ø3.20	Ø3.20	Ø3.30 Ø4.10	Ø3.30 Ø4.20	Ø4.20



Do not use the final drill for bone type 3&4

The drilling sequence is illustrated using a 13mm implant.

Procedure recommended by MIS cannot replace the judgment and professional experience of the surgeon.

SEVEN®

WIDE

Screw type implants range
Wide Platform

Length	6mm	8mm	10mm	11.50mm	13mm	16mm
Type						
Ø5 mm	MF7-06500 	MF7-08500 	MF7-10500 	MF7-11500 	MF7-13500 	MF7-16500 
Ø6 mm	MF7-06600 	MF7-08600 	MF7-10600 	MF7-11600 	MF7-13600 	

Surgical Tools

MT-HSI10

Short insertion tool, internal hex.

MT-HLI10

Long insertion tool, internal hex.

MT-SRH20

Short insertion tool internal hex.

MT-LRH20

Long insertion tool internal hex.

Implant Cover Screw and Healing Caps

MC1-00470

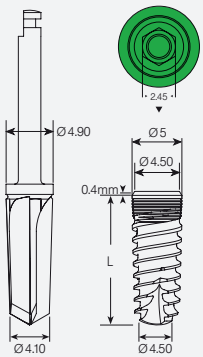
MH-W3500
MH-W4500
MH-W5500

MH-W3630
MH-W4630
MH-W5630

SEVEN®

WIDE

Ø5mm
Wide Platform

Catalog No.	Dimensions	
MF7-06500	Ø5mm length 6mm	
MF7-08500	Ø5mm length 8mm	
MF7-10500	Ø5mm length 10mm	
MF7-11500	Ø5mm length 11.50mm	
MF7-13500	Ø5mm length 13mm	
MF7-16500	Ø5mm length 16mm	

Titanium Alloy Ti 6Al 4V ELI

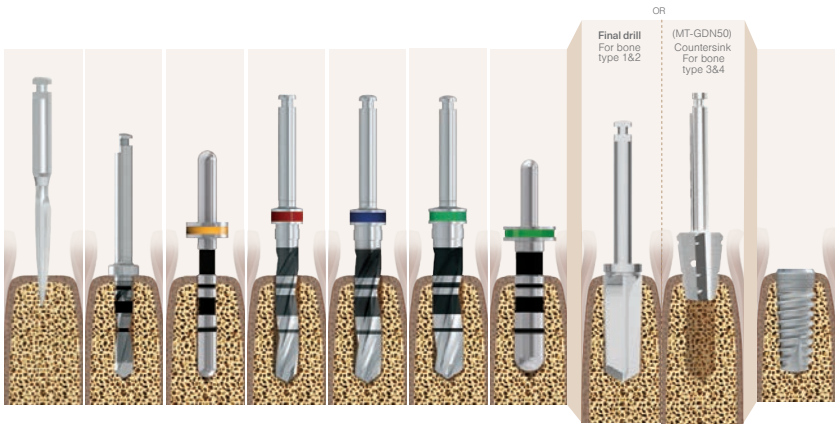
Sand-Blasted and Acid-Etched

Final Drill

Each implant is supplied with a single use final drill corresponding to the correct diameter and length, allowing a short and safe drilling procedure.

Ø5mm Implant Procedure

Drilling Speed (RPM)	1200-1500	900-1200		500-700	400-700	400-600		200-400	200-500	15-25
Diameter	Ø1.90	Ø2.40	Ø2.40	Ø2.80	Ø3.20	Ø4	Ø4	Ø4.10 Ø4.90	Ø5	Ø5



Do not use the final drill for bone type 3&4

The drilling sequence is illustrated using a 13mm implant.

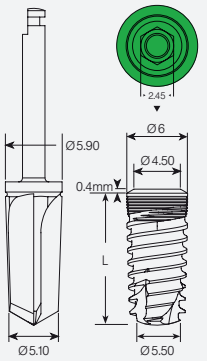
Procedure recommended by MIS cannot replace the judgment and professional experience of the surgeon.

SEVEN®

WIDE

Ø6mm
Wide Platform

Catalog No.	Dimensions
MF7-06600	Ø6mm length 6mm
MF7-08600	Ø6mm length 8mm
MF7-10600	Ø6mm length 10mm
MF7-11600	Ø6mm length 11.50mm
MF7-13600	Ø6mm length 13mm



Titanium Alloy Ti 6Al 4V ELI

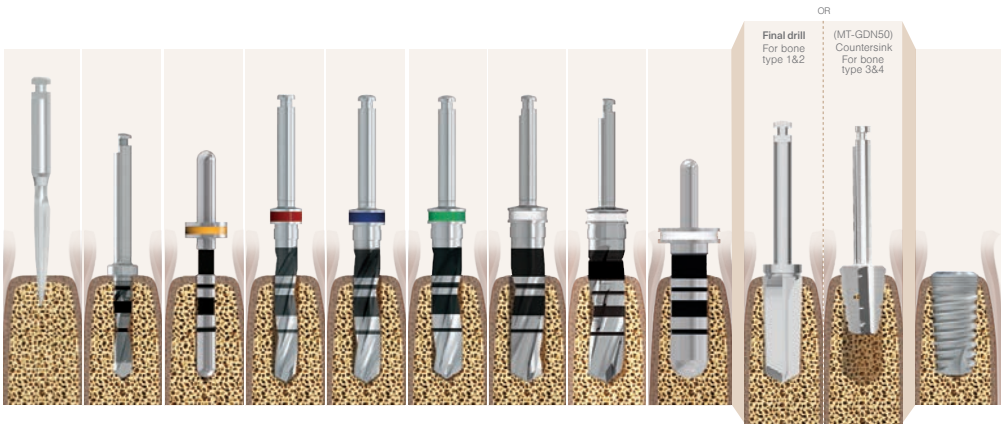
Sand-Blasted and Acid-Etched

Final Drill

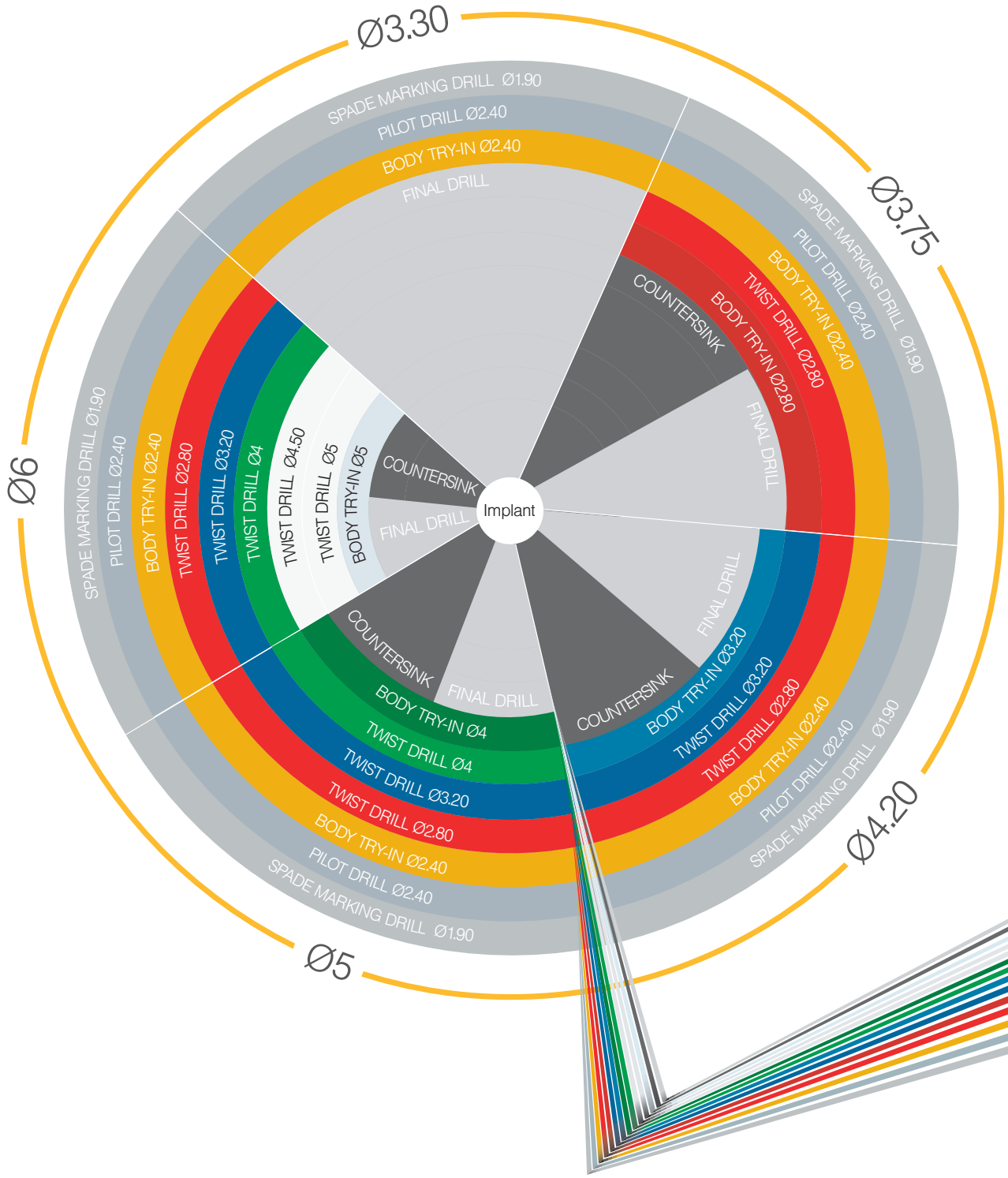
Each implant is supplied with a single use final drill corresponding to the correct diameter and length, allowing a short and safe drilling procedure.

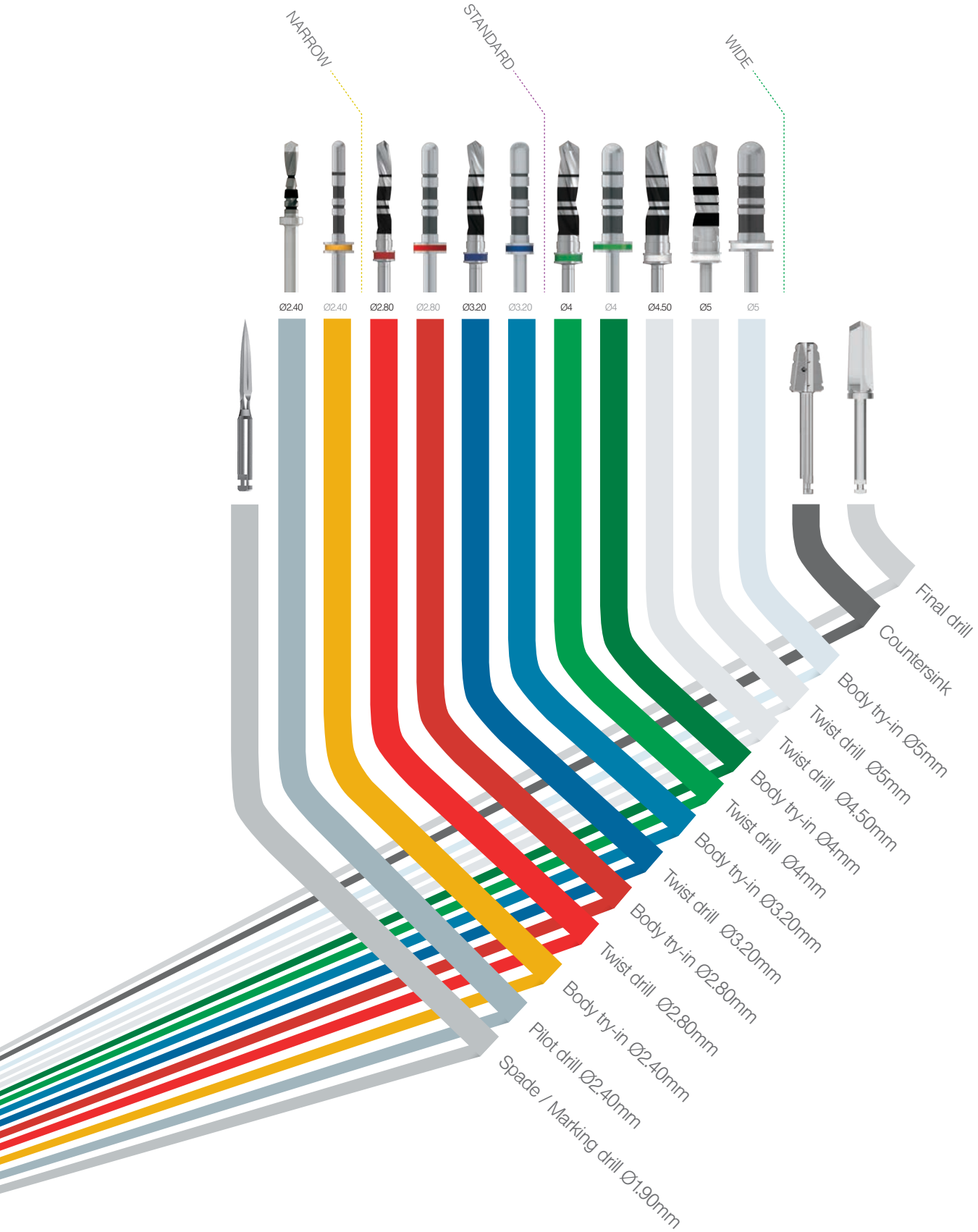
Ø6mm Implant Procedure

Drilling Speed (RPM)	1200-1500	900-1200		500-700	400-700	400-600	300-500	300-500		200-400	200-500	15-25
Diameter	Ø1.90	Ø2.40	Ø2.40	Ø2.80	Ø3.20	Ø4	Ø4.50	Ø5	Ø5	Ø5.10 Ø5.90	Ø6	Ø6



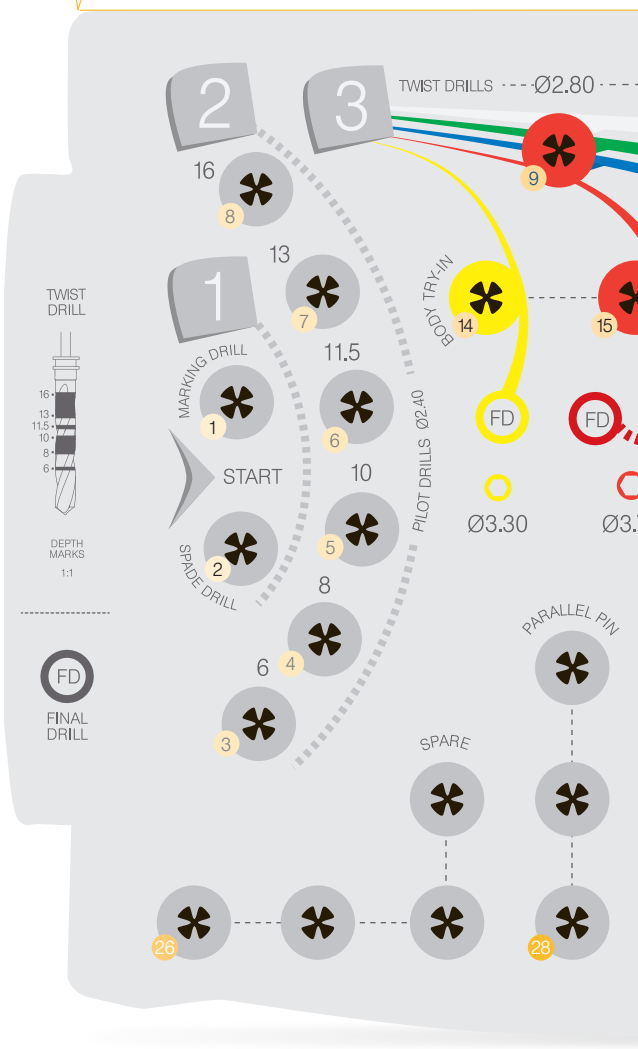
Drilling Procedures.




NARROW
STANDARD
WIDE
Ø2.40
Ø2.40
Ø2.80
Ø2.80
Ø3.20
Ø3.20
Ø4
Ø4
Ø4.50
Ø5
Ø5
Final drill
Countersink
Body try-in Ø5mm
Twist drill Ø5mm
Twist drill Ø4.50mm
Body try-in Ø4mm
Twist drill Ø4mm
Body try-in Ø3.20mm
Twist drill Ø3.20mm
Body try-in Ø2.80mm
Twist drill Ø2.80mm
Body try-in Ø2.40mm
Pilot drill Ø2.40mm
Spade / Marking drill Ø1.90mm

SEVEN Surgical Kit.

MK-EI48 | With external irrigation drills



MARKING DRILLS

1 

MT-TDN19
Marking drill Ø1.90mm external irrigation

2 

MT-SMD10
Spade marking drill

PILOT DRILLS

3 

MT-P2406
Pilot drill with built in stopper Ø2.40 for 6mm length implants

4 

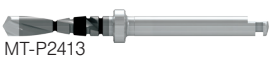
MT-P2408
Pilot drill with built in stopper Ø2.40 for 8mm length implants

5 

MT-P2410
Pilot drill with built in stopper Ø2.40 for 10mm length implants

6 

MT-P2411
Pilot drill with built in stopper Ø2.40 for 11.5mm length implants

7 

MT-P2413
Pilot drill with built in stopper Ø2.40 for 13mm length implants

8 

MT-P2416
Pilot drill Ø2.40 for 13mm length implants

TWIST DRILLS

9 

MT-TDT28
Twist drill Ø2.80mm external irrigation

10 

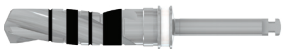
MT-TDT32
Twist drill Ø3.20mm external irrigation

11 

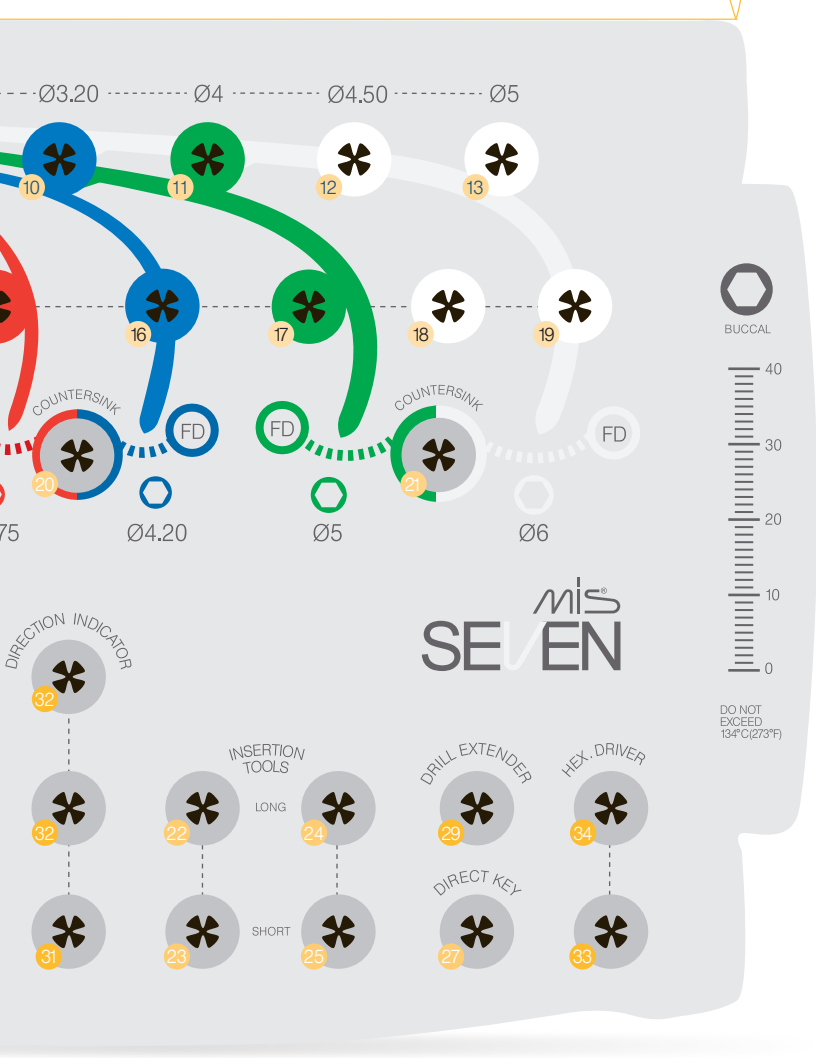
MT-TDT40
Twist drill Ø4mm external irrigation

12 

MT-TDT45
Twist drill Ø4.50mm external irrigation

13 

MT-TDT50
Twist drill Ø5mm external irrigation

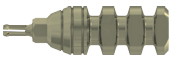


SURGICAL TOOLS

28 
MT-PP240
Parallel pin, Ø3/2.40mm

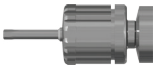
29 
MT-DE001
Drill extender

30 
MT-RT070
Surgical Torque Ratchet

31 
MN-PF330
Direct press fit for closed tray, NP

32 
MD-PF375
Direct press fit for closed tray, SP/WP

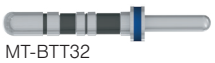
33 
MT-RDL30
Long driver for 0.05 inch hex.

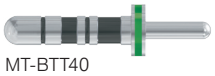
34 
MT-RDS30
Short driver for 0.05 inch hex.

BODY TRY-INS

14 
MT-BTT24
Body try-in Ø2.40mm

15 
MT-BTT28
Body try-in, Ø2.80mm

16 
MT-BTT32
Body try-in, Ø3.20mm

17 
MT-BTT40
Body try-in, Ø4mm

18 
MT-BTT45
Body try-in, Ø4.50mm

19 
MT-BTT50
Body try-in, Ø5mm

COUNTERSINKS

20 
MT-GDN33
Countersink, SP

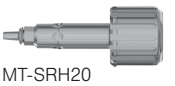
21 
MT-GDN50
Countersink, WP

INSERTION TOOLS

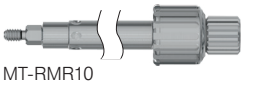
22 
MT-HLI10
Long insertion tool, internal hex.

23 
MT-HSI10
Short insertion tool, internal hex.

24 
MT-LRH20
Long insertion tool, internal hex.

25 
MT-SRH20
Short insertion tool, internal hex.

26 
MT-NRH10
Long ratchet adapter, internal hex. , NP

27 
MT-RMR10
Long direct hand and ratchet key

Surface Quality.

* All MIS implants undergo the same surface treatments; sand-blasting and acid-etching. The research study was done on the SEVEN implant, however the results are valid for all MIS implant surfaces.

Identification Card and Codification of the Chemical and Morphological Characteristics of 62 Dental Implant Surfaces. Part 3: Sand-Blasted/Acid-Etched (SLA Type) and Related Surfaces (Group 2A, main subtractive process).

Background and Objectives

Dental implants are commonly used in dental therapeutics, but dental practitioners only have limited information about the characteristics of the implant materials they take the responsibility to place in their patients. The objective of this work is to describe the chemical and morphological characteristics of 62 implant surfaces available on the market and establish their respective Identification (ID) Card, following the Implant Surface Identification Standard (ISIS). In this third part, surfaces produced through the main subtractive process (sand-blasting/acid-etching, SLA-type and related) were investigated.

Materials and Methods

Eighteen different implant surfaces were characterized: Straumann SLA (ITI Straumann, Basel, Switzerland), Ankylos (Dentsply Friadent, Mannheim, Germany), Xive S (Dentsply Friadent, Mannheim, Germany), Frialit (Dentsply Friadent, Mannheim, Germany), Promote (Camlog, Basel, Switzerland), Dentium Superline (Dentium Co., Seoul, Korea), Osstem SA (Osstem implant Co., Busan, Korea), Genesio (GC Corporation, Tokyo, Japan), Aadva (GC Corporation, Tokyo, Japan), MIS Seven (MIS Implants Technologies, Bar Lev, Israel), ActivFluor (Blue Sky Bio, Grayslake, IL, USA), Tekka SA2 (Tekka, Brignais, France), Twinkon Ref (Tekka, Brignais, France), Bredent OCS blueSKY (Bredent Medical, Senden, Germany), Magitech MS2010 (Magitech M2I, Levallois-Perret, France), EVL Plus (SERF, Decines, France), Alpha Bio (Alpha Bio Tec Ltd, Petach Tikva, Israel), Neoporos (Neodent, Curitiba, Brazil). Three samples of each implant were analyzed.

Superficial chemical composition was analyzed using XPS/ESCA (X-Ray Photoelectron Spectroscopy/Electron Spectroscopy for Chemical Analysis) and the 100nm in-depth profile was established using Auger Electron Spectroscopy (AES). The microtopography was quantified using optical profilometry (OP). The general

morphology and the nanotopography were evaluated using a Field Emission-Scanning Electron Microscope (FE-SEM). Finally, the characterization code of each surface was established using the ISIS, and the main characteristics of each surface were summarized in a reader-friendly ID card.

Results

From a chemical standpoint, in the 18 different surfaces of this group, 11 were based on a commercially pure titanium (grade 2 or 4) and 7 on a titanium-aluminium alloy (grade 5 or grade 23 ELI titanium). 4 surfaces presented some chemical impregnation of the titanium core, and 5 surfaces were covered with residual alumina blasting particles. 15 surfaces presented different degrees of inorganic pollutions, and 2 presented a severe organic pollution overcoat. Only 3 surfaces presented no pollution (and also no chemical modification at all): GC Aadva, Genesio, MIS SEVEN®. From a morphological standpoint, all surfaces were microrough, with different microtopographical aspects and values. All surfaces were nanosmooth, and therefore presented no significant and repetitive nanostructures. 14 surfaces were homogeneous and 4 heterogeneous. None of them was fractal.

Discussion and Conclusion

The ISIS systematic approach allowed to gather the main characteristics of these commercially available products in a clear and accurate ID card. The SLA-type surfaces have specific morphological characteristics (microrough, nanosmooth, with rare and in general accidental chemical modification) and are the most frequent surfaces used in the industry. However they present different designs, and pollutions are often detected (with blasting/etching residues particularly). Users should be aware of these specificities if they decide to use these products.

Identification card of the MIS SEVEN surface, following the implant Surface identification Standard (ISIS) codification

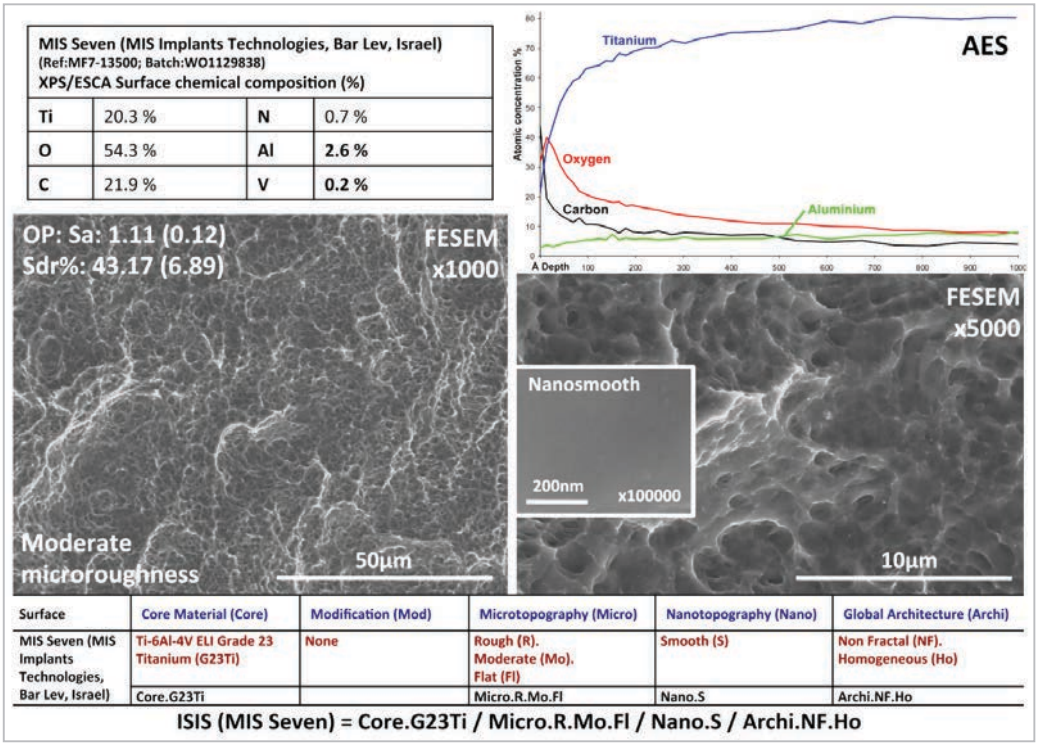


Fig. 1

Identification Card of the MIS SEVEN® surface: MIS Seven (MIS Implants Technologies, Bar Lev, Israel; Figure 1) was a sandblasted/acid-etched surface on a grade 23 ELI (Extra Low Interstitials) titanium core. No pollution or chemical modification was detected. the surface was moderately microrough, nanosmooth, and homogeneous all over the implant.

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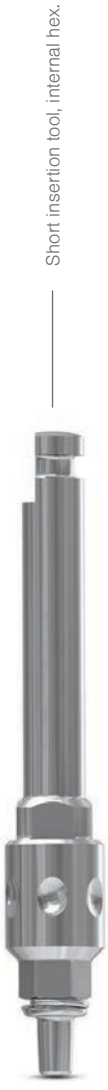
Insertion Tools.

The SEVEN key system is designed to facilitate quick, reliable implant procedures. Keys are supplied within the advanced SEVEN surgical kit. The keys are suitable for use with SEVEN NARROW connectors.

MT-SRH20

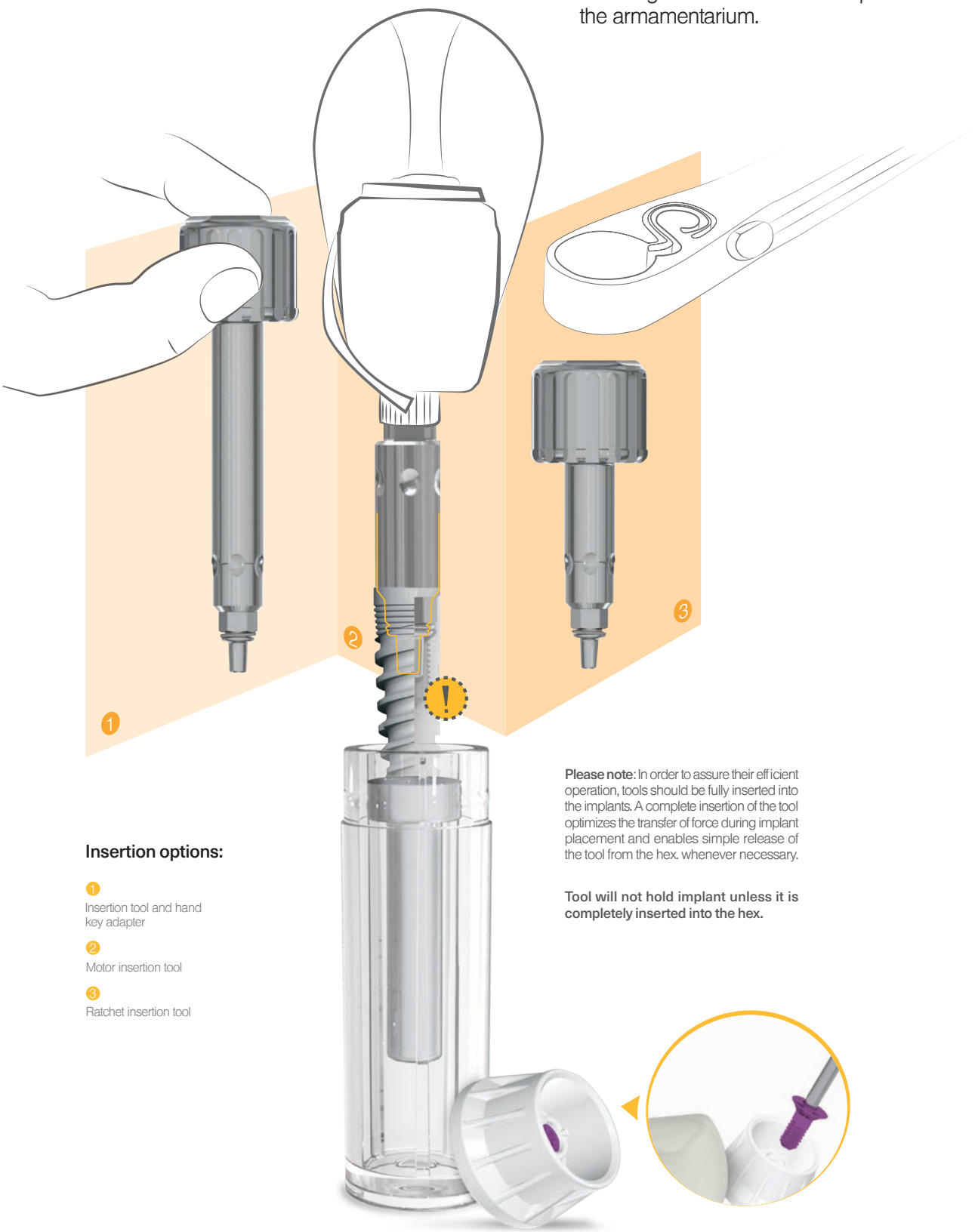
MT-LRH20



MT-HSI10

MT-HLI10

MIS offers a line of specially engineered insertion tools suitable for use either manually or with a ratchet, effectively reducing the number of tools required in the armamentarium.



Please note: In order to assure their efficient operation, tools should be fully inserted into the implants. A complete insertion of the tool optimizes the transfer of force during implant placement and enables simple release of the tool from the hex. whenever necessary.

Tool will not hold implant unless it is completely inserted into the hex.

Insertion options:

1. Insertion tool and hand key adapter
2. Motor insertion tool
3. Ratchet insertion tool

Package Contents.

Each SEVEN implant comes with a cover screw in the implant package.

Following our “Make It Simple” philosophy, MIS is proud to be the first to include a sterile single-use final drill with every SEVEN implant, to ensure a safe and precise surgical procedure.

Packaging.

A double packing system ensures sterilization and safety. Packages are designed for easy handling during surgery and for ease-of-use with surgical gloves.

Prosthetic platform indication

Prosthetic components are marked by specific colors, representing platform diameters.

Implant diameter & platform indication

The outer tube is color-coded, indicating the implant platform. The numeric indication specifies implant diameter and length.

Implant identification

The sticker on top of the box, specifies implant diameter, length and platform size.

Easy pull tab

The pull tab is easily identified and facilitates convenient opening during surgery.

MC-SEVEN Rev.17

MIS Implants Technologies Ltd.
www.mis-implants.com

The MIS Quality System complies with International Quality Standards: ISO 13485:2003 - Quality Management System for Medical Devices, ISO 9001: 2008 - Quality Management System and CE Directive for Medical Devices 93/42/EEC. MIS products are cleared for marketing in the USA and CE approved.