

mis

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

CE

0483 | ISO 9001:2000
ISO 13485:2003
FDA Cleared for marketing

Authorized European Representative:
MIS Germany, Heidestrasse 7, 32427 Minden, GERMANY

MiSTRAL

A New Implant by MIS

MIS
Make it Simple

2.

Based on extensive experience with advanced surface morphology combined with special geometry of the two-stage SEVEN implants, MIS is proud to launch the Mistral: a one-stage screw type implant that includes the entire list of features as well as a one-stage operation protocol solution. The Mistral implant comes in a unique packaging which includes the Mistral implant, Direct anti rotation 1mm abutment, Plastic healing cap and Mount transfer plastic cap. In addition MIS is proud to introduce the primary line of restorative parts unique for the Mistral and the one-stage procedure with an octagon and cone connection.



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- ✔ MIS Implants are manufactured and packaged in accordance with the international standards of ISO-9001:2000 and ISO 13485:2003.
- ✔ MIS Implants are clear for marketing by the FDA – The American Food and Drug Administration.
- ✔ MIS products are CE - approved.
- ✔ MIS has the approval of the Israeli Ministry of Health.
- ✔ MIS Implants are packaged in sterile, gamma-irradiated tubes.

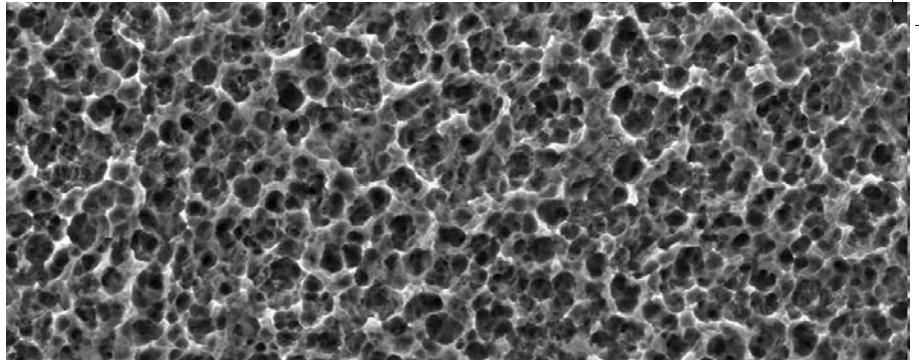


*Mi*S
MiSTRAL

4.



Mistral screw type implant
standard platform $\varnothing 4.10\text{mm}$



new surface morphology

Advantages.

Successful

High success rate, provided by a combination of advanced geometric design and new surface morphology.

Forgiving

MISTRAL is designed for implantation in a wide range of bone types and bone augmentation procedures.

Simple

A specially designed combination mount is supplied with every implant, allowing immediate impression and cemented crown restoration.

Easy

Increased insertion speed is provided by a dual thread of 2.4mm, combined with self-tapping capability.

Initial Stability

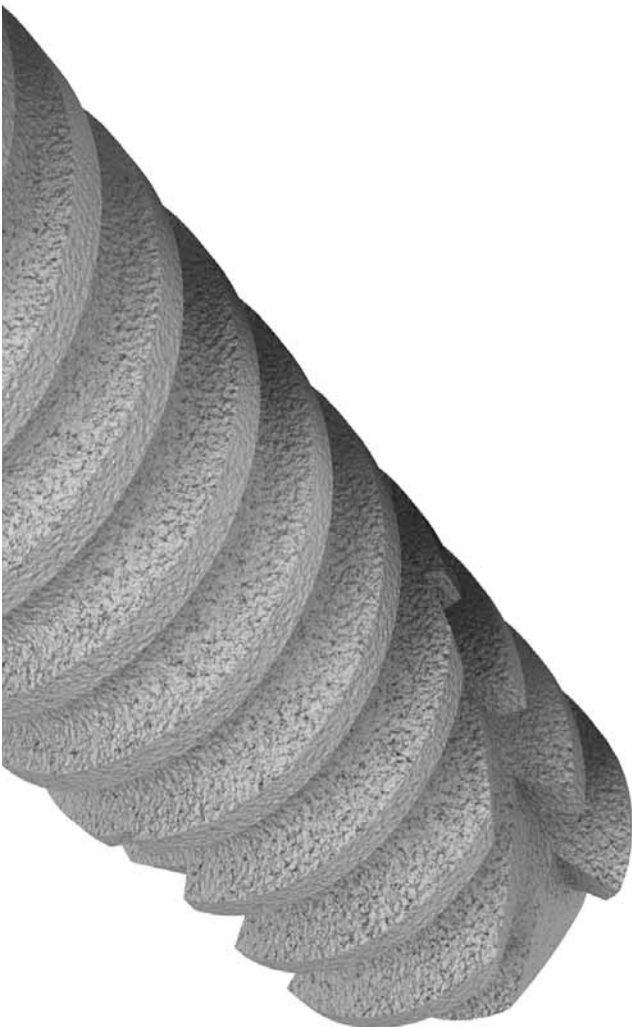
The thread thickness changes from the apex to the neck with the same pitch, improving the compression of the bone during insertion. Micro Rings on the implant neck provide better initial stability by improving the interfacial shear strength at the crestal zone.

Minimal Bone Resorption

The surface roughness, together with the high level of surface morphology, prevents bone resorption.

Self-Tapping









MISTRAL cuts its own threads during implantation, minimizing friction-generated heat. Three spiral channels fill with bone chips during implantation to improve integration.



6.

Implant Range Screw Type

Standard platform.

Length	8mm	10mm	11.50mm	13mm	16mm
Ø 3.75mm Screw type implant standard platform	MF9-08375 	MF9-10375 	MF9-11375 	MF9-13375 	MF9-16375 
Ø 4.10mm Screw type implant standard platform	MF9-08410 	MF9-10410 	MF9-11410 	MF9-13410 	MF9-16410 
Ø 4.80mm Screw type implant standard platform	MF9-08480 	MF9-10480 	MF9-11480 	MF9-13480 	MF9-16480 

Cover Screw and Healing Caps for Implants.

Available in gingival heights
of 1.50mm and 3mm

Standard

IC1-00350



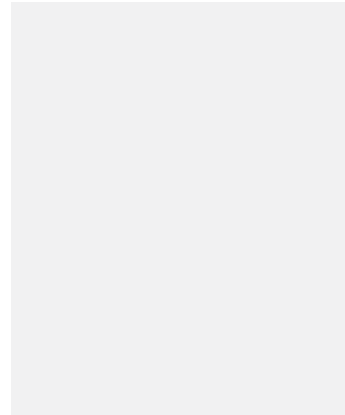
CH-15550



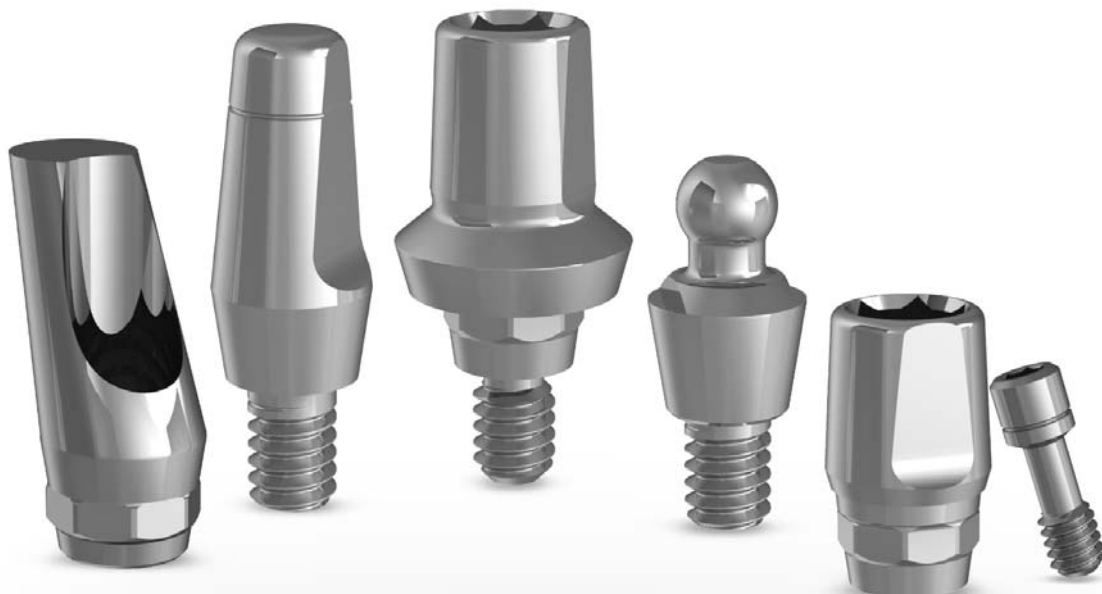
CH-03550



Restorative Components.









Following a long and intensive research and development procedure backed up with a combination of knowledge precision and experience led to a range of restoration components which imbed the innovation and simplicity of MIS.



Internal Octagon. Restorative System Table

System	Abutment	Analog	Healing Cap	Plastic Cap	
Solid	 <p>CT-SADL1 CT-SADS1</p>	 <p>CD-SAA40 (4mm) CD-SAA55 (5.50mm) CD-SAA70 (7mm)</p>		Impression	Plastic Cap
	 <p>CD-SA400 (4mm) CD-SA550 (5.50mm) CD-SA700 (7mm)</p>			 <p>CD-SIC01</p>	 <p>CD-SAP01 CD-SOP01</p>
Direct Anti Rotation	 <p>CD-CA420 CO-S0240</p>	 <p>CD-RSM48 MD-RSM48</p>	 <p>MM-CHC55</p>	 <p>MM-MTP53</p>	 <p>MM-APC49 MM-CPC49</p>
Direct Anti Rotation 1mm	 <p>CD-CM488 CO-S0240</p>	 <p>CD-RSM48 CD-RSM10</p>	 <p>MW-CHC55</p>	 <p>MM-MTP53</p>	 <p>MW-APC49 MW-CPC49</p>

9.

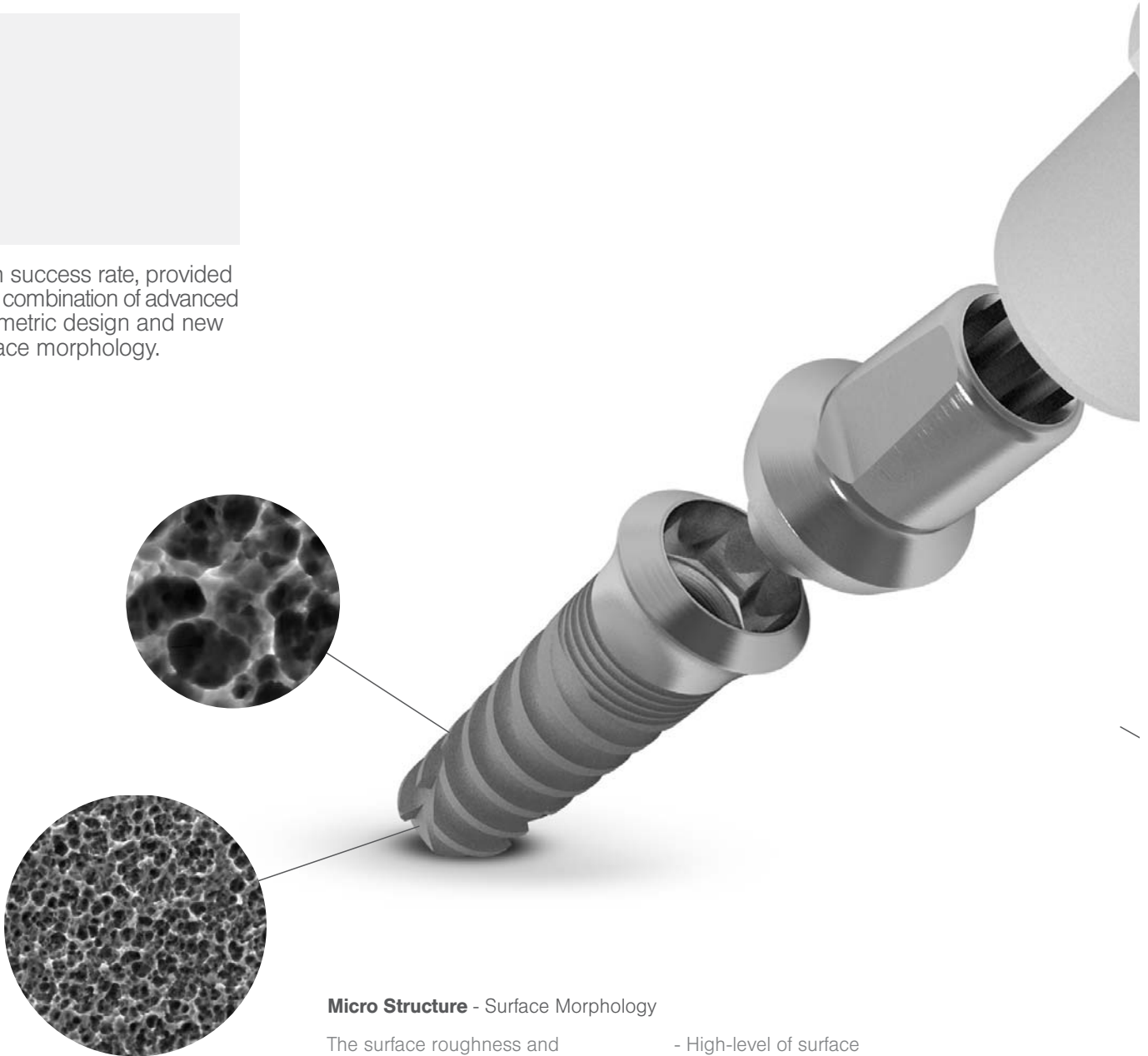
	System	Abutment	Ball Cap	
	Ball Attachment	 CB-00225  MT-BK235	 MB-GPS10  MB-SF200	
	Angulated	 CD-AN015 (15°) CD-AN020 (20°)  CO-S0240		
		Note: all superstructures include the relevant screw.		

Note: all superstructures include the relevant screw.

10.

Success.

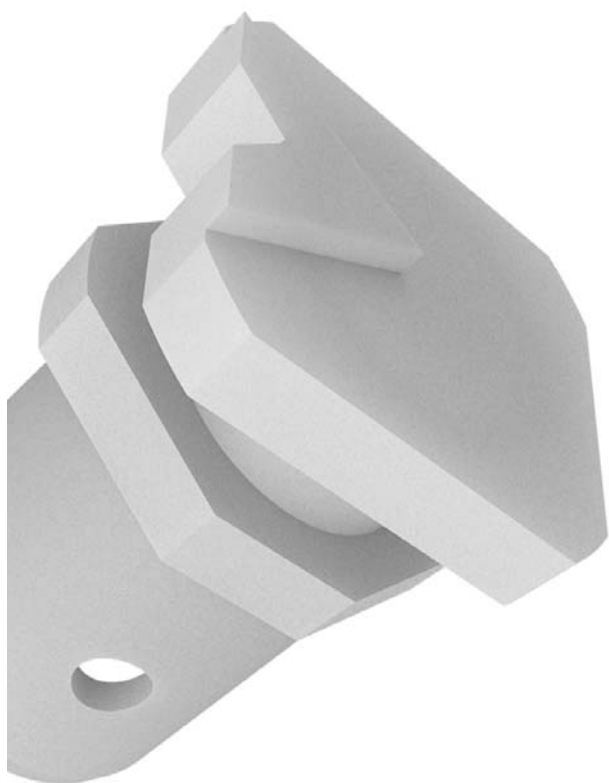
High success rate, provided by a combination of advanced geometric design and new surface morphology.



Micro Structure - Surface Morphology

The surface roughness and microgeometry of titanium is achieved by blasting particles and acid-etching. A larger surface area increases bone-to-implant contact, resulting in more area for bone cell attachment. The micro mechanical fixation increases the stability of the implant.

- High-level of surface morphology.
- Increased bone attachment has been shown to be optimal with micro-pits in the 5-10 micron range.



Adsorption of Serum Protein to Modified Titanium Surfaces

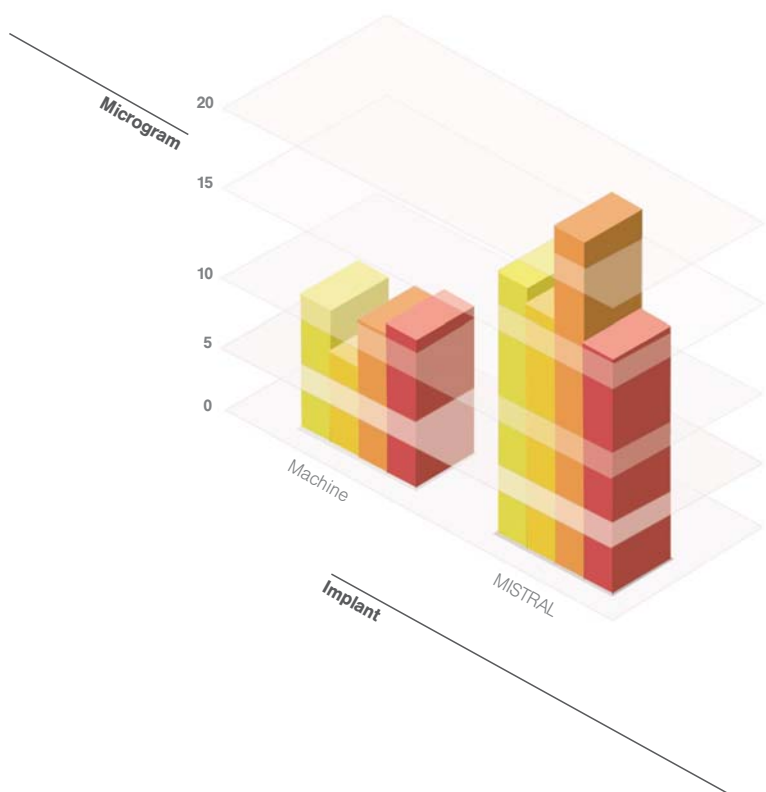
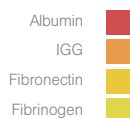
M.N. Sela, L.Badihi, G.Rosen, D.Kohavi and D. Steinberg

The use of Titanium (Ti) implants is a novel clinical procedure in dentistry. The adsorption of biological molecules to the implant's surface triggers a sequence of events that may determine the outcome of this procedure. Clinical data suggests that modified Ti surfaces play an important role in the success or failure of the implant. Objective: the purpose of this study was to investigate the interaction between Ti implants with different surface properties and serum proteins, in order to find the optimal implant surfaces which may improve the Osseointegration process and implant intake. Materials & Methods: Six mm in diameter Ti disks with two types of surface modifications were compared: Machined and Sandblast plus Acid-Etched. The disks were coated with mixtures of Human Serum Albumin conjugated with fluorescein (HAS-FITC).

Following incubation, the coat was removed from the disks by SDS. A Confocal Scanning Laser Microscope was used to visualize and measure the HAS-FITC coat and the degree of protein removal from the Ti surfaces.

Results: The Confocal Microscope images revealed a significantly higher amount of HAS-FITC coat on the rough disks, as compared with the machined disks. Furthermore, under similar experimental conditions, less HAS-FITC could be removed from the rough disks than from the machined disks.

Conclusions: Absorption of albumin to the rough treated Ti surface is both qualitatively and quantitatively far more intense, as compared with the machined surfaces. Further studies of the chemical and physical characterization of the modified Ti surfaces are underway. Moreover, additional serum proteins, as well as oral microorganisms, are being examined for their interactions with the modified Ti surfaces.

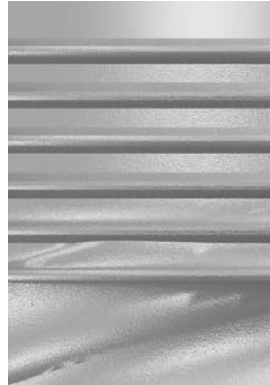
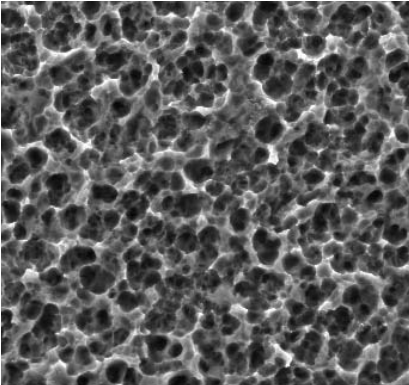


Hebrew University
Jerusalem, Israel, IADR
August 03, 2004

12.

Micro Structure
Micro Rings

Micro rings (0.1x0.3mm) on the neck provide a better initial stability by improving the interfacial shear strength in the crestal zone.

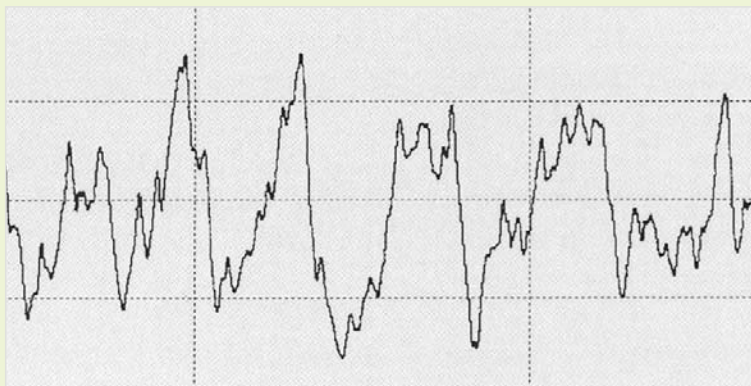


Surface.

The surface roughness, together with the high level of surface morphology, prevents bone resorption at the implant's neck.

Roughness Measurement

The arithmetic average of the deviation Ra is the most commonly used measurement for surface roughness. The micro geometry of MIS implants meet the roughness recommended in the international literature.



Instrument:
Parthometer M1
(MAHR)

Ra 2.25micron
Rz 14.65micron
Rmax 15.5micron
R profile 0.25mm
Lt 5.60mm
Lc 0.80mm
Pc (0.5-0.5) 165/c

Analysis Reports

XPS analysis conditions

Instrument: VG Scientific Sigma Probe
 X-Ray Source: Monochromatic Al K α , 1486.6eV
 X-Ray Beam Size: 4005m

For surface analysis, the samples were irradiated with monochromatic X-rays. Survey spectra were recorded with a pass energy of 100e V, through which the surface chemical composition was determined. The atomic concentrations were calculated using elemental sensitivity factors without applying any standardization procedure. The core level binding energies of the different peaks were normalized by setting the binding energy for the Cls at 284.5 eV.

For each of the screws, one flat edge area, marked as #1, was analyzed in the as-received state only:

Table 1

XPS Atomic Concentrations (%) for LOT 41903

Implants	C	Ti	O	N	Ca	Si	S	Cl	Na	Al	Cu	Mg	F	P	ZN
MF9-11410, flat area	25.71	17.60	52.22	1.99	-	-	-	-	-	1.96	-	0.51	-	-	-
MF9-11410, thread area	28.66	14.88	52.62	0.84	-	-	-	-	--	2.12	-	0.87	-	-	-

Table 2

Ti Oxide Thickness (nm)

Samples	Oxide Thickness (nm)
MF9-11410	6.5

Interpretation of Results:

No strange elements or traces thereof were identified. This means that the surface treatment (etching) did not leave undesired effects. The C/Ti ratio classified the implants as "normal". The ratio admitted is where Ti is 15% and C is 30%.



Positions.

Direct Anti Rotation
CD-CA420 (4.20mm)

Two burn-out plastic caps combine solutions for a bridge or a single crown.
Including fitted healing cap.
Abutment with conical octagon permits return to the same location.
Maximum angled position is 3°.

Solid
CD-SA400 (4mm)
CD-SA550 (5.50mm)
CD-SA700 (7mm)

One impression plastic cap for all abutments heights.
Two burn-out plastic caps combines solutions for a bridge or a single crown.
Maximum angled position is 6° degrees.

Direct Anti Rotation 1mm
CD-CM488 (5.10mm)

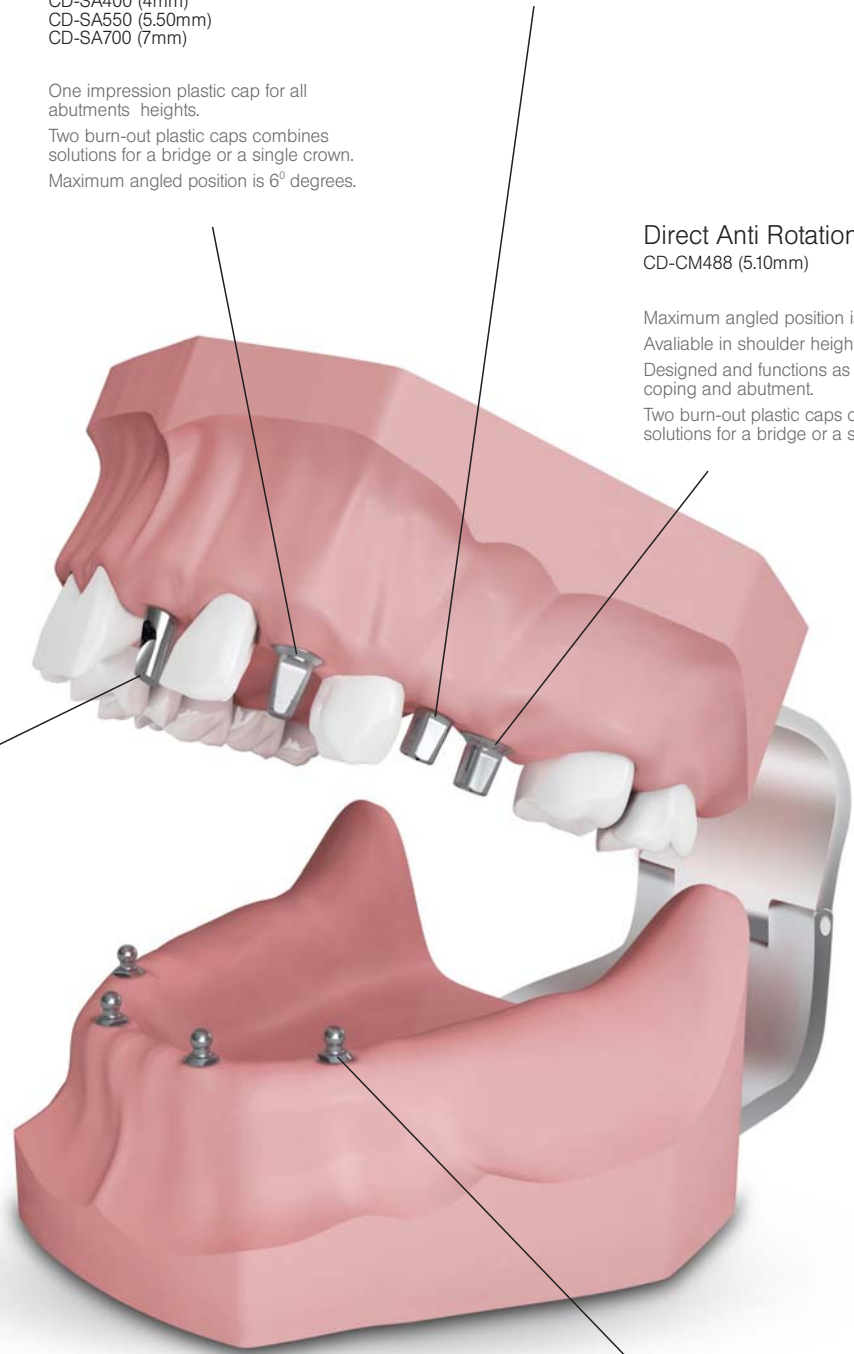
Maximum angled position is 3°.
Available in shoulder height of 1.20mm.
Designed and functions as a transfer coping and abutment.
Two burn-out plastic caps combines solutions for a bridge or a single crown.

Angulated
CD-AN015 (15°)
CD-AN020 (20°)

Available in one height 5.80mm.
8 potential facets to locate.
Round profile shape.

Ball Attachment
CB-00225 (2.60mm)

Standard ball screw diameter 2.25mm.
Compatible with ball attachments
Available in one height 2.60mm.



* Especially designed for mistral platform Ø 4.80

