

p-iO

Developed By P-I Brånemark



MT-F
THE NEXT GENERATION



P-I Brånemark solutions were developed by Professor Per-Ingvar Brånemark, the Osseointegration pioneer, jointly with Lennart Carlsson, Fabio Giannini, clinicians and scientists from renowned universities to meet modern implant dentistry demands.

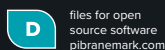
With the human biology, long-term expertise, clinical and scientific evidence as a foundation, key technologies from OSPOL AB, Sweden, were integrated resulting in the MT-F Next Generation System.

Our main objective is to support you in patient-focused treatments providing:

- . Simplicity
- . High Performance
- . Safety and Longevity



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Consult Instructions for Use. Some products might not be available in your region. Images are for illustrative purposes only. Measurements in millimeters. Ø = diameter, h = margin height. This material contains data from internal files including sponsored and independent studies. For more information, visit pibranemark.com



○ MT-F

S I M P L E E X P E R I E N C E

FOR EXCEPTIONAL
O U T C O M E S



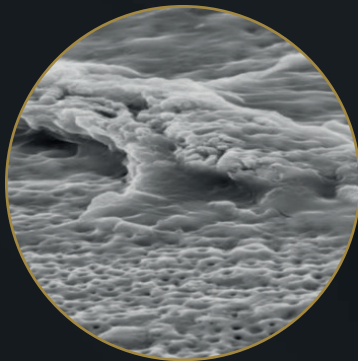
State-of-the-art Simplicity



MT-F

Less bone compression • Higher stability
Greater area compared to tapered-active
Unique interpolated core geometry
Progressive and independent stability by section
Immediate replacement • Post extraction potential

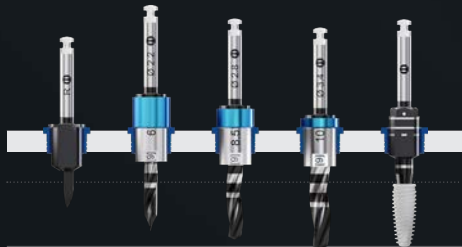
Biology & Stability ISQ ITV RTQ %



OSPOL SURFACE

Stronger Osseointegration versus SLA and anodized surfaces
Higher secondary stability • Chemically enhanced
Widely documented • Pioneer technology
Less bacterial adhesion • Minimally rough • Ceramic oxide
Method adopted by a global leader

More bone. Less biofilm



Guided & conventional

Same Instruments for Guided & Conventional procedures
Potential reduction of temperature and particle release
Drills' frictionless through Sleeves • Use of Stops
Prosthetic-driven • Sleeve design + positioning
Offset freedom in selected software

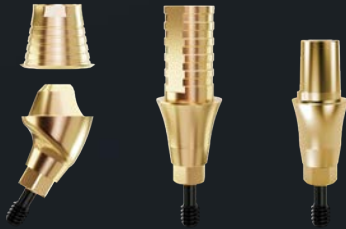
Fully Guided novel technology



● MT Interface • Biological Width

One Interface for all MT-F dimensions • 8.5° x 2
 Biological Width without excessive submersion
 Double Sealing • High preload MT Screw
 Easy sealing reversibility • MT Retriever
 In clinical use for 20+ years • Used by a global leader

Peri-implant preservation potential



ENHANCED
 Ceramic Surface

D DIGITAL
 prosthetics

Intuitive and versatile DIGITAL prosthetics
 Soft tissue space • Concave emergence
 Ceramic Surface • Potential benefits versus titanium
 Chemically Enhanced • Acid free

Modern prosthetics. Complete



⌚ Minimalistic clinical approach

3 low-speed drilling steps max for MT-F up to ø4.1
 Low friction Conical Drills • Constant angle
 One Implant Insertion Driver • Manual and handpiece
 MT-F ø3.3, 3.75, 4.1, 4.8 • Height options 6 - 18mm
 Stops for Guided & Conventional

MT-F

One Interface



Platform Ø

Implants
h = 6 - 18

3.3

3.5

3.9

4.6

Post Extraction
and compromised sites

Implant Ø

3.3

3.75

4.1

4.8

Increased coronal space

Slightly inward flange

Cortical stability

Micro Patterns

Adaptive bone contact

Interpolated core transitions



Gradual thread evolution

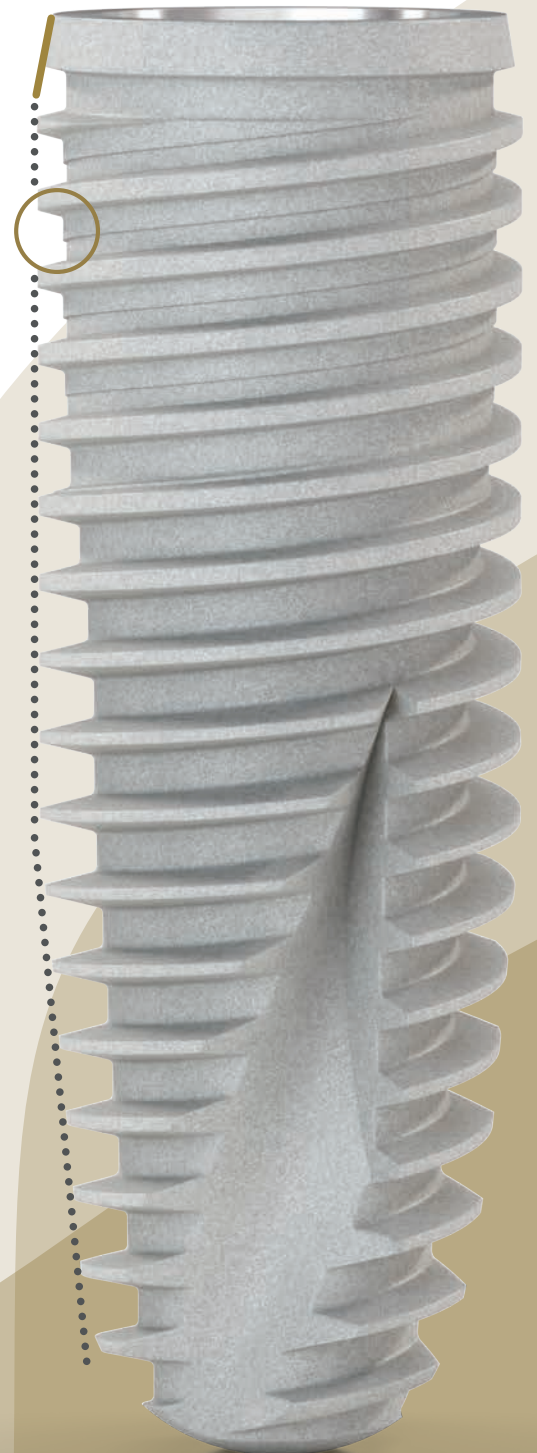
Pronounced depth in all sections

Early engagement

Smooth cutting • Thin dual thread

Axial insertion control

Biological Width positioning

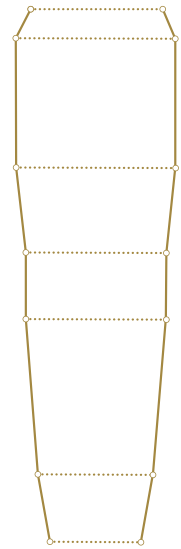


○ MT-F



Adaptive bone contact

Multiple transitions • Interpolated core



Less bone displacement

In all bone densities

● MT-F

Less Trauma • Site Engagement

Thin cutting threads • Pronounced depth in all sections

● MT-F UNIQUENESS

The multiplicity of interpolated core transitions associated with the P-I Conical Drills site preparation, and the gradual evolution of the pronounced depth cutting threads, result in a gentle implant-to-osteotomy engagement in all sections independently.

These unique geometrical combinations provide greater initial contact area with significantly less bone displacement and compression enhancing the Biological Metrics.

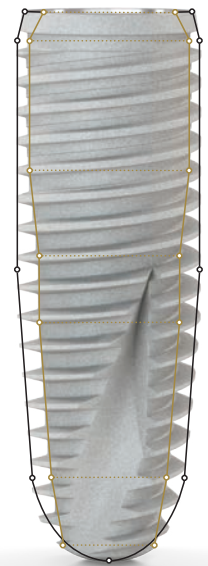
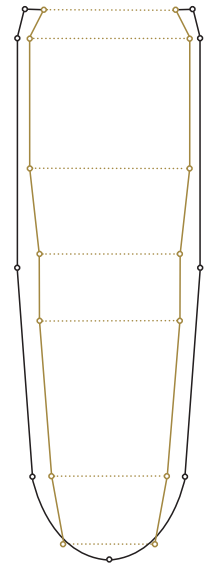
↑ ISQ

ITV ↗

RTQ %

Less compression • Progressive torque • Greater area

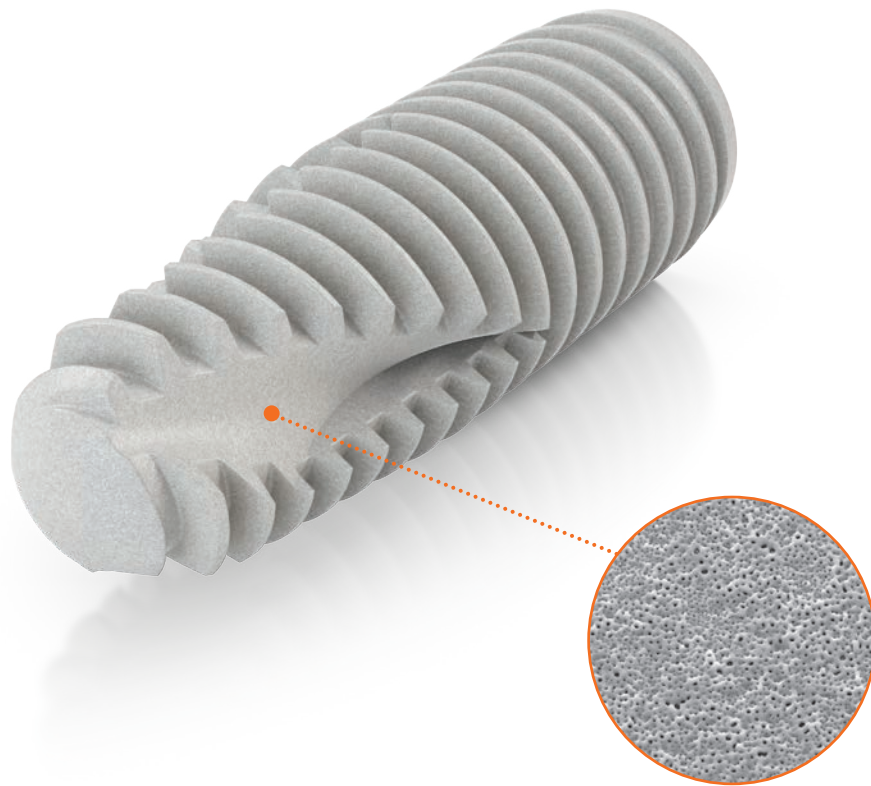
MT-F displaces significantly less bone volume and achieves similar or higher Insertion Torque Value in all bone densities, exhibiting greater area in comparison to the leading competitive tapered-active implants of similar dimensions. Data on file.



Strong Osseointegration

REDUCTION OF BIOFILM INFECTIONS

BIOACTIVE



 **OSPOL**
SURFACE

Improved bone response

In comparison to rougher oxidized and blasted surfaces

Less bacterial adhesion

Equivalent to turned surfaces • Minimally rough

Chemically enhanced

Anodized • Bioactive ions

CP **Ti**
grade 4

Anodized
+
Chemistry

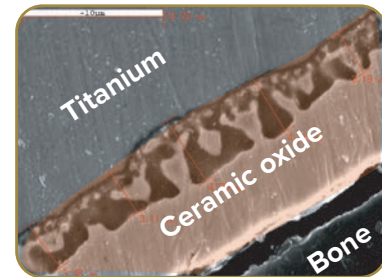
ZERO %
Aluminum
or Acid

Widely documented
Evolution of moderately rough surfaces

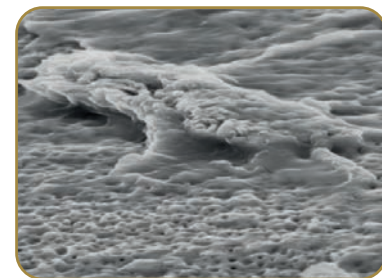


Direct and early
response

Oxide, micropores and crystal structures
greatly influence bone response



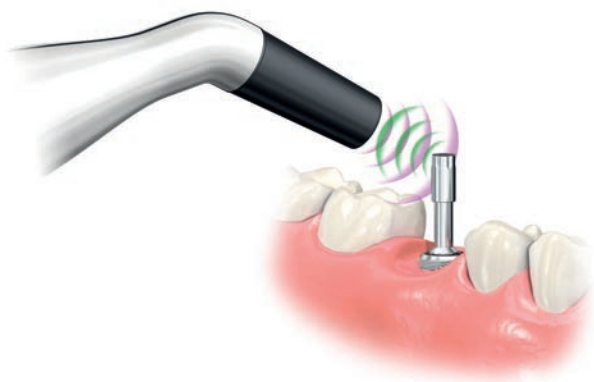
Biochemical bond,
bone in-growth
and mechanical
interlocking



Courtesy of : YT Sul, A. Wennerberg,
T. Albrektsson

Surface chemistry, anodic oxidation and ion
incorporation, enhance Osseointegration and
compensate for minimal roughness

OSPOL Surface was developed at the Gothenburg University, Sweden, and is documented in several publications. Through continual evolution since 2000 and in clinical use for over 20 years, the OSPOL Surface is a modern technology for a rapid and strong bone response, and its modification method was adopted by a global leader in 2019. Less prone to bacterial adhesion, it is a pioneer technology for chemical modification of thin anodized, oxidized, ion incorporation of smoother implants surfaces.



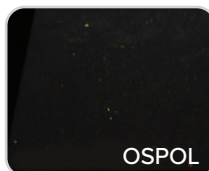
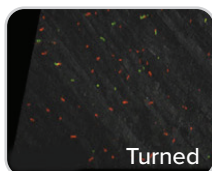
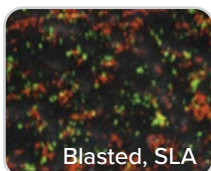
Higher ISQ for chemically- modified Surface

OSPOL Surface modification method achieves faster secondary Implant Stability Quotient • ISQ measured by Resonance Frequency Analysis RFA indicating potential for shorter healing periods.

Less bacterial adhesion and biofilm formation

BIOACTIVE

⚠ OSPOL Surface is easier to clean than rougher surfaces and its bioactivity reduces biofilm formation. The bacterial adhesion is similar to turned, machined surfaces.



(!) Some conditions, whether combined or not, represent contraindications, limitations and risks, relative and absolute, for the treatment of patients with implants. There are several risk factors in Osseointegration widely described in literature. ISQ is a critical factor to clinically monitor Osseointegration. Data from pre-clinical studies.

One Implant Interface

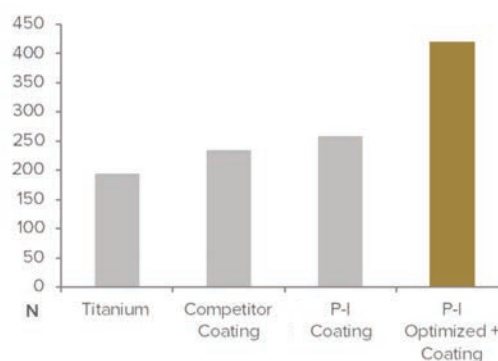
Various prosthetic platforms



High Pre-Load

Effective sealing

P-I Coating +



Easy reversibility

Low stress to peri-implant tissue



Sealing starts at provisionalization

P-I Coating+ is a biocompatible layer that reduces friction and, combined with the MT Screw optimized geometry, provides a substantially higher and homogeneous pre-load, clamping, in comparison to titanium screws at the same tightening torque of 25 Ncm. Data on file. MT Retriever is used to cancel the morse sealing and safely remove Abutments.



Interface in clinical use for 20+ years • Superior biomechanics • Double Sealing

The P-I Morse Taper is an original technology. Highlighting 8.5° x 2 conical indexed, 3mm long, the P-I MT Interface offers a high torsional yield and fatigue strength when compared to other leading systems and was adopted by a global leader in 2015. The MT-F Ø 3.3 Implant can withstand static load of approximately 600N. Data on file.

The high-preload Double Sealing mechanism has easy prosthetic reversibility, seals the Abutment on the MT Interface and the MT Screw on the Abutment, stabilizing the system, minimizing micromovement and microleakage in comparison to certain leading systems under simulated occlusal stress. The Double Sealing is an important hypothesis for the clinical consideration of MT-F Implant placement observing Biological Width principles.

Prosthetic Overview

Screw-Retained

Cement-Retained

Screw • Cemented

D DIGITAL
prosthetics



N **R** **W**



One MT Interface for all MT-F Implant dimensions.



Locator® Abutments available.
Manufactured by Zest Dental Solutions.



Same MT Screw and Prosthetic Driver Ø 1.2 for all Abutments, except straight Conical Abutment and Locator®. All P-I Components are supplied with the respective screw, except Milling Blank.

D See DIGITAL Prosthetics. Libraries are available at pibranemark.com and/or from CAD/CAM software system. Direct Geometries, 3D model Analogs and Geometry Contours available. Link C post has Dentsply Sirona, CEREC® dimensions. Always check latest library version and availability.



files for open
source software
pibranemark.com

3shape  exocad

ENHANCED Ceramic Surface



D **DIGITAL**
prosthetics

The P-I ENHANCED Ceramic Surface for Prosthetic Components is a smooth, tailored anodized surface technology that can potentially offer additional benefits for soft tissue in comparison to untreated titanium.

The acid-free P-I ENHANCED Ceramic Surface also exhibits a golden color for improved esthetics.



Kit

Surgical & Prosthetic



Stainless Steel

BIOSAFETY & DURABILITY
Conventional

Easy, simplified installation

Maximum of 3
low speed steps

(!) Except for MT-F Ø 4.8 Implant, 3 or 4 low speed steps are used. See Surgical Sequence. Spade and Round burr are optional. No pilot drill, counter sink or screw-tap required.



Conical Drills



Less friction. Less trauma

Constant apical conical angle • 3 cutting areas

Corrosion protection

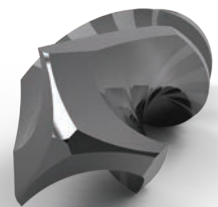
Wear resistance • Diamond Like Carbon

State-of-the-art

Special P-I design

Exceptional cutting performance

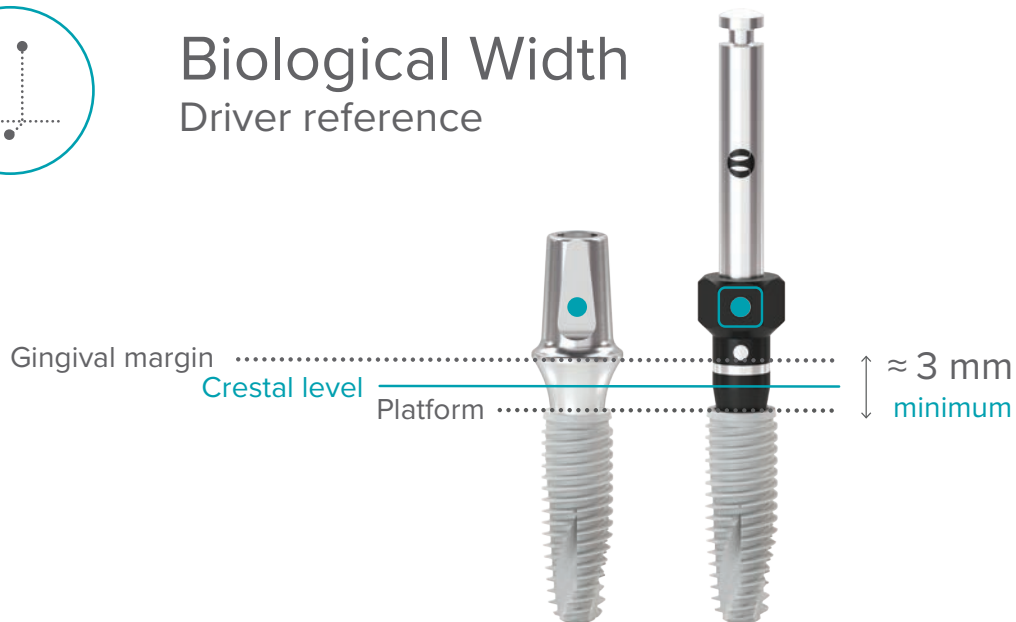
P-I Conical Drills' performance in dense bone, at the highest recommended rotation, without gradual diameter increments and applying constant feeding, present a very low friction therefore lower temperature transmission to bone tissue. Data on file.





Biological Width

Driver reference



Surgical Sequence • Healed Sites



Drills GS can be used in free hand procedures, with or without Stops.



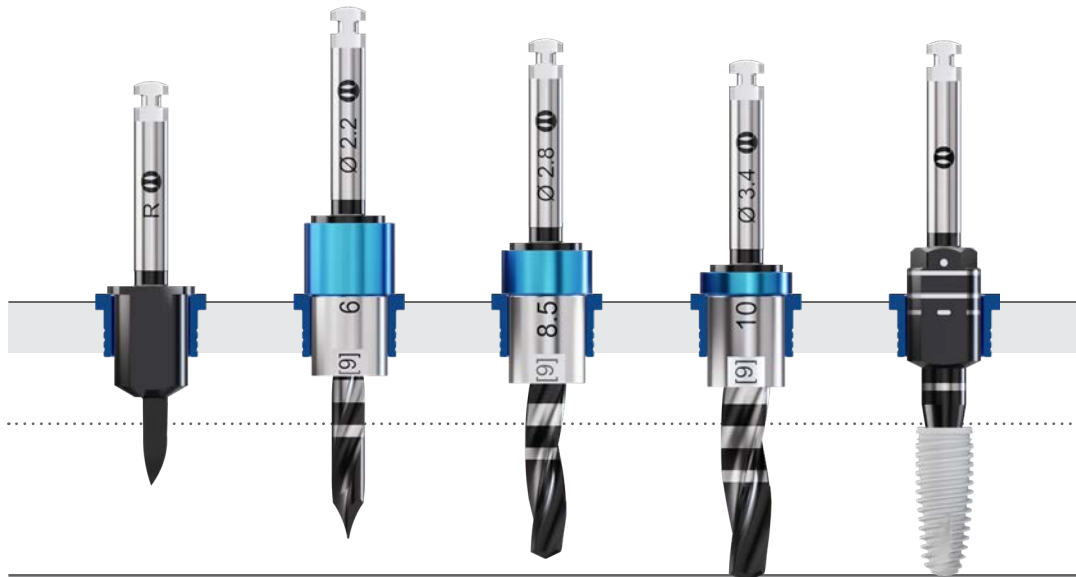
When used with Torque Wrench, the upper hexagonal portion of the Implant Insertion Driver should be entirely connected to the hexagon of the Driver Adapter.



Precision • Simplicity • Versatility



Fully Guided Surgery novel stepwise approach



Drill frictionless
through Sleeve

Potential reduction of both
temperature and particle
release on surgical site

Initial and Conical Drills do not rotate
against surgical guide or Sleeves



files for open
source software
piبرانemark.com

exocad DentalCAD® exoplan




Developed By P-I Brånemark

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