

p-iO

Developed By P-I Brånemark



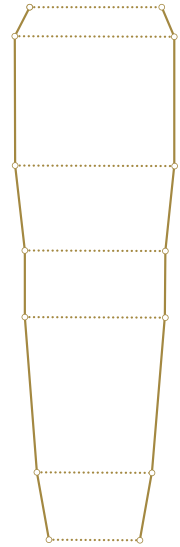
MT-F
THE NEXT GENERATION





Adaptive bone contact

Multiple transitions • Interpolated core



Less bone displacement

In all bone densities

● MT-F

Less Trauma • Site Engagement

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.

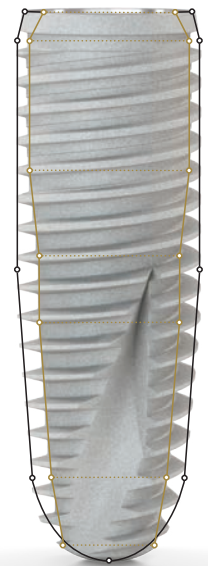
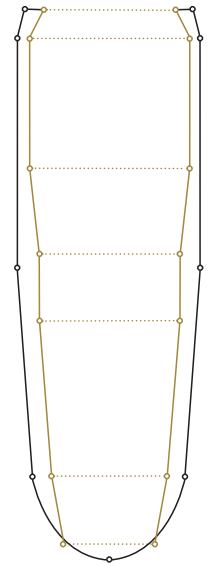
↑ ISQ

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.



Increased coronal space

Slightly inward flange

Cortical stability

Micro Patterns

Adaptive bone contact

Interpolated core transitions



Gradual thread evolution

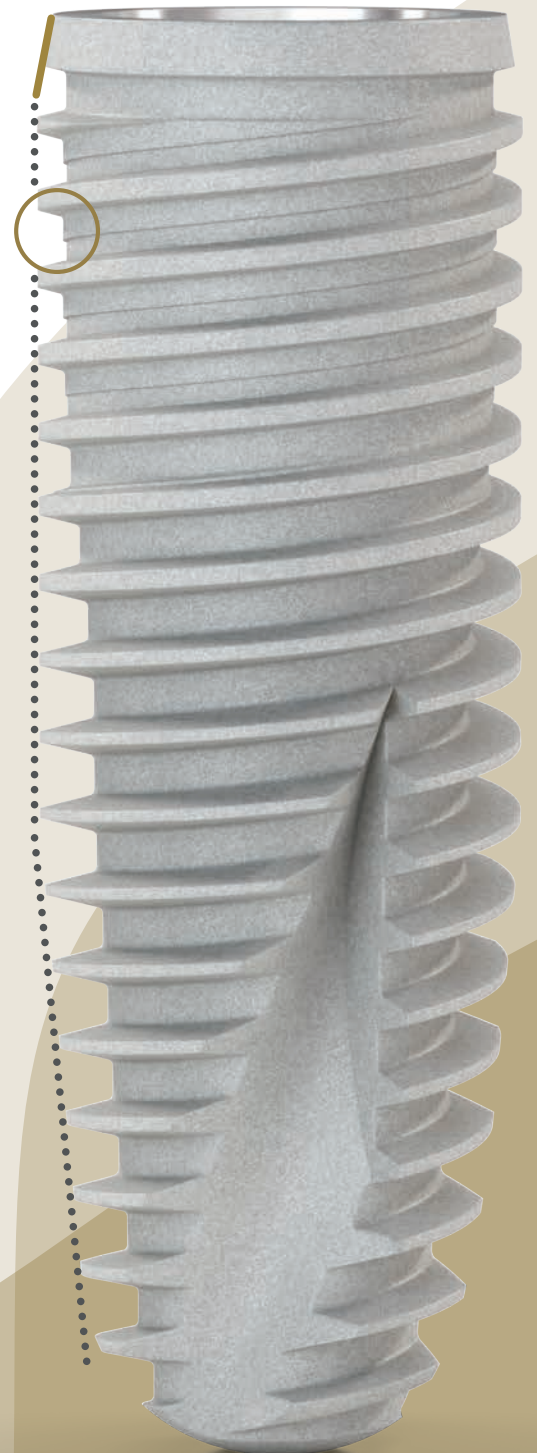
Pronounced depth in all sections

Early engagement

Gentle cutting • Dual thread

Axial insertion control

Biological Width positioning



○ MT-F

One Interface

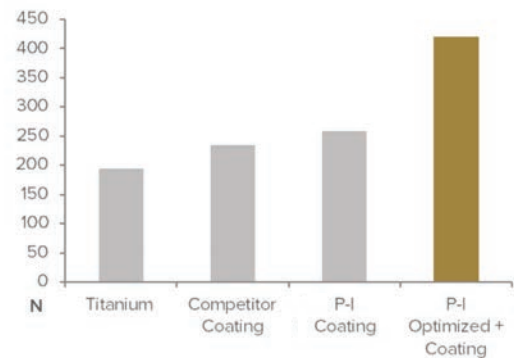
Various prosthetic platforms



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.

Biological
Width



Double
Sealing

System stability

Interface in clinical use for 15+ years • Superior biomechanics • Double Sealing

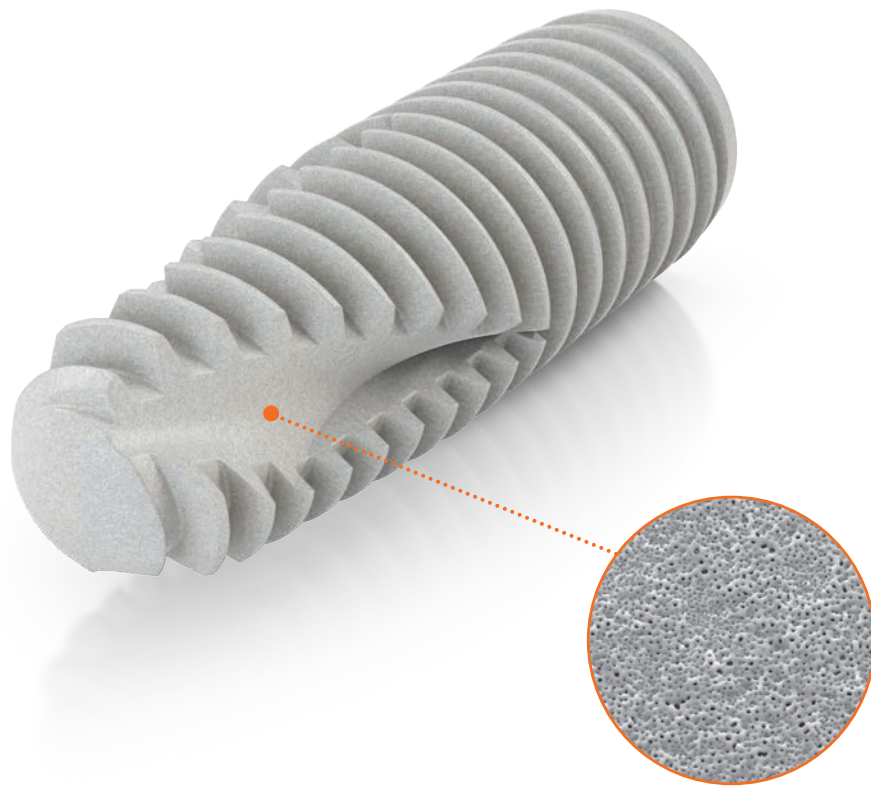
The P-I Morse Taper is an original technology. Highlighting 8.5° x 2 conical indexed, 3mm long, the P-I MT Interface offers a high torsional yield and fatigue strength when compared to other leading systems and was adopted by a global leader in 2015. The MT-F Ø 3.3 Implant can withstand static load of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

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

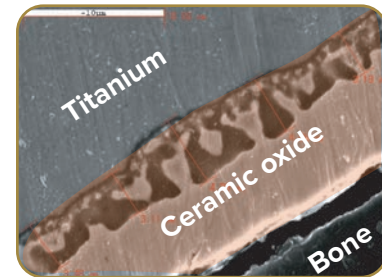
ZERO %
Aluminum
or Acid

Widely documented
Evolution of moderately rough surfaces

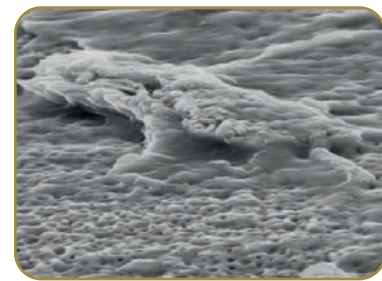


Direct and early
response

Oxide, micropores and crystal structures
greatly influence bone response



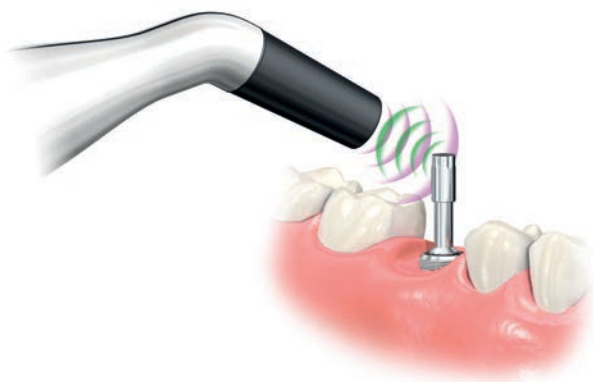
Biochemical bond,
bone in-growth
and mechanical
interlocking



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 in the Gothenburg University, Sweden, and is documented in several publications. In continual evolution since 2000 and in clinical use for over 15 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.



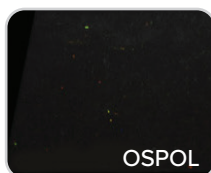
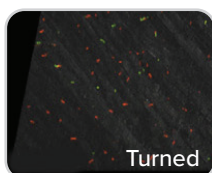
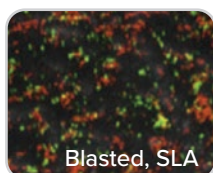
Higher ISQ for chemically- modified Surface

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.

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

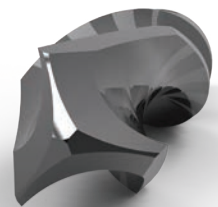
Wear resistance • Diamond Like Carbon

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.

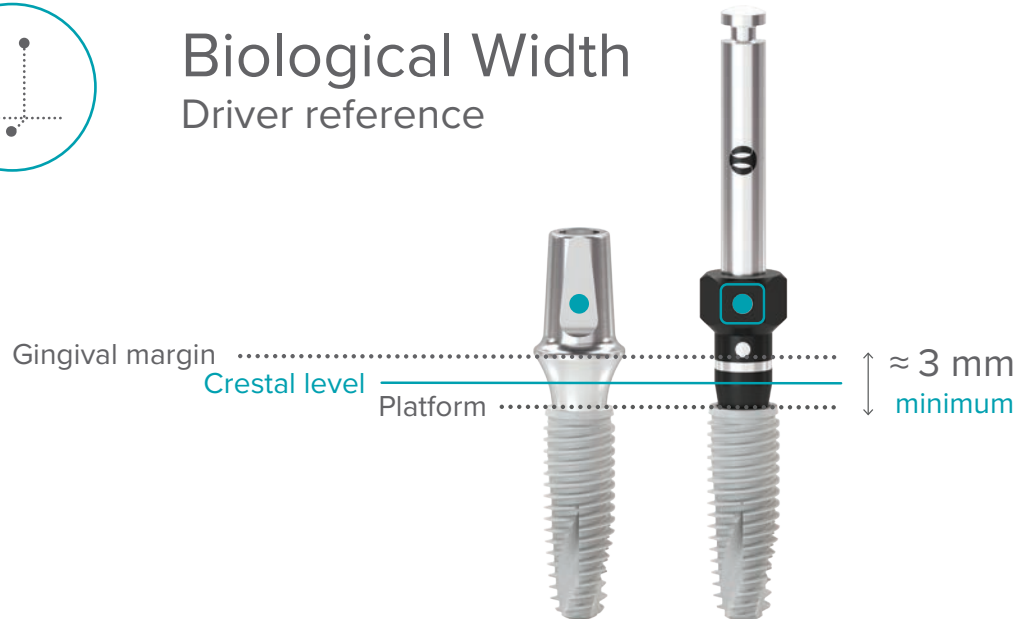


Insertion Driver

Handpiece • Manual • Torque Wrench



Biological Width Driver reference



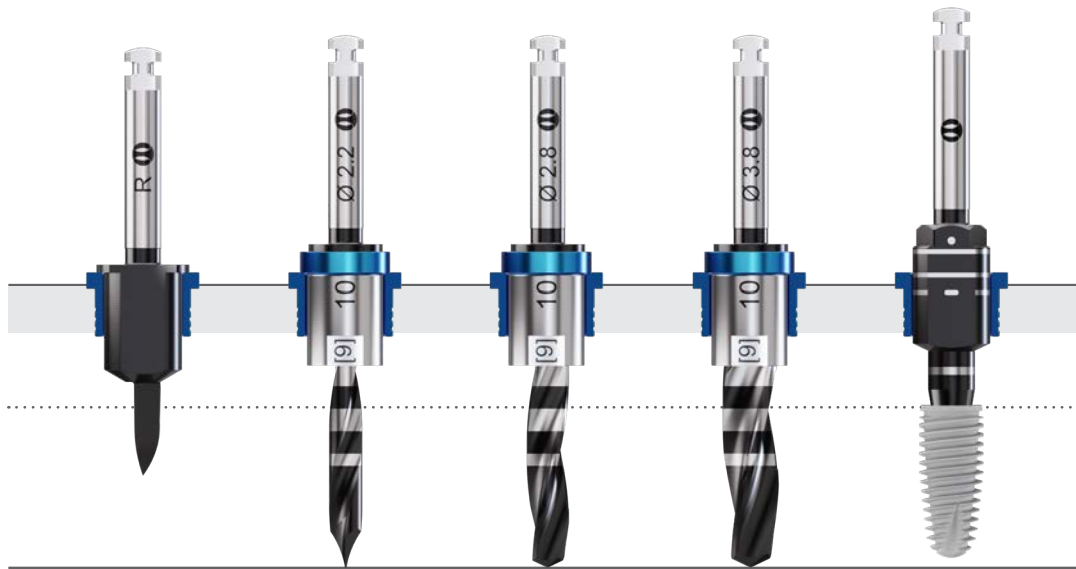
(!) The horizontal Implant Insertion Driver's mark is at approximately 3 mm and serves as a minimum Biological Width vertical reference for Implant platform positioning when completely covered by the lowest point of the soft tissue, the gingival margin. For further submersion, verify available prosthetic Component dimensions. Implant Insertion Driver dots, upper hexagon and flat areas are indexed to the Implant's hexagonal index and Sleeve • GS flat and slots. 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.

 Guided &
conventional
SURGERY



Precision • Sensitivity • Versatility

Fully Guided Surgery novel stepwise approach



Drill frictionless
through sleeve

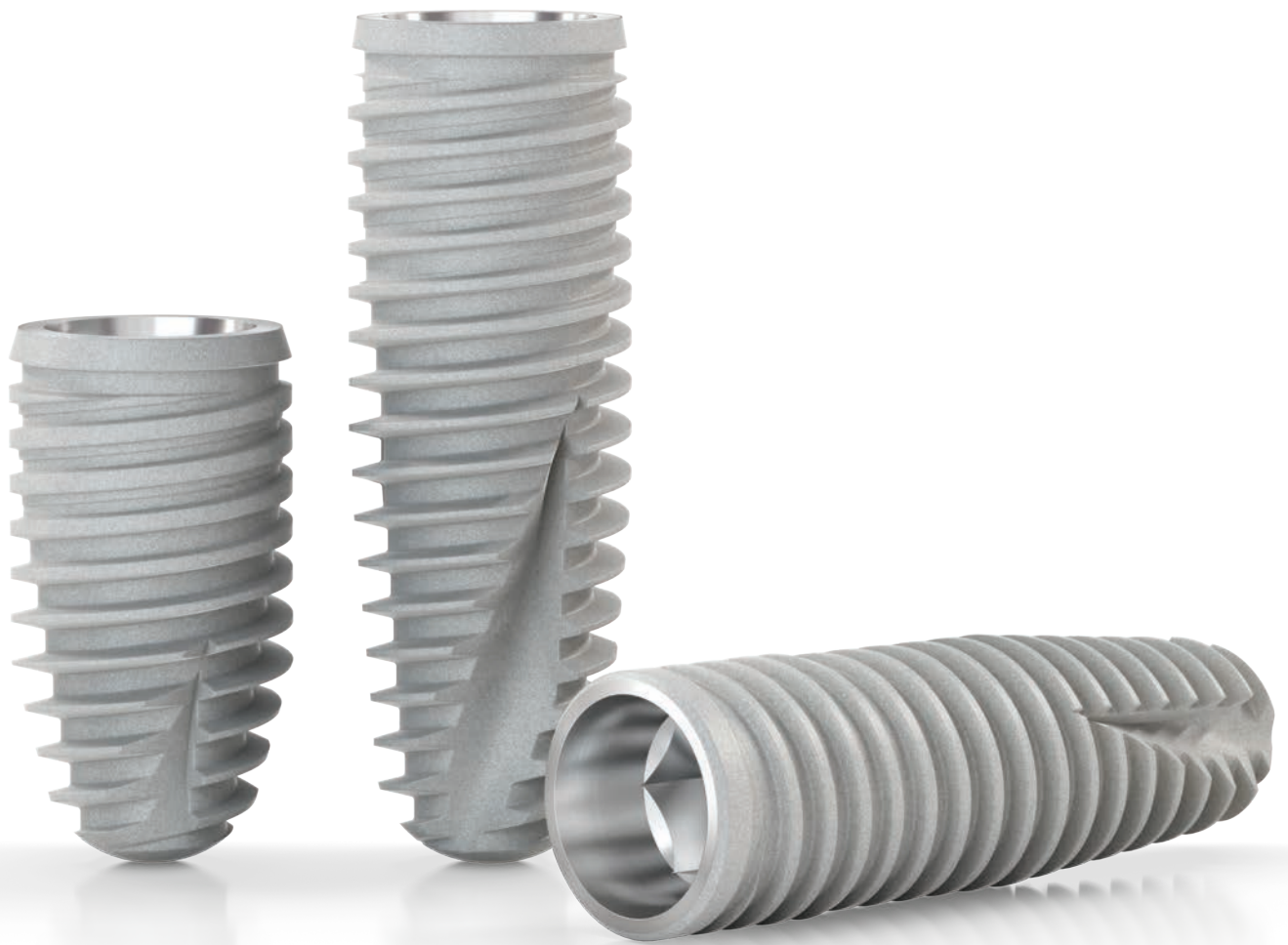
Potential reduction of both
temperature and debris
release on surgical site

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



files for open
source software
piبرانemark.com

exocad DentalCAD® exoplan
3DIEMME
BIOMAGNETIC TECHNOLOGIES



● MT-F
Implants

Platform Ø	3.3	3.5	3.9	4.6
h				
18		172319		
15	172297	172302	172384	
13	172296	172301	172383	172306
11.5	172295	172300	172382	172305
10	172294	172299	172381	172304
8.5	172293	172298	172380	172303
7		172318	172379	172321
6		172317	172378	172320



Implant Ø

3.3

3.75

4.1

4.8



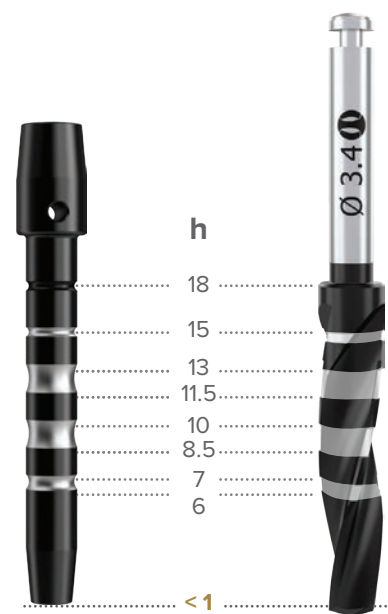
Short
Implants

● MT-F

SURGICAL SEQUENCE



	rpm	600 - 1,200 Lowest possible rpm
	In-Out	△ Coordinated in-and-out movement of Drills for better cooling
	ITV	≤ 70 Ncm Insertion Torque Value
	Full Length	Prepare at planned full length of Implant position combining the Drills GS and Stops GS in accordance to planning
	Irrigation	Constant irrigation to the insertion margin of Conical Drills



△ Drills are less than 1 mm longer than Drill marks

SURGICAL SEQUENCE

 3.3	<table><tr><th>2.2</th><th>2.8</th><th>3.4</th></tr><tr><td>✓</td><td>S ↓ N</td><td>D ↓</td></tr></table>	2.2	2.8	3.4	✓	S ↓ N	D ↓	 3.75	<table><tr><th>2.2</th><th>2.8</th><th>3.4</th></tr><tr><td>✓</td><td>S</td><td>N ↓ D</td></tr></table>	2.2	2.8	3.4	✓	S	N ↓ D				
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✓	S	N Optional for Dense	D																
2.2	2.8	3.8	4.6																
✓	✓	S	N ↓ D																

Bone Density

S Soft

N Normal

D Dense

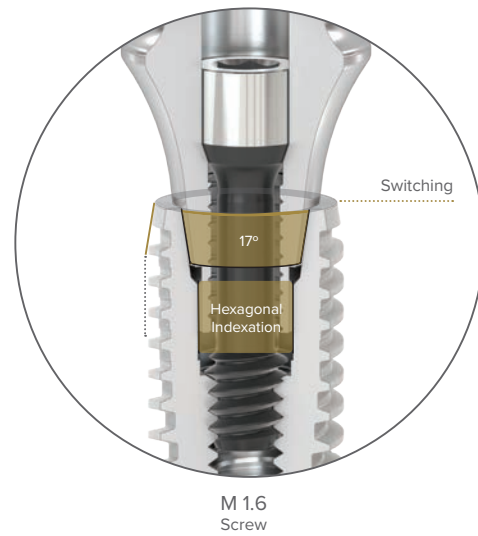
 6 mm Drill tip

(!) The subsequent Conical Drill, in terms of diameter, should be considered with a drilling depth of 6 mm, in order to not exceed 70 Ncm of insertion torque value. The use of Dense Drills (15 – 50 rpm) can also be considered to lower the insertion torque value. Soft Tissue Punch (15 – 50 rpm).

🔗 See Guided Surgery Surgical Sequence at pibranemark.com. Guided Surgery Drills consider a [9mm] offset and, when used with Drill stops, allow for limiting the total length of osteotomy with the objective of providing predetermined Drill length and orientation through the surgical guide. Height repositioning for Sleeve and Stop selection required for [10.5] Offset.

One interface

for all Implant dimensions



Dimensions

Platform	3.3	3.5	3.9	4.6
Effective height				
Apex	1.8	2.0	2.0	2.7
Implant	3.3	3.75	4.1	4.8

(!) Images are for illustrative purposes only. Measurements in millimeters.

Prosthetic Overview



D DIGITAL
prosthetics



N **R** **W**



D One MT Interface for all MT-F Implant dimensions



Locator® Abutments available



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



Developed By P-I Brånemark

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pibranemark.com

 SIC invent Sweden AB
Stora Åvägen 21
43634 Askim, Sweden

CE 2460 CE