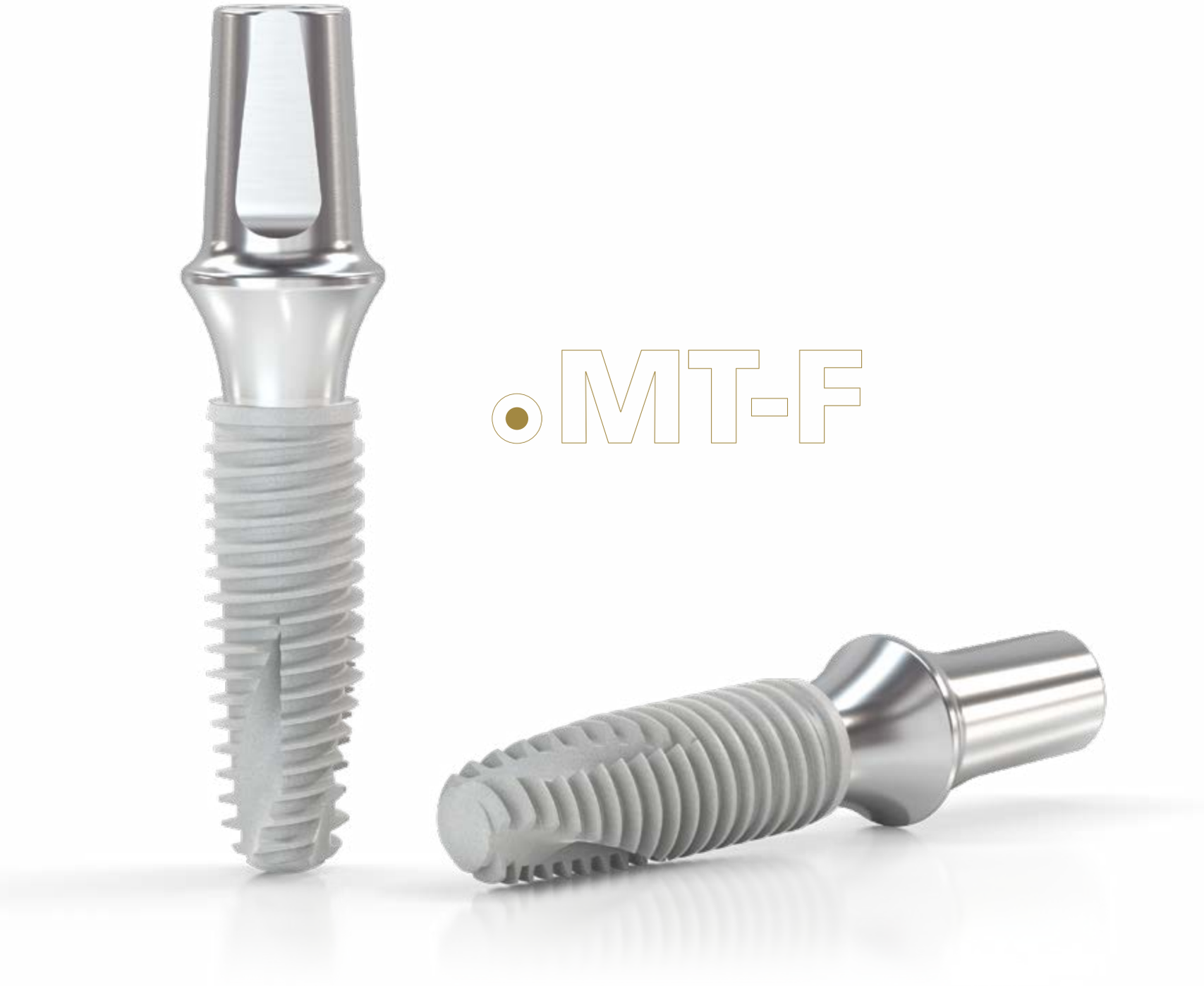
Developed By P-I Brånemark

MT-F



Smart Guide

SIMPLE EXPERIENCE FOR EXCEPTIONAL OUTCOMES

Enhanced Biological Metrics to unlock immediate replacement potential

The P-I Implant Systems were developed by Professor Per-Ingvar Brånemark, the Osseointegration pioneer, jointly with scientists and the P-I Research & Development team in renowned universities to meet the modern implant dentistry demands.

In 2012, Ospol AB Sweden was acquired, and key technologies were integrated in the P-I solutions.

With the human biology, long-term expertise, clinical and scientific evidences as a foundation, our main objective is to support you in patient-focused treatments by providing Implant Systems represented by: Simplification • High Performance • Safety and Longevity

MT-F is the Next Generation System, a result of the P-I Brånemark fundamentals evolutionized by outstanding Biological Metrics and Simplicity.

Contents

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 = height. This Smart Guide contains data from internal files including sponsored and independent studies. For more information, please see www.pibranemark.com and exclusive.pibranemark.com

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, are responsible for 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.

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.

MT-F

Enhanced Biological Metrics

ISQ ITV RTQ %

Biological Metrics

High initial and secondary Implant Stability Quotient [ISQ] measurements by Resonance Frequency Analysis [RFA] in association with sufficient Insertion Torque Value [ITV] and low rotational micro-mobility, indicated by the proportional Removal Torque [RTQ%] to the obtained [ITV], are relevant Biological Metrics and critical success factors for the prosthetic rehabilitation of patients with implants in post extraction, healed sites, low density bone and in combination with tissues regeneration techniques.

The P-I expertise

Our expertise related to [ISQ] using [RFA] micromovement measurements to clinically monitor Osseointegration and to determine when to load implants, originates from the acquisition of Ospol AB in 2012.

Ospol AB and Osstell AB were sister companies established in Sweden and developers of an Implant System and [RFA] measurement technologies, respectively. The Ospol AB developments of the last 20 years are comprised in the P-I Implant Systems and the newest technologies are present in The Next Generation • MT-F System.

p-i OSPOL®

sister companies

OSSTELL

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

Platform switching

Concave emergence

Soft tissue volume

Peri-implant tissue preservation

MT Interface

Biological
Width

Double
Sealing
System stability

In clinical use for 15+ years • Superior biomechanics • Double Sealing

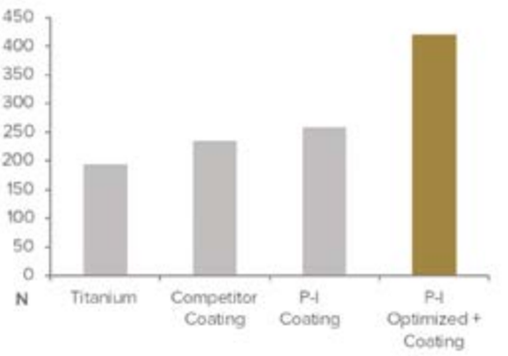
The P-I Morse Taper is an original technology. Highlighting 8.5° x 2 conical indexed, 3mm long, the P-I MT Interface offers a high torsional yield and fatigue strength as compared to other leading systems and was even adopted by a global leader. The MT-F Ø 3.3 Implant can withstand static load of approximately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

One Interface
Various prosthetic platforms

High Pre-Load
Effective sealing

P-I Coating +



Easy reversibility
Low stress to peri-implant tissues

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 and the leading coating at the same tightening torque of 25 Ncm. Data on file. MT Retriever is used to cancel the morse sealing and safely remove Abutments.

Prosthetic Overview

Screw-Retained | Cement-Retained | Screw • Cemented | Over | D DIGITAL











Prosthetic Platforms

N Narrow

R Regular

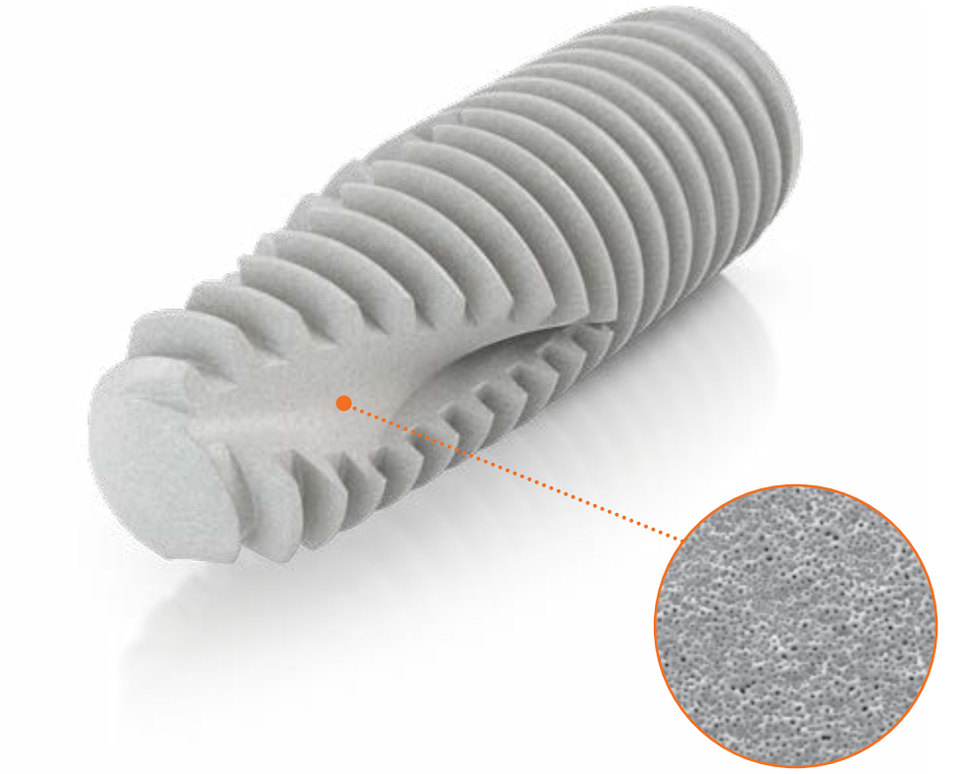
W Wide

(!) One 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.

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 Acid

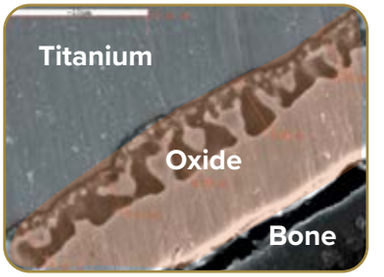
Widely documented

Evolution of moderately rough surfaces

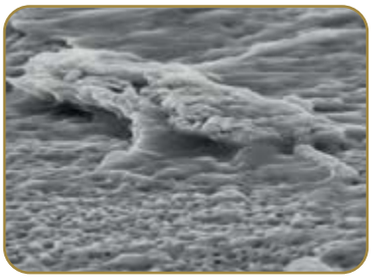
OSPOL
SURFACE

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. Albreaktsson

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. 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 Kit

Surgical & Prosthetic

Stainless Steel

BIOSAFETY

Tray options

Compact

Polymer

Conical Drills

Less friction. Less trauma

Constant apical conical angle • 3 cutting areas

Corrosion protection

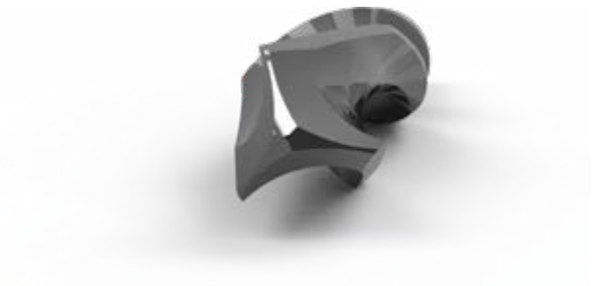
Wear resistance • Diamond Like Carbon

State-of-the-art performance

Special P-I design • Swiss

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 coefficient range of 2 to 10 Ncm. Data on file.



Easy, simplified installation

Maximum of 3
low speed steps

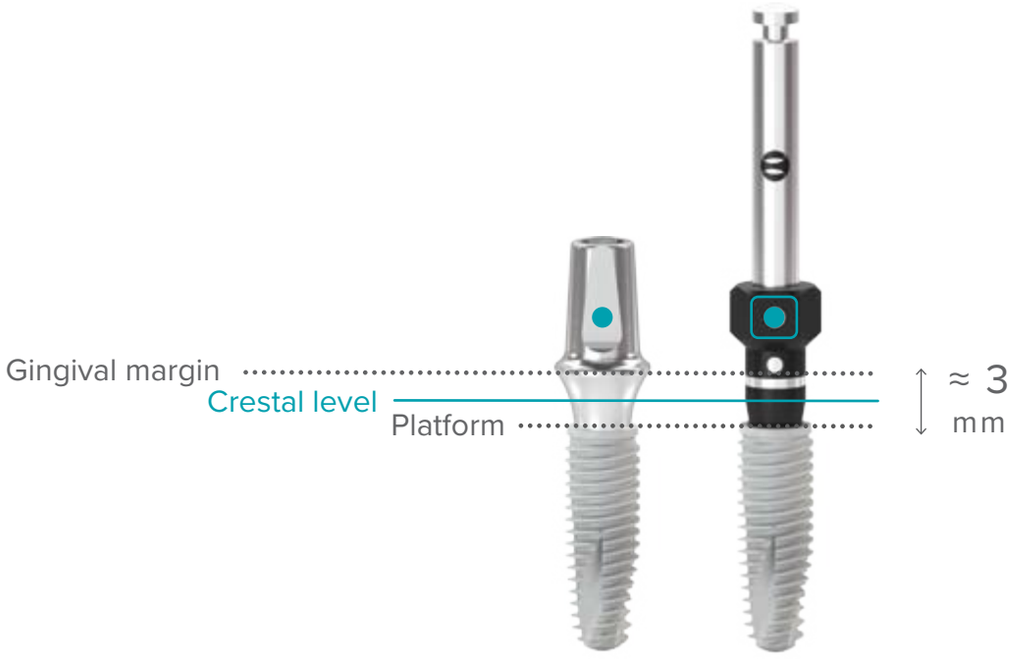
(!) Except for MT-F Ø 4.8 Implant, 3 or 4 low speed steps are used. See Surgical Sequence. Six Conical Drills for all P-I Implant Systems. Spade and Round burr are optional. No pilot drill, counter sink or screw-tap required.

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 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 to address critical and subcritical prosthetic contours. Implant Insertion Driver dots and hexagon are indexed to the Implant's hexagonal index.

MT-F

Implants

MT-F
Implants

Platform Ø	3.3	3.5	3.9	4.6
h				
18		172319	172385	
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

OSPOL
SURFACE

(!) Same Interface in all Platform Ø including narrow and short implants.

Prosthetic Components

Soft Tissue Healing

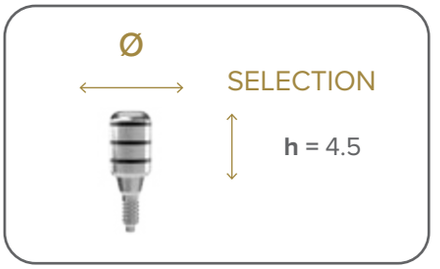
Cover Screw • Healing Abutment

Biological Width

Concave or Parallel emergence Healing • Soft Tissue contouring

Potential for more soft tissue volume

Minimized cortical bone removal for sub-crestal Implants



One Cover Screw

For all Implants and Platforms • MT Interface

(!) Healing Abutment Parallel h = 4.5 mm features height marks serving as a reference for Abutment selection.

			h	N	R	W
Divergent			4.5	171199	171202	171205
			3	171198	171201	171204
			1.5	171197	171200	171203
Parallel		SELECTION	4.5	171190	171193	171196
			3	171189	171192	171195
			1.5	171188	171191	171194

Healing Abutment

		N	R	W
Cover		●	171104	●

Cover Screw

● Regular Cover Screw is used.

Conical Abutment

Single or multiple, screw-retained prosthesis

Biological Width

Concave emergence • Potential for more soft tissue volume

Minimizes cortical bone removal to install Abutment

Single prosthesis

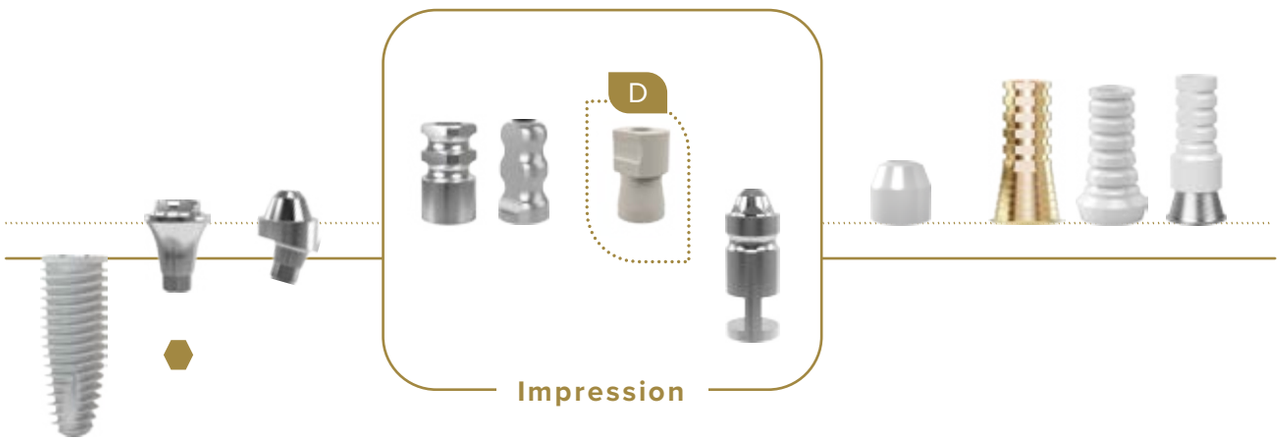
Straight Conical Abutment has double indexation

Select engaging components

Universal Ø 4.8 platform

Scan Body for single and multiple units • D DIGITAL

Inclined implants technique • “All-on-4”



			N	R	W
Cylinder		**Non-Engaging**			
		CoCrMo		101141	
		Castable		101143	
		Titanium		101142	
		Engaging			
		CoCrMo		171249	
		Castable		171250	
		Titanium		171248	
Analog		Cast		171247	
Impression Coping		**Non-Engaging**			
		Open Tray		102385	
		Closed Tray		101113	
		Engaging			
		Open Tray		171245	
		Closed Tray		171246	
Healing Cap				101155	

		h				
Abutment Multiple		**30°**	3	●	171129	●
		17°	3	●	171128	●
			1.5	●	171127	●
Abutment Multiple and Single		**Straight**	4.5	●	171126	●
			3	●	171125	●
			1.5	●	171124	●
			0.8	●	171123	●

Conical Abutment

● Regular Abutment is used.
(!) Conical Abutment prosthetic Platform has Ø 4.8 mm.
(!) Maximum occlusal angulation between two Conical Abutments is 40°.

Abutment Cemented Cylinder

Single or multiple, cement-retained prosthesis

Biological Width

Concave emergence • Potential for more soft tissue volume

Minimizes cortical bone removal to install Abutment

Anterior and posterior

Indexed • 6 and 4mm cone heights

Single and multiple Castable Cemented Cylinders

One-time one-abutment option

Prosthetic procedures over Abutment or Implant Platform

Zero margin Abutment

For limited interproximal spaces “0”

		N	R	W
Cylinder				
	Non-Engaging			
	Castable 6mm (L)	161413	161418	161423
	Castable 4mm	161463	101747	101977
	Engaging			
	Castable 6mm (L)	161414	161419	161424
	Castable 4mm	161464	101746	101976
Analog				
	6mm (L)	161410	161415	161420
	4mm	161462	101745	101975
Impression Coping				
	Closed Tray, 6mm (L)	161412	161417	161422
	Closed Tray, 4mm	161461	101744	101974
Healing Cap				
	6mm (L)	161411	161416	161421
	4mm	161460	101743	101973

Abutment Cemented Cylinder

		h			
4mm		4.5	171157	171162	171167
		3	171156	171161	171166
		1.5	171155	171160	171165
		0.8	171154	171159	171164
6mm • Long (L)		4.5	171142	171147	171152
		3	171141	171146	171151
		1.5	171140	171145	171150
		0.8	171139	171144	171149
		“0”	171138	171143	171148

(!) “0” margin Abutment is not compatible with Healing Cap, Impression Coping or Cylinder.

Contour & Esthetic Abutments

Single or multiple, cement-retained prosthesis

Increased Biological Width

Concave emergence • Potential for more soft tissue volume

Minimizes cortical bone removal to install Abutment

Contour

Robust design

Preparable • Straight and 17°

Esthetic

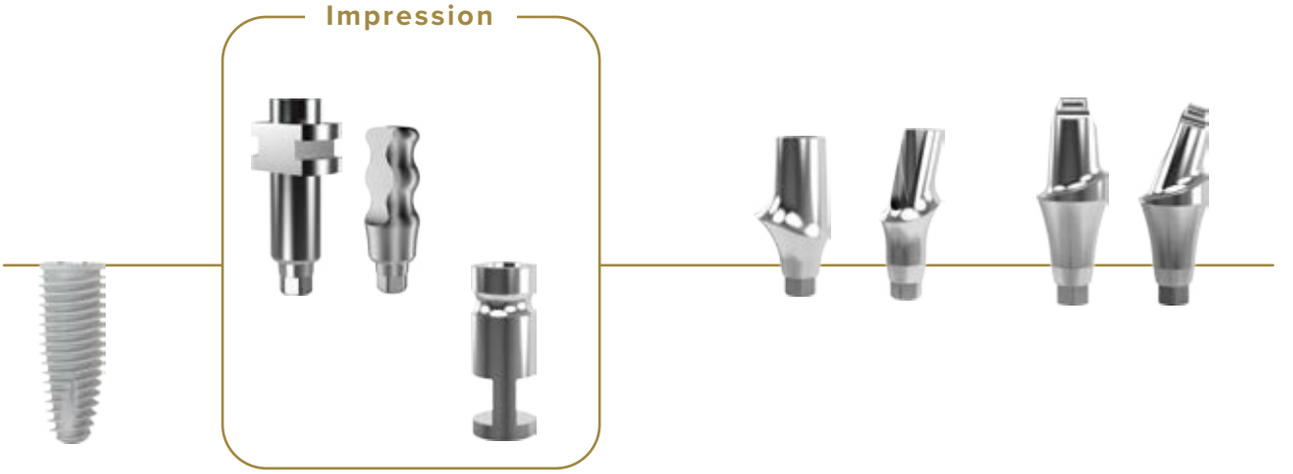
Delicate slim profile

Preparable • Straight and 15°

Impression at Implant Platform

Short and Long Impression Copings

Open and Closed Trays



		h	N	R	W
Contour 17°		4.5	171116	171119	171122
		3	171115	171118	171121
		1.5	171114	171117	171120
Contour Straight		4.5	171107	171110	171113
		3	171106	171109	171112
		1.5	171105	171108	171111

Contour Abutment

		h	N	R	W
Esthetic 15°		4.5	171178	171181	●
		3	171177	171180	●
		1.5	171176	171179	●
Esthetic Straight		4.5	171171	171175	●
		3	171170	171174	●
		1.5	171169	171173	●
		0.8	171168	171172	●

Esthetic Abutment

Implant Analog			●	171212	●
Impression Coping Implant		Open Tray	●	171206	●
		Closed Tray	●	171209	●
		Open Tray, Long	●	172418	●
		Closed Tray Long	●	172417	●

Implant Impression

● Regular Abutment, Impression Coping or Analog is used.

Cylinders over Implant

Single or multiple, cement or screw-retained prosthesis

Increased Biological Width

Concave emergence • Potential for more soft tissue volume

Minimizes cortical bone removal to install Cylinder

Provisional • Titanium

Flat areas and deep trapezoidal retentions

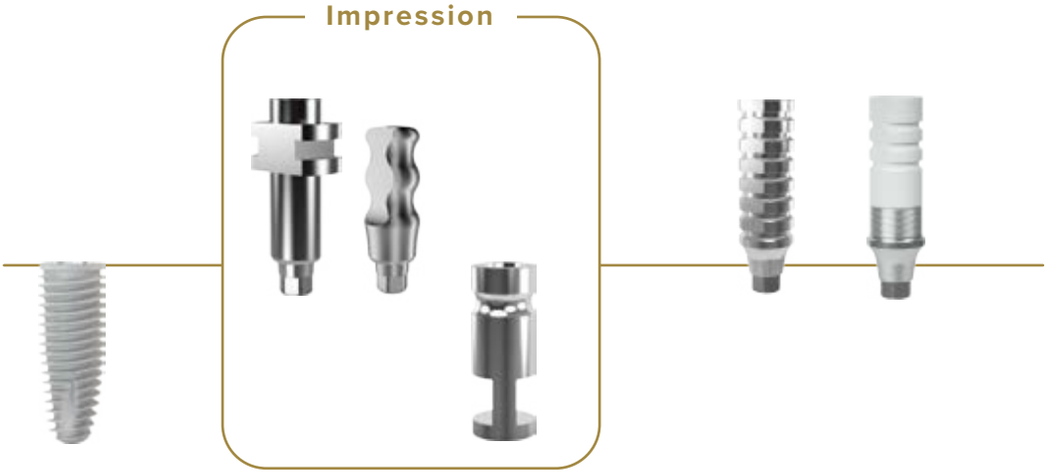
Definitive • Overcasting

Main body [CoCrMo] and waxing sleeve [POM] with retentions

Impression at Implant Platform

Short and Long Impression Copings

Open and Closed Trays



		N	R	W
Cylinder		**Engaging**		
		CoCrMo	171183	171185	171187
		Titanium	171182	171184	171186

Cylinder over Implant

			N		R		W
Implant Analog			●	171212		●
Implant Impression Coping		Open Tray	●	171206		●
		Closed Tray	●	171209		●
		Open Tray, Long	●	172418		●
		Closed Tray Long	●	172417		●

Implant Impression

Locator®

Overdenture prosthesis

			N		R		W
Abutment ■		**h**					
		4	●	2203		●
		3	●	2202		●
		2	●	2201		●
		1	●	2200		●

■ Manufactured by Zest Dental. Components and instruments not included in the P-I Catalog.
● Regular Abutment, Impression Coping or Analog is used.

D DIGITAL

Manufacturing
Prosthetics • 3D Model

Link
Milling Blank • Cylinder

Design
Libraries

Scan
Intraoral • Desk

Scan Body
Implant • Conical Abutment

3shape | exocad

(!) Libraries are available for upload at www.pibranemark.com and/or from CAD/CAM system. Please check library version and availability.

		N	R	W
	h			
Link CAD/CAM	4.5	●	171137	●
	3	●	171136	●
	1.5	●	171135	●
	0.8	●	171134	●
Link C ■	4.5	172422	172426	●
	3	172421	172425	●
	1.5	172420	172424	●
	0.8	172419	172423	●

Link

		N	R	W
Milling Blank ■	Type A	●	161552	●
	Type B	●	161553	●

Milling Blank

Analog + Digital Cast + 3D printed model	Implant	●	172416	●
	Conical Abutment		172453	
Conical Abutment	**Non-Engaging**		161471	
	Engaging		161556	
Implant		●	161469	●

Scan Body

D DIGITAL

■ Manufactured by SIC invent AB. Link C post has Dentsply Sirona, Cerec dimensions.
● Regular Scan Body, Analog + Digital, Milling Blanks or Links are used.

Kit

One for all P-I Implant Systems

width	254 mm
height	40
depth	130

Advanced
Stainless Steel

181036

(!) For all P-I Implant Systems including: External Hex, Amplified, MT and MT-F. Surgical and proshtetic
(!) Reference number is for ordering purposes only. Instruments and Tray delivered separately.

Kit

Tray options

w	202
h	67
d	158

Advanced
Polymer

181022

w	120
h	40
d	80

Advanced
Compact

181023

w	120
h	40
d	80

Prosthetic
Compact

181029

(!) Please see Kit Composition at www.pibranemark.com/en/download for additional Kit contents.
(!) Reference number for ordering purposes only. Instruments and Tray delivered separately.

Surgical Instruments

Drill

		Ø	
	Initial	2.2	141138
	Conical	2.8	141314
		3.4	141148
		3.8	141146
		4.6	141152
		4.8	141315
	Dense	3.3	141213
		3.75	141316
		4.0	141215
		4.8 I 5.0	141317

Implant Insertion Driver

		Medium	Long	
	All Systems	131139	131140	●
	HEX 3.5	131141	131142	

Tools

	Guide Pin	2.2 I 2.8	131114	
		2.8 I 3.8	131115	
		2.2 I 2.8 C	141535	
		2.8 I 3.8 C	141536	
	Drill Extension		131028	
	Spade	1.5	141319	▲
	Round Burr	1.8	141001	▲
	Depth Probe		141440	▲

● Except External HEX Platform Ø 3.5
▲ Optional Instruments not included in the Advanced Kit contents.

Prosthetic Instruments

Driver

Hexagonal Ø 1.2 ●	Short	131010	▲
	Medium	131011	
	Long	131012	▲
Hexagonal + Adapter Ø 1.2 ●	Short	131120	▲
	Medium	131121	▲
	Long	131122	▲

Conical Abutment Ø 2.0	Short	131016	▲
	Medium	131017	▲
Conical Abutment + Adapter Ø 2.0	Short	131123	▲
	Medium	131124	▲

Retriever MT	Short	141564	▲
	Medium	131131	

Torque Wrench

Surgical & Prosthetic

Kit	C14569	■

Adapters

Surgical • Driver 4mm Hex	C371711

Prosthetic • Driver 4 x 4	C8521

■ Manufactured by Elos MedTech Pinol A/S. Torque Wrench Kit includes Surgical & Prosthetic Adapters.
● All Components except straight Conical Abutment and Locator®.
▲ Optional Instruments not included in the Advanced Kit contents.

Guided Surgery

Surgical & Prosthetic precision

3D positioning precision

Fully guided Drills • Angular and axial guidance

Increased accuracy for Implant installation and prosthetic position

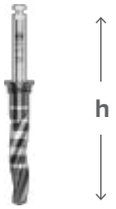
Conventional Surgery

Same Drills and Instruments for both conventional and Guided Surgery

Simplification

Less Instruments

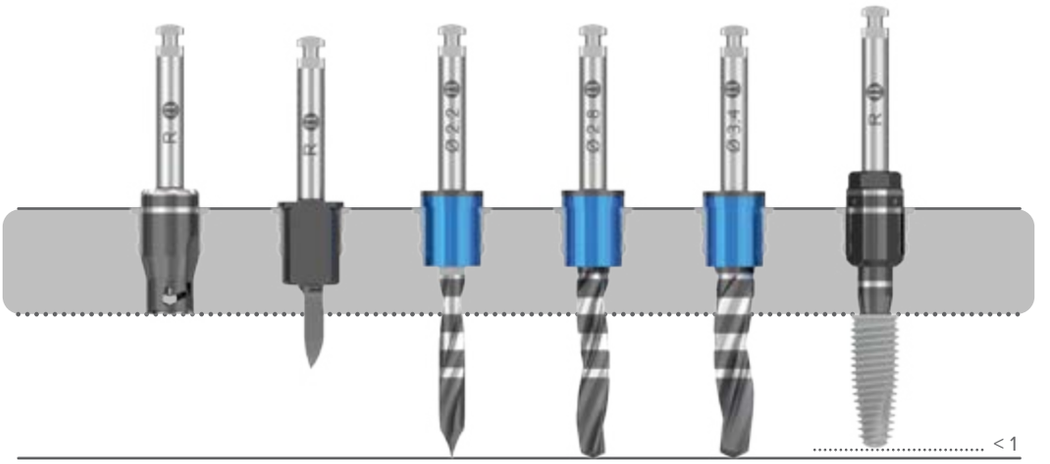
[9mm] offset Stops • Stops can be pre-assembled



Drill	Sleeve	Implant	
		h	Ø
40 • Long	Narrow	10 • 15	3.3
35.5 • Short	Regular	6 • 10	3.75 • 4.1
40 • Long	Regular	11.5 • 15	3.75 • 4.1

[9mm] offset

Drilling depth



Sleeve GS

Pin		Narrow		Regular	
d	1.80	d	3.50	d	5.00
h	7.00	h	4.00	h	4.00
D	4.15	D	4.00	D	6.00

- Drill and Stop depth oriented by corresponding [9mm] offset. Height repositioning for Sleeve and Stop selection required for [+1.5] offset.

Instruments

Drill GS

		Narrow	Regular
	Soft Tissue Punch	141331	141332
	Crestal	141330	141335
		Ø **Long**	**Short** **Long**
		2.2 141378	141336 141340
	Conical	2.8 141381	141337 141341
		3.4	141339 141342
		3.8	141338 141343

Dense Drill GS

3.3	141346
3.75	141345
4.0	141344

Stop GS


h		
6	141357 ●	141365
7	141358	141366
8.5	141359	141367
10	141360	141368
11.5	141361	141369
13	141362	141370
15	141363	141371

Sleeve GS



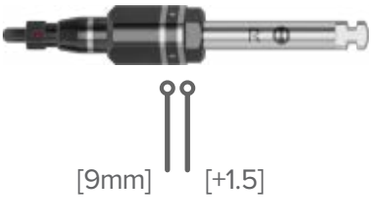
141565
Initial 2.2

141375

141376

● Connects to Conical Drills GS Regular Ø 3.4.

Implant Insertion Driver

	Narrow	Regular
	131153	131152

Guide Fixation GS

	Sleeve Guide Pin	141382
	Pin Drill	141377
	Pin	131167

Tools GS

	Depth Probe GS [9mm] Offset	141439
	Stop Removal	131172

Accessories

Trays

Polymer
131134

Stainless Steel
131117

Stop Organizer GS
141399

Prosthetic 131135
Compact 131138

Lab & Replacement

Conical Abutment

	Screw Cylinder		101984
	Screw Impression Coping	Open Tray	101737
		Closed Tray	171260

Implant

	Coated Screw MT		171239
	Screw Impression Coping	Open Tray	171207
		Closed Tray	102499

Resonance Frequency Analysis

Penguin RFA ■

ISQ

Kit

55002-S ▲

MulTipeg

MT-F • Type 38 — 55046

Conical Abutment • Type 72 — 55080

■ Manufactured by Integration Diagnostics Sweden AB.
● Penguin [RFA] Kit includes instrument, charger, MulTipeg driver and user's manual.
(!) P-I [RFA] pegs are also available from Osstell.

OSSTELL

MT-F
SURGICAL SEQUENCE

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

(!) Drills are less than 1 mm longer than Drill marks

SURGICAL SEQUENCE

3.3

Drill	2.2	2.8	3.4
	✓	S ↓ N	D ↓

3.75

Drill	2.2	2.8	3.4
	✓	S	N ↓ D

4.1

Drill	2.2	2.8	3.4	3.8
	✓	S	N ..... D	

4.8

Drill	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.

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 [+1.5] offset.

One Driver

Manual • Torque Wrench

1.2

Torques	Ncm
MT-F Implants	≤ 70
Abutments Cylinders over Implant Links	25
Cylinders • Conical Abutment	15
Cover Screw Healing Abutments Impression Copings Scan Bodies	Manual

(!) Recommended Torques. Abutment and Components torques should not exceed the torque obtained at Implant installation.
(!) One Prosthetic Driver, except Locator® and straight Conical Abutment.


MEDICAL
DESIGN
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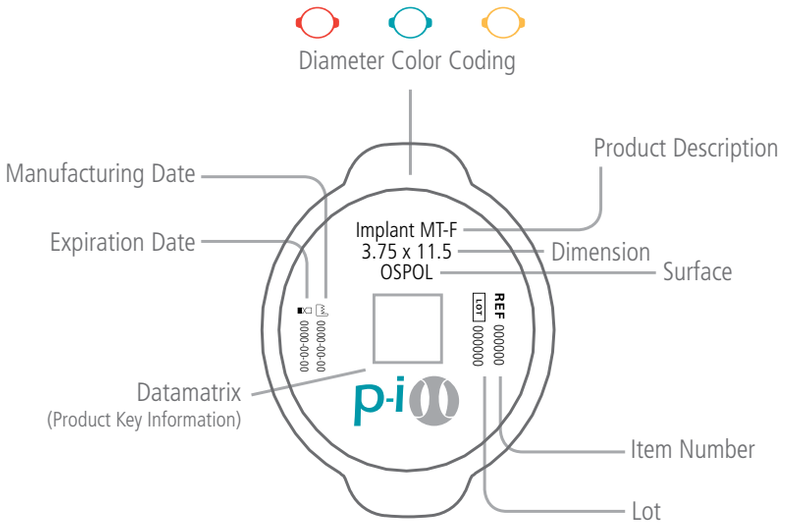
AWARDS®


Diameter Color Coding
Product Description
Manufacturing Date
Expiration Date
Implant MT-F
3.75 x 11.5
OSPOL
Dimension
Surface
Datamatrix
(Product Key Information)
Item Number
Lot

LifeTime
GUARANTEE

(!) Terms & Conditions at www.pibranemark.com

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