

Developed By P-I Brånemark





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 from renowned universities and the P-I Research & Development team 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 that represent: 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.



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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, [] Offset. This Smart Guide contains data from internal files including sponsored and independent studies. For more information, see pibranemark.com



Adaptive bone contact

Multiple transitions • Interpolated core



Less bone displacement

In all bone densities



Less Trauma • Site Engagement

Cutting threads • Pronounced depth in all sections





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 implantto-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.



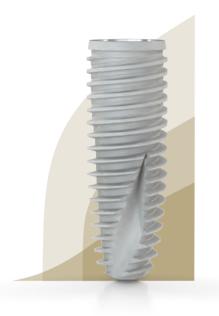




Less compression • Progressive torque • Greater area

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.







Enhanced Biological Metrics







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 and compromised sites, low density bone and in combination with tissue 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 within the P-I Implant Systems and the newest technologies are present in The Next Generation • MT-F System.



sister companies



Increased coronal space Slightly inward flange

Cortical stability
Micro Patterns

Adaptive bone contact Interpolated core transitions

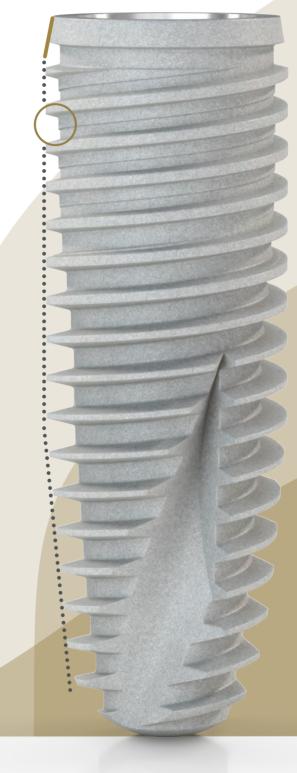
Gradual thread evolution

Pronounced depth in all sections

Early engagement

Gentle cutting • Dual thread

Axial insertion control Biological Width positioning







Concave emergence Soft tissue volume

Peri-implant tissue preservation



MT Interface



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.

One Interface

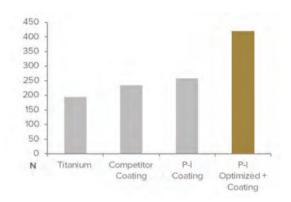
Various prosthetic platforms



High Pre-Load Effective sealing







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.

Prosthetic Overview





One MT Interface for all MT-F Implant dimensions



Locator® Abutments available



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.



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.



files for open source software pibranemark.com

зshape **exocad**

Strong Osseointegration

REDUCTION OF BIOFILM INFECTIONS

BIOACTIVE





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









Widely documented

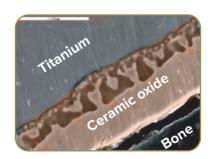
Evolution of moderately rough surfaces



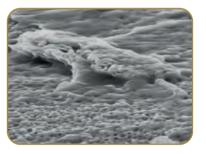


Direct and early response

Oxide, micropores and crystal structures greatly influence bone response



Biochemical bond, bone in-growth and mechanical interlocking



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

ENHANCEDCeramic Surface





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

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.



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.

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.

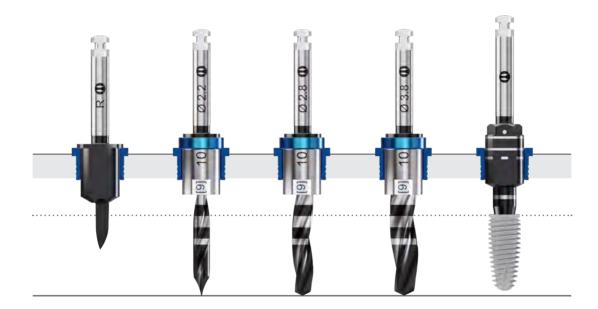




Precision • Sensitivity • Versatility







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















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	
		1			
			1	15	
Implant Ø	3.3	3.75	4.1	4.8	
		400	Ton.		
	Short				
		1	Implants		
		_			



Components





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



				N	R	W
			h			
			5.5	172545	172546	172547
			4.5	171199	171202	171205
Divergent			3	171198	171201	171204
	•		1.5	171197	171200	171203
		SELECTION	4.5	171190	171193	171196
Parallel	A.		3	171189	171192	171195
	-		1.5	171188	171191	171194
Healing Abutment						

Cover Screw -

Cover

171104



Single or multiple, screw-retained prosthesis



Biological Width

Concave emergence • Increased soft tissue volume Minimizes cortical bone removal to install Abutment

Multiple and Single prosthesis

Universal Ø 4.8 Multi Unit platform

Straight Conical Abutment has double indexation

Select engaging components for single unit



Provisional and CAD/CAM prosthesis

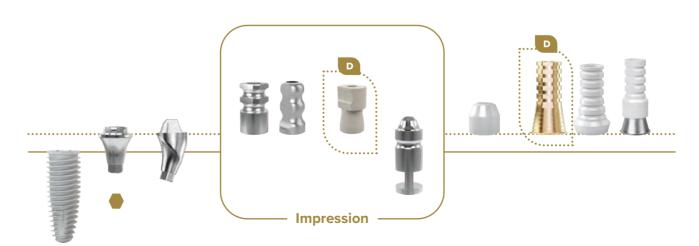


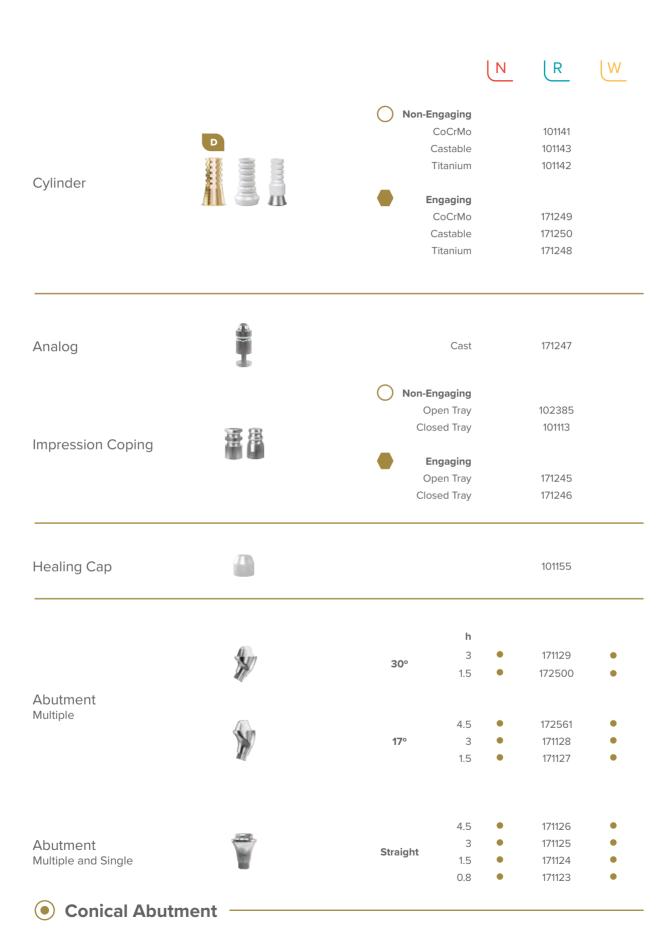


Direct Geometry for single and multiple unit ${\scriptstyle \bullet}$ bridge











Regular Abutment is used.

^(!) Conical Abutment prosthetic Platform has Ø 4.8 mm.

Cylinder • Conical Abutment ENG (Engaging) option is available for straight Conical Abutment only.



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 post heights

Single and multiple Castable Cemented Cylinders



One-time one-abutment option

Prosthetic procedures over Abutment or Implant Platform



For limited interproximal spaces "0"





			N	<u>R</u>	<u>[W</u>
Cylinder		Non-Engaging Castable 6mm (L) Castable 4mm	161413 161463	161418 101747	161423 101977
		Engaging Castable 6mm (L) Castable 4mm	161414 161464	161419 101746	161424 101976
Analog		6mm (L) 4mm	161410 161462	161415 101745	161420 101975
Impression Coping		Closed Tray, 6mm (L) Closed Tray, 4mm	161412 161461	161417 101744	161422 101974
Healing Cap		6mm (L) 4mm	161411 161460	161416 101743	161421 101973
		h			
4mm		4.5 3 1.5 0.8	171157 171156 171155 171154	171162 171161 171160 171159	171167 171166 171165 171164
6mm • Long (L)		4.5 3 1.5 0.8	171142 171141 171140 171139	171147 171146 171145 171144	171152 171151 171150 171149
Abutment Cemer	nted Cylinder —	"O"	171138	171143	171148

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

Robust design

Adjustable • Straight and 17°

Delicate slim profile

Adjustable • Straight and 15°

Impression at Implant Platform

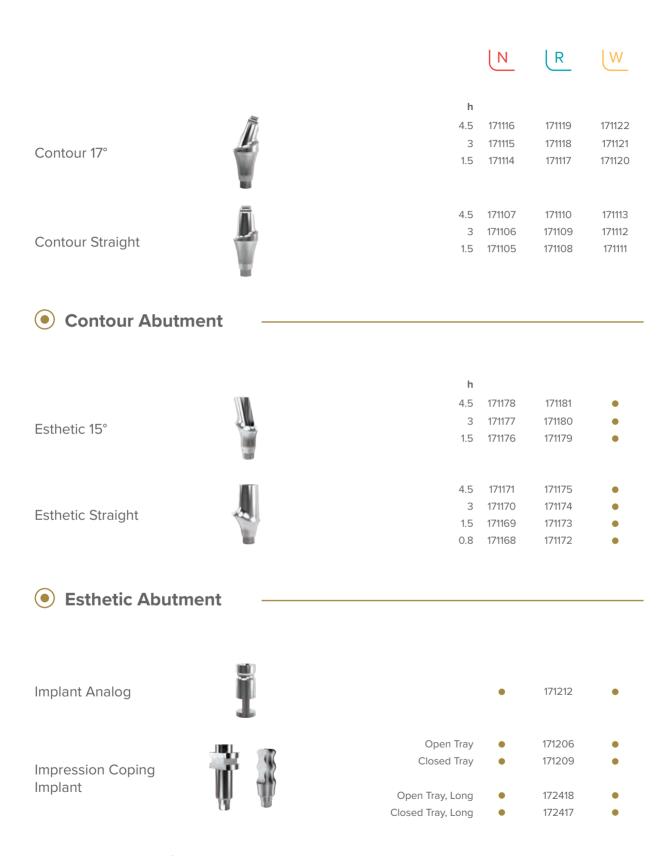
Short and Long Impression Coping

Open and Closed Tray









Cylinders over Implant

Single or multiple, cement or screw-retained prosthesis









Provisional, conventional and CAD/CAM Platform diameter and margin height options Adjustable post heights: 6, 5 and 4mm

Increased Biological Width

Concave emergence • Potential for more soft tissue volume Minimizes cortical bone removal to install Cylinder

Definitive • Overcasting

Main body CoCrMo and waxing sleeve POM with retentions

Provisional and Custom Healing • Titanium

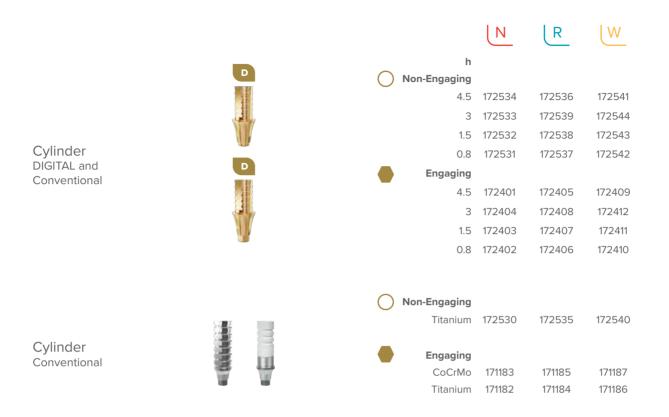
Diameter options • Flat areas and trapezoidal retentions

Impression at Implant Platform

Short and Long, Open and Closed Tray, Impression Coping

Impression





Cylinder over Implant

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

Implant Impression

[•] Regular Components are used.

^(!) Cylinder over Implant • Ti with height options can also be used to support prosthesis manufactured by CAD/CAM.





Manufacturing Prosthetics • 3D Model



Components and Direct Geometries



DesignLibraries



Scan Intraoral • Desk



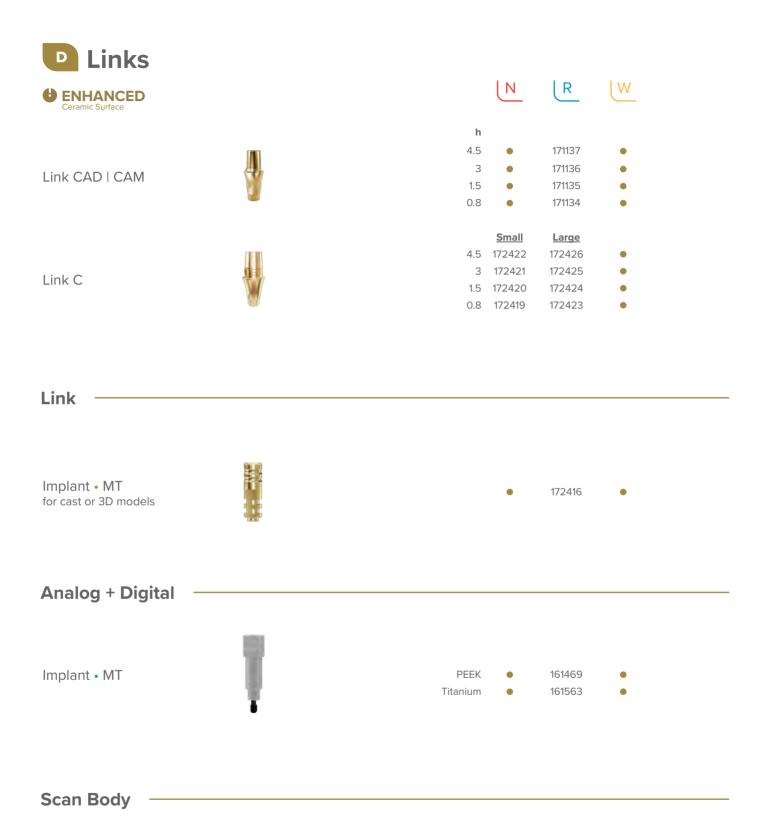
Scan Body Implant • Conical Abutment



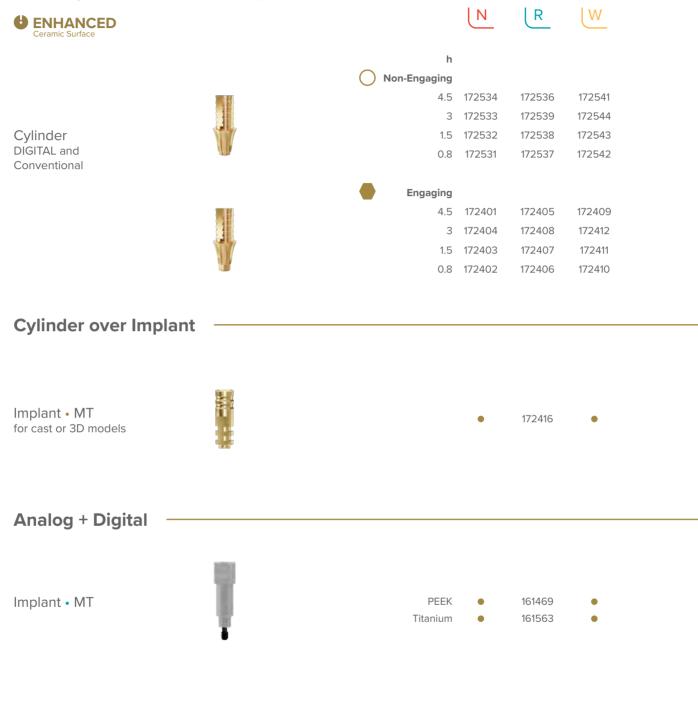


зshape⊳

exocad

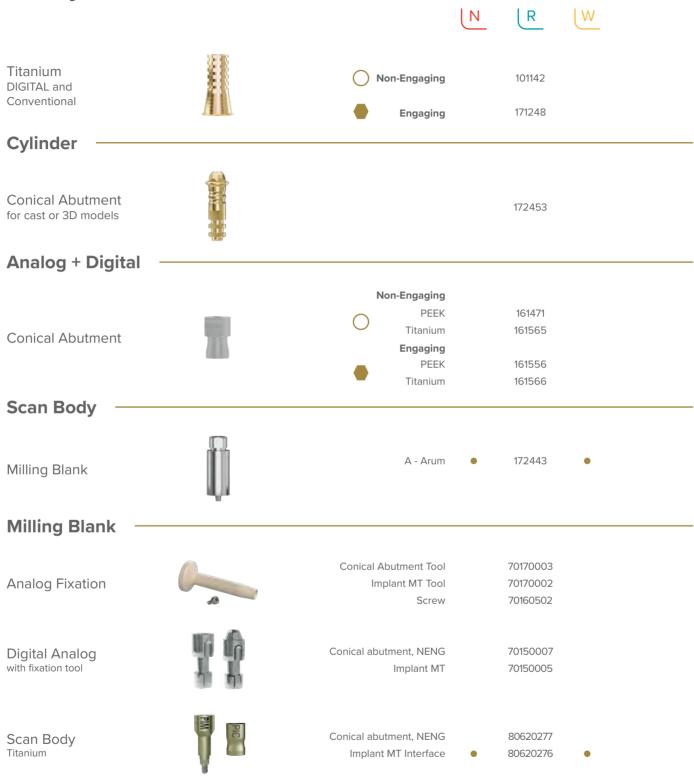


Cylinder over Implant



Scan Body

Cylinder • Conical Abutment



Third Party Acessories

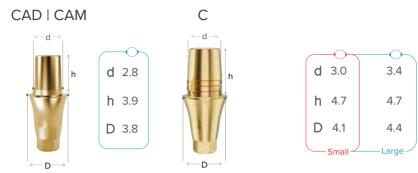
[•] MT interface is the same in all platforms. Scan Body, Analog + Digital and Milling Blank are used.

[■] Manufactured by CoreMedTech 🕍 . Check latest CoreMedTech libraries version and availability.

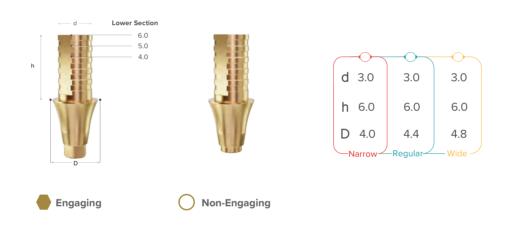
^(!) Cylinder • Conical Abutment ENG (Engaging) option is available for straight Conical Abutment only.

Dimensions and References

Link



Cylinder over Implant



Cylinder • Ti • Conical Abutment



Direct Geometry

Cylinder Conical Abutment









Bridge over Implant



^(!) Direct Geometries are used to manufacture direct screw-retained CAD/CAM prosthesis without P-I titanium base (Links or Cylinders), using spare P-I Screws. Always check latest library version and availability.

Kit

Conventional





width	254 mm
height	40
depth	130

Advanced Stainless Steel 181036

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

^(!) Prosthetic Kit does not include Torque Wrench and Adapters.
(!) Conventional Kit Composition at pibranemark.com
(!) Reference number for ordering purposes only. Instruments and Tray delivered separately.

Instruments • Conventional

Drills ————			
		Ø	
<u> </u>	Initial	2.2	141138
		2.8	141146
		3.4	141148
Ø 3.4 0	Conical	3.8	141314
		4.6	141152
		4.8	141315
		3.3	141213
	Damas	3.75	141316
Ø 3.75 ①	Dense	4.0	141215
		4.8 5.0	141317
Implant Insertion Driver -			
		Medium	Long
a			1044.0
	All Systems	131139	131140
Tools —	All Systems	131139	131140
Tools —	All Systems		
		131139 2.2 2.8 2.8 3.8	131140 131114 131115
Tools —	All Systems Guide Pin	2.2 2.8	131114
Tools —		2.2 2.8	131114
Tools —		2.2 2.8 2.8 3.8	131114 131115
Tools —		2.2 2.8 2.8 3.8 2.2 2.8 C	131114 131115 141535
Tools —	Guide Pin	2.2 2.8 2.8 3.8 2.2 2.8 C	131114 131115 141535 141536





Guided & Conventional

181040

All Instruments



Guided +

181041

Guided Surgery Instruments only includes Prosthetic Instruments



Tray • GS

131162

Tray only

width	190
height	61
depth	138

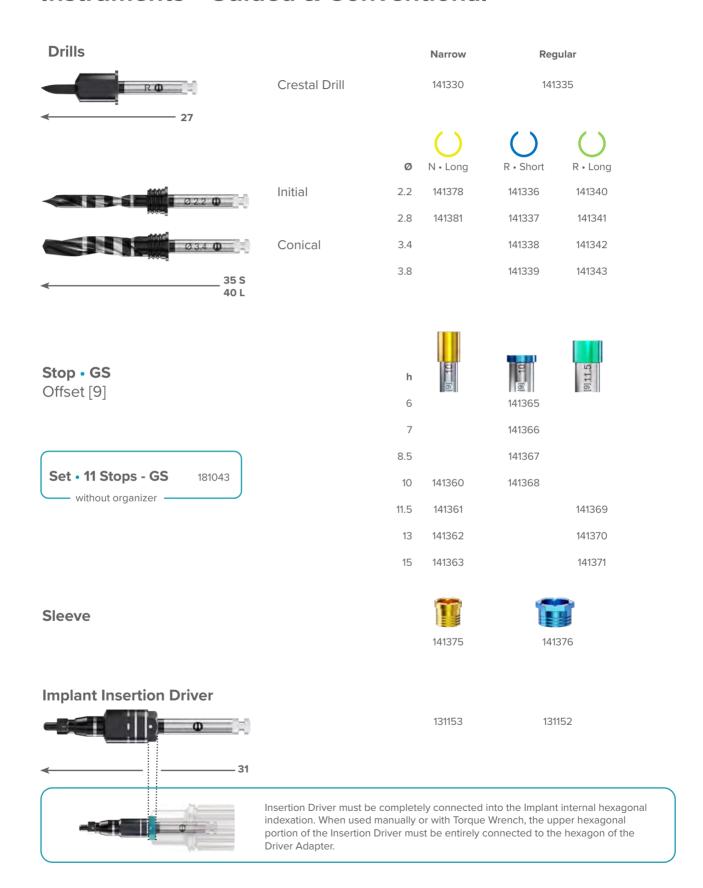


Stop Organizer • GS

141399

Organizer [9] only

Instruments • Guided & Conventional



Guide Fixation



Sleeve - Pin

141382



Pin Drill Ø1.7

141377



Fixation Pin

131167



Surgical Accessories

		Narrow	Regular
Punch 9 25	Soft Tissue Punch	141331	141332
Dense Drill R 0 28	Dense Drill	141344	141345

Torque Wrench Kit



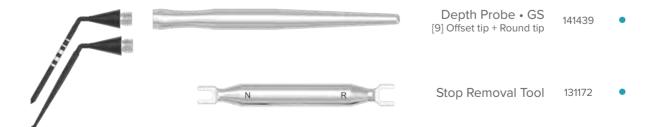
Prosthetic Instruments

Hexagonal Ø 1.2	Short Medium Long	131010 131011 131012
Conical Abutment Ø 2.0 Handling Tool, Angled	Short Medium	131016 131017 102964
Retriever MT	Short Medium	141564 131131

Accessories

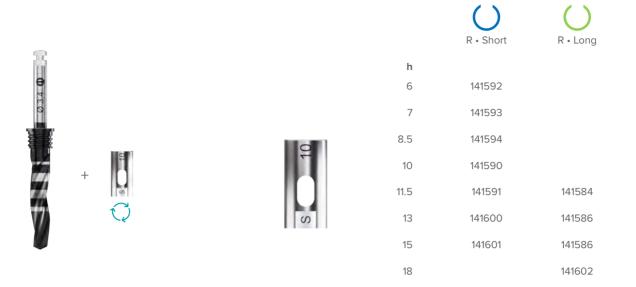


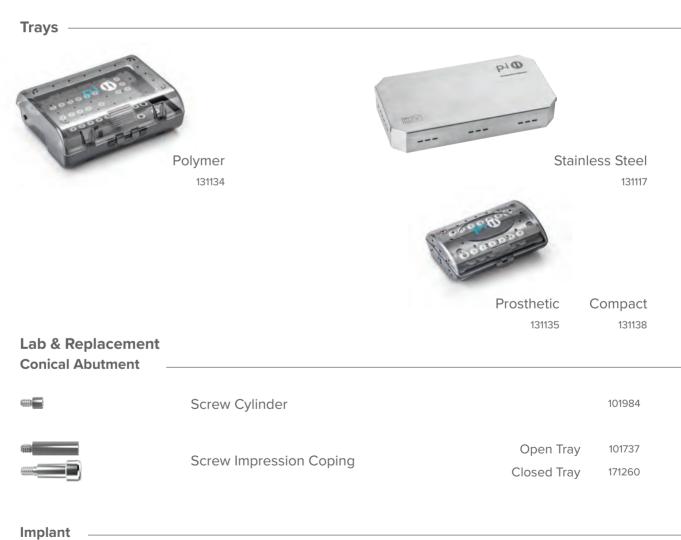
In the event Stop cannot be easily removed by hand, use handpiece in reverse or the Surgical Adapter, with or without Torque Wrench, to stabilize the Drill and apply manual counter torque on the Stop using the Stop Removal Tool.



- Manufactured by Elos MedTech Pinol A/S 🕍 . Torque Wrench Kit includes Surgical & Prosthetic Adapters.
- Stop Removal Tool should be used when Surgical Adapter is not sufficient for the removal of Stop from Drill.
 Depth Probe is not part of Kit GS and should be ordered separately.

Stop • Conventional





Coated Screw MT

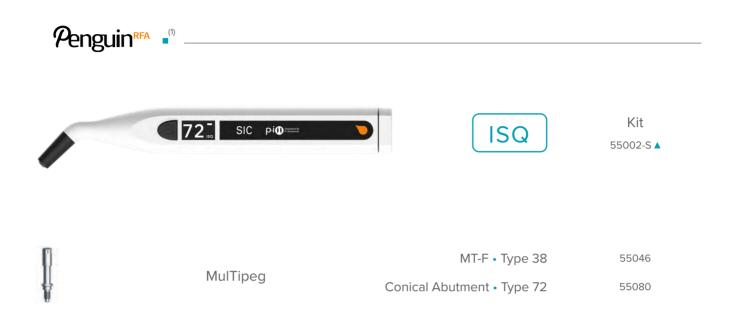
Screw Impression Coping

171239

171207

Open Tray

Resonance Frequency Analysis



Locator® Overdenture -



- (1) Manufactured by Integration Diagnostics Sweden AB
- ▲ Penguin RFA Kit includes instrument, charger, MulTipeg driver and user's manual.
 (2) Manufactured by Zest Dental . Components and instruments not included in the P-I Catalog.
- MT interface is the same in all platforms. Regular Abutments are used. P-I pegs are available from Osstell. MT-F Implant SmartPeg, type 21.



• SURGICAL SEQUENCE





rpm

600 - 1,200

Lowest possible rpm



In-Out

 \triangle 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

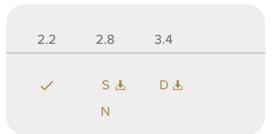
Constant irrigation to the insertion margin of Conical Drills



△ Drills are less than 1 mm longer than Drill marks

SURGICAL SEQUENCE







2.8	3.4	
S	N₫	
	D	
		S N Ł



2.2	2.8	3.4	3.8
	6	N	
~	S	Optional for Dense	»



2.2	2.8	3.8	4.6
~	~	S	N.₺
			D



N Normal





- (!) 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).
- (b) 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

Pla	tform	3.3	3.5	3.9	4.6
	17.75				
	14.75				
ght	12.75				
hei	11.25				
ctive	9.75				
Effective height	8.25	=8	18	33	
	7.15	= 3	1 5	1	1
	6.45	= 9			
Ар	ex	1.8	2.0	2.0	2.7
lm	olant	3.3	3.75	4.1	4.8

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

One Driver

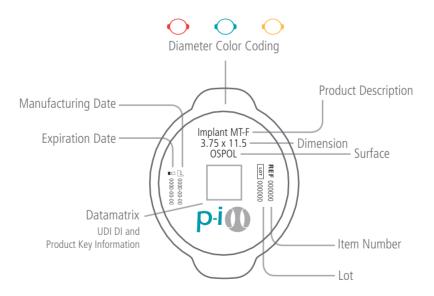
Manual • Torque Wrench



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

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











Developed By P-I Brånemark

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(€ 2460 **(€**