



Developed By P-I Brånemark

P-I product line was developed by the Osseointegration pioneer, Professor Per-Ingvar Brånemark, jointly with experienced scientists in world recognized entities to meet modern implant dentistry demands.

To further complement the P-I portfolio, the company Ospol AB was acquired. Founded in 2002 — Sweden, Ospol AB primarily commercialized its products in Europe, delivering outstanding technologies.

With knowledge and based on scientific evidences the main objective of the P-I brand is to offer professionals and patients competitive solutions represented by:

- . Simplification
- . High Performance
- . Safety and Longevity

The fundamental goal is to restore the quality of life of patients.





Content

- Hybrid Implants
- Interfaces
- Surfaces
- External Hexagon
- Amplified[®]
- Morse Taper
- Prosthetic Components
- Instruments
- Surgical Sequence
- Torques
- Implant Packaging
- LifeTime Guarantee

Hybrid Implants

P-I Hybrid Implants feature macro geometric characteristics combining a conical apex, parallel body and a slightly conical coronal flange with the objective of providing balanced high primary stability with maximum bone contact when combined with P-I Conical Drills, allowing easy, fast and safe clinical application in a variety of cases.

Functional

Intellectual Property and latest development of Professor P-I Brånemark

Presenting unique characteristics and proprietary designs, the Functional Hybrid Implants feature conical apex exhibiting collecting chambers, responsible for improving quality and quantity of surrounding bone (BIC) during the early healing period when compared to solid implants. The Functional geometries are in clinical use since 2002.



Solid

Modern Macrogeometry

Original development of Ospol Sweden AB, commercialized in several countries, primarily in Europe since 2006, the enhanced macrogeometry of Solid Hybrid Implants feature an outstanding Morse Taper Interface.



Interfaces



Morse Taper

A modern Morse Taper. Implant and Abutment Interface microbiological sealing, absence of leakage and micromovement. Very strong and stable Interface. Platform Switching, Micro Threads, hexagonal indexation, reversible prosthesis and Concave Emergence Components, seated by high preload special low friction screw trough, represent technologies to achieve high performance on demanding esthetics at bone or below bone level.





Amplified®

Platform Switched and Micro Threaded in all diameters, the conical indexed Amplified[®] Interface addresses a variety of clinical cases with superior esthetic results without the need for excessive submersion of Implant platform below bone level. Cortical bone preservation and soft tissue maintenance are characteristics of this technology to achieve and maintain esthetic results.





External Hexagon

Classic. Featuring Parallel Emergence Components, the External Hexagon Interface is a simple and great performer for total and partial prosthesis. In the Ø5.1 Platform it is possible to use Ø4.1 Components (Platform Switching). Original dimensions for Components and Hexagon in the Ø4.1 Platform. Solid designs feature Micro Threads, a better potential for tissue preservation.

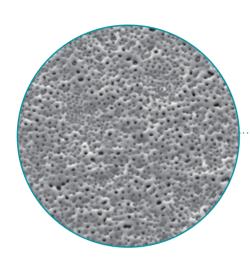


	$\langle \rangle$	\bigcirc	
	External Hexagon	Amplified®	Morse Taper
Platform Ø	3.5 4.1 5.1	3.5 4.1 4.3 5.1	3.5 4.1 5.1
Seating			
Conical		•	•
Hexagonal Indexation	•	•	•
Prosthesis			
Single	•	•	•
Partial	•	•	•
Total	•	•	•
Cemented	•	•	•
Screw-retained	•	•	•
Region			
Anterior	•	•	•
Posterior	•	•	•
Platform Switching	Ø5.1	•	•
Micro Threads*	•	•	•
Bone Level Installation	•	(or 0.5 - 1.0 mm below)	(or 0.5 - 1.5 mm below)
Cortical Bone Preservation	Parallel Emergence Profile	•	•
Soft Tissue Maintenance	Parallel Emergence Profile	•	•
High Esthetic Demand	•	•	•
Morse Sealing			•

^{*} Except HEX | Functional Ø3.75, 4.0 and 5.0.

Surfaces

P-I surfaces are modern and exhibit abundant Osseointegration properties





Widely Documented

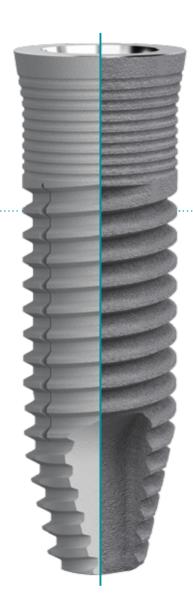
 Developed in the Department of Biomaterials — University of Gothenburg - Sweden and documented in many studies by some of the most important scientists in the field of implant surfaces.

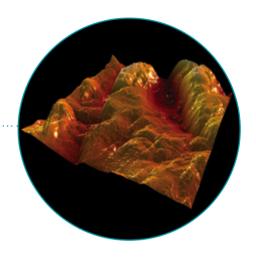
Evolution of a Modern Surface

. A patented evolution of TiUnite® featuring significantly lower micro roughness, the Ospol® Surface is oxidized and incorporates Calcium lons (Ca+2) and presents similar results when compared to moderately rough surfaces.

Better Long Term Perspective

. Ospol® Surface represents a better hypothesis of improving long term success and longevity of Implants being less prone to biofilm adhesion (Periimplantitis), in clinical use since 2004.







Advanced Technology

 The Micro+Nano Surface is exclusively obtained by subtraction methods, controlled microblasting and lons bombardment technology.

Minimally Rough and Nano Structured

. Exhibiting complex minimally rough micro structures and high density of nano features, designed for efficiency during healing periods, especially early ones, the Micro+Nano Surface is documented in international studies by worldwide experts in the Osseointegration field.

New Bone Areas

. A complete solution to address a wide range of clinical cases, the Micro+Nano Surface showed slightly increased bone areas in the 3 week period when compared to Ospol® Surface.

Risk Factors

There are several risk factors in Osseointegration widely described in literature.

The schedule below only demonstrates possible uses for the P-I Surfaces.

	Ů OSPOL [®]	µ M+N Micro+Nano
Bone Density*		
Type I	•	•
Type II	•	•
Type III	•	•
Type IV	•	•
Bone Healing Potential (!)	
Normal	•	•
Slightly Changed	•	•
Heavily Changed	•	•
Advanced Technique		
Grafts Biomaterials	•	•
Loading		
Immediate	•	•
Early	•	•
Delayed	•	•

Surface Structure

Method	Oxidized + Ca ⁺²	Micro Blasting + PIII
Micro Topography	Low Roughness	Minimally Rough
Nano Topography	+	++++
Main Chemical Composition	TiO ₂ + Calcium	TiO ₂

^{*} Lekholm U, Zarb GA

(!) Bone Healing Potential

Slightly	Changed
Juguruy	Cilaliyeu

Smoker (≤ 10 cigarettes/day)	
Controlled diabetes	
Anemia	
Osteoporosis	
Nutritional deficiency	
Treatment with steroids	
Non-steroid anti-inflammatory treatment over a long period	

Heavily Changed Low Predictability
Heavy smoker (≥ 10 cigarettes/day)
Uncontrolled diabetes
Strong anemia
Severe osteoporosis Bisphosphonates
Compromised Immune System
Hyperparathyroidism
Patient on antimitotic (antineoplastic) medication
Irradiated bone
Severe rheumatoid polyarthritis

Important: some conditions, whether combined or not, represent contraindications, limitations and risks (relative and absolute) for the treatment of patients with implants. The procedures for placement of implants are complex and require specialized training. See the Instructions for Use and procedures prior to the installation of Products.



HEX-S | Solid

Enhanced Macrogeometry

Benefits

• Easy, Safe and Simplified installation (!)

- . Special Conical Drills have the same geometry of Hybrid Implants
- . Only 2-3 Conical Drills to install Ø3.75 Hybrid Implants
- . Does not require pilot drill, counter sink or screw tap

• High Primary Stability, Balanced

- . Hybrid Macro Geometry
 - . Conical Apex | Parallel Body | Slightly Conical Coronal Flange
- . Trapezoidal cutting threads | Torque Balance

• Cortical Preservation Potential

- . Presence of Micro Threads up to platform flange
- . Better stress distribution to cortical bone
- . Higher coronal strength

• Maximum Bone Contact

- . Combination of Hybrid Implants and Conical Drills
- . Self Tapping
- . 2 thread entrances
- . Conical Solid apex | 3 cutting areas









HEX | Functional

Intellectual Property and latest development of Professor P-I Brånemark

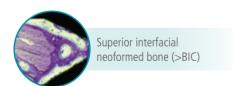
Benefits

- Easy, Safe and Simplified installation (!)
- . Special Conical Drills have the same geometry of Hybrid Implants -
- . Only 2-3 Conical Drills to install Ø3.75 and 4.0 Hybrid Implants
- . Does not require pilot drill, counter sink or screw tap
- High Primary Stability, Balanced
- . Hybrid Macro Geometry
 - . Conical Apex | Parallel Body | Slightly Conical Coronal Flange
- . Rounded single threads* | Torque Balance**

Short Implants from 6 mm

- . Ø3.75, 4.0 and 5.0
- . Apex with 4 cutting areas















* Except for Ø5.0 - 2 thread entrances.

** Except HEX Ø4.0.

Interface

Benefits

• Increased Biological Width

- . Parallel Emergence Components
 - . Does not require removal of cortical bone tissue

• Platform Switching for Enhanced Tissue Preservation

- . Platform Ø5.1 has the same Hexagon of Platform 4.1, allowing use of ················ 4.1 Components
- . Minimum \emptyset 0.15 mm switching in all Platform diameters | 3.5 4.1 5.1

Compatibility

. Original Platform, Hexagon and Components Dimensions for Ø4.1

- . Insertion Drivers with esthetic and dimensional references
- . Same Driver for manual, handpiece and wrench installation

• Versatile Interface

- . Ideal for total and partial prosthesis
- . Easy prosthetic maintenance



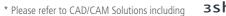






Prosthetic Solutions

















AMP-S | Solid

Benefits

• Easy, Safe and Simplified installation (!)

- . Special Conical Drills have the same geometry of Hybrid Implants
- . Only 2-3 Conical Drills to install Ø3.75 Hybrid Implants
- . Does not require pilot drill, counter sink or screw tap

• High Primary Stability, Balanced

- . Hybrid Macro Geometry
 - . Conical Apex | Parallel Body | Slightly Conical Coronal Flange
- . Trapezoidal cutting threads | Torque Balance

• Maximum Bone Contact

- . Combination of Hybrid Implants and Conical Drills
- . Self Tapping
- . 2 thread entrances
- . Conical Solid apex | 3 cutting areas









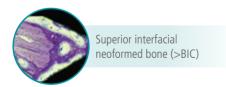
AMP | Functional

Intellectual Property and development of Professor P-I Brånemark designed jointly with renowned professionals

Benefits

- Easy, Safe and Simplified installation (!)
- . Special Conical Drills have the same geometry of Hybrid Implants
- . Only 2-3 Conical Drills to install Ø4.0 Hybrid Implants
- . Does not require pilot drill, counter sink or screw tap
- High Primary Stability, Balanced
- . Hybrid Macro Geometry
 - . Conical Apex | Parallel Body | Slightly Conical Coronal Flange
- . Rounded single threads* | Torque Balance
- Short Implants from 7 mm ·····
- . Ø4.0 and 4.8
- . Apex with 4 cutting areas
- . Recommended for partial prosthesis











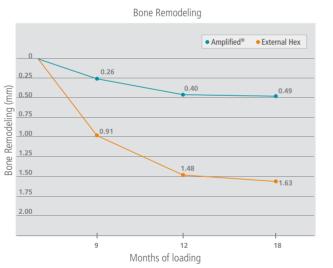


Interface

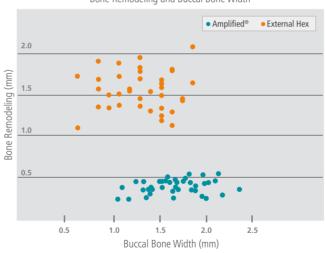
Benefits

• Superior Esthetic Results

- . Cortical bone preservation
- . Soft tissue maintenance
- . Platform Switching and Micro Threads in all diameters
- . Increased Biological width | Parallel Emergence Components







• Bone Level Installation

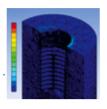
- . Installation at bone level or slightly below (0.5 1.0 mm)
- . Excessive submersion to obtain ideal emergence profile is not $\ensuremath{\mathsf{necessary}}^*$



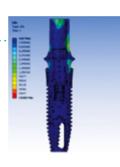
^{*} Please verify available prosthetic Components and consider clinical case anatomic limitations and requirements prior to Implant installation.

• Cortical Preservation Potential

- . Better stress distribution to cortical bone
- . Higher coronal strength



- . Conical indexed Interface $(30^{\circ} + 30^{\circ})$
- . Allows simple prosthetic maintenance and reversibility
- . Hexagonal indexation



• Multi Platform

. Interchangeable Components between Ø4.1, 4.3 and 5.1 Platforms

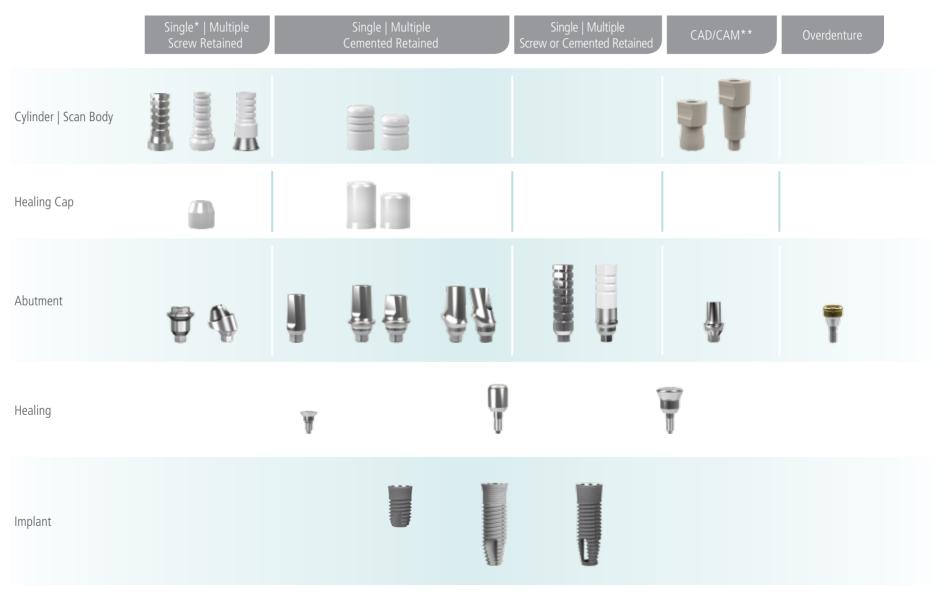
- . Insertion Drivers with esthetic and dimensional references
- . Same Driver for manual, handpiece and wrench installation
- . One Driver for all Implant diameters







Prosthetic Solutions



^{*} Amplified® Straight Conical Abutments can be used for single prosthesis. Please select engaging Components.

^{**} Please refer to CAD/CAM Solutions including 3shape▶













Modern Morse Taper

Benefits

- Easy, Safe and Simplified installation (!)
- . Only 2-3 Conical Drills to install Ø3.75 Hybrid Implants
- . Does not require pilot drill, counter sink or screw tap

• High Primary Stability, Balanced

- . Hybrid Macro Geometry
 - . Conical Apex | Parallel Body | Slightly Conical Coronal Flange
- . Trapezoidal cutting threads | Torque Balance

- . Ø3.75 and 4.8
- . Apex with 3 cutting areas
- . Recommended for partial prosthesis







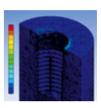




• Cortical Preservation Potential

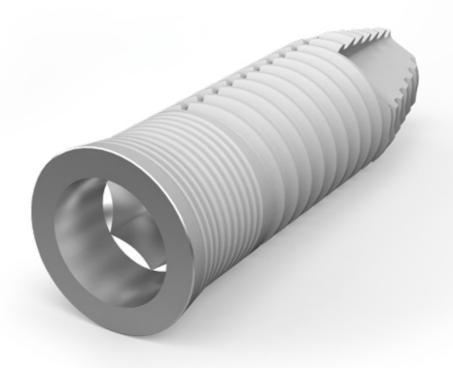
- . Better stress distribution to cortical bone
- . Higher coronal strength





• Maximum Bone Contact

- . Combination of Hybrid Implants and Conical Drills
- . Self Tapping
- . 2 thread entrances
- . Conical Solid apex | 3 cutting areas



Modern Morse Taper

• Microbiological and Mechanical Sealing

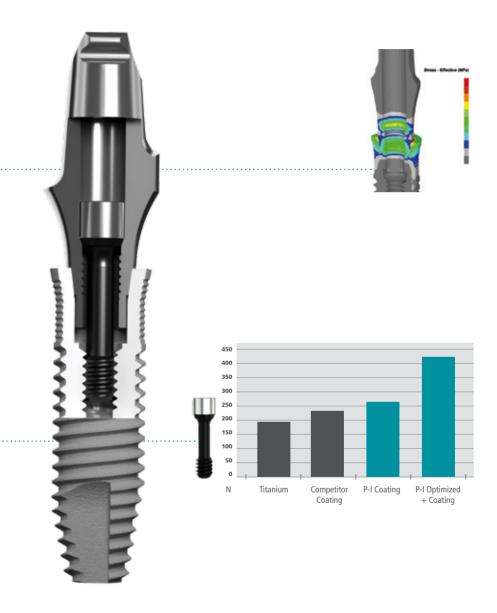
- . Absence of leakage
- . No micromovement
- . Internal conical Interface with effective Morse seating of Components at installation
- . Very stable and strong Interface

• Superior Esthetic Results

- . Platform Switching and Micro Threads in all diameters
- . Concave Emergence Components designed to enhance esthetics
- . Increased Biological width
- . Better hypothesis for cortical bone preservation and soft tissue maintenance

• Higher preload

- . Special design Screw trough guarantees complete seating of Components at installation
- . Same Screw for all Components*





Prosthetic Reversibility

- . Abutment Retriever cancels effective Morse sealing without transmission of stresses to tissues
- . Hexagonal indexation



. Use of any Component on any Implant Platform and diameter, including short and wide Implants

• Bone Level Flexibility

- . Installation at bone level or 0.5 1.5 mm below bone level
- . Possibility of further submersion*
- . Conical Interface $(8.5^{\circ} + 8.5^{\circ})$

- . Insertion Drivers with esthetic and dimensional references
- . Same Driver for manual, handpiece and wrench installation
- . One Driver for all Implant diameters



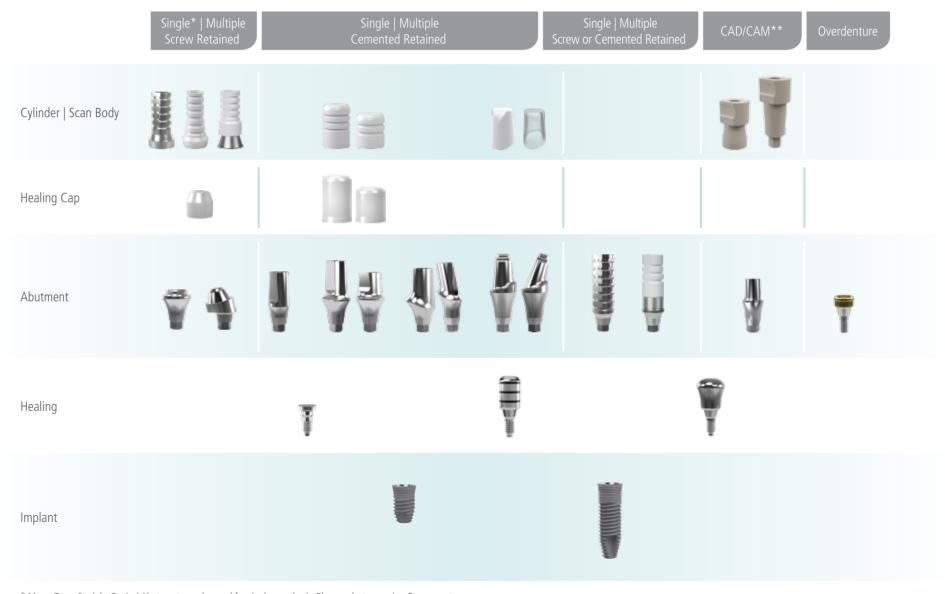






^{*} Please verify available prosthetic Components and consider clinical case anatomic limitations and requirements prior to Implant installation.

Prosthetic Solutions



^{*} Morse Taper Straight Conical Abutments can be used for single prosthesis. Please select engaging Components.

^{**} Please refer to CAD/CAM Solutions including 3shape▶









Complete. Esthetics.



Prosthetic Components

Soft Tissue Healing

• Healing options

- . Divergent Emergence \mid Soft tissue conditioning determined during healing phase
- . Parallel Emergence | Soft tissue conditioning determined by provisional or definitive Abutment

• Selection Abutment | MT

. Heights indication and Diameters options







Conical Abutment

Indicated for multiple and single, screw retained prosthesis

• Increased Biological Width

- . Parallel or Concave Emergence | MT Abutments
- . Does not require removal of cortical bone tissue

• Universal Prosthetic Platform

. Compatible with various CAD/CAM systems. See CAD/CAM Solutions

• Angled Abutments

. Inclination correction or use with angulation Implant techniques | $\mbox{All-on-}4^{\mbox{\tiny @}}$

* Single Prosthesis

. Amplified® and Morse Taper Straight Conical Abutments can be used for single prosthesis. Please select engaging Components





(!) Conical Abutment prosthetic Platform is the same in all diameters. Maximum occlusal angulation between two Abutments is 40°. Total available inter occlusal height must be considered starting from the Conical Abutment platform adding the height of the Prosthetic Cylinder and esthetic material.

Abutment Cemented Cylinder

Indicated for single or multiple, cement retained prosthesis

• Faster and easier prosthetic procedure

. Allows immediate final Abutment placement and impression at Abutment level for better preservation of tissues | One Abutment - One Time

• Increased Biological Width

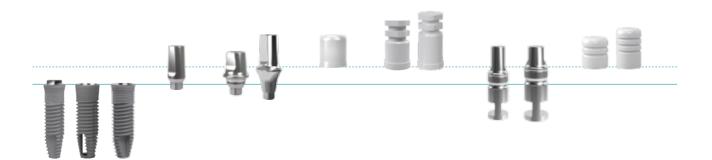
- . Parallel or Concave Emergence | MT Abutments
- . Does not require removal of cortical bone tissue

• Anterior and Posterior Options

- . Conical portion features 2 engaging areas with 2 height options 4 and 6 \mbox{mm}
- . System includes Impression Coping, Analog, Engaging and Non-Engaging Castable Cylinders

"0" Abutments, available for Amplified® and Morse Taper, are indicated for use with thin gingival phenotypes. Not compatible with Healing, Impression and Cylinders system





Esthetic Abutment

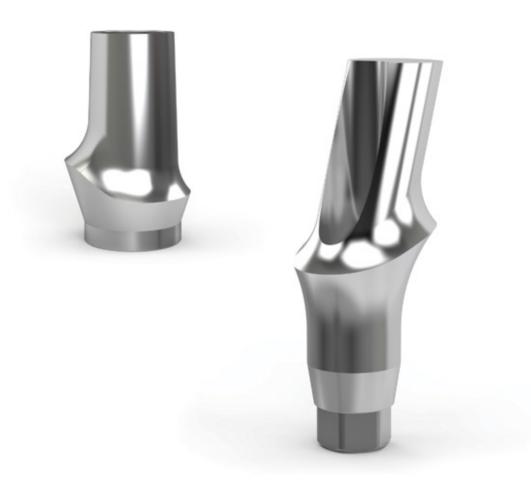
Indicated for single or multiple, cement retained prosthesis

• Increased Biological Width

- . Parallel or Concave Emergence Abutments | MT Abutment
- . Does not require removal of cortical bone tissue

• 15° Angled Abutments

- . Correction of inclination or use with angulation Implant techniques
- . 12 indexing positions for HEX Interface and 6 for Amplified® and Morse Taper





Contour Abutment | Morse Taper (!)

Indicated for single or multiple, cement retained prosthesis

• Soft Tissue preservation

. Allows immediate final abutment placement and impression at abutment level for better preservation of tissues \mid One Abutment - One Time

• Faster and easier prosthetic procedure

. System includes Impression Copings, Analog, Healing Caps, Provisionals and Castable Components for 3 different prosthetic platforms, straight and 17°

• Increased biological width

- . Concave emergence profile
- . Does not require removal of cortical bone tissue





Cylinders over Implant

Indicated for single or multiple, cemented or screw retained prosthesis

• Increased Biological Width

- . Parallel or Concave Emergence | MT Abutments
- . Does not require removal of cortical bone tissue

• Titanium Cylinders for Provisional Prosthetics

. Complete flats (2) and deep trapezoidal retentions for esthetic material

• Flexibility in Prosthetic Design

- . Cobalt Chromium Molybdenum Cylinders for definitive prosthesis
- . Body with retentions
- . Waxing sleeve with flats (2) and deep trapezoidal retentions





Overdenture Solutions

- Universal Components and Instruments
- . Compatible with commercially available systems



CAD / CAM Solutions

Scan Bodies

- Multiple use* for Intraoral and Desk Scanners
- . Polymer Scan Bodies for Implants and Conical Abutments

Links

- Height Flexibility for customized hybrid abutments
- . Avoid stress cracking and provide high precision seating at Implant Interface







exocad





^(!) P-I Interfaces, Links and Scan Bodies are listed in the libraries of described systems. Please check availability in your region.

^(!) The Implant Scan Bodies for Amplified® and Morse Taper are recommended for single units and use with Intraoral and Desk Scanners. For multiple prosthesis, please consider P-I Conical Abutment Scan Bodies with universal Platform.

* It is recommended to replace Scan Bodies frequently, when worn out or damaged. Maximum of 100 autoclave cycles.

One for all Clinical Application.



Kit

- One Kit for all Interfaces and Implant geometries
- Same Kit for Surgical and Prosthetic procedures
- 3 tray options



- Suggested Compositions
- . Advanced
 - . All Interfaces and Implants | Surgical + Prosthetic
- . Start-up
 - . All Interfaces and Implants Ø3.75 and 4.0 | Surgical + Prosthetic
- . Specialist Kits
 - . All Interfaces for Implant Ø3.75 or 4.0 | Surgical
- . Prosthetic Kit
 - . All Interfaces and Components

Stainless Steel



Polymer



L 202 mm H 67 mm

W 158 mm

Compact



L	120	mm

W 80 mm

Specialist Kits

All Interfaces



Specialist Kit* | Ø4.0



Prosthetic Kit

All Interfaces and Components





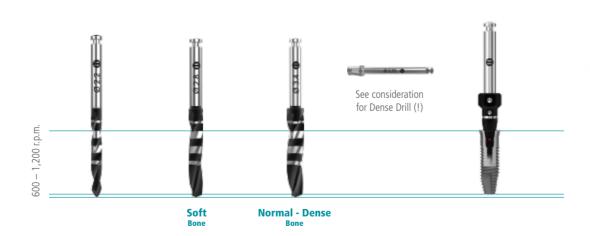


^{*} Surgical placement of Implants Ø3.75 or 4.0 on any Interface. Does not include Torque Wrench. Includes a handpiece and Squared finishing 4x4 mm Implant Insertion Driver (Medium). (!) Ball Abutment and Locator® Instruments are universal and not listed in this Catalog (Their universal instrumentation and tooling are not included in the kits). Please check availability in your region. Please refer to Kit Composition and additional tray options on www.pibranemark.com.

Conical Drills

Developed and manufactured with best available technologies

- Easy, Fast and Simplified installation (!)
- . Only 2-3 Conical Drills to install Ø3.75 and 4.0 Hybrid Implants
- . Does not require pilot drill, counter sink or screw tap
- High Primary Stability, Balanced
- . Special Conical Drills have the same geometry of Hybrid Implants
 - . Maximum bone contact





(!) See Surgical Sequence.



• Total 6 Conical Drills for all Hybrid Implants

Interfaces and Geometries	HEX-S HEX AMP-S AMP MT	
Diameters	3.3 3.75 4.0 4.8 5.0	
Lengths	6 – 15 mm	
Surfaces	Ospol® M+N	





• Safety, High Control and Durability *

- . Design helps to avoid undesired movements and overdrilling
- . Special cutting angles providing low friction
- . Conical apex with 3 cutting edges ·····



- . Low speed cortical bone removal | 15-50 r.p.m.
- . Gradual preparation of coronal region
- . Avoid use of counter sink and screw tap
- . 10 cutting edges



(!) See Surgical Sequence.

* When Instruments are correctly cleaned and sterilized individually, without contact, and in the absence of any mechanical damages.

Implant Insertion

Simplification

- . Only one driver for manual, handpiece and wrench installation (!)
- . Same driver for all Implants*

• Esthetic and dimensional references during surgery



Free gingival margin and Components selection



(!) See Surgical Sequence.

- * Except HEX Ø3.5, specific Driver.
- ** Alignment of Components slices and flats to Implant index (face to face).

 Please check availability of Gem Lock Drivers in your region. Drivers with rings are the same for Amplified® and Morse Taper.

Instruments

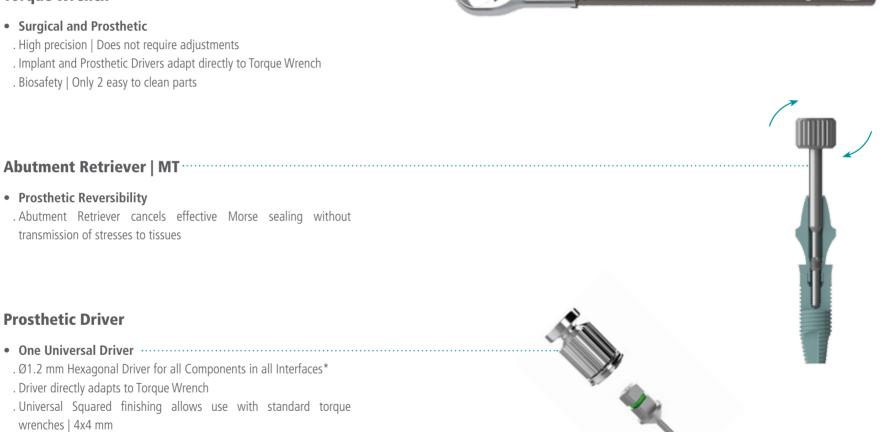
Torque Wrench

- Surgical and Prosthetic
- . High precision | Does not require adjustments
- . Implant and Prosthetic Drivers adapt directly to Torque Wrench
- . Biosafety | Only 2 easy to clean parts

- Prosthetic Reversibility
- . Abutment Retriever cancels effective Morse sealing without transmission of stresses to tissues

Prosthetic Driver

- . Ø1.2 mm Hexagonal Driver for all Components in all Interfaces*
- . Driver directly adapts to Torque Wrench
- . Universal Squared finishing allows use with standard torque wrenches | 4x4 mm
- . Ø1.2 mm Hexagonal Driver captures Screws





Surgical Sequence





During all surgical preparation, coordinated in-and-out movement of drills should be executed



Irrigation must be constant and directed to the insertion margin of drills in the surgical site



Only use the Torque Wrench when at least 3/4 of the Implant are inserted in surgical site

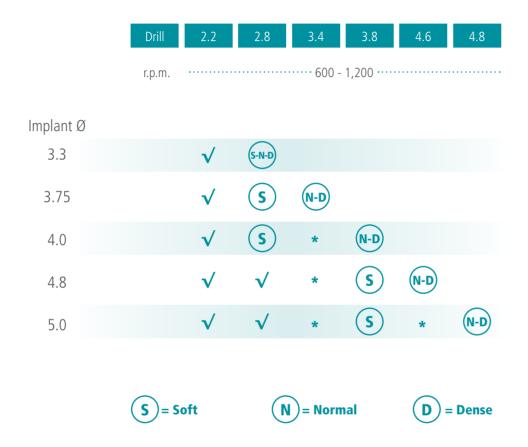


Installation of Hybrid Implants should not exceed 50 Ncm in all clinical cases



When the Torque Wrench is used by the torque handle the maximum torque should not exceed 50 Ncm

Surgical Sequence







Important: during all surgical preparation, the use of Dense Drills should be considered regardless of Implant type and bone density with the objective of not exceeding 50 Ncm of torque. Dense cortical bone removal with Dense Drills must be always performed in low rotation (15 - 50 r.p.m. | Maximum). Dense Drills can be also used to gradually prepare surgical sites (*i.e.* widening of the cortical region and post extraction sites).

^(!) Round Burr and Spade Drill are optional.

^{*} Optional.

Torques

	HEX	AMP	MT	Driver
Hybrid Implants	≤50	≤50	≤50	Insertion Driver
Abutments Cylinders over Implant Links	35*	25	25	Ø1.2**
Cylinders - Conical Abutments	15	15	15	Ø1.2
Locator [®]		35	35	Locator®
Cover Screws Healings Abutments Impression Copings Scan Bodies	Manual	Manual	Manual	Ø1.2

Materials and Dimensions

For further information about Implants and Components Materials and Dimensions, please refer to www.pibranemark.com.

All Components are supplied with Screws when applicable.

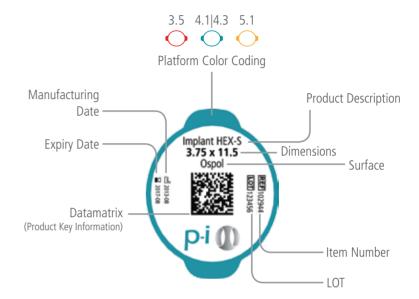
^(!) Caution with cementation procedures should be practiced to avoid contamination of tissues. Image examination and checks should be performed to confirm correct adaptation of Components to Implant Platform.

^{*} Except, HEX Ø3.5 Components and Angled Conical Abutments = 25 Ncm. ** Except Straight Conical Abutment, Driver Ø2.0.

Implant Packaging

- Preserves physical-chemical Surface properties | Titanium Capsule
- Easy identification | Color Coded
- Datamatrix system containing product key information
- 3 traceability tags



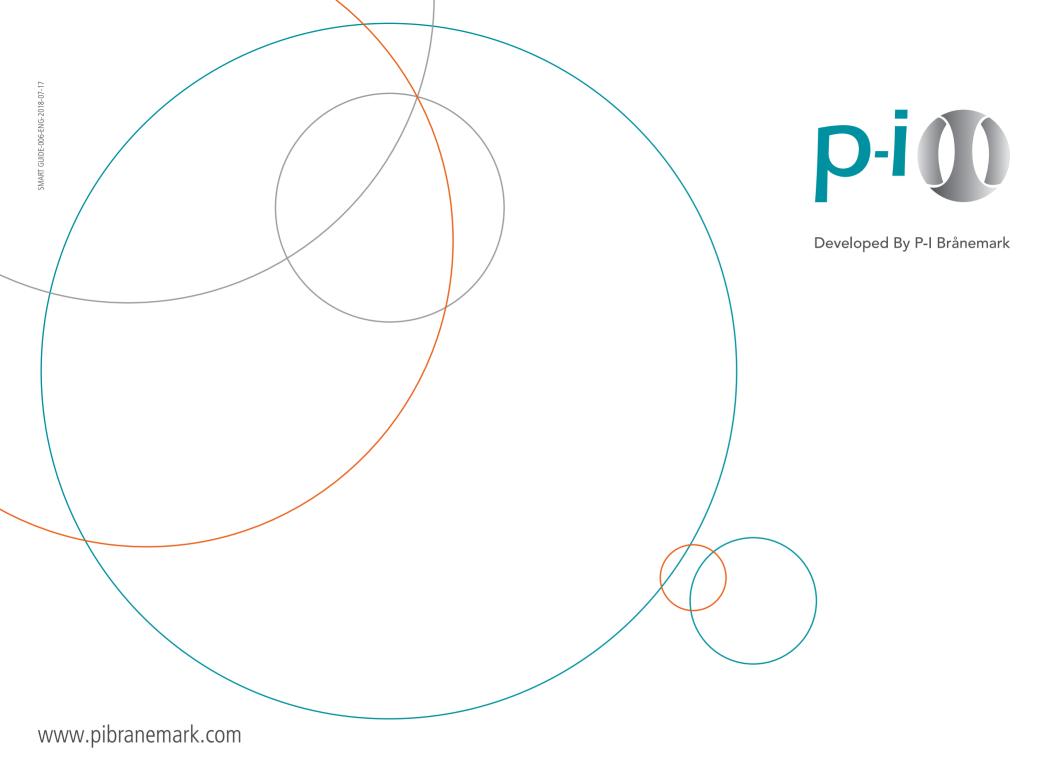




The LifeTime Product Guarantee is limited to Implant and Abutment replacement in case of loss.

Please refer to www.pibranemark.com/guarantee for applicable terms and conditions.





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