

SCIENCE MEETS INNOVATION



A Keystone Dental Group Brand



SCIENCE MEETS INNOVATION

We continue to build on our strong heritage as a contemporary implant system backed by science and innovation. Paltop offers six innovative implants with an advanced biological design, including state-of-the-art surgical and restorative components. This complete implant system with two restorative connections, both engineered for marginal bone preservation and restorative flexibility, can be placed utilizing the Premium Surgical Kit. The hallmark of our restorative components is a unique concave abutment profile, which helps deliver long-term aesthetics. Paltop leads with innovation through unique digital workflows and individual implant solutions, such as the Single-Unit Abutment System (SUA) and the Angulated Corrective System (ACS) designed to deliver excellent treatment outcomes and better patient care.





PALTOP IMPLANT STANDARDS

PLATFORM SWITCHING

The platform switch maintains crestal bone and increases soft tissue volume around the implant platform.^{1,2,3}

CYLINDRICAL CORE

Cylindrical shape promotes long-term osseointegration by enlarging surface area and bone-to-implant contact.

INITIAL STABILITY

Aggressive threads in the apical portion enhance primary stability for indications, such as immediate extraction sockets, poor bone quality, and immediate loading.



BONE MAINTENANCE

Microthreads provide even load distribution, stabilizing, and maintaining crestal bone levels.^{4,5,6}

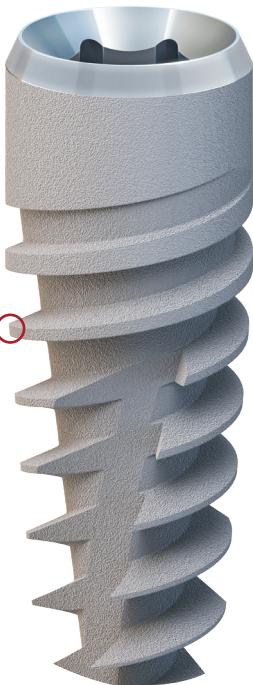
KLEAN

Sandblasted acid-etched surface, with an extensive multi-stage cleaning process, utilizes ultra-pure water (UPW) which removes undesired residues, providing a clean surface and maintaining an intact oxide layer.^{7,8,9}

TAPERED APEX

The apically tapered implant design allows for under-preparation of the osteotomy and supports primary stability in soft bone.

THE PALTOP DIFFERENCE



AGGRESSIVE THREADS

Double-lead thread design with an 1.2 mm thread pitch. Variable thread width from coronal to apical to increase bone-to-implant contact and initial primary stability.

ACTIVE APEX

Allows for aggressive bone anchoring in indications such as immediate loading, poor bone quality, and extraction sockets.^{10,11}



MACHINED COLLAR

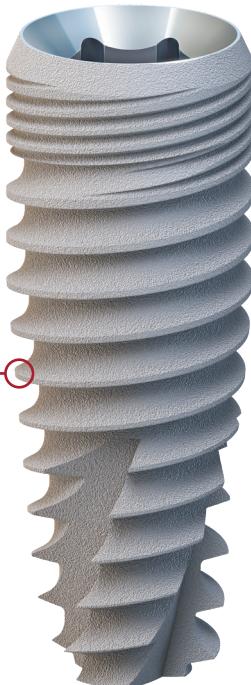
1.5 mm machined collar for different clinical indications and surgical flexibility.

AGGRESSIVE THREADS

Double-lead thread design with an 1.2 mm thread pitch. Variable thread width from coronal to apical to increase bone-to-implant contact and initial primary stability.

ACTIVE APEX

Allows for aggressive bone anchoring in indications such as immediate loading, poor bone quality, and extraction sockets.^{10,11}

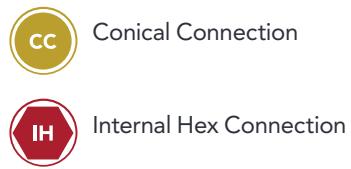


CUTTING THREADS

Double-lead thread with a reverse buttress profile with 0.8 mm thread pitch.

CUTTING APEX

Designed for controlled implant placement in challenging sites.



ADVANCED CLASSIC



PASSIVE APEX

Passive apex enables safe implant insertion without damage to surrounding bone.

V-THREAD

One of the longest documented designs in scientific literature with more than 45 years of evidence.^{15,16}

ADVANCED+ SLIGHTLY ACTIVE APEX



V-THREAD

One of the longest documented designs in scientific literature with more than 45 years of evidence.^{15,16}

CUTTING APEX

Designed for controlled implant placement in challenging sites.

PCA PALTOP CONICAL ACTIVE



CONICAL CONNECTION

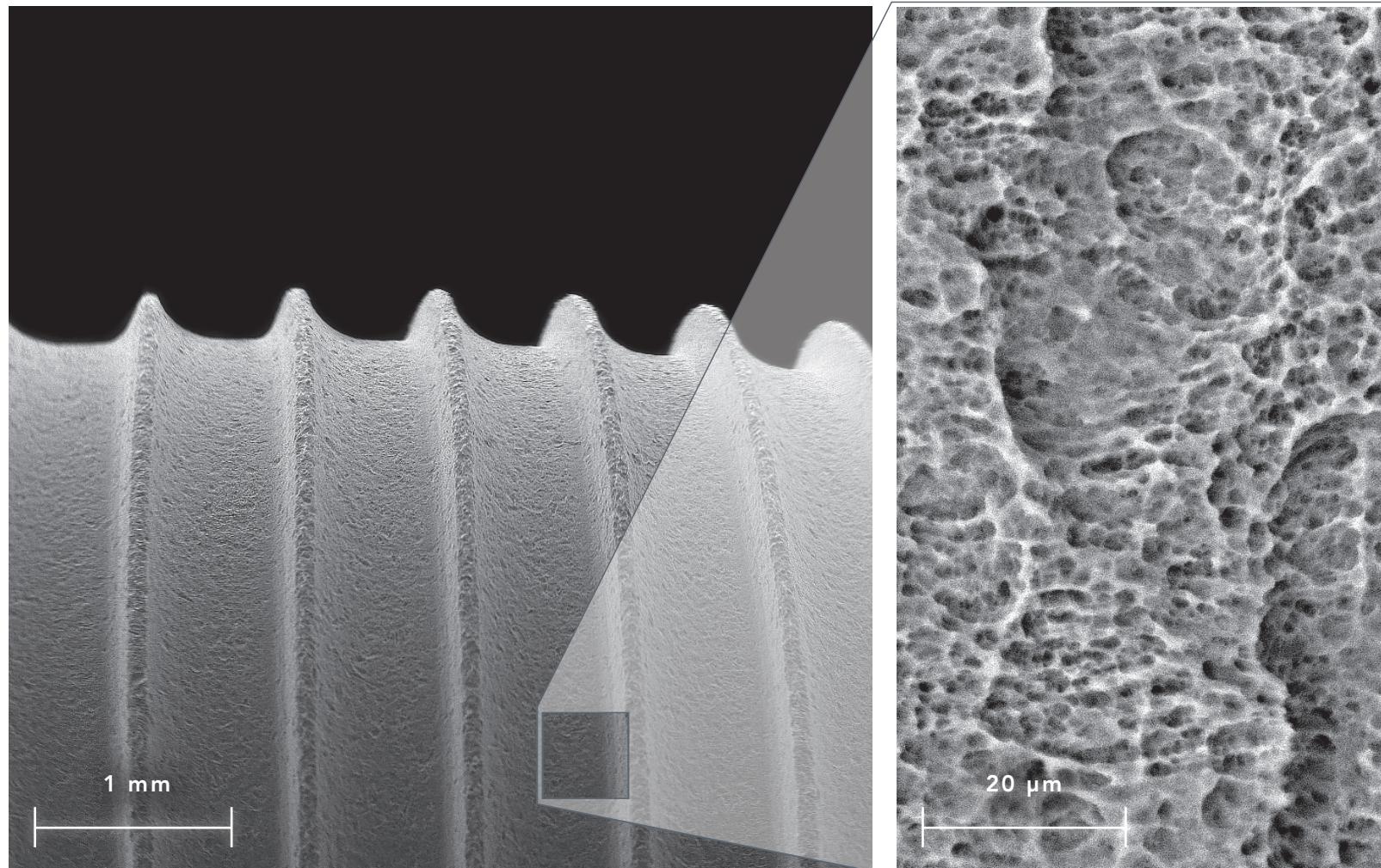
Tightly sealed conical interface with a deep internal hex connection offers high mechanical strength and platform switching to optimize bone preservation and soft tissue.^{12,13,14}

V-THREAD

One of the longest documented designs in scientific literature with more than 45 years of evidence.^{15,16}

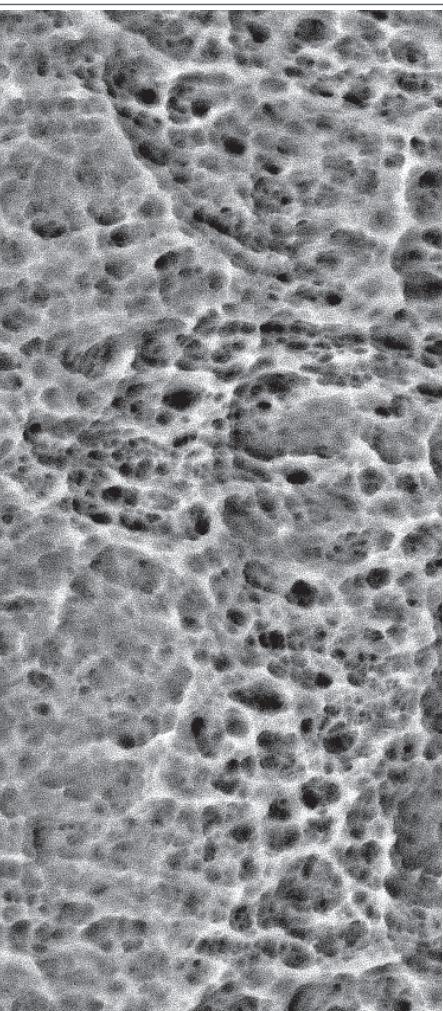
CUTTING APEX

Designed for controlled implant placement in challenging sites.



KLEAN

The proprietary K-LEAN™ surface is created by two sequential stages: sandblasting, aimed at creating a porous surface topography, followed by acid etching, intended to generate micro-roughened surface structure. The surface treatment is completed by removing contaminants using ultra-pure water (UPW), a unique process acquired from the semiconductor industry.^{7,8,9}



FROM BDIZ EDI JOURNAL REPORT: SEM SURFACE ANALYSES OF 120 STERILE-PACKED IMPLANTS

"PALTOP has decided to consistently clean their products with ultra-pure water (UPW), which is rather expensive to produce, compared to regular demineralized water, and is otherwise mostly employed by the semiconductor industry. XPS analyses of the implant surface thus cleaned show no traces of sulphur, silicon, zinc or chlorine, inorganic impurities frequently found in the XPS analyses of the sandblasted and acid-etched surfaces of implants by other manufacturers. The corresponding EDX analysis shows only the typical elements for grade five titanium..."⁹



**STERILE R LEADING IN
PATIENT SAFETY**

Paltop delivers sterile components throughout all treatment phases. The innovative implant packaging utilizes a titanium sleeve, designed to prevent potential contamination of the K-LEAN™ surface.

ADVANCED BIOLOGICAL DESIGN

ENGINEERED FOR MARGINAL BONE PRESERVATION

LONG-TERM AESTHETICS

The sequence of matching restorative components contributes to the maintenance of soft-tissue volume and predictable bone preservation.¹⁷

CONCAVE PROFILE

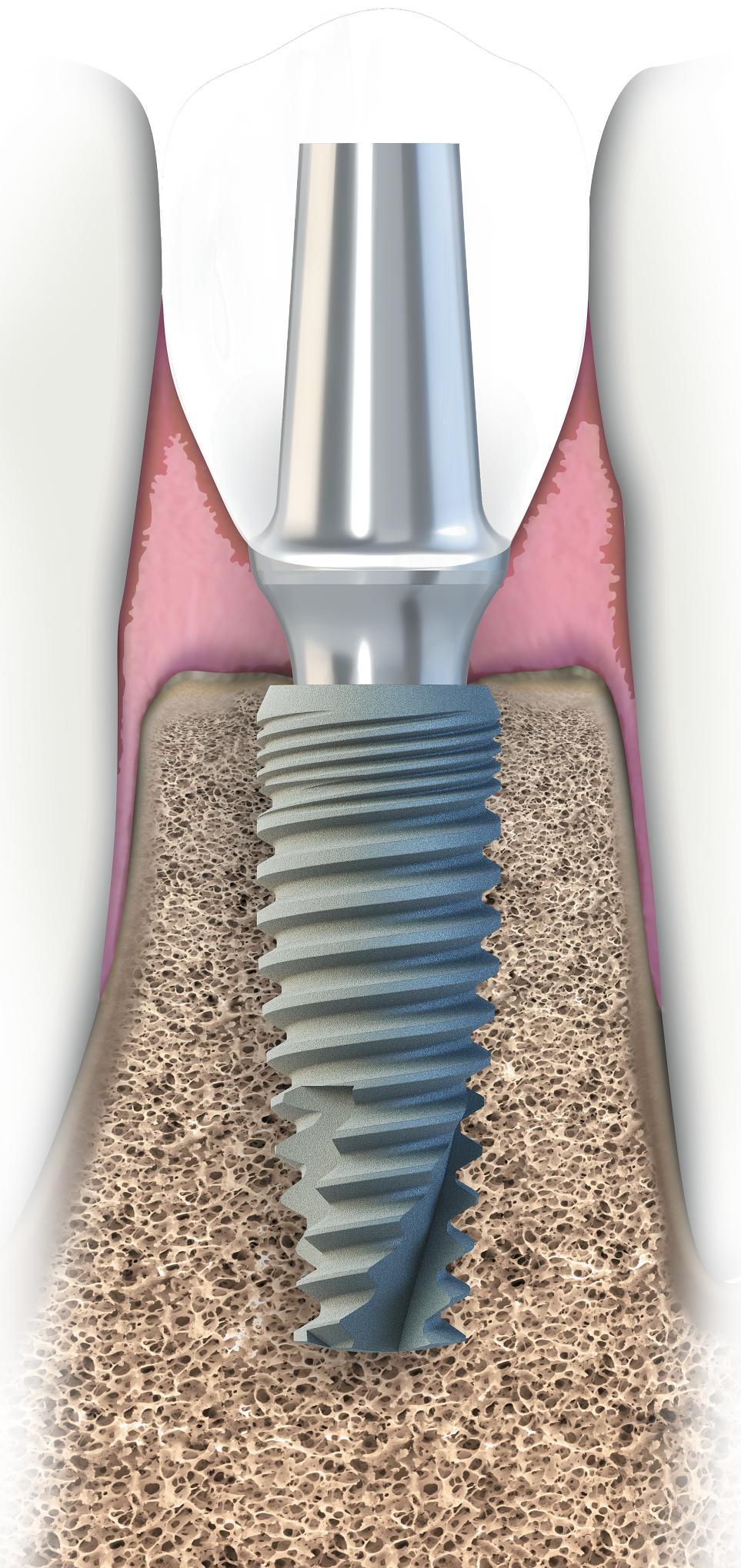
The prosthetically driven concave design increases soft-tissue volume, improving blood supply supporting an optimal emergence profile.^{17,18,19,20}

MICROTHREADS

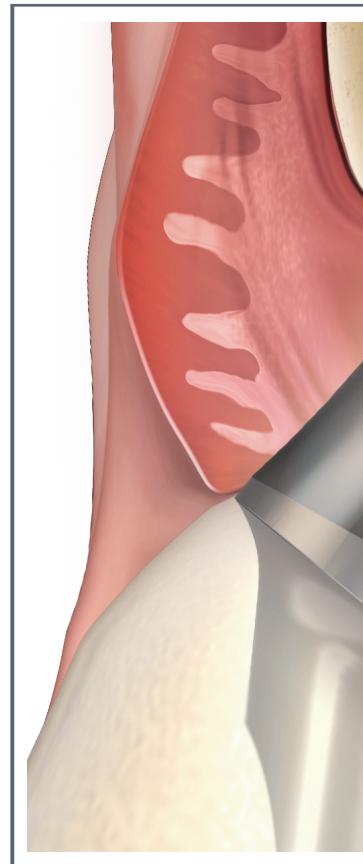
Provides even load distribution, stabilizes and aids in maintaining crestal bone levels.^{4,5,6}

KLEAN SURFACE

Extensive multi-stage cleaning process, utilizes ultra-pure water (UPW) maintaining an intact oxide layer.^{7,8,9}



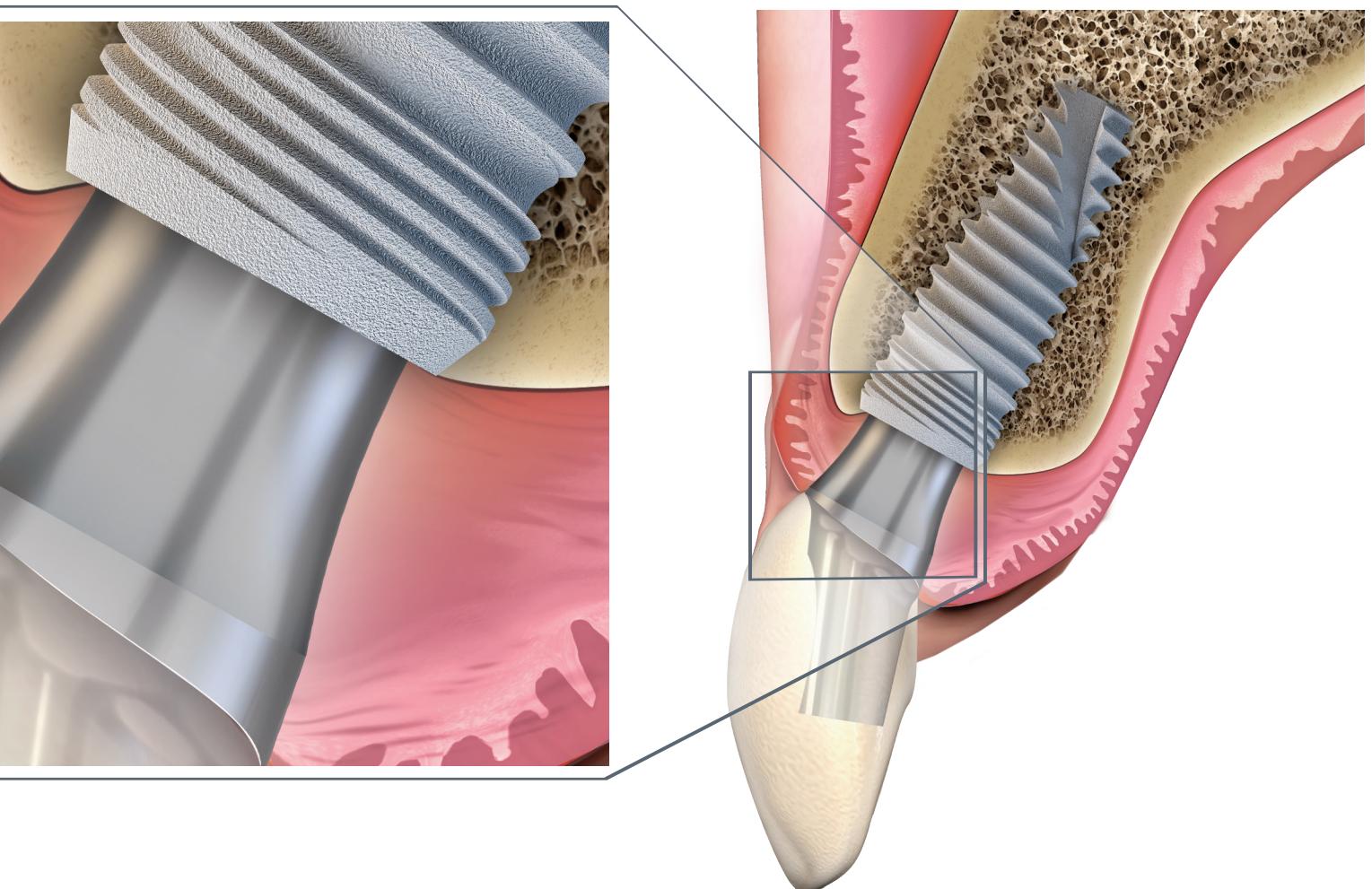
ENGINEERED AESTHETICS



ENHANCED GINGIVAL HEALING

CONCAVE THROUGHOUT THE TREATMENT

The Paltop implant system is a leader of innovative prosthetic solutions, offering prefabricated prosthetic components suitable for all restorative indications. The concave design creates an optimal emergence profile by forming a dense layer of soft tissue. The newly formed concave tissue architecture is maintained throughout the entire treatment.



PROVEN INTERNAL HEX

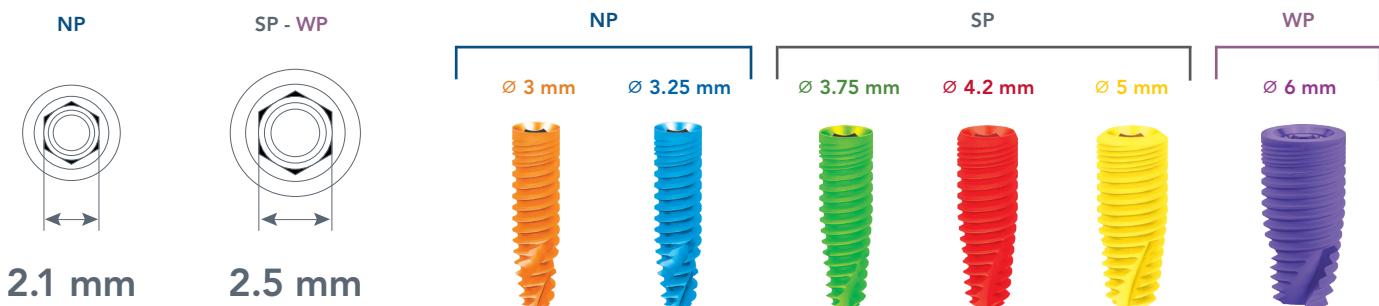
RESTORATIVE FLEXIBILITY

PROVEN CONNECTION

The internal hex connection is proven with over 40 years of long-term data supporting predictable aesthetic outcomes. The ease of use in abutment placement allows for a positive clinical experience. The deep internal hex connection provides abutment stability and a versatile prosthetic connection.

SIMPLIFIED INVENTORY

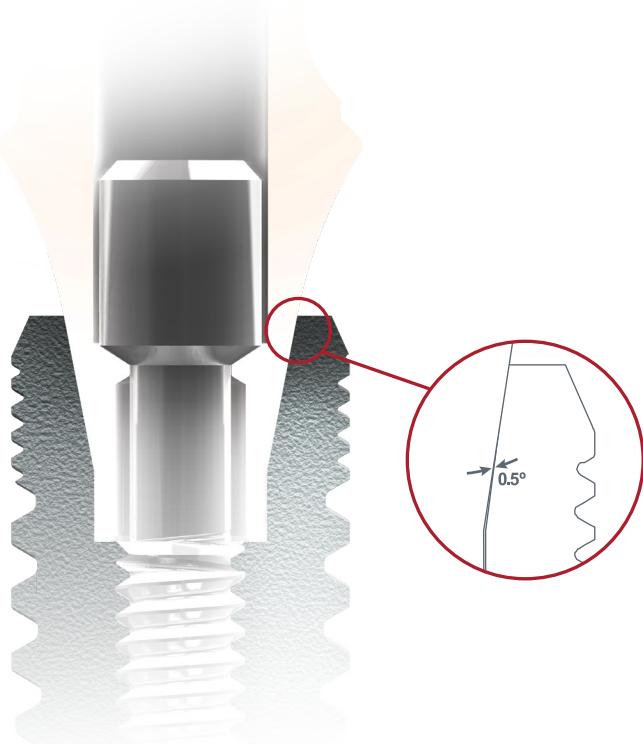
The narrow, standard and wide platforms for all Paltop internal hex implants offer restorative flexibility with reduced inventory. The standard internal hex platform covers 3.75 mm, 4.2 mm, and 5.0 mm implant diameters.



SECURE

CONICAL CONNECTION

**ONE
CONNECTION**

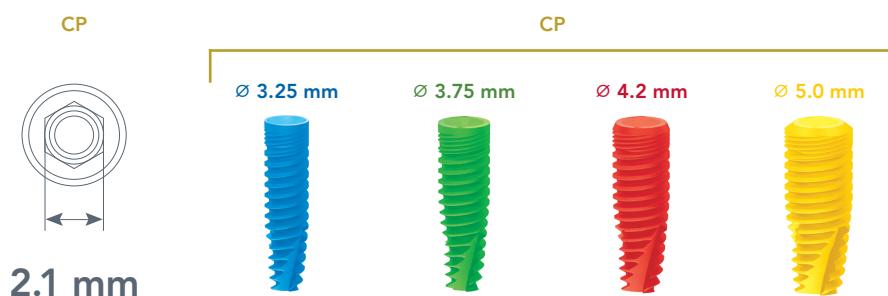


SIMPLIFIED WORKFLOW

One platform across all implant diameters simplifies the restorative workflow, with one prosthetic connection providing a variety of restorative options. This drives efficiency and reduces treatment complexity.

PRECISION MILLED

Implant and abutments are produced to an accuracy of 0.5° to achieve excellent retention. The tighter the tolerance, the greater the mechanical retention for eliminating micromovement and providing a clinical seal between the implant and the abutment.^{12,13,14}



ONE KIT FOR ALL PALTOP IMPLANTS

The Premium Surgical Kit is used for all Paltop implant designs. Suitable for all implant diameters: 3.0 mm, 3.25 mm, 3.75 mm, 4.2 mm, 5.0 mm and 6.0 mm.

EXPANDED TREATMENT CAPABILITY

3.0 mm final drill now included to facilitate placement of the 3.0mm implant.

INCREASED DRILLING EFFICIENCY

The drills are manufactured by a leading provider of the highest quality rotary instruments that perform better, last longer and are color-coded according to diameter and length.

IMPROVED USER EXPERIENCE

State-of-the-art bending beam torque wrench now included.

IMPROVED CLEANING AND DISINFECTION

One-piece grommetless technology facilitates improved cleaning and disinfection of the surgical kit during the sterilization process (approved for use in surgical washer-disinfectors). For full cleaning and sterilization guidelines please refer to both the surgical kit and Paltop instructions for use.





FULLY GUIDED SURGICAL KIT



VIRTUAL PLANNING FOR THE DESIRED AESTHETIC RESULT

The state-of-the-art Fully Guided Surgical Kit eliminates cumbersome drill guide keys/spoons for placing all implants from 3.25 mm to 5.0 mm in diameter. The Fully Guided Surgical Kit includes a handpiece specifically designed for the innovative Digital Guidance Sleeve (DGS). The DGS provides continuous direct irrigation to each drill and protects the drilling flutes from contacting the guide sleeves in order to avoid metal shavings from entering the osteotomy.

DIGITAL GUIDANCE SLEEVE

DGS

DIGITAL INNOVATION

The pioneering Digital Guidance Sleeve (DGS) engages into the handpiece and eliminates the need for drill keys. Increased entry-angle flexibility allows for access in limited posterior interarch spaces. The DGS protects the osteotomy from inadvertent metal shavings while allowing for copious direct irrigation.



ANGULATED CORRECTIVE SYSTEM

ACS

INCREASED RESTORATIVE FLEXIBILITY

ACS abutments are for precision-manufactured CAD/CAM screw-retained restorations where angulation of the screw access hole is required for improved aesthetics and/or function.

20° OF AESTHETICS

The ACS system permits angulation of the screw access hole up to 20 degrees. This is achieved with the aid of a specially designed abutment screw and screwdriver (hand or ratchet) to facilitate precise tightening of the abutment screw at the required torque.



SINGLE-UNIT ABUTMENT SYSTEM

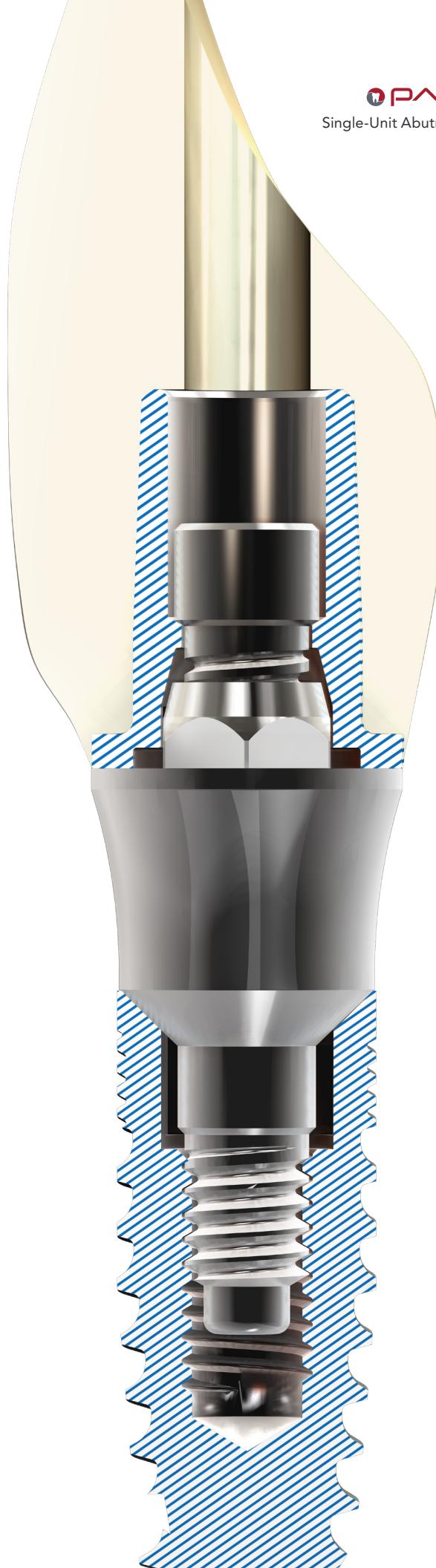
SUA

SOFT-TISSUE PRESERVATION

The Single-Unit Abutment (SUA) is designed for single-tooth restorations placed at time of surgery. The concave profile of the SUA enables increased volume of soft tissue, facilitating an uninterrupted seal. The SUA reduces soft-tissue disruption that may cause apical migration of epithelial cells, potentially creating pockets of unstable soft tissue. The concept of a final abutment at time of surgery helps promotes bone maintenance and greater aesthetic outcomes.

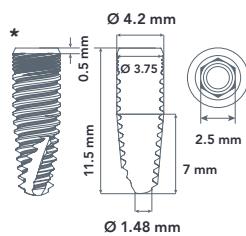
ELEVATED RESTORATION

The one-piece Single-Unit Abutment allows for platform switching and a tissue-level restoration, maintaining long-term soft-tissue attachment.



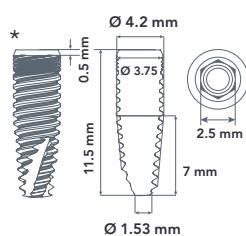
IMPLANT SPECIFICATIONS

ADVANCED CLASSIC



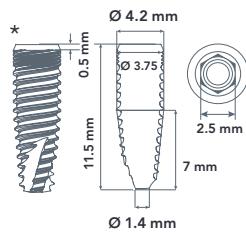
IH	NP		SP		Ø 5 mm
	Ø 3.25 mm	Ø 3.75 mm	Ø 4.2 mm	Ø 5 mm	
6.0 mm	—	—	20-70005	20-70011	
8.0 mm	—	20-70017	20-70006	20-70012	
10.0 mm	20-70018	20-70001	20-70007	20-70013	
11.5 mm	20-70019	20-70002	20-70008	20-70014	
13.0 mm	20-70020	20-70003	20-70009	20-70015	
16.0 mm	20-70021	20-70004	20-70010	20-70016	

ADVANCED+ SLIGHTLY ACTIVE APEX

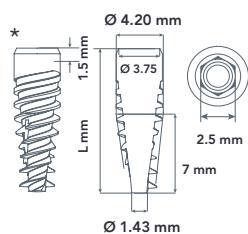


IH	NP		SP			WP
	Ø 3 mm	Ø 3.25 mm	Ø 3.75 mm	Ø 4.2 mm	Ø 5 mm	
6.0 mm	—	—	—	20-70005P	20-70011P	20-70022P
8.0 mm	—	—	20-70017P	20-70006P	20-70012P	20-70023P
10.0 mm	20-70034P	20-70018P	20-70001P	20-70007P	20-70013P	20-70024P
11.5 mm	20-70035P	20-70019P	20-70002P	20-70008P	20-70014P	20-70025P
13.0 mm	20-70036P	20-70020P	20-70003P	20-70009P	20-70015P	20-70026P
16.0 mm	20-70037P	20-70021P	20-70004P	20-70010P	20-70016P	20-70027P

DYNAMIC ENHANCED STABILITY



IH	NP		SP			WP
	Ø 3 mm	Ø 3.25 mm	Ø 3.75 mm	Ø 4.2 mm	Ø 5 mm	
6.0 mm	—	—	—	21-70005	21-70011	21-70022
8.0 mm	—	—	21-70017	21-70006	21-70012	21-70023
10.0 mm	21-70034	21-70018	21-70001	21-70007	21-70013	21-70024
11.5 mm	21-70035	21-70019	21-70002	21-70008	21-70014	21-70025
13.0 mm	21-70036	21-70020	21-70003	21-70009	21-70015	21-70026
16.0 mm	21-70037	21-70021	21-70004	21-70010	21-70016	21-70027



8.0 mm
10.0 mm
11.5 mm
13.0 mm
16.0 mm



Ø 3.25 mm
Ø 3.75 mm

Ø 4.2 mm

Ø 5.0 mm



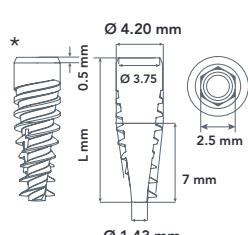
Ø 6.0 mm

29-70017
29-70001
29-70002
29-70003
29-70004

29-70006
29-70007
29-70008
29-70009
29-70010

29-70012
29-70013
29-70014
29-70015
29-70016

29-70023
29-70024
29-70025
29-70026
29-70027



8.0 mm
10.0 mm
11.5 mm
13.0 mm
16.0 mm



Ø 3.25 mm

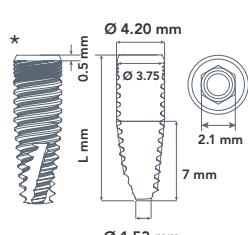
Ø 3.75 mm

Ø 4.2 mm

Ø 5.0 mm



Ø 6.0 mm
29-70023TC
29-70024TC
29-70025TC
29-70026TC
29-70027TC



8.0 mm
10.0 mm
11.5 mm
13.0 mm
16.0 mm



Ø 3.25 mm

Ø 3.75 mm

Ø 4.2 mm

Ø 5.0 mm

22-70012

22-70013

22-70014

22-70015

22-70016

22-70017
22-70001
22-70002
22-70003
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22-70006
22-70007
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22-70009
22-70010

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REFERENCES

1. Al-Nsour MM, Hsun-Liang C, Wang HL. Effect of the Platform-Switching Technique on Preservation of Peri-implant Marginal Bone: A Systematic Review. *The International Journal of Oral & Maxillofacial Implants* Volume 27, Number 1, 2012.
2. Cappiello M, Luongo R, Di Iorio D, Bugea C, Cocchetto R, Celletti R. Evaluation of peri-implant bone loss around platform-switched implants. *Int J Periodontics Restorative Dent.* 2008 Aug;28(4):347-55.
3. Prosper L, Redaelli S, Pasi M, Zarone F, Radaelli G, Gherlone EF. A randomized prospective multicenter trial evaluating the platform-switching technique for the prevention of post-restorative crestal bone loss. *Int J Oral Maxillofac Implants.* 2009 Mar-Apr;24(2):299-308.
4. Thobity A, Kutkut A, Almas K. Microthreaded Implants and Crestal Bone Loss: A Systematic Review. *J Oral Implantol.* 2017 Apr;43(2):157-166. doi: 10.1563/aaid-jo1-D-16-00170. Epub 2016 Nov 21.
5. A Bratu E, Tandlich M, Shapira L. A rough surface implant neck with Microthreads reduces the amount of marginal bone loss: a prospective clinical study. *Clin. Oral Implants Res.* 2009 Aug;20(8):827-32. doi: 10.1111/j.1600-0501.2009.01730.x. Epub 2009 Jun 7.
6. Young-Kyu S, Chong-Hyun H, Seong-Joo H, Sunjai K, Heoung-Jae C. Radiographic evaluation of marginal bone level around implants with different neck designs after 1 year. *Int J. Oral Maxillofac Implants.* Sep-Oct 2006;21(5):789-94.
7. Klein M, Tarnow D, Lehrfield L. Marginal Bone Changes on Ultraclean, Micro-Threaded Platform-Switched Implants Following Restoration: 1- to 4-Year Data. *Compendium of Continuui Education in Dentistry.* Article Vol. 41 No. 4. 2020.
8. Singh Dhaliwal J, Rani Nakka David S, Ramizah Zulhilmi N, Kaur Sodhi Dhaliwal S, Knights J, Ferreira de Albuquerque Junior R. Contamination of titanium dental implants: a narrative review. *SN Applied Sciences* volume 2, Article number: 1011. 2020.
9. Dusdeck D, Maghaireh H, Faber FJ and Neugebauer J. SEM surface analyses of 120 sterile-packed implants. *EDI Journal.* 2014; 64-75.
10. Sun-Young Lee, Sung-Jun Kim, Hyun-Wook An, Hyun-Seung Kim, Dong-Guk Ha, Kyung-Ho Ryo, and Kwang-Bum Park. The effect of thread depth on the mechanical properties of the dental implant. *J Adv Prosthodont.* 2015 Apr; 7(2): 115-121.
11. Heba Abussein, Giorgio Pagni, Alberto Rebaudi, Hom-Lay Wang. The effect of thread pattern upon implant osseointegration. *Clin Oral Implants Res.* 2010 Feb;21(2):129-36.
12. M. Schmitt C, Nogueira Filho G, C. Tenenbaum H, Yuan Lai J, Brito C, Döring H, Nonhoff J. Performance of conical abutment (morse Taper) connection implants: A Systematic review. *J Biomed Mater Res Part A:* 102A: 552-574, 2014.
13. Sang-Woon L, Min-Sang C, Ji-Hye L, Lee-Ra C, Chan-Jin P. Joint stability of internal conical connection abutments with or without hexagon indexes: an in vitro study. *Journal of Dental Rehabilitation and Applied Science,* 10.14368/jdras.2020.36.2.95, 36, 2, 95-103, 2020.
14. Tsuruta K, Ayukawa Y, Matsuzaki T, Kihara M, Koyano K. The influence of implant-abutment connection on the screw loosening and microleakage. *Int. J. Implant Dent.* 2018, 4, 1-6.
15. Yenumula J B Manikyamba, Suresh Sajjan MC, Rama Raju A.V., Bheemalingeshwara Rao Chandrasekharan Nair K. Implant thread designs: An overview. *TPDI.* January and July 2017, Vol. 8, No. 1 & 2.
16. Heba Abussein, Giorgio Pagni, Alberto Rebaudi, Hom-Lay Wang. The effect of thread pattern upon implant osseointegration. *Clin. Oral Impl. Res.* 21, 2010 / 129-136.
17. Redemagni M, Lomazzo C, Cremonesi S, Garlini G, Maiorana C. Soft Tissue Stability with Immediate Implants and Concave Abutments *European Journal of Esthetic Dentistry.* Volume 4. Number 4. Winter 2009.
18. López-López P, Mareque-Bueno J, Boquete-Castro A, Aguilar-Salvatierra Raya A, M Martínez-González J, L Calvo-Guirado J. The effects of healing abutments of different size and anatomic shape placed immediately in extraction sockets on peri-implant hard and soft tissues. *Clin Orla Implants Res.* 2016 Jan27(1) :90-6 doi:10.1111/crl.12516. Epub 2014 Oct 31.
19. Rompen E, Raepsaet N, Domken O, Touati B, Van Dooren E. Soft tissue stability at the facial aspect of gingivally converging abutments in the esthetic zone: A pilot clinical study. *The Journal of Prosthetic Dentistry.* Volume 97. Issue 6 supplement, June 2007, S119-S125.
20. Caram S, Huynh-Ba G, Schoolfield J, Jones A, Cochran D, Belser U. Biologic Width Around Different Implant-Abutment Interface Configurations. A Radiographic Evaluation of the Effect of Horizontal Offset and Concave Abutment Profile in the Canine Mandible *Int J Oral Maxillofac Implants* 2014;29:1114-1122.