

TS SYSTEM CATALOG

Osstem Implant 2014-15 Comprehensive Catalog

Overall Planning/Editing PR Department Design Team

Supervision Implant Lab, Marketing PM

Production/Distribution Marketing & Planning Team

Date of Publication 2014.

Publisher Osstem Implant

8th FL, World Meridian II, 123, Gasan digital 2-ro,

Geumcheon-gu, Seoul, Korea

Phone +82.2.2016.7000

Fax +82.2.2016.7001

www.osstem.com

003	INTRODUCTION
012	CONTENTS
016	TS SYSTEM
082	REFERENCE

**"Osstem - Future
Technology and
Superior Quality"**

Products that dentists can trust.
That is the mission of
Osstem Implant.

**We deeply appreciate
all of our customers
who use our products.**

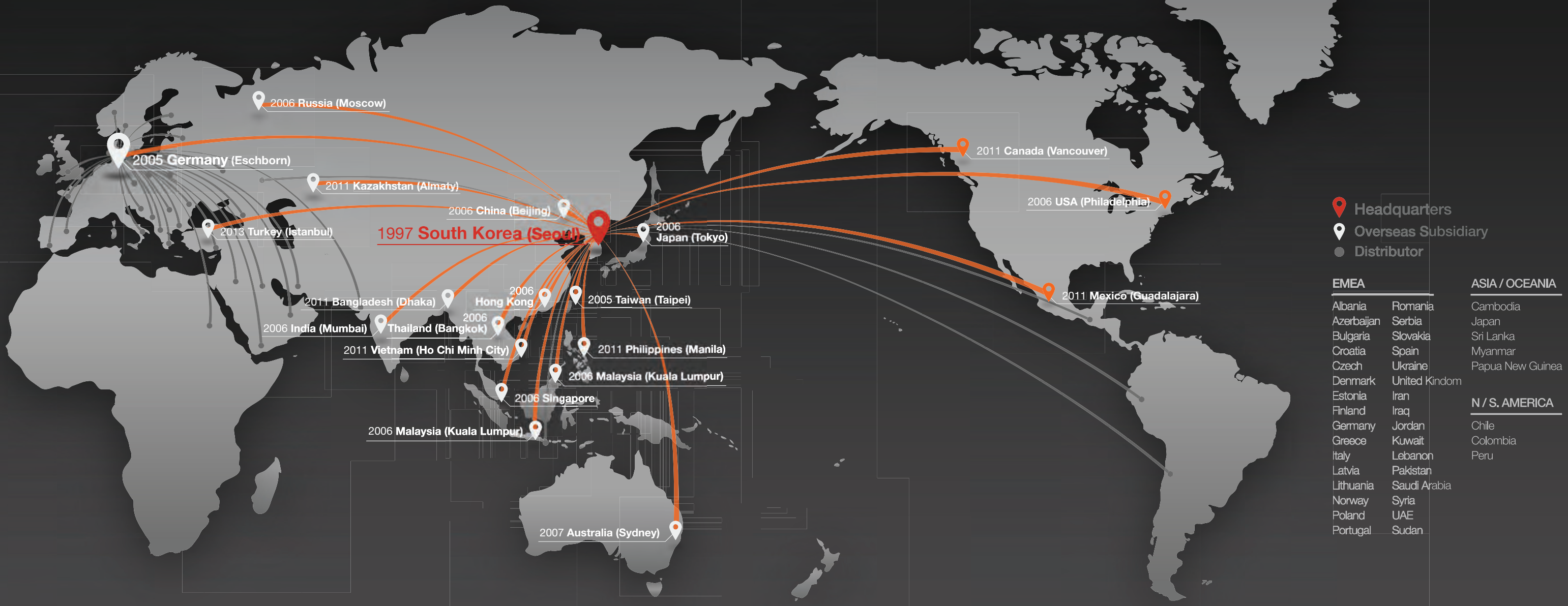
We deeply appreciate all of our customers who use our products. With population aging, rising incomes, and increased interest in health and aesthetics, implants have become an essential treatment in dentistry around the world. Today, implants are well-known as a safe and effective treatment option, and the leading treatment option for patients with no teeth. To satisfy this global trend, Osstem has invested heavily in R&D and continuously promotes innovative products, resulting in it becoming a global leader in technology and product quality. Osstem is releasing new products including TSIII CA, TSIII BA, SSIII HA, and MS SA, and is strengthening its product line-up in order to enable application in a variety of clinical cases. Other products to be released that will enable safe, easy implant procedures include SMARTbuilder, AutoBone collector, 123 KIT, and ESSET KIT.

TSIII CA in particular is expected to become a leading product in the global implant market after launching as a groundbreaking product with superior hydrophilic properties capable of at least 30% greater fusion than ordinary SA products due to its calcium ion solution encapsulation. Also, to improve our customers' convenience and foster reasonable purchasing, we have opened an online store, DenALL (www.denall.com), where dentistry materials can be purchased affordably and conveniently. Osstem leads the way in superior product quality and exports to over 50 countries including the USA, China, Japan, Germany, and India, and is the first company in Korea to record implant sales of over 30 million products and overseas subsidiary sales of over 100 billion won.

Osstem Implant CEO
Gyu-ok Choi (DDS, Ph.D)



Worldwide & History



EMEA		ASIA / OCEANIA	
Albania	Romania	Cambodia	
Azerbaijan	Serbia	Japan	
Bulgaria	Slovakia	Sri Lanka	
Croatia	Spain	Myanmar	
Czech	Ukraine	Papua New Guinea	
Denmark	United Kingdom		
Estonia	Iran	N / S. AMERICA	
Finland	Iraq	Chile	
Germany	Jordan	Colombia	
Greece	Kuwait	Peru	
Italy	Lebanon		
Latvia	Pakistan		
Lithuania	Saudi Arabia		
Norway	Syria		
Poland	UAE		
Portugal	Sudan		

1997

- 01 OSSTEM Co., Ltd. Founded
- 12 Launched "Doobunae" (health insurance claiming software)

2001

- 01 Obtained CE-0434 certification
- 03 Established AIC Training Center

2006

- 03 Changed company name to Osstem Implant Co., Ltd.
- 04 Obtained GOST-R certification in Russia
- 12 Established the first incorporation stage of overseas subsidiaries in 12 countries

2007

- 02 Listed on KOSDAQ stock exchange and began trading
- 06 Obtained GOST-R certification in Russia
- 12 Selected next-generation products Obtained certification from Australia's Therapeutic Goods Administration

2008

- 01 Established Osstem's osteology research center
- 12 Selected as a National Strategic Leading Technology Company

2009

- 10 Obtained permission from Japan's Ministry of Health, Labor, and Welfare to produce and sell medical devices

2010

- 03 Launched TSIII SA implant
- 06 Launched TSIII HA implant
- 08 Selected as WPM Biomedical National Policy Company
- 12 Exceeded 10,000 dentistry software members

2011

- 06 Selected Osstem Implant Research Center as an ATC (Superior Technology Research Center)
- 07 Selected as a world champion business
- 10 Obtained Health Canada certification
- 12 Launched K2 unit chair Selected as "Global First-Class Product"

2012

- 06 Launched TSIII CA implant
- 07 Established Osstem Medical Equipment Research Center

2013

- 01 Launched Osstem's xenograft "A-Oss"
- 09 Launched K3 unit chair
- 10 Selected as a hidden champion business

2014

- 05 Selected as a WorldClass 300 business

2000

- 06 Launched "Hanaro" (dentistry management software)
- 10 Acquired Korean company Sumin Comprehensive Dental Materials

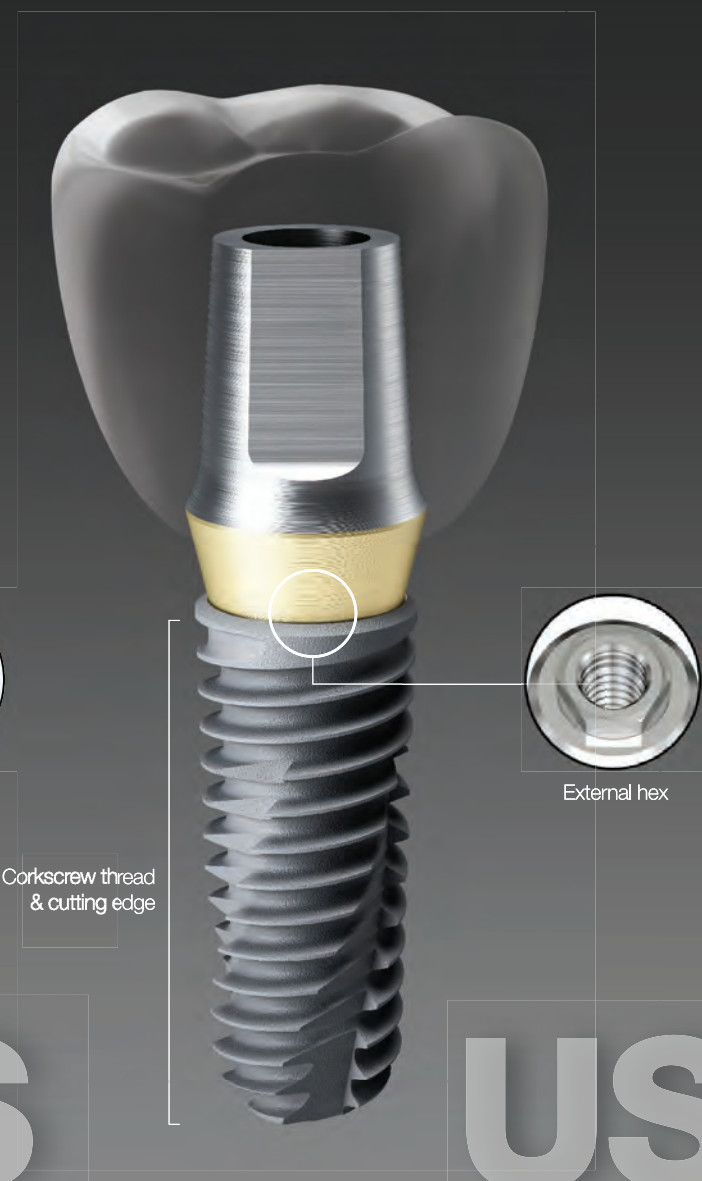
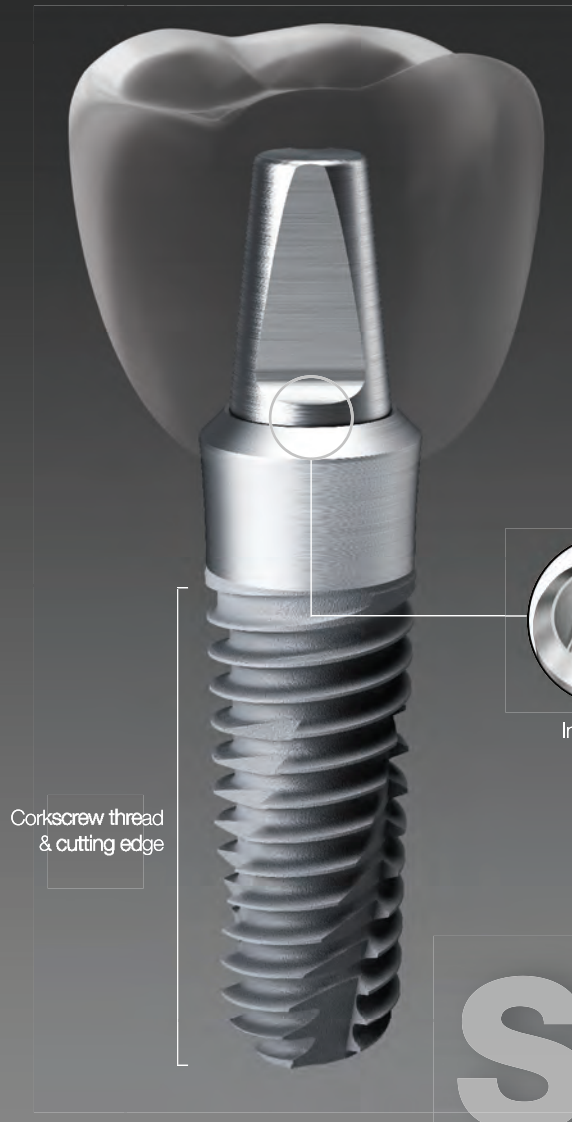
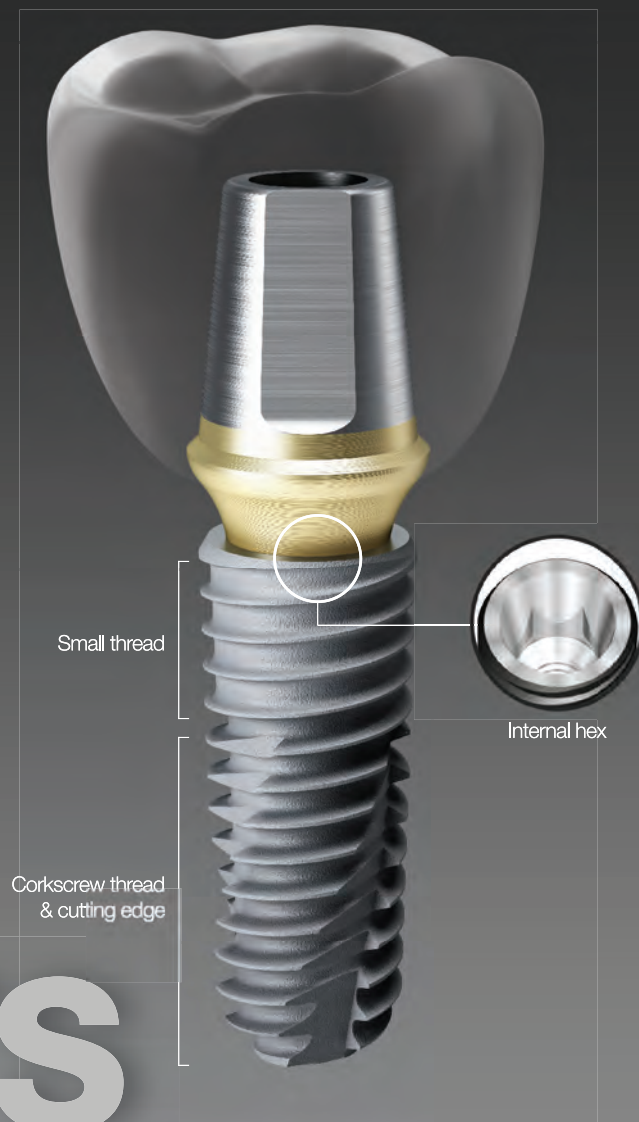
2002

- 01 Established Osstem Implant Research Center
- 08 Obtained US FDA certification Launched USII implant
- 10 Launched SSII implant

OSSTEM[®] Implant Design feature

Osstem Implant,

the leader in popularizing implants in Korea!
We stand out with our passion for strategic R&D and best products, creating globally trend-setting implants.



Packaging Color Information for Each System

• Submerged type implant with an Internal hex 11° taper connection structure

- Connection type and color - Mini/Regular
- Highest initial stability in soft bone by using upper-section small thread
- Corkscrew thread & cutting edge
 - Easy path adjustment through a superior self-threading effect
 - Acquires insertion torque with an increase in soft bone initial stability and without deviation according to the drill diameters
- The various body shape options are available according to the bone and patient's clinical condition
 - TSII (straight body): Easily adjustable insertion depth
 - TSIII (1.5° taper body): Able to acquire the initial stability needed for immediate loading even in soft bone
 - TSIV (6° taper body): Able to acquire superior initial stability only in maxillary sinus and soft bone

• Applied Surface - SA/CA/BA/HA

• Non-submerged type implant with an Internal octa 8° taper connection structure based on one-time procedures

- Connection type and color - Regular/Wide
- Corkscrew thread & cutting edge
 - Easy path adjustment through a superior self-threading effect
 - Acquires insertion torque with an increase in soft bone initial stability and without deviation according to the drill diameters
- The various body shape options are available according to the bone and patient's clinical condition
 - SSII (straight body): Easily adjustable insertion depth
 - SSIII (1.5° taper body): Able to acquire the initial stability needed for immediate loading even in soft bone

• Applied Surface - SA/CA/HA

• Submerged type implant with an external hex connection structure

- Connection type and color - Mini/Regular/Wide/Wide PS
- Corkscrew thread & cutting edge
 - Easy path adjustment through a superior self-threading effect
 - Acquires insertion torque with an increase in soft bone initial stability and without deviation according to the drill diameters
- The various body shape options are available according to the bone and patient's clinical condition
 - USII (straight body): Easily adjustable insertion depth
 - USIII (1.5° taper body): Able to acquire the initial stability needed for immediate loading even in soft bone
 - USIV (6° taper body): Able to acquire superior initial stability only in maxillary sinus and soft bone

• Applied Surface - SA

OSSTEM[®] Implant Surface feature

Osstem Implant provides world-class surface technologies in surface treatment, the core implant technology for fast and safe procedures

SA

CA

BA

HA

• Provides optimum surface through acid treatment

- Provides Ra 2.5~3.0 μm surface roughness
However, upper section 0.5mm area is Ra 0.5~0.6 μm
- Achieved uniform micro-pit 1.3 μm in size
- 46% greater surface area compared to RBM

• Bone reaction performance (in-vitro and in-vivo)

- 20% improvement in osteoblast separation and ossification compared to RBM
- Initial bone reaction performance in animal model (mini-pig)
- 48% improvement in initial stability (RT, 4 weeks) compared to RBM
- 20% improvement in ossification (BIC, 4 weeks) compared to RBM

• Superhydrophilic SA surface encapsulated in calcium solution

- Maintains optimum surface identical to SA surface
- Surface activity maximized after encapsulated in calcium (CaCl_2) solution
- Increased ossification surface area through excellent blood wettability
- Improved bone reaction performance in the early osseointegration stage compared to SA surface

• Bone reaction performance (in-vitro and in-vivo)

- 3x increase in protein, cell adhesion compared to SA
- 19% increase in initial cell separation (7 days) compared to SA
- 34% improvement in initial stability (RT, 2 weeks) compared to SA
- 26% improvement in ossification (BIC, 2 weeks) compared to SA

• Surface coated with low crystalline Nano-HA in SA

- Ultra-thin film with HA coating and 10nm or lower thickness
- HA coating on SA surface (Ra 2.5~3.0 μm)
- Dual function of titanium and HA
- HA is naturally removed during ossification process

• Bone reaction performance (in-vitro and in-vivo)

- Fused surface having advantages of both SA and HA
- Maintains advantage of SA optimum surface formation
- Superior early ossification of the HA in soft bone condition
- 30% improvement in ossification (BIC) compared to SA

• Premium surface coated with high crystalline HA

- High crystalline HA coating 30~60 μm in thickness
- HA coating on RBM surface (Ra 3.0~3.5 μm)
- Achieved at least 98% HA high crystallization
- Solves problem of interbody fusion in low crystalline HA

• Bone reaction performance (in-vitro and in-vivo)

- Excellent biocompatibility in HA that is similar to bone
- 2x improvement in osteoblast ossification (5 days) compared to SA
- 40% improvement in initial stability (RT, 4 weeks) in animal models compared to SA
- Suitable for weak bone tissue, or tooth extraction or implant insertion

TS SYSTEM Contents

016 TSII SA Fixture 	018 TSIII SA Fixture 	020 TSIII CA Fixture 	022 TSIII BA Fixture 	024 TSIII HA Fixture 	067 Convertible Abutment 	069 Convertible Combination Cylinder 	069 Convertible Angled Cylinder 	069 Convertible GoldCast Cylinder 	070 Convertible Temporary Cylinder 
026 TSIV SA Fixture 	028 TSIV CA Fixture 	030 Simple Mount 	030 Cover Screw 	031 Healing Abutment 	070 Convertible Plastic Cylinder 	071 Convertible Pick-up Impression Coping 	071 Convertible Transfer Impression Coping 	072 Convertible Protect Cap 	072 Convertible Lab Analog 
032 Custom Healing Abutment 	035 Rigid Abutment 	038 Rigid Protect Cap 	038 Rigid Retraction Cap 	038 Rigid Impression Coping 	072 Convertible Polishing Protector 	075 Stud Abutment 	076 O-ring Retainer Cap Set 	076 O-ring Retainer Set 	076 O-ring Set 
039 Rigid Burn-out Cylinder 	039 Rigid Lab Analog 	040 Transfer Abutment 	042 Laboratory Screw 	042 Fixture Lab Analog 	076 O-ring Lab Analog 	077 Locator® Abutment 	078 Locator® Male Processing Kit 	078 Locator® Replacement Male 	078 Locator® Extended Replacement Male 
043 Bite Index 	044 Fixture Pick-up Impression Coping 	045 Fixture Transfer Impression Coping 	047 Angled Abutment 	049 Angled Abutment Selector 	079 Locator® Black Processing Male 	079 Locator® Block Out Spacers 	079 Locator® Impression Coping 	079 Locator® Lab Analog 	080 Locator® Core Tool 
050 FreeForm ST Abutment 	052 GoldCast Abutment 	053 NP-Cast Abutment 	055 SmartFit Abutment 	056 ZioCera Abutment 	080 Locator® Torque Driver 				
058 ZioCera Angled Abutment 	059 Temporary Abutment 	060 Quick Temporary Abutment 	063 Multi Abutment 	065 Multi Angled Abutment 					

OSSTEM[®]
IMPLANT

TS SYSTEM

FIXTURE

- 016** TSII SA Fixture
- 018** TSIII SA Fixture
- 020** TSIII CA Fixture
- 022** TSIII BA Fixture
- 024** TSIII HA Fixture
- 026** TSIV SA Fixture
- 028** TSIV CA Fixture
- 030** Simple Mount
- 030** Cover Screw
- 031** Healing Abutment
- 032** Custom Healing Abutment

COMPONENTS

- 034** PROSTHETIC FLOW DIAGRAM 1
- 035** Rigid Abutment
- 040** Transfer Abutment
- 046** PROSTHETIC FLOW DIAGRAM 2
- 047** Angled Abutment
- 050** FreeForm ST Abutment
- 052** GoldCast Abutment
- 053** NP-Cast Abutment
- 054** PROSTHETIC FLOW DIAGRAM 3
- 055** SmartFit Abutment
- 056** Ziocera (Angled) Abutment
- 059** Temporary Abutment
- 060** Quick Temporary Abutment
- 062** PROSTHETIC FLOW DIAGRAM 4
- 063** Multi (Angled) Abutment
- 066** PROSTHETIC FLOW DIAGRAM 5
- 067** Convertible Abutment
- 074** PROSTHETIC FLOW DIAGRAM 6
- 075** Stud Abutment
- 077** Locator[®] Abutment

TSII SA Fixture

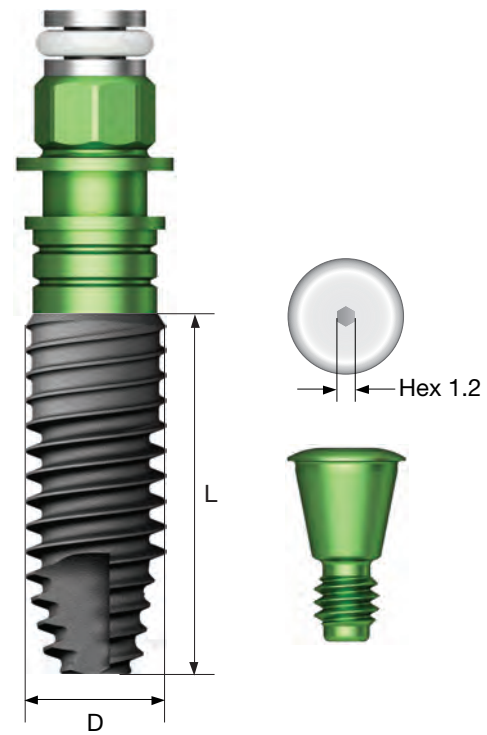
- Submerged type implant with an internal hex 11° taper connection structure
 - Optimum screw thread design for SA surface to achieve consistent roughness
 - Straight body design for easy adjustment of insertion depth
 - Highest initial stability in soft bone by upper-section thread and body design
 - Powerful self-threading effect using corkscrew thread
 - Recommended insertion torque: 40Ncm or more
- ※ For a single posterior implant case, use of fixture at least 4.5mm in diameter is recommended

NoMount fixture order code

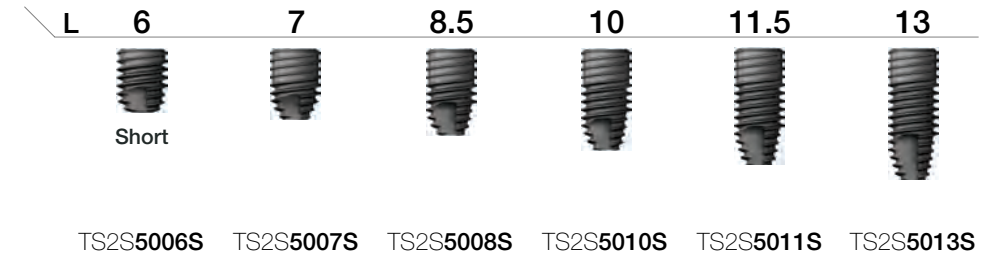
: fixture product code (ex : TS2S4010S)

Pre-Mounted fixture order code (fixture + mount + cover screw)

: **B** + fixture product code (ex : **B**TS2S4010S)

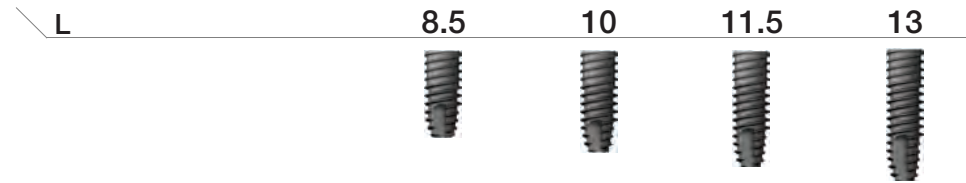


D Ø5.0
Hex 2.5



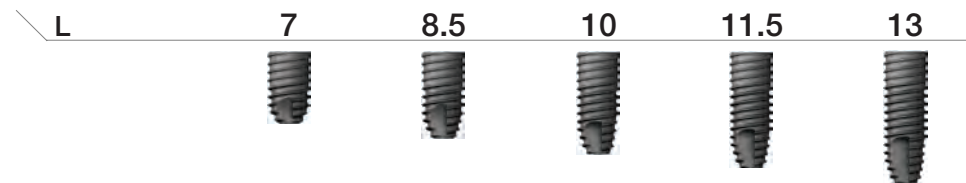
TS2S5006S TS2S5007S TS2S5008S TS2S5010S TS2S5011S TS2S5013S

D Ø3.5
Hex 2.1



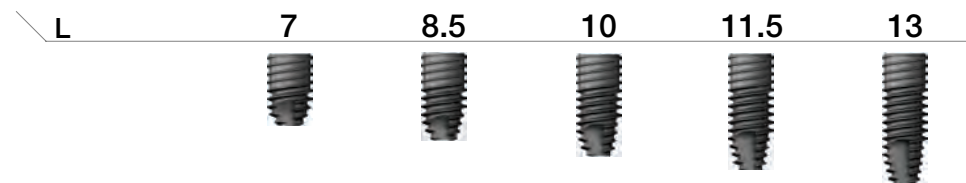
TS2M3508S TS2M3510S TS2M3511S TS2M3513S

D Ø4.0
Hex 2.5



TS2S4007S TS2S4008S TS2S4010S TS2S4011S TS2S4013S

D Ø4.5
Hex 2.5



TS2S4507S TS2S4508S TS2S4510S TS2S4511S TS2S4513S

TSIII SA Fixture

- Submerged type implant with an internal hex 11° taper connection structure
- Optimum screw thread design for SA surface to achieve consistent roughness
- Taper body design with superior initial stability
- Highest initial stability in soft bone by using upper-section thread and body design
- Powerful self-threading effect using corkscrew thread
- Acquires the initial stability needed in immediate loading even in soft bone

Ultra-wide

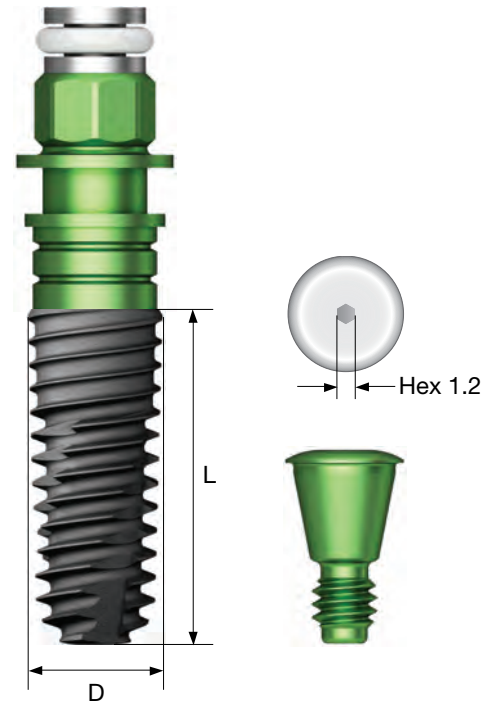
- In implant cases for posterior tooth extraction and immediate insertion and replacing a failed implant
- With its optimized apex design, capable of extracting a tooth and obtaining initial stability predictably even at the bottom 3mm
- Recommended insertion torque: 40Ncm or more
- ※ For a single posterior implant case, use of fixture at least 4.5mm in diameter is recommended

NoMount fixture order code

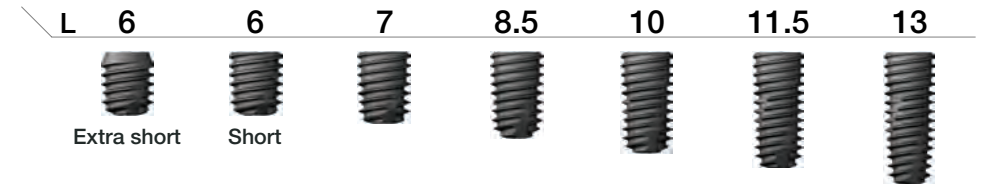
: fixture product code (ex : TS3S4010S)

Pre-Mounted fixture order code (fixture + mount + cover screw)

: **B** + fixture product code (ex : **B**TS3S4010S)



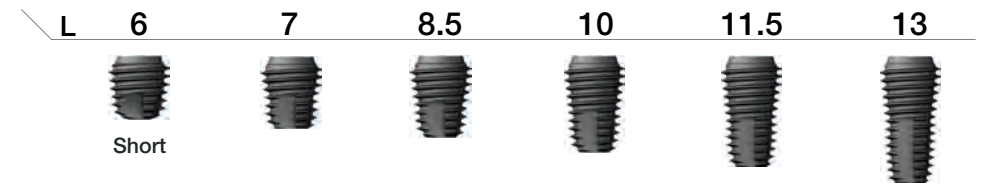
D Ø5.0
Hex 2.5



TS3S5005S TS3S5006S TS3S5007S TS3S5008S TS3S5010S TS3S5011S TS3S5013S

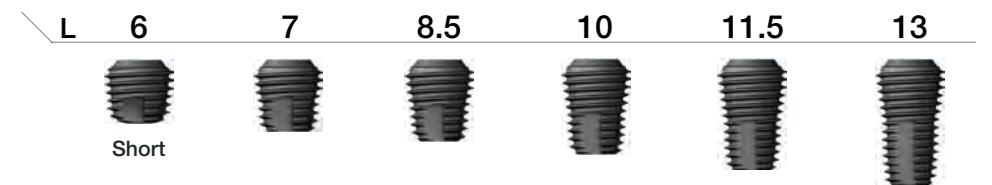
Ultra-Wide

D Ø6.0
Hex 2.5



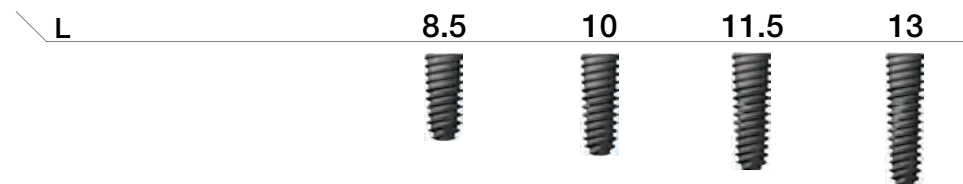
TS3S6006S TS3S6007S TS3S6008S TS3S6010S TS3S6011S TS3S6013S

D Ø7.0
Hex 2.5



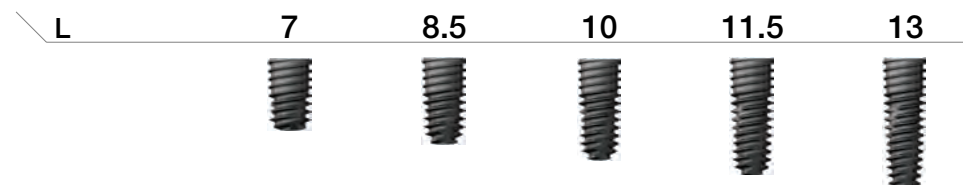
TS3S7006S TS3S7007S TS3S7008S TS3S7010S TS3S7011S TS3S7013S

D Ø3.5
Hex 2.1



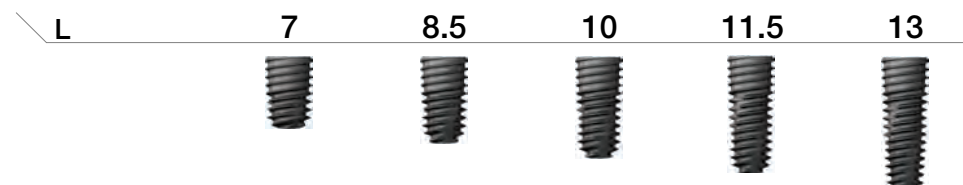
TS3M3508S TS3M3510S TS3M3511S TS3M3513S

D Ø4.0
Hex 2.5



TS3S4007S TS3S4008S TS3S4010S TS3S4011S TS3S4013S

D Ø4.5
Hex 2.5



TS3S4507S TS3S4508S TS3S4510S TS3S4511S TS3S4513S

TSIII CA Fixture

- Submerged type implant with an internal hex 11° taper connection structure
- Superior hydrophilic SA surface encapsulated in calcium solution
- Taper body design with superior initial stability
- Highest initial stability in soft bone by using upper-section thread and body design
- Powerful self-threading effect using corkscrew thread
- Achieves high initial stability needed in immediate loading even in soft bone

Ultra-wide

- In implant cases for posterior tooth extraction and immediate insertion and replacing a failed implant
- With its optimized apex design, capable of extracting a tooth and obtaining initial stability predictably even at the bottom 3mm
- Recommended insertion torque: 40Ncm or more

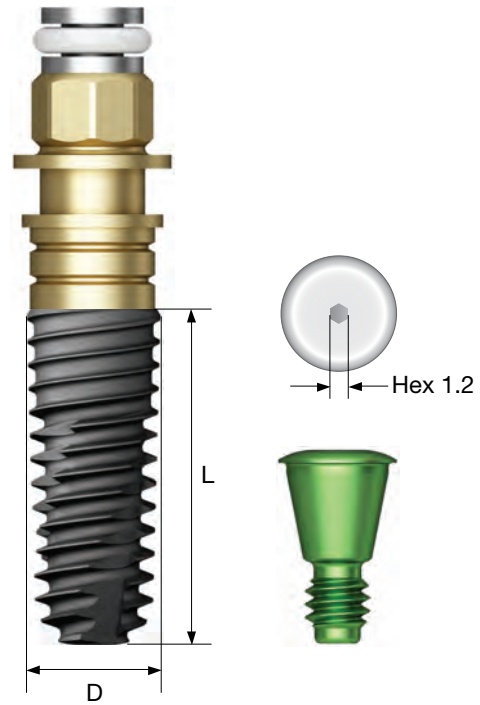
※ For a single posterior implant case, use of fixture at least 4.5mm in diameter is recommended

NoMount fixture order code

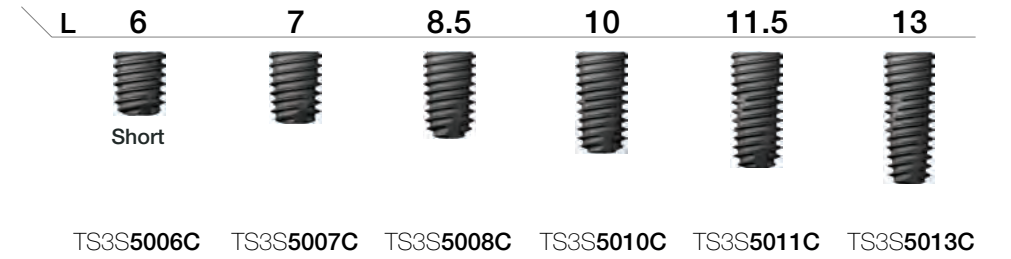
: fixture product code (ex : TS3S4010C)

Pre-Mounted fixture order code (fixture + mount + cover screw)

: **B** + fixture product code (ex : **B**TS3S4010C)

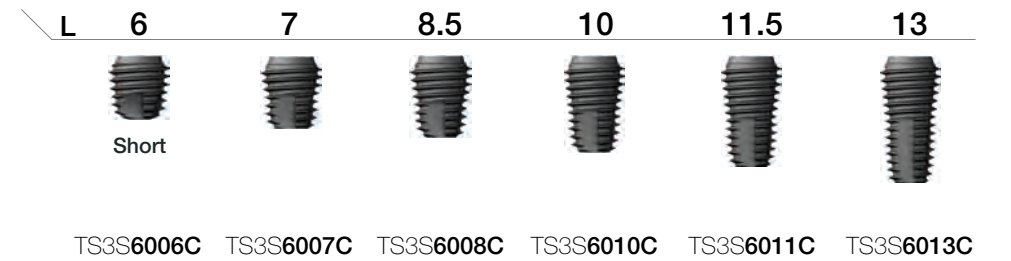


D Ø5.0
Hex 2.5

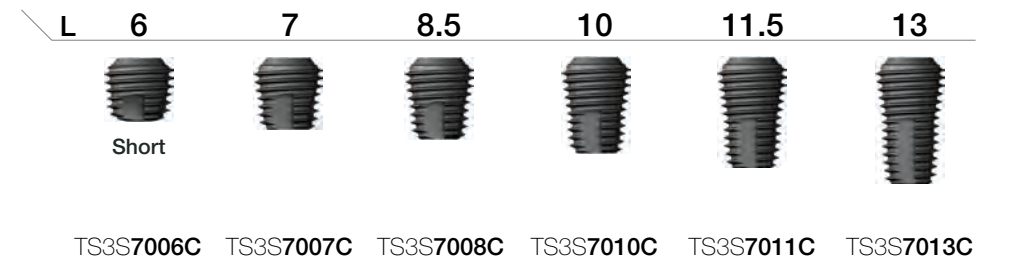


Ultra-Wide

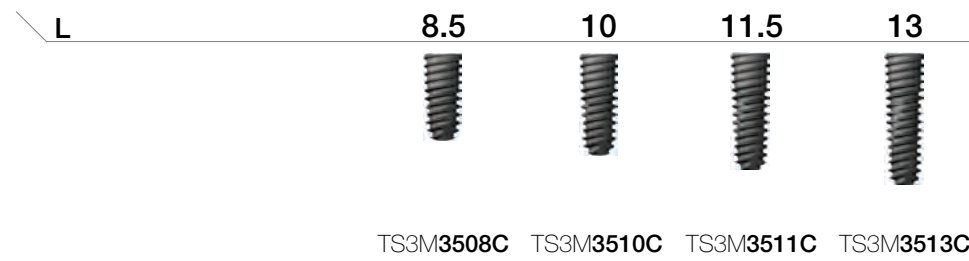
D Ø6.0
Hex 2.5



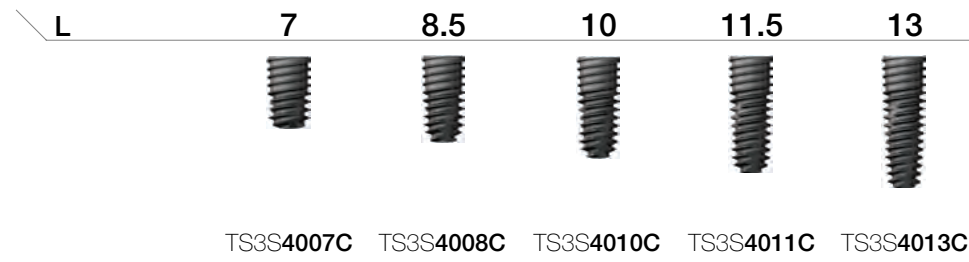
D Ø7.0
Hex 2.5



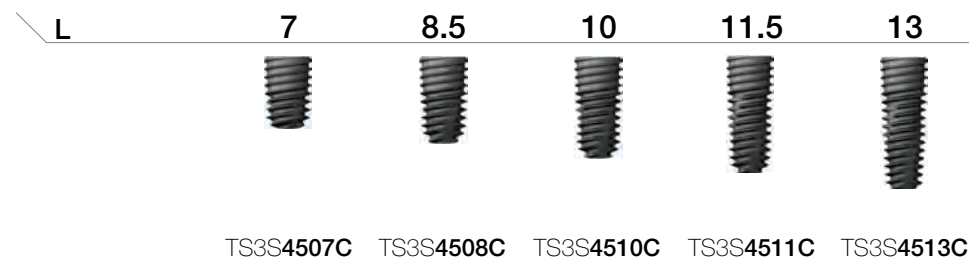
D Ø3.5
Hex 2.1



D Ø4.0
Hex 2.5



D Ø4.5
Hex 2.5



TSIII BA Fixture

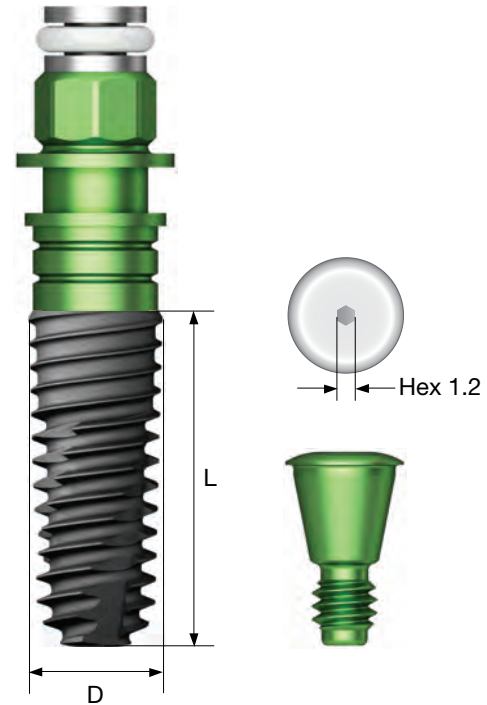
- Submerged type implant with an internal hex 11° taper connection structure
- Surface coated with low crystalline Nano-HA in SA
- Taper body design with superior initial stability
- Highest initial stability in soft bone by using upper-section thread and body design
- Powerful self-threading effect using corkscrew thread
- Achieves high initial stability needed in immediate loading even in soft bone
- Recommended insertion torque: 40Ncm or more
- ※ For a single posterior implant case, use of fixture at least 4.5mm in diameter is recommended

NoMount fixture order code

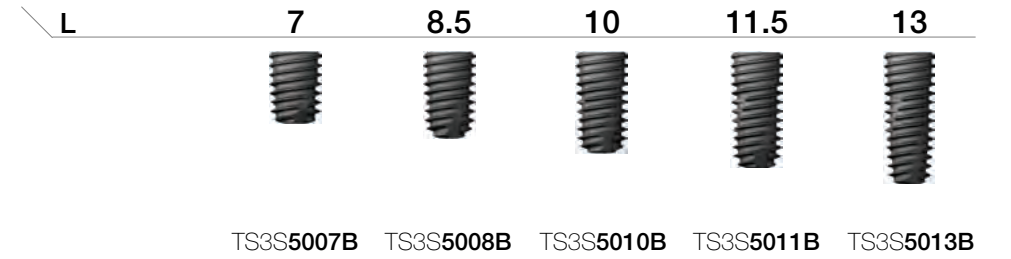
: fixture product code (ex : TS3S4010B)

Pre-Mounted fixture order code (fixture + mount + cover screw)

: **B** + fixture product code (ex : **B**TS3S4010B)

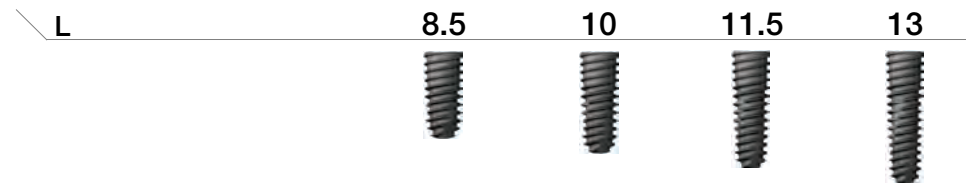


D Ø5.0
Hex 2.5



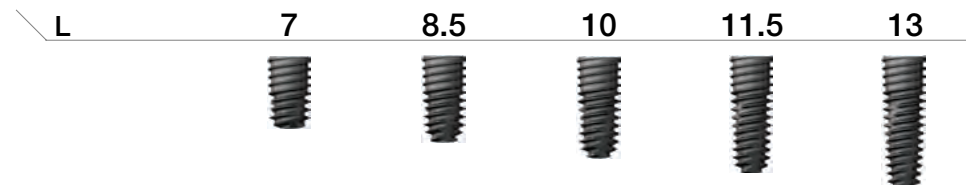
TS3S5007B TS3S5008B TS3S5010B TS3S5011B TS3S5013B

D Ø3.5
Hex 2.1



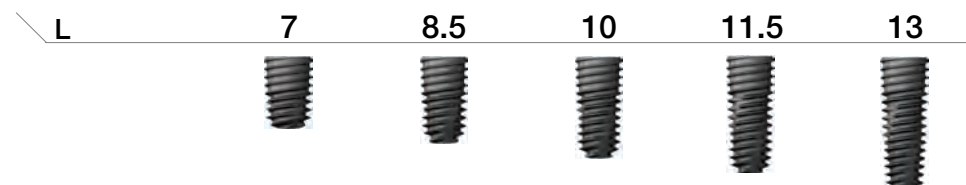
TS3M3508B TS3M3510B TS3M3511B TS3M3513B

D Ø4.0
Hex 2.5



TS3S4007B TS3S4008B TS3S4010B TS3S4011B TS3S4013B

D Ø4.5
Hex 2.5



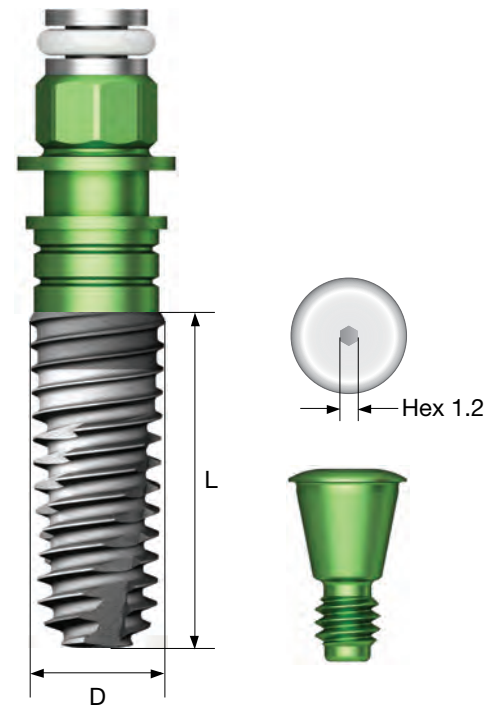
TS3S4507B TS3S4508B TS3S4510B TS3S4511B TS3S4513B

TSIII HA Fixture

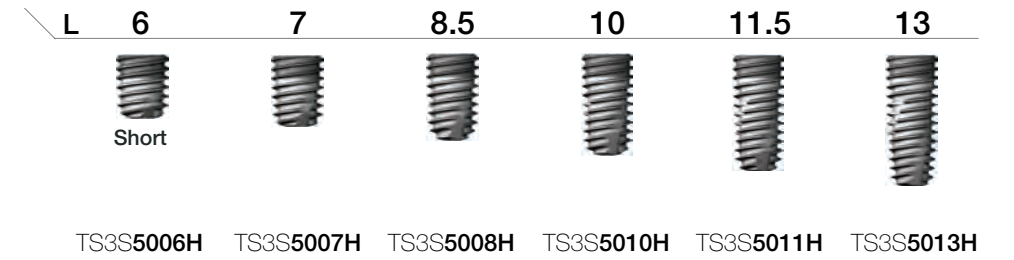
- Submerged type implant with an internal hex 11° taper connection structure
- Premium surface coated with high crystalline HA
- Taper body design with superior initial stability
- Highest initial stability in soft bone by using upper-section small thread
- Powerful self-threading effect using corkscrew thread
- Achieves high initial stability needed in immediate loading even in soft bone
- Recommended insertion torque: 35Ncm or lower
- ※ For a single posterior implant case, use of fixture at least 4.5mm in diameter is recommended
- ※ HA fixture usage not recommended due to possibility of coating layer cracks in hard bone and disbonding

Pre-Mounted fixture order code (fixture + mount + cover screw)

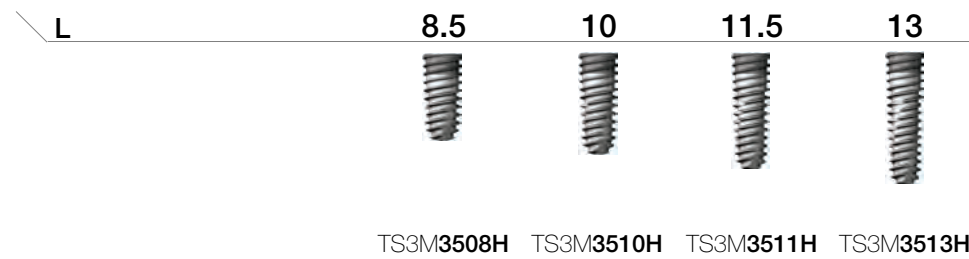
: **B** + fixture product code (ex : **B**TS3S4010H)



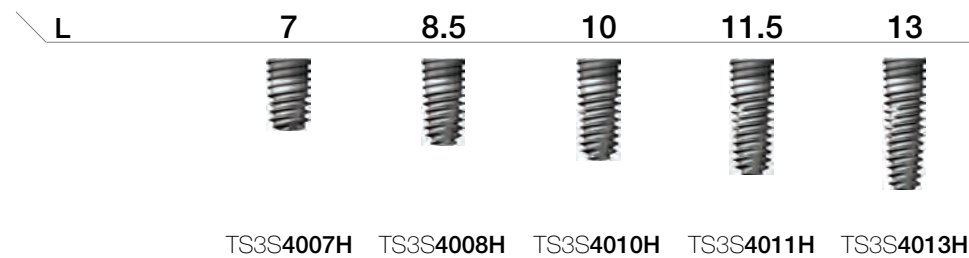
D Ø5.0
Hex 2.5



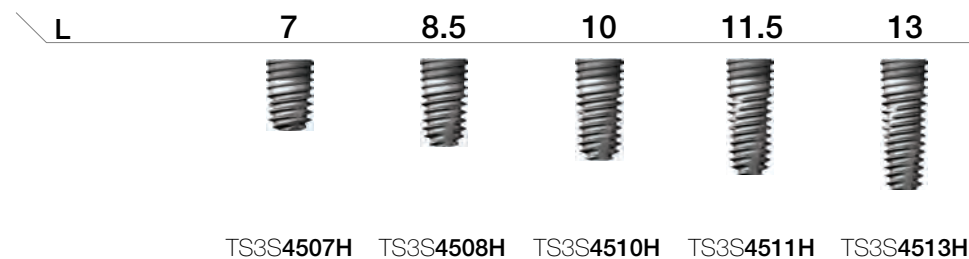
D Ø3.5
Hex 2.1



D Ø4.0
Hex 2.5



D Ø4.5
Hex 2.5



TSIV SA Fixture

- Submerged type implant with an internal hex 11° taper connection structure
- Optimum screw thread design for SA surface
- Fixture for use only in maxillary sinus and soft bone
- Highest initial stability in soft bone by using more tapered body shape and deeper thread pitch
- Powerful self-threading effect using corkscrew thread
- Due to sharp apex design, even after D4 bone \varnothing 2.0, \varnothing 3.0mm drilling implant insertion is possible

Ultra-wide

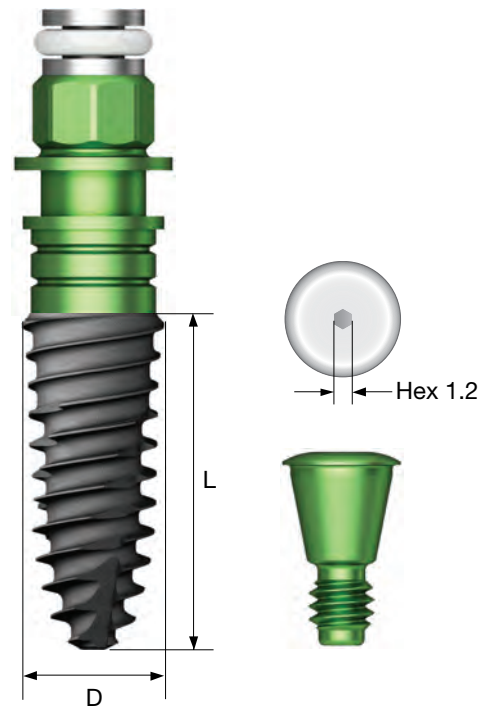
- In implant cases for posterior tooth extraction and immediate insertion and replacing a failed implant
- With its optimized apex design, capable of extracting a tooth and obtaining initial stability predictably even at the bottom 3mm
- Recommended insertion torque: 40Ncm or more
- ※ For a single posterior implant case, use of fixture at least 4.5mm in diameter is recommended
- ※ TSIV fixture insertion is recommended at 15rpm or lower due to large thread pitch and higher insertion speed (or bone expansion feature)

NoMount fixture order code

: fixture product code (ex : TS4S4010S)

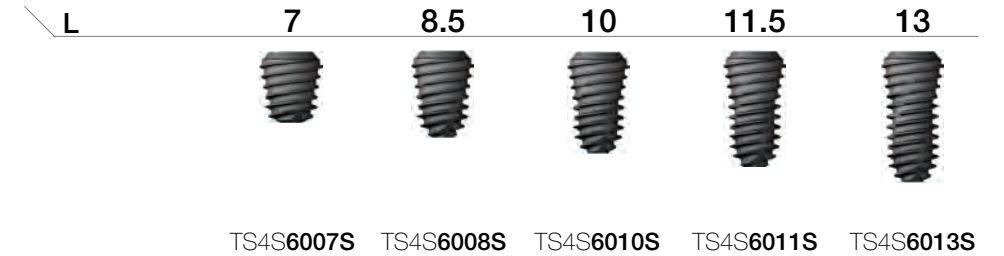
Pre-Mounted fixture order code (fixture + mount + cover screw)

: B + fixture product code (ex : BTS4S4010S)

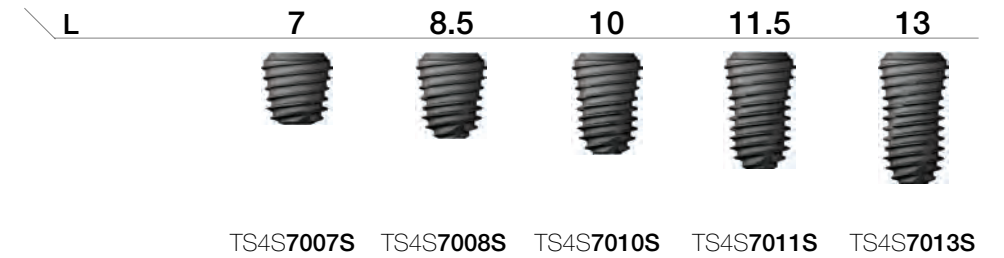


Ultra-wide

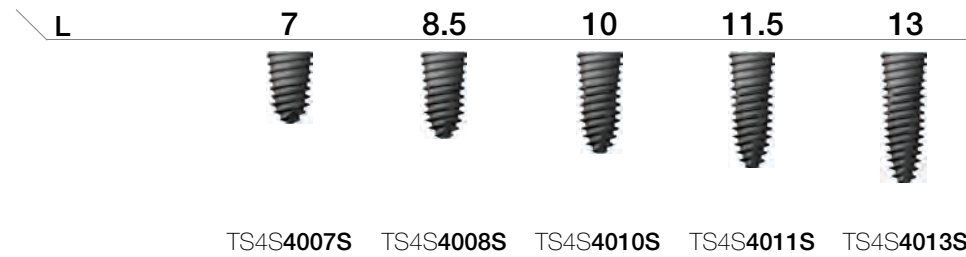
D \varnothing 6.0
Hex 2.5



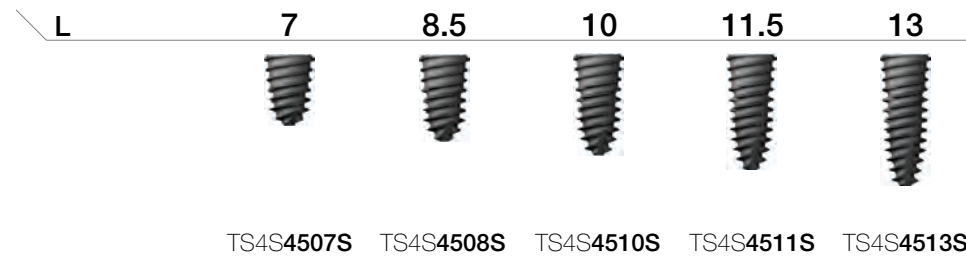
D \varnothing 7.0
Hex 2.5



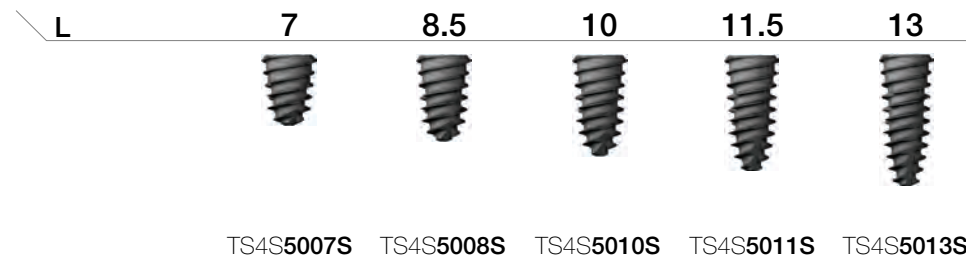
D \varnothing 4.0 Pitch 0.8
Hex 2.5



D \varnothing 4.5 Pitch 1.0
Hex 2.5



D \varnothing 5.0 Pitch 1.2
Hex 2.5



TSIV CA Fixture

- Submerged type implant with an internal hex 11° taper connection structure
- Superior hydrophilic SA surface encapsulated in calcium solution
- Fixture for use only in maxillary sinus and soft bone
- Highest initial stability in soft bone by using more tapered body shape and deeper thread pitch
- Powerful self-threading effect using corkscrew thread
- Due to sharp apex design, even after D4 bone $\varnothing 2.0$, $\varnothing 3.0$ mm drilling implant insertion is possible

Ultra-wide

- In implant cases for posterior tooth extraction and immediate insertion and replacing a failed implant
- With its optimized apex design, capable of extracting a tooth and obtaining initial stability predictably even at the bottom 3mm
- Recommended insertion torque: 40Ncm or more
- ※ For a single posterior implant case, use of fixture at least 4.5mm in diameter is recommended
- ※ TSIV fixture insertion is recommended at 15rpm or lower due to large thread pitch and higher insertion speed (or bone expansion feature)

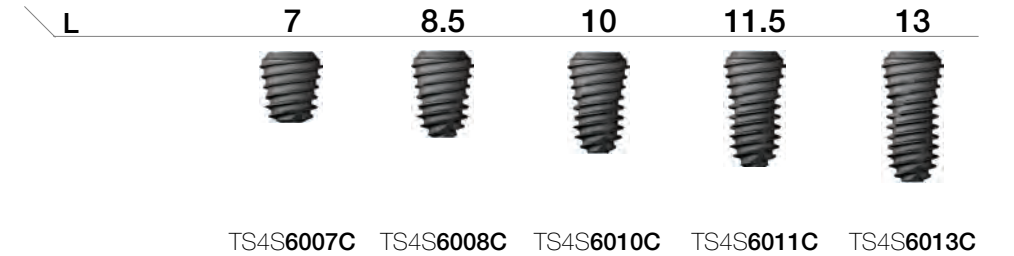


NoMount fixture order code

: fixture product code (ex : TS4S4010C)

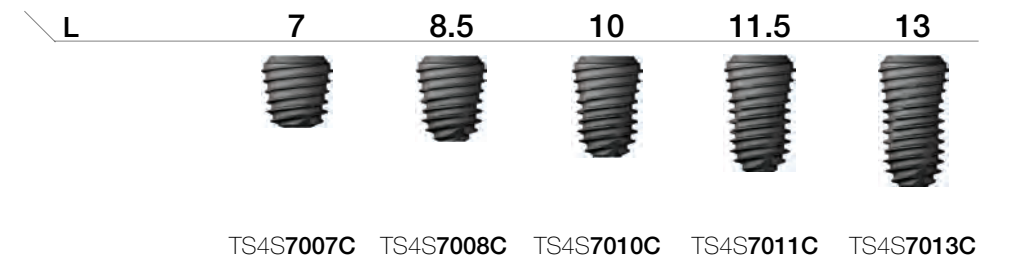
Ultra-wide

D $\varnothing 6.0$
Hex 2.5



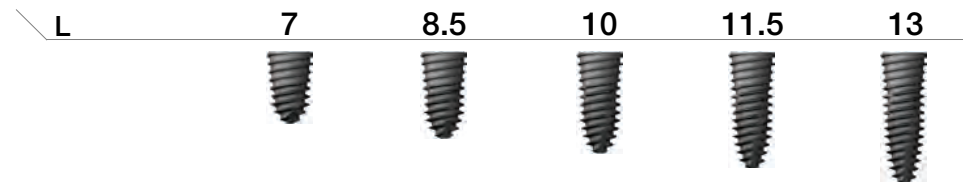
TS4S6007C TS4S6008C TS4S6010C TS4S6011C TS4S6013C

D $\varnothing 7.0$
Hex 2.5



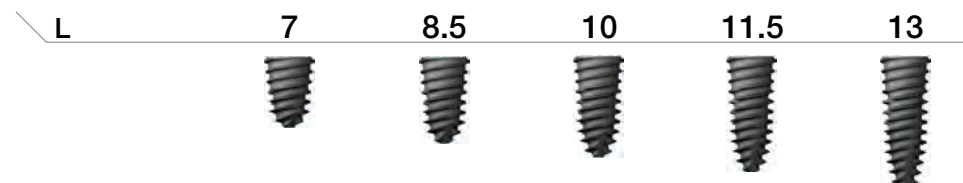
TS4S7007C TS4S7008C TS4S7010C TS4S7011C TS4S7013C

D $\varnothing 4.0$ Pitch 0.8
Hex 2.5



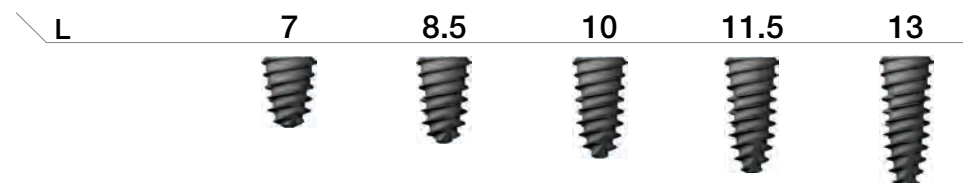
TS4S4007C TS4S4008C TS4S4010C TS4S4011C TS4S4013C

D $\varnothing 4.5$ Pitch 1.0
Hex 2.5



TS4S4507C TS4S4508C TS4S4510C TS4S4511C TS4S4513C

D $\varnothing 5.0$ Pitch 1.2
Hex 2.5



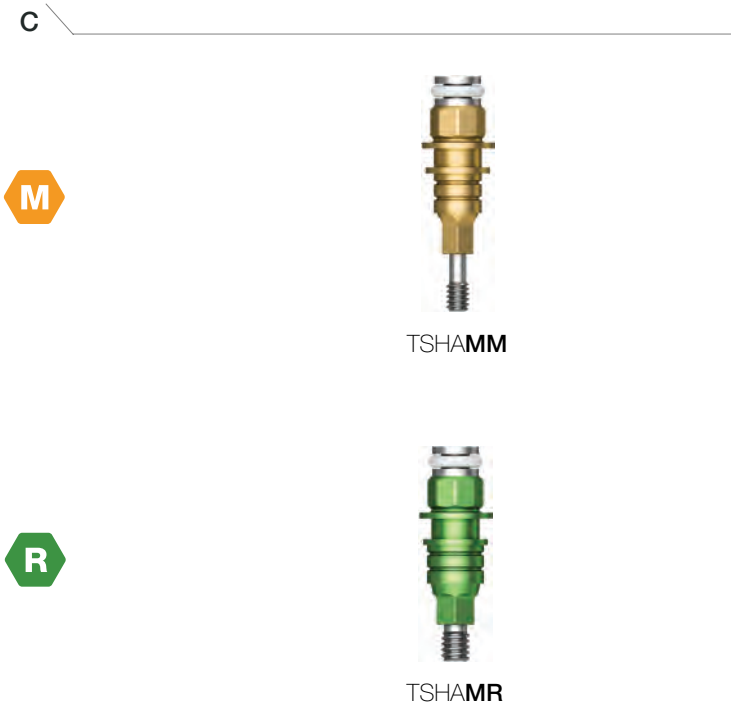
TS4S5007C TS4S5008C TS4S5010C TS4S5011C TS4S5013C

Mount & Screw

Simple Mount

- Use 1.2 Hex driver
- Packing unit : mount + mount screw
- C = Connection

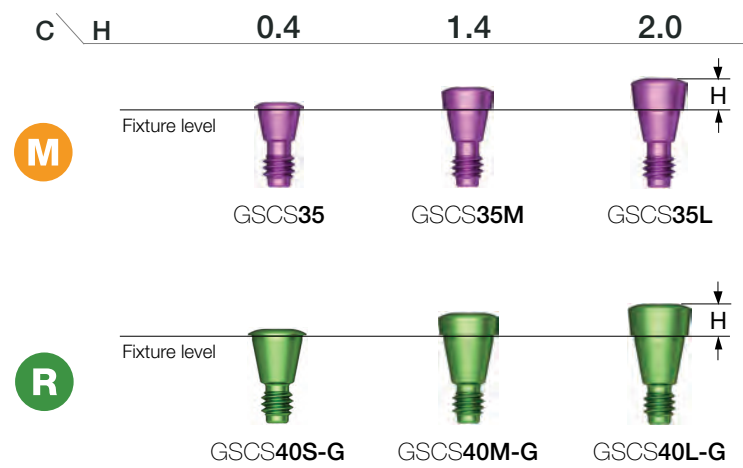
- M** Mini
- R** Regular



Cover Screw

- Long size is used in deep implant insertion
- Hex driver : 1.2
- Recommended tightening torque : 5~8Ncm
- C = Connection

- M** Mini
- R** Regular



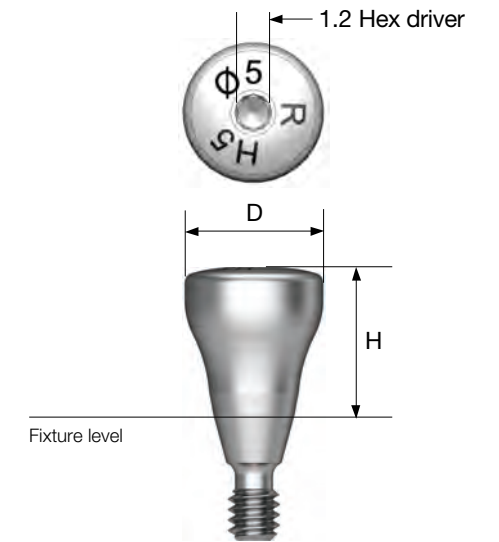
Healing Abutment

- Hex driver : 1.2
- Tightening torque : 5~8Ncm

- M** Mini
- R** Regular

Matching table

Healing Abutment	H	3.0	4.0	5.0	7.0
Abutment	G/H	1.0	2.0 or 3.0	3.0 or 4.0	5.0 이상
Impression coping	Type	Short	Short	Long	Long



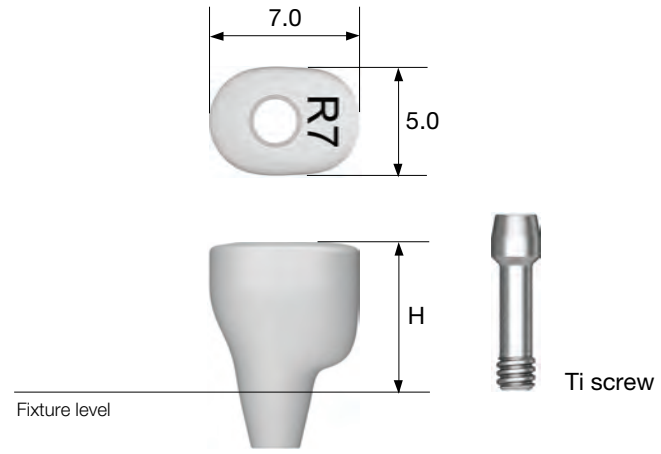
D \ H	3.0	4.0	5.0	7.0	9.0
Ø4.0	TSHA403M	TSHA404M	TSHA405M	TSHA407M	TSHA409M
Ø4.5	TSHA453M	TSHA454M	TSHA455M	TSHA457M	TSHA459M
D \ H	3.0	4.0	5.0	7.0	9.0
Ø4.0	TSHA403R	TSHA404R	TSHA405R	TSHA407R	TSHA409R
Ø4.5	TSHA453R	TSHA454R	TSHA455R	TSHA457R	TSHA459R
Ø5.0	TSHA503R	TSHA504R	TSHA505R	TSHA507R	TSHA509R
Ø6.0	TSHA603R	TSHA604R	TSHA605R	TSHA607R	TSHA609R
Ø7.0	TSHA703R	TSHA704R	TSHA705R	TSHA707R	TSHA709R
Ø8.0	-	-	TSHA805R	-	-

Custom Healing Abutment

- Material : medical PEEK
- Customizing through easy adjustment and removal to achieve ideal emergence profile
- Hex driver : 1.2
- Recommended tightening torque : 5~8Ncm
- Packing unit : abutment + Ti screw
- C = Connection

Abutment + Ti screw order code
: product code + **TH** (ex : TSCHAPR7TH)

- M** Mini
- R** Regular

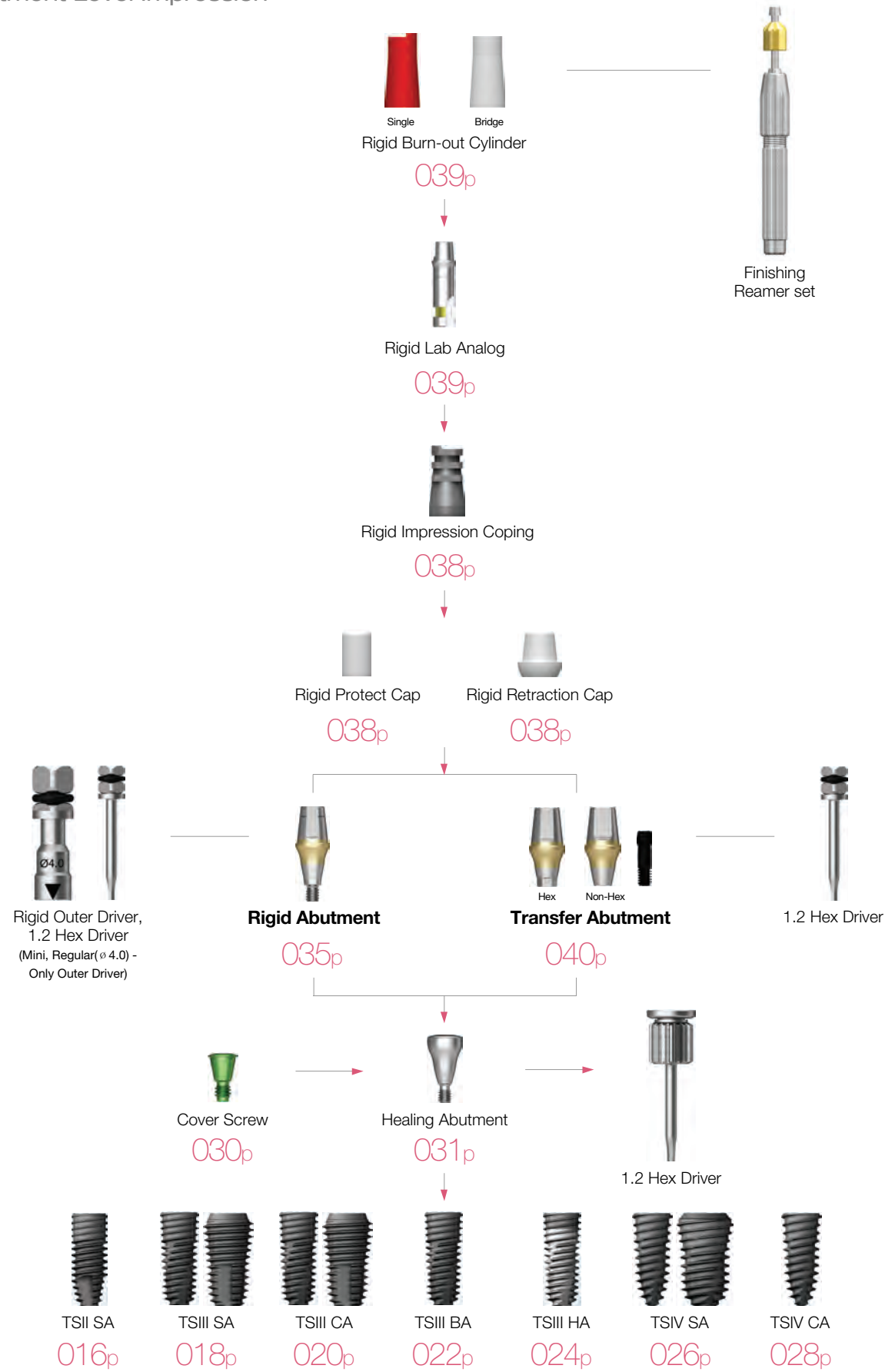


C \ H	5.0	7.0	9.0
M Ti screw : GSCHABSMT	TSCHAP M5	TSCHAP M7	TSCHAP M9
R Ti screw : GSCHABSST	TSCHAP R5	TSCHAP R7	TSCHAP R9



Rigid / Transfer

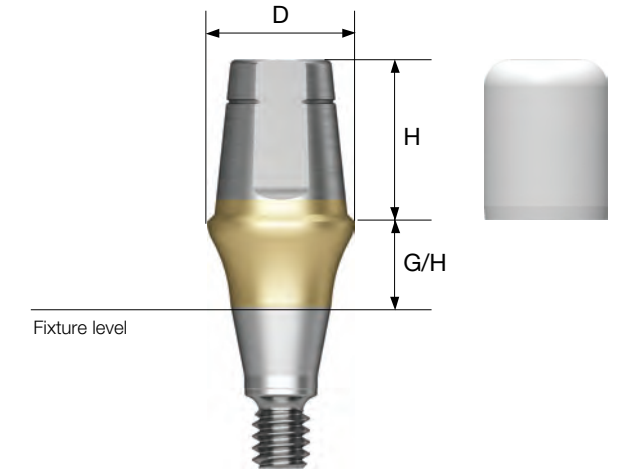
Abutment Level Impression



Rigid Abutment

- Used in producing cement-retained prosthetics
- Gold coloring on gingiva region for improved aesthetics
- Outer driver : $\varnothing 4.0$ (242p)
- Outer driver or 1.2 hex driver : $\varnothing 4.5$, $\varnothing 5.0$, $\varnothing 6.0$
- 1.2 hex driver : $\varnothing 7.0$
- Recommended tightening torque : 30Ncm
- Packing unit : abutment + protect cap

Abutment + protect cap order code
: product code + P (ex : GSRA5620P)



D $\varnothing 4.0$

M

H \ G/H	1.0	2.0	3.0	4.0	5.0
4.0	GSRA4410	GSRA4420	GSRA4430	GSRA4440	GSRA4450
5.5	GSRA4610	GSRA4620	GSRA4630	GSRA4640	GSRA4650
7.0	GSRA4710	GSRA4720	GSRA4730	GSRA4740	GSRA4750

D $\varnothing 4.5$

M

H \ G/H	1.0	2.0	3.0	4.0	5.0
4.0	GSRA4411	GSRA4421	GSRA4431	GSRA4441	GSRA4451
5.5	GSRA4611	GSRA4621	GSRA4631	GSRA4641	GSRA4651
7.0	GSRA4711	GSRA4721	GSRA4731	GSRA4741	GSRA4751

Rigid Abutment

D Ø4.0

R

H \ G/H	1.0	2.0	3.0	4.0	5.0
4.0	GSRAS4410	GSRAS4420	GSRAS4430	GSRAS4440	GSRAS4450
5.5	GSRAS4610	GSRAS4620	GSRAS4630	GSRAS4640	GSRAS4650
7.0	GSRAS4710	GSRAS4720	GSRAS4730	GSRAS4740	GSRAS4750

D Ø7.0

R

H \ G/H	1.0	2.0	3.0	4.0	5.0
5.5	GSRA7610	GSRA7620	GSRA7630	GSRA7640	GSRA7650

D Ø4.5

R

H \ G/H	1.0	2.0	3.0	4.0	5.0
4.0	GSRAS4411	GSRAS4421	GSRAS4431	GSRAS4441	GSRAS4451
5.5	GSRAS4611	GSRAS4621	GSRAS4631	GSRAS4641	GSRAS4651
7.0	GSRAS4711	GSRAS4721	GSRAS4731	GSRAS4741	GSRAS4751

D Ø5.0

R

H \ G/H	1.0	2.0	3.0	4.0	5.0
4.0	GSRA5410	GSRA5420	GSRA5430	GSRA5440	GSRA5450
5.5	GSRA5610	GSRA5620	GSRA5630	GSRA5640	GSRA5650
7.0	GSRA5710	GSRA5720	GSRA5730	GSRA5740	GSRA5750

D Ø6.0

R




H \ G/H	1.0	2.0	3.0	4.0	5.0
4.0	GSRA6410	GSRA6420	GSRA6430	GSRA6440	GSRA6450
5.5	GSRA6610	GSRA6620	GSRA6630	GSRA6640	GSRA6650
7.0	GSRA6710	GSRA6720	GSRA6730	GSRA6740	GSRA6750

Rigid Abutment Components

Rigid Protect Cap

- Used to protect rigid abutments in the oral cavity and minimize foreign body sensation for the patient
- Able to be applied in lower structure of a temporary prosthetic

M Mini
R Regular

D \ H	4.0	5.5	7.0
Ø 4.0/Ø 4.0	 GSRPC440	 GSRPC460	 GSRPC470
Ø 4.5/Ø 4.5	GSRPC441	GSRPC461	GSRPC471
Ø 5.0	GSRPC540	GSRPC560	GSRPC570
Ø 6.0	GSRPC640	GSRPC660	GSRPC670
Ø 7.0	-	GSRPC760	-

Rigid Burn-out Cylinder

- Used in attaching a rigid lab analog in framework for prosthetics
- After casting a prosthetic, margin area is adjusted using specialized reamer




M Mini
R Regular

D \ Type	Single	Bridge
Ø 4.0/Ø 4.0	 GSRP400S	 GSRP400B
Ø 4.5/Ø 4.5	GSRP450S	GSRP450B
Ø 5.0	GSRP500S	GSRP500B
Ø 6.0	GSRP600S	GSRP600B
Ø 7.0	GSRP700S	GSRP700B

Rigid Retraction Cap

- Provides an impression with an accurate margin when taking a direct impression




M Mini
R Regular

D \ H	4.0	5.5	7.0
Ø 4.0/Ø 4.0	 GSRRC440	 GSRRC460	 GSRRC470
Ø 4.5/Ø 4.5	GSRRC441	GSRRC461	GSRRC471
Ø 5.0	GSRRC540	GSRRC560	GSRRC570
Ø 6.0	GSRRC640	GSRRC660	GSRRC670
Ø 7.0	-	GSRRC760	-

Rigid Lab Analog

- Achieves rigid abutment on a working model




M Mini
R Regular

D \ H	4.0	5.5	7.0
Ø 4.0/Ø 4.0	 GSRLA440	 GSRLA460	 GSRLA470
Ø 4.5/Ø 4.5	GSRLA441	GSRLA461	GSRLA471
Ø 5.0	GSRLA540	GSRLA560	GSRLA570
Ø 6.0	GSRLA640	GSRLA660	GSRLA670
Ø 7.0	-	GSRLA760	-

Rigid Impression Coping

- Used in taking impressions of rigid abutments

M Mini
R Regular

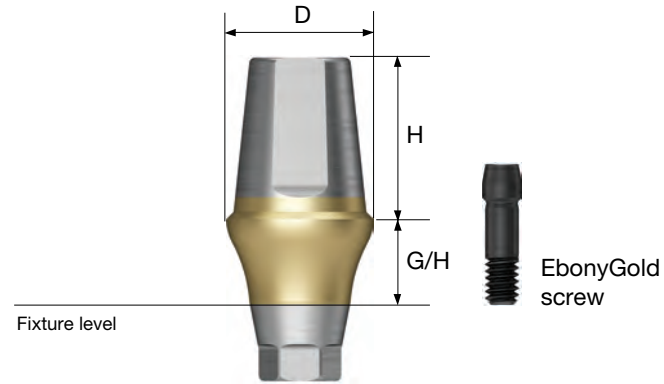
D \ H	4.0	5.5	7.0
Ø 4.0/Ø 4.0	 GSRIC440S	 GSRIC460S	 GSRIC470S
Ø 4.5/Ø 4.5	GSRIC441S	GSRIC461S	GSRIC471S
Ø 5.0	GSRIC540S	GSRIC560S	GSRIC570S
Ø 6.0	GSRIC640S	GSRIC660S	GSRIC670S
Ø 7.0	-	GSRIC760S	-

Transfer Abutment

- Used in producing cement-retained prosthetics
 - Gold coloring on gingiva region for improved aesthetics
 - 1.2 hex driver
 - Recommended tightening torque : 20Ncm(mini), 30Ncm(regular)
 - Packing unit : abutment + EbonyGold screw
- ※ TS transfer abutments and TS rigid abutments have the same margin upper form. Therefore, all components used in TS rigid abutments can be used in TS transfer abutments



Abutment + EbonyGold screw order code
: product code + **WH** (ex : GSTA4621WH)



D Ø5.0



EbonyGold screw
: GSABSS

		H \ G/H	1.0	2.0	3.0	4.0	5.0
Hex	4.0						
	5.5		GSTA5410	GSTA5420	GSTA5430	GSTA5440	GSTA5450
	7.0		GSTA5610	GSTA5620	GSTA5630	GSTA5640	GSTA5650
Non-Hex	4.0						
	5.5		GSTA5410N	GSTA5420N	GSTA5430N	GSTA5440N	GSTA5450N
	7.0		GSTA5610N	GSTA5620N	GSTA5630N	GSTA5640N	GSTA5650N

D Ø6.0



EbonyGold screw
: GSABSS

		H \ G/H	1.0	2.0	3.0	4.0	5.0
Hex	4.0						
	5.5		GSTA6410	GSTA6420	GSTA6430	GSTA6440	GSTA6450
	7.0		GSTA6610	GSTA6620	GSTA6630	GSTA6640	GSTA6650
Non-Hex	4.0						
	5.5		GSTA6410N	GSTA6420N	GSTA6430N	GSTA6440N	GSTA6450N
	7.0		GSTA6610N	GSTA6620N	GSTA6630N	GSTA6640N	GSTA6650N

D Ø4.5



EbonyGold screw
: GSABSM

		H \ G/H	1.0	2.0	3.0	4.0	5.0
Hex	5.5						
	7.0		GSTA4611	GSTA4621	GSTA4631	GSTA4641	GSTA4651
	7.0		GSTA4711	GSTA4721	GSTA4731	GSTA4741	GSTA4751
Non-Hex	5.5						
	7.0		GSTA4611N	GSTA4621N	GSTA4631N	GSTA4641N	GSTA4651N
	7.0		GSTA4711N	GSTA4721N	GSTA4731N	GSTA4741N	GSTA4751N

D Ø4.5



EbonyGold screw
: GSABSS

		H \ G/H	1.0	2.0	3.0	4.0	5.0
Hex	5.5						
	7.0		GSTAS4611	GSTAS4621	GSTAS4631	GSTAS4641	GSTAS4651
	7.0		GSTAS4711	GSTAS4721	GSTAS4731	GSTAS4741	GSTAS4751
Non-Hex	5.5						
	7.0		GSTAS4611N	GSTAS4621N	GSTAS4631N	GSTAS4641N	GSTAS4651N
	7.0		GSTAS4711N	GSTAS4721N	GSTAS4731N	GSTAS4741N	GSTAS4751N

D Ø7.0



EbonyGold screw
: GSABSS

		H \ G/H	1.0	2.0	3.0	4.0	5.0
Hex	5.5						
	5.5		GSTA7610	GSTA7620	GSTA7630	GSTA7640	GSTA7650
Non-Hex	5.5						
	5.5		GSTA7610N	GSTA7620N	GSTA7630N	GSTA7640N	GSTA7650N

Transfer Abutment Components

Laboratory Screw

- Lab screw: Used in apparatus to prevent damage to final screw
- Waxing screw: Used in producing transfer jigs and forming screw holes during wax up

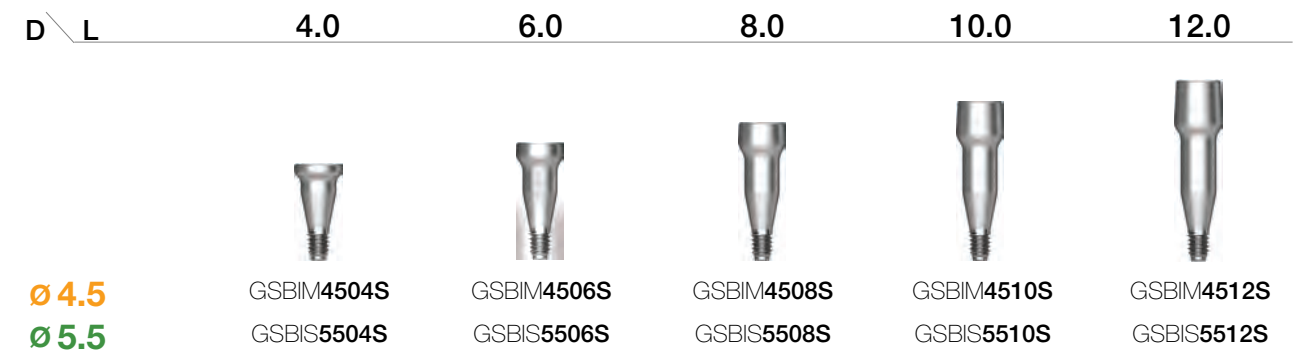
- M** Mini
- R** Regular



Bite Index

- Takes bite with registration after final impression
- 1.2 hex driver

- M** Mini
- R** Regular



Fixture Lab Analog

- Achieves fixture in oral cavity on a working model

- M** Mini
- R** Regular



Transfer Abutment Components

Fixture Pick-up Impression Coping


- Takes impression using open tray technique
- Superior impression stability with an extended flag with a hole
- 1.2 hex driver
- * Label is basic packaging specification
- Packing unit : Impression coping body + guide pin

M Mini
R Regular

D \ L	11		Guide Pin		
	Hex	Non-Hex	0	5.0	9.0
Ø 4.0	GSPIM4011	GSPIM4011N	GSPGPM100	GSPGPM150*	GSPGPM150L
Ø 4.5	GSPIM4511	GSPIM4511N			
Ø 4.0	GSPIS4011	GSPIS4011N	GSPGPR100	GSPGPR150*	GSPGPR150L
Ø 4.5	GSPIS4511	GSPIS4511N			
Ø 5.0	GSPIS5011	GSPIS5011N			
Ø 6.0	GSPIS6011	GSPIS6011N			
Ø 7.0	GSPIS7011	GSPIS7011N			

D \ L	15		Guide Pin		
	Hex	Non-Hex	0	5.0	9.0
Ø 4.0	GSPIM4015	GSPIM4015N	GSPGPM100L	GSPGPM150L*	GSPGPM200L
Ø 4.5	GSPIM4515	GSPIM4515N			
Ø 4.0	GSPIS4015	GSPIS4015N	GSPGPR100L	GSPGPR150L*	GSPGPR200L
Ø 4.5	GSPIS4515	GSPIS4515N			
Ø 5.0	GSPIS5015	GSPIS5015N			
Ø 6.0	GSPIS6015	GSPIS6015N			
Ø 7.0	GSPIS7015	GSPIS7015N			

Fixture Transfer Impression Coping

- Takes impression using closed tray technique
- Accurate impression with gemstone-shaped structure ()
- 1.2 hex driver
- Packing unit : hex - impression coping + guide pin
non-hex - impression coping

M Mini
R Regular

D \ L	11		14	
	Hex	Non-Hex	Hex	Non-Hex
Ø 4.0	GSTIM4011	GSTIM4011N	GSTIM4014	GSTIM4014N
Ø 4.5	GSTIM4511	GSTIM4511N		
Ø 4.0	GSTIS4011	GSTIS4011N	GSTIS4014	GSTIS4014N
Ø 4.5	GSTIS4511	GSTIS4511N		
Ø 5.0	GSTIS5011	GSTIS5011N		
Ø 6.0	GSTIS6011	GSTIS6011N		
Ø 7.0	GSTIS7011	GSTIS7011N		

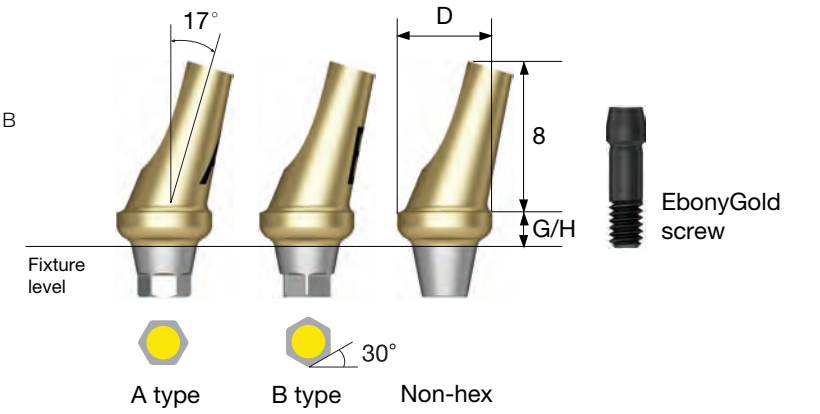
Transfer / Angled / FreeForm ST / GoldCast / NP-Cast

Fixture Level Impression



Angled Abutment

- Used when a prosthetic's path adjustment is necessary at 17° axial angle
- Gold coloring for aesthetics
- 12 orientation choices with two types of hexes, A and B
- Accurate hex type abutment selection by using an abutment selector
- 1.2 hex driver
- Recommended tightening torque : 20Ncm(mini), 30Ncm(regular)
- Packing unit : abutment + EbonyGold screw



Abutment + EbonyGold screw order Code
: product code + WH (ex : GSAA5020AWH)



Angled Abutment

D Ø5.0
R
 EbonyGold screw
 : GSABSS

G/H Type	2.0			4.0		
	Hex A	Hex B	Non-Hex	Hex A	Hex B	Non-Hex
						
	GSAA5020A	GSAA5020B	GSAA5020N	GSAA5040A	GSAA5040B	GSAA5040N

D Ø6.0
R
 EbonyGold screw
 : GSABSS













G/H Type	2.0			4.0		
	Hex A	Hex B	Non-Hex	Hex A	Hex B	Non-Hex
						
	GSAA6020A	GSAA6020B	GSAA6020N	GSAA6040A	GSAA6040B	GSAA6040N

Angled Abutment Components

Angled Abutment Selector

• Used in selecting specifications for angled abutment A or B type, diameter, and G/H when in oral cavity or in model

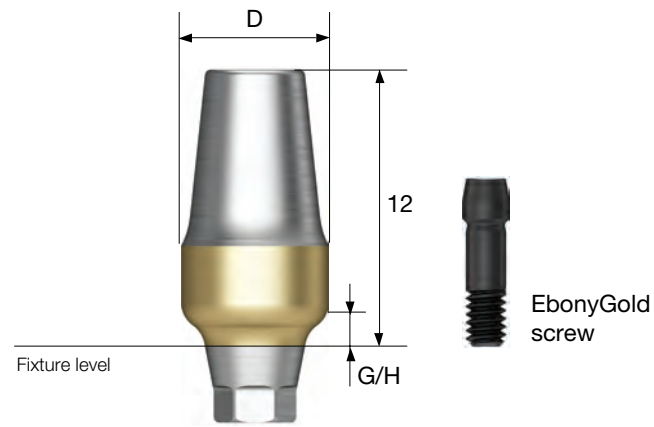
M Mini
R Regular

D	G/H Type	2.0		4.0	
		Hex A	Hex B	Hex A	Hex B
Ø 4.5					
		GSAAS4520MA	GSAAS4520MB	GSAAS4540MA	GSAAS4540MB
Ø 5.0					
		GSAAS5020A	GSAAS5020B	GSAAS5040A	GSAAS5040B
Ø 6.0					
		GSAAS6020A	GSAAS6020B	GSAAS6040A	GSAAS6040B

FreeForm ST Abutment

- Used when an abutment's path must be altered or a prosthetic's margin area must be customized
- Gold coloring on gingiva region for aesthetics
- Recommended tightening torque : 20Ncm(mini), 30Ncm(regular)
- Packing unit : abutment + EbonyGold screw

Abutment + EbonyGold screw order code
: pcode + WH (ex : GSFA5015WH)



D Ø5.0



EbonyGold screw
: GSABSS



D Ø5.0



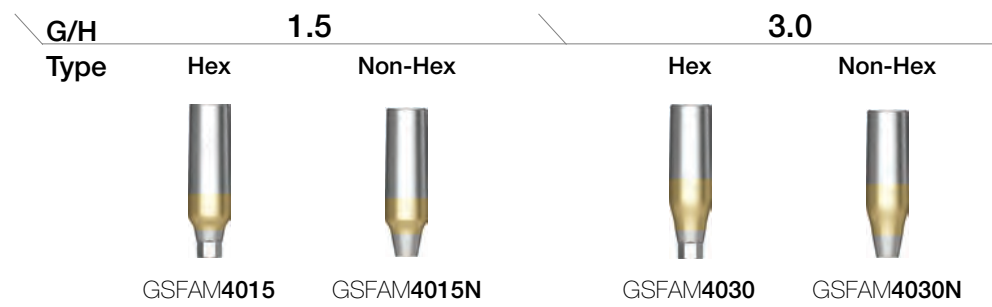
EbonyGold screw
: GSABSS



D Ø4.0



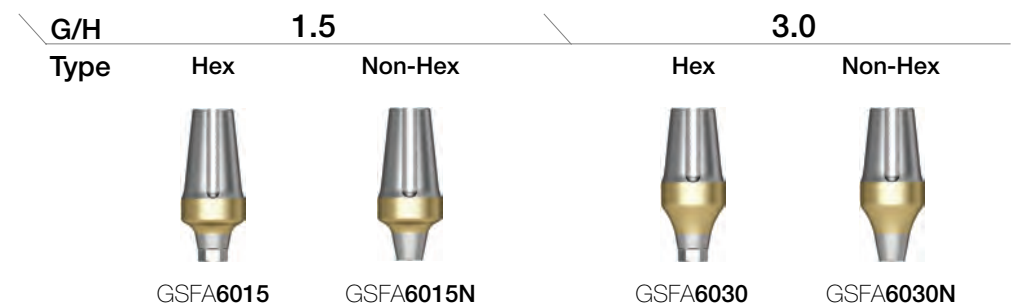
EbonyGold screw
: GSABSM



D Ø6.0



EbonyGold screw
: GSABSS



D Ø4.0



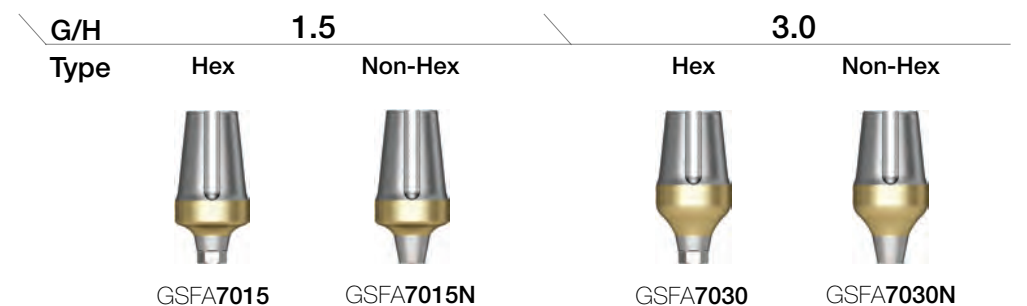
EbonyGold screw
: GSABSS



D Ø7.0



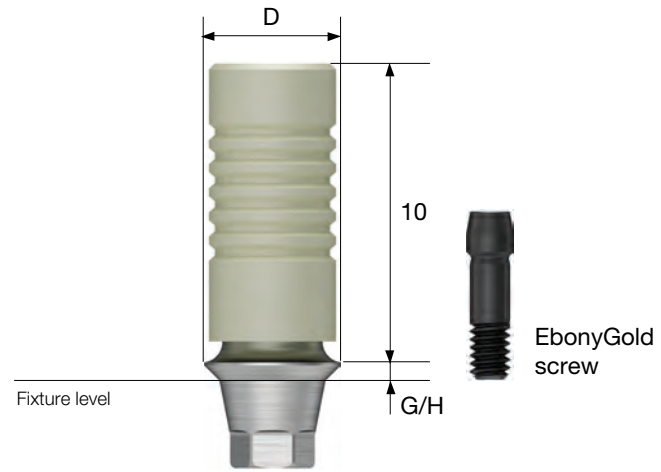
EbonyGold screw
: GSABSS



GoldCast Abutment

- Used in producing screw-retained prosthetics
- Used when path, aesthetics, or space have limitations
- After customization, prosthetic must be produced by casting using dental-quality gold alloy
- Abutment region fusion range : 1400°C~1450°C (casting with non-precious metal alloys is incompatible)
- 1.2 hex driver
- Recommended tightening torque : 20Ncm(mini), 30Ncm(regular)
- Packing unit : abutment + EbonyGold screw

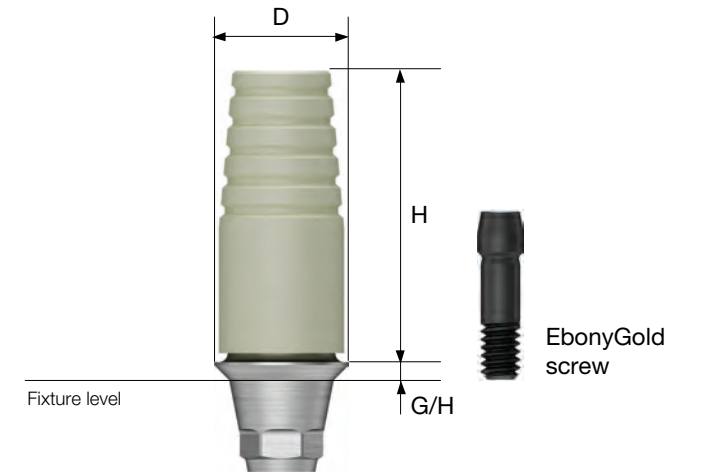
Abutment + EbonyGold screw order code
: product code + **WH** (ex : GSGA4510SWH)



NP-Cast Abutment

- Used in producing screw-retained prosthetics
- Used when path, aesthetics, or space have limitations
- After customization, prosthetic must be produced by casting using dental-quality gold alloy
- Abutment region fusion range : 1400°C~1550°C
- 1.2 hex driver
- Recommended tightening torque : 20Ncm(mini), 30Ncm(regular)
- Packing unit : abutment + EbonyGold screw

Abutment + EbonyGold screw order code
: product code + **WH** (ex : GSNA4510SWH)



D Ø4.0



EbonyGold screw
: GSABSM

G/H Type	1.0		3.0	
	Hex	Non-Hex	Hex	Non-Hex
	GSGA4010S	GSGA4010B	GSGA4030S	GSGA4030B

D Ø4.0



EbonyGold screw
: GSABSM

G/H Type	1.0		3.0	
	Hex	Non-Hex	Hex	Non-Hex
	GSNA4010S	GSNA4010B	GSNA4030S	GSNA4030B

D Ø4.5



EbonyGold screw
: GSABSS

G/H Type	1.0		3.0	
	Hex	Non-Hex	Hex	Non-Hex
	GSGA4510S	GSGA4510B	GSGA4530S	GSGA4530B

D Ø4.5



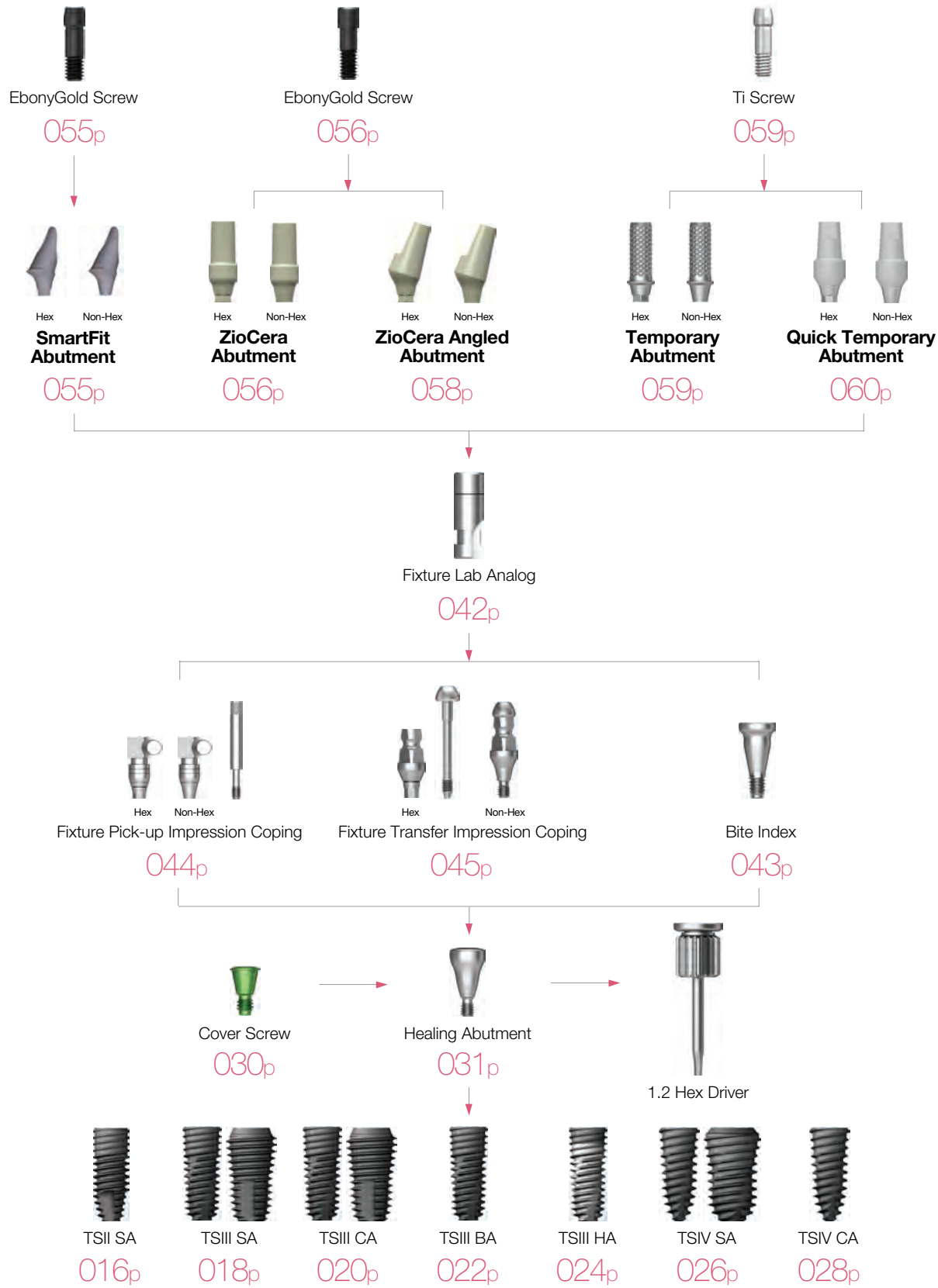
EbonyGold screw
: GSABSS

G/H Type	1.0		3.0	
	Hex	Non-Hex	Hex	Non-Hex
	GSNA4510S	GSNA4510B	GSNA4530S	GSNA4530B

SmartFit / ZioCera / ZioCera Angled Temporary / Quick Temporary

Fixture Level Impression

SmartFit Abutment



- Abutment customized for patient using CAD/CAM
- 1.2 hex driver
- Recommended tightening torque : 20Ncm(mini), 30Ncm(regular)

- Recommended clinical case
 - Case where implant insertion area or angle is not ideal (max correction 30°)
 - Multiple cases requiring consistent path and stable guide
 - Anterior case where aesthetic design is required
 - Irregular or exceedingly deep gingiva case

How to Order

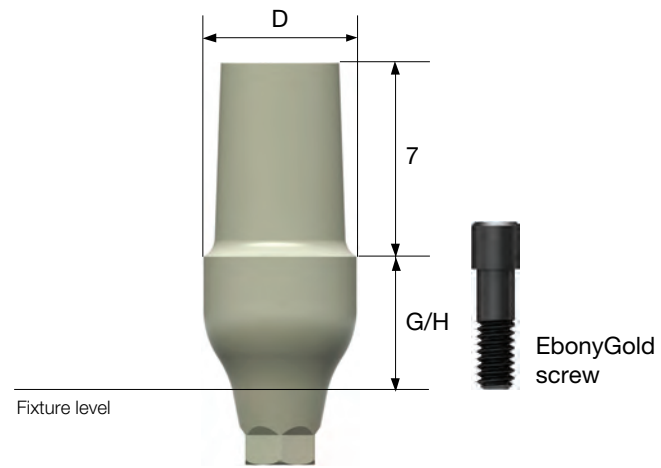
- Create order sheet
- Send necessary items for each case to Osstem Implant CAD/CAM center
- Working time : 5~7days



ZioCera Abutment

- Zirconia material with superior biocompatibility
- Advantageous in aesthetic prosthetics due to having similar color with natural teeth
- 1.2 hex driver
- Recommended tightening torque : 20Ncm(mini), 30Ncm(regular)
- Packing unit : abutment + EbonyGold screw

Abutment + EbonyGold screw order code
: product code + **WH** (ex : GSZAS5535N**WH**)



D Ø5.5



EbonyGold screw
: GSASR

G/H Type	3.5		5.0	
	Hex	Non-Hex	Hex	Non-Hex
	GSZAS5535	GSZAS5535N	GSZAS5550	GSZAS5550N

D Ø6.5



EbonyGold screw
: GSASR

G/H Type	3.5		5.0	
	Hex	Non-Hex	Hex	Non-Hex
	GSZAS6535	GSZAS6535N	GSZAS6550	GSZAS6550N

D Ø4.5



EbonyGold screw
: GSASM

G/H Type	3.5		5.0	
	Hex	Non-Hex	Hex	Non-Hex
	GSZAM4535	GSZAM4535N	GSZAM4550	GSZAM4550N

D Ø4.5



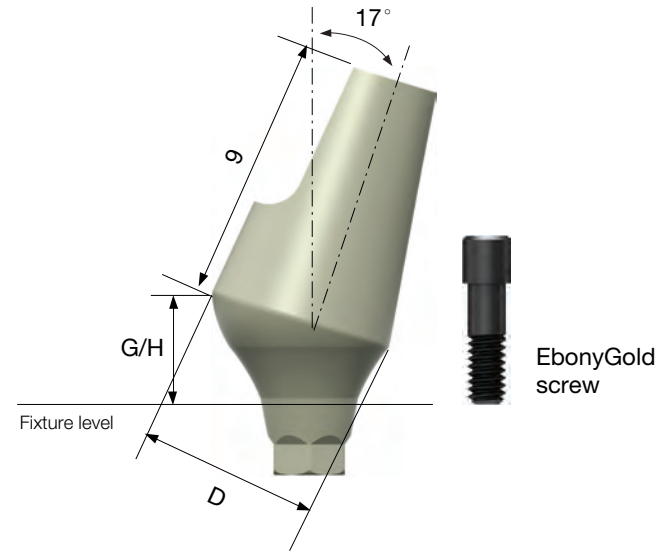
EbonyGold screw
: GSASR

G/H Type	3.5		5.0	
	Hex	Non-Hex	Hex	Non-Hex
	GSZAS4535	GSZAS4535N	GSZAS4550	GSZAS4550N

ZioCera Angled Abutment

- Used in producing aesthetic prosthetics with significant path adjustment
- Advantageous in aesthetic prosthetics due to having similar color with natural teeth
- 1.2 hex driver
- Recommended tightening torque : 30Ncm(regular)
- Packing unit : abutment + EbonyGold screw

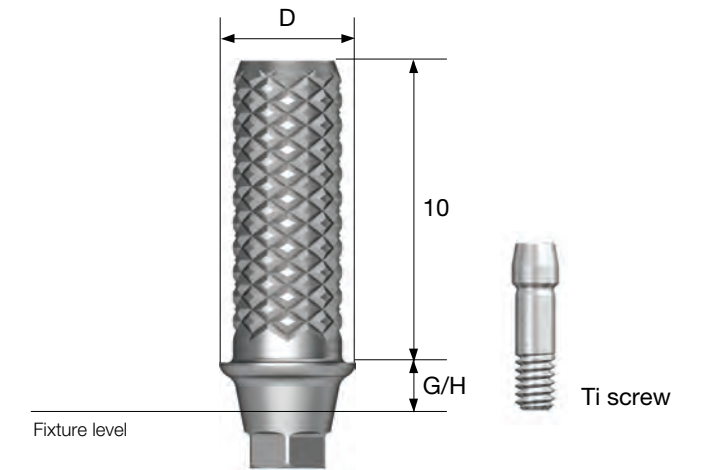
Abutment + EbonyGold screw order code
: product code + **WH** (ex : GS17ZAS5530N**WH**)



Temporary Abutment

- Used in producing temporary prosthetics (Material: Ti Gr-3)
- Structure enabling easy customization
- 1.2 hex driver
- Recommended tightening torque : 20Ncm(mini/regular)
- Packing unit : abutment + Ti screw

Abutment + Ti screw order code
: product code + **TH** (ex : GSTTA4510**TH**)



D Ø5.5

G/H	3.0	
Type	Hex	Non-Hex
	GS17ZAS5530	GS17ZAS5530N

R
EbonyGold screw : GSASR

D Ø6.5

G/H	4.0	
Type	Hex	Non-Hex
	GS17ZAS6540	GS17ZAS6540N

R
EbonyGold screw : GSASR

D Ø4.0

G/H	1.0		3.0	
Type	Hex	Non-Hex	Hex	Non-Hex
	GSTTA4010	GSTTA4010N	GSTTA4030	GSTTA4030N

M
Ti screw : GSABSMT

D Ø4.5

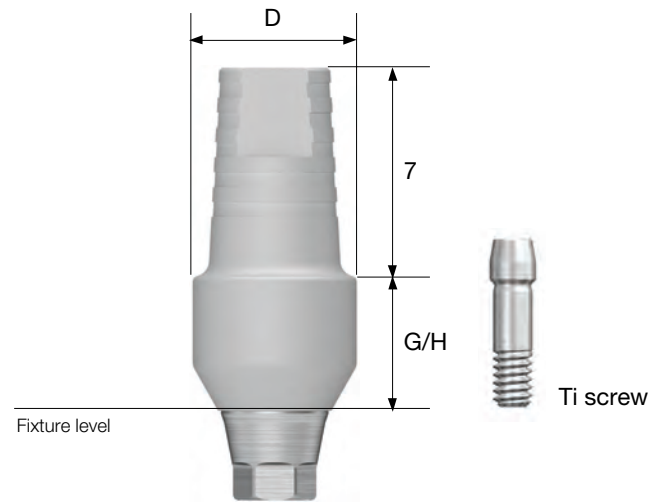
G/H	1.0		3.0	
Type	Hex	Non-Hex	Hex	Non-Hex
	GSTTA4510	GSTTA4510N	GSTTA4530	GSTTA4530N

R
Ti screw : GSABSST




Quick Temporary Abutment

- Material : Medical PEEK
- Used in producing temporary prosthetics for immediate loading
- Capable of easily altering/removing shape of plastic material
- Provide stable connection with fixture with titanium base
- Able to be used for up to 180 days in the oral cavity
- Recommended tightening torque : 20Ncm(mini/regular)
- Packing unit : abutment + Ti screw

Abutment + Ti screw order code
 : product code + **TH** (ex : TSQTA5550**TH**)






D Ø4.5

G/H	5.0	
Type	Hex	Non-Hex
		
	TSQTA4550	TSQTA4550N

Ti screw : GSABSMT

D Ø5.5

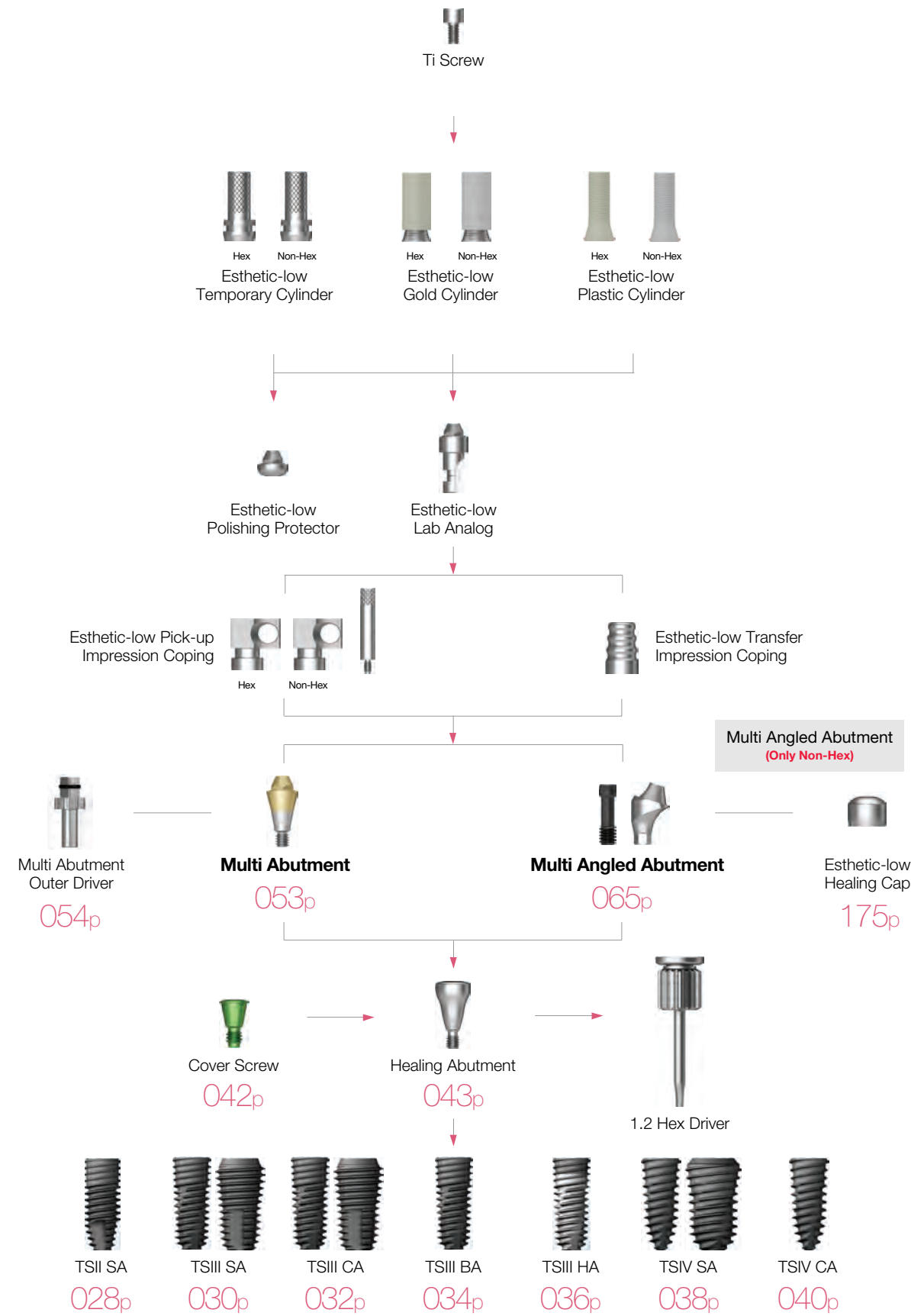
G/H	5.0	
Type	Hex	Non-Hex
		
	TSQTA5550	TSQTA5550N

Ti screw : GSABSST



Multi / Multi Angled

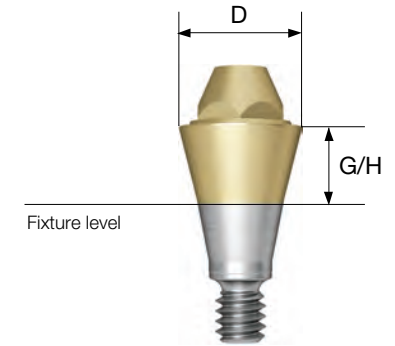
Abutment Level Impression



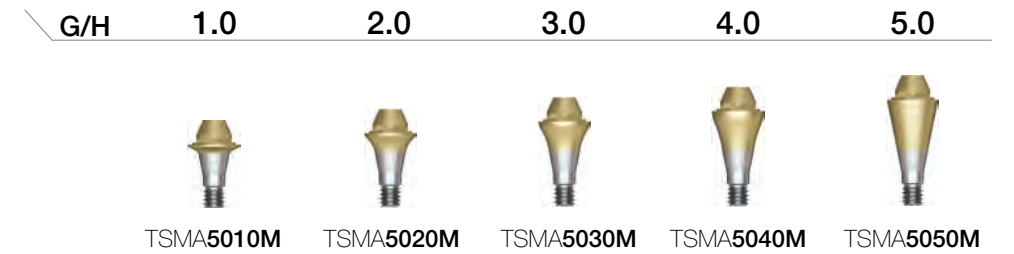
Multi Abutment

- Uses specialized outer driver (MAOD)
- Used in screw type prosthetics in multiple cases
- Produces prosthetics by using US aesthetic-low cylinders
- Recommended tightening torque : 30Ncm

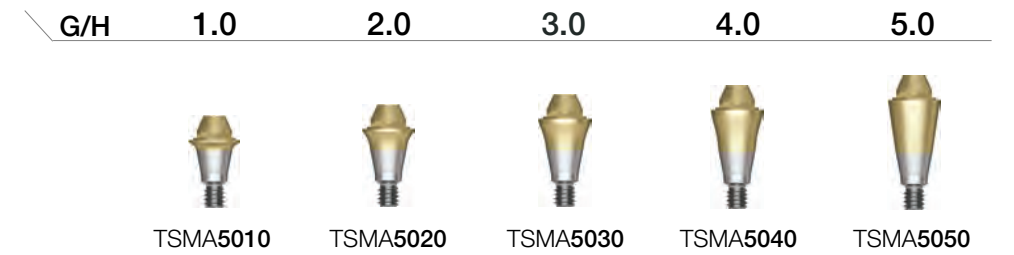
Abutment order code
: product code (ex : TSMA5030)



D Ø4.8



D Ø4.8



Multi Abutment Components

Multi Abutment Outer Driver

- Torque driver specialized for multi-abutments

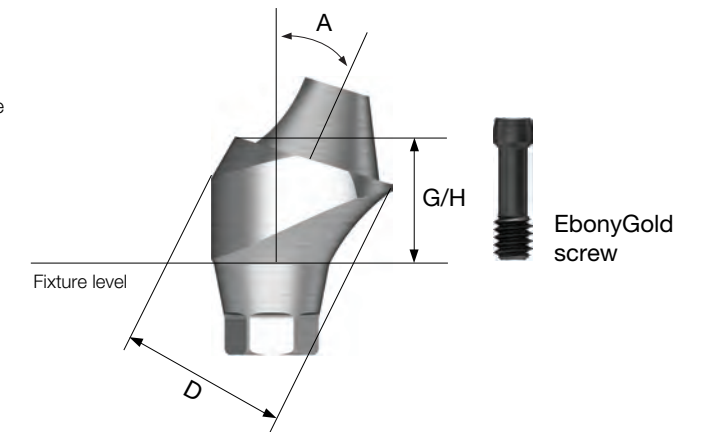


MAOD

Multi Angled Abutment

- Used in implant path compensation in screw retained multiple case
- Up to 60° path compensation (two implant standard)
- Prosthetic production using US aesthetic-low cylinder(non-hex)
- Recommended tightening torque : 20Ncm(mini), 30Ncm(regular)
- Packing unit : multi angled abutment + EbonyGold screw







Abutment + EbonyGold screw order code
: product code + **WH** (ex : GS17MAS4840**WH**)



D Ø4.8









EbonyGold screw
: GSMABSM

Angle \ G/H	2.5	3.0	4.0
17°	 GS17MAM4820	 GS17MAM4830	 GS17MAM4840
30°	 GS30MAM4830	 GS30MAM4840	 GS30MAM4850

D Ø4.8

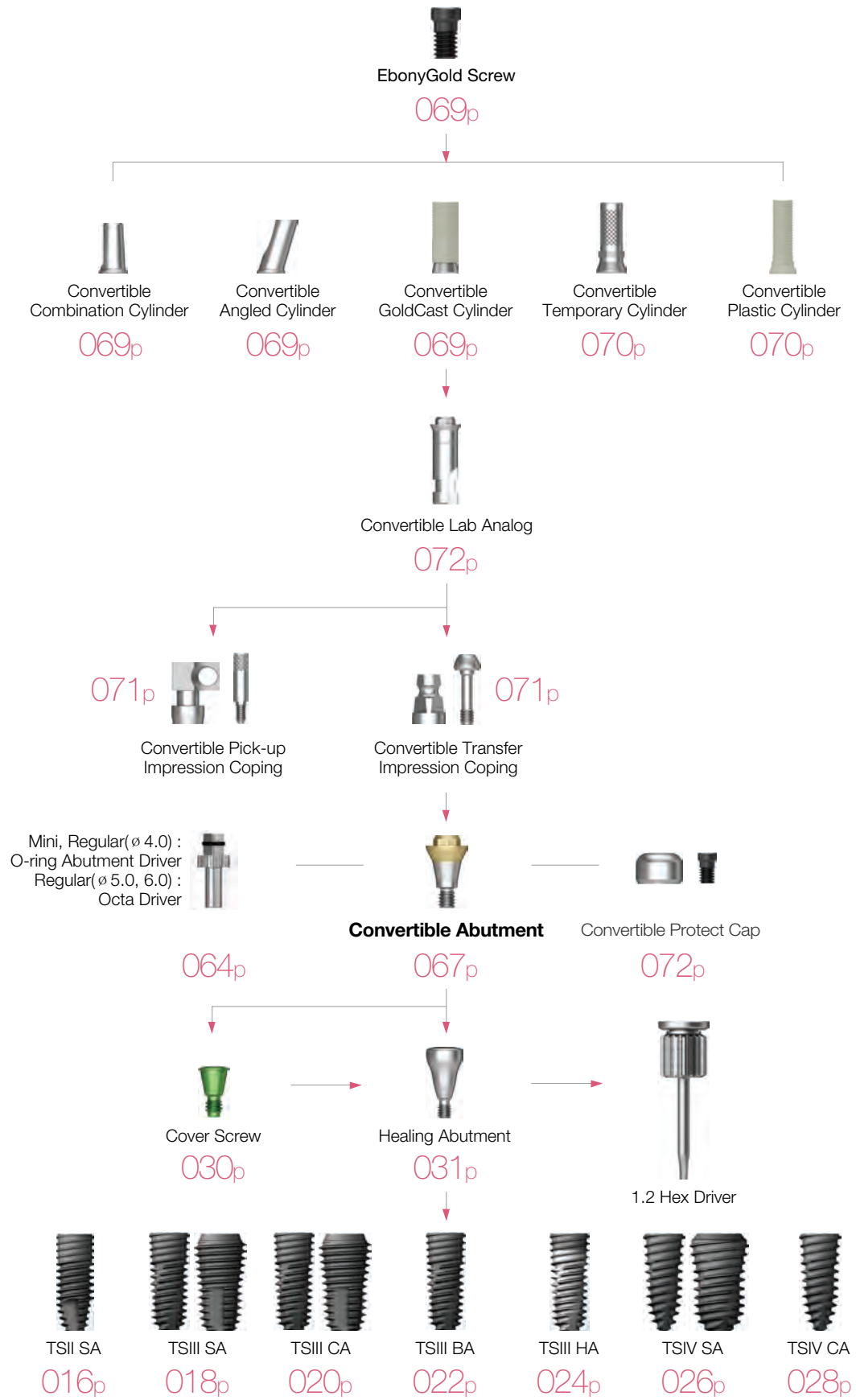


EbonyGold screw
: GSMABSS

Angle \ G/H	2.5	3.0	4.0
17°	 GS17MAS4820	 GS17MAS4830	 GS17MAS4840
30°	 GS30MAS4830	 GS30MAS4840	 GS30MAS4850

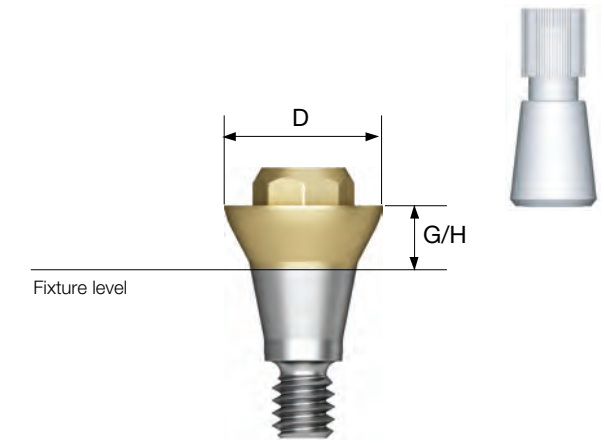
Convertible

Abutment Level Impression



Convertible Abutment

- Used in producing prosthetics in bridge cases where path is not aligned
- O-ring abutment driver : ø 4.0 (AORD)
- Octa abutment driver : ø 5.0, ø 6.0 (244p)
- Recommended tightening torque : 30Ncm
- Packing unit : abutment + carrier



Abutment + carrier order code
: product code + P (ex : GSCA5030P)

D ø 4.0



G/H	1.0	2.0	3.0	4.0	5.0
					-
	GSCA4010	GSCA4020	GSCA4030	GSCA4040	-

D ø 4.0



G/H	1.0	2.0	3.0	4.0	5.0
					-
	GSCAS4010	GSCAS4020	GSCAS4030	GSCAS4040	-

Convertible Abutment

D Ø5.0



G/H	1.0	2.0	3.0	4.0	5.0
	GSCA5010	GSCA5020	GSCA5030	GSCA5040	GSCA5050

D Ø6.0



G/H	1.0	2.0	3.0	4.0	5.0
	GSCA6010	GSCA6020	GSCA6030	GSCA6040	GSCA6050

Convertible Abutment Components

Convertible Combination Cylinder

- Used in producing combination-retained prosthetics using convertible abutments
- 1.2 hex driver
- Recommended tightening torque : 20Ncm
- Packing unit : cylinder + EbonyGold screw

Abutment + EbonyGold screw order code
: product code + WH (ex : GSCC5070TWH)



D \ H	7.0			
	Type	Hex	Non-Hex	Octa
Ø 4.0 / Ø 4.0		GSCC4070T	GSCC4070TN	-
Ø 5.0	-	-	-	GSCC5070T
Ø 6.0	-	-	-	GSCC6070T

EbonyGold screw
: GSFSM (Ø 4.0 / Ø 4.0)
: GSFSR (Ø 5.0 / Ø 6.0)

Convertible Angled Cylinder

- Used in producing combination-retained prosthetics using convertible abutments
- Used when path adjustment is necessary for a prosthetic with 17° axial angle
- 1.2 hex driver
- Recommended tightening torque : 20Ncm
- Packing unit : cylinder + EbonyGold screw

Abutment + EbonyGold Screw order code
: product code + WH (ex : GSAC5080TWH)



D \ H	8.0			
	Type	Hex	Non-Hex	Octa
Ø 4.0 / Ø 4.0		GSAC4080T	GSAC4080TN	-
Ø 5.0	-	-	-	GSAC5080T
Ø 6.0	-	-	-	GSAC6080T

EbonyGold screw
: GSFSM (Ø 4.0 / Ø 4.0)
: GSFSR (Ø 5.0 / Ø 6.0)

Convertible GoldCast Cylinder

- Used in producing screw maintenance prosthetics
- After customization, prosthetic must be produced by casting using dental-quality gold alloy
- Cylinder region fusion range : 1400°C~1450°C (casting with non-precious metal alloys is incompatible)
- 1.2 hex driver
- Recommended tightening torque : 20Ncm
- Packing unit : cylinder + EbonyGold screw

Abutment + EbonyGold screw order code
: product code + WH (ex : GSGC500WH)



D \ H	12			
	Type	Hex	Non-Hex	Octa
Ø 4.0 / Ø 4.0		GSGC400	GSGC400N	-
Ø 5.0	-	-	-	GSGC500
Ø 6.0	-	-	-	GSGC600

EbonyGold screw
: GSFSM (Ø 4.0 / Ø 4.0)
: GSFSR (Ø 5.0 / Ø 6.0)






Convertible Abutment Components

Convertible Temporary Cylinder

- Used in producing temporary prosthetics (Material: Ti Gr-3)
- Structure enabling easy customization and minimizing indication restrictions
- 1.2 hex driver
- Recommended tightening torque : 20Ncm
- Packing unit : cylinder + Ti screw

Abutment + EbonyGold screw order code
: product code + TH (ex : GSCTC500TTH)



D \ H	12			
	Type	Hex	Non-Hex	Octa
ø 4.0 / ø 4.0				
ø 5.0		-	-	
ø 6.0		-	-	

EbonyGold screw
: GSFMT (ø 4.0 / ø 4.0)
: GFSRT (ø 5.0 / ø 6.0)

Convertible Plastic Cylinder

- Used in producing screw maintenance prosthetics
- Produces prosthetics after casting with dental-grade alloy (gold, non-precious metals) after customization
- Lower precision in connection area compared to gold cylinder
- 1.2 hex driver
- Recommended tightening torque : 20Ncm
- Packing unit : cylinder + EbonyGold screw

Abutment + EbonyGold screw order code
: product code + WH (ex : GSCPL500WH)






D \ H	12			
	Type	Hex	Non-Hex	Octa
ø 4.0 / ø 4.0				
ø 5.0		-	-	
ø 6.0		-	-	

EbonyGold screw
: GFSM (ø 4.0 / ø 4.0)
: GFSR (ø 5.0 / ø 6.0)

Convertible Pick-up Impression Coping

- Takes impression using open tray
- Superior impression stability with holinone structure
- 1.2 hex driver
- * Label is basic packaging specification
- Packing unit : Impression coping body + guide pin



D	Guide Pin	
	0	5.0
ø 4.0 / ø 4.0		
ø 5.0	-	
ø 6.0	-	
	-	

Convertible Transfer Impression Coping

- Takes impression using closed tray
- Increased popularity after creating impression with gemstone-shaped structure (◇)
- 1.2 hex driver
- Packing unit : impression coping body + guide pin



ø 4.0 / ø 4.0		
ø 5.0	-	
ø 6.0	-	

Convertible Abutment Components

Convertible Protect Cap




- Used when protecting a convertible abutment in the oral cavity and minimizing foreign body sensation for the patient
- Recommended tightening torque : 20Ncm
- 1.2 hex driver
- Packing unit : protect cap + EbonyGold screw

Abutment + EbonyGold screw order code

: product code + **WH** (ex : GSCHC500**WH**)

M Mini

R Regular

	D		
			
ø 4.0/ø 4.0	GSCHC 400 (Hex)	-	-
ø 5.0	-	GSCHC 500 (Non-Octa)	-
ø 6.0	-	-	GSCHC 600 (Non-Octa)
EbonyGold screw	: GSFSM (ø 4.0 / ø 4.0)		
	: GSFSR (ø 5.0 / ø 6.0)		

Convertible Lab Analog

- Achieves convertible abutment of the oral cavity on a working model

M Mini

R Regular




	D		
			
ø 4.0/ø 4.0	GSCLA 400 (Hex)	-	-
ø 5.0	-	GSCLA 500 (Octa)	-
ø 6.0	-	-	GSCLA 600 (Octa)

Convertible Polishing Protector

- Used with the goal of preventing damage to the connection area of cylinder when polishing after casting the prosthetic

M Mini

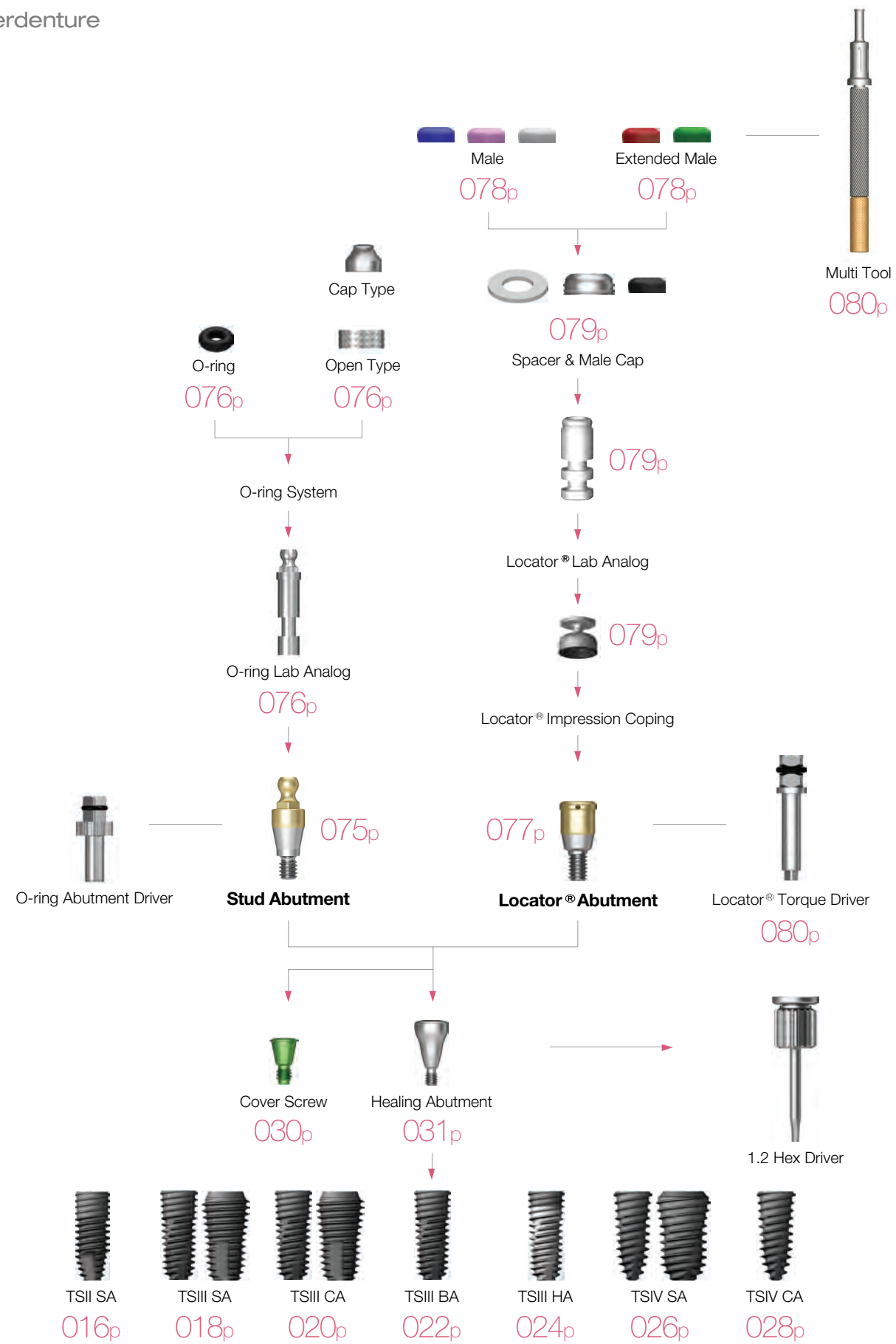
R Regular

	D		
			
ø 4.0/ø 4.0	GSCPC 400 (Hex)	-	-
ø 5.0	-	GSCPC 500 (Octa)	-
ø 6.0	-	-	GSCPC 600 (Octa)

OSSTEM[®]
IMPLANT

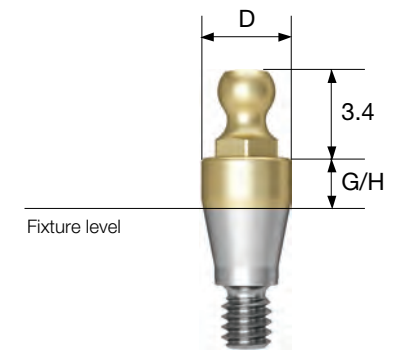
Stud / Locator®

Overdenture



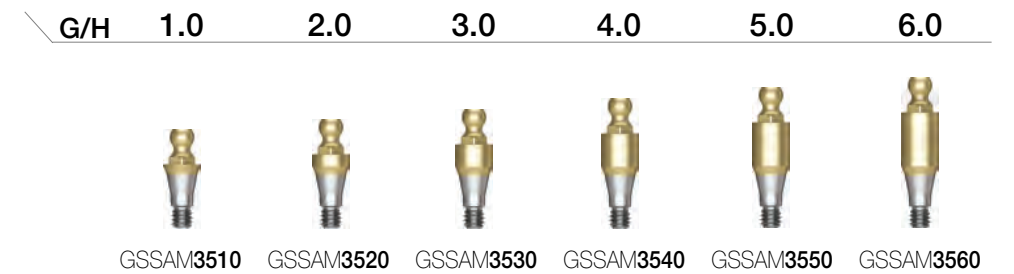
Stud Abutment

- Used in creating stud type overdenture prosthetics
- Compensates the path up to 20°
- O-ring abutment driver (AORD)
- Recommended tightening torque : 30Ncm



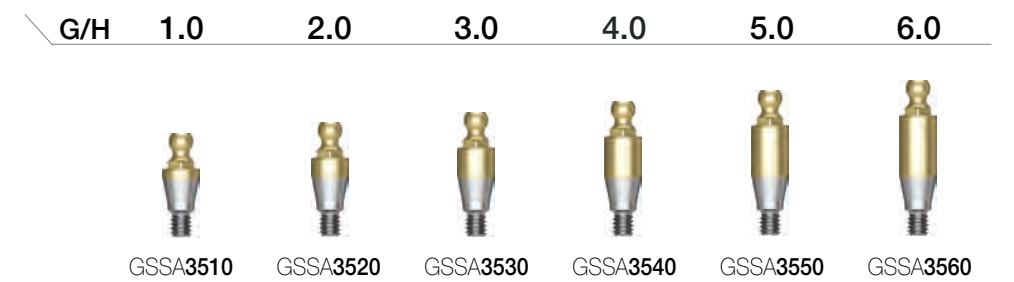
D Ø3.5

M



D Ø3.5

R



Stud Abutment Components

O-ring Retainer Cap Set

- Used in creating stud type overdenture prosthetics
- Packing unit : retainer cap + o-ring



O-ring Retainer Set

- Advantageous when occlusal clearance is low compared to retainer cap
- Packing unit : retainer + o-ring



O-ring Set

- Packing unit : 5ea



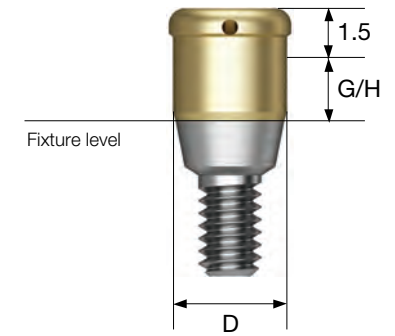
O-ring Lab Analog

- Achieves O-ring abutment of the oral cavity on a working model



Locator® Abutment

- Achieves low vertical dimension, stability, and various attachments with retention
- Possible path compensation up to 40° (two implant standard)
- Tightening by using a locator torque driver
- Recommended tightening torque : 30Ncm



D Ø3.7

M

G/H	1.0	2.0	3.0	4.0	5.0
	HGLCA3510M	HGLCA3520M	HGLCA3530M	HGLCA3540M	HGLCA3550M

D Ø3.7

R

G/H	1.0	2.0	3.0	4.0	5.0
	HGLCA4010S	HGLCA4020S	HGLCA4030S	HGLCA4040S	HGLCA4050S

Locator® Abutment Components

Locator® Male Processing Kit

- Component
 - Block out spacer / denture cap connected black processing male
 - Replacement male blue/pink/clear
- Used after selecting retention males that are appropriate for the case
- Exchanged with male using a locator core tool
- Packing unit : 2set



Locator® Black Processing Male

- Used in lab. process
- Packing unit : 4ea



Locator® Replacement Male

- Retention: Approximately 6N
- Used in 0°~20° paths (two implant standard)
- Packing unit : blue replacement male 4ea



- Retention: Approximately 12N
- Used in 0°~20° paths (two implant standard)
- Packing unit : pink replacement male 4ea



- Retention: Approximately 22N
- Used in 0°~20° paths (two implant standard)
- Packing unit : clear replacement male 4ea



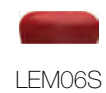
Locator® Block Out Spacers

- Gap sealing component between denture cap and abutment
- Packing unit : 20ea



Locator® Extended Replacement Male

- Retention: Approximately 6N
- Used in 20°~40° paths (two implant standard)
- Packing unit : red extended replacement male 4ea



- Retention: Approximately 12N
- Used in 20°~40° paths (two implant standard)
- Packing unit : green extended replacement male 4ea



Locator® Impression Coping

- Used in taking impressions after attaching locator abutment
- Packing unit : 4ea



Locator® Lab Analog

- Achieves locator abutment on the model
- Packing unit : 4ea



Locator® Abutment Components

Locator® Core Tool

- Used in attaching and changing replacement males



Locator® Torque Driver

- Used in locator abutment tightening



Osstem Implant Key References

Clinic

No.	Title	Reference / Author
1	Retrospective clinical study of new tapered design implants in maxillary posterior areas	Oral Biology Research. 2013; 37(2):105-111 / Young-Kyun Kim et al.
2	A randomized controlled clinical trial of two types of tapered implants on immediate loading in the posterior maxilla and mandible	Int J Oral Maxillofac Implants. 2013 Nov-Dec;28(6):1602-11 (IF 1.908) / Young-Kyun Kim et al.
3	Bony window repositioning without using a barrier membrane in the lateral approach for maxillary sinus bone grafts: clinical and radiologic results at 6 months.	Int J Oral Maxillofac Implants. 2012 27:211-217 / Chang-Joo Park et al.
4	A relaxed implant bed: implants placed after two weeks of osteotomy with immediate loading: a one year clinical trial.	J Oral Implantol. 2012 Apr;38(2):155-64 / Bansal J et al.
5	A multicenter prospective study in type IV bone of a single type of implant	Implant Dent. 2012 Aug;21(4):330-34 / Su-Gwan Kim et al.
6	Comparison of clinical outcomes of sinus bone graft with simultaneous implant placement: 4-month and 6-month final prosthetic loading	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2011 Feb;111(2):164-9 / Young-Kyun Kim et al.
7	Prospective study of tapered resorbable blasting media surface implant stability in the maxillary posterior area	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2012 Feb 28. [Epub ahead of print] / Young-Kyun Kim et al.
8	A 1-year prospective clinical study of soft tissue conditions and marginal bone changes around dental implants after flapless implant surgery	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2011 Jan;111(1):41-6 / Byung-Ho Choi et al.
9	Evaluation of peri-implant tissue in nonsubmerged dental implants: a multicenter retrospective study	Clin Implant Dent Relat Res. 2011 Dec;13(4):324-9 / Young-Kyun Kim et al.
10	A relaxed implant bed: implants placed after two weeks of osteotomy with immediate loading: a one year clinical trial	J Oral Implantol. 2012 Apr;38(2):155-64 / Bansal J et al.
11	A comparison of implant stability quotients measured using magnetic resonance frequency analysis from two directions: prospective clinical study during the initial healing period	Clin. Oral Impl. Res. 2010;21(6):591-7 / Jong-Ho Lee et al.
12	A short-term clinical study of marginal bone level change around microthreaded and platform-switched implants	J Periodontal Implant Sci. 2011;41:211-217 / Kyoo-Sung Cho et al.
13	A randomized clinical one-year trial comparing two types of nonsubmerged dental implant	Clin. Oral Impl. Res. 2010;21(2):228-36 / Jong-Ho Lee et al.
14	Short-term, multi-center prospective clinical study of short implants measuring less than 7mm	J Kor Dent Sci. 2010;3(1):11-6 / Young-Kyun Kim et al.
15	Evaluation of peri-implant tissue in nonsubmerged dental implants: a multicenter retrospective study	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009;108(2):189-95 / Young-Kyun Kim et al.

16	Evaluation of sinus bone resorption and marginal bone loss after sinus bone grafting and implant placement	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009;107:e21-8 / Young-Kyun Kim et al.
17	Evaluation of peri-implant tissue response according to the presence of keratinized mucosa	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009;107:e24-8 / Young-Kyun Kim et al.
18	Study on radiographic evaluation of marginal bone loss around osseointegrated implant after functional loading	J Kor Oral Maxillofac Surg. 2009;35:240-7 / Young - Deok, Chee
19	Four-year survival rate of RBM surface internal connection non-submerged implants and the change of the peri-implant crestal bone	J Korean Assoc Maxillofac Plast Reconstr Surg. 2009;31(3):237-42 / Sok-Min Ko et al.

Biology

No.	Title	Reference / Author
1	Experiment study of bone response to hydroxyapatite coating implants: bone-implant contact and removal torque test	Oral Surg Oral Med Oral Pathol Oral Radiol. 2012 Jun 29. [Epub ahead of print] / Young-Kyun Kim et al.
2	Experimental study about the bony healing of hydroxyapatite coating implants	J Kor Oral Maxillofac Surg. 2011;27(4):295-300 / Young-Kyun Kim et al.
3	The use of autologous venous blood for maxillary sinus floor augmentation in conjunction with sinus membrane elevation: an experimental study	Clin. Oral Impl. Res. 2010;21:346-9 / Byung-Ho Choi et al.
4	Effects of soft tissue punch size on the healing of peri-implant tissue in flapless implant surgery	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2010;109:525-30 / Byung-Ho Choi et al.
5	Morphogenesis of the peri-implant mucosa: a comparison between flap and flapless procedures in the canine mandible	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009;107:66-70 / Byung-Ho Choi et al.
6	A comparative study of two noninvasive techniques to evaluate implant stability: periotest and osstell mentor	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009;107:513-8 / Su-Gwan Kim et al.
7	Influence of abutment connections and plaque control on the initial healing of prematurely exposed implants: an experimental study in dogs	J Periodontol. 2008;79(6):1070-4 / Byung-Ho Choi et al.
8	Er:YAG laser irradiated implant surface observation with scanning electron microscopy	J Korean Assoc Maxillofac Plast Reconstr Surg. 2008;30(6):540-5 / Seung-Ki Min et al.
9	The effect of surface treatment of the cervical area of implant on bone regeneration in mini-pig	J Kor Oral Maxillofac Surg. 2008;34:285-92 / Hong-Ju Park et al.

10	Histologic and histomorphometric evaluation of early and immediately loaded implants in the dog mandible	J Biomed Mater Res A. 2008;86:1122-7 / Su-Gwan Kim et al.
11	Effects of different depths of gap on healing of surgically created coronal defects around implants in dogs: a pilot study	J Periodontol. 2008;79(2):355-61 / June-Sung Shim et al.
12	Comparative study of removal effect on artificial plaque from RBM treated implant	J Korean Assoc Maxillofac Plast Reconstr Surg. 2007;29(4):309-20 / Hee-Jyun Oh et al.

Biomechanics

No.	Title	Reference / Author
1	Evaluation of the correlation between insertion torque and primary stability of dental implants using a block bone test	J Periodontal Implant Sci. 2013;43:41-46 / Ki-Tae Koo et al.
2	Self-cutting blades and their influence on primary stability of tapered dental implants in a simulated low-density bone model: a laboratory study	Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2011;112:573-580 / Young-Jun Lim et al.
3	Variation in the total lengths of abutment/implant assemblies generated with a function of applied tightening torque in external and internal implant-abutment connection	Clin. Oral Impl. Res. 2011;22:834-9 / Ki-Seong Kim et al.
4	Effect of impression coping and implant angulation on the accuracy of implant impressions: an in vitro study	J Adv Prosthodont. 2010;2(4):128-33 / Seung-Geun Ahn et al.
5	Influence of implant diameter and length changes on initial stability	J Kor Acad Prosthodont. 2009;47:335-41 / Chang-Mo Jeong et al.
6	Mechanical strength of zirconia abutment in implant restoration	J KASFO. 2009;25(4):349-60 / Young-Chan Jeon et al.
7	Heat transfer to the implant-bone interface during preparation of zirconia/alumina complex abutment	Int J Oral Maxillofac Implants. 2009;24(4):679-83 / Yong-Geun Choi et al.
8	Fatigue fracture of different dental Implant system under cyclic loading	J Kor Acad Prosthodont. 2009;47(4):424-34 / In-Ho Cho et al.
9	Effect of tightening torque on abutment-fixture joint stability using 3-dimensional finite element analysis	J Kor Acad Prosthodont. 2009;47(2):125-35 / Chang-Mo Jeong et al.
10	The effect of various thread designs on the initial stability of taper implants	J Adv. Prosthodont. 2009;1:19-25 / Young-Jun Lim et al.
11	Influence of tungsten carbide/carbon coating of implant-abutment screw on screw loosening	J Kor Acad Prosthodont. 2008;46(2):137-47 / Chang-Mo Jeong et al.

Osstem Implant product information

Osstem Implant dental fixtures and products are manufactured using medical grade Titanium. Osstem Implant abutments, denture material and surgical tools are only compatible with Osstem fixtures. For more detailed information about each product, please refer to the user manuals, catalogs or please visit our corporate website (www.osstem.com). Please check all product labels for product codes, specifications, manufactured dates and expiration dates.

Sterility

Fixtures, cover screws and healing abutments are cleansed and gamma-sterilized. These products are disposable sterile medical appliances, and must be used in a sterile field. If the package is damaged or has expired, it must not be used. If the product package has been opened but not used, there is a risk of contamination and it is not recommended that the product be re-sterilized and therefore should be discarded.

Storage conditions

Store all products in a dry place at room temperature (30°C). Avoid direct sunlight.

General precautions

Dental implant surgery requires proper and formal training and education.

Cautions before dental surgery

Before dental implant surgery, a thorough patient health history review, oral and radiographic examinations must be completed to determine bone quality and proper treatment planning.

Cautions during dental implant surgery

Osstem Implant System are for single or two stage dental implant procedures. In order to minimize damage to the patient's tissue, special attention to temperature, surgical lesions and eliminating all sources of contamination and infection are needed. Any deviation from the standard surgical protocol increases the risk of failure. When inserting the dental implant, sufficient cooling must be introduced (water or saline) and excessive torque (greater than 55Ncm) can result in dental implant fracture or possibly bone necrosis. Placing dental implants greater than 300 has a very high risk of implant fracture. Direct pressure to the fixture should be avoided right after surgery. Immediate or delayed loading of the fixture must be determined after proper examination of the patient's bone condition and initial stability after placement.

Mini implants or implants with a diameter less than 4.0mm are not recommended for the posterior region.

Ultra-wide dental implants are recommended for the posterior region but should not be used with angled abutments. If considering an Ultra-wide dental implant, proper radiographic evaluation must be made to determine the bone mass and potential anatomical restrictions. Short dental implants (diameter greater than 5mm and shorter than 7mm) are only used for the posterior region. The clinician must

thoroughly evaluate the patient's condition and recognized the following issues:
1) bone loss due to peri-implantitis, 2) changes to the dental implant condition, 3) proper osseointegration determined by a x-ray examination. If there is movement or if there is bone loss more than 50%, removing the dental implant should be a course of action. Wide diameter implants should be performed as a two stage surgery. Sufficient healing time must be given before splinting with other implants or when loading. Immediate loading is not recommended.

Take care when placing dental implants with HA coating. The coating is prone to cracking or fracturing under high torque, therefore hard bone should be avoided and be inserted under 35Ncm of force.

CA and SOSI treated dental implants are encased in a solution to prevent the chemically treated surface from reacting with air. After removing the CA or SOSI dental implant, place the implant within 15 minutes to avoid degradation of the surface.

Warning

Improper patient selection and treatment planning may result in dental implant failure or loss of bone. Osstem Implants must not be used for purpose other than prescribed and must not be altered in any shape or form. Implant movement, bone loss, and chronic infections can result in implant failure.

Indications

Osstem Implant Systems are designed to replace a patient's tooth or teeth. They can be placed in both the maxillary and submaxillary alveolar bones and after full osseointegration can be restored prosthetically. Osstem Implant Systems offer both temporary and final prosthesis and can be retained by cement, screw, overdenture or fixed bridge.

Side effects

There are possible side effects after implant surgery (loss of implant stability, damage to dentures). These issues can be due to the lack of bone or poor bone quality, an infection, patient's poor oral hygiene, non compliance with post op procedures, movement of the implant, degradation of surrounding tissue, or improper placement of the dental implant.

Contraindications

Patients with the following contraindications are not eligible for dental implants:
- Patients with blood clotting issues or issues with wound healing.
- Diabetic patients
- Patients that smoke or drink excessively
- Patient's with compromised immune systems due to disease or chemo and radiation therapy.
- Patients with an oral infection or inflammation (improper oral hygiene or teeth grinding)
- Patients with an incurable malocclusion/arthritis and insufficient arch space.

Manufacturer : Osstem Implant Co., Ltd.
203, Geoje-daero, Yeonje-gu, Busan, Korea
TEL 82-51-850-2500 FAX 82-51-861-4693



0434



Sterilized using irradiation



Use by



Manufacture



DEUTSCHE OSSTEM GmbH.
Mergenthalerallee 25
65760 Eschborn, Germany
+49-(0)6196-777-550



Do not reuse



Date of manufacture



Keep away from sunlight



Catalogue number



Non-Sterile



Keep dry



Batch code



Do not re-sterilize



Caution, Consult accompanying documents

Storage condition

Dry place at room temperature

Rx only

For USA only : Federal law restricts this device to sale by or on the order of a dentist

OSSTEM[®]
IMPLANT