## Contents

**TS & GS System**

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<td>ZioCera Angled Abutment</td>
<td>GoldCast Abutment</td>
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<td>Stud Abutment</td>
<td>Stud Abutment Set (Dalbo Set)</td>
</tr>
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</table>
OSSTEM HISTORY

2011
Dec
Introduces and commences commercial production of K2 Unit & Chair
Nov
Develops and begins commercial production of Smart Membrane
Oct
Registers and obtains approval from Health Canada
Sep
Establishes subsidiary offices in Dacca, Bangladesh and Ho Chi Minh City, Vietnam [OSSTEM Bangladesh Ltd. and OSSTEM IMPLANT Viva Co., Ltd.]
Sep
Establishes subsidiary offices in Jakarta, Indonesia [PT OSSTEM Indonesia]
Aug
Establishes subsidiary offices in Manila, Philippines and Vancouver, Canada [OSSTEM Philippines Inc. and HiOssen Implant Canada Inc.]
Jul
Develops and begins commercial production of CustomFit Abutment
Jun
Develops and begins commercial production of TSII SA
Jun
Establishes subsidiary offices in Jakarta, Indonesia [PT OSSTEM Indonesia]
May
Establishes subsidiary offices in Guadalajara, Mexico [HiOssen de Mexico]
Feb
Develops and begins commercial production of TSV SA

2010
Nov
Develops and begins commercial production of SSII SA
Aug
Develops and begins commercial production of TSII Ultra-wide
Jun
Develops and begins commercial production of TSII HA and CAS Kiti
Apr
Enters ‘OSSTEM World Meeting 2010 in Beijing’
Mar
Develops and begins commercial production of TSII SA

2009
Oct
Registers and obtains approval from Health, Labor and Welfare in Japan
May
Enters ‘OSSTEM World Meeting 2009 in Bangkok’
Jan
Certifies PEP7 (the world’s first new Osseo-inductive compound)
Nov
Develops and begins commercial production of SS Ultra-wide
Jun
Develops and begins commercial production of GSII
Apr
Enters ‘OSSTEM World Meeting 2009 in Seoul’
Mar
Establishes OSSTEM Bone Science Institute
Oct
Establishes subsidiary offices in Sydney, Australia [Osteem Australia Pty Ltd.]
Jun
Registers and obtains approval from the TGA in Australia
May
Develops and begins commercial production of US Ultra-wide
Apr
Enters ‘OSSTEM World Meeting 2009 in Seoul’

2008
Nov
Develops and begins commercial production of SS Ultra-wide
Jun
Develops and begins commercial production of GSII
Apr
Enters ‘OSSTEM World Meeting 2008 in Seoul’
Mar
Establishes AIC (Apsun Dental Implant Research & Education Center)
Jan
Establishes subsidiary offices in Bangkok, Thailand and Kuala Lumpur, Malaysia [OSSTEM Thailand Co., Ltd. and OSSTEM Malaysia SDN, BHD]
Nov
Registers and obtains approval from the SFDA in China
Sep
Establishes subsidiary offices in Philadelphia, USA [HiOssen Inc.]
Aug
Establishes subsidiary offices in Beijing, China / Singapore and Hong Kong [OSSTEM China Co., Ltd. / OSSTEM Singapore Pte. Ltd. and OSSTEM Hong Kong Ltd.]
Jul
Establishes subsidiary office in Tokyo, Japan [OSSTEM Japan Corp.]
Apr
Develops and obtains the DSTIS-II certification in Russia

2007
Mar
Develops and begins commercial production of VS Lists on KOSDAQ (KRX: Korea Exchange)
Dec
Establishes subsidiary offices in Bangkok, Thailand and Kuala Lumpur, Malaysia [OSSTEM Thailand Co., Ltd. and OSSTEM Malaysia SDN, BHD]
Nov
Registers and obtains approval from the SFDA in China
Sep
Establishes subsidiary office in Philadelphia, USA [HiOssen Inc.]
Aug
Establishes subsidiary offices in Beijing, China / Singapore and Hong Kong [OSSTEM China Co., Ltd. / OSSTEM Singapore Pte. Ltd. and OSSTEM Hong Kong Ltd.]
Jul
Establishes subsidiary office in Tokyo, Japan [OSSTEM Japan Corp.]
Apr
Develops and obtains the DSTIS-II certification in Russia

2006
Dec
Registers and obtains approval by the DCH in Taiwan
Establishes the subsidiary office in Airborn, Germany [OSSTEM Germany GmbH]
May
Develops and begins commercial production of GSII
Apr
Enters ‘OSSTEM World Meeting 2006 in Seoul’
Mar
Obtains IKARP(Korean Good Manufacturing Practice) in Korea
Jan
Establishes the subsidiary office in Taipei, Taiwan [OSSTEM Taiwan Co., Ltd.]

2005
Dec
Registers and obtains approval by the DCH in Taiwan
Establishes the subsidiary office in Airborn, Germany [OSSTEM Germany GmbH]
May
Develops and begins commercial production of GSII
Apr
Enters ‘OSSTEM World Meeting 2005 in Seoul’
Mar
Obtains IKARP(Korean Good Manufacturing Practice) in Korea
Jan
Establishes the subsidiary office in Taipei, Taiwan [OSSTEM Taiwan Co., Ltd.]

2004
Nov
Develops and begins commercial production of SSII
Jul
Develops and begins commercial production of USII
Apr
Enters ‘OSSTEM World Meeting 2004 in Seoul’
Mar
Obtains CE-0434 certification
Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

2003
Aug
Establishes subsidiary offices in Beijing, China / Singapore and Hong Kong [OSSTEM China Co., Ltd. / OSSTEM Singapore Pte. Ltd. and OSSTEM Hong Kong Ltd.]
Jul
Establishes subsidiary office in Tokyo, Japan [OSSTEM Japan Corp.]
Apr
Develops and obtains the DSTIS-II certification in Russia

2002
Oct
Introduces and commences commercial production of USII
Aug
Develops and begins commercial production of USII
July
Establishes subsidiary offices in Washington, USA
Jun
Introduces and commences commercial production of RCI Ultra-wide
Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

2001
Mar
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]
Oct
Introduces and commences commercial production of USII
Aug
Develops and obtains approval by the FDA in the USA
Develops and begins commercial production of USII
Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

2000
Nov
Develops and begins commercial production of SS Ultra-wide
Jun
Develops and begins commercial production of GSII
Apr
Enters ‘OSSTEM World Meeting 2000 in Seoul’
Mar
Establishes subsidiary offices in Almaty, Kazakhstan [OSSTEM IMPLANT LLP]
Feb
Establishes subsidiary offices in Jakarta, Indonesia [PT OSSTEM Indonesia]
May
Establishes subsidiary offices in Guadalajara, Mexico [HiOssen de Mexico]

2009
Apr
Develops and begins commercial production of GSII
Mar
Establishes subsidiary offices in Almaty, Kazakhstan [OSSTEM IMPLANT LLP]
Feb
Establishes subsidiary offices in Jakarta, Indonesia [PT OSSTEM Indonesia]
May
Establishes subsidiary offices in Guadalajara, Mexico [HiOssen de Mexico]

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Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

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Oct
Introduces and commences commercial production of USII
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Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

2000
Nov
Develops and begins commercial production of SS Ultra-wide
Jun
Develops and begins commercial production of GSII
Apr
Enters ‘OSSTEM World Meeting 2000 in Seoul’
Mar
Establishes AIC (Apsun Dental Implant Research & Education Center)
Jan
Establishes subsidiary offices in Sydney, Australia [Osteem Australia Pty Ltd.]

1999
Dec
Obtains ISO-9001 certification

1998
Dec
Begins commercial production under the brand name of OSSTEM
Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

1997
Dec
Begins commercial production under the brand name of OSSTEM
Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

1996
Dec
Begins commercial production under the brand name of OSSTEM
Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

1995
Dec
Begins commercial production under the brand name of OSSTEM
Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

1994
Dec
Begins commercial production under the brand name of OSSTEM
Jan
Establishes subsidiary offices in Moscow, Russia and Mumbai, India [OSSTEM LLC. and OSSTEM IMPLANT India Pvt Ltd.]

1992
Dec
Introduces and commences commercial production of V-cep
Jan
Establishes the development of dental implant system
### CHARACTERISTIC of OSSTEM IMPLANT SYSTEM

#### OSSTEM Implant key reference (as of Mar.2012)

**TS/GS System - Clinic**

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Reference</th>
<th>Author</th>
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<tbody>
<tr>
<td>5</td>
<td>Evaluation after sinus bone graft and simultaneous implant placement</td>
<td>Austalian Dental Practice 2011;March/April:136-42</td>
<td>Young-Kyun Kim et al.</td>
</tr>
<tr>
<td>7</td>
<td>A short-term clinical study of marginal bone level change around microthreaded and platform switched implants</td>
<td>J Periodontal Implant Sci 2011;41:211-7</td>
<td>Kyoo-Sung Choi et al.</td>
</tr>
<tr>
<td>10</td>
<td>A Prospective Multicenter Study on the Clinical Success Rate of the Osstem Implant (New GS II RBM) in Edentulous Patients</td>
<td>J Korean Implantology(KAOMI) 2011;19(2):142-52</td>
<td>Su-Kwon Kim et al.</td>
</tr>
<tr>
<td>11</td>
<td>A Relaxed Implant Bed: Implants Placed After Two Weeks of Coexisting with Immediate Loading - A One Year Clinical Trial</td>
<td>Accepted in 2013 for Publication in J Oral Implantol. Bansal D.K et al.</td>
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<tr>
<td>13</td>
<td>Short-term, Multi-center Prospective Clinical Study of Short Implants Measuring Less than 1mm</td>
<td>J Kor Dent Sci 2010;12(5):11-6</td>
<td>Young-Kyun Kim et al.</td>
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<td>16</td>
<td>Analysis of factors affecting crealse body loss around the implants</td>
<td>J Kor Dent Sci. 2009;31(5):12-7</td>
<td>Young-Kyun Kim et al.</td>
</tr>
<tr>
<td>17</td>
<td>Retrospective study of GS II Implant(Dentine) with an internal connection with microthreads</td>
<td>J Kor Stomatolog Function succion 2008;25(4):147-29</td>
<td>Young - Deok, Chee</td>
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<tr>
<td>21</td>
<td>The Use of Bicalutamide Muscular Myocldal Flap in Implant</td>
<td>Accepted in 2010 for Publication in In H J Periodontics Restorative Dent</td>
<td>Young-Kyun Kim et al.</td>
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**TS/GS System - Biology**

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<td>6</td>
<td>The Effect of Thick Mucosa on Per-implant Tissue: An Experimental Study in Dogs</td>
<td>J Periodontol 2008;79:12151-5</td>
<td>Byung-Ho Choi et al.</td>
</tr>
<tr>
<td>9</td>
<td>The Effect of Ca-P Coated Oxide Mineral on Bone Regeneration around Dental Implant in Dogs</td>
<td>J Korean Acad Periodontol 2006;36(9):913-32</td>
<td>Seung-Ho Lee et al.</td>
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**TS/GS System - Biomechanics**

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<td>3</td>
<td>Fatigue Characteristics of Five Types of Implant-Abutment Joint Designs</td>
<td>J Kor Acad Prosthodont 2008;46(5):308-409</td>
<td>Chung-Mi Jeong et al.</td>
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<tr>
<td>6</td>
<td>Influence of Titanium Carbide/Ceramic Coating of Implant-Abutment Screw on Screw Loosening</td>
<td>J Kor Acad Prosthodont 2008;46(5):308-409</td>
<td>Chung-Mi Jeong et al.</td>
</tr>
<tr>
<td>7</td>
<td>The Assessment of Abutment Screw Stability Between the External and Internal Hexagonal Joint under Cyclic Loading</td>
<td>J Kor Acad Prosthodont 2008;46(9):581-8</td>
<td>Jung-Suk Han et al.</td>
</tr>
<tr>
<td>9</td>
<td>Detract Force of Tin Coated Abutment Screw with Various Coating Thickness after Repeated Closing and Opening</td>
<td>J Kor Acad Prosthodont 2007;25(3):769-79</td>
<td>Cha-Na Chun et al.</td>
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OSSTEM Implant System Flow

<table>
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<th>TIII</th>
<th>GSII RBM</th>
<th>TIII</th>
<th>GSIII RBM</th>
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</table>
| ● Bone level fixture of Internal Hex & 11° morse taper connection  
  ● Stable connection of the upper part based on Rigid Motion Connection  
  ● SA surface morphology and roughness increased by 45% compared to RBM treatment  
  ● Straight body facilitates the adjustment of implantation depth  
  ● Powerful Self threading  |   | ● Bone level fixture of Internal Hex & 11° morse taper connection  
  ● Improved design for initial stability and simplified surgical sequences  
  ● Reduced the convenient operation by making it possible to implant into various cases  |   | ● Bone level fixture of Internal Hex & 11° morse taper connection  
  ● Stable connection of the upper part based on Rigid Motion Connection  
  ● SA surface morphology and roughness increased by 45% compared to RBM treatment  
  ● The actual length of TSII Ultra-Wide Fixture is 0.5mm shorter than actual length. (Exception: 7mm) |

![Diagram](image1)

![Diagram](image2)
## TS & GS Prosthesis Library

### TS & GS System

<table>
<thead>
<tr>
<th>Type</th>
<th>Abutment</th>
<th>Protect Cap</th>
<th>Retraction Cap</th>
<th>Impression coping</th>
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<tr>
<td>Transfer</td>
<td>(Hex)</td>
<td>(Non-Hex)</td>
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<td></td>
</tr>
<tr>
<td>Angled</td>
<td>(A type)</td>
<td>(B type)</td>
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<td></td>
</tr>
<tr>
<td>ZioCera/ ZioCera Angled</td>
<td>(Hex)</td>
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<tr>
<td>GoldCast/ NP-CAST</td>
<td>(Hex)</td>
<td>(Non-Hex)</td>
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<tr>
<td>CustomFit</td>
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</tr>
<tr>
<td>FreeForm ST</td>
<td>(Hex)</td>
<td>(Non-Hex)</td>
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<td>Convertible</td>
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<th>Lab Analog</th>
<th>Burn-out Cylinder</th>
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<tr>
<td>(5.5 mm)</td>
<td>(7.0 mm)</td>
<td>Single</td>
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<td>(4.0 mm) (5.5 mm) (7.0 mm)</td>
<td>(Hex) (Non-Hex) Transfer</td>
<td>Bridge</td>
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<tr>
<td>(Hex) (Non-Hex) Pick-up</td>
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<td>Finishing Reamer</td>
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<td></td>
<td>(Hex) (Non-Hex) Transfer</td>
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<td>(Hex) (Non-Hex)</td>
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<td>Polishing Protect Cap</td>
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<th>Dalbo System</th>
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<td>Extended Replacement Male</td>
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<tr>
<th>Core Tool</th>
<th>Torque Driver</th>
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</table>
OSSTEM IMPLANT SYSTEM

TS & GS System
Fixture and Restorative Components

Early & Esthetic
OSSTEM IMPLANT

TS & GS System
Prosthetic Flow Diagrams for TS & GS System

Cement Retained Restoration: Rigid & Transfer Abutment • Mini, Regular

Prosthetic Flow Diagrams for TS & GS System

Cement Retained Restoration: Transfer, Angled, ZioCera, ZioCera Angled, GoldCast, CustomFit, NP-CAST, FreeForm ST

Screw Retained Restoration: ZioCera, ZioCera Angled, GoldCast, Temporary, NP-CAST Abutment • Mini, Regular
TSII Fixture

- Internal Hex & 11° morse taper connected, submerged fixture
- SA surface morphology and roughness increased by 45% compared to RBM treatment.
  - SA : Sand blasted with alumina and Acid etched surface
    - Optimal morphology : Combination of crater and micro-pit
    - Optimal surface roughness : Ra 2.5~3.0㎛
    - Early cell response : 20% faster than RBM
    - Early bone healing : 20% faster than RBM
    - Early loading possible after 6 weeks of placement.
    - Optimized design for SA surface
  - Straight body offers good implantation performance
  - Small Thread : Increase initial stability in soft bone
  - Corkscrew thread : Powerful Self threading
  - Limited insertion torque : 40Ncm

- We recommend that the fixture with over 4.5mm diameter is used for single case in Molar.

TSII Fixture Order Code

- Fixture Only: Product Code [ex: TS2S4010S]
- Pre-Mounted Fixture [Simple Mount]: Fixture + Mount + Cover Screw : B+ Product Code [ex: BTS2S4010S]

Feature of TSII Fixture

- Mini
  - Diameter : 3.5
  - Connection : Regular

- Regular
  - Diameter : 4.0
  - Diameter : 4.5
  - Diameter : 5.0

- Connection : Mini
  - 7
  - 8.5
  - 10
  - 11.5
  - 13
  - 15

- Connection : Regular
  - 7
  - 8.5
  - 10
  - 11.5
  - 13
  - 15

- Note: Short implant require sufficient curing period and, in the process of prosthesis, should be used splinting with another implant.
TSIII Fixture

**Feature of TSIII Fixture**

- Internal Hex & 11° morse taper connected, submerged fixture
- SA surface morphology and roughness increased by 45% compared to RBM treatment.
- SA: Sand blasted with alumina and Acid etched surface
  - Optimal morphology: Combination of crater and micro-pit
  - Optimal surface roughness: Ra 2.5-3.0㎛
  - Early cell response: 20% faster than RBM
  - Early bone healing: 20% faster than RBM
  - Early loading possible after 6 weeks of placement.
  - Optimized design for SA surface
- Taper body offers High initial stability
- Small Thread: Increase initial stability in soft bone
- Corkscrew thread: Powerful Self threading
- Limited insertion torque: 40Ncm

* We recommend that the fixture with over 4.5mm diameter is used for single case in Molar.

**TSIII Fixture Order Code**

- **Fixture Only**
  - Fixture: Product Code [ex: TS3S4010S]
- **Pre-Mounted Fixture [Simple Mount]**
  - Fixture + Mount + Cover Screw: B+ Product Code [ex: BTS3S4010S]

**Note:** Short implant require sufficient curing period and, in the process of prosthesis, should be used splinting with another implant.
**TSIII Ultra - Wide Fixture**

* Uses the same mount and cover screw with GS Regular

**Feature of TSIII Ultra-Wide Fixture**

- Internal Hex & 11° morse taper connected, submerged fixture
- SA surface morphology and roughness increased by 45% compared to RBM treatment.
- SA: Sand blasted with alumina and Acid etched surface
  - Optimal morphology: Combination of crater and micro-pit
  - Optimal surface roughness: Ra 2.5~3.0 ㎛
  - Early cell response: 20% faster than RBM
  - Early bone healing: 20% faster than RBM
  - Early loading possible after 6 weeks of placement.
- Compatible with GS Regular abutment components
- A fixture that is convenient to use in case of immediate installation following posterior tooth extract socket and replacement of failed implant
- Optimized apex design that enables gaining stable initial fixture even at 3 mm below the extract socket
- 4-bladed cutting edge with excellent self-tapping force
- Limited insertion torque: 40Ncm

**TSIII Ultra - Wide Fixture Order Code**

- **Fixture Only**
  - Fixture: Product Code (ex: TS356010S)
- **Pre-Mounted Fixture (Simple Mount)**
  - Fixture + Simple Mount + Cover Screw: B + Fixture Product Code (ex: BTS356010S)

**Regular Connection**

- Diameter: 6.0
- Connection: Regular

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<tr>
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**Note:** Short implant require sufficient curing period and, in the process of prosthesis, should be used splinting with another implant.
**TSIV Fixture**

**Feature of TSIV Fixture**

- Internal Hex & 11: morse taper connected, submerged fixture
- SA surface morphology and roughness increased by 45% compared to RBM treatment.
- SA: Sand blasted with alumina and Acid etched surface
  - Optimal morphology: Combination of crater and micro-pit
  - Optimal surface roughness: $R_a = 2.5 - 3.0 \mu m$
  - Early cell response: 20% faster than RBM
  - Early bone healing: 20% faster than RBM
  - Early loading possible after 6 weeks of placement.
- Compatible with GS Regular abutment components
- Optimized design for SA surface
- Sinus and soft bone only used fixture
- Small Thread: Increase initial stability in soft bone
- Sharp Apex design: D4 bone case is possible to insert after $\varnothing 2$, $\varnothing 3 \text{mm}$ drilling depth
- Limited insertion torque: 40Ncm
- We recommend that the fixture with over 4.5mm diameter is used for single case in Molar.
- Recommended insertion speed: below 15rpm
  - TSIV Fixture Insert speed is fast because of thread pitch is big

---

**TSIV Fixture Order Code**

- **Fixture Only**
  - Fixture: Product Code [ex: TS4S4010S]
- **Pre-Mounted Fixture [Simple Mount]**
  - Fixture + Mount + Cover Screw [ex: BTS4S4010S]

---

**TSIV Fixture Insertion Torque**

- Recommended insertion speed: below 15rpm

---

**TSIV Fixture Insertion Torque**

- We recommend that the fixture with over 4.5mm diameter is used for single case in Molar.
- Recommended insertion speed: below 15rpm
  - TSIV Fixture Insert speed is fast because of thread pitch is big

---

**TSIV Fixture Insertion Torque**

- Recommended insertion speed: below 15rpm
  - TSIV Fixture Insert speed is fast because of thread pitch is big
**GSII RBM Fixture**

- Internal hex & 11° morse taper connected, submerged fixture
- Harmony of macro thread and micro thread considering the cortical and cancellous bone
- Dual thread design offers excellent initial bonding and long-term stability
- RBM: Excellent bio-affinity of surface
- Rigid motion with superstructure helps maintain stable connection
- Straight body facilitates the adjustment of implantation depth
- 3-bladed cutting edge with excellent self-tapping force
- A variety of diameters and lengths are available for various oral environments
- Limited insertion torque: 40Ncm

*We recommend that the fixture with over 4.5mm diameter is used for single case in Molar.*

**Features of GSII RBM Fixture**

- **GSII RBM Fixture Order Code**
  - **Fixture Only**
    - Fixture: Product Code (Ex: GS2R4011R01)
  - **Pre-Mounted Fixture (Simple Mount)**
    - Fixture + Simple Mount + Cover Screw: B + Fixture Product Code (Ex: BG2R4011R01)

- **Connection Mini**
  - Diameter: 3.5mm
  - Lengths: 7, 8.5, 10, 11.5, 13, 15

- **Connection Regular**
  - Diameter: 4.0mm
  - Lengths: 7, 8.5, 10, 11.5, 13, 15

- **Connection Regular**
  - Diameter: 4.5mm
  - Lengths: 7, 8.5, 10, 11.5, 13, 15

- **Connection Regular**
  - Diameter: 5.0mm
  - Lengths: 7, 8.5, 10, 11.5, 13, 15

* The following labeled dimension may differ from the actual dimension.
GSII RBM Ultra - Wide® Fixture

Features of GSII RBM Ultra - Wide® Fixture

- Internal hex & 11° morse taper connected, submerged wide diameter fixture
- Compatible with GS Regular abutment components
- A fixture that is convenient to use in case of immediate installation following posterior tooth extract socket and replacement of failed implants
- Optimized apex design that enables gaining stable initial fixation even at 3 mm below the extract socket
- All RBM surfaces with excellent bio-affinity
- Rigid motion with superstructure helps maintain stable connection
- 4-bladed cutting edge with excellent self-tapping force
- A variety of diameters and lengths are available for various oral environments
- Limited insertion torque : 40 Ncm

GSII RBM Ultra - Wide® Fixture Order Code

- Fixture Only
  - Fixture : Product Code (ex: GS2W6010R02)
- Pre-Mounted Fixture (Simple Mount)
  - Fixture + Simple Mount + Cover Screw : B + Fixture Product Code (ex: BGS2W6010R02)

* The actual length of GSII Ultra-Wide® Fixture is L-0.5mm. (Except for length 7mm)

Note: Short implant require sufficient curing period and, in the process of prosthesis, should be used splinting with another implant.
**Feature of GSIII RBM Fixture**

- Internal hex & 11° morse taper connected, submerged fixture
- Taper body offers excellent primary bonding
- Micro Thread
  - Distribute stress on bone
  - Stimulate bone evenly
  - Increase cell response
  - Reinforce fixture strength
- Corkscrew Thread & Cutting Edge
  - Powerful self threading
  - Change path easily
  - Increase insertion torque in soft bone
  - Increase initial stability in soft bone
- Rigid motion with superstructure helps maintain stable connection
- A variety of diameters and lengths are available for various oral environments
- Limited insertion torque : 40Ncm

*We recommend that the fixture with over 4.5mm diameter is used for single case in Molar.*
GLOBAL STANDARD OSSTEM IMPLANT

**Simple Mount**

- Color indication facilitates easy identification in the oral cavity
  - ø 3.5: Yellow
  - ø 4.0, ø 4.5, ø 5.0, ø 6.0, ø 7.0: Green

**Healing Abutment**

- Use a 1.2 hex driver
- Packing unit: Healing abutment
- Tightening torque: Hand tightening (less than 10Ncm)

**Cover Screw**

- Color to easily distinguish the locations of the implemented fixtures
  - ø 3.5 fixture: Purple
  - ø 4.0, ø 4.5, ø 5.0 fixture: Green

**Regular**

- Use a 1.2 hex driver
- Packing unit: Cover screw
- Tightening torque: 5-8 Ncm

**Matching Table for Healing ABT. & Abutment**

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<th>3</th>
<th>4</th>
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<td>2 or 3</td>
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Compatibility Guide for TS & GS System (Fixture-Abutment)

Rigid Abutment Components

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Sample Table

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<tr>
<td>5.0</td>
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</table>

Sample Diagram

- Rigid: Regular φ4.0 / φ4.5 / φ5.0 / φ6.0
- Convertible: Regular φ4.0 / φ5.0 / φ6.0
- Stud: Regular φ3.5
- Locator: Regular φ3.7

- Rigid: Mini φ4.0 / φ4.5
- Convertible: Mini φ4.0
- Stud: Mini φ3.5
- Locator: Mini φ3.7

- Rigid Regular φ7.0
**Rigid Protect Cap**

- **Use for the protection of the rigid abutment in the oral cavity and to minimize the patient's discomfort**
- **Applicable as a substructure of temporary prosthesis**
- **Convenient locking**

**Packing unit:** Protect Cap

- **Use for taking an impression of rigid abutments**
- **Color indication enables the easy identification of abutments of varying lengths**
  - 4mm (Yellow), 5.5mm (Gray), 7.0mm (Blue)
- **Convenient locking**

**Packing unit:** Impression coping

**Rigid Retraction Cap**

- **Use for making general cement-type prosthesis**
- **Abutment and screw in one**
- **11° taper connection for excellent safety**
- **Gingival gold color for aesthetic effect**
- **Cross-section design for the prevention of prosthesis rotation**
  - Φ4.0 : Use an outer driver
  - Φ4.5, Φ5.0, Φ6.0 : Use an outer driver and a 1.2 hex driver
  - Φ7.0 : Use a 1.2 hex driver
- **Gingival gold color for aesthetic effect**
- **Cross-section design for the prevention of prosthesis rotation**

**Packing unit:** Retraction cap

**Rigid Impression Coping**

- **Use for taking an impression of rigid abutments**
- **Color indication enables the easy identification of abutments of varying lengths**
  - 4mm (Yellow), 5.5mm (Gray), 7.0mm (Blue)
- **Convenient locking**
- **Packing unit:** Impression coping

---

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**Order code:** Abutment + Protect cap: Product code + P (e.g. GSRA5620P)

---

**Global Standard Osstem Implant**

**Mini / Regular**

- **Use for the protection of the rigid abutment in the oral cavity and to minimize the patient's discomfort**
- **Applicable as a substructure of temporary prosthesis**
- **Convenient locking**
- **Packing unit:** Protect Cap

**Regular**

- **Use for making general cement-type prosthesis**
- **Abutment and screw in one**
- **11° taper connection for excellent safety**
- **Gingival gold color for aesthetic effect**
- **Cross-section design for the prevention of prosthesis rotation**

**Packing unit:** Retraction cap

**Rigid Impression Coping**

- **Use for taking an impression of rigid abutments**
- **Color indication enables the easy identification of abutments of varying lengths**
  - 4mm (Yellow), 5.5mm (Gray), 7.0mm (Blue)
- **Convenient locking**
- **Packing unit:** Impression coping
Rigid Burn-out Cylinder

- Use as a prosthetic framework by connecting to Rigid Lab analogs
- Color indication facilitates the identification of abutments of varying lengths
  - 4mm (Yellow), 5.5mm (Gray), 7.0mm (Blue)
- Packing unit: Burn-out Cylinder

Rigid Lab Analog

- Make rigid abutments on a working model
- Color indication enables the easy identification of abutments of varying lengths
  - 4mm (Yellow), 5.5mm (Gray), 7.0mm (Blue)
- Packing unit: Lab analog

Transfer Abutment Components

- Use for making general cement-type prosthesis
- 11° taper connection for excellent safety
- Gingival gold color for aesthetic effect
- Cross-section design for the prevention of prosthesis rotation
- Use a 1.2 hex driver
- Packing unit: Abutment + EbonyGold screw
- Tightening torque: 20 Ncm (mini), 30 Ncm (regular)

Order code
- Abutment + EbonyGold screw: Product code + WH
  - GSTA4611 GSTA4611N
  - GSTA4621 GSTA4621N
  - GSTA4631 GSTA4631N
  - GSTA4641 GSTA4641N
  - GSTA4651 GSTA4651N
  - GSTA4711 GSTA4711N
  - GSTA4721 GSTA4721N
  - GSTA4731 GSTA4731N
  - GSTA4741 GSTA4741N
  - GSTA4751 GSTA4751N

EbonyGold Screw
  - GSTABSM

- Old screw(GSASM, GSASR) is not compatible with the new screw(GSABSM, GSABSS).
Refer to the illustration below, please note the connection.

To prevent loosening or fracture retightening (2~3 times) is recommended.
A wrong connection may be caused by the incorrect setting of the hex with the fixture hex or interference with bone or adjacent tissue surrounding the installed fixture. The former can be corrected by fixing the hex part setting and checking with an x-ray, and the latter, by removing the interference using tools such as a bone profiler and verifying the exact connection.
Pick-up type for taking an impression using a customized tray
- Use for taking a bite registration at Fixture level impression
- Use for taking a bite registration after final impression
- Use a 1.2 Hex driver
- Packing Unit: Bite Index 2ea

Asymmetrical structure minimizing contact interference ( )

Long and short types enhance convenience.

Packing unit : Impression Coping Body + Guide Pin

Transfer type for taking an impression using a ready-made tray
- Triangular arc ( ) design improves markability following impression
- Long and short types enhance convenience
- The hex type is designed as a two-piece, and the non-hex type, as a one-piece
- Packing unit : Impression Coping Body + Guide Pin (Hex)

Use to make temporary prosthesis (material : Ti Gr-3)
- Easy to customize ; designed to minimize indication constraints
- Use a 1.2 hex driver
- Packing unit : Abutment + Ti screw
- Tightening torque : 20 Ncm (mini, regular)

Order code - Abutment + Ti screw / Product code + TH (ex. : GSTTA4510 TH)

● The connection of the fixture transfer impression coping can also be verified by aligning the notch (A) in the connecting part of the coping body with the upper part of the fixture or removing the gap at the 11° taper area.
Angled Abutment
Cement Retained Restoration

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<td></td>
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<td>EbonyGold Screw</td>
<td>GSABGM</td>
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</table>

- Used for the path adjustment of prosthesis in case of 17° axial angle
- 11° taper connection for excellent safety
- Gold color for aesthetic effect
- Functions as a double hex type (A and B hex types)
- The use of an abutment selector enables the selection of precise hex-type abutments
- Use a 1.2 hex driver
- Packing unit: Abutment + EbonyGold screw
- Tightening torque: 20 Ncm (mini), 30 Ncm (regular)

Order code
- Abutment + EbonyGold screw: Product code + WH (ex: GSAA5020MWH)

Regular
Ø 5.0

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</table>

- Use for the selection of specifications such as A- or B-type angled abutments, diameter, and G/H in the oral cavity or on a working model

ZioCera Abutment
Cement or Screw Retained Restoration

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<thead>
<tr>
<th>G/H Type</th>
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<td>Hex(A Type)</td>
<td>GSZAM4540A</td>
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<td>Hex(B Type)</td>
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<tr>
<td></td>
<td></td>
<td>EbonyGold Screw</td>
<td>GSASGM</td>
<td></td>
</tr>
</tbody>
</table>

- Use for esthetic implant restorations
- Ivory Color for aesthetic shade
- Applicable as a screw retained by direct build up
- Use a 1.2 Hex driver
- Packing unit: Abutment + EbonyGold screw
- Tightening torque: 20 Ncm (mini), 30 Ncm (regular)

Order code
- Abutment + EbonyGold screw: Product code + WH (ex: GSZAM5020MWH)

Osstem Implant System

- G / H Type: Mini, Regular
- Ø 4.5, Ø 5.0, Ø 6.0

GS Angled Abutment Selector

- Use for the selection of specifications such as A- or B-type angled abutments, diameter, and G/H in the oral cavity or on a working model

Ostest Implant System
**GoldCast Abutment**
Screw or Cement Retained Restoration

<table>
<thead>
<tr>
<th>D</th>
<th>Hex</th>
<th>Non-Hex</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>EBONYGOLD SCREW GSABSM</td>
<td></td>
</tr>
</tbody>
</table>

- Use for aesthetic implant restorations which needed path modification
- Ivory Color for esthetic shade
- Applicable as a screw retained by direct build up
- Use a 1.2 Hex driver
- Packing Unit: Abutment + EbonyGold Screw
- Tightening torque: 20 Ncm (mini), 30 Ncm (regular)

**ZioCera Angled abutment**
Cement or Screw Retained Restoration

<table>
<thead>
<tr>
<th>D</th>
<th>Hex</th>
<th>Non-Hex</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5</td>
<td>EBONYGOLD SCREW GSABSM</td>
<td></td>
</tr>
</tbody>
</table>

- Use for cases with path and aesthetic and spatial constraints
- 11° taper connection for excellent safety
- After customization, be sure to use only dental gold alloy for casting to make the prosthesis
- Melting point range of abutments (Au, Pt, Pd Alloy): 1400 - 1450°C (use of non-precious metal alloy for casting prohibited)
- Use a 1.2 hex driver
- Packing unit: Abutment + EbonyGold screw
- Tightening torque: 20 Ncm (mini), 30 Ncm (regular)

Order code - Abutment + EbonyGold screw + Product Code + WH (ex: GS17ZAS6540NWH)

- Abutment + EbonyGold screw + Product Code + WH (ex: GS17ZAS6540NWH)
### NP-CAST Abutment
Screw or Cement Retained Restoration

#### Mini

<table>
<thead>
<tr>
<th>G/H</th>
<th>Type</th>
<th>D</th>
<th>φ 4.0</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>1.0</td>
<td>Non-Hex</td>
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<tr>
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</tr>
<tr>
<td></td>
<td>EbonyGold Screw</td>
<td>GSABSM</td>
<td></td>
</tr>
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</table>

#### Regular

<table>
<thead>
<tr>
<th>G/H</th>
<th>Type</th>
<th>D</th>
<th>φ 4.5</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Hex</td>
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<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Non-Hex</td>
<td>GSNA4510B</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>Hex</td>
<td>GSNA4530S</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>Non-Hex</td>
<td>GSNA4530B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EbonyGold Screw</td>
<td>GSABSS</td>
<td></td>
</tr>
</tbody>
</table>

- Packing unit: Abutment + EbonyGold screw
- Use for cases with path and aesthetic and spatial constraints
- After customization, be sure to use only dental non-precious metal alloy for casting to make the prosthesis
- Use the 1.2 hex driver
- Tightening torque: 20Ncm(Mini), 30Ncm(Regular)

**Order code**
- Abutment + EbonyGold screw: Product Code + WH (ex. GSNA4510S WH)

### CustomFit Abutment
Cement Retained Restoration

- CAD/CAM patient-specific abutment
- Use the 1.2 hex driver
- Tightening torque: 20Ncm(Mini), 30Ncm(Regular)

**Recommended clinical cases**
1. Case that the implant position and angle is deviated (Max. 30°)
2. Multiple case that requires consistent path and stable support
3. Case of anterior tooth part requiring esthetic design
4. Case of irregular or excessively deep gingiva

**How to make an order**
1. Fill the order sheet.
2. Inform the needed items to Osstem Implant CAD/CAM Center (free).
3. Working time: 5~7days
Convertible Abutment Components

Convertible Abutment
Screw & Cement Retained Restoration

FreeForm ST Abutment
Cement Retained Restoration

<table>
<thead>
<tr>
<th>Mini (∅ 4.0)</th>
<th>Regular (∅ 4.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hex</td>
<td>Non-Hex</td>
</tr>
<tr>
<td>Non-Hex</td>
<td>Hex</td>
</tr>
</tbody>
</table>

Convertible Combination Cylinder

<table>
<thead>
<tr>
<th>Hex</th>
<th>Non-Hex</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Convertible Angled Cylinder

Convertible Abutment

Dislocated Path

- Use for creating bridge case prosthesis with dislocated path
- Designed to make the prosthesis onto a cylinder following abutment connection in the oral cavity
- ∅ 4.0: Use an O-ring abutment driver
- ∅ 4.8, ∅ 6.0: Use an Octa abutment driver
- Packing: Abutment + Carrier
- Tightening torque: 30 Ncm

Mini

- Abutment + EbonyGold screw: Product Code + P (ex: GSCA5030P)
- Order code: Abutment + Carrier + Product Code + P (ex: GSCA5030P)

Regular

- Abutment + EbonyGold screw: Product Code + P (ex: GSCA5030P)
- Order code: Abutment + Carrier + Product Code + P (ex: GSCA5030P)

Convertible Combination Cylinder

- Abutment + EbonyGold screw: Product Code + WH (ex: GSFA6015WH)
- Order code: Abutment + EbonyGold screw + WH (ex: GSFA6015WH)

Convertible Angled Cylinder

- Abutment + EbonyGold screw: Product Code + WH (ex: GSAC6080WH)
- Order code: Abutment + EbonyGold screw + WH (ex: GSAC6080WH)
Convertible GoldCast Cylinder

<table>
<thead>
<tr>
<th>Mini</th>
<th>Regular</th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

- Use for making screw-retained prosthesis using convertible abutments
- After customization, be sure to use only dental gold alloy for casting to make the prosthesis
- Melting point range of cylinder (Au, Pt, Pd Alloy) : 1400 - 1450°C (use of non-precious metal alloy for casting prohibited)
- Use a 1.2 hex driver
- Packing unit : Cylinder + EbonyGold screw
- Tightening torque : 20 Ncm

Order code - Cylinder + EbonyGold screw / Product Code + WH (ex: GSGC400WH)

Convertible Temporary Cylinder

<table>
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<th>Regular</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
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</tbody>
</table>

- Use to make temporary prosthesis (material: Ti Gr-3)
- Easy to customize ; designed to minimize indication constraints
- Use a 1.2 hex driver
- Packing unit : Cylinder + EbonyGold screw
- Tightening torque : 20 Ncm

Order code - Cylinder + Ti screw / Product Code + TH (ex: GSCTC500TH)

Convertible Plastic Cylinder

<table>
<thead>
<tr>
<th>Mini</th>
<th>Regular</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

- Use for making screw-retained prosthesis using convertible abutments
- After customization, casting should be performed with dental alloy (gold, non-precious metal) to make the prosthesis
- The precision of the connection part is lower compared to gold cylinders
- Use a 1.2 hex driver
- Packing unit : Cylinder + EbonyGold screw
- Tightening torque : 20 Ncm

Order code - Cylinder + EbonyGold screw / Product Code + WH (ex: GSCPL500WH)

Convertible Pick-up Impression Coping

<table>
<thead>
<tr>
<th>Mini</th>
<th>Regular</th>
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<tr>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

- Use for taking an impression using a ready-made tray
- Triangular arc ( ) design improves markability following impression
- Asymmetrical structure minimizing contact interference ( )
- Packing unit : Impression coping body + Guide Pin

Order code - Cylinder + EbonyGold screw / Product Code + WH (ex: GSCGP500WH)

Convertible Transfer Impression Coping

<table>
<thead>
<tr>
<th>Mini</th>
<th>Regular</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

- Use for taking an impression using a customized tray
- Impression coping designed with Hole-in-one ; no need for resin fixation
- Packing unit : Impression coping body + Guide Pin

Order code - Cylinder + EbonyGold screw / Product Code + WH (ex: GSCPL500WH)
**Stud Abutment Components**

### Convertible Protect Cap
- **Use** for the protection of Convertible abutments in the oral cavity and to minimize the patient’s discomfort
- Use a 1.2 hex driver
- Packing unit: Protect Cap + EbonyGold screw
- Tightening torque: 20Nm

**Order code**
- Protect Cap + EbonyGold screw / Product Code + Wh [ex: GSCHC500 Wh]

### Convertible Lab Analog
- **Make aesthetic oral abutments on the working model**
- **Packing unit**: Lab analog

### Convertible Polishing Protector
- **For polishing upon prosthetic casting, use to avoid damaging the cylinder joint**
- **Packing unit**: Polishing protector

---

### Stud Abutment
**Overdenture Restoration**
- **Use** for making stud-type overdenture
- **Superior stability of retention force vs. O-ring**
- **Dalbo plus attachment components**
- **Housing(Ti) + internal lamella(Gold alloy)**
- **Duplicate aid (plastic)**
- **Receive the retention force through internal lamella rotation (clockwise)** using a special-purpose driver
- **Maximum path compensation of 20°**
- **Use an O-ring abutment driver**
- **Packing unit**: Abutment + Dalbo plus attachments
- **Tightening torque**: 30 Ncm

**Packing unit**: Only abutment

---

### Stud Abutment Set (Dalbo Set)
**Overdenture Restoration**
- **Use** for making stud-type overdenture
- **Superior stability of retention force vs. O-ring**
- **Dalbo plus attachment components**
- **Housing(Ti) + internal lamella(Gold alloy)**
- **Duplicate aid (plastic)**
- **Receive the retention force through internal lamella rotation (clockwise)** using a special-purpose driver
- **Maximum path compensation of 20°**
- **Use an O-ring abutment driver**
- **Packing unit**: Abutment + Dalbo plus attachments
- **Tightening torque**: 30 Ncm

**Packing unit**: Only abutment

---

* Due to a mix of specifications(Mini/Regular) will occur wrong connection. Always verify the exactness of the connection by taking an x-ray after the final connection of the abutment.
O-ring Retainer Cap Set

- Packing unit: O-ring 5 piece

O-ring Lab Analog

- Make oral O-ring abutments on the working model
- Packing unit: Lab analog

O-ring Retainer Set

- More advantageous for smaller occlusal gap compared to a retainer cap
- Packing unit: Retainer + O-ring

O-ring Set

- Packing unit: O-ring 5 piece
LOCATOR® Components

LOCATOR® Abutment
Overdenture Restoration

<table>
<thead>
<tr>
<th>Mini</th>
<th>Regular</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM</td>
<td>D</td>
</tr>
<tr>
<td>1.0</td>
<td>HGLCA3510M</td>
</tr>
<tr>
<td>2.0</td>
<td>HGLCA3520M</td>
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<td>HGLCA3530M</td>
</tr>
<tr>
<td>4.0</td>
<td>HGLCA3540M</td>
</tr>
<tr>
<td>5.0</td>
<td>HGLCA3550M</td>
</tr>
</tbody>
</table>

- Packing unit: Locator abutment
- Stable dual retention & optimal holding capabilities against various retention forces (6N, 12N, 22N)
- Excellent durability
- Possible denture restorations even at small vertical dimension
- Accommodate up to 40° divergence between two implants
- Retention males can be easily placed & removed with core tool
- Tightening torque: 30Ncm
- Can be used in GS system & HG system

LOCATOR® Male Processing Kit

- Packing Unit: Locator Male Processing Kit (2 Set)
- Consist of: - Block out Spacers/Denture Cap connected Black Processing Male
  - Replacement Male: Blue/Pink/Clear
  - Male Change by Locator Core Tool

LOCATOR® Replacement Male

- Packing Unit: Blue Replacement Male (4ea)
  - retention Force: about 6N
  - 0°~20° divergence (between two implants)

- Packing Unit: Pink Replacement Male (4ea)
  - retention Force: about 12N
  - 0°~20° divergence (between two implants)

- Packing Unit: clear Replacement Male (4ea)
  - retention Force: about 22N
  - 0°~20° divergence (between two implants)

LOCATOR® Black Processing Male

- Packing Unit: black processing Male (4ea)

LOCATOR® Block out spacers

- Packing Unit: Locator Black out spacers (20ea)
  - For Space Sealing between Locator Abutment & Denture Cap

LOCATOR® Impression Coping

- Packing Unit: Locator Impression Coping (4ea)
  - For Abutment level impression

LOCATOR® lab Analog

- Packing Unit: Locator lab Analog (4ea)

OSSTEM IMPLANT SYSTEM

M Connection

LOCATOR® Extended Replacement Male

- Packing Unit: Red Extended Replacement Male (4ea)
  - retention Force: about 6N
  - 20°~40° divergence (between two implants)

- Packing Unit: Green Extended Replacement Male (4ea)
  - retention Force: about 12N
  - 20°~40° divergence (between two implants)

LOCATOR® lab Analog

- Packing Unit: Locator lab Analog (4ea)
**Locator Core Tool**

<table>
<thead>
<tr>
<th>Code</th>
<th>LCCT</th>
</tr>
</thead>
</table>

- Packing Unit: Locator Core Tool
- For handling of locator system

**Locator Torque Driver**

<table>
<thead>
<tr>
<th>Type</th>
<th>Short</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>TWLDS</td>
<td>TWLDL</td>
</tr>
</tbody>
</table>

- Packing Unit: Locator Torque Driver
- For tightening of Locator Abutment
- Select the Short/Long length

**OSSTEM® IMPLANT**