

KIT PRODUCT CATALOG

Osstem Implant
2016-17 Comprehensive Catalog

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CEO's Message

Providing cutting edge technology and superior quality

Making products that dentists want to use, trust, and are satisfied with:
This is our mission at **OSSEM IMPLANT**.

**We are forever grateful
to all the dentists
who have given
unwavering support to
OSSTEM IMPLANT.**

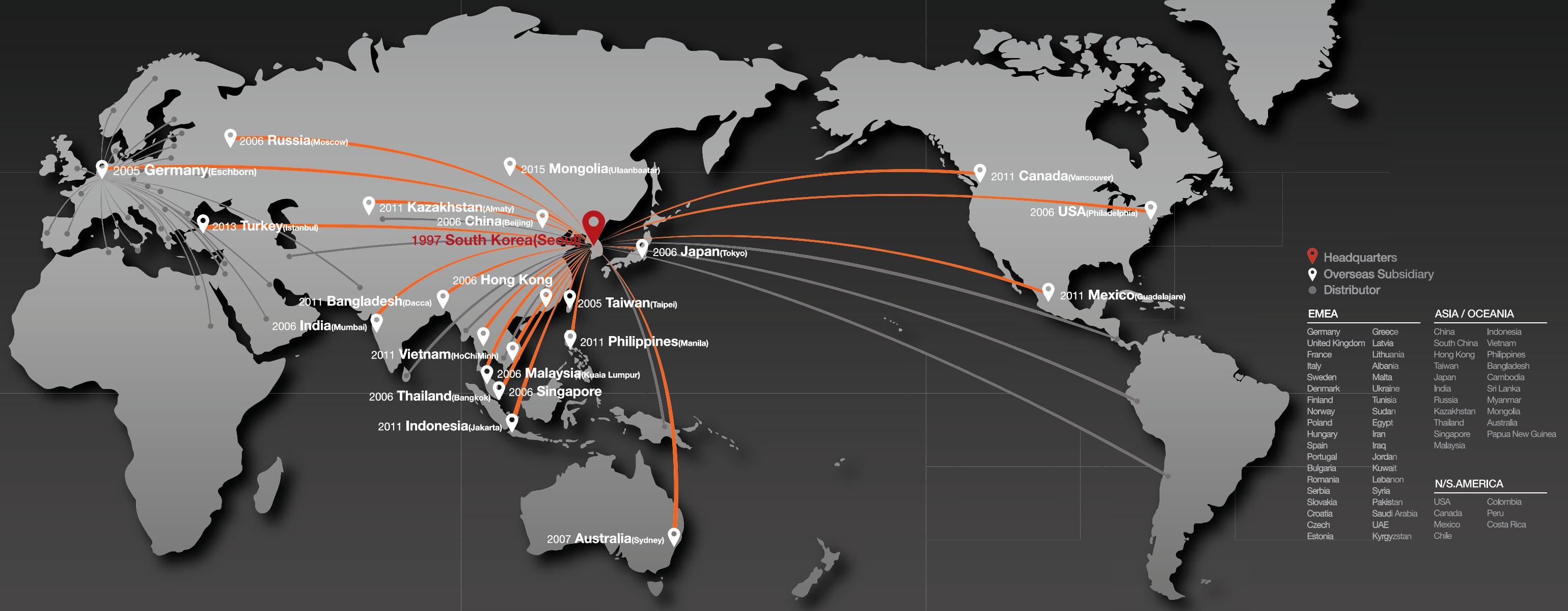
We would like to take this opportunity to express our special thanks to all of our customers. Osstem has been continuously engaged in research and development, and over the past year our efforts have led to the launch of multiple new products. We are excited to publish the 2016-17 Osstem Product Catalog, which showcases these new products and includes all the information you need to know about our fixtures, abutments, surgical tools and regenerative products. We spent countless hours editing, revising and rearranging this catalogue to make it the most comprehensive and user-friendly resource for Osstem products possible. Product codes, specifications and all the information you need about our products are at your fingertips. A number of noteworthy additions have been introduced to the 2016 - 17 Osstem Product Catalog; each product is labeled with the newest products This is unclear. Also sounds impossible.

How do you label a 'product with a product'?. All product images are at the highest resolution possible, and a comprehensive description is provided with each item to ensure customers order correctly. As well, the quality of the 2D and 3D graphical illustrations of our components has been significantly enhanced. The color-coding system has been expanded from just fixtures to include components as well as tools. In addition, complimentary products and equipment are listed "complimentary" means "free of charge". "complementary" means "compatible". Unless you plan to give your products away you may want to change this. Finally, the included QR codes link you to videos of the products being used in actual surgeries. It is our sincere hope that the 2016 - 17 Osstem Product Catalog will become an invaluable resource for you in your practice. Thank you!

CEO of OSSTEM IMPLANT
Choi Kyu-ok (DDS.Ph.D)



Worldwide & History



1997

- 01 Established 'OSSTEM Co., Ltd.'
- 12 Released 'Doobunae' (health insurance claim application software program)

2001

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

2006

- 01 Changed the company name to Osstem Implant Co., Ltd
- 04 Obtained GOST-R certification (Russia)
- 12 Established 12 overseas branches (first round)

2008

- 01 Established Osstem Bone Science Research Center
- 12 Selected as a managing organization for the National Strategic Technology Development Project

2010

- 03 Launched TS III SA line
- 06 Launched TS III HA line
- 08 Selected as a business participating in the WPM Biomedical National Project
- 12 Users of Hanaro program exceeded 10,000

2011

- 10 Obtained 'Health Canada' certification
- 12 Launched 'K2 Unit Chair, which was selected as a 'World Class Product'

2013

- 01 Launched Osstem xenograft material 'A-Oss'
- 09 Launched 'K3 Unit Chair'
- 10 Selected as a 'Hidden Champion' company

2015

- 03 Established Osstem BioPharma Co., Ltd.
- 12 Awarded 'USD 50 Million Export Tower'

2000

- 06 Released 'Hanaro' (dentistry management software)
- 10 Acquired Sumin Comprehensive Dental Materials

2002

- 01 Established Osstem Implant R&D Center
- 08 Obtained FDA certification, launched USII line
- 10 Launched SSII line

2007

- 02 Listed on KOSDAQ and began trading publicly
- 06 Selected as No. 1 products for the next generation and obtained TGA certification (Australia)

2009

- 10 Obtained approval for medical device manufacturing and sale from the Ministry of Health, Labor and Welfare, Japan

2011

- 06 Osstem Implant R&D Center was selected as ATC (Advanced Technology Center)
- 07 Selected as 'World Champ' business

2012

- 06 Launched TSIII CA line
- 07 Established Osstem Dental Equipment Research Institute

2014

- 05 Selected as World Class 300
- 05 Released 'HyFlex', an impression material
- 08 Released 'Beau TIS' whitening material

OSSTEM[®] Implant Design feature

OSSTEM IMPLANT has revolutionized implant dentistry in South Korea. With a focus on aggressive R&D, a commitment to education and a dedication to manufacturing the best products, Osstem Implant's ultimate goal is to become the global leader in implant dentistry.



Submerged type implant with an internal hex and 11° tapered connection

- Internal connection type - Mini / Regular
- Excellent initial stability in soft bone due to smaller threads in the upper section
- Corkscrew thread with cutting edges
 - Easy path adjustments via the implant's excellent self-threading effect
 - Higher initial stability and consistent insertion torque, regardless of the drill's diameter
- Different body types to properly match the patient's bone quality and clinical condition
 - TSII (straight body type): Easy to adjust the insertion depth
 - TSIII (1.5° tapered body type): Excellent initial stability necessary for immediate loading, even in soft bone
 - TSIV (6° tapered body type): Specifically designed for the maxillary sinus and soft bone, excellent initial stability
- Available surface types - SA / CA / BA / HA

Non-submerged type implant with an internal octa and 8° tapered connection

- Internal connection type - Regular / Wide
- Corkscrew thread with cutting edges
 - Easy path adjustments via the implant's excellent self-threading effect
 - Higher initial stability and consistent insertion torque, regardless of the drill's diameter
- Different body types to properly match the patient's bone quality and clinical condition
 - SSII (straight body type): Easy to adjust the insertion depth
 - SSIII (1.5° tapered body type): Excellent initial stability necessary for immediate loading, even in soft bone
- Available surface types - SA / CA / HA

Submerged type implant with an external hex connection structure

- Internal connection type - Mini / Regular / Wide / Wide PS
- Corkscrew thread with cutting edges
 - Easy path adjustments via the implant's excellent self-threading effect
 - Higher initial stability and consistent insertion torque, regardless of the drill's diameter
- Different body types to properly match the patient's bone quality and clinical condition
 - USII (straight body): Easy to adjust the insertion depth
 - USIII (1.5° tapered body): Excellent initial stability necessary for immediate loading, even in soft bone
 - USIV (6° tapered body): Specifically designed for the maxillary sinus and soft bone, excellent initial stability
- Available surface types - SA / CA

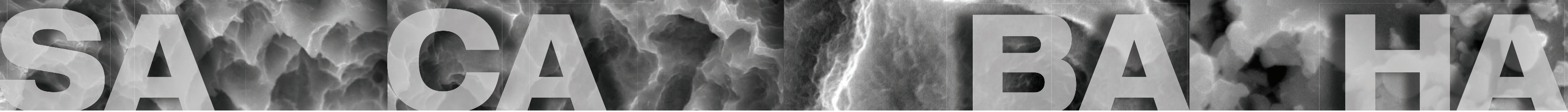


Each implant system has its own unique color code.

OSSTEM[®] Implant Surface feature

The key factor in providing implant treatment safely and efficiently is surface technology.

OSSTEM IMPLANT is proud of its cutting-edge surface technology.



Acid Treated Optimized Surface

- Surface roughness value of about Ra 2.5 to 3.0 μm
Note: The upper 0.5mm section of the implant has a surface roughness of about Ra 0.5 to 0.6 μm
- Consistent surface micro pits between 1 to 3 μm
- Surface area is increased by 46 percent compared to RBM treated implants

In Bone Response

- Increased osteoblastic differentiation and ossification by 20 percent compared to RBM surface
- Initial bone response studied in animal models (mini pigs)
 - Initial stability increased initial stability by 48 percent compared to RBM surface (RT at 4 weeks)
 - Ossification rate increased ossification rate by 20 percent compared to RBM surface (BIC at 4 weeks)

Super-hydrophilic SA surface suspended in a calcium solution

- Same SA surface morphology
- Optimizing surface reaction by suspension in a calcium (CaCl₂) solution
- Increased new bone formation area due to the excellent blood wettability
- Bone response improved in early osseointegration stage compared to standard SA surface

In Bone Response

- Protein and cellular adhesion tripled compared to SA surfaces
- Initial cellular differentiation by 19 percent compared to SA surfaces (7 days)
- Initial stability increased by 34 percent compared to SA surfaces (RT at 4 weeks)
- Ossification rate Increased by 26 percent compared to SA surfaces (BIC at 4 weeks)

Premium low crystalline nano-HA coated SA surface

- SA surface (Ra 2.5 to 3.0 μm) coated with HA
- 10nm ultra-thin HA coating
- Dual function between titanium and HA
 - HA is naturally resorbed during ossification

In Bone Response

- Advantages of both SA and HA surfaces
 - SA's ability to maintain an optimal surface morphology
 - HA's ability to form high quality initial bone, even in a poor bone quality
- Ossification rate increased by 40 percent compared to SA surfaces (BIC)
- Unlike conventional HA surfaces, it is applicable to all types of bone quality

Premium high-crystalline HA-coated surface

- 30 to 60 μm thick high-crystalline HA coating
- HA coated onto a RBM surface (Ra 3.0 to 3.5 μm)
- High HA crystalline over 98 percent
- Solved the problem with low-crystalline HA resorption

In-vitro & In-vivo Bone Response

- Excellent biocompatibility because HA is very similar to actual human bone
- Initial ossification by osteoblasts doubled compared to SA surfaces (5 days)
- Initial stability in animal models increased by 40 percent compared to SA surfaces (RT, 4 weeks)
- Suitable for poor bone quality, tooth extraction sites or immediate implant insertion

KIT Contents 1/3

020 122 Taper KIT 	021 Taper KIT 	022 Taper Ultra KIT 	023 123 KIT 	024 123 Full KIT 		039 Depth Gauge 	040 Trial Pin for Ultra- wide 	040 Positioning Guide 	040 Tissue Height Gauge for TS 	040 Ratchet Wrench 
025 123 KIT - IV Type 	026 Ultra KIT 	028 New Hanaro KIT 	030 Lance Drill - Guide Drill 	030 123 Guide Drill 		041 L-Wrench 	041 Torque Wrench - Spring Type 	041 Torque Wrench - Bar Type 	041 Torque Wrench Set 	042 Anterior Hand Driver for Implant 
030 Sidecut Drill 	030 Drill Extension 	031 Twist Drill - Stopper Drill 	031 Twist Drill - Non Stopper Drill 	032 123 Twist Drill 		042 Torque Handle 	042 NoMount Driver for TS 	043 NoMount Driver for SS 	043 NoMount Driver for US 	043 NoMount Torque Driver for TS 
032 123 Drill Stopper 	033 123 Twist Drill - Stopper Drill 	033 IV Type Twist Drill 	034 Direct Drill 	034 122 Taper Drill 		044 NoMount Torque Driver for SS 	044 Fixture Driver for TS 	044 Fixture Driver for SS 	044 Fixture Driver for US 	045 Torque Extension 
035 Taper Drill 	035 Taper Ultra Drill 	036 Long Shank Pilot Drill 	036 123 Cortical Drill 	036 Cortical Drill 2 for TSII, SSII SA 		045 Simple Mount Driver 	045 Simple Mount Extension 	045 Simple Open Wrench 	046 Removal Tool for Fixture Mount 	046 Tissue Punch 
037 Cortical Drill 3 for Taper Fixture 	037 Taper Cortical Drill for Taper Fixture 	037 Cortical Drill for Ultra-Wide 	038 Countersink for USIII, USII SA, USIII SA 	038 Straight Fixture Tap for TSII, USII, SSII SA 		047 TS Bone Profiler 	047 US Bone Profiler 	048 Trephine Drill 	048 Machine Driver Handle 	048 Bone Mill 
038 Tapered Fixture Tap for TSIII, USIII, SSIII SA 	038 Parallel Pin 	039 Parallel Pin for 123 Drill 	039 Parallel Pin for Taper Drill 	039 Depth Gauge 		049 Smart Brush 1 	050 Prosthetic KIT 	051 Hand Driver 	051 Machine Screw Driver 	052 Torque Driver 

KIT Contents 2/3

052 Repair Torque Driver		052 O-ring Abutment Driver		053 Rigid Outer Driver		053 Solid Abutment Driver		054 Excellent Solid Abutment Driver		066 ESSET KIT		067 Crest Remover		067 Twist Drill		067 Saw		068 SET Drill	
054 Octa Abutment Driver		055 Osstem Torque Driver		055 Path Probe for TS		055 Torque Connector		056 Machine Driver Connector		068 Mount Extension		068 Torque Wrench		068 Depth Gauge		069 Saw Protector		070 MS KIT	
056 Driver Handle		056 Dalbo Plus Screw Driver		056 Finishing Reamer Set		057 Reamer Bite		057 Reamer Tip for Rigid Abutment		071 Ortho KIT		072 Bone Screw KIT		073 Custom KIT		074 Osteo KIT		075 Osteotome KIT	
057 Reamer Tip for Solid, Excellent Solid Abutment		058 CAS KIT		059 CAS Drill		059 Guide Drill		059 Ø 2.2 Twist Drill		076 Sinus KIT		077 Bone Spreader KIT		078 Ridge Split KIT - Straight		079 Ridge Split KIT - Offset		080 ESR KIT	
059 Hydraulic Membrane Lifter Set		060 Stopper		060 Bone Carrier		060 Bone Carrier Head		060 Bone Condenser		081 Reverse Driver		081 Screw Removal Drill (SR Drill)		081 Guide		082 Torque Driver Handle		082 Screw Removal Tip (SR Tip)	
061 Hydraulic Membrane Lifter Tube		061 Depth Gauge		061 CAS KIT Plus CAS Drill		062 LAS KIT		063 Dome Drill		082 Screw Holder		082 Re-tap		083 ESR Handle		083 Abutment Removal Tip		083 Transfer Abutment Separate Tool	
063 Core Drill		063 Side Wall Drill		064 Bone Separator		064 Stopper		065 LAS KIT Plus		083 Slot Driver		084 EFR KIT		085 Remover Screw		085 Screw Driver		085 Remover Body	

KIT Contents 3/3

086 Torque Extension		086 Torque Wrench		086 Fixture Wrench		087 SlowJec		088 Parallel Guide KIT	
089 Guide Drill		089 Single Guide		089 Guide Pin		090 Bridge Guide		090 Multi Joint Handle	
090 Denture Guide		091 L-wrench		091 Distance Setup Pin		092 Smart Guide KIT		093 Smart Template	
093 Twist Drill		093 Checkup Bush		094 Round Bur		094 Ø2.2 Cast Drill		094 Guide Pin	

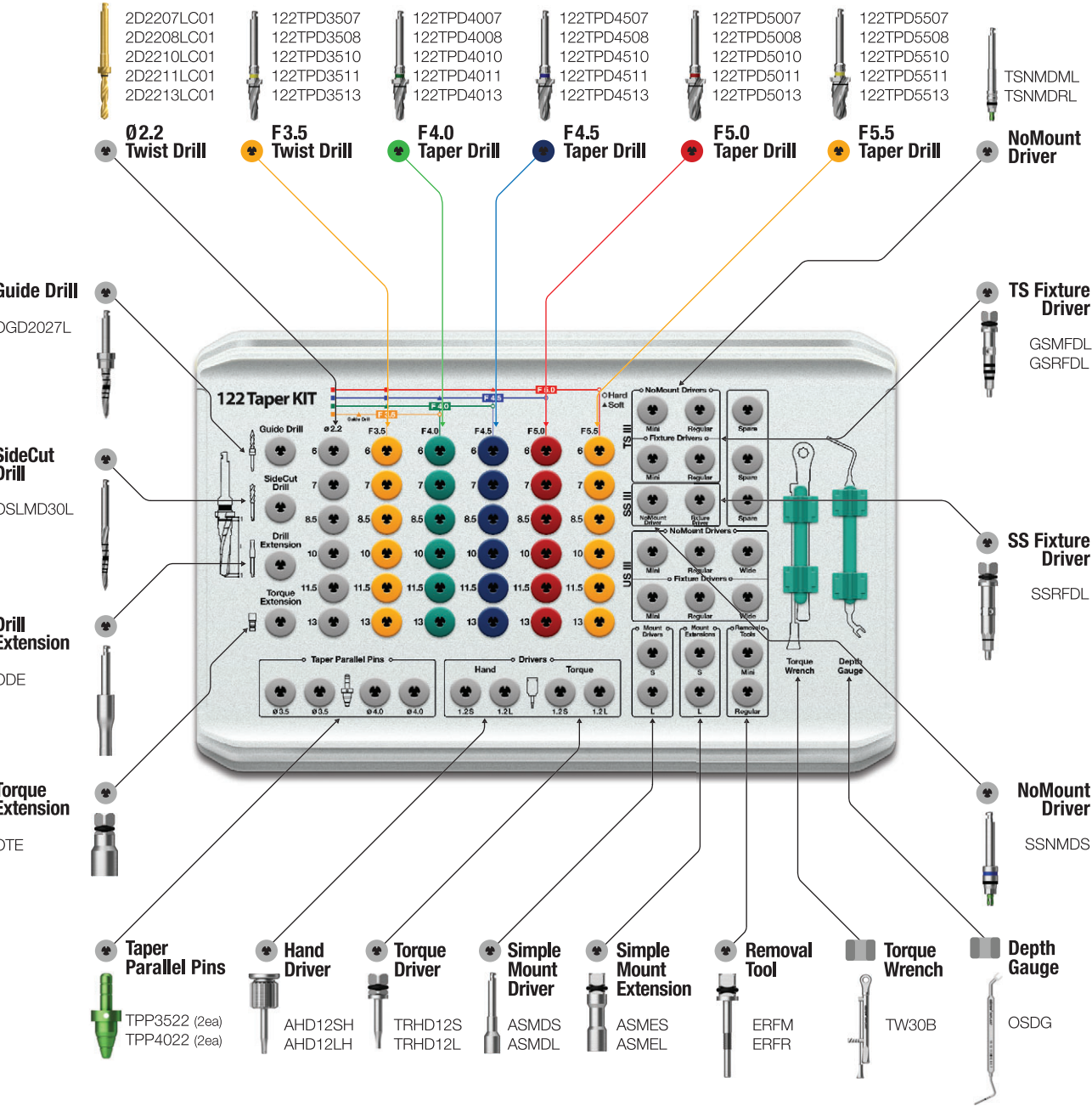
OSSTEM[®]
IMPLANT



- | | | | |
|------------|-------------------|------------|----------------------------|
| 020 | 122 Taper KIT | 071 | Ortho KIT |
| 021 | Taper KIT | 072 | Bone Screw KIT |
| 022 | Taper Ultra KIT | 073 | Custom KIT |
| 023 | 123 KIT | 074 | Osteo KIT |
| 024 | 123 Full KIT | 075 | Osteotome KIT |
| 025 | 123 KIT - IV Type | 076 | Sinus KIT |
| 026 | Ultra KIT | 077 | Bone Spreader KIT |
| 028 | New Hanaro KIT | 078 | Ridge Split KIT - Straight |
| 050 | Prosthetic KIT | 079 | Ridge Split KIT - Offset |
| 058 | CAS KIT | 080 | ESR KIT |
| 061 | CAS KIT Plus | 084 | EFR KIT |
| 062 | LAS KIT | 087 | SlowJec |
| 065 | LAS KIT Plus | 088 | Parallel Guide KIT |
| 066 | ESSET KIT | 092 | SmartGuide KIT |
| 070 | MS KIT | | |

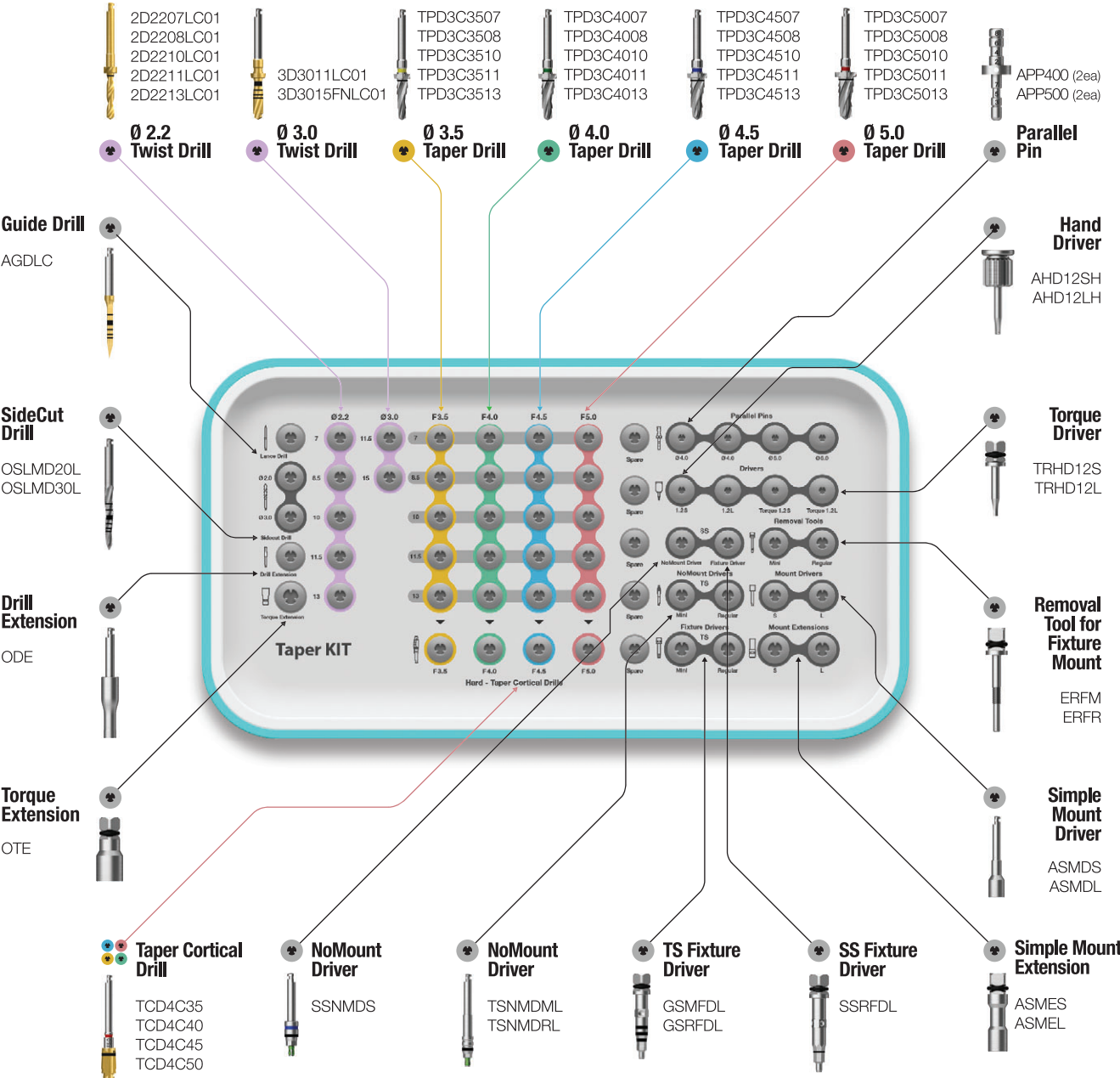
122 Taper KIT (O122TPK)

For TSIII SSIII USIII Implant Systems



Taper KIT (OTSK)

For TSIII SSIII USIII Implant Systems



For **III Ultra-wide** Implant Systems



Three Cutter Twist Drill

OSLMD20L

Sidcu Drill



 Mount Driver



Hand Driver

CD4C60
CD4C70



**Cortica
Drill**

Ø6.0 Taper Ultra Drill

TPD3C6006, TPD3C6007
TPD3C6008, TPD3C6010
TPD3C6011, TPD3C6013

Ø7.0 Taper Ultra Drill

TPD3C7006, TPD3C7007
TPD3C7008, TPD3C7010
TPD3C7011, TPD3C7013

For **TSII / III** **SSII / III** **USII / III** **Implant Systems**



 **Guide Drill**



O2CD40
O2CD45
O2CD50

123 Cortical Drill



O3CD40
O3CD45
O3CD50

III 123 Cortical Drill



2D3036S
2D3041S
2D3046S

123
Twist Drive

ODST07, ODS08
ODST10, ODS11
ODST13, ODS15

Drill Stop

Sidecut Drill

OSLMD30L

Torque Extension

OTE

Drill Extension

ODE

Parallel Pin

OPLP400:2
OPLP500:2

 **Hand Driver**

AHD12SH
AHD12LH

 **Torque Driver**

TRHD12S
TRHD12L

Simple Mount Driver

ASMDS
ASMDL

Simple Mount Extension

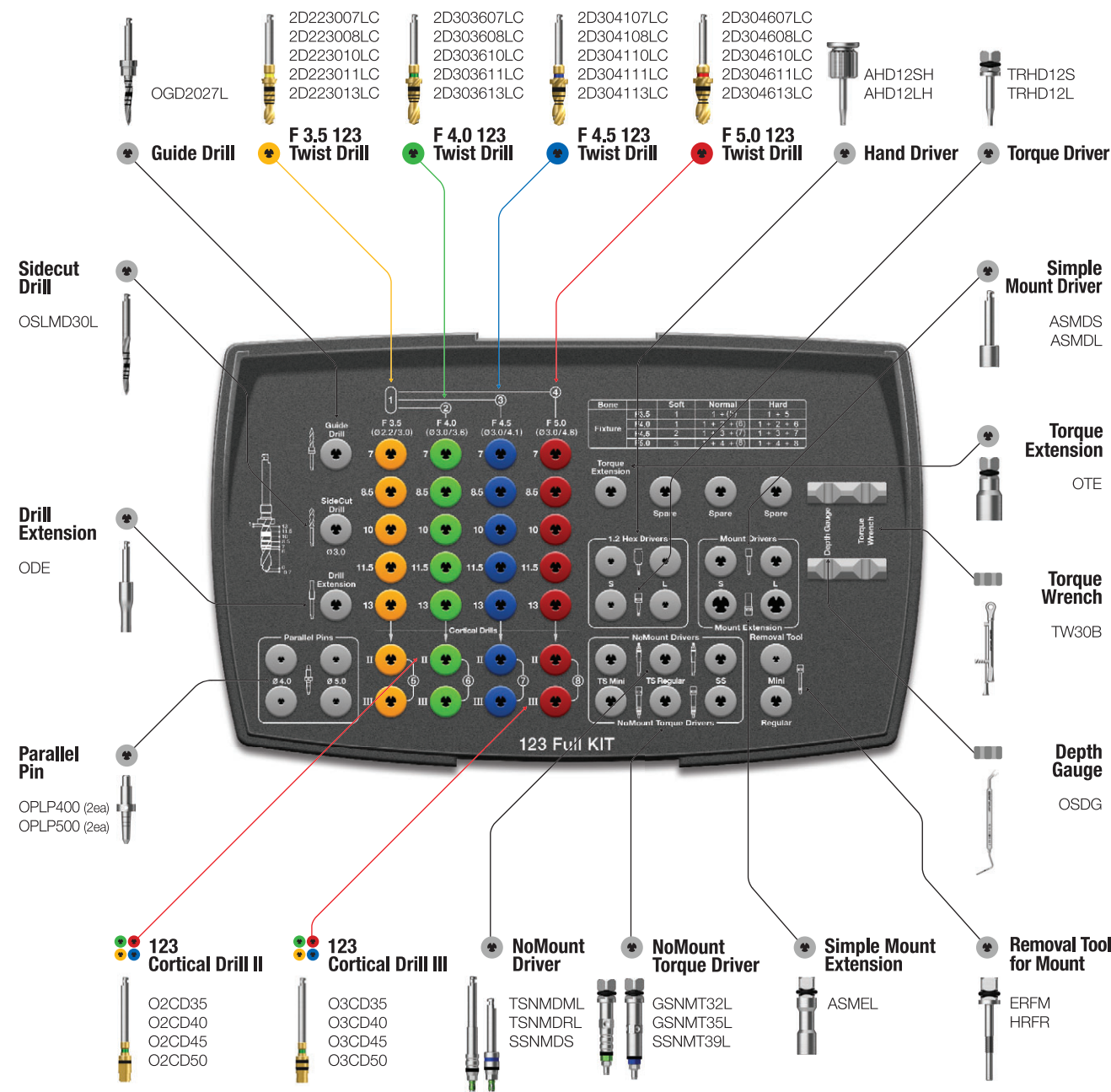


 **Fixture Driver**

GSMFDL
GSRFDL
SSRFDL

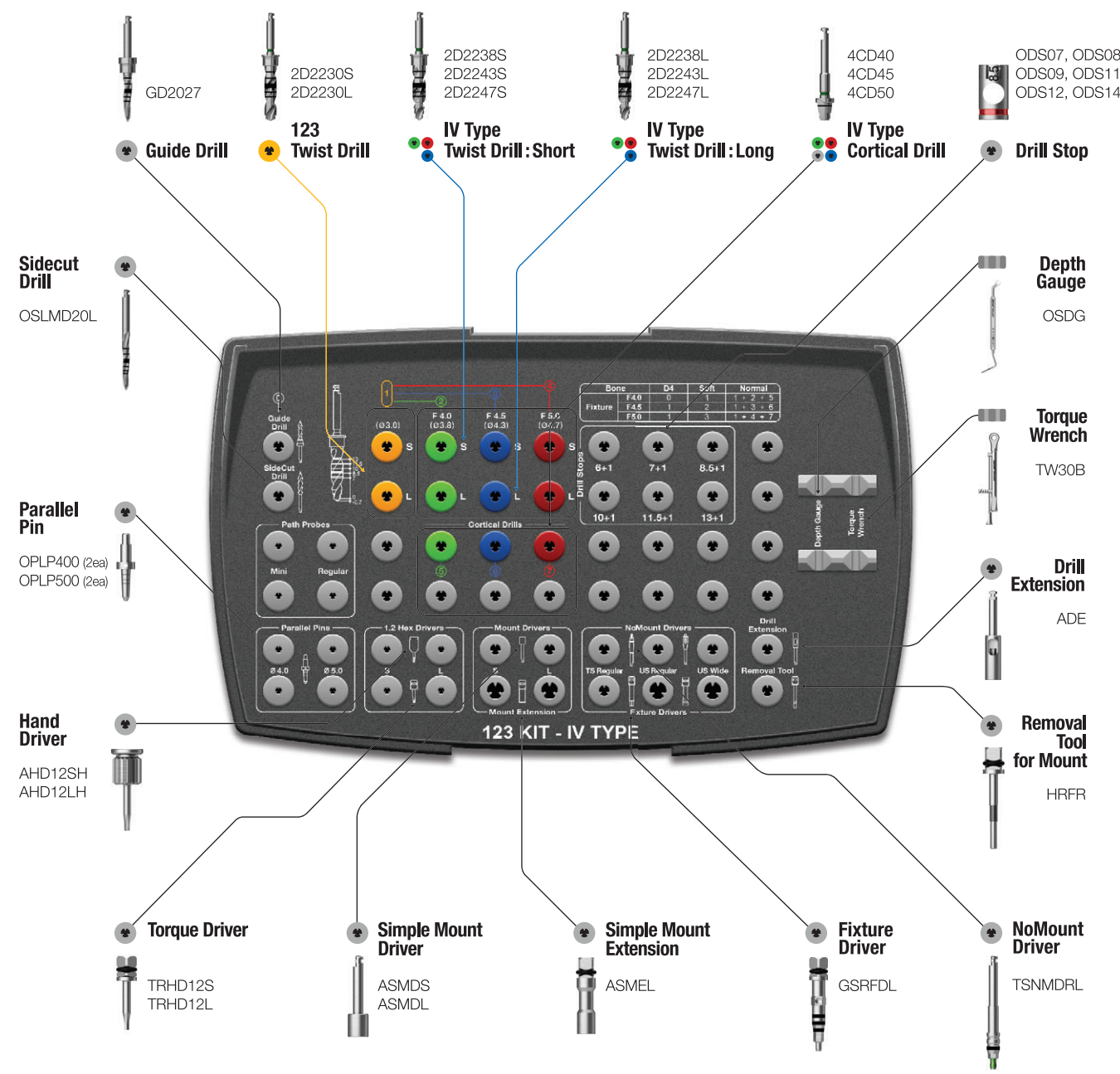
123 Full KIT (O123FK)

For TSV / III SSII / III USII / III Implant Systems



123 KIT - IV Type (O4SK)

For TSV / USIV Implant Systems



Ultra KIT (HULTRK)

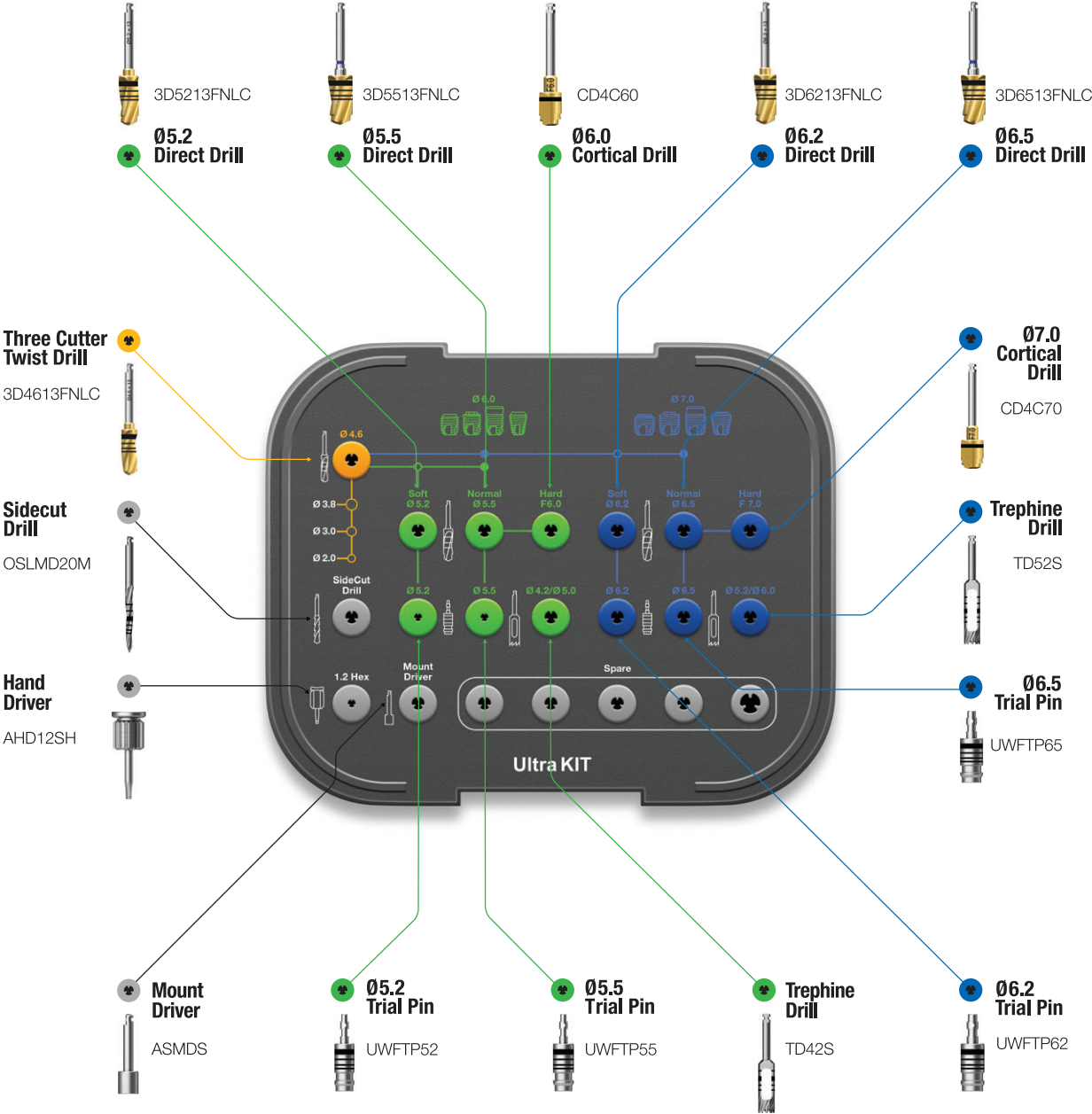
For Ultra-wide Implant Systems

Lower plate components

Open Wrench
SPOW

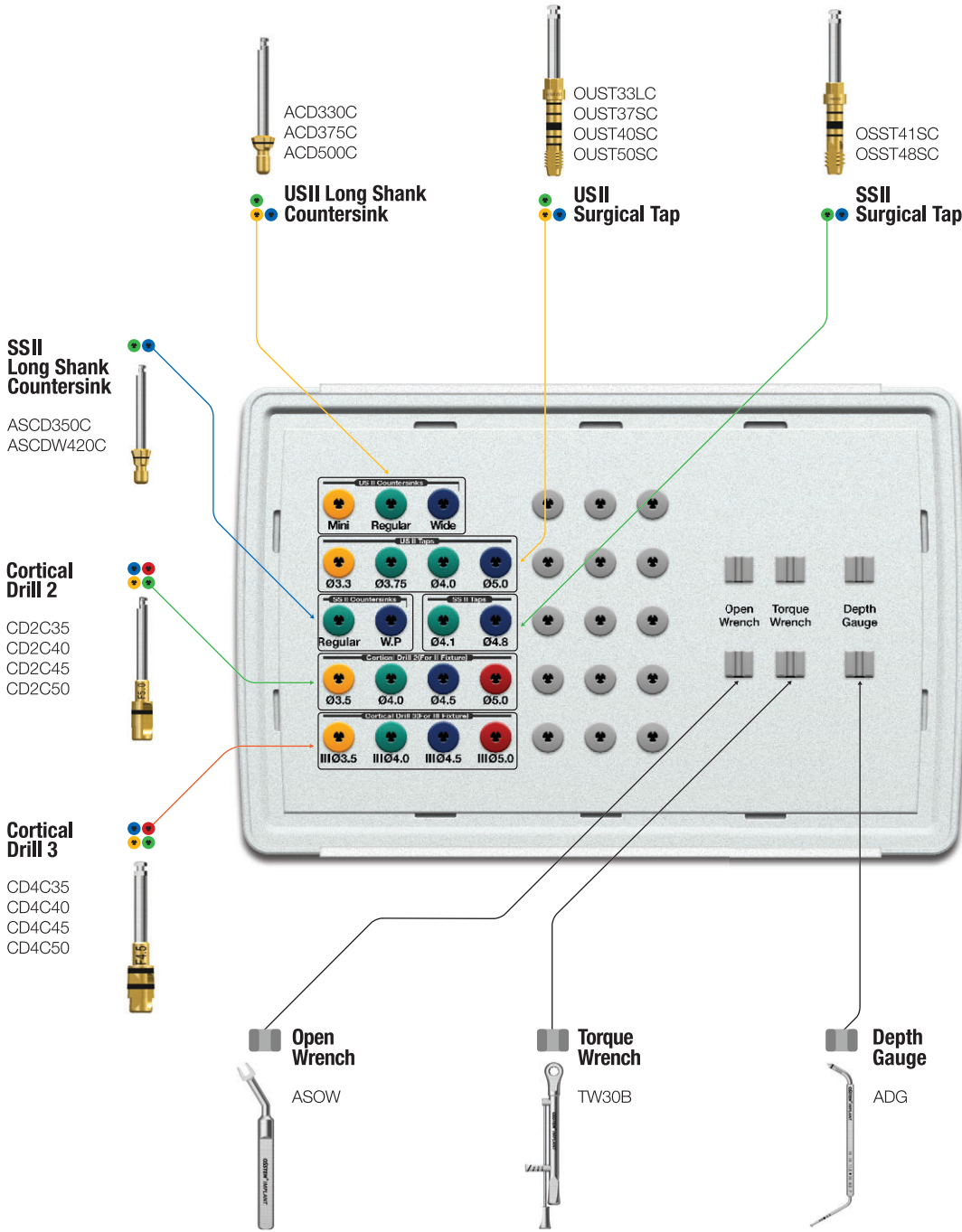
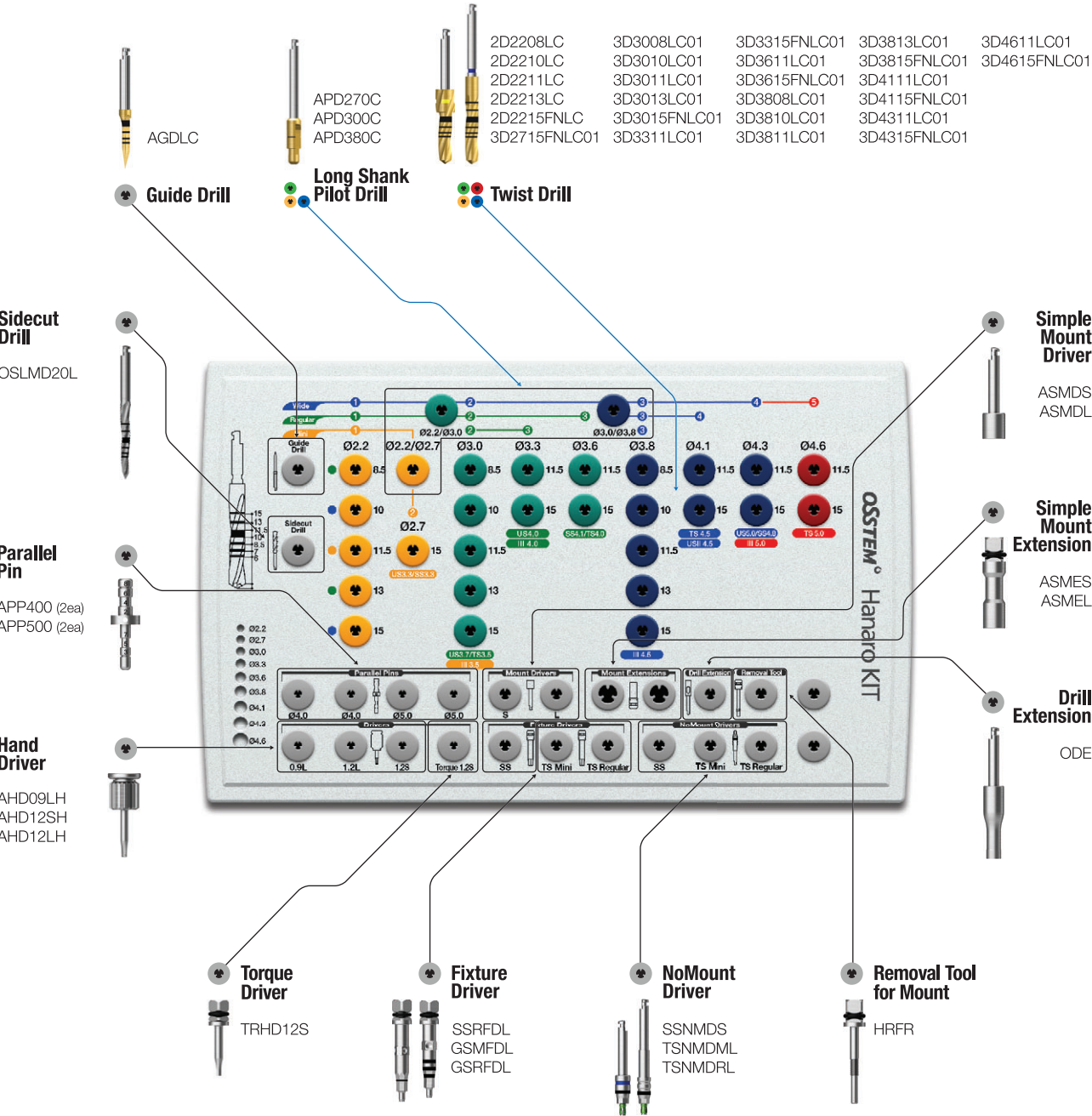


Ratchet Wrench
RCWC



New Hanaro KIT (HKA2)

For TSII / III SSII / III USII / III Implant Systems

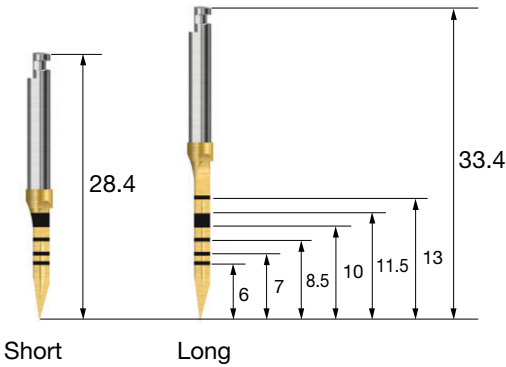


Surgical Instruments

Lance Drill - Guide Drill

- Used to create an initial osteotomy in the bone to facilitate initial drilling
- Bone density can be determined by drilling

L	Short	Long
	AGDSC	AGDLC



123 Guide Drill

- Used to create an initial osteotomy in the bone to facilitate initial drilling
- Easy drill depth control by selecting the appropriate drill stopper

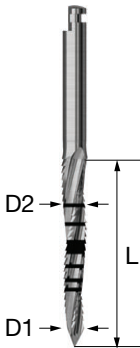
D	Ø2.0
	OGD2027L



Sidecut Drill

- Capable of side cutting an osteotomy using the drill body's cutter blades
- For trimming the ridge of an extraction socket
- Facilitating site preparation of an extraction socket

L \ D1 / D2	Ø1.5 / 2.0	Ø2.0 / 2.5	Ø2.5 / 3.0	Ø3.0 / 3.5
13	OSLMDS	OSLMD20S	OSLMD25S	OSLMD30S
16.5	-	-	OSLMD25L	OSLMD30L
20	OSLMDL	OSLMD20L	-	-



Drill Extension

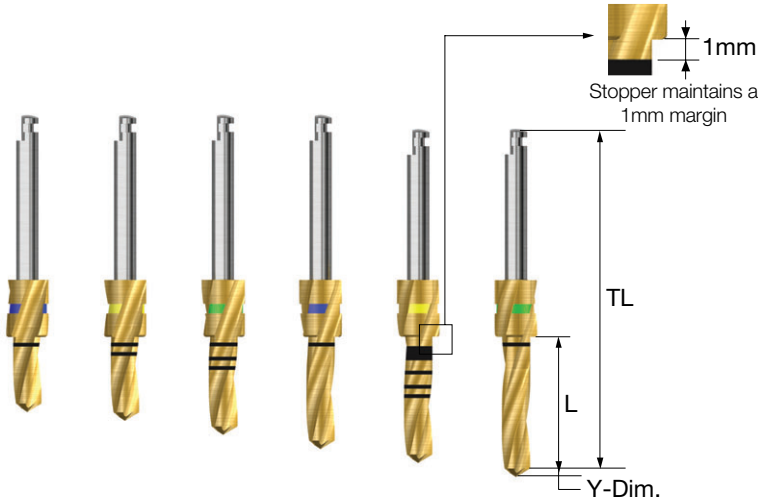
- Extends the length of drills and other hand-piece tools
- Make sure that it is securely fastened to prevent bending or breaking due to excessive force.
- Extends the length of a drill by 16.9mm

	ODE
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Twist Drill - Stopper Drill

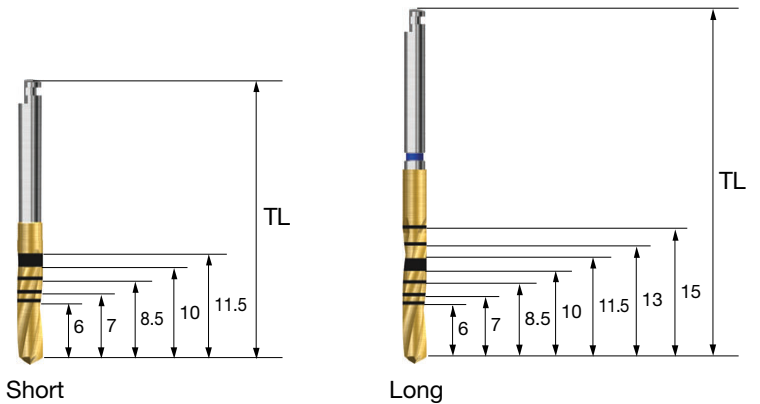
- Long stopper (6mm)
- Posterior drilling possible without an extension
- The color-coded by length



L \ TL D	Ø2.2	Ø3.0	Ø3.3	Ø3.6	Ø3.8	Ø4.1	Ø4.3	Ø4.6
	0.6	0.9	1.0	1.0	1.0	1.0	1.0	1.0
6.0	2D2206LC	3D3006LC	-	-	3D3806LC	-	-	-
7.0	2D2207LC01	3D3007LC01	-	-	3D3807LC01	-	-	-
8.5	2D2208LC01	3D3008LC01	-	-	3D3808LC01	-	-	-
10.0	2D2210LC01	3D3010LC01	-	-	3D3810LC01	-	-	-
11.5	2D2211LC01	3D3011LC01	3D3311LC01	3D3611LC01	3D3811LC01	3D4111LC01	3D4311LC01	3D4611LC01
13.0	2D2213LC01	3D3013LC01	-	-	3D3813LC01	-	-	-

Twist Drill - Non Stopper Drill

- Used when adjacent teeth prevent the use of the Stopper Drill (tight spaces).
- Short and long laser marked drills are available
- Please see the Non Stopper Drill images for marking measurements

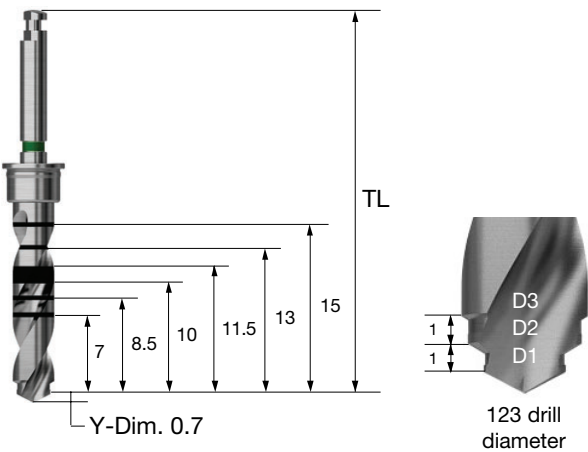


TL \ D	Ø1.5	Ø2.0	Ø2.2	Ø2.7	Ø3.0	Ø3.3
33	2D1518FNLC	2D2018FNLC	2D2218FNLC	3D2718FNLC	3D3018FNLC	3D3318FNLC
41	-	-	2D2215FNLC01	3D2715FNLC01	3D3015FNLC01	3D3315FNLC01
TL \ D	Ø3.6	Ø3.8	Ø4.1	Ø4.3	Ø4.6	
33	3D3618FNLC	3D3818FNLC	3D4118FNLC	3D4318FNLC	3D4618FNLC	
41	3D3615FNLC01	3D3815FNLC01	3D4115FNLC01	3D4315FNLC01	3D4615FNLC01	

Surgical Instruments

123 Twist Drill

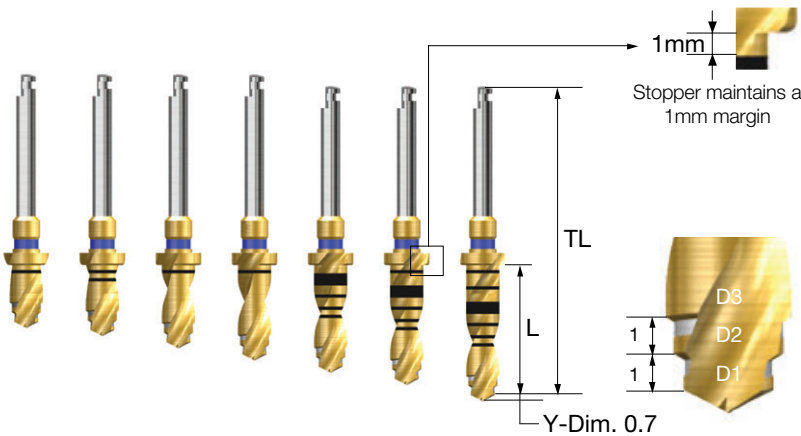
- Unique straight drill that reduces the drilling sequence
- Color codes indicate the drill's diameter and the matching fixture to be placed
- Controll drilling depth by selecting the appropriate drill stopper
- CAUTION: The drill stopper must be used, it can be difficult to control the drilling depth
- F = Fixture



TL \	D1 / D2 / D3			
	F3.5(Ø2.2 / 3.0)	F4.0(Ø3.0 / 3.6)	F4.5(Ø3.0 / 3.6 / 4.1)	F5.0(Ø3.0 / 4.1 / 4.6)
34	2D2230S	2D3036S	2D3041S	2D3046S
40.4	2D2230L	2D3036L	2D3041L	2D3046L
Color	Yellow	Green	Blue	Red

123 Twist Drill - Stopper Drill

- Straight drill that reduces the drilling sequence (stopper included)
- Color codes indicate the drill's diameter and the matching fixture to be placed
- F = Fixture



L \	TL	D1 / D2 / D3			
		F3.5(Ø2.2 / 3.0)	F4.0(Ø3.0 / 3.6)	F4.5(Ø3.0 / 3.6 / 4.1)	F5.0(Ø3.0 / 4.1 / 4.6)
6.0	30.5	2D223006LC	2D303606LC	2D304106LC	2D304606LC
7.0	31.5	2D223007LC	2D303607LC	2D304107LC	2D304607LC
8.5	33	2D223008LC	2D303608LC	2D304108LC	2D304608LC
10.0	34.5	2D223010LC	2D303610LC	2D304110LC	2D304610LC
11.5	34.5	2D223011LC	2D303611LC	2D304111LC	2D304611LC
13.0	36	2D223013LC	2D303613LC	2D304113LC	2D304613LC
15.0	38	2D223015LC	2D303615LC	2D304115LC	2D304615LC
Color		Yellow	Green	Blue	Red

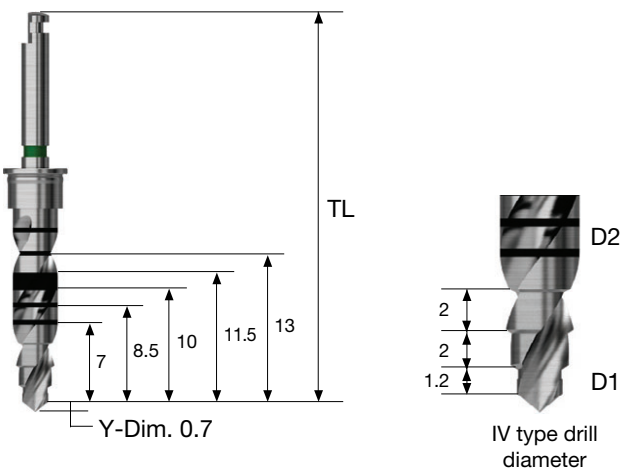
123 Drill Stopper

- The indicated length of the drill stopper is the actual drillable length before reaching the stopper
- Color-coded stopper identify the length and place in the kit

L	6.2	7	8	9.5	11	12.5	14	16
	ODST05	ODST06	ODST07	ODST08	ODST10	ODST11	ODST13	ODST15

IV Type Twist Drill

- Drill specifically for placing type IV fixtures
- Color codes indicate the drill's diameter and the matching fixture to be placed
- The drill stopper must be used, it can be difficult to control the drilling depth
- F = Fixture

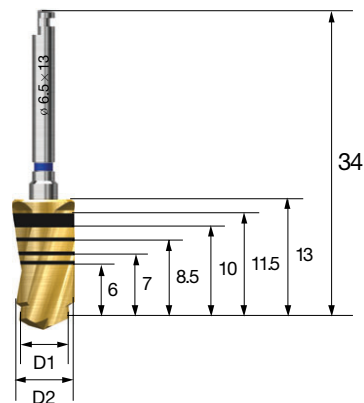


TL \	D1 / D2		
	F4.0 (Ø2.2 / 3.8)	F4.5 (Ø2.2 / 4.3)	F5.0 (Ø2.2 / 4.7)
34	2D2238S	2D2243S	2D2247S
40.4	2D2238L	2D2243L	2D2247L
Color	Green	Blue	Red

Surgical Instruments

Direct Drill

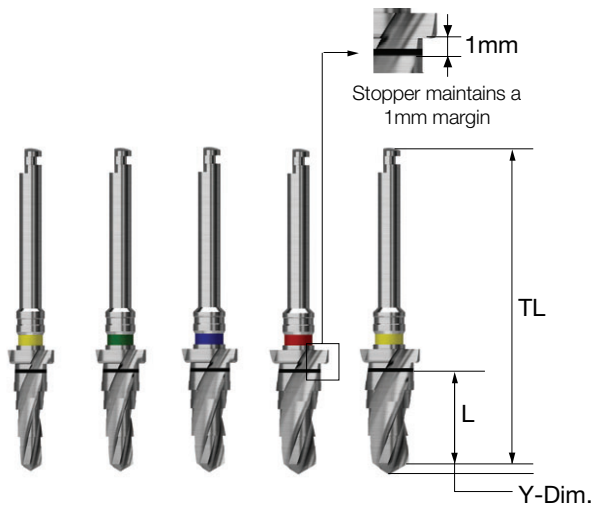
- Direct drill: Two-step drill that functions like a pilot and twist drill
- Final drilling is possible without using pilot drilling
- Increases initial stability in an extraction socket due to the reduced dead space at the apex



D1 / D2	Ø4.6 / 5.2	Ø4.6 / 5.5	Ø5.5 / 6.2	Ø5.5 / 6.5
	3D5213FNLC	3D5513FNLC	3D6213FNLC	3D6513FNLC

122 Taper Drill

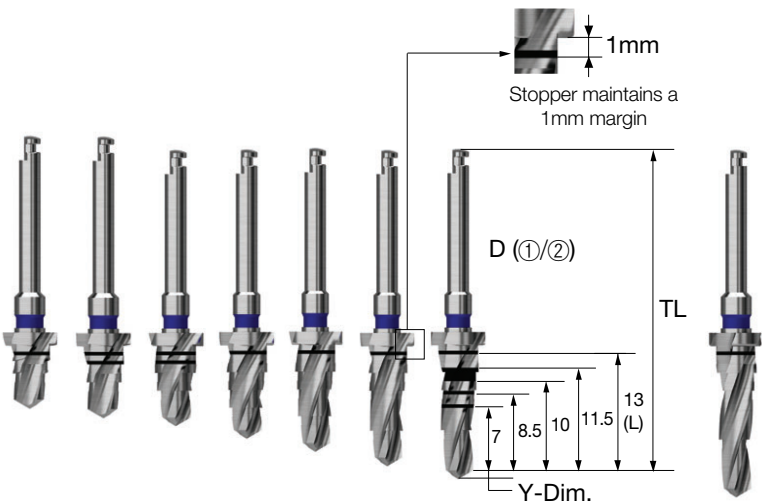
- Drill specifically for tapered (Type III) fixtures
- Range of diameters and lengths are available
- Color codes indicate the drill's diameter and the matching fixture to be placed
- For hard bone cases, use a drill one diameter bigger
- F = Fixture



L	TL	F3.5	F4.0	F4.5	F5.0	F5.5
	Y-Dim.	0.7	0.9	1.0	1.0	1.0
4.0	29.5	122TPD3504	122TPD4004	122TPD4504	122TPD5004	122TPD5504
5.0	29.5	122TPD3505	122TPD4005	122TPD4505	122TPD5005	122TPD5505
6.0	30.5	122TPD3506	122TPD4006	122TPD4506	122TPD5006	122TPD5506
7.0	31.5	122TPD3507	122TPD4007	122TPD4507	122TPD5007	122TPD5507
8.5	33	122TPD3508	122TPD4008	122TPD4508	122TPD5008	122TPD5508
10.0	34.5	122TPD3510	122TPD4010	122TPD4510	122TPD5010	122TPD5510
11.5	34.5	122TPD3511	122TPD4011	122TPD4511	122TPD5011	122TPD5511
13.0	36	122TPD3513	122TPD4013	122TPD4513	122TPD5013	122TPD5513
15.0	38	122TPD3515	122TPD4015	122TPD4515	122TPD5015	122TPD5515
Color		Yellow	Green	Blue	Red	Yellow

Taper Drill

- Drill specifically for tapered (Type III) fixtures, comes in different diameters and lengths
- Stopper drill maintains a 1mm margin
- Color codes indicate the drill's diameter and the matching fixture to be placed
- F3.5: yellow, F4.0: green, F4.5: blue, F5.0: red, F5.5: yellow

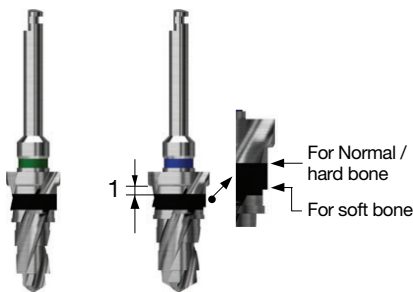


L	TL	F3.5	F4.0	F4.5	F5.0	F5.5
	Y-Dim.	0.8	0.9	1.0	1.0	1.0
5.0	29.5	TPD3C3505	TPD3C4005	TPD3C4505	TPD3C5005	-
6.0	30.5	TPD3C3506	TPD3C4006	TPD3C4506	TPD3C5006	TPD3C5506
7.0	31.5	TPD3C3507	TPD3C4007	TPD3C4507	TPD3C5007	TPD3C5507
8.5	33	TPD3C3508	TPD3C4008	TPD3C4508	TPD3C5008	TPD3C5508
10.0	34.5	TPD3C3510	TPD3C4010	TPD3C4510	TPD3C5010	TPD3C5510
11.5	34.5	TPD3C3511	TPD3C4011	TPD3C4511	TPD3C5011	TPD3C5511
13.0	36	TPD3C3513	TPD3C4013	TPD3C4513	TPD3C5013	TPD3C5513
15.0	38	TPD3C3515	TPD3C4015	TPD3C4515	TPD3C5015	TPD3C5515
Color		Yellow	Green	Blue	Red	Yellow

Taper Ultra Drill

- Drill specifically for tapered ultra-wide fixtures, comes in different diameters and lengths
- Stopper drill maintains a 1mm margin
- Color codes indicate the drill's diameter and the matching fixture to be placed
- F = Fixture

L	F6.0	F7.0
6	TPD3C6006	TPD3C7006
7	TPD3C6007	TPD3C7007
8.5	TPD3C6008	TPD3C7008
10	TPD3C6010	TPD3C7010
11.5	TPD3C6011	TPD3C7011
13	TPD3C6013	TPD3C7013
Color	Green	Blue

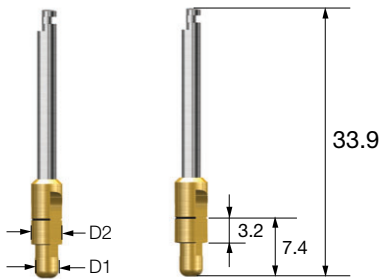


Surgical Instruments

Long Shank Pilot Drill

- Corrects the drilling path
- Maintains the path of the previous drilling sequence

D1 / D2	Ø2.0 / 2.7	Ø2.0 / 3.0	Ø3.0 / 3.8	Ø3.0 / 4.1
	APD270C	APD300C	APD380C	APD410C



Cortical Drill 3
for Taper Fixture (TSIII, SSIII, USIII)

- Use after straight drill to expand cortical bone
- In normal to hard bone, used as the final drill
- Drill specifically for Type III fixture's unique diameter
- The lower marker is for normal bone, the upper is for hard bone
- Recommend drilling until reaching the bottom of the marker

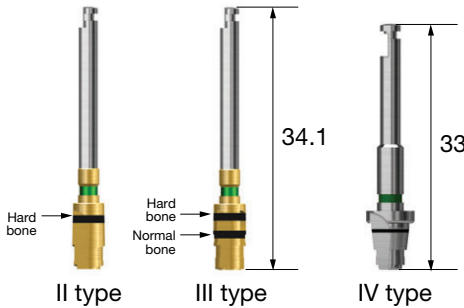
F3.0	F3.5	F4.0	F4.5	F5.0	F5.5
CD4C30	CD4C35	CD4C40	CD4C45	CD4C50	CD4C55



123 Cortical Drill

- Trims cortical bone in hard bone cases
- Recommend drilling until reaching the bottom of the marker
- Type II cortical drill marker is for hard bone
- Type III cortical drill bottom marker is for normal bone, the upper for hard bone
- Type IV cortical drill marker is for normal bone
- Color codes indicate the drill's diameter and the matching fixture to be placed
- F = Fixture

Type	F3.5	F4.0	F4.5	F5.0
II	O2CD35	O2CD40	O2CD45	O2CD50
III	O3CD35	O3CD40	O3CD45	O3CD50
IV	-	4CD40	4CD45	4CD50
Color	Yellow	Green	Blue	Red



Taper Cortical Drill
for Taper Fixture (TSIII, SSIII, USIII)

- Trims cortical bone in hard bone cases (immediately after the taper drill)
- Drill specifically for Type III fixture's unique diameter
- F3.5~5.0 drill's lower marker is for fixture lengths ≤8.5mm and the upper is for lengths ≥10mm
- F5.5 drill's lower marker is for fixture lengths ≤6mm, the middle is for ≤7mm, and the upper is for ≥8.5mm
- Recommend drilling until reaching the bottom of the marker
- F = Fixture

F3.5	F4.0	F4.5	F5.0	F5.5
TCD4C35	TCD4C40	TCD4C45	TCD4C50	TCD4C55



Cortical Drill 2 for TSII, SSII SA

- Trims cortical bone in hard bone cases (for type II)
- Drill specifically for Type II fixture's unique diameter
- Recommend drilling until reaching the bottom of the marker
- F = Fixture

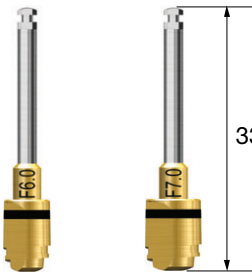
F3.5	F4.0	F4.5	F5.0
CD2C35	CD2C40	CD2C45	CD2C50



Cortical Drill for Ultra-Wide

- Trims cortical bone in hard bone cases (for ultra-wide type fixtures)
- Drill specifically for Ultra-wide Type fixture's unique diameter
- Recommend drilling until reaching the bottom of the marker
- F = Fixture

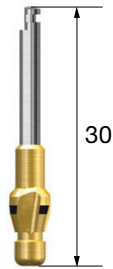
F6.0	F7.0
CD4C60	CD4C70



Surgical Instruments

Countersink
for USIII, USII SA, USIII SA (Wide PS, Wide)

- Drill specifically for USIII, USII SA, and USIII SA Wide PS and Wide type fixtures
- Recommended drilling speed: 300rpm



Straight Fixture Tap
for TSII, USII, SSII SA

- Tap for straight body fixtures (type II)
- For hard bone, taps osteotomy creating fixture thread shape
- Recommended speed: 25rpm or hand torque
- Recommended tapping until reaching the bottom of the marker
- F = Fixture

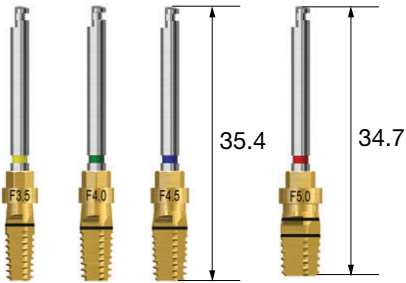
F3.5	F4.0	F4.5	F5.0
O2FTS35	O2FTS40	O2FTS45	O2FTS50



Tapered Fixture Tap
for TSIII, USIII, SSIII SA

- Tap for tapered body fixture (type III)
- For hard bone, taps osteotomy creating fixture thread shape
- Recommended speed: 25rpm or hand torque
- Recommended tapping until reaching the bottom of the marker (F5.0, the lower marker is for fixture lengths ≤7.0mm and the upper is for ≥8.5mm)
- F = Fixture

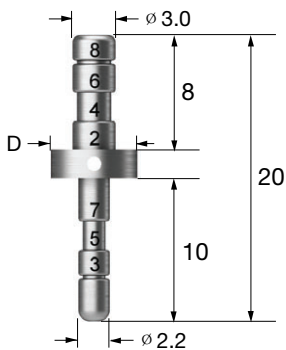
F3.5	F4.0	F4.5	F5.0
OFTS35	OFTS40	OFTS45	OFTS50



Parallel Pin

- Identifies the direction and location of the osteotomy

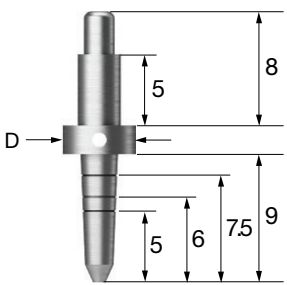
D	Ø4.0	Ø5.0	Ø6.0	Full Set
APP400	APP500	APP600	APPS	



Parallel Pin for 123 Drill

- Parallel pin for the 123 twist drill
- Identifies the direction and location of the osteotomy
- The lower half is use after initial drilling, upper half is for after F3.5 (ø 2.2/3.0) drilling

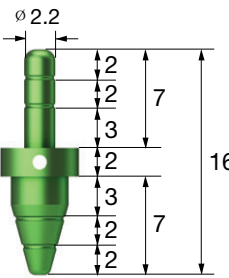
D	Ø4.0	Ø5.0
OPLP400	OPLP500	



Parallel Pin for Taper Drill

- Parallel pin for the taper drill
- Identifies the direction and location of the osteotomy
- The lower half check after standard drilling, upper half is for after initial drilling
- Color-codes indicate fixture diameter (F3.5 : yellow, F4.0 : green, F4.5 : blue, F5.0 : silver)

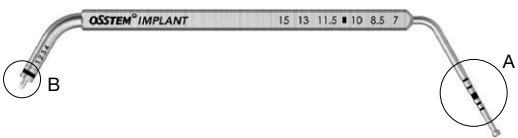
F3.5	F4.0	F4.5	F5.0
TPP3522	TPP4022	TPP4522	TPP5022



Depth Gauge

- A: Measures drilling depth (7~15mm)
- B: Measures the height of the gingiva after placing the fixture

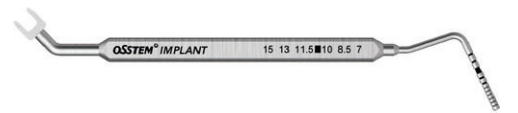
ADG



Depth Gauge

- Measures drilling depth (7 to 15mm) and works as an open wrench

OSDG

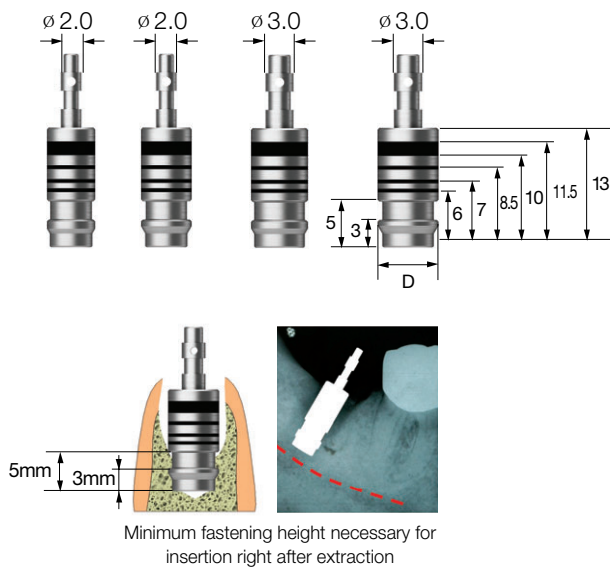


Surgical Instruments

Trial Pin for Ultra-wide

- Measures the width and depth of a failed implant site
- Measure the drilling depth after using the Direct Drill as the final drill
- Also serves as a parallel pin

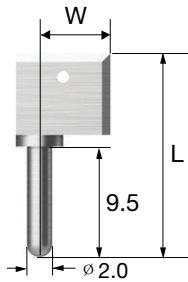
D	Ø5.2	Ø5.5	Ø6.2	Ø6.5
	UWFTP52	UWFTP55	UWFTP62	UWFTP65



Positioning Guide

- Sets the drilling interval for fixture insertion
- Insert after initial drilling
- Packing unit: The components and packages

W/L	2.5/21.5	6.0/17.5	11/17.5
	APG201	APG202	APG203



Tissue Height Gauge for TS

- Connects to the TS fixture to measure the height of the gingiva in relation to the fixture



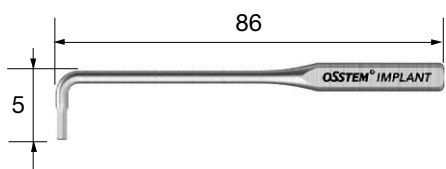
Ratchet Wrench

- Anti-backlash mechanism prevents wrench from backdriving
- Note: Excessive torquing may cause damage to the bone or the inside of a fixture



L-Wrench

- 1.2 hex driver for hard to reach areas like narrow intermaxillary areas
- Torque indication: When the wrench starts to bend (around 10°), apply 5 to 8Ncm of torque



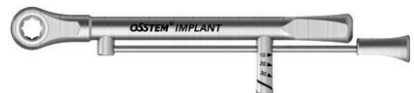
Torque Wrench - Spring Type

- Applies a precise amount of torque (10/20/30Ncm) to the screw and abutment
- The neck of the torque wrench will bend when the exact amount of torque has been delivered.
- Do not continue to torque after the neck has bent. Excessive force may cause damage to the implant, screw, abutment and hard tissue.



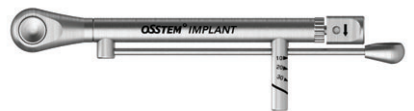
Torque Wrench - Bar Type

- Adjusts the implant depth, and tightens abutments, screws, etc.
- Pull the bar back until reaching the desired torque value



Torque Wrench Set

- Bi-directional torque wrench (a torque connector is included)
- Without separating the connector, rotate the handle to apply torque, either in a forward or a backward direction
- Compatible with Osstem's machine driver connector
- Pull the bar back until reaching the desired torque value
- Packing unit : changeable torque wrench + torque connector



Surgical Instruments

Anterior Hand Driver for Implant

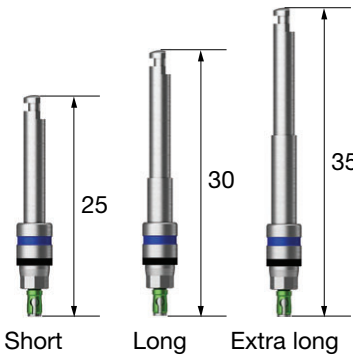
- Manually torque implants in the anterior area
- Connect to a NoMount torque driver or a fixture driver
- Excessive torquing may cause damage to the bone or the inside of a fixture



NoMount Driver for SS

- Engine driver connects directly with the fixture (without a mount) for placement.
- C = Connection

L \ C	Regular / Wide
Short	SSNMDS
Long	SSNMDL
Ex.Long	SSNMDE



Torque Handle

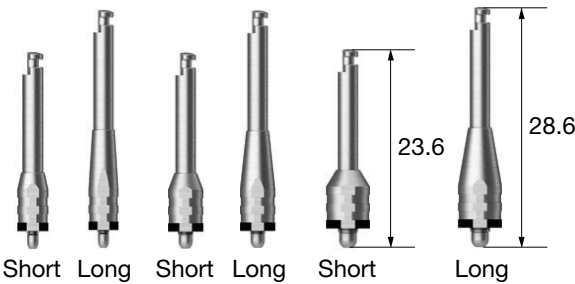
- Connect with a contra-angle hand piece (set hand piece gear ratio to 1:1)
- Connects healing abutments, cover screws, abutment screws, orthodontic screws, etc.
- (Note: After connecting the part, make sure that it is tightened with a torque wrench)
- Excessive torquing may cause damage to the screw fracture or hand piece



NoMount Driver for US

- Engine driver connects directly with the fixture (without a mount) for placement.
- C = Connection

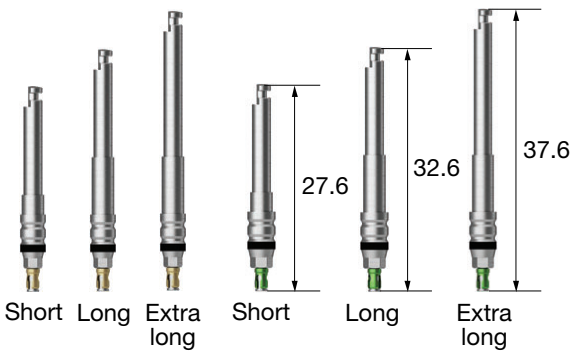
L \ C	Mini	Regular	Wide
Short	USNMD35MS	USNMD41RS	USNMD51WS
Long	USNMD35ML	USNMD41RL	USNMD51WL



NoMount Driver for TS

- Engine driver connects directly with the fixture (without a mount) for placement.
- C = Connection

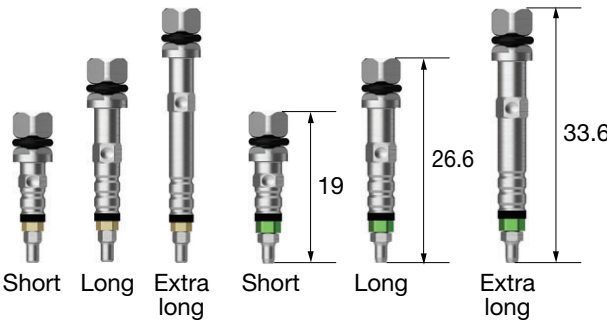
L \ C	Mini	Regular
Short	TSNMDMS	TSNMDRS
Long	TSNMDML	TSNMDRL
Ex.Long	TSNMDME	TSNMDRE



NoMount Torque Driver for TS

- Torque wrench driver connects directly with the fixture (without a mount) for placement.
- Make sure fixture and diver is securly connected; loose connection may cause fixture fracture.
- C = Connection

L \ C	Mini	Regular
Short	GSNMT32S	GSNMT35S
Long	GSNMT32L	GSNMT35L
Ex.Long	GSNMT32E	GSNMT35E

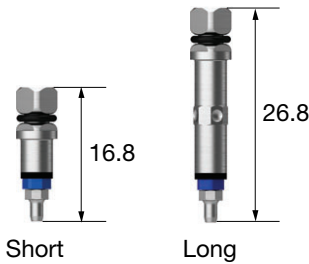


Surgical Instruments

NoMount Torque Driver for SS

- Torque wrench driver connects directly with the fixture (without a mount) for placement.
- Make sure the fixture and the driver are securely connected; loose connection may cause fixture fracture.
- C = Connection

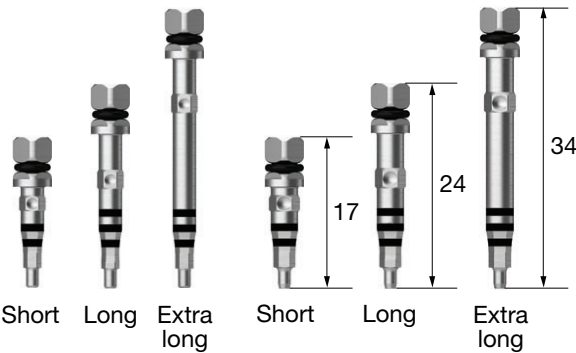
L \ C	Regular / Wide
Short	SSNMT39S
Long	SSNMT39L



Fixture Driver for TS

- Connects directly to the fixture for final adjustments to the implant's depth. Also removes the implant.
- C = Connection

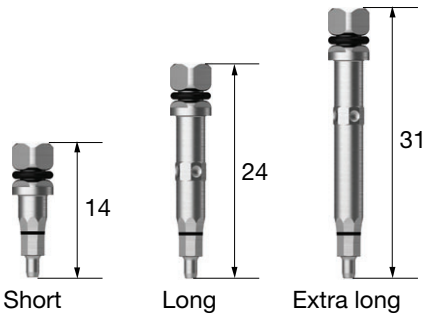
L \ C	Mini	Regular
Short	GSMFDS	GSRFDS
Long	GSMFDL	GSRFDL
Ex.Long	GSMFDE	GSRFDE



Fixture Driver for SS

- Connects directly to the fixture for final adjustments to the implant's depth. Also removes the implant.
- C = Connection

L \ C	Regular / Wide
Short	SSRFDS
Long	SSRFDL
Ex.Long	SSRFDE



Fixture Driver for US

- Connects directly to the fixture for final adjustments to the implant's depth. Also removes the implant.
- C = Connection

C	Mini	Regular	Wide
	USMFDL	USRFDL	USWFDL



Torque Extension

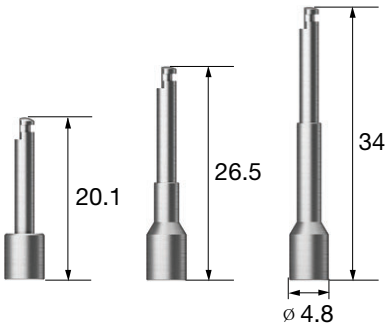
- Extends the length of an instrument by 10mm



Simple Mount Driver

- Connects to mounted fixtures for placement

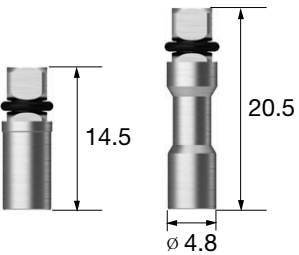
L	
Short	ASMDS
Long	ASMDL
Ex.Long	ASMDE



Simple Mount Extension

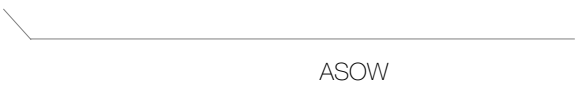
- Extends the length the Simple Mount Driver

L	
Short	ASMES
Long	ASMEL



Simple Open Wrench

- Disengages the simple mount when bone quality is poor
- The neck is at a 30° angle for convenience



Surgical Instruments

Removal Tool for Fixture Mount

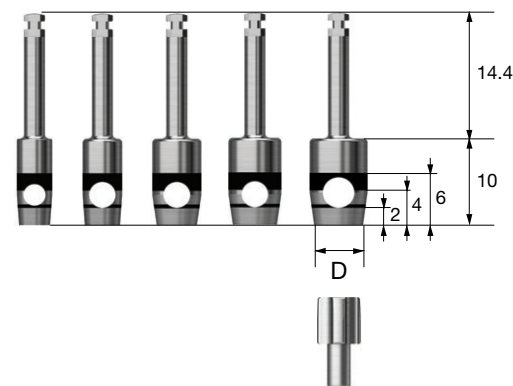
- Removes the mount screw when a fixture and mount become wedged
- Connects to a driver handle and a torque wrench
- Insert vertically, and rotate it clock-wise to remove the mount
- App = Application



App	Mini (τ_s, u_s)	Regular (τ_s, s_s, u_s) / Wide (s_s)	Wide (u_s)
	ERFM	HRFR	ERFW

Tissue Punch

- For flapless surgery
- Measures the height of gingiva, marked at 2mm increments
- Packing unit: tissue punch + guide pin
- ※ Recommend using a tissue punch smaller than the healing abutment by 0.7 to 1.5mm.

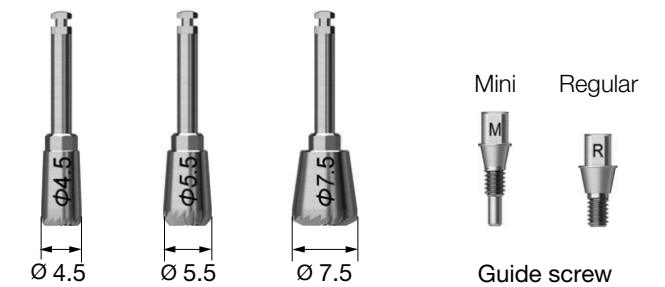


D	Ø3.3	Ø3.8	Ø4.3	Ø4.8	Ø5.3
	OSTP33	OSTP38	OSTP43	OSTP48	OSTP53
TS	Ø 4.0/4.5	Ø 4.5/5.0	Ø 5.0	Ø 6.0	Ø 6.0
SS	-	Ø 4.8	-	Ø 6.0	Ø 6.0
US	Ø 4.0	Ø 5.0	Ø 5.0	Ø 6.0	Ø 6.0

Based on application healing abutment

TS Bone Profiler

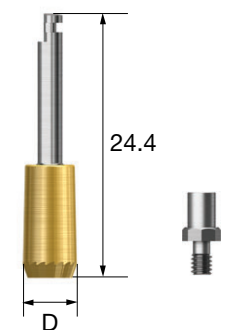
- Trims the bone surrounding a fixture for one stage and two stage procedures
- Connect the Guide Screw to the fixture in order to center the profiler. Make sure to compensate for the healing abutment.
- Guide Screw protects the fixture's platform from damage
- Packing unit : bone profiler + guide screw
- C = Connection



C \ Healing Abutment D	Ø4.5	Ø5.5	Ø6.5 / 7.5
Mini / Regular	GSBP45	GSBP55	GSBP75
	Mini + Regular guide screw	Mini + Regular guide screw	Regular guide screw

US Bone Profiler

- Trims the bone surrounding a fixture and cover screw after a two stage procedure
- Remove cover screw, connect the Guide Screw to the fixture in order to center the profiler. Make sure to compensate for the healing abutment.
- Guide Screw protects the fixture's hex from damage
- Packing unit : bone profiler + guide screw
- P = Platform

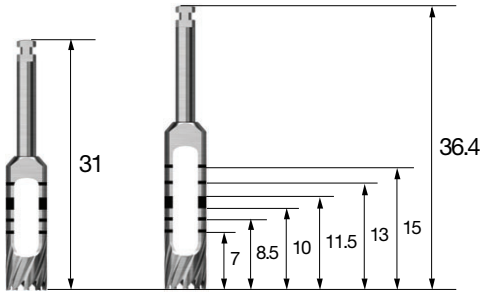


D \ P	Mini	Regular	Wide	T-type
Ø4.0	ABPM 400C	-	-	-
Ø5.0	ABPM 500C	ABPR 500C	-	-
Ø6.0	-	ABPR 600C	ABPW 600C	TBPW 600C
Ø7.0	-	-	ABPW 700C	-

Surgical Instruments

Trephine Drill

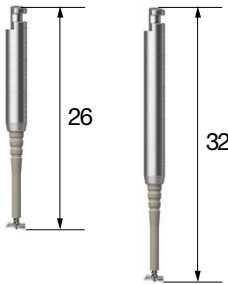
- Harvests bone or removes a failed fixture
- Removes septal bone
- Also serves as the initial drill for ultra-wide fixture



L \ D (Inner / Outer)	3.7 / 4.5	4.2 / 5.0	4.7 / 5.5	5.2 / 6.0	5.7 / 6.5	6.2 / 7.0
Short	TD37S	TD42S	TD47S	TD52S	TD57S	TD62S
Long	TD37	TD42	TD47	TD52	TD57	TD62

SmartBrush 1

- Cleans peri-implantitis
- Remove crown and abutment before use
- Recommended speed: 1,200 to 1,500rpm
- Recommended operation time: 2 to 3 min.
- ※ Operating 5 min or longer can result in severe damage (fracture)
- Saline irrigation during the polishing process
- ※ Disposable; do not re-use; sterilized medical device (discard after use)



L \	
Short	OPISB1S
Long	OPISB1L

Machine Driver Handle

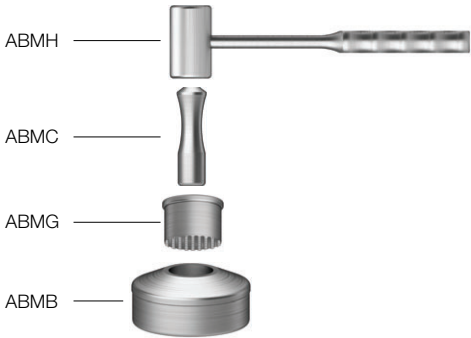
- Manual handle for engine type surgical tools



OMDH

Bone Mill

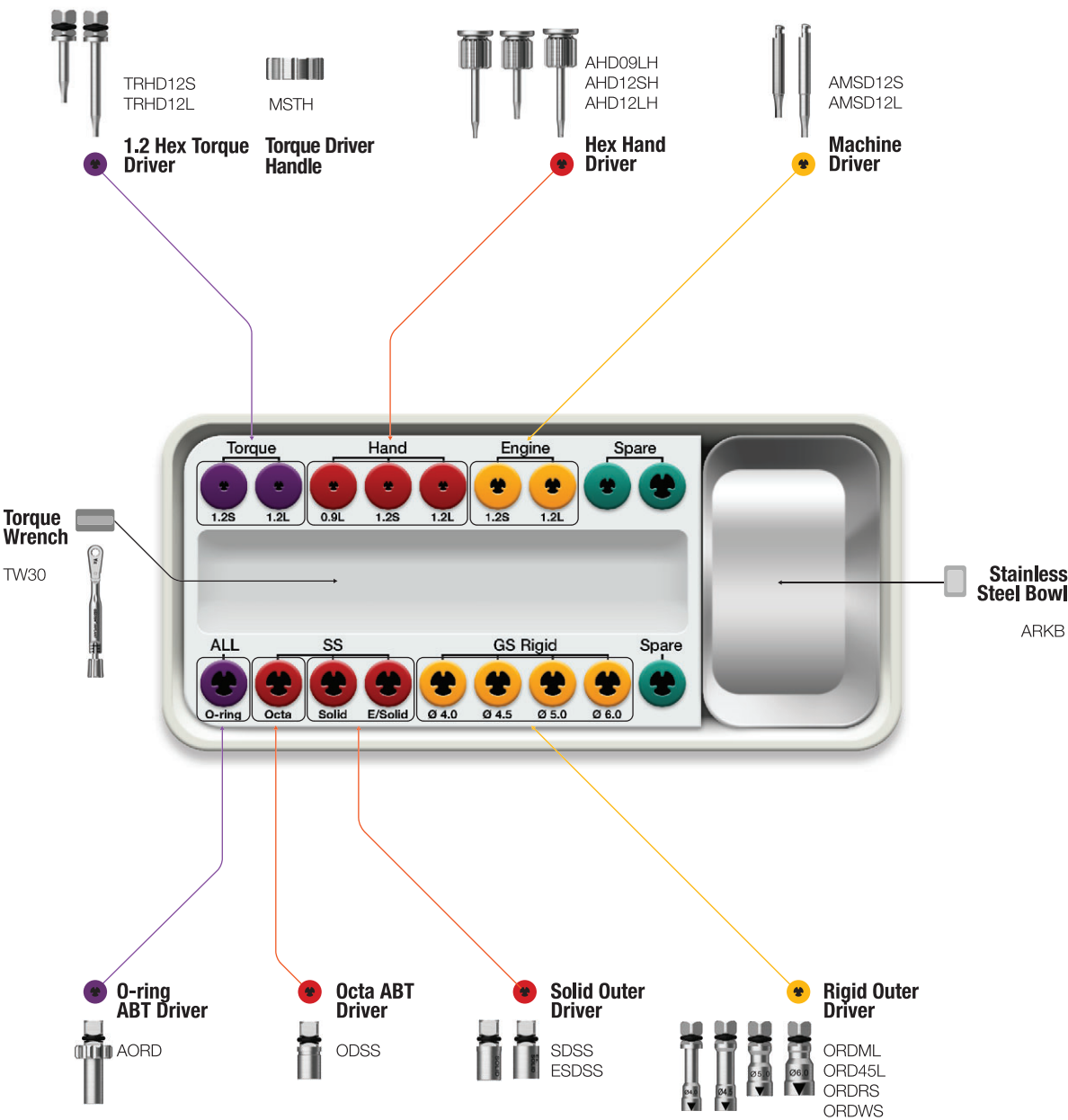
- Motar and pestle type to grind harvested autogenous bone into smaller particles.



ABM

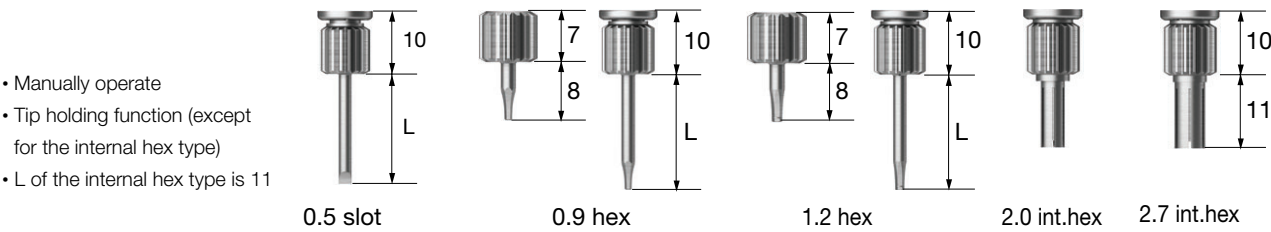
Prosthetic KIT (OPK)

For TSII / III SSII / III USII / III Ultra-wide



Prosthetic Instruments

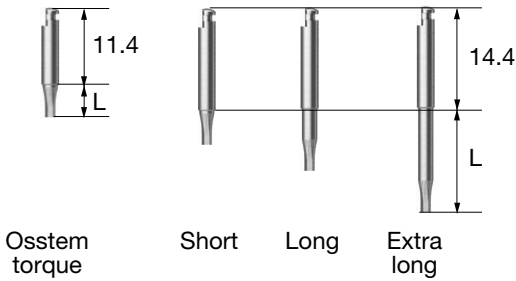
Hand Driver



- Manually operate
- Tip holding function (except for the internal hex type)
- L of the internal hex type is 11

L \ Type	0.5 Slot	0.9 Hex	1.2 Hex	2.0 Int.Hex	2.7 Int.Hex
Ex.Short (8)	-	AHD09MSH	AHD12MSH	-	-
Short (13)	ASD05SH	AHD09SH	AHD12SH	IHD20H	IHD27H
Middle (15)	-	-	AHD12MH	-	-
Long (18)	ASD05LH	AHD09LH	AHD12LH	-	-
Ex.Long (25)	-	-	AHD12EH	-	-

Machine Screw Driver



- Engine driven
- Tip holding function (except for the internal hex type)
- L of the internal hex type is 8

L \ Type	0.5 Slot	0.9 Hex	1.2 Hex	2.0 Int.Hex	2.7 Int.Hex
Osstem Torque (5)	-	-	OTH12S	-	-
Short (5.6)	AMSD05S	AMSD09S	AMSD12S	-	-
Long (11.6)	AMSD05L	AMSD09L	AMSD12L	EIHD20	EIHD27
Ex.Long (17.6)	-	-	AMSD12E	-	-

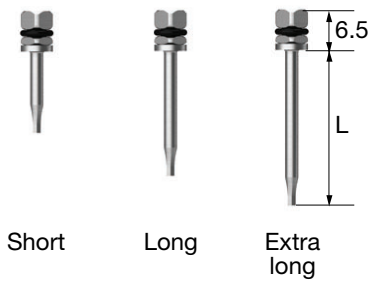
Application

Driver connected products
(Hand, machine screws, and torque drivers are all applicable)

Cover screw (US mini)
Healing abutment, UCLA,
Cemented abutment screw,
Mount screw
Esthetic abutment screw regular,
Esthetic-low abutment screw, standard
Wide esthetic-low abutment screw

Torque Driver

- Use with Torque Wrench
- Tip holding function
- Do not exceed the recommended torque value (over torquing may cause damage)
- Make sure fixture and driver is securely connected; loose connection may cause fixture fracture.
- When applying torque, keep the driver completely vertically (do not tilt)
- Replace the tip if there are any signs of wear and tear (bent, chipped, etc...)



L \ Type	0.5 Slot	0.9 Hex	1.2 Hex	2.0 Int.Hex	2.7 Int.Hex
Ex.Short (8)	-	-	TRHD12MS	-	-
Short (13)	TRSD05S	TRHD09S	TRHD12S	TIHD20S	-
Middle (15)	-	-	TRHD12M	-	-
Long (20)	TRSD05L	TRHD09L	TRHD12L	TIHD20L	TIHD27
Ex.Long (25)	TRSD05E	-	TRHD12E	-	-

Rigid Outer Driver

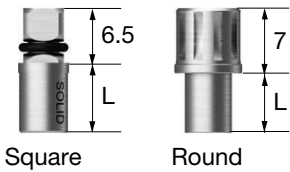
- Driver for rigid abutment
- Recommended tightening torque: 30Ncm

L \ Abutment D	Ø4.0	Ø4.5	Ø5.0	Ø6.0
Short (16.5)	ORDMS	ORD45S	ORDRS	ORDWS
Long (21.5)	ORDML	ORD45L	ORDRL	ORDWL



Solid Abutment Driver

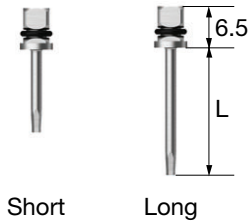
- Driver for solid abutment
- Before applying torque, connect and match the solid abutment groove with the driver's triangle marker
- Recommended tightening torque: 30Ncm



Repair Torque Driver

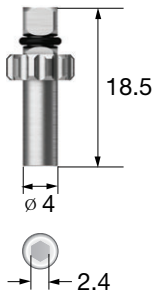
- Handle size has been decreased compared to the torque driver (ø 2.1 → ø 1.6)
- Minimizes the size of the crown hole during repair or SCRP procedure

L \ Type	1.2 Hex
Short (13)	TRHD12SR
Long (20)	TRHD12LR



O-ring Abutment Driver

- Driver for o-ring abutment



Regular

L \ Type	Square	Round
Short (6)	SDSS	SDRS
Long (12)	SDSL	SDRL

Wide

L \ Type	Square
Short (10)	SD60S

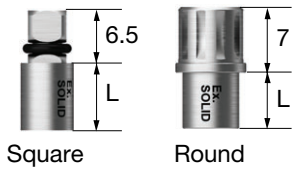


Excellent Solid Abutment Driver

- Driver for excellent solid abutment
- Before applying torque, connect and match the solid abutment groove with the driver's triangle marker
- Recommended tightening torque: 30Ncm

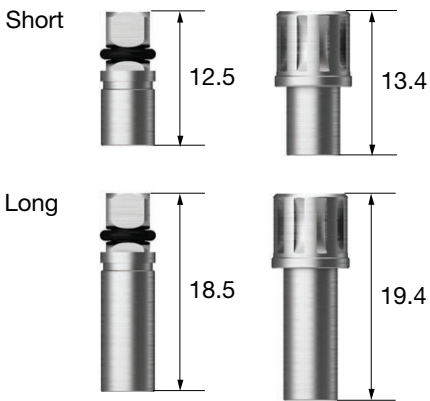
Regular

L \ Type	Square	Round
Short (6)	 ESDSS	 ESDRS
Long (12)	 ESDSL	 ESDRL



Wide

L \ Type	Square
Short (10)	 ESD60S



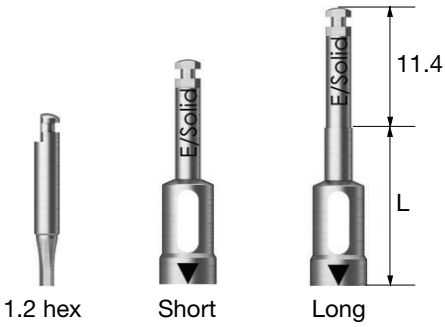
Octa Abutment Driver

- Driver for octa abutment
- Recommended tightening torque: 30Ncm

L \ Type	Square	Round
Short	ODSS	ODRS
Long	ODSL	ODRL

Osstem Torque Driver

- Driver exclusively for the Osstem torque. Do not use with other general hand pieces
- Match the driver's triangle marker with the groove or cross-section of an abutment
- Solid and excellent solid drivers are only compatible with the $\varnothing 4.8$
- 1.2 hex type L is 5

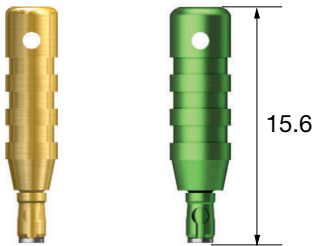


L \ Type	1.2 Hex	Rigid 4.0	Rigid 4.5	Rigid 5.0	Rigid 6.0	Solid	Excellent Solid
Short (10)	OTH12S	OTR40S	OTR45S	OTR50S	OTR60S	OTS48S	OTE48S
Long (15)	-	OTR40L	OTR45L	OTR50L	OTR60L	OTS48L	OTE48L

Path Probe for TS

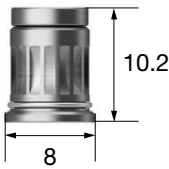
- Checks the implant's path and measures the height of the gingiva after placing a TS fixture
- C = Connection

C	Mini	Regular
	GIPAP-3016A	GIPAP-3516A



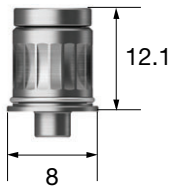
Torque Connector

- Connects the torque square driver to the bi-directional torque wrench



Machine Driver Connector

- Connects the machine square driver to the bi-directional torque wrench



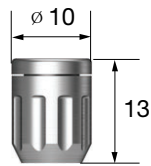
Reamer Bite

- Cutting blade removes the casting body's internal lip of the plastic coping



Driver Handle

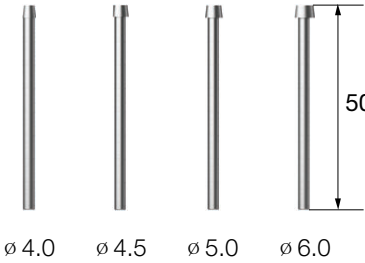
- Connects to the torque driver



Reamer Tip for Rigid Abutment

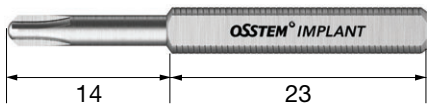
- Guides the reamer when removing the casting body's internal lip of the plastic coping

D	Ø4.0	Ø4.5	Ø5.0	Ø6.0
	GSRFRT400	GSRFRT450	GSRFRT500	GSRFRT600



Dalbo Plus Screw Driver

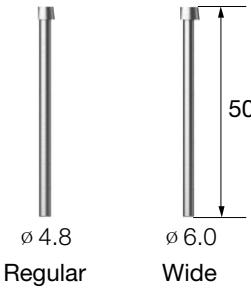
- Adjusts the retention force of the Dalbo plus attachment



Reamer Tip for Solid, Excellent Solid Abutment

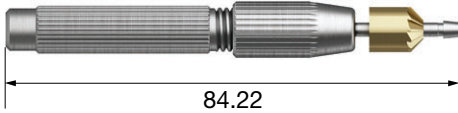
- Guides the reamer when removing the casting body's internal lip of the plastic coping
- The guide for Ø 6.0 Solid and excellent Ø 4.8 Solid are interchangeable

D	Ø4.8	Ø6.0
Solid	FRTS480	FRTS600
Ex.Solid	FRTE480	FRTE600



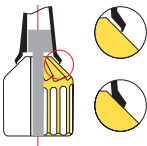
Finishing Reamer Set

- Removes the casting body's internal lip of the plastic coping



Reamer user guide

1. Select a reamer tip that is the same size as the abutment, and connect it to the bum-out cylinder
2. Firmly grasp the casting body and rotate the Reamer Bite with consistent force
3. Ream the body until the it is clean and free of the excess casting



CAS KIT (HCRSNK)

For TSII / III SSII / III USII / III

Lower plate components

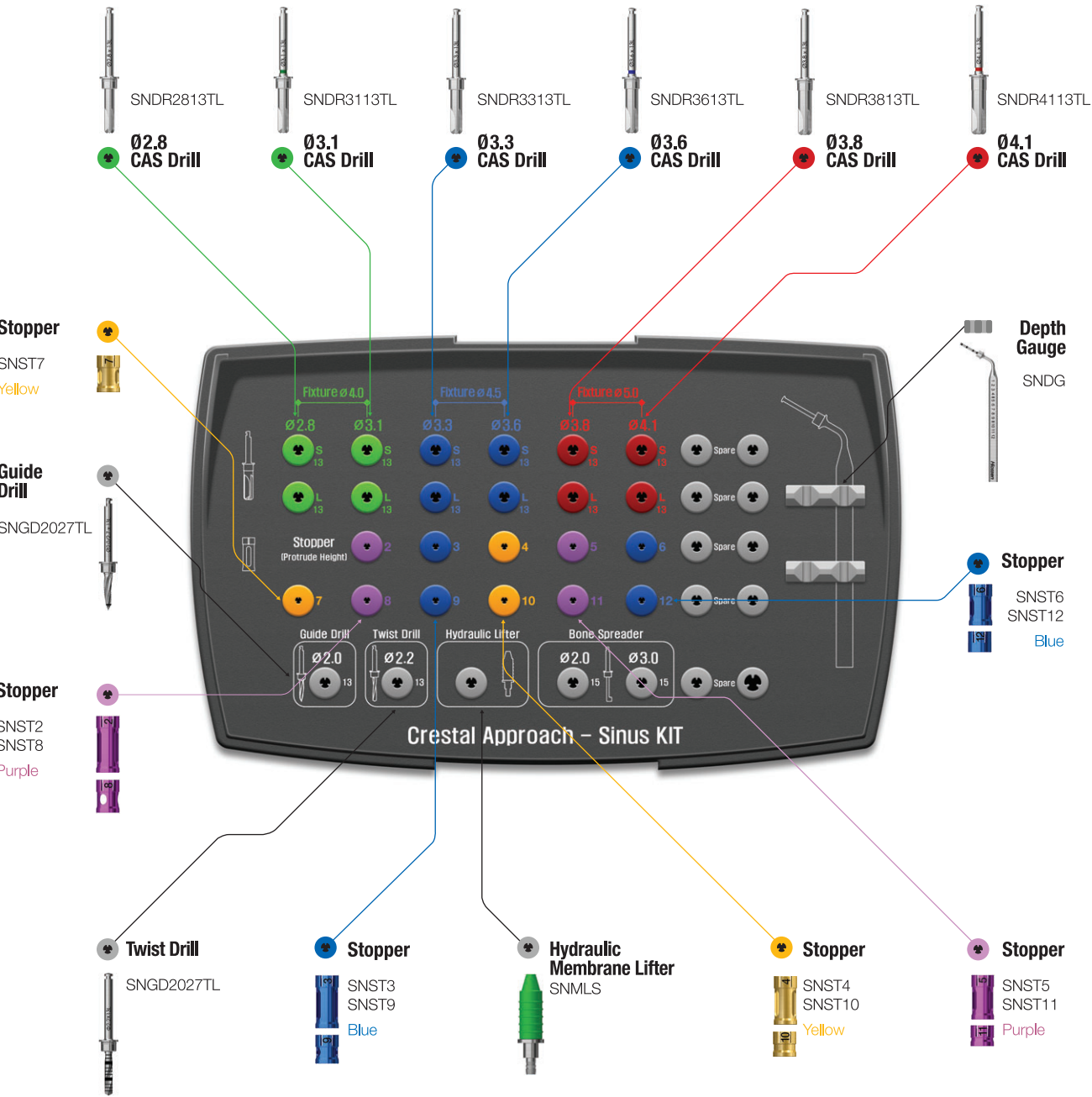
Bone Carrier Head
SNBCH30



Bone Carrier
SNBCS35



Bone Condenser
SNBC1114

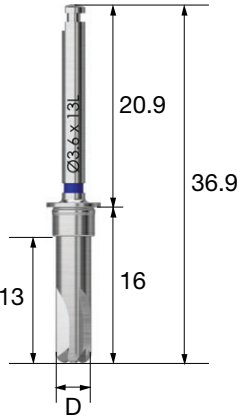


CAS KIT Surgical Instruments

CAS Drill

- Specialized drill designed to penetrate the sinus floor without damaging the Schneiderian membrane by forming a conical bone lid.
- Four blade body drills well at both high and low speeds and is capable of collecting autogenous bone at low speeds.
- Use with stoppers for safe and controlled penetration
- Final drill should be based on the bone quality, regardless of the fixture type (straight or tapered).
- Recommended speed: 400~800rpm (First time: 400rpm)

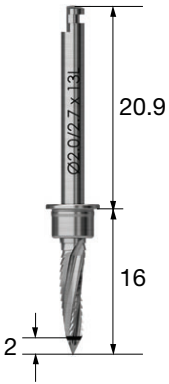
D	Ø2.8	Ø3.1	Ø3.3	Ø3.6	Ø3.8	Ø4.1
	SNDR2813TL	SNDR3113TL	SNDR3313TL	SNDR3613TL	SNDR3813TL	SNDR4113TL



Guide Drill

- Marks the fixture's insertion site
- Side cutting blades trim the extraction socket sidewalls
- Marker 2mm from the tip

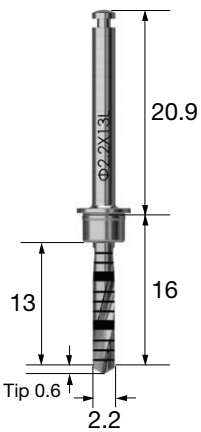
D	Ø2.0 / 2.7
	SNGD2027TL



Ø2.2 Twist Drill

- Recommend under-drilling by 1mm less than the bone's thickness
- Use with stoppers for safe and controlled drilling
- The tip measures an additional 0.6 mm

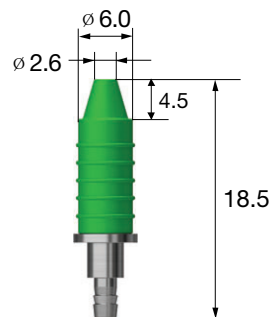
D	Ø2.2
	SNTD2213TL



Hydraulic Membrane Lifter Set

- Hydraulic pressure is used to separate and lift the sinus membrane
- Securely fits Ø2.8 to Ø4.1 CAS drilled osteotomies

D	Ø2.6 / 6.0
	SNMLS



CAS KIT Surgical Instruments

Stopper

- Laser marked numbers indicate the remaining tool's (drill, instruments, etc.) length
- Color-coded by length
- Drill and Stopper recommended number of usage is 50 times

L	2	3	4	5	6	7	8	9	10	11	12
											
Color	Purple	Blue	Yellow	Purple	Blue	Yellow	Purple	Blue	Yellow	Purple	Blue

Bone Carrier

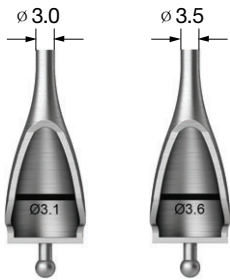
- Handle for the Bone Carrier Head
- Connect the Bone Carrier Head and tighten at the opposite end.
- Connects both heads (SNBCH30 or SNBCH35)



D	Ø3.1	Ø3.6
	SNBCH30	SNBCH35

Bone Carrier Head

- Cone shaped with an extended tip that reaches the sinus cavity and prevents bone material from spilling out.
- SNBCH30 for Ø 3.1/ Ø 3.3 CAS drilled osteotomy
- SNBCH35 for Ø 3.6/ Ø 3.8/ Ø 4.1 CAS drilled osteotomy
- Fill the reservoir with bone material (up to the marker), with the Bone Condenser shuttle the material in small quantities into the sinus. Repeat the process as necessary.



Bone Condenser

- Safely shuttles bone material through the Bone Carrier Head into the sinus cavity. - SNBCH30: Use Ø 1.1 / SNBCH35: Use Ø 1.4

D	Ø1.1 / 1.4
	SNBC1114



Hydraulic Membrane Lifter Tube

- Tubing connects to the Hydraulic Membrane Lifter and saline filled syringe.

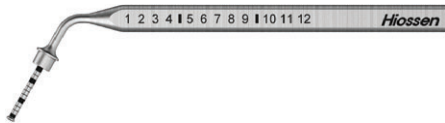
D	Ø3.1	Ø3.6
	SNMT	



Depth Gauge

- Measures the thickness of the residual bone and checks to see if the sinus is properly separated from the floor.

D	Ø3.1	Ø3.6
	SNDG	



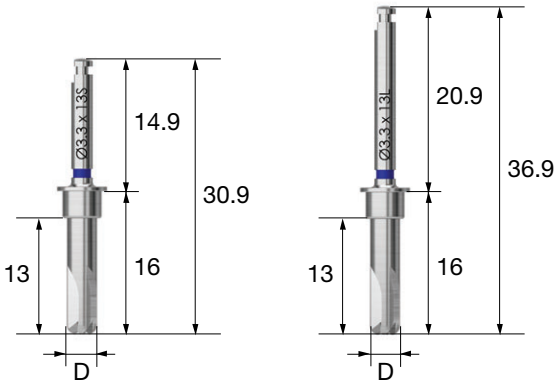
CAS KIT Plus (HCRSNKP)

Incorporates six short CAS Drills

CAS Drill

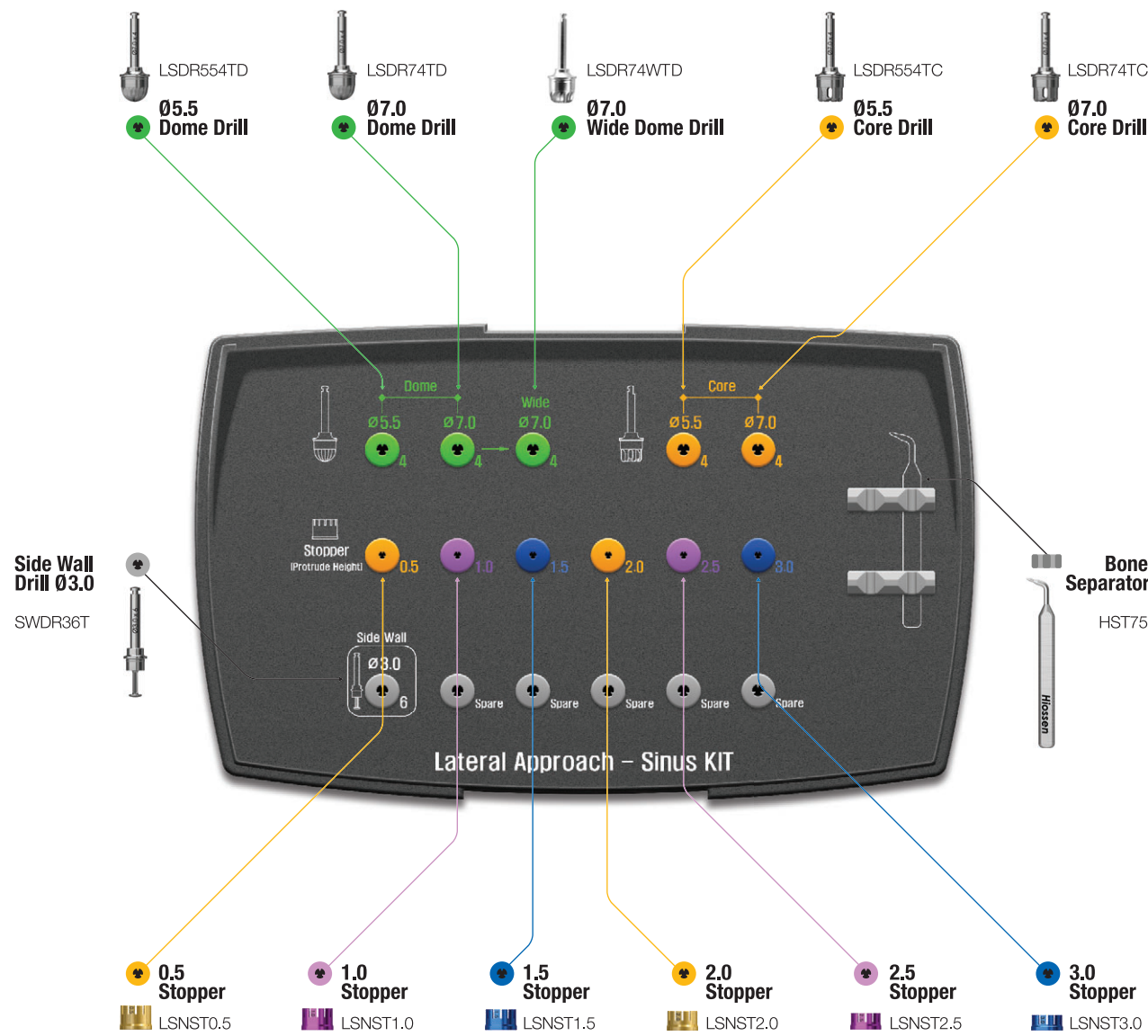
- Specailized drill designed to penetrate the sinus floor without damaging the Schneiderian membrane by forming a concial bone lid.
- Four blade body drills well at both high and low speeds and is capable of collecting autogenous bone at low speeds.
- Stopper system for safe and controlled penetration of the sinus floor without membrane damage.
- Final drill should be based on the bone quality, regardless of the fixture type (straight or tapered).

L \ D	Ø2.8	Ø3.1	Ø3.3	Ø3.6	Ø3.8	Ø4.1
Short	SNDR2813TS	SNDR3113TS	SNDR3313TS	SNDR3613TS	SNDR3813TS	SNDR4113TS
Long	SNDR2813TL	SNDR3113TL	SNDR3313TL	SNDR3613TL	SNDR3813TL	SNDR4113TL



LAS KIT (HLRSNK)

- Lateral approach sinus lift surgery.
- Dome drills and core drills safely form a lateral window; available sizes $\varnothing$ 5.5 and $\varnothing$ 7.0
- Stoppers attach to LAS Kit tools for safe and control penetration without membrane damage.

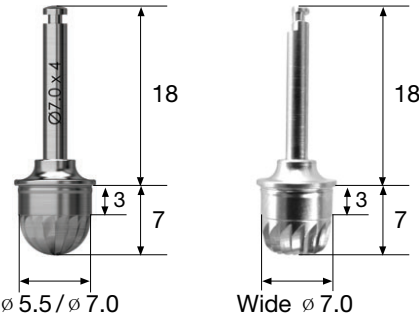


LAS KIT Surgical Instruments

Dome Drill

- Forms a bone window, at the same time collects autogenous bone
- Excellent penetration due to the Macro and micro cutting blades
- Stopper safely controls the penetration depth
- Recommended speed: 1,200 to 1,500 rpm
- ※ Excessive drilling may cause damage to the membrane.

L \ D	05.5	07.0	Wide 07.0
25	LSDR554TD	LSDR74TD	LSDR74WTD



Core Drill

- Forming a bone window and cores a bone lid
- Excellent cutting ability and based on the CAS drill design there is no membrane damage
- Recommended speed: 1,200 to 1,500rpm
- ※ Excessive drilling may cause damage to the membrane

L \ D	05.5	07.0
25	LSDR554TC	LSDR74TC



Side Wall Drill

- Enlarges the bone window after using the dome drill
- Cut using the blade 1mm above the bottom of the drill
- Recommended speed: 1,500rpm



Height of side cutting blade (mm)	1.0	2.0	3.0	4.0	5.0
CAS KIT stopper (mm)	8.0	9.0	10	11	12
Side wall drill + CAS KIT stopper					

※ Stopper safely controls the penetration depth



LAS KIT Surgical Instruments

Bone Separator

- Removes the bone core inside the core drill



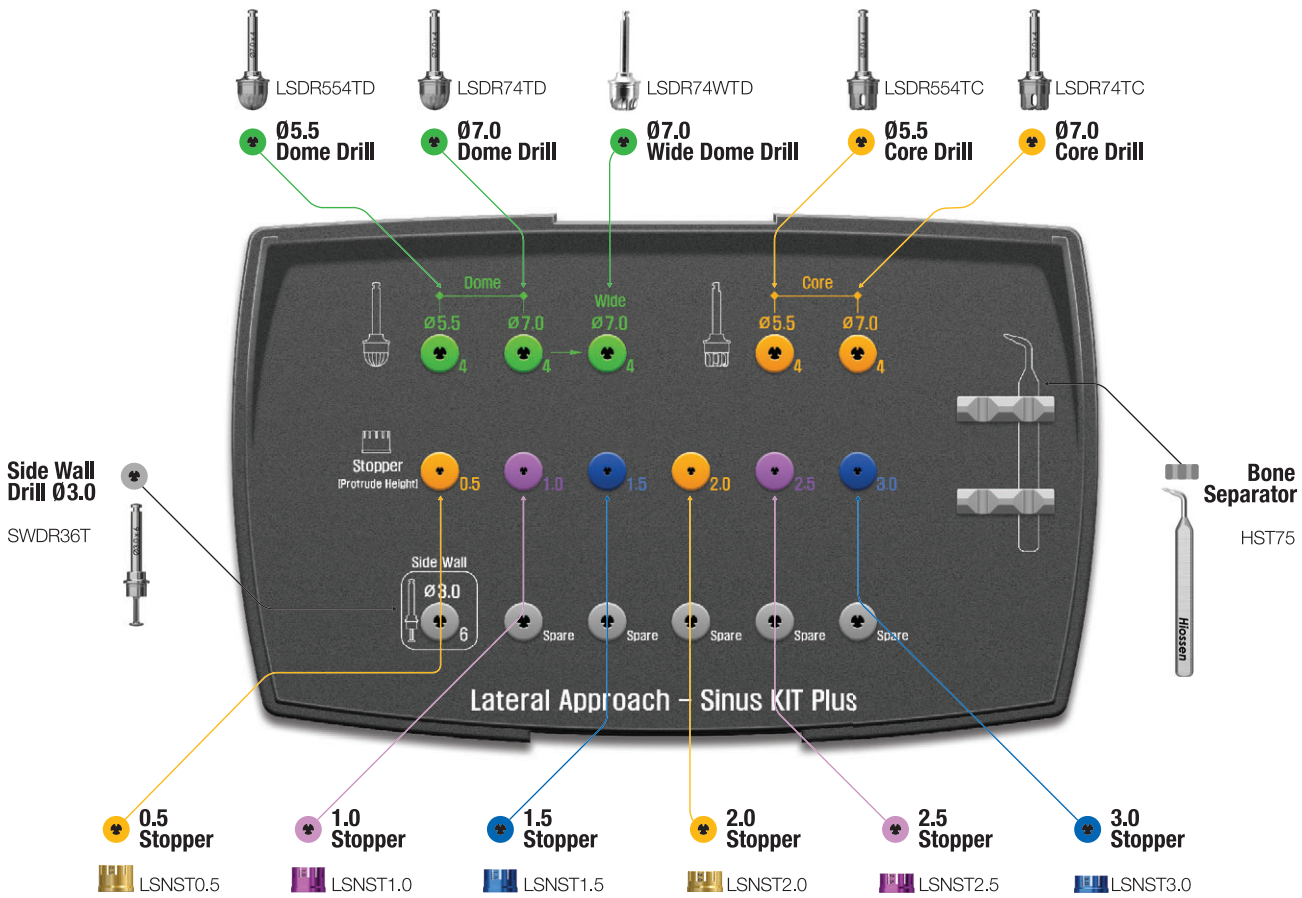
Stopper

- Laser marked numbers indicate the remaining tool's (drill, instruments, etc.) length
- Color-coded by length
- Drill and Stopper recommended number of usage is 50 times

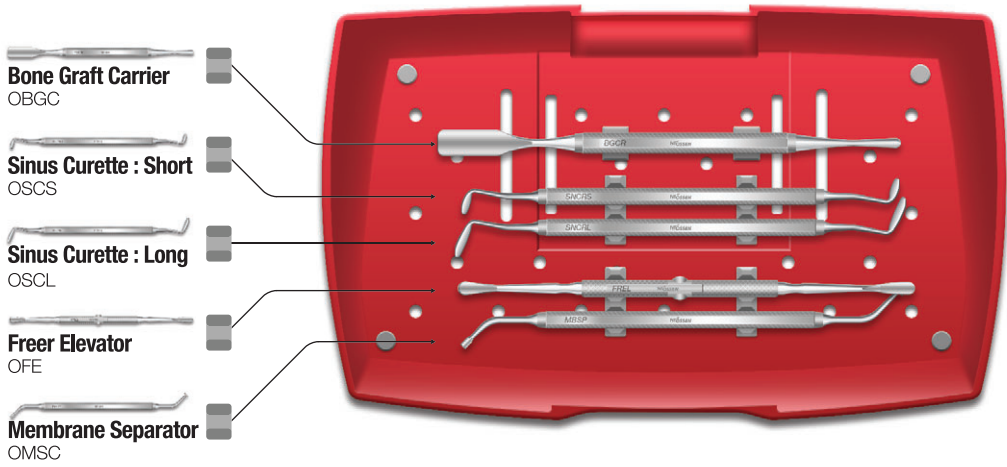
L	0.5	1.0	1.5	2.0	2.5	3.0
Color	Yellow	Purple	Blue	Yellow	Purple	Blue

LAS KIT Plus (HLRSNKP)

- Incorporates six additional sinus lifting tools

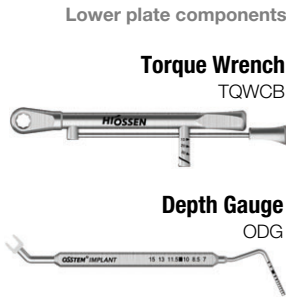


LAS KIT Plus Lower Plate



ESSET KIT (HESEK)

For TSII / III SSII / III USII / III

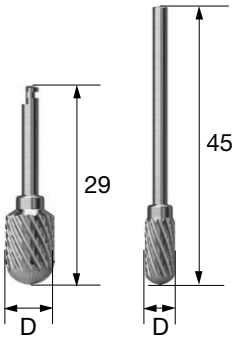


ESSET KIT Surgical Instruments

Crest Remover

- Grinds down narrow aveolar ridge, and creates an indentation for the fixture's insertion site
- Angled Type recommended speed: 1,200 to 1,500 rpm
- Straight Typ recommended speed: 15,000 to 30,000 rpm

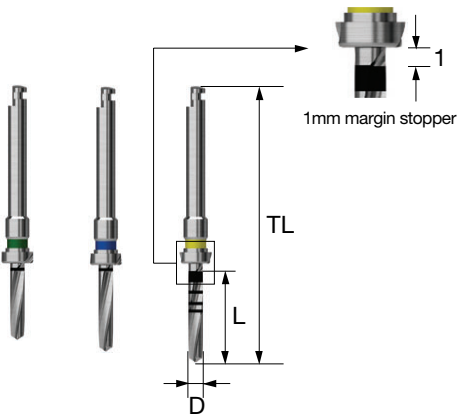
L \ D	Ø5.0	Ø7.0
29	CERM50A	CERM70A
45	CERM50S	-



Twist Drill

- Marks the fixture's insertion site
- Slide on the Stopper to control the depth
- Recommended speed: 1,200 to 1,500rpm

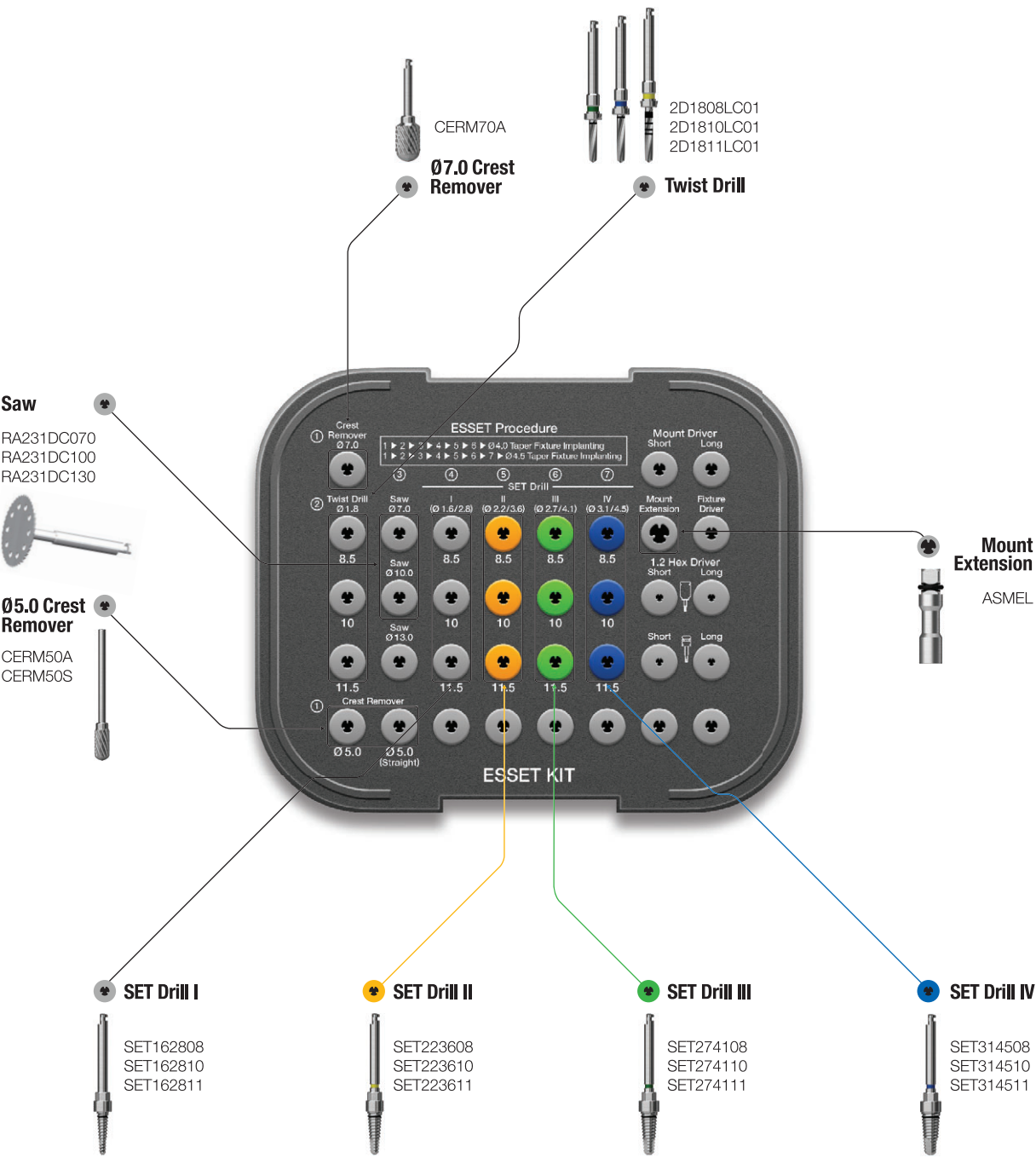
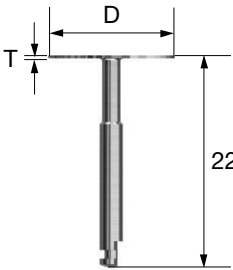
L \ TL \ D	Ø1.8
8.5 \ 33	2D1808LC01
10 \ 34.5	2D1810LC01
11 \ 36	2D1811LC01



Saw

- Saws narrow aveolar ridge
- Saw vertically first, then saw from the mesial to the distal
- Recommended speed: 1,200 to 1,500rpm
- T = Thickness

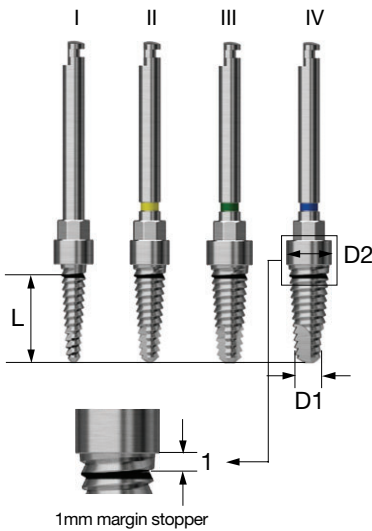
T \	Ø7.0	Ø10.0	Ø13.0
0.3	RA231DC070	RA231DC100	RA231DC130



SET Drill

- Expands narrow aveolar ridge
- Use the SET drills in numerical order based on the diameter of the fixture
F4.0: I → II → III / F4.5: I → II → III → IV
- Recommended speed: 25 to 35rpm

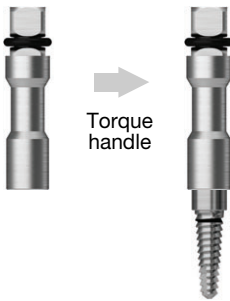
L	Type	I	II	III	IV
	D1 / D2	Ø1.6 / 2.8	Ø2.2 / 3.6	Ø2.7 / 4.1	Ø3.1 / 4.5
8.5		SET162808	SET223608	SET274108	SET314508
10		SET162810	SET223610	SET274110	SET314510
11.5		SET162811	SET223611	SET274111	SET314511



Mount Extension

- Connect with SET Drills for manual torque

ASMEL



Torque Wrench

- Use with Mount Extension and SET Drills

TQWCB



Depth Gauge

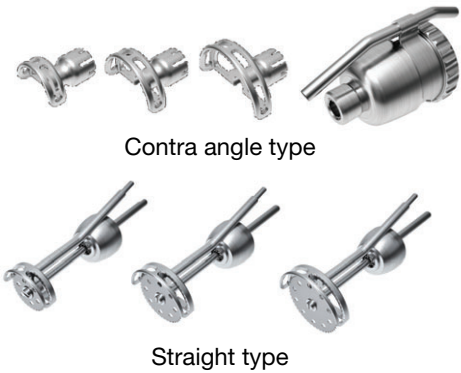
- Releases a wedged SET Drill due to over torquing and fir when the hand piece ceases because bit is stuck. Use with an open wrench.

ODG



Saw Protector

- Saw cover prevents debris from ejecting outside the oral cavity and protects adjent soft tissue
- Cover can rotate 360° adding convenience during surgery.
- Contra angle type: Detachable saw cover - **KaVo (CL 3-09, S201L), W&H (WS-75)**
- Straight type: Integrated saw cover - **KaVo (CL10)**
- ※ Use an appropriate saw
- ※ Cover and body need to be ordered separately



Type	D	Cover				Body
		Ø7.0	Ø10.0	Ø13.0	Ø15.0	
Kavo	Contra Angle Type	SP07AC	SP10AC	SP13AC	-	SPAB
	Straight Type	-	SP10SC	SP13SC	SP15SC	-
W&H	Contra Angle Type	SP07ACW	SP10ACW	SP13ACW	-	SPABW

MS KIT (OMSK)

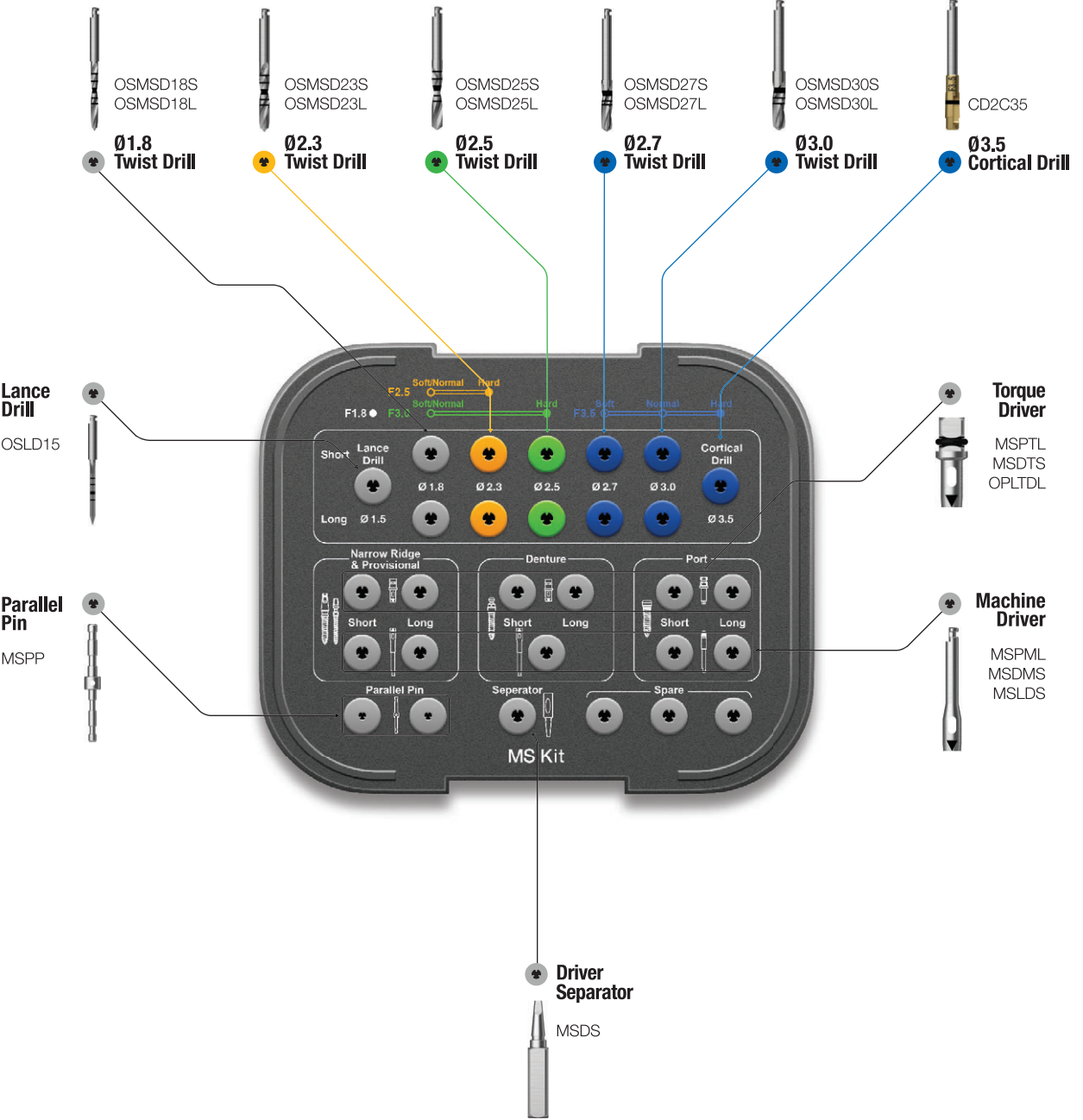
For MS

Lower plate components

Depth Gauge
MSDG

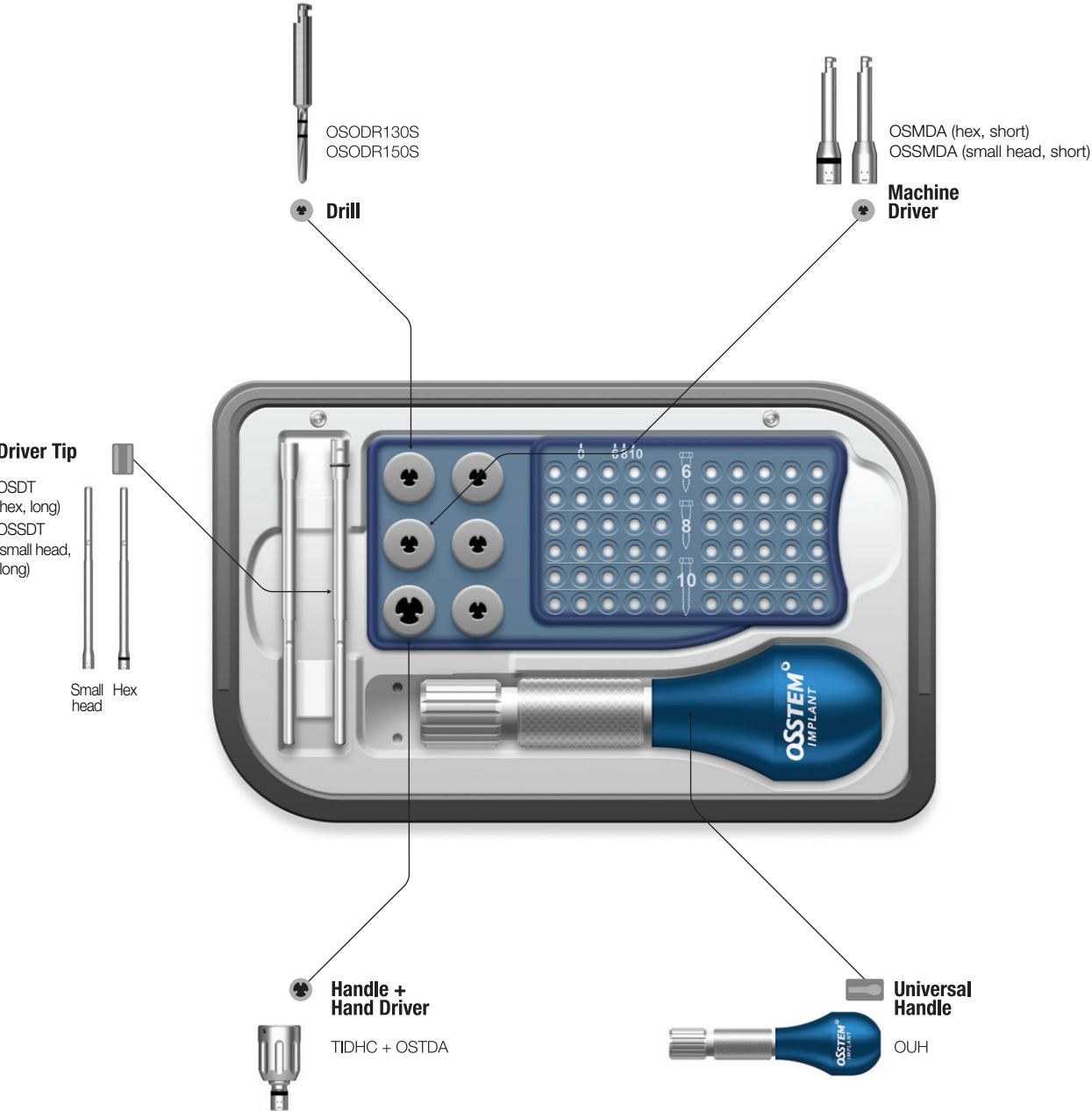


Ratchet Wrench
CITQW-1185A



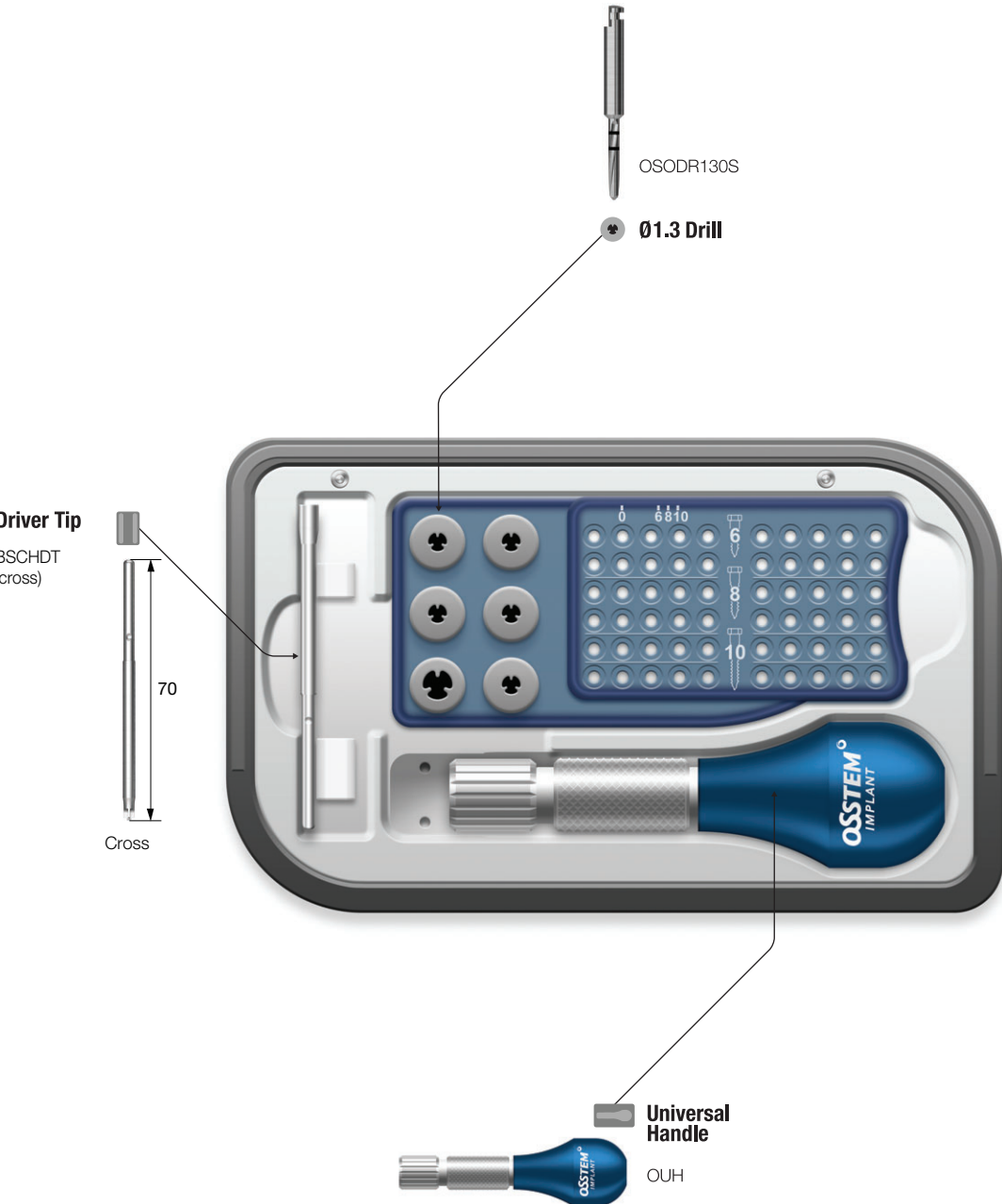
Ortho KIT (OOKS)

For OS



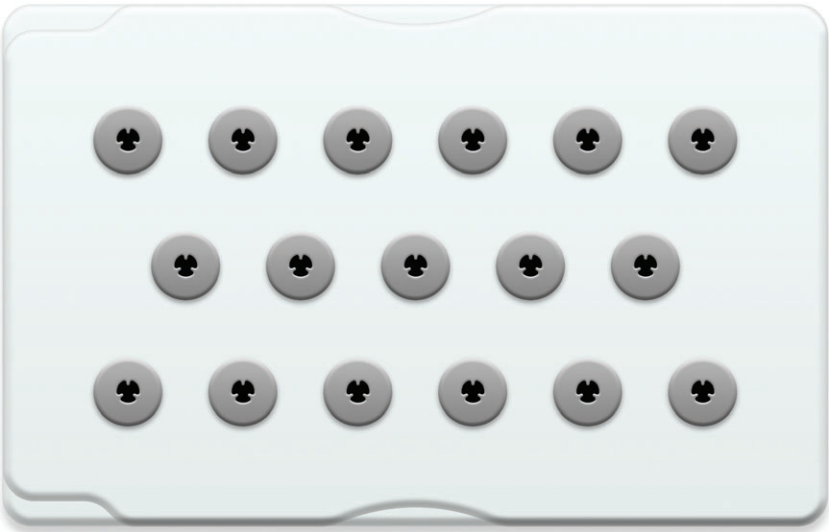
Bone Screw KIT (BSSTKT)

For BS



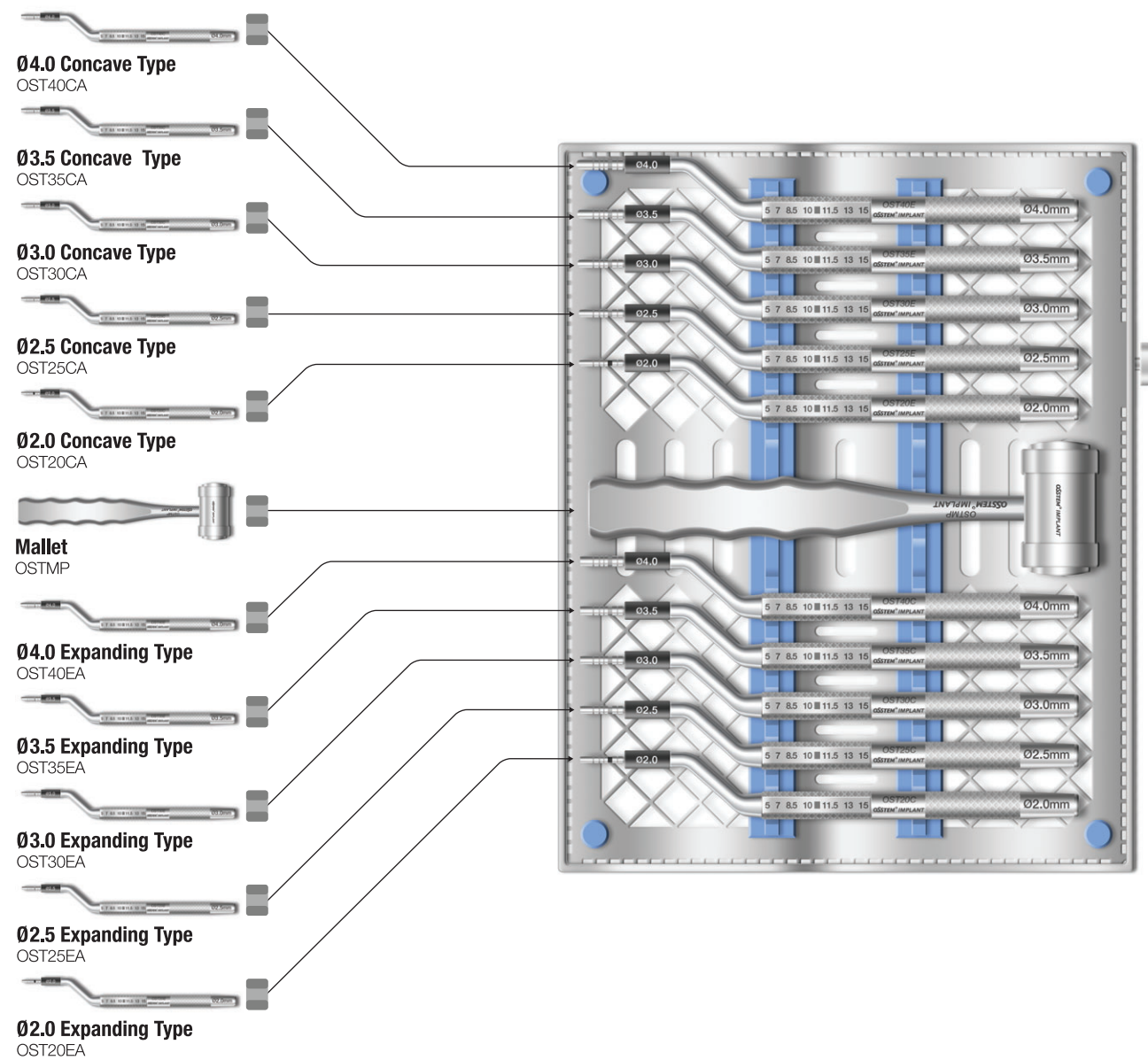
Custom KIT (OCTK)

- Sterilizable case for storing extra tools
- Includes three types of rubber (large, medium, and small) holders
- Sterilization parameters (132°C, 15min)



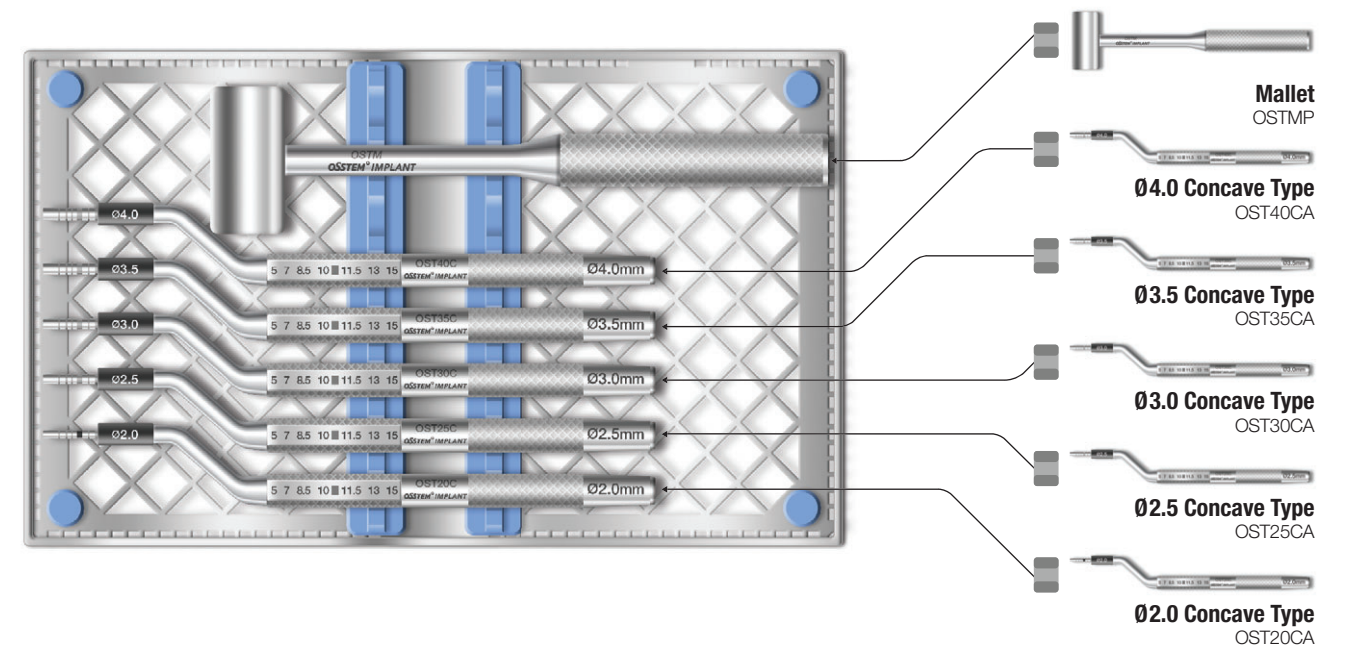
Osteo KIT (OSTK)

- Crestal approach sinus lift surgery
- Osteotome is designed to compact bone while penetrating the sinus floor.
- Includes stopper system for safe and controlled penetration.



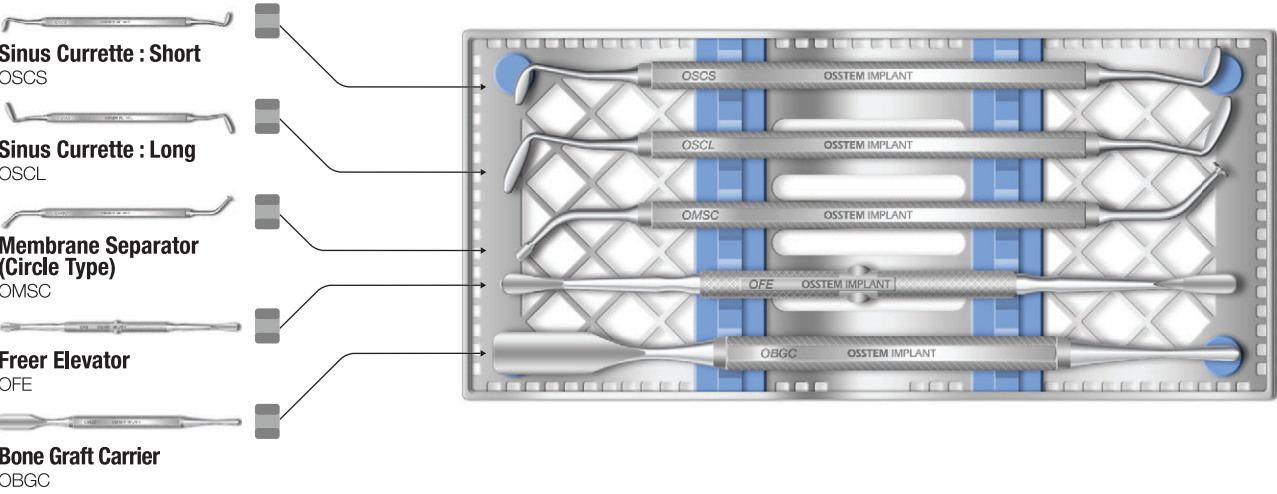
Osteotome KIT (AOST)

- Crestal approach sinus lift surgery
- Concave type only
- Includes stopper system for safe and controlled penetration.



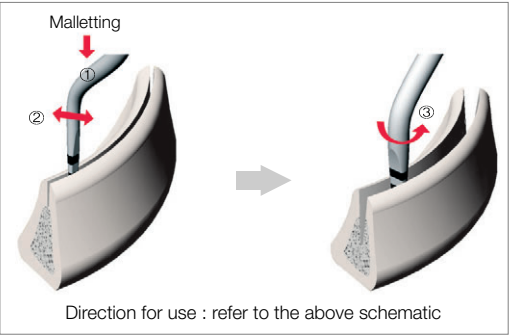
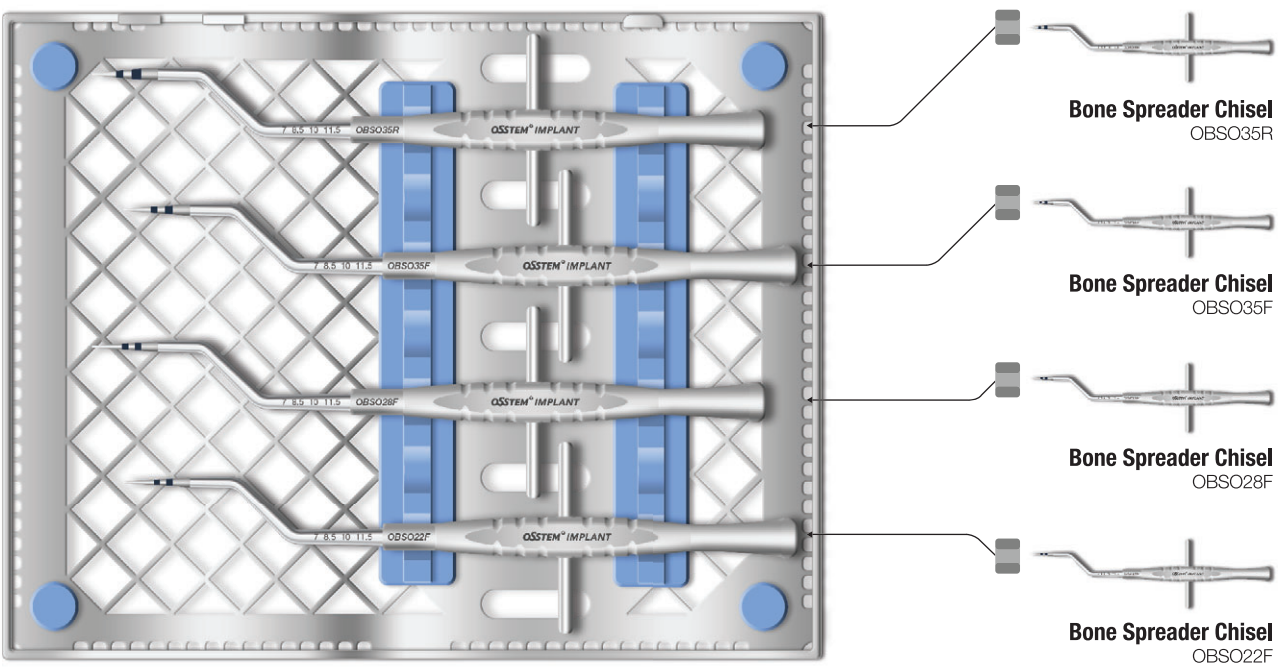
Sinus KIT (ASLK)

- Tools for lateral approach sinus floor elevation surgery
- Components (5 types)
 - Freer elevator : OFE
 - Bone graft carrier : OBGC
 - Membrane separator (circle type) : OMSC
 - Sinus currette-short : OSCS
 - Sinus currette-long : OSCL

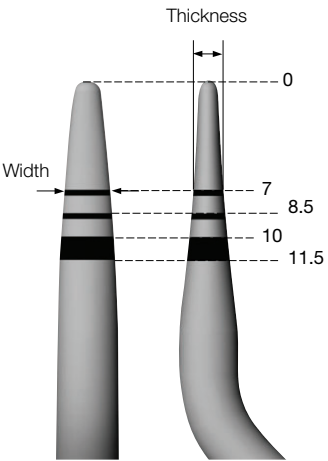


Bone Spreader KIT (OBSOK)

- Expands narrow alveolar ridge
- Offset type
- Components (4 types)
 - OBSO22F, OBSO28F, OBSO35F, OBSO35R



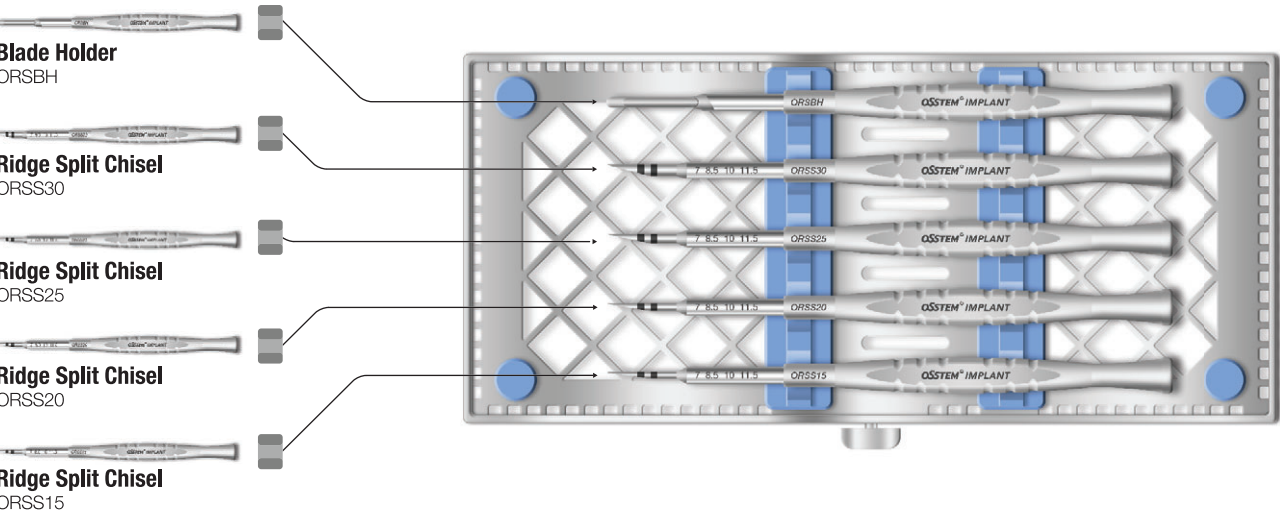
- Use for alveolar bone expansion
- Offset type for easy operation
- Depth marking corresponding to the implant length.



		(Unit : mm)			
Code	Spec.	Tip length			
		7	8.5	10	11.5
OBSO22F	Thickness	1.15	1.3	1.45	1.6
	Width	2.1	2.2	2.2	2.2
OBSO28F	Thickness	1.15	1.3	1.45	1.6
	Width	2.65	2.8	2.8	2.8
OBSO35F	Thickness	1.3	1.45	1.6	1.8
	Width	3.3	3.5	3.5	3.5
OBSO35R (round type)	Thickness	1.85	2.1	2.3	2.55
	Width	3.3	3.5	3.5	3.5

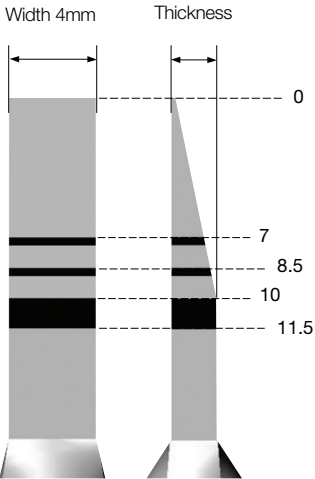
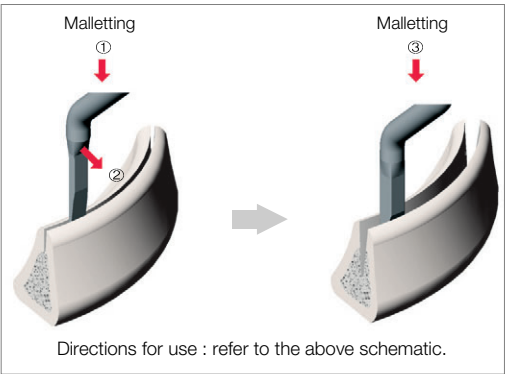
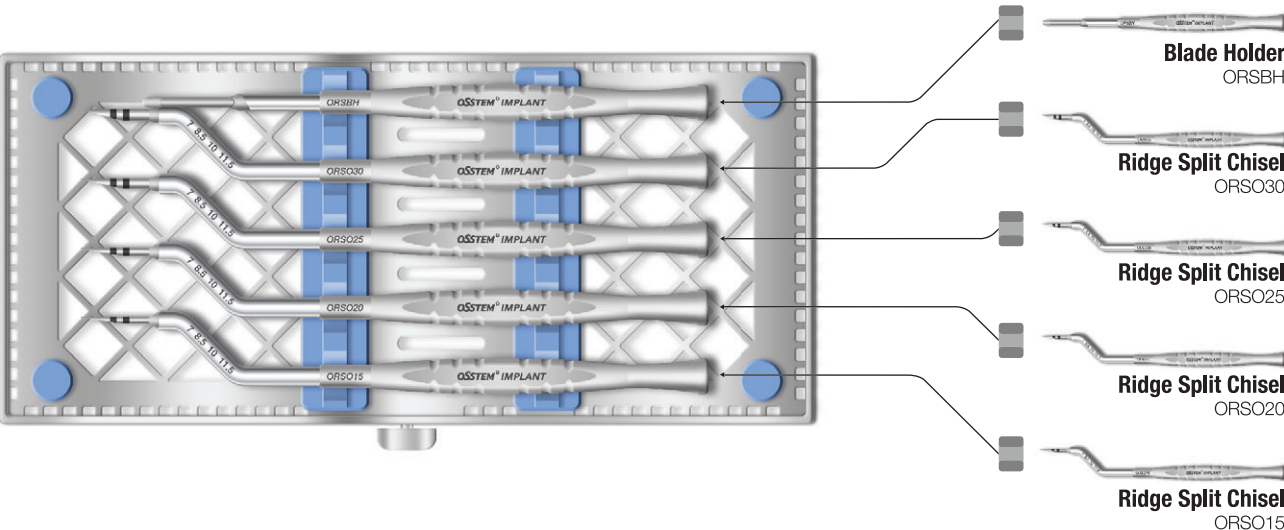
Ridge Split KIT - Straight (ORSSK)

- Chisel: Expands narrow alveolar ridge
- Blade holder: Cuts poor bone quality using a bur, malletting is possible, use a #15 blade
- Components
 - Ridge split chisel : ORSS15, ORSS20, ORSS25, ORSS30
 - Blade holder : ORSBH

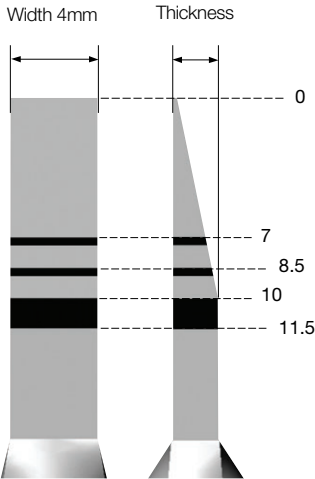


Ridge Split KIT - Offset (ORSOK)

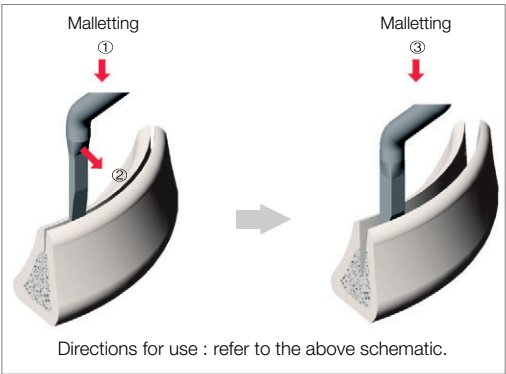
- Chisel: Expands narrow alveolar ridge
- Blade holder: Cuts poor bone quality using a bur, malletting is possible, use a #15 blade
- Components
 - Ridge split chisel : ORSO15, ORSO20, ORSO25, ORSO30
 - Blade holder : ORSBH



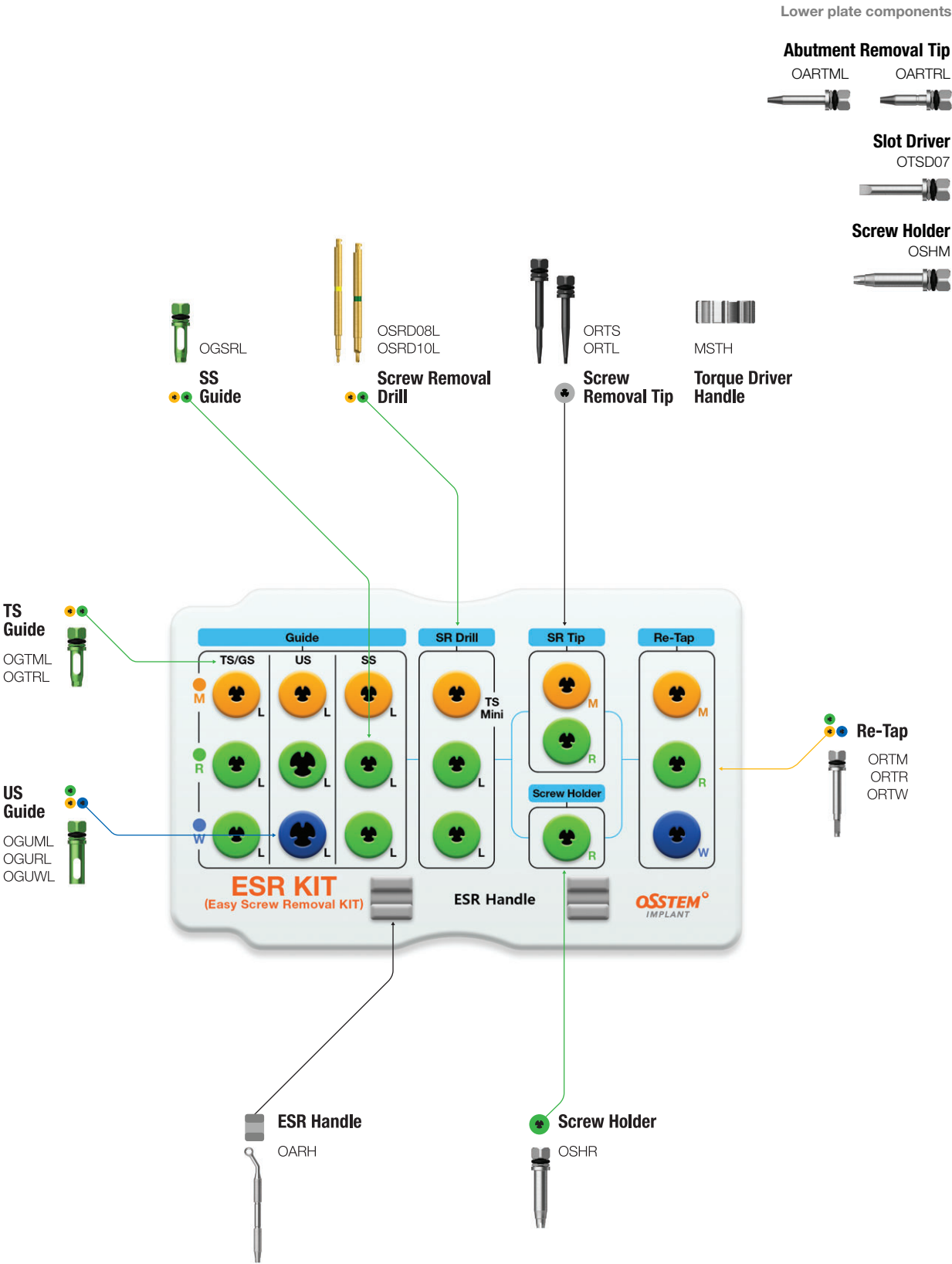
		Tip length			
Code	Spec.	7	8.5	10	11.5
ORSS15	Thickness	1.1	1.27	1.5	1.5
	Width	4	4	4	4
ORSS20	Thickness	1.45	1.7	2.0	2.0
	Width	4	4	4	4
ORSS25	Thickness	1.8	2.15	2.5	2.5
	Width	4	4	4	4
ORSS30	Thickness	2.15	2.5	3.0	3.0
	Width	4	4	4	4



		Tip length			
Code	Spec.	7	8.5	10	11.5
ORSO15	Thickness	1.1	1.27	1.5	1.5
	Width	4	4	4	4
ORSO20	Thickness	1.45	1.7	2.0	2.0
	Width	4	4	4	4
ORSO25	Thickness	1.8	2.15	2.5	2.5
	Width	4	4	4	4
ORSO30	Thickness	2.15	2.5	3.0	3.0
	Width	4	4	4	4



ESR KIT Easy Screw Removal KIT (OESRK)



ESR KIT Surgical Instruments

Reverse Driver

- Removes fractured screws
- Select the propriate Guide that matches the fixture
- Operate the driver in reverse, when the red marker appears above the Guide, stop and disconnect the driver. Connect the Screw Holder to remove the screw.
- For hand mode / Rotate counterclock wise / Number of usages: 10 times
- F = Fixture

L \ F	Mini	Regular / Wide
Short	-	ORVDRS
Long	ORVDML	ORVDRL



Screw Removal Drill (SR Drill)

- Drills a hole in a fractured screw
- Make sure to connect the guide before use; irrigate generously with saline solution and suction out any debris
- Available in Long and Short lengths for different intermaxillary distances
- Drill until the color marker is no longer visible
- Recommended speed: 1,200 to 1,500 rpm (counterclock wise)
- ※ Connect the guide before use/Do not apply excessive vertical force/Do not clean with hydrogen peroxide.
- ※ Disposable; do not re-use
- Short: Single unit purchase available.
- F = Fixture

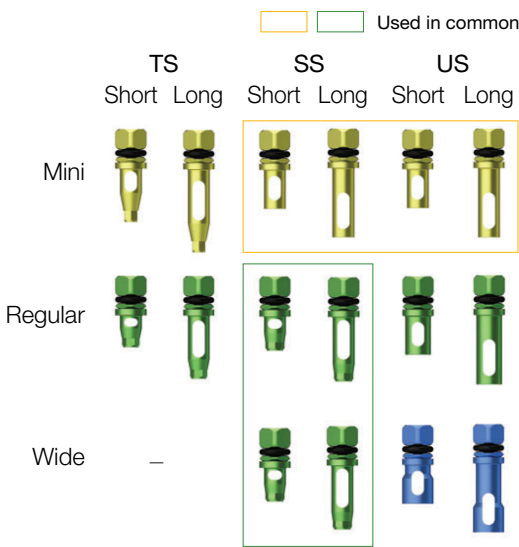
L \ F	Mini	Regular / Wide (GS/TS/SS/US)
Short	OSRD08S	OSRD10S
Long	OSRD08L	OSRD10L



Guide

- Centers and guides Reverse Driver, Screw Removal Drill (SR drill), Re-tap, and minimizes vibration
- Available in Long and Short lengths for different intermaxillary distances
- Connect to ESR Handle before use
- Short: Single unit purchase available
- F = Fixture

F \ Type	TS (Hex)	SS (Octa)	US (Hex)
	Short Long	Short Long	Short Long
Mini	OGTMS OGTM	OGUMS OGUML	OGURS OGURL
Regular	OGTRS OGTRL	OGSRS OGSRL	OGUWS OGUWL
Wide	-	-	-



Torque Driver Handle

- Manual handle for SR Tip, AR Tip, Screw Holder



MSTH

Screw Removal Tip (SR Tip)

- Engage counterclock wise into the drilled hole made by the Screw Removal Drill (SR Drill) of a factured screw, continue to rotate to remove screw.
- Rotation direction: Counterclock wise

※ Disposable; do not re-use.



Mini Regular

L	Mini	Regular / Wide
Short	ORT16S	ORTS
Long	ORT16L	ORTL

ESR Handle

- Centers and guides tools into the middle of the fixture



OARH

Abutment Removal Tip (AR Tip)

- Removes the remaining part of a factured abutment or mount still in a fixture.
- Engage the tip into the fractured abutment counterclock wise. Using forceps grasp the Removal Tip and rock back and forth until the factured abutment is freed.
- The tip can be used remove a screw with a stripped hex
 - To remove the screw, engage the tip into the stripped hex and rotate counterclock wise.
- F = Fixture



Mini Regular

F	Mini	Regular
Short	OARTMS	OARTRS
Long	OARTML	OARTRL
Ex.Long	OARTMEL	OARTREL

Screw Holder

- Grasps onto a protruding fracture screw and unscrews it
- Color-coded
- F = Fixture



Mini Regular Wide

F	Mini	Regular	Wide
	OSHM	OSHR	OSHW

Re-tap

- Re-threads the internal connection of a fixture, if the screw does not properly engage and tightens.
- Connects to a torque wrench or ratchet wrench to re-thread
- F = Fixture

F	Mini (M1.6)	Regular (M2.0)	Wide (M2.5)
	ORTM	ORTR	ORTW



Mini Regular Wide

Transfer Abutment Separate Tool

- Removes stuck or wedged non-hex transfer abutments
- Separate Tool tip fits mini abutments; regular tools can also be used through the second groove.
- After removing the abutment screw, insert the Separate Tool body into the abutment. Fasten the driver, securely joining the Separate Tool body and abutment. Remove the abutment. If this does not release abutment from the fixture, retighten with a ratchet wrench to the driver and try again.

Driver	Body	Set
TASD	TASB	TAST



Driver Body

Slot Driver

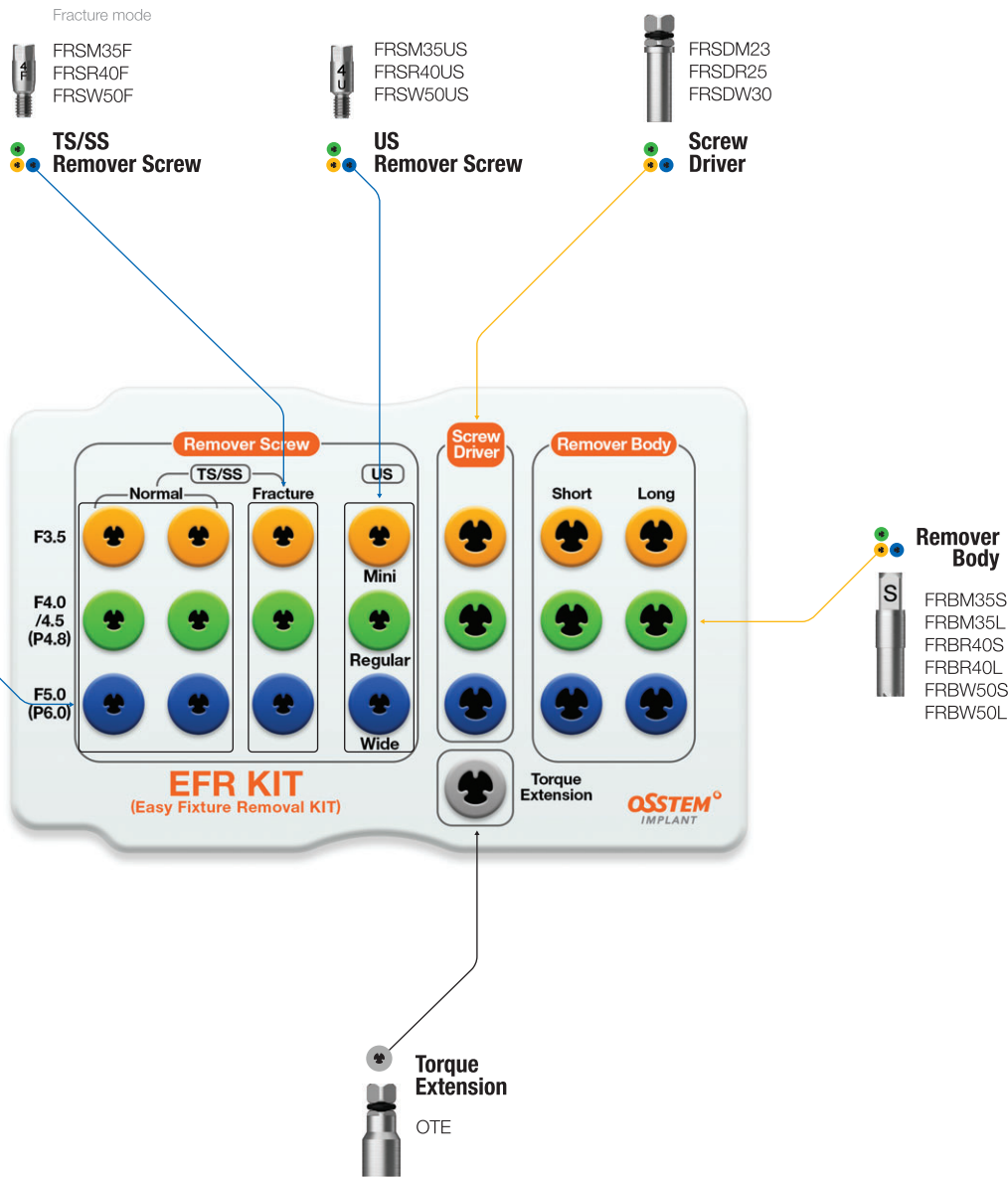
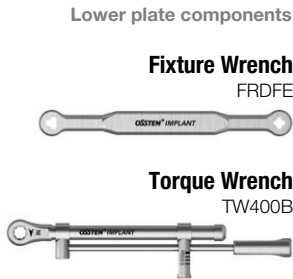
- Cut a slot on a stripped hex healing abutment, cover screw, or abutment screw using a Ø0.8 bur to unscrew.



OTSD07

EFR KIT Easy Fixture Removal KIT (OSFRK)

For TSII / III SSII / III USII / III Ultra-wide



EFR KIT Surgical Instruments

Remover Screw

- Connects to the failed implant and serves to support the Remover Body
- Available in different sizes to match the diameter of the fixture to be removed (TS/SS/US, normal/fracture)
- Fracture type is specifically for removing a fractured fixture
- Recommended tightening torque: regular/wide 100Ncm, mini 80Ncm
- ※ Disposable; do not re-use.
- F = Fixture
- P = Platform



Type \ F / P	Mini Ø3.5 / -	Regular Ø4.0~4.5 / P4.8	Wide Ø5.0 / P6.0
TS/SS Normal	FRSM35	FRSR40	FRSW50
Fracture	FRSM35F	FRSR40F	FRSW50F
US	FRSM35US	FRSR40US	FRSW50US

Screw Driver

- Connects and fastens the Remover Screw to the fixture
- Recommended tightening torque: regular/wide 100Ncm, mini 80Ncm
- F = Fixture

F	Mini	Regular	Wide
	FRSDM23	FRSDR25	FRSDW30



Remover Body

- Connects to a failed fixture via the Remover Screw and by applying counterclockwise torque, removes the implant.
- Available in different sizes to match the diameters of the fixture to be removed.
- ※ Disposable; do not re-use.
- F = Fixture

F	Mini	Regular	Wide
Short	FRBM35S	FRBR40S	FRBW50S
Long	FRBM35L	FRBR40L	FRBW50L



Torque Extension

- Extends the length of the Screw Driver and Remover Body (by 10mm)



Torque Wrench

- Connect with Screw Driver to fasten and Remover Body to remove the fixture
- Applies up to 400Ncm of torque (markers at 80/100/200/300/400Ncm).
- Torque by pulling the bar back until reaching the desired torque value.
- Clean and sterilize for storage.



Fixture Wrench

- Removes implants from the Remover Body after removing the fixture from the bone



SlowJec Anesthesia System -
Wireless & Painless anesthesia system

- Slowly injects anesthesia, minimizes pain and pressure to the injection site
- The system monitors soft tissue pressure and automatically stops injection if it surpasses a certain limit. Once the pressure disapates, the remaining dose is automatically delivered.
- No hand fatigue and more control over anesthetic usage
- No cords to get in the way; voice prompts sooth patients



Parallel Guide KIT

Prime KIT: OPGPK (optional tools are not included)
Advanced KIT: OPGAK (optional tools are all included)

Lower plate components

L-Wrench Option
LWC20H

Denture Guide Option
PGODA

Multi Joint Handle Option
MJH

GD2208NC
GS2213FNC
2D3011LC01

Guide Drill

SGB050 SGB080
SGB060 SGB090
SGB070 SGB100

Single Guide

Bridge Guide (Fan Type)
PGBRA070
PGBRA090
PGBRA110

Guide Pin
PGAP22

Bridge Guide (Compass Type)
PGBPA

Distance setup Pin
PGDSP

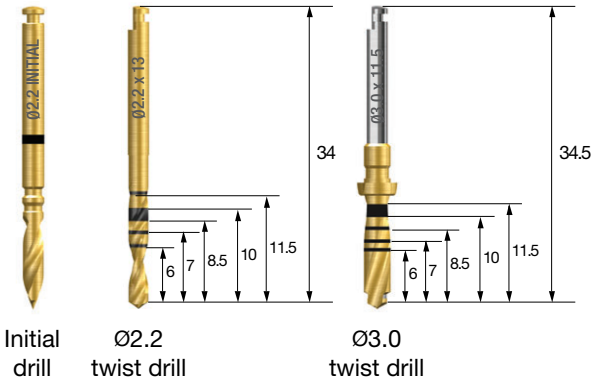
Parallel Guide KIT

Parallel Guide KIT Surgical Instruments

Guide Drill

- Initial drill: Drilling depth can be adjusted by fastening it to the Single Guide
- Ø 2.2 twist drill: Used with the Bridge Guide
- Ø 3.0 twist drill: Final drill

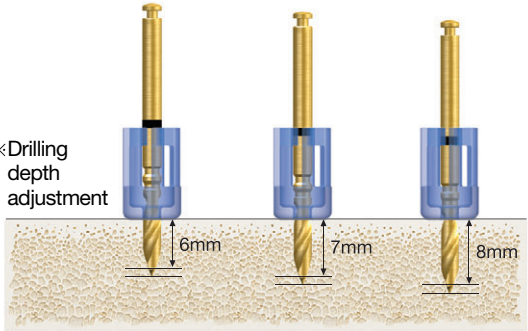
D	Ø2.2	Ø3.0
Initial drill	GD2208NC	-
Twist drill	GS2213FNC	2D3011LC01



Single Guide

- Transparent material indicates the location and direction of drilling
- Available in six sizes from Ø 5.0 to Ø 10.0, must take into account the mesiodistal crown diameters
- Packing unit: 2EA
- ※ Disposable; do not re-use
- ※ Drilling depth can be adjusted from 6 to 8mm, refer to the initial drill marker and top of the Single Guide marker.

F	Ø5.0	Ø6.0	Ø7.0	Ø8.0	Ø9.0	Ø10.0
	SGB050	SGB060	SGB070	SGB080	SGB090	SGB100



Guide Pin

- Checks drilling path and secures the Single Guide



Parallel Guide KIT

Surgical Instruments

Bridge Guide

- Adjustable drill guide for setting up the optimal implant placement and initial drilling sites.
- Fan type: Range between 7.0 mm to 12.5 mm, 0.5mm increments
- Compass type: Range between 5.0 mm to 24 mm, 1mm increments
- Set distance using the kit's middle plate



Type \ Distance	7~8.5	9~10.5	11~12.5	5~24
Fan	PGBRA070	PGBRA090	PGBRA110	-
Compass	-	-	-	PGBPA

L-wrench Option

- Tightens the denture guide after size adjustments



Distance Setup Pin Option

- Compass type bridge guide and Pin type denture guide



Multi Joint Handle Option

- Handle connects to the ball head of the Bridge Guide, provides information about the guide from outside the mouth



Denture Guide Option

- Angle adjustable denture guide for fully edentulous cases
- Using a stone model, arrange the guide to the ideal configuration. Tighten and set the guide using the L-wrench. Transfer to the patient to start surgery.
- Markers represent tooth positions, 2, 3, 4, 5, etc... starting from the midline



SmartGuide KIT (OSGK)

SmartGuide KIT Surgical Instruments

Lower plate components

Guide Pin (4ea)
SGP 22



Round bur (2ea)
RAHM1018



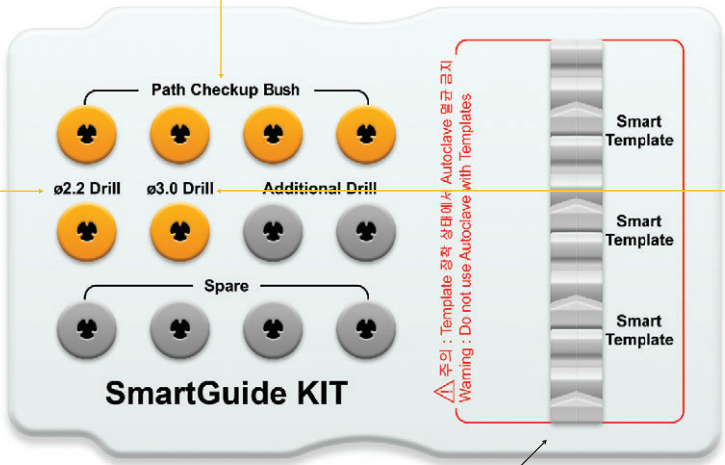
Ø2.2 Cast Drill (2ea) For stone models
2D2208LC01



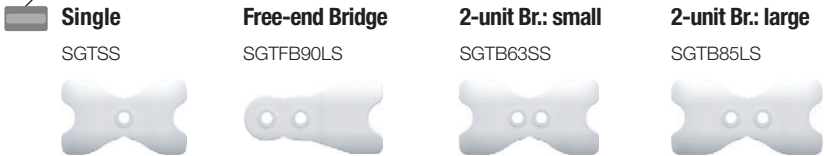
SGCB30S

Checkup Bush (4ea)

Ø2.2
Twist Drill
SGTD2207S



Ø3.0
Twist Drill
QGTD3008



Smart Template

- Medical grade thermoplastic material
 - Becomes flexible when immersed in 70℃ water for approx. 1 min.
 - Template hardens in 1 min. at room temperature
- ※ Disposable; do not re-use; sterilizable under low temperature (Do not autoclave, do not use hydrogen peroxide)

Type	Single	Free-end Bridge	2-Unit Br.: small	2-Unit Br.: large
	SGTSS	SGTFB90LS	SGTB63SS	SGTB85LS

Twist Drill

- Drills specifically for Smart Template
- Stable drilling through the Smart Template sleeve
- Initial drilling using the ø 2.2, followed by ø 3.0 drill
- Recommended speed: 1,200 to 1,500rpm

D	ø2.2	ø3.0
	SGTD2207S	QGTD3008



Checkup Bush

- Connect to the Smart Template sleeve and insert into the surgical site.
- Radiographically (CT or Xray) check the drilling positions



SGCB30S

092

OSTEM KIT

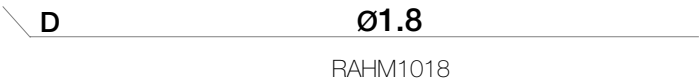
093

OSTEM KIT

SmartGuide KIT Surgical Instruments

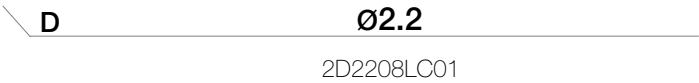
Round Bur

- Marks site of the Guide Pin on a stone model
- Number of usages: 10 times
- Recommended speed: 1,200 to 1,500rpm



Ø2.2 Cast Drill For stone models

- Drills the hole in the stone model for the Guide Pin
- Number of usages: 10 times
- Drill after marketing the site with the round bur
- Recommended speed: 1,200 to 1,500rpm



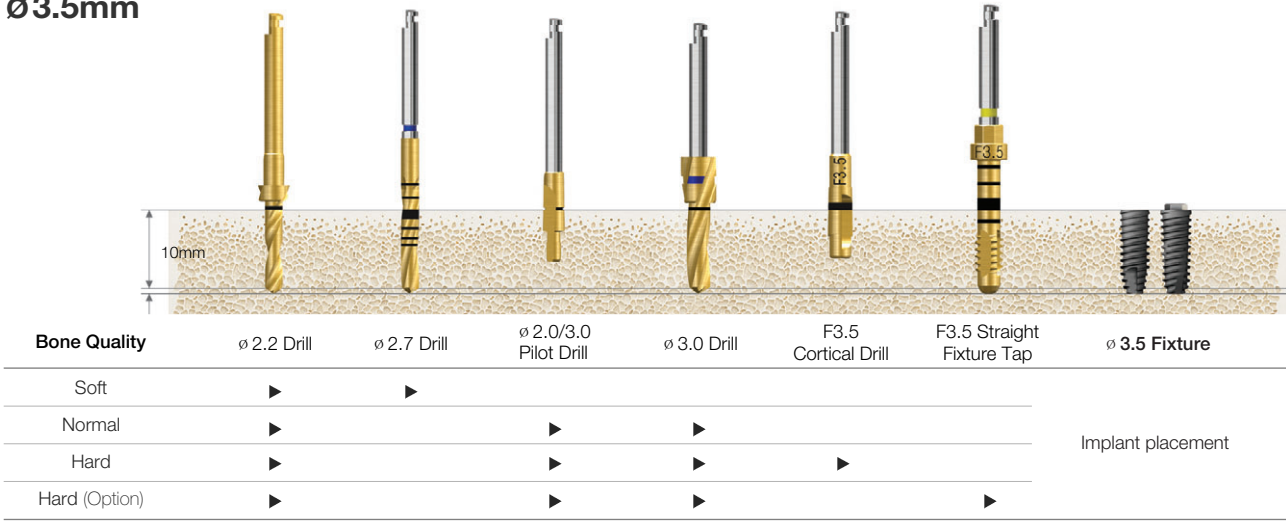
Guide Pin

- Pin that secures the Smart Temple to the stone model
- Connected to the smart template sleeve

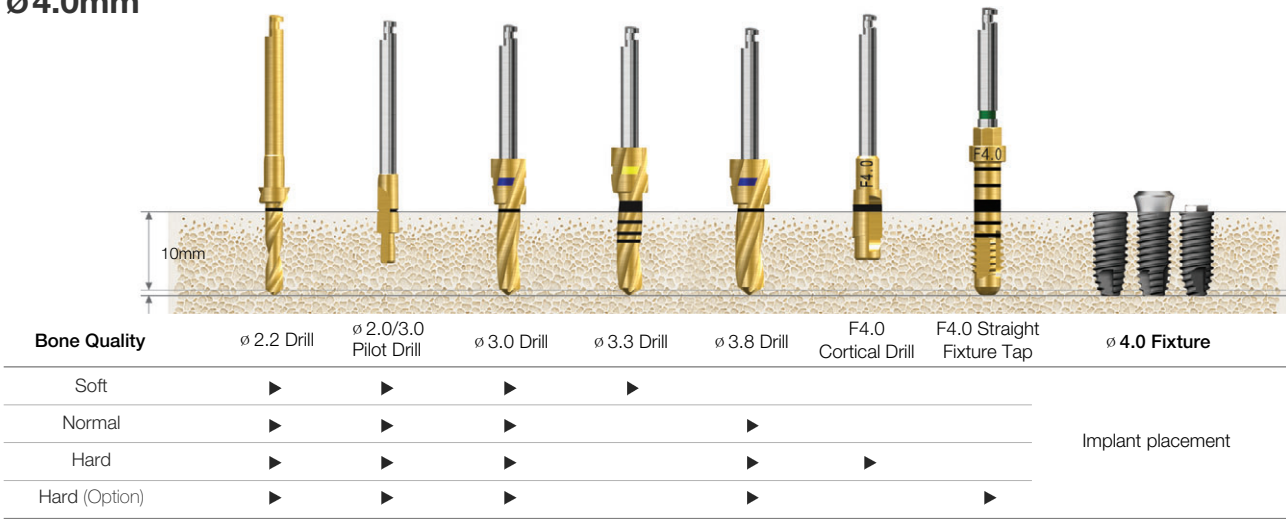


Drilling Sequence **Straight Drill**
TSII CA/SA | **SSII** CA/SA | **USII** CA/SA
(Length : 10mm)

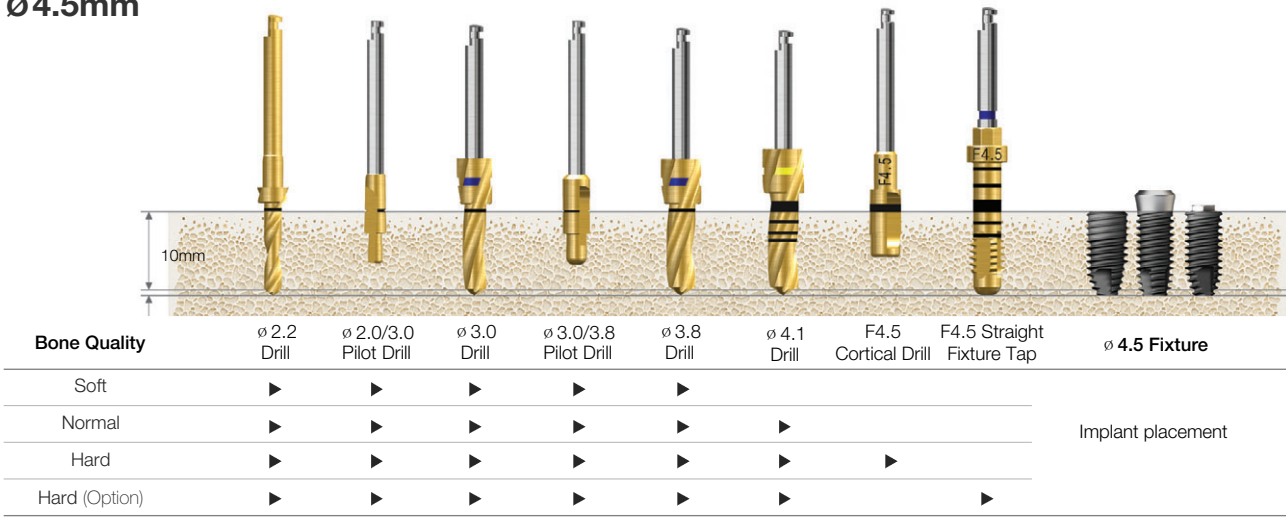
Ø3.5mm



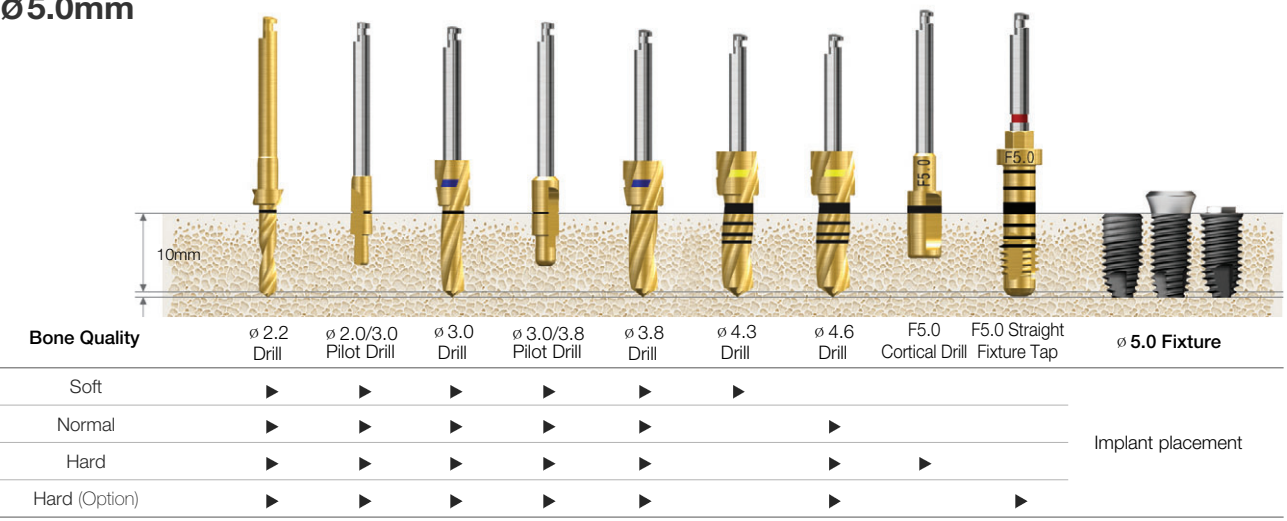
Ø4.0mm



Ø4.5mm



Ø5.0mm



Recommended insertion torque : ≤ 40Ncm
TS fixture insertion depth : In normal/hard bone should be inserted 1mm subcrestal. In soft bone, it should be inserted at bone level for higher stability.
The fixture tap should used for hard bone.
Recommended speed is 25rpm or hand torque using a mount extension and torque wrench.

Drilling Sequence **122 Taper Drill**
TSIII CA/SA/BA/HA | **SSIII** CA/SA/HA | **USIII** CA/SA
(Length : 10mm)

Ø3.5mm

Bone Quality	Guide Drill	F3.5 Taper Drill	F4.0 Taper Drill	Ø 3.5 Fixture
Soft	▶			Implant placement
Normal	▶	▶		
Hard	▶	▶	▶	

Ø5.0mm

Bone Quality	Guide Drill	F3.5 Taper Drill	F4.5 Taper Drill	F5.0 Taper Drill	F5.5 Taper Drill	Ø 5.0 Fixture
Soft	▶		▶			Implant placement
Normal	▶	▶		▶		
Hard	▶	▶			▶	

Ø4.0mm

Bone Quality	Guide Drill	F3.5 Taper Drill	F4.0 Taper Drill	F4.5 Taper Drill	Ø 4.0 Fixture
Soft	▶	▶			Implant placement
Normal	▶	▶	▶		
Hard	▶	▶		▶	

Ø5.5mm

Bone Quality	Guide Drill	F3.5 Taper Drill	F5.0 Taper Drill	F5.5 Taper Drill	F5.5 Taper Cortical Drill	Ø 5.5 Fixture
Soft	▶		▶			Implant placement
Normal	▶	▶		▶		
Hard	▶	▶		▶	▶	

Ø4.5mm

Bone Quality	Guide Drill	F3.5 Taper Drill	F4.0 Taper Drill	F4.5 Taper Drill	F5.0 Taper Drill	Ø 4.5 Fixture
Soft	▶		▶			Implant placement
Normal	▶	▶		▶		
Hard	▶	▶			▶	

F5.0 taper cortical drill marker : Drill to the bottom of the marker for fixture lengths ≥6mm, the middle for fixture lengths ≥7mm, and the top for ≥8.5mm
Recommended insertion torque : ≤40Ncm, for the TSIII/SSIII HA: ≤35Ncm (the HA coating can fracture and flake off when placed in hard bone)
TS fixture insertion depth : In normal/hard bone should be inserted 1mm subcrestal. In soft bone, it should be inserted at bone level for higher stability.

Drilling Sequence **Taper Drill**
TSIII CA/SA/BA/HA | **SSIII** CA/SA/HA | **USIII** CA/SA
(Length : 10mm)

Ø3.5mm

Bone Quality	ø 2.2 Drill	ø 3.0 Drill	F3.5 Taper Drill	F3.5 Taper Cortical Drill	F3.5 Taper Fixture Tap	ø 3.5 Fixture
Soft	▶	▶				
Normal	▶		▶			
Hard	▶		▶	▶		
Hard (Option)	▶		▶		▶	

Implant placement

Ø4.0mm

Bone Quality	ø 2.2 Drill	F3.5 Taper Drill	F4.0 Taper Drill	F4.0 Taper Cortical Drill	F4.0 Taper Fixture Tap	ø 4.0 Fixture
Soft	▶	▶				
Normal	▶	▶	▶			
Hard	▶	▶	▶	▶		
Hard (Option)	▶	▶	▶		▶	

Implant placement

Ø4.5mm

Bone Quality	ø 2.2 Drill	F3.5 Taper Drill	F4.0 Taper Drill	F4.5 Taper Drill	F4.5 Taper Cortical Drill	F4.5 Taper Fixture Tap	ø 4.5 Fixture
Soft	▶	▶	▶				
Normal	▶	▶		▶			
Hard	▶	▶		▶	▶		
Hard (Option)	▶	▶		▶		▶	

Implant placement

Ø5.0mm

Bone Quality	ø 2.2 Drill	F3.5 Taper Drill	F4.5 Taper Drill	F5.0 Taper Drill	F5.0 Taper Cortical Drill	F5.0 Taper Fixture Tap	ø 5.0 Fixture
Soft	▶	▶	▶				
Normal	▶	▶	▶	▶			
Hard	▶	▶	▶	▶	▶		
Hard (Option)	▶	▶	▶	▶		▶	

Implant placement

Ø5.5mm

Bone Quality	ø 2.2 Drill	F3.5 Taper Drill	F4.5 Taper Drill	F5.5 Taper Drill	F5.5 Taper Fixture Tap	ø 5.5 Fixture
Soft	▶	▶	▶			
Normal	▶	▶	▶	▶		
Hard	▶	▶	▶	▶	▶	

Implant placement

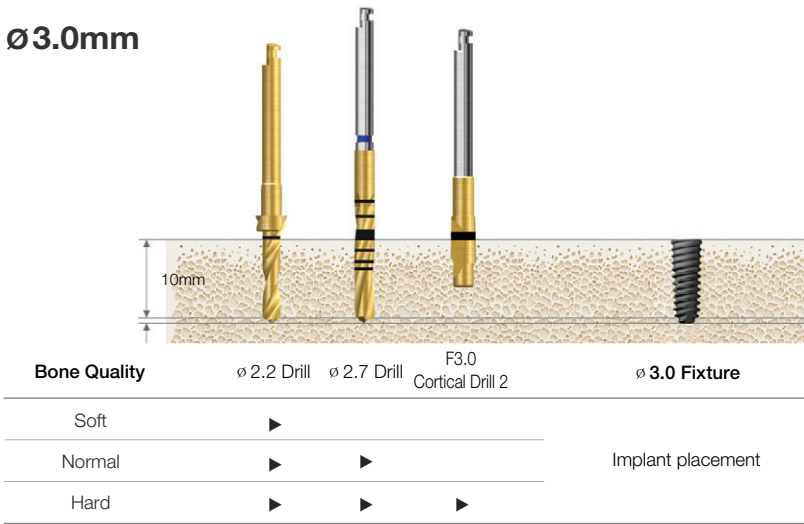
F5.0 taper cortical drill marker : Drill to the bottom of the marker for fixture lengths ≥6mm, the middle for fixture lengths ≥7mm, and the top for ≥8.5mm
Recommended insertion torque : ≤40Ncm, for the TSIII/SSIII HA: ≤35Ncm (the HA coating can fracture and flake off when placed in hard bone)
TS fixture insertion depth : In normal/hard bone should be inserted 1mm subcrestal. In soft bone, it should be inserted at bone level for higher stability.
The fixture tap should be used for hard bone. Recommended speed is 25rpm or hand torque using a mount extension and torque wrench. (F5.0 fixture tap, the bottom of the marker is fixture lengths ≤7mm and the top of the marker is for ≥8.5mm).

Drilling Sequence **Straight Drill**

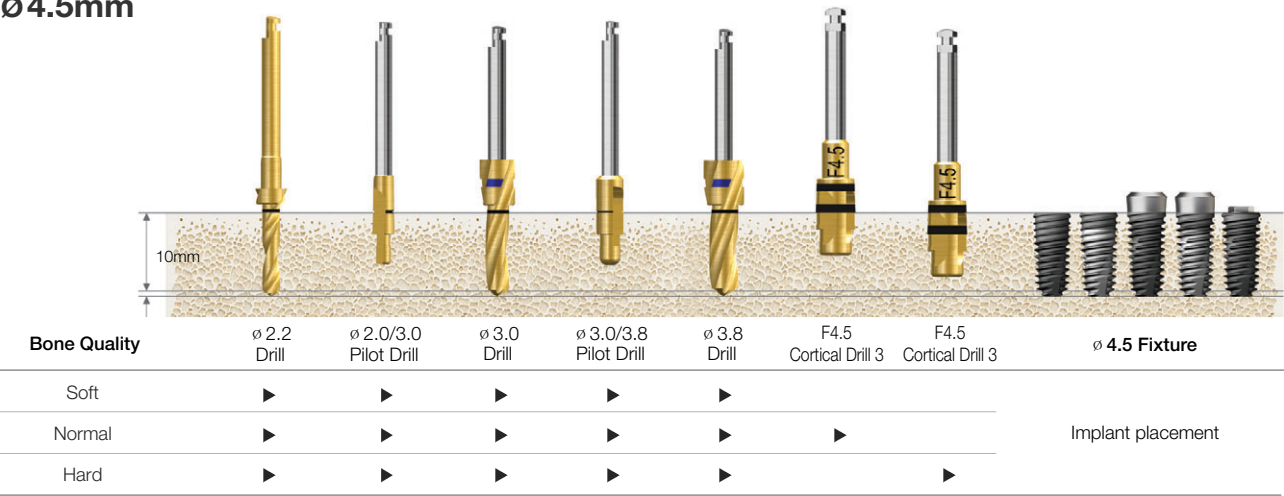
TSIII CA/SA/BA/HA | **SSIII** CA/SA/HA | **USIII** CA/SA
(Length : 10mm)

Recommended insertion torque : ≤40Ncm, for the TSIII/SSIII HA: ≤35Ncm (the HA coating can fracture and flake off when placed in hard bone)
TS fixture insertion depth : In normal/hard bone, it should be inserted 1mm subcrestal. In soft bone, it should be inserted at bone level for higher stability.

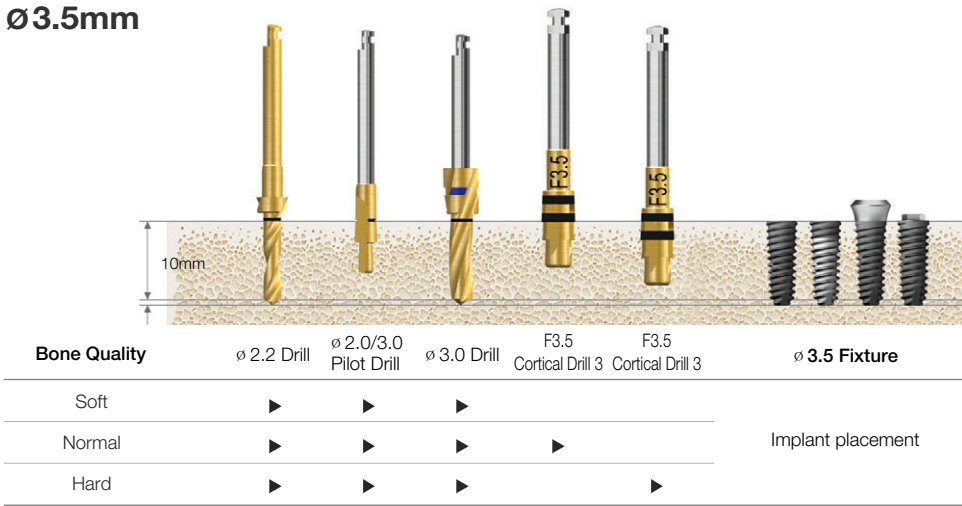
Ø3.0mm



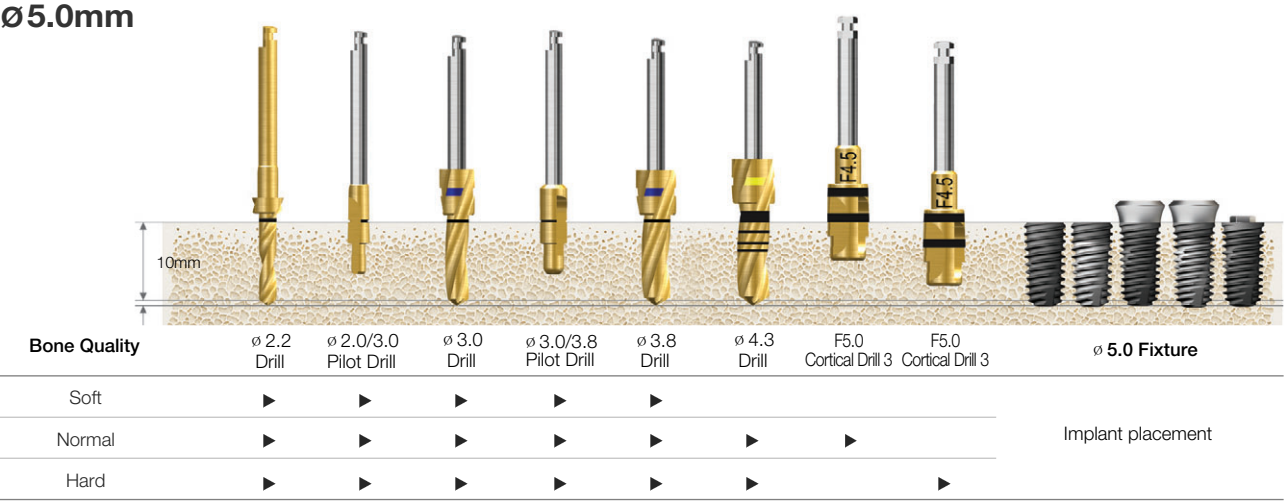
Ø4.5mm



Ø3.5mm



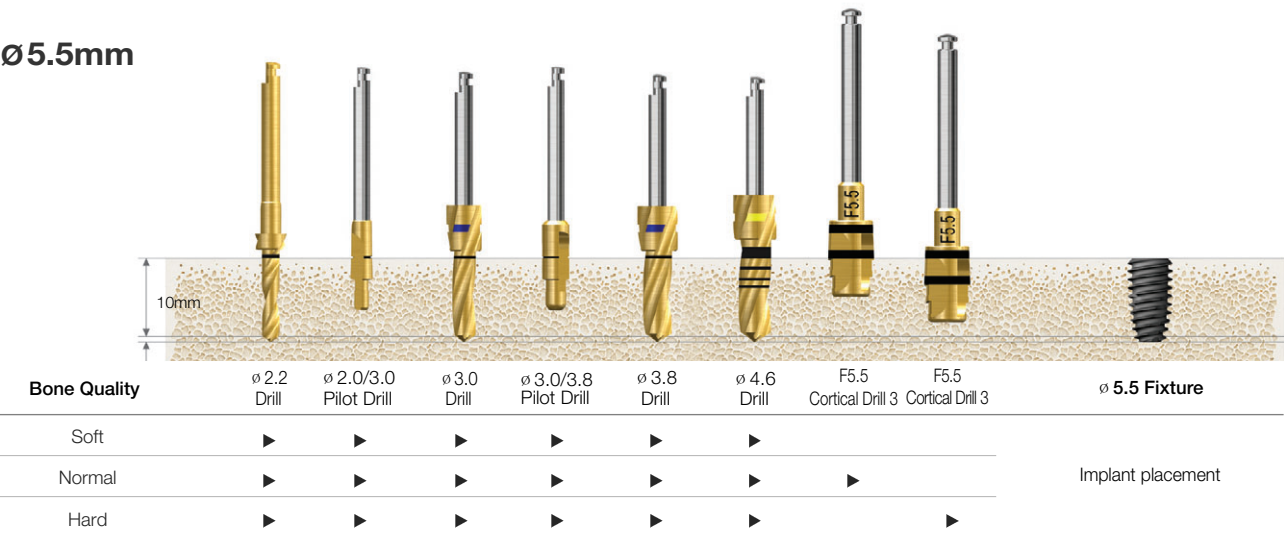
Ø5.0mm



Ø4.0mm

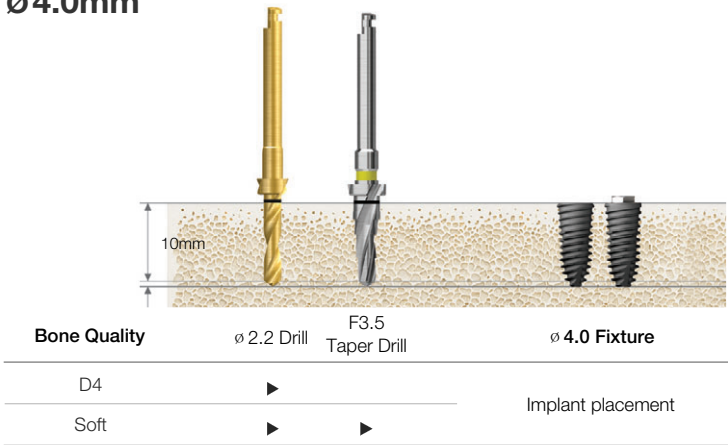


Ø5.5mm

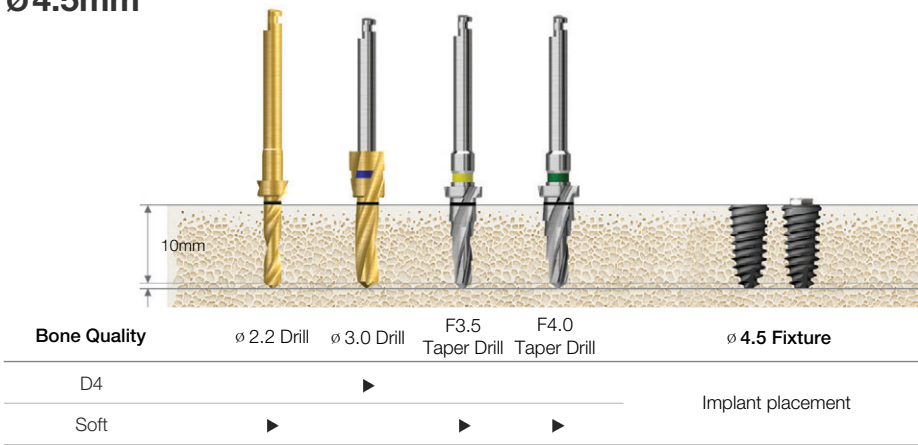


Drilling Sequence **Taper Drill**
TSIV CA/SA | **USIV** CA/SA
(Length : 10mm)

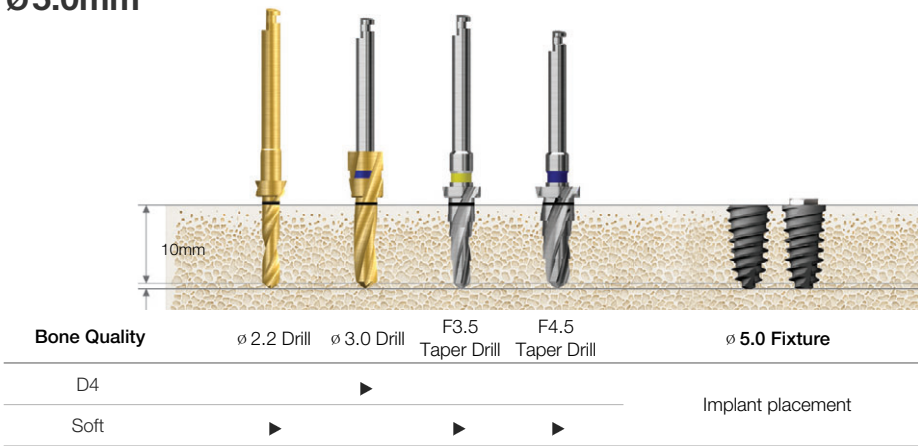
Ø4.0mm



Ø4.5mm



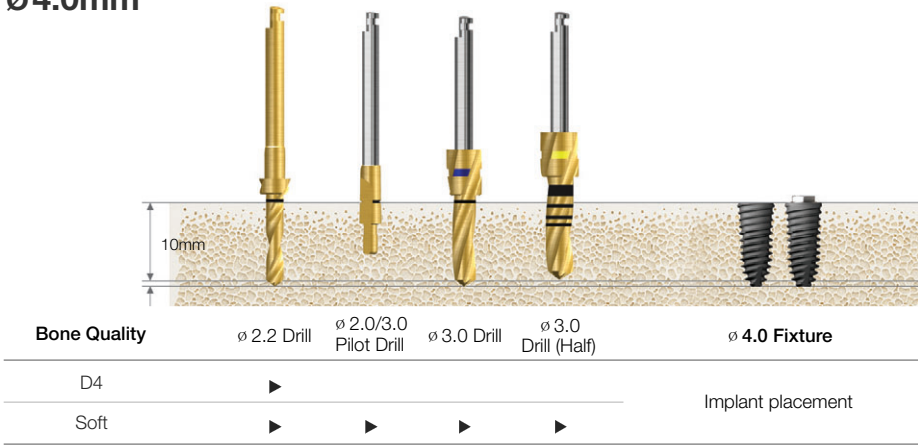
Ø5.0mm



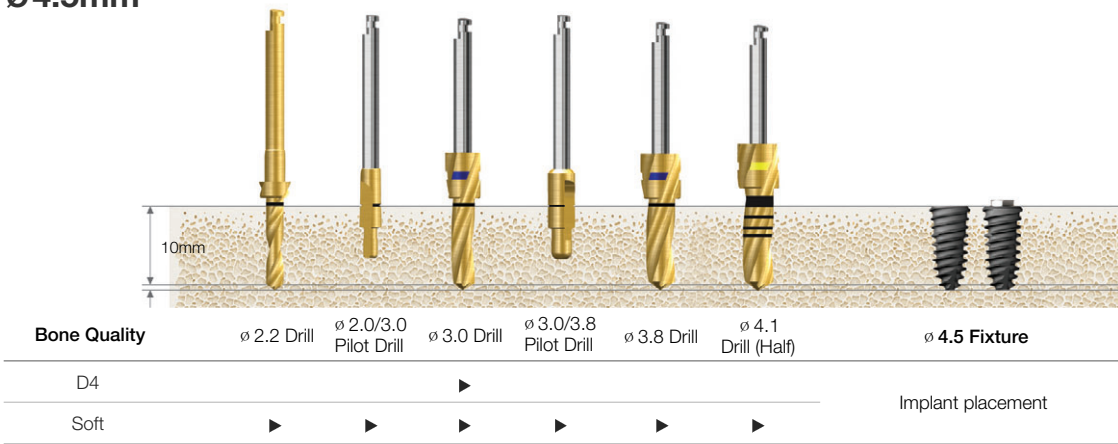
Recommended insertion torque : ≤40Ncm
TSIV/USIV system is designed specifically for the maxillary sinus and soft bone
※ Recommend reducing the insertion speed to 15rpm or lower, due to the TSIV/USIV aggressive threads.

Drilling Sequence **Straight Drill**
TSIV CA/SA | **USIV** CA/SA
(Length : 10mm)

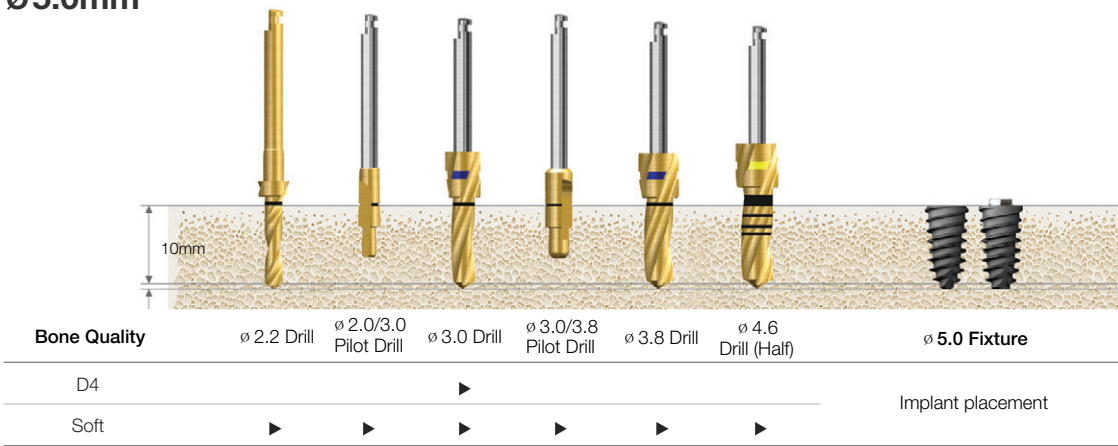
Ø4.0mm



Ø4.5mm



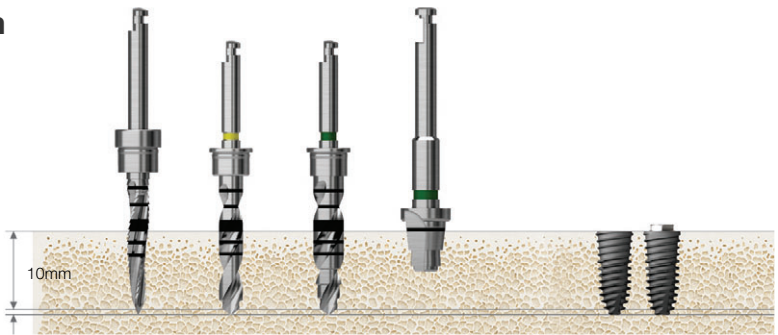
Ø5.0mm



Recommended insertion torque : ≤40Ncm
TSIV/USIV system is designed specifically for the maxillary sinus and soft bone
※ Recommend reducing the insertion speed to 15rpm or lower, due to the TSIV/USIV aggressive threads.

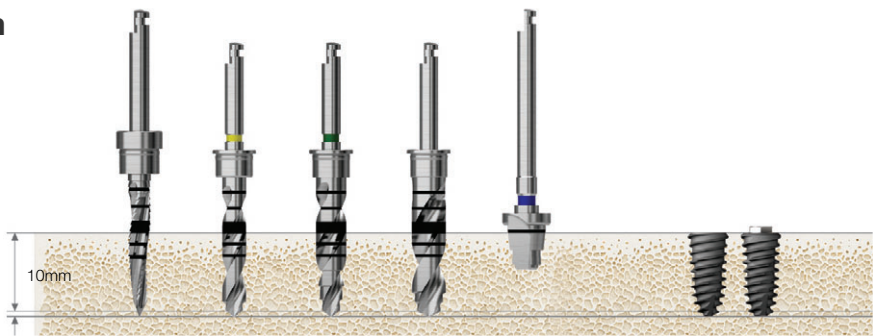
Drilling Sequence **IV Type Drill**
TSIV CA/SA | **USIV** CA/SA
(Length : 10mm)

Ø4.0mm



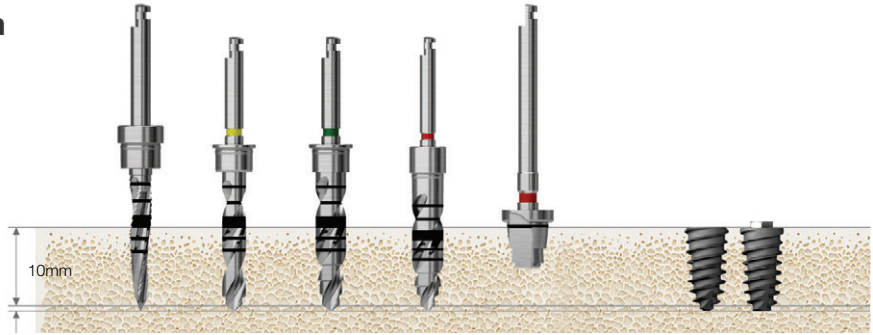
Bone Quality	Guide Drill Product123	ø 2.2/3.0 Product123	F4.0 Drill	F4.0 CD4	ø 4.0 Fixture
D4	▶				Implant placement
Soft	▶	▶			
Normal	▶	▶	▶	▶	
Hard	Not recommended				

Ø4.5mm



Bone Quality	Guide Drill Product123	ø 2.2/3.0 Product123	F4.0 Drill	F4.5 Drill	F4.5 CD4	ø 4.5 Fixture
D4	▶	▶				Implant placement
Soft	▶	▶	▶			
Normal	▶	▶		▶	▶	
Hard	Not recommended					

Ø5.0mm



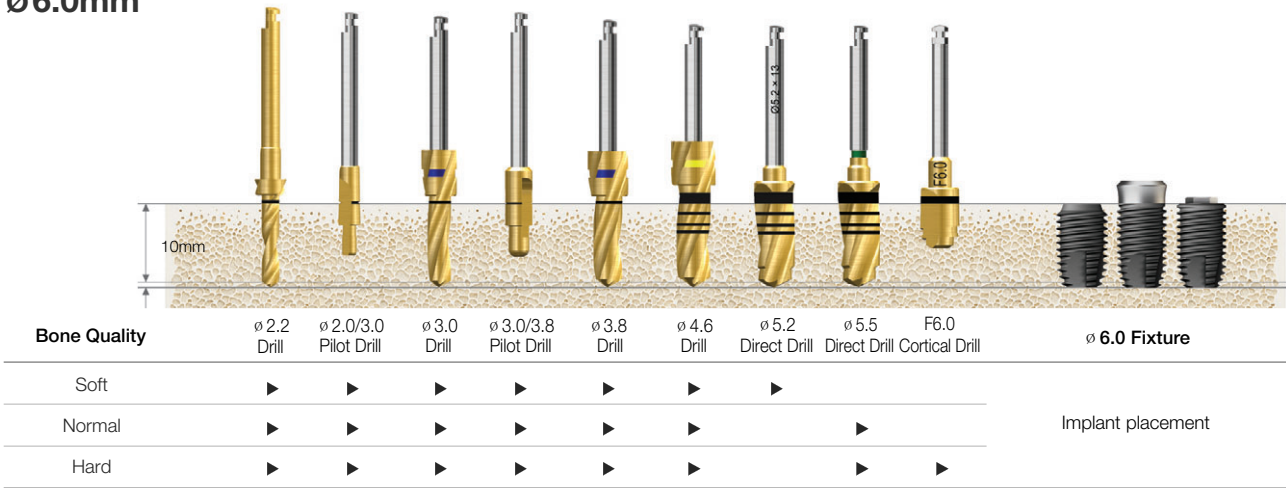
Bone Quality	Guide Drill Product123	ø 2.2/3.0 Product123	F4.5 Drill	F5.0 Drill	F5.0 CD4	ø 5.0 Fixture
D4	▶	▶				Implant placement
Soft	▶	▶	▶			
Normal	▶	▶		▶	▶	
Hard	Not recommended					



Recommended insertion torque : ≤40Ncm
※ Recommend reducing the insertion speed to 15rpm or lower, due to the TSIV/USIV aggressive threads.

Drilling Sequence **Straight Drill**
TSII Ulte-wide CA/SA | **SSII Ulte-wide** CA/SA |
USII Ulte-wide CA/SA (Length : 10mm)

Ø6.0mm



Ø7.0mm

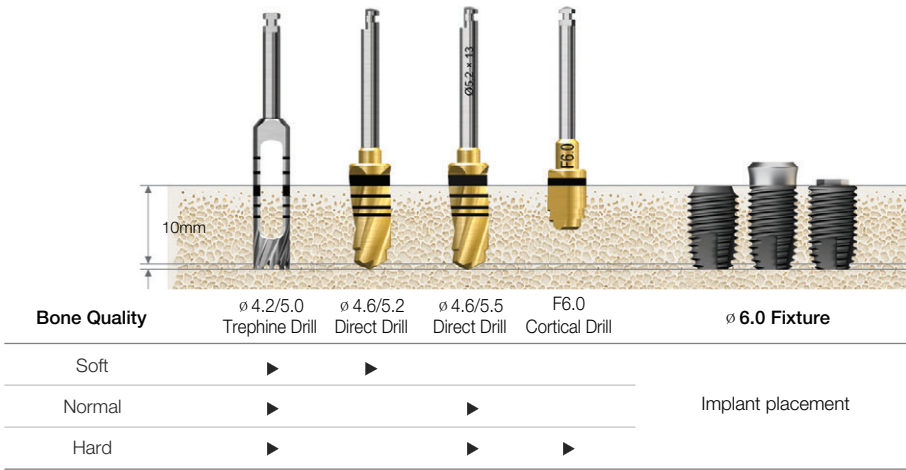


Recommended insertion torque : ≤40Ncm

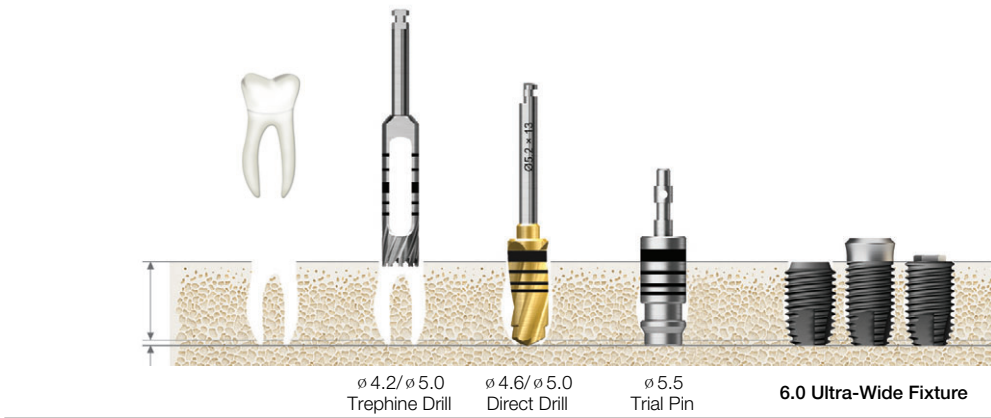
Drilling Sequence **Straight Drill**
TSII Ulte-wide CA/SA | **SSII Ulte-wide** CA/SA |
USII Ulte-wide CA/SA (Length : 10mm)

Ø6.0mm

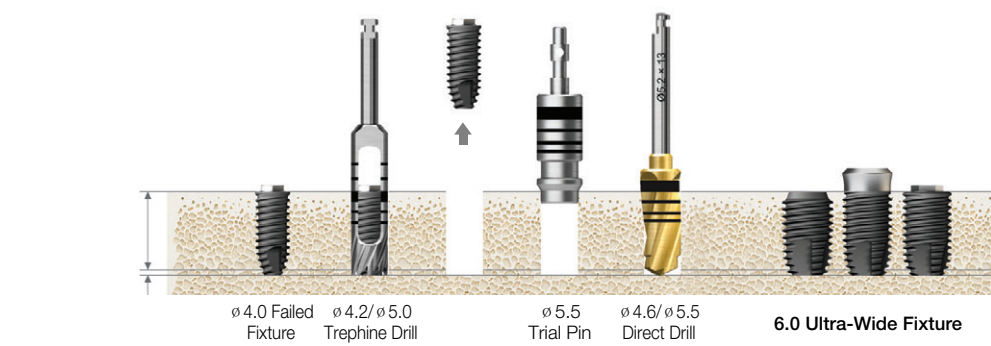
Drilling sequence with trephine in the healed mature bone



Immediate placement at the extraction socket



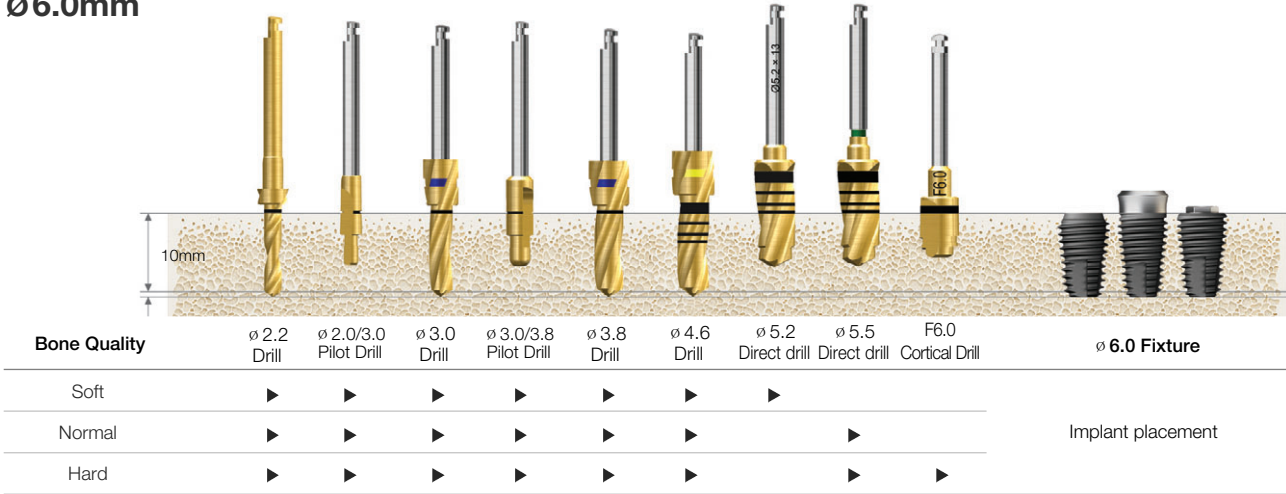
Immediate replacement of the failed implant



Drilling Sequence **Straight Drill**

TSIII Ultre-wide CA/SA | **SSIII Ultre-wide** CA/SA | **USIII Ultre-wide** CA/SA (Length : 10mm)

Ø6.0mm



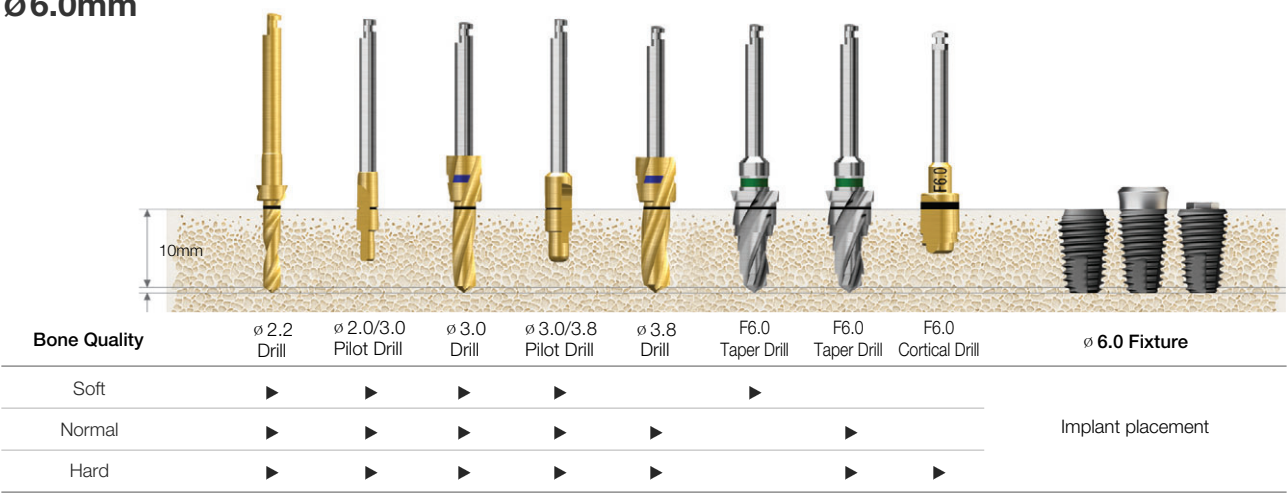
Ø7.0mm



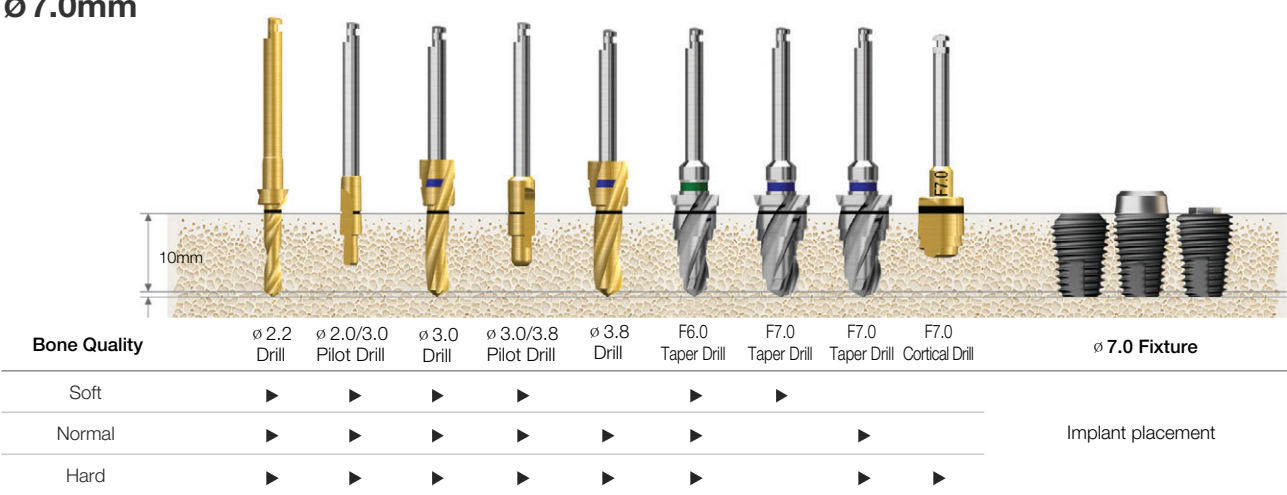
Drilling Sequence **Taper Drill**

TSIII Ultre-wide CA/SA | **SSIII Ultre-wide** CA/SA | **USIII Ultre-wide** CA/SA (Length : 10mm)

Ø6.0mm



Ø7.0mm



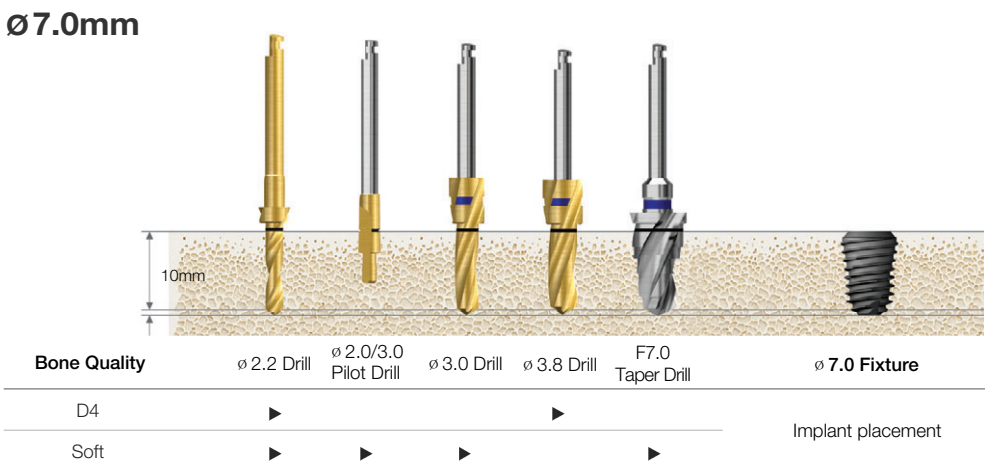
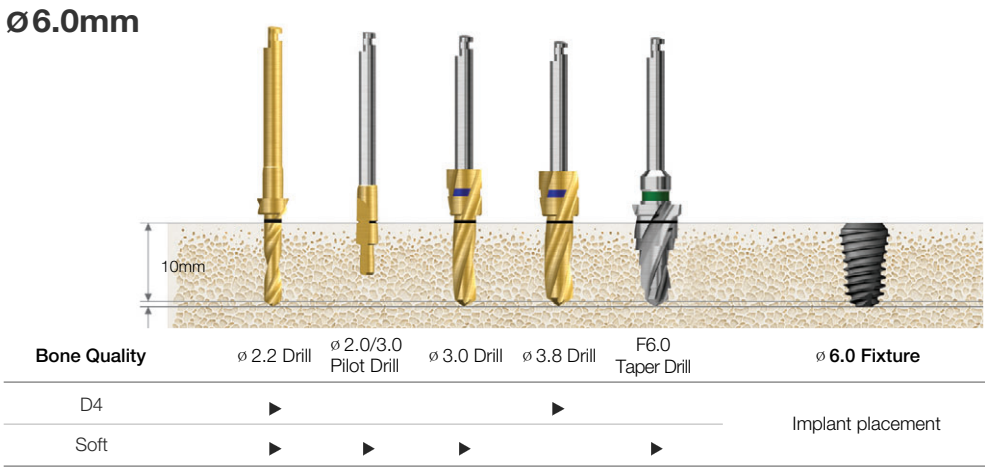
Recommended insertion torque : ≤40Ncm
※Recommend reducing the insertion speed to 15rpm or lower, due to the TSIV/USIV aggressive threads.

Recommended insertion torque: ≤40Ncm
TS fixture insertion depth: In normal/hard bone, the implant should be placed 1mm subcrestal. In soft bone, it should be inserted at bone level for higher stability.

Drilling Sequence **Taper Drill**

TSIV Ultr-wide CA/SA | **USIV Ultr**-wide CA/SA

(Length : 10mm)

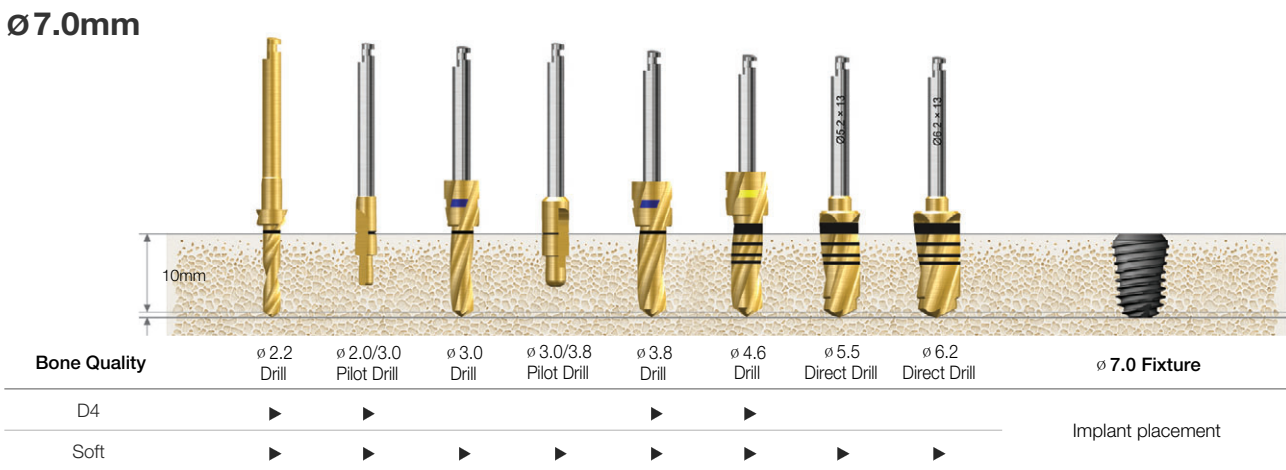
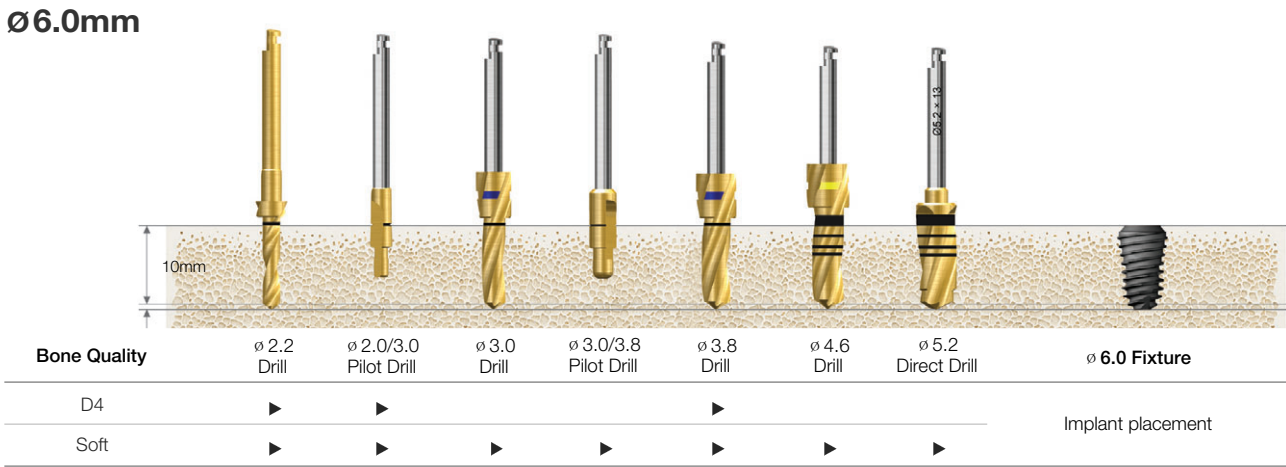


Recommended insertion torque : ≤40Ncm

Drilling Sequence **Straight Drill**

TSIV Ultr-wide CA/SA | **USIV Ultr**-wide CA/SA

(Length : 10mm)

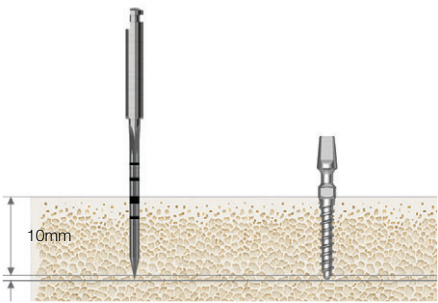


Recommended insertion torque : ≤40Ncm

Drilling Sequence **Straight Drill**

MS (Length : 10mm)

Ø1.8



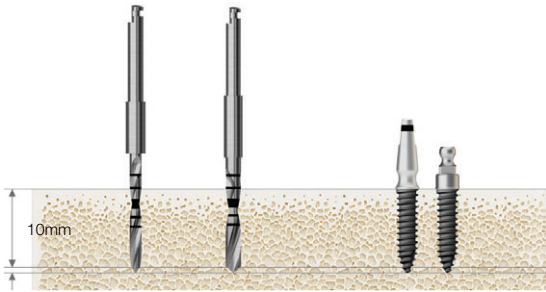
Bone Quality	Lance Drill	Ø 1.8 Implant
Soft	►	Implant placement
Normal	►	
Hard	►	

Ø2.5



Bone Quality	Ø 1.8 Drill	Ø 2.3 Drill	Ø 2.5 Implant
Soft	►	Implant placement	
Normal	►		
Hard		►	

Ø3.0



Bone Quality	Ø 1.8 Drill	Ø 2.5 Drill	Ø 3.0 Implant
Soft	►	►	Implant placement
Normal	►	►	
Hard	►	►	

Recommended insertion torque : 3Ncm

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IMPLANT

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 dentalImplants: 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 dentalImplants: 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 OralRadiol Endod. 2009;107:e24-8 / Young-Kyun Kim et al.
18	Study on radiographic evaluation of marginal bone loss around osseonintegrated 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 stabilityof 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.

User Manual 2013.02 ver.4.0 “Disposable, re-use prohibited, medical appliance”

Osstem Implant product information

Osstem Implant's dental fixtures and products are manufactured using medical grade Titanium. Osstem Implant's abutments, denture material and surgical tools are only compatible with Osstem fixtures. For more details about any individual product, please refer to the user manual or catalog, or visit our company website (www.osstem.com). Please check all product labels for product codes, specifications, date of manufacture and expiration date.

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 resterilized and therefore should be discarded.

Storage conditions

Store all products in a dry place at room temperature (30oC). 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, and oral radiographic examinations must be completed to determine bone quality and proper treatment planning.

Cautions during dental implant surgery

Osstem Implant Systems 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 (lost of implant stability, damage to dentures). These issues can be caused by 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 disease or chemo and radiation therapy.
 - Patients with an oral infection or inflammation (improper oral hygiene or teeth grinding)
 - Patients with an incurable malocclusion/arthropathia 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



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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



0434



Sterilized using irradiation



Use by



Manufacture



Do not reuse



Date of manufacture



Keep away from sunlight



Catalogue number



Non-Sterile



Keep dry



Batch code



Do not resterilize



Caution, Consult accompanying documents

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