

# MegaGen Kit

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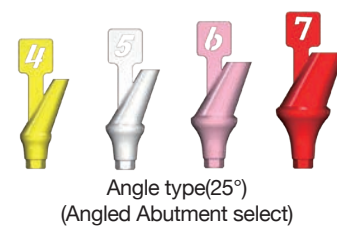
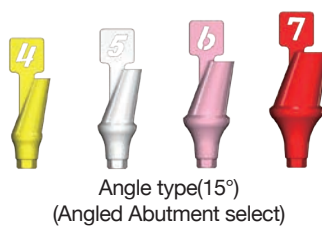
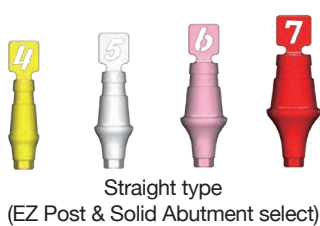
# AnyRidge Kit

## I. AnyRidge Abutment Selection Guide Kit

Ref.C  
KANASG3000

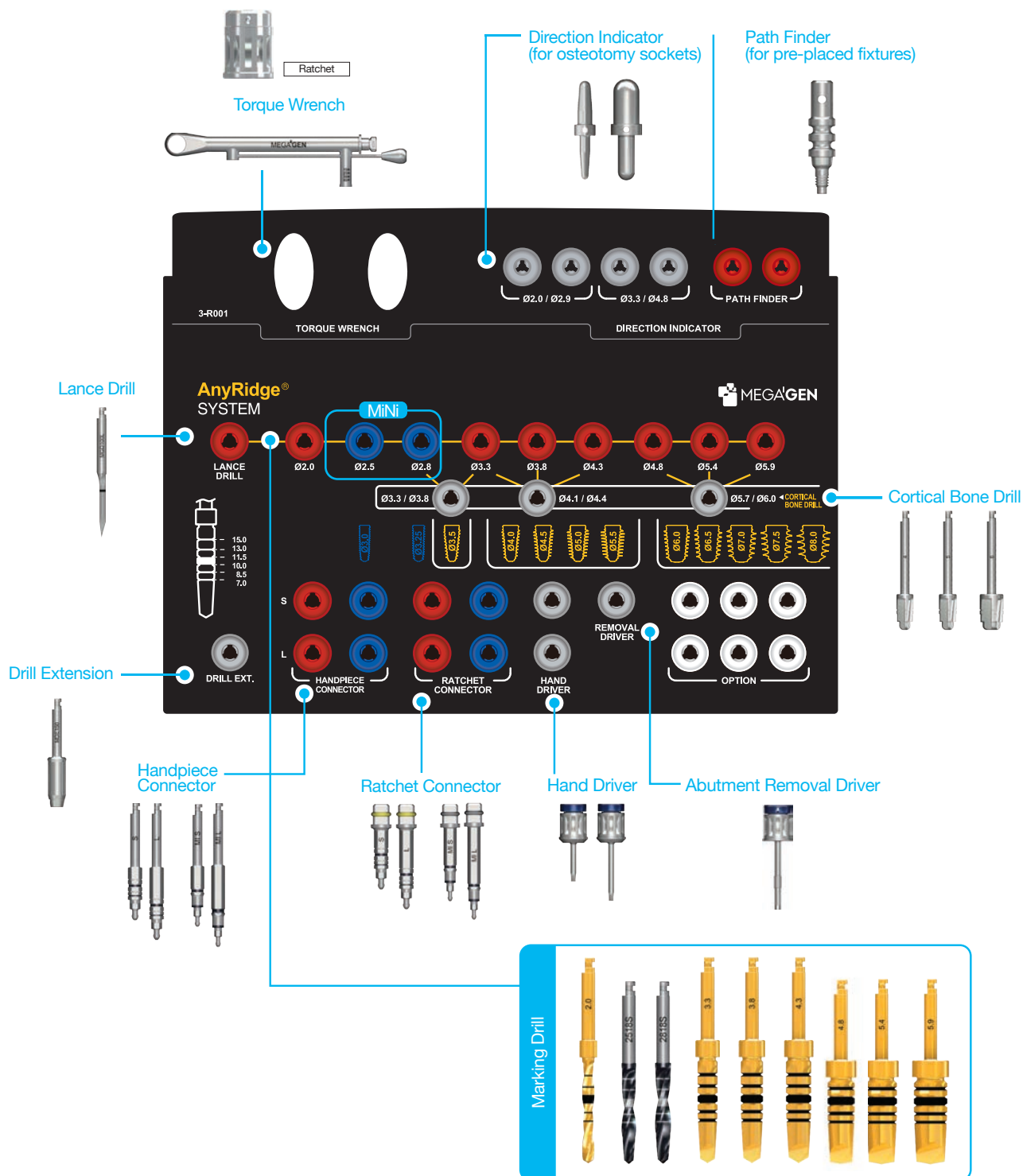
For the best selection of abutments.

- Colors indicate different cuff heights (Yellow : 2mm, White : 3mm, Pink : 4mm, Red : 5mm).
- Store 2 pieces in each container.
- Autoclavable to sterilize.



# II. AnyRidge Surgical Kit : Standard Type

Ref.C  
KARIN3003



# II. AnyRidge Surgical Kit : Full Type

Ref.C

KARIN3001

Easier and safer to drill for the depth as you need with the stopper drills.

**AnyRidge SYSTEM**

**STOPPER DRILL**

11.5mm, 10.0mm, 8.5mm, 7.0mm

**MARKING DRILL**

2.0, 2.5, 3.0, 3.3, 3.8, 4.0, 4.3, 4.8, 5.4, 5.9

**STOPPER DRILL PART NUMBERS:** 2007, 2008, 2010, 2011, 2007M, 2008M, 2010M, 2011M, 3007, 3008, 3010, 3011, 4007, 4008, 4010, 4011

**MARKING DRILL PART NUMBERS:** 2010S, 2011S, 3007, 3008, 3010, 3011, 4007, 4008, 4010, 4011

**Other Components:** Torque Wrench, Ratchet, Direction Indicator (for osteotomy sockets), Path Finder (for pre-placed fixtures), Lance Drill, Cortical Bone Drill, Handpiece Connector, Ratchet Connector, Hand Driver, Abutment Removal Driver, Drill Extension, Point Trephine Bur, Trephine Bur.

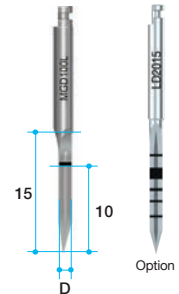
## ➔ Surgical Kit Components

### Lance Drill

- Useful to make an indentation on cortical bone to confirm the exact drilling location.

Diameter	Type	Ref.C
Ø2.0	Long	MGD100L
	Short	*LD2015
	Long	*LD2025
	Ultra-Long	*LD2030

(\*) Separate sales item.



### Marking Drill

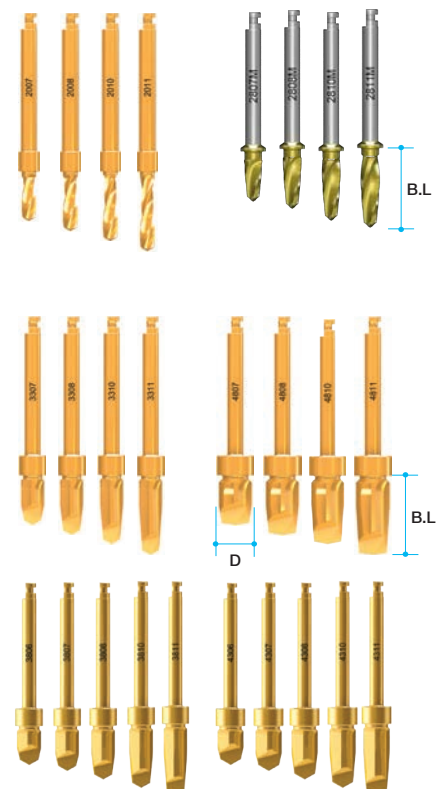
- Each drill has calibrations from 7.0 to 18.0mm. (TANSDF4815, TANSDF5415, TANSDF5915 have calibrations up to 15.0mm)
- Easy to recognize by dual marking systems. (Groove and laser marking)

Diameter	Blade Length (mm)	Ref.C
Ø2.0	18	TANTDF2018
Ø2.5		SD2518S
Ø2.8		SD2818S
Ø3.3		TANSDF3318
Ø3.8		TANSDF3818
Ø4.3		TANSDF4318
Ø4.8	15	TANSDF4815
Ø5.4		TANSDF5415
Ø5.9		TANSDF5915



### Stopper Drill

Diameter	Blade Length (mm)	Ref.C
Ø2.0	7	TANTDF2007
	8.5	TANTDF2008
	10	TANTDF2010
	11.5	TANTDF2011
Ø2.8	7	SD2807M
	8.5	SD2808M
	10	SD2810M
	11.5	SD2811M
Ø3.3	7	TANSDF3307
	8.5	TANSDF3308
	10	TANSDF3310
	11.5	TANSDF3311
Ø3.8	7	TANSDF3807
	8.5	TANSDF3808
	10	TANSDF3810
	11.5	TANSDF3811
Ø4.3	7	TANSDF4307
	8.5	TANSDF4308
	10	TANSDF4310
	11.5	TANSDF4311
Ø4.8	7	TANSDF4807
	8.5	TANSDF4808
	10	TANSDF4810
	11.5	TANSDF4811



## ➔ Surgical Kit Components (Continued)

### Point Trephine Bur

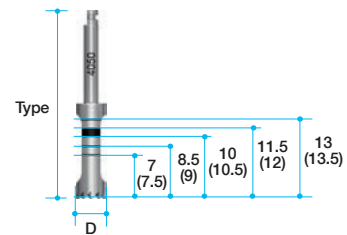
Diameter	Ref.C
Ø5.0 (In.Ø4.0)	SPTB4050



### Trephine Bur

- Minimizes the drilling steps needed, especially for wider fixtures.
- Helpful for collecting autogenous bone.
- Useful for removing failed and fractured fixtures.
- Depth markings are 7, 8.5, 10, 11.5, 13mm, same depths as fixtures. (No Y dimension so markings are actual length).
- Markings on the drill shaft represent the inside / outside diameter of Trephine Burs.

Diameter	Type	Ref.C
Ø3.5 (in Ø2.5)	Short (32mm)	TANTBL2535
Ø5.0 (in Ø4.0)		TANTBL4050
Ø6.0 (in Ø5.0)		*TANTBL5060
Ø7.0 (in Ø6.0)		*TANTBL6070
Ø3.5 (in Ø2.5)	Long (38mm)	*TANTBE2535
Ø5.0 (in Ø4.0)		*TANTBE4050
Ø6.0 (in Ø5.0)		*TANTBE5060
Ø7.0 (in Ø6.0)		*TANTBE6070

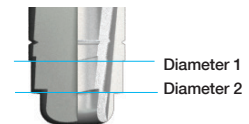


(\*) Separate sales item.  
 Ø3.5, 5.0 Trephine Bur are included in Surgical kit.

### Cortical Bone Drill

- Removes cortical bone and enlarges osteotomy socket especially at hard bone.
- Similar function with countersink drill of other systems.
- Each drill has two steps of diameter for convenience.

Diameter	Ref.C
Ø3.5	TANCDL3500
Ø4.0~ Ø5.5	TANCDL4055
Ø6.0~ Ø8.0	TANCDL6080

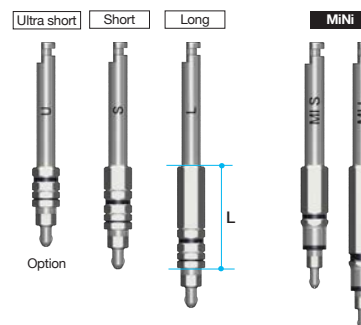


## Handpiece Connector

- Delivers torque for the placement of a fixture with a handpiece.
- Easy and secure pick-up and delivery.
- Used to place an implant without a mount.
- Marks on the shaft can indicate the position of fixture platform, especially in flapless surgery.

Length(mm)	Type	Ref.C
5	*Ultra short	TANHCU
10	Short	TANHCS
15	Long	TANHCL
10	Short (MiNi)	HCS17
15	Long (MiNi)	HCL17

(\*) Separate sales item.

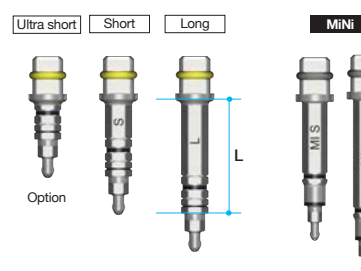


## Ratchet Connector

- Delivers torque for the placement or removal of a fixture with a Ratchet Wrench.
- Secure a Ratchet Extension or Torque Wrench to a fixture before exerting force.
- Too much torque force can result a damage to the hex of a fixture.
- Marks on the shaft can indicate the position of fixture platform, especially for flapless surgery.

Length(mm)	Type	Ref.C
6	*Ultra short	TANREU
10	Short	TANRES
15	Long	TANREL
15	Short(MiNi)	RCS17
20	Long (MiNi)	RCL17

(\*) Separate sales item.



## Hand Driver (1.2 Hex)

- Used for all Cover Screws, all Abutment Screws and all Healing Abutments.
- Available in 4 lengths for convenience.
- Hand Driver can be directly inserted into the Torque Wrench without using an adapter.
- Hex tip can withstand 35-45Ncm of torque without distortion.

Length(mm)	Type	Ref.C
5	*Ultra-short	TCMHDU1200
10	Short	TCMHDS1200
15	Long	TCMHDL1200
20	*Extra-long	TCMHDE1200

(\*) Separate sales item.



## ➔ Surgical Kit Components

### Abutment Removal Driver

- Used to remove final abutment ; use after removing Abutment Screw.
- Insert straight into the abutment and rotate clockwise.
- Long Abutment Removal Driver is for disconnecting an abutment with a cemented crown.

Length(mm)	Ref.C
17.5	TANMRD18
25.0	*TANMRD25

(\*) Separate sales item.



### Drill Extension

- Extends drills & other handpiece tools.
- No more than 45Ncm torque : Can be distorted when too much force is applied.

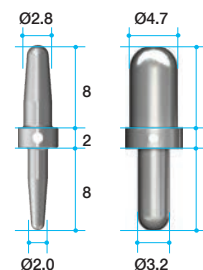
Ref.C
MDE150



### Direction Indicator

- Confirms drilling direction and location during drilling.
- Checks drilling position.

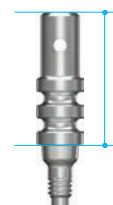
Length(mm)	Ref.C
Ø2.0 / Ø2.8	MDI100
Ø3.2 / Ø4.7	MDI3348



### Path Finder

- After placing a fixture, a Path Finder can be connected to guide parallel for the next implant.
- Gingival depth can be measured with the grooves especially for flapless surgeries.

Length(mm)	Ref.C
10	TANPF3580

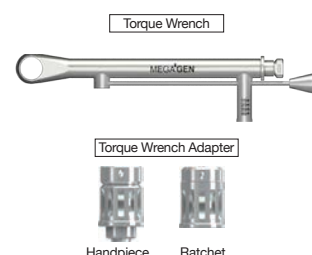


### Torque Wrench & Adapter

- Torque Wrench has torque options from 15Ncm to 45Ncm and is used for the placement of an implant and final tightening of the Abutment Screw.

Type	Ref.C
Torque Wrench	MTW300AT
*Torque Wrench Adapter(Handpiece)	TTAI100
Torque Wrench Adapter(Ratchet)	TTAR100

(\*) Separate sales item.



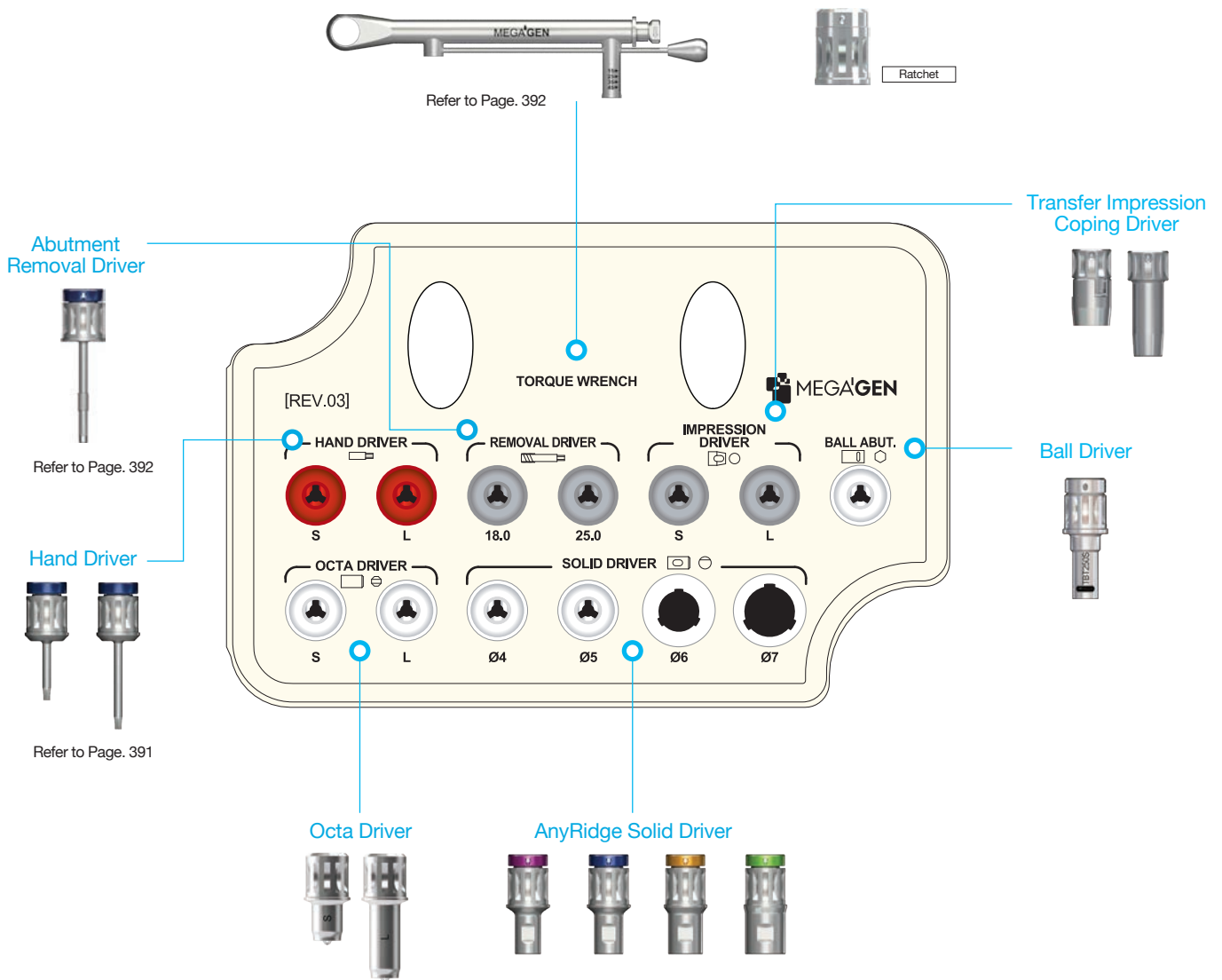


# III. AnyRidge Prosthetic Kit

Ref.C

KANPK3000

A kit with all kinds of driver that are needed for prosthetics.



## ➔ Prosthetic Kit Components

### Solid Driver

- For the delivery of Solid Abutments.
- Color coded for different profile diameters. (Ø4-magenta, Ø5-blue, Ø6-yellow, Ø7-green)
- Two different heights. (8.5 / 13.5mm)
- Directly connectable to Torque Wrench.

Solid Abutment Profile Diameter	Length(mm)	Ref.C
Ø4	8.5	TANSDS400
	13.5	*TANSDL400
Ø5	8.5	TANSDS500
	13.5	*TANSDL500
Ø6	8.5	TANSDS600
	13.5	*TANSDL600
Ø7	8.5	TANSDS700
	13.5	*TANSDL700



(\*) Separate sales item.

### Octa Driver

- For seating of the Octa Abutment into the fixture.
- Can also be connected to Torque Wrench.

Length(mm)	Ref.C
7	MOD300S
13	MOD300L



### Ball Driver

- For seating of the Ball Abutment into the fixture.
- Can connect to a Handpiece, Ratchet or Torque Wrench.
- Available in long and short.

Type	Ref.C
*Handpiece Connector(Short)	TBH250S
*Handpiece Connector(Long)	TBH250L
*Ratchet Connector(Short)	TBR250S
*Ratchet Connector(Long)	TBR250L
Torque Driver(Short)	TBT250S
*Torque Driver(Long)	TBT250L

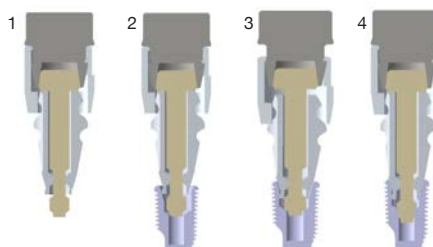


(\*) Separate sales item.

### Impression Coping Driver (Transfer)

- For transfer type of Impression Coping.
- Works with friction only.
- Small but powerful grip.

Type	Ref.C
For Two piece impression Coping	TCMID
For One piece impression Coping	TCMIDE



1. Connect Impression Coping and Impression Driver together
2. Adjust Connection with a Fixture by turning a Holder clockwise.
3. Push the Holder and put the Impression Coping into the Fixture.
4. Turn the Driver clockwise to ensure connection of the Impression Coping and Fixture.

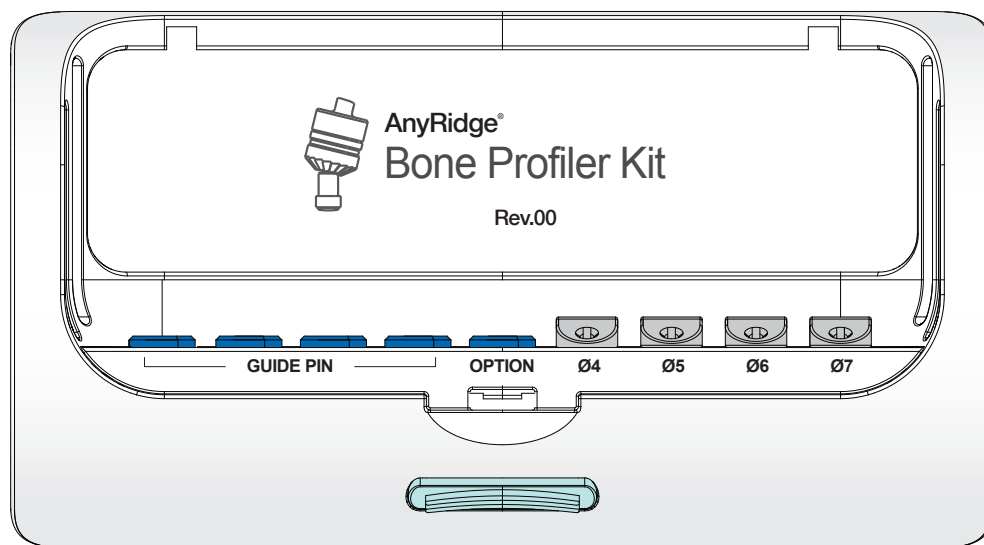
## IV. AnyRidge Bone Profiler Kit

Ref.C

KARBP3000

Removes the overhanged bone around a fixture to allow adequate seating of a Healing Abutment or a Prosthetic Abutment.

- Place a Guide Pin into a fixture and choose a Bone Profiler which fits with the situation.
- Four different sizes of bone profiler and four guide pins are included in the kit.

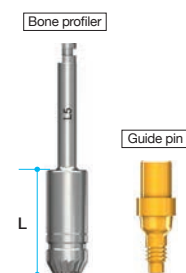


### Bone Profiler

- Guide Pin(TANPGF3305) included.

- Each bone profiler can be purchased separately for refill.
- Each package includes a bone profiler and a guide pin.

Profile Diameter	Length(mm)	Ref.C
Ø4	13	TANBPL40G
Ø5		TANBPL50G
Ø6	8	TANBPS60G
Ø7		TANBPS70G



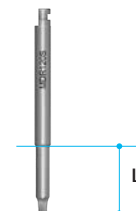
## V. Optional components

- not included in the surgical kit
- can be purchased separately and placed into the 'option' spaces provided in the surgical kit

### Right Angle Driver Tip

- Used for all Cover Screws, all abutment screws and all Healing Abutments.
- Hex tip can withstand 35-45Ncm of torque without distorting.

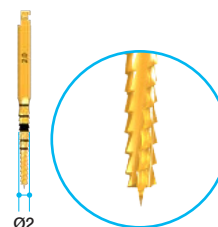
Length(mm)	Type	Ref.C	
4	Ultra-short	Hex 1.2	MDR120SS
10	Short		MDR120S
15	Long		MDR120L
20	Extra Long		MDR120EL



### Lindermann Drill

- Cross cut on the drill.
- Can correct the path during drilling.

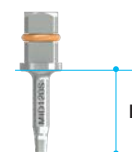
Diameter	Ref.C
Ø2	TEEL200M



### Insert Driver

- Used for all Cover Screws, all abutment screws and all Healing Abutments.
- Hex tip can withstand 35-45Ncm of torque without distorting.

Length(mm)	Type	Ref.C	
10	Short	Hex 1.2	MID120S
15	Long		MID120L



### Hand Tap

- Useful when the internal screw of a fixture is damaged.
- Retapping damaged threads.
- Need to be patient and force-controlled.

Type	Ref.C
M1.8	THT180L



### Multi-unit Driver (2.0 Hex) (For Multi-unit Abutment)

- For the seating & tightening of multi-unit Abutment (Straight type)

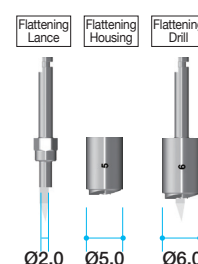
Length(mm)	Type	Ref.C
10	Short	TCMMUDS20
15	Long	TCMMUDL20



### Flattening Drill

- In the case of irregular bone, stopper drill can be drilled in precise depth by flattening the bone.
- Flattening Lance and Housing are connected together. Two types of Housing diameters (Ø5.0 & Ø6.0) are composed in accordance with the size of final drill diameter.
- Ø5.0 = Stopper Drill Ø2.0~ Ø4.3
- Ø6.0 = Stopper Drill Ø4.8~ Ø5.4
- Formation of boundary through housing will guide the next drilling location of fixture.

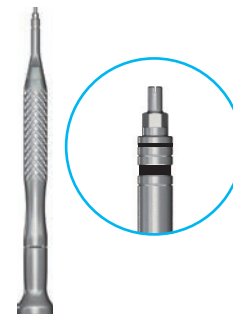
Diameter	Length(mm)	Ref.C
Ø5.0 / Ø2.0	3.5	FD5020
Ø6.0 / Ø2.0		FD6020



## Manual Inserter

- Specially designed for manual placement of AnyRidge fixture.
- Especially useful at immediate implant placement on maxillary anterior.
- The tip has same structure with the hand-piece connector.

Ref.C
TANMI



## Reamer Drill & Center Pin

- Removes inner lip of the cast after casting Burn-out Cylinders of Solid Abutment.
- Center Pin have 4 different diameters according to the profile diameter of Solid Abutments.

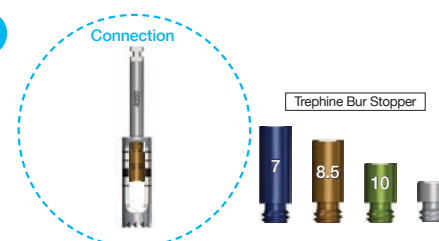
Diameter	Type	Ref.C
Ø10.0	Reamer Drill	TANRD
Ø4.0	Center Pin	TANRDJ40
Ø5.0		TANRDJ50
Ø6.0		TANRDJ60
Ø7.0		TANRDJ70



## Trephine Bur Stopper

- Controls the depth of trephination with a Stopper placed into the Trephine.
- Especially useful in cases with limited available bone from important anatomy.

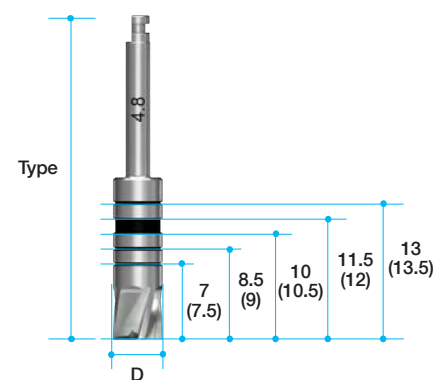
Type	Ref.C
7.0	TANTSF2307
8.5	TANTSF2308
10.0	TANTSF2310
11.5	TANTSF2311



## Bottom Drill

- It removes remaining bone in osteotomy socket after trephine drilling.
- It imprints the sizes of fixtures, for example 7, 8.5, 10, 11.5 and 13mm, by laser marker.

Diameter	Type	Ref.C
Ø3.3	Short (32mm)	TCMBDS33
Ø3.8		TCMBDS38
Ø4.8		TCMBDS48
Ø5.8		TCMBDS58
Ø6.8	TCMBDS68	
Ø3.3	Long (38mm)	TCMBDL33
Ø3.8		TCMBDL38
Ø4.8		TCMBDL48
Ø5.8		TCMBDL58
Ø6.8		TCMBDL68



## Ratchet Wrench

- Used to exert more force than handpiece.
- No bearing system : No breakage and corrosion problems.
- Attaches to Ratchet Extension.
- Arrow laser marking indicates direction of force.

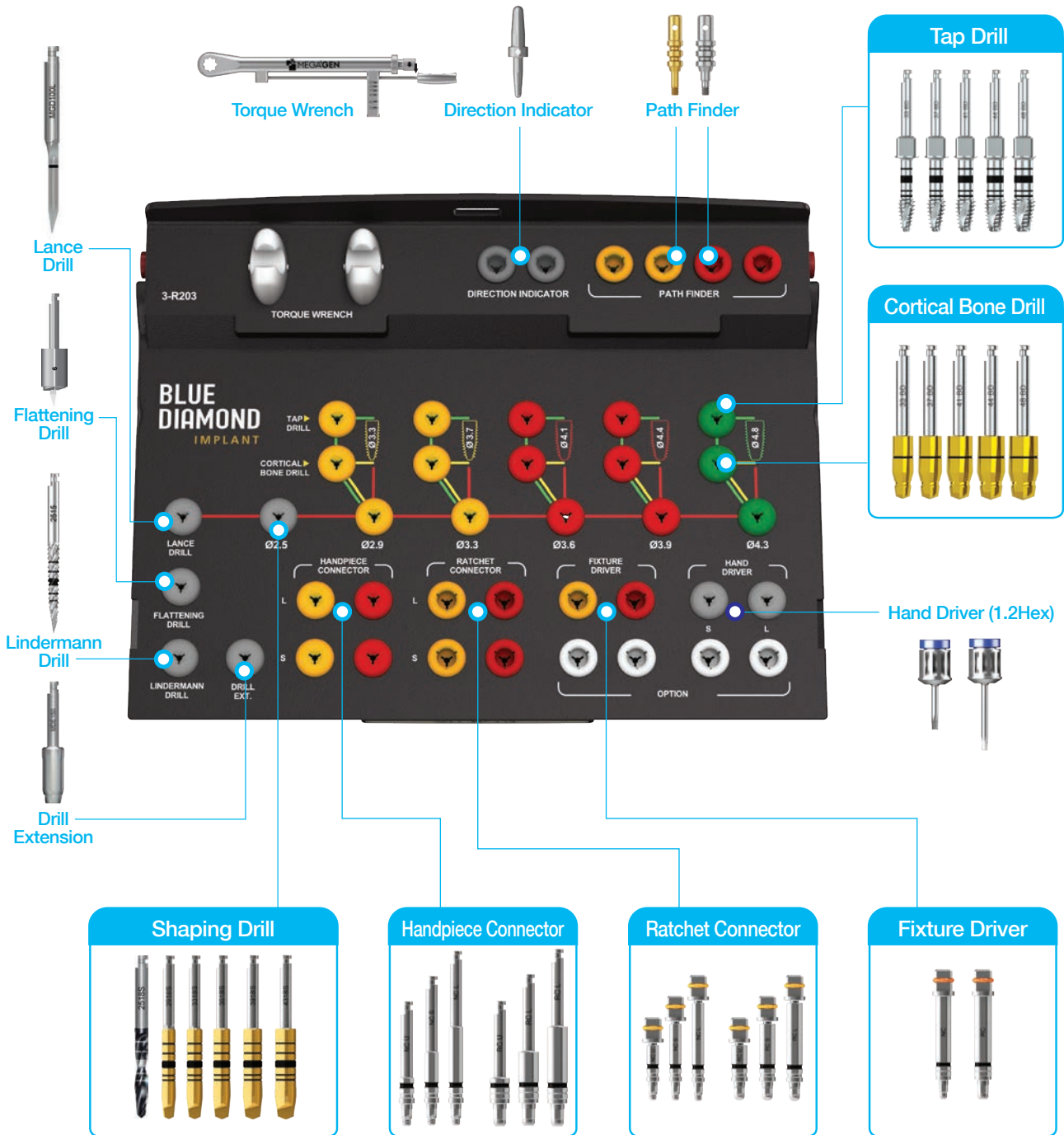
Ref.C
MRW040S



# BLUEDIAMOND IMPLANT Kit

## I. Surgical Kit: Standard Type

Ref.C  
KAR03003



# I. Surgical Kit: Full Type

Ref.C  
KARO3001

**Torque Wrench**

**Direction Indicator**

**Path Finder**

**Handpiece Connectors**

**Ratchet Connectors**

**Fixture Drivers**

**Hand Drivers (1.2Hex)**

**Shaping Drills**

**Cortical Bone Drills**

**Tap Drills**

**Stopper Drills**

**1-R203**

**TORQUE WRENCH**

**DIRECTION INDICATOR**

**PATH FINDER**

**BLUE DIAMOND IMPLANT**

**TAP DRILL**

**CORTICAL BONE DRILL**

**LANCE DRILL**

**FLATTENING DRILL**

**LINDERMANN DRILL**

**DRILL EXT.**

**STOPPER DRILL**

**HANDPIECE CONNECTOR**

**RATCHET CONNECTOR**

**FIXTURE DRIVER**

**HAND DRIVER**

Ø 2.5   Ø 2.9   Ø 3.3   Ø 3.6   Ø 3.9   Ø 4.3

11.5mm   10.0mm   8.5mm   7.0mm

Ø 4.1   Ø 4.4   Ø 4.8

Lance Drill

























Flattening Drill

Lindermann Drill

Drill Extension

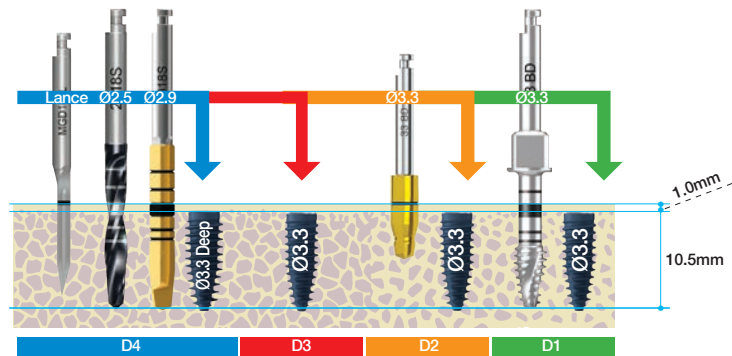
## ►► Drilling Protocols

- BLUEDIAMOND® implants achieve optimum initial stability when used with a guided drilling sequence
- BLUEDIAMOND implants should be placed 1mm sub-crestal  
0.5 ~1mm sub-crestal placement has been proven to show a better crestal bone response

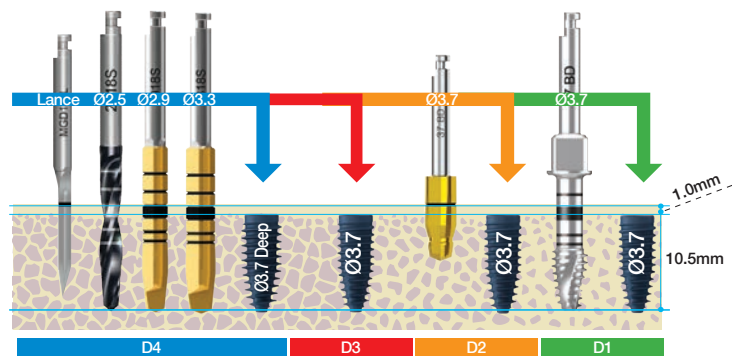
	Flattening Drill	Lance	Shaping Drills						Cortical Bone Drills					Tap Drills					Stopper Drills					
	Ø5.0 / Ø2.0	Ø2.0	Ø2.5	Ø2.9	Ø3.3	Ø3.6	Ø3.9	Ø4.3	Ø3.6	Ø4.0	Ø4.4	Ø4.7	Ø5.0	Ø3.3	Ø3.7	Ø4.1	Ø4.4	Ø4.8	Ø2.5	Ø2.9	Ø3.3	Ø3.6	Ø3.9	Ø4.3
																								
rpm max	400~600	800~1000						300					15					800~1000						

Standard Type
Full Type

### Ø3.3 Fixture Drilling Sequence

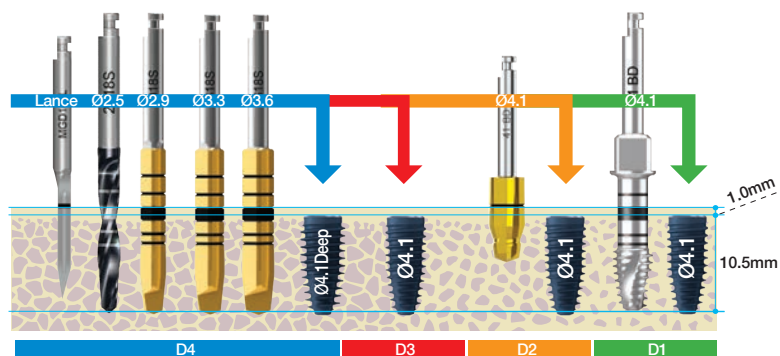


### Ø3.7 Fixture Drilling Sequence

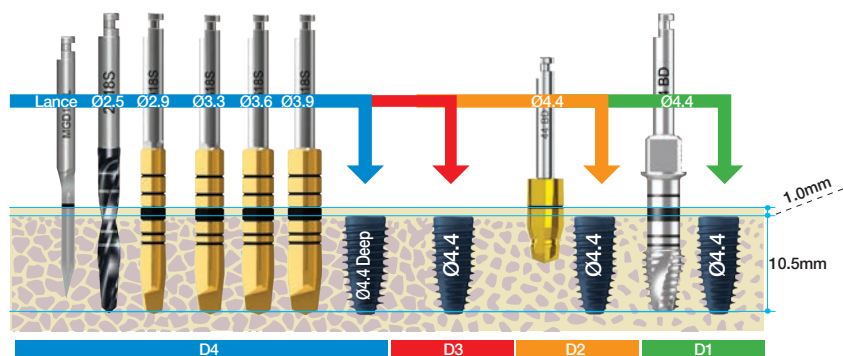




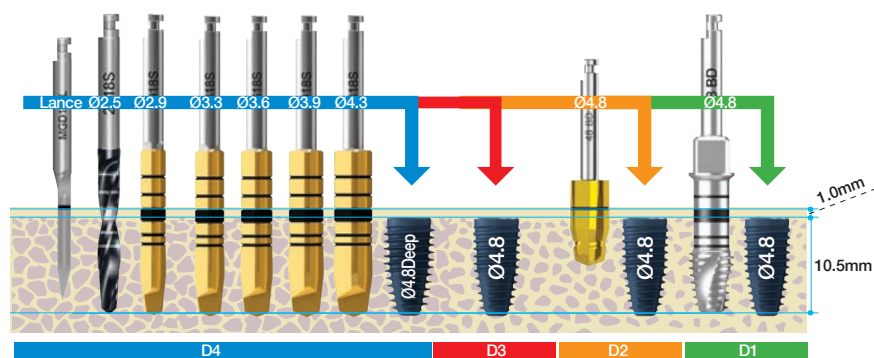
### Ø4.1 Fixture Drilling Sequence



### Ø4.4 Fixture Drilling Sequence



### Ø4.8 Fixture Drilling Sequence



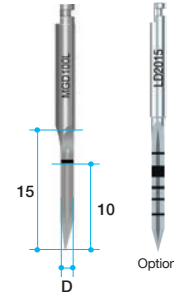
## ➔ Surgical Kit Component (Continued)

### Lance Drill

- Use to make indentation in cortical bone to confirm exact drilling location

Diameter	Type	Ref.C
Ø2.0	Long	MGD100L
	Short	*LD2015
	Long	*LD2025
	Ultra-Long	*LD2030

(\*) Separate sales item

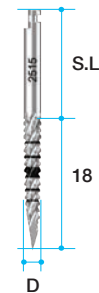


### Lindermann Drill

- Use to correct path during drilling

Diameter	Shank Length(mm)	Ref.C
Ø2.5	15 (Short)	LDMD2515
	20 (Middle)	*LDMD2520
	25 (Long)	*LDMD2525

(\*) Separate sales item

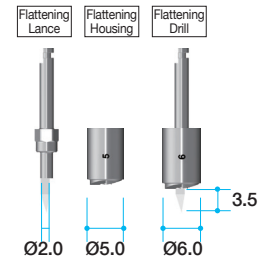


### Flattening Drill

- Use to flatten irregular bone & allow exact drilling with stopper drills
- Designed to engage with Flattening Lance & 2 kinds of Housing to match diameters of different final drills (Ø5.0 & Ø6.0)
- Ø5.0 = Stopper Drill Ø2.0 ~ Ø4.3
- Ø6.0 = Stopper Drill Ø4.8 ~ Ø5.4
- Housing boundary becomes indicator for drilling position of next fixture

Diameter	Length(mm)	Ref.C
Ø5.0 / Ø2.0	3.5	FD5020
*Ø6.0 / Ø2.0		FD6020

(\*) Separate sales item



**1**

• Flattening Drill ensures correct drilling position for accurate fixture placement  
(if final drill diameter is Ø2.0~Ø4.3, use Ø5.0 Housing, if final drill diameter is Ø4.8, Ø5.4, use Ø6 Housing)

**2**

• Drilling sequence should consider fixture size & bone density

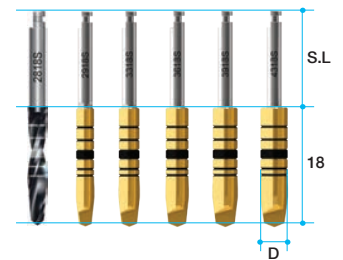
**3**

• Place fixture using Handpiece & Ratchet Connector

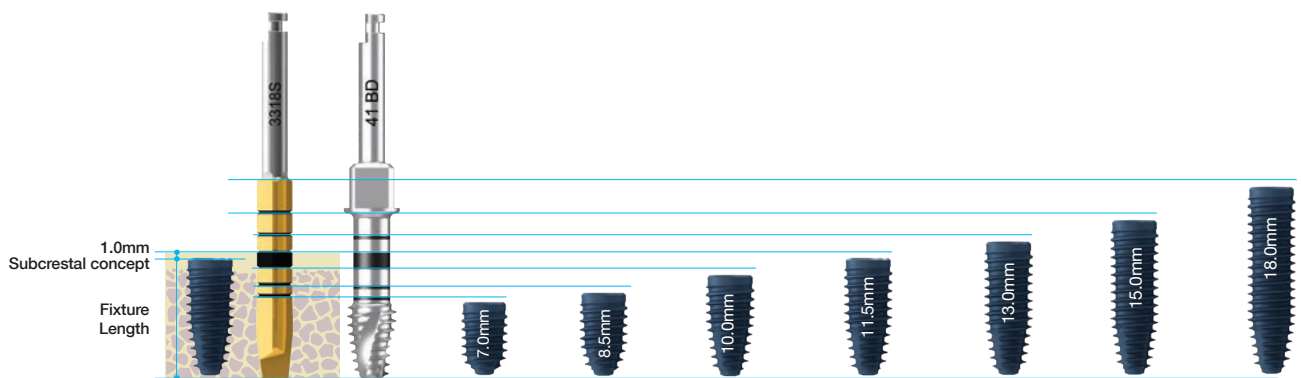
## Shaping Drill

- Each drill has depth markings from 7.0mm to 15.0mm
- Dual marking system (grooves & laser markings) provides visual & radiographic depth verification during surgery
- TiN coating on drills for enhanced corrosion resistance & abrasion resistance
- \* Actual drill length does not normally include Y dimension of drill
- \* Markings on Shaping Drills are 0.8mm longer than fixture, so fixtures will automatically be placed 1mm sub-crestally if drilling protocol is followed

Diameter	Blade Length(mm)	Shank Length(mm)	Ref.C
Ø2.5	18	15(Short)	SD2518S
		25(Long)	*SD2518L
Ø2.9		15(Short)	AROSD2918S
		25(Long)	*AROSD2918L
Ø3.3		15(Short)	AROSD3318S
		25(Long)	*AROSD3318L
Ø3.6		15(Short)	AROSD3618S
		25(Long)	*AROSD3618L
Ø3.9		15(Short)	AROSD3918S
		25(Long)	*AROSD3918L
Ø4.3	15(Short)	AROSD4318S	
	25(Long)	*AROSD4318L	



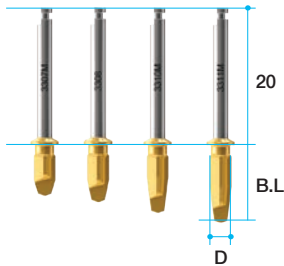
(\*) Separate sales item



## ➔ Surgical Kit Component (Continued)

### Stopper Drill

- Each diameter has drill lengths of 7.0 / 8.5 / 10 / 11.5mm
- TiN coating on drills for enhanced corrosion resistance & abrasion resistance

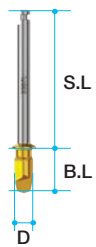


Diameter	Blade Length(mm)	Ref.C
Ø2.5	7.0	SD2507M
	8.5	SD2508M
	10	SD2510M
	11.5	SD2511M
Ø2.9	7.0	AROSD2907M
	8.5	AROSD2908M
	10	AROSD2910M
	11.5	AROSD2911M
Ø3.3	7.0	AROSD3307M
	8.5	AROSD3308M
	10	AROSD3310M
	11.5	AROSD3311M
Ø3.6	7.0	AROSD3607M
	8.5	AROSD3608M
	10	AROSD3610M
	11.5	AROSD3611M
Ø3.9	7.0	AROSD3907M
	8.5	AROSD3908M
	10	AROSD3910M
	11.5	AROSD3911M
Ø4.3	7.0	AROSD4307M
	8.5	AROSD4308M
	10	AROSD4310M
	11.5	AROSD4311M

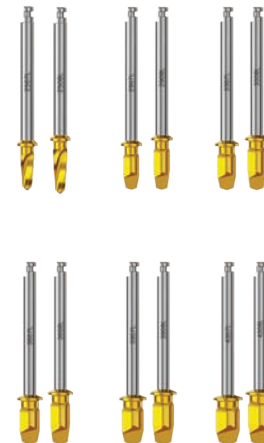


### Stopper Drill (Long type)

- Use products which has long shanks to avoid interference with adjacent teeth



Diameter	Blade Length(mm)	Shank Length(mm)	Ref.C
Ø2.5	7.0	*25	SD2507L
	8.5	*24	SD2508L
Ø2.9	7.0	*25	AROSD2907L
	8.5	*24	AROSD2908L
Ø3.3	7.0	*25	AROSD3307L
	8.5	*24	AROSD3308L
Ø3.6	7.0	*25	AROSD3607L
	8.5	*24	AROSD3608L
Ø3.9	7.0	*25	AROSD3907L
	8.5	*24	AROSD3908L
Ø4.3	7.0	*25	AROSD4307L
	8.5	*24	AROSD4308L

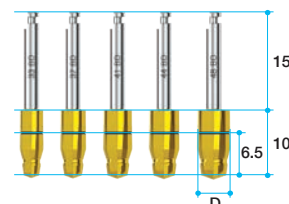


(\*) Separate sales item

## Cortical Bone Drills

- Use to remove & shape cortical bone to control initial stability in dense bone (type II)
- TiN coating on drills for enhanced corrosion resistance & abrasion resistance

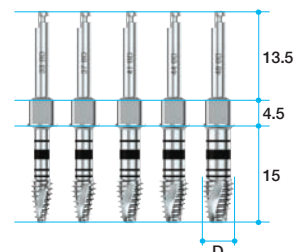
Diameter	Blade Length(mm)	Shank Length(mm)	Ref.C
Ø3.6	10	15	AROCD33
Ø4.0			AROCD37
Ø4.4			AROCD41
Ø4.7			AROCD44
Ø5.0			AROCD48



## Tap Drills

- Can be used with both Handpiece (dental implant engine) & Ratchet Wrench

Diameter	Marking	Ref.C
Ø3.6	7/ 8.5/ 10/ 11.5/ 13/ 15	AROTD33
Ø4.0		AROTD37
Ø4.4		AROTD41
Ø4.7		AROTD44
Ø5.0		AROTD48

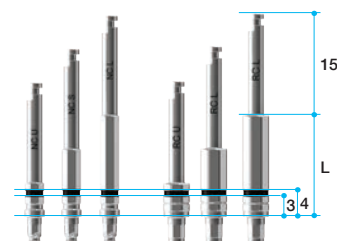


## Handpiece Connector

- Use with Handpiece when removing fixture from ampule & placing fixture
- Spring-type connection allows easy & secure pick-up & positioning of fixture
- First mark on shaft indicates position of fixture platform
- Bottom & top of black line indicate 3mm & 4mm from fixture platform, respectively
- Especially useful in flapless surgery

Length (mm)	Type	Connection (mm)	Ref.C
5	*Ultra-short	Octa. 2.05	AROHCU21
10	Short		AROHCS21
15	Long		AROHCL21
5	*Ultra-short	Octa. 2.5	AROHCU25
10	Short		AROHCS25
15	Long		AROHCL25

(\*) Separate sales item



## ➔ Surgical Kit Components

### Ratchet Connector

- Use with Ratchet Wrench when inserting or removing fixture
- Make sure Ratchet Connector is securely seated in Ratchet Wrench before using
- Excessive force can cause damage to internal Octa of fixture
- Marks on shaft indicate position of fixture platform
- Bottom & top of black line indicate 3mm & 4mm from fixture platform, respectively
- Especially useful in flapless surgery

Length (mm)	Type	Connection (mm)	Ref.C
5	*Ultra-short	Octa. 2.05	ARORCU21
10	Short		ARORCS21
15	Long		ARORCL21
5	*Ultra-short	Octa. 2.5	ARORCU25
10	Short		ARORCS25
15	Long		ARORCL25

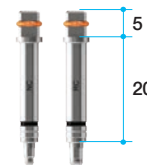
(\*) Separate sales item



### Fixture Driver

- If Ratchet Connector breaks from over-torquing during placement, connect Fixture Driver to Torque Wrench (Ratchet type) to remove fixture
- Excessive force can cause damage to internal Octa of fixture

Length (mm)	Connection (mm)	Ref.C
20	Octa. 2.05	AROFDN
	Octa. 2.5	AROFDR

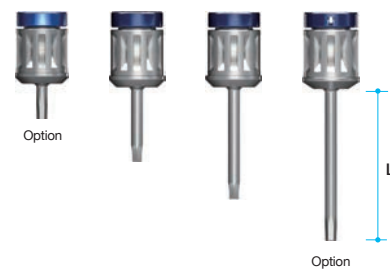


### Hand Driver (1.2 Hex)

- For use with all Cover Screws, Abutment Screws & Healing Abutments
- 4 lengths available
- Directly insert into Torque Wrench without adapter
- Hex tip can withstand 35-45Ncm of torque
- without distortion

Length(mm)	Type	Ref.C
5	*Ultra-short	TCMHDU1200
10	Short	TCMHDS1200
15	Long	TCMHDL1200
20	*Extra-long	TCMHDE1200

(\*) Separate sales item



### Drill Extension

- For extending drills & other handpiece tools
- Up to 45Ncm torque: can be distorted when too much force is applied

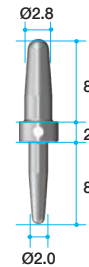
Ref.C
MDE150



## Direction Indicator

- Confirms drilling direction & functions as parallel guide for additional osteotomies
- Each end of Direction Indicator has different diameter - Ø2.0 & Ø2.8.

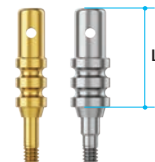
Length(mm)	Ref.C
Ø2.0 / Ø2.8	MDI100



## Path Finder

- Use to guide parallel placement of subsequent fixtures
- Grooves measure gingival depth, especially useful for flapless surgery
- Recommend torque : by Hand(5~8Ncm)

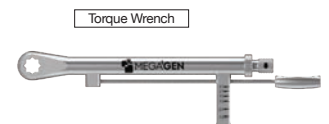
Length(mm)	Type	Ref.C
10	NC	AROPFN
	RC	AROPFR



## Torque Wrench (Ratchet type)

- Torque range: 15Ncm to 75Ncm
- Use for implant placement & final tightening of abutment screw

Type	Ref.C
Torque Wrench	TWSQ70

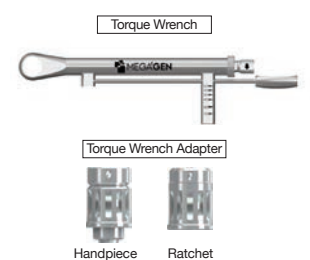


## Torque Wrench & Adapter

- Torque range: 15Ncm to 75Ncm
- Use for implant placement & final tightening of abutment screw

Type	Ref.C
*Torque Wrench (~70Ncm)	TW70
*Torque Wrench (~45Ncm)	MTW300A
*Torque Wrench Adapter (Handpiece)	TTAI100
*Torque Wrench Adapter (Ratchet)	TTAR100

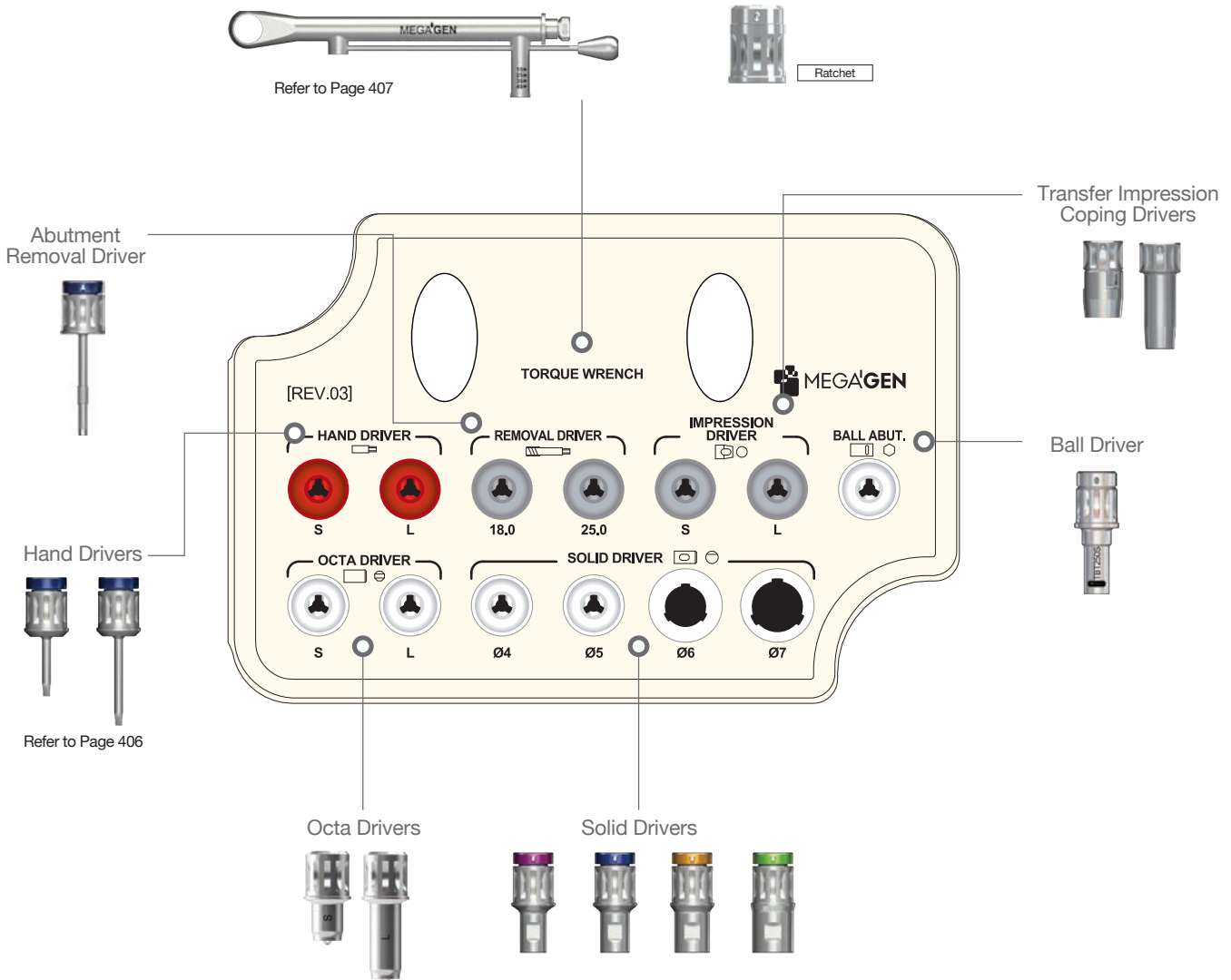
(\*) Separate sales item



# II. Prosthetic Kit

Includes various drivers required for prosthetics

Ref.C  
KANPK3000





## ➔ Prosthetic kit Component

### Solid Driver

- For delivering solid abutment
- Color coded: Ø4-magenta, Ø5-blue, Ø6-yellow, Ø7-green
- Heights: 8.5 & 13.5mm
- Directly connectable to Torque Wrench

Solid Abutment Profile Diameter	Length(mm)	Ref.C
Ø4	8.5	TANSDS400
	13.5	*TANSDL400
Ø5	8.5	TANSDS500
	13.5	*TANSDL500
Ø6	8.5	TANSDS600
	13.5	*TANSDL600
Ø7	8.5	TANSDS700
	13.5	*TANSDL700



(\*) Separate sales item

### Octa Driver

- For seating Octa Abutment into fixture
- Can also be connected to Torque Wrench

Length(mm)	Ref.C
7	MOD300S
13	MOD300L



### Ball Driver

- For seating Ball Abutment into fixture
- Connections for Handpiece, Ratchet & Torque Wrench
- Available as long or short

Type	Ref.C
*Handpiece Connector(Short)	TBH250S
*Handpiece Connector(Long)	TBH250L
*Ratchet Extension(Short)	TBR250S
*Ratchet Extension(Long)	TBR250L
*Torque Driver(Short)	TBT250S
Torque Driver(Long)	TBT250L

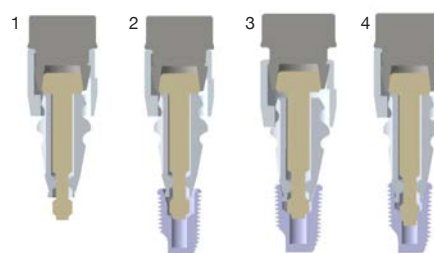


(\*) Separate sales item

### Impression Coping Driver (Transfer)

- For transfer-type impression coping
- Works with friction only
- Small yet powerful grip

Type	Ref.C
For two-piece impression coping	TCMID
For one-piece impression coping	TCMIDE



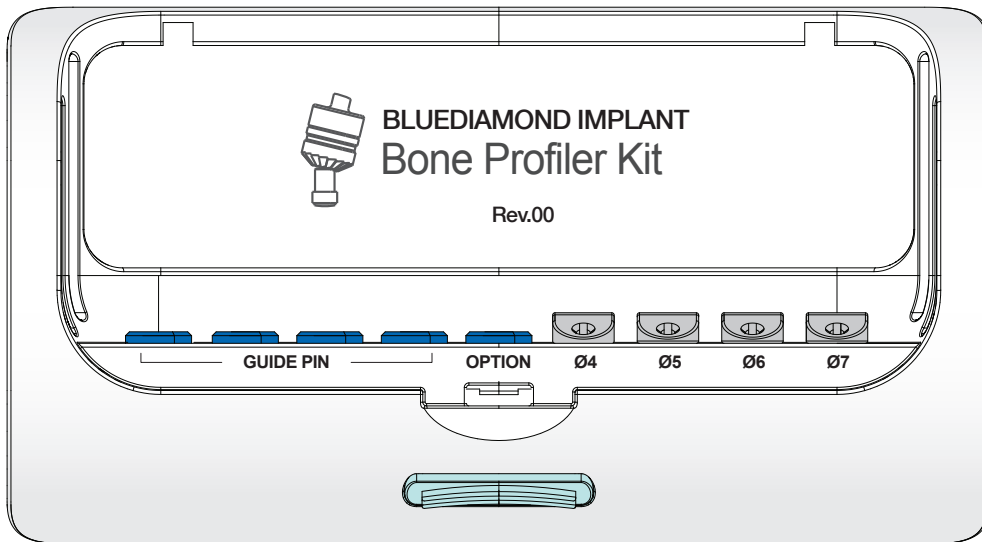
1. Connect Impression Coping & Impression Driver
2. Adjust connection with fixture by turning Holder clockwise
3. Push Holder & insert Impression Coping into fixture.
4. Turn Driver clockwise to ensure connection of Impression Coping & Fixture.

# III. Bone Profiler Kit

Removes overhanging bone around fixture to allow adequate seating of Healing Abutment or Prosthetic Abutment

Ref.C  
KAROBP3000

- Insert guide pin into fixture & select appropriate Bone Profiler
- Kit includes 4 sizes of bone profiler & 4 guide pins

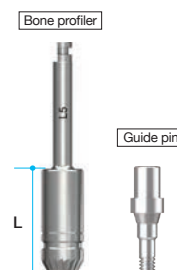


## Bone Profiler

- Guide Pin(AROBPGP) included

- Each bone profiler can be purchased separately, as refill
- Each package includes bone profiler & guide pin

Profile Diameter	Length(mm)	Ref.C
Ø4	13	AROBPL40G
Ø5		AROBPL50G
Ø6	8	AROBPS60G
Ø7		AROBPS70G



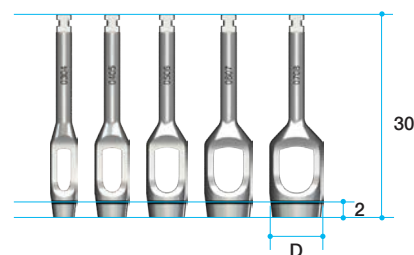
## IV. Optional Component (continued)

- not included in surgical kit
- may be purchased separately & placed in spaces provided in surgical kit

### Tissue Punch

- For removing soft tissue from osteotomy socket, especially useful in flapless surgery
- Identify soft tissue thickness using laser marking at 2mm
- Minimizes loss of soft tissue in flapless surgery
- Can stop bleeding when used with healing abutment

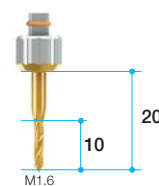
Diameter	Marking	Ref.C
In. Ø2.1 / Out. Ø2.6	2mm	TCMTPM2535
In. Ø3 / Out. Ø4		TCMTPM0304
In. Ø4 / Out. Ø5		TCMTPM0405
In. Ø5 / Out. Ø6		TCMTPM0506
In. Ø6 / Out. Ø7		TCMTPM0607
In. Ø7 / Out. Ø8		TCMTPM0708



### Hand Tap

- Useful when internal screw of fixture has been damaged
- For re-tapping disabled thread
- Caution: use of excessive force can cause further damage, so apply force slowly & gradually

Length(mm)	Type	Ref.C
10	M1.6	THT160L



### Ratchet Wrench

- Used to exert more force than Handpiece
- No bearing system: no breakage or corrosion problems
- Attaches to Ratchet Extension
- Arrow laser marking indicates direction of force

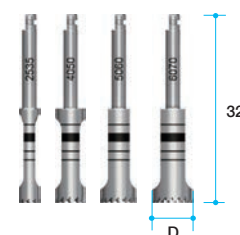
Ref.C
MRW040S



### Trephine Bur

- Use to minimize drilling steps, especially for wider fixtures
- Helpful for collecting autogenous bone
- Useful for removing failed & fractured fixtures
- Depth markings are 7, 8.5, 10, 11.5, 13mm, same as fixture depths (no Y dimension, so markings are actual length)
- Markings on drill shaft represent inside / outside diameter of Trephine Burs

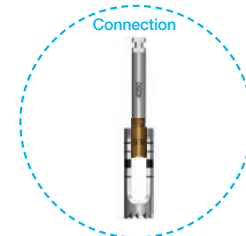
Diameter	Type	Ref.C
Ø3.5 (in Ø2.5)	Short (32mm)	TANTBL2535
Ø5.0 (in Ø4.0)		TANTBL4050
Ø6.0 (in Ø5.0)		TANTBL5060
Ø7.0 (in Ø6.0)		TANTBL6070
Ø3.5 (in Ø2.5)	Long (38mm)	TANTBE2535
Ø5.0 (in Ø4.0)		TANTBE4050
Ø6.0 (in Ø5.0)		TANTBE5060
Ø7.0 (in Ø6.0)		TANTBE6070



## Trephine Bur Stopper

- Controls depth of trephination
- Especially useful in cases with limited available bone

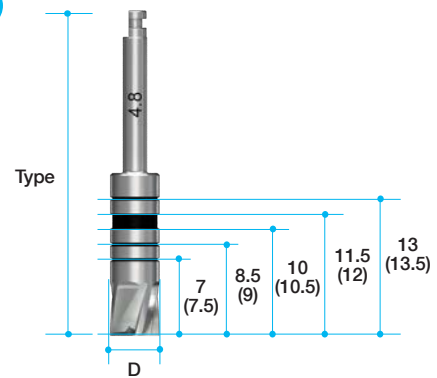
Type	Ref.C
7.0	TANTSF2307
8.5	TANTSF2308
10.0	TANTSF2310
11.5	TANTSF2311



## Bottom Drill

- Removes remaining bone in osteotomy socket after trephine drilling
- Laser markings of fixture sizes: 7, 8.5, 10, 11.5 & 13mm

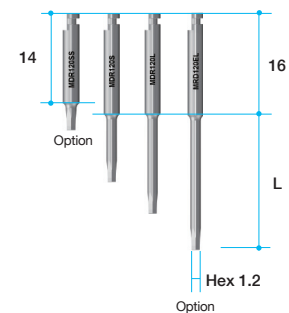
Diameter	Type	Ref.C
Ø3.3	Short (32mm)	TCMBDS33
Ø3.8		TCMBDS38
Ø4.8		TCMBDS48
Ø5.8		TCMBDS58
Ø6.8		TCMBDS68
Ø3.3	Long (38mm)	TCMBDL33
Ø3.8		TCMBDL38
Ø4.8		TCMBDL48
Ø5.8		TCMBDL58
Ø6.8		TCMBDL68



## Right Angle Drivers (hex 1.2)

- For engaging with cover screws, abutment screws & healing abutments
- Hex tip designed to withstand torque force of 35~45 Ncm

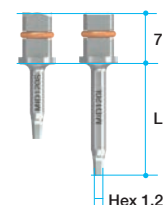
Length(mm)	Type	Ref.C
4	*Ultra-short	MDR120SS
10	Short	MDR120S
15	Long	MDR120L
20	*Extra Long	MDR120EL



## Insert Drivers (hex 1.2)

- For engaging with cover screws, abutment screws & healing abutments
- Hex tip designed to withstand torque force of 35~45 Ncm

Length(mm)	Type	Ref.C
10	Short	MID120S
15	Long	MID120L



## Reamer Drill & Center Pin

- For removing inner lip of cast after casting burn-out cylinders of solid abutment
- Center pins have 4 diameters according to profile diameter of solid abutment

Diameter	Type	Ref.C
Ø10.0	Reamer Drill	TANRD
Ø4.0	Center Pin	TANRDJ40
Ø4.5		TANRDJ50
Ø5.5		TANRDJ60
Ø6.5		TANRDJ70



## Removal Driver

Length(mm)	Type	Ref.C
21	M1.6	ARORDS16



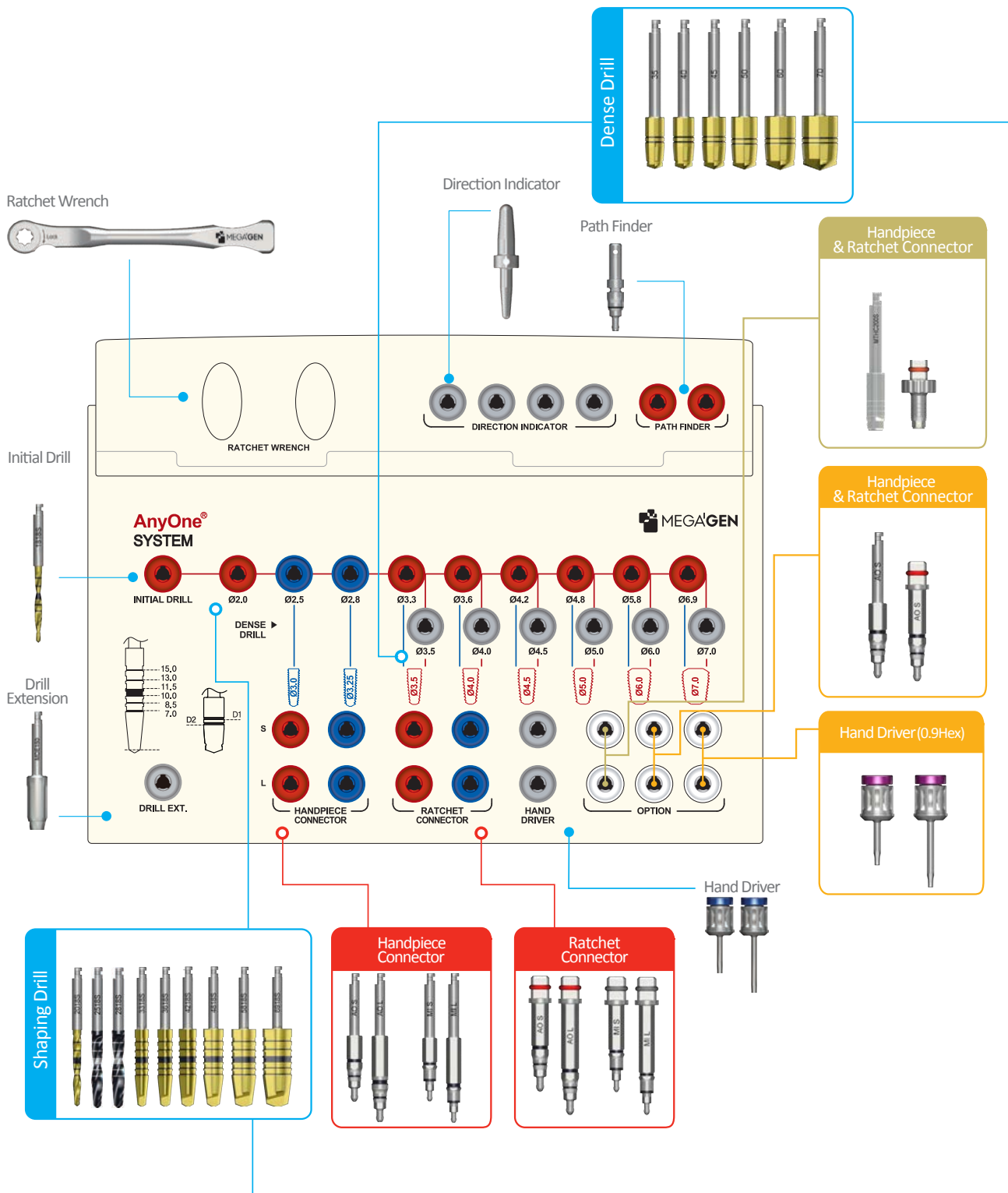
1. Use Hand Driver(1.2 Hex) to unscrew abutment screw
2. Continue to turn counter-clockwise until feeling click of disengagement
3. Push down Hand Driver once again to catch & fix abutment screw
4. Lift up Hand Driver lightly & continue to turn counter-clockwise until abutment screw engages with inner screw of abutment
5. Remove abutment screw completely from abutment
6. Insert Abutment Removal Driver & continue to turn clockwise until abutment comes out of fixture. Despite initial resistance, only simple force is needed to disconnect abutment from fixture

# AnyOne Surgical Kit

## I. AnyOne Internal / External / OneStage Kit

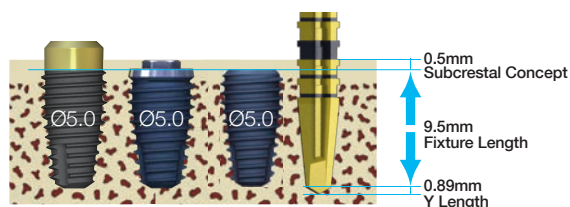
Ref.C

KA0IN3003



## Shaping Drill

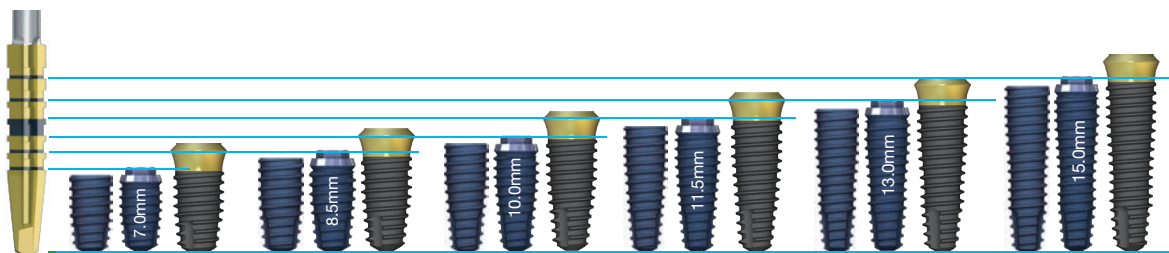
- Each drill has depth marking lines from 7.0mm to 15.0mm
- The dual marking system (grooves and laser markings) provides visual and radio graphic depth verification during surgery.



Drill Diameter	Ø2.8	Ø3.3	Ø3.6	Ø4.2	Ø4.8	Ø5.8	Ø6.9
Y length	0.58	0.59	0.68	0.85	0.89	0.94	0.94

※ Actual drill length : Drill length does not normally include the Y dimension of the drill.

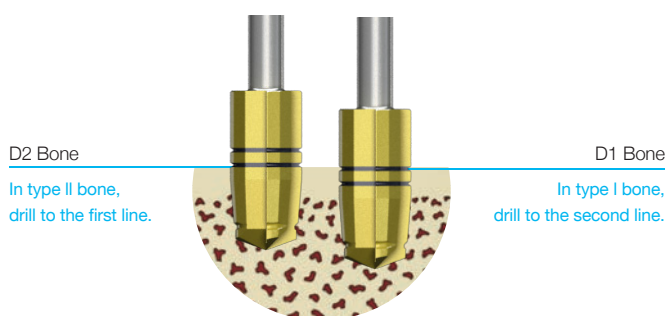
※ Markings on the Shapping Drill are 0.5mm longer than the fixture so fixtures will automatically be placed 0.5mm subcrestally if the drilling protocol is followed.



※ To place a Ø5.0 x 10mm length fixture, the required bone depth would be 10.89mm.  
For example : 0.5mm(subcrestal concept) + 0.89mm(Y dimension of drill tip) + 9.5mm (fixture length)

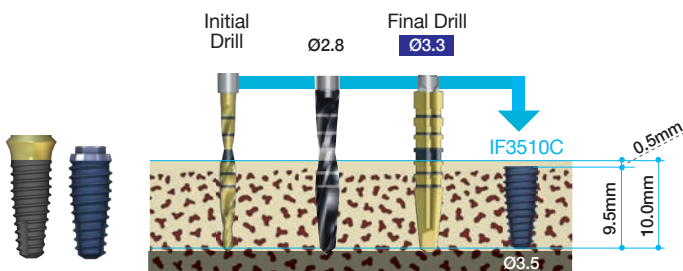
## Dense Drill

- To control initial stability in dense bone (type I & II), use the Dense Drill to remove and shape the cortical bone.



## ► ► Surgical drilling sequence

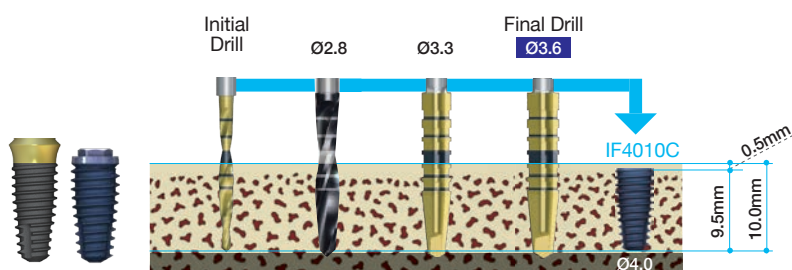
- AnyOne fixtures offer optimum initial stability when they are used with the following drill sequence guide, AnyOne implants should be placed 0.5mm subcrestally.



### Ø3.5 Fixture

#### Ø3.5 Drilling Sequence

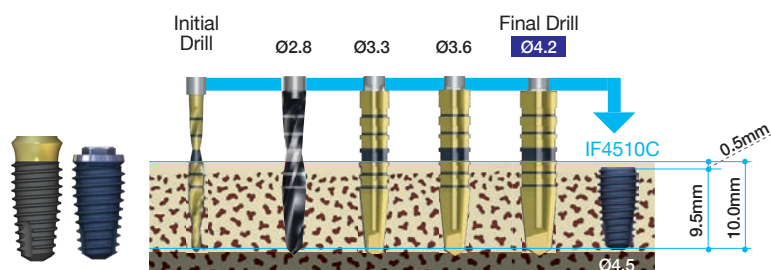
10.0mm is the fixture length, The Shaping Drills are 0.59mm longer than the fixture, so total drill depth is 10.59mm.



### Ø4.0 Fixture

#### Ø4.0 Drilling Sequence

10.0mm is the fixture length, The Shaping Drills are 0.68mm longer than the fixture, so total drill depth is 10.68mm.

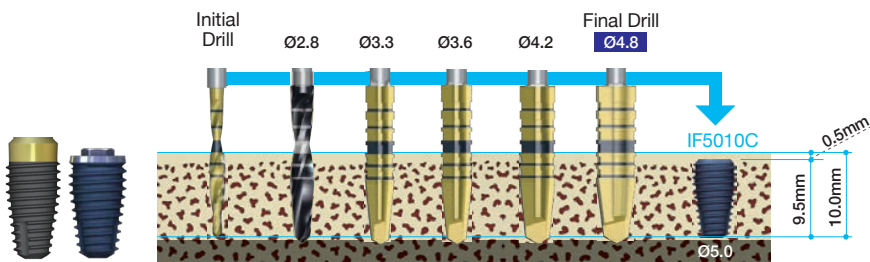


### Ø4.5 Fixture

#### Ø4.5 Drilling Sequence

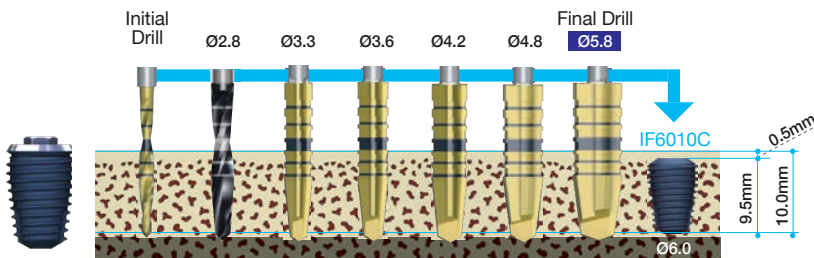
10.0mm is the fixture length, The Shaping Drills are 0.85mm longer than the fixture, so total drill depth is 10.85mm.





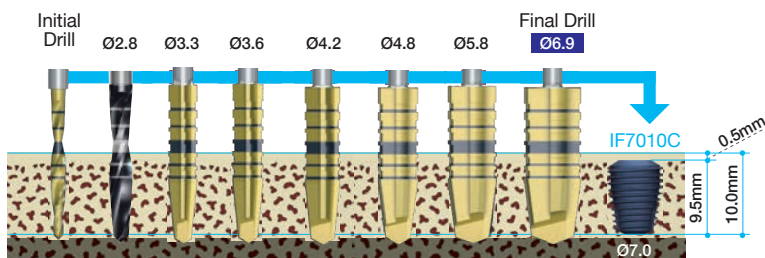
### Ø5.0 Fixture Ø5.0 Drilling Sequence

10.0mm is the fixture length, The Shaping Drills are 0.89mm longer than the fixture, so total drill depth is 10.89mm.



### Ø6.0 Fixture Ø6.0 Drilling Sequence

10.0mm is the fixture length, The Shaping Drills are 0.94mm longer than the fixture, so total drill depth is 10.94mm.

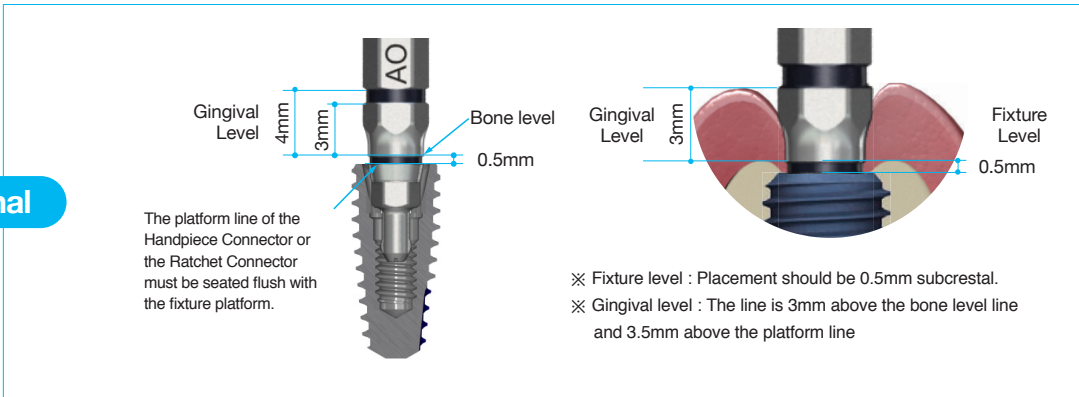


### Ø7.0 Fixture Ø7.0 Drilling Sequence

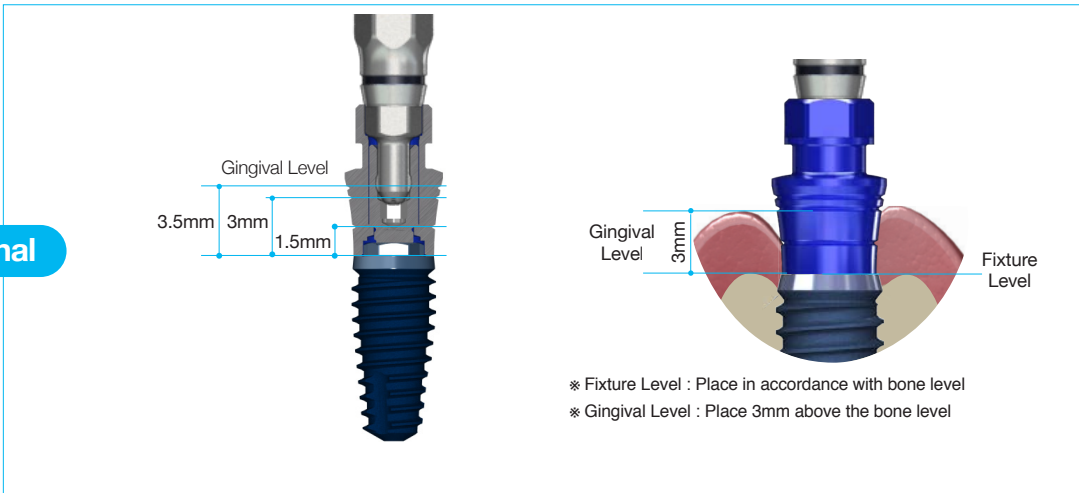
10.0mm is the fixture length, The Shaping Drills are 0.94mm longer than the fixture, so total drill depth is 10.94mm.

## ▶▶ Handpiece & Ratchet Connector

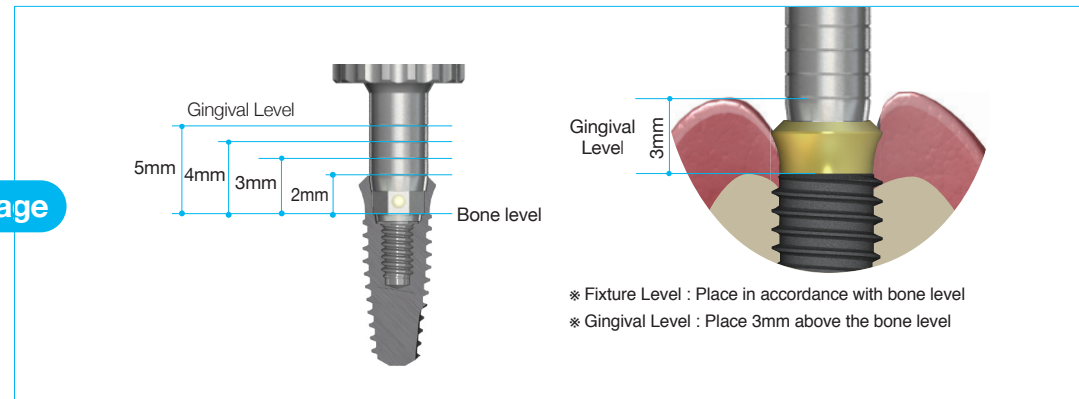
### Internal



### External



### OneStage



## ➔ Surgical Kit Components (Continued)

### Initial Drill

- Used to pierce the cortical bone initially.
- Advisable to go into the bone to the full length of a fixture.

Diameter	Length(mm)	Ref.C
Ø1.8	33	ID1818S
	38	*ID1818M
	43	*ID1818L

(\*) Separate sales item.



### Shaping Drill

- Each drill has depth marking lines from 7.0mm to 15.0mm.
- The dual marking system(grooves and laser markings) provides visual and radiographic depth verification during surgery.
- TiN coating on drills : Enhanced corrosion resistance and abrasion resistance.

Diameter	Length(mm)	Ref.C
Ø2.0	33	SD2018S
	38	*SD2018M
	43	*SD2018L
Ø2.5	33	SD2518S
	38	*SD2518M
	43	*SD2518L
Ø2.8	33	SD2818S
	38	*SD2818M
	43	*SD2818L
Ø3.3	33	SD3318S
	38	*SD3318M
	43	*SD3318L
Ø3.6	33	SD3618S
	38	*SD3618M
	43	*SD3618L
Ø4.2	33	SD4218S
	38	*SD4218M
	43	*SD4218L
Ø4.8	33	SD4818S
	38	*SD4818M
	43	*SD4818L
Ø5.8	33	SD5818S
	38	*SD5818M
	43	*SD5818L
Ø6.9	33	SD6918S
	38	*SD6918M
	43	*SD6918L

(\*) Separate sales item.



### Dense Drill

- Used to remove and shape cortical bone to control initial stability in dense bone (type I & II).
- TiN coating on drills : Enhanced corrosion resistance and abrasion resistance.

Diameter	Type	Ref.C
Ø3.9	Long	DD39
Ø4.3		DD43
Ø4.8		DD48
Ø5.3		DD53
Ø6.3		DD63
Ø7.3		DD73



## ➔ Surgical Kit Components (Continued)

### Handpiece Connector

- Used with Handpiece to remove fixture from ampule and to place the fixture.
- Spring type connection allows for easy and secure pick-up and positioning of the fixture.
- First mark on the shaft indicate the position of the fixture platform, For second mark, the bottom of the black line is 3mm and the top of the black line is 4mm(from fixture platform).
- Especially useful in flapless surgery.

#### AnyOne Internal& External

Length(mm)	Type	Connection	Ref.C
5	*Ultra-short	Hex. 2.5	HCU25
10	Short		HCS25
15	Long		HCL25

(\*) Separate sales item

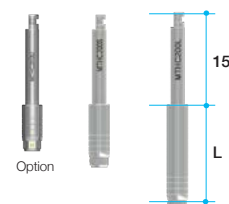
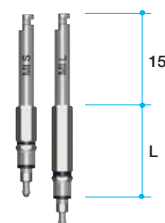
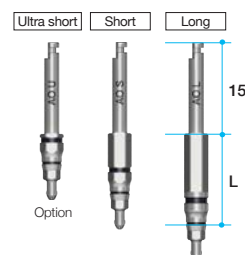
#### MiNi

Length(mm)	Type	Connection	Ref.C
10	Short	Hex. 1.7	HCS17
15	Long		HCL17

#### OneStage

Length(mm)	Type	Connection	Ref.C
6	*Ultra-short	Octa. 3.1	MTHC200U
9	Short		MTHC200S
16	Long		MTHC200L

(\*) Separate sales item



### Ratchet Connector

- Used for inserting or removing a fixture with the Ratchet Wrench.
- Check to make sure the Ratchet Connector is completely seated into the Ratchet Wrench before using.
- Excessive force can cause damage to internal hex of fixture.
- Marks on the shaft indicate the position of fixture platform. Bottom of the black line is 3mm and top of black line is 4mm(from fixture platform).
- Especially useful in flapless surgery.

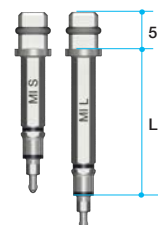
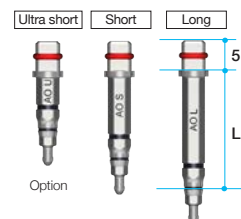
#### Internal& External

Length(mm)	Type	Connection	Ref.C
10	*Ultra-short	Hex. 2.5	RCU25
15	Short		RCS25
20	Long		RCL25

(\*) Separate sales item

#### MiNi

Length(mm)	Type	Connection	Ref.C
15	Short	Hex. 1.7	RCS17
20	Long		RCL17

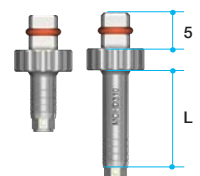


### Final Driver

- Used to attach or remove the fixture by connecting to Ratchet Wrench
- Used to mount the Ratchet Connector fully on the Ratchet Wrench

#### OneStage

Length(mm)	Type	Connection	Ref.C
6	Short	Octa. 3.1	MOHD310S
13	Long		MOHD310



## Hand Driver (Hex 1.2)

- Used for all Cover Screws, Abutment Screws, and Healing Abutments.
- Available in 4 lengths for added convenience.
- Hand Driver can be directly inserted into the Torque Wrench without using an adaptor.
- Hex tip can with stand 35-45Ncm of torque without distorting.

Length(mm)	Type	Ref.C
5	*Ultra-short	TCMHDU1200
10	Short	TCMHDS1200
15	Long	TCMHDL1200
20	*Extra-long	TCMHDE1200

(\*) Separate sales item

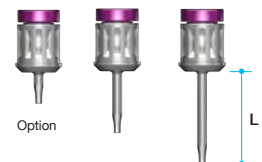


## Hand Driver (Hex 0.9)

- Used for AnyOne External fixture cover screw.
- Available in 3 lengths for convenience.
- Hand Driver can be directly inserted in the to Torque Wrench without using an adaptor.
- Hex tip can with stand 32-35Ncm of torque without distorting.

Length(mm)	Type	Ref.C
5	*Ultra-short	TCMHDU0900
10	Short	TCMHDS0900
15	Long	TCMHDL0900

(\*) Separate sales item



## Drill Extension

- No more than 45Ncm torque : May distorted when excessive force is applied.
- Extends drills & other handpiece instruments.

Ref.C
MDE150

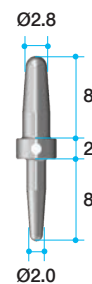


## ➔ Surgical Kit Components

### Direction Indicator

- Confirms drilling direction and functions as a parallel guide for additional osteotomies.
- Each end of the Direction Indicator has a different diameter
  - Ø2.0 and Ø2.8.

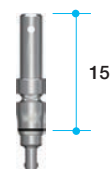
Diameter	Ref.C
Ø2.0 / Ø2.8	MDI100



### Path Finder

- After the fixture is placed, a Path Finder may be connected into the fixture and function as a parallel guide for additional osteotomies.
- Grooves indicate the distance from the fixture platform. The first groove is 0.3mm and the second groove is 1mm, especially useful in flapless surgery.

Length(mm)	Ref.C
15	PF



### Ratchet Wrench

- Used to exert more force than the Handpiece.
- No bearing system : No breakage and no corrosion problems.
- Arrow laser marking indicates direction of force.

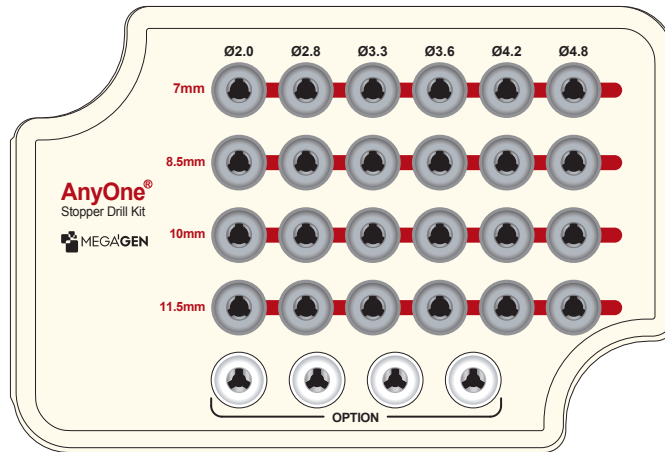
Ref.C
MRW040S



# II. AnyOne Stopper Drill Kit

AnyOne Stopper Drill Kit helps to drill safely and conveniently to a desired depth.

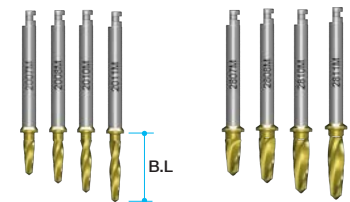
Ref.C  
KAOSS3000



## Stopper Drill

Diameter	Blade Length (mm)	Ref.C
Ø2.0	7	SD2007M
	8.5	SD2008M
	10	SD2010M
	11.5	SD2011M
Ø2.8	7	SD2807M
	8.5	SD2808M
	10	SD2810M
	11.5	SD2811M
Ø3.3	7	SD3307M
	8.5	SD3308M
	10	SD3310M
	11.5	SD3311M
Ø3.6	7	SD3607M
	8.5	SD3608M
	10	SD3610M
	11.5	SD3611M
Ø4.2	7	SD4207M
	8.5	SD4208M
	10	SD4210M
	11.5	SD4211M
Ø4.8	7	SD4807M
	8.5	SD4808M
	10	SD4810M
	11.5	SD4811M
*Ø5.8	7	SD5807M
	8.5	SD5808M
	10	SD5810M
	11.5	SD5811M
*Ø6.9	7	SD6907M
	8.5	SD6908M
	10	SD6910M
	11.5	SD6911M

(\*) Separate sales item.

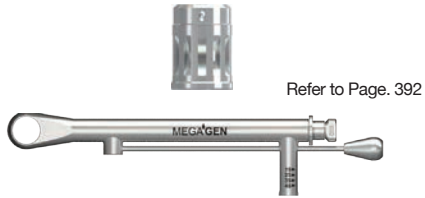


Option

Option

# III. AnyOne Prosthetic Kit Internal

Ref.C  
KAOPK3000



Torque Wrench

Octa Driver



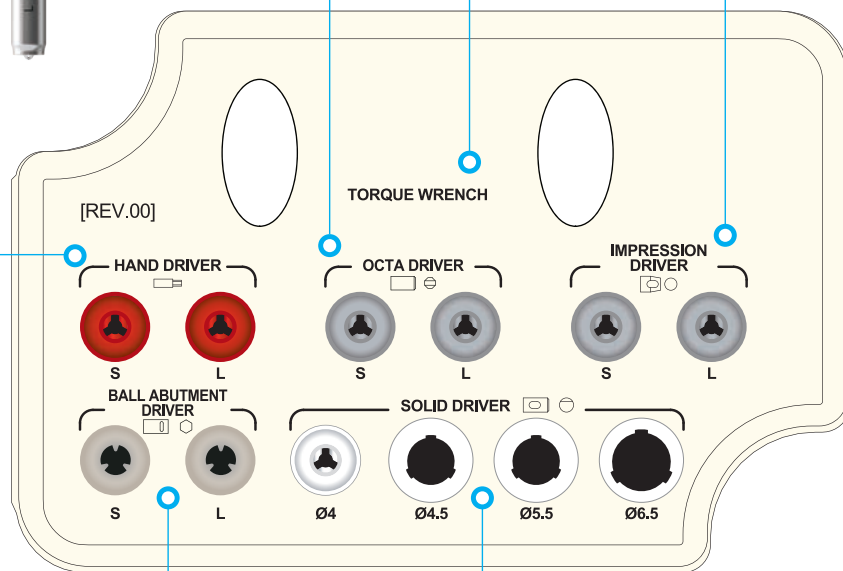
Impression Driver



Hand Driver



Refer to Page. 421



Ball Abutment Driver



Solid Driver





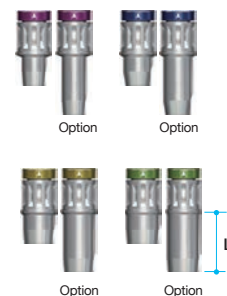
## ➔ Prosthetic kit Components

### Solid Driver

- For seating the Solid Abutment into the fixture.
- Connected to Torque Wrench as well.
- Color coded for different profile diameters.  
(Magenta : PD Ø4.0, Blue : PD Ø4.5, Yellow : PD Ø5.5, Green : PD Ø6.5)
- Two different lengths(6mm/ 12mm).

Diameter	Length(mm)	Type	Ref.C
Ø4.0	6	Short	SDS40
	12	Long	*SDL40
Ø4.5	6	Short	SDS45
	12	Long	*SDL45
Ø5.5	6	Short	SDS55
	12	Long	*SDL55
Ø6.5	6	Short	SDS65
	12	Long	*SDL65

(\*) Separate sales item.



### Octa Driver

- For seating the Octa Abutment onto the fixture.
- Can also be connected to Torque Wrench.

Length(mm)	Ref.C
6	MOD300S
12	MOD300L

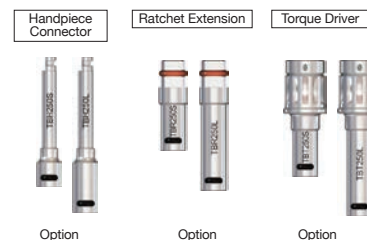


### Ball Driver

- For seating the Ball Abutment into the fixture.
- Can connect to a Handpiece, Ratchet or Torque Wrench.
- Available in long or short.

Type	Ref.C
*Handpiece Connector(Short)	TBH250S
*Handpiece Connector(Long)	TBH250L
*Ratchet Extension(Short)	TBR250S
*Ratchet Extension(Long)	TBR250L
Torque Driver(Short)	TBT250S
Torque Driver(Long)	TBT250L

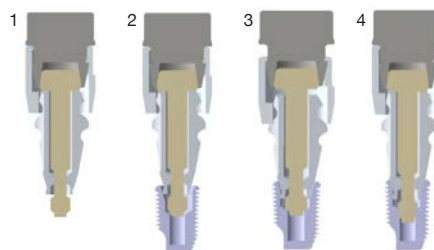
(\*) Separate sales item.



### Impression Coping Driver (Transfer)

- For transfer type of Impression Coping.
- Works with friction only.
- Small but powerful grip.

Type	Ref.C
For Two piece impression Coping	TCMID
For One piece impression Coping	TCMIDE

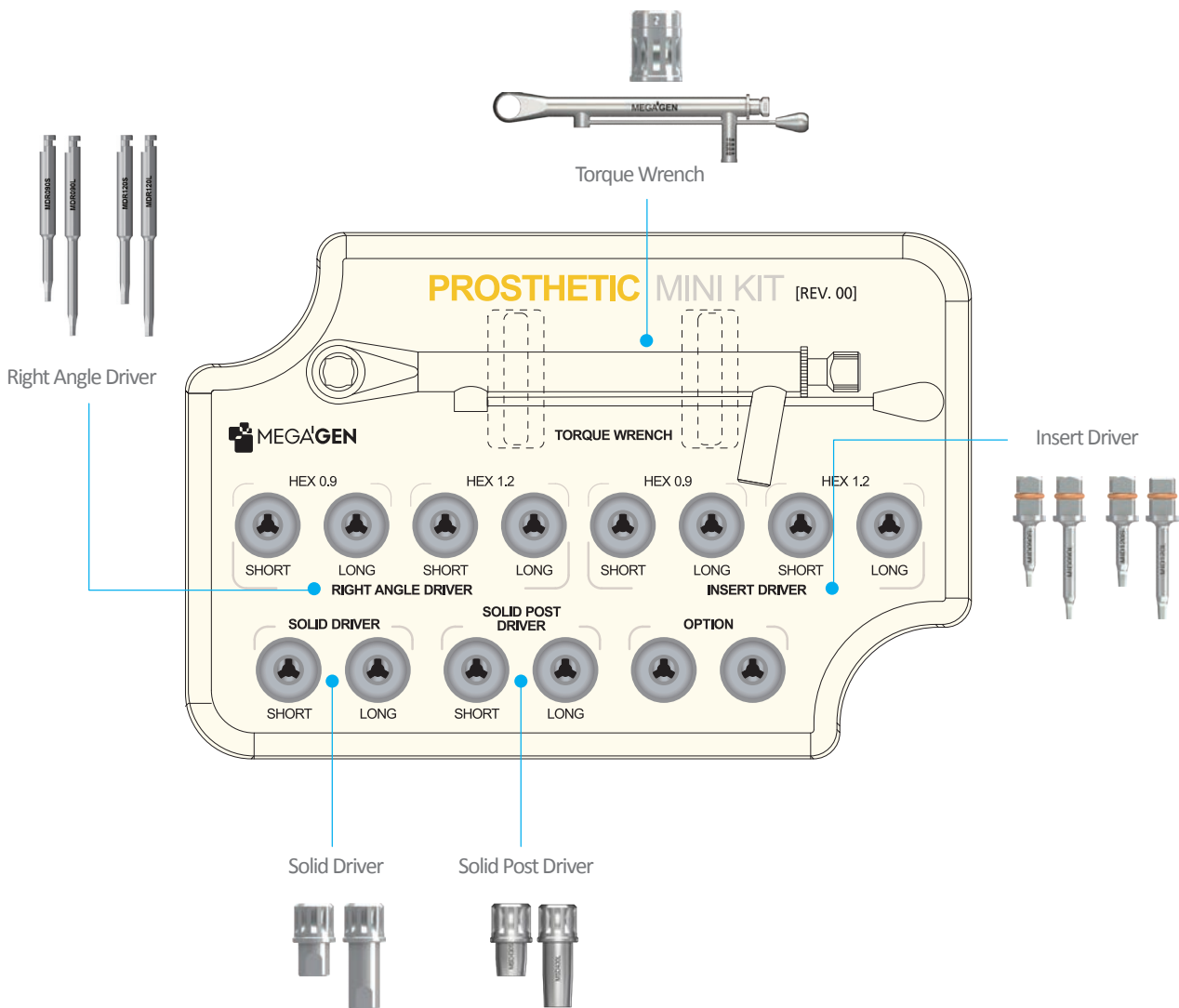


1. Connect Impression Coping and Impression Driver together
2. Adjust Connection with a Fixture by turning a Holder clockwise.
3. Push the Holder and put the Impression Coping into the Fixture.
4. Turn the Driver clockwise to ensure connection of the Impression Coping and Fixture.

# IV. AnyOne Prosthetic Kit External / Onestage

Ref.C

MPK3000



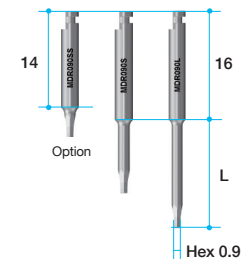
## ➔ Prosthetic kit Components

### Right Angle Driver (hex 0.9)

- Can be engaged with Cover Screws, Abutment Screws and Healing Abutment
- Hex tip has been designed to stand Torque force of 32~35 Ncm
- Used for AnyOne External

Length(mm)	Type	Ref.C
4	*Ultra-short	MDR090SS
10	Short	MDR090S
15	Long	MDR090L

(\*) Separate sales item.

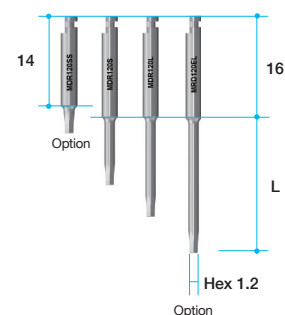


### Right Angle Driver (hex 1.2)

- Can be engaged with Cover Screws, Abutment Screws and Healing Abutment
- Hex tip has been designed to stand Torque force of 35~45 Ncm
- Used for AnyOne Internal & External

Length(mm)	Type	Ref.C
4	*Ultra-short	MDR120SS
10	Short	MDR120S
15	Long	MDR120L
20	*Extra Long	MDR120EL

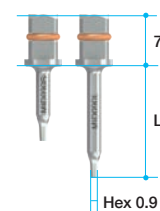
(\*) Separate sales item.



### Insert Driver (hex 0.9)

- Can be engaged with Cover Screws, Abutment Screws and Healing Abutment
- Hex tip has been designed to stand Torque force of 35~45 Ncm

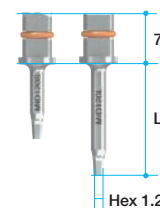
Length(mm)	Type	Ref.C
10	Short	MID090S
15	Long	MID090L



### Insert Driver (hex 1.2)

- Can be engaged with Cover Screws, Abutment Screws and Healing Abutment
- Hex tip has been designed to stand Torque force of 35~45 Ncm

Length(mm)	Type	Ref.C
10	Short	MID120S
15	Long	MID120L



### Solid Driver

- Can be engaged with Solid Abutment
- Connected to Torque Wrench as well
- Offers various options of Length (6mm / 12mm)

Diameter	Length(mm)	Type	Ref.C
Ø3.4	6	Short	MSD300S
	12	Long	MSD300L



### Solid Post Driver

- Can be engaged with Solid Abutment
- Connected to Torque Wrench as well
- Offers various options of Length (6mm / 12mm)

Diameter	Length(mm)	Type	Ref.C
Ø4.3	6	Short	MSD430S
	12	Long	MSD430L



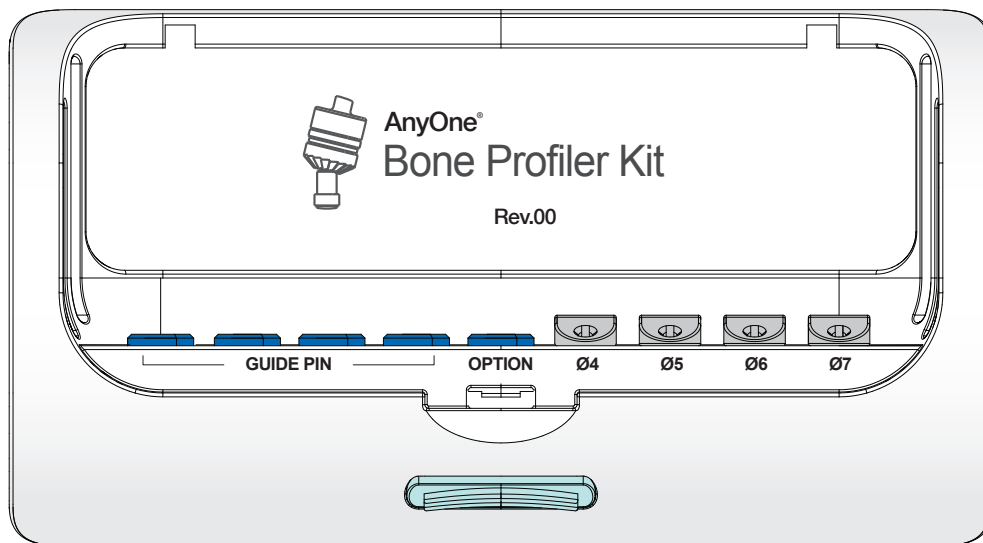
# V. AnyOne Bone Profiler Kit

Ref.C

KAOBP3000

Removes the overhanged bone around a fixture to allow adequate seating of a Healing Abutment or a Prosthetic Abutment.

- Place a Guide Pin into a fixture and choose a Bone Profiler which fits with the situation.
- Four different sizes of bone profiler and four guide pins are included in the kit.

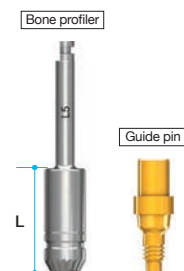


## Bone Profiler

- Guide Pin(BPGP2) included.

- Each bone profiler can be purchased separately for refill.
- Each package includes a bone profiler and a guide pin.

Profile Diameter	Length(mm)	Ref.C
Ø4	13	AOBP40G
Ø5		AOBP50G
Ø6	8	AOBP60G
Ø7		AOBP70G



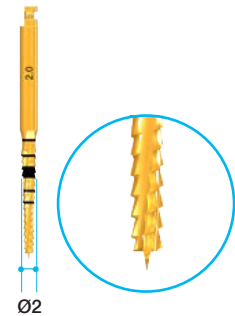
## VI. Optional components (Continued)

- not included in a surgical kit
- may be purchased separately and placed in the spaces provided in the surgical kit

### Lindermann Drill

- Cross cut on the drill.
- Can correct the path during drilling.

Diameter	Ref.C
Ø2	TEEL200M



### Hand Tap

- Useful when the internal screw of the Fixture has been damaged
- For Re-tapping the disabled thread
- It can even more damage the thread when excessive force is applied when Re-tapping. Therefore it is recommended to apply the force slowly and gradually
- M1.6 can be used for AnyOne's External fixtures with Small Sizes

Length(mm)	Type	Ref.C
10	M1.6	THT160L
	M2.0	THT200L

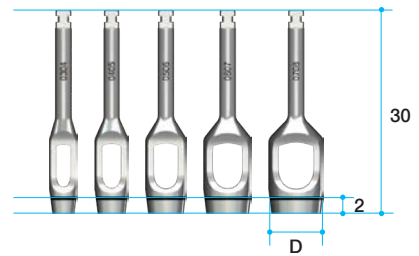


# VI. Optional components (Continued)

## Tissue Punch

- Customized to remove soft tissue using osteotomy socket and useful for flapless surgery
- Easy to identify the thickness of soft tissue by comparing the tissue with the laser marking on the height of 2mm
- Can minimize the loss of soft tissue when conducting a flapless surgery
- Can stop from bleeding when used with Healing Abutment

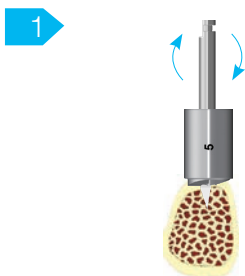
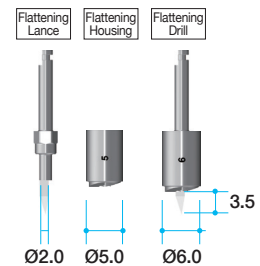
Diameter	Marking	Ref.C
In. Ø3 / Out. Ø4	2mm	TCMTPM0304
In. Ø4 / Out. Ø5		TCMTPM0405
In. Ø5 / Out. Ø6		TCMTPM0506
In. Ø6 / Out. Ø7		TCMTPM0607
In. Ø7 / Out. Ø8		TCMTPM0708



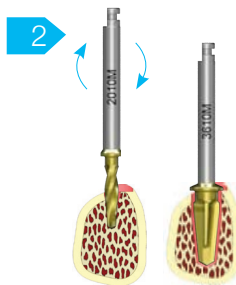
## Flattening Drill

- Flattens the irregular bone and enables the stopper drill to drill the exact depth
- Designed to be engaged with Flattening Lance and Housing. There are 2 kinds of Housing to match the diameters of different final drills. (Ø5.0 & Ø6.0)
- Ø5.0 = Stopper Drill Ø2.0 ~ Ø4.3
- Ø6.0 = Stopper Drill Ø4.8 ~ Ø5.4
- By using Housing Boundary of the path is formed and it becomes the barometer of the drilling position for the next fixture

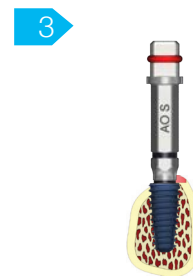
Diameter	Length(mm)	Ref.C
Ø5.0 / Ø2.0	3.5	FD5020
Ø6.0 / Ø2.0		FD6020



- Use Flattening Drill to make drilling on the right fixture position  
(If the Final drill's diameter is from Ø2.0~Ø4.3, use Ø5.0 Housing and in case the diameter is Ø4.8, Ø5.4 use Ø6 Housing.)



- Start drilling sequence below considering the size of fixtures to place and the bone density

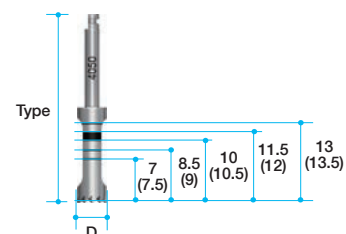


- Start placing the fixtures using Handpiece & Ratchet Connector

## Trepine Bur

- Minimizes the drilling steps needed, especially for wider fixtures.
- Helpful for collecting autogenous bone.
- Useful for removing failed and fractured fixtures.
- Depth markings are 7, 8.5, 10, 11.5, 13mm, same depths as fixtures. (No Y dimension so markings are actual length).
- Markings on the drill shaft represent the inside / outside diameter of Trepine Burs.

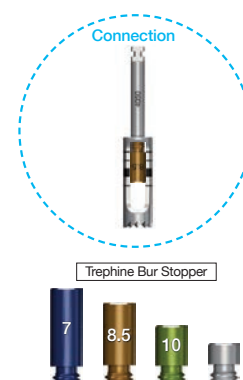
Diameter	Type	Ref.C
Ø3.5 (in Ø2.5)	Short (32mm)	TANTBL2535
Ø5.0 (in Ø4.0)		TANTBL4050
Ø6.0 (in Ø5.0)		TANTBL5060
Ø7.0 (in Ø6.0)		TANTBL6070
Ø3.5 (in Ø2.5)	Long (38mm)	TANTBE2535
Ø5.0 (in Ø4.0)		TANTBE4050
Ø6.0 (in Ø5.0)		TANTBE5060
Ø7.0 (in Ø6.0)		TANTBE6070



## Trepine Bur Stopper

- Controls the depth of trephination with a Stopper placed into the Trepine.
- Especially useful in cases with limited available bone from important anatomy.

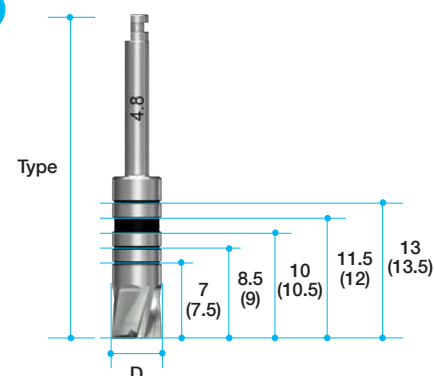
Type	Ref.C
7.0	TANTSF2307
8.5	TANTSF2308
10.0	TANTSF2310
11.5	TANTSF2311



## Bottom Drill

- It removes remaining bone in osteotomy socket after trephine drilling.
- It imprints the sizes of fixtures, for example 7, 8.5, 10, 11.5 and 13mm, by laser marker.

Diameter	Type	Ref.C
Ø3.3	Short (32mm)	TCMBDS33
Ø3.8		TCMBDS38
Ø4.8		TCMBDS48
Ø5.8		TCMBDS58
Ø6.8		TCMBDS68
Ø3.3	Long (38mm)	TCMBDL33
Ø3.8		TCMBDL38
Ø4.8		TCMBDL48
Ø5.8		TCMBDL58
Ø6.8		TCMBDL68

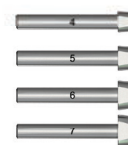


## VI. Optional components

### Reamer Drill & Center Pin

- Removes inner lip of the cast after casting Burn-out Cylinders of Solid Abutment.
- Center Pin have 4 different diameters according to the profile diameter of Solid Abutments.

Diameter	Type	Ref.C
Ø10.0	Reamer Drill	TANRD
Ø4.0	Center Pin	RDJ40
Ø4.5		RDJ45
Ø5.5		RDJ55
Ø6.5		RDJ65



### Slot Driver (Slotted type)

- Useful for the placement or removal of AnyOne Healing Abutment which has slot on the top.

Length(mm)	Type	Ref.C
10	Short	SDS06
15	Middle	SDM06
20	Long	SDL06



### Multi-unit Driver (2.0 Hex) (For Multi-unit Abutment-S Type)

- For the seating & tightening of Multi-unit Abutment (Straight type)

Length(mm)	Type	Ref.C
10	Short	TCMMUDS20
15	Long	TCMMUDL20

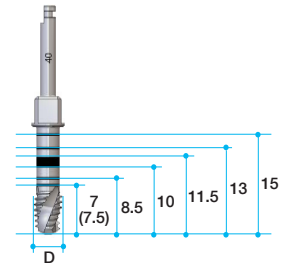




## Tap Drill

- Can use both Handpiece(Dental implant engine) & Ratchet Wrench

Diameter	Marking	Ref.C
Ø3.9	7.5/ 8.5/ 10/ 11.5/ 13/ 15	TD35
Ø4.3		TD40
Ø4.8		TD45
Ø5.3		TD50
Ø6.3		TD60
Ø7.3		TD70

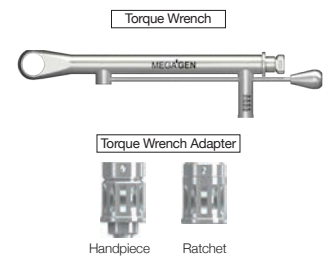


## Torque Wrench & Adapter

- Torque Wrench has various options to control the force from 15Ncm ~ 45Ncm and can be used for engaging with Abutment Screw

Type	Ref.C
Torque Wrench	MTW300AT
*Right Angle Adapter (Handpiece)	TTAI100
Torque Wrench Adapter (Ratchet)	TTAR100

(\*) Separate sales item.



## Mount Removal Driver

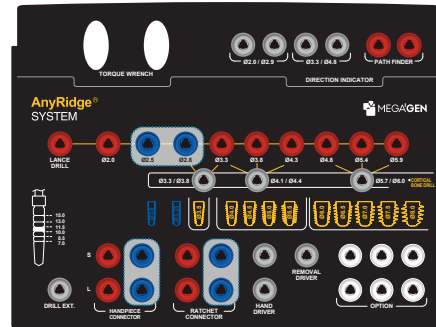
Length(mm)	Ref.C
19	MVD100



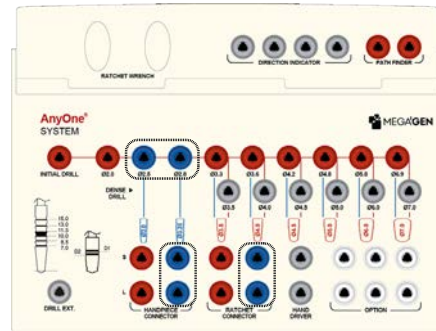
# MINI™ Kit

The instruments of MiNi Internal system are included in AnyRidge & AnyOne surgical kit.

※ Even the customers who do not use AnyRidge & AnyOne Internal System can experience MiNi System at any time by purchasing only six instruments separately.



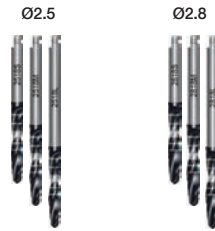
AnyRidge Surgical Kit (KARIN3003)



AnyOne Surgical Kit (KAOIN3003)

## Shaping Drill

Diameter	Length(mm)	Ref.C
Ø2.5	33	SD2518S
	38	*SD2518M
	43	*SD2518L
Ø2.8	33	SD2818S
	38	*SD2818M
	43	*SD2818L



(\*) Separate sales item.

## Handpiece Connector

Type	Ref.C
Short	HCS17
Long	HCL17



## Ratchet Connector

Type	Ref.C
Short	RCS17
Long	RCL17



## Handpiece Connector

• Can use Overdenture Fixture

Type	Ref.C
Short	*OHCS

(\*) Separate sales item.



## Ratchet Connector

• Can use Overdenture Fixture

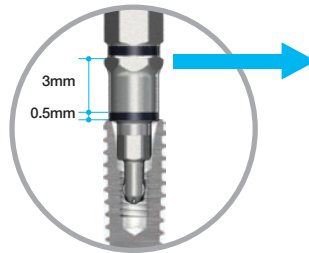
Type	Length(mm)	Ref.C
Short	12	*ORCS

(\*) Separate sales item.



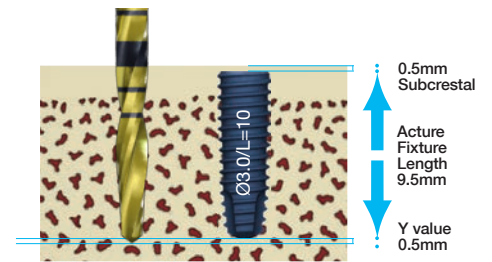
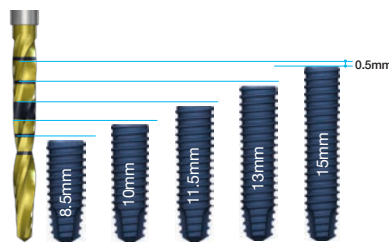
Product coordinator : jung hee Lee, [rnd\\_implant3@imegagen.com](mailto:rnd_implant3@imegagen.com)

### 9.5 fixture length and drilling marking



The platform line of the Handpiece Connector or the Ratchet Connector must be flush with the fixture platform.

⚠ When using the Ratchet Wrench, do not use an excessive torque as it can damage the internal structure of the fixtures. It is not recommended to exceed the maximum torque of 75N-cm.



The actual lengths of MINI™ internal fixtures are 0.5mm shorter than the depth markings of a Shaping Drill. Therefore, the fixture will be placed 0.5mm under the crest automatically.

Actual drilling depth 10.5mm = 0.5mm subcrestal + 9.5mm actual fixture length + 0.5mm Y value  
 \* Fixture Ø3.0 (Y value = 0.5mm), Ø3.25 (Y value = 0.6mm)

## ➡ Surgical Drilling Sequence

Initial Drill
Ø2.0
Ø2.5

Initial Drill
Ø2.0
Ø2.5
Ø2.8

Actual drilling depth 10.5mm = 0.5mm subcrestal + 9.5mm actual fixture length + 0.5mm Y value

Actual drilling depth 10.6mm = 0.5mm subcrestal + 9.5mm actual fixture length + 0.6mm Y value

# Advanced Intermezzo / MiNi Surgical Kit

Ref.C

KAISS3000



With Options



Without Options

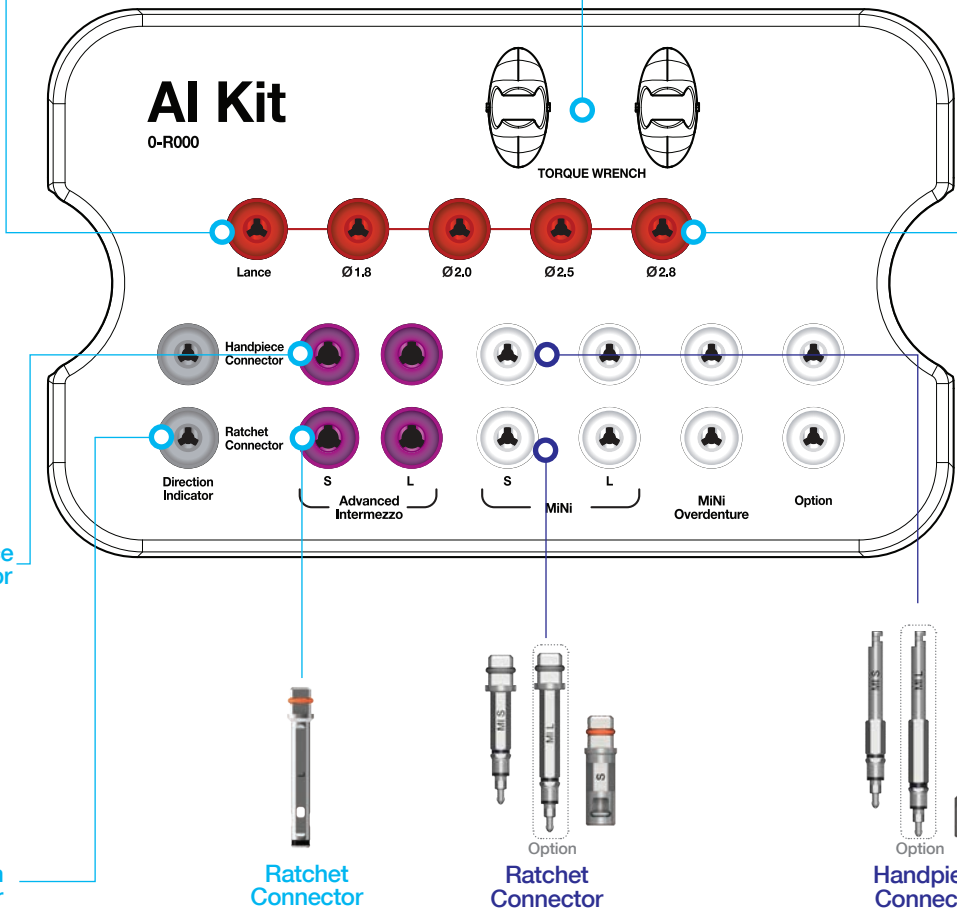
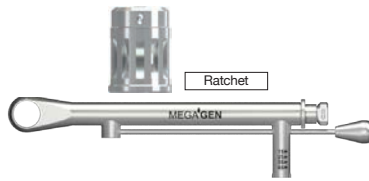
**Lance Drills**

Option

**Shaping Drills**

Ø1.8    Ø2.0    Ø2.5    Ø2.8

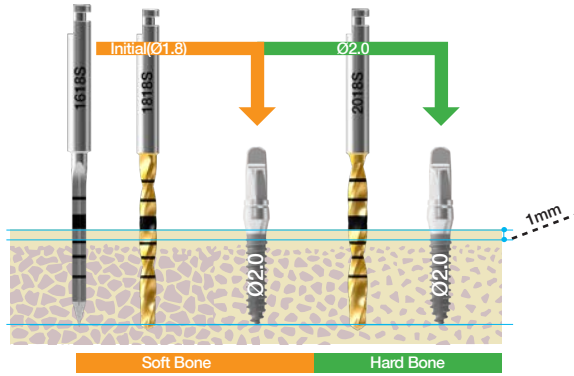
Option    Option    Option    Option



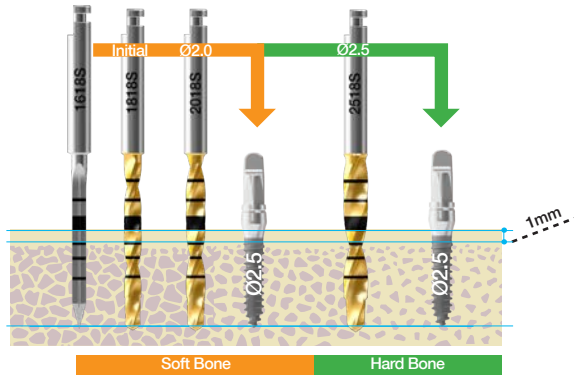
## ➔ Drilling Protocols

- All fixtures achieve optimum initial stability when used with a guided drilling sequence
- All implants should be placed 1mm subcrestally  
0.5~1mm subcrestal placement has been proven to show a better crestal bone response

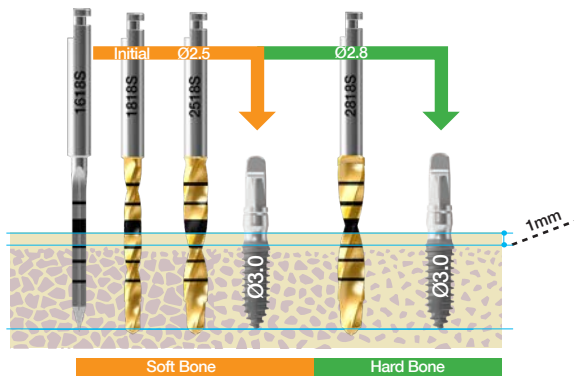
### Ø2.0 Fixture Drilling sequence



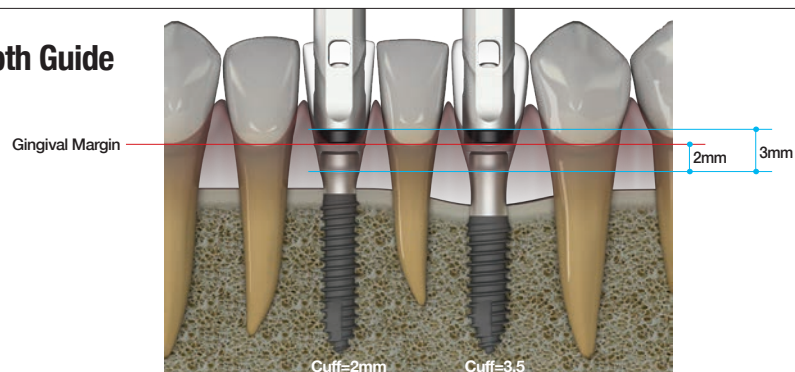
### Ø2.5 Fixture Drilling sequence



### Ø3.0 Fixture Drilling sequence



### ▶▶ Fixture Depth Guide



## ➔ Surgical Kit Components

### Lance Drill

- Useful to make an indentation on cortical bone to confirm the exact drilling location.

Diameter	Length(mm)	Ref.C
Ø1.6	33	*LD1618S
	38	LD1618M
	43	*LD1618L

(\*) Separate sales item.

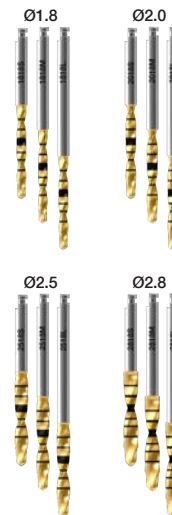


### Shaping Drill

- Each drill has depth marking lines from 5.0mm to 15.0mm.
- TiN coating on drills : Enhanced corrosion resistance and abrasion resistance.

Diameter	Length(mm)	Ref.C
Ø1.8	33	*NSD1818S
	38	NSD1818M
	43	*NSD1818L
Ø2.0	33	*NSD2018S
	38	NSD2018M
	43	*NSD2018L
Ø2.5	33	*NSD2518S
	38	NSD2518M
	43	*NSD2518L
Ø2.8	33	*NSD2818S
	38	NSD2818M
	43	*NSD2818L

(\*) Separate sales item.



### Direction Indicator

- Confirms drilling direction and location during drilling.

Diameter	Ref.C
Ø1.6 / Ø1.8	MDI1618



### Handpiece Connector

- Use with Handpiece to remove fixture from ampule and place fixture
- Taper Connection allows for easy and secure pick-up and positioning of fixture
- Especially useful for flapless surgery

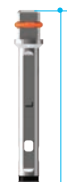
Type	Length(mm)	Ref.C
Short	30	AIHCS
Long	35	AIHCL



## Ratchet Connector

- Use for inserting or removing fixture with Ratchet Wrench.
- Check to make sure Ratchet Connector is completely seated in Ratchet Wrench before using
- Excessive force can cause damage to Post hex of fixture.
- Especially useful for flapless surgery.

Type	Length(mm)	Ref.C
Short	23	AIRCS
Long	30	AIRCL



## Handpiece Connector

- Can use MiNi Fixture

### MiNi

Type	Ref.C
Short	*HCS17
Long	*HCL17

(\*) Separate sales item.



## Ratchet Connector

- Can use MiNi Fixture.

### MiNi

Type	Ref.C
Short	*RCS17
Long	*RCL17

(\*) Separate sales item.



## Handpiece Connector

- Can use MiNi Overdenture Fixture.

### MiNi

Type	Ref.C
Short	*OHCS

(\*) Separate sales item.



## Ratchet Connector

- Can use MiNi Overdenture Fixture.

### MiNi

Type	Length(mm)	Ref.C
Short	12	*ORCS

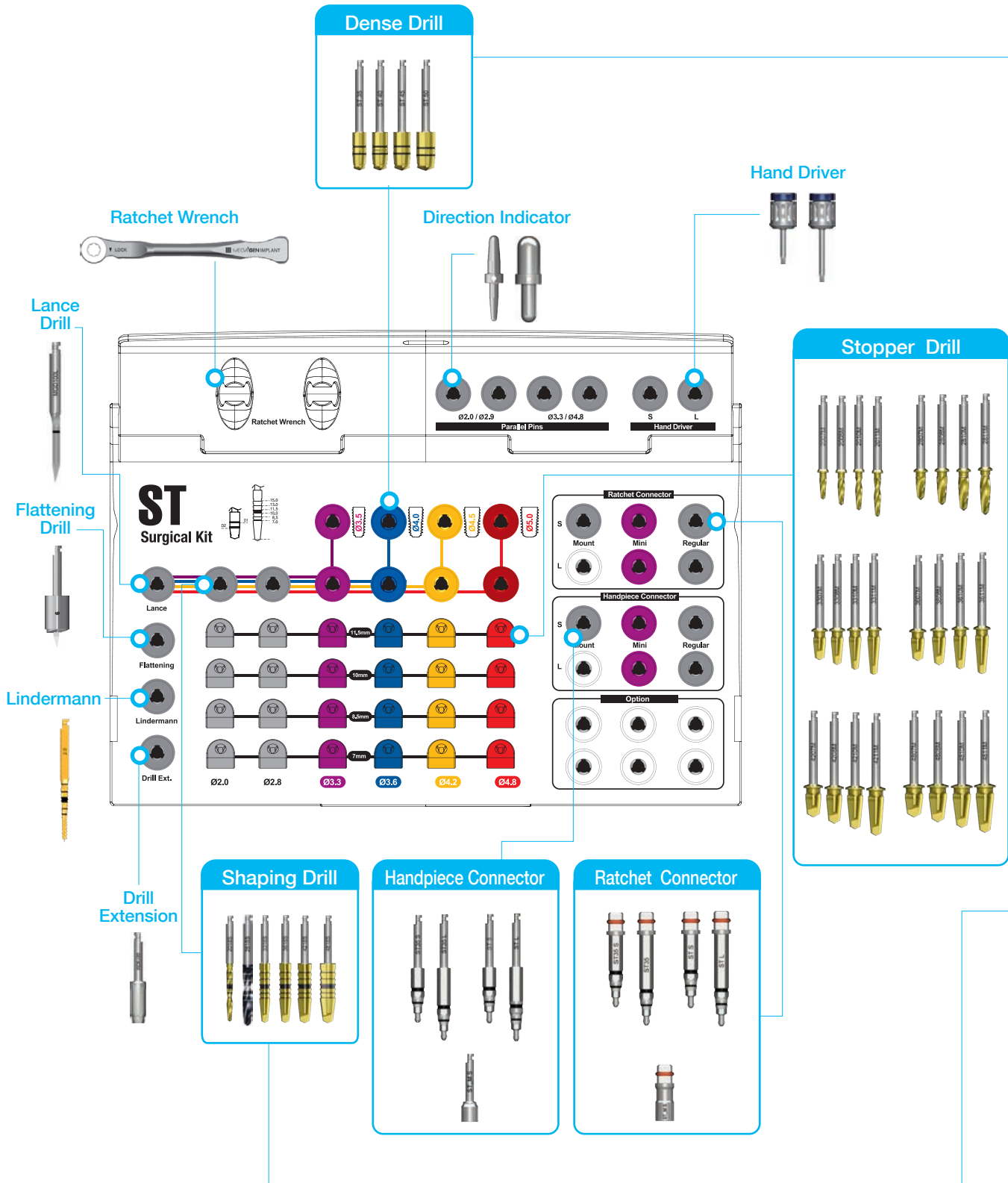
(\*) Separate sales item.



# ST Surgical Kit

Ref.C

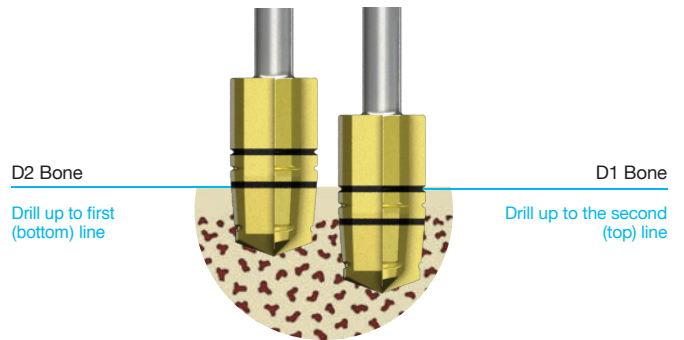
KSTIN3000





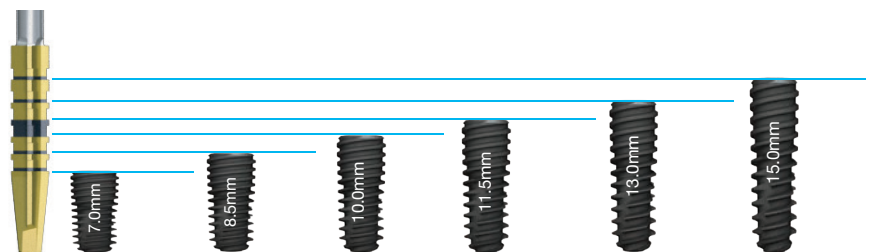
## ○ Dense Drill

- For cutting & shaping cortical bone to secure initial stability in hard bone (D1 & D2)

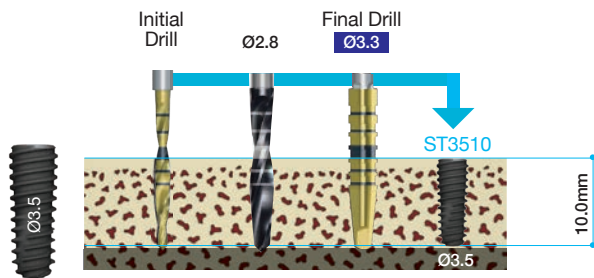


## ○ Shaping Drill

- Depth markings up to 7.0~15.0 mm
- Dual marking system (groove & laser markings) designed for easy recognition of placement depth



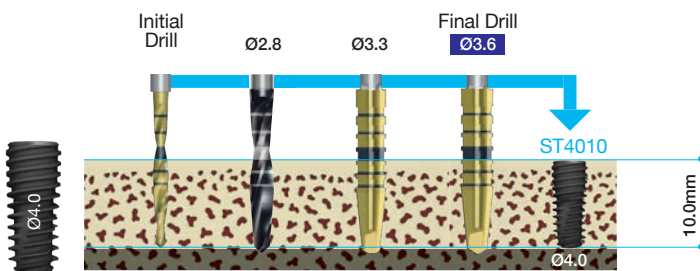
## ▶ ▶ Surgical Drilling Sequence



### Ø3.5 Fixture

#### Ø3.5 Drilling Sequence

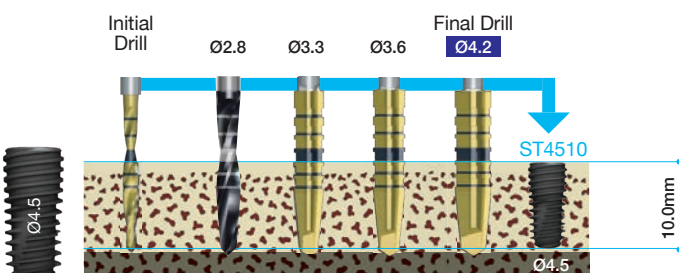
Actual fixture length is 10.0mm & shaping drill length is 0.59mm, so total drill depth is 10.59mm



### Ø4.0 Fixture

#### Ø4.0 Drilling Sequence

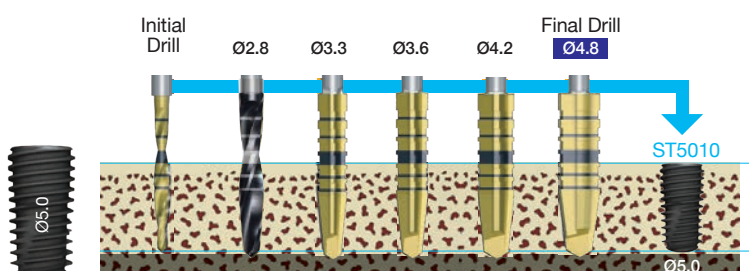
Actual fixture length is 10.0mm & shaping drill length is 0.68mm, so total drill depth is 10.68mm



### Ø4.5 Fixture

#### Ø4.5 Drilling Sequence

Actual fixture length is 10.0mm & shaping drill length is 0.85mm, so total drill depth is 10.85mm



### Ø5.0 Fixture

#### Ø5.0 Drilling Sequence

Actual fixture length is 10.0mm & shaping drill length is 0.89mm, so total drill depth is 10.89mm

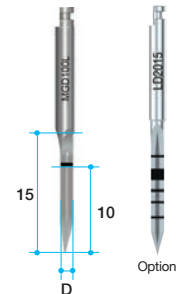
## ➔ ST Surgical Kit Components (Continued)

### Lance Drill

- For easy marking of cortical bone for accurate drilling

Diameter	Type	Ref.C
Ø2.0	Long	MGD100L
	Short	*LD2015
	Long	*LD2025
	Ultra-Long	*LD2030

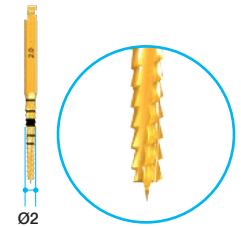
(\*) Separate sales item.



### Lindermann Drill

- For controlling drilling path

Diameter	Ref.C
Ø2	TEEL200M



### Shaping Drill

- Depth markings up to 7.0~15.0mm
- Dual marking system (groove & laser markings) designed for easy recognition of placement depth
- Coated with TiN to resist corrosion & damage

Diameter	Length(mm)	Ref.C
Ø2.0	33	SD2018S
	38	*SD2018M
	43	*SD2018L
Ø2.8	33	SD2818S
	38	*SD2818M
	43	*SD2818L
Ø3.3	33	SD3318S
	38	*SD3318M
	43	*SD3318L
Ø3.6	33	SD3618S
	38	*SD3618M
	43	*SD3618L
Ø4.2	33	SD4218S
	38	*SD4218M
	43	*SD4218L
Ø4.8	33	SD4818S
	38	*SD4818M
	43	*SD4818L

(\*) Separate sales item.



### Dense Drill

- For cutting & shaping cortical bone to secure initial stability in hard bone (D1, D2)
- Coated with TiN to resist corrosion & damage

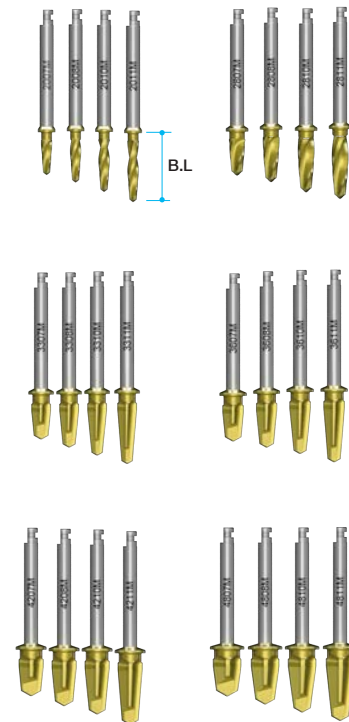
Diameter	Type	Ref.C
Ø3.9	Long	STDD39
Ø4.3		STDD43
Ø4.8		STDD48
Ø5.3		STDD53



## ➔ ST Surgical Kit Components

### Stopper Drill

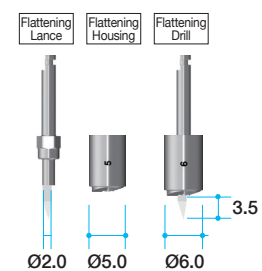
Diameter	Blade Length (mm)	Ref.C
Ø2.0	7	SD2007M
	8.5	SD2008M
	10	SD2010M
	11.5	SD2011M
Ø2.8	7	SD2807M
	8.5	SD2808M
	10	SD2810M
Ø3.3	7	SD3307M
	8.5	SD3308M
	10	SD3310M
Ø3.6	7	SD3607M
	8.5	SD3608M
	10	SD3610M
Ø4.2	7	SD4207M
	8.5	SD4208M
	10	SD4210M
Ø4.8	7	SD4807M
	8.5	SD4808M
	10	SD4810M
	11.5	SD4811M



### Flattening Drill

- For flattening irregular bone so that stopper drill can drill to accurate depth
- To use flattening lance, connect to housing (Ø5.0 & Ø6.0) according to final drill diameter
- Ø5.0 = Stopper Drill Ø2.0~ Ø4.3
- Ø6.0 = Stopper Drill Ø4.8~ Ø5.4
- Boundary is formed by housing & guides position of subsequent fixture drilling

Diameter	Length(mm)	Ref.C
Ø5.0 / Ø2.0	3.5	FD5020
Ø6.0 / Ø2.0		FD6020



### Drill Extension

- For extending length of drill connected to handpiece
- Can be damaged if 45Ncm or higher torque is applied

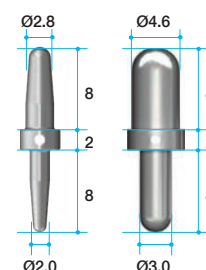
Ref.C
MDE150



### Direction Indicator

- For checking location, direction, & depth of drilled hole

Length(mm)	Ref.C
Ø2.0 / Ø2.8	MDI100
Ø3.0 / Ø4.6	MDI3348



## Ratchet Wrench

- For applying stronger force than handpiece
- No bearing system: no blood-triggered corrosion, not easily damaged
- Connect to ratchet extension to use
- Arrow on head indicates direction of force to be applied

Ref.C
MRW040S



## Hand Driver (1.2 Hex)

- For all cover screws, abutment screws, & healing abutments
- Various lengths available
- Can be used as torque driver after connecting it to torque wrench without separate adapter
- Hex tip is designed to withstand 35~45Ncm torque

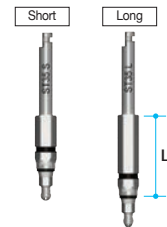
Length(mm)	Type	Ref.C
5	*Ultra-short	TCMHDU1200
10	Short	TCMHDS1200
15	Long	TCMHDL1200
20	*Extra-long	TCMHDE1200



## Handpiece Connector

- For retrieving fixture from ampule & positioning in mouth using handpiece
- Spring-type connection allows easier & safer fixture pick-up & positioning
- First (bottom) mark on shaft indicates position of fixture platform, while second (top) mark indicates distance from fixture platform. Lower part indicates 3.5mm from bone level & upper part indicates 4.5mm as guide for flapless surgery.

Length(mm)	Type	Connection	Ref.C
10	Short	Mini	STHCS21
15	Long	Mini	STHCL21
15	Short	Regular	STHCS25
20	Long	Regular	STHCL25



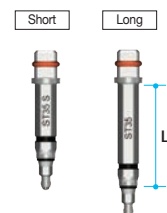
Length(mm)	Type	Connection	Ref.C
15	Short	Mount	STHCS36M



## Ratchet Connector

- For placing or removing fixture using ratchet wrench
- Check if ratchet wrench & ratchet connector are connected properly before use
- Too much torque can damage internal hex
- First (bottom) mark on shaft indicates position of fixture platform, while second (top) mark indicates distance from fixture platform. Lower part indicates 3.5mm from bone level & upper part indicates 4.5mm as guide for flapless surgery.

Length(mm)	Type	Connection	Ref.C
10	Short	Mini	STRCS21
15	Long	Mini	STRCL21
15	Short	Regular	STRCS25
20	Long	Regular	STRCL25



Length(mm)	Type	Connection	Ref.C
15	Short	Mount	STRCS36M



NEW

# MegGyver kit

The total solution kit to remove broken pieces easily when fixture, abutment or screw are fractured.

Ref.C  
KPSCSN3000

**Torque Wrench**

**Fixture Remover**

**Fixture Tapping Remover**

**Carrier Extension**

**Screw Remover Guide Holder**

**Fixture Remover Screw**  
M1.4 (Red) M1.6 (Yellow) M1.8 (Green) M2.0 (Blue)

**Abutment Remover**

**Screw Remover**

**Square Driver**

**Trepine Bur**

**Hex Remover**

**Screw Remover Guide**

**MegGyver Kit**

**TORQUE WRENCH**

**Extension**

**Abutment Remover**  
M2.0  
M1.8

**Screw**  
M2.0 AO/ST  
M1.8 AR  
M1.8 BD  
M1.4 MINI

**Fixture Remover**  
S L  
3035  
3540  
4555  
6080

**Option (I.D./O.D.)**  
S L  
3.0/3.3 3.4/3.7 3.9/4.2  
4.2/4.5 4.4/4.7

**Tipping**  
S L

**Screw Remover**  
S L  
M2.0 & M1.8  
M1.8 & M1.4  
10° 22°  
30°NC 30°RC  
22°S  
HEX

## ➔ MegGyver kit Components (Continued)

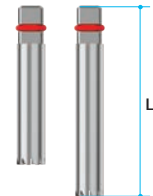
Coming Soon

### Fixture Remover

- To remove the fixture.
- Choose proper fixture remover which fits the guide
- If first removal fails, try second removal by selecting a bigger remover
- Fixture Remover Guide

System	3035	3540	4555	6080
AnyRidge	Ø3.5	Ø4.0 - Ø5.0	Ø5.5	Ø6.0 - Ø8.0
BLUEDIAMOND	Ø3.3 Ø3.7	Ø4.1 Ø4.4	Ø4.8 Ø6.3	-
AnyOne	Ø3.5	Ø4.0 - Ø5.0	Ø5.5	Ø6.0 - Ø8.0
ST	Ø3.5 Ø4.0	Ø4.5 Ø5.0	-	-
MINi	Ø3.0 Ø3.3	-	-	-

Applied Fixture Diameter	Length (mm)	O-Ring Color	Ref.C
Ø3.0~Ø3.6	25	Red	FRS3035
	30		FRL3035
Ø3.7~Ø4.6	25	Yellow	FRS3540
	30		FRL3540
Ø4.7~Ø5.6	25	Orange	FRS4555
	30		FRL4555
Ø5.7~Ø7.0	25	Gray	FSS6080
	30		FRL6080



### Fixture Remover Screw

- To connect fixture and Fixture Remover.
- Recommended tightening torque
  - 1st - M1.4 & M1.6 : 50Ncm
  - M1.8 ~ M2.5 : 100Ncm
  - (On a first removal failure)
  - 2nd - M1.4 & M1.6 : 80Ncm
  - M1.8 ~ M2.5 : 150Ncm
- M1.4 = MiNi  
M1.6 = BLUEDIAMOND, EZ Plus, ExFeelØ3.3  
M1.8 = AnyRidge  
M2.0 = AnyOne, ST, MegaFix, EZ Plus, ExFeel  
M2.5 = Rescue

Applied Fixture Thread	Color	Torque	Ref.C
M1.4	Red	80 Ncm	FRS14
M1.6	Yellow		FRS16
M1.8	Green	100 Ncm	FRS18
M2.0	Blue		FRS20
M2.5	Magenta		*FRS25

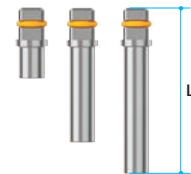


(\*) Separate sales item.

### Square Driver

- To connect fixture removal screw to a fixture.

Length(mm)	Ref.C
5	*SD05
15	SD15
20	SD20



(\*) Separate sales item.

### Fixture Tapping Remover

- To remove the fixture.

Length(mm)	Ref.C
30	FTRS
35	FTRL

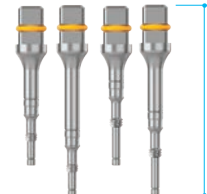


## ➔ MegGyver kit Components

### Abutment Remover

- To remove fractured abutment.
- Use screw size M1.8 & M2.0.

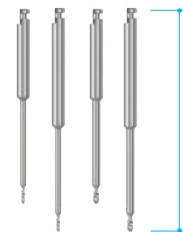
Type	Length(mm)	Ref.C
M1.8	25	ARS18
	30	ARL18
M2.0	25	ARS20
	30	ARL20



### Screw Remover

- To remove fractured screw.
- M1.4=MiNi
- M1.6=BLUEDIAMOND, EZ Plus, ExFeel Ø3.3
- M1.8=AnyRidge
- M2.0=AnyOne, ST, MegaFix, EZ Plus, ExFeel
- M2.5=Rescue

Type	Length(mm)	Ref.C
M1.4 & M1.6	34	SRS1416
	39	SRL1416
M1.8 & M2.0	34	SRS
	39	SRL



### Screw Remover Guide

- To secure the Screw Remover from moving side to side when removing the screw.
- 10°=AnyRidge
- 16°=AnyOne Onestage
- 22°S =MiNi
- 22°W=Rescue
- 22°N=AnyOne Ni, ST Ni
- 30°NC=BLUEDIAMOND NC
- 30°RC=BLUEDIAMOND RC
- Hex2.4=AnyOne External Ø3.5
- Hex2.7=AnyOne External
- Hex3.3=Rescue External

Type	Angle	Length(mm)	Ref.C	
Internal	10°	9	*SRGS10	
		14	SRGL10	
	16°	9	*SRGS16	
		14	SRGL16	
	22°	9	*SRGS22	
		14	SRGL22	
	22° S	9	*SRGS22S	
		14	SRGL22S	
	22° W	9	*SRGS22W	
		14	*SRGL22W	
	22° N	9	*SRGS22N	
		14	*SRGL22N	
	30° NC	9	*SRGS30NC	
		14	SRGL30NC	
	30° RC	9	*SRGS30RC	
		14	SRGL30RC	
	External	HEX 2.4	9	*SSEG24
		Hex 2.7	9	*SSEG27
Hex 3.3		9	*SSEG33	



(\*) Separate sales item.



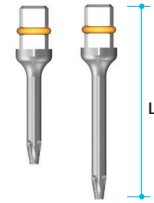
Coming Soon

## Hex Remover

- To remove hex-damaged Abutment Screw, Cover Screw or Healing Abutment.

Length(mm)	Ref.C
22	*HSS
27	HSL

(\*) Separate sales item.



## Torque Wrench

- To check torque force when removing fixture.
- To check torque force when tightening Fixture Remover Screw.

Type	Ref.C
500Ncm	TWSQ500
70Ncm	*TWSQ70



## Screw Remover Guide Holder

- Tool to support the Screw Remover Guide.

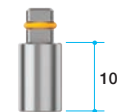
Ref.C
SSGH



## Carrier Extension

- To extend the length of Ratchet Connector.

Length(mm)	Ref.C
10	MRE400S

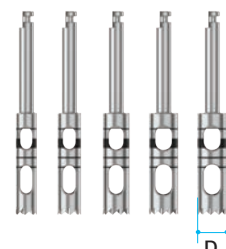


## Trephine Bur

- Useful for removing failed & fractured fixtures

Diameter	Ref.C
Ø3.3 (in Ø3.0)	*TANTBL3033
Ø3.7 (in Ø3.4)	*TANTBL3437
Ø4.2 (in Ø3.9)	*TANTBL3942
Ø4.5 (in Ø4.2)	*TANTBL4245
Ø4.7 (in Ø4.4)	*TANTBL4447

(\*) Separate sales item.



## ▶▶ How to use MegGyver kit

### Fixture Remover

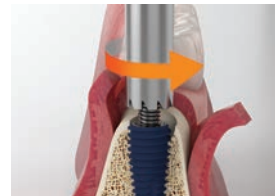
- ☛ Fixture Remover Screw : Recommended to use 3 times
- ☛ Do not use in case of a gap in Fixture Remover



Remove the prosthesis of the fixture to be removed, and the surrounding bone.



Select a Fixture Remover Screw, Use the Torx Driver to turn the screw clockwise (100Ncm~150Ncm) to place in the fixture.



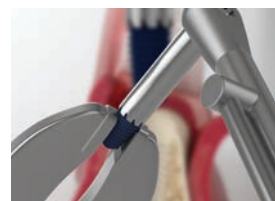
Select a Fixture Remover that fits the fixture diameter. Turn the fixed Fixture Remover Screw counterclockwise until it touches the fixture.



As the Fixture Remover cuts the side of the Fixture and engages the left and right screws each other, the Fixture Remover gets fixed with the Fixture.



Using Torque Wrench, turn counterclockwise and pull out fixture and Fixture Remover.  
(For a torque of greater than 300Ncm, it is recommended to use a Trepine bur)



Removed fixture can be pulled out, turning Fixture Remover and fixture clockwise, holding onto vice plier.

### Abutment Remover

- ☛ Can use for abutments that use M1.8 & M2.0 screws.
- ☛ Cannot use for abutment that use M1.6 and M2.5



Remove the screw attached on the fractured abutment.



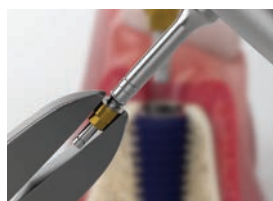
Insert the Abutment Remover in the fractured abutment hole.



Turn abutment remover clockwise using the Torque Wrench. The Abutment Remover goes down tapping the Abutment Hole.



After the abutment remover have reached the bottom of the abutment, keep rotating the abutment remover clockwise to remove the abutment from the fixture.



Secure the separated abutment in a vice or vice pliers. Use the Torque Wrench to turn counterclockwise to separate the abutment with the Abutment Remover.

Coming Soon

## Screw Remover



Remove the broken Abutment Screw and the abutment.



Select the correct Screw Remover Guide that fits the fixture connection to join.



After combining the Screw Remover Guide and the Screw Holer, place the Screw Remover Guide on the fixture.



After inserting the Screw Remover into the Screw Remover Guide Hole, press it down and rotate it counterclockwise. (RPM:2000,Torque:30Ncm)



As it rotates at high speed, a friction will be occurred creating a hole on the surface of the screw, and the screw will be removed. (Easier when the fractured screw surface is flat)

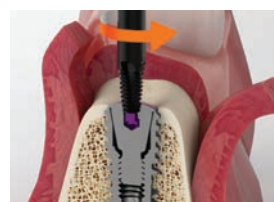


Remove the pieces of broken screw from the fixture internal screw using forceps.

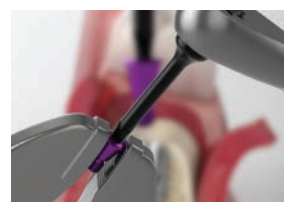
## Hex Remover



In cases that Abutment Screw, Cover Screw or Healing Abutment's hex is damaged.



Use the Ratchet Wrench to turn counterclockwise to join the abutment with the Abutment Remover as one body. (Use a torque of less than 40Ncm., Ratchet Wrench is included in surgical kit.)

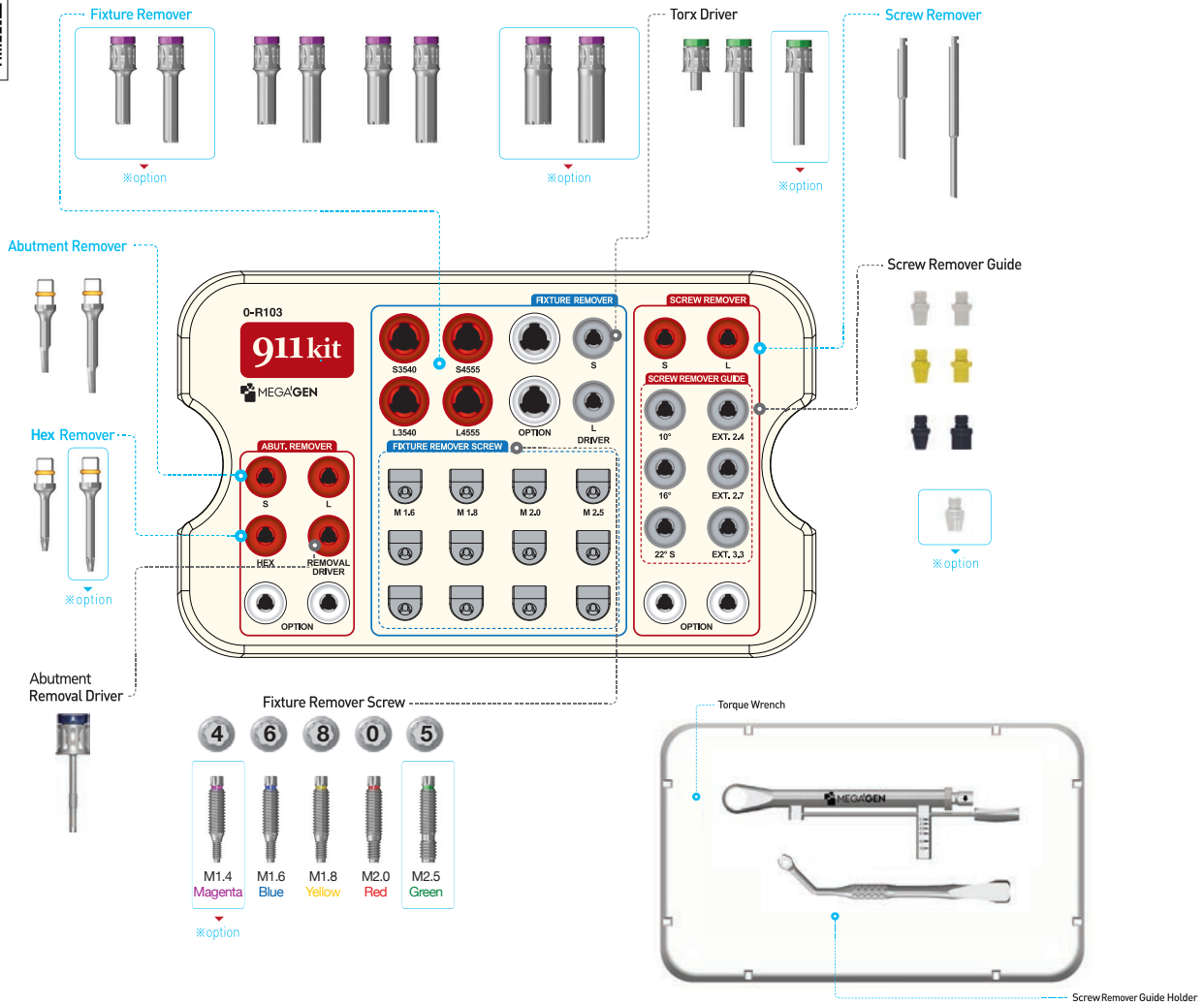


Place the removed screw in the vice. Use the Torque Wrench to turn clockwise to separate the abutment with the Hex Remover.

# 911kit

The total solution kit to remove broken pieces easily when fixture, abutment or screw are fractured.

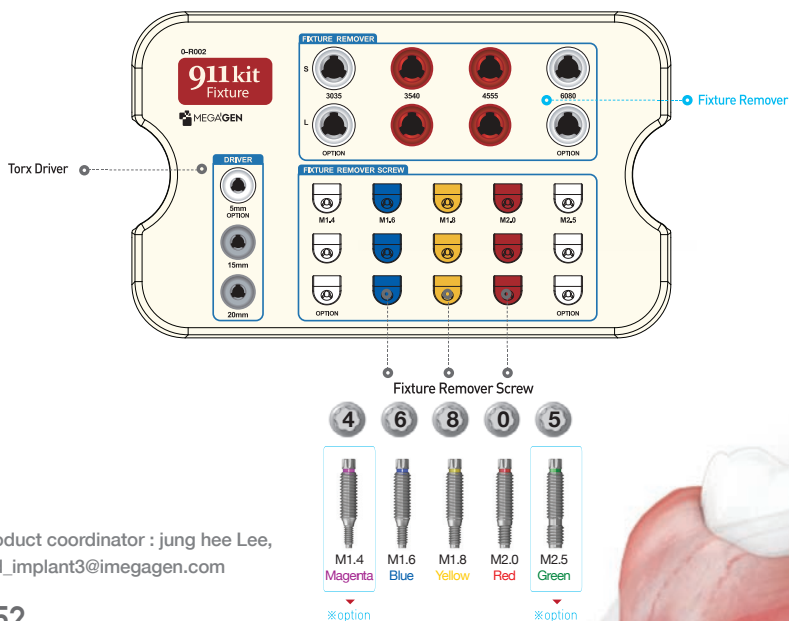
Ref.C  
KPSCS3000



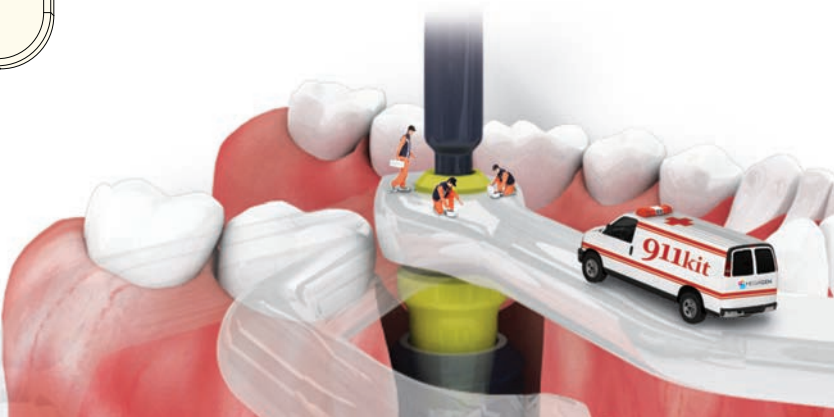
## ➔ 911Fixture Removal kit

This is a simplified version of 911 kit, only to use for fixture removal.

Ref.C  
KPSFS3000



Product coordinator : jung hee Lee,  
rnd\_implant3@imegagen.com

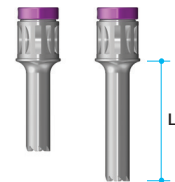


## ➔ 911kit Components (Continued)

### Fixture Remover

- To remove the fixture. When selecting a Fixture Remover, consider the outer diameter of a Fixture. In case of AnyRidge Fixture that the thread is formed under platform, select a Fixture Remover according to platform size

Applied Fixture Diameter	Length(mm)	Ref.C
Ø3.0~Ø3.6	15	*FSS3035
	20	*FSL3035
Ø3.7~Ø4.6	15	FSS3540
	20	FSL3540
Ø4.7~Ø5.6	15	FSS4555
	20	FSL4555
Ø5.7~Ø7.0	15	*FSS6080
	20	*FSL6080



(\*) Separate sales item.

### Fixture Remover Screw

- To connect fixture and Fixture Remover.
- Recommended tightening torque
  - FSS14, FSS16 : 70 Ncm
  - FSS18, FSS20, FSS25 : 110 Ncm.

Applied Fixture Thread	Color	Torque	Ref.C
M1.4 (MINI)	Magenta	70 Ncm	*FSS14
M1.6 (BLUEDIAMOND, EZ Plus, ExFeel Ø3.3)	Blue		FSS16
M1.8 (AnyRidge)	Yellow	110 Ncm	FSS18
M2.0 (AnyOne, MegaFix, EZ Plus, ExFeel)	Red		FSS20
M2.5 (Rescue)	Green		*FSS25

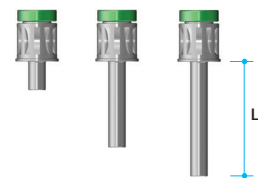


(\*) Separate sales item.

### Torx Driver

- To connect fixture removal screw to a fixture.

Length(mm)	Ref.C
5	TD05
15	TD15
20	*TD20



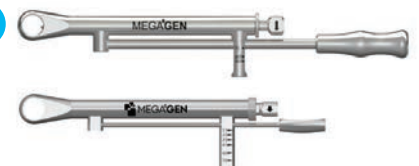
(\*) Separate sales item.

### Torque Wrench

- TW500 : To check torque force when removing fixture.
- TW70 : To check torque force when tightening Fixture Remover Screw.

Type	Ref.C
300Ncm	TW500
70Ncm	*TW70

(\*) Separate sales item.

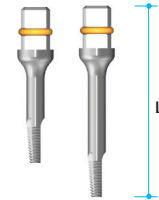


## ➔ 911kit Components

### Abutment Remover

- To remove fractured abutment.
- Use screw size M1.8 & M2.0.

Length(mm)	Ref.C
22	ASS
27	ASL

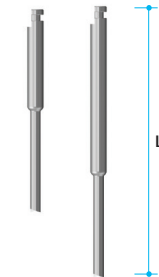


### Screw Remover

- To remove fractured screw.
- Screw size of system  
M1.4=MiNi  
M1.6=EZ Plus, Exfeel Ø3.3  
M1.8=AnyRidge  
M2.0=AnyOne

Length(mm)	Type	Ref.C
30	M1.4 & M1.6	*SS1416S
45		*SS1416L
30	M1.8 & M2.0	SSS
45		SSL

(\*) Separate sales item.



### Screw Remover Guide

- To secure the Screw Remover from moving side to side when removing the screw.

Applied Fixture Diameter	Type	Ref.C
Internal	10°(AnyRidge)	SSIG10
	16°(AnyOne OneStage)	SSIG16
	22°(AnyOne Internal / MiNi Internal)	*SSIG22S
	22°(AnyOne Internal / MiNi Internal)	SSIG22
	22°(AnyOne Internal / MiNi Internal)	*SSIG22W
External	HEX 2.4 (AnyOne External Ø3.5)	SSEG24
	Hex 2.7 (AnyOne External)	SSEG27
	Hex 3.3 (Rescue External)	SSEG33

(\*) Separate sales item.



### Screw Remover Guide Holder

- Tool to support the Screw Remover Guide.

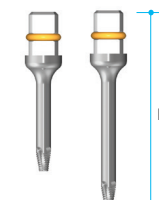
Ref.C
SSGH



### Hex Remover

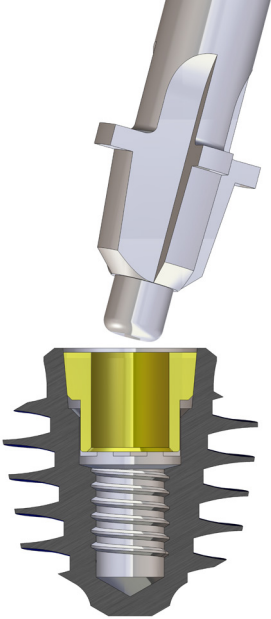
- To remove hex-damaged Abutment Screw, Cover Screw or Healing Abutment.

Length(mm)	Ref.C
22	HSS
27	HSL



## ➔ Grinding and Removal Bur

: Remover set to remove fractured AnyRidge Abutment



▶ **Components**  
High Speed Bur

▶ **How to**  
grind remaining fractured abutment using a high-speed bur, and remove the residue using a housing-connected driver

▶ **Recommendations**

1. If an abutment hex is not separated even though the abutment is removed up to the stopper, remove the abutment hex with pincette.
2. Check the blade before usage. It is highly recommended to use a new bur if it is worn out.
3. Wash and sterilize immediately after every usage

※ **Cautions**

1. Perpendicularly insert a high-speed bur into a fixture
2. Do not overload when using a high-speed bur.  
Adequate irrigation is highly recommend when using.
3. The given kit case is for storage only. Do not sterilize.
4. Anti-clockwise when in use.

Grinding and Removal  
Bur with a Implant Motor

Ref.C

ARARHB18



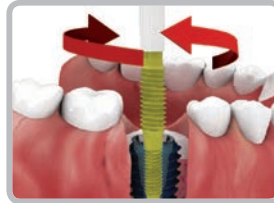
## ►► How to use 911kit

### Fixture Remover

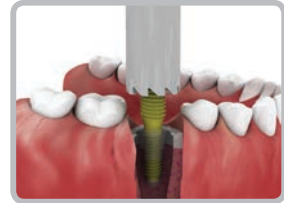
- ☞ Fixture Remover Screw: Single use only
- ☞ Do not use in case of a gap in Fixture Remover



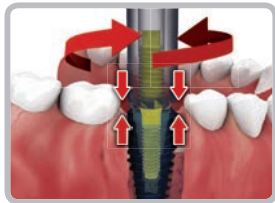
Remove the prosthesis of the fixture to be removed, and the surrounding bone.



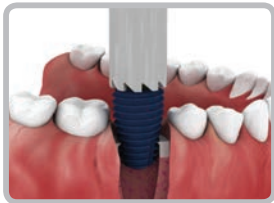
Select a Fixture Capture Screw of the same size as the fixture internal screw. Use the Torx Driver to turn the screw clockwise (40Ncm~70Ncm) to place in the fixture. (Use of torque less than 40Ncm for M1.6, and 60Ncm for other products may lead to loosening)



Select a Fixture Remover that fits the fixture diameter. Turn the fixed Fixture Remover Screw counterclockwise until it touches the fixture. (For a torque of greater than 300Ncm, it is recommended to use a Trephine bur)



Fixture and Fixture Remover are tightly connected as rising force and descending force are combined. (Suction is needed; debris may happen on removal of a fixture)



Using Torque Wrench, turn counterclockwise and pull out fixture and Fixture Remover. (No more than maximum torque per fixture)



Removed fixture can be pulled out, turning Fixture Remover and fixture clockwise, holding onto vice plier.

### Abutment Remover

- ☞ Can use for abutments that use M1.8 & M2.0 screws.
- ☞ Cannot use for abutment that use M1.6 and M2.5



Insert the Abutment Remover in the fractured abutment hole.



Use the Ratchet Wrench to turn clockwise in order to join the abutment and the Abutment Remover as one body. (Ratchet Wrench is included in surgical kit)



Move the Abutment Remover sideways while pulling up to remove it. (Use of excessive force may traumatize the fixture or the bone)

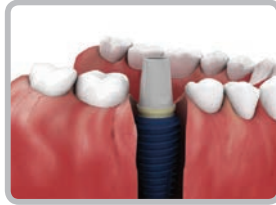


Secure the separated abutment in a vice or vice pliers. Use the Ratchet Wrench to turn counterclockwise to separate the abutment with the Abutment Remover.



## Screw Remover

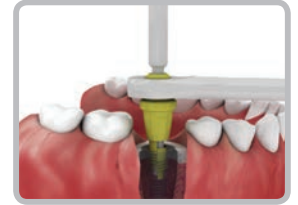
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Remove the broken Abutment Screw and the abutment.



Select the correct Screw Remover Guide that fits the fixture connection to join.



Secure the Screw Remover Guide and insert the Screw Holder in the Screw Remover Guide hole.



Push the Screw Remover downwards while rotating counter clockwise to separate it from the fixture internal screw.  
(rpm:30~50, Torque : 30Ncm)



Remove the pieces of broken screw from the fixture internal screw using forceps.



When separating the holder from the guide, push in the direction of the arrow to separate.

## Hex Remover

---



In cases that Abutment Screw, Cover Screw or Healing Abutment's hex is damaged.



Use the Ratchet Wrench to turn counterclockwise to join the abutment with the Abutment Remover as one body.  
(Use a torque of less than 40Ncm., Ratchet Wrench is included in surgical kit.)



Place the removed abutment in the vice. Use the Ratchet Wrench to turn clockwise to separate the abutment with the Hex Remover.

# Root Membrane Kit

## I. Root Membrane Kit

Ref.C  
RMK3000

The best result of Immediate Implant Placement in esthetic zone.

Save the time & See an exceptional esthetic effect.

Root Membrane KIT is the answer for you!



### Introduction

The labial bundle bone of the upper anterior, the esthetic zone in dentistry, is only 0.8mm thick and most blood supply is made through the root membrane, thus after extraction the labial bone plate is resorbed fast leading to labial gingival recession posing esthetic problems. The root membrane technique is designed to address this problem as it can suppress the recession of the bundle bone by not removing the labial root.

# ▶ Root Membrane Technique

- Courtesy of Dr. Siormpas & Dr. Miltiadis E. Mitsias

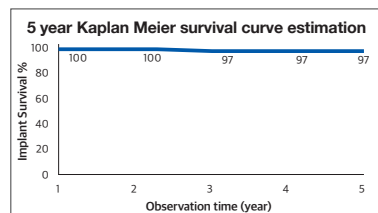
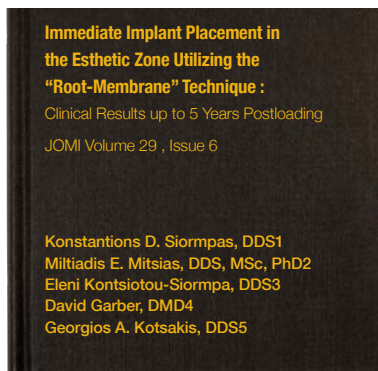
Root Membrane technique is a surgical procedure performed before implant placement to induce successful osseointegration as increasing the soft tissue aesthetics by minimizing the loss of the buccal bone after extraction.

It separates the root at the time of extraction and leaving the root partially in the buccal side.

Therefore, it is possible to maintain the physiological relationship with the buccal side without deteriorating.

- The surgical procedure is currently performed using various techniques and instruments, however, since it is difficult to perform, it is considered an area that only skilled dentists can do.

- Through the step-by-step customized Diamond drill and simple guide, the tissue might entirely protected with the precise tooth modification. We released this KIT aiming to make the surgical procedures that had required intricate technique much easier.

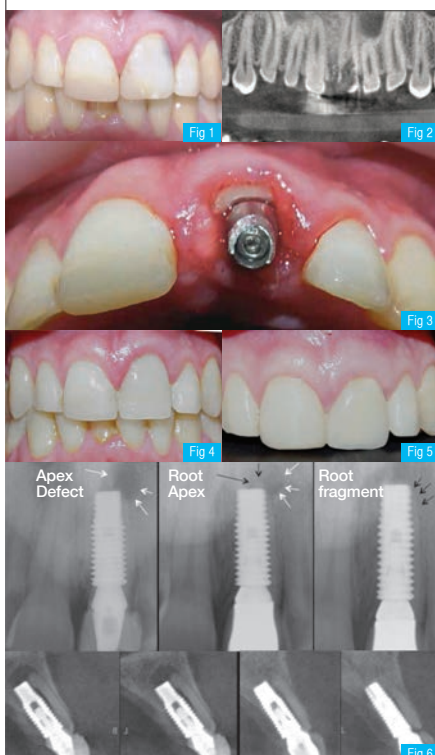


The buccal side of Immediate implant placement in the anterior maxilla, there are Cementum, PDL, Attachment fibers, Vascularization, and Bundle bone maintained. Therefore, it leads continuous and predictable osseointegration by minimizing the loss of the buccal bones caused by socket remodeling that occurs after extraction.

According to a study published in JOMI, RMT is an alternative treatment method for Immediate placement techniques in aesthetic part. It has extremely high success rate compared to the implant placement after extraction.

As the study shows, the reason is that when the buccal root fragment is intentionally left the blood supply will be maintained smoothly and consequently the dimensions of alveolar ridge can be preserved. On the basis of this evidence, we can conclude that Root Membrane Technique is a safe treatment yields a high implant success rate.

Also, this unique technique can ensure the dimensional stability of facial and soft tissues around the implant site without using of the supplementary biomaterials such as bone grafts. Dento-gingival fibers retained in the root fragment increases soft tissue aesthetics when they are in process of esthetic Immediate implant placement.



**Fig. 1** The clinical feature before surgery of the maxillary left central incisor which is planned for extraction due to significant resorption.

**Fig. 2** Cone beam CT section indicates consistent loss of tooth structure with invasive cervical root resorption.

**Fig. 3** Immediate implant placement on the lingual side of the root fragment.

**Fig. 4** Immediate loading after fixture placement.

**Fig. 5** Follow-up for 2 years, the finally restored clinical photo. (Creeping attachment)

**Fig. 6 Top (Left to right)**

The 24-month radiograph showed a limitation of defect size, while the resorption traces of apex did not appear radially. There was no sign of radiopacity consistent with the defect fill for 36 months. Apex resorption of root is confirmed.

**Bottom (Left to right)**

With 48 months of follow-up, the cross-section showed complete defect fill and about 1.5 mm root reabsorption. The reabsorption area is full of new bone cell with radiologic pattern and it leads new born growth.



“ Verify more Clinical Evidence of Root Membrane Technique which is certified a long-term clinical result ”

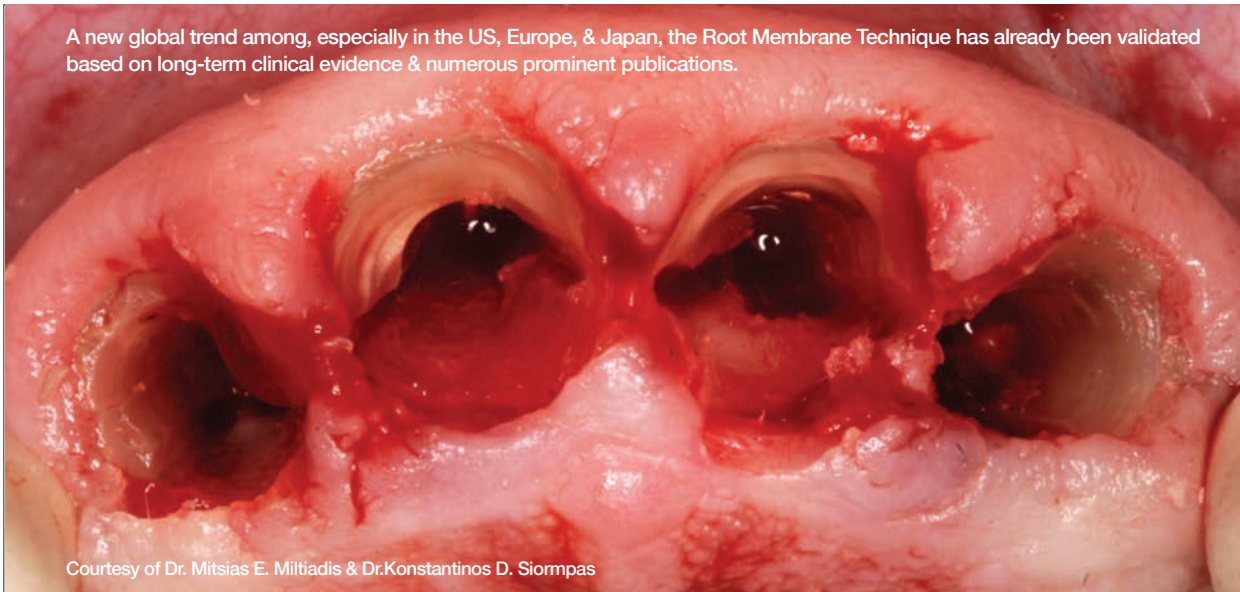
The socket-shield technique to support the buccofacial tissues at immediate implant placement  
INTERNATIONAL DENTISTRY – AFRICAN EDITION VOL. 5, NO. 3  
Howard Gluckman, Jonathan Du Toit, Mauricio Salama

A Step-by-Step Description of PDL-Mediated Ridge Preservation for Immediate Implant Rehabilitation in the Esthetic Region  
The International Journal of Periodontics & Restorative Dentistry VOL. 35, No.6  
Miltiadis E. Mitsias, Konstantinos D. Siormpas, Eleni Kontsiotou-Siormpas, Hari Prasad, David Garber, Georgios A. Kotsakis

Advantages of the Root Submergence Technique for Pontic Site Development in Esthetic Implant Therapy  
The International Journal of Periodontics & Restorative Dentistry VOL. 27, NO. 6  
Maurice Salama, Tomohiro Ishikawa, Henry Salama, Akiyoshi Funato, David Garber

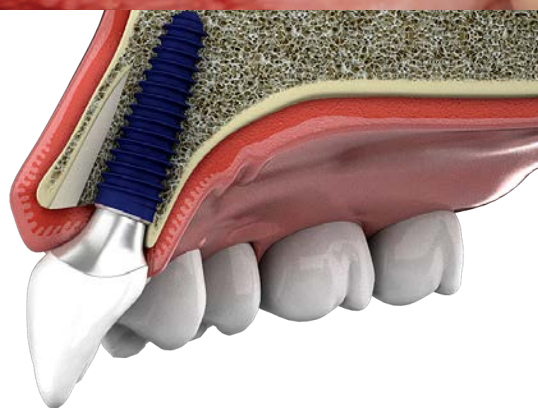
## ► Advantage of Root Membrane KIT

A new global trend among, especially in the US, Europe, & Japan, the Root Membrane Technique has already been validated based on long-term clinical evidence & numerous prominent publications.



Courtesy of Dr. Mitsias E. Miltiadis & Dr. Konstantinos D. Siompas

Root Membrane Technique  
 Socket Shield Technique  
 Root Submergence Technique  
 Partial Extraction Therapy  
**Root Membrane KIT is the answer for you!**



### Best Diamond Drill for Root Membrane Technique

MegaGen's Root Membrane Kit is made by combining the best quality of dental diamond drill technology from 50-year-old Japanese company called "Hinatawada Precision manufacturing."

The reason why MegaGen selected Hinatawada is that it is a Japanese premium diamond drill company which has been recognized as one of the world's top class products by the philosophy of craftsmen.

Also, Hinatawada has the most advanced technology for Root Membrane technique; no wobbling, cutting power, and durability that cannot be found anywhere in the world.

#### Advantages of MegaGen Diamond Drill

1. It does not give excessive vibration to the teeth, and you can get a smooth formed surface.
2. 3-4mm long diamond drill does not wobble when it is used at high speed rotation. (Rotation accuracy: less than 3 microns)
3. The sharpness of the diamond drill is maintained for a long time.
4. The diamond drill, which is made with high precision by grinding process, can be treated with the same feeling always because there is no deviation per product.
5. By increasing the hardness of the diamond drill, you can avoid the risk of bending during treatment, thus making it safer.
6. It has high rotation accuracy and small shaft vibration, so it prevents abrasion of the handpiece bearing part

### Perfect match with AnyRidge

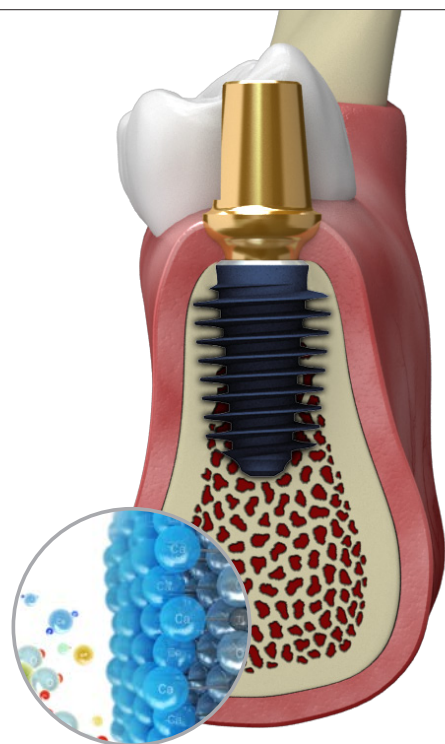
The strong point of Root membrane technique is Immediate Implant Placement. Strong initial stability guarantees a high success rate. AnyRidge Implant system of MegaGen and Root membrane technique is in harmony with strong initial stability and fast osseointegration.

#### AnyRidge Knife Thread Design

Knife Thread® with an oblique shape is designed of round face and narrow thread. Therefore, it can obtain an optimal ISQ because it is placed without damaging the unique architecture of cancellous bone. Also, it gives even stress distribution.

#### AnyRidge Xpeed Surface Treatment

XPEED® surface treatment technology is that the Ca<sup>+</sup> ions which increase osseointegration rate on fixture surface can be reached through the chemical reaction with 0.5 micrometer thickness. Also, there is no problem of absorption of the coating layer after scaling deterioration, BIC and Removal Torque values are excellent.



### The Root Membrane Technique: Human Histologic Evidence after Five Years of Function

- Miltiadis E. Mitsias, Konstantinos D. SioRoot Membranepas, Gerogios A. Kotsakis, Scott D. Ganz, Carlo Mangano, Giovanna Iezzi

Our present human histologic study supports the assertion that the Root Membrane technique is effective in preventing bone resorption of the buccal bone plate of the anterior maxilla, five years after the placement of an immediate implant. This human histologic evidence that Root Membrane can preserve the buccal bone plate is of great value since it can help validate the clinical use of this surgical technique to maintain the hard and soft tissues over time and to optimize aesthetic results.

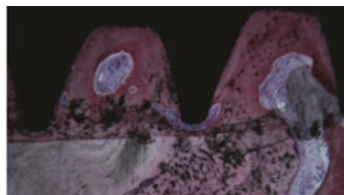
The retrieved tissue sample, which included the implant, the root membrane, the space between them, and the buccal bone plate, appeared intact. Only palatally to the fixture, and in the most coronal area, it appear evident that the trauma had detached the surface of the implant from the palatal bone; that area was of less importance for the present histologic evaluation and, therefore, the sample could be considered in perfect condition for histologic and histomorphometric analysis. The histomorphometrical evaluation showed a bone-to-implant contact of 76.2%.



Trabecular, mature bone at the interface of the implant was observed. The bone was present between the implant and the root. The root membrane and the buccal bone plate appeared intact without any signs of resorption.



Compact bone in the mediat thirds and apical portion of the implant were evident. No gaps were present at the interface.



In the apical portion of the root, it was observed that the cementum migrated from the residual root to the implant surface. Acid fuchsin-toluidine blue 40x.

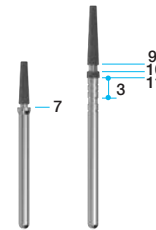
Hindawi  
BioMed Research International  
Volume 2017, Article ID 7269467, 8 pages  
<https://doi.org/10.1155/2017/7269467>

## ➔ Components for Root Membrane Kit

Maximum Speed (RPM) of Drill		
R1	1,200	3DD50, 4DD4005, RMSD2018L, RMSD2518L RMKTB2535S, RMKTB4050S
R2	30,000	2DD2034, 2DD3034, 3DD2008
R3	40,000	1DD1607, 1DD1911
R4	100,000	2DD2025, 2DD2029, 2DD3025, 2DD3029, 3DD20H

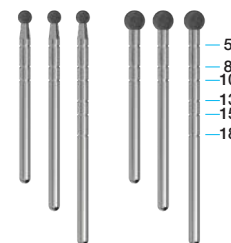
### Diamond Drill (Initial Shaper)

RPM	Diameter	Length(mm)	Ref.C
R3	Ø1.6	25	1DD1607 (IS1)
	Ø1.9	34	1DD1911 (IS2)



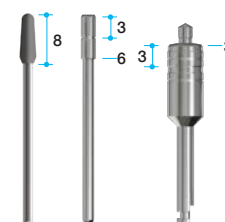
### Diamond Drill (Round Diamond)

RPM	Diameter	Length(mm)	Ref.C
R4	Ø2.0	25	2DD2025
		29	2DD2029
R2	Ø2.0	34	2DD2034
R4		Ø3.0	25
	29		2DD3029
R2	Ø3.0	34	2DD3034



### Diamond Drill (Final Shaper)

RPM	Diameter	Length(mm)	Ref.C
R2	Ø2.7	34	3DD2008 (FS1)
R4	Ø2.0	29	3DD20H (FS2)
R1	Ø5.0	28	*3DD50

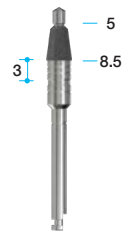


\* FS1, FS2 High Speed / 3DD50 Low Speed

(\*) Separate sales item.

### Diamond Drill (Tapered Diamond)

RPM	Diameter	Length(mm)	Ref.C
R1	Ø4.0	32	4DD4005



### Trepine Bur

RPM	Diameter	Length(mm)	Ref.C
R1	Ø3.5	38.5	*RMKTB2535S
	Ø5.0	38.5	*RMKTB4050S

(\*) Separate sales item.



### Shaping Drill

RPM	Diameter	Length(mm)	Ref.C
R1	Ø2.0	43	*RMSD2018L
	Ø2.5	43	*RMSD2518L
	Ø2.8	43	*RMSD2818L
	Ø3.3	43	*RMSD3318L

(\*) Separate sales item.

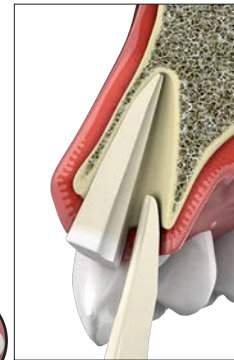
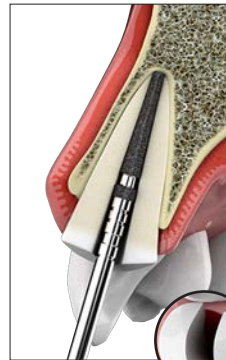
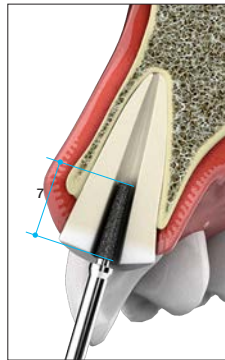


## ►► How to use Root Membrane Kit

1. After measuring the length of root canal, secure the root canal using the Drill and Bur.

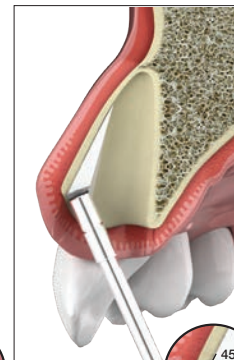
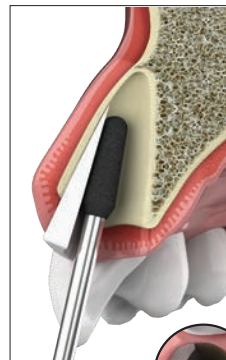


2. Use Initial Shaper (IS1) to perform an initial root split about 7mm so that lingual surface becomes slightly rounded.



3. Then use the Initial Shaper (IS2) to expand as the length of the root and remove the palatal side fragment.

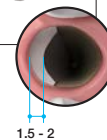
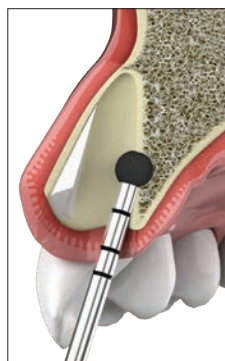
4. Trim the form of root fragments left on the labial side.



5. After trimming the form of root fragments on the labial side, perform extraction and curettage with a round diamond bur.

6. Make space between the root membrane and the implant so that they are not in contact. To facilitate bone formation, make the surface smooth by trimming with a root membrane bur.

7. Prepare the root fragments in the bone margin area with a crestal trimming bur to make it inclined at 45 degrees.

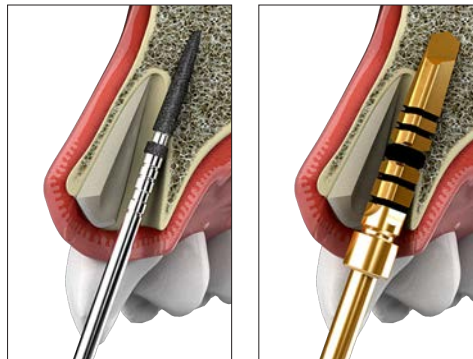


8. To prepare for the palatally and apically positioned immediate implant placement, use a 3.0 mm diameter round diamond bur to make indentation on the solid palatal bone.



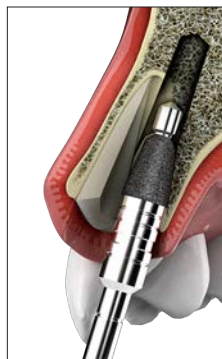
9. To prevent slip of the common drill along the slot, initial drilling should be done using an initial shaper (IS2) after matching the direction in which the fixture is to be placed.

10. After that, it needs step-by-step drilling.



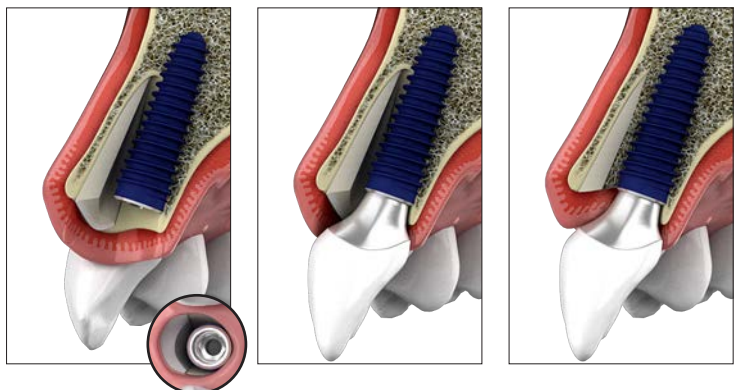
11. Due to the feature of immediate placement, there is no resistance on the labial side, so labial shifting is likely to occur when the fixture is placed.

To prevent this, trim the palatal side bone before fixture placement by using tapered diamond. It's kind of counter sinking drilling. You can adjust the depth of the tapered diamond according to the diameter of the fixture being placed.



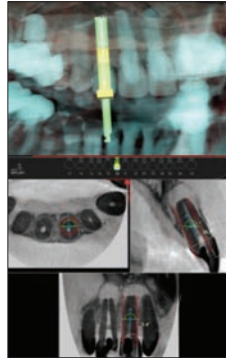
12. Place the fixture without touching the remaining root fragment.

If a gap between the root fragment and the fixture is wide, perform a little bone graft.

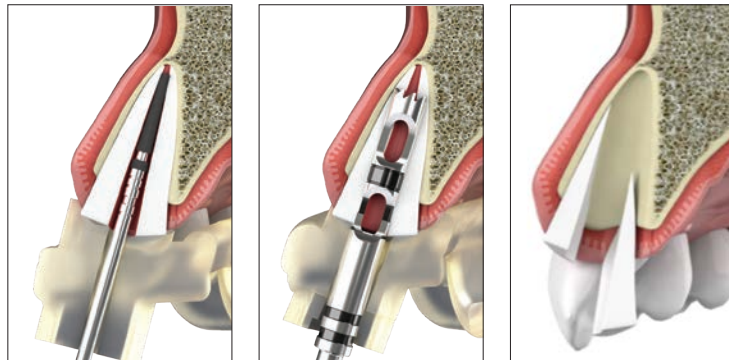


## ►► How to use Root Membrane Kit easily using R2GATE

1. Diagnose trephine bur, drill and fixture that fits the root fragment's length and size using R2GATE



2. Place the guide made according to the diagnosis (for Root Membrane) and remove the root fragment on the palatal side by drilling with the Trephine Bur holding on to the position of the middle of the root using IS2.



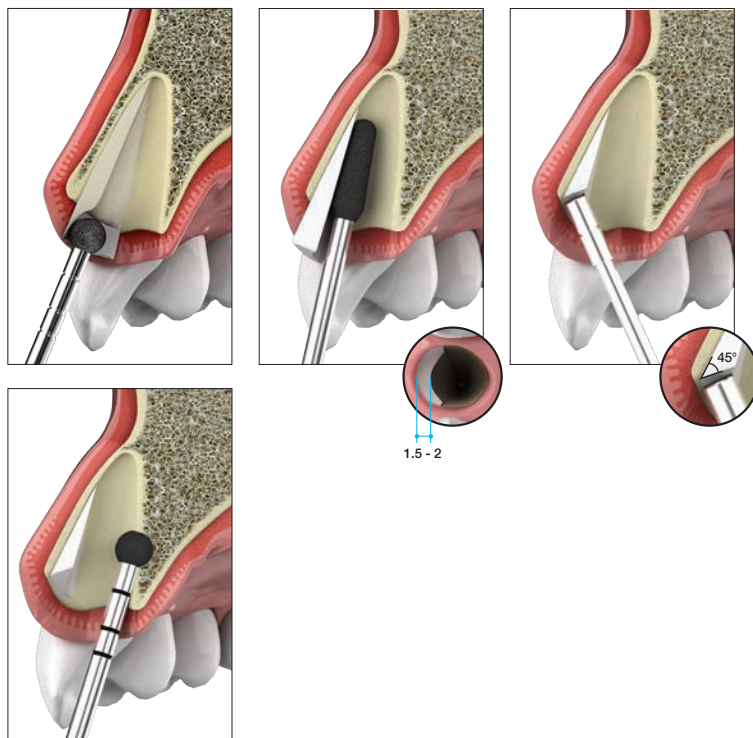
3. Trim the form of root fragments left on the labial side.

4. After trimming the form of root fragments on the labial side, perform extraction and curettage with a round diamond bur.

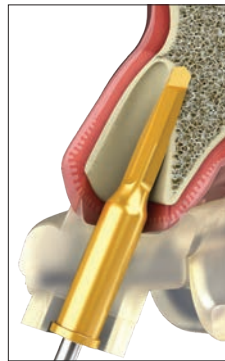
5. Make space between the root membrane and the implant so that they are not in contact. To facilitate bone formation, make the surface smooth by trimming with a root membrane bur.

6. Prepare the root fragments in the bone margin area with a crestal trimming bur to make it inclined at 45 degrees.

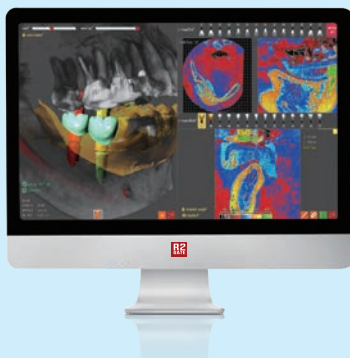
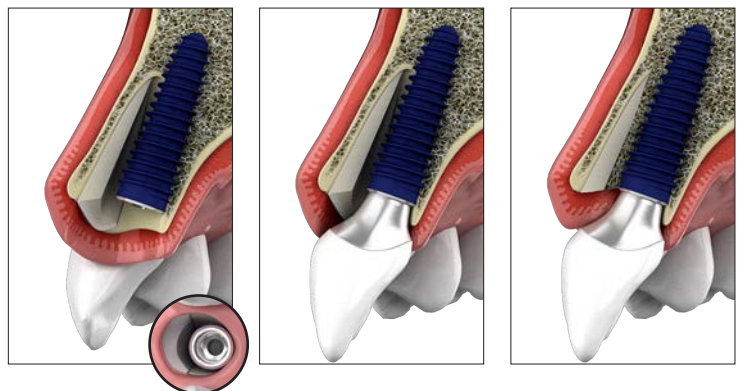
7. To prepare for the palatally and apically positioned immediate implant placement, use a 3.0 mm diameter round diamond bur to make indentation on the solid palatal bone.



8. Place the guide made according to the diagnosis (for fixture placement) and proceed drilling step by step.



9. Place the fixture without touching the remaining root fragment.  
If a gap between the root fragment and the fixture is wide, perform a little bone graft.



For detailed instructions, refer to R2GATE Website  
(<https://www.r2gate.com/>)

# Root Membrane Clinical Case

## ➔ Clinical Case 1

- Courtesy of Dr. Yoshiharu Hayashi

### Patient : 65 year old female

#7, 8, 9 on the left in maxilla have only roots remaining and #10 on the left is defective. As there were no residual tooth structure in the root region, it was highly likely the root would fracture even with new prosthesis (Figure 01, 02).

The plan was to have immediate placement after extraction with the root membrane technique for #7 on the right, delayed placement where placement is done after bone is matured for #10 on the left, and root membrane pontic for #8, 9

The sequence of the root membrane technique is to be revisited through this case.

### Progress of Treatment

After cutting the roots of #7, 8, 9 on the left in maxilla mesio - distally with an ISF bur (Figure 03, 04), the palatal roots are removed.

Then, space should be created between the residual labial root fragments and the implants so that they do not touch with each other, and the surface of the root fragments facing the implants should be smoothed to facilitate bone regeneration. If it is trimmed with a round diamond bur it would be hard to make the surface smooth as bumps can be made.

Therefore, the root fragments should be trimmed using a root membrane bur that can create wide smooth surface (Figure 05). After that, the root fragments should be reduced up to the bone margin using a round diamond bur (Figure 06), and then 45 degree inclination should be made with a crestal trimming bur (Figure 07, 08).

As a result, gingiva will be inclined and the form of prosthesis can be relatively freely selected.

In summary, after forming the root fragments in 1-1.5mm thickness, the implant facing side should be trimmed smoothly followed by implant placement in a position where some space can be secured.



Fig 1 Intraoral frontal view at the first visit.



Fig 2 Intraoral occlusal view of anterior maxilla at the first visit. As only roots remained without healthy ferrule at #7, 8, 9 there was a very high risk of possible root fracture even if prosthesis were remade. Only root remained at #7, 8, 9

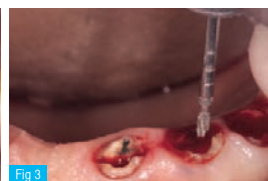


Fig 3 Residual root of #7, 8, 9 was divided mesiodistally using an ISF bur.



Fig 4 Residual root of mesiodistally divided #7, 8, 9.



Fig 5 After removing the divided palatal root fragment, the inner wall of the labial root fragment was trimmed smoothly in thickness of around 1.5mm using a root membrane bur.

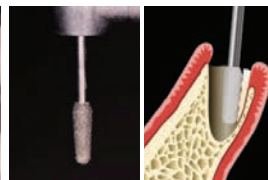


Fig 6 With a round diamond bur, the root fragment was prepared until its height was the same as the bone margin.



Fig 7 About 45 degree inclination was given to the root fragment in the bone margin area using a crestal trimming bur. With this, gingiva would inline and the shape of prosthesis can be relatively freely chosen.

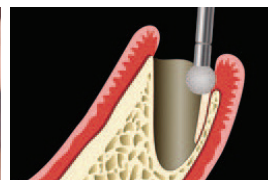


Fig 8 Completed root membrane.



Fig 9 A placement hole needs to be formed while checking the bone quality of the site because initial stability is key to Implant success. The bone quality of #7 was checked first and a hole was drilled appropriate for the bone quality.



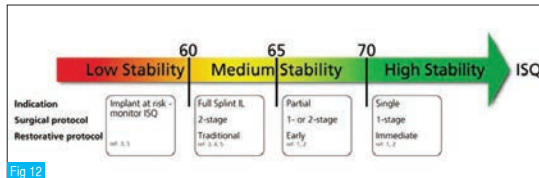
Fig 10 Implant was placed apically and palatally with around 60 Ncm torque.





Fig 11

Implant Stability Quotient, ISQ, was over 70. ISQ can be used as an indicator to diagnose implant stability. The device uses RFA (Resonance Frequency Analysis) to measure and numerically represent the biomechanic property of bone tissue around implant and the strength of the interface between implant and bone. In general, low ISQ values, compared with the higher values, are considered to have higher risk of failure<sup>3</sup>.



The relations between ISQ values and implant stability in bone.



Fig 13

Delayed implant placement was performed after waiting for the bone to mature at #10. A hole was formed by checking the bone quality at this site too. During drilling, a straight abutment was temporarily inserted on the implant already placed at #7 and was used as a guide for parallelism.



Fig 14

Implant was placed apically and palatally with about 65 Ncm torque. The depth of placement was adjusted so that the platform was set at 4 mm below the gingival margin.



Fig 15

ISQ value was over 70.

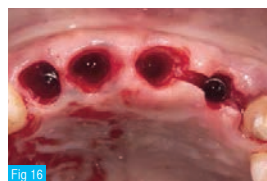


Fig 16

Occlusal view of anterior maxilla after implant placement. The Root membrane pontic technique was used for #7, delayed placement for #10, and the Root membrane pontic for #8, 9.



Fig 17

Intraoral frontal view immediately after surgery. Temporary restoration with contour adjusted to the patient's gingival line was delivered. As delayed placement was carried out at #10 after waiting for the bone to mature, subgingival form was Flat -contoured.



Fig 18

Intraoral frontal view #12 week post-op.

Implant is placed in a normal way but caution should be exercised during drilling as primary stability is crucial for Implant. It is important to drill the hole for implant by checking the bone quality of the site as bone quality varies depending on the location on the jaw bone. Especially in this case, as root membrane pontic installation was done for #8, 9 in the upper jaw at the same time to reduce the treatment time, immediate provisionalization would be impossible if implant primary stability is not obtained, lowering quality of life for patients during the treatment period.

In this case, after appropriate drilling is made by checking the bone quality of upper right #7 site, implant was placed palatally and slightly apically with the torque of 60 Ncm (Figure 09~11). Next, delayed placement was done at #10 on upper left by also checking the bone quality to create the hole for placement followed by implant placement palatally and slightly apically with the torque of 65 Ncm (Figure 02~16). The implant can be placed in parallel direction based on the temporary straight abutment mounted to the implant placed first at #7 on the right. As each implant showed ISQ 70 or more, it was determined good enough for immediate provisionalization.

Provisional restoration contoured according to the current gingival line right after the procedure was delivered. (Figure 17).

As delayed placement which awaits bone to mature was performed for #10 the subgingival form was under-contoured.

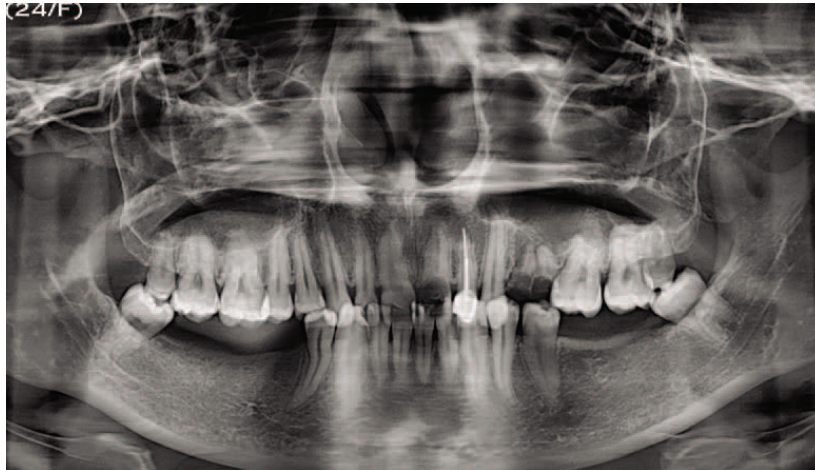
Symmetric and erengingival was maintained 12 week post-op. (Figure 18).

## ➔ Clinical Case 2

- Courtesy of Dr. Chang Hoon Han

### Case (24/F)

A 24-year-old female patient came to the office complaining severe carries in the upper left central incisor crown area, and wanted implants for the tooth, maxillary left premolar and bilateral mandibular molar region.



Clinical pre-op photo. In this case, if immediate implant placement after extraction is to be planned, firstly atraumatic extraction should be made before drilling along the lingual wall of the extraction socket. Initial stability can be obtained more easily with tapered implant. The preferred method is to place autogenous bone graft or allograft into the gap between the buccal bone fragment and implant, and xenograft which is resistant to resorption on the buccal side of the buccal bone.



The buccal bone of the root was very thin on CT and was anticipated to be lost after extraction even if it were preserved during extraction. After discussing various treatment options with the patient, the minimally invasive "Root-membrane technique" which can obtain good outcome was chosen.



### #21 : AnyRidge 4.5 x13 mm (ITV 50 N/cm, ISQ 72)

After decoronation and hemisection, lingual portion of the root fragment was removed and the remaining root fragment on the buccal side was trimmed to the crestal bone level. The lingual side of the remaining root fragment was smoothly trimmed using a diamond bur. In terms of root membrane thickness, the thickest central part should be 1.5 ~ 2 mm from the occlusal view.

As the implant was positioned 1~2 mm inferior to the bone margin, the bone margin of the root membrane was made inclined with a 45 degree angle palatally (lingually) before implant placement to enable proper formation of emergence profile for future prosthesis. Drilling was performed to place implant on the lingual side of the root membrane in a normal way. Before AnyRidge 4.5x13 mm was placed, final checking was done to see if the completed root membrane was mobile. Relatively large diameter implant was placed but a 2 mm or bigger gap existed between the implant and the root membrane remaining on the buccal side.

In general, it is recommended to fill the gap with autogenous bone graft or allograft. In this case, the top portion of the gap was simply blocked with absorbable hemostat and suturing was done minimally hoping the blood clot filling the gap would turn into bone later. The implant placement torque was 50 Ncm and the ISQ value right after the placement was 72. As the initial stability was good, pick-up impression coping was connected right after surgery for immediate provisionalization and impression was taken.



**OP + 1 day**

On the next day of implant placement, provisional using temporary abutment was delivered and the patient was advised not to use the anterior region during the healing period.



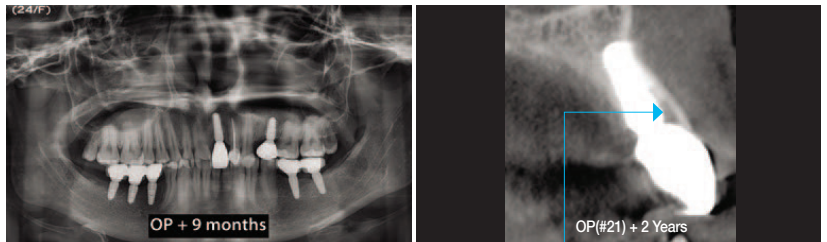
**OP + 8 months**

At 8 month post-op, the provisional crown was modified to look similar to the final prosthesis.



**OP + 9 months**

The area around the implant prosthesis was confirmed to remain healthy without any sign of inflammation while provisional restoration period. At 9 month post-op, screw retained type final prosthesis was delivered. After the delivery of the final prosthesis, it was confirmed that continuity of the buccal bone to the adjacent teeth was maintained on the occlusal



**OP + 9 months**

At 9 month post-op, prosthetic treatment was completed for implants in the upper central incisors as well as upper left premolar and bilateral mandibular posterior region.

**OP(#21) + 2 years**

On the 2 year post-op CT, the very thin remaining buccal bone before the surgery was fused with the root membrane and resembled cortical bone (corticalization). Although the gap between the implant and the root membrane remaining on the buccal side was simply blocked with absorbable hemostat without any graft, it was filled with blood clot and was replaced by cancellous bone.

# Partial Extraction Therapy(PET) Kit

## I. PET Kit

- Socket Shield Technique
- Pontic Shield Technique
- Root Submergence Technique

Ref.C

PET 3000



### Developer

#### • Dr. Howard Gluckman

- Ph.D. Partial Extraction Therapy: Past, Present and Future, Szeged University, Hungary
- DDS & Postgraduate Diploma in Implantology, University of Stellenbosch & University of Western Cape, SA
- Private Clinic in Cape Town, SA
- Director, Implant & Aesthetic Academy, SA
- Immediate Past President, South African Society for Dental Implantology
- Diplomat, International Congress of Oral Implantologists
- Board Member, Southern African Association of Osseointegration
- Dental XP Expert Panel & Scientific Board Member

The Partial Extraction Kit has been developed specifically to make the Partial Extraction Therapy Techniques more achievable. The step by step process helps to standardize the procedure to enable faster and more predictable results. The development of the kit was made possible through research which highlighted the complications associated with the techniques.

The internal and external shield exposure are the main complications associated with socket shield and pontic shield. The use for the PET kit has specific drills that enable the simple reduction of the shield without damage to the adjacent mucosa as well as preparation of the chamfer below the bone level in order to create the prosthetic space necessary for ideal soft tissue healing over the shield.

The large round diamonds are ideal for both socket shield as well as Root Submergence Technique. The size of the round drills allows fast and easy reduction of the roots to the ideal position reducing treatment time and achieving predictability.



## ➔ Components for Partial Extraction Therapy Kit

Maximum Speed (RPM) of Drill

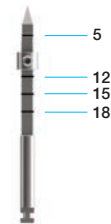
R1	1,200	LD2037, GD40G, FS40G, FD3010B
R2	40,000	LMD1225, LMD1231
R3	100,000	RD2025B, RD2034B, RD3025K, RD3034K

No. 1

### Lance Drill

RPM	Diameter	Length(mm)	Ref.C
R1	Ø2.0	37	LD2037

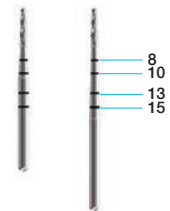
\* Depth stopper adjustment is possible with Hand Driver 0.9 Hex.



No. 2

### Diamond Drill (Lindermann Drill)

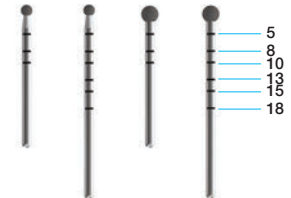
RPM	Diameter	Length(mm)	Ref.C
R2	Ø1.2	25	LMD1225
		31	LMD1231



No. 3

### Diamond Drill (Round Diamond Bur)

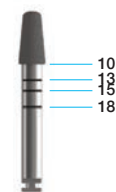
RPM	Diameter	Length(mm)	Ref.C
R3	Ø2.0	25	RD2025B
		34	RD2034B
	Ø3.0	25	RD3025K
		34	RD3034K



No. 4

### Diamond Drill (Finishing Diamond Bur)

RPM	Diameter	Length(mm)	Ref.C
R1	Ø3.0	34	FD3010B



No. 5

### Diamond Drill (Final Shaper)

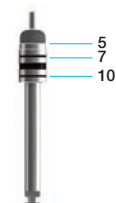
RPM	Diameter	Length(mm)	Ref.C
R1	Ø4.0	28	FS40G



No. 6

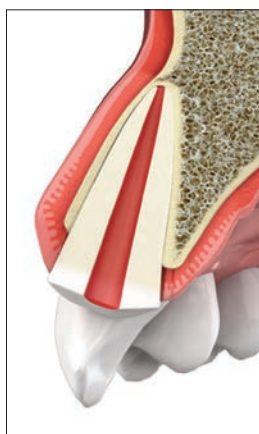
### Diamond Drill (Guided Drill)

RPM	Diameter	Length(mm)	Ref.C
R1	Ø4.0	30	GD40G



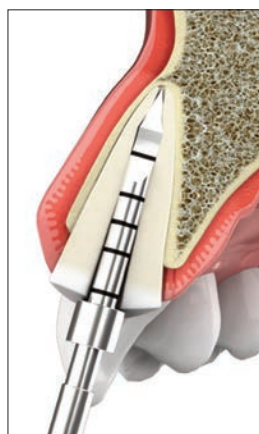
## ▶▶ How to use Partial Extraction Therapy(PET) Kit (Continued)

### Socket Shield Technique



From a CBCT, measure the length of the root from the level of the gingiva to the apex.

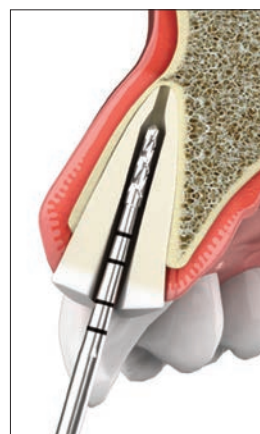
Referencing the CBCT, remove the coronal portion of the tooth flush with the gum line.



Set the length of the No.1 drill using the depth stopper and the 0.9 Hex Hand Driver.

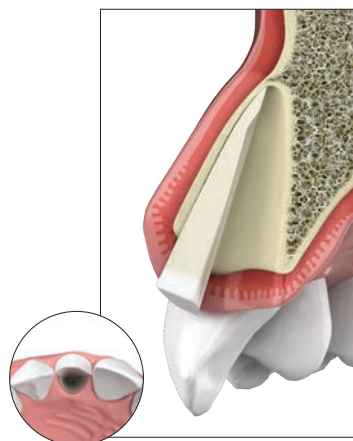
Drill with copious irrigation and intermittent pump action until you reach the level of the depth stopper.

Take an X-ray to confirm that you have reached the apex of the root.



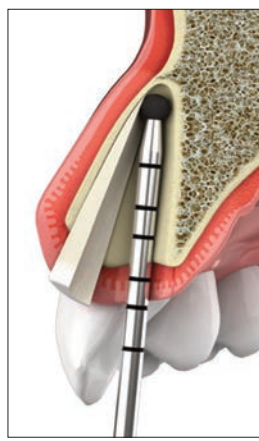
Use the long shanked No. 2 drill to section the root from mesial to distal in a sweeping motion that runs from mesial line angle to distal line angle.

Ensure that you have measured and marked the length of the root, referencing the markings on the drill to make sure you don't drill past the apex.



Gently remove the palatal portion of the root by luxating motion.

Your finger should rest on the buccal eminence for support and to ensure no movement of the buccal shield. If there is movement, the palatal portion is not correctly resected.

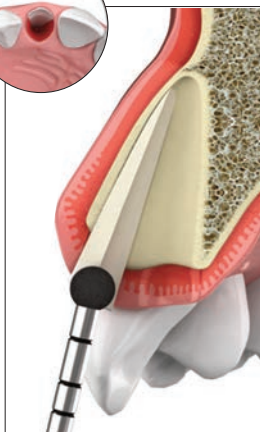


Once the palatal portion has been removed the apical portion needs to be addressed. The root apex and any gutta percha material must be removed using the No.3 round drill.

Place the drill at the most apical portion against the root and move coronally in a gentle painting motion. The drill should not be pushed apically at the apex as this may lead to perforation of the buccal plate.

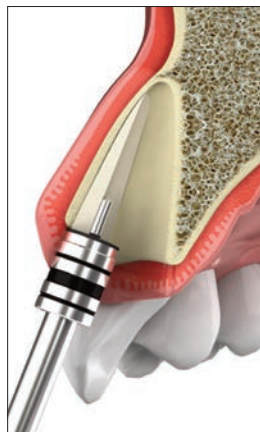


Use the No.4 finishing diamond drill in the final preparation of the shaping and smoothing of the shield.



Use the No.3 round drill to reduce the coronal portion as close to the crest of the bone as possible.

Make sure that the gingiva is retracted with a gingival retractor to prevent damage to the gum during preparation.



Use the No.5 Final Shaper Drill for final preparation and reduction of the coronal portion.

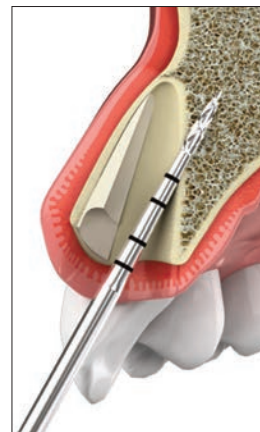
The shield should be prepared to bone level. Use the markings on the drill to get the shield to the correct depth.

Verify shield height at bone level with CBCT.

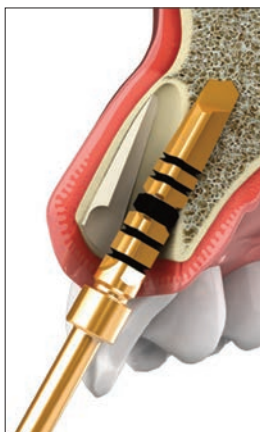


The No.6 guided chamfer drill creates the space that allows the soft tissue to grow between the shield and the implant.

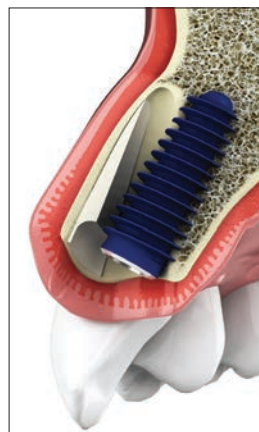
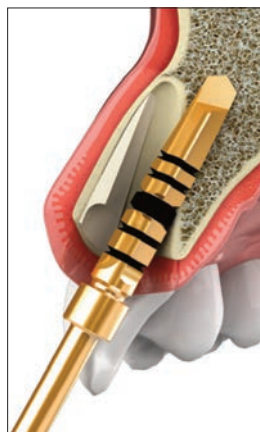
Use the markings on the drill to prepare the chamfer to the correct depth, reshaping and smoothing the coronal portion of the shield.



Implant preparation according to the normal protocols of AnyRidge or AnyOne implants.



Proceed according to AnyRidge and AnyOne drilling protocol to prepare site to appropriate size for implant placement.



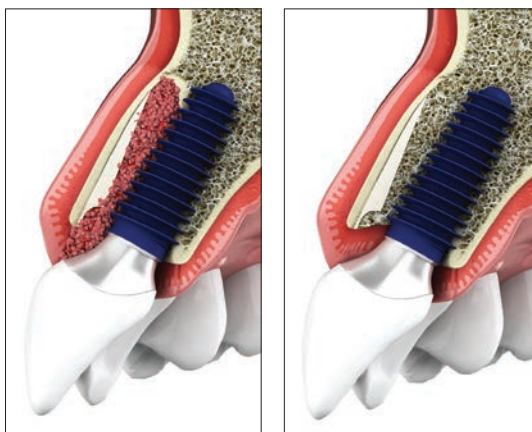
The implant should be placed about 0.5mm above the widest part of the chamfer to allow for maximum space between the implant and the shield.



The jump gap should be filled with bone graft material. This can be done either before or after the implant has been placed.

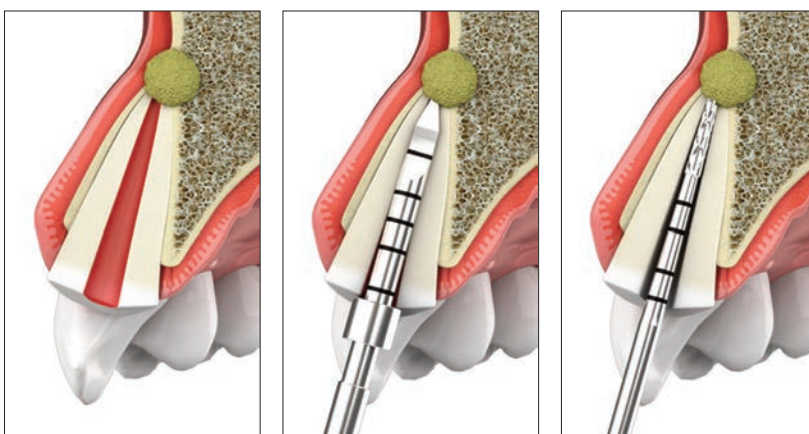
This will minimize the risk of internal shield exposure. The implant can touch the shield if there is limited space, however more space is preferable.

## ▶▶ How to use Partial Extraction Therapy(PET) Kit (Continued)



Either a provisional crown or custom temporary abutment with an emphasis on the distance between the shield and subcritical notch is crucial. 2-3 mm of space is necessary to allow good soft tissue coverage of the shield. Failure to accomplish this may lead to an internal shield exposure.

### Pontic Shield Technique



From a CBCT, measure the length of the root from the level of the gingiva to the apex.

Referencing the CBCT, remove the coronal portion of the tooth flush with the gum line.

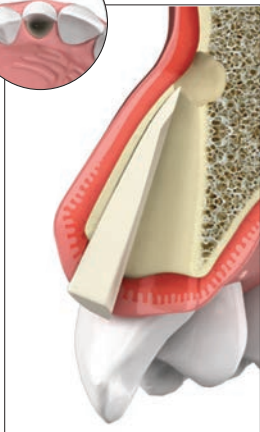
Set the length of the No.1 drill using the depth stopper and the 0.9 Hex Hand Driver.

Drill with copious irrigation and intermittent pump action until you reach the level of the depth stopper.

Take an X-ray to confirm that you have reached the apex of the root.

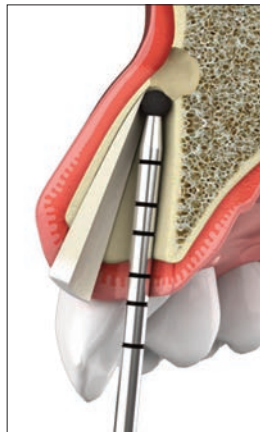
Use the long shanked No. 2 drill to section the root from mesial to distal in a sweeping motion that runs from mesial line angle to distal line angle.

Ensure that you have measured and marked the length of the root, referencing the markings on the drill to make sure you don't drill past the apex.



Gently remove the palatal portion of the root by luxating motion.

Your finger should rest on the buccal eminence for support and to ensure no movement of the buccal shield. If there is movement, the palatal portion is not correctly resected.

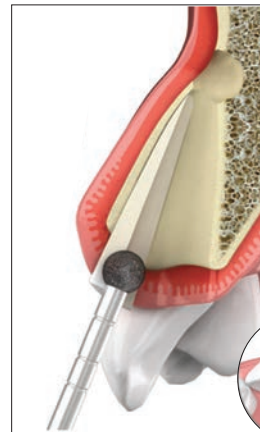


Once the palatal portion has been removed the apical portion needs to be addressed. The root apex and any gutta percha material must be removed using the No.3 round drill.

Place the drill at the most apical portion against the root and move coronally in a gentle painting motion. The drill should not be pushed apically at the apex as this may lead to perforation of the buccal plate.



Use the No.4 finishing diamond drill in the final preparation of the shaping and smoothing of the shield.



Use the No.3 round drill to reduce the coronal portion as close to the crest of the bone as possible.

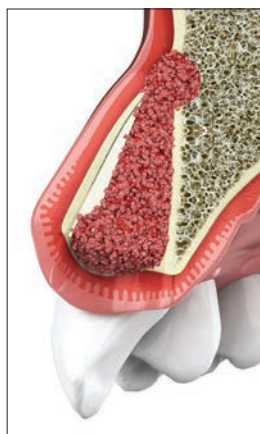
Make sure that the gingiva is retracted with a gingival retractor to prevent damage to the gum during preparation.



Use the No.5 Final Shaper Drill for final preparation and reduction of the coronal portion.

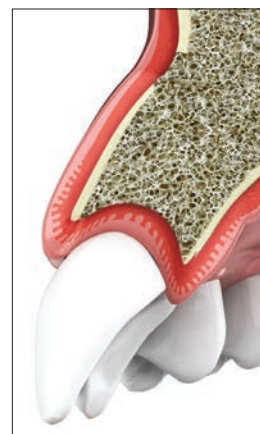
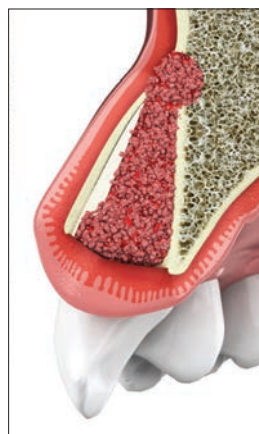
The shield should be prepared to bone level. Use the markings on the drill to get the shield to the correct depth.

Verify shield height at bone level with CBCT.



After the socket has been curetted and all the infected material has been removed, the socket is filled with a bone substitute. A soft tissue graft is used to cover the socket. This can either be in the form of a connective tissue graft or a free gingival graft that has been deepithelialized.

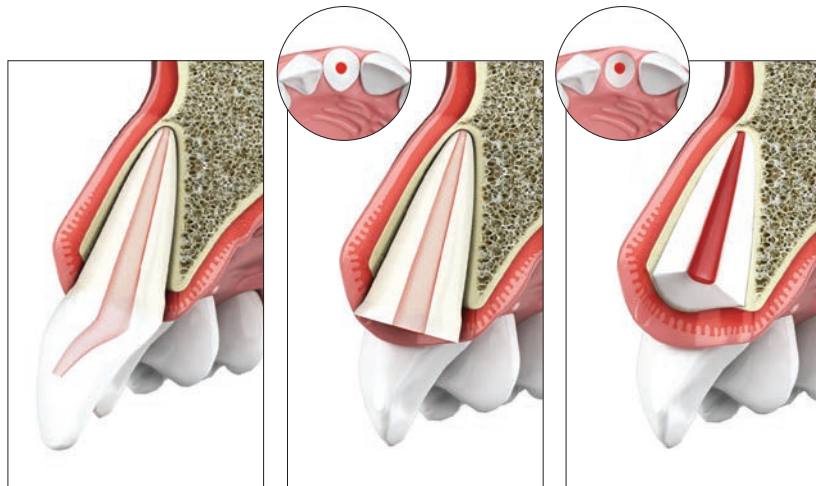
The tissue should be tucked under the buccal and palatal flaps at least 4-5mm deep. The other alternative is a rotated palatal flap which will need to be inserted into a buccal pouch at least 4-5mm. It is essential that the tissue is sutured in an immobile fashion. Once healed an ovate pontic is used with light pressure to form the soft tissue.



## ▶▶ How to use Partial Extraction Therapy(PET) Kit

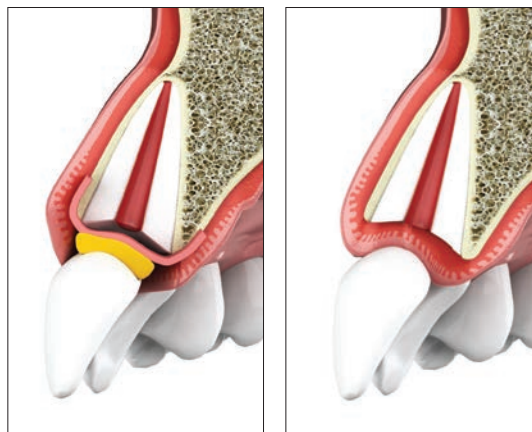
### Root Submergence Technique

● Vital Root Submergence



Vital teeth can be used in the Root Submergence Technique.

Cut the coronal portion off the tooth to gingival level. Use the large No. 3 round bur to then reduce the root surface interface to bone level. The internal root area (concave shape) should be about 2mm below bone level to allow adequate soft tissue thickness between the root and the future pontic.



The vital root surface interface is left exposed. No graft material is applied to the surface area of the root.

Coverage of the root is essential using either a free gingival graft or a vascularized rotated palatal flap.

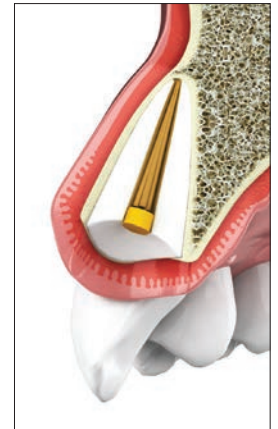
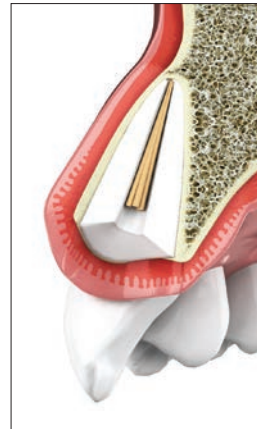
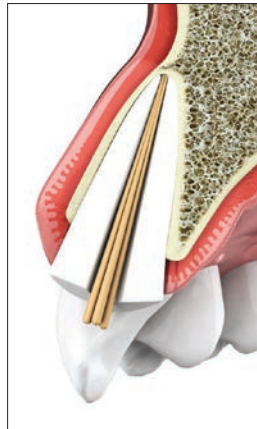
It is essential that the free gingival graft extends at least 4mm into a pouch created both buccally and palatally to ensure adequate blood supply to the graft.

Once healed (about 8-12 weeks) an ovate pontic is used with light pressure to form the soft tissue.

It is imperative that there is only light pressure on the tissue as to not put too much pressure on the gingiva, which could lead to exposure of the root.

## Root Submergence Technique

### Non-vital Root Submergence



Root submergence of a non-vital root requires that the root canal treatment is well sealed and has NO apical radiolucency.

Cut the coronal portion off the tooth to gingival level. Use the large No. 3 round bur to then reduce the root surface interface to bone level. The internal root area (concave shape) should be about 2mm below bone level to allow adequate soft tissue thickness between the root and the future pontic. Remove 2mm of root canal material and seal the canal with glass ionomer cement or MTA.



Coverage of the root is recommended using either a free gingival graft or a vascularized rotated palatal flap. It is essential that the free gingival graft extends at least 4mm into a pouch created both buccally and palatally to ensure adequate blood supply to the graft.

Once the soft tissue has healed in 8-12 weeks an ovate pontic can be placed onto the tissue. It is imperative that there is only light pressure on the tissue as to not put too much pressure on the gingiva which could lead to exposure of the root.

# Densah Bur Kit

## I. Densah Bur Kit



Merits of Densah Bur



View the Lecture of the Developer, Dr. Salah Huwais

Ref.C

VUJBLK

Implant procedures using a Densah bur with the osseodensification effect has been recognized by many renowned dentists' long-term clinical evidences and articles of at least 5 years. The procedure is now emerging as a trend among dentists in North America and Europe.



### 1. The reason European and North American dentists point to Densah bur as one of their must-have items!

#### A Paradigm Shift In Implant Osteotomy Preparation "Osseodensification"

An amazing osseodensification effect turning D4 to D2 bone while maintaining the autogenous bone fresh without necross.

#### Osseodensification Bone "Spring Back Effect"

It causes bone to return to the implant faster than natural bone by its "Spring Back Effect", increasing the initial stability and BIC beyond imagination.

#### A versatile kit that can also be used for a maxillary sinus lift procedure

The Densah bur's unique design causes no bone loss or sinus membrane perforation, thus minimizing the need for bone grafts.

#### Amazing Ridge Expansion Effect

Ridge expansion using the osseodensification technique preserves the thickness of the ridge, and also expands it. An implant of 4.2 mm or larger diameter can be placed in a 3 mm ridge.

#### With the Magic Kit alone, all implant systems from around the world can be placed.

More than 90 major implant systems from more than 30 companies across the globe including MegaGen, Osstem, Dentium, Straumann, Nobel Biocare, Astra, and Zimmer Biomet can be placed with the Magic Kit.

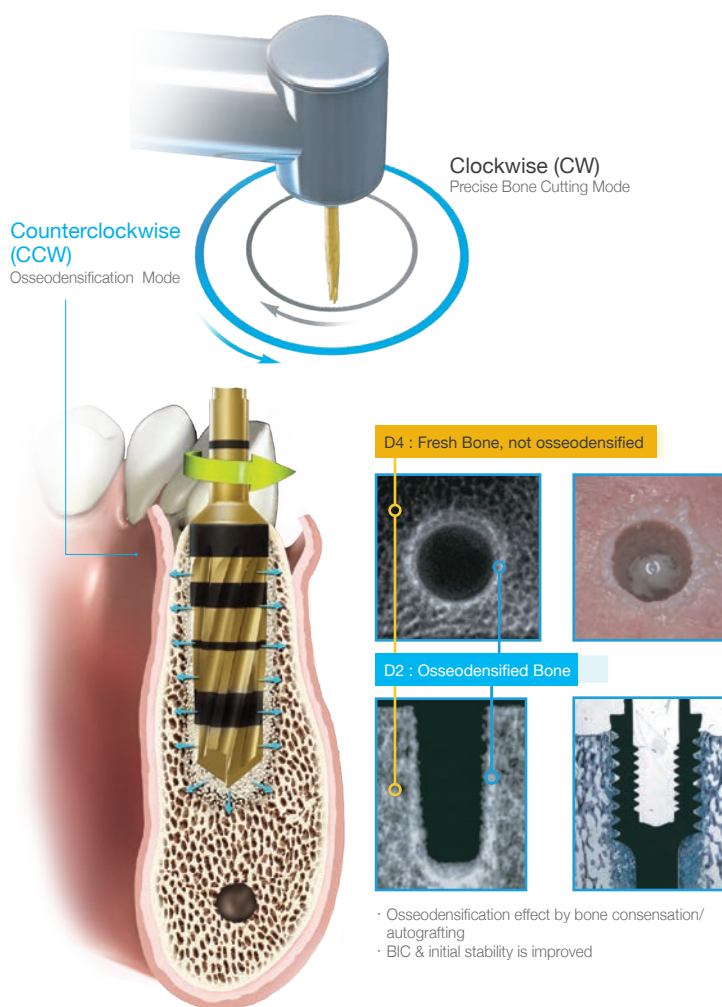


## 2. OSSEODENSIFICATION Effect?

### What is OSSEODENSIFICATION, the core of Densah bur technology?

The functionally designed Densah bur compacts bone outwardly, rotating in reverse direction under irrigation without excavating bone.

- There are two modes for the Densah bur:

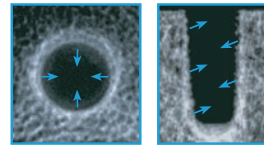


## 3. Characteristics and Advantages of Densah Bur

1. Bone density is improved by compacting bone outwardly while maintaining healthy bone without necrosis (D4 → D2 Bone).
2. The osseodensified bone springs back to the implant faster than natural bone, facilitating osseointegration with improved BIC and ISQ values.
3. As soon as an implant is placed, higher primary stability can be secured than from conventional drilling.
4. Immediate loading can also be applied to D4 bone.
5. Dangerous under-drilling is no longer necessary.

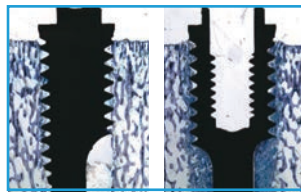
√ Do you know what the Spring Back Effect is?

Once bone is osseodensified by a Densah bur, it tends to return to the implant faster than natural bone because it is not damaged during implant placement, and maintains the stable state of the natural bone while forming harder and denser bone. The return effect is called the Spring Back Effect. The fast Spring Back Effect increases the implant primary stability and BIC, compared to when the effect is not utilized.



Osseodensification and the fast Spring Back Effect facilitates osseointegration faster than the conventional approach.

√ Don't under-drill anymore! Experience high BIC immediately on the day of implant placement due to osseodensification.



Standard Drilling      Osseodensification tech using a Densah bur.

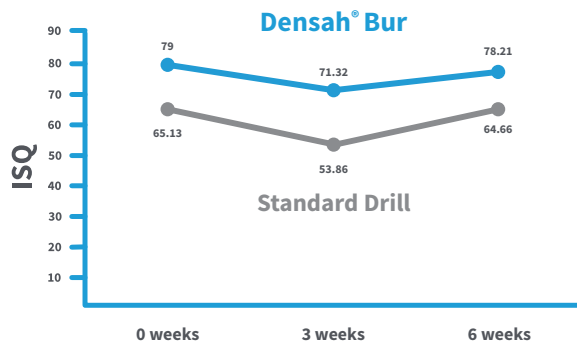
No Necrosis  
No Micro fractures  
Much higher BIC



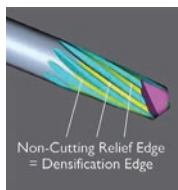
in vivo test  
Excellent osseointegration confirmed at 6 weeks after placement

√ Sufficient ISQ values for immediate loading even for D4 bone!

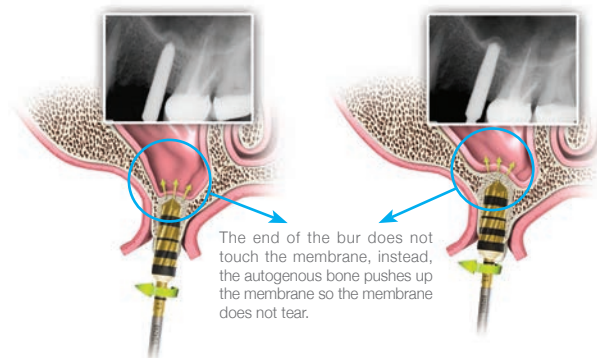
- Densah Bur / Standard Drill  
29 Implant in 13 Patients



√ Remarkable Maxillary Sinus Procedure!



With the patented design and mechanism (rounding & sliding) of the Densah bur, the bur moves forward pushing bone, thus eliminating the risk of sinus membrane tearing and bone loss, leading to a minimized need for bone grafts. It can also be useful for expanding a narrow ridge by boosting bone density and expanding bone width.



## ➔ Densah Bur Kit Components

### VT5 Bur

Length(mm)	Diameter	Ref.C
37	2.0	VT1525
	3.0	VT2535
	4.0	VT3545
	5.0	VT4555



### VT8 Bur

Length(mm)	Diameter	Ref.C
37	2.3	VT1828
	3.3	VT2838
	4.3	VT3848
	5.3	VT4858



### VS8 Bur

Length(mm)	Diameter	Ref.C
37	2.5	VS2228
	3.5	VS3238
	4.5	VS4248
	5.5	VS5258



### Pilot Drill

Length(mm)	Diameter	Ref.C
37	1.6	VPLTT



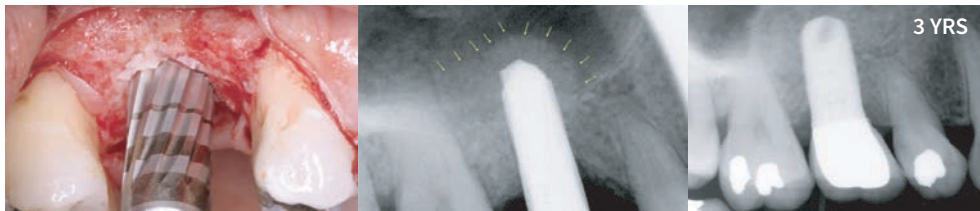
### Parallel Pin

Length(mm)	Ref.C
22	VPLP
22	VPLP-XL



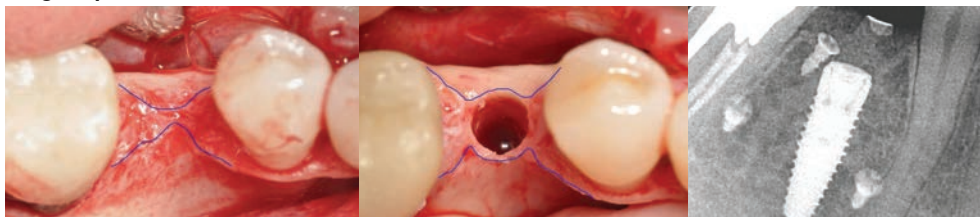
## ➔ Clinical Cases

### Densah Lift Protocol



Courtesy of Dr. Salah Huwais

### Ridge Expansion Protocol



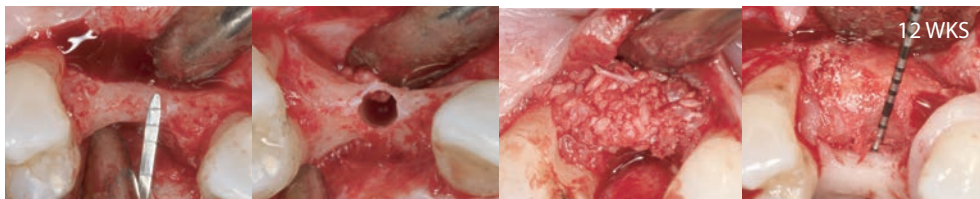
Courtesy of Dr. Samvel Bleyan

### Immediate Implant Placement Protocol



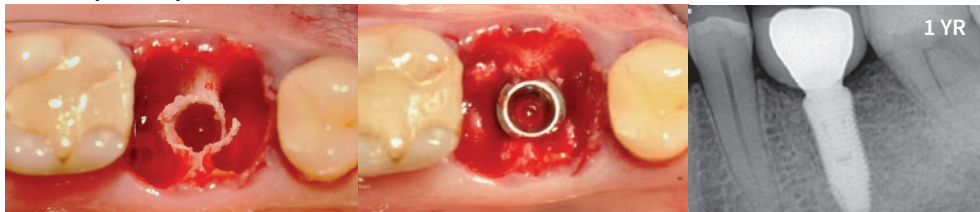
Courtesy of Dr. Salah Huwais

### Guided Expansion Graft: 2-Stage Augmentation Protocol



Courtesy of Dr. Salah Huwais

### Molar Septum Expansion Protocol



Courtesy of Dr. Samvel Bleyan