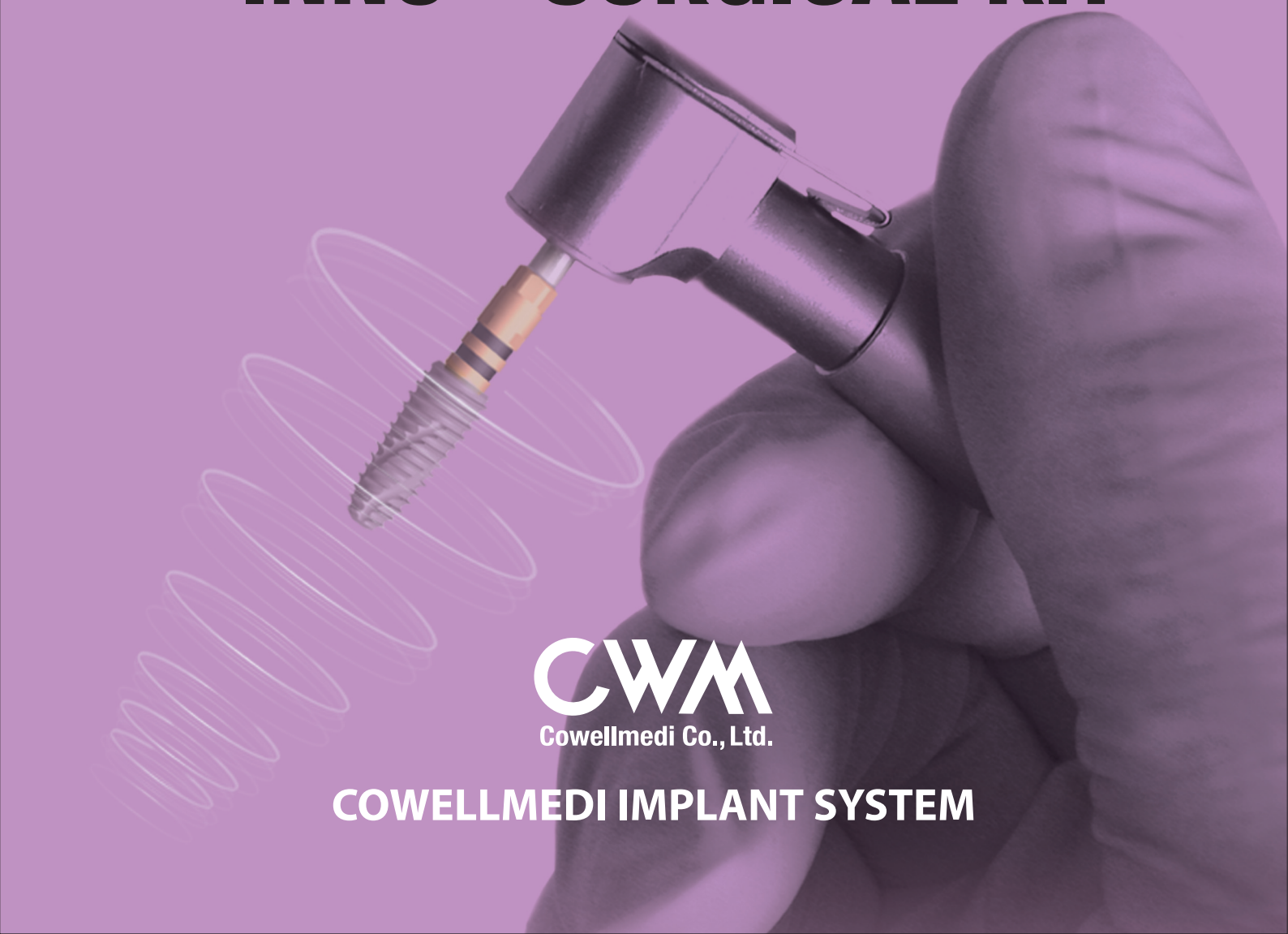


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INNO - SURGICAL KIT



CWM
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COWELLMEDI IMPLANT SYSTEM



INNO Sub. Surgical Full Kit (KCA009F)

> Fixture Driver for INNO Sub. Fixture placement, the rest of component is for Sub. / Int. / Ext.

INNO FULL Sub. (KCA009F)

Drill Extension

- Point Drill: KPD01S
- Machine: KDE002
- Mount Driver: L (KMMD06L), R (KRMD19L)
- 1.2 Hex Driver: L (KHD1221), XL (KHD1227)

Machine

- Machine Short: 2KMS01S
- Machine Long: 2KMS01L
- Ratchet Short: 2KMS01S
- Ratchet Long: 2KMS01L

Fixture Driver

- Sub. Fixture Driver: 2KMS01S

Final Drill

- Ø3.5 Fixture Final Drill: 2KTD3708
- Ø4.0 Fixture Final Drill: 2KTD4008
- Ø4.5 Fixture Final Drill: 2KTD4508
- Ø5.0 Fixture Final Drill: 2KTD5008
- Ø6.0 Fixture Final Drill: 2KTD6007

Counter sink

- Ø3.5 Countersink: 4KCS35
- Ø4.0 Countersink: 4KCS40
- Ø4.5 Countersink: 4KCS45
- Ø5.0 Countersink: 4KCS50
- Ø6.0 Countersink: 4KCS60

Parallel Pin

- Parallel Pin: KPP002

Common tools

- Torque Wrench: KTW001
- Depth Gauge: KDG001

Exclusive tools

- 1.2 Hex Driver L: KHD1221
- 1.2 Hex Driver XL: KHD1227
- Parallel Pin: KPP002
- Torque Wrench: KTW001
- Depth Gauge: KDG001



INNO Int. Surgical Full Kit (KCA009FI)

> Fixture Driver for INNO Int. Fixture placement, the rest of component is for Sub. / Int. / Ext.

INNO FULL Int. (KCA009FI)

Drill Extension

- Point Drill: KPD01S
- Machine: KDE002
- Mount Driver: L (KMMD06L), R (KRMD19L)
- 1.2 Hex Driver: L (KHD1221), XL (KHD1227)

Machine

- Machine Short: 2KMS01S
- Machine Long: 2KMS01L
- Ratchet Short: 2KMS01S
- Ratchet Long: 2KMS01L

Fixture Driver

- Int. Fixture Driver: 2KMS01S

Final Drill

- Ø3.5 Fixture Final Drill: 2KTD3708
- Ø4.0 Fixture Final Drill: 2KTD4008
- Ø4.5 Fixture Final Drill: 2KTD4508
- Ø5.0 Fixture Final Drill: 2KTD5008
- Ø6.0 Fixture Final Drill: 2KTD6007

Counter sink

- Ø3.5 Countersink: 4KCS35
- Ø4.0 Countersink: 4KCS40
- Ø4.5 Countersink: 4KCS45
- Ø5.0 Countersink: 4KCS50
- Ø6.0 Countersink: 4KCS60

Parallel Pin

- Parallel Pin: KPP002

Common tools

- Torque Wrench: KTW001
- Depth Gauge: KDG001

Exclusive tools

- 1.2 Hex Driver L: KHD1221
- 1.2 Hex Driver XL: KHD1227
- Parallel Pin: KPP002
- Torque Wrench: KTW001
- Depth Gauge: KDG001



INNO Ext. Surgical Full Kit (KCA009FE)

> Fixture Driver and Multi Countersink for INNO Ext. Fixture placement, the rest of component is for Sub. / Int. / Ext.

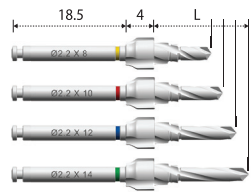
Point Drill	Ø2.2 X 8	Ø3.7 X 8	Ø4.0 X 8	Ø4.5 X 8	Ø5.0 X 8	Ø6.0 X 7	M. Fixture Driver. S
KPD01S	KPSD2208	2KTD3708	2KTD4008	2KTD4508	2KTD5008	2KTD6007	KMME01S
Drill Extension	Ø2.2 X 10	Ø3.7 X 10	Ø4.0 X 10	Ø4.5 X 10	Ø5.0 X 10	Ø6.0 X 8	M. Fixture Driver. S
KDE002	KPSD2210	2KTD3710	2KTD4010	2KTD4510	2KTD5010	2KTD6008	KMME02S
M. Mount Driver. L	Ø2.2 X 12	Ø3.7 X 12	Ø4.0 X 12	Ø4.5 X 12	Ø5.0 X 12	Ø6.0 X 10	R. Fixture Driver. L
KMMD06L	KPSD2212	2KTD3712	2KTD4012	2KTD4512	2KTD5012	2KTD6010	KHDE01L
R. Mount Driver. L	Ø2.2 X 14	Ø3.7 X 14	Ø4.0 X 14	Ø4.5 X 14	Ø5.0 X 14	Ø6.0 X 12	R. Fixture Driver. L
KRMD19L	KPSD2214	2KTD3714	2KTD4014	2KTD4514	2KTD5014	2KTD6012	KHDE02L
1.2 Hex Driver L	Parallel Pin	Ø3.5 Countersink	Ø4.0 Countersink	Ø4.5 Countersink	Ø5.0 Countersink	Ø6.0 Countersink	Multi Countersink
KHD1221	KPP002	4KCS35	4KCS40	4KCS45	4KCS50	4KCS60	4KCS01
1.2 Hex Driver XL	Parallel Pin	Torque Wrench		Depth Gauge		*	
KHD1227	KPP002	KTW001		KDG001		A common tool for Sub. / Int. / Ext. An exclusive tool by type	

01 Drill / Surgical Tool

Point Drill > Primarily used for marking the implant recipient site and to determine spacing.
> The point drill has a unique pointed tip, making this an excellent drill for starting the osteotomy through the hard cortical plate.

Length	15
	KPD01S

Ø2.2 Initial Drill > Initial stepped Drill - Ø2.2 / Ø2.8 / Ø3.3 mm stepped osteotomy at Point Drill site



Length	9	11	13	15
	KPSD2208	KPSD2210	KPSD2212	KPSD2214

Stopper with irrigation groove

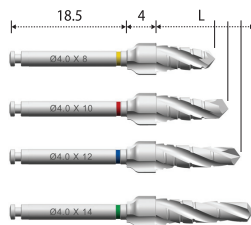
Ø4.9 Crestal cutter – flattening the sloped and sharp crestal ridge which make crestal bone surround around the whole fixture platform

Ø3.3/2.8 Pilot cutter – stepped hole guiding the pathway of Ø3.5 / Ø4.0 / Ø4.5 fixture final drill

Ø2.2 Path cutter – determining the orientation of fixture installation

Initial drill Guiding the pathway of final drill.
Final drill is inserted a half into initial drill's hole without reduction of drill.

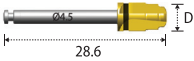
Final Drill > Ø3.5, 4.0, 4.5, 5.0, 6.0 diameter fixture's final drills
> 7, 8, 10, 12, 14 mm fixture's final drills in length



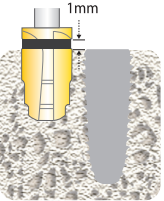
Fixture Dia. Length	Ø3.5	Ø4.0	Ø4.5	Ø5.0	Ø6.0
8					2KTD6007
9	2KTD3708	2KTD4008	2KTD4508	2KTD5008	2KTD6008
11	2KTD3710	2KTD4010	2KTD4510	2KTD5010	2KTD6010
13	2KTD3712	2KTD4012	2KTD4512	2KTD5012	2KTD6012
15	2KTD3714	2KTD4014	2KTD4514	2KTD5014	

Countersink

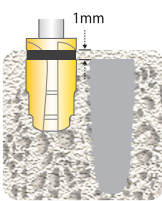
- > Bone quality 1: high compressive placement of fixtures induces the failure of osseointegration and bone loss.
- > Countersink decreases torque force. (Ø4.0 Fixture : 80 Ncm → 45 Ncm / Ø5.0 Fixture : 150 Ncm → 45 Ncm)
- > Preventing compressive necrosis of dense cortical bone.



Fixture Dia.	Ø3.5	Ø4.0	Ø4.5	Ø5.0	Ø6.0
Diameter	Ø3.7	Ø4.2	Ø4.6	Ø5.1	Ø6.0
	4KCS35	4KCS40	4KCS45	4KCS50	4KCS60



Low margin of depth marking line indicating Fixture platform level



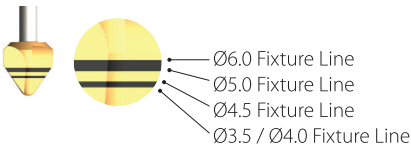
Upper margin of depth marking line indicating 1 mm over fixture platform level

Multi Countersink



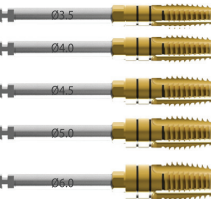
Diameter	Ø6.5
	4KCS01

> Only External



Tap Drill

- > Used in preparation of osteotomy in dense bone only.

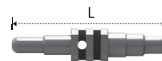


Fixture Dia.	Ø3.5	Ø4.0	Ø4.5	Ø5.0	Ø6.0
	* 3KMTD35A	* 3KMTD40A	* 3KMTD45A	* 3KMTD50A	* 3KMTD60A

*Extra product

Parallel Pin

- > Insert Parallel Pin after Ø2.2 or Ø3.5 drill to check the osteotomy path.
- > In order to prevent losing Parallel Pin in patient's mouth, be sure to tie floss through the hole in the Parallel Pin.

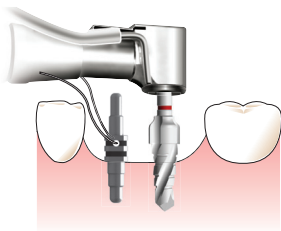


Length	21
	KPP002

After Ø2.2 Initial Drilling

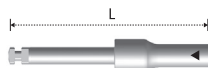


After Ø3.5 Final Drilling



Drill Extension

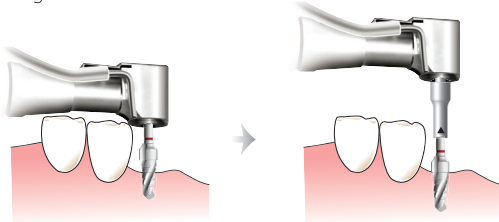
- > Used for lengthening the drill when using a hand-piece.
- > Do not go over recommended torque when using the Drill Extension.



Length	27.5
	KDE002

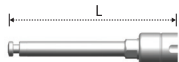


Triangle mark indicating the cutting surface of drill shaft



Mount Driver

- > Used to install Pre-Mount Type Fixtures.



Type	Machine
20.5(Short)	* KMMD06S
26.3(Long)	KMMD06L
32.3(X-Long)	* KMMD12X

*Extra product

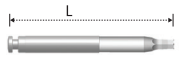


Type	Ratchet
12(Short)	* KRMD12S
19(Long)	KRMD19L

*Extra product

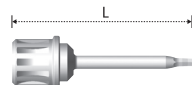
Hex Driver

- > Used to insert or remove cover screw, healing abutment and coping screw.
- > Machine drivers are used with contra angle, while ratchet drivers are used with torque wrench.



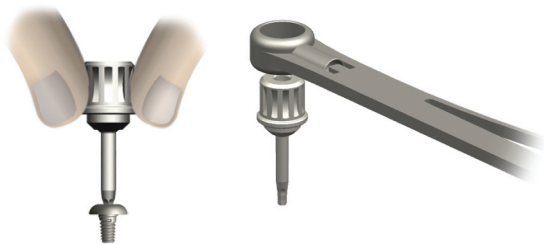
Type	Machine	
Length	Hex 0.9	Hex 1.2
22(Short)	* KMD09S	* KMD12S
28(Long)	* KMD09L	* KMD12L

*Extra product



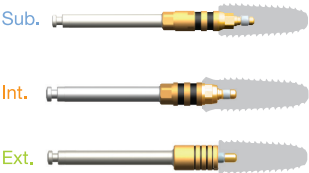
Type	Ratchet	
Length	Hex 0.9	Hex 1.2
15(Short)	* KHD0915	* KHD1215
21(Long)	* KHD0921	KHD1221
27(X-Long)	* KHD0927	KHD1227

*Extra product



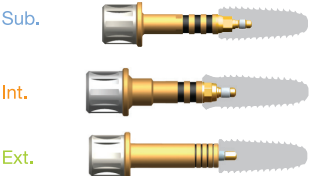
Fixture Driver

> Used to install No- Mount Type Fixtures.



Type	Machine			
Length	Sub.	Int.	Ext.(Hex 2.7)	Ext.(Hex 3.4)
28.1 / 26.3 / 26.4 (Short)	2KMS01S	KMMI01S	KMME01S	KMME02S
33.3 / 30.5 / 31.4 (Long)	2KMS01L	KMMI01L	*KMME01L	
40.3 / 35.5 / 36.4 (X-Long)	*2KMS01X	*KMMI01X	*KMME01X	

*Extra product



Type	Ratchet			
Length	Sub.	Int.	Ext.(Hex 2.7)	Ext.(Hex 3.4)
20.7 / 19.5 / 19.9 (Short)	*2KHS01S	KHDI01S	*KHDE01S	
25.7 / 24.5 / 24.9 (Long)	2KHS01L	KHDI01L	KHDE01L	KHDE02L
30.7 / 29.5 / 29.9 (X-Long)	2KHS01X	*KHDI01X	*KHDE01X	

*Extra product



Torque Wrench

- > Torque control in implant placement and abutment connection.
- > 10 / 25 / 30 / 35 Ncm Torque force able to be controlled by pulling the elastic bar.
- > Maximal 120 Ncm Torque force with pulling the rigid main bar.



Code KTW001



Depth Gauge

- > Measuring the drill depth with scaled rod.
- > Measuring the 5 mm space between adjacent fixtures with flat end of the other side.



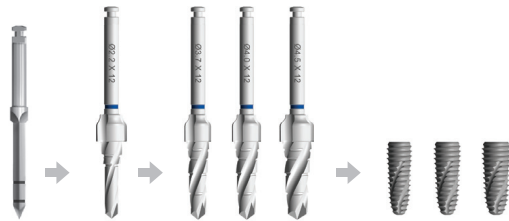
Code KDG001



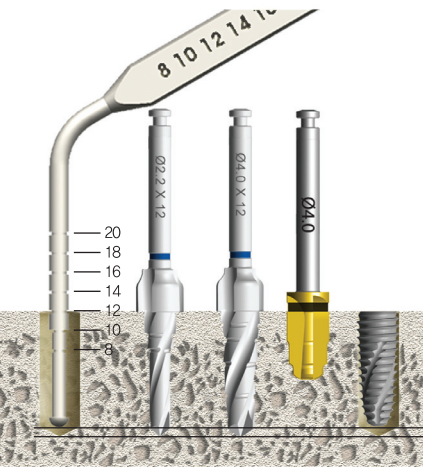
02 Drill Sequence

Ex.) Fixture 12mm

> Minimal drill frequency with Point Drill, Ø2.2 Initial Drill and Final Drill (Ø3.5, 4.0 and 4.5mm fixtures)

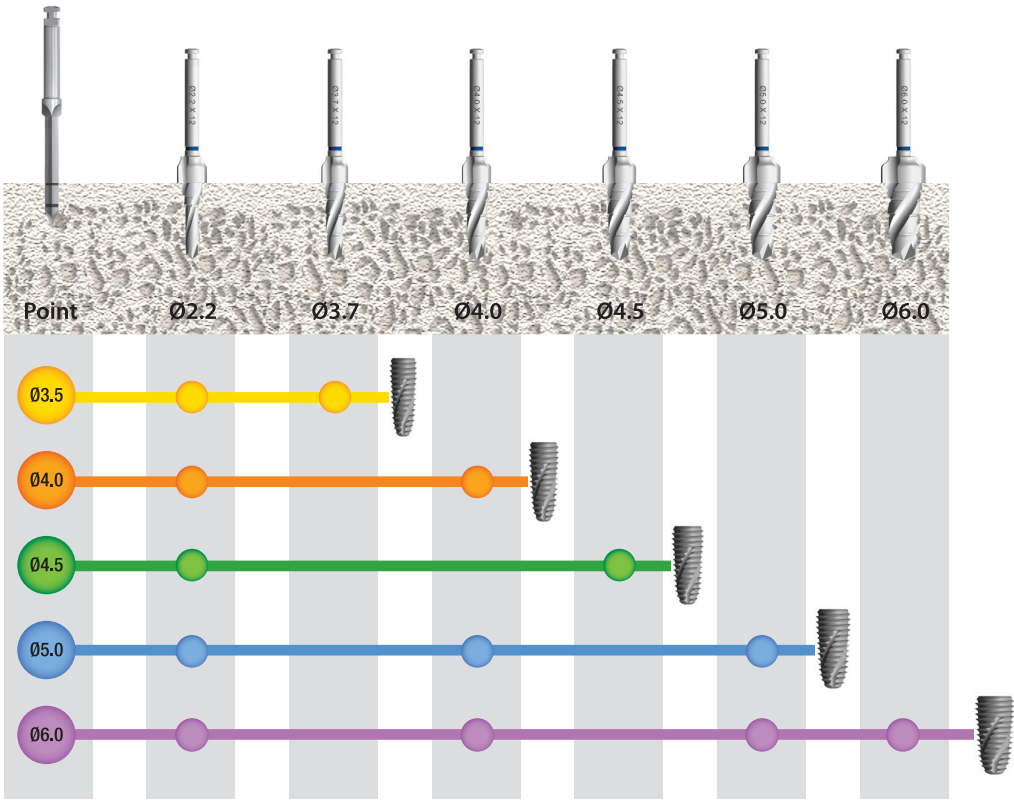


> Length Marking

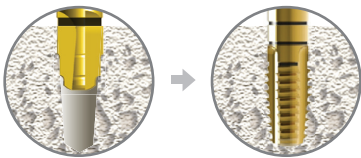


Actual Length of Drill : Fixture + 1mm

- > Ø5.0 fixture: a series of point drill, Ø2.2 Initial drill, Ø4.0 final drill and Ø5.0 final drill
- > Ø6.0 fixture: a series of point drill, Ø2.2 Initial drill, Ø4.0 final drill, Ø5.0 final drill and Ø6.0 final drill



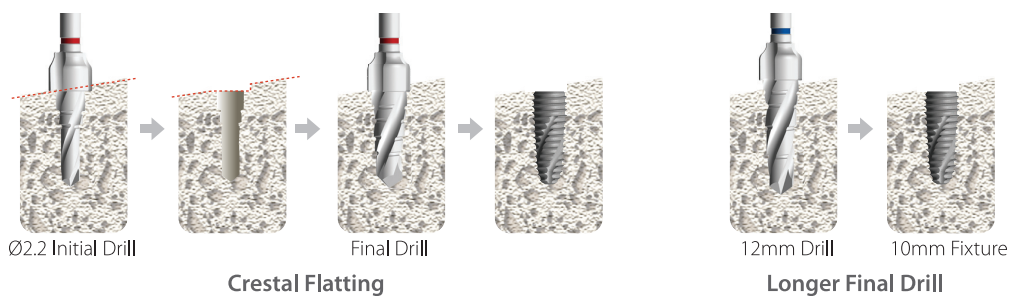
※ Countersink and Tap drill used in Type 1 hard bone quality



*Extra product

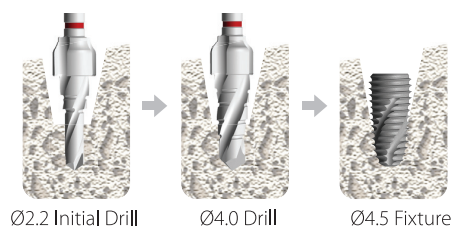
※ Sloped edentulous ridge adjacent of tooth

- > Crestal cutter of initial drill and final drill
- > Longer drills than fixture's length



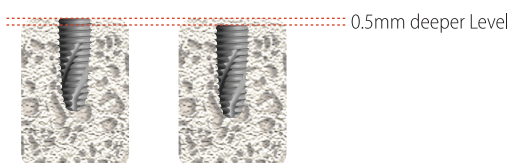
※ Wide extraction socket

- > Absence of the cortical bone & spongy bone
- > Narrower diameter than the fixture's diameter



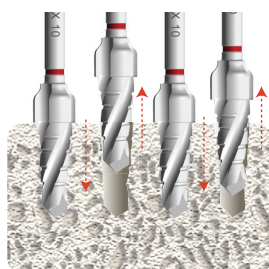
※ Torque force control

- > The 0.5mm deeper placement increases the initial torque force of fixture.



Fixture Placement Level						
Level	Crestal Level			0.5mm Deeper Level		
Density	D1	D2	D3	D1	D2	D3
Torque	34.1	29	15.5	44.4	38.4	19.1

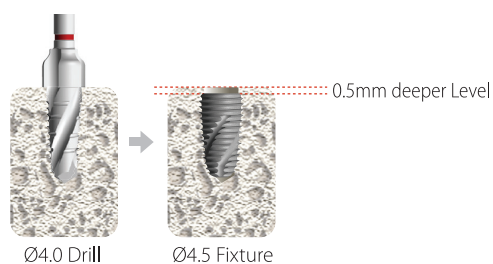
- > The pumping action of drill removes the bone chip in the hole.
- > In dense bone, the debris action decrease the high torque force.



Pumping action of final drill for debris			
Density	D1	D2	D3
Non-Debriment	34.1	29	15.5
Debriment	30	25	19.6

※ In weak bone quality 4 of maxillary tuberosity

- > No pumping action
- > 0.5mm deeper placement of fixture
- > Wider fixture than final drill



Level	Crestal level		0.5mm Deeper Level	
Debriment	with	without	with	without
Ø4.5 Fixture	4.4	10.2	-	12.9
Ø5.0 Fixture	11.6	19.9	14.1	24.5