

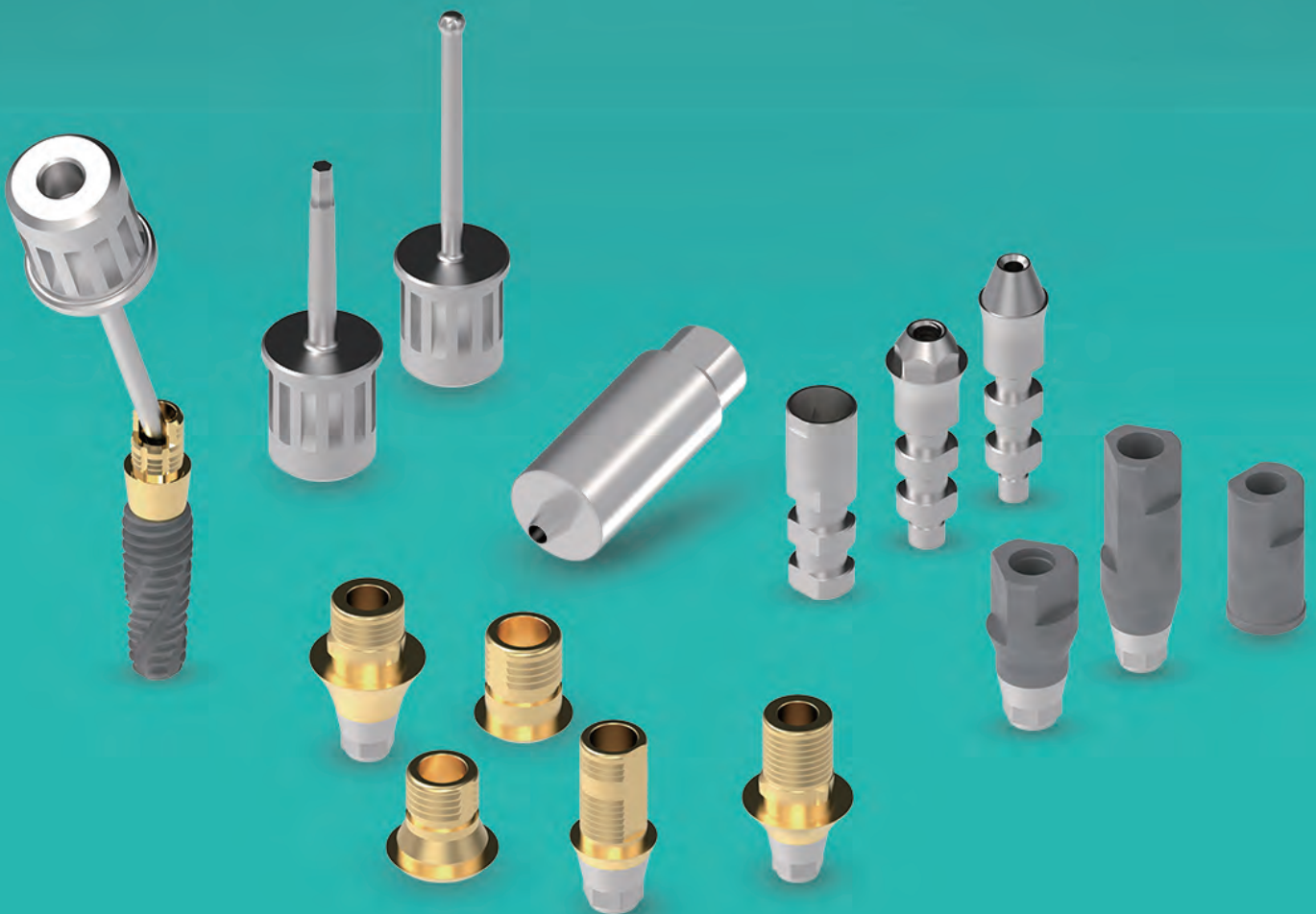
COWELL DIGITAL PRODUCTS

Drive Yourself to Cowellmedi's Digital Transformation

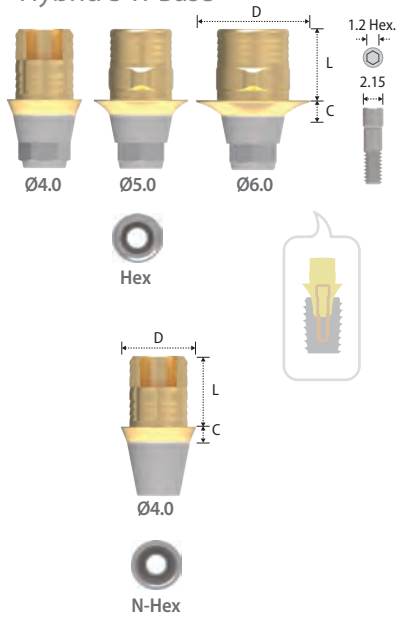
Digital Prosthesis

Hybrid Solution

- Sub. Hybrid Ti-Base System
- Sub. & Sub-N. Multi Hybrid Ti-Base System
- Sub. Lock Hybrid Ti-Base System
- Sub-N. Hybrid Ti-Base System
- Int. Hybrid Ti-Base System



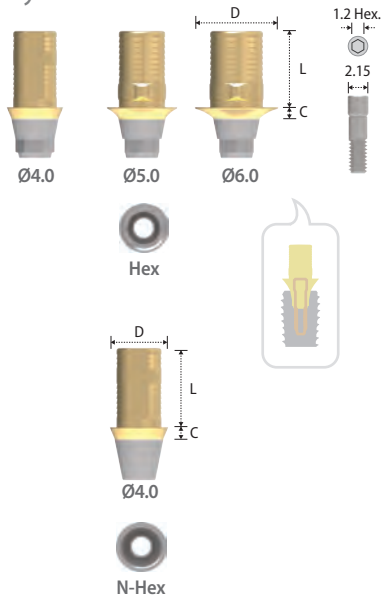
Hybrid S Ti-Base



Type	Hex			N-Hex	
Diameter	Ø4.0	Ø5.0	Ø6.0	Ø4.0	
Length	3.75	3.75	3.75	3.75	
Cuff	0.8	2SLH404	2SLH504	2SLH604	2SLN404
	2	2SLH424	2SLH524	2SLH624	2SLN424
	3	2SLH434	2SLH534	2SLH634	2SLN434

- > Packing unit: 1 Hybrid S Ti-Base + 1 Abutment Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > Gold color for more translucent restoration.
- > Lingual surface hole for more esthetic restoration (Ø4.0).
- > Right angled (Ø4.0) and humped design (Ø5.0, Ø6.0) for anti-rotation of the prosthesis.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Abutment Screw (2SSHR200).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.
- > Use the Scanbody for 3D Work.
- > Fixture level impression.

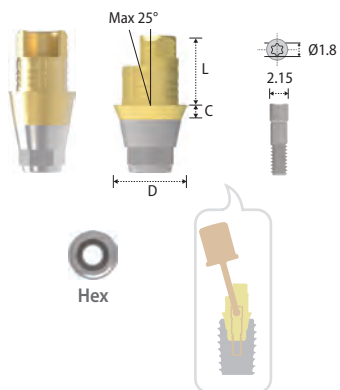
Hybrid L Ti-Base



Type	Hex			N-Hex	
Diameter	Ø4.0	Ø5.0	Ø6.0	Ø4.0	
Length	5.5	5.5	5.5	5.5	
Cuff	1	2SLH415	2SLH515	2SLH615	2SLN415
	2	2SLH425	2SLH525	2SLH625	2SLN425
	3	2SLH435	2SLH535	2SLH635	2SLN435

- > Packing unit: 1 Hybrid L Ti-Base + 1 Abutment Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > Gold color for more translucent restoration.
- > Cutting surface (Ø4.0) and humped design (Ø5.0, Ø6.0) for anti-rotation of the prosthesis.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Abutment Screw (2SSHR200).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.
- > Use the Scanbody for 3D Work.
- > Fixture level impression.

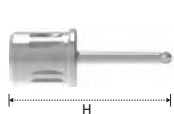
Hybrid A Ti-Base



Type	Hex	N-Hex
Diameter	Ø4.0	Ø4.0
Length	3.75	3.75
Cuff	0.8	0.8
	2SLH404A	2SLN404A
	2SLH424A	2SLN424A
	2SLH434A	2SLN434A

- > Packing unit: 1 Hybrid A Ti-Base + 1 Abutment Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > For Fabrication of Angulated Screw Channel up to 25°.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Stargrip Abutment Screw (2SLAH100, 2SLAH200 & 2SLAH300).
- > Tightened with the Torx A Ratchet Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.
- > Use the Scanbody for 3D Work.
- > Fixture level impression.

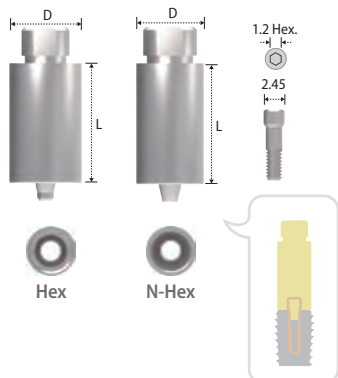
* Torx A Ratchet Driver



Height	Type	Ratchet
24(Short)		KRBUD15
29(Long)		KRBUD20

- > Stable to internal slip or fracture due to wide contact area of the Torx A Driver and the dedicated Stargrip Abutment Screw.
- > Tightening torque force: 30N.cm (50N.cm Max).

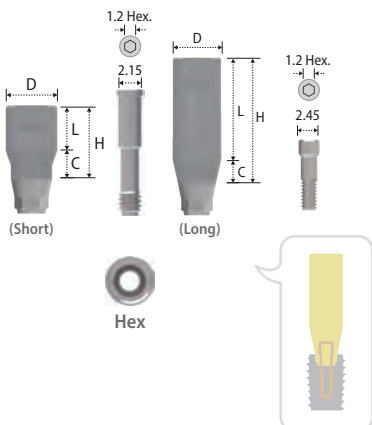
Hybrid Ti-Block



Type	Hex			N-Hex		
Diameter	10	12	14	10	12	14
Length	20	20	20	20	20	20
	CSHH10S	CSHH12S	CSHH14S	CSHN10S	CSHN12S	CSHN14S

- > Packing unit: 1 Hybrid Ti-Block + 2 Abutment Screws.
- > For Screw-Cement or Cement Retained Abutment.
- > Block abutment for CAD/CAM customized abutment.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Abutment Screw (2SSHR100).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.
- > Use the Scanbody for 3D Work.
- > Fixture level impression.

Scanbody



Type	Hex(Short)	Hex(Long)
Diameter	Ø4.3	Ø4.3
Height	6	11
Length	4	9
Cuff	4	9
	2SSB4325	2SSB4329

- > Packing unit: 1 Scanbody + 1 Abutment Screw.
- > For both, model-scanner and intra-oral scanner.
- > Made of 100% titanium alloy with a special coating applied.
- > No need to spray.
- > Connected with the Abutment Screw.
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

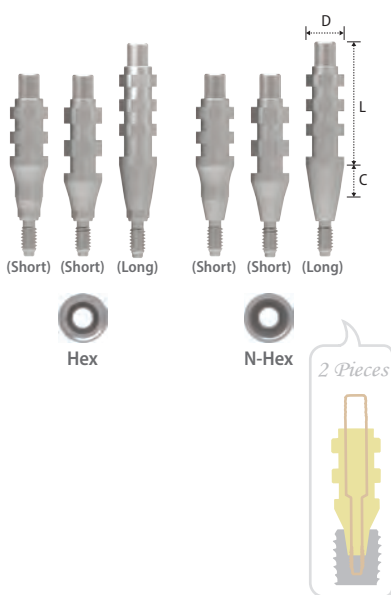
Bite Impression Coping



Type	Hex(Short)	Hex(Long)	Hex(X-Long)	
Diameter	Ø4.5	Ø4.5	Ø4.5	
Length / Cuff	2	4	6	
	4.0	2SBIC45S	2SBIC45L	2SBIC45X

- > Packing unit: 1 Bite Impression Coping (Inbuilt Guide Pin).
- > Designed to simultaneously take bite and impression.
- > For closed tray impression (Bite Impression).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.
- > Fixture level impression.

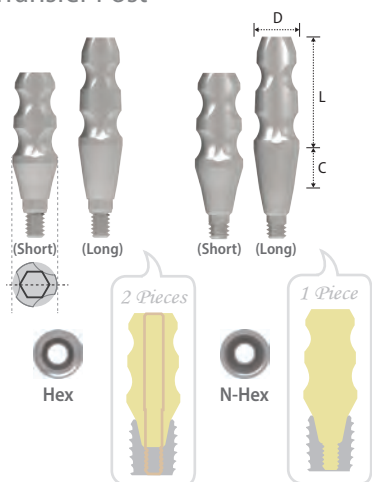
Pick-up Impression Coping



Type	Hex			N-Hex		
	Ø4.5	Ø5.5	Ø6.5	Ø4.5	Ø5.5	Ø6.5
12 (Short) / 4	2SIH454S	2SIH554S	2SIH654S	2SIN454S	2SIN554S	2SIN654S
14 (Short) / 2	2SIH45S	2SIH55S	2SIH65S	2SIN45S	2SIN55S	2SIN65S
16 (Long) / 4	2SIH45L	2SIH55L	2SIH65L	2SIN45L	2SIN55L	2SIN65L

- > Packing unit: 1 Pick-up Impression Coping + 1 Guide Pin.
- > For open tray impression.
- > Connected with the Guide Pin (2SISR001SS / 2SISR001SL).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.
- > Fixture level impression.

Transfer Post



Type	Hex			N-Hex		
<i>Diameter</i> <i>Length / Cuff</i>	Ø4.5	Ø5.5	Ø6.5	Ø4.5	Ø5.5	Ø6.5
9 (Short) / 2	2STH45S	2STH55S	2STH65S	2STN45S	2STN55S	2STN65S
11 (Long) / 4	2STH45L	2STH55L	2STH65L	2STN45L	2STN55L	2STN65L

- > Packing unit: Hex - 1 Transfer Post + 1 Guide Pin / N-Hex - 1 Transfer Post (Solid Type).
- > For closed tray impression.
- > Connected with the Guide Pin (2STH001SS / 2STH001SL).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.
- > Fixture level impression.

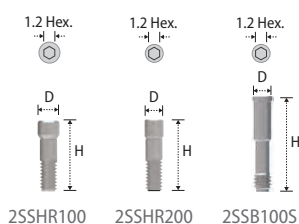
Digital Analog



<i>Diameter</i> <i>Height</i>	Ø3.9
12	2SDR001

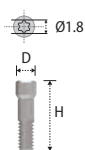
- > Packing unit: 1 Digital Analog.
- > Analog of fixture for the working cast.
- > Used for both 3D printed model (RP) and stone model.

Abutment Screw



<i>Diameter</i> <i>Height</i>	Ø2.45	Ø2.15	Ø2.15
8.5	2SSHR100	2SSHR200	
10.7			2SSB100S

- > Packing unit: 1 Abutment Screw.
- > 2SSHR100: Hybrid Block and Scanbody (2SSB4329).
- > 2SSHR200: Hybrid S Ti-Base and Hybrid L Ti-Base.
- > 2SSB100S: Scanbody (2SSB4325).
- > Tightened with the Hex Driver and Torque Wrench.

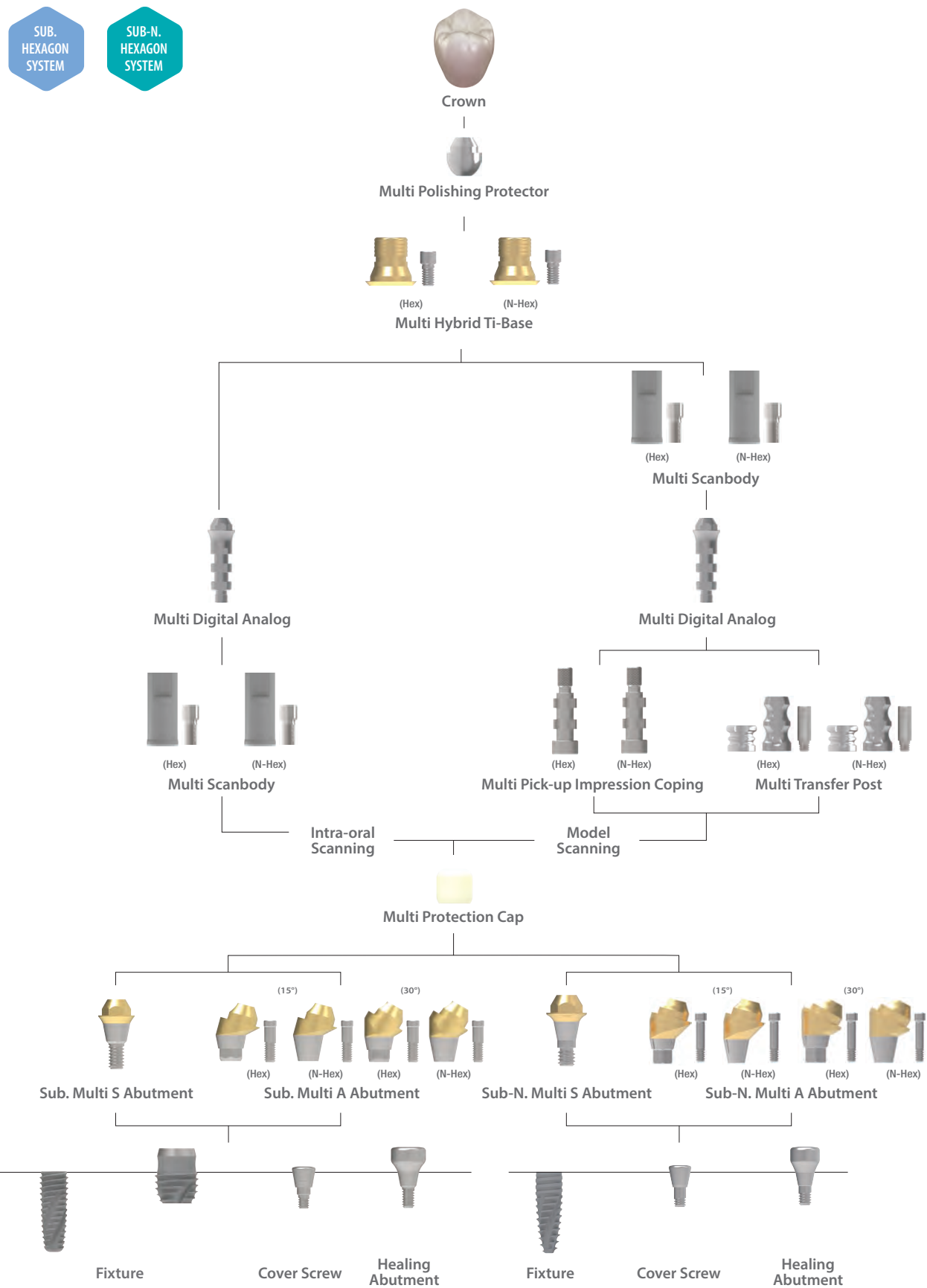


<i>Height</i> <i>Diameter</i>	2	3.2	4.2
Ø2.15	2SLAH100	2SLAH200	2SLAH300

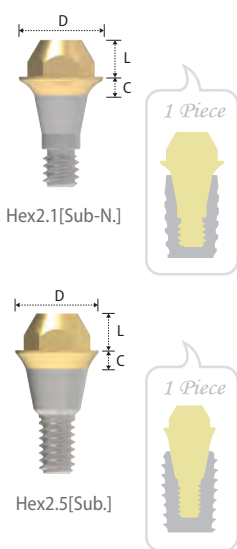
- > Packing unit: 1 Abutment Screw.
- > Exclusive for the Hybrid A Ti-Base (2SLAH100 for 2SLH404A, 2SLAH200 for 2SLH424A & 2SLAH300 for 2SLH434A).
- > Tightened with the Torx A Driver and Torque Wrench.

Component selection guide for the Sub. & Sub-N. Multi Hybrid Ti-Base System

- Intra-oral scanning
- Model-scanning



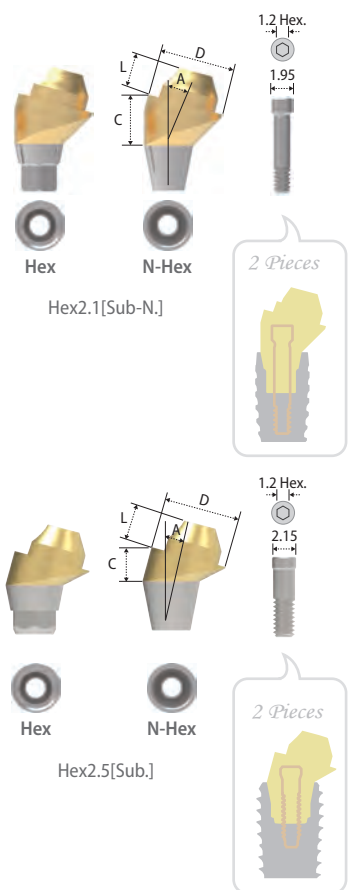
Multi S Abutment



Fixture Connection	Hex2.1[Sub-N.]	Hex2.5[Sub.]	
Platform[Fixture Dia.]	Ø4.5 [Ø3.1 / Ø3.3]	Ø4.5 [Ø3.5 / Ø4.0 / Ø4.5 / Ø5.0 / Ø6.0]	
Diameter	Ø4.5	Ø4.5	Ø5.5
Cuff / Length	2	2	2
1	SMS451N	2SMS451	2SMS551
2	SMS452N	2SMS452	2SMS552
3	SMS453N	2SMS453	2SMS553
4	SMS454N	2SMS454	2SMS554
5		2SMS455	2SMS555

- > Packing unit: 1 Multi S Abutment.
- > For Screw-Retained Prosthesis.
- > Titanium base for the Multi Hybrid Ti-Base.
- > Gold color for more translucent restoration.
- > Library available for EXOCAD®, 3Shape® & others.
- > Integrated with the screw and abutment (solid screw).
- > Use the S Holder for a more stable position.
- > Tightened with the S Machine or S Ratchet Driver and Torque Wrench.
- > Tightening torque force: 30N.cm (Sub.) / 20~25N.cm (Sub-N.).
- > Use the Multi Scanbody for digital flow.
- > Abutment level impression.

Multi A Abutment

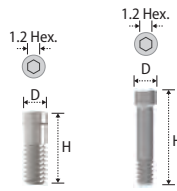


Type	Hex					
Fixture Connection	Hex2.1[Sub-N.]		Hex2.5[Sub.]			
Platform[Fixture Dia.]	Ø4.5 [Ø3.1 / Ø3.3]		Ø4.5 [Ø3.5 / Ø4.0 / Ø4.5 / Ø5.0 / Ø6.0]		Ø5.5 [Ø3.5 / Ø4.0 / Ø4.5 / Ø5.0 / Ø6.0]	
Diameter(Angle)	Ø4.5(15°)	Ø4.5(30°)	Ø4.5(15°)	Ø4.5(30°)	Ø5.5(15°)	Ø5.5(30°)
Cuff / Length	2	2	2	2	2	2
2	★ SMAH45152N		● 2SMAH45152			
3	● SMAH45153N	★ SMAH45303N	★ 2SMAH45153	● 2SMAH45303	★ 2SMAH55153	★ 2SMAH55303
4	● SMAH45154N	● SMAH45304N	★ 2SMAH45154	★ 2SMAH45304	★ 2SMAH55154	★ 2SMAH55304
5					★ 2SMAH55155	★ 2SMAH55305

Type	N-Hex					
Fixture Connection	Hex2.1[Sub-N.]		Hex2.5[Sub.]			
Platform[Fixture Dia.]	Ø4.5 [Ø3.1 / Ø3.3]		Ø4.5 [Ø3.5 / Ø4.0 / Ø4.5 / Ø5.0 / Ø6.0]		Ø5.5 [Ø3.5 / Ø4.0 / Ø4.5 / Ø5.0 / Ø6.0]	
Diameter(Angle)	Ø4.5(15°)	Ø4.5(30°)	Ø4.5(15°)	Ø4.5(30°)	Ø5.5(15°)	Ø5.5(30°)
Cuff / Length	2	2	2	2	2	2
2	★ SMAN45152N		● 2SMAN45152			
3	● SMAN45153N	★ SMAN45303N	★ 2SMAN45153	● 2SMAN45303	★ 2SMAN55153	★ 2SMAN55303
4	● SMAN45154N	● SMAN45304N	★ 2SMAN45154	★ 2SMAN45304	★ 2SMAN55154	★ 2SMAN55304
5					★ 2SMAN55155	★ 2SMAN55305

- > Packing unit: 1 Multi A Abutment + 1 Abutment Screw.
- > For Screw-Retained Prosthesis.
- > Titanium base for the Multi Hybrid Ti-Base.
- > Gold color for more translucent restoration.
- > Library available for EXOCAD®, 3Shape® & others.
- > Use the A Holder for a more stable position.
- > Connected with the Abutment Screw (SSHR200N: ★ SSHR300N: ● / 2SSHR300: ★ 2SSHR400: ●).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm (Sub.) / 20~25N.cm (Sub-N.).
- > Use the Multi Scanbody for digital flow.
- > Abutment level impression.

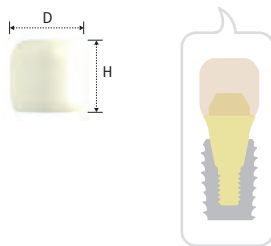
Abutment Screw



Height / Diameter	8.7	9.3	7.5	6.5
1.95	★ SSHR200N	● SSHR300N		
2.15			★ 2SSHR300	● 2SSHR400

- > Packing unit: 1 Abutment Screw.
- > To connect the Multi A Abutment.
- > Tightened with the Hex Driver and Torque Wrench.

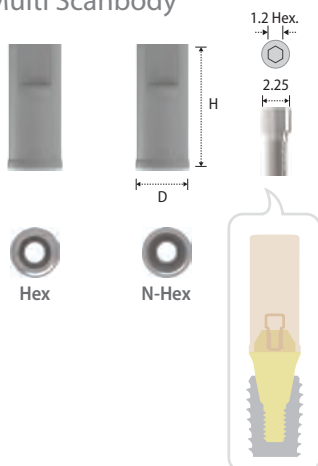
Multi Protection Cap



Multi S & A Abutment Diameter	Ø4.5	Ø5.5
Diameter	Ø5.2	Ø6.2
Height	5	5
	2SMPC45	2SMPC55

- > Packing unit: 1 Multi Protection Cap.
- > Protection from cheek and tongue for gingival healing period.
- > Prevention of gingival retraction for prosthodontic margin for the abutment.
- > Alternative usage for sub-structure of the temporary prosthesis.
- > Tightened with the Hex Driver.
- > Tightening torque force: 5~10N.cm.

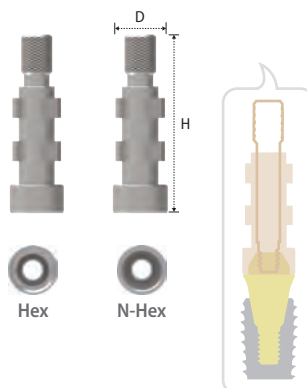
Multi Scanbody



Type	Hex	N-Hex
Multi S & A Abutment Diameter	Ø4.5 & Ø5.5	Ø4.5 & Ø5.5
Diameter	Ø4.5	Ø4.5
Height	9	9
	2SMB001H	2SMB001N

- > Packing unit: 1 Multi Scanbody + 1 Multi Cylinder Screw.
- > For both, model-scanner and intra-oral scanner.
- > For the Multi Hybrid Ti-Base.
- > Made of 100% titanium alloy with a special coating applied.
- > No need to spray.
- > Connected with the Multi Cylinder Screw (2SMCS100).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

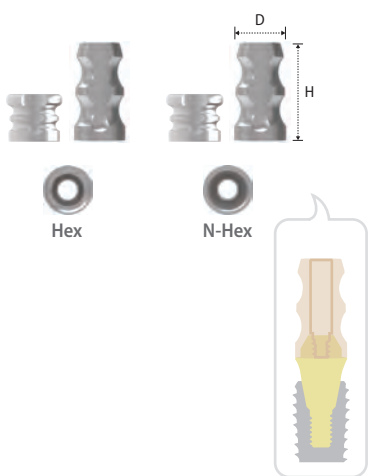
Multi Pick-up Impression Coping



Type	Hex		N-Hex	
Multi S & A Abutment Diameter	Ø4.5	Ø5.5	Ø4.5	Ø5.5
Diameter	Ø4.65	Ø5.65	Ø4.65	Ø5.65
Height	16	16	16	16
	2SMIH45	2SMIH55	2SMIN45	2SMIN55

- > Packing unit: 1 Multi Pick-up Impression Coping + 1 Guide Pin.
- > For open tray impression.
- > Connected with the Guide Pin (2SMGP012).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

Multi Transfer Post



Type	Hex		N-Hex	
Multi S & A Abutment Diameter	Ø4.5	Ø5.5	Ø4.5	Ø5.5
Diameter / Height	Ø4.5	Ø5.5	Ø4.5	Ø5.5
5	2SMTH455	2SMTH555	2SMTN455	2SMTN555
8.5	2SMTH45	2SMTH55	2SMTN45	2SMTN55

- > Packing unit: 1 Multi Transfer Post + 1 Guide Pin.
- > For closed tray impression.
- > Connected with the Guide Pin (2SMTHS100).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

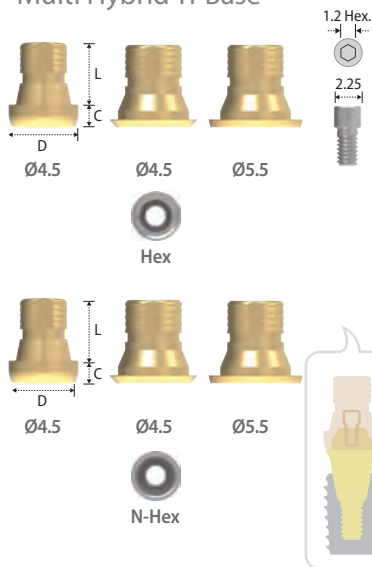
Multi Digital Analog



Multi S & A Abutment Diameter	Ø4.5	Ø5.5
Diameter / Length	Ø4.5	Ø5.5
2	2SMLA45	2SMLA55

- > Packing unit: 1 Multi Digital Analog.
- > Replacement of the Multi S or A Abutment shape in working cast.
- > Used for both 3D printed model (RP) and stone model.
- > Select according to the dimension of the Multi S or A Abutment.

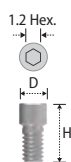
Multi Hybrid Ti-Base



Type	Hex			N-Hex		
Multi S & A Abutment Diameter	Ø4.5	Ø4.5	Ø5.5	Ø4.5	Ø4.5	Ø5.5
Diameter	Ø4.5	Ø4.5	Ø5.5	Ø4.5	Ø4.5	Ø5.5
Cuff / Length	4.5	4.5	4.5	4.5	4.5	4.5
0.5	2SMHT45H	2SMHT55H		2SMHT45N	2SMHT55N	
1.5	2SMHT40H			2SMHT40N		

- > Packing unit: 1 Multi Hybrid Ti-Base + 1 Multi Cylinder Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > Gold color for more translucent restoration.
- > Cutting surface for anti-rotation of the prosthesis.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Multi Cylinder Screw (2SMCS100).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 20N.cm.
- > Use the Scanbody for 3D Work.
- > Abutment level impression.

Multi Cylinder Screw

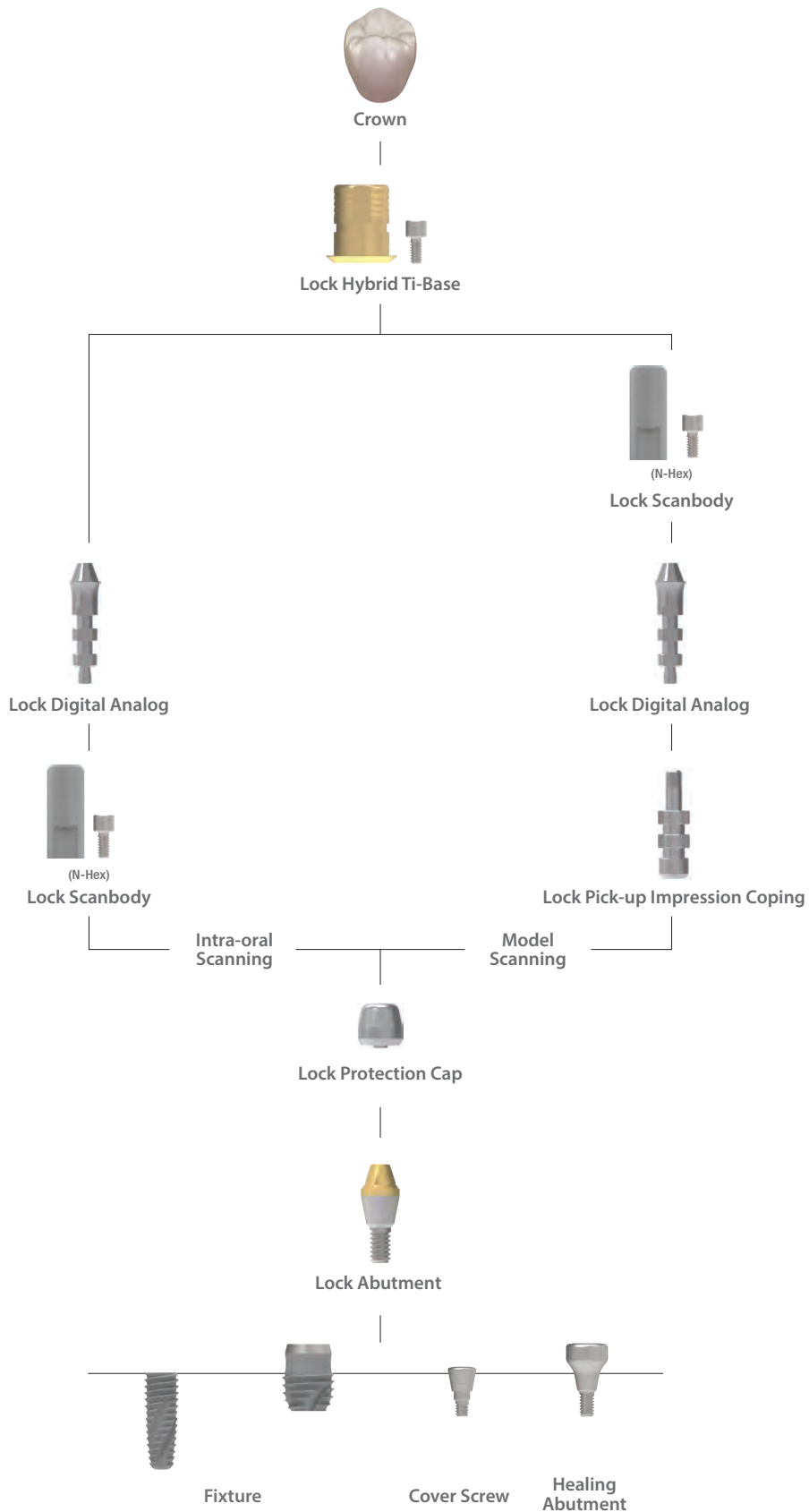


Diameter / Height	Ø2.25
5	2SMCS100

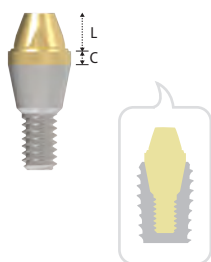
- > Packing unit: 1 Multi Cylinder Screw.
- > Connected with the Multi Scanbody and Multi Hybrid Ti-Base.
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 20N.cm.

Component selection guide for the Sub. Lock Hybrid Ti-Base System

- Intra-oral scanning
- Model-scanning



Lock Abutment



	2.15
0.5	2SLA400
1	2SLA410
2	2SLA420
3	2SLA430
4	2SLA440

- > Packing unit: 1 Lock Abutment.
- > For Screw-Retained Prosthesis.
- > Titanium base for the Lock Hybrid Ti-Base.
- > Gold color for more translucent restoration.
- > Integrated with screw and abutment.
- > Tightened with the Lock Ratchet Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.
- > Abutment level impression.

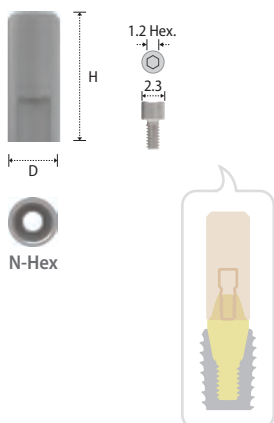
Lock Protection Cap



Lock Abutment Diameter	Ø3.5
Diameter / Height	Ø4.3
4	2SLP45

- > Packing unit: 1 Lock Protection Cap.
- > Protection from cheek and tongue for gingival healing period.
- > Prevention of gingival retraction for prosthodontic margin for the abutment.
- > Tightened with the Hex Driver.
- > Tightening torque force: 5~10N.cm.

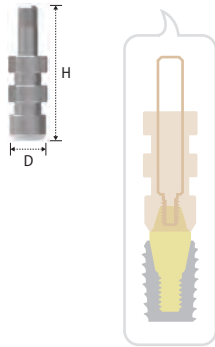
Lock Scanbody



Lock Abutment Diameter	Ø3.5
Diameter / Height	Ø4.3
9	2SLB001H

- > Packing unit: 1 Lock Scanbody + 1 Lock Cylinder Screw.
- > For both, model scanner and intra oral scanner.
- > For the Lock Hybrid Ti-Base.
- > Made of 100% titanium alloy with a special coating applied.
- > No need to spray.
- > Connected with the Lock Cylinder Screw (2SLCS200).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

Lock Pick-up Impression Coping



Lock Abutment Diameter	Ø3.5
Diameter	Ø4.3
Height	16
	2SLIH45

- > Packing unit: 1 Lock Pick-up Impression Coping + 1 Guide Pin.
- > Connected with the Guide Pin (2SLIH45S).
- > For open tray impression.

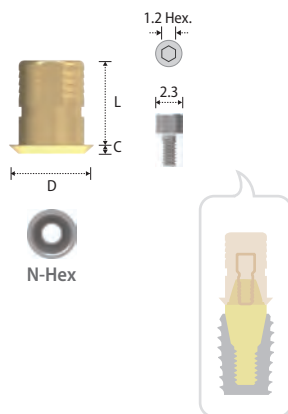
Lock Digital Analog



Lock Abutment Diameter	Ø3.5
Diameter	Ø3.5
Length	2.2
	2SLLA35

- > Packing unit: 1 Lock Digital Analog.
- > Used for both 3D printed model (RP) and stone model.

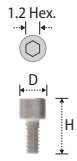
Lock Hybrid Ti-Base



Lock Abutment Diameter	Ø3.5
Diameter	Ø4.5
Length	5
Cuff	0.5
	2SLHT40N

- > Packing unit: 1 Lock Hybrid Ti-Base + 1 Lock Cylinder Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > Gold color for more translucent restoration.
- > Cutting surface for anti-rotation of the prosthesis.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Lock Cylinder Screw (2SLCS200).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.
- > Use the Scanbody for 3D Work.
- > Abutment level impression.

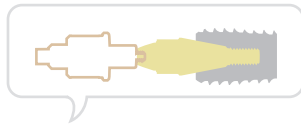
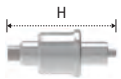
Lock Cylinder Screw



Diameter	Ø2.3
Height	4.8
2SLCS200	

- > Packing unit: 1 Lock Cylinder Screw.
- > Connected with the Lock Scanbody and Lock Hybrid Ti-Base.
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.

Lock Ratchet Driver

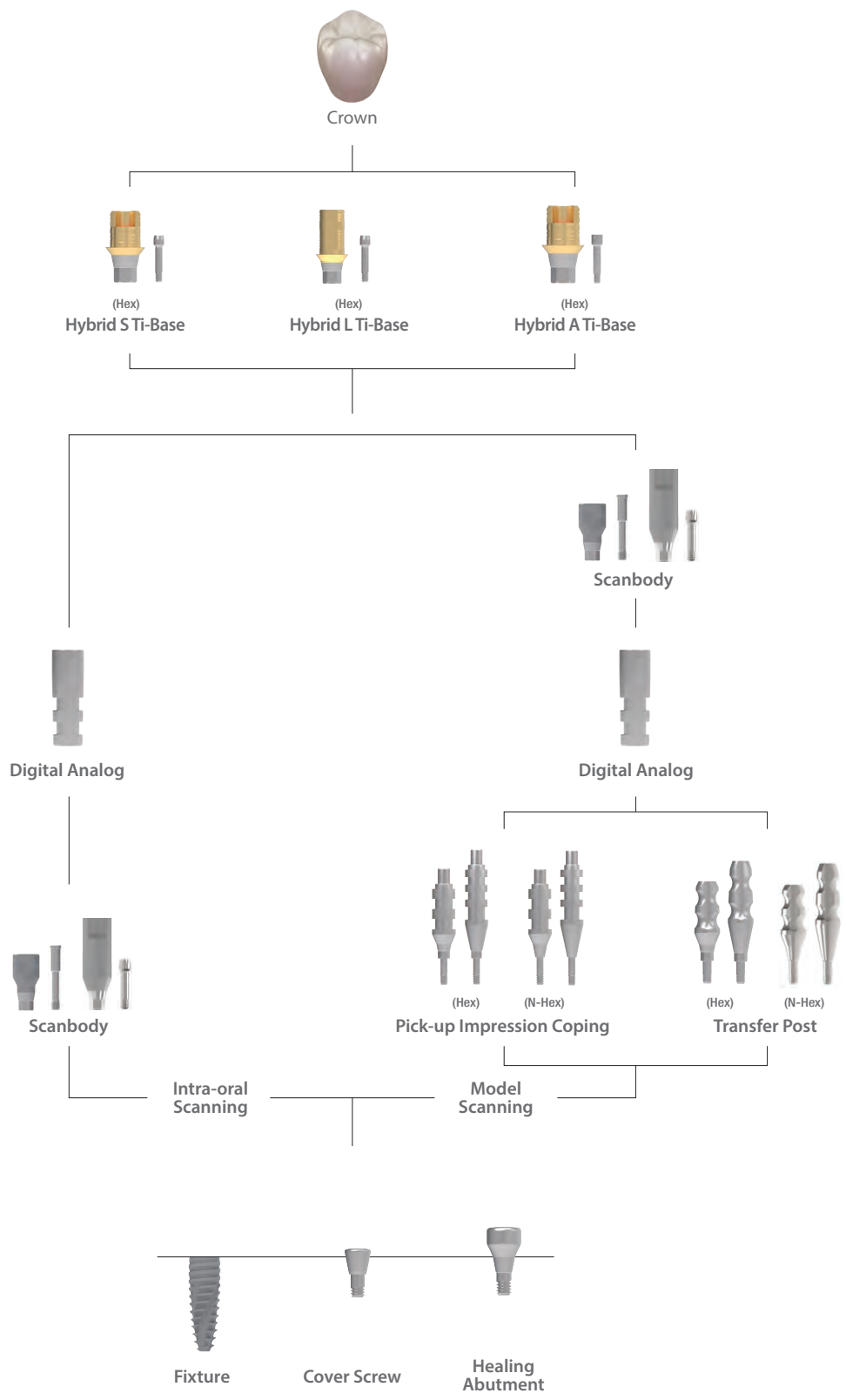


Height	Type	Ratchet
14.2		KRLRD18
28.5		KRLRD28

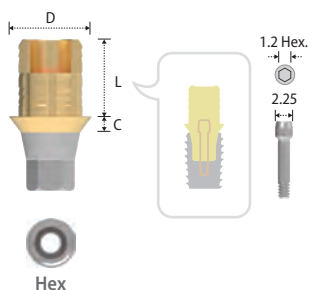
- > Packing unit: 1 Lock Ratchet Driver.
- > To install and remove the Lock Abutment with the Torque Wrench.

Component selection guide for the Sub-N. Hybrid Ti-Base System

- Intra-oral scanning
- Model-scanning



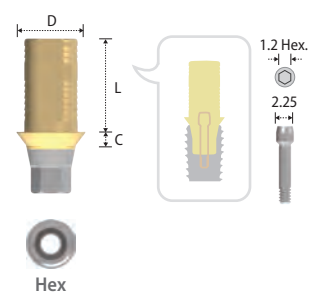
Hybrid S Ti-Base



Type	Hex
Diameter	Ø4.0
Length Cuff	3.75
0.8	SLH404N
2	SLH424N
3	SLH434N

- > Packing unit: 1 Hybrid S Ti-Base + 1 Abutment Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > Gold color for more translucent restoration.
- > Lingual surface hole for more esthetic restoration.
- > Right angled for anti-rotation of the prosthesis.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Abutment Screw (SSHR100N).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 20~25N.cm.
- > Use the Scanbody for 3D Work.
- > Fixture level impression.

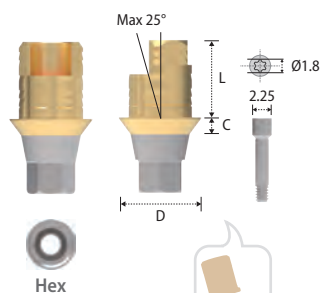
Hybrid L Ti-Base



Type	Hex
Diameter	Ø4.0
Length Cuff	5.5
1	SLH415N
2	SLH425N
3	SLH435N

- > Packing unit: 1 Hybrid L Ti-Base + 1 Abutment Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > Gold body for 3D Work.
- > Cutting surface for anti-rotation of the prosthesis.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Abutment Screw (SSHR100N).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 20~25N.cm.
- > Use the Scanbody for 3D Work.
- > Fixture level impression.

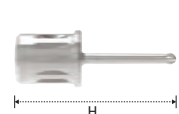
Hybrid A Ti-Base



Type	Hex	N-Hex
Diameter	Ø4.0	Ø4.0
Length Cuff	3.75	3.75
0.8	SLH404AN	SLN404AN
2	SLH424AN	SLN424AN
3	SLH434AN	SLN434AN

- > Packing unit: 1 Hybrid A Ti-Base + 1 Abutment Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > For Fabrication of Angulated Screw Channel up to 25°.
- > Right angled for anti-rotation of the prosthesis.
- > Library available for EXOCAD®, 3Shape® & Others.
- > Connected with the Stargrip Abutment Screw (SLAH100N, SLAH200N & SLAH300N).
- > Tightened with the Torx A Ratchet Driver and Torque Wrench.
- > Tightening torque force: 20~25N.cm.
- > Use the Scanbody for 3D Work.
- > Fixture level impression.

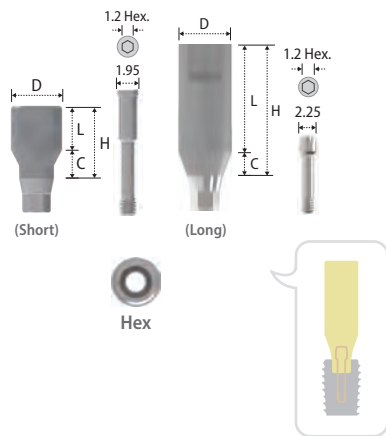
*Torx A Ratchet Driver



Height	Type	Ratchet
24(Short)		KRBUD15
29(Long)		KRBUD20

- > Stable to internal slip or fracture due to wide contact area of the Torx A Ratchet Driver and the dedicated Stargrip Abutment Screw.
- > Tightening torque force: 30N.cm (50N.cm Max).

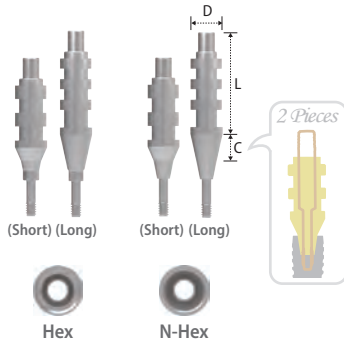
Scanbody



Type	Hex(Short)	Hex(Long)
Diameter	Ø4.3	Ø4.3
Height	6	11
Length / Cuff	4	9
2	SSB4325N	SSB4329N

- > Packing unit: 1 Scanbody + 1 Abutment Screw.
- > For both, model-scanner and intra-oral scanner.
- > Made of 100% titanium alloy with a special coating applied.
- > No need to spray.
- > Connected with the Abutment Screw.
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

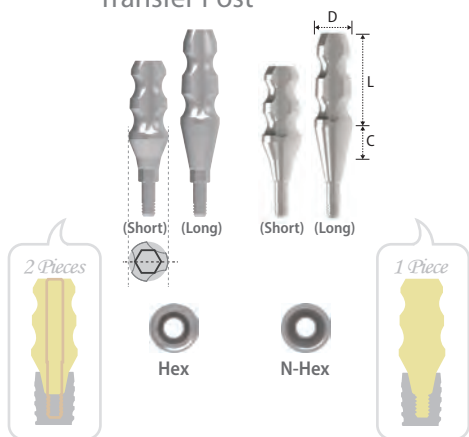
Pick-up Impression Coping



Type	Hex	N-Hex
Diameter	Ø4.5	Ø4.5
Length / Cuff		
14 (Short) / 2	SIH45SN	SIN45SN
16 (Long) / 4	SIH45LN	SIN45LN

- > Packing unit: 1 Pick-up Impression Coping + 1 Guide Pin.
- > For open tray impression.
- > Connected with the Guide Pin (SIS001SN / SIS001LN).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

Transfer Post



Type	Hex	N-Hex
Diameter	Ø4.5	Ø4.5
Length / Cuff		
9 (Short) / 2	STH45SN	STN45SN
11 (Long) / 4	STH45LN	STN45LN

- > Packing unit: Hex - 1 Transfer Post + 1 Guide Pin / N-Hex - 1 Transfer Post (Solid Type).
- > For closed tray impression.
- > Connected with the Guide Pin (STH001SN / STH001LN).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

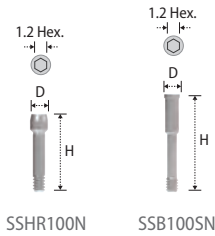
Digital Analog



<i>Diameter</i>	Ø3.9	
<i>Height</i>	12	SDR001N

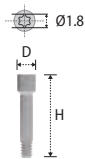
- > Packing unit: 1 Digital Analog.
- > Analog of fixture for the working cast.
- > Used for both 3D printed model (RP) and stone model.

Abutment Screw



<i>Diameter</i>	Ø2.25	Ø1.95
<i>Height</i>	10.2	SSHR100N
	12.3	SSB100SN

- > Packing unit: 1 Abutment Screw.
- > SSHR100N: Hybrid S Ti-Base, Hybrid L Ti-Base, and Scanbody (SSB4329N).
- > SSB100SN: Scanbody (SSB4325N).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 20~25N.cm.

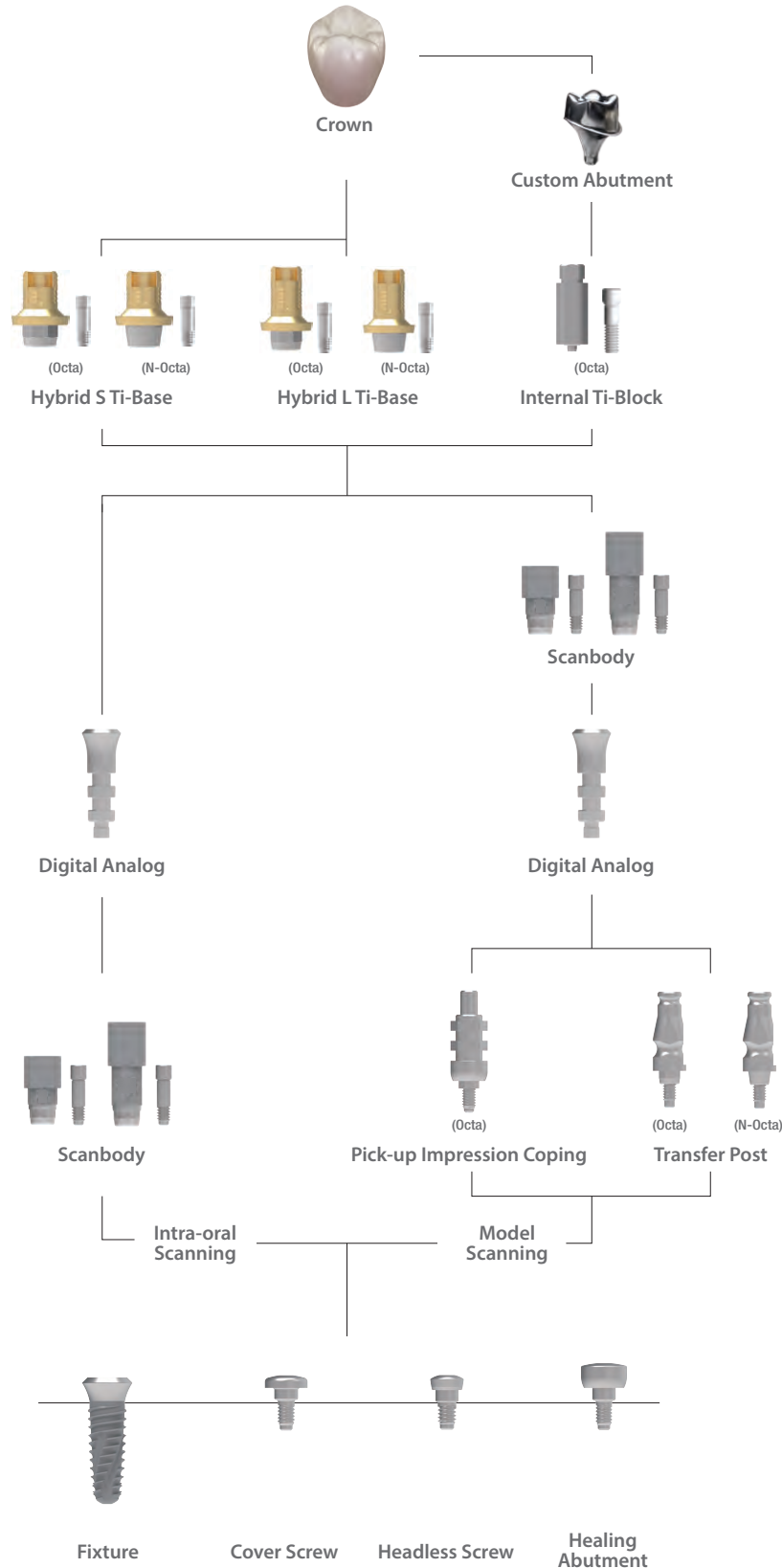


<i>Diameter</i>	10.2	11.4	12.4
<i>Height</i>	Ø2.25	SLAH100N	SLAH200N
			SLAH300N

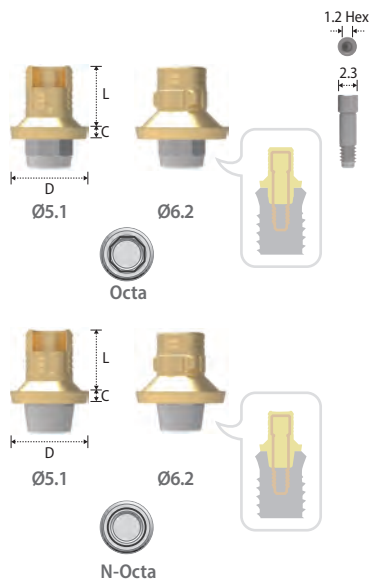
- > Packing unit: 1 Abutment Screw.
- > Exclusive for the Hybrid A Ti-Base (SLAH100N for SLH404AN, SLAH200N for SLH424AN & SLAH300N for SLH434AN).
- > Tightened with the Torx A Ratchet Driver and Torque Wrench.

Component selection guide for the Int. Hybrid Ti-Base System

- Intra-oral scanning
- Model-scanning



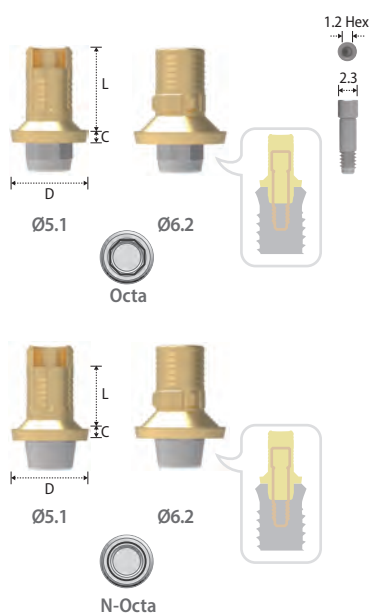
Hybrid S Ti-Base



Type	Octa		N-Octa	
Platform [Fixture Dia.]	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]
Diameter	Ø5.1	Ø6.2	Ø5.1	Ø6.2
Length	4			
Cuff	4			
0.8	ILO4814	ILO5914	ILN4814	ILN5914
2	ILO4824	ILO5924	ILN4824	ILN5924
3	ILO4834	ILO5934	ILN4834	ILN5934

- > Packing unit: 1 Hybrid S Ti-Base + 1 Abutment Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > Gold color for more translucent restoration.
- > Library available for EXOCAD®, 3Shape® & others.
- > Right angled (Ø5.1) and humped design (Ø6.2) for anti-rotation of prosthesis.
- > Connected with the Abutment Screw (ILHS100).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.
- > Use the Scanbody for digital workflow.
- > Fixture level impression.

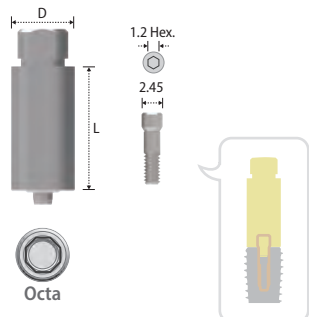
Hybrid L Ti-Base



Type	Octa		N-Octa	
Platform [Fixture Dia.]	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]
Diameter	Ø5.1	Ø6.2	Ø5.1	Ø6.2
Length	5.5			
Cuff	5.5			
0.8	ILO4815	ILO5915	ILN4815	ILN5915
2	ILO4825	ILO5925	ILN4825	ILN5925
3	ILO4835	ILO5935	ILN4835	ILN5935

- > Packing unit: 1 Hybrid L Ti-Base + 1 Abutment Screw.
- > For Screw-Cement or Cement Retained Abutment.
- > Titanium base for the strength of CAD/CAM customized abutment or crown.
- > Gold color for more translucent restoration.
- > Library available for EXOCAD®, 3Shape® & others.
- > Cutting surface (Ø5.1) and humped design (Ø6.2) for anti-rotation of the prosthesis.
- > Connected with the Abutment Screw (ILHS100).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.
- > Use the Scanbody for digital workflow.
- > Fixture level impression.

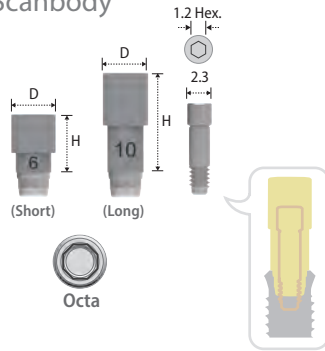
Internal Ti-Block



Type	Octa	
Platform	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]
Diameter	10	
Length	10	
20	CIOR10S	CIOW10S

- > Packing unit: 1 Hybrid Ti-Block + 2 Abutment Screws.
- > For Screw-Cement or Cement Retained Abutment.
- > Block abutment for CAD/CAM customized abutment.
- > Library available for EXOCAD®, 3Shape®
- > Connected with the Abutment Screw (2SSHR100).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30Ncm.
- > Use the Scanbody for 3D Work.
- > Fixture level impression.

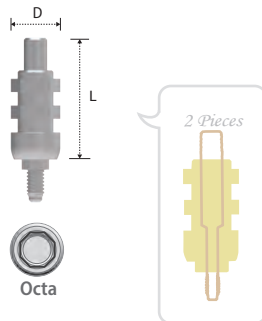
Scanbody



Type	Octa(Short)	Octa(Long)
Platform [Fixture Dia.]	Ø4.8 & Ø5.9 [Ø3.5 / Ø4.0 / Ø4.5 / Ø5.0 / Ø6.0]	Ø4.8 & Ø5.9 [Ø3.5 / Ø4.0 / Ø4.5 / Ø5.0 / Ø6.0]
Diameter	Ø4.5	Ø4.5
Height	6	10
	ISB406	ISB410

- > Packing unit: 1 Scanbody + 1 Abutment Screw.
- > For both, model-scanner and intra-oral scanner.
- > Made of 100% titanium alloy with a special coating applied.
- > No need to spray.
- > Connected with the Abutment Screw (ISHR110).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

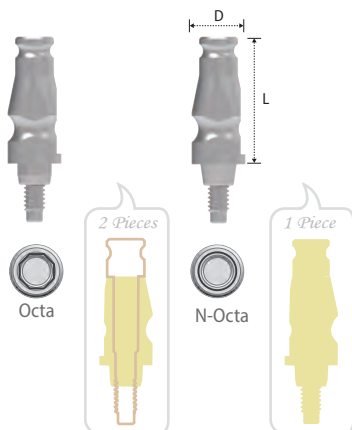
Pick-up Impression Coping



Type	Octa	
Platform [Fixture Dia.]	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]
Diameter	Ø5.5	Ø6.6
Length	13.7	13.7
	IIOR001	IHOW001

- > Packing unit: 1 Pick-up Impression Coping + 1 Guide Pin.
- > For open tray impression.
- > Connected with the Guide Pin (IIOR001S).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

Transfer Post



Type	Octa		N-Octa	
Platform [Fixture Dia.]	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]
Diameter	Ø4.8	Ø5.9	Ø4.8	Ø5.9
Length	11.6	11.6	11.6	11.6
	ITOR400	ITOW500	ITNR400	ITNW500

- > Packing unit: Octa - 1 Transfer Post + 1 Guide Pin / N-Octa - 1 Transfer Post (Solid Type).
- > For closed tray impression.
- > Connected with the Guide Pin (Regular: ITOR400S / Wide: ITOW500S).
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 12~15N.cm.

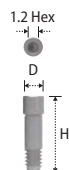
Digital Analog



Platform [Fixture Dia.]	Ø4.8 [Ø3.5 / Ø4.0 / Ø4.5]	Ø5.9 [Ø5.0 / Ø6.0]
Diameter	Ø4.8	Ø5.9
Height	13.5	IDR001R
		IDR001W

- > Packing unit: 1 Digital Analog.
- > Analog of fixture for the working cast.
- > Used for both 3D printed model (RP) and stone model.
- > Select according to fixture platform.

Abutment Screw



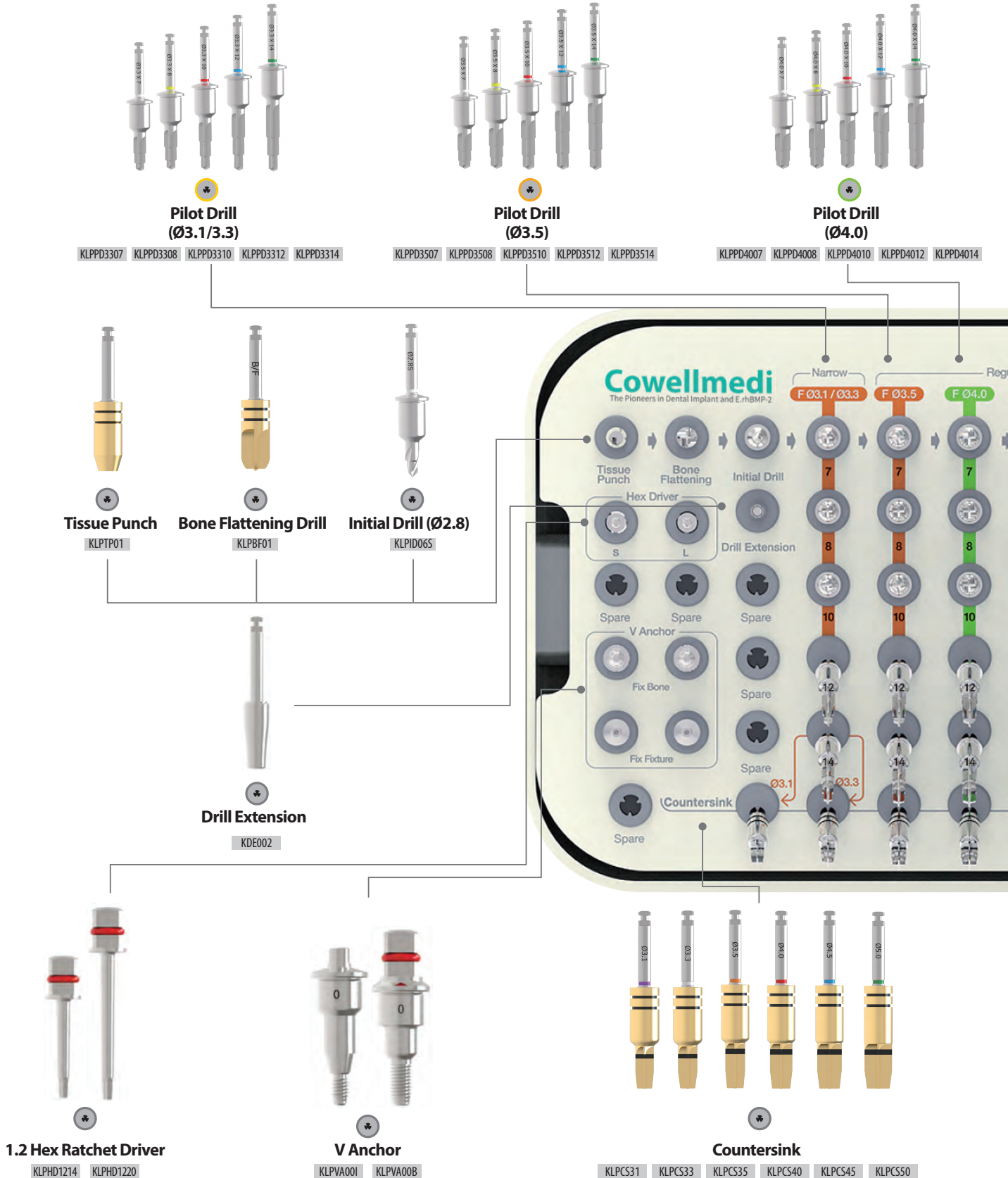
Diameter	Ø2.3
Height	8.6
	ILHS100

- > Packing unit: 1 Abutment Screw.
- > Tightened with the Hex Driver and Torque Wrench.
- > Tightening torque force: 30N.cm.

COWELL EXPERT KITS

Lodestar Plus Kit [KLSP001]

- > A total guided surgery solution applicable to various types of clinical cases.
- > Exclusive for the INNO Submerged and Submerged Narrow Implant System.





Pilot Drill (Ø4.5)

KLPPD4508 KLPPD4510 KLPPD4512 KLPPD4514



Pilot Drill (Ø5.0)

KLPPD5007 KLPPD5008 KLPPD5010 KLPPD5012 KLPPD5014



Implant Adapter

KLPF01R KLPF02R KLPF01N KLPF02N



Lodestar Plus



Fixture Driver

KLFPD21



Torque Wrench

KTW001LP



Adapter Extension

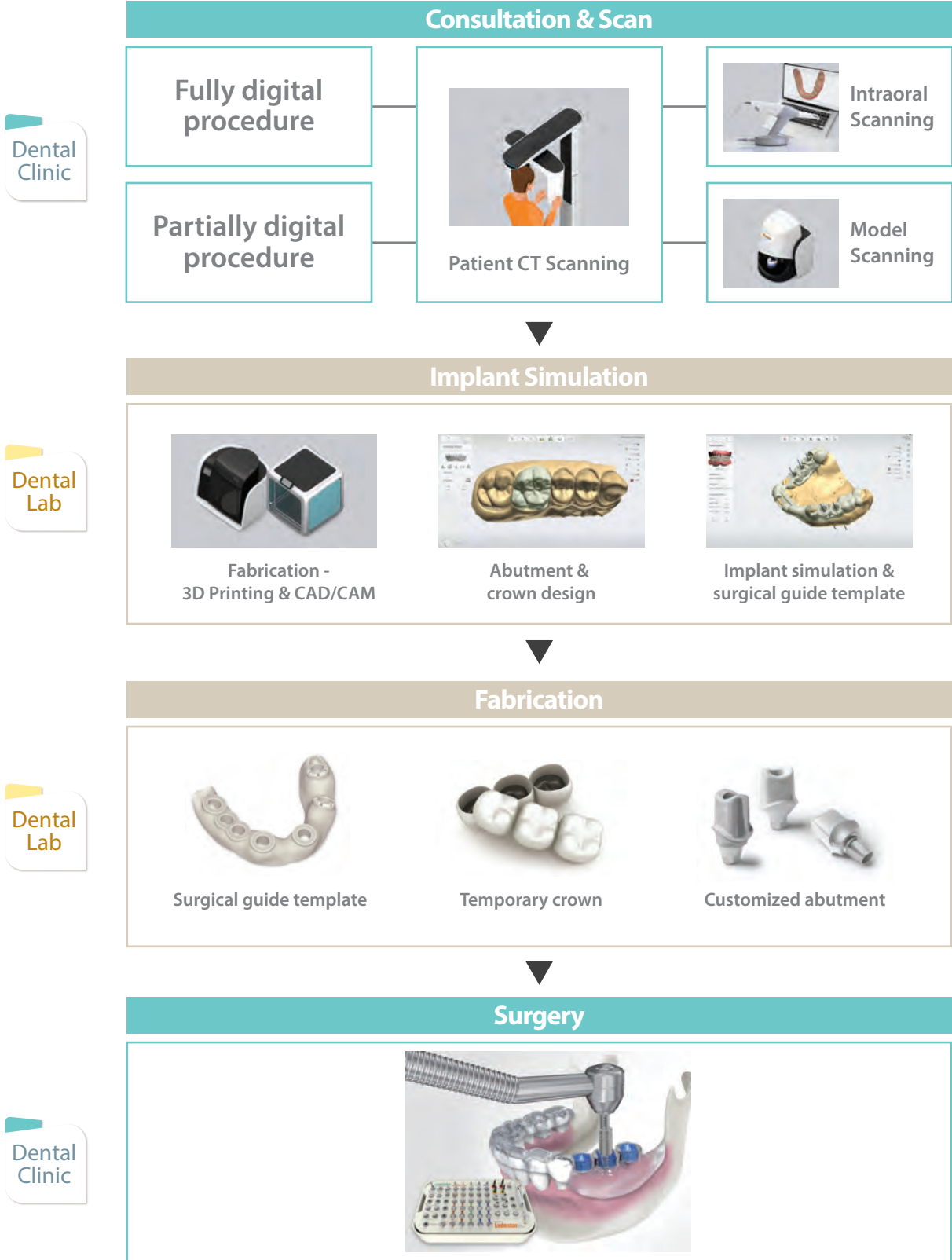
KLPRE08S KLPRE12L KLPMEO8S KLPMET12L



Abutment Profiler

KLPAP10 KLPAP12 KLPAP14

Workflow



Preparation before Operation



Disinfection of surgical guide template

Disinfection must be done before the operation. Immerse the surgical guide template into the alcohol and chlorhexidine solution in a ratio of 9:1 or disinfection fluids such as Cidex OPA, betadine, etc. for more than 20 minutes. Then rinse with the saline solution and install in patient's oral cavity.



Installation of surgical guide template

- Check if inward of the surgical guide template and outward of teeth are accurately contacted through the windows of mounted surgical guide template. In case of insufficient scan data, delete and adjust the inner side of the surgical guide template to contact precisely.
- Install the surgical guide template while scanning CT to check implantation path and precision before the operation (Implantation path may also be checked in post operation by scanning CT with installation of the surgical guide template).



Verification of dental implant

Check if the marked dental implant is in the surgical report.

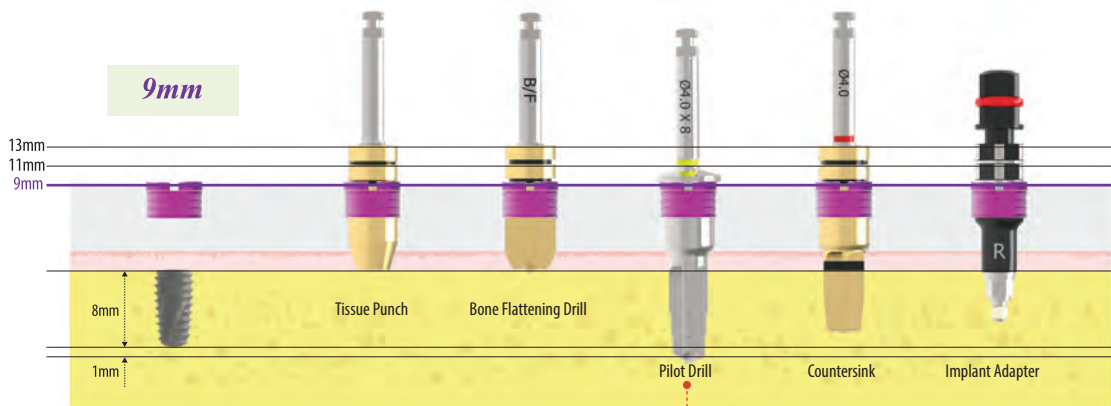


Confirmation of protocol

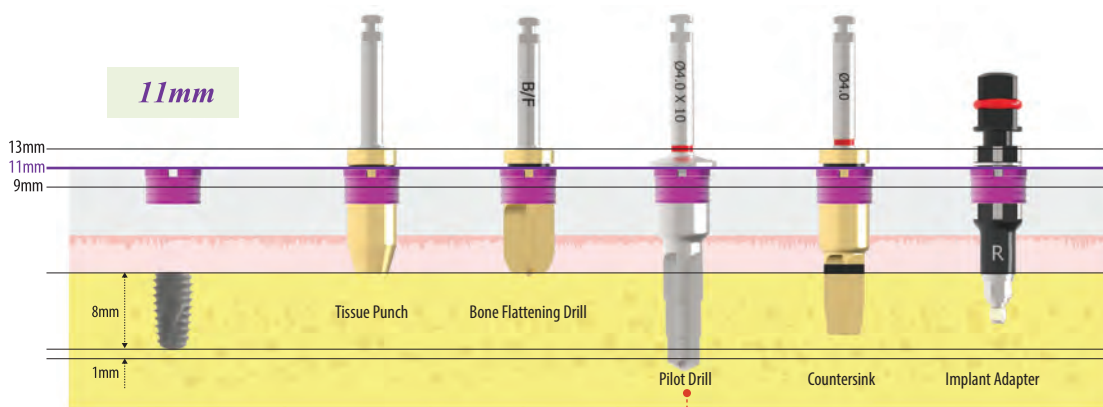
Confirm the surgical report and surgical protocol for sure.

Comprehension and Usage of Offset

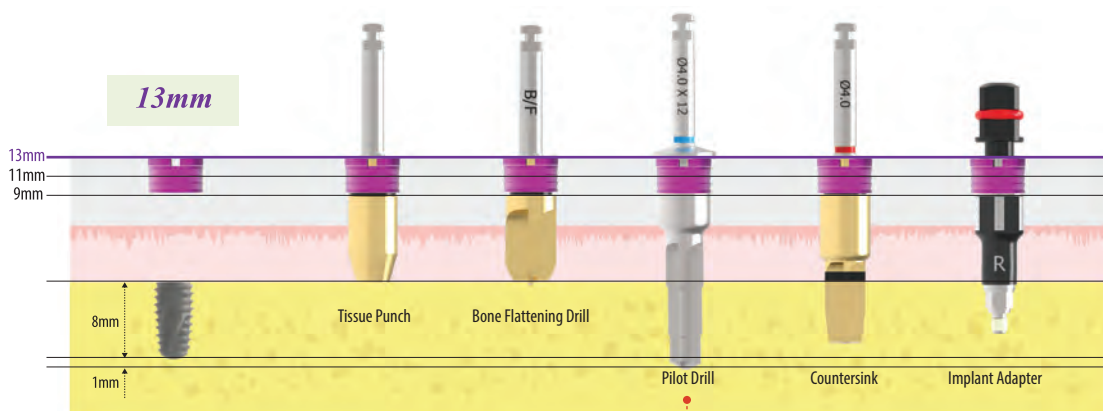
- > The basic length is 9mm from the fixture platform to the top of the Sleeve.
- > In case the gingiva is thick or fixture needs to be placed deeper due to low bone density, use the Sleeve 2 or 4mm upright to the top.
- > The higher the offset value, the less accurate it is, so use 9mm if possible.



Selection of the Drill according to the Sleeve offset (In case of placing 8mm Fixture)
: In case of offset 9mm(0mm) – Select 8mm Drill.



Selection of the Drill according to the Sleeve offset (In case of placing 8mm Fixture)
: In case of offset 11mm(2mm) – Select 10mm Drill.



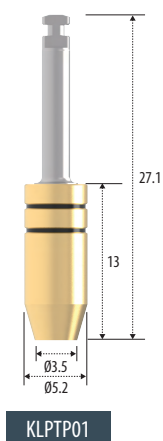
Selection of the Drill according to the Sleeve offset (In case of placing 8mm Fixture)
: In case of offset 13mm(4mm) – Select 12mm Drill.

* Caution

Please note that the actual depth of drilling is 1mm longer than the Drill mark.

Ex) Ø4.0 X 8mm Drill - Drilling depth: 9mm.

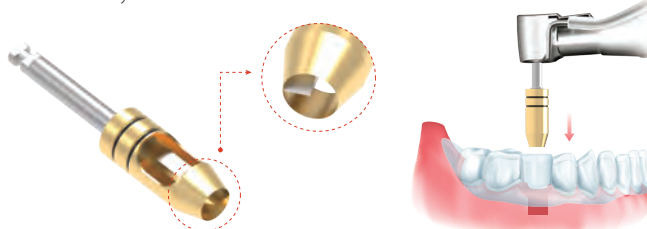
Tissue Punch



- > Used for soft tissue elimination (the gingiva in the position where the implant is to be placed can be incised in a circular shape).
- > Hemostatic effect, small scar, or fast wound healing effect occurs after the operation due to the small diameter of tissue punch.
- > Able to apply offset (9mm, 11mm, 13mm).
- > 50rpm without irrigation.

Double blade

The internal cutting edge of the Tissue Punch cuts the gingiva into small pieces so that those can be removed by suction without extra work.

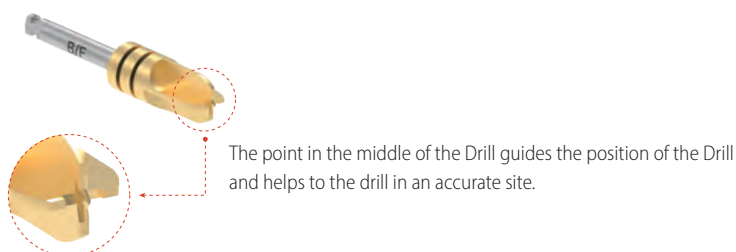


*** Caution** The Tissue Punch must be kept clean. Otherwise, it may cause rust or damage on the blade due to residual gingival pieces or others in the Tissue Punch after the operation (remove the residual gingiva piece by explorer, steam etc.).

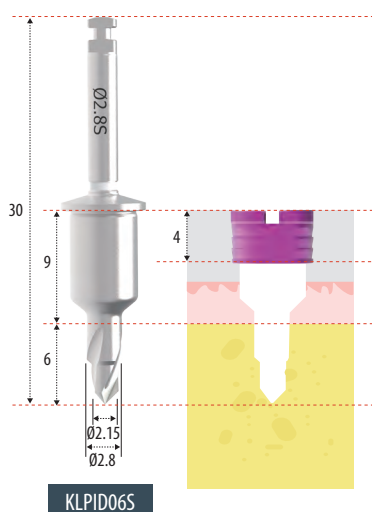
Bone Flattening Drill



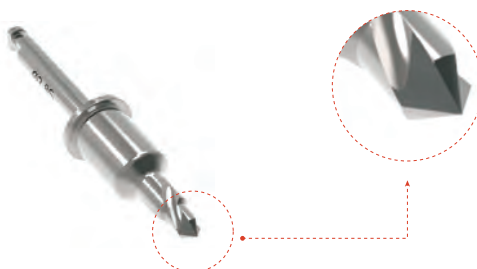
- > Flattens the bone level of the operation site.
- > Inclined bone level may glide the Drill and can not drill as planned.
- > Eliminates the soft tissue after using the Tissue Punch.
- > The point in the middle of the Drill guides the position of the Drill and helps to the drill in an accurate site.
- > Able to apply offset (9mm, 11mm, 13mm).
- > 400rpm without irrigation / 800rpm with irrigation.



Initial Drill



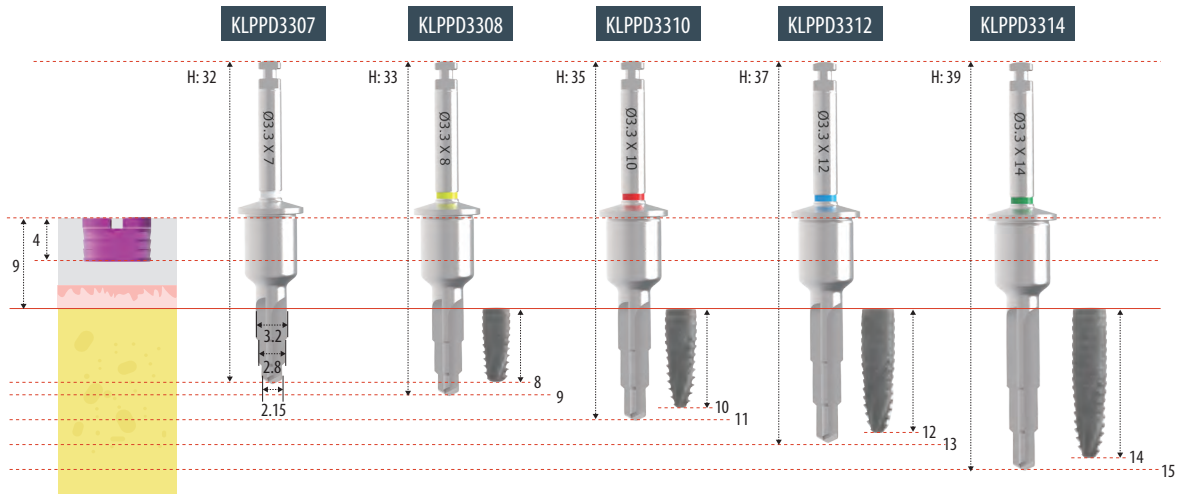
- > High speed, 1,000rpm with irrigation.



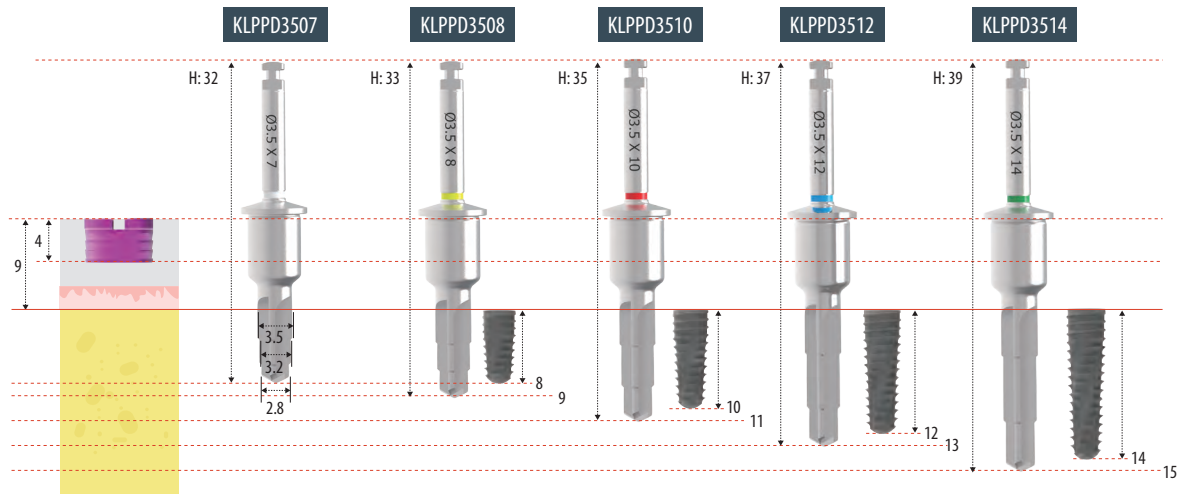
Point

Creates the hole on the bone surface so that the axis of the next step Drill is not moved and it guides the Drill position by preventing slip even at the inclined bone level.

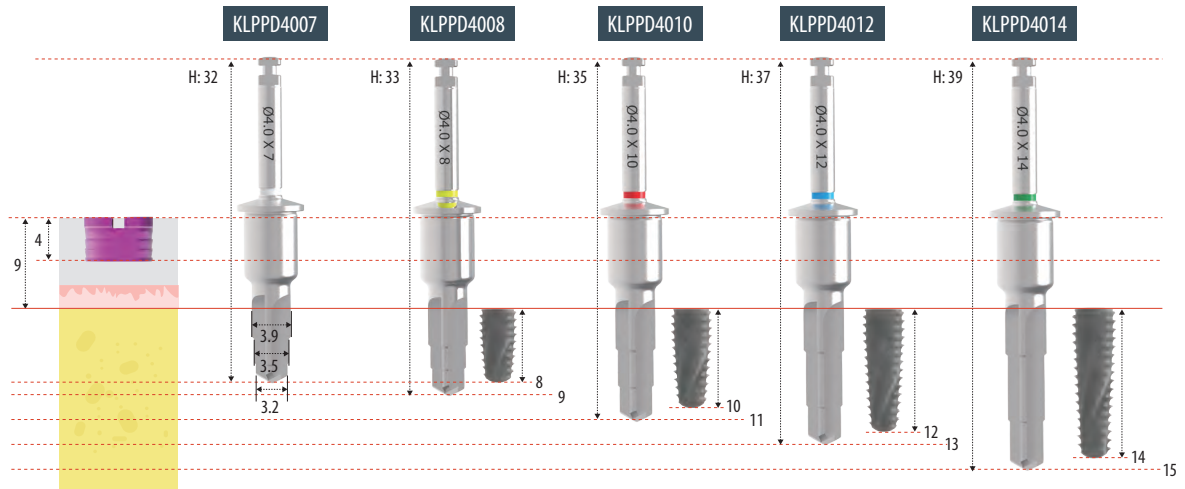
Ø3.1/Ø3.3 Fixture



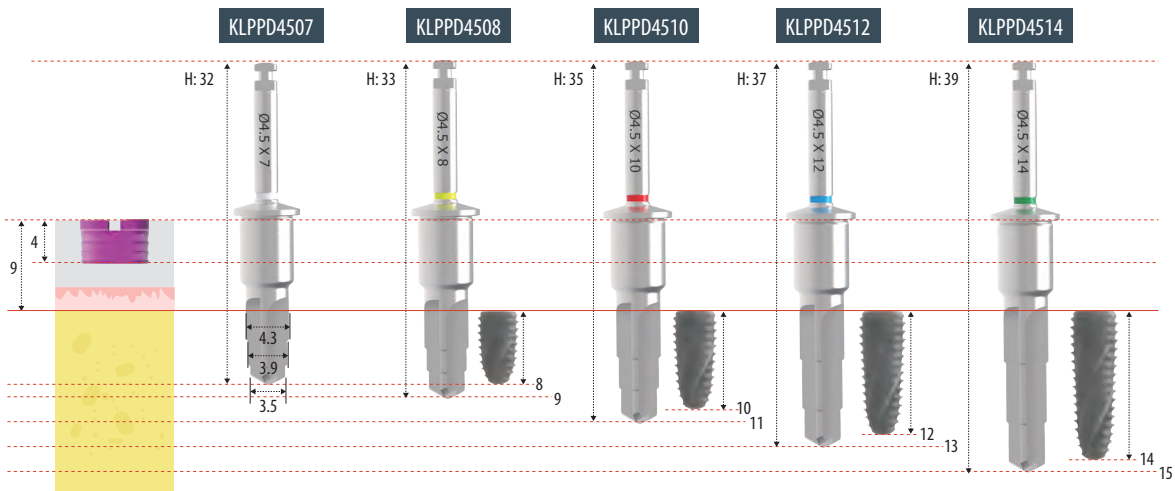
Ø3.5 Fixture



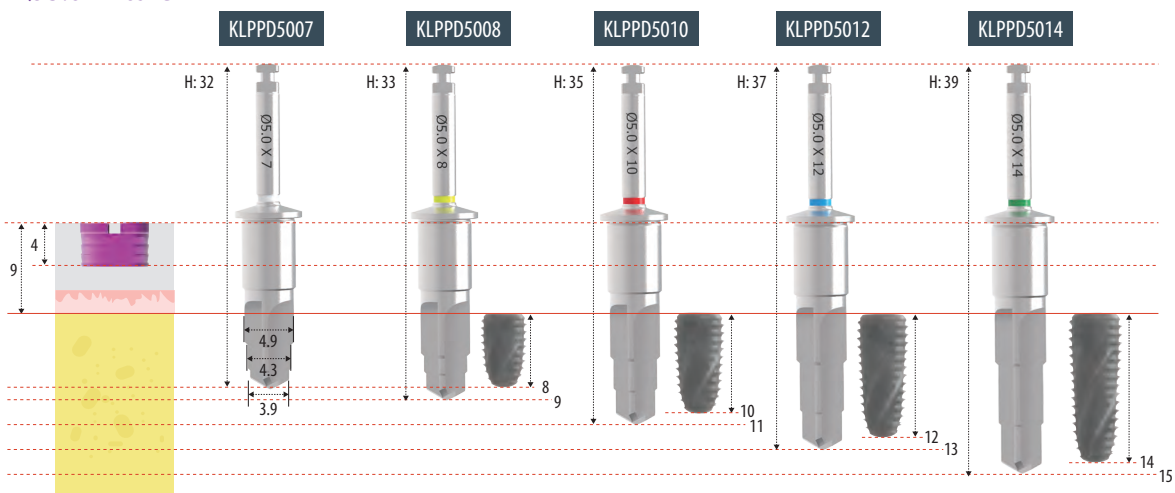
Ø4.0 Fixture



Ø4.5 Fixture

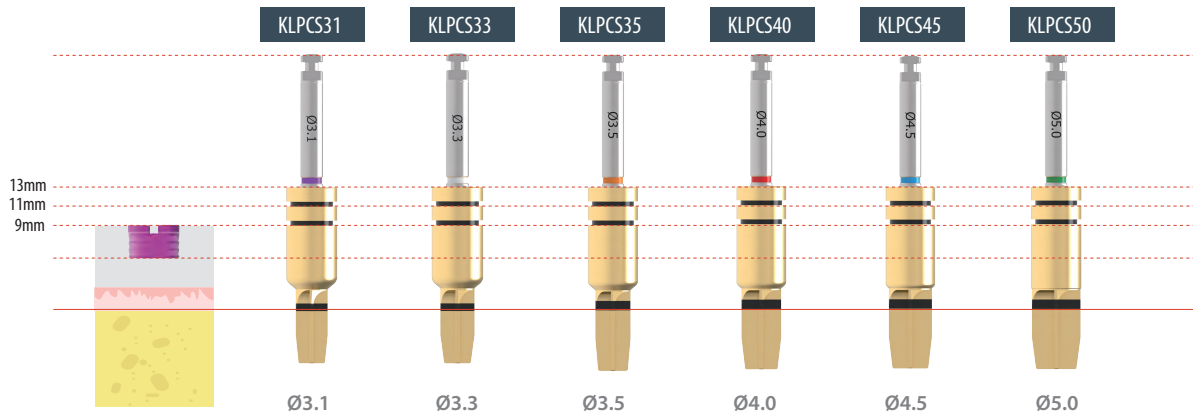


Ø5.0 Fixture



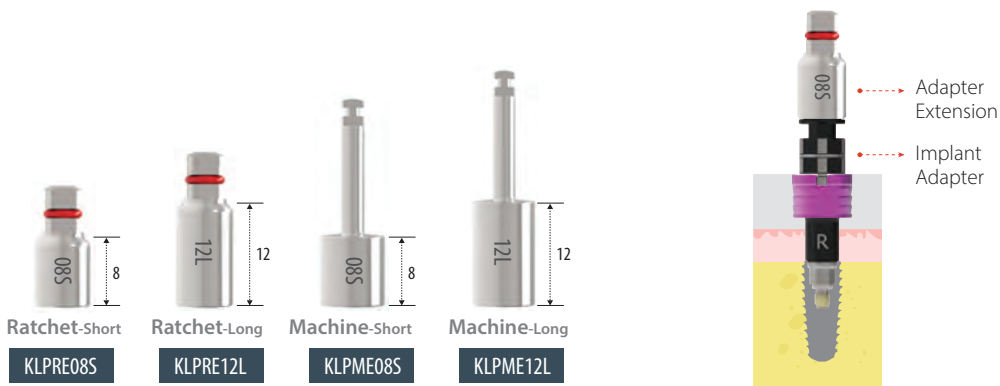
Countersink

- > Expands the cortical bone in D1/D2 bone to prevent excessive implantation of the fixture.
- > Able to apply offset (9mm, 11mm, 13mm).
- > 50rpm without irrigation.



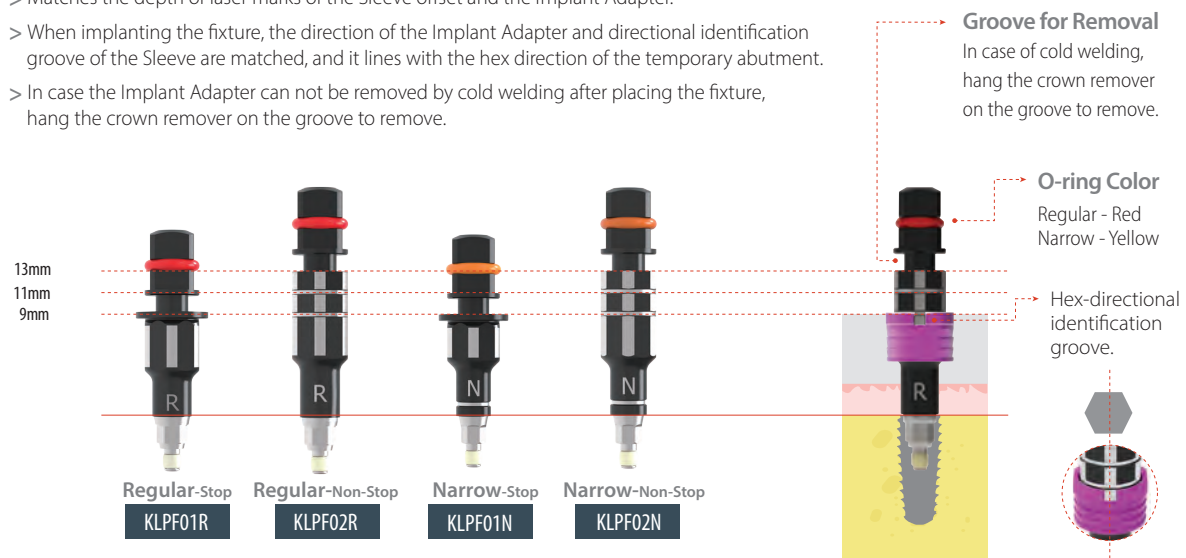
Adapter Extension

- > In case the Implant Adapter is too short to use, connect the Ratchet or Machine Adapter Extension to place the fixture.



Implant Adapter

- > Moves fixture to the Sleeve to implant safely.
- > Matches the depth of laser marks of the Sleeve offset and the Implant Adapter.
- > When implanting the fixture, the direction of the Implant Adapter and directional identification groove of the Sleeve are matched, and it lines with the hex direction of the temporary abutment.
- > In case the Implant Adapter can not be removed by cold welding after placing the fixture, hang the crown remover on the groove to remove.

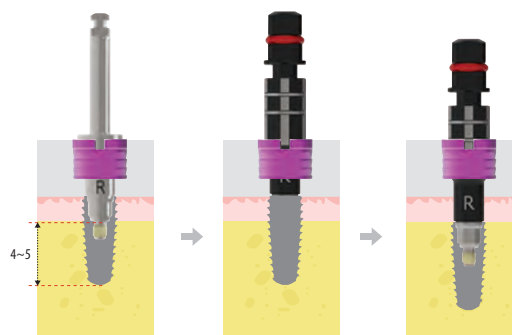


Fixture Driver - Molar

- > Used in case the Implant Adapter can not be used due to the low occlusal height.
- > After implanting 4~5mm, change to the Implant Adapter to complete the placement.



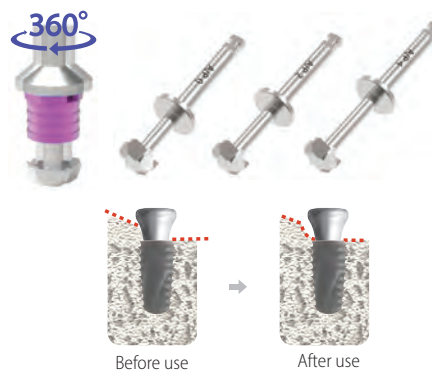
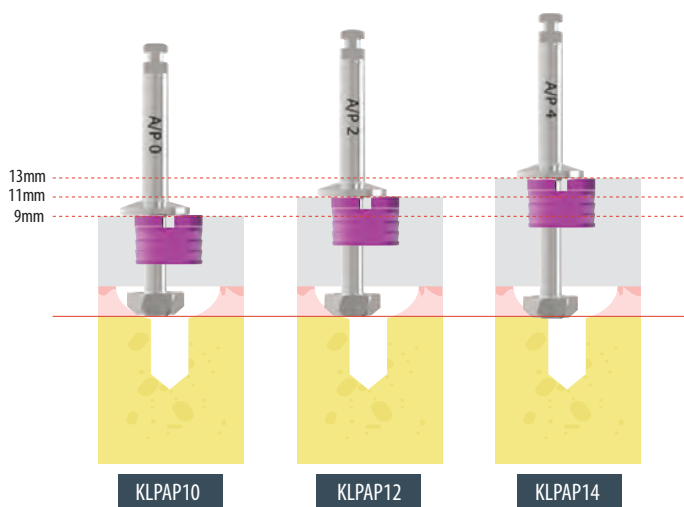
KLPFD21



- ① Place 4~5mm.
- ② Change to the Implant Adapter.
- ③ Complete placement.

Abutment Profiler

- > Used for the elimination of the alveolar bone that interferes with the accurate connection of abutment. Remove residual bone by rotating and drilling 360°.
- > In case of thick cortical bone, drill higher rpm with irrigation (within 100rpm).



V Anchor - Fix Fixture

> Used with the 1.2 Hex Driver to fix the surgical guide template to the fixture in such cases as edentulous teeth.



*** Caution**

- > Install by aligning to the Sleeve offset of the placed fixture.
- > The V Anchors for the offset 11 and 13mm in length are extra products.

V Anchor - Fix Bone

> Used with the Torque Wrench to fix the surgical guide template into the hole of the bone created after initial drilling in such cases as edentulous teeth.

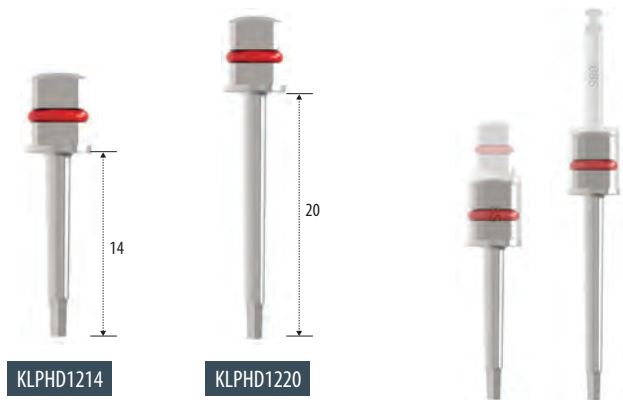


*** Caution**

- > Install by aligning to the Sleeve offset of the placed fixture.
- > The V Anchors for the offset 11 and 13mm in length are extra products.

1.2 Hex Ratchet Driver

> Used to install or remove the Cover Screw, and Healing Abutment.

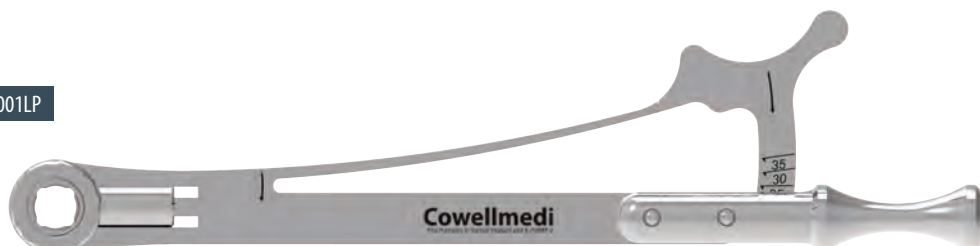


Connect the Adapter Extension if necessary.

Torque Wrench(Square)

- > Used to control torque force in the fixture and abutment placement.
- > Used with the Implant Adapter, 1.2 Hex Driver, and V Anchor, etc.
- > Torque force 10, 25, 30 & 35N.cm are able to be controlled by pulling the elastic bar.
- > Maximal torque force 120N.cm with pulling the rigid main bar.

KTW001LP



Sleeve

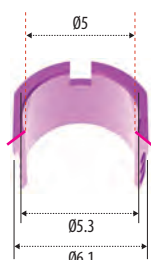
Extra



Closed Sleeve

KLPS01

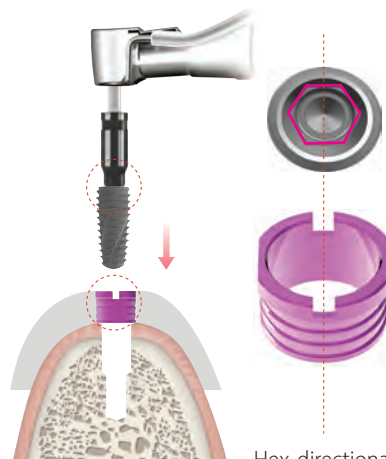
* Packing Unit: 5 Sleeves



Open Sleeve

KLPS02

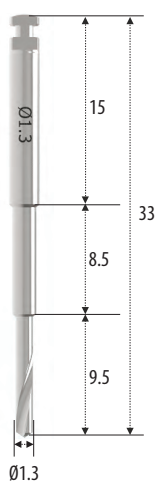
* Packing Unit: 5 Sleeves



Hex-directional identification groove.

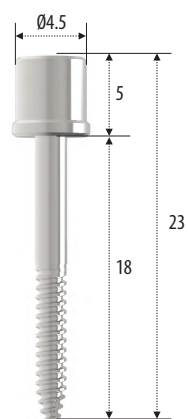
Anchor System

Extra



Anchor Drill

KLSAD13



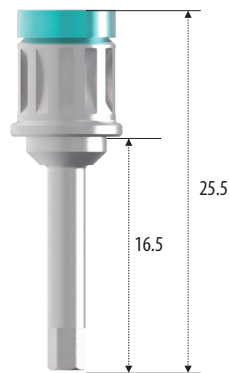
Anchor Screw

KLSAS18



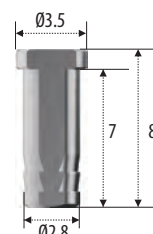
Anchor Driver

KLSMD23



Anchor Driver

KLSRD16



Anchor Sleeve

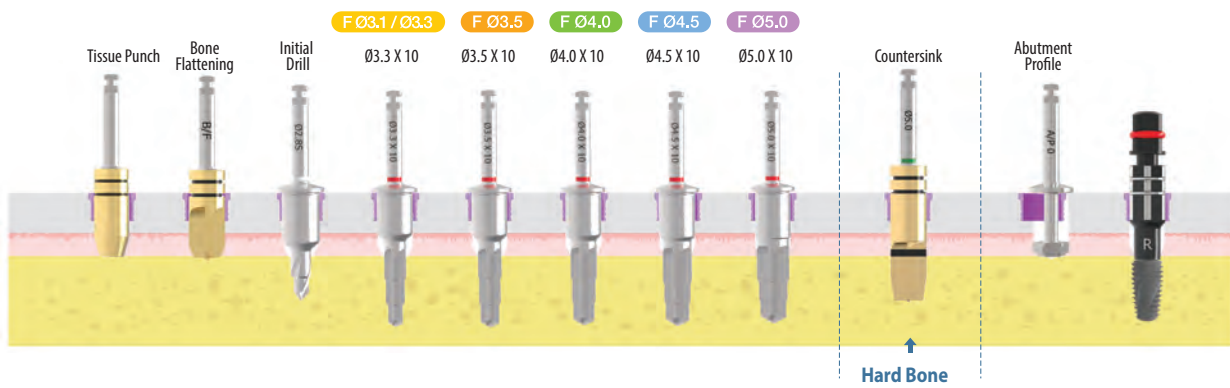
KLSAS01

* Packing Unit: 5 Sleeves

Drilling Sequence

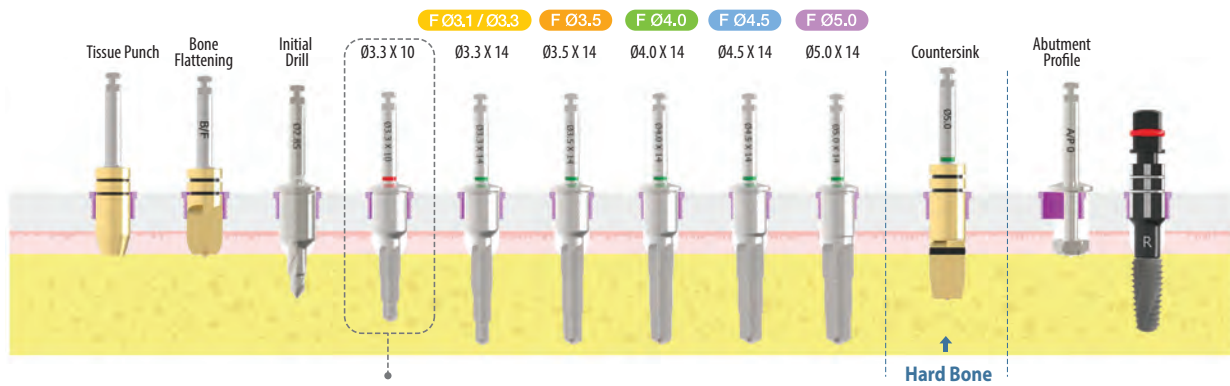
Drilling Sequence (7~10mm)

INNO Sub Fixture Ø5 x 10mm



Drilling Sequence (12~14mm)

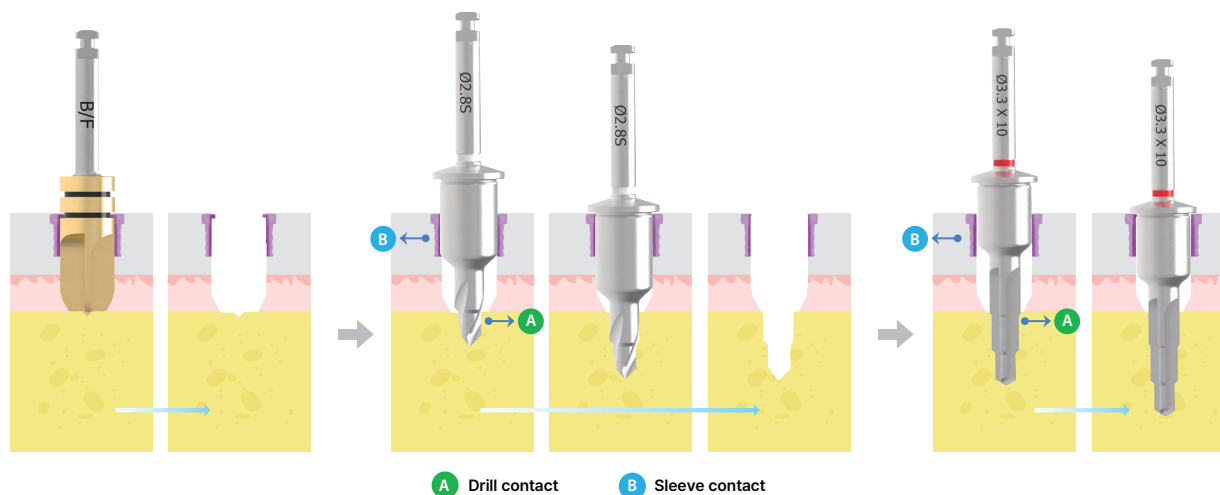
INNO Sub Fixture Ø5 x 14mm



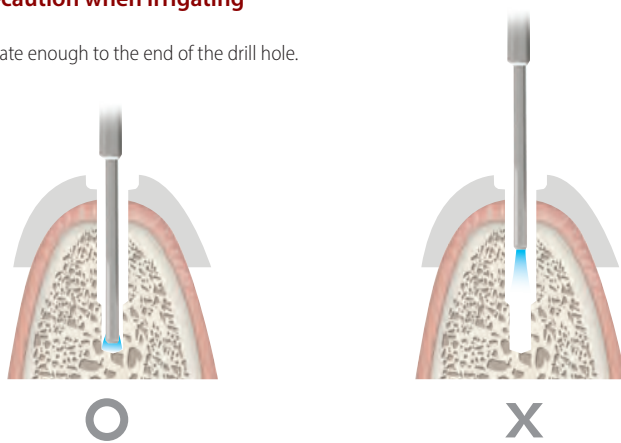
8~10mm drilling should be done in advance for the sleeve contact.

*** Drilling method**

- > Make sure with drilling in the desired direction without a change in the path through the primary drill contact (A) with the hole created by the previous drilling and the secondary contact (B) with the sleeve.
- > Create the hole using the initial drill and insert the next drill into the hole made during the previous step and drill after achieving the drill and sleeve contact (A&B).
- > If drilling only with the sleeve contact (B) without the drill contact (A), the path may not be correct.

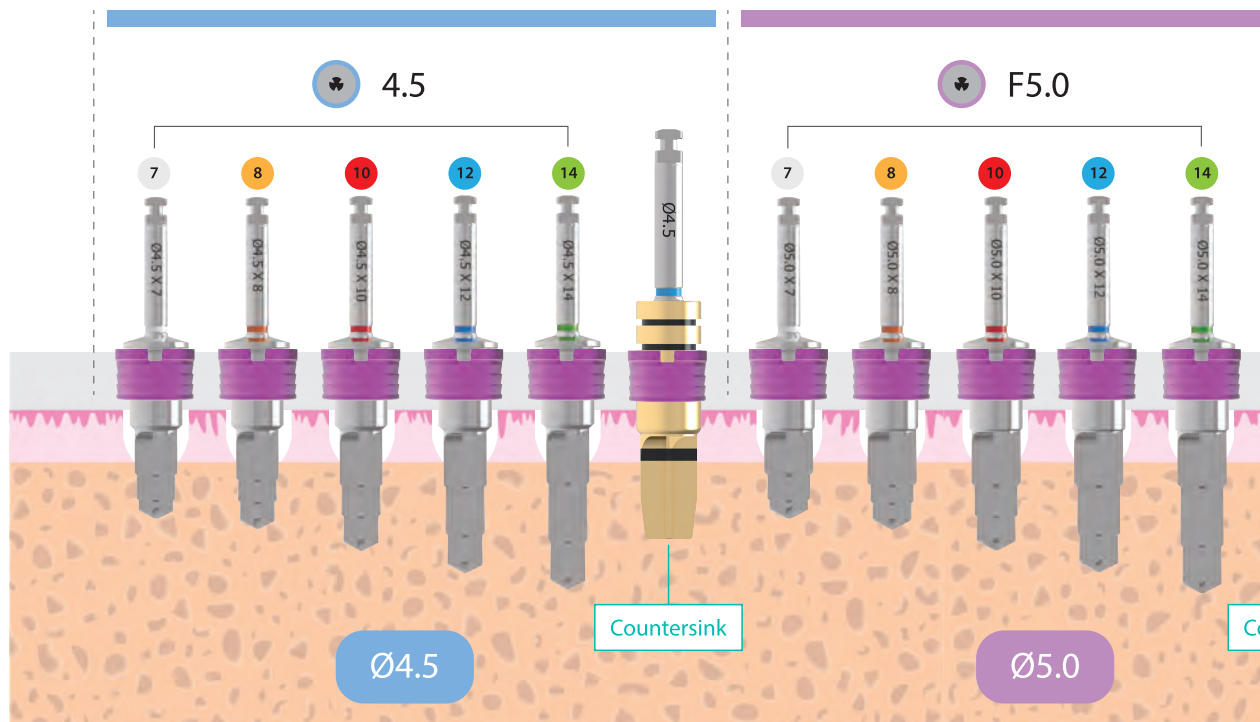
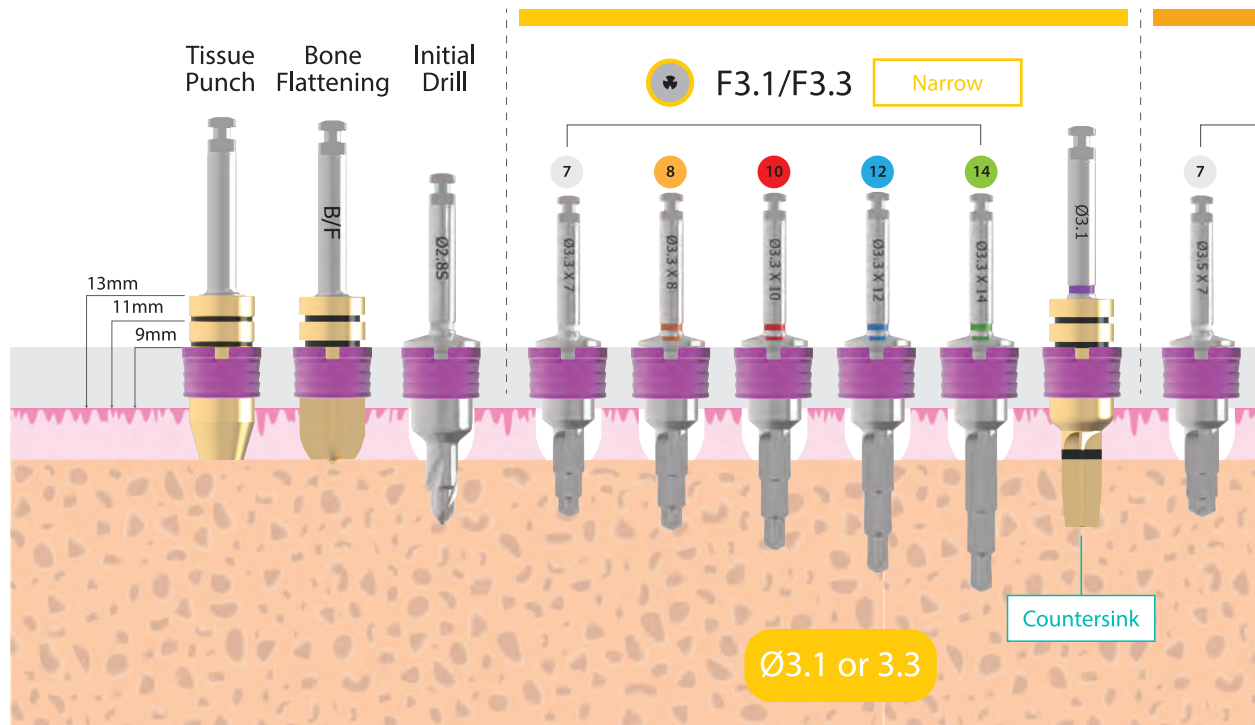
*** Precaution when irrigating**

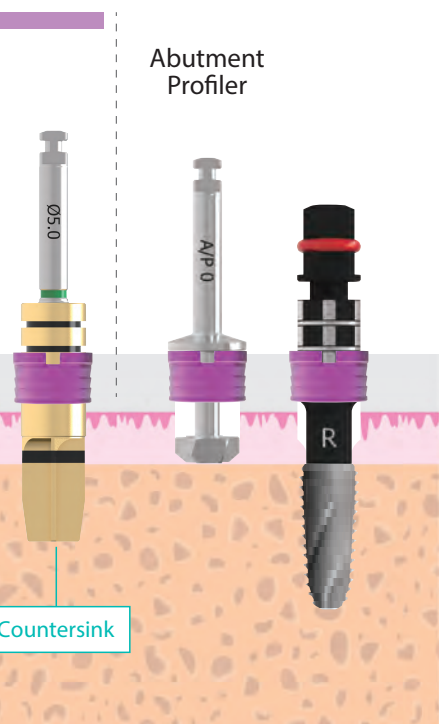
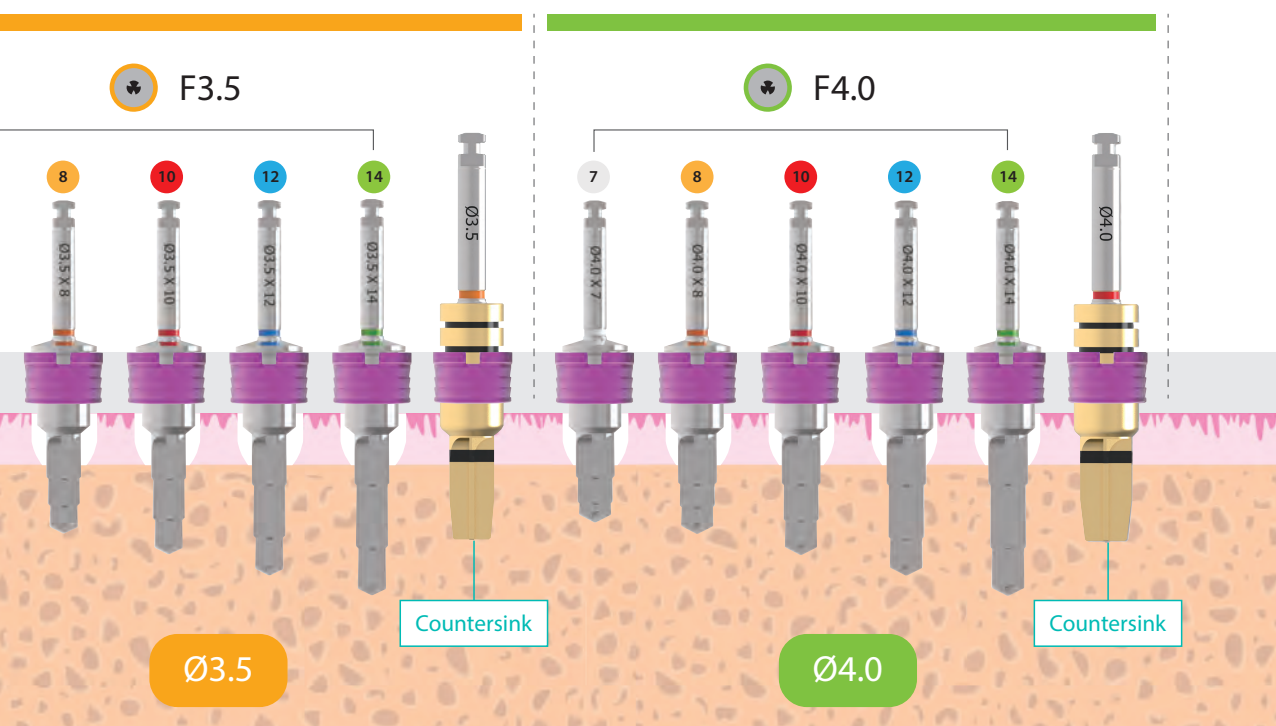
- > Irrigate enough to the end of the drill hole.



Drilling Sequence

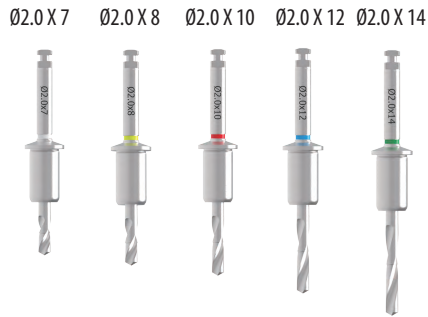
> Total drilling sequence with the Tissue Punches, Bone Flattening Drills, Initial Drills, and Pilot Drills, Abutment Profilers, and Implant Adapters.





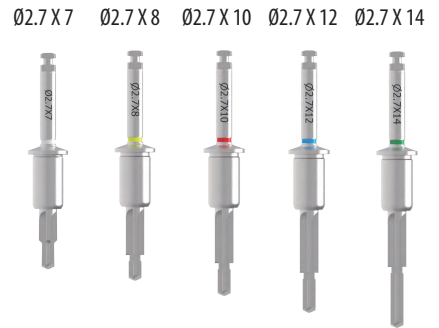
Lodestar Kit [KLS001]

- > A cost-effective guided surgery solution applicable to various types of clinical cases.
- > Universal to any implant system.



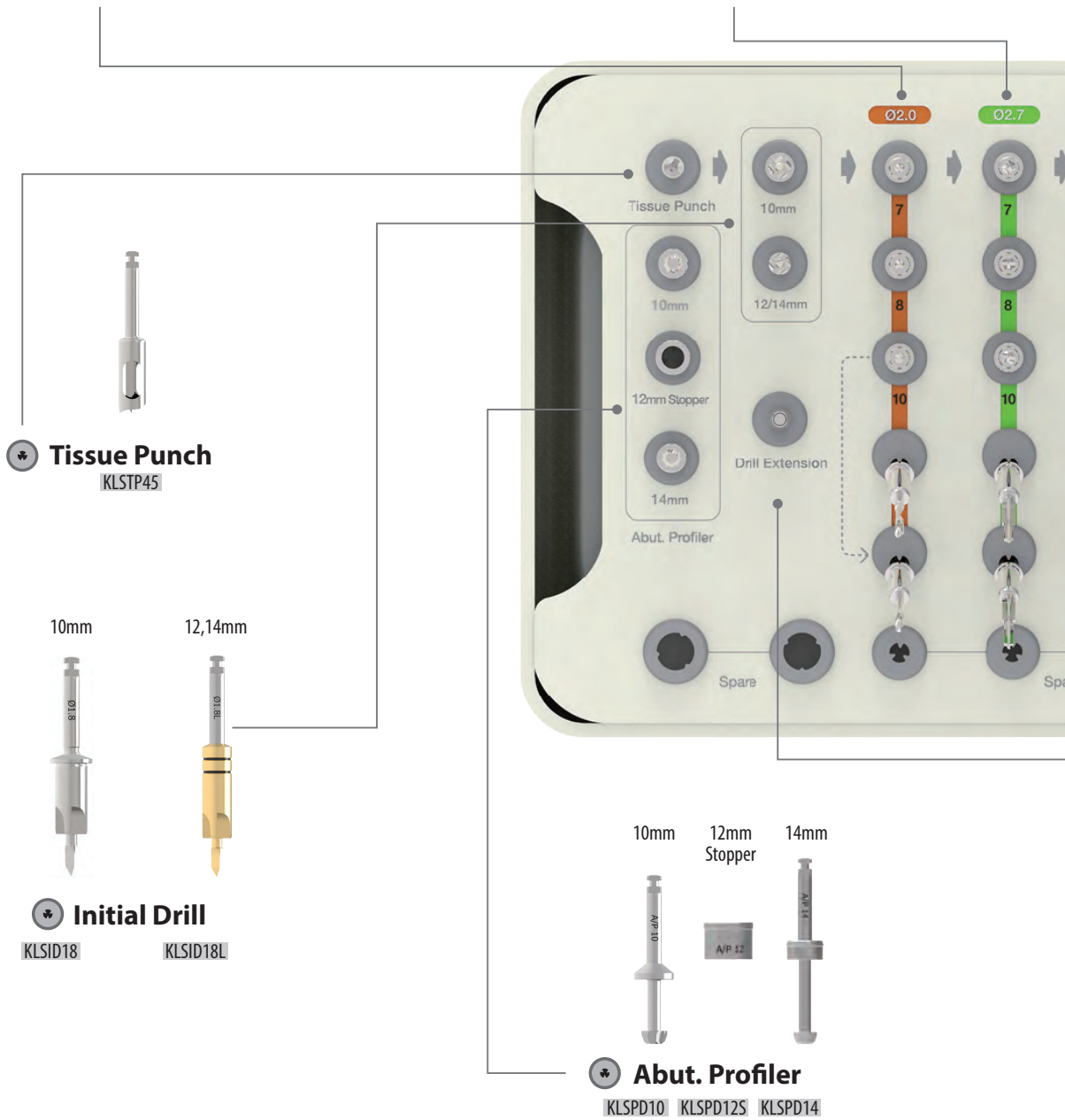
✦ Pilot Drill(Ø2.0)

KLSPD2007 KLSPD2008 KLSPD2010 KLSPD2012 KLSPD2014



✦ Pilot Drill(Ø2.7)

KLSPD2707 KLSPD2708 KLSPD2710 KLSPD2712 KLSPD2714



✦ Tissue Punch
KLSTP45

10mm 12,14mm
✦ Initial Drill
KLSID18 KLSID18L

10mm 12mm Stopper 14mm
✦ Abut. Profiler
KLSPD10 KLSPD12S KLSPD14

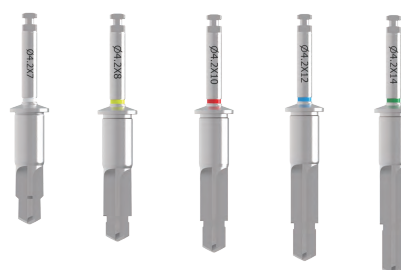
Ø3.4 X 7 Ø3.4 X 8 Ø3.4 X 10 Ø3.4 X 12 Ø3.4 X 14



⚙️ Pilot Drill(Ø3.4)

KLSPD3407 KLSPD3408 KLSPD3410 KLSPD3412 KLSPD3414

Ø4.2 X 7 Ø4.2 X 8 Ø4.2 X 10 Ø4.2 X 12 Ø4.2 X 14



⚙️ Pilot Drill(Ø4.2)

KLSPD4207 KLSPD4208 KLSPD4210 KLSPD4212 KLSPD4214



⚙️ Anchor System

KLSAD13 KLSAS18 KLSMD23 KLSRD16

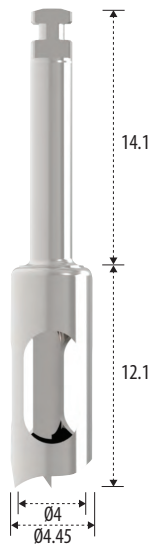


⚙️ Drill Extension

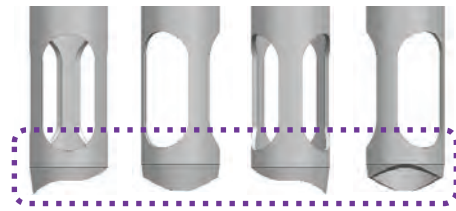
KDE002

Tissue Punch

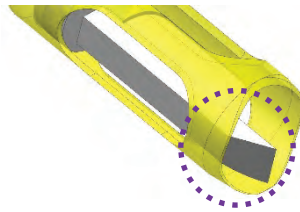
> The gingiva in the position where the implant is to be placed can be incised in a circular shape and can also be used in inclined bones (50rpm without irrigation).



KLSTP45



The gingiva can be incised in a circular shape although the bone level is inclined or not parallel.

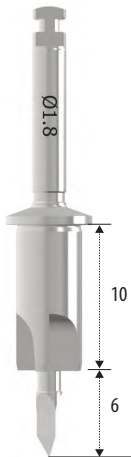


The internal cutting edge of the Tissue Punch cuts the gingiva into small pieces so that those can be removed by suction without extra work.

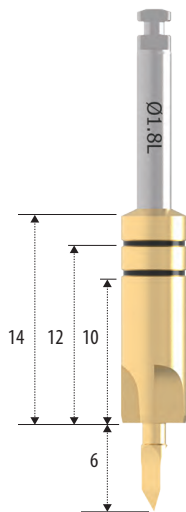


Initial Drill

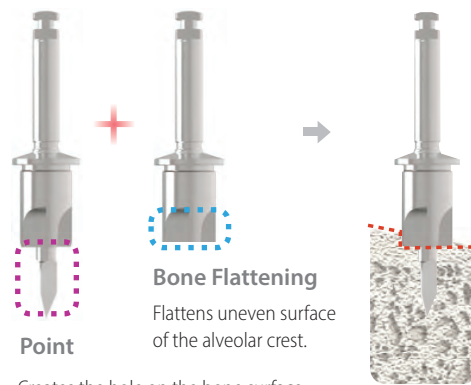
> The Drill combined with Bone Flattening Drill and Point Drill which no separate Bone Flattening Drill is required provides a simpler procedure and shorter chair time (1,000rpm with irrigation).



KLSID18



KLSID18L



Point

Bone Flattening

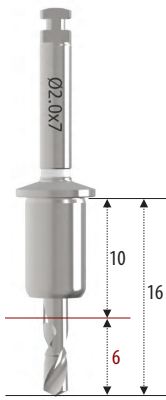
Flattens uneven surface of the alveolar crest.

Creates the hole on the bone surface so that the axis of the next step Drill is not moved and it guides the Drill position by preventing slip even at the inclined bone level.

Pilot Drill

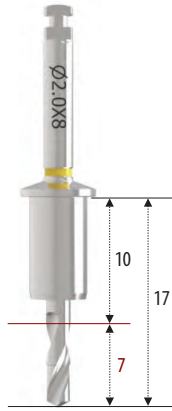
> Ø2.0 / Ø2.7 / Ø3.4 / Ø4.2.

Ø2.0: High Speed - 600rpm



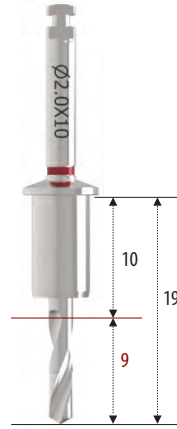
Pilot Drill 16mm(6mm)

KLSPD2007



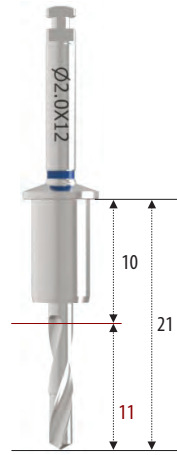
Pilot Drill 17mm(7mm)

KLSPD2008



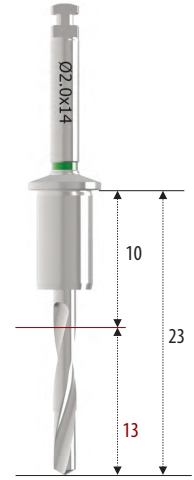
Pilot Drill 19mm(9mm)

KLSPD2010



Pilot Drill 21mm(11mm)

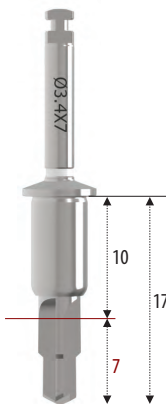
KLSPD2012



Pilot Drill 23mm(13mm)

KLSPD2014

Ø2.7 / Ø3.4 / Ø4.2: Low Speed - 50~200rpm / 50N.cm

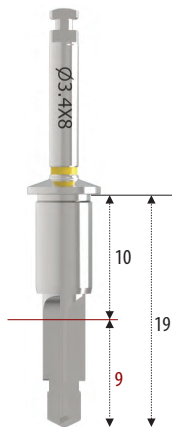


Pilot Drill 17mm(7mm)

KLSPD2707

KLSPD3407

KLSPD4207

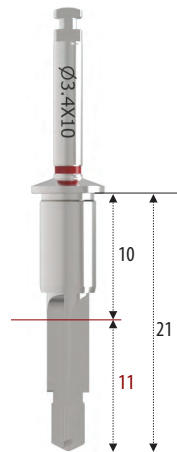


Pilot Drill 19mm(9mm)

KLSPD2708

KLSPD3408

KLSPD4208

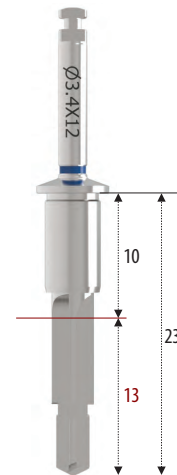


Pilot Drill 21mm(11mm)

KLSPD2710

KLSPD3410

KLSPD4210

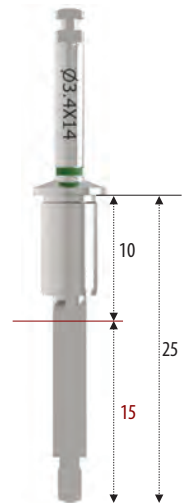


Pilot Drill 23mm(13mm)

KLSPD2712

KLSPD3412

KLSPD4212



Pilot Drill 25mm(15mm)

KLSPD2714

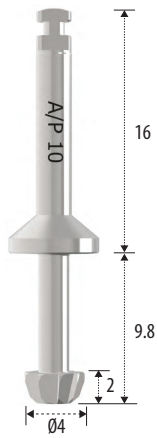
KLSPD3414

KLSPD4214

Abutment Profiler

> Used for the elimination of the alveolar bone that interferes with the accurate connection of abutment.

KLSPD10



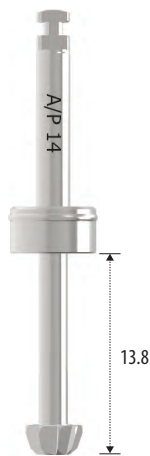
Offset - 10mm

KLSPD14 + KLSPD12S



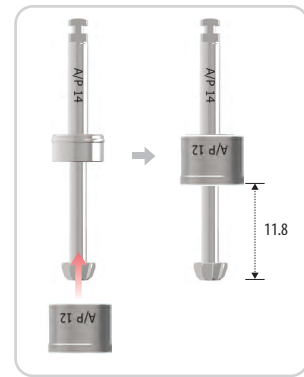
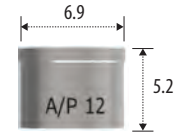
Offset - 12mm

KLSPD14

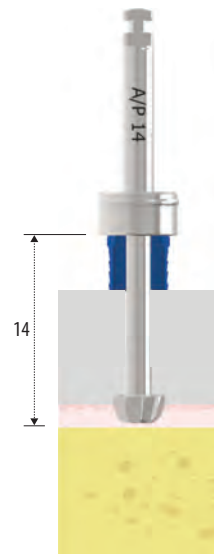
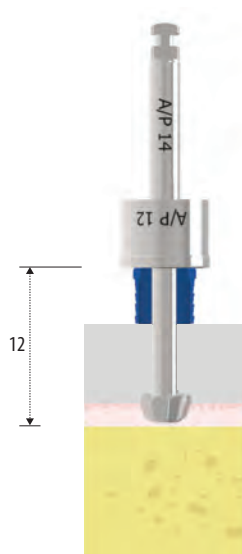
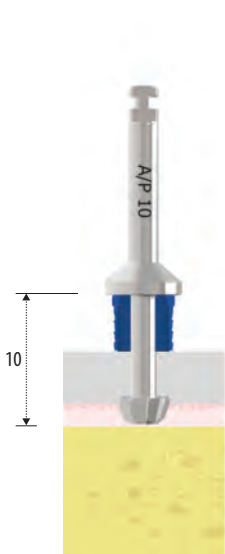


Offset - 14mm

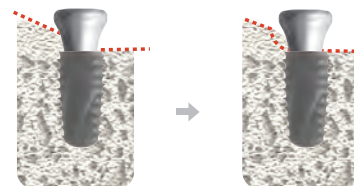
KLSPD12S



* Use as the 12mm Abutment Profiler by installing the Stopper to the 14mm Abutment Profiler.

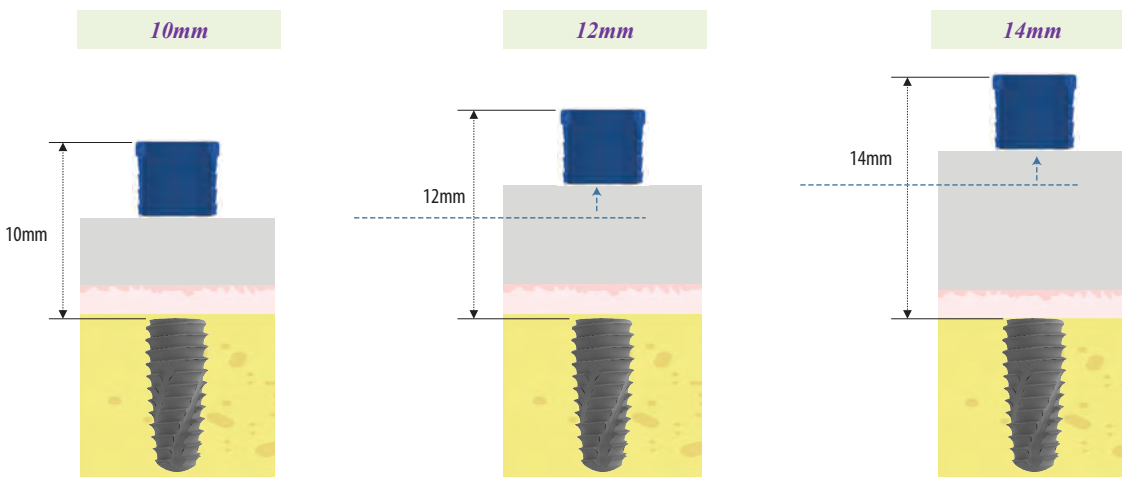


* Remove residual bone by rotating and drilling 360° along the inside of the Sleeve.
If the cortical layer is thick, increase the drilling speed in the range of 1,000rpm with irrigation.

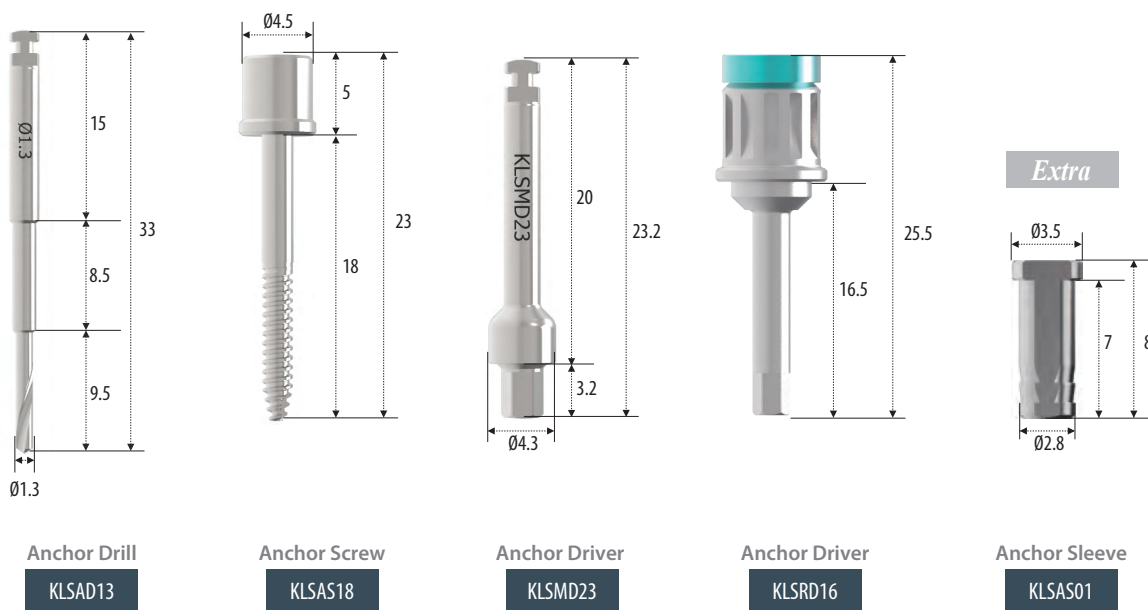


*** Comprehension and Usage of Offset**

- > The basic length is 10mm from the fixture platform to the top of the Sleeve.
- > In case the gingival is thick or fixture needs to be placed deeper due to low bone density, use the Sleeve 2 or 4mm upright to the top.
- > The higher the offset value, the less accurate it is, so use 10mm if possible.



Anchor System



* Packing Unit: 5 Sleeves

Optional

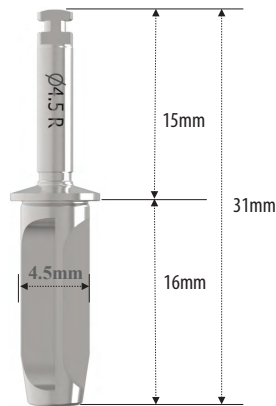
> These products are optional as extra ones which are not included in the kit.

Guide Reamer *Extra*

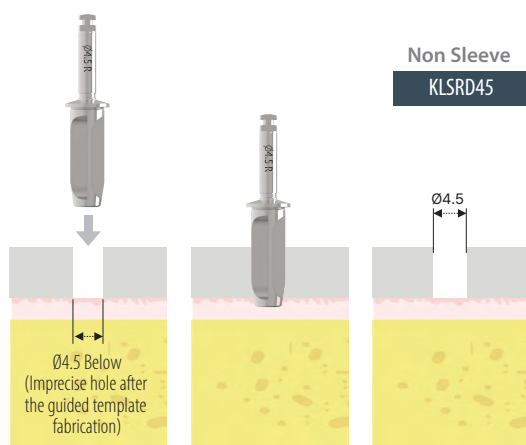
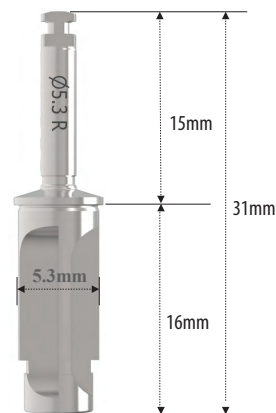
Used for precise contact of Drill and Sleeve (Sleeve / Non-Sleeve).

Use the 4.5mm Guide Reamer for Non-Sleeve, and the 5.3mm Guide Reamer for Sleeve (800rpm without irrigation).

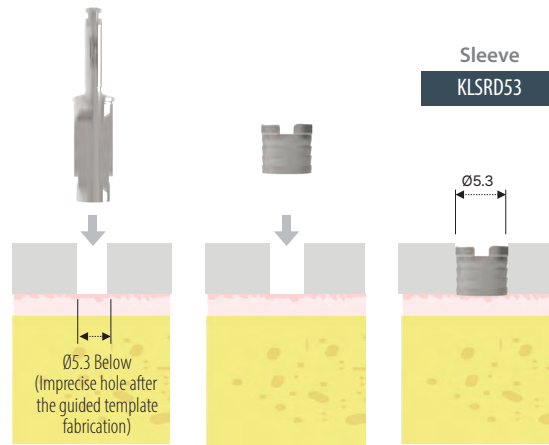
Guide Reamer
(Non-Sleeve)
KLSRD45



Guide Reamer
(Sleeve)
KLSRD53

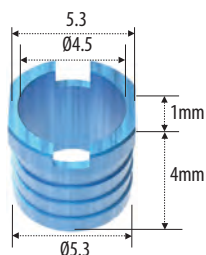


Revises imprecisely formed hole after the guided template fabrication using the 4.5mm Guide Reamer to create the hole to be in exact contact with the Drill.



Revises imprecisely formed hole after the guided template fabrication using the 5.3mm Guide Reamer to precisely insert the Sleeve.

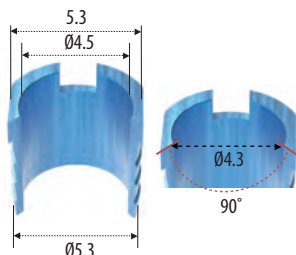
Sleeve *Extra*



Closed Sleeve

KLSS01

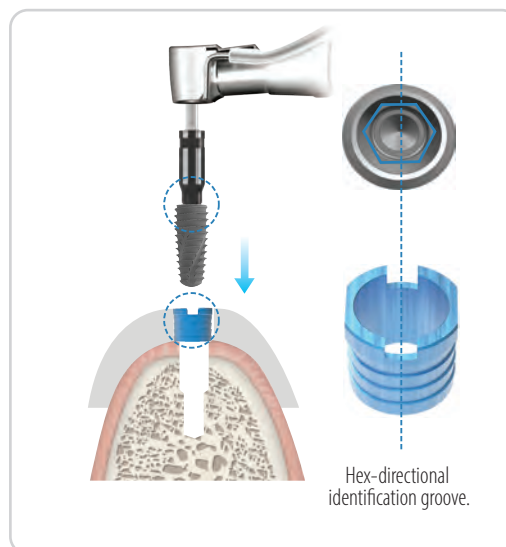
* Packing Unit: 5 Sleeves



Open Sleeve

KLSS02

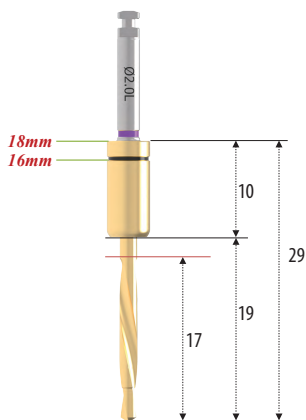
* Packing Unit: 5 Sleeves



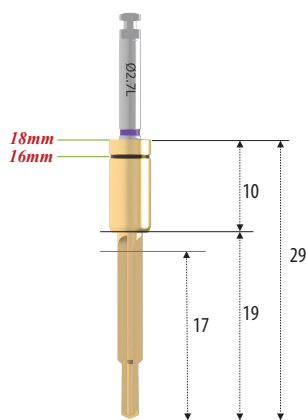
Hex-directional identification groove.

Pilot Drill – 16/18mm

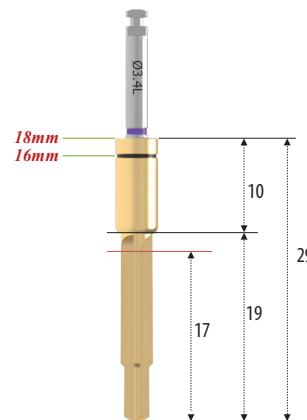
Extra



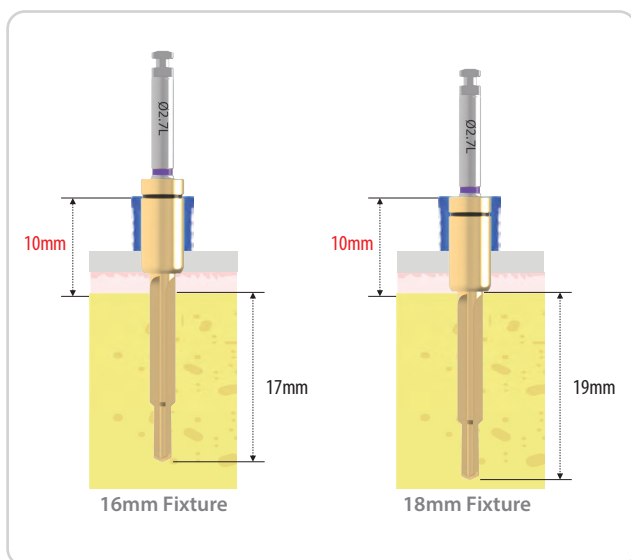
KLSPD2018



KLSPD2718



KLSPD3418

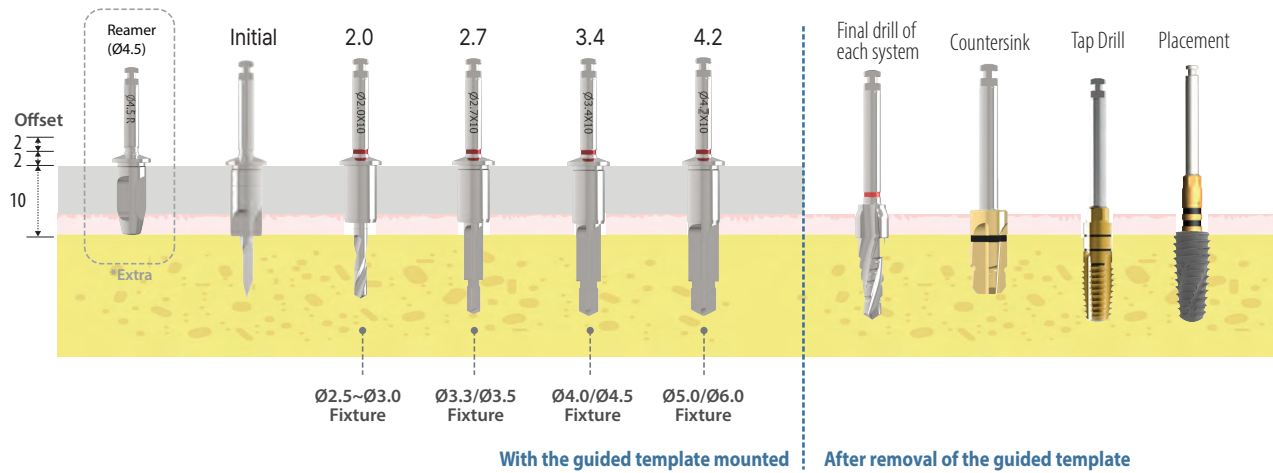


16mm Fixture

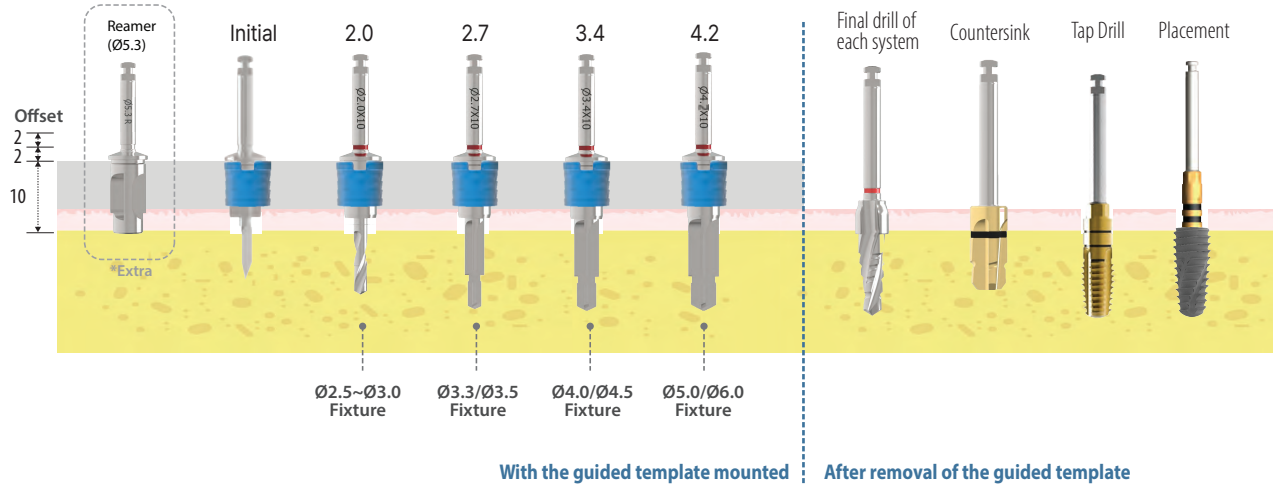
18mm Fixture

Drilling Sequence

Drilling Sequence (without sleeve)



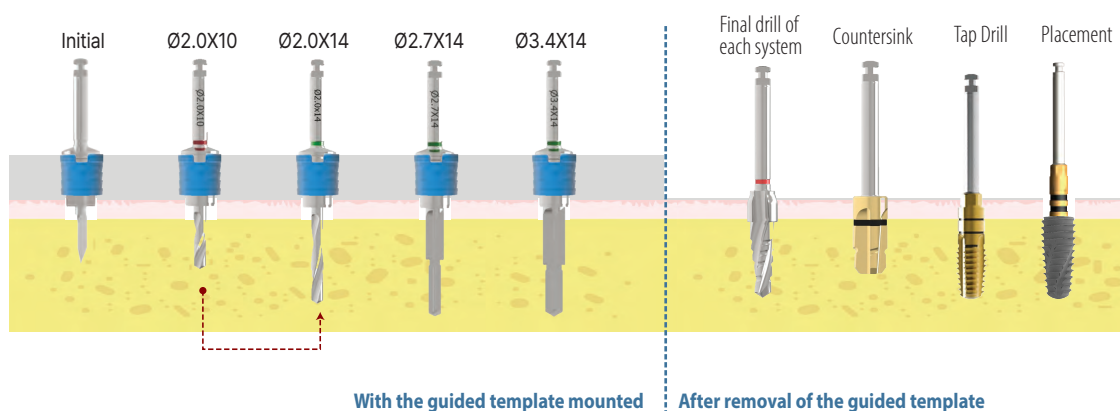
Drilling Sequence (with sleeve)



* Use 10mm Drill prior to 14mm Drill

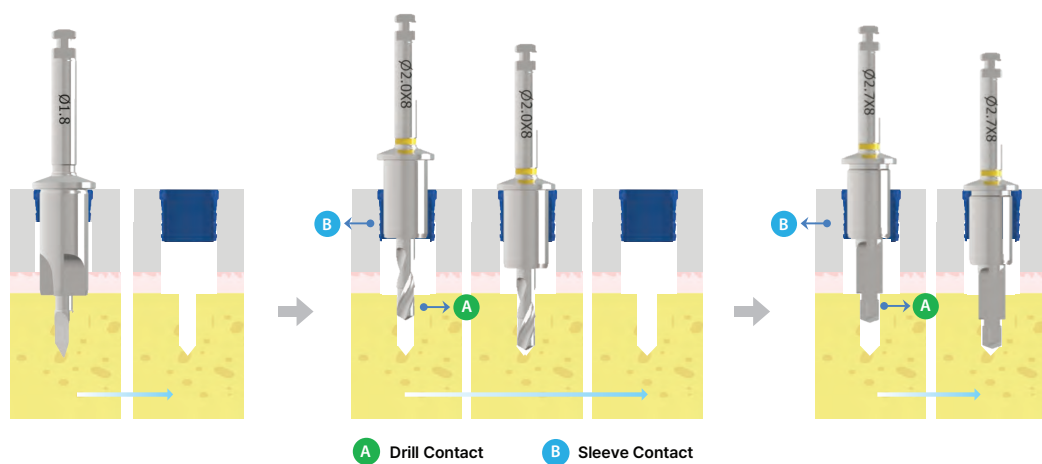
For the use of the 14mm Drill with accurate contact to the Sleeve, use the $\varnothing 2.0 \times 10\text{mm}$ Drill before using the 14mm Drill.

e.g.) 3.4 X 14mm Drilling Sequence



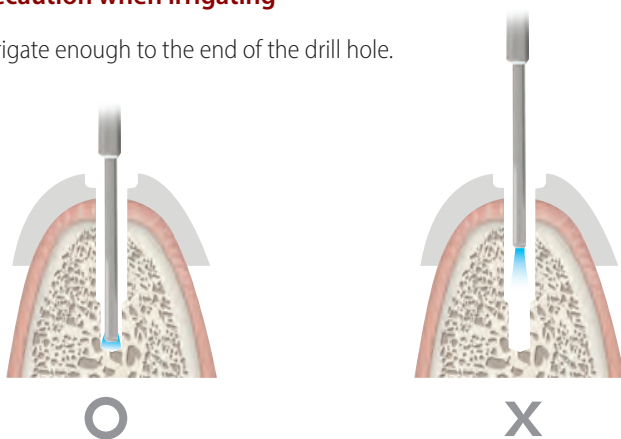
* Drilling method

- > Make sure with drilling in the desired direction without a change in the path through the primary Drill contact (A) with the hole created by the previous drilling and the secondary contact (B) with the Sleeve.
- > Create the hole using the Initial Drill and insert the next drill into the hole made during the previous step and Drill after achieving the Drill and Sleeve contact (A&B).
- > If drilling only with the Sleeve contact (B) without the Drill contact (A), the path may not be correct.



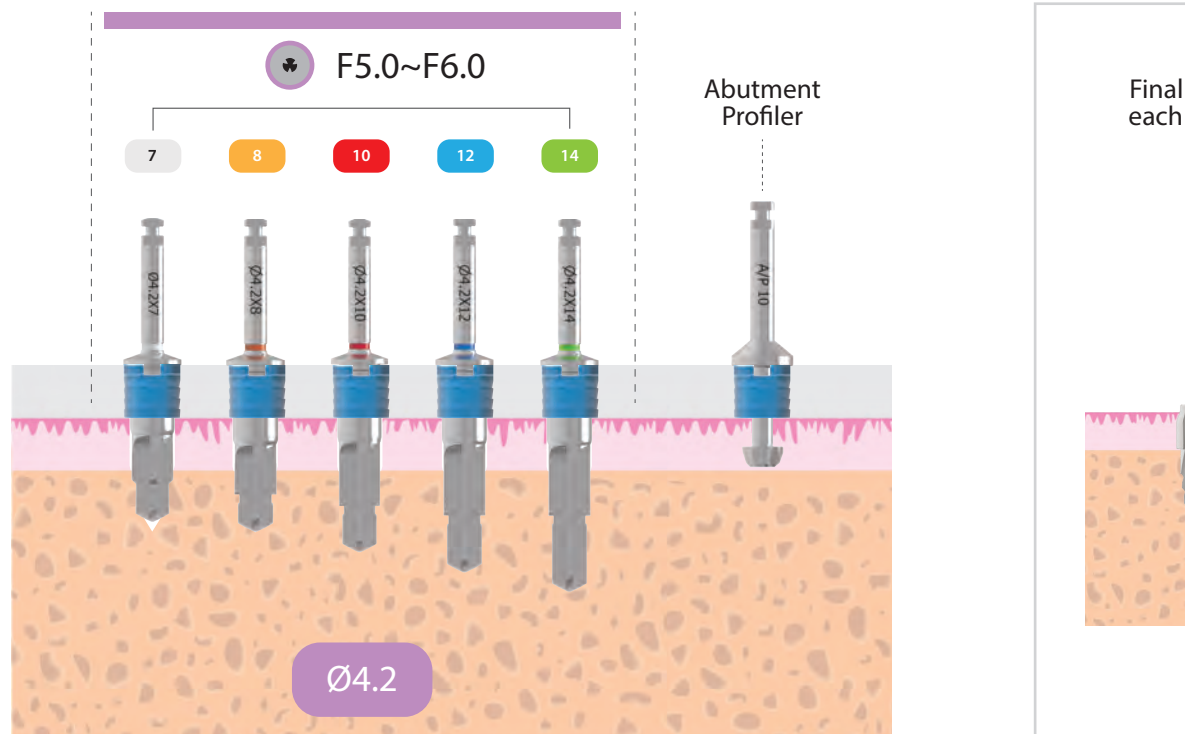
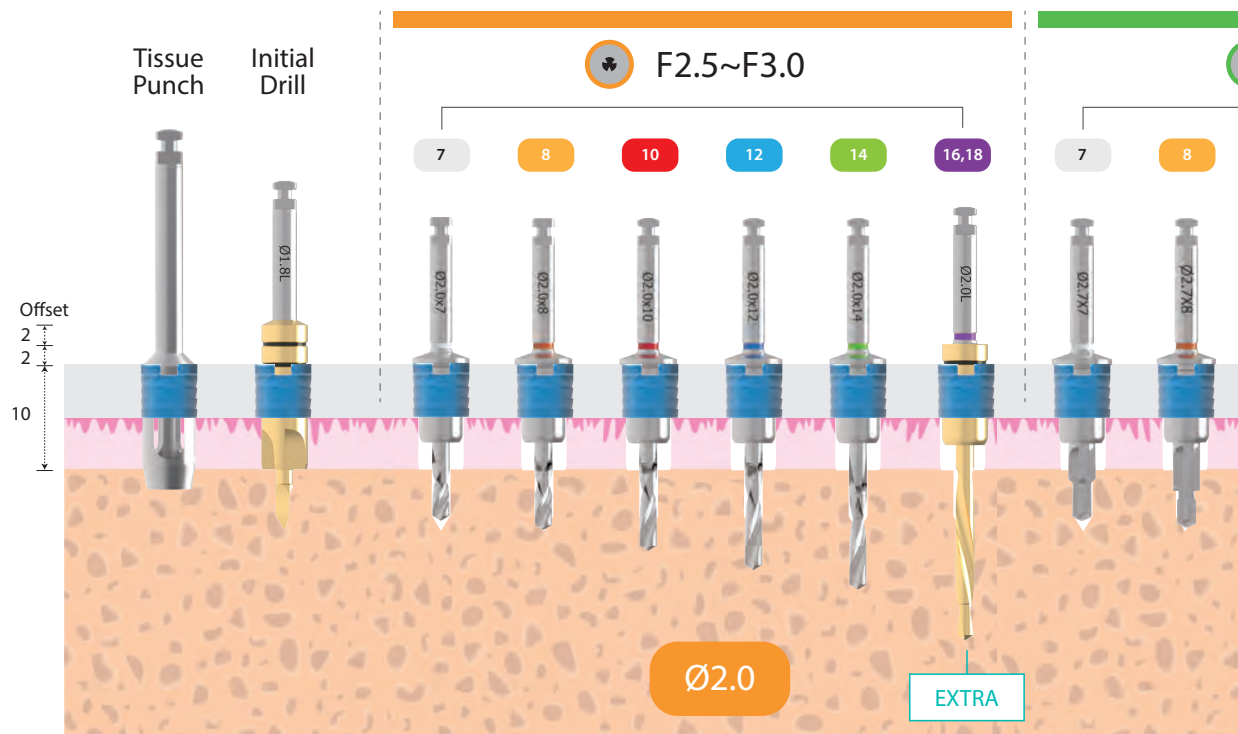
* Precaution when irrigating

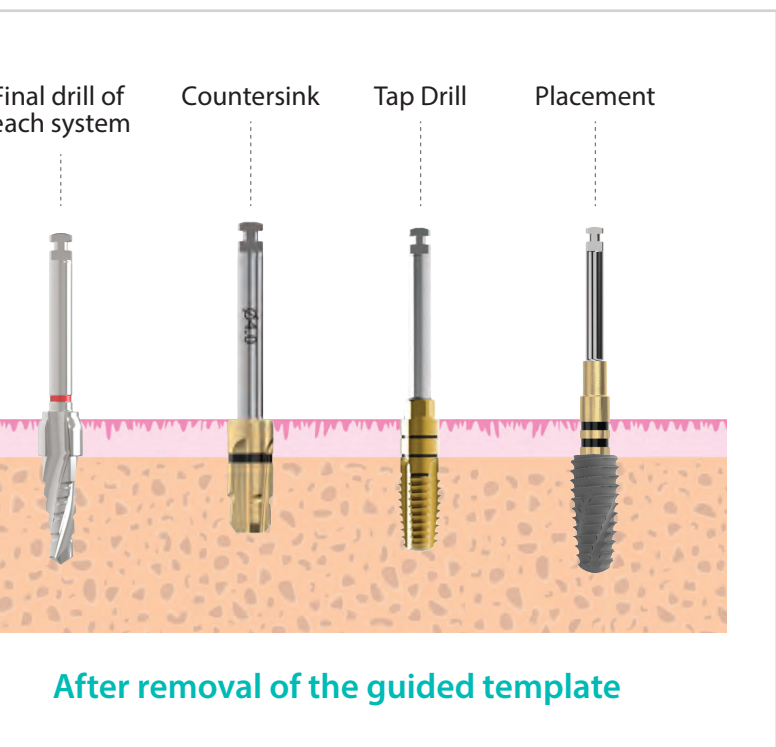
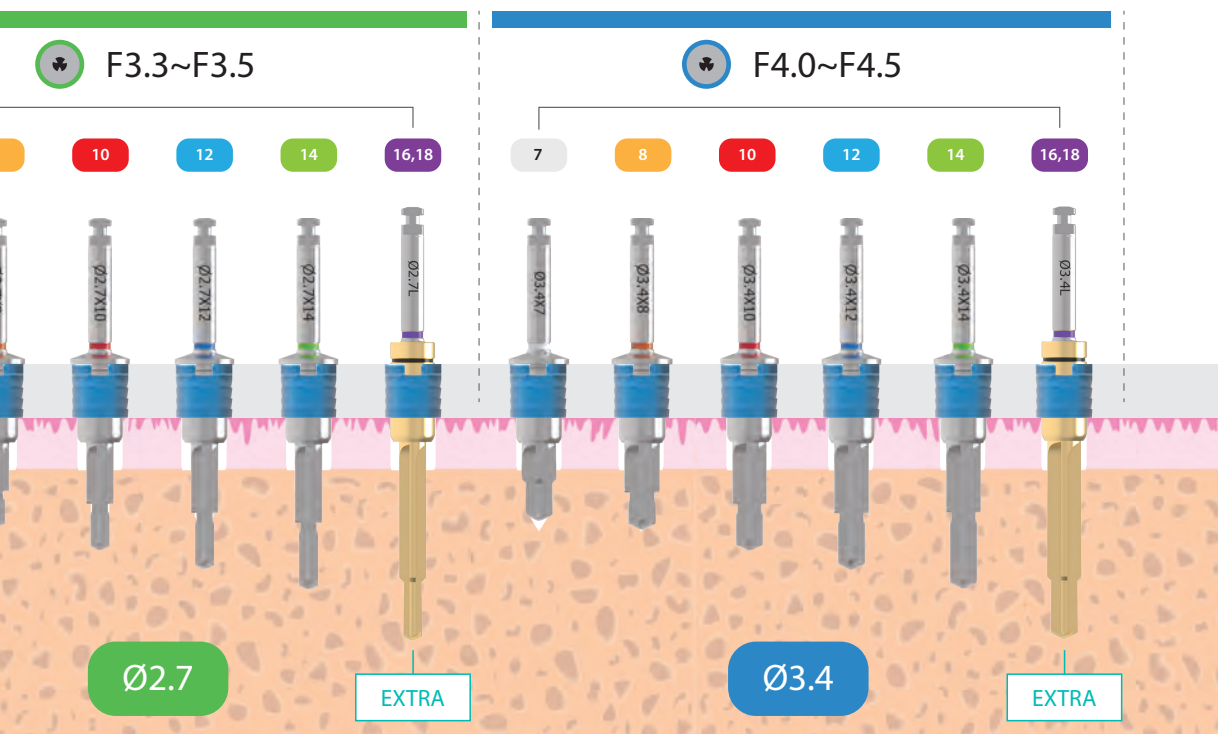
- > Irrigate enough to the end of the drill hole.



Drilling Sequence

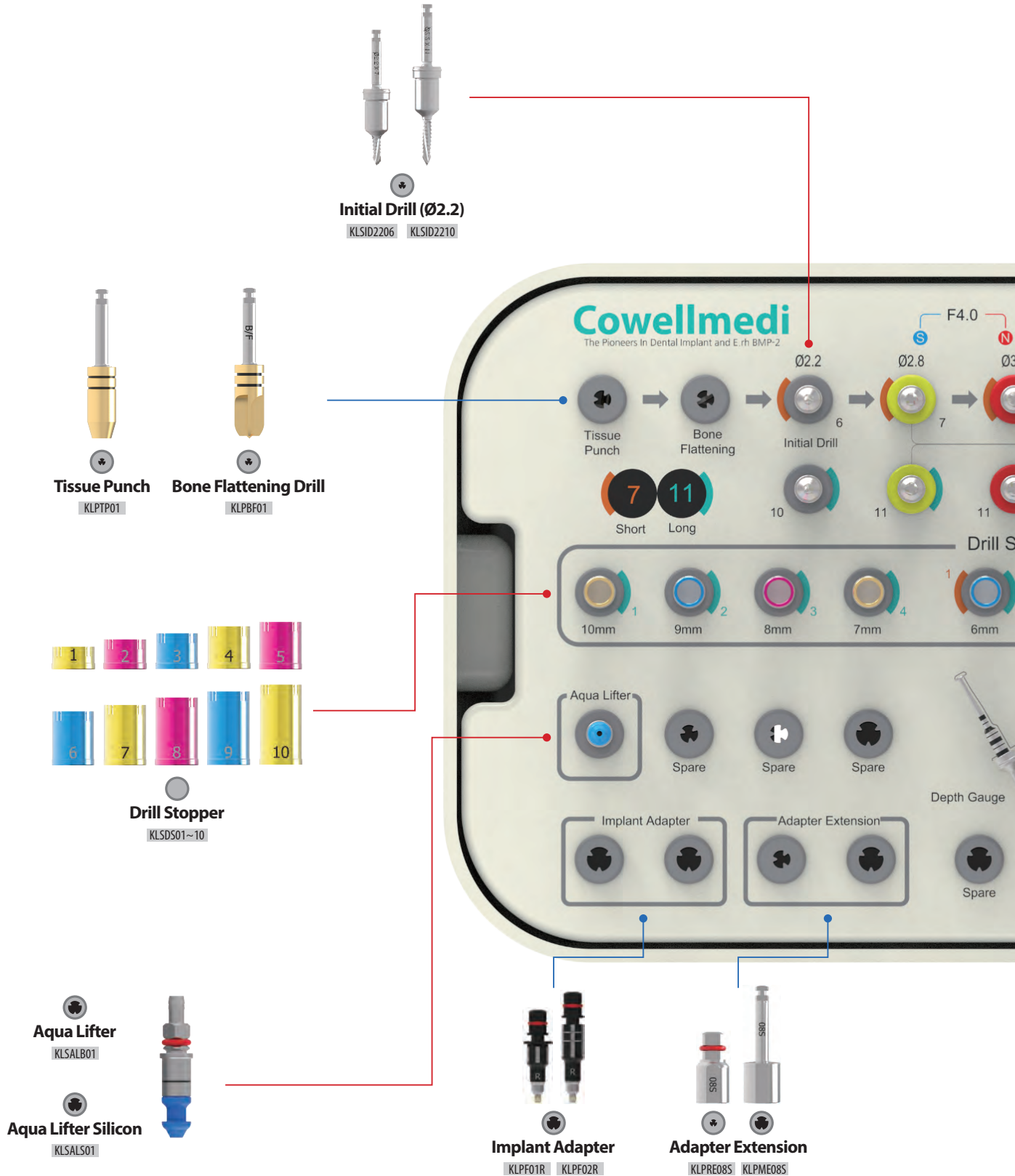
> Total drilling sequence with the Tissue Punches, Initial Drills, Pilot Drills, and Abutment Profilers.





Lodestar Sinus Kit [KLSS001]

- > Safety and Precision in maxillary sinus procedures with the surgical guide template.
- > Use the same sleeve as in the Lodestar Plus Kit for compatibility with all drills and instruments.





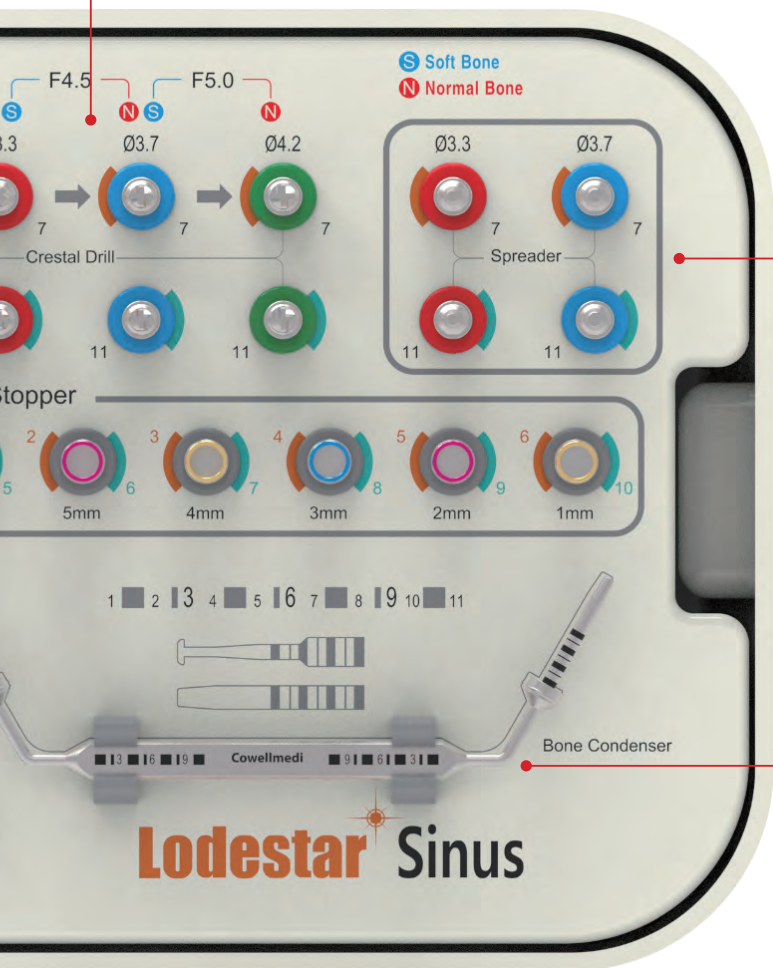
Crestal Drill
(Ø2.8/3.3/3.7/4.2)

- KLSCD2807
- KLSCD2811
- KLSCD3307
- KLSCD3311
- KLSCD3707
- KLSCD3711
- KLSCD4207
- KLSCD4211



Spreader
(Ø3.3/3.7)

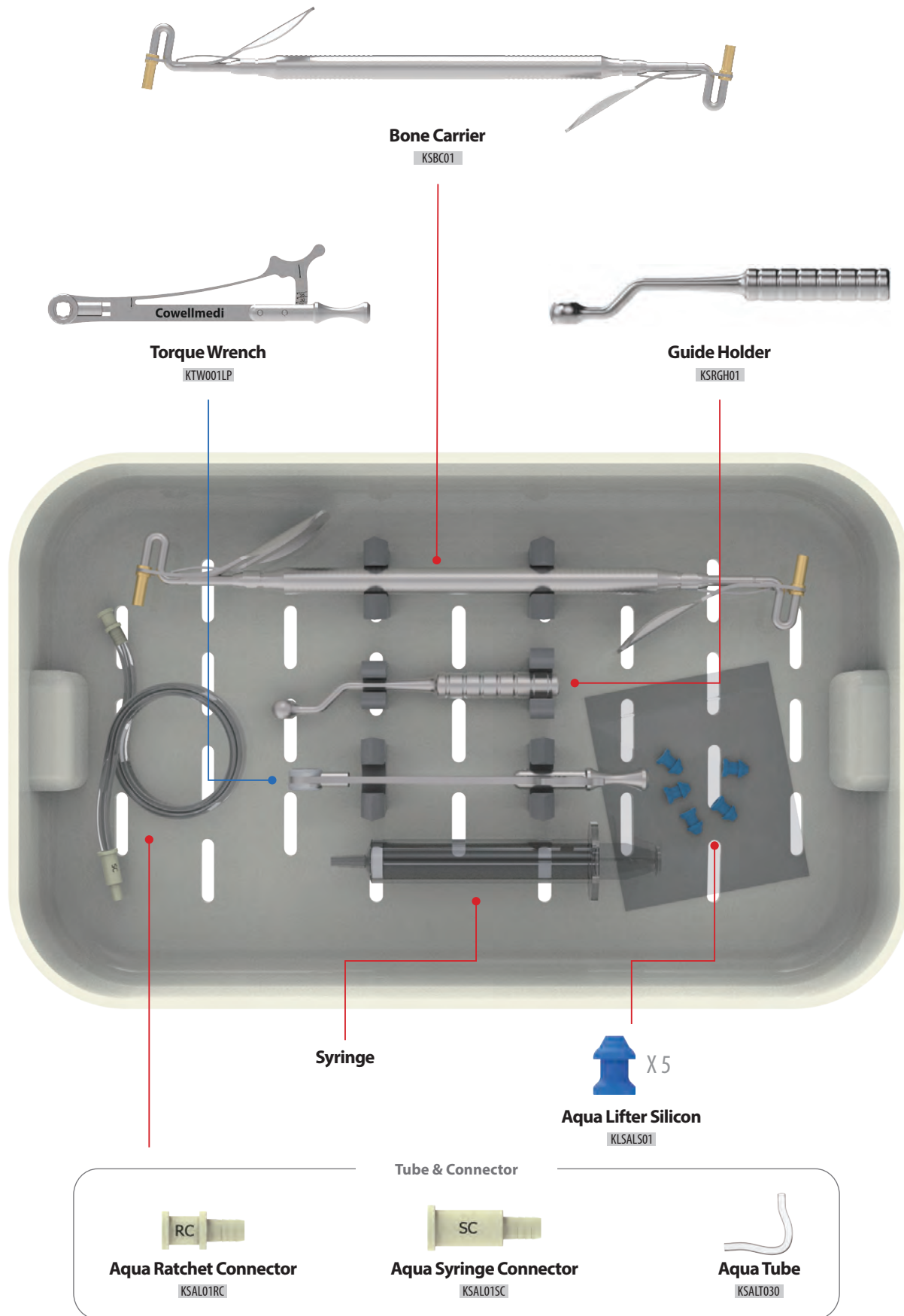
- KLSSD3307
- KLSSD3311
- KLSSD3707
- KLSSD3711



MF Controller

KLSMFC

- Standard Components
- Extra



Bone Carrier
KSBC01

Torque Wrench
KTW001LP

Guide Holder
KSRGH01

Syringe

Aqua Lifter Silicon
KLSALS01 X5

Tube & Connector



Aqua Ratchet Connector
KSAL01RC



Aqua Syringe Connector
KSAL01SC

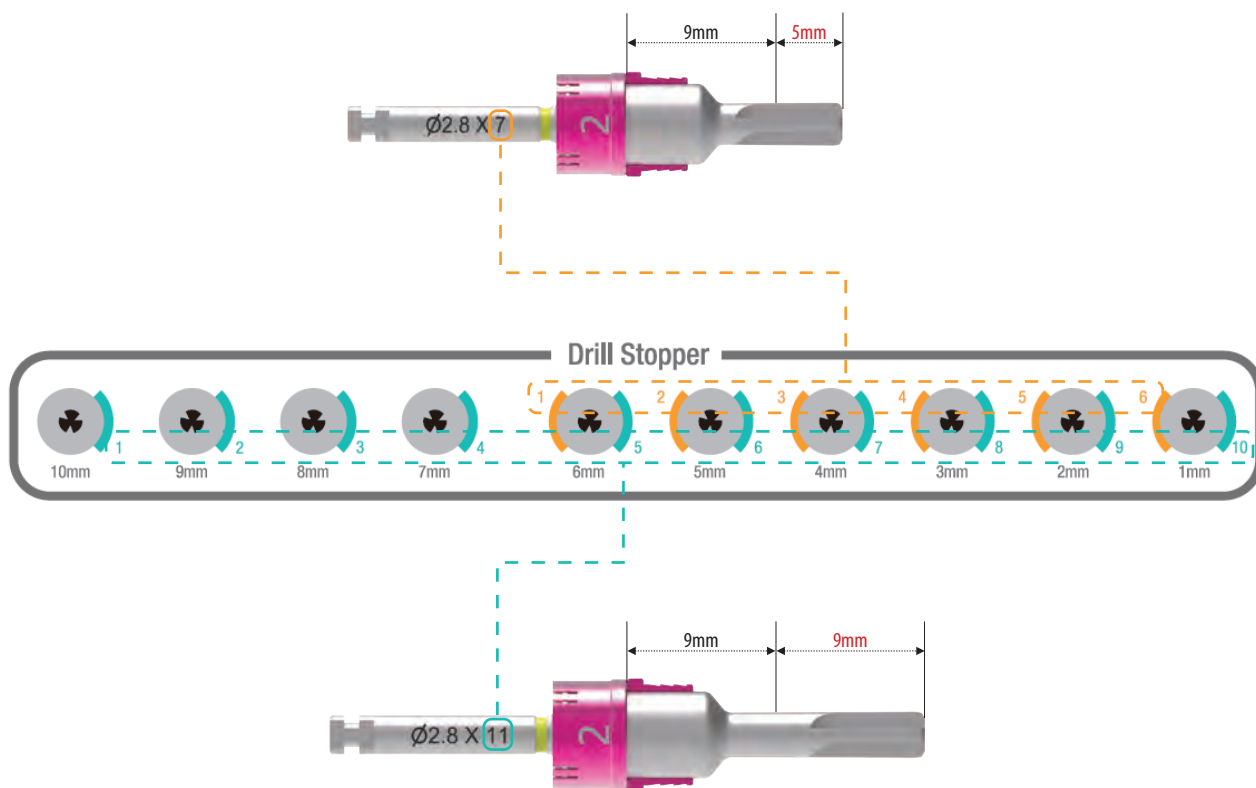


Aqua Tube
KSALT030

- Standard Components
- Extra

Drill Stopper

- > Use the Drill Stopper Sequentially, depending on the Residual Bone Height
- > Use stoppers of different colors based on lengths
- > Indicate the drilling depth when attaching the stopper to the drill : 7mm Drill - Orange, 11mm Drill - Blue
- > Have a range of sizes from 1mm to 10mm in 1mm steps, allowing you to easily adjust the drill depth for optimal precision



· H(mm)

Drill Stopper Selection Guide

> Drill - Offset 9mm

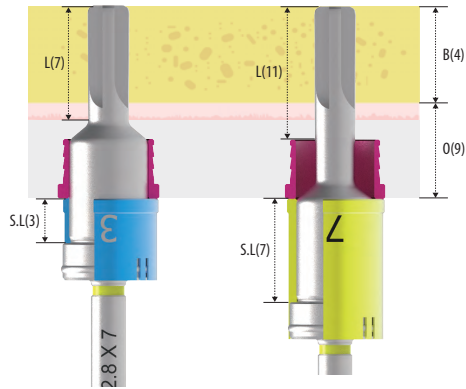
1. Choose an appropriate stopper based on the Residual Bone Height

· Drill Length(L) - Residual Bone Height(B) = Drill Stopper(D.S)

Ex) When the height of the bone is 4mm

· Short Drill : 7(Drill Length) - 4(Residual Bone Height) = 3(Drill Stopper)

· Long Drill : 11(Drill Length) - 4(Residual Bone Height) = 7(Drill Stopper)



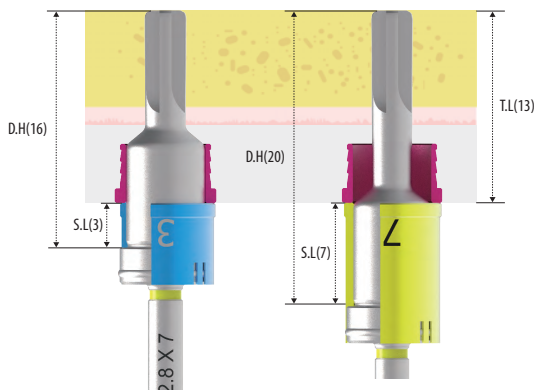
2. Choose an appropriate stopper based on Total length (Surgical Guide Top - Membrane)

· Drill height(D.H) - Total Length(T.L) = Drill Stopper(D.S)

Ex) When the total length is 13mm

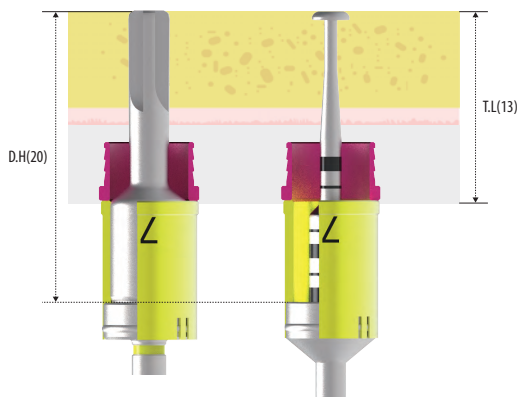
· Short Drill : 16(Drill Height) - 13(Total Length) = 3(Stopper Length)

· Long Drill : 20(Drill Height) - 13(Total Length) = 7(Stopper Length)



3. MF Controller

· Use stopper for a long drill

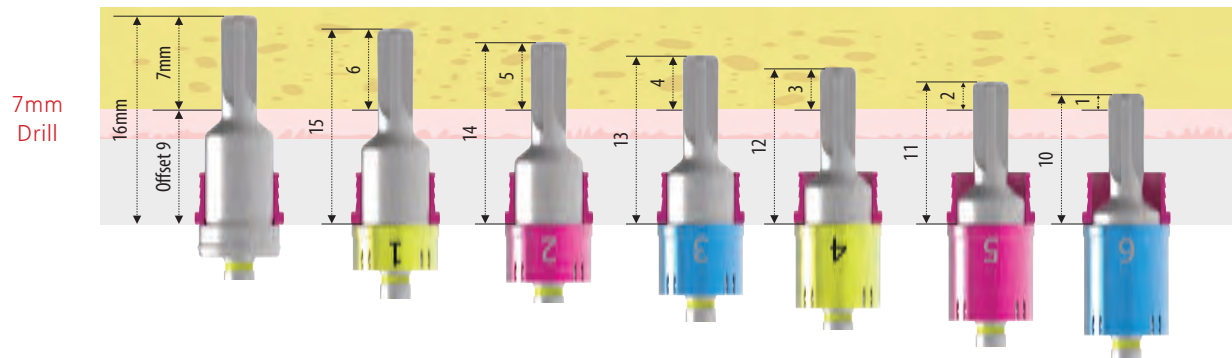


- > S.L : Stopper Length
- > T.L : Total Length
- > D.H : Drill Height
- > B : Residual Bone Height
- > O : Offset
- > L : Drill Length

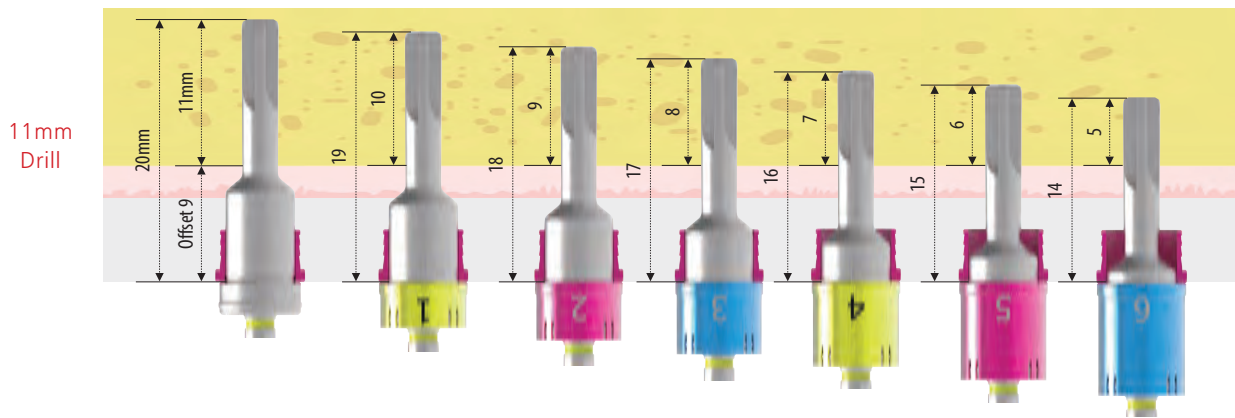
* When dealing with an 11mm offset, choose a stopper 2mm shorter, and if it is 13mm, it is recommended to utilize a stopper 2mm shorter,

The drilling depth is determined by the drill chosen, with variations

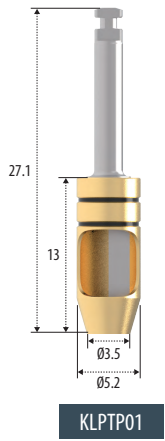
> 7mm Drill + Drill Stopper



> 11mm Drill + Drill Stopper



Tissue Punch **Extra**

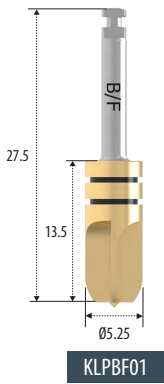


- > It is utilized for the excision of soft tissue, facilitating the precise incision of gingiva in a circular configuration
- > Small-diameter punch for postoperative hemostasis, minimal surgical traces, and rapid healing effects of wounds
- > Offset can be applied (9mm, 11mm, 13mm)
- > 50rpm without irrigation

Double blade
The internal cutting edge of the Tissue Punch cuts the gingiva into small pieces so that those can be removed by suction without extra work

*** Caution** The Tissue Punch must be kept clean. Otherwise, it may cause rust or damage on the blade due to residual gingival pieces or others in the Tissue Punch after the operation (remove the residual gingiva piece by explorer, steam etc.).

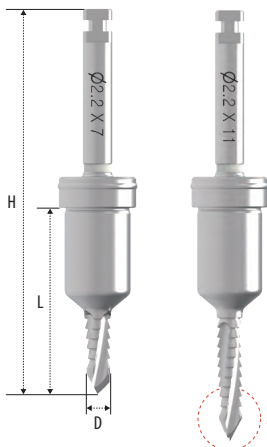
Bone Flattening Drill **Extra**



- > Flattens the bone level of the operation site
- > Inclined bone level may glide the Drill and can not drill as planned
- > Eliminates the soft tissue after using the Tissue Punch
- > The point in the middle of the Drill guides the position of the Drill and helps to the drill in an accurate site
- > Offset can be applied (9mm, 11mm, 13mm)
- > 400rpm without irrigation / 800rpm with irrigation

The point in the middle of the Drill guides the position of the Drill and helps to the drill in an accurate site

Initial Drill



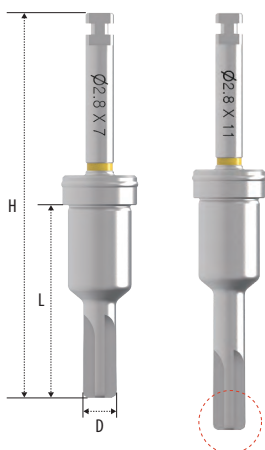
- > Use to make a guide hole before using crestal drill
- > Are used as the point drill and the Lindermann Drill. It ensures stability in drilling processes, enabling precise control over the drilling direction and preventing any sliding on challenging bone angles during procedures
- > The drill stoppers are used based on gingiva height for optimal precision
- > **Is shorter than Crestal Drill by 1mm**
- > Should be used at 800~1000 rpm

·Are used as the point drill and the Lindermann Drill. It ensures stability in drilling processes, enabling precise control over the drilling direction and preventing any sliding on challenging bone angles during procedures

Code	D(Ø)	L(mm)	H(mm)	Color Band
KLSID2206	2.2	15	31	White
KLSID2210	2.2	19	35	White

* Crestal Drill : L-1mm

Crestal Drill



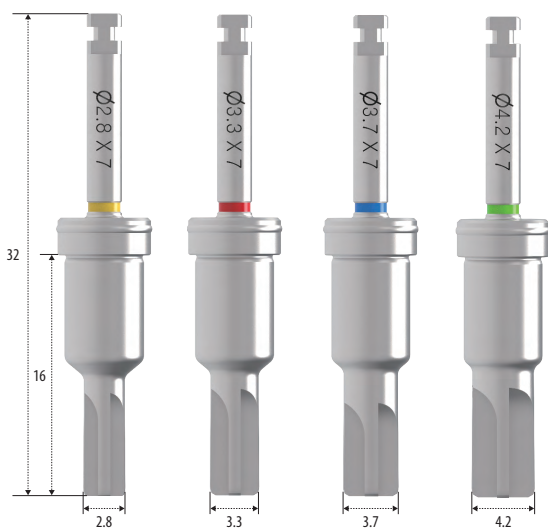
- > Be able to Safely elevate the membrane during maxillary sinus procedures with the rounded design of the drill edge.
- > To ensure safe membrane elevation, securely attach and use the Drill Stopper based on the height of the remaining bone
- > The diameter of Final drill can be chosen based on the bone density
- > When Drilling, autogenous bones would be harvested
- > Should be used at 500 ~ 800 rpm



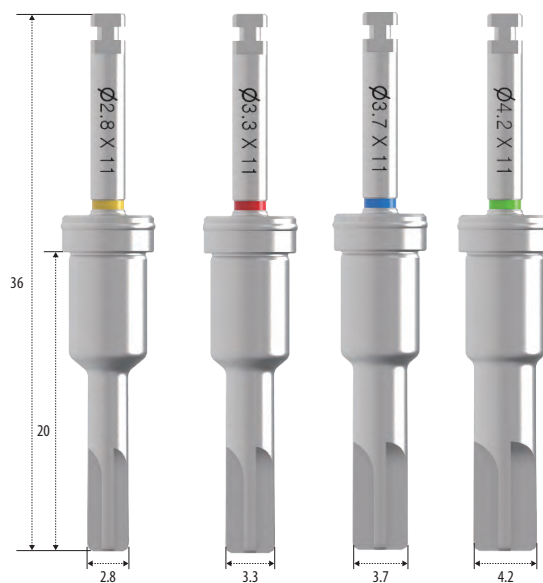
※ Flat floor edge minimize damage to membrane

Code	D(Ø)	L(mm)	H(mm)	Color Band
KLSCD2807	2.8	16	32	Yellow
KLSCD2811	2.8	20	36	Yellow
KLSCD3307	3.3	16	32	Red
KLSCD3311	3.3	20	36	Red
KLSCD3707	3.7	16	32	Blue
KLSCD3711	3.7	20	36	Blue
KLSCD4207	4.2	16	32	Green
KLSCD4211	4.2	20	36	Green

Crestal Drill - 7mm

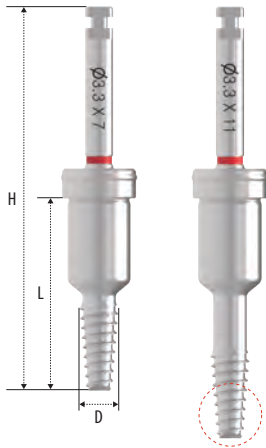


Crestal Drill - 11mm



Yellow	Ø2.8
Red	Ø3.3
Blue	Ø3.7
Green	Ø4.2

Spreader



- > When the remaining bone height is greater than 4mm, it is advisable to use a speed of 20-30 rpm for a gradual perforation of the maxillary sinus
- > Applying a taper design compresses the bone, leading to an initial boost in fixation strength
- > Choose an appropriate stopper based on the remaining bone
- > Should be used at 20-30rpm / 45Ncm



* Be safely elevated the maxillary sinus membrane by slowly trimming with the cutting blade of the front

Code	D(Ø)	L(mm)	H(mm)	Color Band
KLSSD3307	3.3	16	32	Red
KLSSD3311	3.3	20	36	Red
KLSSD3707	3.7	16	32	Blue
KLSSD3711	3.7	20	36	Blue

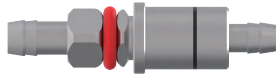
Aqua membrane Lifter System

> After confirming elevation of the cartilage of maxillary sinus, elevate membrane with the Aqua Membrane Lifter System



Aqua Lifter Silicon

KLSALS01



Aqua Lifter

KLSALB01



Aqua Ratchet Connector

KSAL01RC



Aqua Syringe Connector

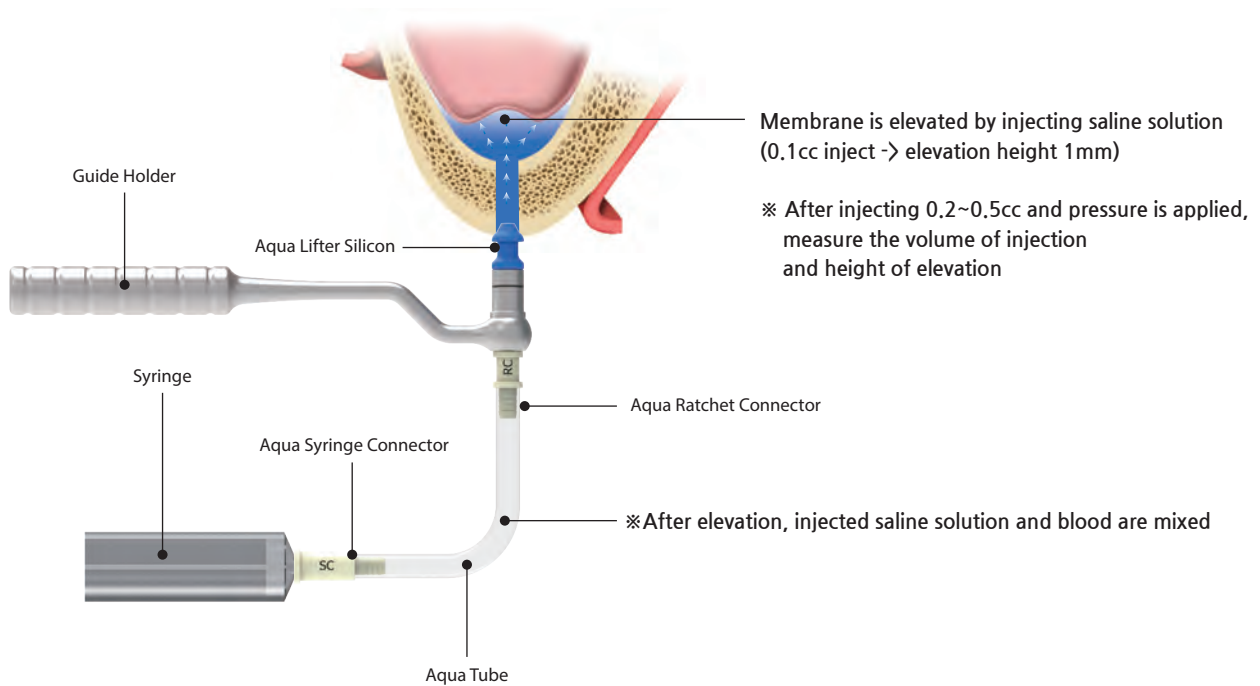
KSAL01SC



Aqua Tube

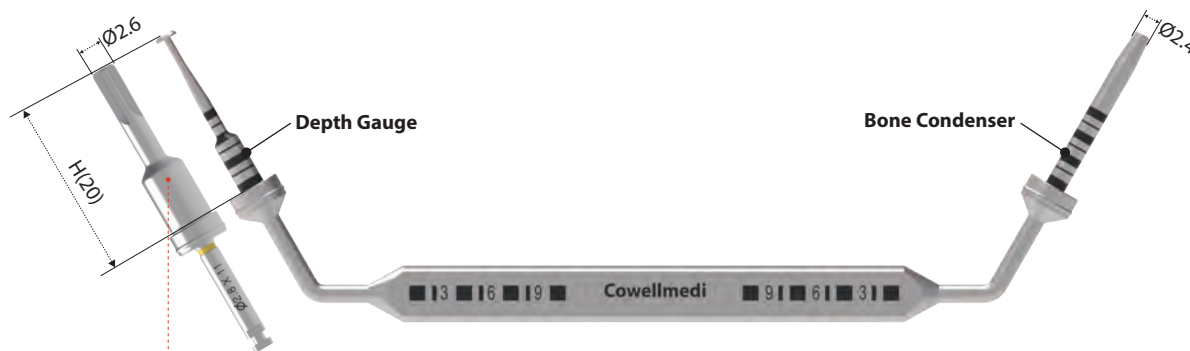
KSALT030

* Disposable medical devices

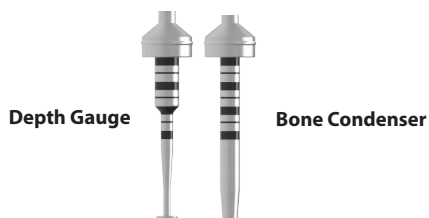


MF Controller

- > Use a single tool interchangeably for depth measurement and bone condensing purposes
- > Use drill stopper for the safe elevation
- > An 11mm drill is congruent in length with its 20mm height, featuring precise 1mm interval marking lines for accurate measurements
- > Depth Gauge : to assess the remaining bone depth and verify the elevation of the membrane
- > Bone Condenser : Insert bone graft materials to inside of maxillary sinus

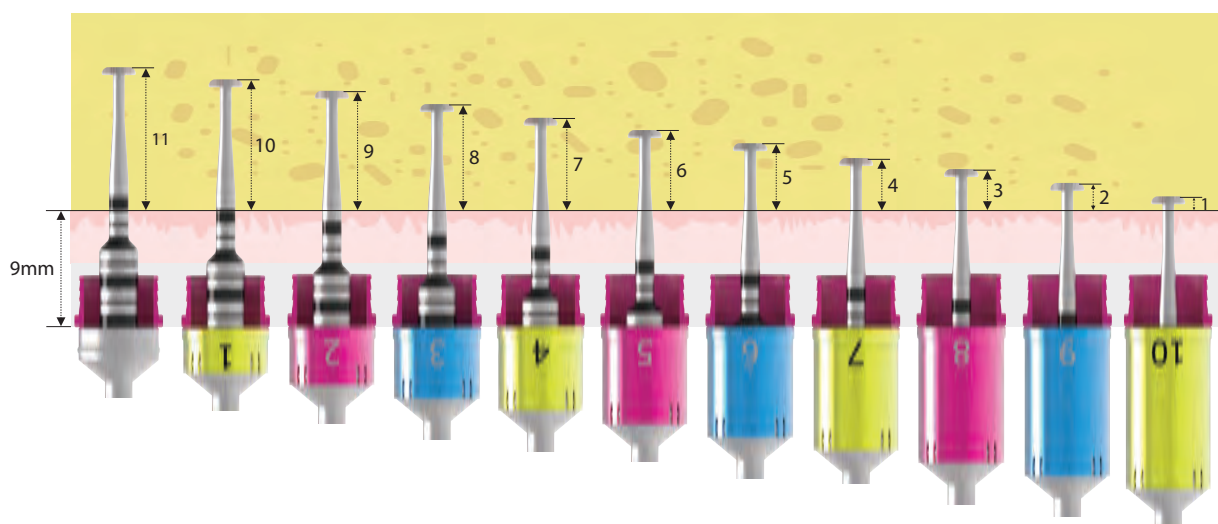


The 11mm drill is identical in height

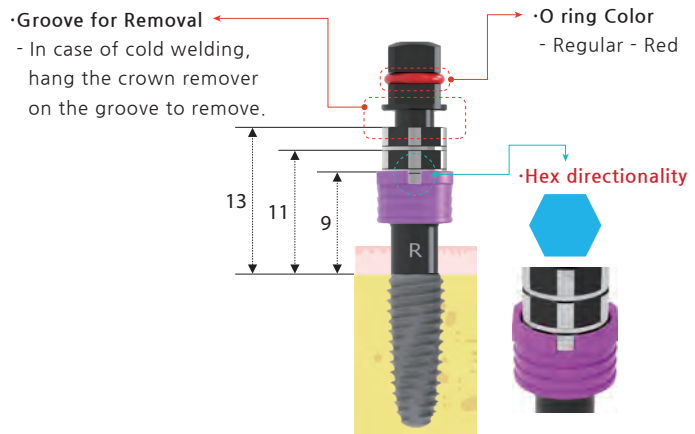
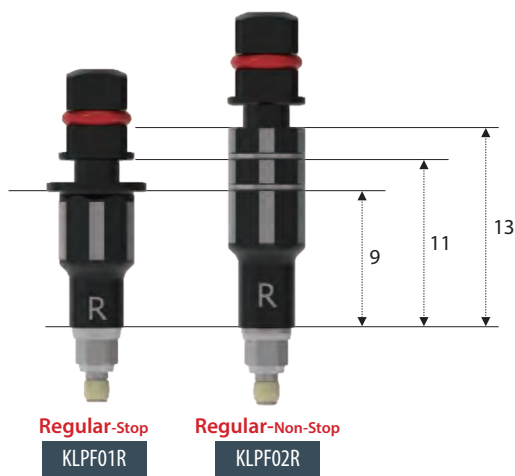


·Marking Line is the same

MF Controller + Stopper

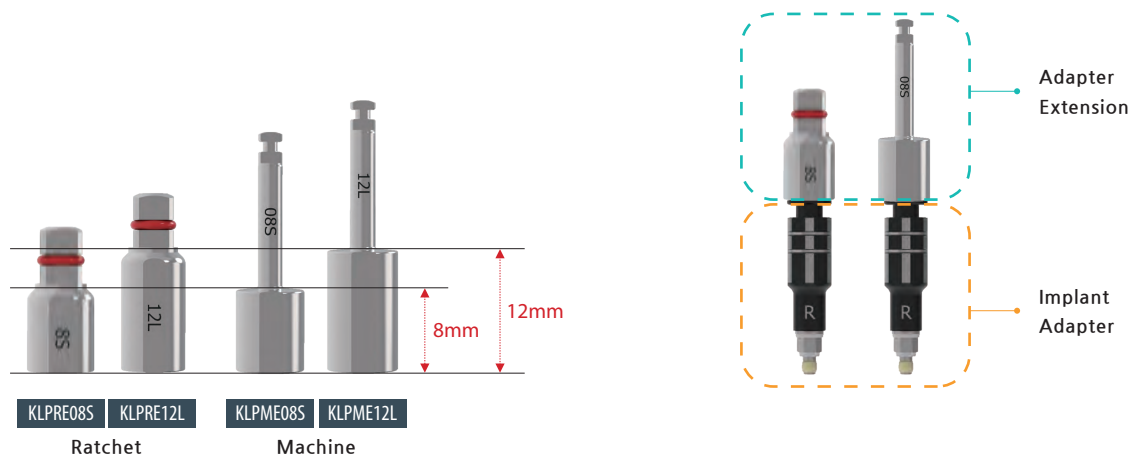


Implant Adapter *Extra*

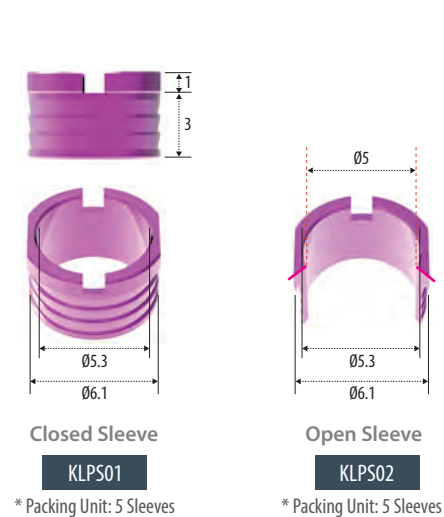


Adapter Extension *Extra*

> In case the Implant Adapter is too short to use, connect the Ratchet or Machine to Adapter Extension to place the fixture.



Sleeve *Extra*



Bone Carrier

> Insert bone graft material, using the Bone Carrier



KSBC01

Guide Holder

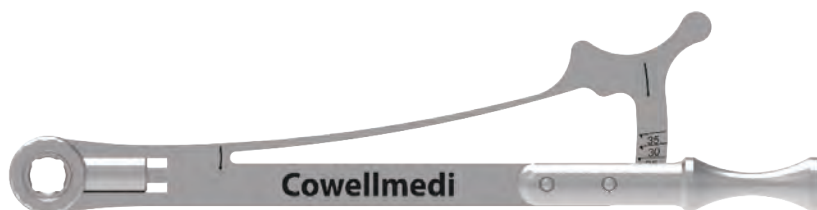
> Should be used with an Aqua lifter



KSRGH01

Torque Wrench *Extra*

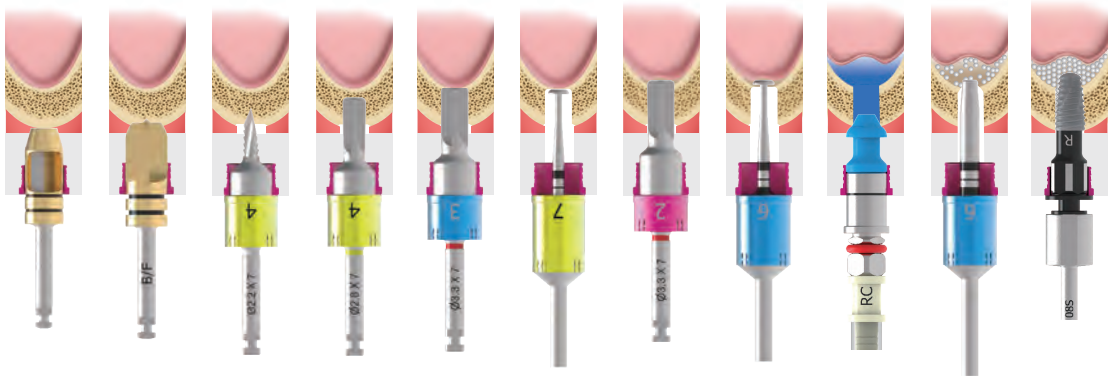
> Use during implant placement and should be attached to the implant connector



KTW001LP

Drill Protocol

> Residual Bone Height 4mm, Fixture Ø4.0



Bone Quality	Tissue Punch	Bone Flattening	Initial Drill (Ø2.2 X 7)	Crestal Drill	Crestal Drill	Crestal Drill	MF Controller	Crestal Drill	MF Controller	Aqua Lifter	MF Controller	Implant
Soft	▶	▶	▶	Ø2.8 X 7	Ø2.8 X 7	Depth	Ø2.8 X 7	Depth	▶	Condenser	▶	
Normal	▶	▶	▶	Ø3.3 X 7	Ø3.3 X 7	Depth	Ø3.3 X 7	Depth	▶	Condenser	▶	
Stopper			4	4	3	7	2	6		6		

Drill Protocol

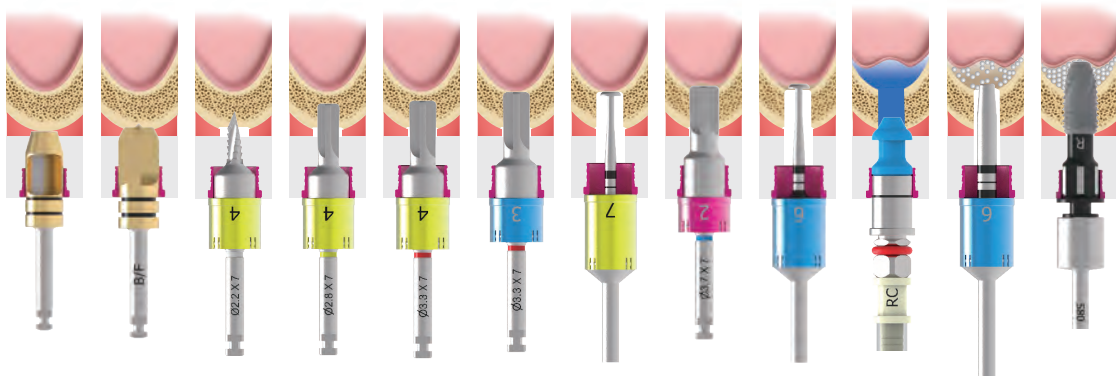
> Residual Bone Height 4mm, Fixture Ø4.5



Bone Quality	Tissue Punch	Bone Flattening	Initial Drill (Ø2.2 X 7)	Crestal Drill	Crestal Drill	Crestal Drill	MF Controller	Crestal Drill	MF Controller	Aqua Lifter	MF Controller	Implant
Soft	▶	▶	▶	Ø2.8 X 7	Ø3.3 X 7	Ø3.3 X 7	Depth	Ø3.3 X 7	Depth	▶	Condenser	▶
Normal	▶	▶	▶	Ø3.3 X 7	Ø3.3 X 7	Ø3.3 X 7	Depth	Ø3.3 X 7	Depth	▶	Condenser	▶
Stopper			4	4	4	3	7	2	6		6	

Drill Protocol

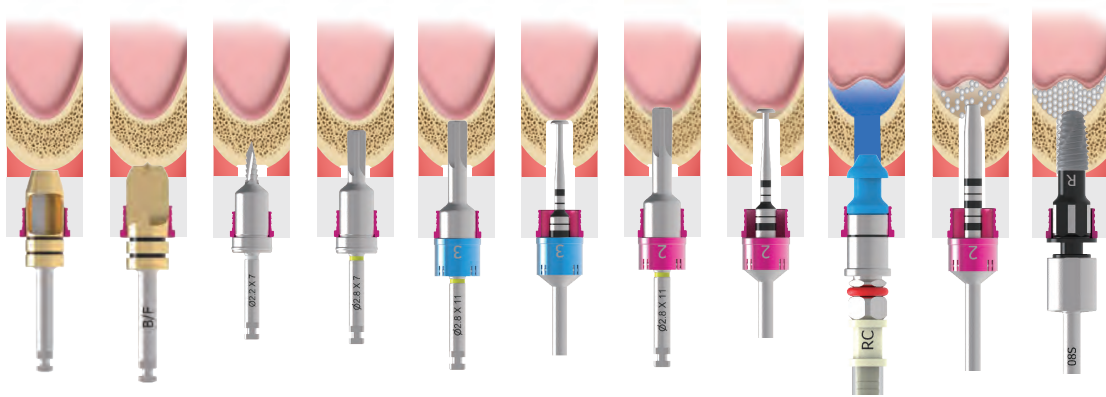
> Residual Bone Height 4mm, Fixture Ø5.0



Bone Quality	Tissue Punch	Bone Flattening	Initial Drill (Ø2.2 X 7)	Crestal Drill	Crestal Drill	Crestal Drill	MF Controller	Crestal Drill	MF Controller	Aqua Lifter	MF Controller	Implant
Soft	▶	▶	▶	Ø2.8 X 7	Ø3.7 X 7	Ø3.7 X 7	Depth	Ø3.7 X 7	Depth	▶	Condenser	▶
Normal	▶	▶	▶	Ø3.3 X 7	Ø4.2 X 7	Ø4.2 X 7	Depth	Ø4.2 X 7	Depth	▶	Condenser	▶
Stopper			4	4	4	3	7	2	6		6	

Drill Protocol

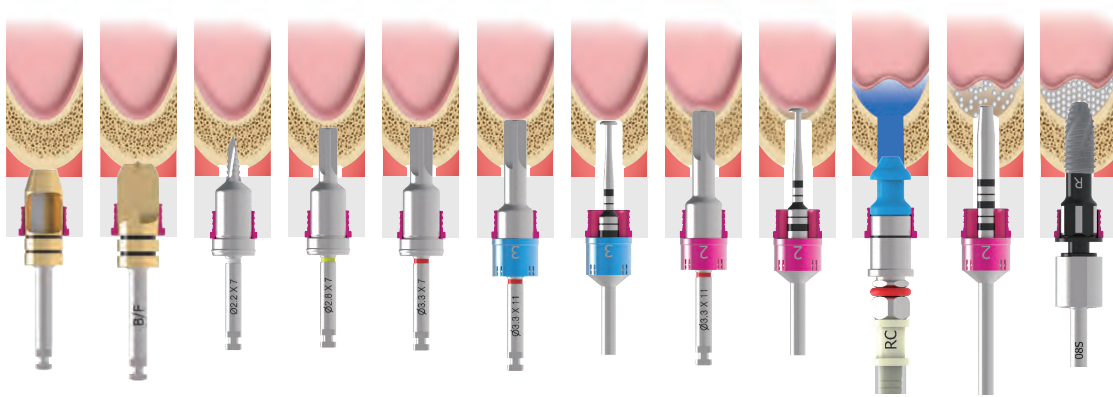
> Residual Bone Height 8mm, Fixture Ø4.0



Bone Quality	Tissue Punch	Bone Flattening	Initial Drill (Ø2.2 X 7)	Crestal Drill	Crestal Drill	MF Controller	Crestal Drill	MF Controller	Aqua Lifter	MF Controller	Implant
Soft	▶	▶	▶	Ø2.8 X 7	Ø2.8 X 11	Depth	Ø2.8 X 11	Depth	▶	Condenser	▶
Normal	▶	▶	▶	Ø3.3 X 7	Ø3.3 X 11	Depth	Ø3.3 X 11	Depth	▶	Condenser	▶
Stopper					3	3	2	2		2	

Drill Protocol

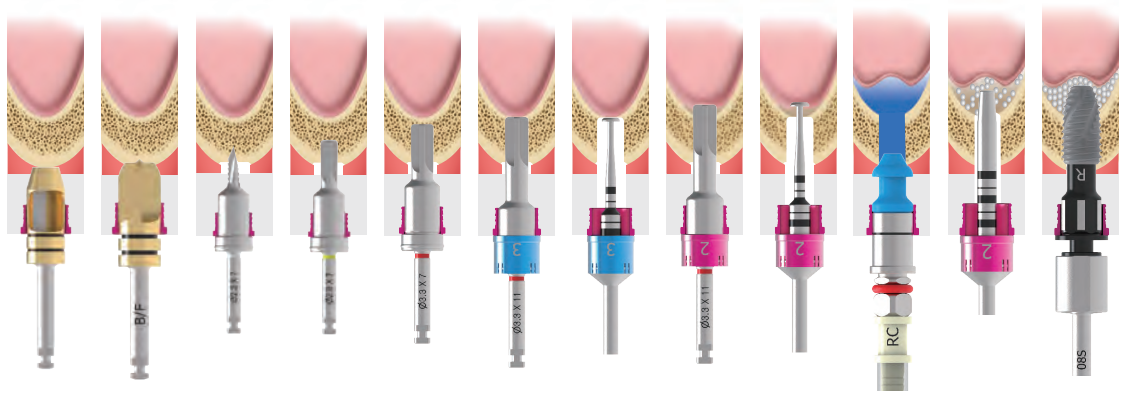
> Residual Bone Height 8mm, Fixture Ø4.5



Bone Quality	Tissue Punch	Bone Flattening	Initial Drill (Ø2.2 X 7)	Crestal Drill	Crestal Drill	Crestal Drill	MF Controller	Crestal Drill	MF Controller	Aqua Lifter	MF Controller	Implant
Soft	▶	▶	▶	Ø2.8 X 7	Ø3.3 X 7	Ø3.3 X 11	Depth	Ø3.3 X 11	Depth	▶	Condenser	▶
Normal	▶	▶	▶	Ø3.3 X 7	Ø3.7 X 7	Ø3.7 X 11	Depth	Ø3.7 X 11	Depth	▶	Condenser	▶
Stopper						3	3	2	2		2	

Drill Protocol

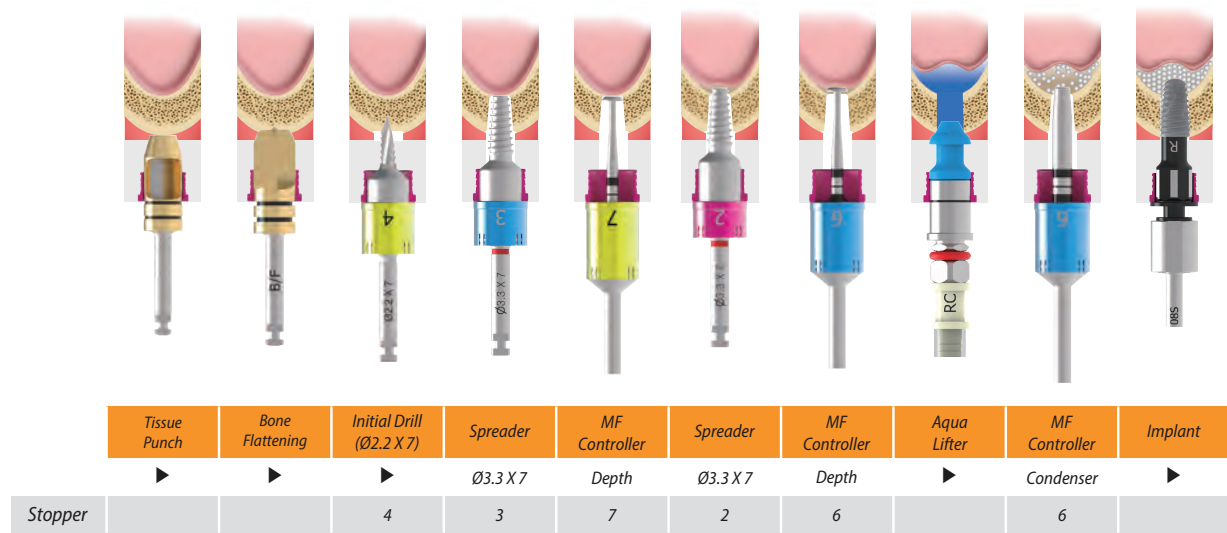
> Residual Bone Height 8mm, Fixture Ø5.0



Bone Quality	Tissue Punch	Bone Flattening	Initial Drill (Ø2.2 X 7)	Crestal Drill (Ø2.8 X 7)	Crestal Drill (Ø3.7 X 7)	Crestal Drill (Ø3.7 X 11)	MF Controller	Crestal Drill (Ø3.7 X 11)	MF Controller	Aqua Lifter	MF Controller	Implant
Soft	▶	▶	▶	Ø2.8 X 7	Ø3.7 X 7	Ø3.7 X 11	Depth	Ø3.7 X 11	Depth	▶	Condenser	▶
Normal	▶	▶	▶	Ø3.3 X 7	Ø4.2 X 7	Ø4.2 X 11	Depth	Ø4.2 X 11	Depth	▶	Condenser	▶
Stopper						3	3	2	2		2	

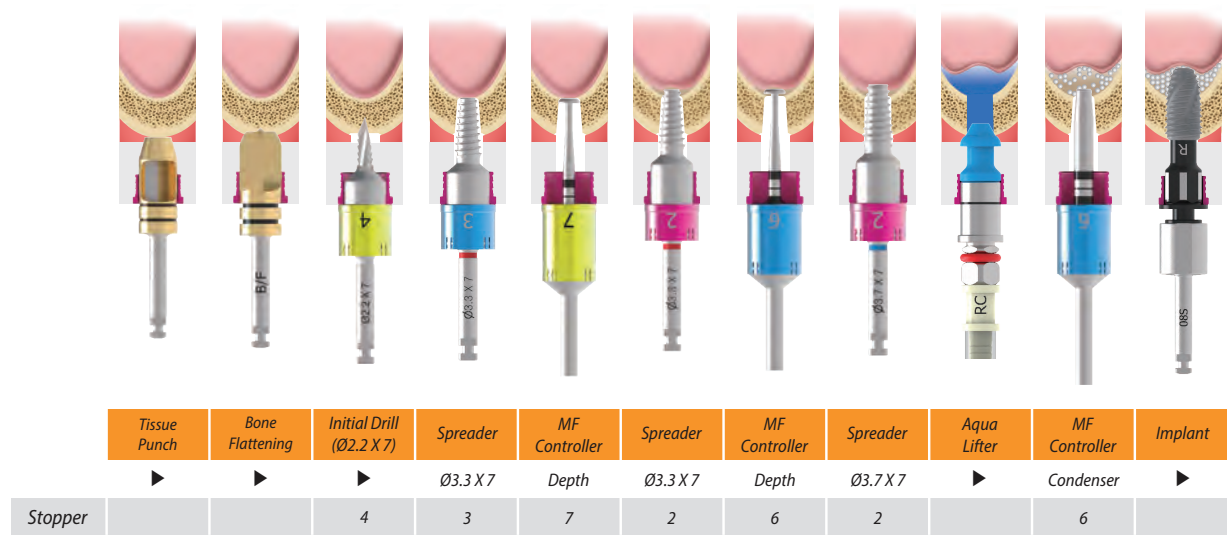
Drill Protocol - Spreader

> Residual Bone Height 4mm, Fixture Ø4.0, Ø4.5



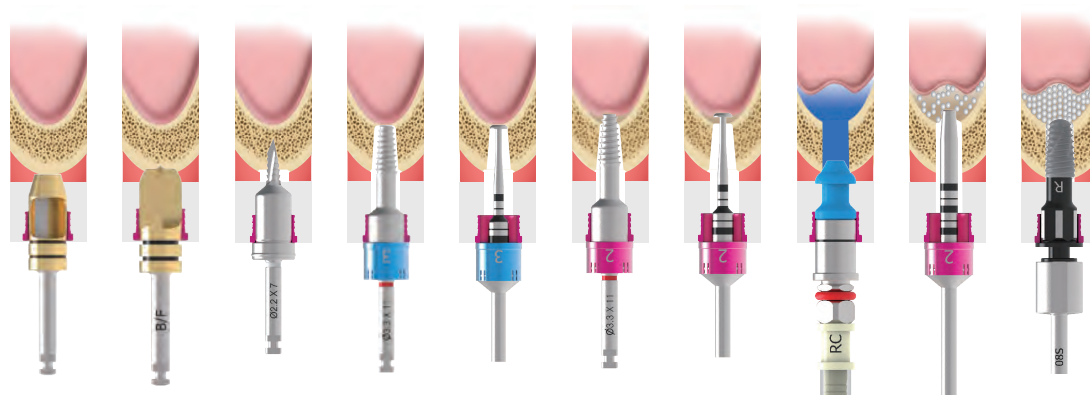
Drill Protocol - Spreader

> Residual Bone Height 4mm, Fixture Ø5.0



Drill Protocol - Spreader

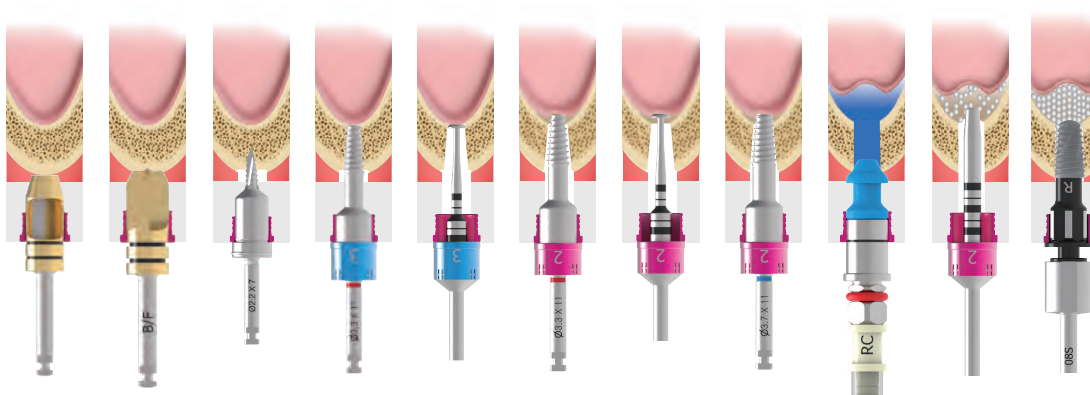
> Residual Bone Height 8mm, Fixture Ø4.0, Ø4.5



	Tissue Punch	Bone Flattening	Initial Drill (Ø2.2 X 7)	Spreader	MF Controller	Spreader	MF Controller	Aqua Lifter	MF Controller	Implant
	▶	▶	▶	Ø3.3 X 11	Depth	Ø3.3 X 11	Depth	▶	Condenser	▶
Stopper				3	3	2	2		2	

Drill Protocol - Spreader

> Residual Bone Height 8mm, Fixture Ø5.0



	Tissue Punch	Bone Flattening	Initial Drill (Ø2.2 X 7)	Spreader	MF Controller	Spreader	MF Controller	Spreader	Aqua Lifter	MF Controller	Implant
	▶	▶	▶	Ø3.3 X 11	Depth	Ø3.3 X 11	Depth	Ø3.7 X 11	▶	Condenser	▶
Stopper				3	3	2	2	2		2	