CASANGELS
中 科 安 齿



CASANGELS DENTAL IMPLANT SYSTEM

PRODUCT MANUAL

Contents

01	01	Company Profile
	03	Enterprise Patent
	05	Development History
02	07	Implant Features
	11	CASANGELS Implant
	12	Prosthetic Components
03	29	Surgical Tool Kits
	31	Surgical Drills
	33	Surgical Kits
04	35	Official Platform



CRAFTED WITH PRECISION
ENGINEERED TO PERFECTION



COMPANY PROFILE



CASANGELS is a National High-Tech Enterprise incubated by the Chinese Academy of Sciences, specializing in the research and manufacture of dental implants and restorative products. Upholding the spirit of "Crafted with ingenuity, perfected in precision," we are dedicated to create a high-end oral medical device brand.

Our company possesses international first-class modern production lines and equipment, It adheres to the strictest quality management system, with each product undergoing 17 inspection processes and passing 67 quality checks before being releeased.

Committed to independent innovation, the company holds numerous patents and intellectual property rights. Meanwhile, we cooperate with renowned medical schools, scientific research institutions, and top clinical experts domestically and internationally. The company has led and participated in the development of multiple industry standards and has served more than 8,000 dental medical institutions. We are committed to simplifying and securing the dental implantation process, providing doctors and patients with superior dental implant products and services.



COOPERATIVE AGENCY

- Partnered with Sun Yat-sen University in strategic R&D optimization of functional dental implant systems and surgical instrument.
- Engineered precision positioning devices for robotic-assisted dental implantation systems at Fourth Military Medical University.
- Collaborated with Southern Medical University on pioneering development of 3D-printed customized dental implants.
- Jointly collaborated with the Precision Engineering Institute of the Chinese University of Hong Kong and the Faculty of Dentistry of the University of Hong Kong on technical cooperation for new repair methods of oral cancer.
- Collaborated with McMaster University (Canada) in comprehensive R&D program on 3D-printed oral maxillofacial, neurosurgical, and orthopedic implants, encompassing biological evaluation and clinical applications.

ENTERPRISE PATENT

Our dental implant patents rank among the industry leaders.



Over 400
Total Granted Patents

40%
Of national patents in this field


发明专利证书
国家知识产权局
专利登记簿副本
EC Certificate
认证证书

16 YEARS

2009
PROJECT INCUBATION LAUNCHED UNDER CAS

2011
ESTABLISHED THE R&D PLATFORM FOR DENTAL IMPLANT SYSTEMS

2015
CASANGELS FOUNDED

2017
CASANGELS IMPLANT PRODUCTS OBTAINED EU CE LICENSE

2018
ESTABLISHED INTERNATIONAL ADVANCED ORAL MEDICAL DEVICE HEADQUARTERS IN GBA



ENTERPRISE DEVELOPMEN

2019
RECEIVED INVESTMENT FROM RENOWNED INSTITUTIONS

2020
DENTAL IMPLANT SYSTEM GRANTED NMPA REGISTRATION CERTIFICATE

2021
ABUTMENT SYSTEM & SURGICAL DRILLS GRANTED NMPA REGISTRATION CERTIFICATE

2022
CUSTOMIZED ABUTMENT GRANTED NMPA REGISTRATION CERTIFICATE

2023
CUSTOMIZED IMPLANT GUIDES GRANTED NMPA REGISTRATION CERTIFICATE

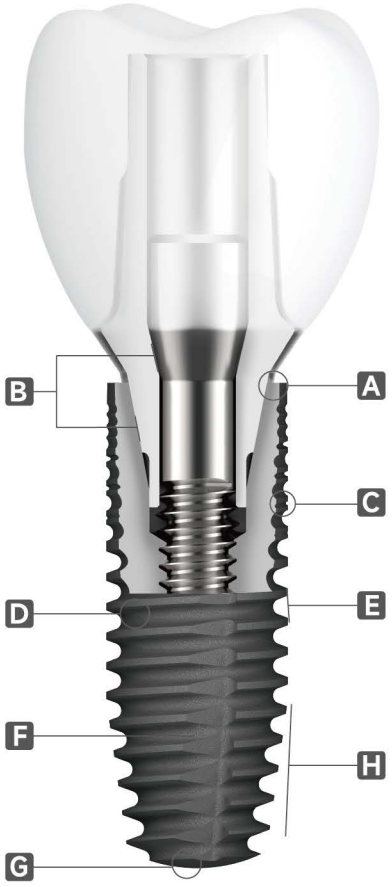
2024
ABUTMENT SCREW CHANNEL FILLERS GRANTED NMPA REGISTRATION CERTIFICATE

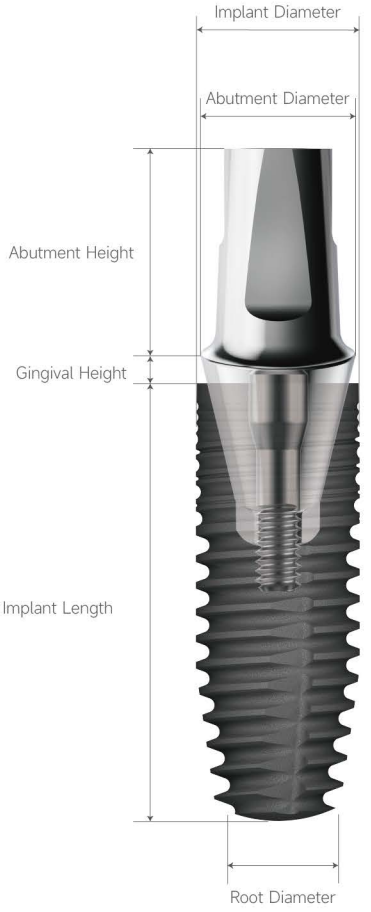
2025
SOUTH CHINA INNOVATION HEADQUARTERS FULLY OPERATIONAL



NT HISTORY

CASANGELS Implant Features





Implant Color Marking



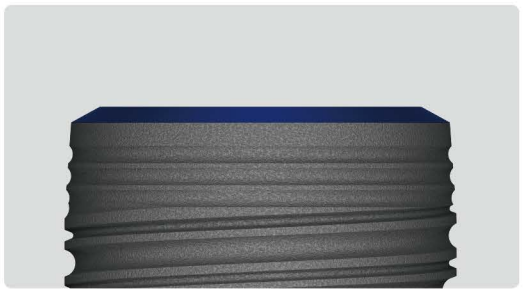
3.5 Implant



4.3 Implant

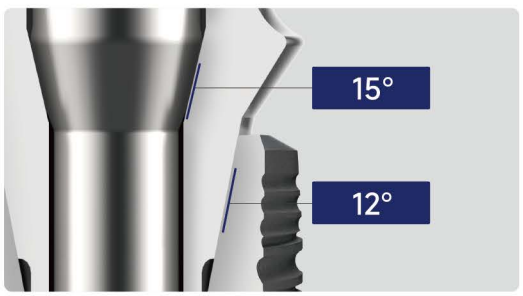


5.0 Implant



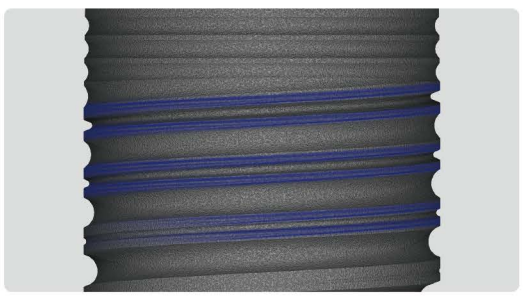
A Biological Seal with Platform Switching

Optimized cervical biomechanics and sealing reduce marginal bone resorption, preserve more hard and soft tissues, and lower the risk of peri-implantitis.



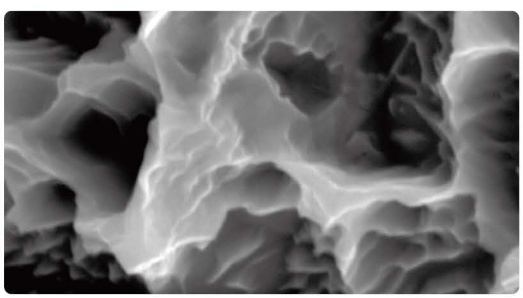
B Patented Double-Sided Integrated Connection Design

Disperses occlusal stress for stable restorations
Stress distribution ensures restoration stability



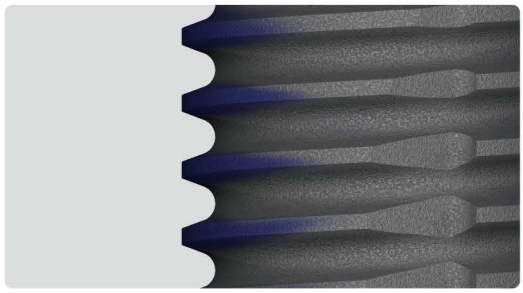
C Graded Double-Thread Design

Increases bone contact area for better primary stability, enhances osseointegration, and improves secondary stability.



D Next-Generation S.L.A Surface Treatment

Zirconia sandblasted, ultra-clean with zero residuals, significantly accelerating osseointegration.



E Unique Self-Tapping Thread

Facilitates implant placement while maintaining long-term stable loading of trabecular bone.



F Self-Tapping Cutting Edges

Sharp cutting edges relieve lateral bone pressure, while ideal chip evacuation space enhances tapping efficiency.



G Safe Apex Geometry

Effectively protects the anatomical structures below the implant and reduces the risk of perforation in low-density bone regions.



H Micro-Tapered Body Design

Adaptable to various bone conditions, achieving excellent primary stability even in cancellous bone.

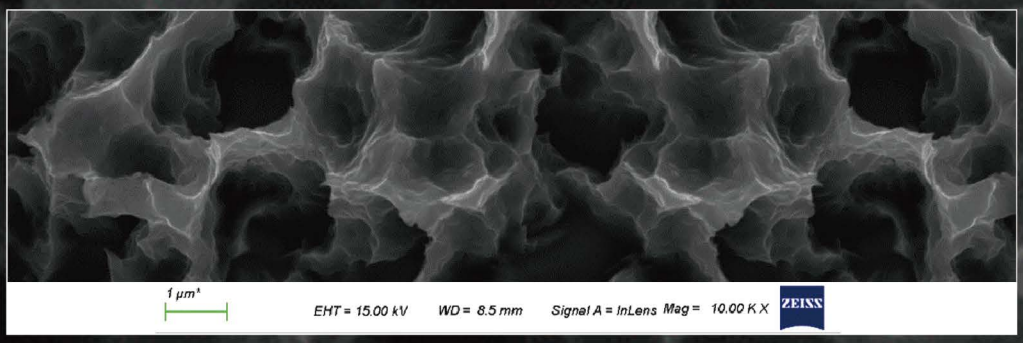
New Generation Patented S.L.A Surface Treatment Technology

PATENT NO.: ZL 201610063596.9

Independently developed Zirconia Sandblasting and Fully Automated Acid Etching Technology

- No aluminum is contained in the entire production and manufacturing process, with ultra-clean and zero residue
- Brand-new acid etching solution formula, safer and more reliable
- Guides osteoblast attachment and growth, accelerating osseointegration
- Improves early biological stability and promotes bone tissue growth

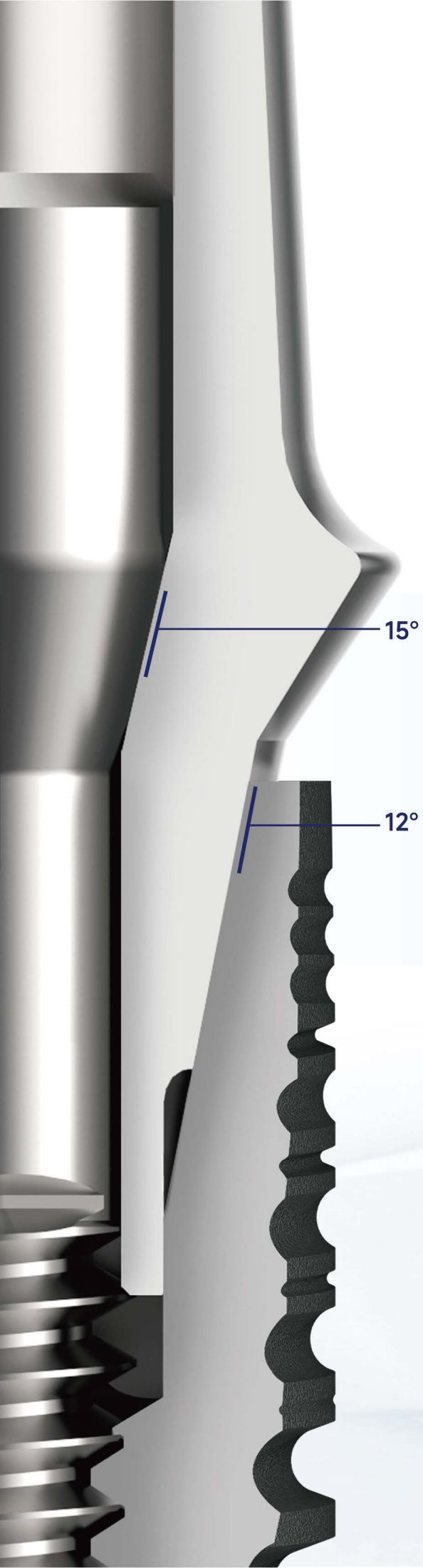
√Ultra-clean surface with zero residue **√Faster and better osseointegration** **√Higher initial stability**



The implant surface layer magnified to 10,000 times

Patented Double-sided integrated connection design

PATENT NO.: ZL 202120581411.X



Cold Pressure Welding Sealing Technology + Ultra-precision Manufacturing

- Face-to-face docking between the implant and abutment, and between the abutment and Basal Screw, enhancing overall structural stability
- Disperses occlusal stress, reduces force on the Basal Screw, and stabilizes the restoration structure
- Controls microgap, prevents microleakage, and ensures neck marginal bone stability
- The bevel contact gap between the abutment and implant is less than 1 micron, effectively reducing bacterial invasion

CASANGELS Implant

NP ∅3.5mm Implant

Unit: mm

Length(L)	Model
8.0	AI0135080A
10.0	AI0135100A
11.5	AI0135115A
13.0	AI0135130A
15.0	AI0135150A



RP ∅4.3mm Implant

Unit: mm

Length(L)	Model
8.0	AI0143080A
10.0	AI0143100A
11.5	AI0143115A
13.0	AI0143130A
15.0	AI0143150A



RP ∅5.0mm Implant

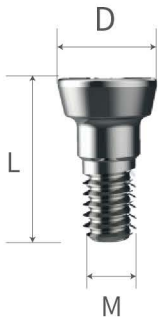
Unit: mm

Length(L)	Model
8.0	AI0150080A
10.0	AI0150100A
11.5	AI0150115A
13.0	AI0150130A
15.0	AI0150150A



Cover Screw





∅3.0mm Cover Screw

Unit: mm

Connection Port Specification	Diameter(D)	Length(L)	Screw Diameter(M)	Model
NP	∅3.0	5.0	∅1.8	AC013501

∅3.6mm Cover Screw

Unit: mm

Connection Port Specification	Diameter(D)	Length(L)	Screw Diameter(M)	Model
RP	∅3.6	6.0	∅2.0	AC014301

Healing Abutment

∅4.0mm Healing Abutment

Unit: mm

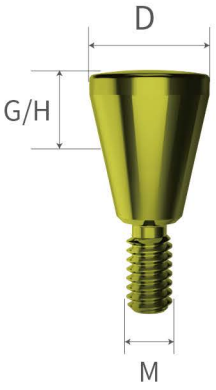
Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AH01400118
	2.0		AH01400218
	3.0		AH01400318
	4.0		AH01400418
	5.0		AH01400518



∅5.0mm Healing Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AH01500118
	2.0		AH01500218
	3.0		AH01500318
	4.0		AH01500418
	5.0		AH01500518
RP	1.0	∅2.0	AH01500120
	2.0		AH01500220
	3.0		AH01500320
	4.0		AH01500420
	5.0		AH01500520



∅6.0mm Healing Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
RP	1.0	∅ 2.0	AH01600120
	2.0		AH01600220
	3.0		AH01600320
	4.0		AH01600420
	5.0		AH01600520

NP RP

Restorative Abutment-Straight Abutment

∅4.0mm Straight Abutment

Unit: mm

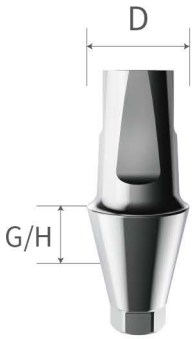
Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AA01400100050
	2.0		AA01400200050
	3.0		AA01400300050
	4.0		AA01400400050
	5.0		AA01400500050



∅5.0mm Straight Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AA01500100050
	2.0		AA01500200050
	3.0		AA01500300050
	4.0		AA01500400050
	5.0		AA01500500050
RP	1.0	∅2.0	AA01500100065
	2.0		AA01500200065
	3.0		AA01500300065
	4.0		AA01500400065
	5.0		AA01500500065



∅6.0mm Straight Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
RP	1.0	∅2.0	AA01600100065
	2.0		AA01600200065
	3.0		AA01600300065
	4.0		AA01600400065
	5.0		AA01600500065



Restorative Abutment-Angled Abutment 15°

∅4.0mm Angled Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AA01400115050
	2.0		AA01400215050
	3.0		AA01400315050
	4.0		AA01400415050
	5.0		AA01400515050



∅5.0mm Angled Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AA01500115050
	2.0		AA01500215050
	3.0		AA01500315050
	4.0		AA01500415050
	5.0		AA01500515050
RP	1.0	∅2.0	AA01500115065
	2.0		AA01500215065
	3.0		AA01500315065
	4.0		AA01500415065
	5.0		AA01500515065



∅6.0mm Angled Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
RP	1.0	∅2.0	AA01600115065
	2.0		AA01600215065
	3.0		AA01600315065
	4.0		AA01600415065
	5.0		AA01600515065



Restorative Abutment-Angled Abutment 25°

∅4.0mm Angled Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)v	Screw Diameter(M)	Model
NP	1.0	∅1.8	AA01400125050
	2.0		AA01400225050
	3.0		AA01400325050
	4.0		AA01400425050
	5.0		AA01400525050



∅5.0mm Angled Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AA01500125050
	2.0		AA01500225050
	3.0		AA01500325050
	4.0		AA01500425050
	5.0		AA01500525050
RP	1.0	∅2.0	AA01500125065
	2.0		AA01500225065
	3.0		AA01500325065
	4.0		AA01500425065
	5.0		AA01500525065



∅6.0mm Angled Abutment

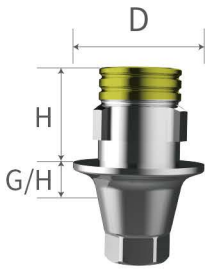
Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
RP	1.0	∅2.0	AA01600125065
	2.0		AA01600225065
	3.0		AA01600325065
	4.0		AA01600425065
	5.0		AA01600525065

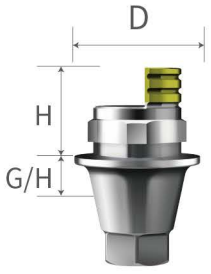


Multifunctional Abutment





Model:AT



Model:AV



∅4.0mm Multifunctional Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Abutment Height(H)	Screw Diameter(M)	Model
NP	1.0	4.0	∅1.8	AT401SH
		6.0		AT401LH
	3.0	4.0		AT403SH
		6.0		AT403LH
	1.0	3.5		AV401SH
		5.5		AV401LH
	3.0	3.5		AV403SH
		5.5		AV403LH

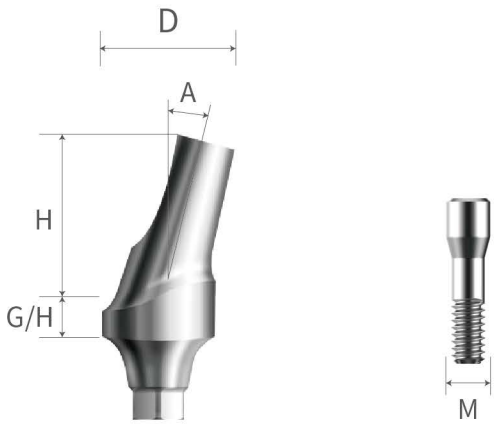
∅5.0mm Multifunctional Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Abutment Height(H)	Screw Diameter(M)	Model
RP	1.0	4.0	∅2.0	AT501SH
		6.0		AT501LH
	3.0	4.0		AT503SH
		6.0		AT503LH
	1.0	3.5		AV501SH
		5.5		AV501LH
	3.0	3.5		AV503SH
		5.5		AV503LH

NP RP

Customized Abutment



Customized Abutment

Unit: mm

Connection Port Specification	Diameter(D)	Gingival Height(G/H)	Height	Angle	Compatible System
NP RP	Min ∅4.0mm Max ∅6.0mm	Min 1.0mm Max 4.0mm	≥ 4.0mm	Min 0° Max 25°	Hexagonal Cross Locking Clip

NMPA Registration Certificate 20223170163

Pre-Milled Abutment



Pre-Milled Abutment

Unit: mm

Connection Port Specification	Diameter(D)	Height(H)	Model
NP	∅10	28.37	T2NP101
	∅14		T2NP141
RP	∅10	29.17	T2RP101
	∅14		T2RP141

Screw-Retained Straight Abutment

∅4.0mm Screw-Retained Straight Abutment

Unit: mm

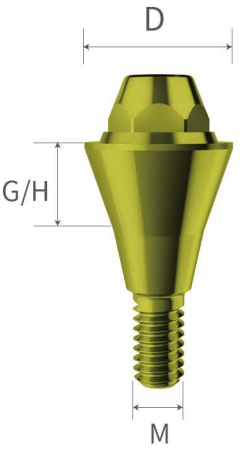
Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AM00400100
	2.0		AM00400200
	3.0		AM00400300
	4.0		AM00400400
	5.0		AM00400500



∅5.0mm Screw-Retained Straight Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	1.0	∅1.8	AM00500100
	2.0		AM00500200
	3.0		AM00500300
	4.0		AM00500400
	5.0		AM00500500
RP	1.0	∅2.0	AM00501100
	2.0		AM00501200
	3.0		AM00501300
	4.0		AM00501400
	5.0		AM00501500



∅6.0mm Screw-Retained Straight Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
RP	1.0	∅2.0	AM00601100
	2.0		AM00601200
	3.0		AM00601300
	4.0		AM00601400
	5.0		AM00601500

NP RP

Angular Screw-Retained Abutment

17° Screw-Retained Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	2.5	∅1.8	AM01500217B
	3.5		AM01500317B
	4.5		AM01500417B
	5.5		AM01500517B
RP	2.5	∅2.0	AM01501217B
	3.5		AM01501317B
	4.5		AM01501417B
	5.5		AM01501517B

Notice: The diameter of the titanium base corresponding to the 17° screw-retained abutment is 5.0mm.

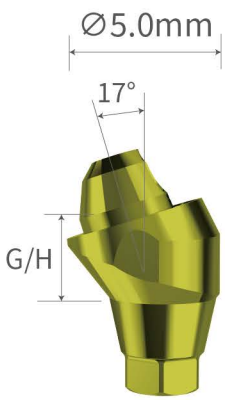


30° Screw-Retained Abutment

Unit: mm

Connection Port Specification	Gingival Height(G/H)	Screw Diameter(M)	Model
NP	3.5	∅1.8	AM01500330B
	4.5		AM01500430B
	5.5		AM01500530B
RP	3.5	∅2.0	AM01501330B
	4.5		AM01501430B
	5.5		AM01501530B

Notice: The diameter of the titanium base corresponding to the 30° screw-retained abutment is 5.0mm.





NP RP

Ti-Sleeve

Unit: mm

Connection Port Specification	Diameter(D)	Model
corresponding to the diameter of screw-retained abutment	∅4.0	AB140N
	∅5.0	AB150N
	∅6.0	AB160N

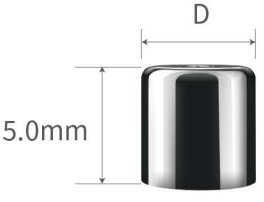




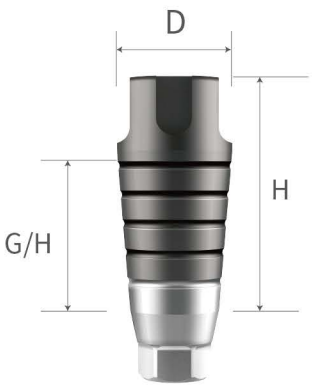
Screw-Retained Abutment Protective Cap

Unit: mm

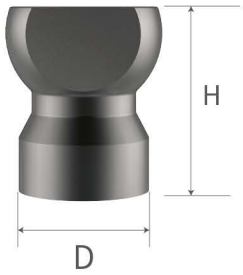
Connection Port Specification	Diameter(D)	Model
corresponding to the diameter of screw-retained abutment	∅4.0	AE0140
	∅5.0	AE0150
	∅6.0	AE0160



Scan Body



Implant-Level



Abutment-Level

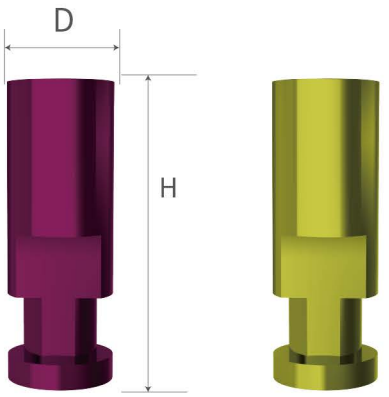
Implant-Level Scanbody (Suitable for intraoral scanning, model scanning) Unit: mm

Connection Port Specification	Diameter(D)	Gingival Height(G/H)	Height(H)	Model
NP	∅4.0	3.5	6.0	DB4035NP
		5.5	8.0	DB4055NP
		7.5	10.0	DB4075NP
		9.5	12.0	DB4095NP
RP	∅5.0	3.5	6.0	DB5035RP
		5.5	8.0	DB5055RP
		7.5	10.0	DB5075RP
		9.5	12.0	DB5095RP

Abutment-Level Scanbody (Suitable for intraoral scanning, model scanning) Unit: mm

Connection Port Specification	Diameter(D)	Height(H)	Model
corresponding to the diameter of screw-retained abutment	∅4.0	7.0	DS40A1
	∅5.0		DS50A1
	∅6.0		DS60A1

Ordinary Model Analog



Implant-Level



Abutment-Level

Implant-Level Analog

Unit: mm

Connection Port Specification	Diameter(D)	Height(H)	Model
NP	∅3.5	12	IT041
RP	∅4.3		IT042

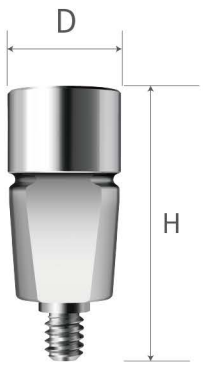
Abutment-Level Analog

Unit: mm

Connection Port Specification	Diameter(D)	Height(H)	Model
corresponding to the diameter of screw-retained abutment	∅4.0	12	IT044
	∅5.0		IT045
	∅6.0		IT046

NP RP

Print Model Analog



Implant-Level



Abutment-Level

Implant-Level Analog

Unit: mm

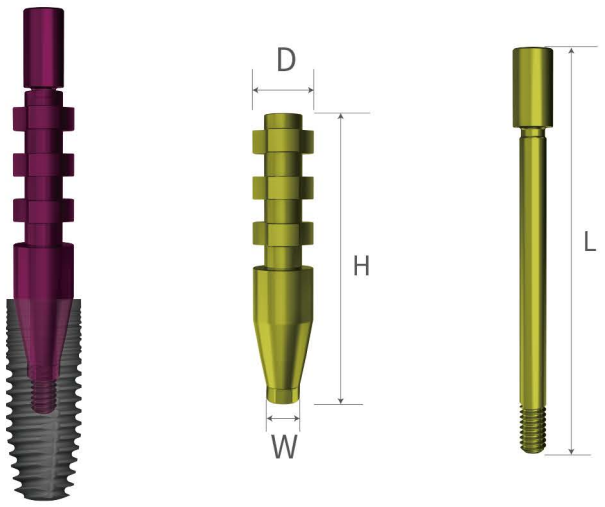
Connection Port Specification	Diameter(D)	Height(H)	Model
NP	∅4.6	11.0	TB001
RP			TB002

Abutment-Level Analog

Unit: mm

Connection Port Specification	Diameter(D)	Height(H)	Model
corresponding to the diameter of screw-retained abutment	∅4.0	13.2	TSA01
	∅5.0		TSA02
	∅6.0		TSA03

Open-Tray Impression Coping



NP ∅4.0mm Open-Tray Impression Coping

Unit: mm

Impression Height(H)	Connection Port Specification (W)	Screw Length(L)	Model
14.4	Hexagon	22.5	IT001
18.4		26.5	IT002

NP ∅5.0mm Open-Tray Impression Coping

Unit: mm

Impression Height(H)	Connection Port Specification (W)	Screw Length(L)	Model
14.4	Hexagon	22.5	IT003
18.4		26.5	IT004

RP ∅5.0mm Open-Tray Impression Coping

Unit: mm

Impression Height(H)	Connection Port Specification (W)	Screw Length(L)	Model
15.2	Hexagon	22.5	IT005
19.2		26.5	IT006

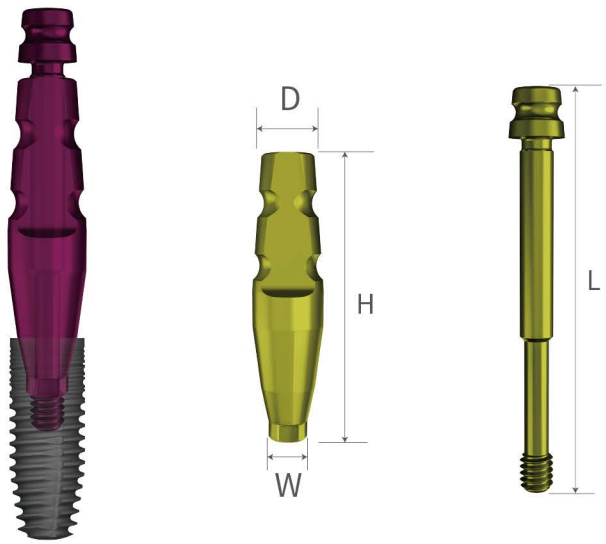
RP ∅6.0mm Open-Tray Impression Coping

Unit: mm

Impression Height(H)	Connection Port Specification (W)	Screw Length(L)	Model
15.2	Hexagon	22.5	IT007
19.2		26.5	IT008

NP RP

Closed-Tray Impression Coping



NP ∅4.0mm Closed-Tray Impression Coping

Unit: mm

Impression Height(H)	Connection Port Specification (W)	Screw Length(L)	Model
11.4	Hexagon	17.0	IT021
15.4		21.0	IT022

NP ∅5.0mm Closed-Tray Impression Coping

Unit: mm

Impression Height(H)	Connection Port Specification (W)	Screw Length(L)	Model
11.4	Hexagon	17.0	IT023
15.4		21.0	IT024

RP ∅5.0mm Closed-Tray Impression Coping

Unit: mm

Impression Height(H)	Connection Port Specification (W)	Screw Length(L)	Model
12.2	Hexagon	17.0	IT025
16.2		21.0	IT026

RP ∅6.0mm Closed-Tray Impression Coping

Unit: mm

Impression Height(H)	Connection Port Specification (W)	Screw Length(L)	Model
12.2	Hexagon	17.0	IT027
16.2		21.0	IT028

NP RP

Screw-Retained Open-Tray Impression Coping



Open-Tray Impression Coping

Unit: mm

Connection Port Specification	Diameter(D)	Model
corresponding to the diameter of screw-retained abutment	∅4.0	IT051
	∅5.0	IT053
	∅6.0	IT054

Screw-Retained Closed-Tray Impression Coping

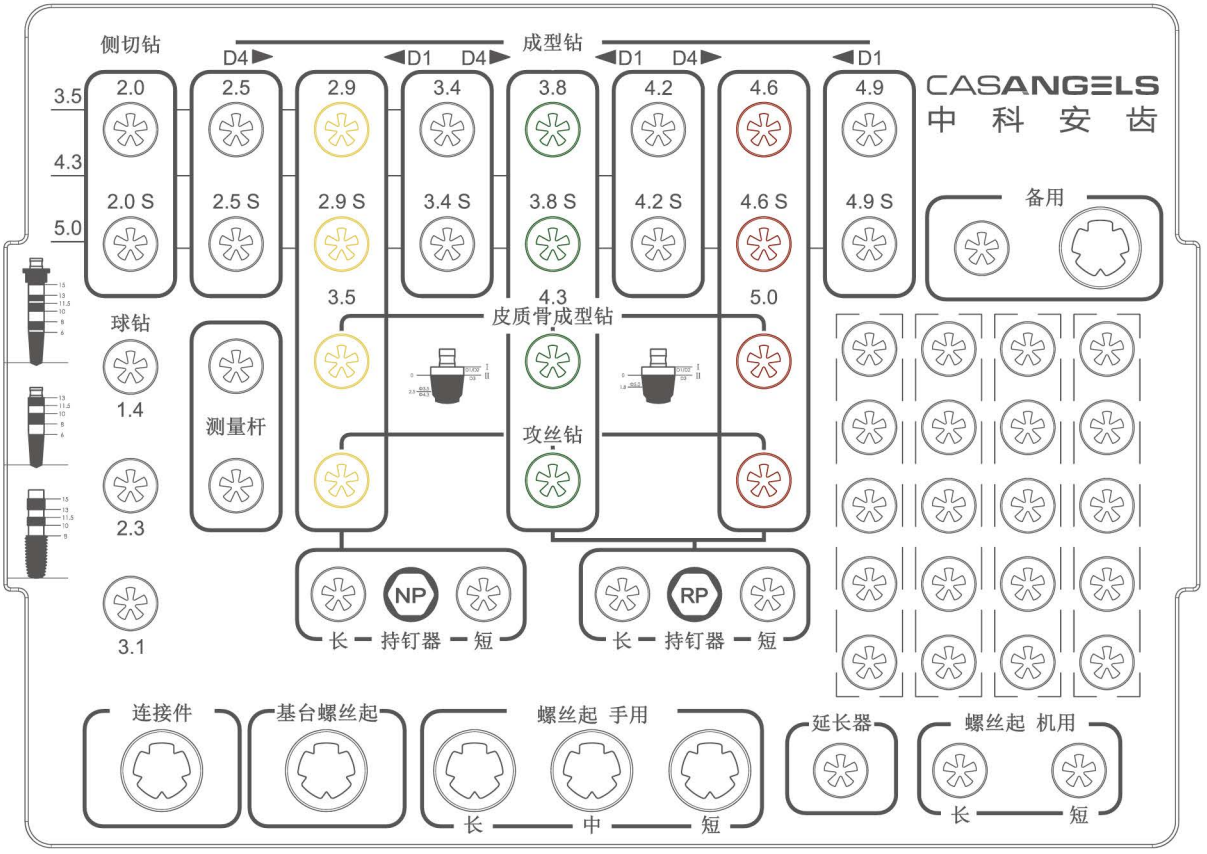


Closed-Tray Impression Coping

Unit: mm

Connection Port Specification	Diameter(D)	Model
corresponding to the diameter of screw-retained abutment	∅4.0	IT047
	∅5.0	IT049
	∅6.0	IT050

Surgical kit



Product Details

CASANGELS Surgical Kit distinguishes tool components by color.

Yellow surgical tool components are used for the Ø3.5 NP series implants.

Green surgical tool components are used for the Ø4.3 RP series implants.

Red surgical tool components are used for the Ø5.0 RP series implants.

This allows surgeons to perform procedures easily, quickly, and efficiently.

NP ∅3.5mm Implant RP ∅4.3mm Implant RP ∅5.0mm Implant

Surgical Kit Components

Surgical Kit Components


Round bur ∅1.4/∅2.3/∅3.1


Side-Cutting Bur ∅2.0S/2.0


Depth Gauge ∅2.0/2.5


Profile Drill ∅2.5S


Profile Drill ∅2.5


Profile Drill ∅2.9S


Profile Drill ∅2.9


Profile Drill ∅3.4S


Profile Drill ∅3.4


Profile Drill ∅3.8S


Profile Drill ∅3.8


Profile Drill ∅4.2S


Profile Drill ∅4.2


Profile Drill ∅4.6S


Profile Drill ∅4.6


Profile Drill ∅4.9S


Profile Drill ∅4.9


Cortical Bone Profile Drill ∅3.5


Cortical Bone Profile Drill ∅4.3

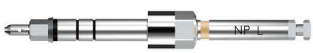

Cortical Bone Profile Drill ∅5.0


Tap Drill ∅3.5


Tap Drill ∅4.3


Tap Drill ∅5.0


Screw Holder NP S


Screw Holder NP L


Screw Holder RP S


Screw Holder RP L


Drill Extender


Screwdriver for Ratchet extra-short/short/long


Screwdriver for Handpiece short/long


Abutment Screwdriver


Adapter for Ratchet


Implant Depth Gauge


Torque Control Device

Surgical Drills

Round bur

Unit: mm

Diameter(D)	Length(L)	Model
∅1.4	34	SK001
∅2.3		SK002
∅3.1		SK016



Side-Cutting Bur

Unit: mm

Diameter(D)	Length(L)	Model
∅2.0	27	SK062
	32	SK017



Profile Drill

Unit: mm

Diameter(D)	Length(L)	Model
∅2.5	29	SK063
	34	SK064
∅2.9	29	SK065
	34	SK066
∅3.4	29	SK067
	34	SK068
∅3.8	29	SK069
	34	SK070
∅4.2	29	SK071
	34	SK072
∅4.6	29	SK073
	34	SK074
∅4.9	29	SK081
	34	SK082



Surgical Drills

Cortical Bone Profile Drill

Unit: mm

Diameter(D)	Length(L)	Model
∅3.5	27	SK075
∅4.3		SK076
∅5.0		SK077



ap Drill

Unit: mm

Diameter(D)	Length(L)	Model
∅3.5	34	SK078
∅4.3		SK079
∅5.0		SK080



Surgical Kits

Drill Extender

Unit: mm

Diameter(D)	Model
∅4.0	ST045



Depth Gauge

Unit: mm

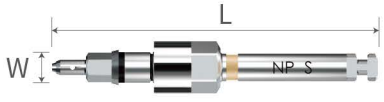
Diameter(D)	Length(L)	Model
∅2.0	27.5	ST002
∅2.5		



Screw Holder

Unit: mm

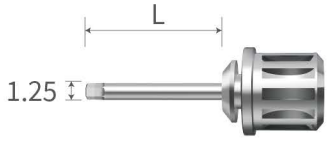
Connection Port Specification (W)	Length(L)	Model
NP	26	ST046
RP		ST047
NP	35	ST048
RP		ST049



Screwdriver for Ratchet

Unit: mm

Hexagon	Length(L)	Model
1.25	6	ST042
	13	ST011
	17	ST012

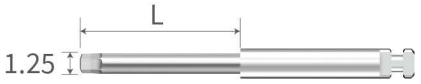


Surgical Kits

Screwdriver for Handpiece

Unit: mm

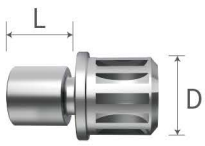
Hexagon	Length(L)	Model
1.25	11	ST013
	15	ST014



Abutment Screwdriver

Unit: mm

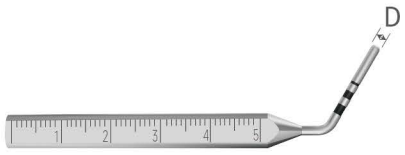
Diameter(D)	Length(L)	Model
∅7	6	ST015



Implant Depth Gauge

Unit: mm

Diameter(D)	Model
∅1.9	ST007



Torque Control Device

Unit: mm

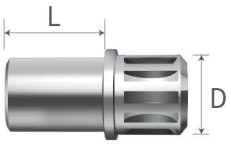
Diameter(D)	Torque	Model
∅7	0~70N.cm	ST008



Adapter for Ratchet

Unit: mm

Diameter(D)	Length(L)	Model
∅7	9	ST009



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