

Contents

Introduction			
S.L.A. Surface	05		
NR Line Characteristics	06	Prosthetic Procedure 3	
NR Line Color Coding by Diameter	07	Screw Abutment - Abutment Level Impression	33
NR Line Fixture	08	Screw Abutment	34
		Angled Screw Abutment	35
Surgical Components		Screw Abutment Impression Components	36
Cover Screw	10		
Healing Abutment	11	Prosthetic Procedure 4	
IOS Healing Abutment	13	Mini Ball Attachment - Abutment Level Impression	38
		Mini Ball Attachment	39
		Angled Mini Ball Attachment	40
Prosthetic Procedure 1		Magnetic Attachment	41
Dual Abutment - Abutment Level Impression	14		
Dual Abutment [Square]	15	Instruments	
Dual Abutment [Round]	17	Surgical Kit	42
Abutment Level Impression Components	19	Stopper Kit	43
		Prosthetic Kit	44
Prosthetic Procedure 2		Drill	45
Dual / Dual Milling / Angled / Metal-Casting /		Instrument	47
Temporary Abutment - Fixture Level Impression	20	Prosthetic and Laboratory Instrument	50
Fixture Level Impression Components	21		
Dual Milling Abutment	25	Surgical Manual	52
Angled Abutment [15°]	27	Prosthesis Manual	61
Angled Abutment [25°]	29		
Metal Casting Abutment	30		



NR Line Characteristics

Abutment screw

 \cdot Ø1.9 hole size for occlusion







Narrow, but strong

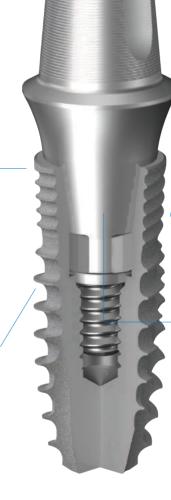
- ·Body Ø3.1 fixture is very useful for narrow ridge
- · Good for high occlusal stress

Extended thread design

· Extended thread design helps







Simple GBR

· Minimize bone and gingival resorption

Firm & stable connection (Internal 10° taper & square shape)

 $\cdot \, \mathsf{Less} \, \mathsf{screw}, \mathsf{abutment} \, \& \, \mathsf{fixture} \, \mathsf{fracture}$



- \cdot 10° taper & square shape between implant and abutment interface ensures tight sealing
- · Square connection

NR Line Color Coding by Diameter

Color Coding by Diameter

· Cover screw is not included in the package.

Unit: mm

Cap Colo	r	Yellow	Yellow	Green	Blue	Red	Red
Fixture NR Line (Mount Free							
	A Platform Diameter	3.2	3.6	3.6	4.3	5.0	6.0
A	B Body Diameter	3.1	3.1	3.6	4.3	5.0	5.0
B	C L: 7B Bevel Height		2.0	2.0	2.0	2.0	2.0
-	C L:7,9,11,13 Bevel Height	0.03	1.0	0.05	0.25	0.45	0.70
Selection Guid	deline	Anterior	Anterior	Premolar	Molar	Molar	Molar

Unit: mm, Scale 1:1.5

NR Line Fixture

NR Line Fixture

Body Ø 3.1 | Platform Ø 3.2

L	Art. No.
7	GFX 30 07 S
9	GFX 30 09 S
11	GFX 30 11 S
13	GFX 30 13 S





Unit: mm, Scale 1:1.5

Body Ø 3.1 | Platform Ø 3.6

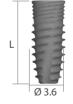
L	Art. No.
7	GFX 30 07 B
7	GFX 30 07
9	GFX 30 09
11	GFX 30 11
13	GFX 30 13

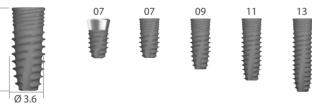




Body Ø 3.6 | Platform Ø 3.6

L	Art. No.
7	GFX 36 07 BS
7	GFX 36 07 S
9	GFX 36 09 S
11	GFX 36 11 S
13	GFX 36 13 S

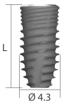


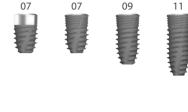


Body Ø 4.3 | Platform Ø 4.3

L	Art. No.
7	GFX 43 07 BS
7	GFX 43 07 S
9	GFX 43 09 S
11	GFX 43 11 S
13	GFX 43 13 S



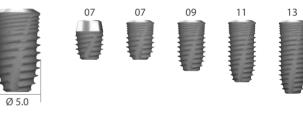




Body Ø 5.0 | Platform Ø 5.0

L Art. No. 7 GFX 50 07 BS 7 GFX 50 07 S 9 GFX 50 09 S 11 GFX 50 11 S 13 GFX 50 13 S		
7 GFX 50 07 S 9 GFX 50 09 S 11 GFX 50 11 S	L	Art. No.
9 GFX 50 09 S 11 GFX 50 11 S	7	GFX 50 07 BS
11 GFX 50 11 S	7	GFX 50 07 S
	9	GFX 50 09 S
13 GFX 50 13 S	11	GFX 50 11 S
	13	GFX 50 13 S





Body Ø 5.0 | Platform Ø 6.0

L	Art. No.
7	GFX 50 07 BW
7	GFX 50 07 W
9	GFX 50 09 W
11	GFX 50 11 W
13	GFX 50 13 W





Cover Screw

Unit: mm, Scale 1:1.5



GCS36 and GFX3609S

Cover Screw

Application (Body Ø)	Art. No.
Ø3.1S	GCS 30
Ø3.1 / Ø3.6S / Ø4.3S / Ø5.0S / Ø5.0W	GCS 36





Healing Abutment

• Single use only Unit: mm, Scale 1:1.5



GHAB433545 and GFX3609S

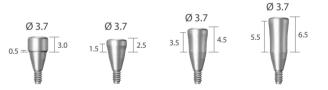
Diameter Ø 3.1 / Ø 3.6

G/H	Art. No.
3.5	GBHA 31 35
0.5	GBHA 36 05
2.0	GBHA 36 20



Diameter Ø 3.7

G/H	Н	Art. No.
0.5	3.0	GHAB 37 05 30
1.5	2.5	GHAB 37 15 25
3.5	4.5	GHAB 37 35 45
5.5	6.5	GHAB 37 55 65



Diameter Ø 4.3

G/H	Н	Art. No.
0.5	3.0	GHAB 43 05 30
1.5	2.5	GHAB 43 15 25
3.5	4.5	GHAB 43 35 45
5.5	6.5	GHAB 43 55 65



Diameter Ø 5.5

G/H	Н	Art. No.
0.5	3.0	GHAB 55 05 30
1.5	2.5	GHAB 55 15 25
3.5	4.5	GHAB 55 35 45
5.5	6.5	GHAB 55 55 65



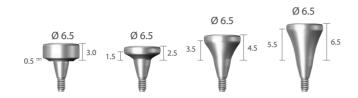
 $[\]ensuremath{\,\%^{\circ}}$ Square driver: Use no more than 5N·cm torque when screwing a cover screw to a fixture If square is worn, slot on the head of the product can be used to rotate it

Healing Abutment

• Single use only Unit: mm, Scale 1:1.5

Diameter Ø 6.5

G/H	Н	Art. No.
0.5	3.0	GHAB 65 05 30
1.5	2.5	GHAB 65 15 25
3.5	4.5	GHAB 65 35 45
5.5	6.5	GHAB 65 55 65



Diameter Ø 7.5

G/H	Н	Art. No.
4.0	4.0	GHAB 75 40 40



Diameter Ø 8.5

G/H	Н	Art. No.
4.0	4.0	GHAB 85 40 40



Diameter Ø 9.5

G/H	Н	Art. No.
4.0	4.0	GHAB 95 40 40

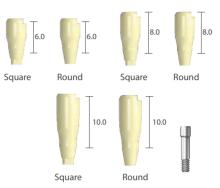


IOS Healing Abutment

• Single use only Unit: mm, Scale 1:1.5

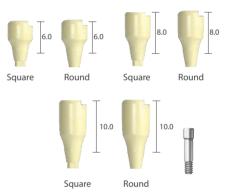
Diameter Ø 4.0

Diameter	G/H	Туре	Art. No.
	6.0	Square	GIHAB 40 06 S
	6.0	Round	GIHAB 40 06 R
Ø 4.0	8.0	Square	GIHAB 40 08 S
	8.0	Round	GIHAB 40 08 R
	10.0	Square	GIHAB 40 10 S
	10.0	Round	GIHAB 40 10 R



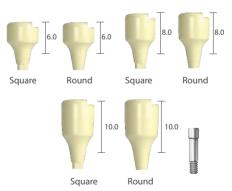
Diameter Ø 5.0

Diameter	G/H	Type	Art. No.
	6.0	Square	GIHAB 50 06 S
	6.0	Round	GIHAB 50 06 R
Ø 5.0	8.0	Square	GIHAB 50 08 S
Ø 5.0	8.0	Round	GIHAB 50 08 R
	10.0	Square	GIHAB 50 10 S
	10.0	Round	GIHAB 50 10 R



Diameter Ø 6.0

Diameter	G/H	Type	Art. No.
	6.0	Square	GIHAB 60 06 S
	6.0	Round	GIHAB 60 06 R
0.60	8.0	Square	GIHAB 60 08 S
Ø 6.0	8.0	Round	GIHAB 60 08 R
	10.0	Square	GIHAB 60 10 S
	10.0	Round	GIHAB 60 10 R



14 NR Line Product Catalog NR Line Product Catalog 15

Prosthetic Procedure 1

Impression Technique and Restoration Selection

Dual Abutment

Abutment Level Impression

Closed Tray Technique



Dual Abutment

Square / Round Ø3.7 / Ø4.3 / Ø5.5 / Ø6.5

Page 14, 15, 16, 17



Impression Coping

(Burn-Out Cylinder, Comfort Cap, Abutment Holder) Ø3.7 / Ø4.3 / Ø5.5 / Ø6.5

Page 18



Comfort Cap

Ø3.7 / Ø4.3 / Ø5.5 / Ø6.5

Page 18



Analog

Ø3.7 / Ø4.3 / Ø5.5 / Ø6.5

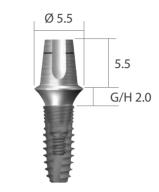
Page 18

Modification

Cemented Restoration

Dual Abutment [Square]

• Abutment screw is included Unit: mm, Scale 1:1.5



GDAB5520AS and GFX3609S

Diameter Ø3.7 | Square

G/H	Art. No.
0.5	GDAB 37 05 AS(H)
1.0	GDAB 37 10 AS(H)
2.0	GDAB 37 20 AS(H)
3.0	GDAB 37 30 AS(H)
4.0	GDAB 37 40 AS(H)
5.0	GDAB 37 50 AS(H)



Diameter Ø4.3 | Square

G/H	Art. No.
0.5	GDAB 43 05 BAS(H)
1.0	GDAB 43 10 AS(H)
2.0	GDAB 43 20 AS(H)
3.0	GDAB 43 30 AS(H)
4.0	GDAB 43 40 AS(H)
5.0	GDAB 43 50 AS(H)

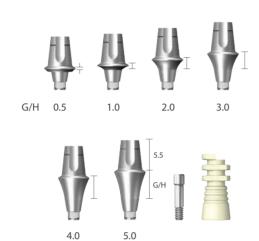


Abutment screw is included

Unit: mm, Scale 1:1.5

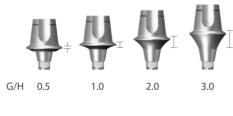
Diameter Ø5.5 | Square

G/H Art. No. 0.5 GDAB 55 05 BAS(H) 1.0 GDAB 55 10 AS(H) 2.0 GDAB 55 20 AS(H) 3.0 GDAB 55 30 AS(H) 4.0 GDAB 55 40 AS(H) 5.0 GDAB 55 50 AS(H)		
1.0 GDAB 55 10 AS(H) 2.0 GDAB 55 20 AS(H) 3.0 GDAB 55 30 AS(H) 4.0 GDAB 55 40 AS(H)	G/H	Art. No.
2.0 GDAB 55 20 AS(H) 3.0 GDAB 55 30 AS(H) 4.0 GDAB 55 40 AS(H)	0.5	GDAB 55 05 BAS(H)
3.0 GDAB 55 30 AS(H) 4.0 GDAB 55 40 AS(H)	1.0	GDAB 55 10 AS(H)
4.0 GDAB 55 40 AS(H)	2.0	GDAB 55 20 AS(H)
	3.0	GDAB 55 30 AS(H)
5.0 GDAB 55 50 AS(H)	4.0	GDAB 55 40 AS(H)
	5.0	GDAB 55 50 AS(H)



Diameter Ø6.5 | Square

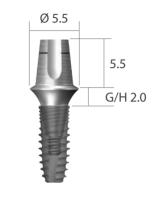
G/H	Art. No.
0.5	GDAB 65 05 BAS(H)
1.0	GDAB 65 10 AS(H)
2.0	GDAB 65 20 AS(H)
3.0	GDAB 65 30 AS(H)
4.0	GDAB 65 40 AS(H)
5.0	GDAB 65 50 AS(H)





Dual Abutment [Round]

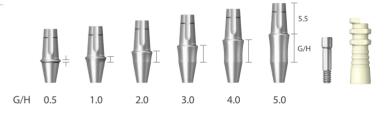
• Abutment screw is included Unit: mm, Scale 1:1.5



GDAB5220AR and GFX3609S

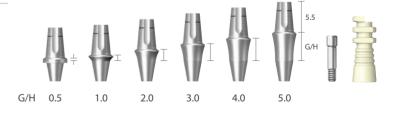
Diameter Ø3.7 | Round

G/H	Art. No.
0.5	GDAB 37 05 AR(H)
1.0	GDAB 37 10 AR(H)
2.0	GDAB 37 20 AR(H)
3.0	GDAB 37 30 AR(H)
4.0	GDAB 37 40 AR(H)
5.0	GDAB 37 50 AR(H)



Diameter Ø4.3 | Round

G/H	Art. No.
0.5	GDAB 43 05 BAR(H)
1.0	GDAB 43 10 AR(H)
2.0	GDAB 43 20 AR(H)
3.0	GDAB 43 30 AR(H)
4.0	GDAB 43 40 AR(H)
5.0	GDAB 43 50 AR(H)



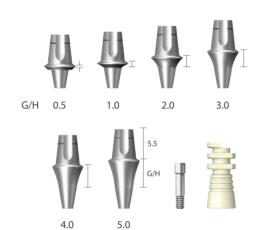
Unit: mm, Scale 1:1.5

Dual Abutment [Round]

• Abutment screw is included Unit: mm, Scale 1:1.5

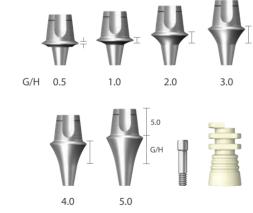
Diameter Ø5.5 | Round

G/H	Art. No.
0.5	GDAB 55 05 BAR(H)
1.0	GDAB 55 10 AR(H)
2.0	GDAB 55 20 AR(H)
3.0	GDAB 55 30 AR(H)
4.0	GDAB 55 40 AR(H)
5.0	GDAB 55 50 AR(H)



Diameter Ø6.5 | Round

G/H	Art. No.
0.5	GDAB 65 05 BAR(H)
1.0	GDAB 65 10 AR(H)
2.0	GDAB 65 20 AR(H)
3.0	GDAB 65 30 AR(H)
4.0	GDAB 65 40 AR(H)
5.0	GDAB 65 50 AR(H)



Abutment Level Impression Components

Comfort Cap

Diameter	Art. No.
Ø3.7	GCC 37
Ø4.3	GCC 43
Ø5.5	GCC 55
Ø6.5	GCC 65

Ø 3.7	Ø 4.3	Ø 5.5	Ø 6.5

Impression Coping

Diameter	Art. No.
Ø3.7	GADH 37
Ø4.3	GADH 43
Ø5.5	GADH 55
Ø6.5	GADH 65



Analog

Diameter	Art. No.
Ø3.7	GCAN 37
Ø4.3	GCAN 43
Ø5.5	GCAN 55
Ø6.5	GCAN 65

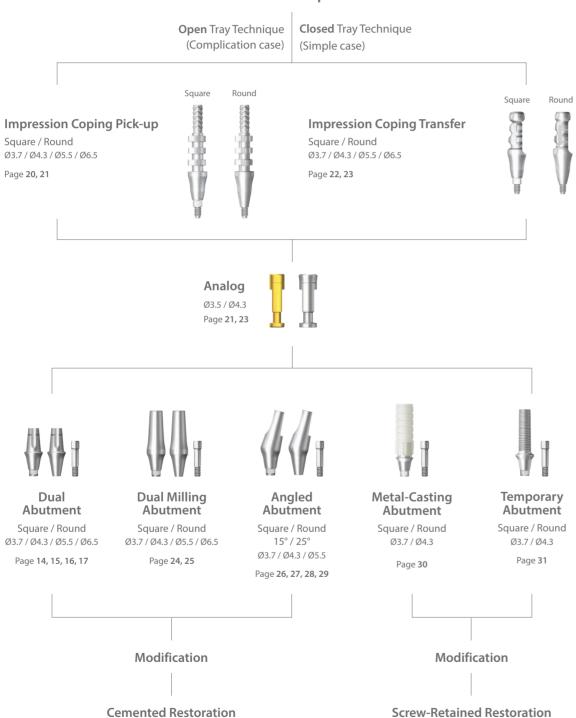


Prosthetic Procedure 2

Impression Technique and Restoration Selection

Dual / Dual Milling / Angled / Metal-Casting / Temporary Abutment

Fixture Level Impression



Fixture Level Impression Coping

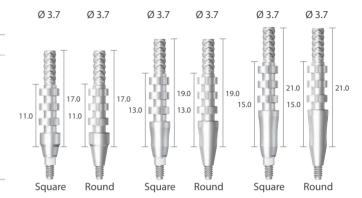
• Impression coping screw is included with Impression coping

Unit: mm, Scale 1:1.5

NR Line Product Catalog 21

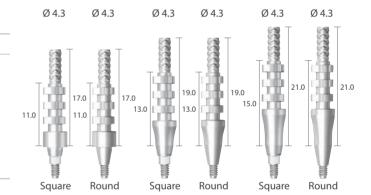
Impression Coping Pick-up Ø 3.7

Size	Type	Art. No.
Short	Square	GDPU 37 11 S
Short	Round	GDPU 37 11 R
Middle	Square	GDPU 37 13 S
Middle	Round	GDPU 37 13 R
Long	Square	GDPU 37 15 S
Long	Round	GDPU 37 15 R



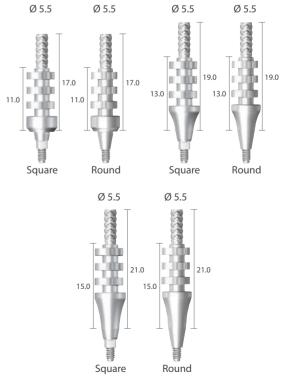
Impression Coping Pick-up Ø 4.3

Size	Type	Art. No.
Short	Square	GDPU 43 11 S
Short	Round	GDPU 43 11 R
Middle	Square	GDPU 43 13 S
Middle	Round	GDPU 43 13 R
Long	Square	GDPU 43 15 S
Long	Round	GDPU 43 15 R



Impression Coping Pick-up Ø 5.5

Size	Type	Art. No.
Short	Square	GDPU 55 11 S
Short	Round	GDPU 55 11 R
Middle	Square	GDPU 55 13 S
Middle	Round	GDPU 55 13 R
Long	Square	GDPU 55 15 S
Long	Round	GDPU 55 15 R



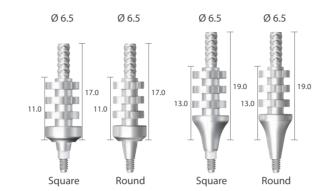
Fixture Level Impression Coping

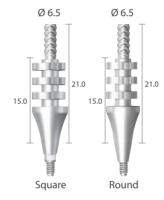
• Impression coping screw is included with Impression coping

Unit: mm, Scale 1:1.5

Impression Coping Pick-up Ø 6.5

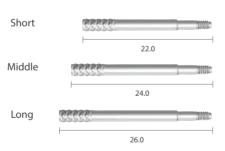
Size	Type	Art. No.
Short	Square	GDPU 65 11 S
Short	Round	GDPU 65 11 R
Middle	Square	GDPU 65 13 S
Middle	Round	GDPU 65 13 R
Long	Square	GDPU 65 15 S
Long	Round	GDPU 65 15 R





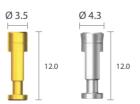
Impression Coping Pick-up Screw

Size	Art. No.
Short	GDPS 11
Middle	GDPS 13
Long	GDPS 15



Analog

Application (Body Ø)	Art. No.
Ø3.1S	GDANR 30
Ø3.1 / Ø3.6S / Ø4.3S / Ø5.0S / Ø5.0W	GDANR 36



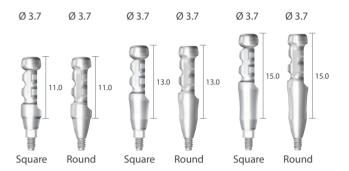
Fixture Level Impression Coping

• Impression coping screw is included with Impression coping

Unit: mm, Scale 1:1.5

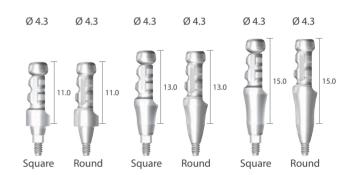
Impression Coping Transfer Ø 3.7

Size	Type	Art. No.
Short	Square	GDTF 37 11 S
Short	Round	GDTF 37 11 R
Middle	Square	GDTF 37 13 S
Middle	Round	GDTF 37 13 R
Long	Square	GDTF 37 15 S
Long	Round	GDTF 37 15 R



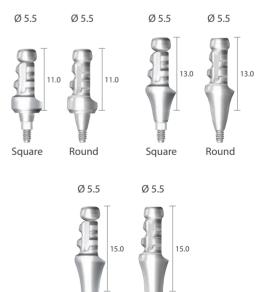
Impression Coping Transfer Ø 4.3

Size	Type	Art. No.
Short	Square	GDTF 43 11 S
Short	Round	GDTF 43 11 R
Middle	Square	GDTF 43 13 S
Middle	Round	GDTF 43 13 R
Long	Square	GDTF 43 15 S
Long	Round	GDTF 43 15 R



Impression Coping Transfer Ø 5.5

Size	Type	Art. No.
Short	Square	GDTF 55 11 S
Short	Round	GDTF 55 11 R
Middle	Square	GDTF 55 13 S
Middle	Round	GDTF 55 13 R
Long	Square	GDTF 55 15 S
Long	Round	GDTF 55 15 R



Round

Square

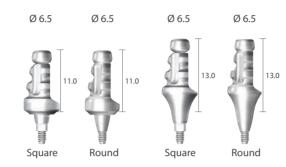
Fixture Level Impression Coping

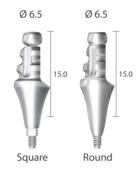
• Impression coping screw is included with Impression coping

Unit: mm, Scale 1:1.5

Impression Coping Transfer Ø 6.5

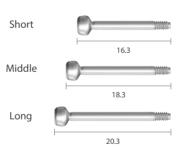
Size	Turno	Art. No.
Size	Туре	Art. No.
Short	Square	GDTF 65 11 S
Short	Round	GDTF 65 11 R
Middle	Square	GDTF 65 13 S
Middle	Round	GDTF 65 13 R
Long	Square	GDTF 65 15 S
Long	Round	GDTF 65 15 R





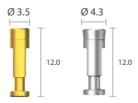
Impression Coping Transfer Screw

Size	Art. No.
Short	GDTS 11
Middle	GDTS 13
Long	GDTS 15



Analog

Application (Body Ø)	Art. No.
Ø3.1S	GDANR 30
Ø3.1 / Ø3.6S / Ø4.3S / Ø5.0S / Ø5.0W	GDANR 36



Dual Milling Abutment

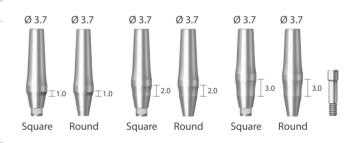
• Abutment screw is included Unit: mm, Scale 1:1.5



GMAB4320AS and GFX3609S

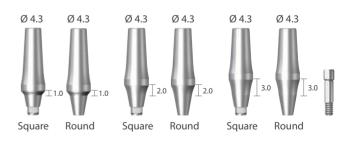
Diameter Ø 3.7

G/H	Type	Art. No.
1.0	Square	GMAB 37 10 AS
1.0	Round	GMAB 37 10 AR
2.0	Square	GMAB 37 20 AS
2.0	Round	GMAB 37 20 AR
3.0	Square	GMAB 37 30 AS
3.0	Round	GMAB 37 30 AR



Diameter Ø 4.3

Type	Art. No.
Square	GMAB 43 10 AS
Round	GMAB 43 10 AR
Square	GMAB 43 20 AS
Round	GMAB 43 20 AR
Square	GMAB 43 30 AS
Round	GMAB 43 30 AR
	Square Round Square Round Square



₩ Note: It is recommended to keep the torque level at 20 N·cm to tighten the dual abutment with fixture

Dual Milling Abutment

• Abutment screw is included Unit: mm, Scale 1:1.5

Diameter Ø 5.5

G/H	Type	Art. No.
1.0	Square	GMAB 55 10 AS
1.0	Round	GMAB 55 10 AR
2.0	Square	GMAB 55 20 AS
2.0	Round	GMAB 55 20 AR
3.0	Square	GMAB 55 30 AS
3.0	Round	GMAB 55 30 AR





Diameter Ø6.5

G/H	Type	Art. No.
1.0	Square	GMAB 65 10 AS
1.0	Round	GMAB 65 10 AR
2.0	Square	GMAB 65 20 AS
2.0	Round	GMAB 65 20 AR
3.0	Square	GMAB 65 30 AS
3.0	Round	GMAB 65 30 AR





Angled Abutment[15°]

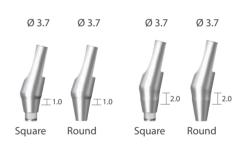
• Abutment screw is included Unit: mm, Scale 1:1.5



GAAB154320AS and GFX3609S

Diameter Ø 3.7 | Angled 15°

G/H	Туре	Art. No.
1.0	Square	GAAB 15 37 10 AS
1.0	Round	GAAB 15 37 10 AR
2.0	Square	GAAB 15 37 20 AS
2.0	Round	GAAB 15 37 20 AR
3.0	Square	GAAB 15 37 30 AS
3.0	Round	GAAB 15 37 30 AR

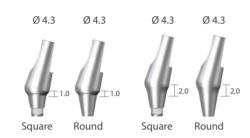




Abutment screw is included

Diameter Ø 4.3 | Angled 15°

Type	Art. No.
Square	GAAB 15 43 10 AS
Round	GAAB 15 43 10 AR
Square	GAAB 15 43 20 AS
Round	GAAB 15 43 20 AR
Square	GAAB 15 43 30 AS
Round	GAAB 15 43 30 AR
	Square Round Square Round Square



Unit: mm, Scale 1:1.5



Diameter Ø 5.5 | Angled 15°

G/H	Туре	Art. No.
1.0	Square	GAAB 15 55 10 AS
1.0	Round	GAAB 15 55 10 AR
2.0	Square	GAAB 15 55 20 AS
2.0	Round	GAAB 15 55 20 AR
3.0	Square	GAAB 15 55 30 AS
3.0	Round	GAAB 15 55 30 AR





Angled Abutment [25°]

 Abutment screw is included Unit: mm, Scale 1:1.5



GAAB254320AS and GFX3609S

Diameter Ø 3.7 | Angled 25°

G/H	Type	Art. No.
1.0	Square	GAAB 25 37 10 AS
1.0	Round	GAAB 25 37 10 AR
2.0	Square	GAAB 25 37 20 AS
2.0	Round	GAAB 25 37 20 AR
3.0	Square	GAAB 25 37 30 AS
3.0	Round	GAAB 25 37 30 AR



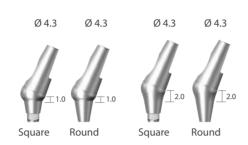


Angled Abutment [25°]

• Abutment screw is included Unit: mm, Scale 1:1.5

Diameter Ø 4.3 | Angled 25°

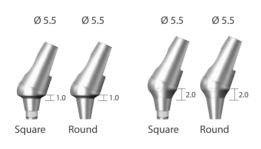
G/H	Type	Art. No.
1.0	Square	GAAB 25 43 10 AS
1.0	Round	GAAB 25 43 10 AR
2.0	Square	GAAB 25 43 20 AS
2.0	Round	GAAB 25 43 20 AR
3.0	Square	GAAB 25 43 30 AS
3.0	Round	GAAB 25 43 30 AR





Diameter Ø 5.5 | Angled 25°

G/H	Type	Art. No.
1.0	Square	GAAB 25 55 10 AS
1.0	Round	GAAB 25 55 10 AR
2.0	Square	GAAB 25 55 20 AS
2.0	Round	GAAB 25 55 20 AR
3.0	Square	GAAB 25 55 30 AS
3.0	Round	GAAB 25 55 30 AR





Metal Casting Abutment

• Abutment screw is included Unit: mm, Scale 1:1.5



GRAB43CS and GFX3609S

Metal-Casting Abutment

G/H	Type	Art. No.
1.0	Square	GRAB 37 C S
1.0	Round	GRAB 37 CR
1.0	Square	GRAB 43 C S
1.0	Round	GRAB 43 CR



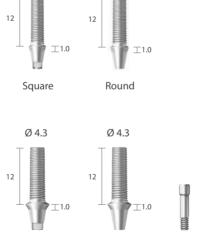
Temporary Abutment

• Abutment screw is included. Unit: mm, Scale 1:1.5



Ti-Temporary Abutment

G/H	Type	Art. No.
1.0	Square	GRAB 37 TS
1.0	Round	GRAB 37 TR
1.0	Square	GRAB 43 TS
1.0	Round	GRAB 43 TR



Round

Ø 3.7

Ø 3.7

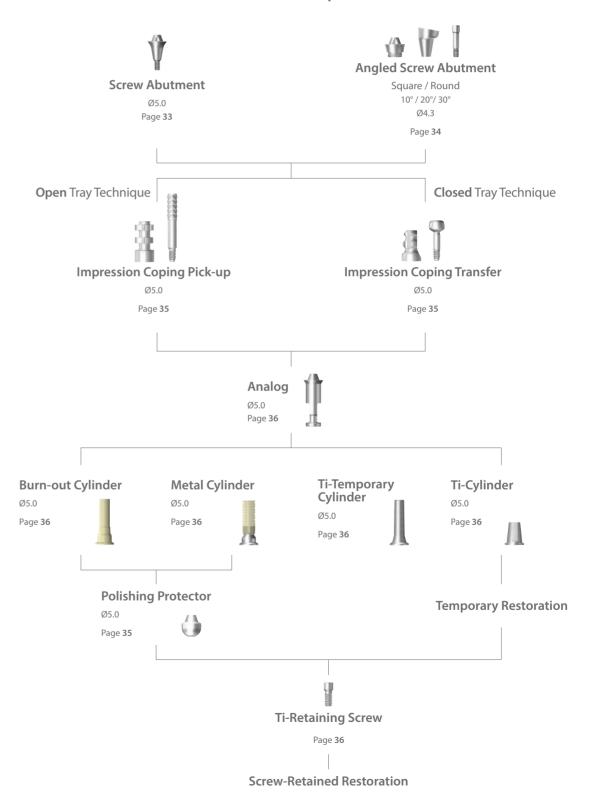
Square

Prosthetic Procedure 3

Impression Technique and Restoration Selection

Screw Abutment

Abutment Level Impression



Screw Abutment

Unit: mm, Scale 1:1.5





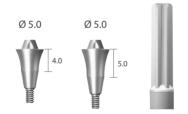


GSAB5020A and GFX3609S

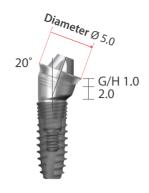
Diameter Ø 5.0

G/H	Art. No.
0.5	GSAB 50 05 BA
1.0	GSAB 50 10 A
2.0	GSAB 50 20 A
3.0	GSAB 50 30 A
4.0	GSAB 50 40 A
5.0	GSAB 50 50 A





Angled Screw Abutment

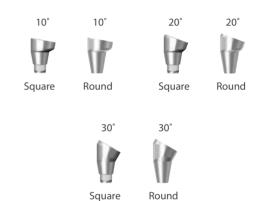


Unit: mm, Scale 1:1.5

GAOS5010A and GAOB432020AS and GFX3609S

Base Abutment

Diameter	Angle	Art. No.
Ø4.3	10°	GAOB 43 20 10 AS
Ø4.3	10°	GAOB 43 20 10 AR
Ø4.3	20°	GAOB 43 20 20 AS
Ø4.3	20°	GAOB 43 20 20 AR
Ø4.3	30°	GAOB 43 20 30 AS
Ø4.3	30°	GAOB 43 20 30 AR



Screw Cap

G/H	Art. No.
1.0	GAOS 50 10 A
2.0	GAOS 50 20 A
3.0	GAOS 50 30 A



Healing Abutment

	G/H	Art. No.
	1.0	GAOC 50 10 A
	2.0	GAOC 50 20 A
	3.0	GAOC 50 30 A



Screw

GAOSC1619	



[※] Note: It is recommended to keep the torque level at 20 N⋅cm to tighten the dual abutment with fixture

Screw Abutment Impression Components

Unit: mm, Scale 1:1.5

Impression Coping Pick-up | Bridge

Diameter	Art. No.
Ø5.0	GSPU 50



			_ (
Imnre	SSION	(oning	Transfer	l Bridge

Diameter	Art. No.
Ø5.0	GSTF 50



Impression Coping Screw

Type	Art. No.
Pick-up	GSPS 09
Transfer	GSTS 09





Comfort Cap

Diameter	Art. No.
Ø5.0	GSCC 50



Polishing Protector

Diameter	Art. No.
Ø5.0	GSPP 50



Screw Abutment Impression Components

Unit: mm, Scale 1:1.5

Analog

Diameter	Art. No.
Ø5.0	GSAN 50



Ti-Cylinder

Diameter	Art. No.
Ø5.0	GSTA 50 A



Ti-Temporary Cylinder

Diameter	Art. No.
Ø5.0	GSTC 50 AT



Burn-out Cylinder

Diameter	Art. No.
Ø5.0	GSBC 50



Metal Cylinder

Diameter	Art. No.
Ø5.0	GSGC 50 C



Ti-Retaining Screw

GSRS 16 T	



38 NR Line Product Catalog NR Line Product Catalog 39

Prosthetic Procedure 4

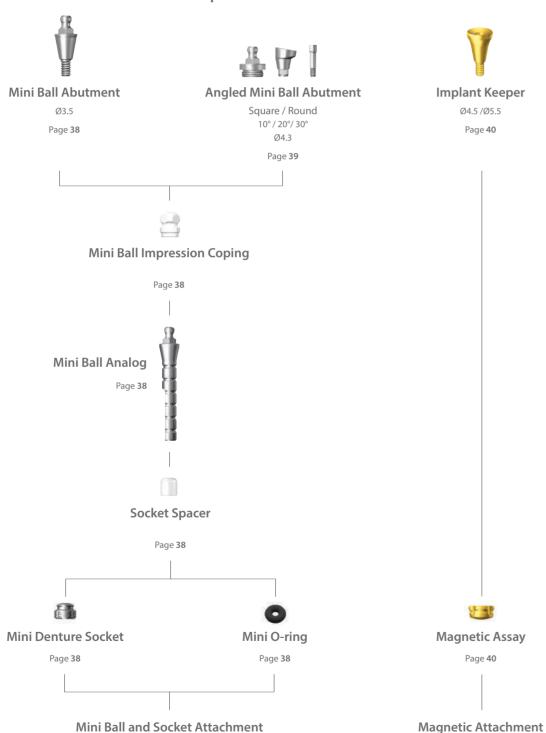
Impression Technique and Restoration Selection

for Overdenture

Overdenture Procedure Mini Ball / Magnetic Attachment

Abutment Level Impression

for Overdenture



Mini Ball Attachment

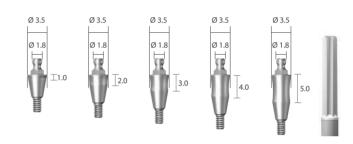
Unit: mm, Scale 1:1.5



BPF3 and GBAB3520 and GFX3609S

Mini Ball Abutment

G/H	Art. No.
1.0	GBAB 35 10
2.0	GBAB 35 20
3.0	GBAB 35 30
4.0	GBAB 35 40
5.0	GBAB 35 50



Mini Ball Impression Coping

GICA



Mini Ball Analog

BANL



Socket Spacer

Art. No. GBIC3L GBIC2L



Female Socket

Art. No.	BPF3 (300~500gf) BPF2 (500~700gf)
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Angled Mini Ball Attachment



Unit: mm, Scale 1:1.5

GAOB4310A and GAOB432010AS and GFX3609S

Base Abutment

Diameter	Angle	Art. No.
Ø4.3	10°	GAOB 43 20 10 AS
Ø4.3	10°	GAOB 43 20 10 AR
Ø4.3	20°	GAOB 43 20 20 AS
Ø4.3	20°	GAOB 43 20 20 AR
Ø4.3	30°	GAOB 43 20 30 AS
Ø4.3	30°	GAOB 43 20 30 AR









30° Square



Mini Ball Cap

G/H	Art. No.
1.0	GAOB 43 10 A
2.0	GAOB 43 20 A
3.0	GAOB 43 30 A







Angled Overdenture Screw

GAOSC1619



Magnetic Attachment

Unit: mm, Scale 1:1.5



MGT4520D and GMK4520D and GFX3609S

Magnetic Assay

Application	Diameter	Н	Art. No.
MKP45D	Ø4.5	2.0	MGT 45 20 D
MKP55D	Ø4.5	2.0	MGT 55 20 D



Implant Keeper Diameter Ø 4.5

G/H	Art. No.
1.0	GMK 45 10 D
2.0	GMK 45 20 D
3.0	GMK 45 30 D
4.0	GMK 45 40 D
5.0	GMK 45 50 D

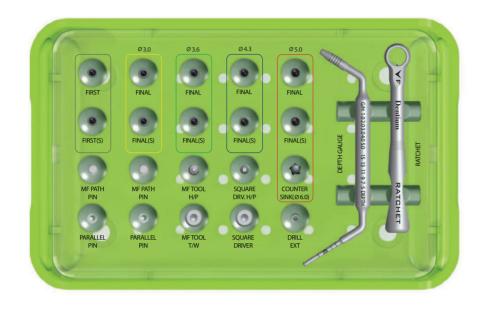


Implant Keeper Diameter Ø 5.5

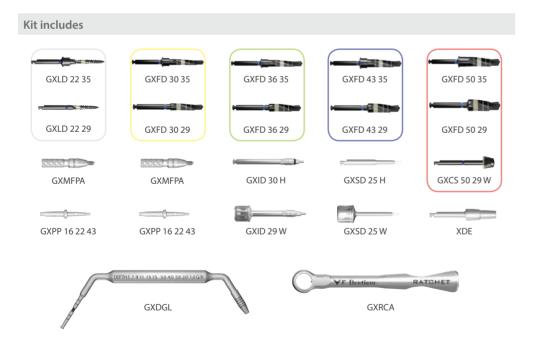
G/H	Art. No.
1.0	GMK 55 10 D
2.0	GMK 55 20 D
3.0	GMK 55 30 D
4.0	GMK 55 40 D
5.0	GMK 55 50 D



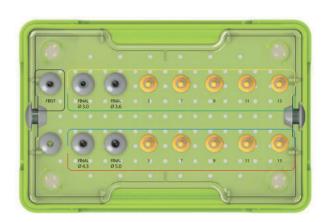
Surgical Kit



NRLine Surgical Kit GXIFK



Stopper Kit

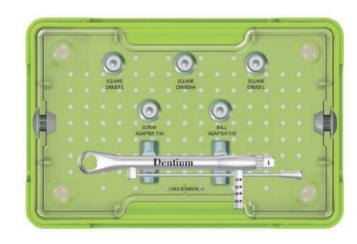


NRLine Stopper Kit GXDS

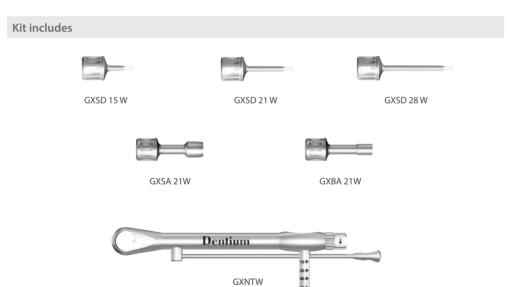




Prosthetic Kit



NRLine Prosthetic Kit GXNP



Drill



Unit: mm, Scale 1:1

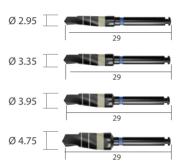
First Guide Drill

Diameter	L	Art. No.	
Ø2.6	29	GXLD 22 29	
Ø2.6	31	GXLD 22 31	
Ø2.6	35	GXLD 22 35	



Final Drill

Diameter	L	Art. No.
Ø2.95	29	GXFD 30 29
Ø3.35	29	GXFD 36 29
Ø3.95	29	GXFD 43 29
Ø4.75	29	GXFD 50 29



Final Drill

Diameter	L	Art. No.
Ø2.95	31	GXFD 30 31
Ø3.35	31	GXFD 36 31
Ø3.95	31	GXFD 43 31
Ø4.75	31	GXFD 50 31



Final Drill

	Diameter	L	Art. No.
	Ø2.95	35	GXFD 30 35
	Ø3.35	35	GXFD 36 35
	Ø3.95	35	GXFD 43 35
	Ø4.75	35	GXFD 50 35

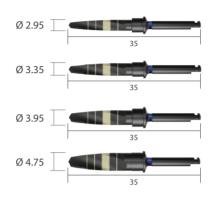


Drill

Unit: mm, Scale 1:1

Final Drill | Option

Diameter	L	Art. No.
Ø2.95	35	GXFH 30 35
Ø3.35	35	GXFH 36 35
Ø3.95	35	GXFH 43 35
Ø4.75	35	GXFH 50 35



Countersink

Diameter	L	Art. No.
Ø6.0	29	GXCS 50 29 W



Instrument

Unit: mm, Scale 1:1

Stopper | For final drill 3035, 3635

Drilling Depth	L	Art. No.
13	5.6	GXDST 13
11	7.6	GXDST 11
9	9.6	GXDST 09
7	11.6	GXDST 07
5	13.6	GXDST 05

Ø 5.14	Ø5.14	Ø5.14	Ø5.14	Ø5.14
5.6	7.6	9.6	11.6	13.6

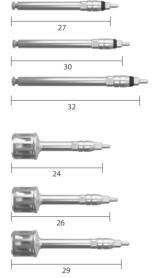
Stopper | For final drill 4335, 5035

Drilling Depth	L	Art. No.
13	5.6	GXDST 13 L
11	7.6	GXDST 11 L
9	9.6	GXDST 09 L
7	11.6	GXDST 07 L
5	13.6	GXDST 05 L



Adapter

Туре	L	Art. No.
	27	GXID 27 H
Hand-piece	30	GXID 30 H
	32	GXID 32 H
	24	GXID 24 W
Ratchet	26	GXID 26 W
	29	GXID 29 W



Unit: mm, Scale 1:1

Instrument

Unit: mm, Scale 1:1

Instrument

Parallel Pin

Diameter	L	Art. No.
Ø4.3	23.6	GXPP 162243



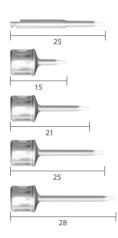
Path Pin

L	Art. No.
17.3	GXMFPA



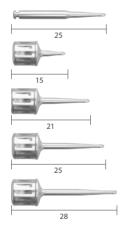
Square Driver

Туре	L	Art. No.
Hand-piece	25	GXSD 25 H
Ratchet	15	GXSD 15 W
	21	GXSD 21 W
	25	GXSD 25 W
	28	GXSD 28 W



Angled Square Driver

Туре	L	Art. No.
Hand-piece	25	GXAD 25 H
Ratchet	15	GXAD 15 W
	21	GXAD 21 W
	25	GXAD 25 W
	28	GXAD 28 W



Drill Extension

XDE



Adapter for Screw Abutment

GXSA21W



Adapter for Ball Abutment

GXBA21W



Ratchet

GXRCA



Torque Wrench | Scale 1:0.7

GXNTW



Depth Gauge

GXDGL

™ Note: One side of Depth Gauge measures the osteotomy depth and the other side measures the gingival height from the top of the implant



Prosthetic and Laboratory Instrument

Unit: mm, Scale 1:1

Reamer Guide for Dual Abutment

Art. No.	
GDRG 37	
GDRG 43	
GDRG 55	
GDRG 65	



Reamer Guide for Screw Abutment

GSRG



Reamer

GSRM



Reamer Handle

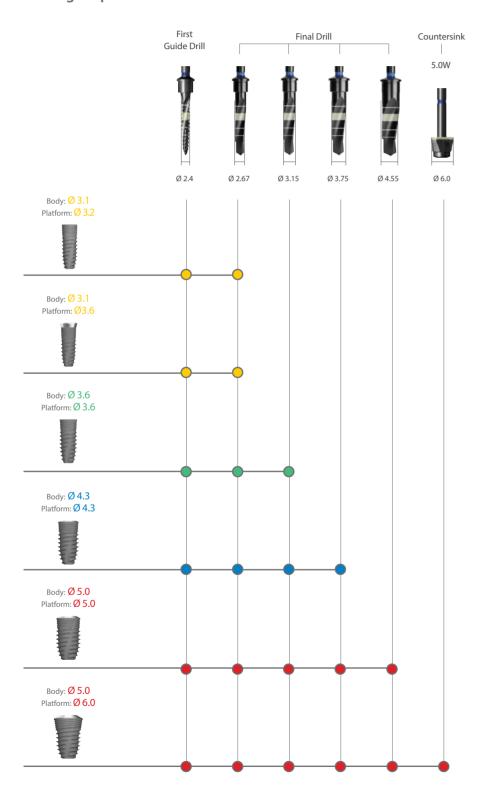
CRH



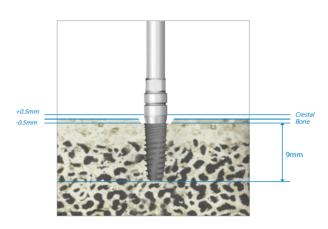


Surgical Drill Sequence

Drilling Sequence Guide

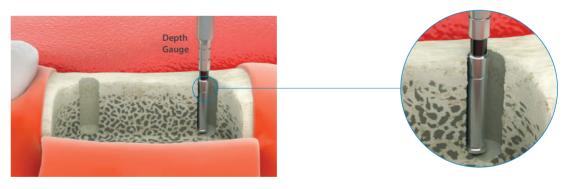


Determination of Fixture Top Level



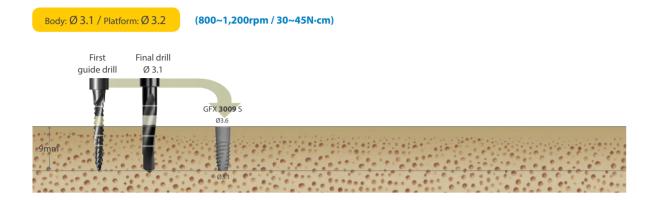
Top level of fixture needs to be located 0.5mm below the marginal crestal bone level to minimize bone loss after implantation.

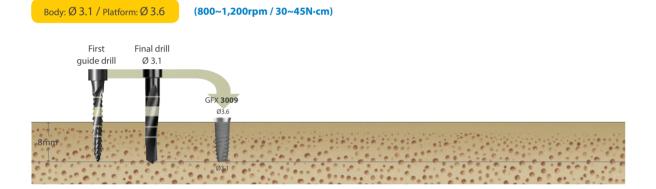
Depth Indication

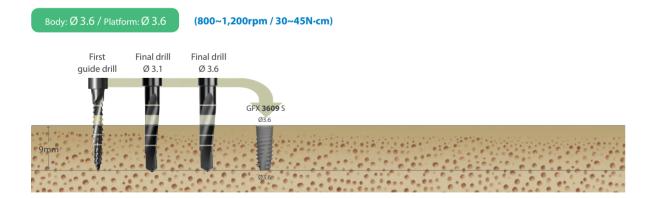


- Use the depth gauge after first guide drill to check depth of drilling.
- Place the depth gauge against the wall of the osteotomy.

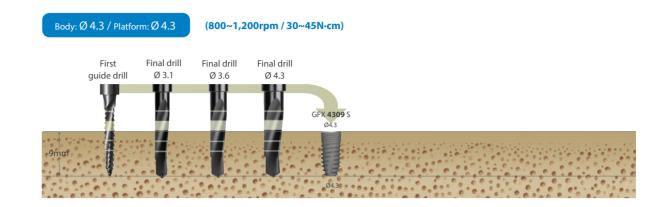
Drilling Depth Guide (Bone Level)

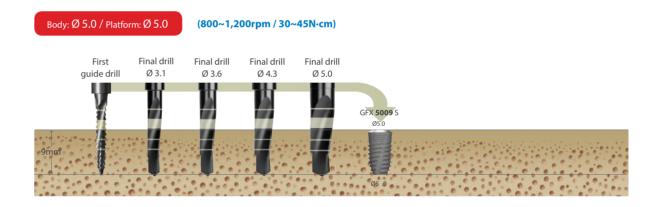


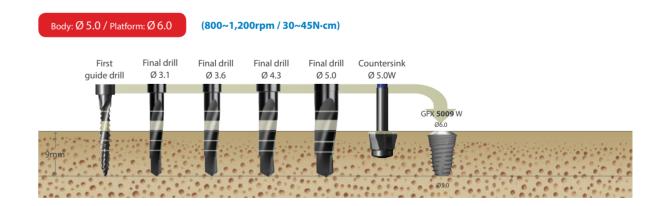




Drilling Depth Guide (Bone Level)







Fixture Connection











Caution

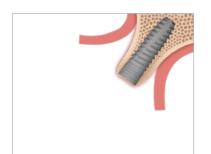
When opening the fixture pack, hold the fixture container upward and engage the adapter into the fixture.



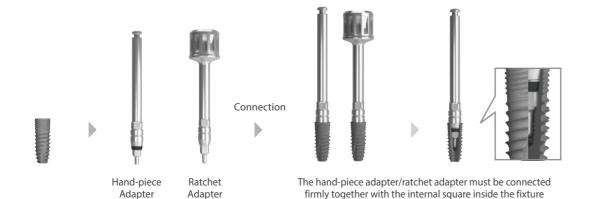




By ratchet



Directions Using the Hand-piece / Ratchet Adapter



Installation Procedure & Warnings

Sterilization and Instrument Care Procedures

Cover Screw





By square driver

Cover screw (GCS36) connection

Healing Abutment







By square driver

Healing Abutment connection

Healing Abutment (GHAB371525) connection in thin gingiva

Warnings

Dental Implant surgery and restoration involve complex dental procedures. Appropriate and adequate training in proper technique is strongly recommended prior to use.

- Improper medical examination and/or treatment plan can result in implant failure and/or loss of supportive bone.
- Improper initial stability and/or excessive occlusal forces during healing period may lead to osseointergration failure.
- Excessive insertion torque may lead to mechanical failure or implant biologic failure due to bone compression and necrosis.
- When forces or loads are greater than its design, implant or abutment fracture could happen. Therefore clinicians should make careful decisions with regards to clinical treatment planning to minimize the risk of fracture. Appropriate implant quantity, occlusal interface and a nightguard are essential. Potential excessive loading conditions may include the following:
- 01 Inadequate number of implants are placed.
- 02 Implant width and/or length are inappropriate for a treatment site.
- 03 Prosthesis which has excessive cantilever length due to inadequate biomechanical design
- **04** Continuous occlusal force are generated by incomplete connection between implant and abutment and/or abutment screw loosening.
- 05 Metal Casting Abutment angles are greater than 30° from the vertical axis of the implant.
- **06** Occlusal interferences causing excessive lateral forces
- 07 Patient parafunctions such as bruxism
- 08 Inadequate dental laboratory casting procedures
- 09 Improper prosthesis fit
- 10 Trauma from patient habits or accidents
- 11 Excessive marginal bone loss caused by inadequate bone width and/or advanced peri-implantitis.

Surgical Kit Maintenance

Manual Cleaning and Sterilization Procedure

It is important to use protective clothing and face shield while cleaning contaminated instruments. Always wear protective glasses, mask, gloves, etc. for your safety.

Cleaning

- 1 Rinse instruments immediately after use under running tap water (<40°C) for a minimum of one (1) minute to remove all debris including extraneous body fluids, bone debris and tissue.
- 2 Soak all instruments immediately after rinsing in an enzymatic cleaning solution* for 10 to 20 minutes (Do not soak overnight).
 - * Follow manufacturer's instructions and observe recommended cleaning solution concentrations (enzymatic detergent with a pH level between 7-10 and temperature not to exceed 40°C). Do not use incompatible cleaning solutions to clean instruments.
- 3 For internal irrigation drills, use a 1mL syringe and a 25 gauge needle to clean the drill irrigation hole with a minimum of 0.2 mL of the prepared cleaning solution. Repeat this step two (2) more times for a total of three (3) rinses.
- 4 Scrub with a soft brush for a minimum of 1 (one) minute to remove any debris inside the drill irrigation hole.
- **5** Rinse the instruments under running tap water (<40°C) for a minimum of 1 minute. Use a 1mL syringe and a 25 gauge needle with a minimum of 0.2 mL of tap water to forcefully flush inside the drill irrigation hole. Repeat flushing of drill irrigation hole two (2) more times for a total of three (3) flushings.
- 6 Place instruments into an ultrasonic cleaner with neutral detergent**. Keep instruments inside the ultrasonic bath for 15 minutes using a frequency of 25-50 kHz. Ensure multiple instruments placed within the bath remain separated.
 - ** Follow manufacturer's instructions and observe recommended neutral detergent solution concentrations (neutral detergent with a pH level between 7-10 and temperature not to exceed 40°C). Do not use incompatible neutral detergent solutions to clean instruments.
- 7 Rinse instruments thoroughly with running tap water (<40°C) for a minimum of 1 (one) minute until all traces of neutral detergent solution are removed. Rinse inside drill irrigation hole using a 1mL syringe and a 25 gauge needle with a minimum of 0.2 mL of tap water. Repeat rinsing drill irrigation hole two (2) more times for a total of three (3) rinses.
- **8** Gently wipe instruments with a soft lint-free cloth or place the instruments in a drying cabinet (60°C for less than 10 hours) until fully dry. Blow residual water from drill irrigation hole using a 1mL syringe and a 25 gauge needle. Visually inspect instruments in a well-lit area to ensure they are clean, dry and free of residue.
- 9 Clean instrument trays with a germicidal cleaner prior to returning instruments into Kit.
- 10 Always check for damage or corrosion after rinsing and drying.

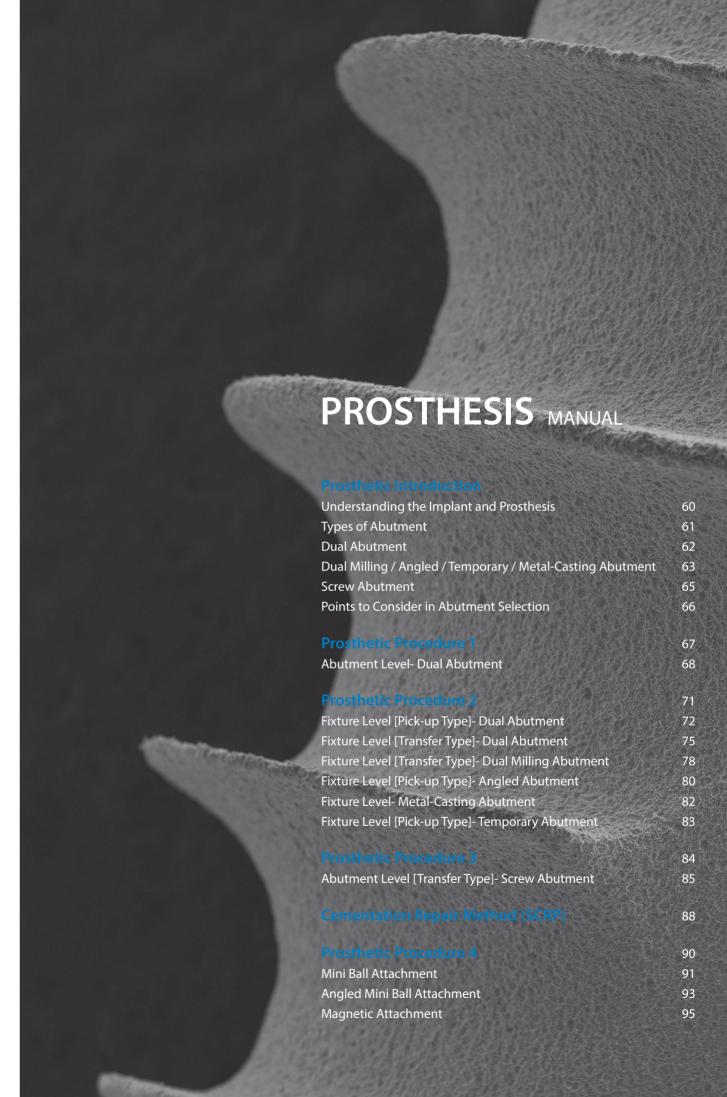
Sterilization

Dentium recommends either the Pre-vacuum or Gravity autoclave methods for sterilization under the conditions described below. However, autoclave performance can affect the efficacy of this process. Healthcare facilities should validate their sterilization processes employing the actual equipment and operators that routinely sterilize instruments.

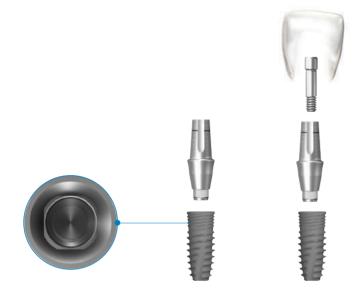
All autoclaves/sterilizers should be regularly validated, maintained and checked in accordance with EN 285/EN 13060, EN ISO 17665, ANSI AAMI ST79 to ensure compliance with these and related standards. Make sure packaging is suitable for steam sterilization.

Recommended Sterilization Parameters

Method-Moist Heat Sterilization	Pre-vacuum	Gravity
Set Point Temperature	132 ℃	132 °C
Exposure time	4 minutes	30 minutes
Drying time	20 minutes	40 minutes



Understanding the Implant and Prosthesis



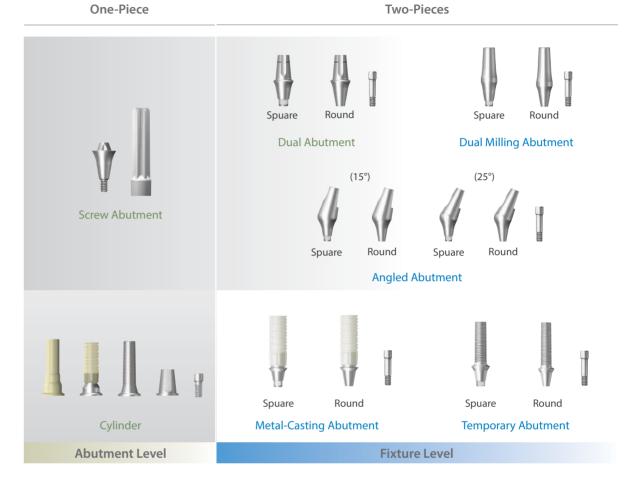
Firm & Stable Connection

- The tapered conical square connection between implant and abutment interface provides hermetic sealing.
- The biological connection distributes the load to the fixture evenly. Therefore it may minimize bone loss.
- All implant diameters share the same internal connection. One abutment screw fits all abutments and fixtures.

Types of Abutment (Abutments are available in various diameters & gingival heights)

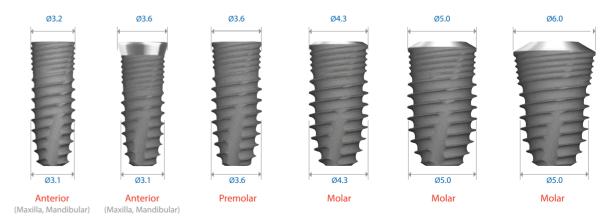
Dual Abutment		Abutment level
• Dual Abutment	7	
• Dual Milling Abutment		
• Angled Abutment (15°/25°)		Fixture level
Metal-Casting Abutment		
•Temporary Abutment		
• Screw Abutment • Angled Screw Abutment (10°/ 20°/ 30°)		Screw retained (Abutment level)
 Mini Ball Attachment Angled Mini Ball Attachment (10°/ 20°/ 30°) Magnetic Attachment 		For denture use

Types of Abutment

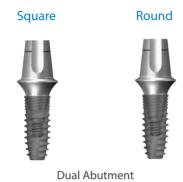


- Straight abutments are Dual and Milling Abutment.
- Depending on the insertion angle and position of the fixture, the Angled or Metal-Casting / Temporary Abutment may be used.
- •The Screw Abutment can be used when prosthesis retrieval is anticipated.

Selection Guideline



Dual Abutment



- It is possible to take an impression at both fixture level and abutment level.
- If the abutment selection is made in the mouth, gauge the thickness of gingiva with depth gauge to decide the appropriate abutment gingival height.
- For abutment level impressions, the impression is taken with the snap cap.
- When using the Dual Abutment with abutment level impression, it remains in the mouth after the impression is taken.
- For fixture level impressions, the abutment selection takes place on the master model.
- For fixture level impressions, a precise positioning jig for abutment may be required.
- Either square or round abutments may be used, according to operators preference.
- * If a cement retained restoration requires retrieval, cutting a hole in the occlusal surface would allow access to the screw to permit removal.

Square / Round

	Square	Round
Positioning Jig	Unnecessary	Required
Radiograph	Required	Unnecessary

Dual Abutment (Square / Round)

Diameter	G/H	Vertical Angle
Ø3.7	0.5mm, 1.0mm, 2.0mm, 3.0mm, 4.0mm, 5.0mm	3.5°
Ø4.3	0.5mm, 1.0mm, 2.0mm, 3.0mm, 4.0mm, 5.0mm	5°
Ø5.5	0.5mm, 1.0mm, 2.0mm, 3.0mm, 4.0mm, 5.0mm	6°
Ø6.5	0.5mm, 1.0mm, 2.0mm, 3.0mm, 4.0mm, 5.0mm	7°



Dual Milling / Angled / Temporary / Metal-Casting Abutment







butment Angled Abutment

Square Round



Metal-Casting Abutment

Angled Abutment

- The Angled Abutment is recommended when the restoration path of insertion is unfavorable in either anterior or posterior sites.
- Retention force can be increased through milling process.

Metal-Casting Abutment

- Equivalent results for a fraction of the price.
- Our highly affordable metal alloy replaces expensive gold to alleviate financial burden to all.

Temporary Abutment

- Temporary Abutments are available with titanium.
- The titanium abutment comes in square and ronud both with a gingival height of 1.0mm.

Dual Milling / Angled / Temporary / Metal-Casting Abutment

Fixture Level Abutment (Square / Round)

A	butment		Diameter	G/H	Angle
			Ø3.7	1.0mm 2.0mm 3.0mm	
Dual Milling Abutment		Ø4.3	1.0mm 2.0mm 3.0mm		
	Square	Square Round	Ø5.5	1.0mm 2.0mm 3.0mm	X
			Ø6.5	1.0mm 2.0mm 3.0mm	
Angled Abutment Square	12 /2	Ø3.7	1.0mm 2.0mm 3.0mm	15° / 25°	
	# #	Square Round	Ø4.3	1.0mm 2.0mm 3.0mm	15° / 25°
	Square		Ø5.5	1.0mm 2.0mm 3.0mm	15° / 25°
Metal-Casting Abutment Square		Ø3.7	1.0mm		
	Square	re Round	Ø4.3	1.0mm	Х
Temporary Abutment			Ø3.7	1.0mm	×
	Square	Round	Ø4.3	1.0mm	^

Screw Abutment



Screw Abutment

If prosthesis repair is anticipated, use of a Screw Abutment retained prosthesis enables easy retrieval.

- Useful for connecting multiple units or when there is a preference for a screw retained prosthesis.
- Useful when respective long axes of implants differ. Each side tapers by 30° and this permits up to 60° divergence between two abutments.
- Useful when the prognosis of an adjacent restoration is not ideal thus permitting easy retrieval and modification of the restoration.

Ti-Retaining Screw (1.6mm - body diameter)

- Can minimize screw loosening due to increased approximal space.
- Can endure various kinds of masticatory force.





Diameter	G/H	
Ø5.0	0.5mm, 1.0mm, 2.0mm, 3.0mm, 4.0mm, 5.0mm	



Angled Screw Abutment

Diameter	G/H	Angle
Ø4.3	1.0mm, 2.0mm, 3.0mm	10°/20°/30°





NR Line Product Catalog NR Line Product Catalog 67

Points to Consider in Abutment Selection

Considerations in Selecting an Abutment

- Esthetic requirement
- Implant angulation
- Implant location
- Fixture installation depth (Gingival height)
- Interarch distance
- Prosthesis type
- Dentist & dental technician's preference

Impression of Implant

According to the case the impression can be taken at abutment or fixture level.

Fixture Level

- 1 Dual Abutment
- 2 Dual Milling Abutment
- 3 Angled Abutment (15° / 25°)
- 4 Metal-Casting Abutment
- 5 Temporary Abutment (Titanium)

Abutment Level

- 1 Dual Abutment
- 2 Screw Abutment
- 3 Angled Screw Abutment (10° / 20° / 30°)

Abutment Impression Recommendation

Dual Abutment	Cementation type, screw-cementation type	Fixture level impression or abutment level impression
Dual Milling Abutment	Cementation type, screw-cementation type	Fixture level impression
Angled Abutment	Cementation type, screw-cementation type	Fixture level impression
Screw Abutment	Screw retained type	Abutment level impression
Metal-Casting Abutment	Cementation type, screw-cementation type	Fixture level impression
Temporary Abutment	Cementation type, screw-cementation type	Fixture level impression

Prosthetic Procedure 1

Impression Technique and Restoration Selection

Dual Abutment

Abutment Level Impression

Closed Tray Technique



Dual Abutment

Square / Round Ø3.7 / Ø4.3 / Ø5.5 / Ø6.5



Impression Coping

(Burn-Out Cylinder, Comfort Cap, Abutment Holder) Ø3.7 / Ø4.3 / Ø5.5 / Ø6.5



Comfort Cap

Ø3.7 / Ø4.3 / Ø5.5 / Ø6.5



Ø3.7 / Ø4.3 / Ø5.5 / Ø6.5

Modification

Cemented Restoration

Abutment Level- Dual Abutment

[Multiple Units]

Abutment Level- Dual Abutment

[Multiple Units]

Clinical Procedure



Chairside



Remove the Healing Abutment after formation of soft tissue.



Dual Abutment (Square / Round)



Select the Dual Abutment by diameter and gingival height.



Retighten after 15 minutes tighten it to 20N·cm.



Seat the plastic cap over the abutment.



Injection of impression material



Impression taking



Cap comes off into the impression.



Fabrication of provisional restoration or insertion of comfort cap

Laboratory Procedure



Labside



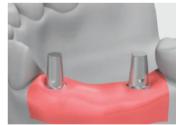
Insertion of abutment level analog into impression



Make sure analog seats securely into the impression cap (line up the flat side of analog to the flat side of the cap).



Soft tissue model



Fabrication of master cast



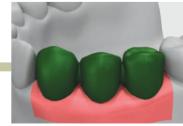
Seat burn-out cylinder securely into analog.



Consider distance of opposing teeth, modify burn-out cylinder to its proper height if needed.



Fabrication of burn-out cylinder and plastic bar in preparation for wax-up



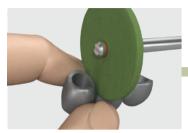
Completion of wax-up



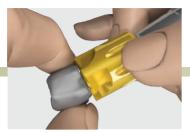
Fabrication of metal framework

Abutment Level- Dual Abutment

[Multiple Units]



Trimming of the extended margin by using the rubber wheel



Reamer is used to eliminate "Lip" caused by 'snap-on' mechanism.



Metal framework after removal of "Lip"



Metal framework



Porcelain build-up



Final prosthesis

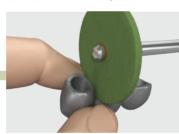
SCRP: Once an access hole has been created, it can be converted to a SCRP (Screw & Cemented Retained Prosthesis).



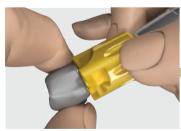
Access hole is made when burn-out cylinder is used to do the wax-up.



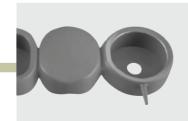
Extended margin around the metal framework due to 'snap-on' mechanism



 $Trim\ extended\ margin\ by\ rubber\ wheel$



Eliminate the lip remnant caused by 'snap-on' mechanism by reamer.



Metal framework after removal of "Lip"



Metal framework



Final prosthesis

Prosthetic Procedure 2

Modification

Cemented Restoration

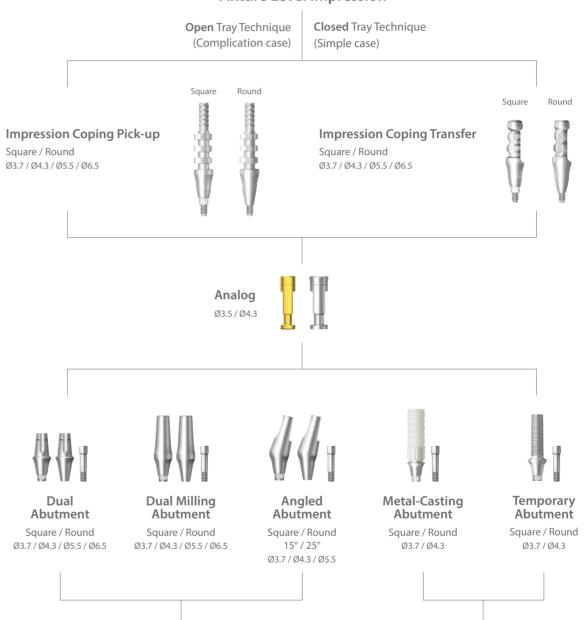
Impression Technique and Restoration Selection

Modification

Screw-Retained Restoration

Dual / Dual Milling / Angled / Metal-Casting / Temporary Abutment

Fixture Level Impression



72 NR Line Product Catalog NR Line Product Catalog 73

Fixture Level [Pick-up Type]- **Dual Abutment**



Chairside





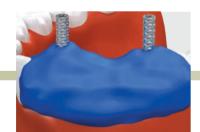
Open tray impression (pick-up)

Pick-up Type



Open Tray

Apply adhesive on open tray (Individual tray).



Injecting the impression material



Impression taking Remove the screw before removing the impression tray.



Inner side of impression

Fixture Level [Pick-up Type]- Dual Abutment

[Multiple Units]

Laboratory Procedure



Labside



Connect lab analog with impression coping.



Soft tissue model



Connect a proper abutment.



After surveying of abutment, milling is possible if necessary.



Fabrication of positioning jig



Fabrication of the cap with pattern resin





Metal framework



Final prosthesis

Fixture Level [Pick-up Type]- Dual Abutment

[Multiple Units]

Chairside



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 20N⋅cm. Retighten after 15 minutes.



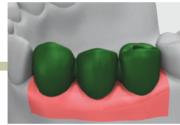
Insertion of the final prosthesis and occlusal adjustment

* In the process of seating the prosthesis, the prosthesis can be rebounded by gingival tissue. In this case it is advised to apply occlusal load on the prosthesis for 10~15 minutes.

SCRP- Labside



Formation of access hole with long transfer coping screw



Wax-up



Metal framework



Final prosthesis



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 20N·cm. Retighten after 15 minutes.



Insertion of final prosthesis and adjustment of occlusion

* In the process of seating the prosthesis, the prosthesis can be rebounded by gingival tissue. In this case it is advised to apply occlusal load on the prosthesis for 10~15 minutes.

Fixture Level [Transfer Type]- **Dual Abutment**

[Multiple Units]









Impression Coping Transfer Type



Fixture Level Impression Closed Tray

Chairside



Healing Abutment

Second stage surgery (Uncovering)



Soft tissue formed around Healing Abutment



Transfer type impression coping



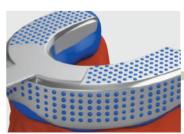
Seating the impression coping which has the same diameter as Healing Abutment



Impression of fixture level



Injection of impression material



Impression taking



Inner side of the impression

Fixture Level [Transfer Type]- Dual Abutment

[Multiple Units]

Laboratory Procedure







Height Modification of Dual Abutment



Crown Wax-up



Final Restoration Cementation Type

Labside



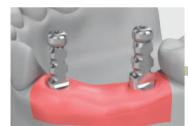
Impression coping and analog connection. And insert impression coping into the impression.



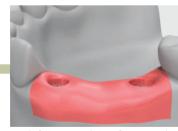
Make sure the impression coping is fully seated into the impression.



Soft tissue model



Fabrication of master cast



Soft tissue condition after removal of impression coping



Measuring gingival height with depth gauge



Selection of Dual Abutment of proper diameter and gingival height



Verify by surveying the selected abutment. (Milling of the abutment is possible if necessary)



Fabrication of positioning jig

Fixture Level [Transfer Type]- Dual Abutment

[Multiple Units]



Seat the cap with pattern resin



Completion of wax-up



Completion of metal framework



Final prosthesis



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 20N-cm.

Retighten after 15 minutes.

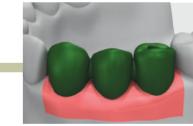


Insertion of final prosthesis, and adjustment of occlusion. Prior to cementation, place wax into abutment screw hole to protect screw head.

SCRP- Labside



Make an access hole in the resin cap by using the long transfer coping screw.



Completed wax-up



Metal framework



Final prosthesis



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 20N-cm.
Retighten after 15 minutes.



Insertion of final prosthesis and occlusal adjustment. Place wax into screw hole of the abutment prior to sealing with composite.

^{*} In the process of seating the prosthesis, the prosthesis can be rebounded by gingival tissue. In this case it is advised to apply occlusal load on the prosthesis for $10\sim15$ minutes.

Fixture Level [Transfer Type]- Dual Milling Abutment



Chairside



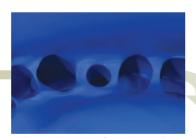
Placement of Healing Abutment Placement of impression coping with the same diameter as Healing Abutment







Impression taking



Impression coping formation on the inside of impression is observable. (Traces of impression coping on the inner surface of impression)

Laboratory Procedure



Lab Analog Connection Dual I





Modification



Crown Wax-up



Final Restoration Cementation

Fixture Level [Transfer Type]- Dual Milling Abutment

[Single Unit]

Labside



Impression coping and analog connection and insert impression coping into the impression.



Soft tissue model



Master cast



Selection of appropriate Dual Milling Abutment



Abutment after milling process



Fabrication of positioning jig



Fabrication of pattern resin cap



Completion of wax-up



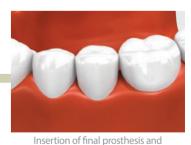
Metal framework

Final prosthesis



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 20N-cm.

Retighten after 15 minutes.

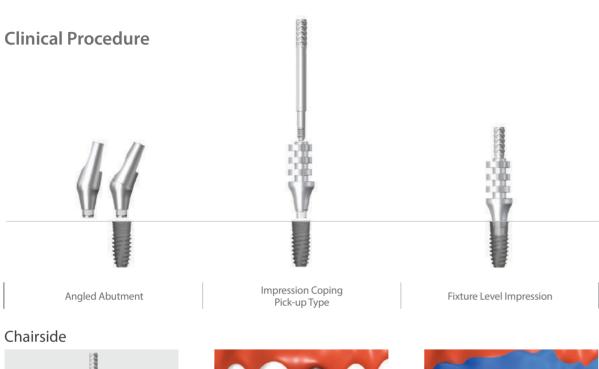


occlusal adjustment

* In the process of seating the prosthesis, the prosthesis can be rebounded by gingival tissue. In this case it is advised to apply acclusal load on the prosthesis for 10~15 minutes.

Fixture Level [Pick-up Type]- Angled Abutment

[Single Unit]





Pick-up type impression coping





Impression taking



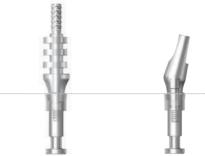


Injecting impression material

Removed impression

Laboratory Procedure

(individual tray with holes)



Lab Analog Connection



Connection



Modification



Framework Wax-up



Final Restoration Cementation

Fixture Level [Pick-up Type]- Angled Abutment

[Single Unit]

Labside



Impression coping with analog connections



Soft tissue formation and fabrication of master model



Unscrew then separate impression from the model.



Master cast



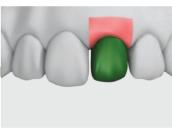
Select an Angled Abutment.



Modification of Angled Abutment & fabrication of positioning jig



Fabrication of pattern resin cap



Wax-up



Metal or zirconia framework

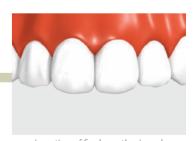
Chairside



Final prosthesis



Insertion of the Angled Abutment using positioning jig



Insertion of final prosthesis and occlusal adjustment

NR Line Product Catalog 83

Fixture Level- Metal-Casting Abutment

[Single Unit]

Laboratory Procedure



Labside



Placement of Metal-Casting Abutment



Completed custom abutment



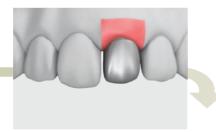
Fabrication of positioning jig



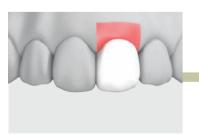
Fabrication of pattern resin cap



Wax-up



Metal framework



Final prosthesis



Insertion of custom abutment using positioning jig



Insertion of final prosthesis and occlusal adjustment

Fixture Level [Pick-up Type]- Temporary Abutment

[Single Unit]



<Using Temporary Abutment>



Considering the opposing teeth before seating the Temporary Abutment, trim off the abutment if needed and complete the Temporary Abutment prosthesis with direct resin.





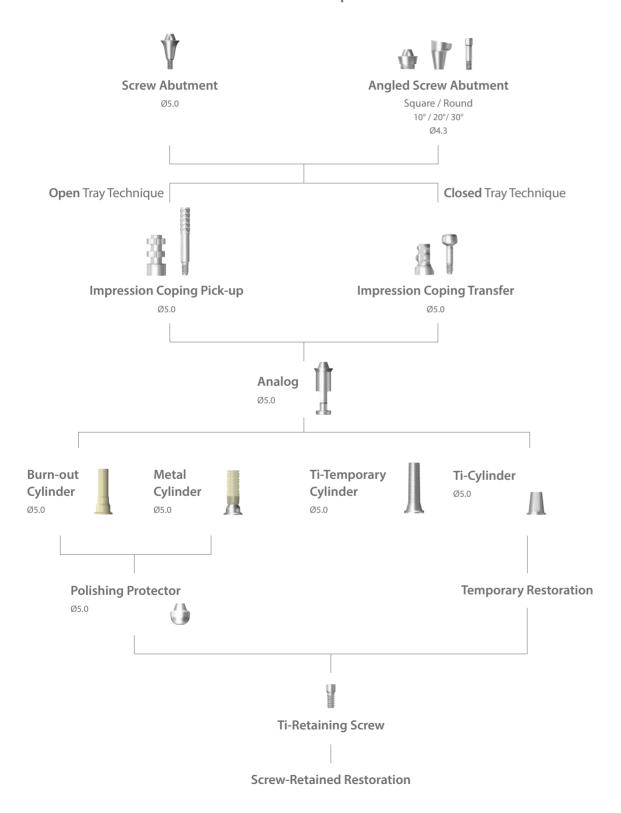
NR Line Product Catalog 85

Prosthetic Procedure 3

Impression Technique and Restoration Selection

Screw Abutment

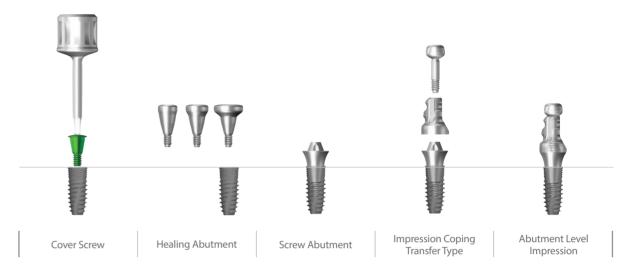
Abutment Level Impression



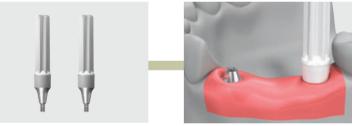
Abutment Level [Transfer Type]- Screw Abutment

[Multiple Units]

Clinical Procedure



Chairside



Select and seat an appropriate
Screw Abutment with delivery holder.



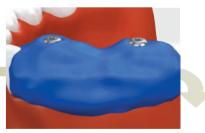
Tighten it to 20N·cm.
Retighten after 15 minutes with Screw
Abutment adaptor.



Screw Abutment transfer coping (abutment level)



Placement of impression copings



Injecting impression material



Impression taking



Inner-side of impression



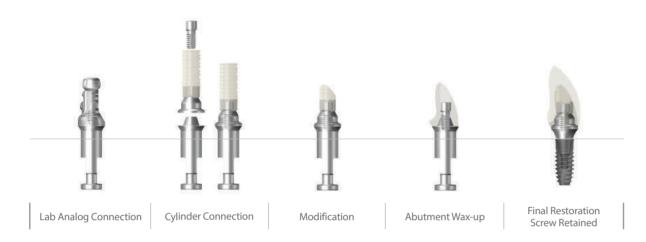
Placement of comfort cap on Screw Abutment

NR Line Product Catalog 87

Abutment Level [Transfer Type]- Screw Abutment

[Multiple Units]

Laboratory Procedure



Labside



Connecting impression coping with Screw Abutment analog



Positioning impression coping and analog assembly in the exact location of the impression



Soft tissue model



Fabrication of master cast



Removal of impression coping



Connect the Screw Abutment cylinder then tighten it with ti-retaining screw.



Consider the distance with opposing teeth, then trim cylinder to its appropriate height.



Connect the plastic bar in the middle of trimmed Screw Abutment to help support the wax pattern. Wax pattern may have shrinkage.



Wax-up

Abutment Level [Transfer Type]- Screw Abutment

[Multiple Units]



Metal framework



Removal of lip remnant in the interior of metal framework using reamer



Completion of metal framework



Completion of final prosthesis



Insertion of final prosthesis and occlusal adjustment. Tighten with ti-retaining screw (20N·cm).

Cementation Repair Method (SCRP)

[Screw & Cement Retained Prosthesis]

In Light of Implant Prosthesis:

- · A screw type restoration helps to simplify prosthesis repair, including insertion and removal of the prosthesis if necessary.
- Cement type restoration tend to have a stable occlusion and may enhance the adaptability. However the weak point is that it cannot be removed after permanent cementation.
- A dual abutment can be cemented or screw retained.

In Case of Screw Loosening or if Prosthesis Repair is Needed



In case of the following: screw loosing or prosthesis repair



In order to unscrew, form access hole on the occlusal surface with bur.



Unscrew, then remove the prosthesis from the oral cavity.



Both cemented prosthesis and abutment are removed.

Fill the access hole with cotton.



the oral cavity.



Finish the repair then seat it inside



Fill the access hole with resin.



Tighten the prosthesis with 20N⋅cm by a screw driver $\ensuremath{^*}$ It is recommended that the abutment screw is retightened after 15 minutes



Final prosthesis

Cementation Repair Method (SCRP)

[Screw & Cement Retained Prosthesis]

Separation of Prosthesis with Abutment due to Cement Loss



Remove the screw completely with square driver and remove prosthesis from the patient's mouth.



Apply cement to the prosthesis.



Place it back into the patient's mouth.



After the cement setting, unscrew and remove the excessive cement.



Finish the repair and seat it inside the patient's mouth.



Tighten the prosthesis with 20N·cm with a screw driver.

Adding to the Interproximal Contact Surface due to Prosthesis Loosening



Prosthesis loosening due to contact loosening.



Form access hole using bur.



Unscrew, then remove the cemented prosthesis with abutment in the oral cavity.





Position the prosthesis in the oral cavity and tighten the screw with 20N-cm, then fill up the access hole.



Contact adding with resin on the prepared under space.



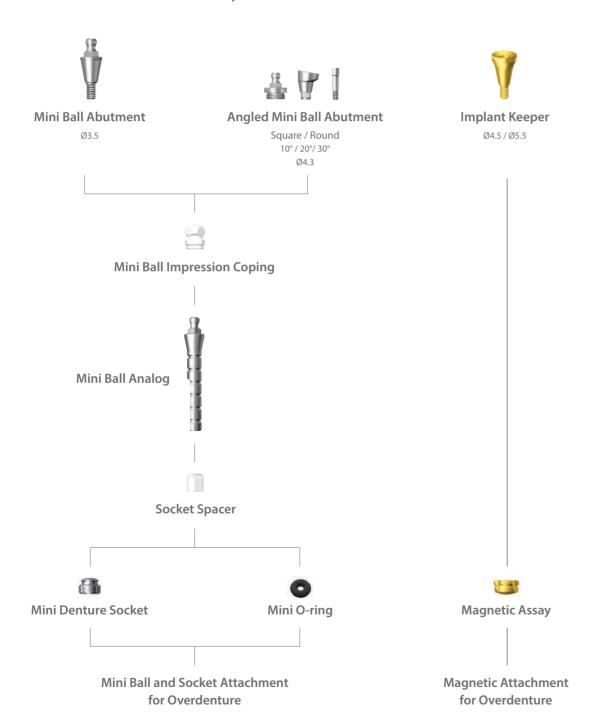
Insert the prosthesis in the oral cavity and screw it in afterwards perform light curing. And then polish the contact area. It is recommended that the abutment screw is retightened after 15 minutes.

Prosthetic Procedure 4

Impression Technique and Restoration Selection

Overdenture Procedure Mini Ball / Magnetic Attachment

Abutment Level Impression



Mini Ball Attachment

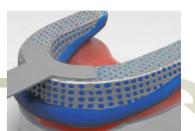
Chairside



Connect the Mini Ball Abutment onto the fixture.



Affix the impression coping on the Mini Ball Abutment.



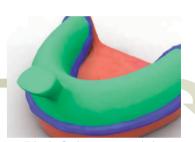
Take impression for the making of individual tray.



Produce the individual tray for denture impression.



Apply the impression material.



Take the final impression with the prepared individual tray.



After the impression material is set, discard the individual tray.



Image of the final impression (with impression coping)



Labside



Mini Ball Analog



embedded impression coping.



Create the master model.



Socket spacer



Fabrication of denture with conventional method

Mini Ball Attachment

Case 1



Secure spaces for the female sockets.





Connect the female sockets to the Mini Ball Abutments in the intra-oral.



Apply small amount of the resin into the secured area.



Position the denture in the oral cavity and wait until the resin is completely set.



Female sockets are placed in the denture.



After polishing, the overdenture is completed.

Case 2



Create holes for placement of female sockets.

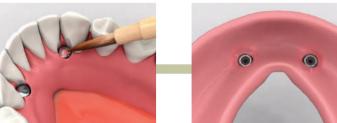




Connect the female sockets to the



Examine the interference between inner surface of the holes and the female sockets.



Apply the resin into the holes and wait until it is completely set.



Female sockets are placed in the denture.



Apply resin around the female sockets.

Angled Mini Ball Attachment

Case 1



Secure spaces for the female sockets.







Position the denture in the oral cavity and wait until the resin is completely set.



Connect the female sockets to the Angled Mini Ball Abutments in the intra-oral.



Female sockets are placed in the denture.



Apply small amount of the resin

into the secured area.

After polishing, the overdenture is completed.





After polishing, the overdenture is completed.

8

intra-oral.

Female sockets are placed

in the denture.

Angled Mini Ball Attachment

Case 2



Create holes for placement





Connect the female sockets to the Angled Mini Ball Abutments in the of female sockets.



Examine the interference between inner surface of the holes and the female sockets.

Apply resin around the female sockets.





After polishing, the overdenture is completed.

Magnetic Attachment

Chairside



After Healing Abutment removal



Connect implant keeper with fixture and tighten it with 20N·cm.



Implant keepers connected with the fixtures



Position the Magnetic Assay on the implant keeper.



Secure spaces for the Magnetic Assays.



Examine the interference between inner divot of the denture and the magnets.

Case 1



Apply resin on the divot of the denture's inner surface.



Position the denture into the mouth and wait until the resin is completely set.



Magnetic Assays are placed in the denture.



Apply some of resin around the Magnetic Assays.



After the resin is completely set, remove excess. After polishing, the overdenture is completed.

Magnetic Attachment

Case 2



Create holes for the placement of the magnets.



Examine the interference between inner surface of the holes and the magnets.



Position the denture in the mouth and apply small amount of resin into the hole.



Wait until the resin is completely set.



After setting, remove denture from the mouth.



Add the resin around the magnets.



After polishing, the overdenture is completed.

