

DiaDent®

DiaDent Group International

www.diagun.co.kr

DIA GUN™
Cordless Obturation System



DIA PEN™
Cordless Warm Compaction Device



Cordless Warm Vertical Compaction Device

Dia-Pen is a cordless warm vertical compaction device. Dia-Pen's unparalleled performance and superior design translate into reliable and predictable clinical outcomes.

Supported Techniques

- **Softening** root canal filling material (Gutta Percha Points)
- **Spreading** root canal filling material (Gutta Percha Points) laterally and vertically
- **Cutting** root canal filling material (Gutta Percha Points)
- **Compacting** root canal filling material (Gutta Percha Points) using heat

Product Features

- Effectively and tightly compacts and seals all canals including lateral canals
- Cordless, ergonomic and lightweight design: easy to handle, clean and store
- Quick heating tip reaches highest level of temperature within one (1) second to save treatment time
- Color-coded pen tips are available in various sizes (#XF, F, FM, M, ML) for easy identification
- Three temperature settings: Low, Medium, High



A. Low Temperature mode (170°C)



B. Medium Temperature mode (200°C)



C. High Temperature mode (220°C)

- Simple operation with three buttons



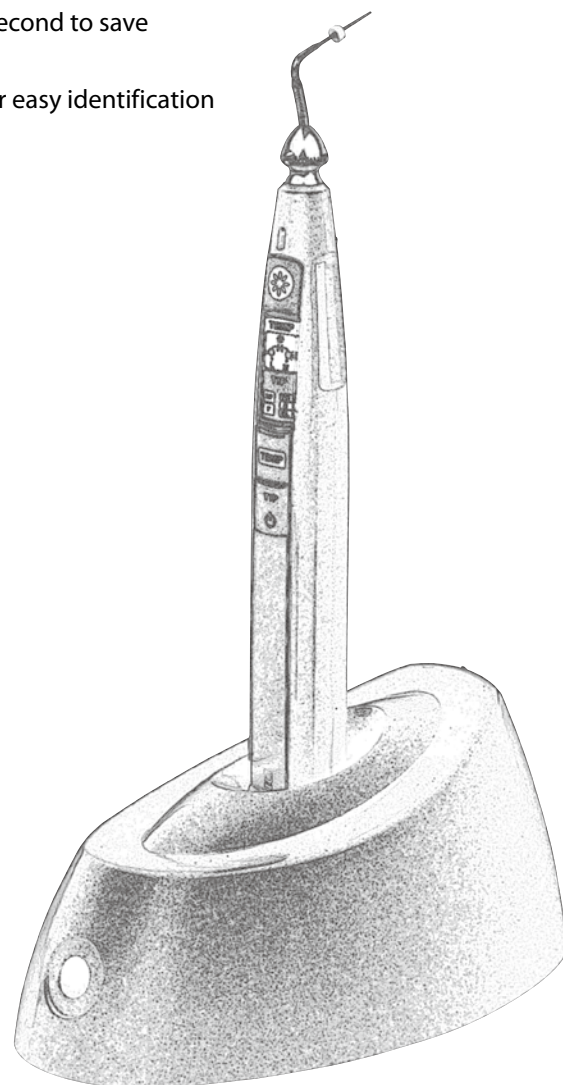
A. Power On/Off and Tip Setting Button



B. Temperature Setting Button



C. Operation button



Accessories

A. Silicone Cover



B. Pen Tip

Size	Color code	Taper/Size
#XF	Green	.025/#45
#F	White	.025/#50
#FM	Yellow	.045/#50
#M	Red	.060/#50
#ML	Blue	.080/#50



C. Power Adapter & Cord



Regular Kit

- ITEM #4002-1001 Regular Kit
- Dia-Pen Handpiece & Charger
- Accessories: 2 x Silicone Covers, Power Adapter & Cord, Pen Tips #F and #FM (1 ea, endo stops included)

Device Part Codes

- ITEM #4002-1010 Handpiece
- ITEM #4002-1020 Charger
- ITEM #4002-1030 Power Adapter & Cord
- ITEM #4002-1040 Silicone Covers (2)
- ITEM #4002-1050 Battery
- ITEM #4002-1060 Pen Tip #XF
- ITEM #4002-1061 Pen Tip #F
- ITEM #4002-1062 Pen Tip #FM
- ITEM #4002-1063 Pen Tip #M
- ITEM #4002-1064 Pen Tip #ML
- ITEM #4002-1065 Pen Tips #F/FM (1 ea)

Technical Specification

Product Name		Dia-Pen
Classification		Class II (AC/DC Adapter)
Setting Temperature		170~220°C
Charging time		Approx. 2 hrs 30 min
Operation time per full charge		450 times per 2 sec
Dimensions	Handpiece	22 x 166 x 20.1 mm (W x H x D)
	Charger	156 x 66 x 88 mm (W x H x D)
Weight	Handpiece	65 g
	Charger	285 g
	Adapter	200 g
Power Supply (Adapter)	Input	100V-250V~, 50-60 Hz, 0.5A
	Output	6V ---, 2.5A
Battery		Li-polymer Battery, DC 3.7V, 1200 mAh
Storage Condition	Temperature	-10°C ~ 40°C
	Humidity	30~85%
	Atmospheric Pressure	80~106 kPa
Transportation Condition	Temperature	-10°C ~ 40°C
	Humidity	30~85%
	Atmospheric Pressure	600~1060 hpa

Cordless Obturation Device

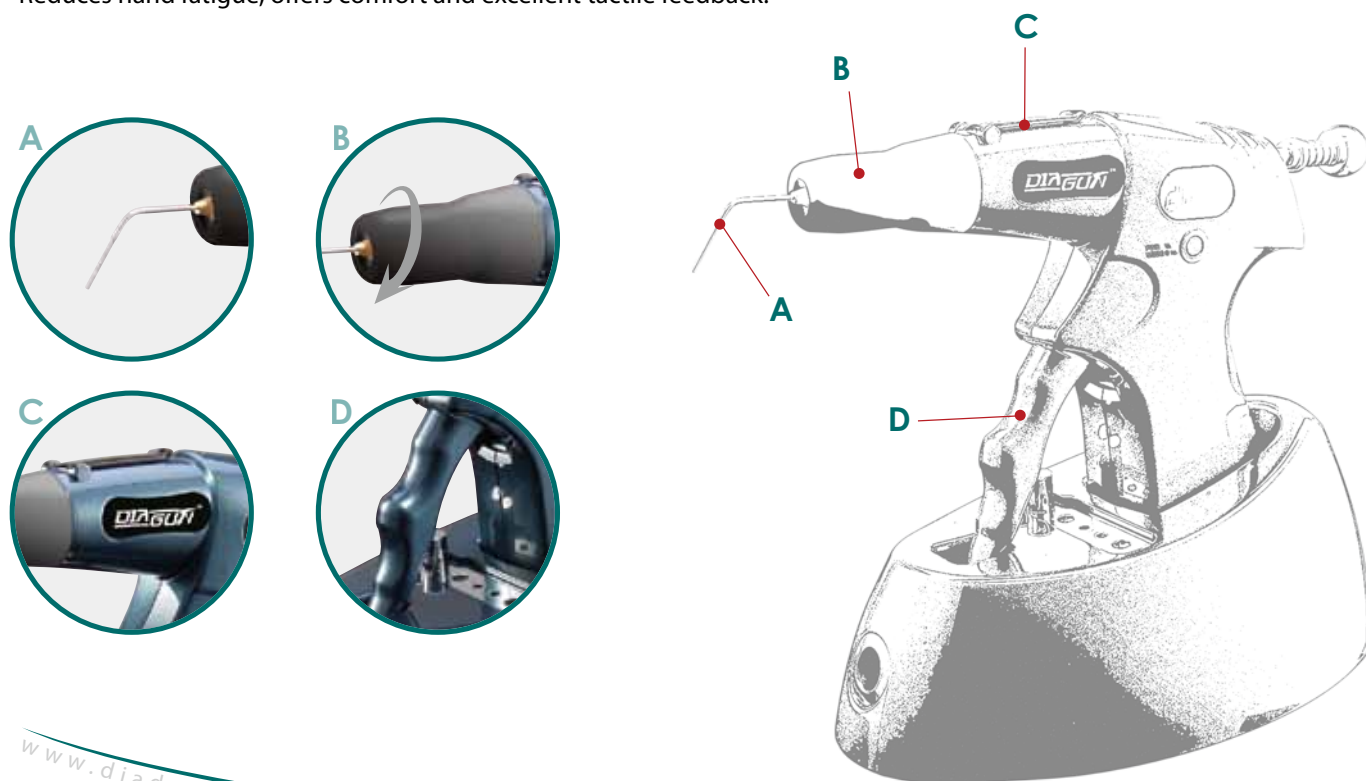
Dia-Gun is a cordless obturation system that extrudes warm gutta percha to backfill root canals. With Dia-Gun's fast and precise delivery of warm obturation material, optimal result is achieved everytime.

Advantages

- Cordless, lightweight, and compact design allows complete freedom of movement
- Reliable and precise gutta percha delivery
- Fast and continuous flow of filling material tightly seals the canal
- Variable Temperature Settings (160°C, 180°C, 200°C): precise control of obturation flow
- Quick Heating System: temperature reaches 200°C within 25 seconds
- Ergonomically designed 360° swivel tip offers improved access
- Thinner tip can easily fill narrow root canals

Product Features

- A.** Superior Silver Alloy Gun Tip: reduces chances of accidental breakage.
- B.** 360° Swivel Heat Chamber: allows safe adjustments to gun tip's direction. Versatile and convenient, backfilling maxillary teeth is a breeze.
- C.** Heat Chamber with a Lid: Keeps the heat chamber clean from dirt and dust.
- D.** Ergonomic Design: Reduces hand fatigue, offers comfort and excellent tactile feedback.



Accessories

- A. Safety Cap
- B. Plunger
- C. Plunger O-rings
- D. Power Adapter & Cord
- E. Disposable Gun Tips
- F. Multi-purpose Wrench
- G. Scrubbing Brush
- H. Gutta Percha Obturator (Soft, Medium, Hard Type)



Regular Kit

- ITEM #4001-1001 Dia-Gun Regular Kit
- Dia-Gun Handpiece (battery included)
- Charger
- Accessories: 2 x Safety Caps, Plunger, 4 x Plunger O-rings, Power Adapter & Cord, 4 x Disposable Gun Tips (23G), Multi-purpose Wrench, Scrubbing Brush, Gutta Percha Obturators (Medium type, 100 pellets)

Device Part Codes

- ITEM #4001-1010 Handpiece
- ITEM #4001-1020 Charger
- ITEM #4001-1030 Safety Caps (2)
- ITEM #4001-1040 Plunger
- ITEM #4001-1050 Plunger O-rings (4)
- ITEM #4001-1060 Power Adapter & Cord
- ITEM #4001-1070 Disposable Gun Tips (4 x 23G)
- ITEM #4001-1071 Disposable Gun Tips (4 x 25G)
- ITEM #4001-1080 Multi-purpose Wrench
- ITEM #4001-1090 Scrubbing Brush
- ITEM #4001-1100 Battery
- ITEM #181-100 Gutta Percha Obturator (Soft type 100 pellets)
- ITEM #181-101 Gutta Percha Obturator (Medium type 100 pellets)
- ITEM #181-102 Gutta Percha Obturator (Hard type 100 pellets)

Technical Specification

Product Name		Dia-Gun
Classification		Class II (AC/DC Adapter)
Setting Temperature		160, 180, 200°C
Charging time		Approx. 2 hrs 30 min
Operation time per full charge		20 times per four and half (4.5) min
Dimensions	Handpiece	180 x 124 x 33 mm (W x H x D)
	Charger	156 x 65 x 88 mm (W x H x D)
Weight	Handpiece	186 g
	Charger	305 g
	Adapter	200 g
Power Supply (Adapter)	Input	100V-240V~, 50-60 Hz, 0.4A
	Output	5V ---- , 2A
Battery		Li-ion Battery, DC 3.7V, 2200 mAh
Storage Condition	Temperature	-10°C ~ +40°C
	Humidity	30 ~ 85%
	Atmospheric Pressure	70 ~ 106 kPa
Transportation Condition	Temperature	-10°C ~ +40°C
	Humidity	10 ~ 85%
	Atmospheric Pressure	600~1060 hPa

ROOT CANAL OBTURATION TECHNICAL SEQUENCE

Vertical Condensation with Dia-Pen

Step 1a

• Shape the root canal with endo files and determine the working length. Select a master cone that closely matches the apical size.

Step 1b

• Insert Dia-Pen tip into the root canal to the point 4~7mm short of the working length. Move and set the endo stop accordingly.

Step 2

• Insert the selected master Gutta Percha cone that is coated with sealer.

Step 3a

• Place pen tip in the orifice of the canal and activate Dia-Pen by pressing the Operation Button. Using the activated pen tip, cut the middle of Gutta Percha cone and condense the softened material to the point 6~9mm from the apex for about 1.5~2 seconds only.

Step 3b

• Release the Operation Button to allow pen tip to cool down, while at the same time continue pushing and holding the cooled pen tip to the apex for 8 seconds. This ensures all lateral and accessory canals are filled. Activate the pen tip again by pressing and holding the Operation Button for about 1~1.5 seconds, compact the Gutta Percha cone to the point 4~7mm of working length.

Step 4

• Condense the remaining material using a hand plugger.

Backfill Obturation with Dia-Gun

Step 5

• Using Dia-Gun's activated tip, make contact with the upper part of filled master cone in the canal, transfer heat for 3 to 5 seconds to soften the material.

Step 6a

• Extrude the melted Gutta Percha Obturator to the root canal.

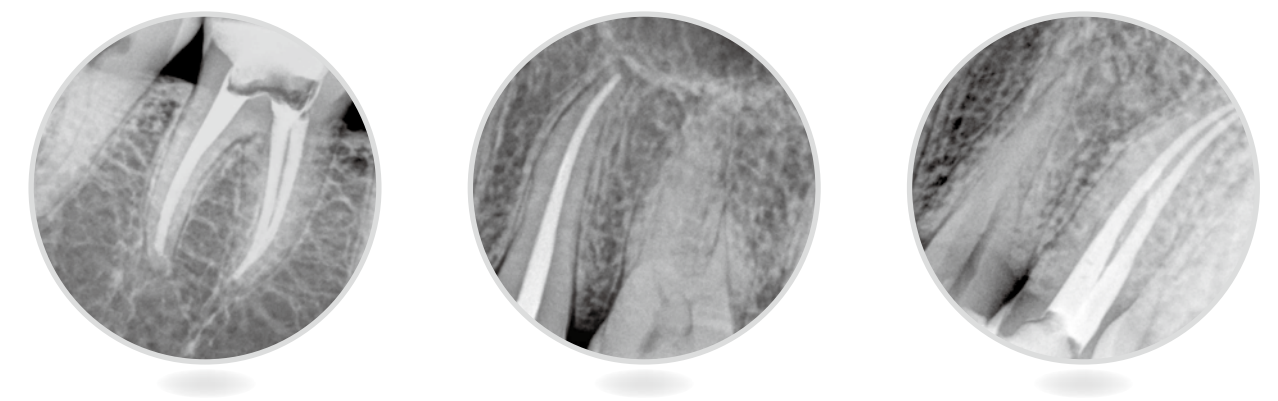
Step 6b

• Continue flowing while withdrawing the tip from the canal.

Step 7

• Use a hand plugger to compact obturation material.

Radiographs



• Perfect and tightly sealed root canals after using warm obturation technique with Dia-Pen & Dia-Gun.



www.diadent.com

ISO 9001 ISO 13485

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