

# Root ZX3



**EO** Endo.  
Optimized.

Thinking ahead. Focused on life.

# From Root to Results:

## Endodontic Evolution in Advanced Canal Treatment

### New Approach to Canal Treatment

A new treatment approach has emerged in addition to conventional root canal shaping and cleaning methods.

By introducing high-frequency conduction (HFC) therapy, the following benefits are anticipated:

- Cauterization of pulp in initial treatment
- Cauterization of pulp in retreatment of challenging cases that could not be addressed solely by conventional methods
- HFC's superior hemostatic affect contributes to enhanced apex location precision

Discover a new world of root canal treatment.

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### Apex Locator

- Utilizes Morita's industry-leading, reliable apex location technology, which has been independently evaluated at a 97.5% accuracy rate\*
- Full functionality in dry or wet canals
- Automatic calibration to compensate for changes in environment (temperature, humidity, etc.) and aging
- High accuracy that lasts decades

### Intuitive Design

- Large and easy-to-read LCD display
- Real-time readings smoothly displayed by 40 indicator bars
- Clearly audible sound

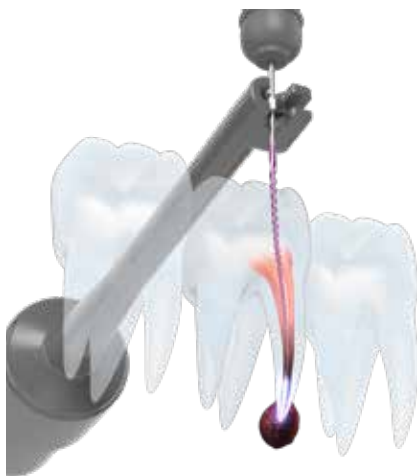


\* Tested with Root ZX II.

Guise, G. M., Goodell, G. G., & Imamura, G. M. (2010). In Vitro Comparison of Three Electronic Apex Locators. *Journal of Endodontics*, 36(2), 279-281.

### Expand Your Treatment Range

- Utilize high-frequency conduction by connecting an additional module to Apex Locator
- In conjunction with the Apex Locator, HFC energizes the exact target location
- Current output is limited depending on the position of the electrode via apex location to prevent current overflow
- Easily incorporated into your existing treatment style



### High-Frequency Conduction (HFC)

For endodontic treatment

- HFC can cauterize and coagulate tissue and residual substances by heating the area near and in contact with the tip of the electrode
- After determining the tip position of the electrode through the apex location function, HFC can be performed for 1 second by stepping on the footswitch
- 3 modes with different output levels are available
- 2 types of electrodes are included. The Electrode S and Electrode C can be used for both HFC and apex location

For gingival treatment

- Can be used as an electric scalpel for gingival incisions and excisions
- Cutting Electrode No.1 is included



Electrode S



Electrode C

Effective for securing the surgical field when using a microscope



Cutting Electrode No.1

# Cases

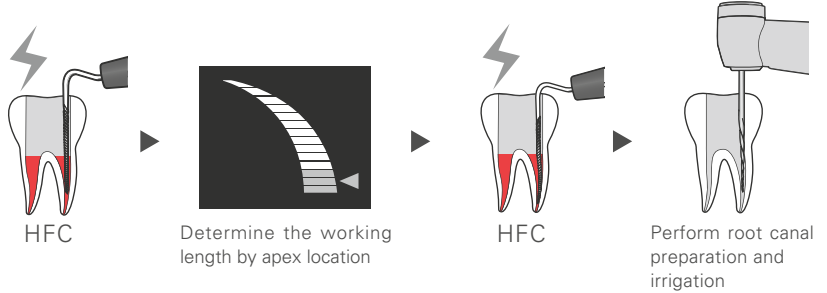
## Applications of High-Frequency Conduction (HFC)

### Application in Initial Treatment

HFC can be used to cauterize the pulp in a pulpectomy procedure. Cauterization results in hemostasis and coagulation of the pulp.



### Procedure



Pre-operative



Intra-operative

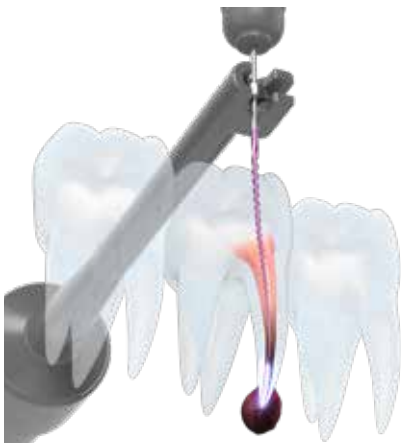


Post-operative

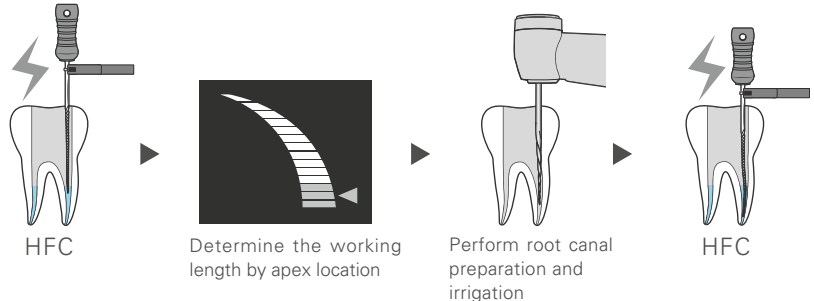
### Application in Retreatment

HFC can be used to cauterize infected tissue and contaminants inside and around the root canal.

After cauterization, symptoms are expected to improve due to the natural healing process of the human body.



### Procedure



Pre-operative



Post-operative (14 months)



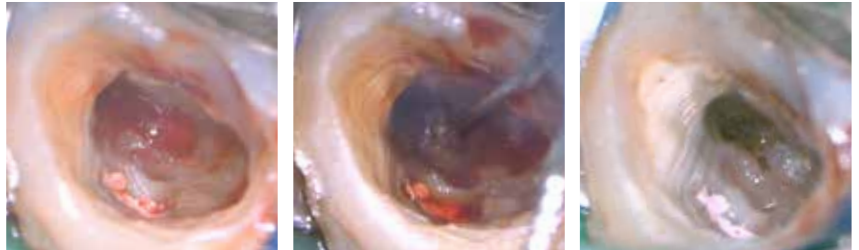
Post-operative (25 months)

\*Clinical image examples of post-surgery progress.

**Wide Range of Root Canal Treatment Applications**

HFC is effective to cauterize infected tissue in un-instrumented areas and in the granulation. The hemostasis that results from HFC allows for further stability in the apex location.

**Cauterization of granulation within the root canal**

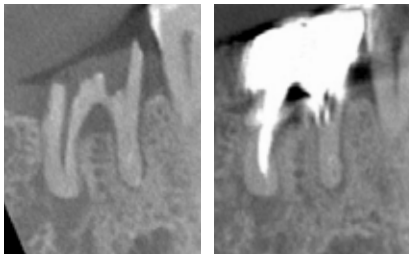


Pre-operative

Intra-operative

Post-operative

**Application in Unnegotiated Root Canal**

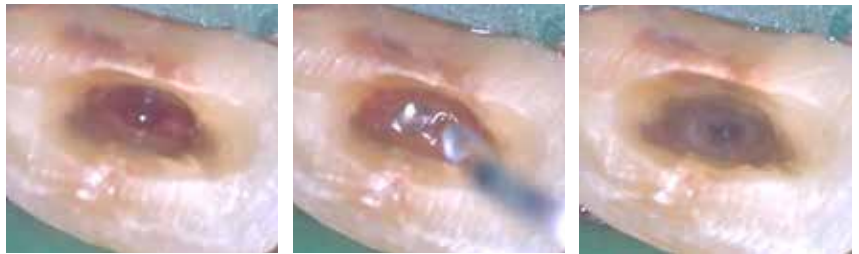


Pre-operative

Post-operative  
(5 months)

※Clinical image examples of post-surgery progress.

**Hemostasis in the root canal (coagulation of blood)**



Pre-operative

Intra-operative

Post-operative

**Application in Gingival Incision/ Gingivectomy**

HFC can be applied to a gingivectomy and gingival polypectomy during septum/ matrix creation and gingival retraction.



Using Cutting Electrode No.1

**Gingivectomy during gingival retraction**



Pre-operative

Intra-operative

Post-operative (1 week)

**Gingival polypectomy**



Pre-operative

Intra-operative

Post-operative

Clinical images were provided by Dr. Tominaga, Dr. Tada, Dr. Miyaji

# Specifications

## Apex Locator Module



1. Contrary Electrode 2. File Holder

## Apex Locator Module + HF Module



3. Wide Contrary Electrode\* 4. Grip\*\* 5. Electrode Pen 6. Electrode Holder 7. Foot Switch  
\* Hook the wide contrary electrode to the corner of the patient mouth when performing high-frequency conduction. \*\* Have the patient securely hold the grip when performing high-frequency conduction.



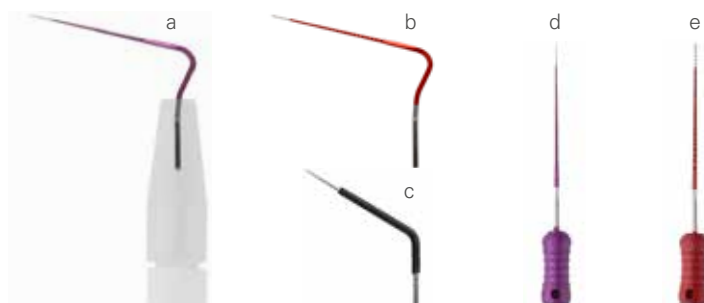
Promotion Movie

	<b>Apex Locator Module</b>		<b>HF Module</b>
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※ To use the HF Module, connect it to the Apex Locator Module.

Name	Root ZX3	
Model	RZX3	
Type	RCM	HF
Dimensions	Approx. 85 mm (Length) × 95 mm (Width) × 100 mm (Height)	Approx. 105 mm (Length) × 95 mm (Width) × 90 mm (Height)
	Approx. 110 mm (Length) × 95 mm (Width) × 100 mm (Height) (Apex Locator Module + HF Module)	
Weight	Approx. 390 g (with dry batteries)	Approx. 360 g
	Approx. 550 g (Apex Locator Module + HF Module)	
Power Rating/ Power Consumption	Solo operation: DC 6 V (alkaline dry batteries [AA size], Qty: 4) Connected with HF Module: DC 9.6 V (Ni-MH battery)	DC9.6V (nickel-metal hydride rechargeable battery)
		AC Adapter Input: AC 100 V to 240 V, 50 Hz to 60 H Output: DC15V
Features	Apex locator, Customizable working length determination, Adjustable volume, Auto-calibration	Optional HF (high-frequency conduction) module, 4 output modes including electrocautery mode, Portable style
Components	5 × Contrary Electrodes 3 × File Holders 1 × Probe Cord 4 × Alkaline Dry Batteries (AA size)	3 × Wide Contrary Electrodes, 1 × Grip 1 × Foot Switch, 1 × Cap 1 × HF Probe Cord 1 × HF Relay Cord 1 × AC Adapter 1 × Battery Pack (nickel-metal hydride rechargeable battery)* 1 × Electrode Pen 3 × Electrode Holders 2 × Electrodes C #10 2 × Electrodes S #10L25 2 × Cutting Electrodes No.1 *Built-in



Options (Sold separately)

- a. Electrode C #10 (2 pcs.)
- b. Electrode C #25 (2 pcs.)
- c. Cutting Electrode No.1 (2 pcs.)
- d. Electrode S #10L25 (2 pcs.)
- e. Electrode S #25L25 (2 pcs.)



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