



# Tri Auto ZX2+



Thinking ahead. Focused on life.

# Beyond Ingenuity

## Intelligent Endodontic Motor



### **Patency and Glide Path Have Never Been Easier**

Tri Auto ZX2+ is equipped with a new generation reciprocating drive, OGP2, that greatly reduces the chance of a file breaking in the canal. This innovative motor can be used for patency, glide path, and shaping, allowing you to finish treatment safely and in less time. Additionally, with no limits on file size or cutting direction, your current file system is compatible. The future of endodontic treatment is here...Tri Auto ZX2+.



# Next Level Reciprocation

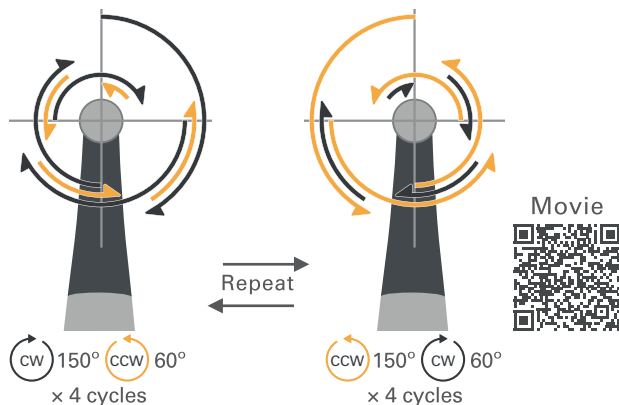
## Introducing OGP2

### OGP2 (Optimum Glide Path 2) Reduces the Chance of File Breakage

OGP2 dramatically reduces the chance of breaking files due to its new and innovative reciprocating motion. Even patency using a #10 scout file is possible. Notoriously difficult patency by hand filing can now be achieved by endo motor!

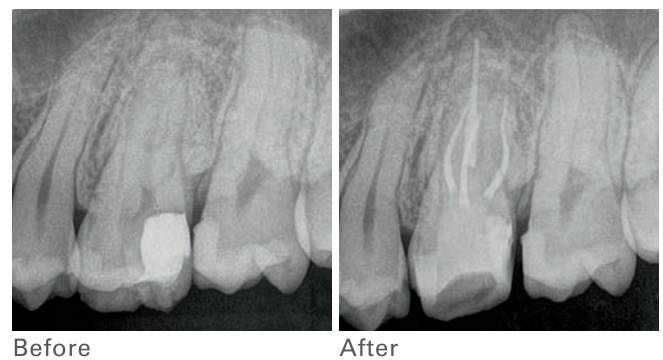
#### Rotation

Its intelligent motion reduces file binding and, when it does occur, helps prevent the file from breaking in the canal.



#### Maintains the Root Canal Shape

Even with curved or narrow root canals, OGP2 allows you to provide treatment that maintains the original root canal shape.



### Handles Patency, Glide Path, and Shaping Using Just One Mode

From a #10 scout file, to the widest size available, the Tri Auto ZX2+ handles any CW/CCW file all in one mode. Patency, glide path, and shaping can all be performed with OGP2, allowing you to focus on treatment rather than settings.

Mode	m1 600 <sup>r/min</sup> EMR 3.0 <sup>N/cm</sup>	m2 500 <sup>r/min</sup> OGP2 150 <sup>r/min</sup> 60 <sup>deg</sup>		
Sequence	Coronal flaring	Patency (Scouting)	Glide Path	Shaping
File example	#25 / 08 or #35 / 08	#10 / 02	#15 / 04	#20 / 04 - #40 / 04* #20 / 06 - #40 / 06*

Available CW and CCW files.

\* Decide on the final file size according to the shape of the root canal.

# The Efficiency of OTR

## OTR (Optimum Torque Reverse) for Efficient Shaping

The Tri Auto ZX2+ features the innovative OTR mode for shaping that combines the cutting efficiency of continuous rotation and the safety of reciprocation. When the load on the file exceeds the set value, the device rotates counter-clockwise at a fixed angle, contributing to shorter treatment times while reducing the possibility of file breakage. You can also modify the angles for cutting and reversing freely to suit your needs.

## New OTR CCW Mode for Reciprocating Files

Using reciprocating files? The new OTR CCW mode improves cutting efficiency of your CCW files.



# World-leading apex location Built Right in

## Root ZX Technology

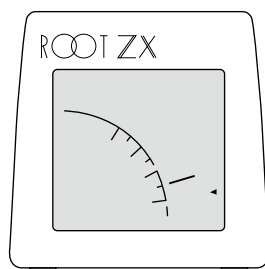
Capable of high-precision measurement without being affected by dry or wet canals, the integrated apex locator allows you to perform treatment while continuously monitoring the position of the file.

The Tri Auto ZX2+ also provides multiple safety features utilizing Root ZX's proven accuracy to stop rotation and prevent over-instrumentation of the root canal.

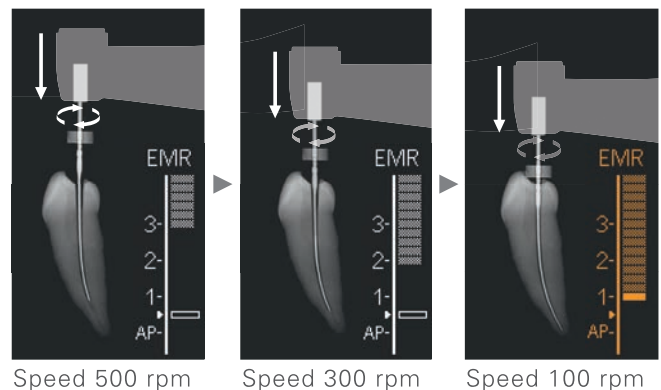
## Apical Slow Down

Activated when the OGP2 mode is operating, Apical Slow Down reduces the rotation speed of the file as it approaches the apex. This function allows you to provide treatment that simulates the feel of hand filing while also reducing the chance of file breakage.

Since 1992



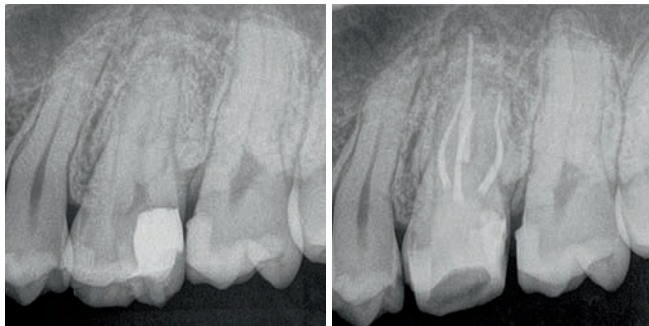
Slow Down →



# Cases

## Case 1

Curved root canal (left maxillary first molar)



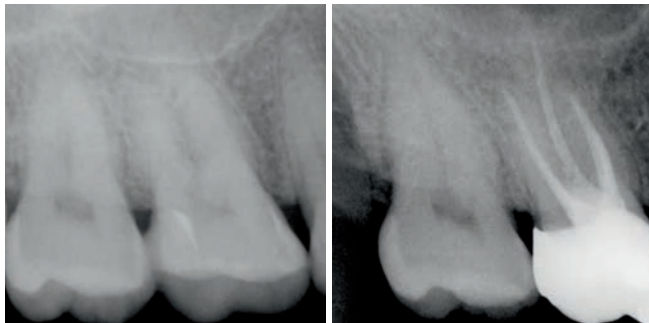
Preoperative

Postoperative

Mesiobuccal (MB) and distobuccal (DB) roots of #26 are constricted, and only a few millimeters of patency was achieved with hand files. Then a mechanical glide path using OGP2 was established. OGP2 could obtain glide path preparation without any difficulties such as broken files or ledge formation to constricted canals even to DB, which has severe constriction and S-shape curvature. Total time to complete mechanical glide path using OGP2 was 5 minutes.

## case 2

Sclerosed root canal (right maxillary first molar)



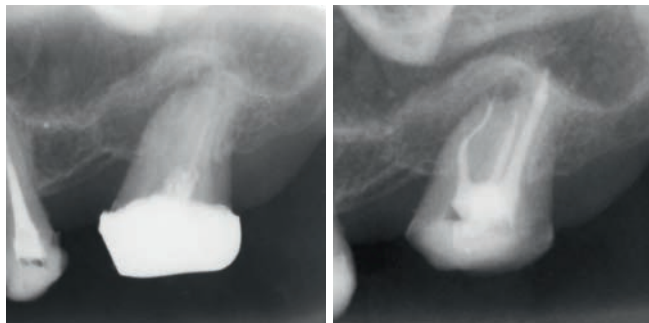
Preoperative

Postoperative

The radiographic images highlight that a root canal system was still present. The detection of the root canal orifice and root canal preparation were difficult due to the presence of mineralized tissue. The OGP2 mode contributed to attaining patency and glide path on 4 roots, including the second mesiobuccal (MB2) root canal. Subsequently, root canal preparation was completed using OTR mode on the device. All procedures ranging from the patency of the 4 root canals to the final root preparation were carried out in approximately 7 minutes.

## case 3

Patency abandoned (left maxillary second molar)



Preoperative

Postoperative

Retreatment case of #37, root canal patency was not obtained during the past treatment. After root canal orifices are specified, patency was obtained using OGP2. Both mesiobuccal (MB) and distobuccal (DB) canals have S-shape curvature, and especially MB was challenging. If only with hand instruments, treatment time for MB would be extremely long. By using OGP2, total time needed for glide path preparation was 14 minutes in total; 6 minutes for MB, 5 minutes for DB and 3 minutes for palatal canal.

Clinical images and comments are provided by: Dr. Toshihiro Ushikubo  
Dr. Motoki Okamoto  
Dr. Tai Gega

\*The images shown here represent examples of post surgery progress at the clinic that provided the photos.

\*A pre-sales clinical survey conducted by J.MORITA MFG.CORP. showed that of the dentists that used OGP2, 77% used it for patency and 86% used it for glide path.



One Motor Can Do All This?  
Apex Location, Patency, Glide Path, Shaping  
All In One.

## Various Modes

Display				
Mode	EMR	CONT CW	Optimum Glide Path 2	Optimum Glide Path 2
Usage	Apex location	Coronal flaring	Patency (Scouting) Glide path Shaping (Flash Bar Position=0.5)	Patency (Scouting) Glide Path Shaping (Flash Bar Position=1.0)
	Optimum Torque Reverse (CW)	Optimum Torque Reverse (CCW)	CONT CW	CONT CCW
	Optimum Torque Reverse (CCW)	CONT CW	CONT CCW	Optimum Glide Path (CW)
	Shaping (for CW files)	Shaping (for CCW files)	Root canal irrigation with irrigation files	Inject intracanal medicaments
				Ledge bypass



# Specifications

Name: Tri Auto ZX2  
 Model: TR-ZX2  
 Type: PLUS  
 Manufacturer: J. MORITA MFG. CORP.

Functions: Apex location  
 OGP2 (Optimum Glide Path2)  
 OGP (Optimum Glide Path)  
 OTR (Optimum Torque Reverse)  
 OAS (Optimum Apical Stop)  
 OAS2 (Optimum Apical Stop2)  
 Auto Start / Stop, Auto Apical Reverse  
 Auto Apical Stop, Apical Slow Down  
 Torque Slow Down, Apical Torque Down  
 Auto Torque Reverse

Accessories: Tester, LS OIL  
 Power Plugs (one each of 4 types)  
 Probe Cord (0.75 m)  
 File Holder, Contrary Electrodes  
 HP Protective Sleeve Type A

Options: Handpiece Holder, Long File Holder  
 External File Electrode (with cap)  
 Probe Cord (1.8 m)

## Handpiece

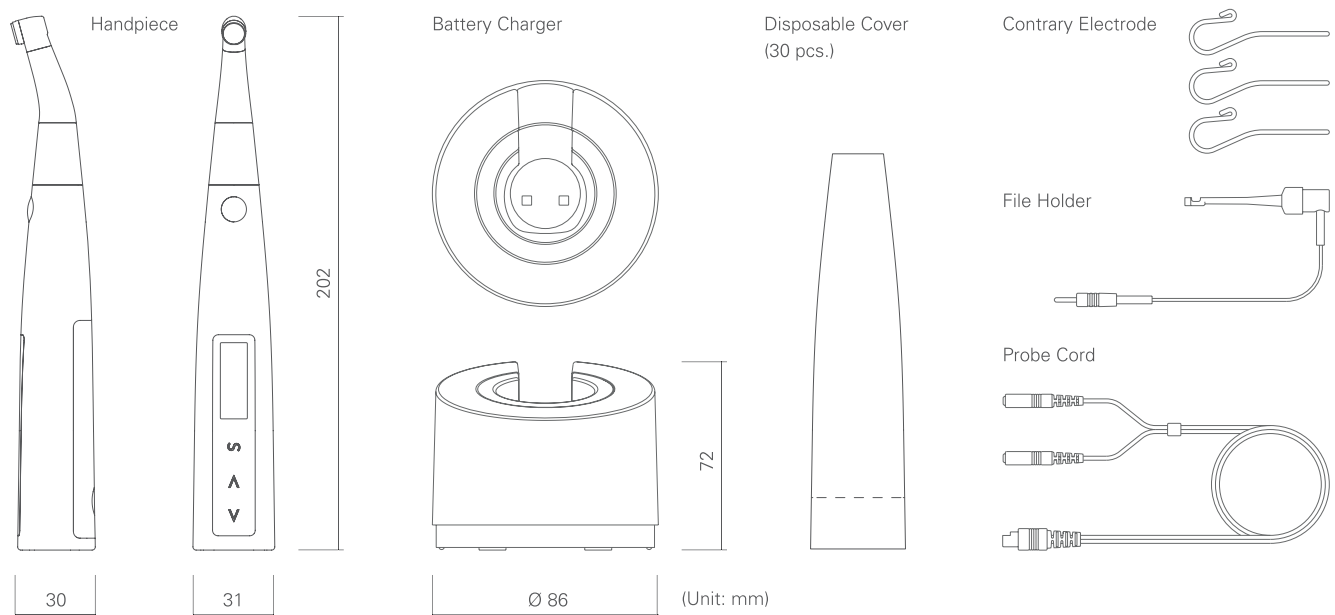
Free Running Operation  
 Speed: 100 – 1000 rpm  
 Torque: 4 Ncm or more  
 Battery: Lithium-ion battery (DC 3.7 V)  
 Weight: Approx. 140 g (including battery and contra angle)

## Battery Charger

Rated Input Voltage: DC 5 V  
 Rated Input Current: 2.4 A  
 Weight: Approx. 280 g  
 (AC adapter not included)

## AC Adapter

Rated Input Voltage: AC100 - 240 V  
 Rated Input Frequency: 47 - 63 Hz  
 Rated Input Current: 0.4 A





Development and Manufacturing

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