

AdvErL EVO

Gentle treatment for
wide-ranging disciplines



Thinking ahead. Focused on life.

AdvErL EVO

Versatility, efficiency and comfort in just one unit

With more than 20 years' experience on the laser market, Morita is able to offer the AdvErL EVO Er:YAG laser, a sophisticated system which supports the economic efficiency of dental practices in a wide variety of ways. AdvErL EVO operates on a minimally invasive basis and guarantees both safe and comfortable patient treatment.

In addition, the AdvErL EVO combines a large range of comfort features: The scaler-formed handpiece ensures direct access to the preparation area and the narrow application tips optimize the area with wide visibility.

Above all, the application tips are the unique feature of the AdvErL EVO and provide water and air right to the tip and therefore precisely to aimed point of emission. In this way, the laser develops its full effect precisely in the preparation area and is suitable for a wide variety of indications. From peri-implantitis treatment, periodontology, oral surgery, conservative therapy and endodontics – the Er:YAG laser has a very wide performance range.



Er:YAG laser technology for a wide variety of treatments

Less painful

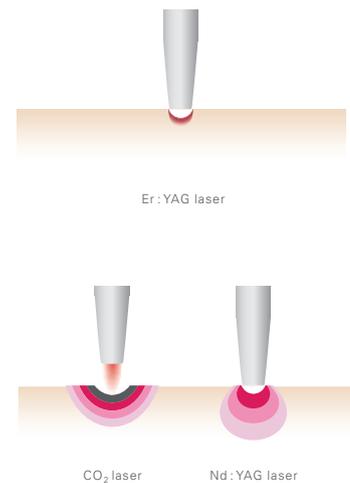
The wavelength of the Er:YAG laser is the most suitable for dental treatment because it is readily absorbed by water. Therefore it efficiently vaporizes human tissue that has a high water content and effects only the surface of the tissues. It also produces very little heat which reduces pain to a minimum.

Wide variety of applications

The wide array of tip options enables this laser to perform both hard and soft tissue procedures.

Less trauma for biological tissues

Unlike CO₂ and Nd:YAG lasers, vaporization is concentrated at the surface of the tissue so the energy does not penetrate and damage deeper layers of tissue. It is also far less likely to produce cracks in the enamel, and it does not disperse energy to the area surrounding the irradiation target.



Periodontal treatment

(incision, excision, vaporization, ablation and coagulation)

Removal of subgingival calculi
Laser soft tissue curettage

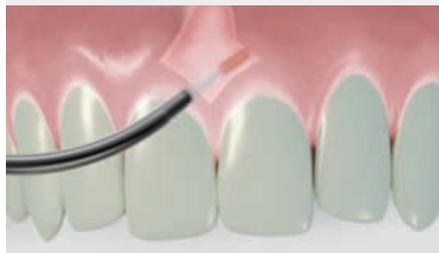


Scaling

Soft tissue treatment

(incision, excision, vaporization, ablation and coagulation)

Gingival incision and excision
Hemostasis and coagulation
Frenectomy and frenotomy

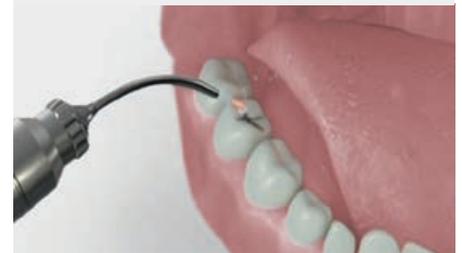


Gingival incision and excision

Hard tissue treatment

(ablation, vaporization)

Class I, II, III, IV and V cavity preparation
Caries removal



Caries removal

Clinical indications

Hard tissue indications

- Caries removal
- Surface ablation of wedge shaped defect

Periodontal indications

- Irradiation to the periodontal pocket
- Scaling
- Periodontal curettage
- Gingivoplasty
- Gingival flap operation

Soft tissue indications

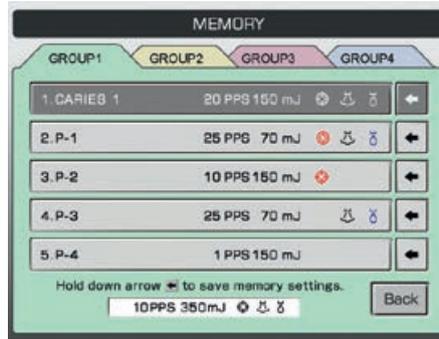
- Frenectomy and frenotomy
- Gingival incision and excision
- Coagulation of stomatitis
- Removal of pigmentation

Endodontic indications

- Laser root canal disinfection after endodontic treatment
- Flap preparation – incision of soft tissue to prepare a flap and expose the bone
- Cutting bone to prepare a window access to the apex (apices) of the root(s)
- Apicoectomy
- Root end preparation for re-fill with bio-ceramic materials
- Removal of pathological tissues (e.g. cysts, neoplasm or abscess) and hyperplastic tissues (e.g. granulation tissue) from around the apex



Smooth handling, easy navigation

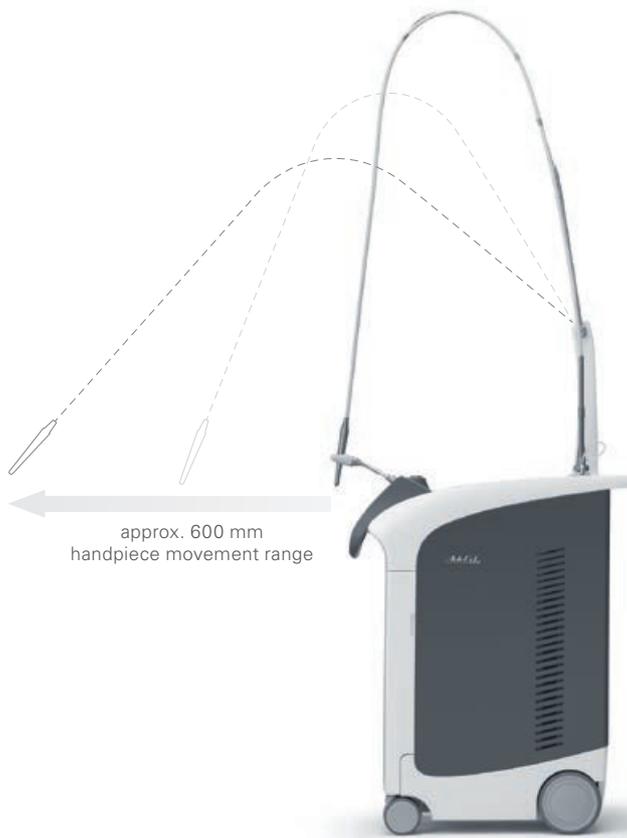


Intuitive interface

The display is large, easy to read, and has an intuitive design. All settings can be easily confirmed at a glance. There are 20 pre-programmed settings that can be easily retrieved.

Usage log saved on flash memory

A usage log is saved on a flash memory stick that can easily be connected to a computer for review.



Elegant and compact

The unit is lightweight and can easily be moved with large castors and handles on both the front and back. These convenient features also allow the unit to be slightly repositioned during treatment if needed. To install the laser, simply plug it in. The water and air systems are all built in eliminating the need for complicated connections.

Scaler-formed handpiece

This special formed handpiece offers a better access and a direct view to the preparation area.

Easy handling and operation

The flexible optical transmission cable and swing arm make the handpiece seem nearly weightless and allows the dentist to concentrate on the treatment procedure.

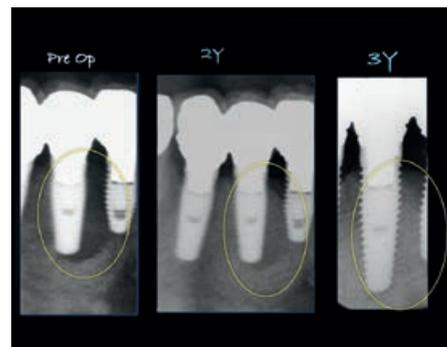
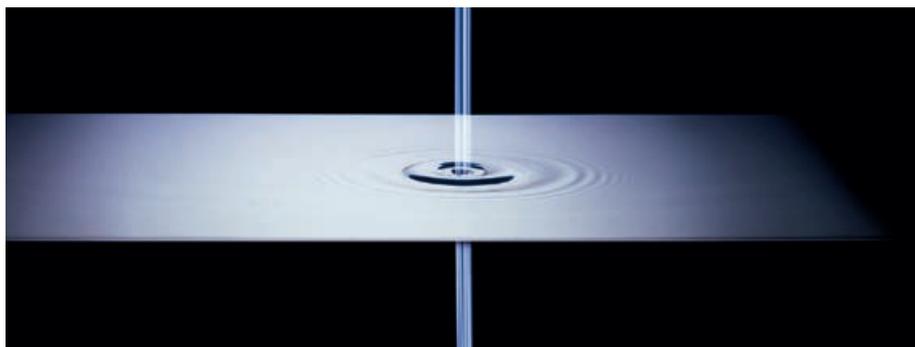
Adjustable handpiece hanger

The hanger is attached to the unit with a magnet so that it remains secure. The position of the handpiece hanger can be adjusted to suit the individual dentist.

Infection control

The handpiece hanger can be autoclaved for enhanced infection control.

Revolutionary new treatment for peri-implantitis



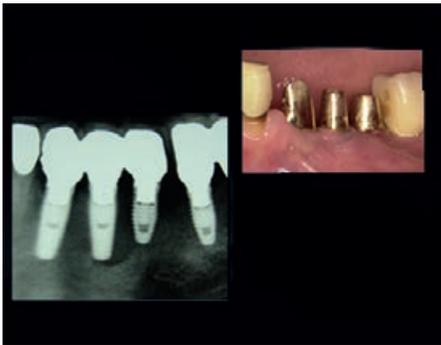
Peri-implantitis is a disease that currently poses a very challenging clinical problem. Research has shown no definitive, evidence based treatments that lead to a permanent and predictable outcome.

Now, under the leadership of Dr. Atsuhiko Yamamoto of the Japan Institute for Advanced Dental Studies, Perio-Implant Hospital AUTIS, we have developed an effective therapy that has already achieved great success in Japan during the last 8 years. Using our AdvErL Evo Er:YAG laser, the tissue will regenerate for long term and the bacteria is removed permanently by the utilization of micro-explosions produced by the laser's energy. It's an extremely low heat treatment which doesn't interfere with osseointegration and removes the contaminated titanium oxidized layer.

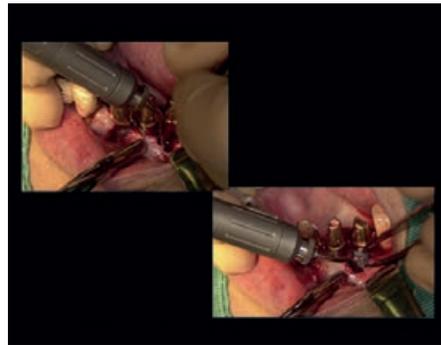
The micro-explosions are the key to our epoch-making treatment method. Micro-explosions exist when the laser energy is absorbed by water, the vol-

ume suddenly expands from 800 to 1,000 times. We have found a way to exploit these micro-explosions so that both the contaminated matter on the implant surface and the layer of the contaminated oxidized titanium is removed. With this method, the surface is not scraped off; the titanium is peeled off. So the unique property of using our AdvErL Evo Er:YAG laser is its wavelength; compared to the wavelength of other lasers, the absorption of water by our system is much greater.

Clinical case study



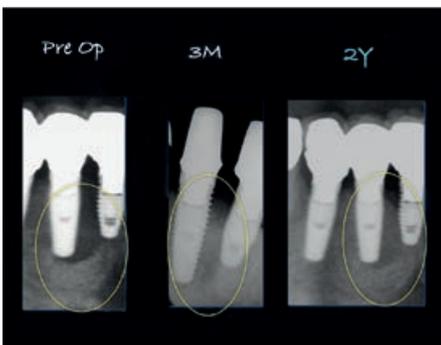
A female patient complained of swelling around an implant. An X-ray examination showed considerable transparency around the implant in the region of tooth 19. The superstructure was removed and it was observed that the implant was not loose. An examination determined that this was a CIST class D case.



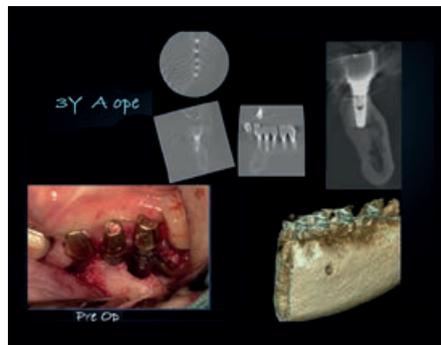
After opening a flap, bone loss and also granulation tissue were observed. The granulation tissue was removed with Er:YAG laser irradiation. The key to removing this tissue is not to irradiate the tissue itself, but to irradiate the layer where the contaminated and healthy tissue meet.



After removing the contaminated tissue, the oxidized layer on the implant was sterilized and peeled off.



X-rays taken before treatment, 3 months after treatment and 2 years later. The implant has stabilized.



The CT and volume rendered images show that bone growth has been satisfactory and the implant has stabilized.

Tip options

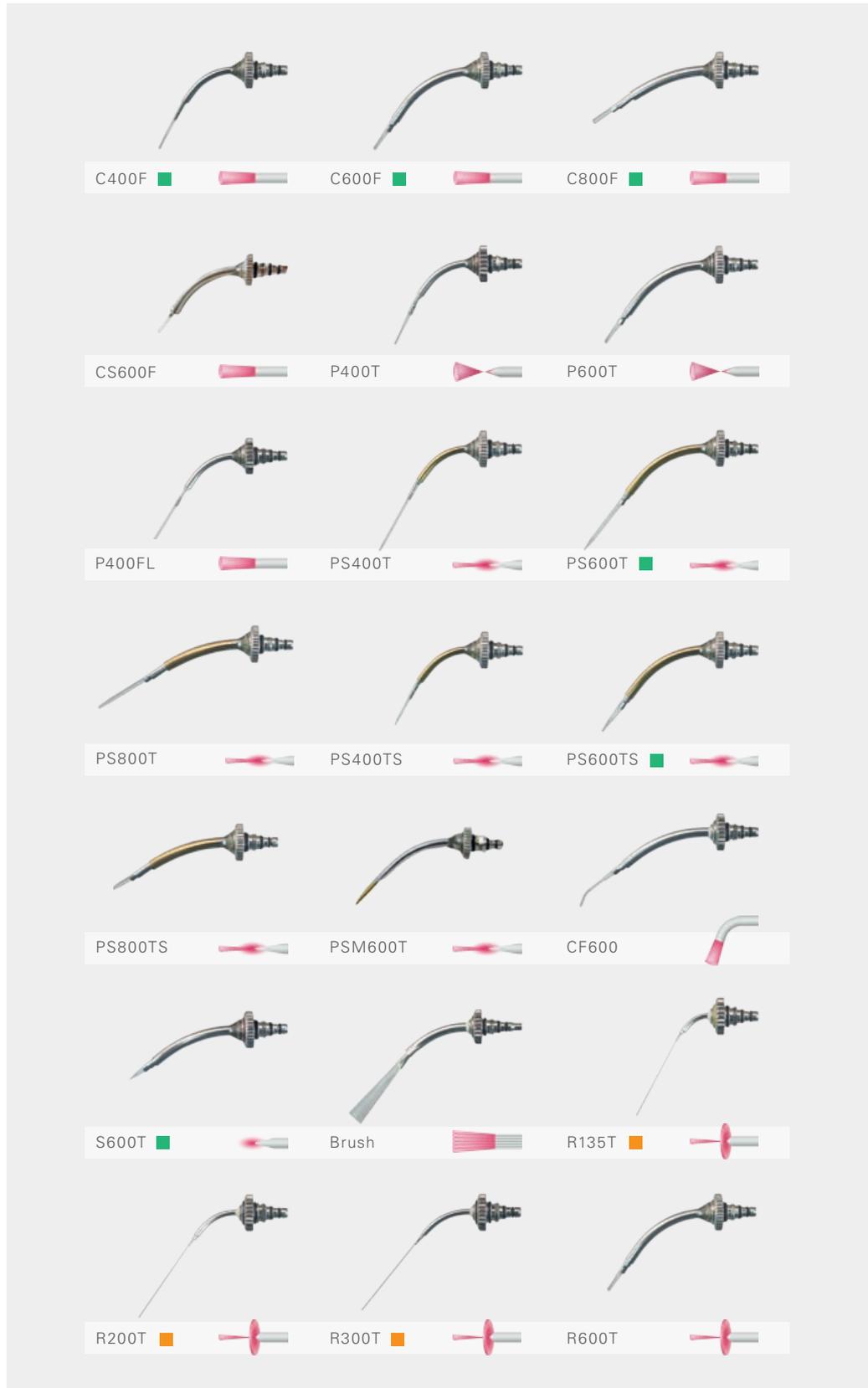


A total of 21 tips are available for a wide range of treatments.

Standard tips are indicated by a green square. The R series tips require an additional R-Attachment.

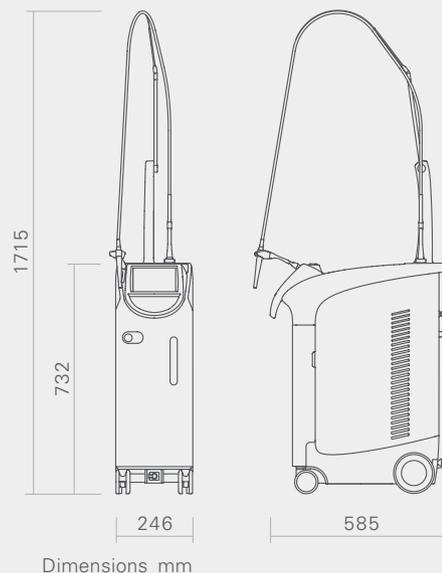
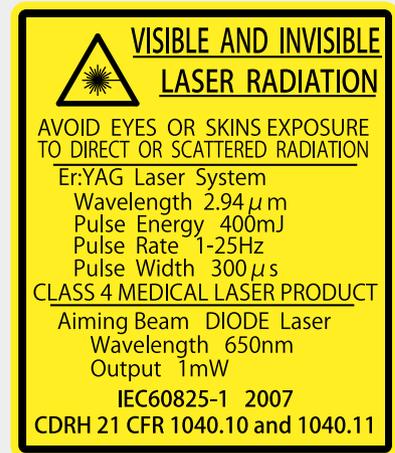
Marking Tool:

- Standard Tip
- Handpiece Type R is necessary
- C Caries Tip
- CF Corner/Curve flat tip
- P Perio tip
- PS Pocket surgery tip
- R Root tip
- Brush Hyper sensitive
- S Surgery tip



Specifications

Name	AdvErL EVO
Model	MEY1-A
Power rating	AC 100 V – 240 V \pm 10% 50/60 Hz
Power consumption	1.5 kVA (at maximum laser output)
Laser classification	Class 4 (Er:YAG), Class 2 (aiming beam)
Type of laser	Er:YAG
Wavelength	2,940 nm
Type of operation	Pulse
Laser energy	30 ~ 400 mJ at 1 ~ 10PPS 30 ~ 170 mJ at 20PPS 30 ~ 80 mJ at 25PPS
Pulse repetition rate	1, 3.3, 5, 10, 20, 25PPS
Aiming beam	LD (red)
Aiming beam wavelength	650 \pm 15nm
Type of protection against electric shock	Class I
Degree of protection against electric shock	Type B
Cooling method	Water cooling (built-in reserve)
Outer dimensions	(W)246 \times (D)585 \times (H)732 mm
Weight	Approx. 49kg



Diagnostic and Imaging Equipment 

Treatment Units 

Handpieces and Instruments 

Endodontic Systems 

Laser Equipment 

Laboratory Devices 



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Subject to technical changes and errors.

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