

## INSIDE

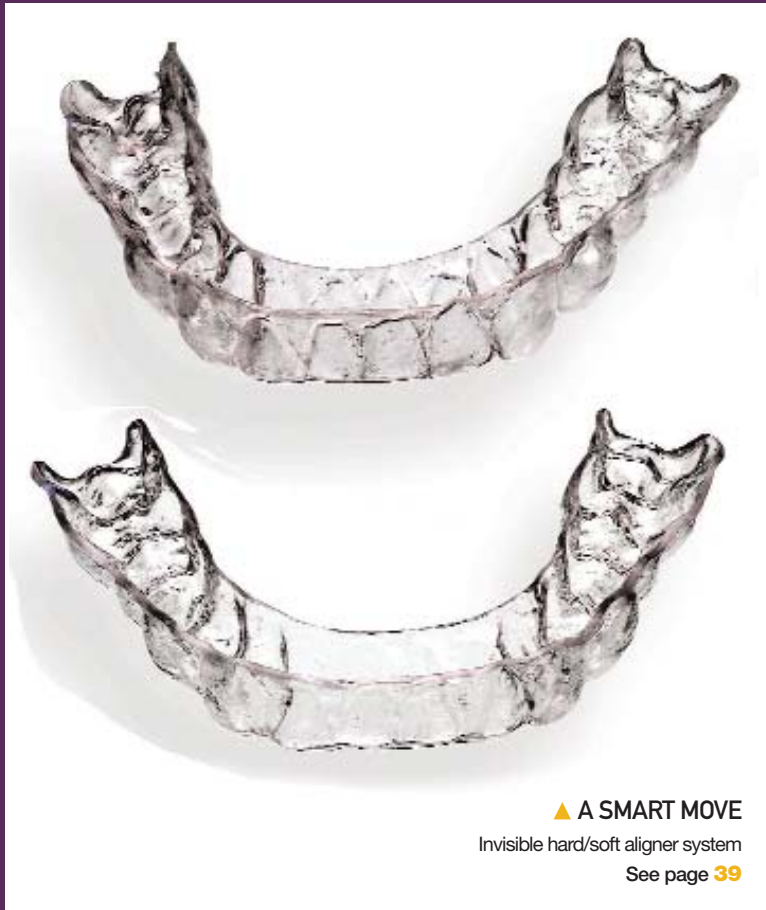
**THE ERGONOMIC DEBTE**  
Philosophy v the science

**STEP-BY-STEPS**  
Osteocentral anaesthesia and VT for implantology

**STOCKHOLM 2008**  
Your guide to the Annual World Dental Congress

**REFURBISHING YOUR PRACTICE**  
Don't do it yourself!

**NEW PRODUCTS**  
Bringing you the latest market offerings



▲ **A SMART MOVE**

Invisible hard/soft aligner system  
See page 39

▼ **DISINFECTION PROGRAMME**

Highly professional scientific support  
See page 36



## MANY MORE NEW PRODUCTS INSIDE



AN ADVANSTAR PUBLICATION  
DENTAL MEDIA



▲ **A CUT ABOVE**

New Ziramant instruments  
See page 39

▼ **STERILE DIAMONDS**

Never a dull bur  
See page 36



# Highest Performance in Dental Care



## Revolutionizing Dentistry

Fotona's AT Fidelis is set to revolutionize the world of laser dentistry with its combination of highest performance lasers, power and speed generating capacity, treatment versatility, safety and ease-of use.

## Highest Performance in Dental Care

The AT Fidelis, All Tissue laser, is the newest generation in dental laser systems, originating from Fotona's popular Fidelis range. It combines dentistry's two best laser wavelengths in one convenient, versatile solution for the modern practice. Its Er:YAG laser is proven to outperform any dental laser in ablation speed and allows more selective and precise work, thus preserving more healthy structural tissue. The world's fastest hard tissue drilling laser has broadened its operating range with the finest low pulse, high repetition rate capability for delicate soft tissue surgery. In addition, the top-of-the-line Nd:YAG laser provides trouble-free endodontic, surgical and aesthetic procedures

## Convenience and Safety First

The AT Fidelis includes the latest in touch screen navigation systems. Standard daily procedures are quickly and safely performed with the help of Comfort Mode pre-set treatment programs and simple user-interface. Through its Advanced Mode procedures are easily fine-tuned to maximize

treatment efficacy and efficiency. The AT Fidelis does not require external air or water sources, making it uniquely mobile; a must for large, multi-disciplinary practices.

## More Than Just a Dental Laser

Apart from providing the widest range of hard and soft tissue dental treatments, the AT Fidelis uniquely enables practices to offer facial aesthetic laser treatments, providing even more opportunities for practices to expand their patient base.

## High technology for precision, safety and control

Variable Square Pulse (VSP) Technology minimizes the transfer of heat to the tooth eliminating patient sensitivity during the procedure. In the majority of cases it eliminates the need for anesthetics, while it provides the dentist complete control over the tissue effect of the laser.

Energy Feedback Control (EFC) Technology controls energy output thus ensuring safe and efficient treatments without the need for repeated, external calibration.

Electronic Spray Control (ESC) Technology adjusts, saves and calls up the perfect water and air spray mixes specific to each treatment.

Laser dentistry's only Tissue effect Graphical Interface (TeGI) provides an instantaneous and precise graphical representation of the laser tissue effect as the various treatment parameters are selected.

## 4-in-1: four laser treatment modalities in a single system

### Wavelength Characteristics

**Er:YAG (2940)** A golden standard in laser dentistry. Its ideal water absorption coefficient for hard tissue drilling enables the Er:YAG laser to ablate comfortably, efficiently and safely in enamel, dentin and composites. VSP Technology support provides pulsewidths under 100µs and square pulse shapes which increases ablation speed, treatment precision and safety. The AT Fidelis Er:YAG features low pulse energy and high repetition rate capabilities to further broaden soft tissue surgery options.

**Nd:YAG (1064)** The most suitable and versatile soft tissue laser in dentistry. Provides excellent cutting precision with simultaneous hemostasis and disinfection. Procedures are overall shorter, require less anesthesia, require less healing time and have less post-operative swelling, discomfort and infection risk. Disinfection up to 1000 µm inside tubuli provides higher success rates and shorter treatment times in endodontics.

**Long pulse Er:YAG (2940)** Its minimal penetration in skin provides micron layer-by-layer action which ideally suits a wide range of facial wrinkle reduction, skin rejuvenation and acne scar reduction treatments.

**Long pulse Nd:YAG (1064)** The Nd:YAG laser possesses the ideal absorption characteristics for effective and safe hair removal, acne treatments and vascular treatments in all skin types.

## Laser And Health Academy

Visit [www.laserandhealth.com](http://www.laserandhealth.com) to download the latest papers and clinical bulletins on dental laser applications, provided by members of the Laser and Health Academy. Workshops in laser dentistry are organized on a regular basis by the Academy and are open to anyone interested in discovering more about Fotona laser dentistry.

### The only laser faster than a conventional drill

Laser energy is efficiently delivered through an articulated arm and supported with VSP Technology which enables the AT Fidelis to cut faster than any other laser in dentistry. When laser ablation is faster than heat diffusion no unnecessary heat is deposited into the tissue. A recently published study confirms that Fotona's Er:YAG laser ablates 3.7 times faster in dentine and 5 times faster in enamel compared to Er,Cr:YSGG lasers. Find more information on [www.laserandhealth.com](http://www.laserandhealth.com)

### FeatherLight articulated arm provides higher energy efficiency and better range-of-motion

Fotona's FeatherLight articulated arm, with 7 high precision mirrors, transmits Er:YAG laser energy up to 40% more efficiently than alternative methods such as fibers and hollow waveguides. Articulated arms are durable and robust, and generally more suited to delivering the high laser energies required for effective laser dentistry. The articulated arm offers a full range-of-motion and can be optimally balanced so that the weight of the articulated arm and handpiece assembly are carried by a counterweight. This gives complete freedom when working with the laser, which is of particular importance when performing delicate procedures.

### Intuitive touchscreen interface and treatment management system

Designed for both expert users and practitioners without any previous experience with laser systems. A simple press of a button is enough to quickly change wavelengths and combine the hard tissue efficiency of Er:YAG with the soft tissue precision of Nd:YAG, to give every patient the very best possible care. Comfort Mode provides pre-set treatment programs and data storage options, and Advanced Mode allows fine-tuning the parameters to specific treatments.

### Quartz and sapphire fiber tips for precise tissue ablation

A wide variety of contact tips are easily changed at chair side. Fiber tips are made of durable mineral materials and have been designed and shaped meticulously to suite specific treatments.

### Self-sufficient and mobile

Water and air spray assemblies, integrated directly into the system mean that no external compressed air or water sources are required, making the system uniquely mobile and versatile in the dental practice.

### Wireless footswitch

Available for even more mobility and flexibility while working. Avoids the unnecessary and messy tangle of cables on the practice floor.

### Contact

The Fotona AT Fidelis is available worldwide from the Fotona Global Sales Network.

Visit [www.fotona.com](http://www.fotona.com) to find your local Fotona representative.

Fotona.com provides more information on Fotona's dental laser systems range, including treatment videos, before and after photos and downloadable product literature.

### Features

- 2 laser sources
- 4 laser treatment modalities
- 5 selectable pulse duration modes
- Highest performance specifications
- Variable Square Pulse Technology
- Tissue effect Graphical Interface
- Touchscreen navigation and treatment management system
- Comfort and Advanced Modes
- Electronic Spray Control
- Energy Feedback Control
- Aesthetic upgrade packages
- Treatment-specific titanium handpieces and sapphire fiber tips
- Integrated air & water supply

### Key Treatments

- Caries Removal
- Cavity Preparation
- Soft Tissue Surgery
- Root Canal Disinfection
- Gingival Treatments
- Dentin Hypersensitivity
- Closed Curettage
- Tooth Surface Preparation
- Oral Diseases
- Calculus Removal
- Tooth Whitening
- Facial Aesthetics

### Advantages

- Superior power, speed and precision
- Advanced performance and superior clinical results
- The world's fastest drilling, hard tissue laser
- Complete control of energy delivery through VSP Technology
- No need for external calibration
- Industry's only Tissue effect Graphical interface (TeGI)



### AT Fidelis in Practice

#### What are the advantages of a laser system that supports both Nd:YAG and Er:YAG?

Nd:YAG is the chosen soft tissue laser and provides deepest disinfection with simultaneous coagulation for trouble-free surgical and aesthetic procedures. AT Fidelis' Er:YAG, as the fastest hard tissue drilling laser, is perfect for selective and precise procedures on hard tissue preserving more healthy tissue. Having both laser sources available in one system, and at a touch of a button, means that a greater number of treatments and procedures can be performed in just one session. Only one investment is required to have access to the most complete range of lasers used in laser dentistry today.

#### Is the AT Fidelis laser suitable for any dental practitioner?

AT Fidelis' comprehensive features ensure the systems versatility and ease-of-use. Its touch-screen user interface and navigation system are designed for both expert and novice laser users. It includes Comfort Mode where a desired treatment can simply be selected from the menu of standard daily procedures; the system provides the ideal treatment parameters. Treatment parameters can be further fine-tuned in Advanced Mode. Procedures can therefore be performed more quickly and safely.

#### Is laser suitable for treating pediatric patients?

Lasers like Fotona's AT Fidelis offer new possibilities for improved service for pediatric dentistry patients and their parents. Much of the pain associated with the drill is caused by heat and vibration, which can easily be avoided when using a laser. Two main procedures dentists perform on pediatric patients with laser are cavity preparation and frenectomies. To achieve best results, the ideal combination is a laser system with Er:YAG and Nd:YAG wavelengths. Laser dentistry with AT Fidelis is gentler and conserves the tooth structure. Chair time is shorter and healing time faster.

#### What sort of treatments can you offer your patients with the aesthetic upgrade?

Fotona's Er:YAG can provide treatments such as scar reductions, superficial lesions removal and a range of skin resurfacing treatments.

Most common Nd:YAG treatments are hair removal, treatment of facial veins and lesions, active acne reduction and non-ablative rejuvenation. Nd:YAG treatments generally involve minimal downtime and post-procedure care.



Laser & Health  
ACADEMY