AR PHOTONICCS

We don’t just build technology
We build confidence

BRAND OF THE YEAR

VARICOSE VEINS | EVLT | EVLA

7w/1940nm

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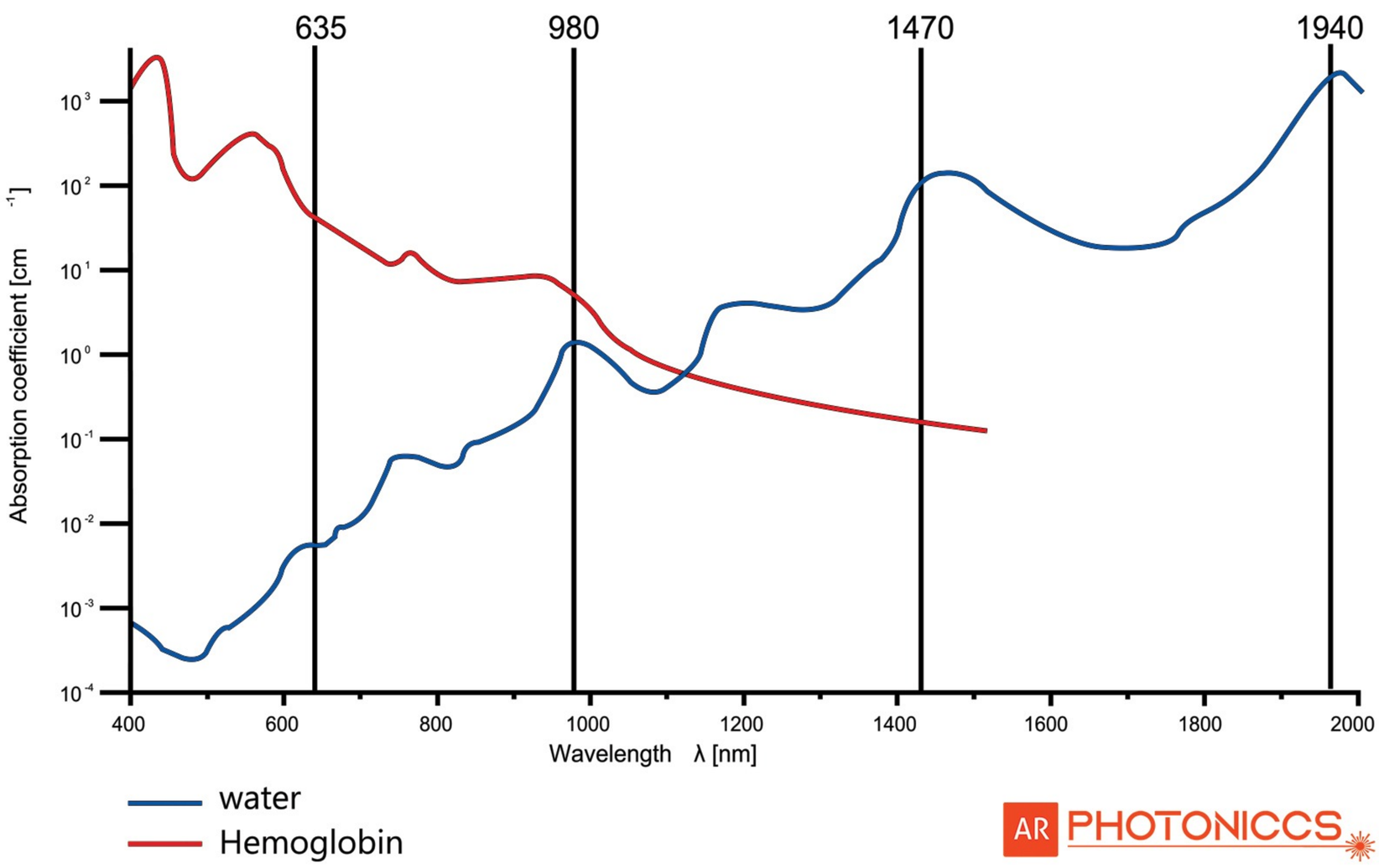
WHAT WAVELENGTH IS RECOMMENDED?

For minimally invasive endovenous laser ablation - EVLT, Photoniccs offers diode lasers emitting radiation at different wavelengths: 980nm, 1470nm or 1940nm with the possibility of their further expansion with additional light sources.

As can be seen in the diagram, for 980nm radiation, the absorption coefficient is higher for hemoglobin than for water. For 1470nm, especially 1940nm, the opposite is true and water absorbs light radiation many times better than hemoglobin. Both of these chromatophores are components of human tissues, including blood and vascular walls. Lasers with a wavelength of 980nm have been used on a large scale for over 20 years and the average power used during treatments is 10-12W. Using 1470nm wavelength, smaller powers are needed - at 6-8W, and for 1940nm wavelengths 4-6W is enough to perform an effective surgery. Reducing the amount of power needed, makes these lasers much safer and predictable tools for the doctor, while giving patients faster and more comfortable recovery.

A novelty among the medical devices manufactured by Photoniccs is the two-wave, universal 980 / 1470nm surgical laser, which in addition to varicose veins and proctology is widely used in dermatosurgery, ENT and gynecology.

In addition as the first and only in the world, diode lasers from the family, each of the above configurations can be extended by additional wavelength - 635nm, which, thanks to biomodulation effects, has a very beneficial effects on morphotic elements in human blood. It significantly improves the soft tissue regeneration process, rebuilds blood vessels, reduces postoperative pain and swelling, stimulates blood and lymph flow and strengthens local immunity. The use of the 635nm laser is especially recommended for patients undergoing inflammation hard-healing wounds or ulcers and after each surgery to accelerate healing, reduce pain and swelling.



Emergency Switch

Touch Screen Interface

ADVANTAGES & SPECIFICATION

There are many advantages to choosing EVLT to treat your varicose veins including:

- Rapid relief from symptoms.
- Minimally invasive procedures are performed through a small hole in the skin, minimising the patient's discomfort and recovery time. There won't be any scar.
- Most procedures can be performed on an outpatient basis or require only a short hospital stay. As interventional procedures tend to require only local anaesthesia, hospital stays are very short, with patients frequently going home the day the procedure is performed.
- No or negligible blood loss. No requirement of blood transfusion.
- Overall procedure is less expensive than surgery or other alternatives.
- Return to work and other normal activities usually within the first few days after the procedure.
- Low risk compared to surgery. The techniques can be used in very sick patients who are unfit for surgery.

EVLT BREAKTHROUGH

EVLT (Endovenous Laser Treatment) is a procedure leading to occlusion of varicose veins. It involves putting a Fiber optic into a saphenous vein through a catheter. Then the laser is turned on and slowly withdraw from the vein. Thanks to light-tissue interaction mainly thermal effects occur, the tissue is heated and the walls of the vein shrink, because of alteration of endothelium and contraction of collagen. There are two possibilities of performing the treatment: with pulsed and continuous-wave laser operation. Using the pulsed operation also the fiber is withdraw step by step. A better choice is to use continuous- wave laser and to withdraw the fiber also continuously, what provides more homogenous illumination of the vein, less tissue damaged outside the vein and better results. The therapy is just a beginning of the occlusion process. After the treatment the veins are shrinking for several days or weeks. That's why in the long-period observation very good results are obtained. The main advantage of EVLT is that it's a non-invasive technique in contrast to surgical treatments. It also doesn't involve hospital stay and can be performed in an ambulatory conditions with local anesthesia and lasts for less than 1 hour. After the procedure patient doesn't have any unsightly incisions and scars.

Thanks to radial illumination the maximum energy density is directed to the walls of the vein near the fiber and cause immediate occlusion. The simple bare fiber is also possible to use, but the treatment is much more effective with the radial illumination.

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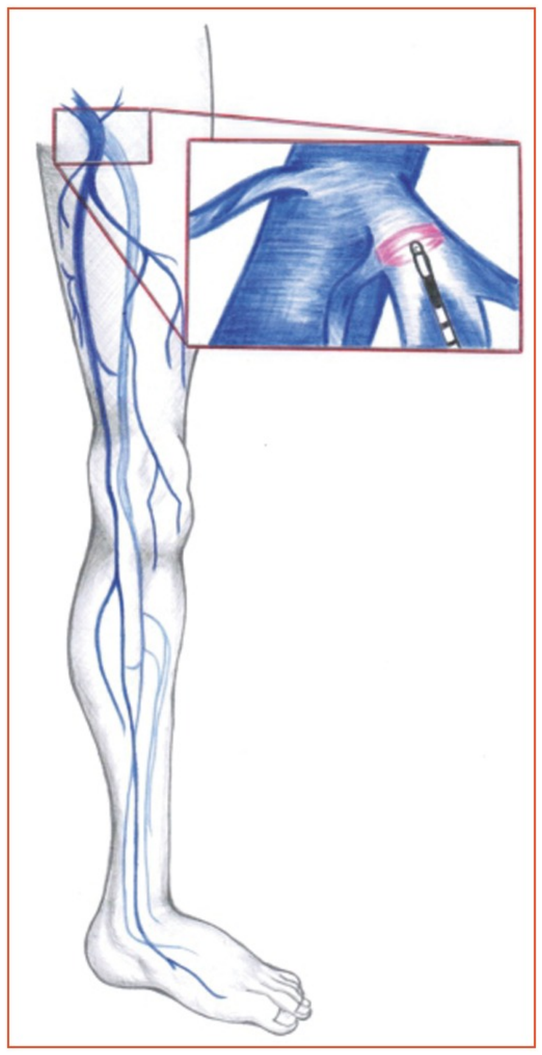
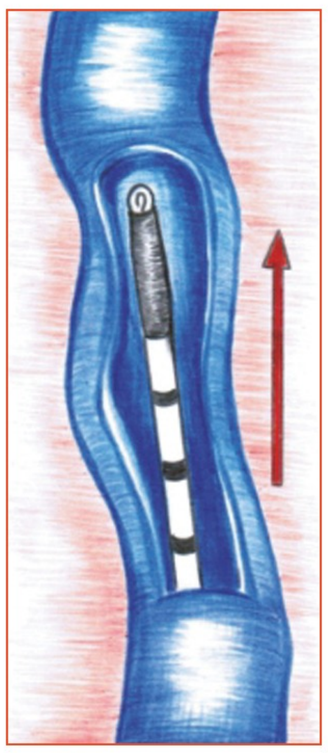
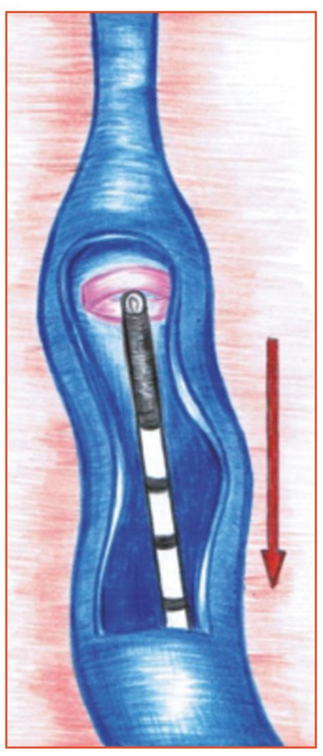
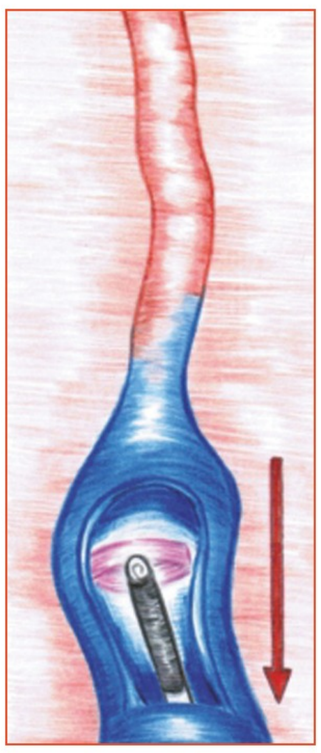




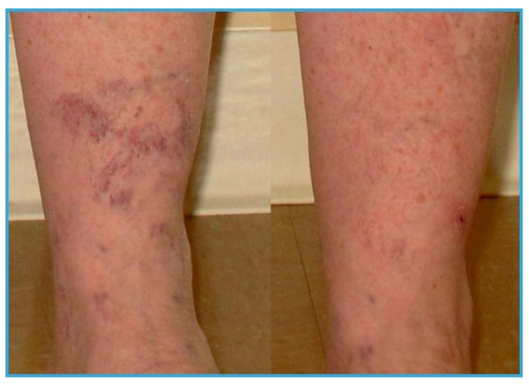




WHY PHOTONICCS

- Photoniccs provides choice of multipal possible wavelengths: 980nm ,1470nm, Dual Wavelength, 1940nm, 4 Wavelength of 3 types of fibers : bare, radial & conical.
- Cutting edge technology.
- Extendable database of predefined therapy protocols which can be modified and assigned to a patient.
- Lowest operating costs.
- Very compact and small sized device.
- Flexibility of development & other customized parameters .

BEFORE & AFTER



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SPECIFICATION

Laser type	Diode, Semiconductor
Wavelength	1940nm
Max Power	7 watts
Aiming beam	635nm/1, 4Mw max or 515nm/2, 5mW max
Operation Mode	Continuous or Modulated
Pulsed Time	0.05ms -1000ms
Beam Delivery	SMA905 connector
Optic Fiber Compatible	Optic fibers having a core from 200um to 1000um, NA=0.22~0.48
Beam Emission Initiation	Footswitch
Controller	Microprocessor
Display	10.1” IPS with touch panel Medical approved
Cooling	Internal, air and thermoelectric cooling
Power supply of the laser	DC 24V/8.33A from the separate AC
Power supply of AC adapter	Single phase 100~240VA; 50-60HZ, Max 90w
AC Adapter	DC 24V/8.33A Medical approved
Laser Dimensions	27cm * 24,5cm x 9cm
Laser weight	2.75kg
Laser case dimensions	53cm × 38cm × 23cm
Weight of laser with cases	9kg
Environmental conditions during work	From +10 to 24^{0}C degree, relative humidity from 30% up to 60%
Cass of Medical Device	IIB
Laser safety Class	4
Electric Safety Class	I type B
Housing Protection Degree	Ip20b
Footswitch Protection Degree	IPX6

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DISTRIBUTOR

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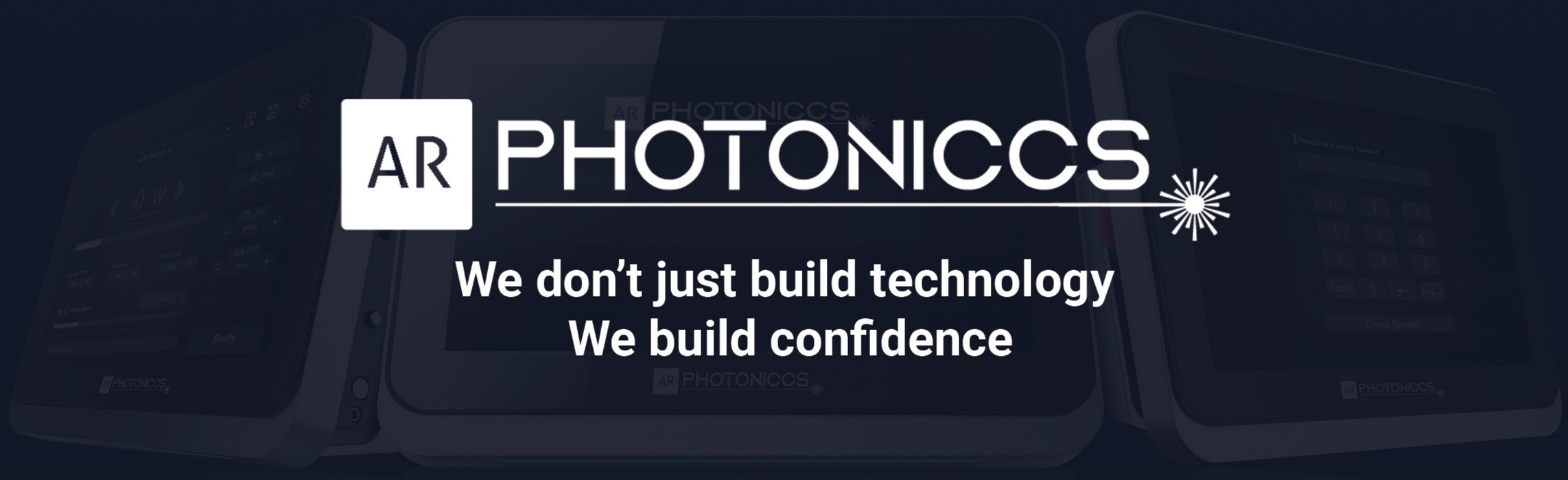

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