

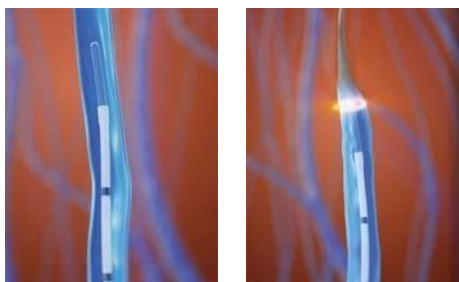
Phlebological laser
for Varicose Veins - EVLT

SWING 1470 nm

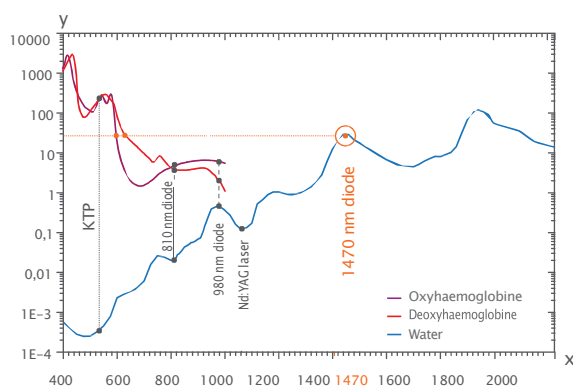
Gold standard in EVLT:

- Greater saphenous vein
- Small saphenous vein
- Perforating Veins
- Recurrences
- Venous Ulcer





Biophisic



Axis y: Absorption coefficient [cm⁻¹] Axis x: Wavelength [nm]

EVLT – EndoVenous Laser Treatment

EndoVenous Laser Treatment (EVLT) was first used in the USA. Since that time, the unique advantages of this method have made it more and more popular.

Considering the advantages of this method, it is now globally becoming the method of choice in the treatment of superficial venous incompetence in large veins. This modern method of endovascular treatment enables large vein closure without making skin incisions, which is not possible when using traditional methods.

EVLT - advantages of the method:

- Does not require hospitalisation (patient can go home even 20 minutes after treatment)
- Local anaesthesia
- Short time of treatment
- No incisions or post-surgical scars
- Quick return to daily activities (usually 1–2 days)
- High effectiveness
- High level of treatment safety
- Very good aesthetic effect

EVLT with 1470 nm

Advantages of EVLT with 1470 nm:

- Effective vein closure using smaller dose of energy supplied to the vein (up to 70 J/cm on average at the power range from 8 up to 10 W)
- Lack of tissue carbonisation effect in vein and blood on the optical fibre ensuring homogeneous energy dose transfer along the entire vein
- Lower energy doses result in decreased pain, absence of the risk of burns and the related skin discolouration effects
- High effectiveness of treatment of 95% in the first year after treatment and 97% after three years according to scientific publications

Biophisic of the 1470 nm wavelength

Optimal degree of water absorption in the tissue

SWING, emits energy at the wavelength of 1470 nm. The wavelength has a high degree of water absorption in the tissue with simultaneous effects on blood. The bio-physical property of the wave used in the SWING laser means that the ablation zone is shallow and controlled, and therefore there is no risk of damage to adjacent tissues. Additionally, it has a very good effect on blood (no risk of bleeding). These features make the SWING laser a safer and cheaper alternative to near-infrared lasers (810 nm–980 nm, Nd: YAG 1064 nm) and far-infrared laser (CO2 10600 nm).

Source: G. M. Hale, M. R. Querry, "Optical constants of water in the 200 nm to 200 μm wavelength region," Appl. Opt., 12, 555-563 (1973). Scott Prahl, <https://omlc.org/spectra/hemoglobin/>, Oregon State of Technology, USA.

SWING 1470 nm

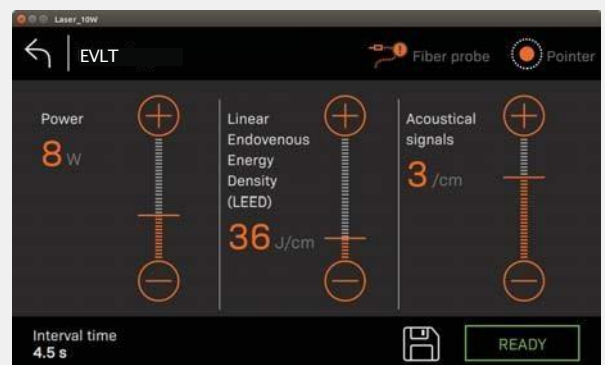
Software which makes the work easier

The SWING DIODE laser is controlled from very high definition touch screen with excellent colour quality and a wide field of view in order to provide the operator with ease of use. Individual user settings can be saved in the device, allowing quick and easy selection of treatment parameters. Additionally, the device has several convenient modes for EVLT procedure.

The laser software allows the energy emission in continuous wave (CW) mode where the operator based on the ultrasound image (on-line), retracts the optical fibre in reaction to the visible response of the vein to the emission of energy.

The device software includes a mode of operation (EVLT) enabling control of the vein ablation process by audibly informing the operator about delivering a programmed (or pre-set) dose of energy (J/cm) to the vein, thus determining the rate of optical fibre retraction from the treated vessel (sec/cm). After generating the desired energy dose, the laser automatically signals the optical fibre relocation time. The operator using this functionality can fully concentrate on tracking the ultrasound image without the need to control the laser operation.

The use of additional equipment such as "optical fibre retractor" is unnecessary, which reduces costs and also increases the quality and safety of the procedure.



Advantages of SWING 1470 nm

- Intuitive touch screen panel with black or white interface
- Easy and quick list of set up programs to choose from
- Several convenient modes such as: flebology, continuous mode, ENT, and much more
- Possibility to create and save own programs
- Automatically signals the optical fibre relocation time for the better control
- The highest quality optical fibre 360°

Black or white?

You can choose the colour of the interface and change it whenever you want. The device remembers your last settings, so you don't have to change it each time you turn on the device.





Optical Fibre

Radial fibre 360°

The EVLT procedure should be performed using a combination of the SWING DIODE 1470 nm laser and a unique radial optical fibre (ring emission).



This combination ensures the concentration of the laser energy on the vein wall ensuring high efficiency. MC offers radial optical fibres in two diameters:

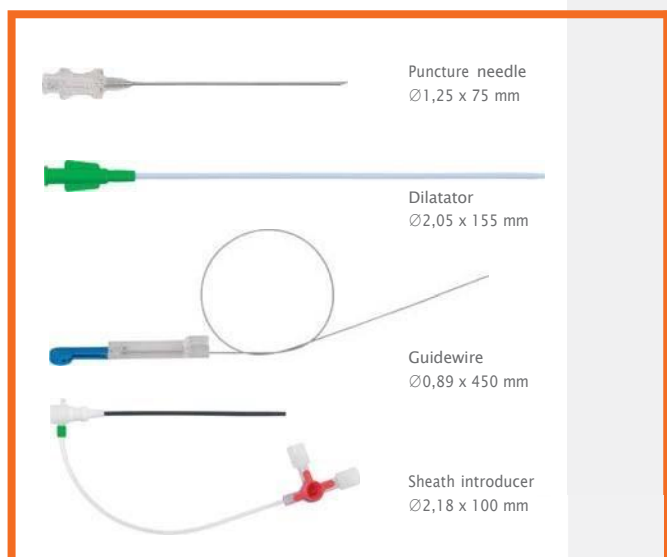
- Standard 600 um – e.g. GSV, SSV
- Slim 400 um – e.g. perforators. The thinnest available on the market

The use of radial fibres provided by MC together with the SWING laser guarantees full compatibility of the set and thus effective energy transfer into the treatment field. This means that the nominal laser energy, as declared by the manufacturer, is fully available at the optical fibre tip, and thus it is equal to that delivered to the tissue. Many other lasers and optical fibres cause losses of up to 20%, which can cause vein recanalisation due to uneven energy density and power losses during EVLT procedure.

Combination of Radial Fiber with 1470 nm laser – tissue reaction:

- Temperature max : >100°C
- Temperature of Collagen: >80°C
- Temperature of Protein: >60°C

Fibers are delivered to the customer in sterile, double packages and are ready to use. The storage period without the risk of losing its sterility is up to 5 years.



Tumescence pump, dispenser for varicose vein laser treatment

Universal, sturdy pump

The Dispenser DP is a specifically designed tumescence infiltration pump, delivering high volume of tumescence liquid with an optimal pressure.

- Good price/performance ratio
- Easy handling with low maintenance effort
- Continuously variable and precise adjustable infiltration performance
- Delivery of tumescence liquid up to 27 liters per hour
- Available with Vario pedal or on/off pedal
- Very fast and easy fixing of the tubing set
- Easy cleaning of the device due to smooth-edged design



SWING 1470 nm

Specification

Power supply		
Power supply		110-230V~ 50-60Hz
Maximum power consumption	SWING 12, SWING 15W	500 VA
Safety		
Class		I
Laser		
Laser class		4
Wavelength		1470 nm
Max. laser power (ver. dependent)		12 W, 15W
Operation mode:		Continuous (CW) Quasi continuous (QCW) Pulse (REPEAT)
Dimensions:		41/42/19 cm
Weight:		13 kg
Treatment parameters		
Ton	Laser pulse time [μ s, ms]	200 μ s ÷ 100s
Toff	Pulse interval value [μ s, ms]	200 μ s ÷ 100s
N	Pulse number in "package"	1 ÷ 100, and ∞
Tpause	Interval between pulse "packages"	200 μ s ÷ 100s



VISIBLE AND INVISIBLE LASER RADIATION.
AVOID EYE OR SKIN EXPOSURE TO DIRECT
OR SCATTERED RADIATION.

CLASS 4 LASER PRODUCT

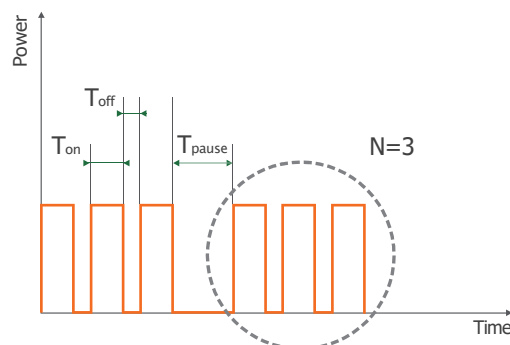
ACCORDING TO EN 60825-1:2014





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Metrum Cryoflex, Sp. z o.o., Sp.k.
Zielna 29, Blizne Łaszczynskiego 05-082



TWIST 1940 nm

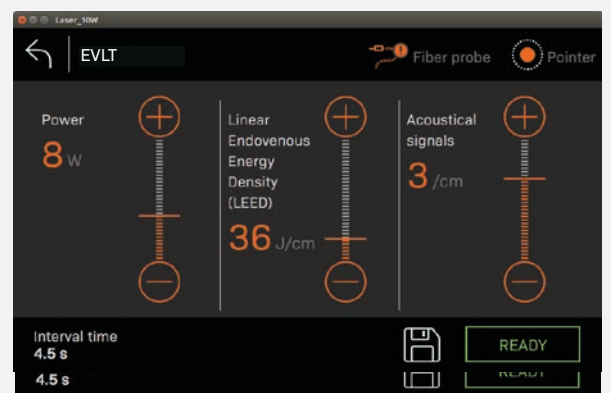
User friendly software

The SWING DIODE laser is controlled using a high definition touch screen with excellent colour quality and a wide field of view in order to provide the operator with ease of use. Individual user settings can be saved on the device, allowing for the quick and easy selection of treatment parameters. Additionally, the device has several convenient modes for EVLT.

The software allows the user to select the energy emission in a continuous wave (CW) mode where the operator, based on the ultrasound image, retracts the optical fibre in reaction to the visible response of the vein to the laser.

The device's software includes a mode of operation (EVL) enabling control of the vein ablation process. The device will audibly inform the operator about delivering a pre-set dose of energy (J/cm) to the vein, thus determining the rate of optical fibre retraction from the treated vessel (sec/cm). After generating the desired energy dose, the laser automatically signals the optical fibre relocation time. The user can fully concentrate on tracking the ultrasound image without the need to operate the laser.

The use of additional equipment such as "optical fibre retractors" are unnecessary, which reduces costs and also increases the quality and safety of the procedure.



Advantages of TWIST 1940 nm

- Audible feedback during fibre retraction
- No need for optical fibre retractors
- Cost effective solution
- Pre-programmed modes of operation including EVLT, continuous mode, impulse & quasi CW
- Ability to save customised parameters
- Automatic signals for optical fibre relocation
- High quality radial fibre
- Nominal laser energy available at the optical fibre tip





CE 2274

TWIST 1940 nm

Specification

Power supply

Power supply	110-230 V~ 50 Hz-60 Hz
Maximum power consumption	500 VA

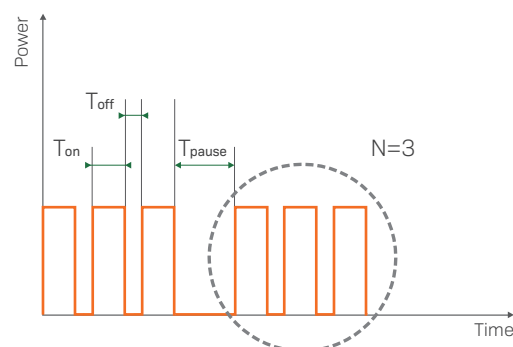
Safety

Class	I
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Laser

Laser class	4
Wavelength	1940 nm
Max. laser power (ver. dependent)	10 W
Operation mode:	Continuous (CW) Quasi continuous (QCW) Pulse (REPEAT)

Ton	Laser pulse time [μs, ms]	200 μs ÷ 100 s
Toff	Pulse interval value [μs, ms]	200 μs ÷ 100 s
N	Pulse number in "package"	1 ÷ 100, and ∞
Tpause	Interval between pulse "packages"	200 μs ÷ 100 s
Dimensions:	41/42/19 cm	
Weight:	13 kg	





AUTHORIZED DISTRIBUTER PAN INDIA



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