

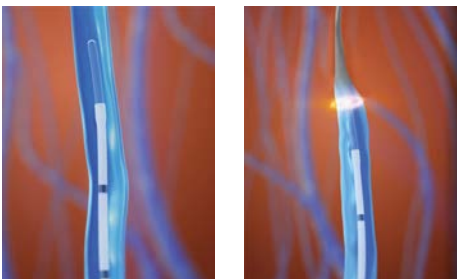
SWING 15

1470 nm phlebology diode laser

Gold standard in EVLT:

- Greater saphenous vein
- Small saphenous vein
- Perforating veins
- Recurrences
- Venous ulcer





EVLT - EndoVenous Laser Treatment

EndoVenous Laser Treatment (EVLT) was first used in the USA. Since then, the unique advantages of this method have made it increasingly popular. It is now the global 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.

EVLT - advantages of the method:

- Day case procedure
- Local anaesthesia
- Short treatment time
- No incisions or post-surgical scars
- Quick return to daily activities (usually 1-2 days)
- Excellent patient outcomes
- Great aesthetic results
- High level of treatment safety

EVLT with 1470 nm

Advantages of EVLT with 1470 nm:

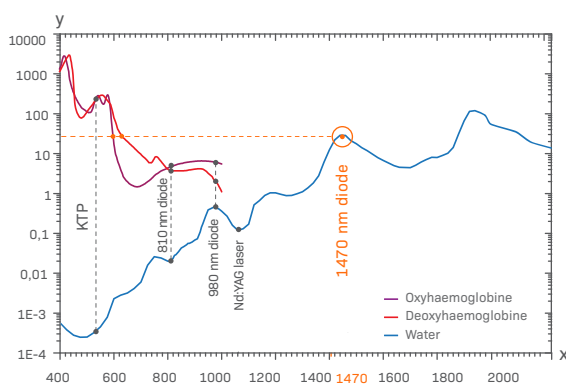
- Effective vein closure using a smaller dose of energy supplied (up to 70 J/cm on average with a power range of 8 - 10 W)
- No residual tissue carbonisation ensuring homogeneous energy dose transfer along the entire vein
- Lower energy dose results in decreased pain, reduced risk of burns and skin discolouration
- Positive clinical outcomes - 95% post op success rate in year 1, 97% in year 3

Biophysics of the 1470 nm wavelength

Optimal water absorption

SWING 15 laser emits energy in a 1470 nm wavelength. The wavelength has a high degree of water absorption in the tissue with simultaneous effects on blood (minimal risk of bleeding). The bio-physical property of the wave used in the SWING 15 laser means that the ablation zone is shallow and controlled and therefore there is no risk of damage to adjacent tissue. These features make the SWING 15 laser a safer and cheaper alternative to near-infrared lasers (810 nm - 980 nm, Nd:YAG 1064 nm) and far-infrared lasers (CO2 10600 nm).

Biophysics



Axis y: Absorption coefficient [cm⁻¹] Axis x: Wavelength [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 Prah, <https://omlc.org/spectra/hemoglobin/>, Oregon State of Technology, USA.

SWING 15

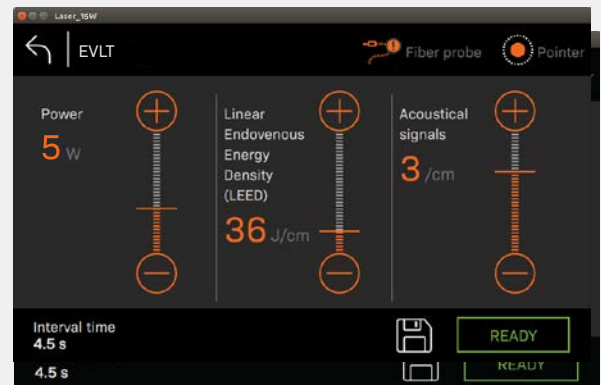
User friendly software

The SWING 15 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 energy emission in a 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's software includes a mode of operation (EVLTL) 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 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 SWING 15

- User friendly list of programs to choose from
- Several convenient modes such as: phlebology, continuous mode, quasi-continuous & impulse
- Ability to create and save bespoke programs
- Automatically signals the optical fibre relocation time for optimal control
- Premium optical fibre 360°, double sealed
- Intuitive touch screen panel with black or white interface





Optical Fibre

Radial fibre 360°

EVLT procedures should be performed using a combination of the SWING 15 laser and our unique radial optical fibre (ring emission).



This combination ensures the concentration of the laser energy on the vein wall is highly efficient. The device comes with a choice of radial optical fibres in two diameters:

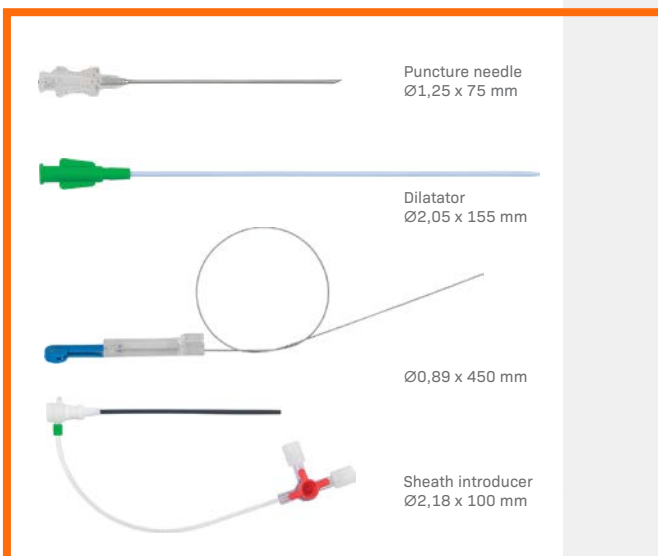
- Standard 600 um - e.g. GSV, SSV
- Slim 400 um - e.g. perforators. The thinnest available on the market

The use of radial fibres provided by MC together with the SWING 15 laser guarantees full compatibility of the set and thus effective energy transfer into the treatment field. This means that the nominal laser energy 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 procedures.

Combination of Radial Fibre with 1470 nm laser - tissue reaction:

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

All fibres are double sterile packed and ready to use. The storage period without the risk of losing its sterility is up to 5 years.



Additional Extras

Tumescence pump, dispenser for varicose vein laser treatment

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

- Cost effective solution
- Easy handling with low maintenance effort
- Continuously variable and precise adjustable infiltration performance
- Delivery of tumescence liquid of up to 27 litres per hour
- Available with Vario pedal or on/off pedal
- Fast and easy fixing of tubing set
- Easy cleaning of the device due to smooth-edged design





CE 2274

SWING 15

Specification

Power supply		
Power supply	110-230 V~ 50 - 60 Hz	
Maximum power consumption	375 VA	
Safety		
Class	I	
Laser		
Laser class	4	
Wavelength	1470 nm	
Max. laser power (ver. dependent)	15 W	
Operation mode:	Continuous (CW) Quasi continuous (QCW) Pulse (REPEAT)	
Dimensions:	43/46/20.3 cm	
Weight:	13 kg	
Treatment parameters		
Ton	Laser pulse time [μ s, ms]	200 μ s ÷ 100 s
Toff	Pulse interval value [μ s, ms]	200 μ s ÷ 100 s
N	Pulse number in "package"	1 ÷ 100 and ∞
Tpause	Interval between pulse "packages"	200 μ s ÷ 100 s



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

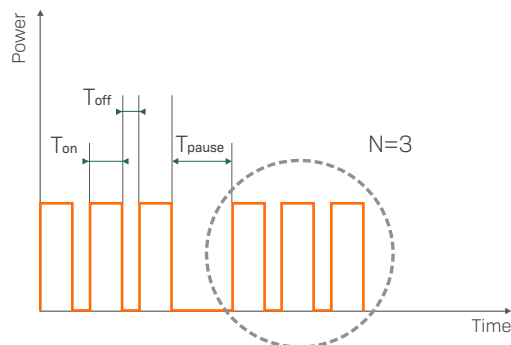




Metrum Cryoflex, Sp. z o.o., Sp.k.
Zielna 29, Blizne Łaszczyńskiego 05-082



2274





METRUM CRYOFLEX

Manufacture

Zielna 29 Street
05-082 Blizne Łaszczyńskiego
POLAND, EU

Headoffice

Kolejowa 16A Street
05-092 Łomianki
POLAND, EU

Tel: +48 22 33 13 750
+48 22 33 13830
Fax: +48 22 33 13 766

export@metrum.com.pl
www.metrum.com.pl