



Metrum CryoFlex
medical devices manufacturer
www.metrum.com.pl

PHLEBOLOGY

The latest generation
of medical devices
for the treatment
of varicose veins

medical device
for cryosurgery
Cryo-S Electric

diode lasers
SWING 1470 nm
SALSA 940 nm

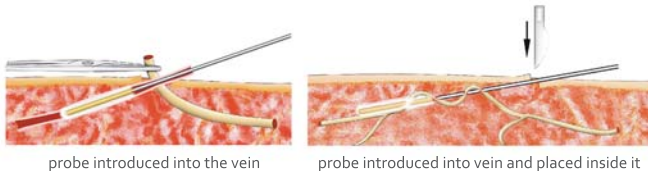
CRYOSTRIPPING - modern mini-phlebectomy

Cryostripping involves the removal of the insufficient vein segment by introducing the special probe into vein or by its external application on it, and which then can reach a low temperature in a few seconds. Taking advantage of the adhesion phenomenon (freezing of the probe to the vessel wall) and using different sizes of the probe, from a few skin punctures there are removed varicose veins of different size and shape (enhanced mini-phlebectomy). This applies both to primary and secondary varicose veins in chronic venous insufficiency.

Cryostripping is the best method for the removal of varicose veins after a previous obliterative treatment and a history of thrombophlebitis. Cryostripping also proved to be the most convenient method for removing meandering varicose plexuses.

Advantages of the method

- small skin incision
- short treatment time
- the possibility to remove perforating and epifascial veins
- lack of complications
- patient's quick return to normal functioning
- very good cosmetic result
- low cost of treatment
- the possibility to remove meandering veins (treatment not available in laser and RF methods)



Cryosurgery in the venous ulcers treatment

Excellent results have been recently obtained also in the removal of perforators in the surgical venous ulcer treatment.

Perforator veins cryosurgery involves introduction of the probe in place of healthy skin (over the area of skin-muscle scleroderma). Skin incision after the probe introduction does not exceed 3 - 4 mm. Then in the epifascial layer, after freezing it, all the veins near the ulcer area, connecting the deep venous system to the superficial are removed (stripping).

BEFORE AFTER



BEFORE



AFTER



Cryo-S Electric

State of the art cryosurgical device manufactured by Metrum CryoFlex is the next generation of apparatus used by many experts in the field from 1992.

Cryo-S Electric is controlled by microprocessor, and all the parameters can be monitored on a special LCD screen.

- Mode selection, cleaning the probe and freezing can be performed using foot switch or touch panel which is also helpful for keeping the site of a lesion under sterile conditions.
- Contains automatic probe cleaning system and two freezing modes (continuous and discontinuous)
- Temperature of the probe, pressure, gas flow, time of the procedure are displayed during freezing.
- It can be used with disposable and reusable probes.
- Treatments quantity and probe's parameters are controlled by microchip.



Cryo S electric

CE 0044

The working medium for **Cryo-S series** devices is N₂O - nitrous suboxide (-89°C). It is the anaesthiological gas, very efficient and easy to use. One 10 liters cylinder of N₂O serves for 4 hours of continuous work. Due to special qualities of the gas it can be stored safely in cylinders made of steel and without losses, which is one of the greatest drawbacks of liquid nitrogen devices. The apparatus can also work on carbon dioxide CO₂.

EVLT - endovascular laser treatments

EVLT (endovascular laser treatment) is a procedure carried out under ultrasound control and based on the introduction of optical fiber to the insufficient, non-meandering vein. The fiber while being retracted is emitting light energy, which closes the vein from the inside. After the surgery there is only a small scar left at the puncture site, and vein undergoes fibrosis within 3 to 6 months. EVLT is featured for its treatment effectiveness comparable to conventional methods, the minimal invasiveness, quick post-treatment recovery and leaving no scarring. Laser surgery for varicose vein removal takes about 30 minutes and is performed under local anaesthesia without requiring later hospitalization.

The 1470 nm laser - ideal tissue water absorption

The 1470 nm laser light emitted by LED has optimal (respectively low) for the penetration of the skin absorption in melanin and haemoglobin and high absorption for selective photothermolysis in water and fat. Laser wavelength of 1470 nm is absorbed by the cellular water 40 times better than in case of the 980 nm laser and 160 times better than the Nd:YAG 1064 nm laser.

Safe treatment parameters + excellent performance

Advantages of the 1470 nm wavelength consist in less pain after surgery, low treatment power (for the saphenous vein closure the power of 8-15 W is just sufficient). The use of lower power during the procedure dramatically reduces the risk of the vein perforation, its carbonization and tissue burns providing at the same time the effective treatment.

The use of 1470 nm SWING laser

- intravenous removal of great saphenous vein
- intravenous removal of perforating veins
- treatment of venous ulcers
- laser lipolysis and laser-assisted liposuction
- treatment of haemorrhoids
- removal of safe skin lesions
- treatment of acne vulgaris and other sebaceous gland pathologies



gold standard in EVLT:
SWING laser and radial fiber 360°



SWING 1470 DIODE LASER

The latest generation 1470 nm diode laser designed and manufactured by **Metrum CryoFlex** is the first and only Polish laser of such wavelength, characterized by unique parameters (single pulse duration of 0.2 ms, the power up to 17 or 40 Watts).

The company **Metrum CryoFlex** uses for its laser manufacturing the highest quality components: diodes and cooling systems are manufactured for us in the U.S., Germany and Poland. Power systems, controls and software have been developed by a **Metrum CryoFlex** team of engineers.

SWING 1470 nm is the only laser of this wavelength on the Polish market, free from the "Chinese" components, and clinically studied in a number of influential medical centers.

Laser is equipped with a standard SMA 905 fiber connector, which allows to connect treatment fibers from any manufacturer, which significantly reduces the single treatment costs.



SWING 1470
diode laser



Reusable, medical fiber of 0.6 mm (SMA905)

The only available on the Polish market medical optical fiber which provides a stable performance after 25-fold sterilization.

Metrum CryoFlex

Metrum CryoFlex is a recognized Polish manufacturer of equipment used in cryosurgery, cryotherapy, as well as of medical lasers and ozone generators used in public and private health care institutions. We are a manufacturer having a well-developed R&D infrastructure which guarantees the continuous development of our products and quick service.

Medical devices from the **Metrum CryoFlex** company are appreciated around the world: they meet the requirements of the **European Medical Directive MDD/93/42/EEC** and are **CE-certified**.

Metrum CryoFlex company provides trainings and a free equipment testing.

1992 - 2012


Twentieth anniversary of the company Metrum CryoFlex

Thank you for your cooperation and trust

Wiestaw Brojek



Medical devices manufacturer
all devices are manufactured in accordance with
quality management system **ISO 13485:2003**

 **Metrum CryoFlex**

www.metrum.com.pl

Head Office:
ul. Kolejowa 16a
05-092 Łomianki
POLAND

tel. +4822 33 13 750
fax +4822 33 13 766
office@metrum.com.pl
export@metrum.com.pl