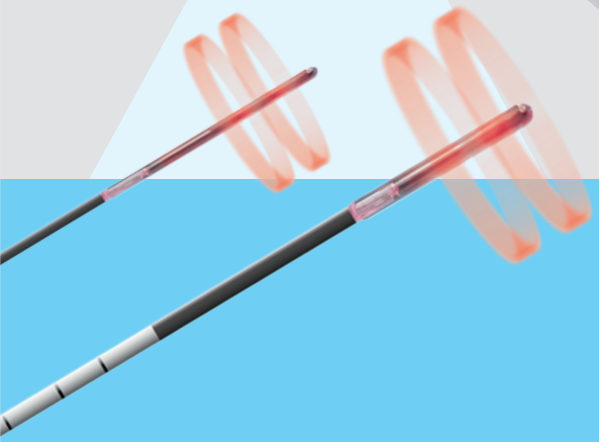
ELVeS® Radial®

Minimally invasive laser therapy of venous insufficiency

Safely to the next level



- Vena saphena magna
- Vena saphena parva
- Tributary veins
- Perforator veins
- Recurrences

The ELVeS® Radial® procedure – the unique solution for the treatment of venous insufficiency

THE ORIGINAL RADIAL®

The evolution of laser therapy

As one of the world's leading pioneers in the field of medical laser therapy, biolitec® launched the first medical 1470 nm diode laser in 2006 and the patented Radial® fiber in 2008 and has continued to improve endoluminal laser therapy ever since.

Attain the next level safely with us

2019
1940 nm

2019
ELVeS® Radial® 2ring Pro

2012
ELVeS® Radial® 2ring

2008
ELVeS® Radial®

2006
1470 nm

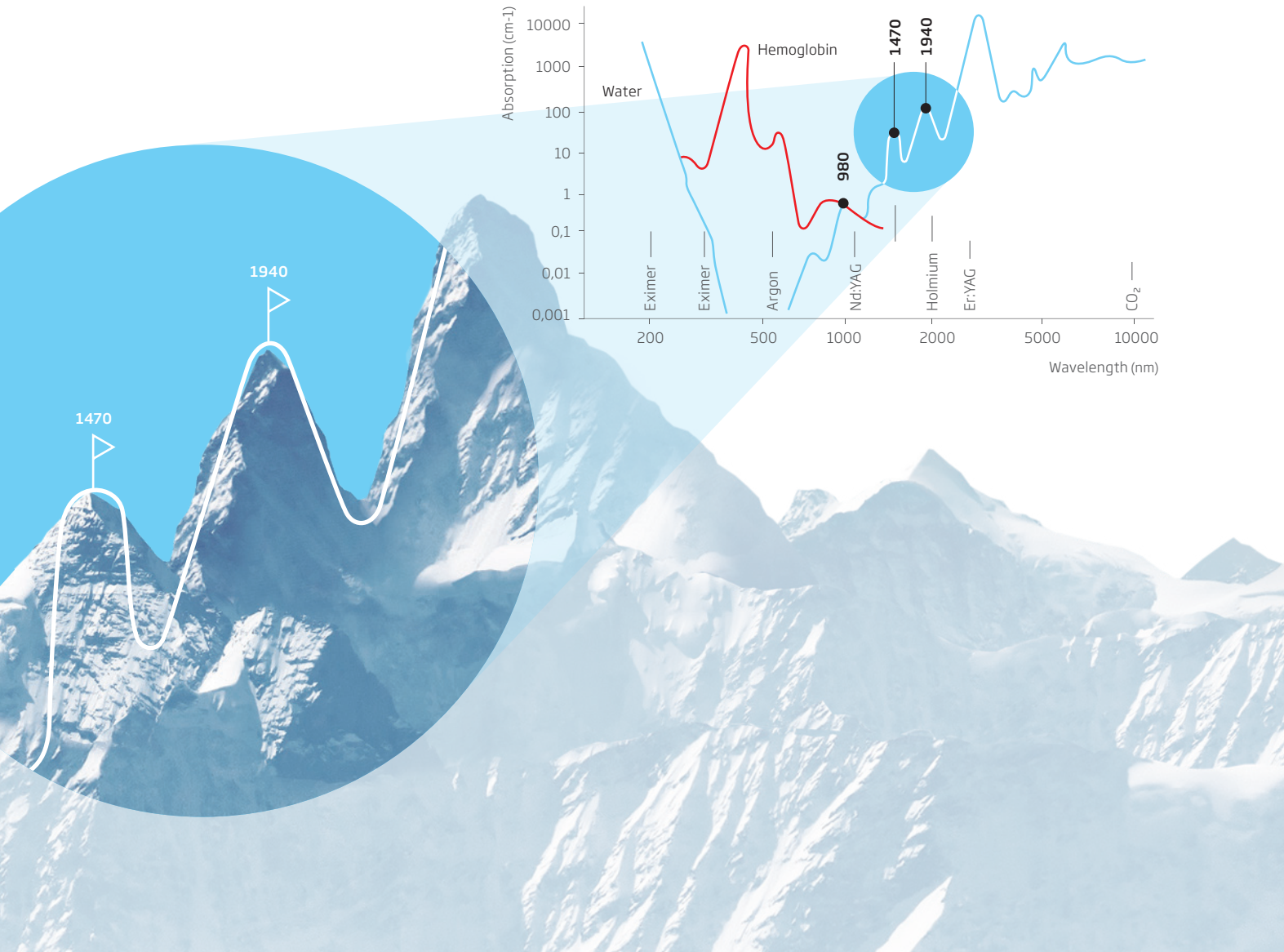
The evolution continues

Present and future call for even more intelligent solutions. Our striving to develop an outstanding system with respect to safety and flexibility for the endoluminal treatment of varicose veins has led us to 2ring technology.

This principle, combined with the safest Fusion® fiber optics, the latest diode laser generation and treatment software, which can also incorporate a pulling device, offers:

- a high degree of standardization of your treatment
- always the right equipment for each of your approaches
- therapy also for complex vascular courses

We are reaching the next peak



ELVeS® Radial® 2ring

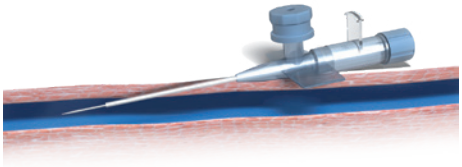
The dual-phase radiation with the ELVeS® Radial® 2ring fiber is the best choice for a perfect result, not only for experienced physicians but also for new users who demand efficient, safe, and easy-to-use technology.

With this laser fiber the energy is split into two rings.
This allows safe closure of the vein with

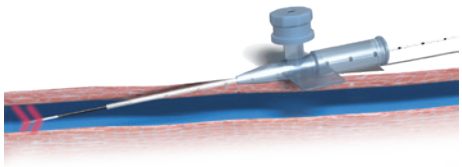
- a low energy density in each ring
- a perfectly centered fiber tip due to the pre-shrinkage effect
- optimal, homogeneous radiation on the vessel wall (even with a large diameter >15 mm)
- a simple retraction technique (possible with the push of a button)

ELVeS® Radial® 2ring slim and ELVeS® Radial® swift 2ring

The great variety of the ELVeS® Radial® family offers you many combinations from direct puncture or the use of introducer sets for tailored treatment of your patients almost without limitations. Due to their very small external diameter of only 1.2 / 1.5 mm the slim or swift fibers are introduced via conventional 16 GA or 14 GA indwelling catheters into the vein, so no complete introducer set is needed. Of course, depending on the findings (e.g., very tortuous veins), several such accesses can be placed or obstacles overcome when using the ELVeS® Radial® Pro-Fiber.



Introduction into the vein



Placement of the catheter

Applications

ELVeS® Radial® procedures*

- Vena saphena magna
- Vena saphena parva
- Tributary veins
- Perforator veins
- Recurrences
- Ulcus cruris venosum

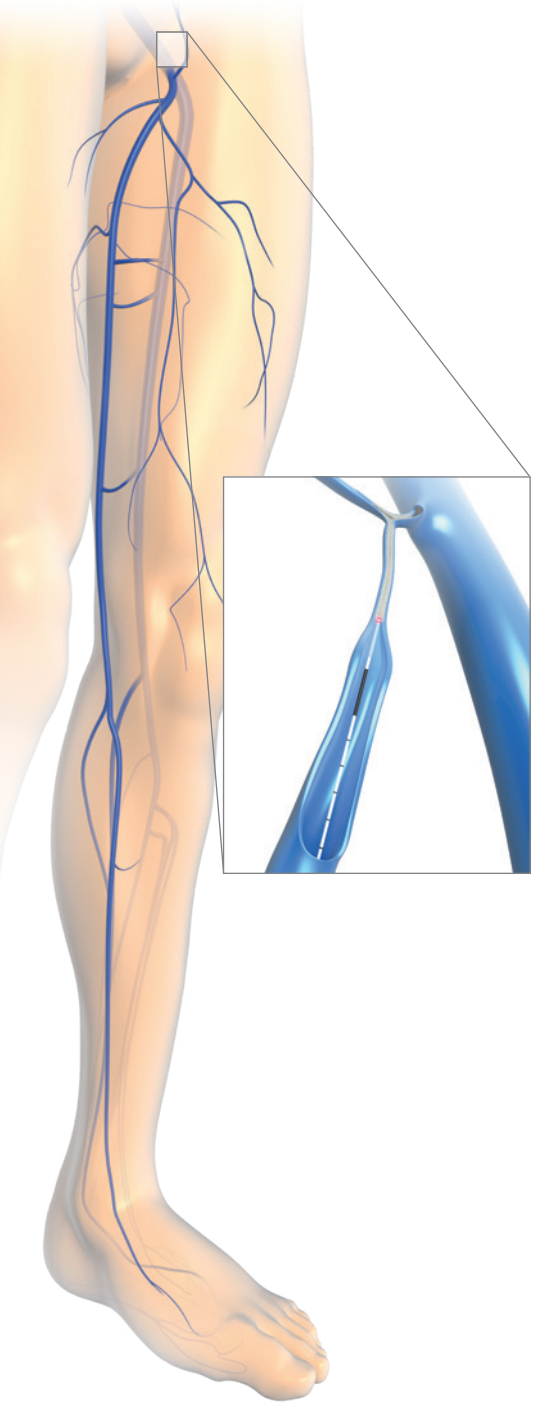
* for use with 1470 nm and 1940 nm only.

ELVeS® Radial® Original Quality

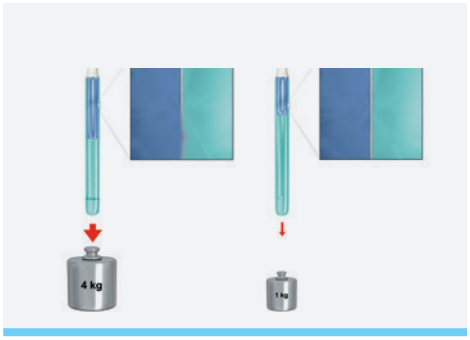
Why Fusion®?

Because quality matters

Due to of its high quality standards, biolitec® has understood from the beginning what is important when it comes to safety. For this reason, all of biolitec®'s distal quartz glass caps and laser fibers are fused to one another with the help of Fusion® technology. Simple gluing does meet the current standard for these products (DIN EN ISO 10555-1, Annex B), but not the high demands of modern minimally invasive laser medicine. biolitec® has developed the Fusion® process and thus set the standards worldwide.



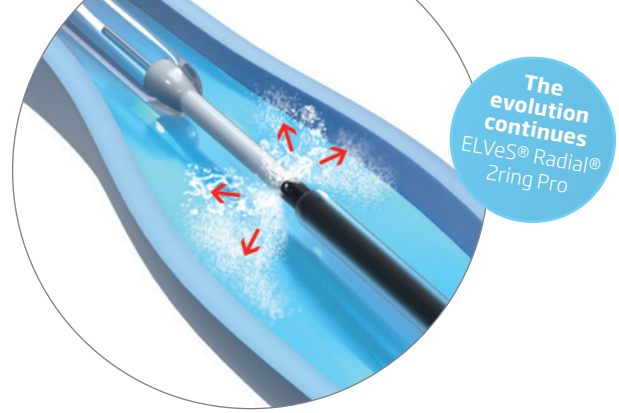
On the right side is a sketch of the tensile forces that a catheter must meet according to the standard. On the left, however, one sees the tensile strength, attained as a minimum by Fusion®-technology (internal biolitec® tests).



ELVeS® Radial® 2ring – the procedure

The ELVeS® Radial® 2ring procedure is usually performed on an outpatient basis under local anesthesia and with ultrasound monitoring. After the percutaneous puncture of the vena saphena, the ELVeS® Radial® 2ring fiber is advanced to the saphenofemoral junction.

The laser treatment is performed along the insufficient vein segment; the ELVeS® Radial® 2ring fiber is continuously withdrawn during the process. The entire treatment lasts approx. 30 – 40 minutes depending on the findings. Shortly thereafter, the patient can resume his normal activities. With the ELVeS® Radial® 2ring procedure, bilateral treatments or combined treatments of the vena saphena magna and the vena saphena parva can be performed in a single session.



Simple and Safe – The All-Round Solution with the Integrated Safety Concept

The ELVeS® Radial® 2ring process is the optimal solution for effective and careful endovenous laser therapy and sets new standards for patients and users. Performing endovenous laser therapy has never been easier. Thanks to the homogeneous laser radiation made possible by an exclusive and patented distal design, the ELVeS® Radial® 2ring procedure minimizes the risk of vein perforation and ensures high echogenic visibility. The 1470 nm laser energy is preferably absorbed by the intracellular water of the vein wall. The induced irreversible photothermic process leads to complete closure of the treated vein. The ELVeS®-Signal software mode guides the user through the procedure. The laser energy can be applied in an individual dose to any vein diameter without having to treat individual sections a second time, as is the case with other products.

The recently introduced 1940 nm diode laser with 10 watts output power even offers slightly higher water absorption compared to the established 1470 nm wavelength. It thus offers the possibility of treating even more controlled superficial (extrafascial) vein segments and, according to initial findings, leads to a faster resorption of the treated vein segments. In combination with the 2ring fiber and a fiber pullback device, this leads to unrivalled homogeneity of your treatment, all this with the push of a button, or you can continue to "handle it yourself".

The ELVeS® Radial® 2ring procedure is ...

- fast
- safe
- homogeneous
- effective
- evidence-based

NEW
LEONARDO®
Mini 1470 nm –
Now with
12 watts

LEONARDO®

Model	**LEONARDO® Mini 1470**	**LEONARDO® 1470**	**LEONARDO® 1940**
REF	SL1470nm12W	SL1470nm15W	SL1940nm10W
Wavelength	1470 nm	1470 nm	1940 nm
Power	12 Watt	15 Watt	10 Watt
Fiber diameter	≥ 360 µm	≥ 360 µm	≥ 360 µm
Aiming beam	635 nm, max. 4 mW	532 nm und 635 nm, green 1 mW, red 4 mW, user controlled intensity	635 nm, red 4 mW, user controlled intensity
Treatment mode	CW, Pulse Mode, ELVeS® Signal	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment
Impulslänge / - break	0.01 – 180 sec / 0.01 – 180 sec	0.01 – 60 sec / 0.01 – 60 sec	0.01 – 60sec / 0.01 – 60 sec
Power supply	110 – 240 VAC, 50 – 60 Hz (12 VDC @ 100 W)	110 – 240 VAC, 50 / 60 Hz, 450 VA	110 – 240 VAC, 50 / 60 Hz, 450 VA
Batteries	Li-ion Batterien	–	–
Dimensions (H × B × T)	6.0 cm × 9.0 cm × 21.5 cm	ca. 28 cm × 37 cm × 9 cm	ca. 28 cm × 37 cm × 9 cm
Weight	900 g	approx. 8.5 kg	approx. 8.5 kg

All laser sets incl. 3 safety goggles, foot switch, interlock connector, power cord and manual in a carrying case.

Fibers

REF	Product	PU*	length [m]	ø fiber tip [mm]	CI**
503100150	ELVeS Radial slim Fiber, IC	10	2.5	1.25	4 Fr
503100100	ELVeS Radial Fiber, IC	10	2.5	1.85	6 Fr
503100140	ELVeS Radial swift Fiber, IC	10	2.5	1.5	5 Fr
503100142	ELVeS Radial swift 2ring Fiber, IC	10	2.5	1.5	5 Fr
503100170	ELVeS Radial 2ring Fiber, IC	10	2.5	1.85	6 Fr
503100155	ELVeS Radial 2ring slim Fiber, IC	10	2.5	1.25	4 Fr
503100145	ELVeS Radial 2ring Pro Fiber, IC	10	2.5	1.85	6 Fr

Kits

503100160	ELVeS Radial slim Kit / Venflon, IC	10	2.5	1.25
503100130	ELVeS Radial Kit 6F, IC	10	2.5	1.85
503100141	ELVeS Radial swift Kit, IC	10	2.5	1.5
503100143	ELVeS Radial swift 2ring Kit, IC	10	2.5	1.5
503100185	ELVeS Radial 2ring Kit 6F	10	2.5	1.85
503100156	ELVeS Radial slim 2ring Kit, IC	10	2.5	1.25
503100146	ELVeS Radial 2ring Pro Fiber Kit, IC	10	2.5	1.85

* Packaging unit ** compatible introducers

Contact us

to learn more about a whole new world of minimally invasive laser therapies

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bio LITEC®

All fibers are free of latex and DEHP. Our fibers are single use products (unless otherwise indicated) delivered sterile for immediate use.

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