

Veineo[®]

Radiofrequency treatment of varicose veins

Veineo®

A safe and easy procedure for the treatment of varicose veins

The Veineo® procedure uses the principle of radiofrequency thermocoagulation to treat varicose veins. It is a minimally invasive technique based on the emission of high frequency electromagnetic waves (4MHz).

A catheter is inserted into the vein and the radiofrequency energy is transmitted to the vein through the catheter tip. The energy will heat and ablate the vein wall, thus seal the vein along its full length.

Depending on the vein diameter, a range of different catheter sizes is available; CR30KAB, CR40i or CR45i.

The high flexibility of these CR-catheters is a key advantage that allows to easily follow the course of tortuous veins. Moreover, the catheters are lumen-free and have a steel wire running through their entire length. Therefore, they are unbreakable, and are well visible under ultrasound guidance, even after tumescence has been administered. Furthermore, no extra guide wire is required during the procedure.

The thermal effect around the catheter tip has a 3 mm action radius, thus avoiding damage to surrounding tissue, muscles, or nerves.

The Veineo® procedure can be performed in a day-case or outpatient setting. The intervention only takes a few minutes with minimal discomfort for the patient, allowing a speedy return to daily activities.



The 4 phases of thermocoagulation



Ionic agitation



Dehydration of the tissue



Denaturation of proteins



Coagulation by thermal destruction



Advantages



For the patient

- + Quick and minimally invasive procedure
- + Suitable for all skin types
- + No hyperpigmentation
- + Quick relief from symptoms
- + No post-operative wound care
- + Speedy return to daily activities

For the practitioner

- + Minimally invasive procedure
- + Flexible catheters easily maneuverable through tortuous veins
- + Good visibility, thus fast positioning of the catheter under ultrasound guidance
- + Catheter markings allow premeasurement and clearly indicate the procedure speed
- + Safe energy control, avoiding damage to surrounding tissue, muscles, or nerves
- + No major complications, no risk of DVT, no paresthesia, no ecchymosis



Clinical studies

Comparative analysis of five-year outcomes of lower extremity varicose vein therapy using monopolar and segmental radiofrequency ablation

Witold WOŹNIAK, Maciej KIELAR, R. Krzysztof MLOSEK, Piotr CIOSTEK
International Angiology 2018 December; 37(6):457-64
<https://pubmed.ncbi.nlm.nih.gov/30303348/>

Comparison of monopolar and segmental radiofrequency ablation in the treatment of lower limb chronic venous insufficiency

Jun-Yi Ryan TAN, Zhiwen Joseph LO, Pravin LINGAM, Qiantai HONG, Enming YONG, Sadhana CHANDRASEKAR, Glenn Wei Leong TAN
ARC Journal of Surgery, Volume 4, Issue 3, 2018, PP 5-10, ISSN 2455-572X
<https://www.arcjournals.org/pdfs/ajs/v4-i3/2.pdf>

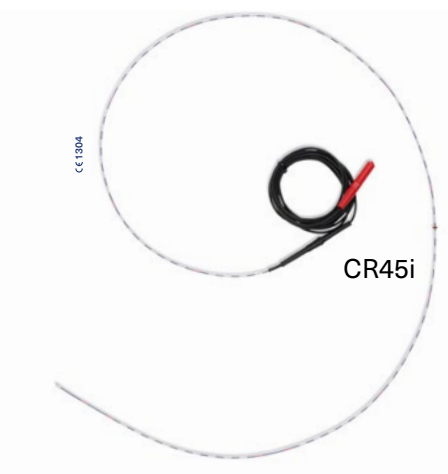
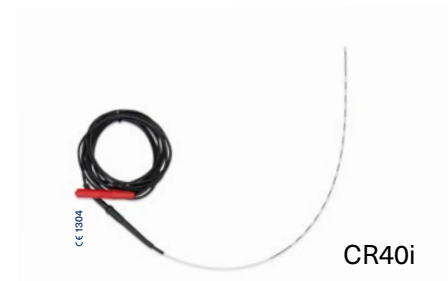
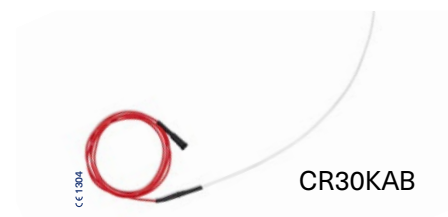
Endovenous ablation of incompetent truncal veins and their perforators with a new radiofrequency system. Mid-term outcomes

Stavros SPILIOPOULOS, Vasiliki THEODOSIADOU, Athanasia SOTIRIADI and Dimitrios KARNABATIDIS
Vascular OnlineFirst, December 12, 2014
<https://journals.sagepub.com/doi/abs/10.1177/1708538114564462>

Equipment

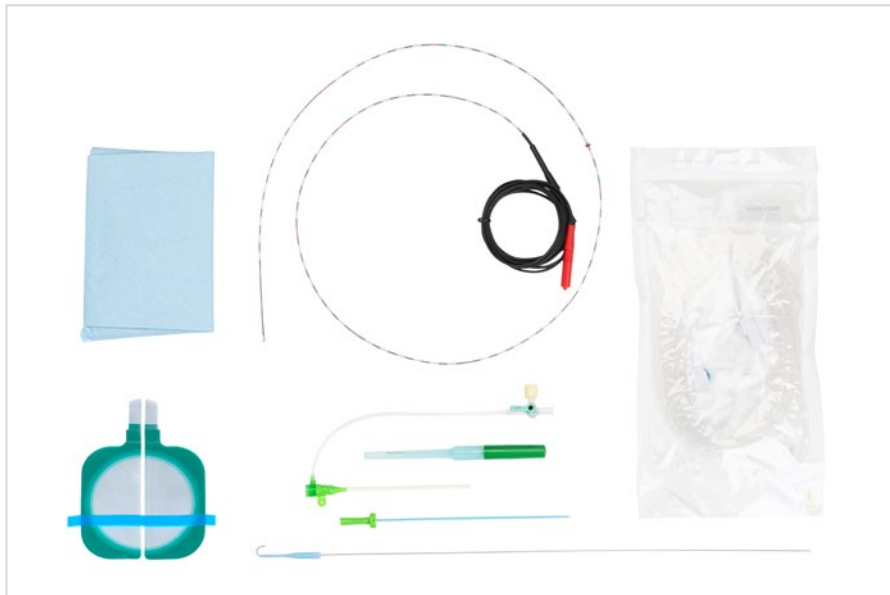
1. Catheters

Catheter type	CR30KAB	CR40i	CR45i
Vein type	2-5 mm varicose vein	perforating vein	saphenous vein
Catheter diameter	0.7 mm	1.1 mm	1.9 mm
Catheter length	275 mm	365 mm	600 mm or 1190 mm
Tip length	10 mm	5 mm	5 mm
Sterile extension cable length	1 m	2.5 m	2.5 m
Marking	–	every 7 mm	every 7 mm
Insulation material	PTFE	PTFE	PTFE
Tip material	stainless steel	stainless steel	stainless steel
Included	20G introducer	16G introducer	–
Product reference	05CR30KAB	05CR40iV2	05CR45iV2 (1 190 mm) 05CR45i 60 (600 mm)



Equipment

2. CR45i Pack



Content*

- 1x sterile CR45i catheter
- 1x sterile 6F introducer set
- 1x sterile tubing set for tumescence pump
- 1x sterile transducer cover
- 1x universal electrosurgical pad

*Availability and content may vary from region to region

3. MedRF4000® radiofrequency generator

The new MedRF4000® generator is suitable for the treatment of several types of varicose veins, but it can be used for multiple treatments with radiofrequency energy, such as the ablation of haemorrhoids or anal fistulas.

It's a smart all-in-one generator to which you can connect all sorts of disposables. Adding a treatment to the device takes a simple software installation (simply using a USB fob).

The device is monopolar and generates 4MHz radiofrequency waves that are applied to whichever catheter, probe, or needle that is attached. The application of energy is controlled by a foot pedal. The MedRF4000® is easy to use and has preset parameters for each treatment.



For treatment of

- Saphenous veins
- Collateral veins
- Perforating veins
- Telangiectasia
- Haemorrhoids
- Anal fistulas



NEW

Technical specifications

MedRF4000® generator	
Technology	monopolar RF generator
Output Frequency	4 MHz
Dimensions	W 252 mm x D 245 mm x H 185 mm
Supply voltage	110-230 V / 50-60 Hz
Max. input power	125 VA
Output setting	100% (25 W)
Applied parts classification	type BF
Weight	± 5 kg
Product REF	00MEDRF4000



- Plug & play device
- Tilted touchscreen with user-friendly interface
- Display of time and energy (number of Joules per leg)
- Foot switch energy control
- Export of individual procedure settings via USB key

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