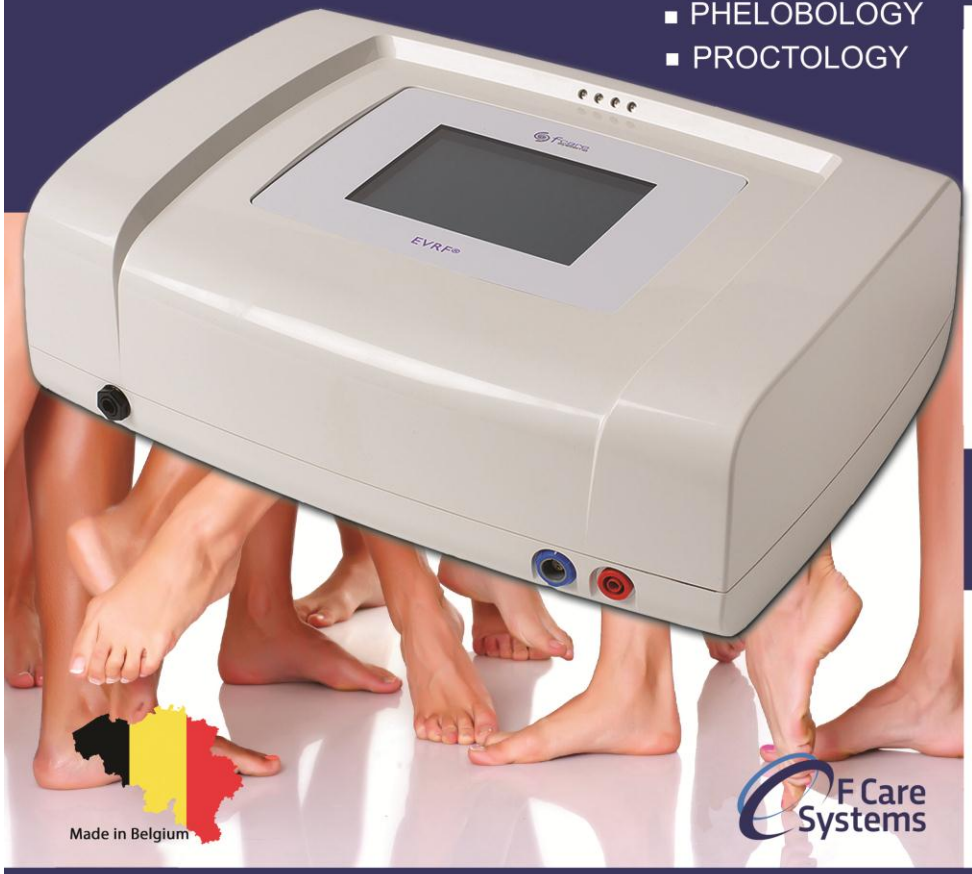
EVRF®

ENDOVENOUS RADIO FREQUENCY

- PHELOBOLOGY
- PROCTOLOGY



F Care Systems

Lotus Laser Parsian co.

نماینده انحصاری کمپانی Fcaresystem بلژیک در ایران

5th Floor, Pardis Building, West Hashtbehesht Street, Isfahan, Iran
Unit 7/56, 7th Floor, Satin Building, Gharb Town, Tehran, Iran
Marketing@llplaser.com www.llplaser.com

+98 31 31 31 00 31
+98 21 86175071 - 2
+98 912 533 9574

Uitbreidingstraat 42-46, 2600 Berchem, Belgium
info@fcaresystems.com www.fcaresystems.com
+32 3 451 51 39

F Care Systems

شرکت لوتوس لیزر پارسیان

شـرکت لوتوس لیزر پارسـیان با تکیه بر سـال ها تجربه و دانش مدیریتی و با بهره گیری از مجرب ترین متخصصان داخلی و خارجی و با داشتن بیش از دو دهه سابقه فعالیت در حوزه فروش و اجاره تجهیزات پزشکی آماده ارائه برترین خدمات به سراسر ایران می باشد. کارشناسـان و متخصصان حاضر در این مجموعه با شـرکت در سـمینارها و کنگره ها و با برگزاری کارگاه های آموزشی مختلف با هدف ارتقای دانش پزشکان محترم و آشنایی ایشان با آخرین تجهیزات و فناوری های روز دنیا در حیطه ی تجهیزات پزشکی سعی در اجرای این رسالت مهم دارند.

شرکت لوتوس لیزر پارسیان نماینده انحصـاری بهترین و شناخته شده ترین کمپانی هـای دنیا، نظیر کمپانی Wellcomet آلمان، ITS ایتالیا، Fcare بلژیک، TQG ایتالیا می باشـد. این شرکت با داشتن ده دپارتمان مختلف بازرگانی و فروش، رنت و اجاره ی تجهیزات پزشکی ناظریـن فنـی، خدمات پس از فروش، واحـد آموزش، مدیریت منابـع مالی و حقوقی مدیریت برنامه ریزی و تحقیق و توسـعه، مدیریـت داخلی، انبارداری و مدیریت تجهیز و تاسیس کلینیک ها مشغول به فعالیت می باشد.

امید است بتوانیم با تلفیقی از دانش و تجربه ، کادر مجرب و خدمات فوقع العاده گامی موثر در حوزه درمانی کشور عزیزمان برداریم.

مدیر عامل

مهندس شهرام دهقان

- Small veins
- Midsize veins
- Large veins

PROCTOLOGY

- Hemorrhoids
- Anal Fistula
- Anal Fissure

PHELOBOLOGY

- Spider veins
- Collateral veins
- Saphenous veins
- Reticular veins
- Perforating veins
- Varicose veins

Catheters & Probe

HPR45i Probe

- Tip length 10 mm
- Probe length 210 mm
- Diameter tip 2 mm

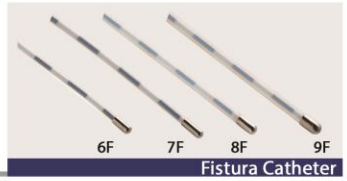
Hemorrhoids, Fissure


Hemorrhoids probe

Fistura Catheter

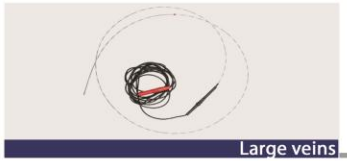
- Available in 4 different sizes: from 6F to 9F

Anal Fistura



Fistura Catheter

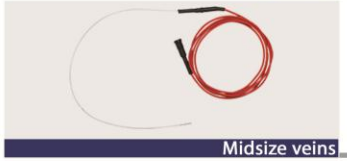
Catheters & Needles


Large veins

CR45i Catheter

- Tip length 5mm
- Catheter length 1200 mm
- Diameter 2 mm

Saphena veins


Midsize veins

CR30KAB Catheter

- Tip length 10 mm
- Catheter length 275 mm
- Diameter 0,7 mm

Collateral,Reticular & Perforating veins


Small veins

Needle Holder

- K3i needle (0.8 mm) for facial treatments
- K6i needle (0.15 mm) for treatment of legs

Small veins (up to 1 mm), Spider veins
Telangiectasia

EVRF®

ENDOVENOUS RADIO FREQUENCY

- All-in-one device
- Large range of treatments
- Minimally invasive treatment
- Minimal damage to surrounding tissue
- Low investment and maintenance costs
- Immediate return to normal daily activities

4 Mhz

Thermocoagulation

The EVRF® device produces thermocoagulation by means of a Radio frequency signal. The principle of thermocoagulation is the heating of the venous wall. A high 4 Mhz frequency will cause the molecule to generate heat and eventually coagulate up to and including the Tunica externa.
Thermocoagulation: Clotting of the blood by raising the temperature of the vein wall.

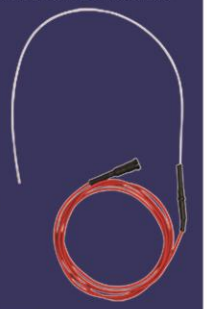
process :

- Ionization of the cell
- Vaporization and dehydration of the tissue
- Denaturation of the collagen fibers
- Vascularization of the tunica intima

PHLEBOLOGY

CR30KAB Catheter

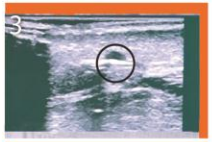
The EVRF has a special connection to the CR30KAB catheter. This catheter can be inserted into a varicose vein through a 20 gauge access needle.
The catheter is flexible and can be routed through veins that are not too tortuous. The EVRF software allows the user to set the energy level so that the varicose vein can be coagulated.
The tip of the flexible PTFE coated catheter is from steel and the RF energy allows the tip to heat so that the vein coagulates.
Reticular, collateral and perforating veins can be treated with F Care Systems CR30KAB catheter. The catheter is extremely flexible, so that it follows the direction of the vein easily. Smooth insertion is ensured with the advanced coating material around the catheter.
The non-insulated tip transmits the high frequency signal to the vein wall. This causes the vein to coagulate and eventually disappear.



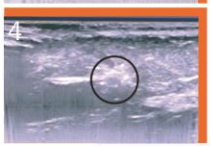
4 step procedure

1. Insert the surflo into the vein.

2. Insert the catheter through the surflo into the vein.



3. Position the catheter under ultrasound guidance.



4. Retract the catheter while pushing the foot pedal to transmit an RF signal in the vein and observe thermal reaction

The Advantages

For the patient

- No pain during and after treatment
- No allergic skin reaction
- No dermatological reactions due to chemical compound
- High aesthetic outcome

For the doctor

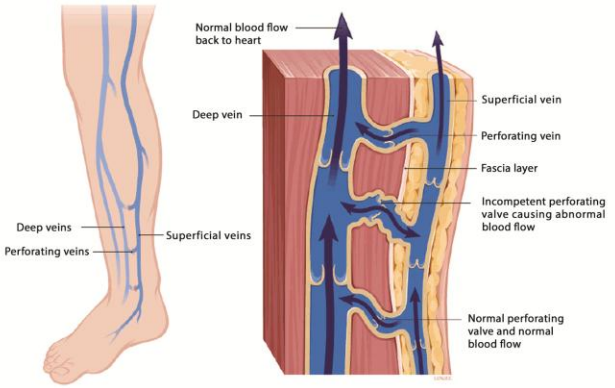
- Easy to use
- Permanent occlusion
- Semi-sterile environment (private practice)
- No chemical agent in the body
- Collateral, peripheral and perforating veins can be treated

Technical specifications CR30KAB

Tip length	*10 mm*
• Catheter length	*275 mm*
• Diameter	*0,7 mm*
• Insulation material	*PTFE*
• Tip material	*Stainless steel*
• Length extension cable	*1m*
• Markings	*No*
• Class	*IIb*
• CE	*1304*

Treatment

The CR30KAB allows the coagulation of varicose veins with a diameter of about 2 to 5mm. When the valves of perforator veins become incompetent they can cause venous reflux when the muscles contract. The resulting reflux can cause a rapid deterioration in an existing varicose disease and be responsible for the development of venous ulcers.



PHLEBOLOGY

Catheter CR45i

The EVRF has a connection to a CR45i catheter which because of its larger diameter can coagulate the **Great Saphenous Vein** and the **Small Saphenous Vein**.
The energy to be supplied is indicated by the lights on the EVRF device or by the sound that each light accompanies.
The catheter is also covered with a PTFE coating. The tip of the catheter is in metal and conducts the radio frequency signal in the vein wall. The 4 MHz vibrations of the tip make the cells in the vein wall increase in temperature and coagulate.

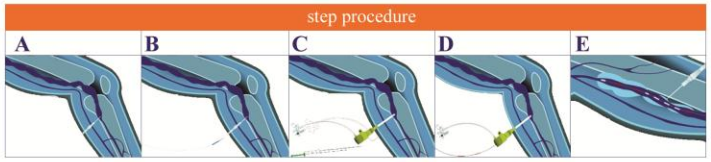
4 step procedure

1. Insert a 6F introduction needle into the Saphena Magna vein.

2. Insert a guide wire through the needle into the vein. Open the vein by sliding a dilatator over the guide wire.

3. Replace the guide wire with a CR45i catheter and move the catheter up the vein. Position the catheter correctly with echo Doppler guidance.

4. Press the foot pedal to send an RF signal into the vein. A warning signal and light on the EVRF® appear when the catheter needs to be retracted. Repeat the procedure for the whole vein.



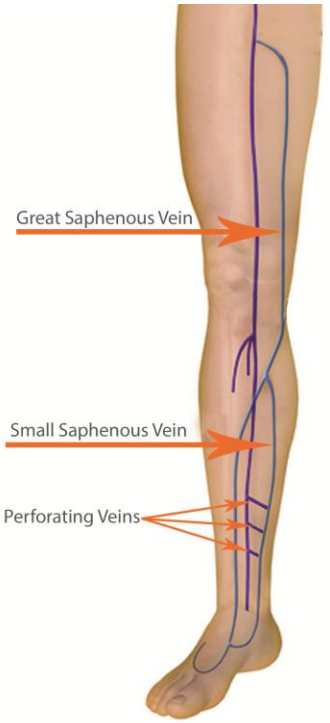
The Advantages

For the patient

- No pain during or after the treatment
- Day clinic walk-in walk-out procedure
- Can resume daily activities within 24 hours after treatment
- Very good cosmetic outcome
- No scars, bruising or swelling
- Quick relief from symptoms

For the doctor

- Easy and fast procedure
- Very flexible catheter - many applications
- No skin coloration
- Good visibility under ultrasound - fast positioning of catheter
- Same catheter can be used for large collateral veins and perforating veins



Treatment

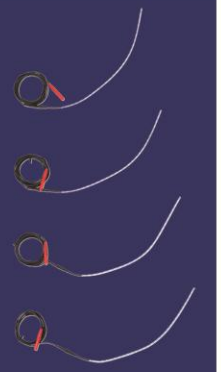
For the treatment of the **Great Saphenous Vein** the CR45i catheter is used. Its 5 mm non-isolated tip and its flexibility allows for a smooth insertion. The catheter will be pulled back gradually until the entire vein is closed.
This procedure will take about 5 minutes. **Saphena Magna** ablation with EVRF® is minimally invasive, preventing unpleasant and possibly unsafe side effects such as pigmentation, superficial thrombophlebitis or deep vein thrombosis (DVT). Patients experience minimal discomfort and normal daily activities can be resumed within one day.

Technical specifications CR45i	
• *Tip length*	*5 mm*
• *Catheter length*	*1200 mm*
• *Diameter*	*2 mm*
• *Insulation material*	*PTFE*
• *Tip material*	*Stainless steel*
• *Length extension cable*	*2,5m*
• *Markings*	*Yes*
• *Class*	*IIb*
• *CE*	*1304*

PROCTOLOGY

Fistura Catheter

The Fistura® procedure uses radio frequency thermocoagulation to treat anal fistulas utilising the emission of electromagnetic waves at a very high frequency (4MHz), similar to the principle of a microwave.
This minimally invasive technique seals the fistula tract without having to open the anal sphincter and is performed in a day-case or the outpatient setting, with minimal discomfort for the patient, allowing an immediate return to daily activities.
The flexibility of the catheter is a key advantage to easily follow the path of the anal fistula It will allow you to close the fistula along its entire length.



The catheters maximize energy penetration to a high degree, emitting a radial wave within a radius of 3 mm thus avoiding damage to adjacent tissue or muscle.
Depending on the diameter of the anal fistula, a range of different catheter sizes is available (from 6F to 9F).

The Advantages

For the patient

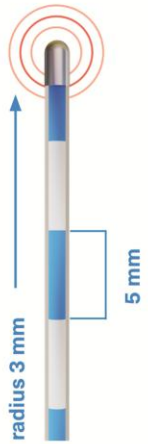
- Minimally invasive
- Quick procedure perform.ed in a day-case or outpatient setting
- Comparatively little or no pain
- Minimal post-operative care
- Immediate return to daily activities

For the Doctor

- Quick and efficient minimally invasive procedure
- Simple to perform
- Excellent alternative to more invasive techniques
- Minimal post-operative care
- Safe control of energy, avoiding damage to adjacent tissue or muscles

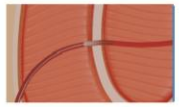
Technical specifications

French size	6F	7F	8F	9F
Catheter diameter	2 mm	2.33 mm	2.66 mm	3 mm
Catheter weight	40 g	41 g	42 g	43 g
Catheter length	350 mm			
Marking	every 5 mm			
Insulating material	PFTE			
Tip length	4 mm			
Tip material	stainless steel AISI316L			
Extension cable length	2.5 m			
Medical device	class IIb			
Product reference	05FIS6F	05FIS7F	05FIS8F	05FIS9F

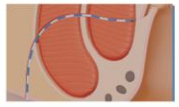


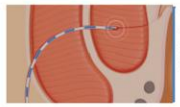
The Fistura procedure

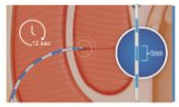

The fistula should be drained prior to surgery using a seton to clean the tract and prevent infection.


The tract is cleaned using a fistula brush prior to inserting the catheter.

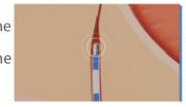

The internal opening of the anal fistula is closed with a cross suture.


Choose the appropriate sized catheter (6F to 9F) thats uits the diameter of the fistula.
The catheter is inserted into the anal fistula from the external opening until it reaches the closed internal end.


Ensure the correct settings on the device and then press the generator pedal to deliver the power.


Gradually withdraw the catheter,half a centimetre at a time,according to the beeps generated by the device.
±5mm (+1marking) every 12 seconds.


During the procedure,regularly clean the catheter tip.Reinsert and proceed.


Work from end to end.
Occasionally check that the tract is closed by pushing the catheter back to see if it re-advances.Generally,the tract will seal immediately and the catheter will not be able to re-advance.

PHLEBOLOGY

Needle Holder

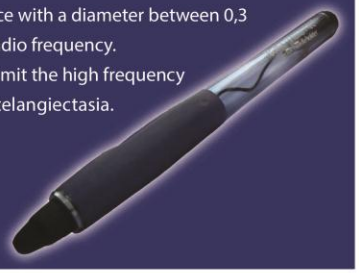
The EVRF has a connection cable to the needle holder which accepts small insulated needles to treat spider veins and telangiectasia. The EVRF software allows the user to pre-set an energy level and an impulse time so that the exact energy can be administered to coagulate a small spider vein.

Spider veins are small veins on the legs or the face with a diameter between 0,3 and 0,9 mm which are treatable with the EVRF radio frequency.

When linked to the apparatus, it permits to transmit the high frequency impulses through the needle for treatment of telangiectasia.

K3i needle with diameter 0.075mm:
(mostly used for facial treatment)

K6i needle with diameter 0.150mm:
(mostly used for the treatment of legs)



procedure

before treatment

After 7 days

Day 0

Betwenn 2 and 3 weeks

With the extremely sharp needle tip, the treatment is almost painless and causes only very light stains that completely disappear within a few days.

EVRF for small veins (up to 1 mm)

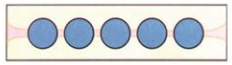
Disposable needles:

- K3i needle (0,08 mm)
  mostly for facial treatment
- K6i needle (0,15 mm)
  mostly for treatment of legs

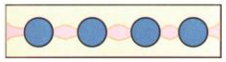
Extremly sharp needle tip:

- Almost painless
- Only very light reddening that fully disappears withis a few day

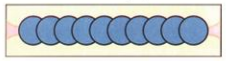
Size between pulses should be no more and no less 1-2 mm.



Segments of a vein can remain - - -

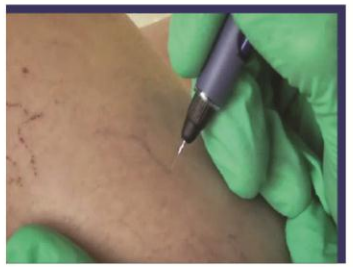


There can be a pigmentation



procedure

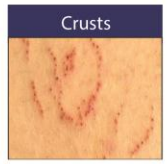
1. Edema
2. Oreols
3. Crust
4. Healed lesion



Teleangiectasias

Oreols

Crusts



Healed lesion

PROCTOLOGY

HPR45i Probe

The EVRF has a connection to the HPR45i probe, which is a small stiff probe with a noninsulated tip. The EVRF delivers energy the same way as with the CR45i catheter to the tip of the HPR45i probe so that the tip makes the hemorrhoidal tissue heat up and coagulate.
Hemorrhoids are also vein based so that the coagulation of the hemorrhoid will make it shrink and fall off or disappear. Hemorrhoids of grade 1-4 can be treated with the EVRF and the HPR45i probe.
The fact that the outer part of the hemorrhoid is hardened because of the coagulation will make the hemorrhoid stop growing and will make it shrink.

Treatment

- Hemorrhoids which are not treated properly can gradually develop up to degree 3 or 4, which could result into an urgent need of a painful operation.

- With the HPR45i probe, all types of hemorrhoids can be treated easily and effectively.

- Patients hardly experience any pain after treatment so minimal postoperative care is required and a swift return to normal daily activities ispossible.

- Patients hardly experience any pain after treatment so minimal postoperative care is required and a swift return to normal daily activities ispossible.

The Advantages

For the patient

- Minimal discomfort during the treatment
- No or minimal bleeding after the treatment
- Quick return to daily activities
- Local anaesthesia
- Walk-in walk-out day care treatment

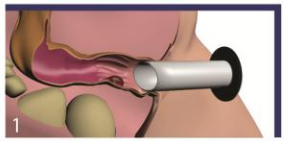
For the doctor

- Local anaesthesia
- Easy to learn procedure and easy to apply
- Immediate clinical results
- No post-operative care
- Cost effective and efficient treatment
- Day clinic or private practice

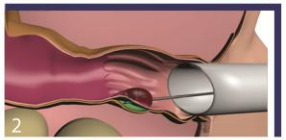
Technical specifications HPR45i

• *Tip length*	*10 mm*
• *Probe length*	*210 mm*
• *Diameter tip*	*2 mm*
• *Diameter handle*	*19,5 mm*
• *Insulation material*	*PTFE*
• *Tip material*	*Stainless steel*
• *Length extension cable*	*2,5 m*
• *Class*	*IIb*
• *CE*	*1304*

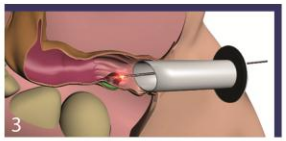
4 step procedure



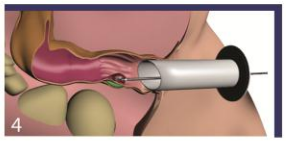
- 1.Insert the anoscope in the rectum of the patient to see the haemorrhoid.



- 2.Apply local anaesthesia (Lidocaine 1% 3-6 ml) in the muscle layer under the haemorrhoid,NOT in the haemorrhoidal tissue.



- 3.Insert the HPR45i probe in the haemorrhoid and apply the RF energy.



- 4.Apply the RF energy to the surface of the haemorrhoid.

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Top Quality Group

TS group

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شرکت لوتوس لیزر پارسیان نماینده انحصاری برترین کمپانی های دنیا

TECHNICAL SPECIFICATION

EVRF

General characteristics

Supply Voltage: 110-230V / 50-60 HZ
Power : 125 VA
BF type apparatus

Protection degree against liquid penetration: IPX0.
Temporized fuse in glass.
Work in continuous.
Dimensions : W= = 360 mm, D = 280 mm, H= 120 mm
Weight : +/- 5 kg.
Class IIb apparatus.
Insulation : class I.

Output characteristics

This apparatus generates some high frequencies impulses whose characteristics are:

Frequency of the wave : 4 MHz.
Max voltage in output : 660V.
Max time of impulse :0,8s
Continuouse mode.

F Care Systems