# MC METRUM CRYOFLEX

Proctological 1470 nm diode laser set with a conical tip fiber for laser hemorrhoid and perirectal fistula ablation

## **SWING 15** 15 W - 1470 nm

- No risk of damage to surrounding tissues
- Homogeneous tissue ablation
- Reduced pain
- No need to cut and sew





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Laser enables treatment of hemorrhoidal diseases of grades II, III and IV.





Grade II

Grade III

## Laser hemorrhoidoplasty procedure



#### Entrance

The specially designed pencil-shaped fiber tip allows the fiber to be inserted into the hemorrhoid light without making an incision.



## Ablation

Repeated Pulse Ablation - energy emission that initiates ablation leads to a gradual hemorrhoid shrinkage.



### Output

As a result of thermal ablation, the hemorrhoid completely shrinks, retracts and regresses.

#### **Benefits**





WITHOUT SEWING





PAINLESS



LOW RISK OF

COMPLICATIONS

SHORT PROCEDURE

SHORT **RECOVERY TIME** 

## Laser ablation

The laser hemorrhoid ablation technique, otherwise known as laser hemorrhoidoplasty or laser obliteration, is well established in the treatment of hemorrhoidal diseases II, III and IV grades by laser hemorrhoidal obliteration.

## How it works?

A laser hemorrhoid plastic surgery involves the introduction of a special conical tip fiber, also called 'arrow fiber', into the cavity of the hemorrhoid plexus and its obliteration with a light beam at the wavelength of 1470 nm. The submucosal emission of light causes shrinkage of the hemorrhoid mass, the connective tissue renews itself - the mucosa is adhered to the underlying tissues thereby eliminating the risk of the nodule prolapse. The treatment leads to the reconstruction of collagen and restores the natural anatomical structure. The procedure is performed on an outpatient basis under local anesthesia or light sedation.

## Advantages of the laser method

Unlike other methods, hemorrhoidoplasty does not require any foreign materials, e.g. rubber bands, staples, threads. It does not require any incisions and sewing. There is no risk of stenosis. The surgery and recovery time is shortened. Patients are not at risk of post-operative pain and can quickly return to their normal activities.

- No sutures
- No foreign materials
- No wounds or bleeding
- No pain

## Why is it worth it?

The advantages of laser hemorrhoidoplasty with the use of the SWING 15 laser and the conical tip fiber are disproportionate to other methods currently used. The use of the laser ablation technique is more comfortable both for the patient and the doctor.

#### Benefits for the patient

- Painless treatments
- No risk of damage to the mucosa and sphincter
- Low risk of complications
- Reduction of tissue in the hemorrhoidal venous cushions
- Outpatient procedure or one-day surgery
- Short recovery time

### Benefits for the doctor

- No need to cut
- Treatment without the use of rubber bands, staples, threads
- No need to sew
- Low risk of complications
- Possibility to repeat the treatment





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 Prahl, https://omlc.org/spectra/hemoglobin/, Oregon State of Technology, USA.



## Meet SWING 15

### SWING series, the first polish semiconductor lasers

SWING 15 laser emits energy at the wavelength of 1470 nm. The wavelength has a high degree of water absorption in the tissue with simultaneous effects on blood. 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 tissues (e.g. sphincter).

Additionally, it has a very good effect on blood (no risk of bleeding). These features make the SWING a safer and cheaper alternative to near-infrared lasers (810 nm-980 nm, Nd: YAG 1064 nm) and far-infrared laser (CO2 10600 nm).

#### Conical tip fiber or 'arrow' fiber

What is a unique feature of the conical tip fiber is a significant reduction in forward energy emission in comparison to bare fibers. The energy delivered from the tip of the fiber ensures a uniform ablation of the tissue without penetration beyond the planned area. Thanks to its special design, the conical tip fiber can be introduced into the hemorrhoid without the risk of perforations or damage.

Conical tip fibers are delivered to the customer in sterile, double packages and are ready to use. The storage period without the risk of losing its sterility is up to 5 years.

#### Laser proctology anoscope

The anoscope has a specially designed feature resembling wings to facilitate the introduction or change of its position without the risk of tissue damage. The anoscope has the diameter of 34 mm and the length of 90 mm. It is slanted and anatomically formed to enable the exposure of hemorrhoids for laser ablation. The anoscope is with an obturator. It is packed in a sterile, double package and ready to use without the need of disinfection.



## Specification

Laser wavelength: 1470 nm
Fiber core diameter: 400 µm, 600 µm
Max. output power: 15 W
Dimensions: 43/46/20.3 cm
Weight: 13 kg





## METRUM CRYOFLEX

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