

# DERMEO

A slimming device based on the cavitational effect

## CAVIFAST 2® Cavitational lipolysis & lipoclasia



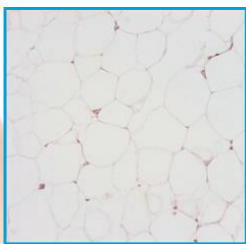
Frequency 38 kHz +/- 2 kHz  
Highly powerful ultrasounds of 3 W/cm<sup>2</sup> (RMS)

Medical Certification Class IIb

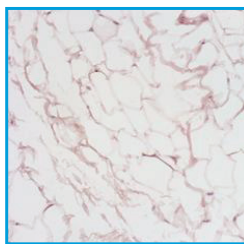
Autocalibration of the transducers  
Bio-impedance analysis system

### Proved efficiency and innocuity

A lipolysis (reduction of the volume of adipocytes) by mobilization and removal of glycerol stored in adipocytes.



Skin before treatment (x 200)



Skin treated by CAVIFAST 2 (x 200)

Non-invasive lipoclasia (by membrane cell disruption of adipocytes) without any alteration on the dermo-hypodermic junction

"The compliance with the essential structures of the skin such as blood and lymph vessels certifies the innocuity of the device" Dr.Boisnic, GREDECO



  
Dermeo®  
Paris



# ORGANISATION

Our researchers, our innovations, our knowledge



## The Company

With over 10 years of knowledge, DERMEO offers you technical expertise in the manufacturing of medical devices for optimal clinical results.

DERMEO is involved in the design, the manufacturing, the industrialisation, the distribution and the after sales services of medical devices.

## French design and manufacturing

Thanks to the quality of our research and development, DERMEO enjoys a dynamic progression. At the cutting edge of technology, DERMEO selects the best components from French or European origin. All devices are manufactured in our workshop in Paris.



## Quality

DERMEO brings you the expertise of a ISO 9001 and ISO 13485 certified expert. For better security, the CAVIFAST 2 device respects the international medical standards CEI EN 60601-1 and CEI EN 60601-1-2.



Designing, manufacturing, industrialisation, distribution, and after sales services of medical devices

Innovative non-invasive technology for slimming treatments

# TECHNOLOGY

## The principles of cavitation

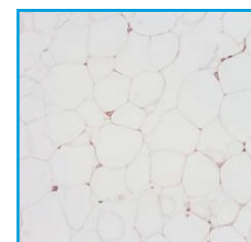
Cavitation is the emission of ultrasounds within a liquid environment. When the liquid is submitted to a high intensity pressure ultrasound wave, micro-cavity bubbles are formed and their volume increases until they implode.

The generated thermal energy during this phenomenon and the compressing and decompressing waves, are responsible for the implosion of the micro-cavities.

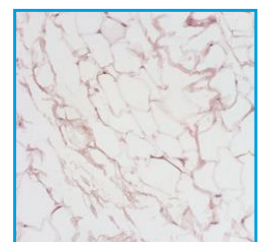
## Cavitation Slimming

The cavitation principle allows the treatment of excess localised fat and reduces the built-up layers in order to lose centimeters from the treated zone. Low frequency ultrasounds generated by the transducers use the water located in our cells to form bubbles. These bubbles increase in volume until they implode, thus weakening the membrane of the adipocytes and releasing the triglycerides.

A study conducted by the laboratory GREDECO, certifies the efficiency and the innocuity of the CAVIFAST 2 device.

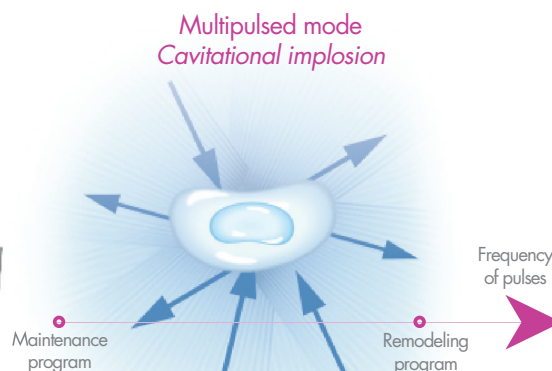


Skin before treatment (x200)



Skin treated by CAVIFAST 2 (x200)

Histological examination of human skin explants conducted by researchers and dermatologist connected to the hospital de la Pitie Salpetriere in Paris, show a non-invasive lipoclasia.



DERMEO's CAVIFAST 2 combines two programs for one optimal result

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### Highly powerful system

The power of the transducers is more than 60 Watts for a diameter of 50 mm, which means a power of 3 W/cm<sup>2</sup> (RMS).

A power of 3 W/cm<sup>2</sup> (RMS) coupled with a system of pulsed emission is considered as ultrasounds with a high power. Only highly powerful ultrasounds can modify the environment within which they are spread.

### Large treatment area

CAVIFAST 2 is provided with handheld transducers with a diameter of 50 mm which corresponds to a treatment area of 19.6 cm<sup>2</sup>. By having a large treatment area, the treatment is performed very quickly allowing to obtain a larger profitability.

### An LCD touch screen

CAVIFAST 2 is equipped with a 'resistant' color touch screen of 5.7 inches, which offers the user legibility and comfort of working even when wearing gloves.

### A scalable software

The SD card allows easy and fast updates for the system.

### Transducers ...

A transducer allows the conversion of electric energy into mechanical ultrasound energy. Composed of inalterable piezoelectric material, each transducer is formed of two pieces of ceramic adjusted in order to prevent overheating. When activating the device, the two ceramic pieces vibrate simultaneously, each at a different frequency, (called resonant frequency) and therefore create ultrasounds.

### ... indicate ...

The concave transducer (with a diameter of 50 mm) is used for focalized treatment. It works on small areas and treats fibrous cellulite (the skin is dimpled when standing, has a rugged touch, and painful when pinched). The flat transducer (with a diameter of 50 mm) targets edematous cellulite (the skin is dimpled when standing and laying down).

### ... autocalibrate and endurance

At each start-up, the system autocalibrates the transducers, reajusting the resonant frequency to optimum. Thanks to its coating of anodized aluminum, the treatment head does not suffer from oxidation when it comes into contact with the gel.

### Bio-impedance

The analysis system measures the body's composition by bio-impedance at 50 kHz. This process is used as a part of the slimming treatment in order to determine the amount of fat mass. By measuring the body's resistance to a low alternating stream with one or several frequencies, reliable measures are obtained, showing the scientific efficiency of the device.



### Autocalibration

## Fast and simple loss of centimeters

### Clinical Description

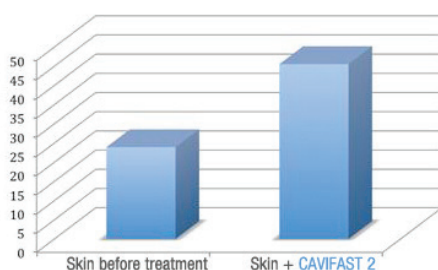
The CAVIFAST 2 device allows a decrease in the size of the treated zone by reducing the number of triglycerides within the adipose cells which leads to a loss of centimeters and an improvement in the quality of the skin.

Thanks to the elimination of fibrous nodules, the improvement of oxygenation and the revascularization of the subcutaneous tissue, a considerable improvement

### Proven results

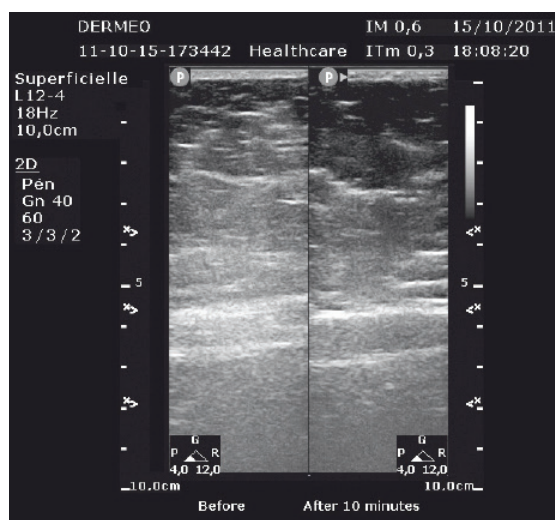
The anti-cellulite activity of the device CAVIFAST 2 is confirmed by the cavitation lipolysis observed at hypodermis level for all donors associated with a nearly double increase of released glycerol.

### Biochemical dosage of glycerol based on hypodermis fragments of skins of each donor.



	µg/g of adipose tissue
Skin before treatment	23,9 ± 9,0
Skin + CAVIFAST 2	45,54 ± 11,8 * p = 0,01

### Tissue ultrasound Before/After 1 session



Superficial ; L12-4 ; 18Hz ; 10,0cm  
2D Pen ; Gn 40 ; 60 ; 3/3/2

## CLINICAL

### Treatment Protocol

The technique of lipolysis addresses the problems of dissatisfying silhouettes and the excess of localized cellulite (the arms, abdomen, thighs, 'love-handles' and buttocks). The technique of cavitation lipolysis and lipoclasia is non-invasive, so it allows the customer to return to normal activities immediately after the session. A session can last up to 60 minutes (10 minutes per zone of 10 x10 cm) and can be attended once a week. On average 5 or 6 sessions are sufficient.

CAVIFAST 2 combines "remodeling," a deep and intense treatment for reshaping the target zones, and a "maintenance" treatment, to maintain the tonicity of the skin.

### Instant loss of 1 up to 8 cm



Clinical study conducted on voluntary patients by the independent laboratory GREDECO at the hospital de la Pitié Salpêtrier in Paris

A fast and easy to a use non-invasive treatment

