

TECHNICAL DATA

Type of Laser	Pulsed Nd:YAG
Wavelength	1064 nm
Output power	6W (max.)
Emission mode	Single Pulse from 1 to 10 minutes
Frequency	5 - 40 Hz
Transmission system	300 µm Optical Fibre
Controls	Electronic Microprocessor
Cooling	Air
Power supply	230 Vac / 8 A (max) / 50 - 60 Hz
Beam guide	HeNe Laser 1 mW @ 632.8 nm
Dimensions	68 cm (H), 23 cm (L), 65 cm (W)
Weight	38 kg



APPLICATION

■ LASERLIPOLISI

CE
0459



VISIBLE AND INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT
Max. Nd:YAG laser energy @ 1064 nm: 150mJ
Max. pulse length: 150µs
Max. HeNe laser power @ 632.8 nm: 1mW
Classified by EN 60825-1 (2004-20)




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Nd:YAG laser system for
Laserlipolisi®

DEKA THE SCIENCE OF WELL-BEING

Deka is the medical division of the El.En.Group, Italian leader in the production of laser equipment. Founded in 1981 it operates in more than 40 countries throughout the world. The Group's activity covers the majority of industrial applications and laser sources with powers up to 6 kW. Deka produces laser equipment in compliance with the specifications of Medical Device Directive 93/42/EEC and adopts a quality assurance system certified by  according to the ISO 9001 and ISO 13485 standards.



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LASERLIPOLISI® THE NEW-GENERATION TECHNIQUE

The main application of the **SmartLipo** laser system is **Laserlipolisi®**, a laser-assisted liposculpture treatment with a totally revolutionary concept. **Laserlipolisi®** is an innovative technique designed especially for removing excess fatty tissue thanks to the selective interaction of the laser beam with the adipocytes. This results in the disintegration of the membranes of the lipocytes and the elimination of their contents, either naturally, or via the aspiration of the lysate at low negative pressure. **SmartLipo** is ideal for medical professionals who carry out adiposity therapy with liposuction, liposculpture, and tumescent liposculpture, and who wish to extend their therapeutic offer. **SmartLipo** offers the chance to carry out minimally invasive liposculpture treatments (the cannulas have a diameter of only 1 mm), in a decidedly less traumatic manner compared to traditional techniques.

Laserlipolisi® performed with **SmartLipo** offers undeniable advantages like:

- the possibility of performing operations in the doctor's rooms;
- reduced trauma;
- reduced invasiveness;
- simultaneous coagulation of the blood vessels resulting in less blood-loss;
- possibility of not aspirating the lysate obtained with the laser action in patients who are reluctant to undergo this treatment;
- reduced recovery times and less constrictive bandaging;
- possibility of treating areas up till now considered as unsuitable for traditional liposuction like the face, forearms, upper part of the abdomen, and knees.

SmartLipo is a pulsed 1.064 nm Nd:YAG system with very special and specific features:

- ultra short pulses (one ten-thousandth of a second)
- extremely high peak powers (up to 1,500 watts).
- the positioning of the cannula is highlighted via trans-illumination from a red guiding beam;
- improved surface homogeneity of the skin after treatment
- any aspiration of the lysate is facilitated by its low viscosity.

SUPERIOR TECHNIQUE

The **SmartLipo** Nd:YAG laser system is the expression of a new concept that combines all the new generation laser technology with the advantages of compactness and reliability. **SmartLipo** possesses the outstanding features necessary for exalting its operating performance. This is a laser system that can reach extremely high powers for very brief periods, even several millionths of a second, plus it has electronic control of the emitted power and the laser pulses. These features also mean that the laser emission can be considered as minimally thermal due to the energy being concentrated in very brief pulses. The tissue treated with the laser beams is able to cool thanks to the fact that the pulse wavelength only represents a tiny percentage of the time elapsing between two consecutive pulses.

This highlights the technical capacity of the Deka system which is able to deliver powerful and instantaneous pulses.

SmartLipo also ensures energy savings and greater user-friendliness in managing the operating parameters, while in their simplicity and anatomical design, the handpieces and tips allow for carrying out safe and effective treatments.



SmartLipo

EFFICACY

Laserlipolisi® represents the new standard in liposculpture. Its technique uses the high peak power of the laser emission to rupture the membrane of the adipocytes. The effect is not only thermal but also thermomechanical, and the rapid and elevated absorption by the adipocytic membrane allows for creating an opening in the membrane itself with the spilling out of the cellular contents. This results in the production of an oily, low-viscosity aggregate which facilitates body modelling, and can also be easily removed with low-pressure micro-pumps. The laser light is conveyed through micro-cannulas (with a diameter of one millimetre) into which an optical fibre of only 300 micrometers is inserted. **Laserlipolisi®** can also be associated with the tumescent technique as the special Nd:YAG laser system radiation at 1,064 nm is not absorbed by this type of solution. In short, **Laserlipolisi®** is efficacious, minimally invasive, and haemostatic at the same time, ensuring rapid recovery times and reduced constrictive bandaging. The operation can also be performed in the doctor's rooms. This is an additional incentive for patients who are not willing to consider day-hospital and would never set foot inside an operating theatre.

Bibliography:

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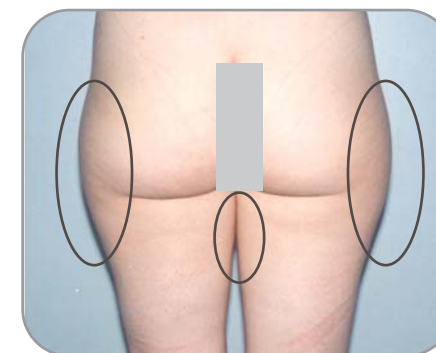
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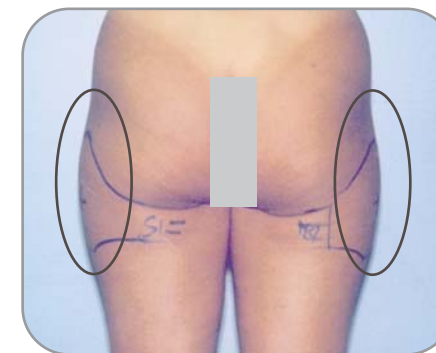
CLINICAL CASES



Before



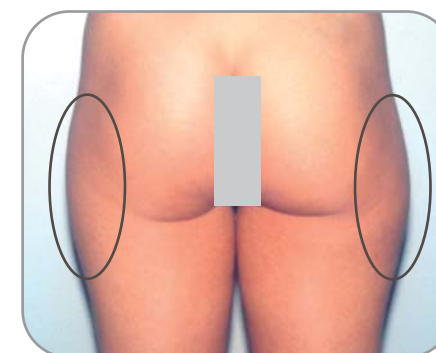
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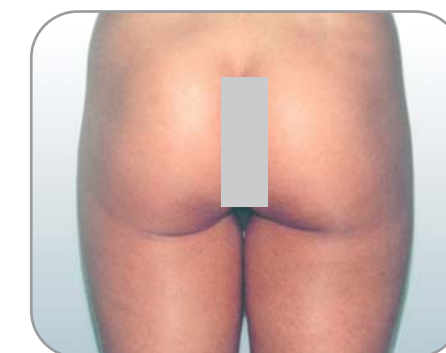
Before



After



Before



After

ERGONOMICS

Laserlipolisi® opens new horizons in the treatment of districtual adiposity, doing away with large-section cannulas, and instead using a simple handpiece supporting a micro-cannula with an optical fibre inside that conducts the laser beam emitted by the **SmartLipo** system. Parameter adjustments are simple and immediate thanks to the LCD, and the intuitive, user-friendly software. The optical fibres are reusable and can be sterilised in the autoclave. Simple concepts and simple applications for a far superior and more effective technique.

