

# Manuale d'Istruzioni / Instruction's Manual

**DEPILATOR**

# 400



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## IMPORTANTE / IMPORTANT

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Produttore / *Manufacturer*

**LED SpA**

PROGETTAZIONI E PRODUZIONI ELETTRONICHE  
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## WARNING

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It is very important that these instructions are saved together with the unit for further need. If the unit is sold or transferred to another user, be sure that these instructions are given to him, so that he can know the functioning of the unit and its warning.

**THESE INSTRUCTIONS ARE WRITTEN FOR YOUR AND FOR THE OTHERS SAFETY, SO PLEASE, READ THEM CAREFULLY BEFORE INSTALLING OR USING THE UNIT.**

The electric safety of this unit is assured only when it is correctly connected to an efficient earthed system in conformity to the actual safety norms. It is necessary to verify this safety fundamental requisite and, in case of doubt, to require an accurate control of the plant from qualified personnel. The manufacturer cannot be considered responsible for possible damages caused by the lack of an efficient connection to earth of the installation.

- After having removed the package, check the integrity of the unit and its accessories, in case of doubt do not use and ask for qualified personnel.
- Ensure that the rating (indicated on the rear panel) corresponds to that of the available system, before connecting the unit.
- In case of incompatibility between the available mains socket and the power supply cable of the unit, replace it only with a proper kind. The use of adapters, multiple connections or cables of extension is not advisable. If their use should be necessary, it is obligatory to use only single or multiple adapters conforming to the actual safety norms.
- The use of any electric equipment requires the observance of some fundamental rules. Particularly:
  - do not touch the equipment with damp or wet hands or feet;
  - do not use the equipment with naked feet;
  - do not leave the equipment exposed to atmospheric agents (rain, sun, etc.).
- Do not leave the equipment uselessly switched on. Switch it off when not in use.
- This equipment must be designated only for the use it has been designed. Every other use has to be considered improper and dangerous. The manufacturer cannot be considered responsible for possible damages due to improper, wrong or unreasonable use.
- It is dangerous to modify or the attempt to modify the characteristics of the equipment.
- Before effecting any operation of cleaning or maintenance, disconnect the unit from the electric system, unplugging the mains cable from the system or switching off the main switch of the plant.
- Switch off the equipment in case of breakup or malfunction. Refer only to an authorized service center for the reparation and ask for the use of original spare parts.

The not observance of these norms can expose to safety risk the equipment and can be dangerous for the user.

- The unit emits HF radiation without warning that can interfere with other electric equipment, non-relational electronics, navigation systems, telecommunication.
- Before using the unit, check it and its cables to verify if there are uncovered conductive parts or other conditions of danger.
- To avoid virus or bacterial contaminations, substitute the needle electrodes every treatment. Only use sterile disposable needle electrodes.
- Do not treat unconscious or with sensitivity to thermo-pain subjects.
- The use of this unit is not advised in patients:
  - carriers of pace-maker or other installed electronic device, or in proximity of such patients;
  - cardiopaths or with serious unbalances of the arterial pressure;
  - with serious illnesses of the nervous system or with renal insufficiencies;
  - during pregnancy;

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## INTRODUCTION

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One of the methods employed in the thermolytic hair removal consists in the supplying of HF current to get the heating and the consequent coagulation of the hair papilla, reached through the introduction of the needle in the follicle of the hair. The success of the operation depends on the period of life of the treated hair, or rather, on its phase of growth (anagenic), of maturity (telegenic) or atrophization (catagenic). The Best results are gotten on the hair treated in anagenic phase. The HF current delivery time is inversely proportional to the delivered power and goes from 1 second to few seconds the time is controlled by the pedal activation. During the use, the HF current deliver is started each time by the pedal and lasts a time equal to the pedal pushing time.

The type of HF coagulative current allows more permanent results than those obtainable with other techniques of depilation.

DEPILATOR 400 is an electric unit for esthetical use and is CEI62-39 (Italian Law 110 of 05 May 2012 for article 10 of Law 1 of 4/1/90 “Electric and electrical depilatories”) certified.

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## CONTRAINDICATIONS AND AFTEREFFECTS

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- The use is not recommended in persons:
  - Having a pace-maker or any other electric device.
  - With heart disease.
  - With serious unbalances of the arterial pressure.
  - With serious illness of the nervous system.
  - With serious renal deficiencies.
  - During pregnancy.
  - Hemorrhagic.
  - Epileptics.
  - With disturbance of the thermodorific sensibility.
  - Seriously asthenics.

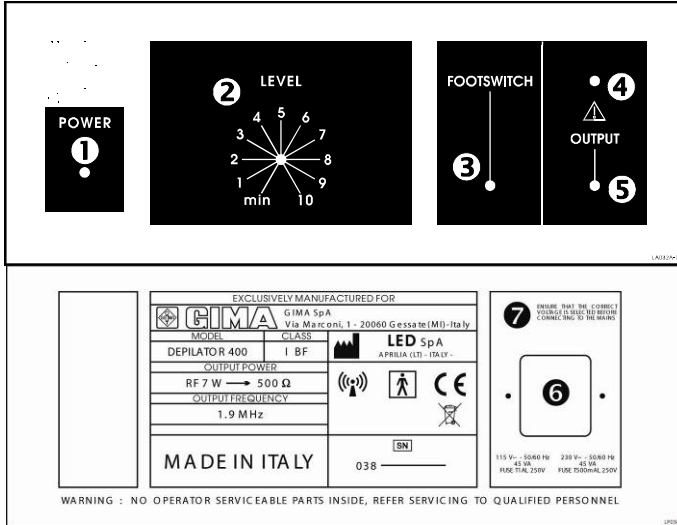
Moreover the application is not recommended:

- In the tumoral centre.
- When contagious diseases are in course.
- During childhood.
- On the testicles.



# CONTROLS

- |                        |                    |
|------------------------|--------------------|
| 1 POWER switch         | 5 OUTPUT socket    |
| 2 LEVEL power knob     | 6 Mains socket     |
| 3 FOOTSWITCH connector | 7 Voltage selector |
| 4 Emission light       |                    |



## CONTROLS DESCRIPTION

### 1 POWER SWITCH

It is the general switch of the unit; in I position the internal light is switched on.

### 2 POWER LEVEL KNOB

Power regulation from 1 to 10. Be careful, even when the knob is at the minimum, the output current be different from zero.

### 3 PEDAL CONNECTOR FOOTSWITCH

Foot-switch connector, it is advised to thighten it (screwing the ring). The pedal works as delivery command. HF output current is delivered during the footswitch activation.

### 4 EMISSION SIGNAL

It is switched on when there is HF current delivery.

## **5 OUTPUT SOCKET OUTPUT**

It is the socket to connect the needle holder-handle

## **6 MAINS SOCKET**

It is the socket to connect the furnished mains cable.

## **7 VOLTAGE SELECTOR**

On the power supply block can be present a voltage selector suitable for the selection of 115V~ or 230V~ mains voltage. Before powering the unit, it is necessary to preset the correct mains voltage by properly set the voltage selector. The unit is factory preset to 230V~.

## **TECHNICAL CHARACTERISTICS**

Mains power	115/230 V~ /50-60 Hz selectable
Max. Absorbed power	45 VA
Fuses	230V~ 2xT500mAL, 250V (5x20) 115V~ 2 x T1AL, 250V (5x20)
Output frequency	1.9 MHz
Modulation frequency	100 Hz
Output power	70W → 500Ω
Electrical Safety Class	I BF

ELECTRO UNIT FOR ESTHETICAL USE (CEI62-39)

(Italian Law 110 of 05 May 2012 for article 10 of Lax 1 of 04/01/1990 “*Electric and electronical depilatories*”)

## **ENVIRONMENTAL CHARACTERISTICS**

Environmental temperature	between 10 and 40°C
Relative moisture	between 30 and 75%
Atmospheric pressure	between 70 and 106 kPa

## **DIMENSIONS**

Height	110 mm
Width	260 mm
Depth	250 mm
Weight	4 Kg

## **STANDARDS COMPONENTS**

1	<b>REF</b> GMA20100.10A	DEPILATOR 400 Unit
1	<b>REF</b> 00100.03	2mt mains cord SIEMENS-IEC
1	<b>REF</b> 00201.01	Handpiece for micro-needles
1	<b>REF</b> 00201.03	Holder for handpiece model 00201.01
1	<b>REF</b> 00300.00	Pedal
10	<b>REF</b> 00500.L11	Needle for depilation
1	<b>REF</b> MA038	Instructions

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## INSTALLATION

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- Unpack the unit and its accessories, verify that they have not been damaged during the transport. In case of damages, do not use the unit and/or its accessories and let that qualified personel check them.
- Verify that the available mains power is in conformity with that of the unit (see the unit's rear panel). Before powering the unit, it is necessary to preset the correct mains voltage by properly set the voltage selector. The unit is factory preset to 230V~.
- Connect the furnished mains cable to a socket with a good net connection.

### **IL FUNZIONAMENTO DELL'APPARECCHIO SENZA CONNESSIONE DI TERRA E' PROIBITO.**

### **THE UNIT OPERATION WITHOUT HEARTHING IS FORBIDDEN.**

- Put the mains switch on O (off). Insert the furnished mains cable in the socket.
- Put and block the pedal in the socket called FOOT-SWITCH.
- Put the holder handle connector in the socket on the front right side called OUTPUT. Connect on the holder handle a sterile needle-electrode (see the figure).
- Switch on the unit, putting the mains switch on I (on).
- Preset the power through the knob LEVEL.
- To deliver the high frequency, press the pedal (the delivery is visualized by the emission signal).

*Attention: the delivery lasts all the time the foot presses the pedal.*

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## APPLICATION TECHNIQUE

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Usually the discharge duration is regulated between 8/100 sec, in the depilation of the upper lip, a maximum time of 30/100 sec. is reached; in particular part of the body not very sensible, the medium time is 15/100sec.

Put the power level on 10 to treat very thin or thin hair, on 15 for normal hair and on 20 for particularly strong hair.

The permanent depilation is obtained when the germinative cells are destroyed. These cells are in the hair bulb. Researches, on the contrary, have demonstrated that, even though the bulb is eliminated, some cells that are in the hair follicle below the outlets of the sebaceous glands can regenerate themselves and create a new hair with its papilla. The depilation is definitely permanent when these cells are also destroyed.

The technique consists in the introduction of the needle-electrode tip in the follicle, until a light resistance is encountered. It is not due to the reaching of the bulb, as it is easy to think, but to the reaching of that part of the follicle below the sebaceous gland outlet that, adhering with the entire hair length, both in correspondence of the epithelial sheath and in the papilla, does not allow the advancing of the needle. The introduction of the needle electrode tip in the most superficial part of the follicle, that is made easy by the cutaneous relaxation or by its plica, must be without traumas (without pain or bleeding!).

The needle direction shall be the same to that of the first trait of the hair that comes out from the follicular orifice. The operator, after reaching the zone of light resistance, press the pedal and simultaneously plunge the needle 1, 2 or 3 mm, until the bulb is reached; doing so all the hair determinative cells are destroyed. The needle plunge depth is measured after checking the extraction of the first hair. With the movement, from the surface into the depth, the epidermic damages, due to superficial discharge, are avoided.

Just one discharge, while the needle electrode is working, is necessary to remove thin and very thin hair; for stronger hair a second discharge is necessary; it is generated after the needle has been retired a little and it is directly behind the bulb (between the bulb and the sebaceous gland outlet). During this second discharge, that completes the destruction of all the germinative cells, the operator must keep the needle electrode immobile. The treated hair is removed with little forceps and should not oppose any relevant resistance to the extraction. If a resistance is opposed, the operation must be repeated more precisely. The beginners of this technique can operate with a time higher of some hundreds of second respect to that indicated, proportionally reducing the power, until they will achieve the necessary precision, that allows the reduction of the discharge duration until the advised values.

The possibility to preset one hundred of second, at a constant power, allows to limit the thermic damage in a well defined space, sufficient for the destruction of the hair germinative cells, but insufficient to be left visible cicatricial results, even using powers superior to those used in different methods and even if the discharge is repeated one more time on the same point.

## ***HAIR PHISIOLOGY***

It is necessary that the operator, before the treatment, explains to the subject to be treated, the different phases of growth of the hair and the necessity to intervene again in the same zone, even though it has been completely depilated, until all the follicles, from which the hair come out, will be treated.

Pay particular attention to avoid too superficial discharges that can damage the skin, most of all where the follicle are very short and innervated as in the upper lip.

A good technique consists in the subdivision of the lip into three parts: a central one and two lateral ones that are depilated with a partial thinning out and in successive treatments. The same technique can be used for the depilation of the eyelash and of the eyebrow.

## ***FACE DEPILATION***

It is executed in weekly or biweekly treatments, during which 50, 100 or more hair are removed. If necessary all the present hair can be removed in a single treatments, even though one is next to the other or even contiguous. The cheeks, the upper lip, the chin, the neck can be depilated, the hair joint can be modified, the extremity of the eyelid can be depilated, as well as the area between the two eyebrows. This kind of depilation and the one of the cheekbones and in some parts of the neck, where the hair easily grows in, is quite common among the men.

## ***BODY DEPILATION***

Several parts of the body can be definitely depilated, such as the mammary and the mammary region, the abdominal area, the groin and the axillas, the dorsal area. In those areas where the hair is very concentrated, such as the groin and the axillas, the technique of the thinning out in several treatments is advised.

In the groin treatment, the operator limits the area to be depilated, using the patient's panties as reference, and epilates completely the piliferous zone that comes out from the panties borders. This kind of depilation must be repeated 2 or 3 times at a distance of 2/3 months to remove those hairs that, in the first treatments were in phase of growth.

To depilate the other parts of the body, the indications of the table in the unit's instructions must be followed, using the same technique of the face depilation, remembering that for the body depilation the recovery is slower than that of the face.

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# MAINTENANCE

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## ***PREVENTIVE MAINTENANCE***

**BEFORE PERFORMING ANY OPERATION OF MAINTENANCE, DISCONNECT THE ELECTRIC CONNECTIONS.**

The preventive maintenance consists mainly:

- in the control before every use of the state of the equipment and the accessories, to examine the integrity of all the cables, the isolations, the wraps, etc. designed to avoid the contact with the voltage.
- in the periodic cleaning of the equipment to effect on a smooth and regular surface, to maintain the equipment in the best conditions of functionality and appearance.
- in the periodic cleaning of the accessories.

## ***CLEANING OF THE EXTERNAL CONTAINER AND THE PANELS OF COMMAND***

Clean the external container and the panels of command with a damp cloth: the use of abrasive products or solvents is not advised. Referring specifically to the rear and to the command panels, the use of ethyl alcohol or detergents containing high percentages of ethyl alcohol is not advised.

## ***CLEANING OF THE HOLDER HANDLE***

Clean the holder handle with a soft cloth: do not use abrasive products or solvents.

## ***STERILIZATION OF THE NEEDLE ELECTRODE***

The sterilization of the needles, even if very important, has often been disregarded.

It is necessary, after every treatment, to sterilize the needle electrodes, that are declared to be sterilized by the manufacturer, following the parameters (method, temperature, time) indicated by the manufacturer himself.

The use of sterile disposable needle electrodes is advised.

**NOTE:** The equipment should be periodically controlled (at least once a year), from qualified personnel, to verify the following electric safety values:

- Misure of the creepage currents.
- A measure of the resistance between the clamp of earth and every conductor accessible part for which the earthing is required.

## ***CORRECTIVE MAINTENANCE***

If a malfunction is found, check, first of all, that there is not error in the disposition of the commands.

In case the equipment is submitted to external mechanical solicitations, for instance after a serious fall, or if the unit has been submitted to an abundant dripping of liquid, or if the equipment has been submitted to strong overheating (for instance direct light of the sun, fire), or if the functionality of the equipment seems altered or if some parts of its wrap are broken, removed or lacking, or if some connector or cable show signs of deterioration, the unit and its accessories should be checked from personnel professionally qualified.

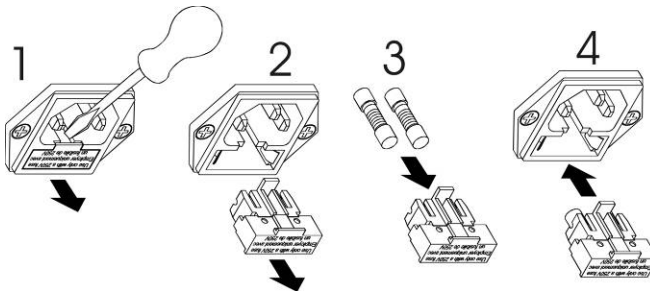
## ***FUSES SUBSTITUTION***

If the substitution of the fuses should be necessary, after disconnecting the mains cable from the mains socket, proceeds as follows:

1 – 2 With a small slot screwdriver, extract the drawer from the mains socket.

3 After extracting the damaged fuses, insert two fuses of the type 2x50 with characteristic indicate on rear panel.

4 Insert the drawer.



## ***MEANING OF THE GRAPHIC SYMBOLS ON THE UNIT***



European Norms Conform



Attention: see the furnished information



Radiation not ionizing



Serial Number



Protection degree against direct and indirect contacts: BF type



Manufacturer



The product mustn't be thrown in the containers for urban wastes but it must be swallowed by a separate picking.


## TROUBLE SHOOTING

These are some simples solutions to some problems that can occur with Depilator 400 unit.


Problem	Solution
The unit does not work, even if the switch is ON	Check that the signal inside the switch is lighting.
The signal inside the switch is not lighting.	Check that the mains cable is correctly inserted. Check that the mains socket is really working. Check the fuses, disconnecting the socket from the system. If they are interrupted, substitute them with a proper kind (see fuse substitution).
The unit is switched on but does not deliver the power.	Check that the emission signal is switched on, check the pedal, the holder handle and the needle connections on the holder handle.
The unit delivers but does not depilate.	Check the power level.

If, despite the interventions, some problems continue to occur, let check DEPILATOR 400 unit and accessories from qualified personnel. Do not open for any reason the cover of the equipment.

**Informazioni in base all'Art. 13 del D.Lgs. 151/05 del 25/07/2005 "Attuazione delle Direttive 2002/95/CE e 2003/108/CE, relative alla riduzione di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti.**

	<p>A fine vita il presente prodotto <u>non</u> deve essere smaltito come rifiuto urbano, lo stesso deve essere oggetto di una raccolta separata.</p> <p>Se il rifiuto viene smaltito in modo non idoneo è possibile che alcune parti del prodotto (ad esempio eventuali accumulatori) possono avere effetti potenzialmente negativi per l'ambiente e sulla salute umana.</p> <p>Il simbolo a lato (contenitore di spazzatura su ruote barrato) indica che il prodotto non deve essere gettato nei contenitori per i rifiuti urbani ma deve essere smaltito con una raccolta separata.</p> <p>In caso di smaltimento abusivo di questo prodotto sono previste delle sanzioni.</p>
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**Information about elimination of this product (Applicable in the European Union and other European countries with separate collection systems)**

	<p>On the end of the life, the present product <u>mustn't</u> be eliminated as urban refusal, but it must be eliminated in a separated collection.</p> <p>If the product is eliminated in unsuitable way, it is possible that some parts of the product (for example some accumulators) could be negative for the environment and for the human health.</p> <p>The symbol on the side (barred dustbin on wheel) denotes that the products mustn't throw into urban refuses container but it must be eliminated with separate collection.</p> <p>In case of abusive elimination of this product, could be foreseen sanctions.</p>
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