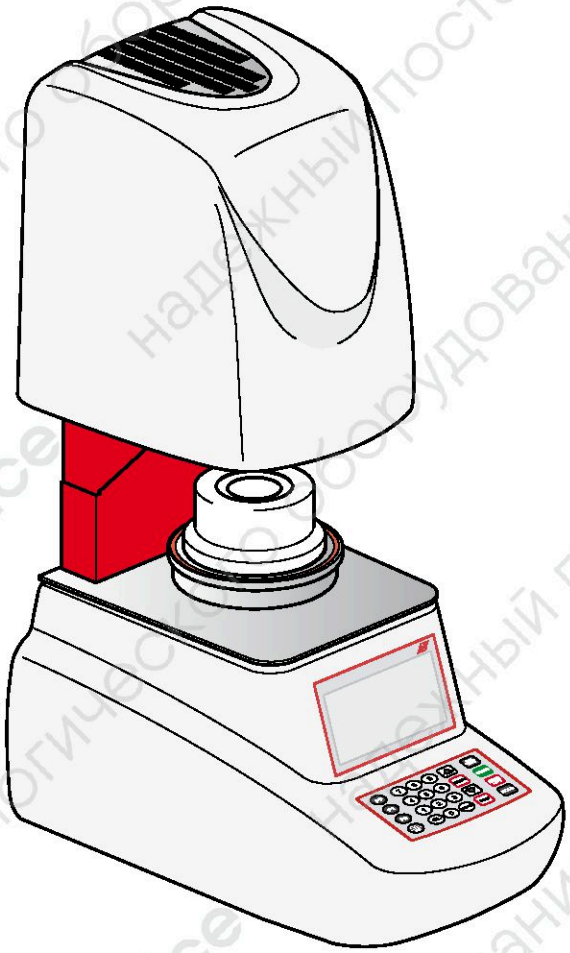
stomdevice

NEW GIGA

Mod. **NEW GIGA** Cod. C306606
Mod. **NEW GIGA PRESS** Cod. C306607



Zhermack®
TECHNICAL

Maintenance and use manual

XM1610000

Rev. 12/07

Ceramic oven

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

GENERAL INDEX

INTRODUCTION CH. 1

Pag. 5 **1.1** How to read and use the manual
Pag. 6 **1.2** Terminology and symbols

GENERAL INFORMATIONS CH. 2

Pag. 7 **2.1** Responsibility
Pag. 7 **2.2** Warranty: general instruction
Pag. 7 **2.3** Authorized personnel
Pag. 8 **2.4** General safety regulations

DESCRIPTION OF THE MACHINE CH. 3

Pag. 9 **3.1** General description of the machine
Pag. 9 **3.2** Table of the components
Pag. 9 3.2.1 Description of the components
Pag. 10 **3.3** Keypad
Pag. 10 3.3.1 Description of keypad
Pag. 11 **3.4** Identification data
Pag. 11 3.4.1 On-machine labels and symbols

TECHNICAL CHARACTERISTICS CH. 4

Pag. 12 **4.1** Technical characteristics and operating start
Pag. 12 **4.2** Technical Data
Pag. 13 4.2.1 Weight and overall dimensions
Pag. 13 4.2.2 Noise levels

TRANSPORT AND MOUNTING CH. 5

Pag. 14 **5.1** Warning
Pag. 14 **5.2** Packing and unpacking
Pag. 14 5.2.2 Supplied components
Pag. 15 **5.3** Transport and mounting
Pag. 15 **5.4** Elimination / Dismantling

INSTALLATION AND FIRST-TIME USE CH. 6

Pag. 16 **6.1** Warnings and precautions
Pag. 16 **6.2** Permitted ambient conditions
Pag. 16 **6.3** Required work space
Pag. 17 6.3.1 Worktops
Pag. 17 **6.4** Connecting up to the power supply
Pag. 18 **6.5** Starting up the machine
Pag. 18 **6.6** Vacuum pump connections
Pag. 18 **6.7** Compressed air connections (for GIGA PRESS model only)
Pag. 20 **6.8** Purpose of the machine / Improper and forbidden use

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

USING THE MACHINE — CH. 7

Pag. 21	**7.1**	Warning
Pag. 21	**7.2**	Safety system
Pag. 21	**7.3**	General information
Pag. 22	**7.4**	Stand-by
Pag. 22	**7.5**	Routine operation
Pag. 22	7.5.1	Selecting a program
Pag. 23	7.5.2	Pan control movements
Pag. 23	7.5.3	Program name
Pag. 24	7.5.4	Writing a program
Pag. 25	7.5.5	Options
Pag. 25	7.5.6	Setup
Pag. 28	7.5.7	Post-Fire functions
Pag. 29	7.5.8	HOLD functions
Pag. 29	**7.6**	Diagnostic functions
Pag. 33	**7.7**	Manual pan opening
Pag. 33	**7.8**	Decontamination cycle
Pag. 34	**7.9**	Programme setting examples
Pag. 34	**7.10**	Residual risk

MAINTENANCE — CH. 8

Pag. 35	**8.1**	Cleaning
Pag. 35	**8.2**	Routine maintenance
Pag. 35	**8.3**	Unscheduled maintenance
Pag. 36	**8.4**	Restarting after a long period of inactivity
Pag. 36	**8.5**	Requesting technical assistance

APPENDICES

Pag. 37	**A.1**	CE Declaration of conformity
Pag. 38	**A.2**	Warranty certificate and identification form
Pag. 39	**A.3**	Maintenance and repair worksheet
Pag. 40	**A.4**	Notes

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

CHAPTER 1: INTRODUCTION

HOW TO READ AND USE THE MANUAL 1.1

This Use and Maintenance Manual provides information on use and maintenance of the **GIGA** and **GIGA PRESS** ceramic ovens made by ***Zhermack S.p.A.***

• The machine must be used in accordance with the instructions in this manual: it is therefore recommended that you read it carefully prior to installation and start-up. Make sure that you read the entire manual and pay particular attention to messages written in bold type or items highlighted by boxes and/or symbols: the symbols are designed to highlight situations involving danger or requiring caution (see paragraph 1.2).

• Observance of standards and regulations shown in this manual will ensure that the machine is used properly and that maintenance work is carried out safely.

• This Use and Maintenance Manual is an integral part of the machine: it should therefore be kept together with the machine so that it can be consulted as and when necessary (keep the booklet in a secure dry place away from sunlight, atmospheric agents, etc.). It must be
available for consultation throughout the working life of the machine even when the machine is sold or finally dismantled.

• It is recommended that you keep this manual constantly updated by integrating any
amendments, additions or modifications made by the Manufacturer. Any notes or comments should be made on the blank pages at the rear of the booklet (see Appendices: Notes).

• Use the manual properly so that it is not damaged in any way.

• Do not remove, tear or write on any part of the pages.

• If the manual is lost or damaged and its contents become illegible you can request a
replacement copy from the Manufacturer.

The purpose of this Use and Maintenance Manual is to provide users with information on how to operate the machine properly. The manual contains all the information needed to use the device as intended: in particular the manual includes instructions and information on the
following:
• correct installation of the machine;
• Detailed description of how the machine works and its components;
• Initial start-up;
• Scheduled maintenance;
• Basic Safety and Accident Prevention info.

This manual contains 8 chapters each of which covers a specific argument.
The appendices at the rear of the manual are a useful complement to these chapters.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

1.2 TERMINOLOGY AND SYMBOLS

It is important that you understand the following symbols and their significance as they highlight important information such as critical situations, practical advice, or straightforward information.
If you have any doubts as to the significance of a symbol always consult this page.

• Tasks for which failure to observe instructions or tampering with machine parts may put personnel in serious danger are highlighted by the symbol:



DANGER!

This symbol refers to safety standards which must be observed at all times in order to protect both workers and machine.

• Critical situations concerning dangerous areas or tasks in which failure to observe the instructions may render the warranty null and void, or cause damage to machine, connected components or the surrounding area, are highlighted by the symbol:



WARNING!

This symbol refers to safety standards which must be observed carefully in order to guarantee your safety, other people's safety and prevent damage to the machine.

• Any work that fails to comply with instructions in this manual, or any tampering which might automatically render the warranty null and void, is highlighted by the following symbol:



FORBIDDEN!

This symbol refers to actions which must never be carried out (i.e. forbidden actions).

• Any general information and/or advice which may be useful at any time is highlighted by the following symbol:



NOTE!

This symbol highlights information and/or useful advice.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

CHAPTER 2: GENERAL INFORMATIONS

RESPONSABILITY 2.1

Failure to observe the instructions in this Use and Maintenance Manual exonerates the Manufacturer from any liability whatsoever.
For any matters not covered by this manual or about which you have any doubts please contact the Manufacturer directly:

Zhermack S.p.A.
Via Bovazecchino, 100
45021 Badia Polesine • RO • Italy
Tel. +39 0425 597 611 • Fax +39 0425 53 596
http://www.zhermack.com e-mail: info@zhermack.com

If machine maintenance work fails to comply with instructions or is done in such a way as to compromise machine integrity or modify its characteristics ***Zhermack S.p.A.*** shall be exonerated from any liability as regards worker safety and/or machine performance.

WARRANTY: GENERAL INSTRUCTION 2.2

Included in the Appendices to this Use and Maintenance Manual you will find the Warranty certificate and the ID Form which must be filled out in full.
In general the Warranty is rendered null and void by the following:
• Improper machine use.
• Incorrect installation.
• Serious negligence of maintenance schedules.
• Modifications to or work on the machine which has not been authorised by the Manufacturer (especially on safety devices).
• Use of non-original spare parts.

Zhermack S.p.A. **cannot, as of this moment, be held liable if the machine is modified or tampered with without prior written consent from the Manufacturer. Consequently, any repairs made by unauthorised personnel, use of non-original spare parts or failure to comply with the installation standards specified in this manual shall immediately render the Warranty null and void.**



AUTHORIZED PERSONNEL 2.3

Personnel may be divided into the following categories:

• ***Operator-user:***
Person trained to use the machines. Carries out tasks necessary for operation of the ceramic oven, such as: activation of start/stop controls, programming, cleaning, inspection and simple tasks associated with routine use of the machine.

The operator-user must only use the machine when it is fully assembled and the safety devices are working properly as described in this manual.



https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Before using this machine or carrying out any work on it, the operator must read the entire contents of this manual. This manual has been drawn up to provide the user with essential information on rational, safe utilisation of the machine. The user must comply with the information given at all times. Furthermore, the user must use the work sheets enclosed with this manual so as to keep a record of maintenance/component replacement work as well as make notes on any machine malfunctions.

• ***Zhermack S.p.A. authorised maintenance technician:***
Person authorised to carry out work on the machine under all operating conditions and all safety levels. He/she is also authorised to carry out any mechanical or electrical repairs/adjustments, scheduled maintenance and any component replacement work.

2.4 GENERAL SAFETY REGULATIONS

The operator must read the advice and warnings given below and comply with such regulations at all times: doing so will ensure safe, long-lasting machine performance.
• Do not allow untrained personnel to use this machine.
• Ensure that the work area is properly prepared: it must be free from obstacles, clean and properly illuminated.
• Take measures to ensure that you are not distracted when using the machine.
• In the event of a malfunction follow the advice given in this manual: if you have any doubts shut down the machine and contact your Authorised Service Centre immediately.
• Never use a malfunctioning machine and always inform the Maintenance Manager of any faults. Never use a malfunctioning machine and always inform the Maintenance Manager of any faults.
• Do not leave the machine with shields unmounted.
• Do not open compartments containing electrical apparatus.
• It is forbidden to use the machine on items other than those for which it has been specifically designed.
• Before doing any cleaning, routine and/or unscheduled maintenance work make sure that the machine has been unplugged from the mains socket.
• Make sure that there are no foreign objects inside the work area as these could damage the machine and/or injure personnel.
• Do not use petrol or flammable solvents as detergents; use only non-flammable, non-corrosive, and non-toxic substances (see paragraph 8 .1).

***Zhermack S.p.A.* cannot be held liable for any damage to persons or objects caused by incorrect maintenance carried out by unqualified personnel or maintenance work that does not comply with the instructions in this manual. *Zhermack S.p.A.* is, as of this moment, exonerated from any liability concerning injury to persons or damage to objects that may result from using this machine in a way other than that described in this manual.**

This machine has electrical parts: therefore, in the event of a fire, no matter how small, use only powder-type extinguishers. Never attempt to put out an electrical fire with water.

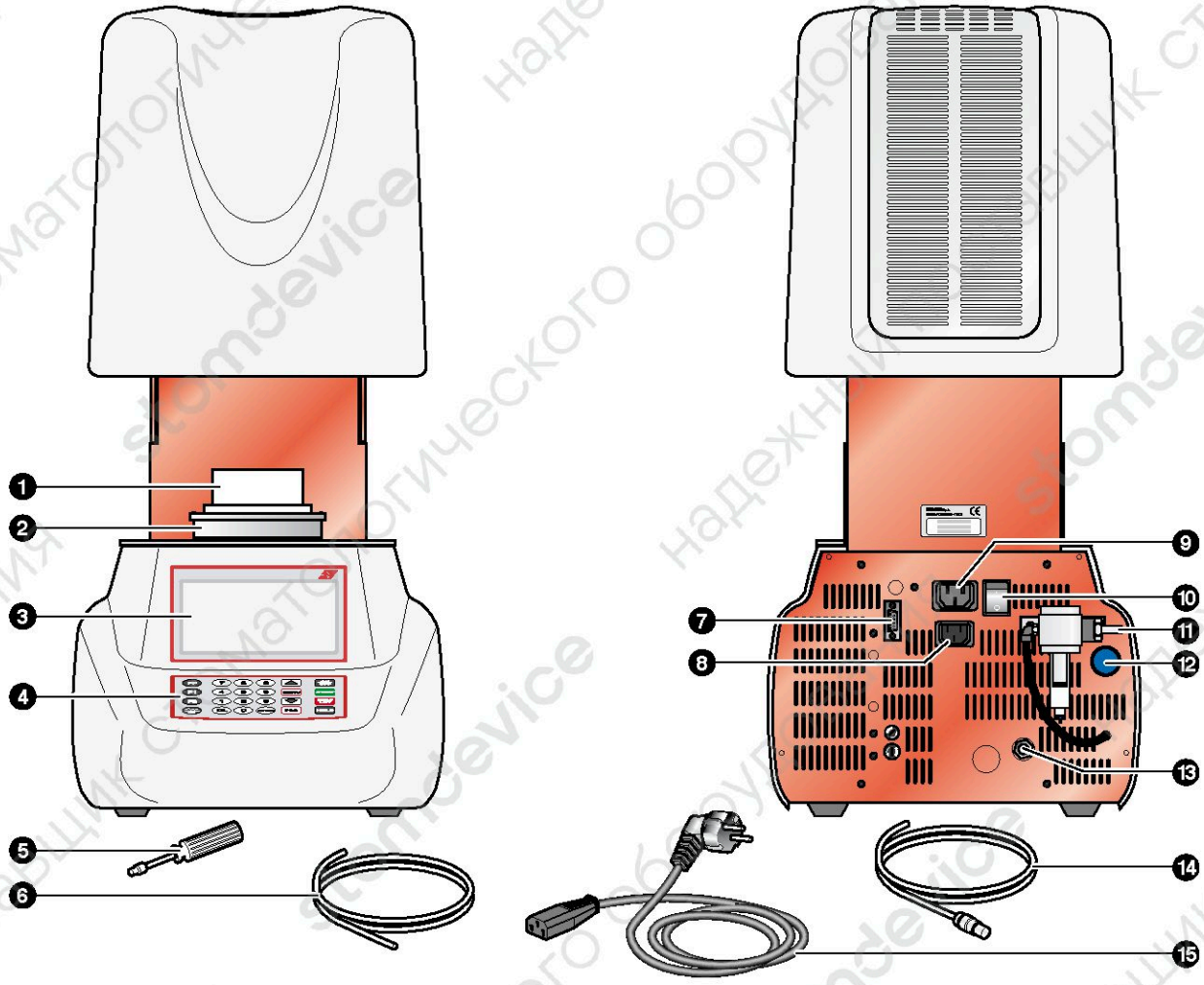
https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

CHAPTER 3: DESCRIPTION OF THE MACHINE

GENERAL DESCRIPTION OF THE MACHINE 3.1

The machine described in this manual is the GIGA Series ceramic oven designed to the fire ceramic items used in odontotechny.

TABLE OF THE COMPONENTS 3.2

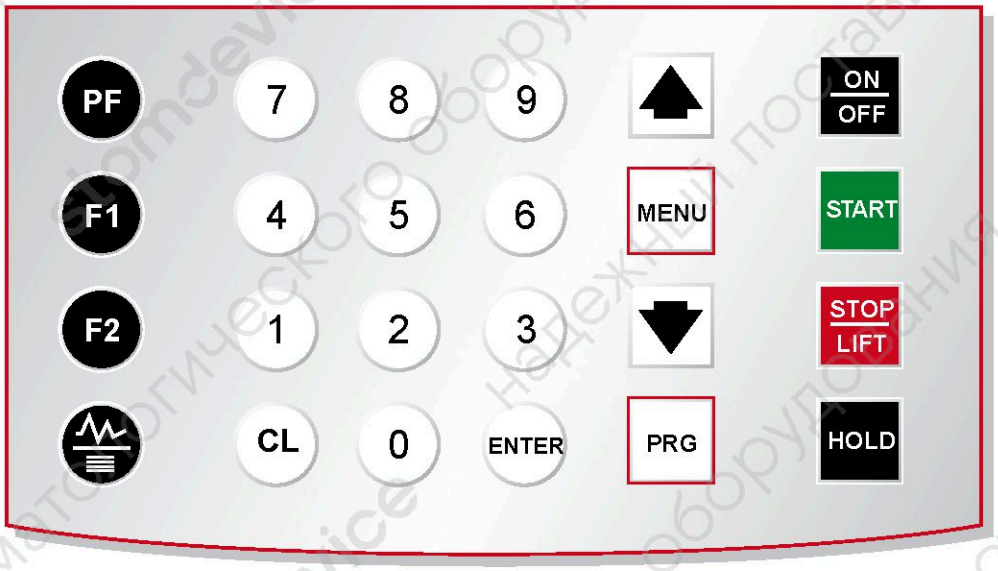


Description of the components 3.2.1

1. Refractory block
2. Mobile firing chamber closure pan
3. Display
4. Keypad (see paragraph 3.3)
5. Key for manual pan opening
6. Vacuum connection hose
7. Serial connector
8. Mains power lead socket
9. Vacuum pump power lead socket
10. Main switch
11. Compressed air infeed with filter *(GIGA PRESS only)*
12. Pressure reducer *(GIGA PRESS only)*
13. Vacuum hose fitting
14. Compressed air connection hose *(GIGA PRESS only)*
15. Power lead

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

3.3 KEYPAD



3.3.1 Description of keypad

PF — Post Firing function key

F1 — Function key 1

F2 — Function key 2

Text/graphics display commutation key

0 ÷ 9 — Numerical keys

CL — Cancel key

ENTER — Data confirm key

Up key

MENU — Menu selection key

Down key

PRG — Program selection key

ON OFF — Stand-by/routine operation commutation key

START — Program start key

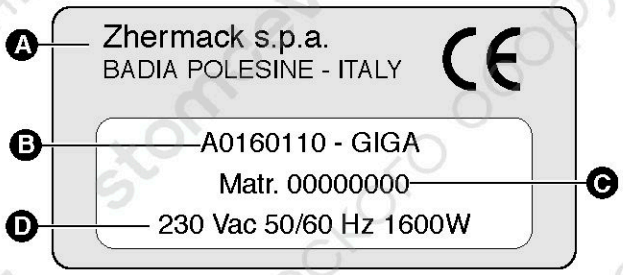
STOP LIFT — Program stop key
Pan operation key

HOLD — Key to modify programs during execution

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

IDENTIFICATION DATA 3.4

The machine described in this manual has an ID platelet giving information about both the machine and the manufacturer:



A. Name and address of manufacturer

B. Machine code and model

C. Serial number

D. Power supply information

The machines has been built in compliance with the EC directives listed in the enclosed "EC declaration of conformity". When requesting spare parts, information or assistance from your Authorised Servicing Centre always quote the data on the ID plate.
Should the ID plate deteriorate and become illegible, even partially, order a replacement plate from the manufacturer: remember to quote the relevant data.

Do not remove and/or damage the plate as you must be able to read the data at all times.



On-machine labels and symbols 3.4.1

On the machine there are positioned others plates and symbols (as shown in the figure below), which point out:

WARNING! ELECTRIC CURRENT DANGER. DO NOT OPEN, REMOVE FLAP DOORS OR PROTECTIONS BEFORE SWITCHING OFF THE POWER SOURCE.



WARNING! HIGH HEAT DANGER. YOU MUST USE PROPER TWEEZERS AND THERMAL PROTECTING GLOVES.



WARNING! CRUSHING DANGER. DO NOT INSERT PARTS OF THE BODY OR OBJECTS INTO THE MACHINE NEAR THE DANGER SITE.



https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

CHAPTER 4: TECHNICAL CHARACTERISTICS

4.1 TECHNICAL CHARACTERISTICS AND OPERATING START

Zhermack S.p.A. produces advanced devices and machines made to the highest technological and qualitative standards. They are designed to meet the specific needs of the odontotechny industry.

The latest ***GIGA*** and ***GIGA PRESS*** ovens represent the third generation of such machines to be made by Zhermack : they continue the tradition of excellence that began with the LUI 7 and LUI 8 models and the more evolved GIGA 30 and GIGA 100.
More specifically, the ***GIGA PRESS*** model reflects developments in the materials field and features an injection system that allows the user to make solid die-cast ceramic items.
Zhermack ovens are designed to be universal: they offer a program structure - comprehensive yet not needlessly sophisticated - that is the result of long-standing experience. They offer flexible chamber opening/closing and also have a self-calibration feature. All these aspects will be described in detail in subsequent sections of this manual.
The newly-designed muffle reduces thermal inertia and thus has the advantage of aiding faster heating/cooling and also enhancing the precision of electronic control in both static and dynamic phases.
Complete motorisation gives more secure piece movement and also reduces noise levels.
Finally, the electronics system has been upgraded and uses SMT components.

The characteristics of both the ***GIGA*** and ***GIGA PRESS*** models may be summed up as follows:
- 200 programmes.
- each program consists of 13 parameters.
- easy programming thanks to the membrane keypad and the versatility of the graphic display.
- program parameters can even be modified during operation.
- silver wire self-calibration.
- personalisation of pan opening and closing phases (e.g. position and closure time step settings).
- adjustable vacuum levels.

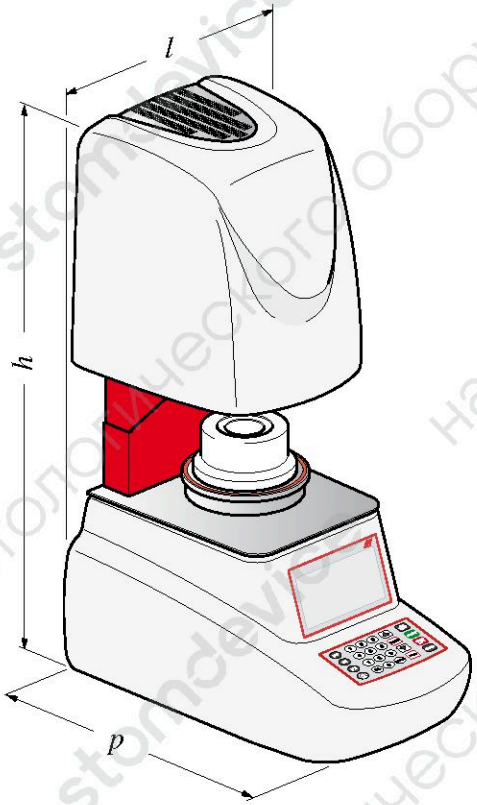
In particular, the ***GIGA PRESS*** features:
- 20 special injection programs (included in the 200).
- injection is not effected continuously but according to a pressure/pause cycle in which the duration of the various phases can be programmed.
- the end of the injection phase can be timed or ends when the injection piston has finished its stroke.
- analogue pressure sensor to ensure correct injection.

4.2 TECHNICAL DATA

• Power supply:	230 V AC ± 10% 50/60 Hz
• Max absorbed power, pump excluded:	1600 Watt
• Max pump power input:	400 Watt
• Max compressed air pressure (GIGA PRESS only)	5 Bar

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Weight and overall dimensions 4.2.1



DIMENSIONS	WITHOUT PACKING	WITH PACKING
Height (*h*)	cm. 67	cm. 80
Length (*l*)	cm. 30	cm. 45
Depth (*p*)	cm. 47	cm. 53
Weight	Kg. 20	Kg. 30

The example illustration shows a *GIGA PRESS* ceramic oven.

Noise levels 4.2.2

Under standard ***GIGA*** and ***GIGA PRESS*** ceramic oven operating conditions in which brief periods of pump operation (to create the vacuum inside the firing chamber) are alternated with periods in which the pump is on standby, the sound pressure detected at the operator workstation when using an ***Zhermack S.p.A.*** vacuum pump (***Satovac 1***) is 67 dB (A).

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

CHAPTER 5: TRANSPORT AND MOUNTING

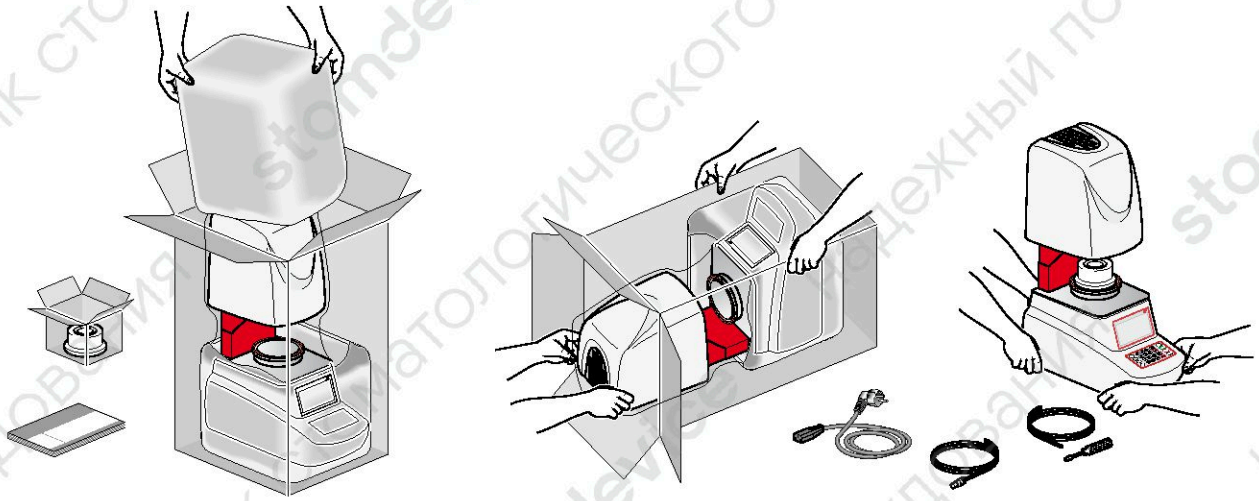
5.1 WARNING

To prevent any injury to persons or damage to things always proceed with the utmost care and attention when mounting the machine. Observe all the precautions and instructions contained in the following paragraphs.

5.2 PACKING AND UNPACKING

All the material is thoroughly checked by the Manufacturer prior to shipment. When you receive the goods make sure they have not been damaged during transit and that no-one has tampered with the packaging and removed any of the parts contained therein.
Should you note any damage or missing parts please inform your Dealer and the shipping carrier immediately: take photographs and send them on to both dealer and carrier.

The packaging, consisting of a cardboard box with internal expanded plastic padding, contains:
- the ***GIGA*** ceramic oven series.
- supplied components (see paragraph 5.2.2).
- this Use and Maintenance Manual.



It is recommended that you keep the original packaging so that, if necessary, it can be re-utilised; doing so ensures that you do not use unsuitable packaging materials during transport and mounting which might lead to accidental damage (see section 5.3).

5.2.2 Supplied components

Table of components supplied as standard:

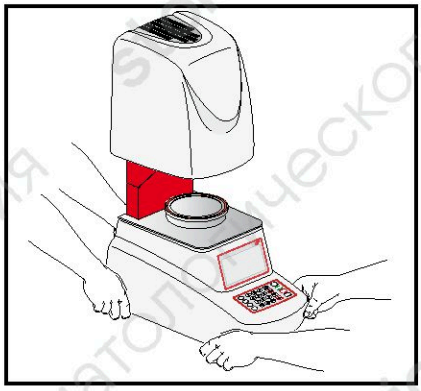
MODEL	DESCRIPTION	Q.TY
GIGA - GIGA PRESS	Vacuum connection hose	1
GIGA - GIGA PRESS	Manual pan movement key	1
GIGA - GIGA PRESS	Mains power lead	1
GIGA - GIGA PRESS	Spare fuses	1
GIGA - GIGA PRESS	Standard refractory block	1
GIGA PRESS	Compressed air connection hose	1
GIGA PRESS	Injection refractory block	1
GIGA PRESS	Injection cylinder preparation kit	1

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

TRANSPORT AND MOUNTING 5.3

If you need to move the ceramic oven it will be necessary to disconnect the machine from the power supply and:
1. position the refractory block correctly.
2. re-close the item holder pan.
3. gather up all the accessories.

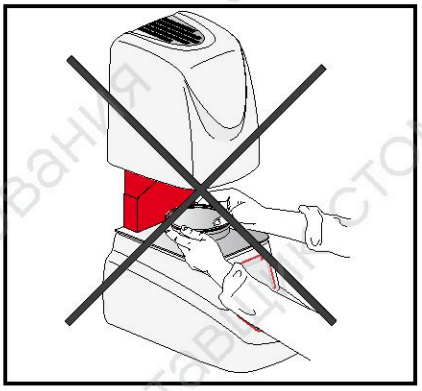
The mounting for transport and/or packing of the machine must follow some basic rules such as:



a. The tasks of handling and/or moving the oven must be carried out by at least 2 (two) workers who must grip the unit by its base.



b. It is forbidden grip the oven by its protection screen when handling and/or moving it.



c. It is forbidden grip the oven by its workpiece support plate when handling and/or moving it.

4. Pack the machine in its original box or, if this is not possible, take all the necessary precautions to protect the machine against knocks or drops, in that the goods are transported at the owner's risk.
To this end always bear in mind the weight and dimensions of the unit being handled to prevent any damage caused by inobservance of these measurements.

Failure to observe the above exonerates the Manufacturer from any liability concerning machine malfunction and consequently renders the Warranty null and void.

When shipping/delivering the machine to your Authorised Servicing Centre always enclose a copy of the purchase document and a copy of the properly compiled ID form.

If the unit is to be transported by courier, the postal service or rail it is recommended such shipments be insured.

ELIMINATION / DISMANTLING 5.4

When disposing of the ***packaging materials*** the user must comply with the standards in force in his/her country regarding the following materials:
• Wood/paper: non-polluting materials, but must be recycled properly.
• Polystyrene/plastic: pollutants which must not be burnt (toxic fumes) nor dispersed into the environment, but disposed of in compliance with the standards in force in the country of use.

If the machine is to be ***dismantled*** the user must, in compliance with EC directives and the laws in force in the country of use, effect elimination and recycling of the following materials:
• Plastic and glass parts, insulated electrical wiring, rubber parts.
• There are no toxic or corrosive parts.

This product must not be disposed of as household waste but rather, when no longer used, must be collected separately according to EC Directive 2002/96.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

CHAPTER 6: INSTALLATION AND FIRST-TIME USE

6.1 WARNINGS AND PRECAUTIONS

Before proceeding with installation make sure that all relevant safety conditions prevail and follow the instructions below carefully.

So as to provide greater clarity the numbers given in the diagrams in this chapter correspond exactly to the numbering in the Components Table (Ch. 3).

6.2 PERMITTED AMBIENT CONDITIONS

The ceramic oven must only be used in a temperature-regulated indoor environment with limited exposure to dust and powder: avoid installation in a place that is damp or where acid fumes are present (e.g. in areas where steam units or acid cleaning devices are used).
Unless stated otherwise at the time of order the machine will be configured to operate properly under the following ambient conditions:

Min ambient temperature	0°C
Max ambient temperature	40°C
Max humidity	90%

Ambient conditions other than those listed above may cause malfunctions or sudden breakdowns. Lighting in the installation area must be sufficient to provide good visibility at every single point on the machine.
More specifically, luminosity must not be less than 200 lux, lighting must be as uniform as possible and there must be no reflected light as this could dazzle the operator.

The machine must not be used in workplaces having an atmosphere which is explosive and/or at risk of fire as it has not been designed for use in such areas. Nevertheless, should a fire accidentally break out follow the procedure described in paragraph 2.4.

Work area lighting is an important factor in both personnel safety and the ultimate quality of the work being done. In Italy lighting must comply with a Ministerial Decree Law that clearly defines minimum lighting requirements. In other countries lighting requirements form part of the accident prevention and workplace hygiene standards.

6.3 REQUIRED WORK SPACE

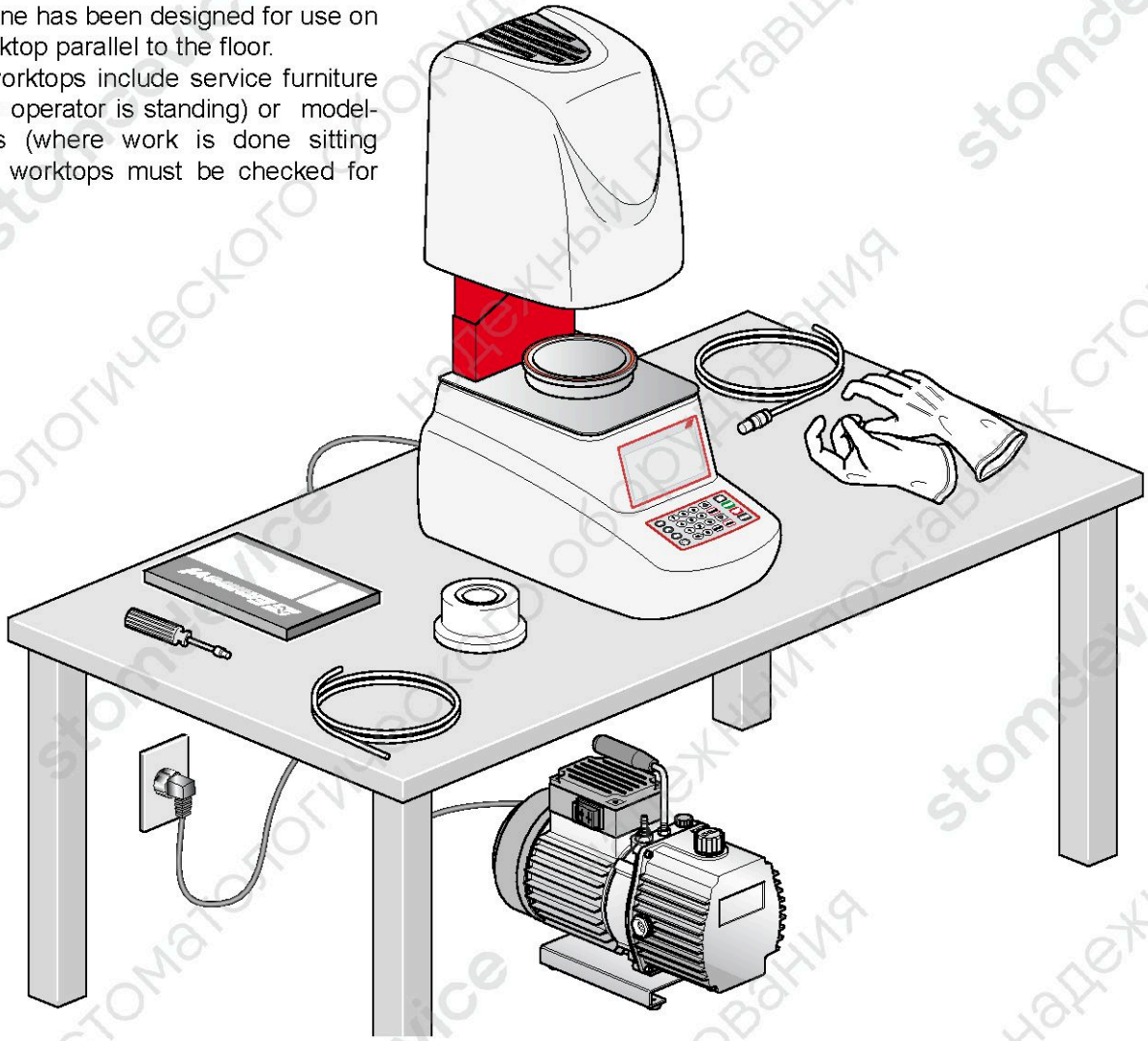
Choosing a good workplace with an appropriate amount of space available for machine installation is an essential factor in personnel safety, the quality of the work and proper maintenance.
This zone must not only be spacious enough to allow for optimum machine operation but must also be well illuminated, aired, not dusty and not exposed to direct sunlight.

The ceramic oven does not require an extraction fan system.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Worktops 6.3.1

The machine has been designed for use on a rigid worktop parallel to the floor.
Suitable worktops include service furniture (where the operator is standing) or modelling tables (where work is done sitting down). All worktops must be checked for stability.



CONNECTING UP TO THE POWER SUPPLY 6.4

The user must provide a power connection with relative socket near the machine installation point. The user must also install an adequate electrical circuit breaker upstream from the socket as well as efficacious overload/indirect contact safety devices.
Connection is effected via the safety plug (16A, in compliance with European standards) at the end of the power lead: this must be inserted in the mains socket. When connecting check:
• that mains voltage and frequency are as indicated on the identification plate (incorrect power supply voltage may damage the machine);
• that the mains supply has a proper, efficient earth connection.

It is forbidden to tamper with the power lead and its plug. When replacing them owing to damage and/or wear please contact an Authorised Service Centre.

A proper earth connection is compulsory. Should it temporarily be necessary to use an extension lead the latter must comply with the standards in force in the country of use.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

6.5 STARTING UP THE MACHINE

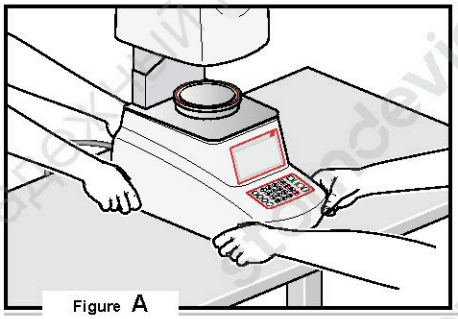


Figure A

Fig. A : Place the oven evenly on a flat worktop (see section 6.3.1).

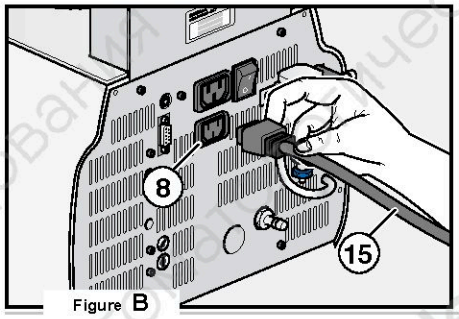
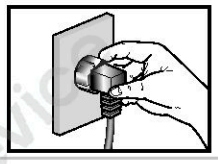


Figure B

Fig. B : Connect the power lead (**15**) to the socket at the rear of the unit (**8**) and the relative plug to a mains socket.
Mains power must be 230 V AC ± 10% 50/60 Hz.
Make sure the electrical system is properly earthed and observe relevant standards in force.



It is forbidden to tamper with the power lead and the plug.

6.6 VACUUM PUMP CONNECTIONS

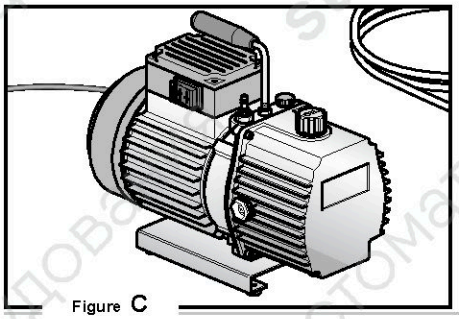


Figure C

Fig. C : The vacuum pump, which must be connected to the oven, must not be powered at a wattage higher than 400 W.
To ensure oven/pump compatibility use of the "***SATOVAC 1***" pump by ***Zhermack S.p.A.*** is recommended.

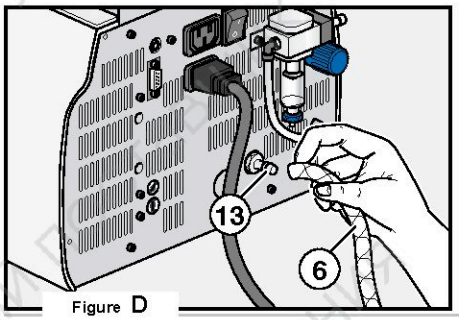


Figure D

Fig. D : At the rear of the oven there is a fitting (**13**) in which the vacuum hose (**6**), connected to the ***Zhermack S.p.A.*** "***SATOVAC 1***" pump, must be connected.

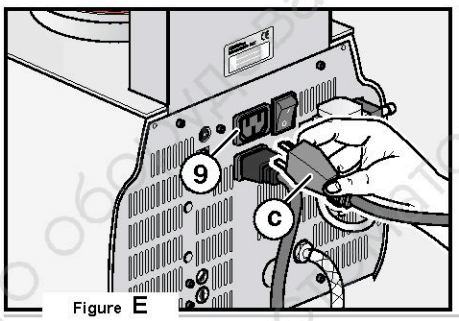


Figure E

Fig. E : Connect the pump power lead (**c**) by inserting the plug in the relevant socket (**9**) at the rear of the oven.

The pump must always be positioned lower than the oven.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

COMPRESSED AIR CONNECTIONS (for GIGA PRESS model only) 6.7

Fig. F : Connect the compressed air feed to the inlet (**11**) using the supplied compressed air connection hose (**14**).

For the oven to operate properly line pressure must be at least 5 Bar.

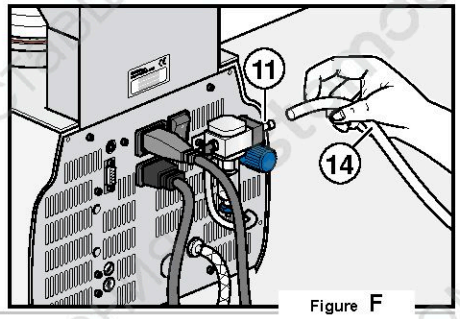


Figure F

Fig. G : Once the connection has been made it will be necessary to adjust oven pressure via the blue knob (**12**) illustrated in the diagram: follow the information given below.

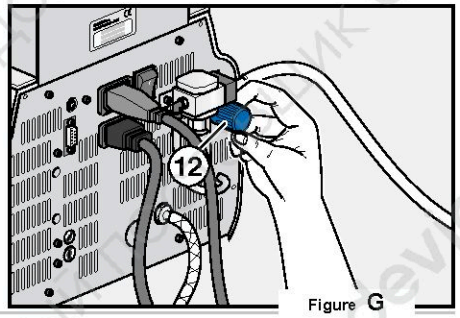


Figure G

Fig. H : Switch on the oven via the main switch (**10**).

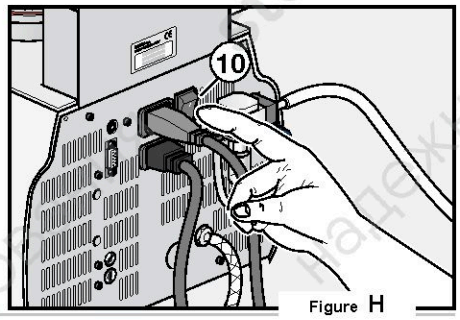
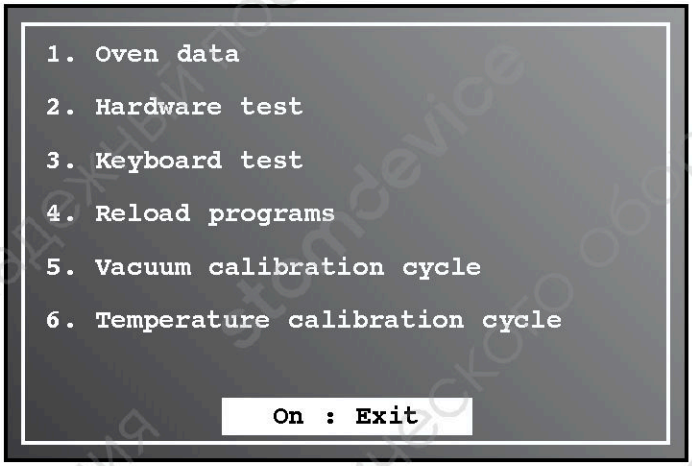


Figure H

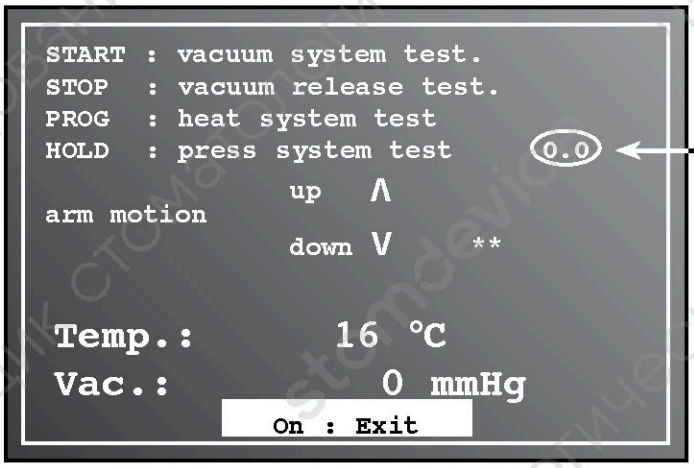
The stand-by display appears (see adjacent diagram):



https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

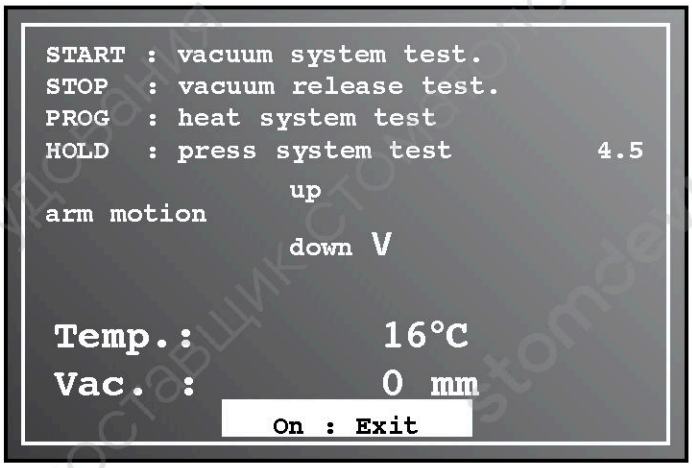


Press F2 and the "diagnostics" display appears (see adjacent diagram);



Then press key 2 to go to the Test Hardware option (see adjacent diagram).

The pressure value is highlighted at the end of the 4th line.



Then act on the blue knob (**12**) until displayed pressure is 4.5 bar.

Press the ON OFF key to exit.

6.8 PURPOSE OF THE MACHINE / IMPROPER AND FORBIDDEN USE

The GIGA and GIGA PRESS ovens have been designed and built to make odontotechny items in solid ceramic.

Using the machine for any purpose other than that described in this Manual shall be considered improper and thus forbidden.

Improper use renders the Warranty null and void and *Zhermack S.p.A.* shall not be liable for any damages to objects, workers or third parties.

The main reasons for which the Warranty may be rendered null and void are given in section 2.2 and in the "Warranty Certificate" enclosed with this Manual.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

CHAPTER 7: USING THE MACHINE

WARNINGS 7.1

The GIGA series ceramic oven must never be used with any of its parts removed. Always make sure that all machine parts are positioned properly.

To ensure that work is done in absolute safety always make sure that you follow the described procedures with caution.

To provide greater clarity the numbers given in the diagrams in the following paragraphs correspond exactly to the numbering in Chapter 3 in the "Machine Description" section.

SAFETY SYSTEMS 7.2

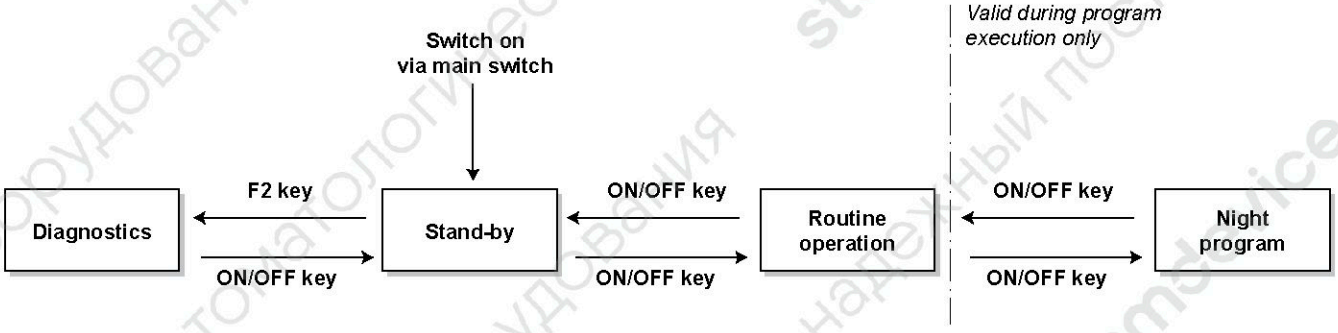
To ensure maximum working reliability, ***Zhermack S.p.A.*** effects strict quality controls on all machine materials and components; the machine is fully tested prior to delivery.
Only the very best materials are used: ***Zhermack S.p.A.*** effects constant quality controls on all materials (on taking delivery, during storage and during final use in the production plant) so as to guarantee the customer absence of damage, deterioration and/or malfunctions.
Note that the ceramic oven is equipped with safety devices such as fixed and mobile guards that screen moving parts in compliance with international accident prevention standards EEC 89/392. These devices are designed to ensure worker safety during machine operation.

It is strictly forbidden to use the machine for any purpose other than that specified in this manual. The Manufacturer cannot be held liable for any injury or damage caused by incorrect and/or improper use.

GENERAL INFORMATION 7.3

There are 4 machine operation modes:
- Stand-by
- Routine operation
- Night program
- Diagnostics

The user can pass from one mode to another as illustrated in the following flow diagram:



https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

7.4 STAND-BY

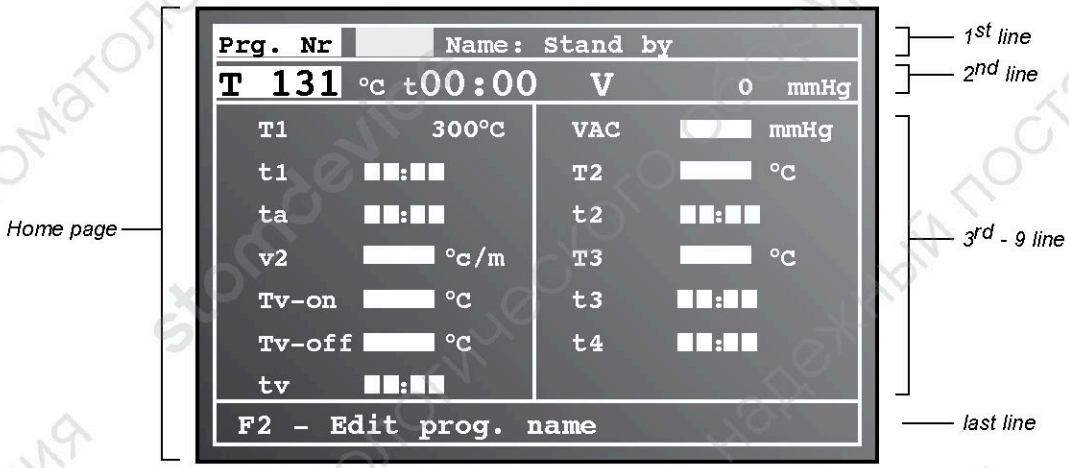
In this mode oven status is stable and may remain so indefinitely.

Press key F2 to go to diagnostics mode.

Press the ON OFF key to go to routine operation mode.

7.5 ROUTINE OPERATION

In this mode the oven can be programmed and used to execute programmed cycles.
The following page appears on the screen: this shall be referred to as the **Home Page**:



The **first line** indicates the **name** and **number** of the program.

The **second line** shows:

T XXXX	temperature inside the chamber
t XX:XX	duration of selected program
V XXX	vacuum level inside chamber

Program parameters are indicated in **lines 3 - 9**.

The **last line** (Help) illustrates the various key functions.

Until a program is selected the fields remain empty and the oven automatically goes to a temperature of 300°C as highlighted in field **T1** (see illustration).

7.5.1 Selecting a program

To select a program press the following keys in sequence:

PRG + XXX + ENTER

where XXX is a number between 1 and 199.
• Program **0** is the Night Program and cannot be modified by the user.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

It is also possible to select a program from the List by pressing the key:

MENU

The following screen (right) appears.



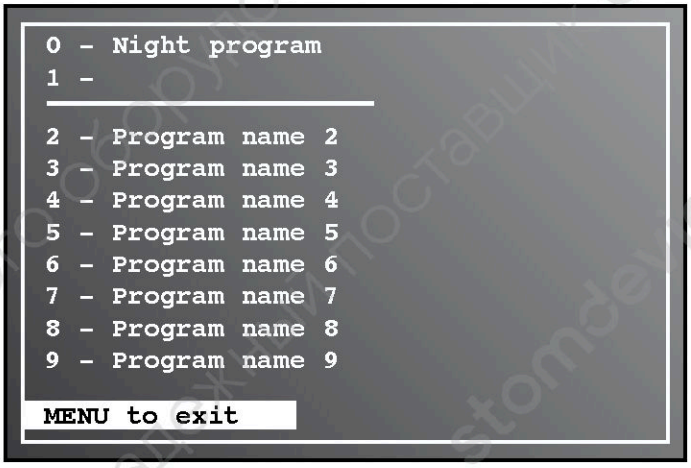
Press key

1

and the adjacent page appears.
Once identified the program is selected via the usual key sequence:

PRG + XXX + ENTER

To exit just press MENU



You can scroll the list by pressing the ▲ and ▼ keys. Pressing one or two numerical keys allows you to select the decade.

Pan movement controls 7.5.2

After selecting the program the pan can be moved via the ▲ (up) or ▼ (down) keys. The pan will move until the key is released.

If you wish to open or close the pan rapidly just press the STOP LIFT key for a few seconds and the pan will open or close completely without having to hold the key down.
To interrupt movement press the key again.

Program name 7.5.3

To edit the name of the selected program go to the Home page and press key F2. Instructions on how to edit the name appear.

Press ENTER :o go to the next page from where you can key in the name: use the numerical keys according to the letter-number correspondence shown on the right of the screen.

If the desired character fails to appear scroll with the ▲ and ▼ keys until it does. The program name can have up to 18 characters.

Once the complete name has been written, press the ENTER key: return to the **Home Page** where the edited name appears on the first line. The same name will now appear on the **List**.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

7.5.4 Writing a program

After selecting the desired program as described in 7.5.1 the Home Page displays the relative parameters. Their meaning is shown below:

T1 Cycle start temperature. When a program is selected the oven automatically goes to this temperature. Settable from **100 to 800 °C. Compulsory parameter.**

t1 Pan closing time as measured from moment at which the program starts (with temperature **T1** reached). Settable from 20 seconds to 40 minutes. If this parameter is not programmed the closure time will be as short as possible.

ta Pre-heat time. Start temperature is maintained for a period **ta** after the pan has been closed. Settable **from 0 to 40 minutes**. If this is not programmed the oven will go to the next temperature setting **T2** after pan closure.

v2 Rate (in °C/minute) at which the temperature goes from **T1** to **T2**. Settable **from 10 to 180 °C/min. Compulsory parameter.**

Tv-on Vacuum activation temperature. When this temperature is reached the pump comes on until the desired vacuum level is reached. Must be coherent with the temperatures set on the program.

Tv-off Vacuum deactivation temperature. When this temperature is reached the pump is deactivated. Must be coherent with the temperatures set on the program.

tv Vacuum maintenance time. Programmable up to a **maximum of 40 minutes**. This parameter is an alternative to **Tv-off**: if one is programmed the other must not be.
Pressing note: tv must be the sum of t2 + Press t.

Vac Vacuum setting expressed in mmHg. Settable **from 100 to 760**. Where set higher than 740 mmHg the pump is always on.

T2 Firing temperature. Reached at rate **v2**. Programmable up to a **maximum of 1150°C. Compulsory parameter.**

t2 Time for which temperature **T2** is maintained. Programmable up to **40 Minutes.**

T3 Additional firing stage (optional). May be higher or lower than **T2**: if lower the pan will open to a (programmable) position to effect cooling. Programmable up to **1150°C**.

t3 Time for which temperature **T3** is maintained. Programmable up to **40 Minutes.**

t4 Pan opening time. Settable **from 20 seconds to 40 minutes**. If not set the pan will open as rapidly as possible.

On the ***GIGA PRESS*** model programs 180-199 concern ceramic die-casting. Instead of parameters **T3** and **t3** this model features the following:

Press T Temperature maintained during injection. Settable from 100 to 1150°C.

Press t Duration of injection stage. Settable from 20 seconds to 40 minutes.

Where ceramic pressing programs are used the **Vac** parameter has no effect in that firing is always executed with vacuum at maximum (i.e. with pump always running).

When writing a program you can go from one parameter to another using the ▲ and ▼ keys.

Once a parameter has been selected you can set it via the numerical keys.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Should you require help press F1 to display parameter-relative information.
Any errors can be cancelled via the CL key.

To exit a program and save set values press ENTER .

It is also possible to copy a selected program by going to the Home page and pressing the following sequence of keys:

F1 + XXX + ENTER

where XXX is the number of the program into which the data will be copied.

The following paragraphs illustrate how parameters T3 and t3 can be disabled to allow use of programs with just 11 parameters.

Options 7.5.5

From the Home Page, press MENU

and then key 2

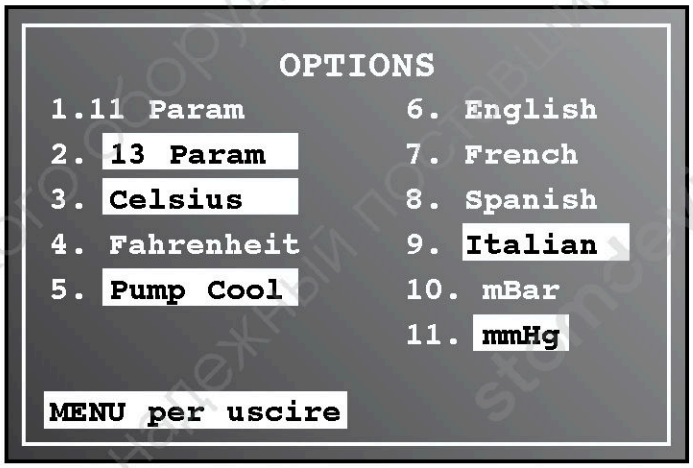
to go to the Options menu: this allows other settings - **valid for all programs** - to be made.

To select an option just scroll using the



keys, position the cursor over the option you wish to

activate and then press ENTER



- Use parameters **1** and **2** to enable or disable program parameters **T3** and **t3** (to give a total of **11** or **13** program parameters).
- Parameters **3** and **4** are used to select the unit of measure for the temperature.
- Parameter **5** establishes whether you wish to cool using the vacuum pump or not.
- Parameters **6** - **9** are used to select the language.
- Parameters **10** and **11** are used to select the unit of measure for the vacuum.
- Once settings have been made, exit by pressing MENU .

Setup 7.5.6

From the Home Page press

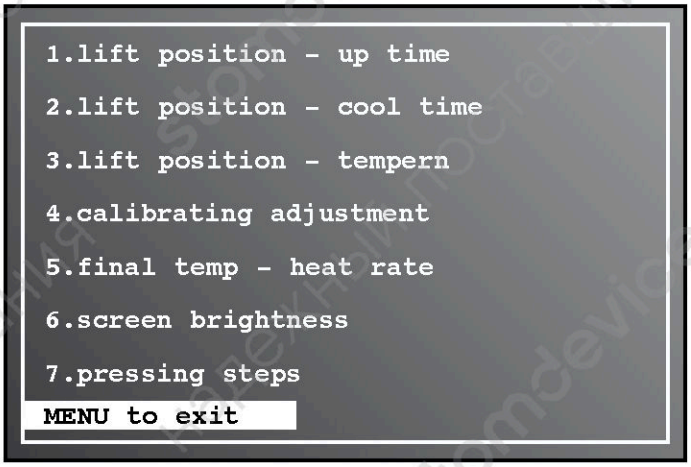
MENU

and then

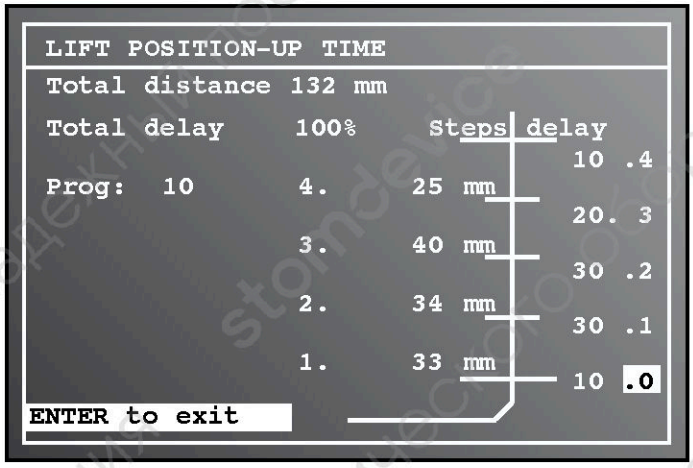
3

to go to the Setup menu where certain characteristics valid for the **selected program only** can be set.

The following page (right) appears:



https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ



Press

1

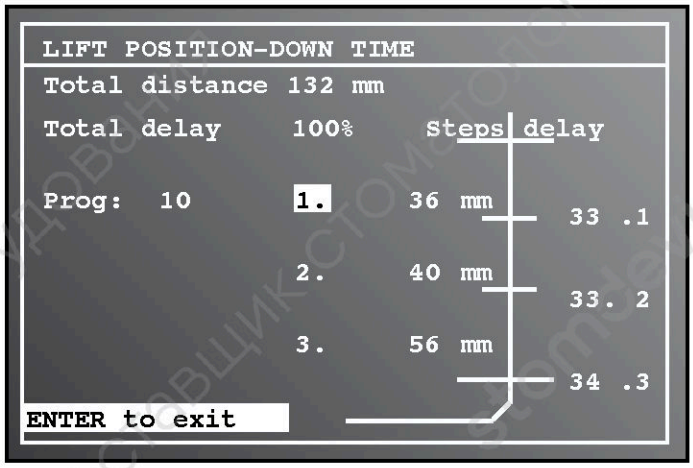
to call up the page (left). This page allows you to manage pan closure during the stage lasting time **t1**.

The left-hand side of the graph shows the height (in mm) of the 4 points at which the pan stops during closure. Since the entire pan stroke measures 132 mm the sum of the 4 values will logically be 132 mm. The right-hand side of the graph, instead, shows the percentage values of the total time t1 that the pan stops at the holding points. The sum of these value must logically be 100%.

To clarify: on the page illustrated adjacently the left-hand side of the graph shows that the pan travels 33 mm in the first step, 34 in the second, 40 in the third and 25 in the fourth. The right-hand side of the graph shows that the pan is at standstill for 10% of time **t1**, at the first step for 30 %, at the second for 30 %, at the third for 20% and at the fourth for 10 %.

To modify the values with the ▲ and ▼ keys go to the parameter you wish to modify and key in the desired value.
Any errors can be cancelled using the CL key.

Once the setting has been made press ENTER to save and exit to the Setup menu.



Press

2

to call up the adjacent page. From here you can manage opening of the pan during the opening stage of duration **t4**.

The left-hand side of the graph shows the height (in mm) of the 3 points at which the pan stops during opening. Since the entire pan stroke measures 132 mm the sum of the 4 values will be 132 mm.
The right-hand side of the graph, instead, shows the percentage values of the total time t4 that the pan stops at the holding points. The sum of these value must logically be 100%.

To clarify: the left-hand side of the graph shows that the pan travels 36 mm in the first step, 40 in the second and 56 in the third. The right-hand side of the graph shows that the pan is at standstill at the first step for 33% of time **t4**, at the second step for 33 %, at the third for 34 %.

To modify the values with the ▲ and ▼ keys go to the parameter you wish to modify and key in the desired value.
Any errors can be cancelled using the CL key.

Once the setting has been made press ENTER to save and exit to the Setup menu.

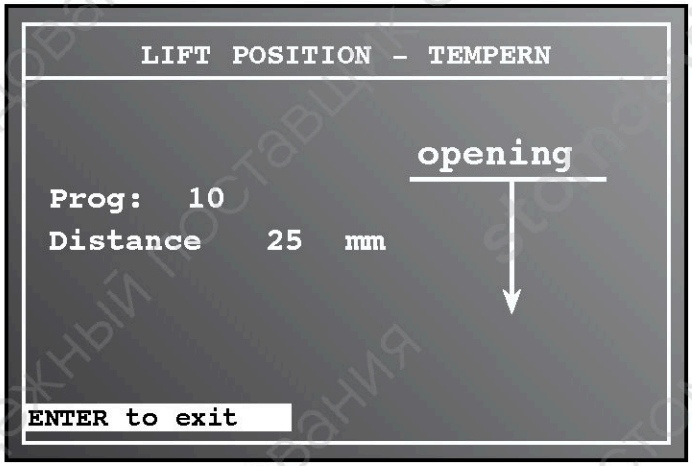
https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Press 3 to call up the adjacent page.

When temperature **T3** is lower than temperature **T2** cooling is necessary: cooling is achieved by opening the pan.
It is necessary to set (in mm) the degree to which the pan opens.

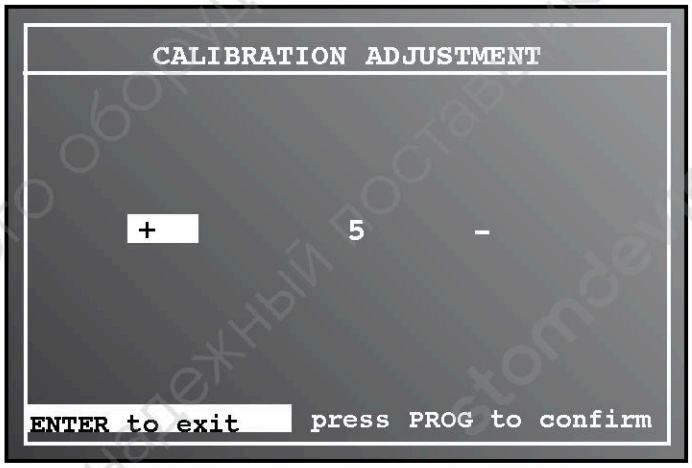
Key in the desired value and press ENTER to save it and exit to the Setup menu.

Use the CL key to correct any errors.



Press 4 to call up the adjacent page.

This page allows the user to set a correction factor without actually altering oven calibration.
This is particularly useful when you need to make oven performance homogeneous with that of other ovens already in the laboratory.



Use the ▲ and ▼ keys to select type of variation (+ or -) and the numerical keys to set the desired value.

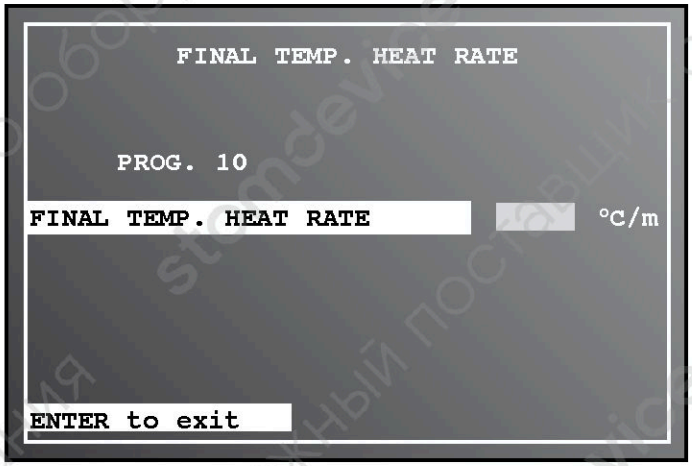
Use the CL key to cancel any errors. Press ENTER to save and return to the Setup menu.

Press 5 to call up the adjacent page.

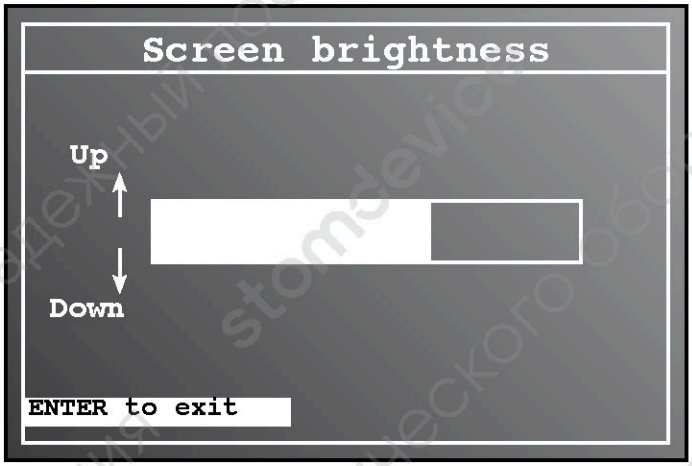
If temperature **T3** is higher than temperature **T2** and you wish to reach it at a rate different from **v2** you can set a different speed.
Set the desired value using the numerical keys.

Key in the desired value and press ENTER to save it and exit to the Setup menu.

Use the CL key to correct any errors.



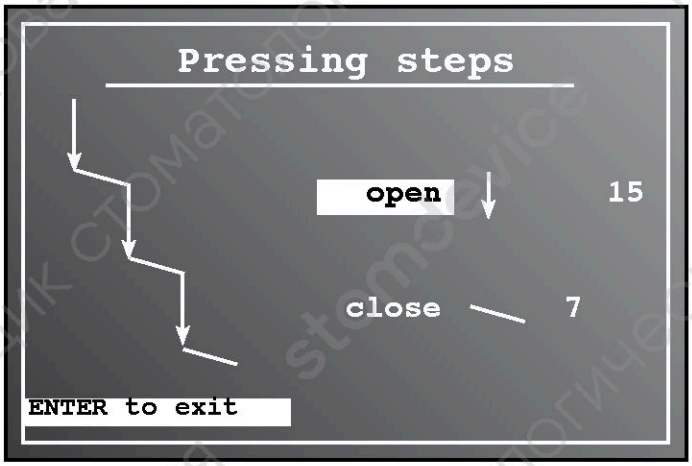
https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ



Press 6 to call up the adjacent page.

Used to adjust screen brilliance by acting on the ▲ and ▼ keys.

Once the desired value has been set, press ENTER to save and return to the Setup menu.



N. B.: for the GIGA PRESS model only

Press 7 to call up the adjacent page.

Use this parameter to set the action of the injection piston during the pressing phase.

"**Open**" indicates how many seconds the piston presses, while "**Closed**" indicates how long it stays on stand-by.

Use the ▲ and ▼ keys to select type of variation (+ or -) and the numerical keys to set the desired value.

Use the CL key to cancel any errors. Press ENTER to save and return to the Setup menu.

7.5.7 POST FIRE function

Experience has shown that sometimes, when an item is being completed, it may be necessary to repeat the firing stage (temperature **T2** for duration **t2**) at a slightly higher temperature.

The POST FIRE function can be executed during the pan opening phase **t4**: in this instance, should you decide that further firing is necessary, just press PF : the pan will close and the firing stage will be repeated with temperature **T2** raised.

Pressing PF once raises the temperature by 5°C. Subsequent pressings of the key raise the temperature by just 3°C.

Example:	T2 = 900° C	t2 = 1:00
Pressing PF once:	T2 = 900°C + 5°C	t2 = 1:00
Pressing PF twice:	T2 = 900°C + 5°C + 3°C	t2 = 1:00

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

HOLD function 7.5.8

The **HOLD** function allows the user to modify a program while it is being run.

To activate it press the HOLD key: the word Cycle in the top left corner of the display changes to **HOLD** (flashing) and the oven periodically emits a beep. At this point the program can be modified as described in the previous paragraphs.

Once the modifications have been made, press ENTER to save and then press HOLD again to recommence the cycle.
Changes made using the **HOLD** function only affect the cycle in progress; they do not modify the original program.

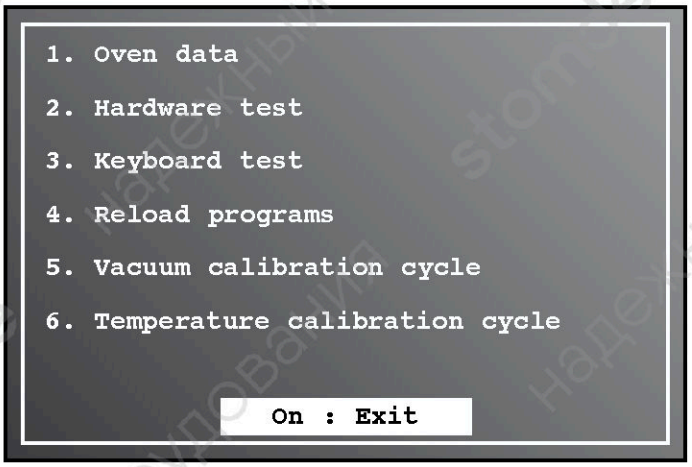
DIAGNOSTICS 7.6

These functions are not used as part of routine machine operation: they are used to check that hardware components are working properly and effect calibration.
N.B. Improper use of these functions could damage the oven.

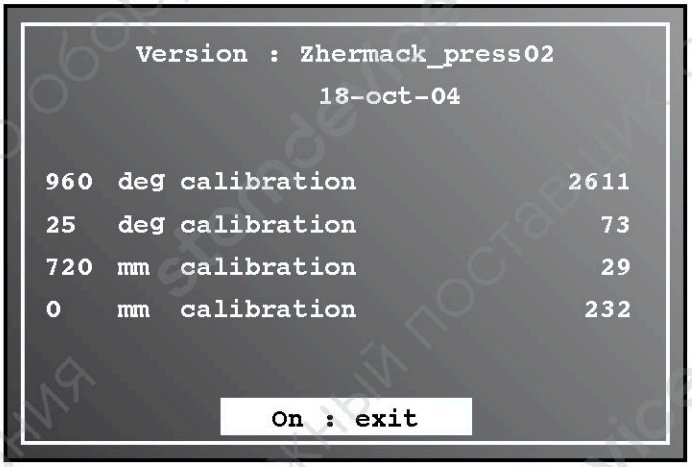
From the oven **stand-by** display press key

F2

and the following page appears:

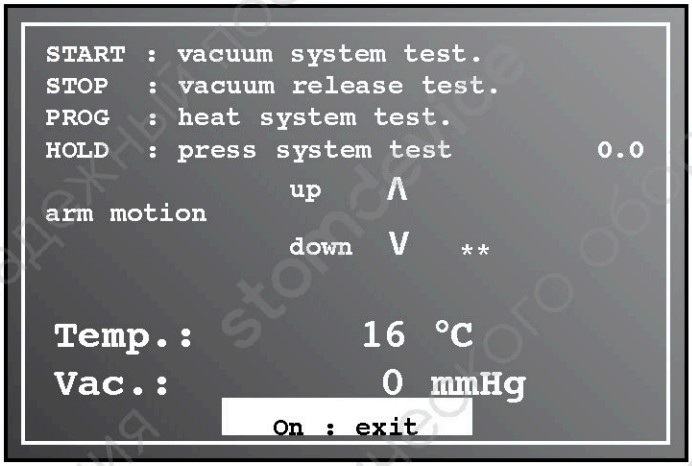


Press key 1 to display the adjacent page:



This data is intended for the Manufacturer only in that is shows ADC Converter values relative to temperature and vacuum calibration.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ



Press key 2 to display the adjacent page.

Use this routine to check for:
- Proper operation of vacuum pump
- Proper operation of vacuum circuit solenoid valves
- Proper operation of muffle heating elements
- Proper operation of compressed air circuit (***GIGA PRESS*** model only)
- Proper operation of pan movement
- Proper operation of temperature and vacuum sensors.

Press the START key and the vacuum pump starts. It is good practice to activate it only after closing the pan. In this case, with the pump activated, the numbers in the vacuum field increase.

Press the STOP LIFT key to release the vacuum inside the chamber.

If you do not release the vacuum it will not be possible to open the pan and the motor will be subject to a level of stress that could damage it.

The PRG key switches on the muffle element at maximum. Holding the key down causes the **Temp** value to increase.

For the *GIGA PRESS* model only:

Press the HOLD key to activate the pneumatic piston that effects injection inside the chamber: use a small mirror to check for advancement of the piston on the upper wall of the chamber.

The value shown on the 4th line indicates compressed air pressure inside the oven. The correct value is 4.5 Bar.

Use the ▲ and ▼ to operate upward and downward movement of the pan.

When the upper limit switch is activated the ** symbol appears at the end of the 5th line (see diagram). Similarly, when the lower limit switch is activated the ** symbol appears at the end of the 6th line.

Release the ▲ and ▼ keys when the corresponding ** symbol appears. Otherwise you risk damaging the pan operating system.

Press the ON OFF key to return to the main Diagnostics page.

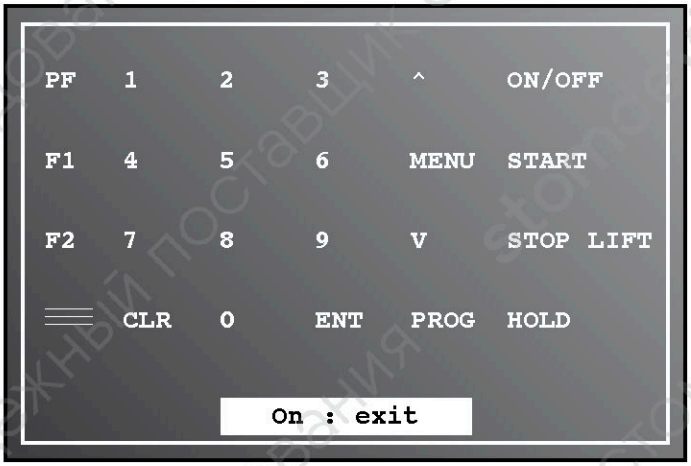
https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Press key 3 to display the adjacent page:

The purpose of this page is to check that the keypad is working properly: note that it mirrors the layout of the actual keys.

Press any key: if it is working the relevant symbol is deleted.

Press the ON OFF key to return to the main Diagnostics page.



Press key 4 to restore the default programs entered into the oven by the Constructor.

The adjacent page appears as data is being loaded.



When loading is over use the

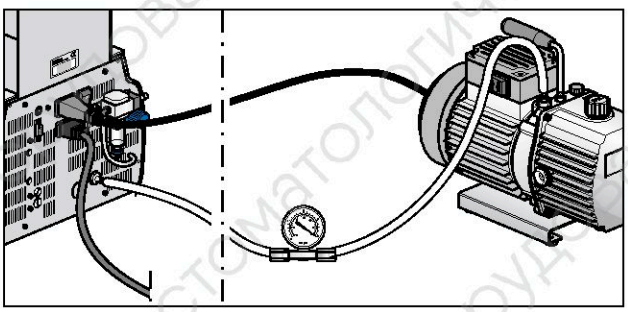
ON OFF

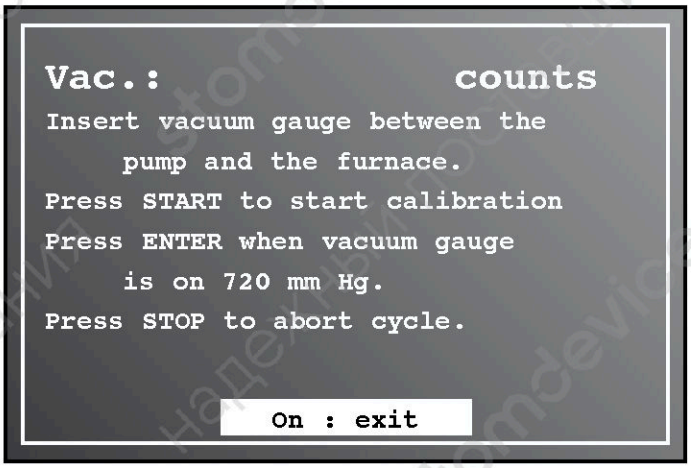
key to return to the main Diagnostics page (as indicated on the page itself).



Press key 5 to display the adjacent page:

This function can be used to **calibrate the vacuum sensor.**





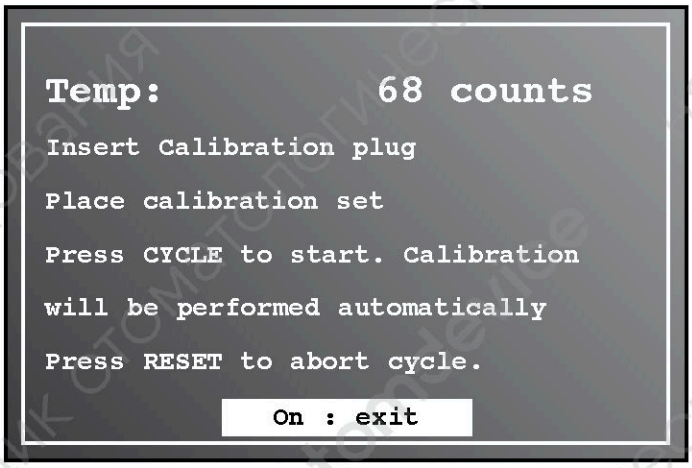
https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

This routine must only be carried out by an **Authorised Assistance Centre** as part of routine or unscheduled maintenance. Proper execution of this routine requires that a precision, calibrated vacuum meter be connected between the vacuum pump and the oven (as in the figure, above left).

If you have this device, execute calibration by pressing START (the vacuum pump will start) and then press ENTER when the vacuum meter between pump and oven reads **720 mmHg**.

If you wish to interrupt the calibration cycle and leave the existing calibration value unaltered just press the STOP LIFT key.

Use the ON OFF key to return to the main Diagnostics page.



Finally, press key 6 to gain access to the oven temperature self-calibration function.

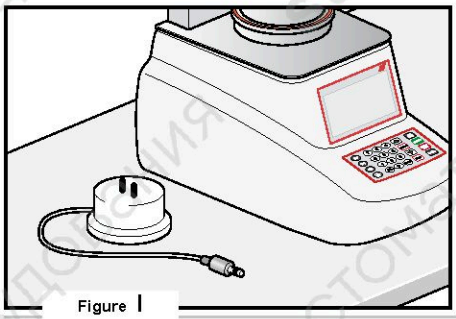
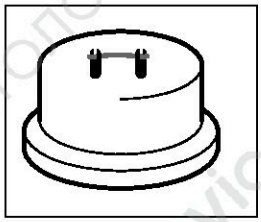

Figure I

Fig. I : This utility function can only be carried out with the aid of the self-calibration block (optional).



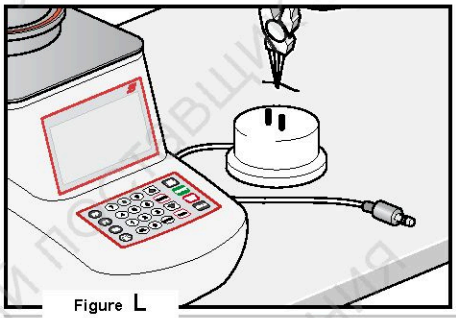

Figure L

Fig. L : Position a piece of silver wire (supplied with the block itself) on the block.

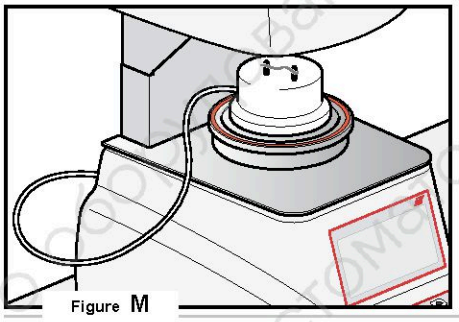

Figure M

Fig. M : Position the block on the pan.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Fig. N : Then insert the block connector in the relevant socket (**a**).

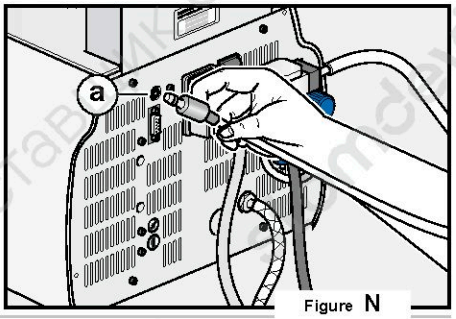


Figure N

At this point press the START key: the oven will close the pan and automatically increase the temperature; when it detects melting of the wire it will acquire the correct calibration value and emit a beep.

To interrupt the cycle press the STOP LIFT key: in this case the previous calibration will remain valid.

Press the ON OFF key to return to the main Diagnostics page.

MANUAL PAN OPENING 7.7

Should pan movement be prevented by a power failure or an electrical fault you can act manually using the pan opening key (**5**).

Fig. O : Insert the key (**5**) in the hole at the centre-bottom of the rear panel (**b**).
Rotate it (you may need to exert some force) to move the pan as desired.

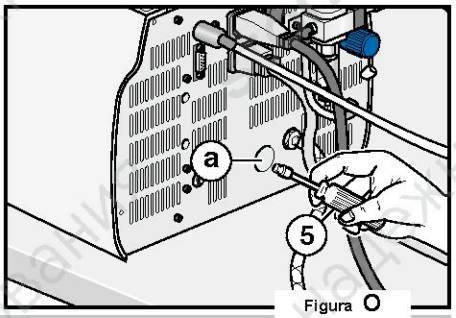


Figura O

DECONTAMINATION CYCLE 7.8

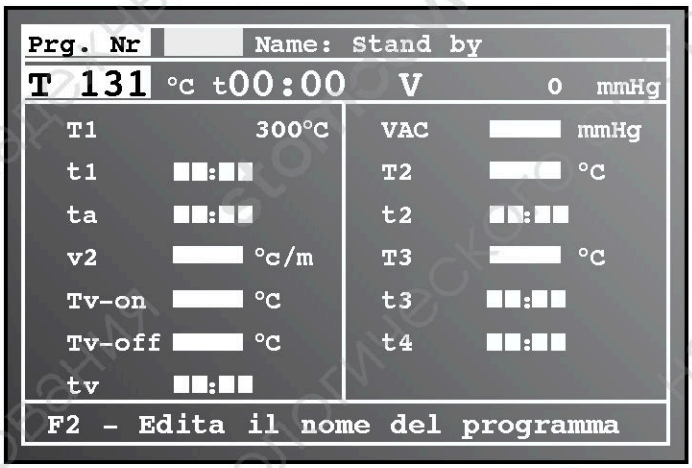
Insert a graphite tablet on the piece-carrying plate and then set the following parameters:

T1	=	700 °C
V2	=	90 °C/min
Tv-on	=	700 °C
Tv	=	5 : 00
Vac	=	720 mmHg
T2	=	1040 °C
t2	=	5 : 00

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

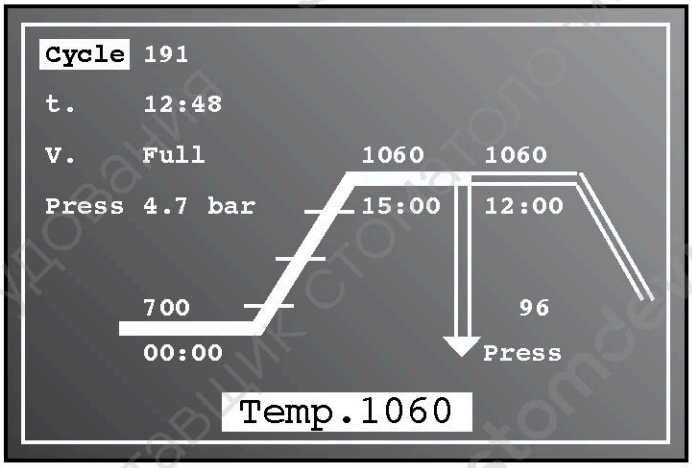
7.9 PROGRAMME SETTING EXAMPLES

For an explanation of the parameters please see section 7.5.4.



example n°1	example n° 2	example n° 3 (with PRESS)
T1 = 600	T1 = 600	T1 = 700
t1 = 5 : 30	t1 = 5 : 30	t1 = --
ta = --	ta = 5 : 00	ta = --
V2 = 60	V2 = 60	V2 = 60
Tv-on = 700	Tv-on = 720	Tv-on = 700
Tv-off = 920	Tv-off = --	Tv-off = --
tv = --	tv = 0 : 45	tv = --
Vac = 760	Vac = 760	Vac = 760
T2 = 920	T2 = 920	T2 = 1045
t2 = 0 : 30	t2 = 1 : 00	t2 = 19 : 00
T3 = 960	T3 = 960	Press T = 1045
t3 = 0 : 10	t3 = 1 : 00	Press t = 4 : 00
T4 = 5 : 00	T4 = --	T4 = --

- Values t2 and t3 must be the same as or greater than the value tv.
- On closure of the pan, pressing the START key takes you to the block preheating stage.



This screen shows the percentage of piston descent.

7.10 RESIDUAL RISK

Residual risk is:
• a danger that cannot be completely eliminated through design and application of safety devices.
• a potential danger which cannot be highlighted.
Ceramic ovens generate heat. It follows that the residual risks consist of:
• accidental contact with hot parts and/or parts that have not cooled sufficiently. Wait until cooling is over or use suitable personal protection items.

To prevent accidents always observe the instructions in this manual. Should you have any doubts at all please contact the Manufacturer or your Authorised Servicing Centre.

The above-mentioned dangers are indicated by special labels attached to the machine, as described in sub-section 3.3.1.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

CHAPTER 8: MAINTENANCE

CLEANING 8.1

The machine exterior can normally be kept clean just by wiping it with a dry cloth. If necessary, wet the cloth just a little water or use a non-degreasing detergent.
The operator must ensure that the machine is kept clean and free from any foreign bodies such as dirt, water, non-conducting liquids etc.
The machine must be cleaned at the end of every work session to remove all residues. Cleaning must be done with the machine at standstill and positioned in a stable manner.

Before cleaning the machine exterior always turn the main switch to OFF. It is strictly forbidden to clean the machine while it is connected to the mains power supply.



Never use inflammable, corrosive, alkaline or toxic liquids when cleaning the machine.



Eye goggles and a face mask must be worn when using compressed air for cleaning purposes. Do not allow any persons near the machine as they could be hit by flying dust.



ROUTINE MAINTENANCE 8.2

Once the machine has been cleaned (see section 8.1) the operator must check for worn, damaged or loose parts. If any such anomalies are discovered contact your Authorised Servicing Centre.

Should any of the above anomalies be discovered it is strictly forbidden to restart the machine before such faults have been set right.



More precisely, should the operator note any defects or problems of any kind whatsoever he/she must place a warning sign on the machine indicating that maintenance work is in progress and that using the machine is forbidden (EC-compliant signs can be purchased from the relevant suppliers).
Routine maintenance, cleaning and proper machine use are essential factors in guaranteeing long-lasting machine performance and safety.

Never use a naked flame to see what you are doing during checks or maintenance operations.



Machine safety devices/guards must never be removed except for repair and maintenance purposes. Such items must be replaced as soon as the situation which led to their removal no longer exists and in any case before the machine is used again.



UNSCHEDULED MAINTENANCE 8.3

Unscheduled maintenance (to be carried out by qualified, authorised personnel only) includes repairs of accidental breakages and replacement of worn or faulty parts.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ



All electrical and mechanical work must only be carried out by an authorised *Zhermack S.p.A.* maintenance technician.



Modifications which alter the machine characteristics from a safety and risk prevention viewpoint may only be made by the Manufacturer who shall then issue a certificate stating that the machine conforms to safety standards. Therefore any modification or maintenance tasks not actually described in this manual are to be considered forbidden. If the machine is modified, tampered with or repaired by unauthorised personnel or non-original spare parts are used the manufacturer is relieved of all responsibility. If a maintenance task is required but is not described in this manual you must contact an Authorised Servicing Centre.

8.4 RESTARTING AFTER A LONG PERIOD OF INACTIVITY

Should the ceramic oven be restarted after a particularly long period of disuse it is necessary to proceed as per the start-up instructions provided in Chap. 6.
Should malfunctions occur proceed as described in the section on “Diagnostics”; if the problem persists or is not listed contact an Authorised Assistance Centre immediately.

8.5 REQUESTING TECHNICAL ASSISTANCE

To obtain technical assistance choose one of the following options:
1. contact your Authorised Servicing Centre.
2. telephone the ***Zhermack S.p.A.*** Customer Assistance Service on the number **+39 0425.597.611** and proceed as follows: give personal data (e.g. address and telephone n.), state the information on the equipment ID plate (see paragraph 3.3) and explain the problem clearly.
3. fax all the above information and a properly filled out ID Form (see Appendix 2) to **+39 0425.53.596**.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

DECLARATION OF CONFORMITY CE A.1

The Manufacturer:

Zhermack S.p.A.
Via Bovazecchino, 100
45021 Badia Polesine • RO • Italy
Tel. +39 0425 597 611 • Fax +39 0425 53 596

Declares that:

ceramic oven
GIGA and **GIGA PRESS** series

are built and equipped, latest modifications included, in compliance with the following EC directives and all related national legislation:

Electromagnetic compatibility:
EC Directive 89/336 amended and integrated by EC directives 92/31, 93/68 and 93/97.

Low voltage:
EC Directive 73/23 amended and integrated by EC directive 93/68.

Machine safety:
EC Directives 98/37 (G.U. n° L207 - 23.07.1998).

Please note that manufacturer's liability for damages caused by a defective product expires 10 years from the date in which the manufacturer put such product on the market and that such liability is transferred to the user as stated in EC Directive 85/374.

Badia Polesine, 01/12/2004

Tiziano Busin
Managing Director

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

A.2 WARRANTY CERTIFICATE AND IDENTIFICATION FORM

1. This document certifies that the Manufacturer has built the product correctly using only top quality materials, carried out all the necessary tests and that the product complies with EC directives. This product Warranty is valid for 24-months as from date of delivery to the customer. Proof of such date shall be provided by a purchase document or the completed identification form. These documents must be handed over together with the equipment to the Servicing Centre. Persons wishing to make use of warranty coverage must make the fault known within eight days of its discovery as per Italian civil code art. 1495. Warranty cover is limited to replacement or repair of individual components or pieces with manufacturing defects and does not cover costs related to transfer of technical personnel, transport, packing etc. Breakdowns, faults or damages which derive from poor maintenance, incorrect power supply, negligence, inexperience and other causes not imputable to the Manufacturer and parts subject to normal wear are not covered by the Warranty. The Warranty does not cover breakdowns caused by failure to carry out routine maintenance or customer negligence.
This Warranty does not provide for any awards for direct or indirect damages of any kind caused to persons or things by any equipment inefficiency.
2. The Warranty is instantly rendered null and void if the equipment is repaired, modified or tampered with by the purchaser or any unauthorised third parties.
Responsibility for damages caused by defective products expires 10 years after the Manufacturer puts them on the market: after such time damages are the user's responsibility, as stated in EC Directive 85/374.
3. To have work carried out under Warranty the purchaser must only contact the retailer, the Manufacturer-authorised servicing centres, or the Manufacturer.
The Warranty entitles the purchaser to free replacement of defective parts. It does not entitle the purchaser to replacement of the entire equipment.
4. In the event of disputes over application of the Warranty, the quality or condition of the equipment, the purchaser shall not suspend payment or delay payment of the price or price instalment.
5. The purchaser shall not be entitled to damages for any loss of production.
6. The Warranty is rendered null and void if:
a. the equipment is damaged by a fall, exposed to fire, spilt liquids, lightning, natural disaster or any other cause not imputable to the Manufacturer.
b. installation has not been carried out properly.
c. power supply is incorrect (e.g. rated mains voltage incorrect). Erroneous mains connection (rated mains voltage incorrect), or failure to install proper protection devices.
d. the serial number has been removed, cancelled out or altered.
7. Any components to be replaced under the terms of the Warranty shall be sent back to ***Zhermack S.p.A.*** which shall then send the appropriate spare parts. Should the changed part not be replaced it shall be charged to the person who ordered it.
8. The Manufacturer and the Dental Deposit are not required to provide replacement equipments while repairs are carried out.
9. Spare parts shall, for tax purposes, only be provided under warranty where the relevant limitations set out in the terms and conditions of the warranty are observed.
10. For any other eventuality not provided for by this Warranty Certificate and the regulations consult the Italian Civil Code.
11. Labour, travel and call-out invoices must be paid for on their receipt.
12. The manufacturer and the dealer shall comply with all data processing laws, including proper observance of data security standards in compliance with the specifications given in the data processing information sheet.

IDENTIFICATION FORM

MACHINE MODEL: .....

MACHINE SERIAL NUMBER: .....

PURCHASER: .....

ADDRESS: .....

TOWN / POSTCODE: .....

TEL: .....

TAX CODE / VAT NUMBER RETAILER: .....

RETAILER: .....

PURCHASER'S SIGNATURE: .....

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

MAINTENANCE AND REPAIR WORKSHEET A.3

DATE	DESCRIPTION OF WORK	SIGNATURE

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

A.4 NOTES

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

stomdevice
www.tecnomedia.biz

Zhermack TECHNICAL

Zhermack S.p.A. - Via Bovazecchino, 100
45021 Badia Polesine (Rovigo) Italy
Tel. +39 0425 597 611 - www.zhermack.com

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ