

Shenpaz
Dental Furnaces

GEMINI^{LT}

GEMINI^{LT}
PRESS



USER MANUAL

Gemini LT / Gemini LT PRESS

Warning

ATTENTION!

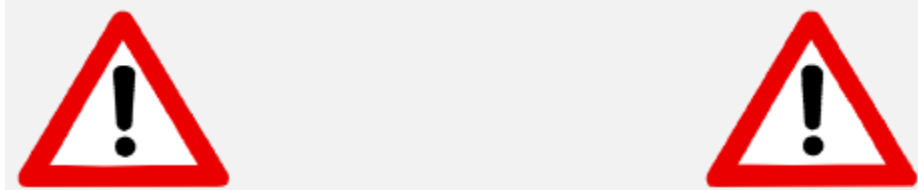


You have available one of the most precise dental ceramic furnaces equipped with a heating muffle made of quartz glass or ATC from the original manufacturer of this technology with an experience of more than 30 years.

IN ORDER TO PRESERVE THIS PRECISION AT ALL TIMES, PLEASE BE SURE TO ATTENTIVELY READ THE FOLLOWING INSTRUCTIONS PRIOR TO USING THE FURNACE!

- Prior to carrying out maintenance work on the furnace or in case of mechanical failure, firstly be sure to completely shut down the device. To do so, switch the main switch (POWER) on the back of the furnace to OFF and pull the power-supply plug.
- Only qualified technicians and experts recommended by the furnace supplier should open the furnace.
- All pumps connected to the furnace and those which may have been supplied by the manufacturer or by other suppliers must be marked with the CE symbol. ,doubt of case In .supplier consult your furnace
- Be sure to only use ceramics and alloys that are specifically provided for use in dental firing or pressing furnaces.
- Certain parts of the furnace may run very hot during operation. Be sure to use the complimentary supplied tweezers.
- Do not attempt to open the furnaces without authorization since this will void the guarantee. For any necessary repair and maintenance work, consult your Shenpaz device servicing center.
- In case of a necessary replacement of fuses, proceed as follows:
 - 1) Pull the power-supply plug.
 - 2) .fuse Replace the
 - 3) Be sure the correct safety fuse parameter is indicated on the spare fuse.

- In case of an external power failure and when the furnace is in operation, proceed as follows:
 - 1) Pull the power-supply plug.
 - 2) Lower the support. To do so, insert the supplied crank into the hexagonal screw on the back of the furnace.



ATTENTION!

When operating the furnace a Ceramic table or pressure table must always be on the lift tray!



ATTENTION!

Take out the furnace with both hands. To do so, hold the bottom of the furnace with one hand and the top side with the other hand.

ATTENTION!

Do not pull out the furnace by its support in order to avoid damages.

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Dear customer,

During the transport the heating muffle and the firing ceramic table absorbs moisture. Therefore, the following measures have to be taken prior to starting up the furnace for the first time:

Install the furnace in accordance with the information provided in the working instructions and place the ceramic table onto the lift tray. Enter the program #199:

PROGRAM No. 199

Start Temp: 400°C

Heat Rate: 40°C/min.

High Temp. 950°C

Temp delay: 1 min.

(without vacuum)

Start the program and let it run 3 to 4 times in a row to dry the heating muffle. Only after the drying process is completed, the furnace is ready for operation. Any non-compliance may result in damage to the furnace and the pump and might cause insufficient firing results.

Installation

Unpacking:

Check the packaging of the furnace for any visible damage.

Check whether all components are present by means of the listing below:

- Table Ceramic 2
- Power cord
- hose Pump
- 8A fuse 230v 15A fuse for 100/115v(for the heating)
- 5A fuse 230v 6.3A fuse for 100/115v (for the pump)
- Instruction manual
- Tweezers
- wrench Emergency 6 mm

Additional Components of Gemini LT Press :

- Table Pressure
- Cylinder press system, including 2 ShenPaz bases, 2 dies plunger and 2 e-base (compatible to e.max)

Note: The packaging was especially designed for proper handling of the furnace and transport safety, we strongly recommend keeping the original packaging for future transportation purpose.

Setting Up:

Place the furnace on a leveled surface and keep a distance of at least 10 cm from the wall. Keep combustible objects away from the furnace. Do not expose the furnace to direct sunlight in order to avoid possible damages to the LCD display. Protect the furnace from strong air circulation (such as ventilators), since this may result in fluctuations of the temperature display when opening the programs chamber.

Power Supply:

Connect the furnace to a grounded power socket. Be sure the parameters are in conformity with the electrical specifications of the Gemini LT /Gemini LT Press model.

- ***Your furnace is equipped with the latest software recovery system. In case of electrical shut down, your cycle will fully be recovered within a temperature decrease not exceeding 150°C/302°F degrees. For a temperature decrease more than this value, the cycle will be aborted to avoid unnecessary firing.***

Vacuum Pump:

Connect the power-supply plug and vacuum tube to the furnace.

Compressed Air: available only in press

Connect the furnace to a compressed-air system by means of a compressed-air tube. The maximum in-feed pressure should not exceed 8-10 bar. In order to avoid damages on the furnace, the compressed air must be absolutely dry.

Switches and Keys

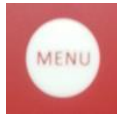
Overview of furnace panel



Master Switch:

The master switch is at the back of the furnace. Turn switch ON. An audio signal will be heard.

MENU –



Press **Menu** to switch on the furnace. The program overview display window will appear and furnace is in Standby mode.

Pressing twice on the same button will bring you to the menu setup.

IMPORTANT NOTE:

The furnace must never be heated without its ceramic table or pressing table in place!

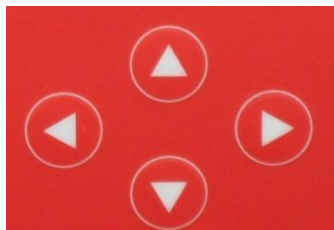
Numeric Keys



These keys are used to enter parameters, program numbers to be selected, program names and to directly select single menu sub-entries.

Arrow Keys

The Arrow keys are used for different purposes depending in which screen appears on the display.



- Control of lift in diagnostic menu,
Menu accessed by pressing
2numeric key +PF *Choose left or right working table with
lateral arrow. Movement of the lifts (long
press on up or down arrow)*
- In the program overview display window: *Selection of parameters to be entered or
to be modified (short press on up down
(arrows*
- On the display, "Program List": *Selection of desired program*
- :screens In different *entries-Selection of sub*
- screen In main *Navigate to Setup (left) or Options (right)*

Press Left or Right arrow key to go back to the main menu from setup or options.

Cycle Key (left or right)



There are 2 cycle keys, one for each working table.

Press this key to start the selected program on the relevant side.

STOP Key



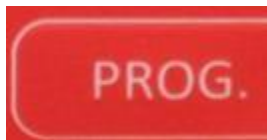
Press this key twice to abort the currently running program (safety query). The firing chamber
.opens up

HoldKey



- Press this key to intervene in a currently running program. This function ("Hold" key) is used to modify a currently running program. The forthcoming parameters in the current program will be changed temporally. The original saved program remains unchanged
:Proceed as follows
 1. Press the **HOLD** key (the program is interrupted)
 2. Press the **arrow** and **numeric keys** to modify the program parameters.
 3. Press **the ENTER** key to confirm.
 4. Press this key again to resume the program.
- While the cycle is called but not running: Press this key in the operation mode to call up the Name Editor.

Program Key



There are two **PROG** keys on the front panel, one for each working table.

This key is used to select a program number for the respective working table; after pressing the **PROG.** key; press the numeric key(s) to select the program number; confirm by pressing the **ENTER** key.

The list and the chosen program will appear automatically after pressing "prog+XXX".

Switching to Graphic Diagram and return to parameter screen



Press this key to switch the display into a graphic diagram. Pressing a second time will return the display to the parameters screen.

Pre Functions –PF



- Press this key in standby mode to activate the diagnosis mode.

Night Mode

In order to considerably extend the life of the heating, keep a constant temperature of 100°C.

There are two methods to start the night mode:

1. Start the program "0" to activate the "normal Night Mode".
2. The "automatic Night Mode" will start only when a program is running, if the **Cycle** key is pressed when said program is running. Press the **Cycle** key for a second time will deactivate the "automatic Night Mode".

Functions , Displays and Programming

Program Overview Display Window

This display is divided up in different sections and two different colors.

The dark blue background represents all parameters and status of the left swivel work table.

The white background represents all parameters and status of the right swivel working table.

For example, refer to the below screen shots:

The status section is on the left side of the display and shows the respectively current status of the program for the left working table (upper part) and the program for right working (lower part)

The top left side of the display indicates the program number for the left swivel working table is 20, the name of the program and time.

In the middle, the real status of the running program (dark blue or white according to which table is working).

The lower left side of the display indicates the program number for the right swivel working table is 21, the name of the program and time.

All parameters of the program are displayed on the right display page. The right side of this screen is used to enter and edit programs.

In dark blue while programming Left Program.

In Inverse mode white while programming Right Program.



The Vacuum value for each parameter will appear on the middle left section VAC. (if the vacuum is not preset)

The vacuum parameters are displayed in the center of the display:

ON-OFF-DELAY-LEVEL

Graphic Representation

This picture shows a graphic representation of the currently running program and its parameters.



Modes

- Program number 199 Should be set, Preheat mode used for extracting the moisture from the muffle and drying of the muffle.
- On Gemini LT, the program number 1 -199 are available for the "programming".

Choice of Programs and Starting the Program

Press the **PROG** key on the chosen side to access the pre-stored list. By using the arrow keys, you can navigate through the list or press directly the program numbers by means of the numeric keys.

Press **ENTER** to confirm your selection.

Press the **CYCLE** key on the chosen side to start the program. The word CYC will appear in inverse color while work is in cycle.

Once the program is completed, the firing chamber opens up and an audio signal is heard. The current program will end a few seconds later.

If another program is programmed for the other working table, it will begin automatically after reaching to the Low temp of the new program.

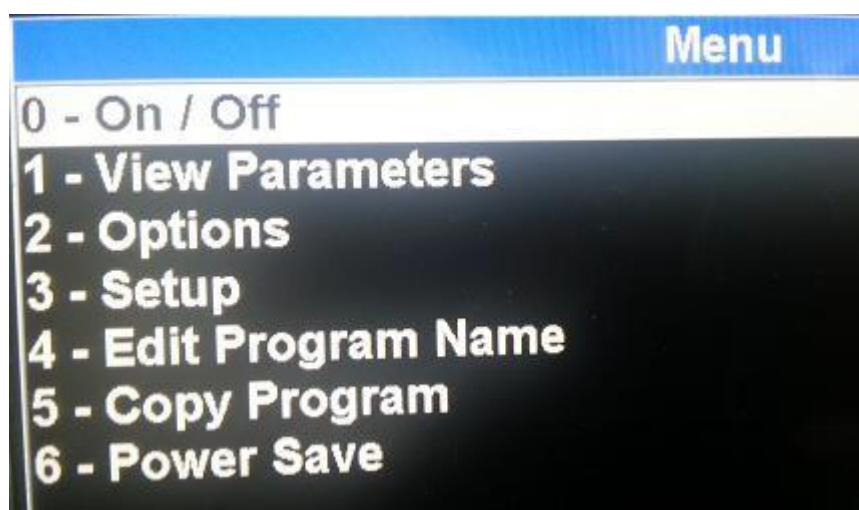
Pre-heating Program

Important note:

During transportation, storage and non-use, the isolation material of the muffle may absorb humidity. In order to avoid damages to the vacuum and heating system and in order to always obtain repeatable quality firing results, it is recommended that the user run the pre-heating program (program digit 1) at the beginning of such periods. This is always recommended if the furnace has been completely cooled down after operation

Menu Functions

To access the MENU, use the [Menu key](#). There are 6 sub-entries:



Use numeric keys to make a selection.

0. TURN OFF THE FURNACE TO LOGO

press "0" "ent" to go to the Logo screen without turning off the furnace from the main switch

1. VIEW CURRENT PROGRAMS

This function allows you to view also the program parameter, one by one in addition to the direct access to the parameters from the main screen with the arrow down and up.

2. OPTIONS

Allow you to configure your furnace default parameters, C°/F°/mmHg/Mbar/HPa, calibration adjustment, pump cooling, Language, time to graph, 11 parameters or 13 parameters, vacuum level preset.

* if the value of the vacuum is preset they will not appear on the parameters screen.

By changing options in this screen, display configurations will automatically appear depending on option selected.

NOTE: Functionally the entered program will perform as intended; the only difference is visual on the screen display.

The following 4 screen samples are the only display configurations possible in the furnace.

11 Parameters without Vacuum preset

Parameters (Left)			
Prog.	- - -	L	Stop
Time	00:00		
Temp.	0284 °C		
Vac.	000 mmHg		
Prog.	000	R	Stop
Time	00:00		
Start Temp	300 °C		
Up Time	00:00		
Dry Time	00:00		
Heat Rate	0		
V.On V.Off V.Delay V.Level			
High Temp	0 °C		
Temp Delay	00:00		
Cool Time	00:00		

12 Parameters with vacuum preset

Parameters (Left)			
Prog.	199	L	Stop
Time	00:00		
Temp.	0561 °C		
Vac.	000 mmHg		
Prog.	199	R	Stop
Time	00:00		
Start Temp	450 °C		
Up Time	00:00		
Dry Time	00:00		
Heat Rate	100		
V.On V.Off V.Delay			
High Temp	900 °C		
Temp Delay	01:00		
Final Temp	0 °C		
Final Delay	00:00		
Cool Time	00:20		

13 Parameters without vacuum preset:

Parameters (Left)			
Prog.	199	L	Stop
Time	00:00		
Temp.	0514 °C		
Vac.	000 mmHg		
Prog.	199	R	Stop
Time	00:00		
Start Temp	450 °C		
Up Time	00:00		
Dry Time	00:00		
Heat Rate	100		
V.On V.Off V.Delay V.Level			
High Temp	900 °C		
Temp Delay	01:00		
Final Temp	0 °C		
Final Delay	00:00		
Cool Time	00:20		

10 Parameters with Vacuum preset

Standby(parameters) Right			
Prog. 179	L	Stop	
Time 00:00			
Temp. 0689°F			
Vac. 720 mmHg			
Prog. 250	R	Cycle	
Time 14:38			
Remarks: min:212, max:1472			
Start Temp	950 °F		
Dry Time	00:00		
Pre Heat	00:00		
Heat Rate	90 Deg/min		
V.On	950 °F		
V.Off	1616 °F		
V.Hold	00:00		
High Temp	1616 °F		
Temp Hold	01:00		
Cool Time	00:20		

See next section

3. SETUP MENU



- rate Heat & Final temp

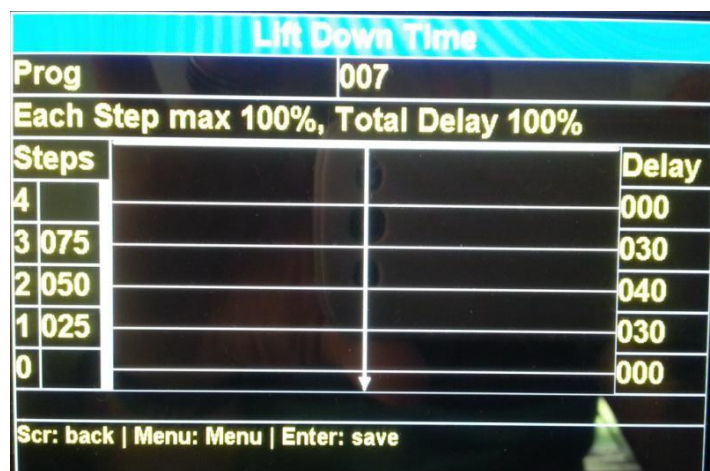
Details Setup screen for lift:

1. *Lift Positions – Closing* (program-specific)

LIFT UP TIME

	Selection of lift parameters when closing. Press the arrow keys , numeric keys and ENTER to edit. The respective lift path is edited in the left column, whereas the halt periods are edited in % in the right column (relative to the complete “lift closed” time of .(the respective program
--	--

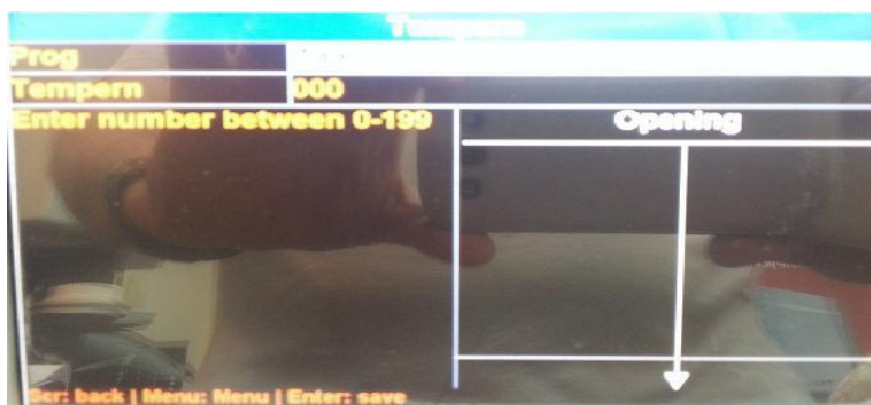
2. Lift Positions – Opening (program-specific)



Selection of lift parameters when opening.

Press the **arrow keys**, **numeric keys** and **ENTER** to edit. The respective lift path is edited in the left column, whereas the halt periods are edited in % in the right column (relative to the complete "lift open" time of the .(respective program

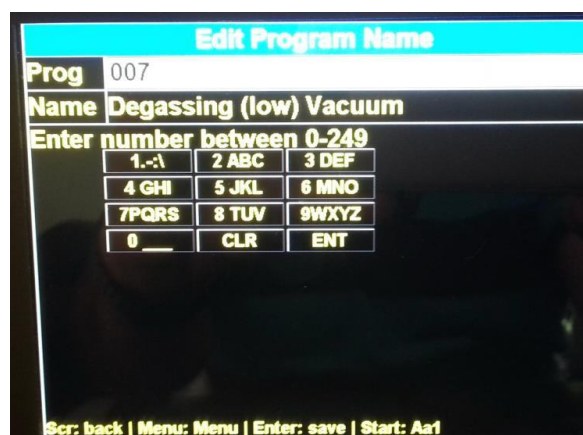
3-Tempering: opening of the table for every cycle



Preset of closing and opening of every program can be set in this section also, follow the info on the screen:

Navigate with the arrows, write the new value within the limit and save

4- EDITING THE PROGRAM NAME



In order to edit the program name, press **number "5" + ENT** in the menu

Entering a new program name by means of the Numeric keys. To switch the numbers on the screen to corresponding letter, use the **up/down arrows**. The Numeric keys will correspond to the letters that appear on the display screen.

Editing an existing program name, using the **right/left arrows** selects the place to edit.

The cursor shifts position by means of the **arrow keys**.

The **Left CYCLE** key is used to shift between the upper and lower case.

Editing the Program Contents

1. Press the **arrow keys** to select the characters.
2. Press the **numeric keys** to enter the characters.
3. To edit further characters, follow the steps 1 and 2 above.
4. .confirm to **ENTER** Press

5. COPY PROGRAMS

to copy program from one to another follow the instruction on the screen press enter
all the program with the name and all the parameter will be copied

6. POWER SAVE:

The Temperature will be reached after the time preset and the door will be closing to maintain temperature in the furnace close

7. ONLY FOR GEMINI LT PRESS VERSION

The Gemini LT Press is a press able version of the Gemini LT.

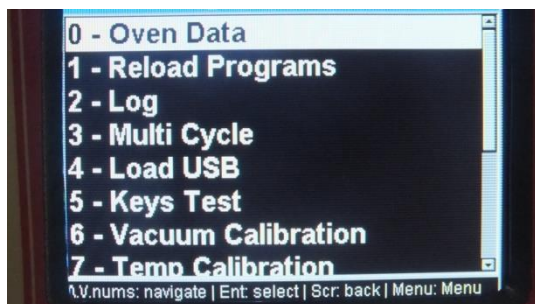
The programs from 200 to 249 can be programmed for press cycle.

ShenPaz is supplying a full into kit of pressing cylinder and plunger according to all ingots on the market.

The press cycle can be programmed easily with 6 parameters

- 1- Start Temp
- 2- Heat Rate
- 3- High Temp
- 4- Temp delay
- 5- Press Delay
- 6- Cooling Time

Shenpaz latest technologies of pressing, is adapted to all type of ingots and will stop automatically pressing while the cylinder is full. To cancel this function pres PF button before starting the cycle, the "PF writing will disappear from the screen. The change is permanent until the user will change it again , (this function is per program)



Pressing Steps

In the parameter screen, when the Press delay is high light and a program is chosen, you can enter this setup automatically by pressing the Right Arrow Key.



Unique to Gemini LT Press, it is incorporated with a pressure method that heightens the homogeneity of compressed ceramics which minimizes the risk of muffle cracking or damage.

The amount of pressure applied is reduced and subsequently increased in regular intervals during the pressing procedure.

To individually define these interval steps, if needed:

Use the "down" [arrow key](#) and enter value with [numeric keys](#) (units in seconds), the "Right" arrow key to "close" valve.

Press accessories

1- Press Kit



2- 1 press tube



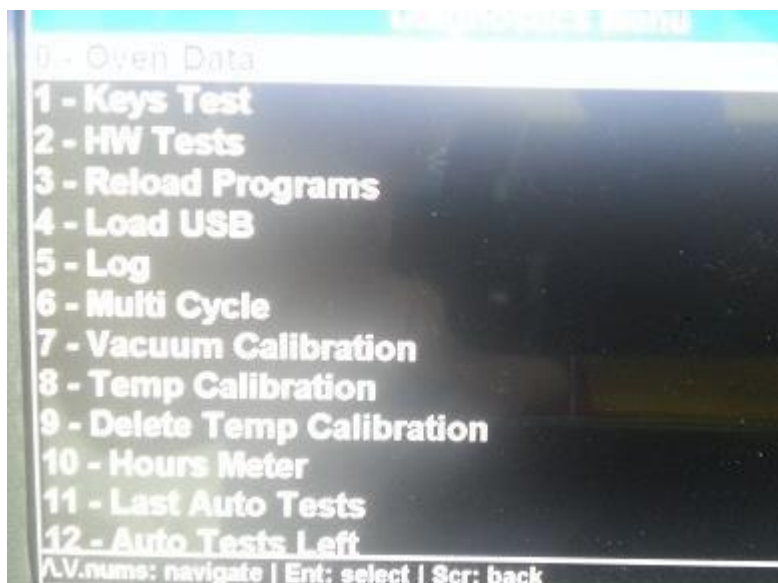
3- 1 Table Press



Options Menu/Diagnosis

Press the PF button from the logo screen to call up the diagnosis menu. (the furnace name is shown in the display).

Press the respective numeric key to call up the desired function.



Overview display window with the diagnosis tools available for selection by choosing the number and press "ent" button you choose the relevant screen

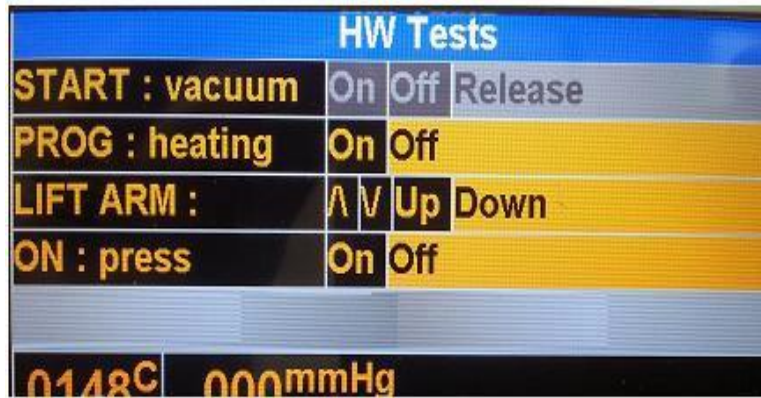
0/Oven Data



This is to show the basic data of the furnace. These data show important notes in case of a possible failure or error. Moreover, the software version as well as the calibration values will appear.



Hardware Test /2



This is to check the individual components. Press the ON key to test the press die. The amount of pressure applied (in bar) appears on the line below. Press start to start/stop/release vacuum. For the rest follow the instruction on the screen

Restoring all Programs /3

The programs and setting data including the lift parameters set by the manufacturer will be restored again, if they have been changed during operation. To do so, press the **numeric key 1+ENT** in the diagnosis menu. The preset default programs will be restored after a few minutes.

Warning! *This operation will erase the program into the furnace*

4/ Load USB: only for technician purpose

5 Log

6/ Multi cycle: only for technician purpose

7/ Vacuum Calibration

This is a servicing function which should exclusively be carried out by a device expert only.

Warning! *This operation will erase the calibration of the furnace*

8/ Temperature Calibration

This is a servicing function which should exclusively be carried out by a device expert only.

Warning! *This operation will erase the calibration of the furnace*

9/ Delete Temp calibration: only for technician purpose

Warning! *This operation will erase the previous calibration of the furnace*

Hours meters /10

Hours Meter			
Action			
Total hours in 100c	25	:	55
Total hours in 300c	21	:	6
Total hours in 600c	0	:	3
Total hours in 900c	0	:	3
Total hours in 1000c	0	:	3

In this screen you can follow the utilization of your muffle. It is recommended to replace your muffle every 3000 Hour working cycle above 600 degrees.

11/ Last auto test: only for technician purpose

12/ Auto test left: only for technician purpose

12/ Auto test right: only for technician purpose

Technical Data

:General

Dimensions	; (H)mm 680mm x 450mm x 450
Muffle chamber	"2.6x "3.7Ø ;mm 60mm x 95Ø
Combustion Table	"3.5Ø ;mm 90Ø
Net Weight	lbs 89 /Kg 35
Heating Speed	230 V from 10 to 100 ° C/ 50-212°F 115V from 10 to 100 ° C/50-212°F
Pump capacity	A 5 v230 A6.3 v115/100
Mains voltage	Hz 50/60W 1750V 230 Hz 50/60W 1100V 115
Vacuum Level	Up to 980 mbar Up to 740 mmHg
Time	In Min and Sec mm:ss
Temperature	Range 100 ° to 1180 ° C; 112° to 2156°F

Transportation and storing conditions

Temperature	°F104° to 32 ;C°40 ot C°0
Relative air humidity	humidity .rel % 100Less than

Operating condition

Temperature	°F104 /C°40 ot C°10
Air Humidity	80 % rel. Humidity up to 31 °C / 88°F

Putting out of Commission and Disposal



For an environmental-friendly disposal, please bring this device to a recycling collection point for metal and electronic products or return it to the manufacturer.

Distribution and Technical Service



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Version: 01

Technical and visual amendments reserved. Shenpaz 11/05/13

Drawing up of Instruction Manual: 05/2013

This device has been developed for its use in the dental scope and should be used as described in the instruction manual. The manufacturer will not accept any liability for damages resulting from any other use than described in this manual or resulting from misuse or abuse. Moreover, it is the user's responsibility to check the device on his own responsibility on its suitability and its possible use for the intended purposes prior to its use, above all if said purposes are not described in the instruction manual. This will also apply if the device will be used in combination with products from competitors.

[illegible]