

**OPERATION INSTRUCTIONS FOR THE PRELIMINARY  
TREATMENT FURNACE DENTAMATIC 6000-M**



Dentamatic 6000 Burnout Furnace with a muffle of ceramic fiber insulation can withstand extremely high temperature without damage. The heating element has quartz-protected tubes (like a vacuum furnaces for ceramic restorations).

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## I. TECHNICAL DATA

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### **ELECTRICAL:**

- power supply 200÷240V/50÷60Hz;
- power peak consumption 2000 W;

### **MECHANICAL:**

- Heating chamber dimensions:  
height 160/ width 160/ depth 200mm;
- Overall furnace dimensions:  
height 395/ width 300/ depth 365mm;
- weight 17 kg.

### **IMPORTANT FEATURES:**

- maximum temperature 1100°C;
- temperature speed - up to 100 °C/min;
- 4 temperature levels;
- programmable STANDBY temperature;
- delayed start - up to 24 hours;
- numbers of programs - 100 pre-programmable;
- average volume /number of rings/: 4-8;
- sound;
- computer controlled ventilation of chamber;
- no relays, 6-digit display and many more;
- platinum thermocouple;
- protection against interruptions in power supply, thermo-couple malfunction, open door .

### **TECHNICAL LIMITATIONS:**

- max time of steps 9:59 hours;
- min time of steps for steps is 1 min;
- min step for temperature is 1 °C;

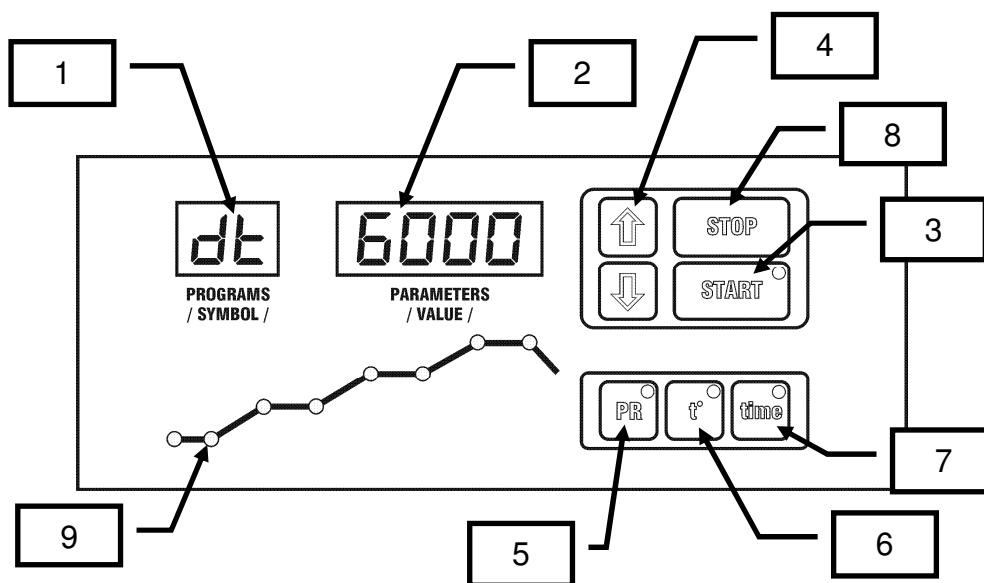
### **ENVIRONMENTAL:**

- Storage temperature: 1°C ÷ 50°C;
- Operation temperature: 10°C ÷ 50°C.



*You may use ventilation electrical motor up to 300W. Switching in and switching off of the fan is programmed in the program.*

## II. CONTROLS AND INDICATORS



### 1. Left digital display – two digits. It serves to display:

- the number of the selected program (00-99);
- the selected parameter during programming:
  - °C - temperature of the particular temperature level (indicated by the LED graph);
  - t[n] – Current selected time segment (n varies from 0 to 6).
- indicate what is shown on the right display, during program program execution:
  - °C – the temperature in the chamber;
  - Hr – remaining time in hours and minutes

### 2. Right digital display - four digits. It serves to display:

- remaining time to the end of the program;
- current temperature in the chamber;
- value of the selected parameter (temperature or time);
- text messages such as (Pro, STBY, END, STRT, STOP, etc.).

**3. START button.** It serves to start the current selected program. Prior to depressing this button make sure that the door is well closed.

**4. Arrows buttons.** These buttons are used to change currently selected program or the value of currently selected parameter.

**5. PR button.** With this button programming mode can be activated.

**6. t°- button.** This button can be used for:

- to show current temperature on the display during stand-by or program execution mode;
- to cycle the selected temperature level, during programming;

**7. TIME - button.** It serves to:

- to show remaining time during program execution;
- to cycle the selected time segment, during programming;

**8. STOP button.**

- pressing STOP button during program execution will terminate the program;
- while in programming mode, pressing the STOP button will put the furnace in stand-by mode;

**9. Program graph.**

- during program execution, shows the advance;
- in programming mode, shows currently selected parameter (temperature level or time segment).

### III. USING THE FURNACE

#### 1. Powering on.

When the furnace power supply is turned on, an initial checks will be performed. Message "dt 6000" is shown on the displays. After a second, on the left display will appear the number of the currently selected program. On the right display – message "Pro". After another second, the furnace will enter in stand-by mode.

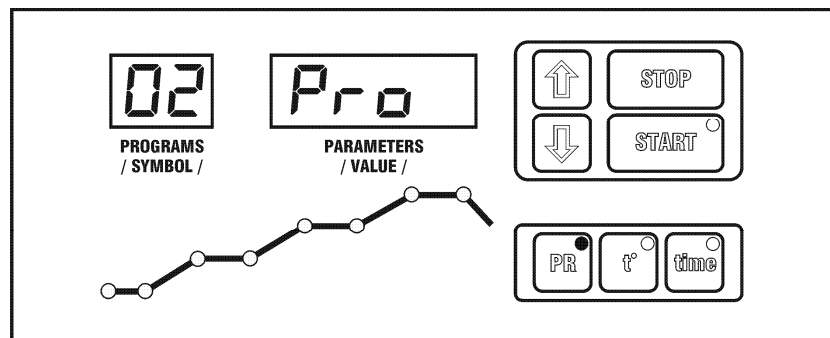
In stand-by mode, the furnace will maintain the temperature, entered in the first temperature level of the selected program.

Using the **t°** button the current temperature can be displayed on the right display. It will be displayed for 5 seconds and then the text **Stby** will reappear.

Pressing the button "START" will always start currently selected program. Pressing the button "STOP" will always stop the program execution or will exit from programming mode and will return to stand-by" mode.

#### 2. Programming.

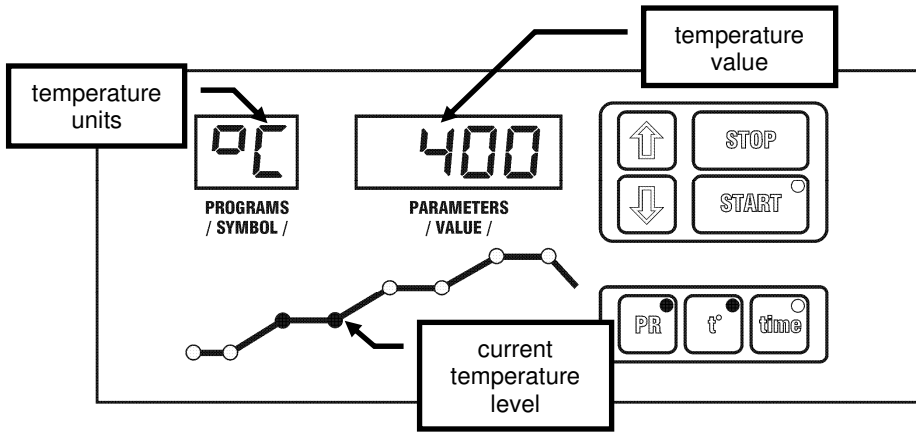
To select another program, from stand-by mode press button "PR". The LED on the button will light up. On the left display will appear the number of the selected program. On the right – message "Pro".



Use the arrows buttons to change the program number.

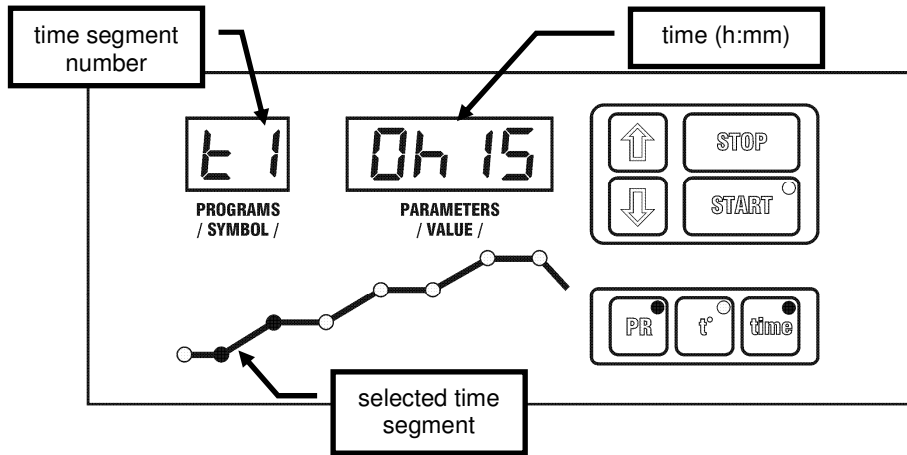
To edit program's parameters, press button **t°** or button **time**.

Sequential pressing of the button **t°** will cycle the four temperature levels of the program.



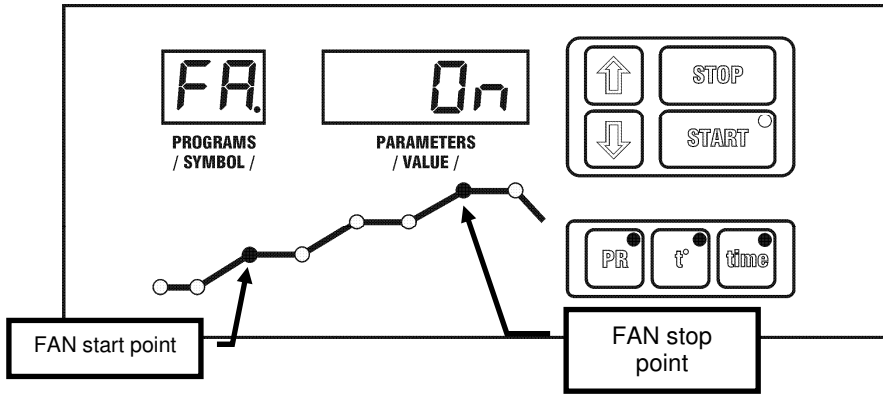
With buttons arrows, parameter's value can be changed.

Pressing the button time will cycle the seven time segments.



The time format of the first segment is always in hours (0 to 24h). It can be used to delay the program execution. For all other segments, the time format is h:mm (from 0:00 to 9:59). The time of the unused segments must be left 0:00.

By pressing both **t°** and **time** buttons simultaneously, FAN output can be programmed.



Fan start point can be moved by arrow down button, fan stop point is moved by arrow up button.

The left decimal dot on the left display, during program editing will indicate, that program change has occurred.

Exit from programming mode can be done by pressing button **PR / STOP** or button **START** (to directly start the program).

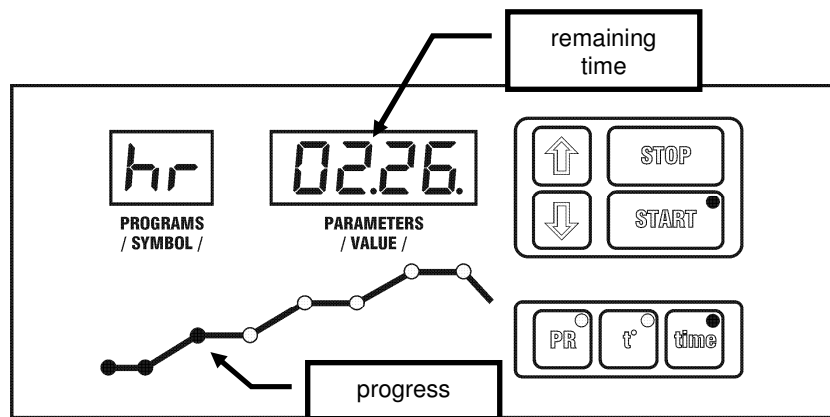
**Note: Program's changes are always automatically stored.**

### 3. Program execution.

Pressing the button "**START**" will start currently selected program.

The right digital display will show remaining time.





The program graph will visualize the progress.

Pressing the **button t°** will show current temperature on the display. Pressing **button time** will return the remaining time on the display.

If the time for the current segment is over, before desired temperature is reached, the step is automatically prolonged until the desired temperature has been reached. The LED on the program graph will flash to indicate this situation.



*During the program execution, it is undesirable to open the furnace since that will most likely damage the detail being treated. When the furnace is opened the heaters are automatically turned off. After closing the program will continue automatically.*

When there is a heater activity, most left decimal dot on the right display will flash.

Two minutes before program completion, warning sound signal from the furnace can be heard. Upon completion, the furnace will enter in stand-by mode.



*In case of power cut, during program execution, the furnace will continue the program execution, after power is restored. The program will continue from the beginning of the step to which the furnace has cooled. Upon program completion, message "Ac FA IL" will be displayed, to indicate that power loss has occurred during program execution.*

#### IV. MESSAGES

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1. **STBY** – **standby** – the furnace is in STBY mode. The furnace will maintain the temperature of the first temperature level of the selected program.
2. **OPEN** – the door is open during stand-by mode.
3. **CLDS** – displayed when the door is opened during the execution of a program. The heaters are turned off and closure of the door is expected.
4. **STOP** – displayed when the STOP button has been pressed.
5. **End** – displayed at the completion of the program. Accompanied with 5 sound signals in 1-second intervals.
6. **ERRS** – displayed when a thermo-couple sensor has been broken. The further work of the heaters is blocked. Change of the thermocouple is necessary.
7. **AC FAIL** – power loss has occurred during program execution. Displayed upon program completion.
10. **HI T°** – High temperature. Displayed upon program start, when the temperature in the furnace is higher than the first temperature in the program. The program will continue, after the temperature in the chamber drop below first used temperature level. Pressing the button START again will force the program execution.

## V. TROUBLESHOOTING

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**There is heater activity indication, but the temperature doesn't change.**

*Probably heater is damaged.*

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**The messages "OPEN" / "CLOSE" are constantly displayed or "CLOSE" appears during program execution (while the doors is closed).**

*Door position sense switch needs adjustment or replacement.*

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**On turn on, the display stay dark.**

*Probably the computer board is damaged. (Only for technical specialists: check the PCB transformer).*

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**On turn on, the display continuously flashes.**

*Probably mains voltage is too low for proper operation.*

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**We wish you pleasant and successful work with DENTAMATIC 6000-M!**

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