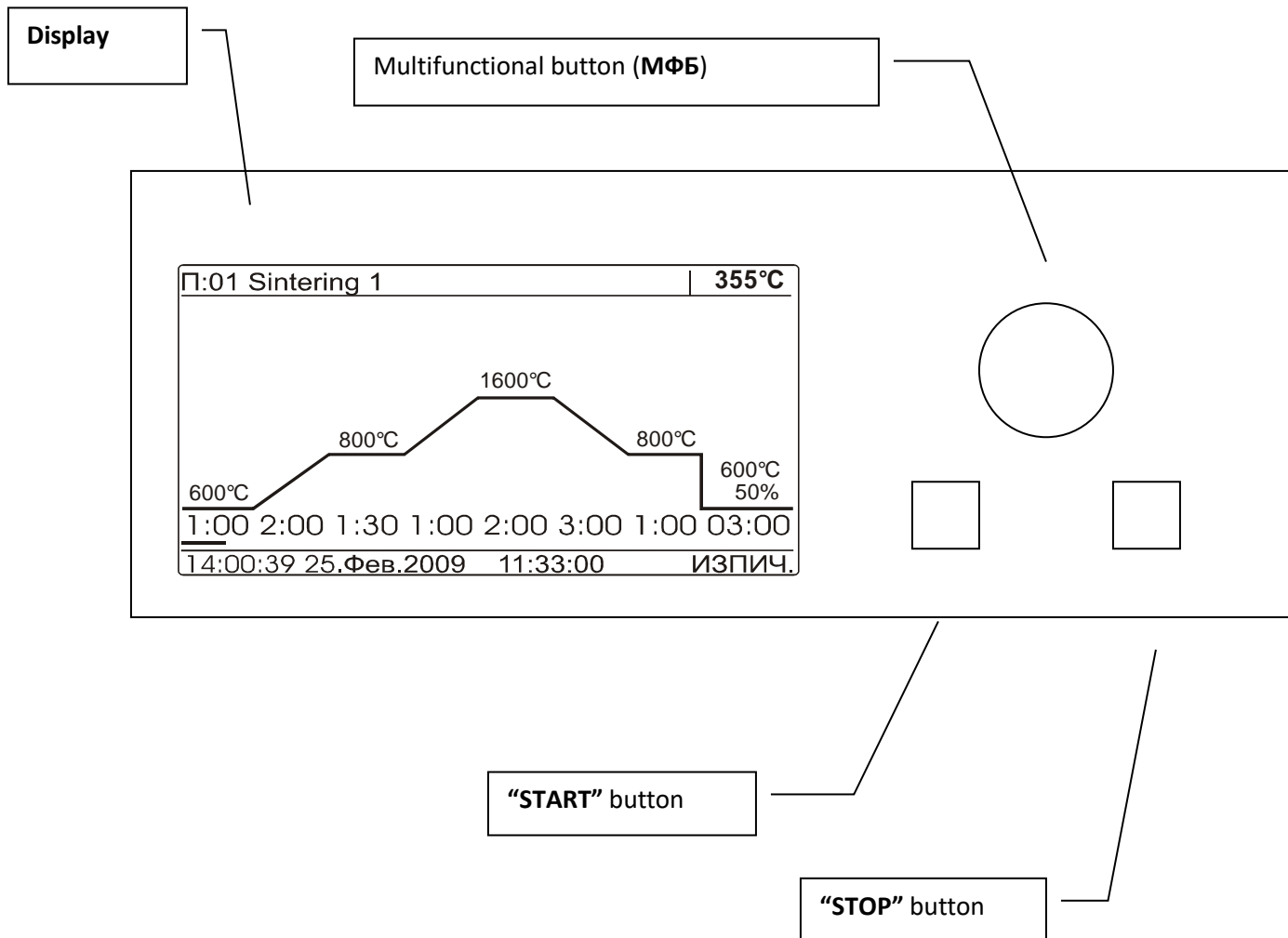


DENTAMATIC 500 HT SINTERING FURNACE

OPERATION MANUAL

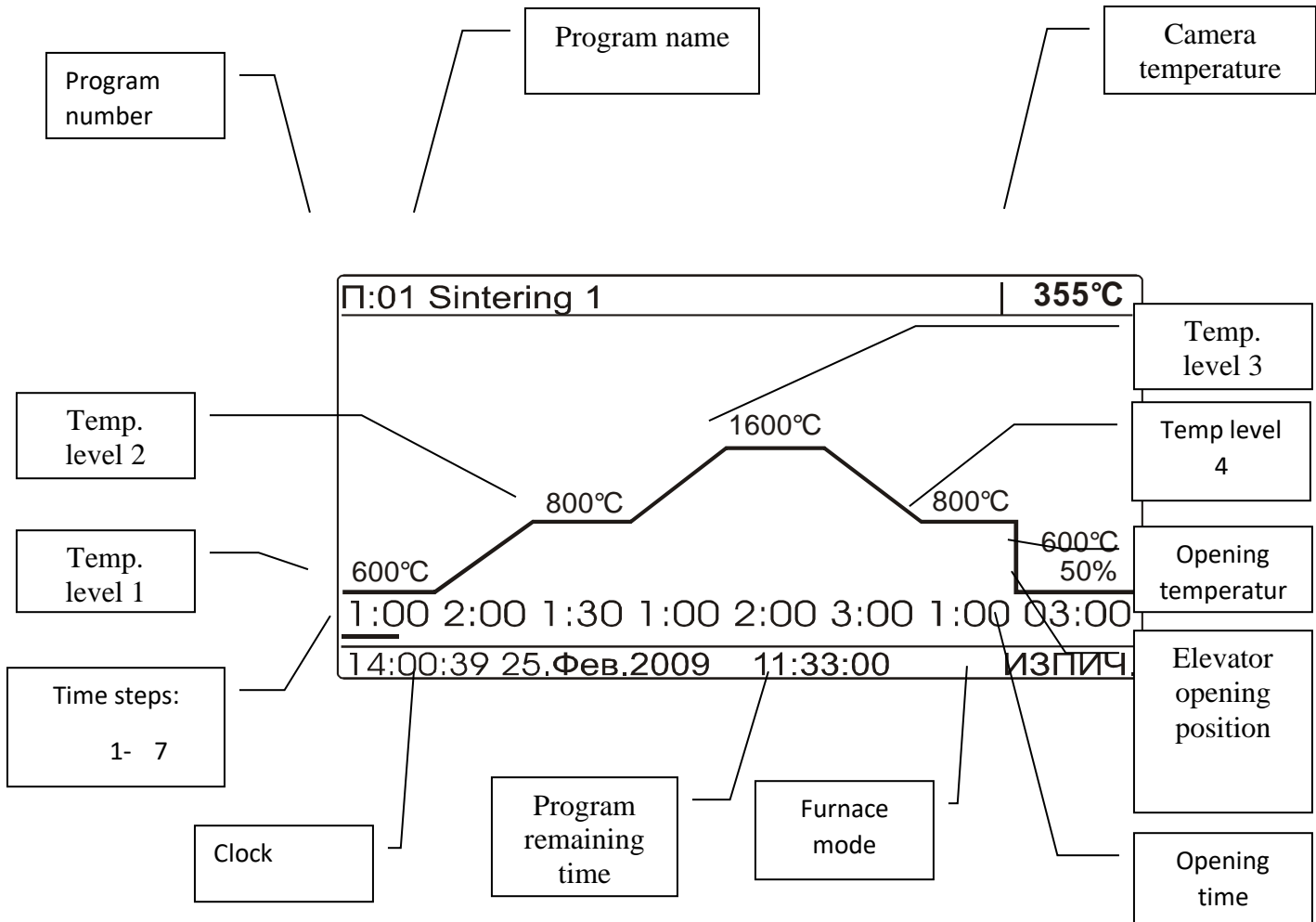


1.Interface



Controlling of the furnace is executed via buttons "START", "STOP" and rotary multifunctional button (MFB).

The display shows the current state of the furnace, camera temperature, number and name of the current program, program parameters ext.



2. Programs.

The furnace stores 100 programs parameters numbered from 0 to 99. Every program consists the following parameters:

Name	Dimension	Value	Note
Program name			
Temperature level 1	C/F	10 C – 1600 C	Temp. level 1 will be used if Time 1 and/or Time 2 input value is different than 0

Temperature level 2	C/F	10 C – 1600 C	Temp. level 2 will be used if Time 2 and/or Time 3 input value is different than 0
Temperature level 3	C/F	10 C – 1600 C	Temp. level 3 will be used if Time 4 and/or Time 5 input value is different than 0
Temperature level 4	C/F	10 C – 1600 C	Temp. level 4 will be used if Time 6 and/or Time 7 input value is different than 0
Time 1	H:MM	0:00 – 9:59	Temperature level hold time
Time 2	H:MM	0:00 – 9:59	Time for transition from temperature level 1 to temperature level 2
Time 3	H:MM	0:00 – 9:59	Time for hold on temperature level 2
Time 4	H:MM	0:00 – 9:59	Time for transition from the previous temperature level to temperature level 3
Time 5	H:MM	0:00 – 9:59	Time for hold on temperature level 3
Time 6	H:MM	0:00 – 9:59	Time for transition from previous temperature level to temperature level 4
Time 7	H:MM	0:00 – 9:59	Time for hold on temperature level 4
Door opening time	MM:SS	00:00 – 99:59	Time before door opening
Opening position	%	0% - open 100% - closed	Position to which the door will open after the program finish
Opening temperature	C/F	10 C – 800 C	Door opening temperature (program end)

3.Furnace modes

3.1. STOP

This is the normal mode after powering up. Down-Right corner of the display indicates “STOP”.

The current program can be changed at this stage by rotating MFB. When MFB is pushed the current program can be modified. When the MFB button is pressed and hold for 2 seconds the menu “Settings and Information” will be launched.

The elevator can be controlled by the button “STOP”:

- Press and hold the “STOP” button for the elevator to start in the opposite direction of the previous one;
- Press short the button “STOP” to stop the elevator movement.

Press the “START” button to start the furnace under the current program.

3.2. Program modification

In this mode by rotating MFB changes the parameter (blinking cursor is occurring).

Temperature value changes with 10 degrees, time values 1 hour (except “Opening time” which changes with 1 min value), second pressing of MFB changes the temperature value with 1 degree (except “Opening time” – 1 sec). The input value will be confirmed with another pressing of the MFB or cancelled by pressing the button “STOP”.

When changing the program name, first rotate the MFB to change the cursor position. When MFB is pressed enters the symbol changing regime (the display shows a table with input symbols). By rotating the MFB changes the desired value and pressing the MFB confirms it. By the “STOP” button the symbol changing is cancelled. “START” button deletes the symbols.

Exit from this mode is executed by the button “STOP”.

3.3. Menu “Settings and Information”

This menu has the following options:

- Temperature values – setting of the furnace temperature values (C/F).
- Display brightness – by rotating the MFB display brightness intensity changes.
- Display off – number of minutes before the display switches off (screensaver activation). When the 0 value is set this function is deactivated.
- Sound – on/off sound signalization.
- Date and hour – clock setting.
- Cycles count – cycles number counter.
- Serial number.
- Software version.
- Language – Change the language – English/Bulgarian

3.4. Program execution.

When the program is initiated will start temperature calibration and then the door should be closed. On the down-right display corner there is a sign "BURN" and before the sign there is the remaining program time.

The current step time will be indicated on the display. When the furnace pass all temperature levels, will hold until the camera temperature drop to 800 degrees C , after if there is a OPEN setting the program goes to opening mode (if the setting is 00:00, the door opens and the program finishes). For the pre-set time the elevator will execute movement to the aimed position, then will wait the camera temperature to drop to the desired "Opening temperature" then the program execution will finish.

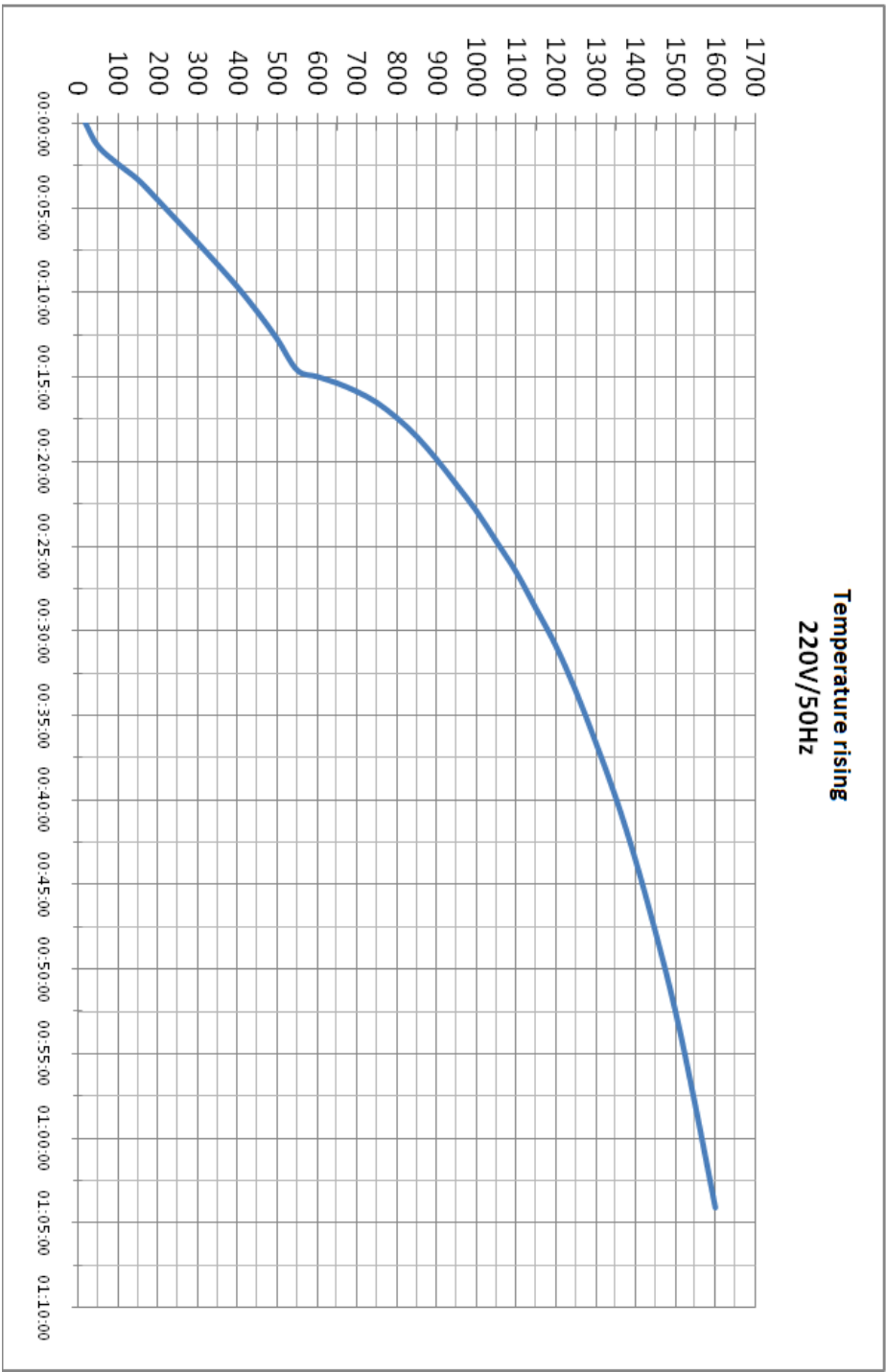
Complete stopping of the program can be done by the button "STOP".

When a program finish there will be display indication for it and also indication if the power supply was interrupted during the program execution.

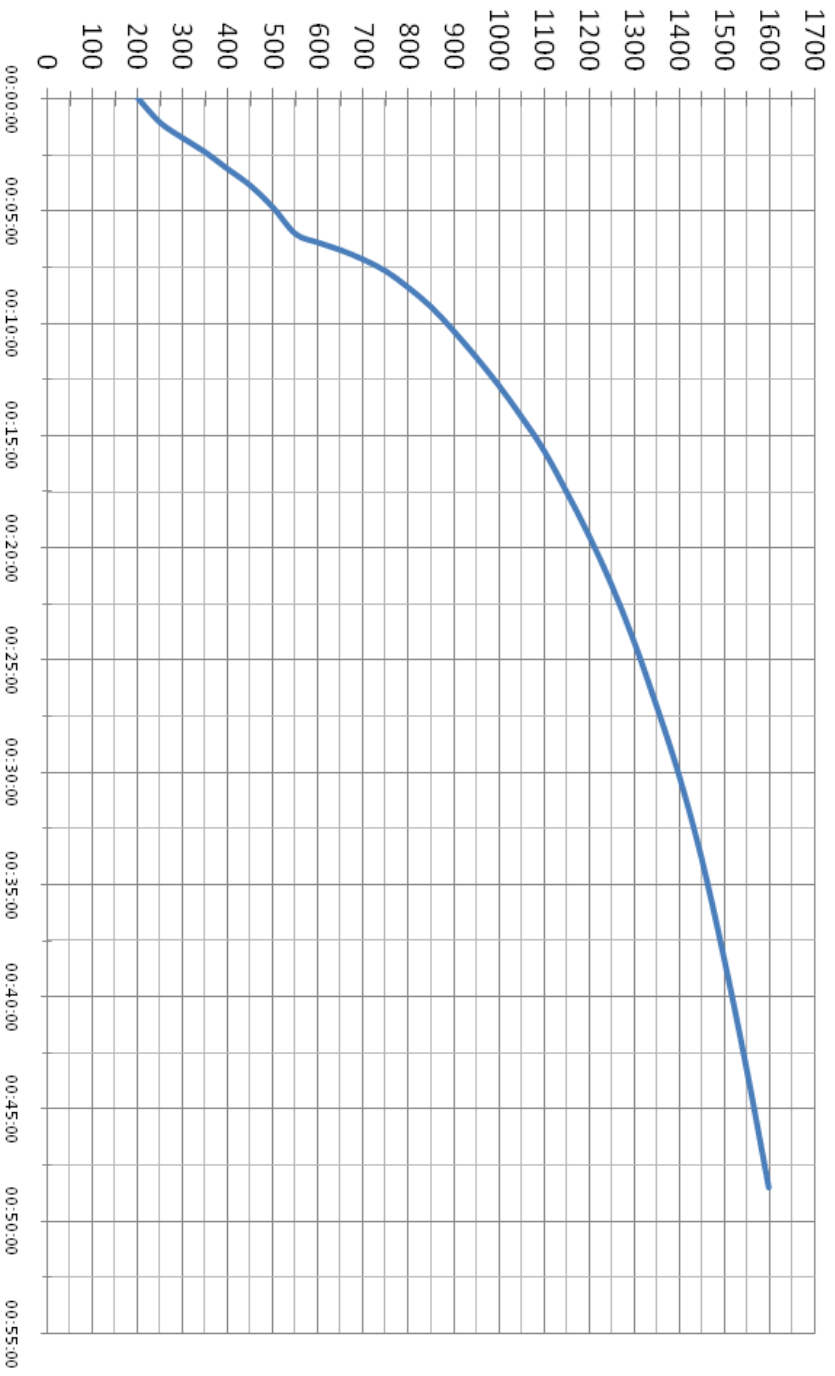
When the program stops, if the camera temperature is above 800 degrees C, the door will remain closed.

4.Alarm notifications.

- **ELEVATOR OVERLOAD!** – if the elevator movement is restrained.
- **ELEVATOR POSITION SENSOR IS DAMAGED!** – if the elevator is moving and there is a lack of impulses from the position sensor.
- **LIFT MICROSWITCHES ARE BROKEN!** – if simultaneously the upper and lower microswitches are activated.
- **DAMAGED THERMOCOUPLE!** – if the thermocouple doesn't make contact.
- **OVER CRITICAL TEMPERATURE!** – if the camera temperature is above 1650 degrees C.



Temperature rising warm furnace
220V/50Hz



TOKMET-TK Ltd

29 Chernomore Str, Varna-9022, Bulgaria
Tel: +359 52 343488; Fax: +359 52 343489; Mob: +359 88 8406908
e-mail: teko@tokmet.com, web: www.tokmet.com