

VITA - VACUMAT 30

Operating Manual

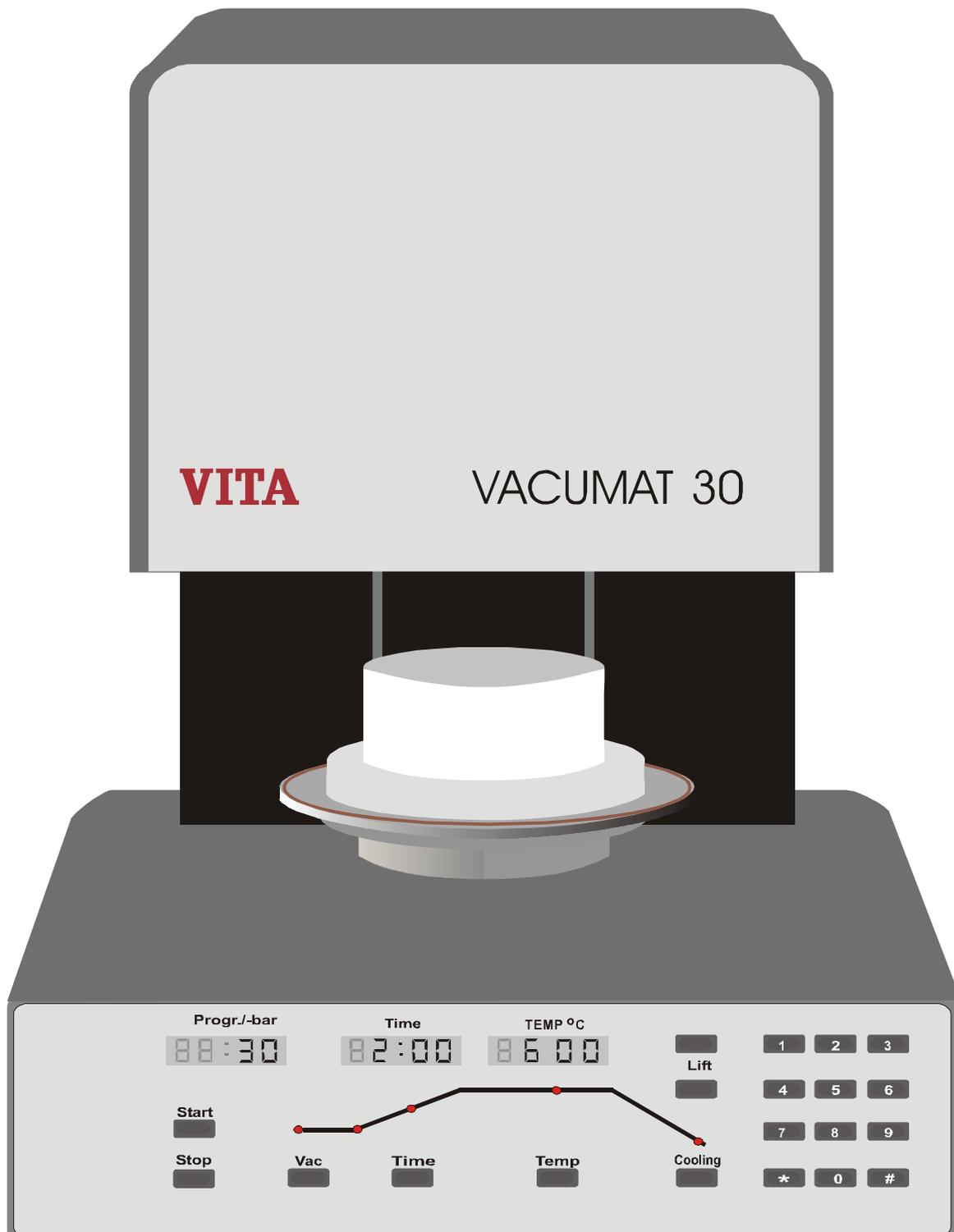


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1 Technical Specifications

Dimensions:	height: 540 mm width: 350 mm depth: 360 mm
Firing chamber (interior space):	diameter: 96 mm height: 70 mm
Weight:	20 kgs.
Power supply:	230 Volts A.C., 50/60 Hz
Max. power consumption:	1.5 KW
Classification:	Safety Class I
Fuse:	T8H250
Max. firing chamber temperature:	1.200° C
Power supply for vacuum pump:	230 Volts A.C., 50/60 Hz, max. 0.2 KW
Vacuum pump (optional):	Type PJ 9080-023.3, 230 Volts, 50/60 Hz, IP20 weight 6.4 kgs.

Supply schedule:

1 special shipping carton, containing:

- 1 VITA VACUMAT 30 Furnace
- 1 firing tray
- 2 platforms for depositing hot firing trays
- 1 mains power lead
- 1 pair of furnace tweezers
- 1 set of firing stands A+B, grey
- 1 set of firing stands G, grey
- 1 operating manual
- 1 vacuum pump (only supplied on special order)

If any items are missing, contact your supplier immediately. Save the carton and packaging materials, in case you ever need to pack and relocate the furnace.

2 Safety advice

This furnace may only be operated with the supplied mains power lead!

Prior to making the electrical connection, make sure that

- the furnace power switch is OFF.
- the furnace voltage matches your power supply. Confirm the line voltage for your furnace by checking the line voltage designation on the rating plate on the back of furnace.
- the protection fuse and the wiring system in your laboratory are suitable to carry the total electric load of the furnace (see rating plate and/or technical specifications).
- the wiring system in your laboratory has an efficient earth connection in compliance with rules and laws in force.
- the plug is inserted into a suitable wall socket which can easily be reached.
- the mains power lead is laid out in such way as to ensure that it does not come into contact with any hot surfaces or objects and that it does not obstruct any passage way.

- The Manufacturer disclaims any liability in case these accident-preventing rules are not observed ●



This is a warning symbol about dangerous electrical current. Disconnect furnace from the mains power supply before opening it for maintenance or repair work. Contact your VITA dealer or a qualified service technician if your furnace needs to be repaired or serviced.

Typ PJ 9080-023.3
230 Volt - 50/60 Hz

This label gives information on the power connection of the vacuum pump.

T8H 250V

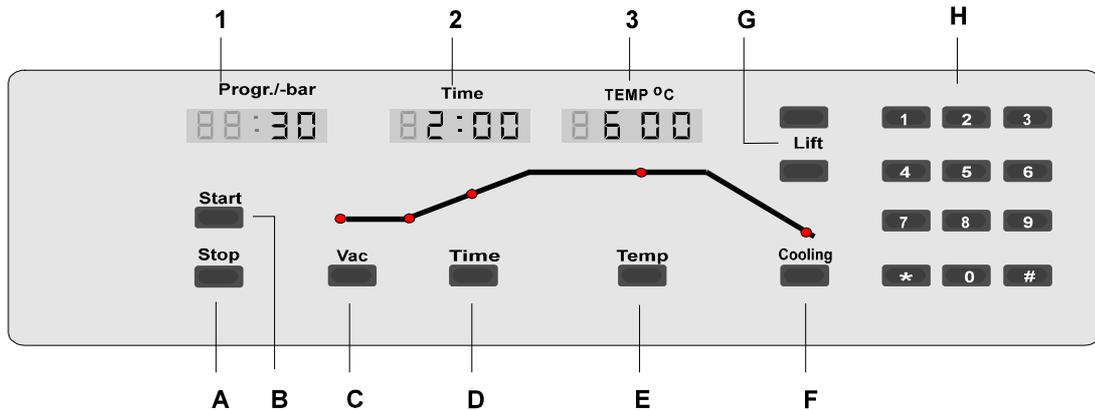
This notice advises on the type of fuses used in this furnace. Another type may not be used.



It is not necessary to clean the inside of the firing chamber, but only to wipe the surface of the insulation at the lower edge of the firing chamber regularly with a damp cloth. This applies also to the O-ring on the lift support plate. The casing can likewise be cleaned using a damp cloth. In order to ensure smooth gliding of the firing tray lift at all times, the lift guide rails should be wiped regularly with a dry cloth.

Never use cleaning agents or flammable liquids for cleaning the furnace

3 Operation Controls and Display



Multi-Function Display	LCD1	- Program number and vacuum display (remaining vacuum time can be displayed while programme is running by pushing 'Vac' key (C). - Year **)
	LCD2	- Pre-drying and heating-up time, hold-time for end temperature and vacuum time - Time of day *) - Date (month/day **)
	LCD3	- Current temperature inside firing chamber. - Software no. is shown when furnace is switched on. - can also be called up: pre-drying temperature, endtemperature and cooling temperature - Time of day **)
Keys	A	Start key
	B	Stop key
	C	Key for activating/deactivating vacuum, also for calling up display of remaining vacuum time while programm is running.
	D	Key for entering and viewing pre-drying time heating-up time and hold time.
	E	Key for entering and viewing starting temperature, pre-drying and firing temperature.
	F	Key for activating/deactivating cooling after programme has ended.
	G	Keys for lift function.
LED Indicators	LD1	Program sequence 'Vacuum'
	LD2	Program sequence 'Starting and Pre-drying'
	LD3	Program sequence 'Heating-up'
	LD4	Program sequence 'Firing at end temperature'
	LD5	Program sequence 'Cooling'

*) = displayed when furnace is switched on but no firing programs are activated.

***) = will appear when 'Vac' key is pressed while furnace is switched on but no program is active.

4 Installation and Starting-Up

(see also Safety Advice p. 3)

1. When positioning the furnace, the minimum distance between all sides of the furnace and any wall should be at least 25 cm.
2. Make sure the furnace power switch is OFF. Connect the furnace to the mains outlet, using the supplied mains power lead.
3. Connect the plug of the vacuum pump to the socket at the rear of the furnace and then slide the vacuum hose onto the nozzle.
4. Press the power ON/OFF switch to switch on the furnace. The firing tray lift will descend to its lower position.
5. Place the firing tray onto the lift support plate. The furnace must never be operated without the firing tray on the lift support plate.
6. Select program '00' with the program selection keys (H) and press 'Start' key (A). The firing tray lift ascends into the firing chamber. The temperature will then rise until it reaches the factory-set starting temperature of 400° C. The pre-set starting temperature can be altered by entering program no. 181. When keeping the 'Temp' key (E) pressed down, the temperature display (3) shows the pre-set starting temperature of 500°C.

Once the starting temperature has been reached, the furnace is ready for firing using any program.

5 Protection against power failure

The furnace is protected against power failure. This backup device is activated immediately in the event of a mains power failure while the furnace is on standby or while a firing programme is running. In the case of a mains power failure lasting up to 20 seconds, the program will still continue running. If the power failure lasts longer than 20 seconds, the program is aborted and the LCD displays (1-3) will show the following after the power resumes:

- if only the standby program was active **LCD 1** shows "P0".
- if a firing program was running, **LCD 1** shows the program phase at which the power failure occurred:

"P1" when 'pre-drying' phase was active
 "P2" when 'heating-up' phase was active
 "P3" when 'end temperature' hold phase was active
 "P4" when 'cooling phase' was active

In addition, an acoustic signal (beeping sound) will sound and all LED indicators will flash.

LCD 2 shows the remaining time required for completion of the aborted program and **LCD 3** displays the temperature at which the programme stopped.

Press 'Stop' key (B) to cancel all messages. The furnace is once more ready for use.

Attention: In the case where the mains power supply in the laboratory is turned off accidentally while the furnace was in operation, the same symptoms as those of a power failure will become visible after the power resumes.

6 Temperature and time settings for firing programs

The VITA Vacumat 30 furnace has a capacity of 60 freely selectable firing programs. The firing programs required for VITA firing techniques are factory pre-programmed, but entries can be altered as desired.

For all firing cycles the temperature and time settings can be selected from within the ranges indicated below:

- | | | |
|---|----------------|-------------------|
| 1. Pre-drying temperatur | (LCD3) | 200°C - 700°C |
| 2. Firing temperature | (LCD3) | 450°C - 1200°C |
| 3. Pre-drying time | (LCD2 and LD2) | 0:00 – 60:00 min. |
| 4. Heating-up time | (LCD2 and LD3) | 3:00 – 20:00 min. |
| 5. End temperature firing time | (LCD2 and LD4) | 0:00 – 60:00 min. |
| 6. Vacuum time | (LCD2 and LD1) | 0:00 – 40:00 min. |
| Start of vacuum time always at the start of heating-up cycle. | | |
| 7. Cooling temperature | (LCD3 and LD5) | 400°C - 1.000°C |

When temperature and time settings outside the option range are entered, the message "Err.." will be displayed briefly on the corresponding LCD. The initially stored value is sustained. Please refer to "Error messages".

7 Selecting and starting firing programs

1. Enter the required firing program (nos. 1 - 60) via the program selection keys (H) and confirm with key #.
2. The LED indicators light up to show all stored program segments.
 - Press key # to obtain the firing parameters (temperature and time settings).
 - Pressing key # for the first time causes LD1 for 'pre-drying' to flash. The time and temperature settings are displayed on LCD2 and LCD3.
 - By pressing key # repeatedly, all time and temperature settings of the selected programme will be displayed consecutively.
 - If key # is not pressed within 7 seconds, this viewing procedure will be terminated.
3. Press 'Start' key (A) to activate firing program.
4. Flashing LEDs indicate the currently active phase(s) of a running program. LCD2 shows the remaining running time (in minutes and seconds) for the active program sequence.
5. A running program can be aborted at any time by pressing the 'Stop' key (B).
6. The end of a program is announced by an acoustic signal.

Important: After starting a firing program, the firing chamber is first heated up to the pre-drying temperature before the first phase of the program begins (start of pre-drying or heating-up time).

8 Entering and altering temperature & time settings

Once a firing program has been selected, all temperature and time settings can be altered as follows:

Pre-drying temperature and firing temperature:

1. Press key # repeatedly until LD2 for pre-drying or LD4 for end temperature is flashing. The appropriate temperature value is displayed on LCD3.
2. Press „Temp“ key (E) and temperature indicator LD3 will begin to flash. Enter required value using the program selection keys (H) and confirm by pressing key #. The new value is shown on LCD3.

Time settings:

1. Press key # repeatedly until the required program sequence has been reached and respective LED indicator starts flashing: LD2 - pre-drying time, LD3 - heating-up time, LD4 - hold time. The appropriate time value is displayed on LCD2.
2. Press „Time“ key (D). LCD2 display will flash. Enter the required value using the program selection keys (H) and confirm by pressing key #. The new value is shown on LCD2.

Vacuum settings:

1. Press „Vac“ and # keys to activate/deactivate the vacuum in a selected program. This is shown on LD1.
2. The vacuum pump always switches on at the beginning of the heating-up phase.
3. Programing vacuum setting:
 - Activate vacuum by pressing „Vac“ key.
 - LD1 and LCD2 go into flash mode and pre-set vacuum time will be displayed.
 - Either maintain existing value as displayed or enter the required vacuum time setting using the program selection keys (H).
 - Confirm selection by pressing key #. The confirmed value is now displayed on LCD2.
 LD1 lights up indicating that vacuum has been selected for the program.

Cooling temperature (slow cooling after firing):

1. Press 'Cooling' key to activate/deactivate cooling phase in a selected program. LD5 lights up.
2. The cooling phase begins after end of firing cycle at end-temperature.
3. Programing cooling phase:
 - Press 'Cooling' key.
 - LD5 and LCD3 go into flash mode and pre-set cooling time will be displayed.
 - Either maintain existing value as displayed or enter the required cooling temperature using the program selection keys (H).
 - Confirm selection by pressing key #. The confirmed value is now displayed on LCD3.
 LD5 lights up indicating that vacuum has been selected for the program.

9 Utilities

All programs listed in this table can be selected by entering the respective program number using the program selection keys (H). All entries must be confirmed by pressing key #.
To stop or cancel a program already selected, press the 'Stop' key (B).

Important: Before activating one of these programs, please note instructions related thereto.

Progr.No.	Programme	Entry/Description	Display/Indicator	
0		Closing firing chamber without heating up		
00		Closing firing chamber and heating up to starting temperature	LCD3 shows temperature in the firing chamber. Press 'Temp' key (E) for display of programmed temperature	
99	Fast Cooling	Temperature in firing chamber rapidly cooled to 50°C below stand-by temperature	LCD3 shows target cooling temperature when pressing 'Temp' key (E)	
170	Entering Time	hrs/mins. Enter time of day	when entering time of day: LCD2	*
171	Entering Date	Month/Day Enter date – Format MM : TT	when entering date: LCD 2	*
172	Entering Year	Calendar Year Enter calendar year	when entering year: LCD3	*
181	Starting Temperature	values ranging from 200°C - 700°C	LCD3	
183	Temperature adjustment	+/- 20°C using programming keys (H) Press 'Temp' key to select + or – symbol	LCD3	**
184	to determine vacuum parameters	- Only for maintenance purposes - Calibration programme for vacuum display. The program cannot be interrupted. Exit using 'Stop' key (B)	Automatic test run. Duration approx. 3 mins.	①
187	Setting Lift positions for pre-drying and cooling stages Lift interval time	- Press 'Time' key (D) to select 'Pos'.no. or 'Int' - pre-drying lift pos. 1 - enter value ranging from 0 - 40 pre-drying lift pos. 2 - enter value ranging from 30 - 60 pre-drying lift pos. 3 - enter value ranging from 50 - 120 cooling lift pos. 4 - enter value ranging from 30 - 120 Lift interval Int – enter value ranging from 20 - 60 sec.	LCD2 shows 'Pos'.no. or 'Int' LCD3 shows programmed value. Confirm by pressing # key.	①
189	Lift Speed	ascending "S up" - enter value ranging from 0 - 99 descending "S dn" - enter value ranging from 0 - 99 Use 'Time' key to select "S up" or "S dn"	LCD2 shows "S up" or "S dn" LCD3 shows programmed value	②
191	Initializing	All time and temperature settings given in VITA firing charts are read into the memory	all displays active	③
192	Start of a firing program	- Select 1 or 2 using 'Temp' key - 1 = Program only begins after temperature in the firing chamber has cooled to pre-drying temperature 2 = Program starts immediately, even with higher temperature in firing chamber	LCD3	
193	Signal tone	Signal tone to sound once - select "01" Continuous signal tone - select "Cont" - Select required mode using 'time' key -	LCD3	
196	Operating time meter	Exit by pressing any key	LCD2 shows hours LCD3 shows min./sec.	
199	Basic entries	Program runs automatically reinstating standard settings acc. 'Beep' signal sounds at end of programme.		

- * Press and hold down the „Vac“ key to obtain display of time, date and year while the furnace is switched on and the lift is in its lower position: LCD1 shows the current year, LCD2 the current month and day, LCD3 the current time of day. When the furnace is switched on and on standby, LCD 2 always shows the time of day.
- ** The temperature in the firing chamber can be altered within the range of +/- 20°C.
Important: When making an adjustment, the temperature range for all firing programs will be altered accordingly, i.e. an entry of up to + 20°C will result in the furnace firing at higher temperatures as increased by the entered value and, correspondingly, an entry of -1°C to -20°C in lower firing temperatures. Nonetheless, the displayed temperature settings will remain unchanged.
- ① The vacuum settings are factory-calibrated. These settings only require to be changed when a pump model other than that supplied with the furnace is used.
- ① The lift positions for pre-drying and cooling are also factory-programed. These settings can be changed by programming new settings using program no. 187. To verify altered lift positions, interrupt program by pressing the 'Stop' key, then start a firing program.
- ② The speed at which the firing tray lift ascends and/or descends can be altered using program no. 189. Enter new value to increase or decrease lift speed.
- ③ By activating this program, all standard settings as required for VITA firing techniques are read into the memory. This means that the temperature and time settings for all firing programs according to a VITA firing chart will be stored.

Note: Any previously entered individual firing program will be deleted.

10 Factory pre-programed Standard Settings

Parameter	Pre-set Value
Starting temperature	500°C
Temperature offset	0° C
Lift speed (up)	200
Lift speed (down)	180
Lift position 1	00
Lift position 2	50
Lift position 3	105
Lift position 4	60
Interval time	50 sec.
Signal upon completion of program	continuous
Start of a firing program	00

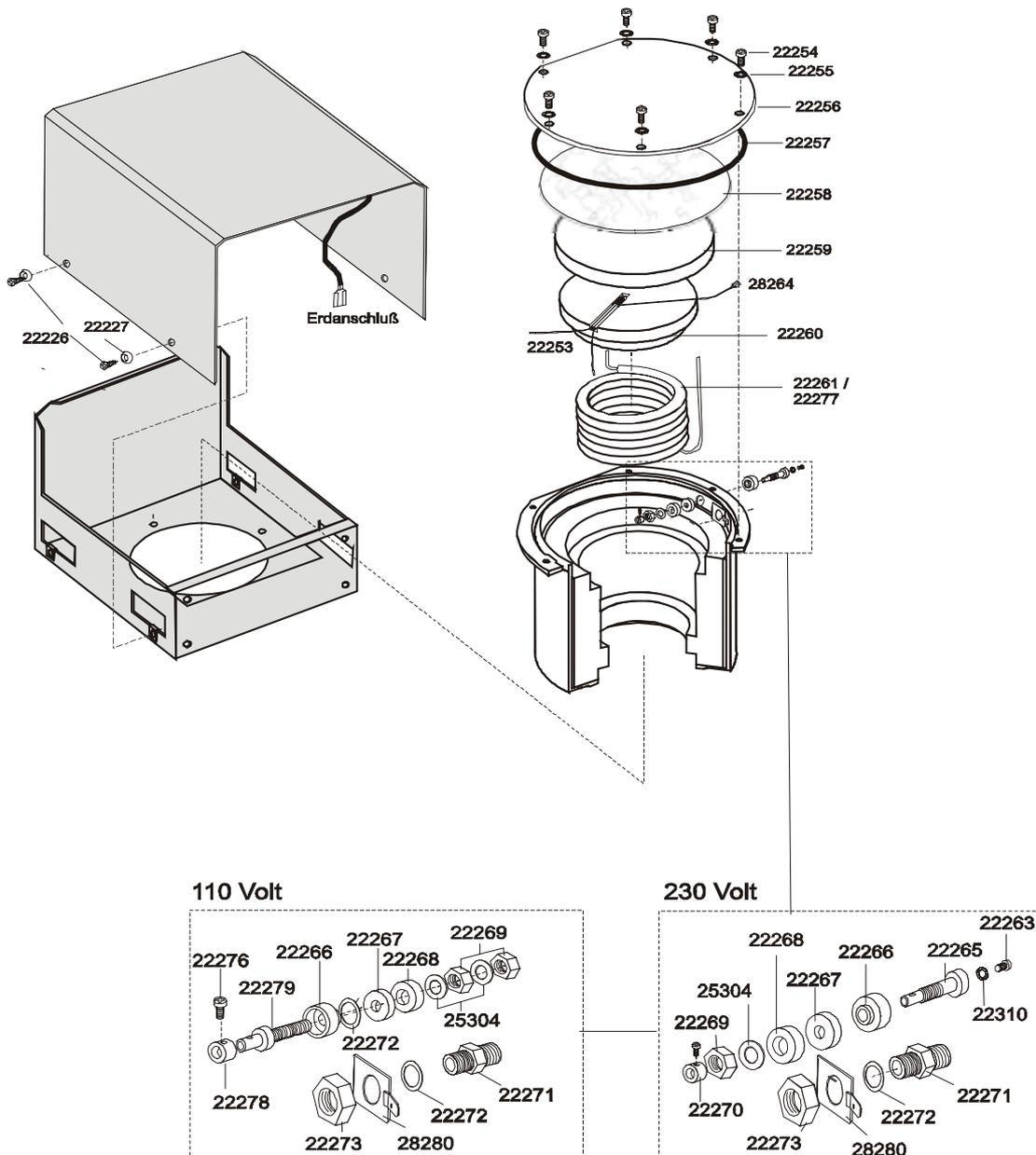
These values are factory pre-programed but can be altered using programs listed under "Utilities"

11 Changing the muffle

Important:

- Only to be carried out by a qualified service technician!
 - Contact your VITA dealer or authorized service personnel!
1. Switch off furnace and disconnect from the mains power supply!
 2. Unscrew the four screws on the sides of the top casing of the furnace
 3. Remove top casing of the furnace.
 4. Disconnect earthed conductor wire from top casing of furnace.
 5. Unscrew and remove top cover of firing chamber.
 6. Disconnect all wires from the thermocouple.
 7. Lift out insulation stone complete with thermocouple.
 8. Disconnect the wires from the defective quartz glass spiral muffle and then lift it out.
 9. Place new muffle into position, then reassemble the furnace in reverse order to that given above.

CAUTION: Do not forget to reconnect the earthed conductor wire to the furnace top casing!



12 Error messages

The error messages marked * will cause the program to stop. To re-start the program, the furnace must be switched off at its power switch and then switched on again.

Error message	Cause	Remedy
Error 01	* Required temperature exceeded by 80°C	Error in output area, exchange CPU board
Error 02	* Rupture of thermocouple	Check connections to thermocouple, exchange if necessary
Error 07	* Error in vacuum system	Check and clean seal on lift support plate and edge of firing chamber, check pump
Error 10	Starting temperature outside range of entry values	Correct by entering value between 200°C and 700°C
Error 11	Pre-drying time outside range of entry values	Correct by entering value between 0:00 and 60:00 min.
Error 12	Pre-drying temperature outside range of entry values	Correct by entering value between 200°C and 700°C
Error 13	① Heating-up time outside range of entry values	Correct by entering value between 3:00 and 20:00 min.
Error 14	Firing temperature outside range of entry values	Correct by entering value between 450°C and 1200°C
Error 15	End temperature firing time outside range of entry values	Correct by entering value between 0:00 and 60:00 min.
Error 16	Vacuum time outside range of entry values	Correct by entering value between 0:00 and 60:00 min.
Error 17	Cooling temperature outside range of entry values	Correct by entering value between 400°C and 1000°C
Error 19	Temperature adjustment outside range of entry values	Correct by entering value between +/- 0°C and 20°C
Error 20	Firing temperature lower than cooling temperature	Select firing temperature higher than cooling temperature
Error 21	Firing temperature lower than pre-drying temperature	Select firing temperature higher than pre-drying temperature
Error 40	Lift speed 'UP' outside range of entry values	Correct by entering value between 0 and 99
Error 40	Lift speed 'DOWN' outside range of entry values	Correct by entering value between 0 and 99
Error 42	Lift position 1 outside range of entry values	Correct by entering value between 0 and 40
Error 42	Lift position 2 outside range of entry values	Correct by entering value between 30 and 60
Error 42	Lift position 3 outside range of entry values	Correct by entering value between 50 and 150
Error 42	Lift position 4 outside range of entry values	Correct by entering value between 30 and 120
Error 42	Interval time outside range of entry values	Correct by entering value between 20 and 60 sec.
Error 50	Time of day (incorrect format)	enter value between 00:00 - 24:00 (MM:SS)
Error 51	Date (incorrect format)	enter value between 01:01 - 31:12 (DD:MM)
Error 52	Calendar Year (incorrect format)	enter value between 1994 - 2005 (YYYY)
Error 76	Start of a firing program while standby program is still running	Stop standby program by pressing 'Stop' key before starting firing program

① The temperature rise in °C, i.e. the difference between starting temperature and end-temperature divided by the selected heating-up time should not be more than 120° C!

For further information please contact the VACUMAT Service Department of your local VITA distributor!

13 Firing Cycle Charts

VITA OMEGA	Progr. no.	VAC min.	→ min.	Pre-Drying °C	↗ min.	→ min.	Temp. approx °C
Oxidation firing	1	Follow manufacturer's instructions !					
NEW (1) 1 st opaque firing (powder)	2	3.00	2.00	600	3.00	1.00	950
1 st opaque firing (paste)	52	6.00	6.00	500	6.00	1.00	950
NEW (1) 2 nd opaque firing (powder)	3	3.00	2.00	600	3.00	1.00	930
2 nd opaque firing (paste)	53	6.00	6.00	500	6.00	1.00	930
Dentine firing	4	6.00	6.00	600	6.00	1.00	930
2 nd dentine firing	5	6.00	6.00	600	6.00	1.00	920
3 rd dentine firing	6	6.00	6.00	600	6.00	1.00	910
Glaze firing	7	---	---	600	3.00	1.00	930
Glaze firing with VITACHROM DELTA Fluid / Akzent Fluid	8	---	4.00	600	3.00	1.00	930
Glaze firing with Glasurmasse 740 / Akz 25	9	---	4.00	600	3.00	1.00	900
Margin porcelain firing "MARGIN*"	10	6.00	6.00	600	6.00	1.00	940

(1) = Firing of opaque porcelains marked with an asterisk at approx. 20°C higher.

VITA OMEGA 900	Progr. no.	VAC min.	→ min.	Pre-Drying °C	↗ min.	→ min.	Temp. approx °C
Oxidation firing	41	Follow manufacturer's instructions !					
1 st opaque firing (powder)	42	4.00	2.00	600	4.00	2.00	900
1 st opaque firing (paste)	54	6.00	6.00	500	6.00	3.00	900
2 nd opaque firing (powder)	43	4.00	2.00	600	4.00	1.00	900
2 nd opaque firing (paste)	55	6.00	6.00	500	6.00	2.00	900
Dentine firing	44	6.00	6.00	600	6.00	1.00	900
2 nd dentine firing	45	6.00	6.00	600	6.00	1.00	890
3 rd dentine firing	46	6.00	6.00	600	6.00	1.00	890
Glaze firing	47	---	---	600	4.00	2.00	900
Glaze firing with VITACHROM DELTA Fluid / Akzent Fluid	48	---	4.00	600	4.00	2.00	900
Glaze firing with Glasurmasse 740 / Akz 25	49	---	4.00	600	4.00	1.00	900
Margin porcelain firing "LUMINARY"	50	6.00	6.00	600	6.00	2.00	900

Alloys with a thermal expansion coefficient $\geq 14.5 \times 10^{-6} \times K^{-1}$ should be fired using slow cooling from the 1st dentine firing onwards. Slow cooling from firing temperature to starting temperature should take no less than 5 minutes. This increases the leucite content in the metal ceramic and raises the thermal expansion coefficient of the ceramic.

VITA VMK 95	Progr. no.	VAC min.	→ min.	Pre-Drying °C	↗ min.	→ min.	Temp. approx °C
Oxidation firing	11	Follow manufacturer's instructions !					
1 st opaque firing (powder)	12	3.00	2.00	600	3.00	1.00	950
1 st opaque firing (paste)	52	6.00	6.00	500	6.00	1.00	950
2 nd opaque firing (powder)	13	3.00	2.00	600	3.00	1.00	930
2 nd opaque firing (paste)	53	6.00	6.00	500	6.00	1.00	930
Dentine firing	14	6.00	6.00	600	6.00	1.00	930
2 nd dentine firing	15	6.00	6.00	600	6.00	1.00	930
3 rd dentine firing	16	6.00	6.00	600	6.00	1.00	920
Correction porcelain firing CORRECTIVE	— *)	---	4.00	600	6.00	1.00	900
Glaze firing	17	---	---	600	3.00	1.00	930
Glaze firing with VITACHROM DELTA Fluid / Akzent Fluid	18	---	4.00	600	3.00	1.00	930
Glaze firing with Glasurmasse 740 / Akz 25	19	---	4.00	600	3.00	1.00	900
Margin porcelain firing "MARGIN"	20	6.00	6.00	600	6.00	1.00	930

*) = Enter program number yourself

VITA VMK 68	Progr. no.	VAC min.	→ min.	Pre-Drying °C	↗ min.	→ min.	Temp. approx °C
Oxidation firing	21	Follow manufacturer's instructions !					
1 st opaque firing	22	3.00	2.00	600	3.00	1.00	950
2 nd opaque firing	23	6.00	2.00	600	3.00	1.00	930
Dentine firing	24	6.00	6.00	600	6.00	1.00	930
2nd dentine firing	25	6.00	6.00	600	6.00	1.00	920
3rd dentine firing	26	6.00	6.00	600	6.00	1.00	910
Glaze firing	27	---	---	600	3.00	1.00	930
Glaze firing with VITACHROM DELTA Fluid / Akzent Fluid	28	---	4.00	600	3.00	1.00	930
Glaze firing with Glasurmasse 740 / Akz 25	29	---	4.00	600	3.00	1.00	900

VITADUR ALPHA	Progr. no.	VAC min.	→ min.	Pre-Drying °C	↗ min.	→ min.	Temp. approx °C
Hard core porcelain	31	6.00	---	600	6.00	2.00	1.120
Dentine firing	32	6.00	6.00	600	6.00	1.00	960
1 st + 2 nd correction firing	33	6.00	6.00	600	6.00	1.00	950
Glaze firing	34	---	---	600	3.00	1.00	940
Glaze firing with VITACHROM DELTA Fluid / Akzent Fluid	35	---	4.00	600	3.00	1.00	940
Glaze firing with Glasurmasse 740 / Akz 25	36	---	4.00	600	3.00	1.00	920

Additional programs	Progr. no. *)	VAC min.	→ min.	Pre-Drying °C	↗ min.	→ min.	Temp. approx °C
Metall - Corrector	---	---	2.00	600	6.00	1.00	1.040
Spectra-Gold	---	---	---	550	3.00	1.00	820
Furnace soldering 1	---	---	5.00	600	5.00	3.00	z.B.800
Furnace soldering 2	---	---	1.00	600	3.00	4.00	z.B.800

*) = Enter program number yourself

Soldering in the VITA Vacumat:

Method 1

Preheat the restoration, complete with flux and beads solder, in a preheating furnace for 15 – 20 min. at 400°C.

Program no. *)

Set final temperature by adding 50°C to melting point of solder.

Pre-drying time: 5.00 min
 Heating-up time: 5.00 min
 Hold time: 3.00 min

Method 2

Preheat the restoration, with flux but without solder, in a preheating furnace for 15 – 20 min. at 400°C.

Program no. *)

Set final temperature by adding 50°C to melting point of solder.

Pre-drying time: 1.00 min
 Heating-up time: 3.00 min
 Hold time: 4.00 min

*) = Enter program number yourself