

VITA - Vacumat 50

Operating Manual

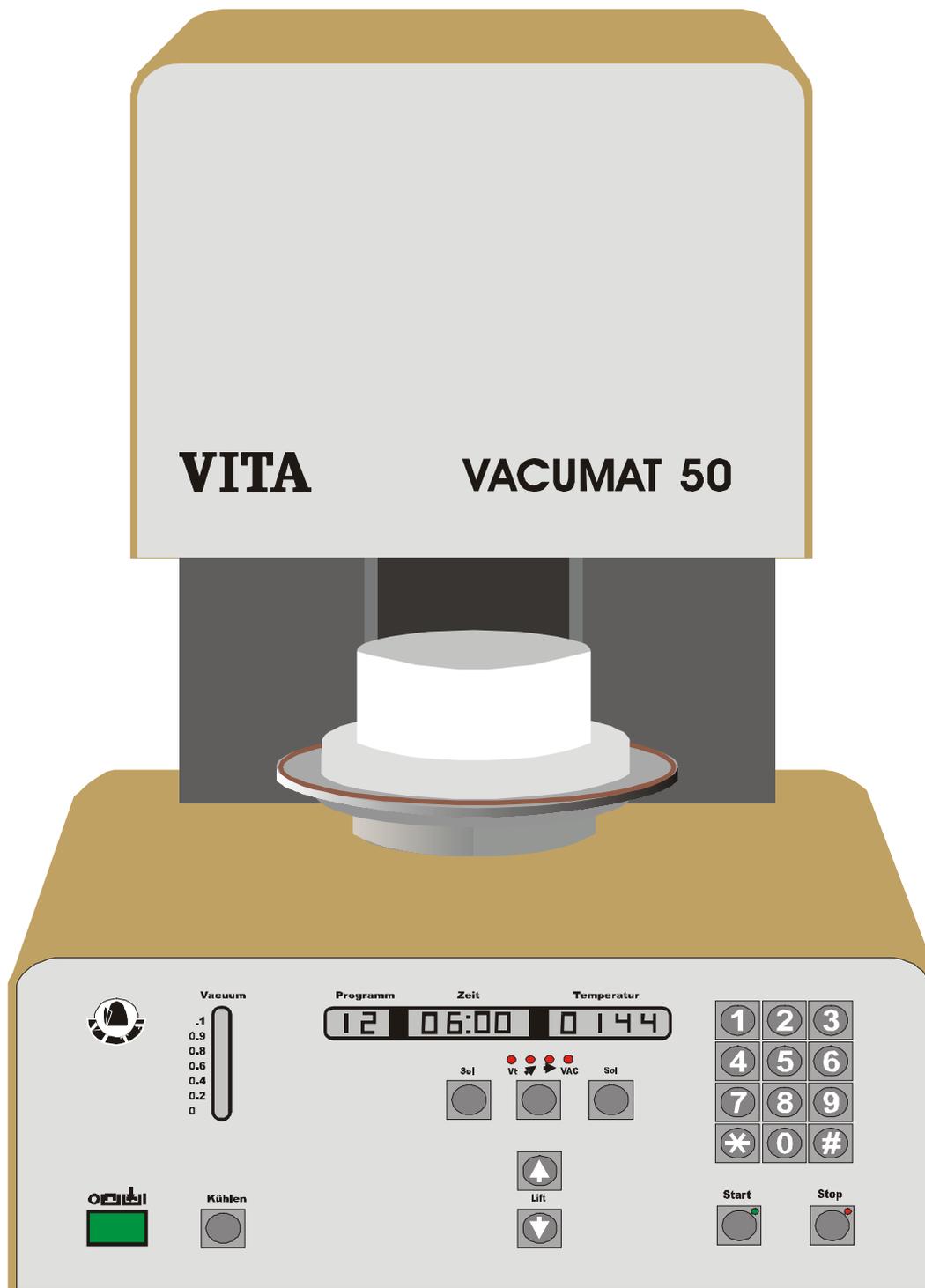


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1 Technical Specifications

Dimensions:	height: 540 mm width: 350 mm depth: 365 mm
Firing chamber (interior space):	diameter: 96 mm height: 70 mm
Weight:	19 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:	1200°C
Power supply for vacuum pump:	230 Volts A.C., 50/60 Hz, max. 0.2 KW
Vacuum pump (optional):	Type: PM 2932, 230 Volts, 50/60 Hz, IP20 weight 6.4 kgs.

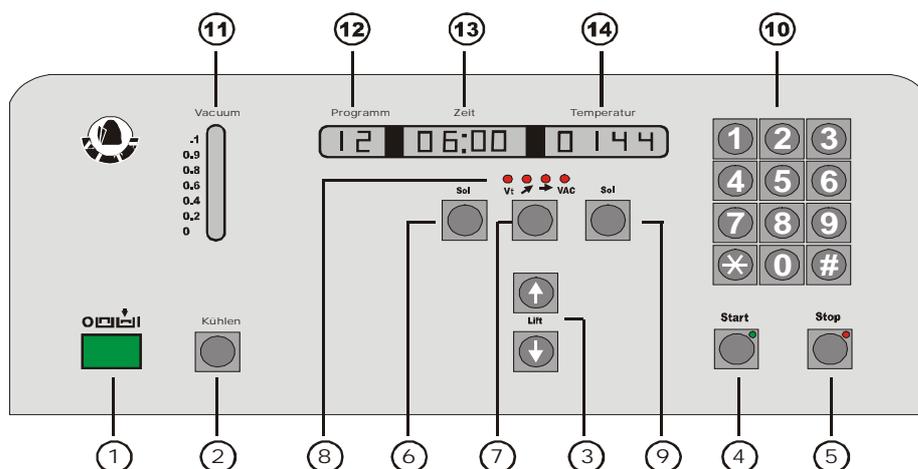
Supply schedule:

1 special shipping carton, containing:

- 1 Packing case, containing:
- 1 VITA VACUMAT 50
- 1 Vacuum pump (optional)
- 1 Firing tray
- 1 Mains power lead
- 1 pair of furnace tweezers
- 1 pack of crown stands A/B, grey
- 1 pack of porcelain trays G, gray
- 1 Operating instructions
- 1 Guarantee card

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 Controls and displays



- (1) POWER ON / OFF
- (2) SLOW COOL, activates slow cooling phase once the firing cycle has been completed
- (3) FIRING TRAY LIFT UP / DOWN
- (4) START
- (5) STOP
- (6) SET, for firing time and time under vacuum
- (7) SELECT, for firing time, time under vacuum and temperature
- (8) Indicator lights, for firing time and time under vacuum
 Vt = Pre-drying time/temperature; \blacktriangleright = Rise time;
 \rightarrow = Hold time at final temperature; VAC = Vacuum firing time
- (9) SET, for firing temperatures
- (10) Numerical block
- (11) Display bar for vacuum
- (12) LCD for program numbers
- (13) LCD for firing time and vacuum
- (14) LCD for firing temperature

3 Installation / Heating to standby temperature

1. The furnace must be positioned at least 25 cm from the nearest wall.
2. Connect furnace to mains using cable supplied.
3. Switch on furnace by pressing ON / OFF (1). The firing tray lift is lowered.
4. Place firing tray on lift.
5. Connect vacuum pump by inserting plug into socket G. Push vacuum pump hose over nozzle H. (Both G and H are at rear of furnace).
6. Press START (4). Firing tray lift is raised and furnace heats to standby temperature. Once standby temperature has been reached, the furnace is ready for firing using any program.

4 Standby temperature / Fast cooling / Cooling temperature:

4.1 Entering / altering standby temperature:

1. Switch on furnace by pressing ON / OFF (1).
2. Standby temperature program is selected by pressing input keys 8 and 1 on numerical block (10) and confirming entry by pressing key #.
3. Desired temperature is entered using keys on numerical block (10).
4. Store entered temperature by pressing key # on numerical block (10).

4.2 Heating to standby temperature:

When the furnace is switched on and the firing tray lift in its lowest position, display (12) for program no. shows „00“, press START key (4).

Caution: Standby temperatures of 200°C – 700°C may be entered.
Factory calibrated standby temperature: 500°C.

4.3 Program no. 99:

Fast cooling down to set standby temperature with firing tray lowered.

4.4 Program no. 82:

Setting cooling temperature (see: Entering standby temperature).

5 Selecting a firing program / Checking and altering program settings

5.1 Selecting a firing program:

1. Switch on furnace by pressing ON / OFF (1).
2. Enter program number (Nos. 1 to 50 possible) using keys on numerical block (10), and confirm entry by pressing key #.
3. Indicator lights (8) show which sequence of the selected program is currently active.
4. Start program by pressing START (4).

5.2 Heating to standby temperature:

When the furnace is switched on and the firing tray lift in its lowest position, display (12) for program no. shows „00“, press START key (4).

5.3 Checking program settings:

Select setting to be checked using SELECT (7). The corresponding indicator lights up. It is also possible to check settings whilst a program is running. The setting which is to be checked is displayed as long as SELECT (7) is pressed.

5.4 Altering program settings:

- a. Press SELECT (7) repeatedly until corresponding indicator lights (8) up. Display time or temperature setting by pressing respective SET (6) or (9). The settings are shown on the LCD (13) and (14).
- b. Set the desired time or temperature using keys on numerical block (10). Press key # to confirm new setting.

Key * is used to correct or cancel entered settings.

6 The following values may be selected:

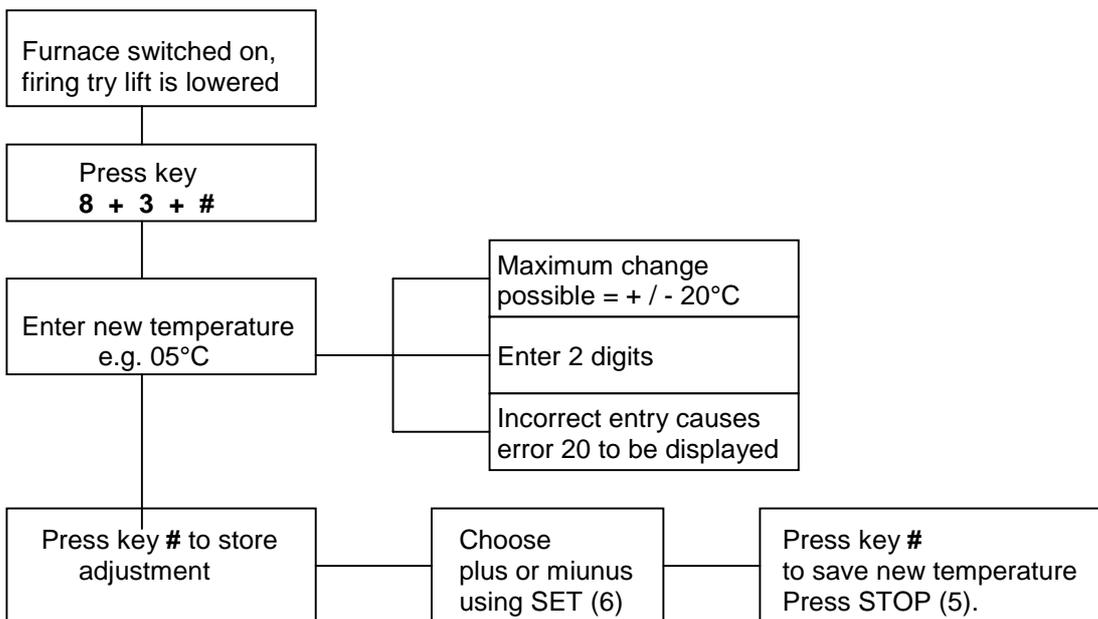
Pre-drying time:	0.00 – 20.00 minutes
Pre-drying temperature:	20°C – 700°C
Rise time:	3.00 – 20.00 minutes
Hold time at final temperatures:	0.00 – 20.00 minutes
Vacuum firing time:	0.00 – 20.00 minutes

7 Running a firing program:

1. The LCD for temperature (14) shows the current temperature.
2. The LCD for time (13) shows the time remaining within the current phase.
3. The indicator lights (8) show which phases are included in the program.
4. The current phase is indicated by a flashing indicator light.
5. The LCD for vacuum level, between 0 and 1 bar.
6. When slow cooling is activated by pressing SLOW COOLING (2), the lamp inside the press-button lights up.

Please note: A program may be aborted at any time by pressing STOP (5). All entered settings can be checked whilst the program is running.

8 Adjusting furnace temperature:



9 Firing cycle charts:

VITA Spectra-Gold Program 24

Factory calibration:	Final temperature:	approx. 820°C
	Pre-drying time:	0.00 min
	Rise time:	3.00 min
	Hold time:	1.00 min

VITA Metal-Corrector Program 25

Factory calibration:	Final temperature:	approx. 1040°C
	Pre-drying time:	2.00 min
	Rise time:	6.00 min
	Hold time:	1.00 min

Soldering in the VITA VAVUMAT

Method 1:

Preheat the restoration, complete with flux and beat of solder, in a preheating furnace for 15 or 20 minutes, at 400 °C.

Select firing program 26

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

Pre-drying time:	5.00 min
Rise time:	5.00 min
Hold time:	3.00 min

Method 2:

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

Select firing program 27

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

Pre-drying time:	1.00 min
Rise time:	3.00 min
Hold time:	4.00 min

When firing tray is lowered, place solder in joint gap using solder dispenser.

VITA OMEGA and VITA VMK® 68	Progr.	approx. °C				VAC
Oxidation	1	980	-	4.00	5.00	-
1 st opaque firing VMK 68	2	950	2.00	3.00	1.00	3.00
1 st opaque firing OMEGA	28	970	2.00	3.00	1.00	3.00
2 nd opaque firing VMK 68	3	930	2.00	3.00	1.00	3.00
2 nd opaque firing OMEGA	29	950	2.00	3.00	1.00	3.00
Dentine firing	4	930	6.00	6.00	1.00	6.00
2 nd dentine firing	5	920	6.00	6.00	1.00	6.00
3 rd dentine firing	6	910	6.00	6.00	1.00	6.00
Glaze firing	7	930	-	3.00	1.00	-
Glaze firing, using VITACHROM DELTA Fluid	8	930	4.00	3.00	1.00	-
Glaze firing, using „740“ glaze	9	900	4.00	3.00	1.00	-

VITA OMEGA and VITA VMK® 68 on alloys with slow cooling	Progr.	approx. °C				VAC
Oxidation	1	980	-	4.00	5.00	-
1 st opaque firing VMK 68	2	950	2.00	3.00	1.00	3.00
1 st opaque firing OMEGA	28	970	2.00	3.00	1.00	3.00
2 nd opaque firing VMK 68	3	930	2.00	3.00	1.00	3.00
2 nd opaque firing OMEGA	29	950	2.00	3.00	1.00	3.00
Dentine firing	4+K*	930	6.00	6.00	1.00	6.00
2 nd dentine firing	5+K*	920	6.00	6.00	1.00	6.00
3 rd dentine firing	6+K*	910	6.00	6.00	1.00	6.00
Glaze firing	10+K*	930	1.00	3.00	1.00	-
Glaze firing, using VITACHROM DELTA Fluid	8+K*	930	4.00	3.00	1.00	-
Glaze firing, using „740“ glaze	9+K*	900	4.00	3.00	1.00	-

K* = Slow cooling

VITA OMEGA 800	Progr.	approx. °C	Pre- drying °C				VAC
Oxidation	40	800	450	-	3.00	10.00	12.30
Bonder	41	800	450	2.00	3.00	2.00	3.00
Pre-Opaque	41	800	450	2.00	3.00	2.00	3.00
Opaque	42	790	450	2.00	3.00	2.00	3.00
Dentine firing	43	790	450	6.00	7.00	2.00	7.00
Glaze firing	44	800	450	3.00	3.00	2.00	-
Glaze firing, using OMEGA 800 glaze	45	790	450	4.00	3.00	3.00	-

When firing VITA VMK® 68 N porcelains, increase all VMK 68 temperatures by 10°C.

VITA Hi-Ceram, VITADUR ALFA VITADUR ALFA for Jacket Crowns	Progr.	approx. °C				VAC
Refractory die	11	1000	10.00	10.00	3.00	-
Spacer „S“	12	1000	6.00	6.00	1.00	-
1 st and 2 nd core firing	13	1170	6.00	10.00	0.00	10.00
3 rd core firing	14	1170	6.00	10.00	3.00	10.00
Cervical porcelain firing	15	940	6.00	6.00	1.00	6.00
Core firing	17	1120	6.00	6.00	2.00	6.00
Core firing with bite pad	18	1120	6.00	6.00	2.00	6.00
Dentine firing	19	960	6.00	6.00	1.00	6.00
2 nd and 3 rd dentine firing	20	950	6.00	6.00	1.00	6.00
Glaze firing	21	940	-	3.00	1.00	-
Glaze firing, using VITACHROM DELTA Fluid	22	940	6.00	3.00	1.00	-
Glaze firing, using „740“ glaze	23	920	4.00	3.00	1.00	-

All above-mentioned programs are factory calibrated