VITA vPad comfort / excellence / clinical

Operating manual
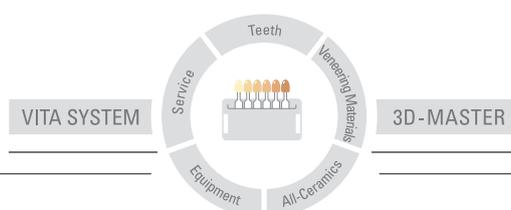

| VITA shade taking | > | VITA shade communication | > | VITA shade reproduction | > | VITA shade control |

Date of issue: 06.11

VITA SYSTEM   3D-MASTER

Teeth
Veneering Materials
All-Ceramics
Equipment
Service

VITA

Table of contents

1 Introduction

Dear Customer,

Thank you for deciding to purchase a VITA vPad comfort/excellence/clinical unit to operate and control your VITA VACUMAT 6000 M ceramic furnace or VITA VACUMAT 6000 MP combipress furnace or VITA ZYRCOMAT 6000 MS (available from autumn 2011).

You can use the VITA vPad comfort / clinical to connect up to 2 VITA VACUMAT 6000 M / 6000 MP and VITA ZYRCOMAT 6000 MS units.

You can use the VITA vPad excellence to connect up to 4 VITA VACUMAT 6000 M / 6000 MP and VITA ZYRCOMAT 6000 MS units.

Please read this user manual carefully before use.

The user manual is an important aid for operating the device successfully and safely.

The user manual contains important information on how to use the device safely, appropriately and efficiently. Adherence to the information contained in the manual helps to prevent risks, reduce repair costs and downtime and increase the reliability and service life of the device.
All of the illustrations and drawings in this user manual are intended for general explanatory purposes and are not authoritative for the detailed construction of the device.

This operating manual must always be kept close to the device. It must be read and followed by all persons responsible for working with/on the device, for example in relation to:

- Operation
- Troubleshooting work routines
- Cleaning
- Servicing (maintenance, inspection, repairs).

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2   Scope of delivery

2.1 Device supplied in special box including:

- 1 VITA vPad comfort 7" color touchscreen **or**
- 1 VITA vPad clinical 7" color touchscreen **or**
- 1 VITA vPad excellence 8.5" color touchscreen
- 1 user manual

❶ An additional switchbox and connection cable (VITA Prod. No. D47009) are required for operating 2 to 4 VITA VACUMAT 6000 M / 6000 MP or VITA ZYRCOMAT units with the VITA vPad comfort / excellence / clinical control unit.

3   Technical Information

VITA vPad comfort / clinical control unit with 7" color touchscreen, memory capacity of 500 programs with 1 GB photo viewer and control of up to 2 sintering units, furnaces or combipress furnaces.

VITA vPad excellence control unit with 8,5" color touchscreen, memory capacity of 1000 programs with 2 GB photo viewer and control of up to 4 sintering units, furnaces or combipress furnaces.

4   Technical Data

4.1   Dimensions/weights

VITA vPad comfort / excellence / clinical

- Width: 235 mm
- Depth: 156 mm
- Height: 150 mm
- Weight: 0.7 kg
- Housing: Plastic

4.2   Electrical data

The power of 48 V DC is supplied to the VITA VACUMAT 6000 M / 6000 MP or VITA ZYRCOMAT 6000 MS via the connection cable.

4.3   Ambient conditions

- Use indoors
- Ambient temperature: 2°C to 40°C
- Relative humidity 80% at 31°C

5   Intended use

Basic information on the device design
The device is designed according to a state of the art design and recognized safety standards.

However, if it is used inappropriately, hazards for the health and safety of the user or third parties may arise as well as the risk of damaging the device and other valuable assets.

Unauthorized modes of operation
Operating the device with power sources, products, etc., which are subject to hazardous materials regulations or could have any negative impact on the health of the operating personnel, and the use of equipment modified by the user, are not permitted.

Authorized modes of operation
The operation of the device is only permitted if this user manual has been completely read and understood and the procedures described in it have been observed. Any other or additional use, e.g. processing of products other than those intended as well as handling of hazardous materials or substances injurious to health, is considered to be contrary to the recommended use.

The manufacturer/supplier will not be liable for any damage resulting from such unauthorized use. The risk of such use is borne exclusively by the user.

6   Operation and cleaning of the control unit

Do **not** operate the control unit with **sharp or hot objects**; this will result in damage to the touchscreen.

Clean the display at regular intervals with a screen cleaner. A screen cleaner does not cause any scratches, generates an antistatic effect and the touch screen will remain clean longer.

Damage to the display attributable to improper handling during operation or cleaning is excluded from the warranty.

6.1   Warranty and liability

The warranty and liability are based on the terms and conditions stipulated in the contract.

❶ In the event of software modifications without the knowledge and approval of VITA Zahnfabrik H. Rauter GmbH & Co. KG, all liability and warranty claims are invalidated.

6.2   Spare parts

Spare parts must comply with the technical requirements specified by the manufacturer. This is always ensured when using original spare parts.

6.3   Safety information

Before using the device for the first time, please observe the safety information for the VITA VACUMAT 6000 M / 6000 MP furnaces (see operating instructions of VITA VACUMAT 6000 M / 6000 MP – Safety information).

7 Safety functions

The furnace is operated with a VITA vPad comfort / excellence / clinical control unit and has the following safety and monitoring features:

- Temperature sensor monitoring
- Temperature monitoring
- Vacuum monitoring
- Power supply failure protection
- Lift monitoring

Additional functions when operating with the VITA VACUMAT 6000 MP:

- Detection of pellets for VITA press pellets
- Detection of press stroke

7.1 Mains power supply failure

The device is equipped with power supply failure protection. This component prevents a program interruption and hence incorrect firing in the event of a brief failure of the mains power supply. The power failure protection is activated as soon as the mains power supply fails when a firing program is running.

Mains voltage failure time less than approx. 15 sec.

The program continues to run and is not interrupted. The display is out of order during this period. The display shows the start screen once the power is supplied again; after pressing the Material key, the running program is displayed again.

Mains voltage failure time longer than approx. 15 sec.

The program is interrupted and the display is out of order.
Once mains power is supplied again, the display shows the start screen.

> ⚠ **Once the mains power is supplied again, the time required to switch the control unit back on again is approx. 20 sec.**

8 Automatic temperature calibration

Automatic temperature calibration is activated by the processor after each start of a firing program.

The temperature calibration examines and corrects all deviations, which have occurred in the electronic components regarding temperature measurement and temperature control.
This calibration is performed after each start of a program and does not have any influence on the general time sequence. Therefore, even if the device is operated over a longer period, constant temperature control of +/- 1°C is achieved.

8.1 Service

Further information about the device is available on the homepage:
http://www-vita-zahnfabrik.com

Software updates can be downloaded under **Services / Equipment Servicing**.
Moreover there is also a registration possibility for the VITA Update Messenger to be automatically informed by email about new information on the device.

Technical questions and questions concerning repair and warranty can be sent to the following email address:
instruments-service@vita-zahnfabrik.com
Phone +49 (0) 7761 / 562-105, -106, -101

9 First use

Observe the setup and first use instructions in the VITA Vacumat 6000 M / 6000 MP or the VITA ZYRCOMAT user manual.

- Use the connector cable supplied to connect the control unit VITA vPad comfort / excellence / clinical to the VITA VACUMAT 6000 M / 6000 MP or VITA ZYRCOMAT 6000 MS.
- Plug in the vacuum pump (only for VITA VACUMAT 6000 M / 6000 MP)
- Insert the vacuum pump tube (only for VITA VACUMAT 6000 M / 6000 MP)
- Plug in the power supply cable.
- Switch on the device using the main switch.
- The lift moves to the lower position, then to the upper position and back to the lower position (lift distance measurement).

Additional features of the VITA VACUMAT 6000 MP:

- Connection for compressed air (max. 5 bar) to the pressure regulator of the vacuum pump. Attach the enclosed tube clamps to the compressed air tube: one clamp to the outlet from the laboratory's compressed air line and one clamp to inlet to the pump.

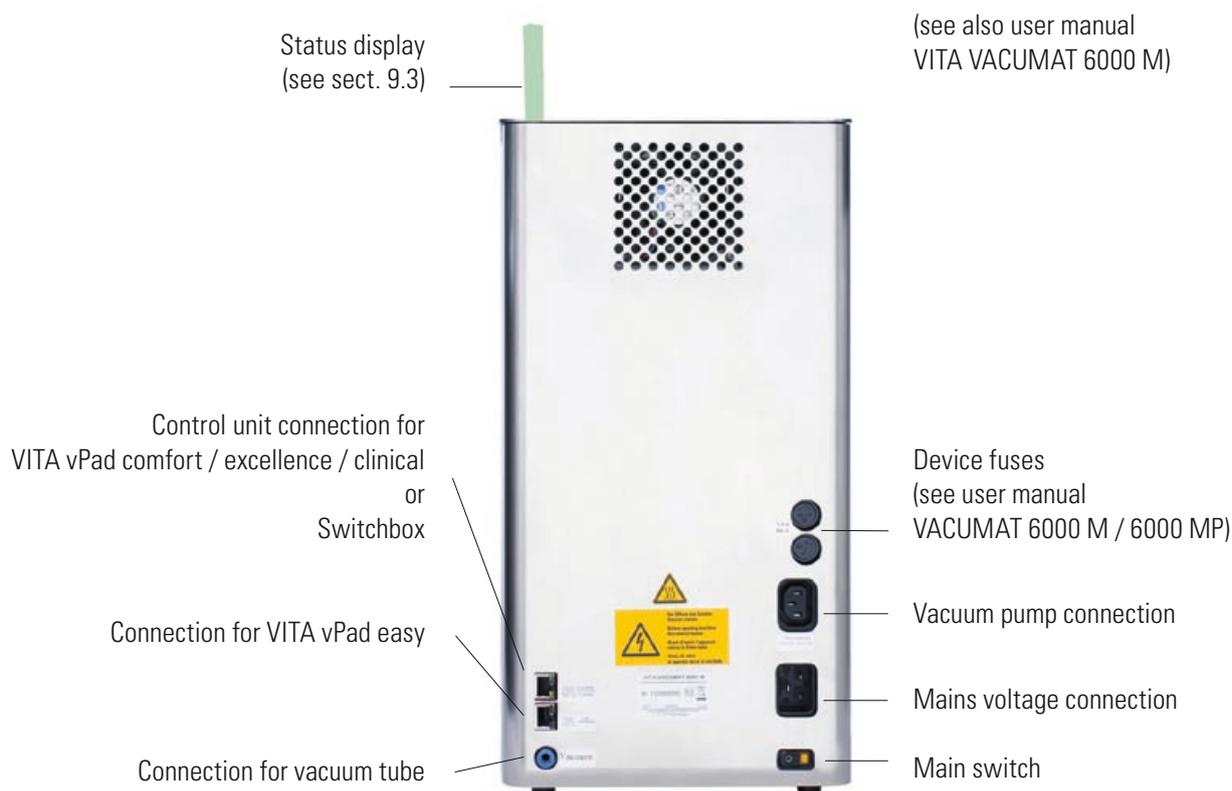For information about the individual connections see sections 9.1 and 9.2

I ⚠ **Attach the firing socket to the lift plate!**

Operating the device without a firing socket can damage the device due to the strong influence of heat.

When using 2 or more firing units with a vPad comfort / excellence / clinical control unit, it is important to observe the numerically marked connections of the Switchbox.

I ⚠ **One furnace must always be connected to port 1.**

9.1 Connections of the VITA VACUMAT 6000 M furnace

Status display
(see sect. 9.3)

(see also user manual
VITA VACUMAT 6000 M)

Control unit connection for
VITA vPad comfort / excellence / clinical
or
Switchbox

Connection for VITA vPad easy

Connection for vacuum tube

Device fuses
(see user manual
VACUMAT 6000 M / 6000 MP)

Vacuum pump connection

Mains voltage connection

Main switch

9.2 Connections of the VITA VACUMAT 6000 MP combipress furnace

(see also user manual VITA VACUMAT 6000 MP)

Status display
(see sect. 9.3)

Compressed air connection,
max. 5 bar

Control unit connection for
VITA vPad comfort / excellence / clinical
or
Switchbox

Connection for VITA vPad easy

Connection for vacuum tube

Device fuses

Vacuum pump connection

Pressure regulator 3 bar
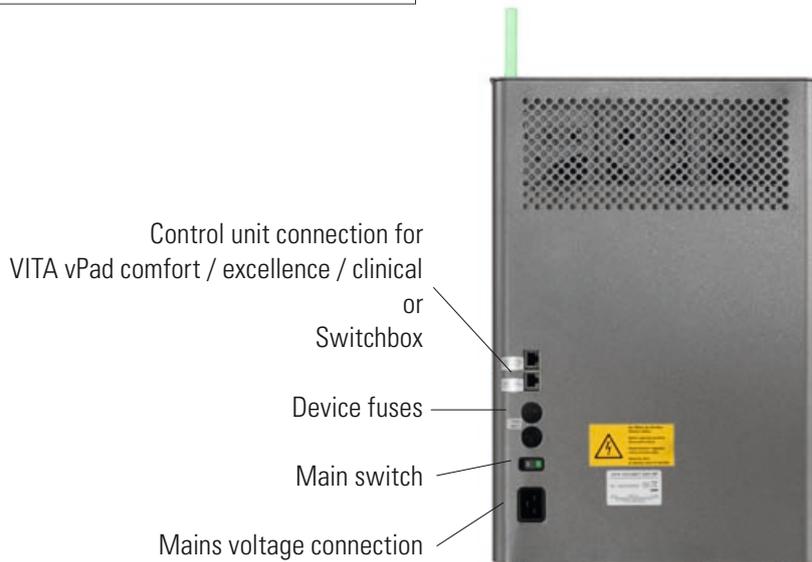
Mains voltage connection

Main switch
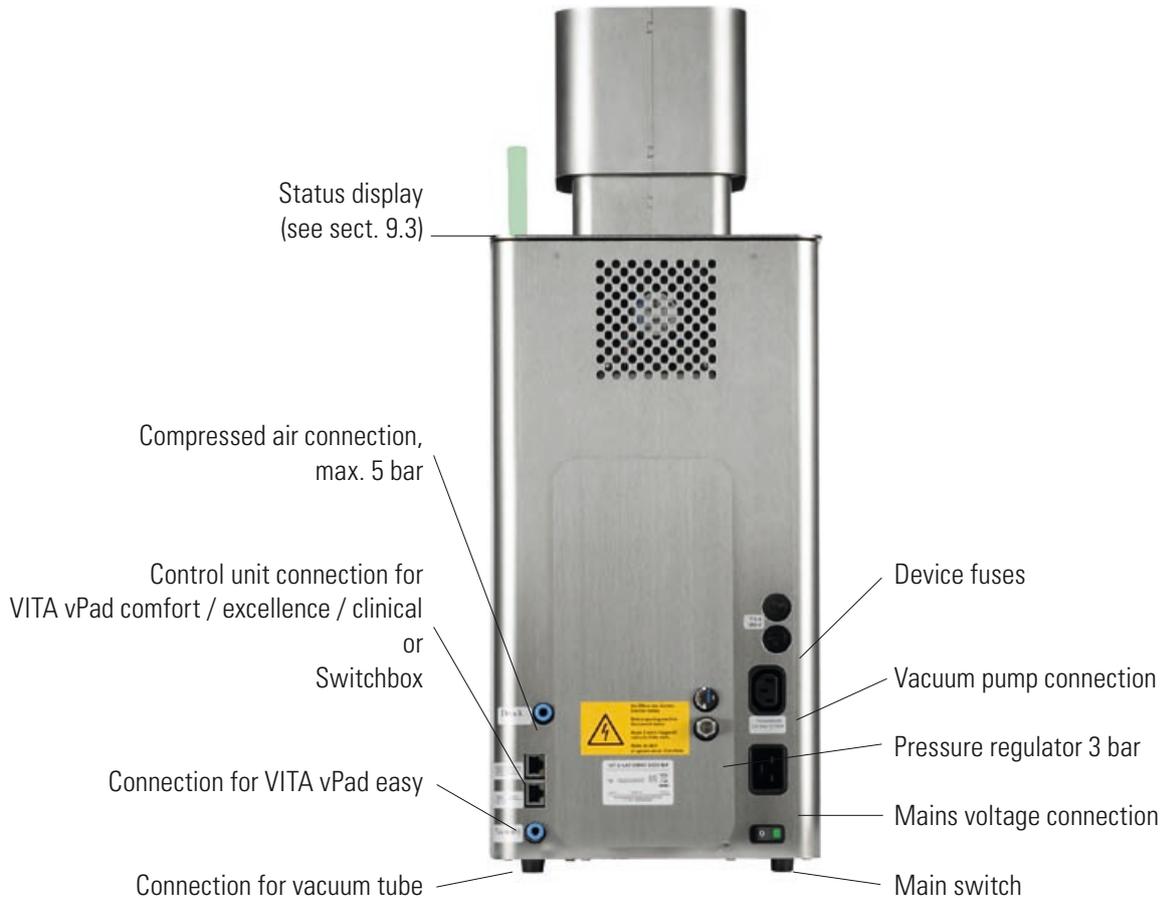
9.3 Compressed air connection

The vacuum pump features a pressure regulator.
The inlet pressure from the lab's compressed air supply should not exceed 6 bar.
The pressure supplied to the device should be adjusted to a maximum of 5 bar.
About the settings for the press pressure, see sect. 18.3

9.3 Connections of VITA ZYRCOMAT 6000 MS
(see also user manual of VITA ZYRCOMAT 6000 MS)

Control unit connection for
VITA vPad comfort / excellence / clinical
or
Switchbox

Device fuses
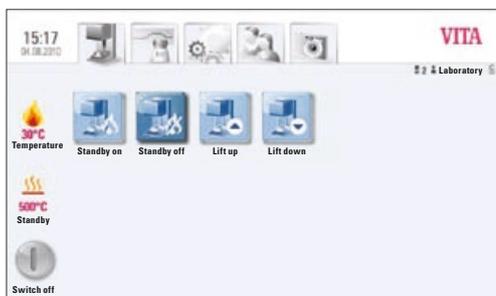
Main switch

Mains voltage connection

10 Switching on the device

Switch on the device using the **main switch** (see sect. 9.1, 9.2 and 9.4). The lift moves to the lower position, the software boots up and the start screen is displayed.

After connecting the VITA VACUMAT 6000 M / 6000 MP, the display shows:

VITA vPad comfort / excellence / clinical with
1 Device

VITA vPad comfort / excellence / clinical with
with 2 Devices

10.1 Start Standby

1 Device**:**
Press the **Standby On** button.

2 Devices**:**
Select the device using the **Furnace 1**
or **Furnace 2** buttons.

Press the **Standby On** button.

The lift moves into the firing chamber and the temperature increases to the set standby temperature. After reaching the standby temperature and holding for 5 minutes, the device is ready for firing processes.

The **Cooldown** button is only displayed if the temperature in the firing chamber is higher than the standby temperature.

10.2 Preventing condensation (AntiCon)

ⓘ If the device is switched on with the main switch and standby is started, the lift moves to the upper position, but does not seal the firing chamber completely. This allows condensation in the insulation to evaporate.

After reaching the standby temperature and holding for approx. 5 minutes, the firing chamber is completely sealed and the device is ready for use. With the Standby Off button, the lift is lowered and the heater is switched off.

10.3 Status display

The status display shows the following operating modes:
- Green – device in standby mode
- Blue – program active
- Red – error

VITA vPad comfort / vPad excellence with 1 firing unit

VITA vPad comfort / vPad excellence with 2 firing units

11 Operation and features of VITA vPad comfort / excellence / clinical

1   Standby temperature
2   Firing chamber temperature
3   Time / date
4   Standby features
5   Materials / firing programs
6   Device settings
7   User profiles / individual material and program settings
8   Photo Viewer
9   Standby On
10 Standby Off
11 Lift Up
12 Lift Down
13 Fast cooldown to standby (symbol is only displayed if the temperature in the firing chamber is higher than the standby temperature)
14 Number of the selected device / user name / password protection status: if password is activated – icon "lock" is closed; if password protection is not activated – icon "lock" is open
15 Device off / display off, see sect. 11.5
16 Information field with remaining time/user/temperature
17 Switch off device in multi-furnace mode, see sect. 11.5

11.1 Start Standby

Standby On

Programs, settings, user and Photo Viewer (upper bar tab) may be operated in active or inactive standby mode.

If the device is switched on using the main switch and the standby program is started, the lift moves to the upper position and remains approx. 2-3 cm open for approx. 10 minutes, so that condensation in the insulation can evaporate.

After reaching the standby temperature and holding it for 5 min., the device is closed.

11.2 Standby beenden

Standby Off

The lift moves down, and the heater switches off.

11.3 Lift Buttons

Lift Up **Lift Down**

The lift moves up or down when the **Lift Up** or **Lift Down** buttons are pressed.

11.4 Cooldown to standby

Cooldown

The **Cooldown** button is only displayed/active when the firing chamber temperature is higher than the standby temperature.

The lift remains in the lower position and the pump is switched on; after reaching the standby temperature minus 50°C, the lift is raised up and the firing chamber is heated to the standby temperature.

11.5 Switching off

Switch off

When operating several furnaces, each device can be switched off individually. If several devices are being operated with one control unit, a dialog box is displayed showing the devices in operation when pressing the **Switch off** button. The devices can then be selected individually to switch them off.

After pressing the **Device off** button, the lift is raised up, the heater is switched off and **Switch off** is shown on the display.

12 Selecting the firing program

On pressing the **Material** tab or **User** tab, programs can be selected.

Material

On pressing the **Material** tab, the stored materials are displayed.

User

On pressing the **User** tab, the users that have been set up are displayed; after selecting a user, the stored materials are displayed.

To select and start a firing program, follow the steps below:

1. Select the material

2. Select the program

3. Start the program using the START button

The firing curve is colored red according to the program sequence.

The time sequence is displayed on the individual buttons for the program phases.

The total program time is displayed in red (see the clock symbol at the top right).

When operating just one furnace, the firing program is displayed during the entire program sequence.

After the program sequence, the display returns to the firing programs.
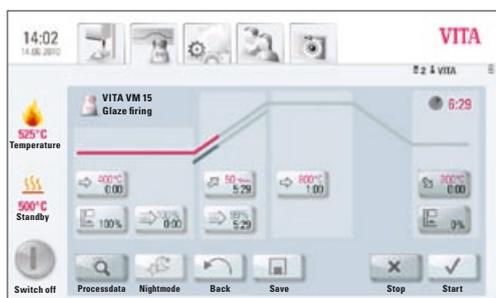
When operating multiple furnaces, approx. 20 sec. after the program start the Furnace Overview screen is displayed (see sect. 10 figure 2).

The next free device can thus be selected and used for firing.

A signal sounds at the end of the program; for settings, see sect. 18.2.

The active program can be interrupted at any time using the **Stop** button.

Information about the additional function buttons:

12.1 Process data

Process data

Press **Process data** button, display shows:

Saving process data for quality assurance

The following data are saved automatically:
- User / operator
- Material name
- Name of firing program
- Firing program data – set and actual values
- Device type
- Device number
- Date of firing process

The following data can additionally be entered in a dialog box:

Press input field:
- Order No.
- Name
- Note / remarks about the firing object

Apply the value using the **OK** button or retain the last value using the **Cancel** button and return to the firing curve screen.

These data are stored in the control unit memory. These data can subsequently be exported to a USB stick and transferred to the administration program (FDS – Firing-Data-System) on the PC (see sect. 18.4).

This administration program permits archiving of all firing data and subsequent tracking and printing of individual orders.

12.2 Night program

Night program

Pressing the key activates the night program; at the end of a firing program the lift is moved into the firing chamber after the temperature in the firing chamber has decreased to 200°C; display and heating are deactivated.

To switch the unit on again, the main switch needs to be switched off and on again.

The night program must be activated before starting a firing program.

12.3 Back button

Back

The **Back** button is used to display the previously selected screen.

12.4 Save

Save

Saving program values - see sect. 13.

12.5 Program buttons

Functions of the program buttons – see sect. 13.1 Entering / modifying program values.

13 Entering / modifying / saving program values

Any programs and program values can be customized except of the programs under user **VITA**.

All of the VITA original programs are stored under user **VITA** and serve as a backup copy of the factory settings.

User **Laboratory** (for VITA vPad clinical "**Practice**") is a copy of user **VITA** and can also be modified; changes of the material names cannot be performed (see sect. 14).

All materials available for CEREC practices are already prestored for user **Doc** that is exclusively available for the VITA vPad clinical unit.

When creating a new user, a copy of all VITA programs is created automatically. These programs can be customized and saved by the users depending on their individual needs. This does not apply to changes of the material names.

Various symbols are available for creating new materials, which can also be changed (see sect. 14.1).

Value changes are saved using the **Save** button.

If a program with modified values is started directly with the **Start** button, the change is valid only for the active program sequence; at the end of the program, the value is reset to the last saved value.

If password protection is activated, the password is requested after pressing the **Save** button. After entering the valid password, the value entered can be saved.

For value changes after starting the program, see sect. 13.10.

13.1 Description of function buttons

1   Predrying temperature and predrying time (see sect. 13.2)
2   Predrying lift positions (see sect. 13.3)
3   Prevacuum (see sect. 13.4)
4   Rise time / Rise temperature (see sect. 13.6)
5   Main vacuum (see sect. 13.5)
6   Firing temperature and holding time (see sect. 13.7)
7   Cooldown temperature and holding time (see sect. 13.8)
8   Lift position for cooldown (see sect. 13.9)
9   Saving the process data (see sect. 12.1)
10 Night program (see sect. 12.2)
11 Back to previous screen (see sect. 12.3)
12 Save button (see sect. 13)
13 Program stop button
14 Program start button
15 1st firing temperature and holding time
16 Vacuum for 2nd temperature rise and holding time
17 2nd rise time / rise temperature
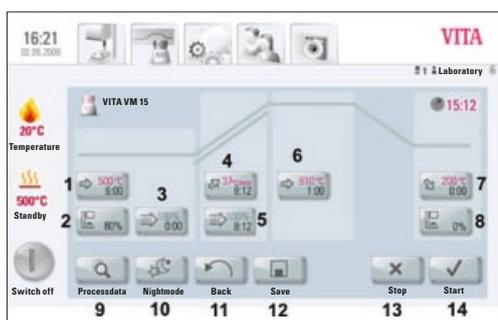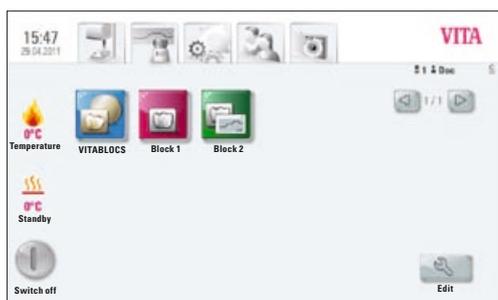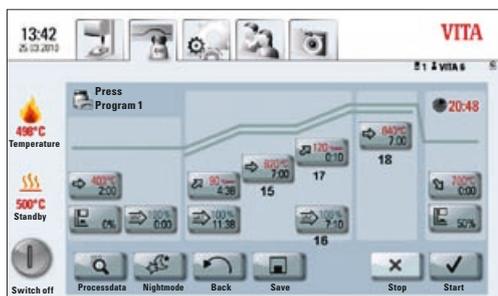18 2nd firing temperature and holding time

Figure 1 shows firing program view

Figure 2 shows firing program view with 2nd temperature rise
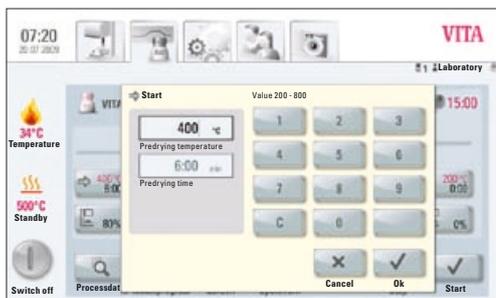
13.2 Predrying temperature / predrying time

Press **Predrying** button, display shows:

Enter / change values

• Move to the **Predrying temperature or Predrying time** field
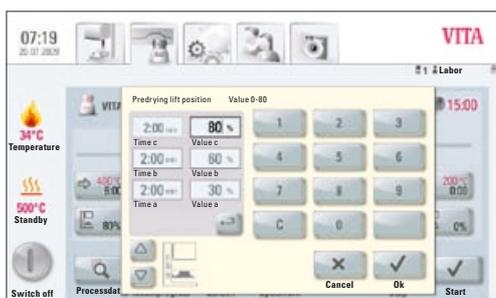• Enter the **value**

Entry ranges:
Temperature   200°C – 800°C
Time   0 – 40:00 min/sec.

The available entry values are displayed.

Apply the value using the **OK** button **or** retain the last value
using the **Cancel** button and return to the Firing curve screen.

13.3 Predrying lift positions
Three lift positions are available for the predrying phase.

Press **Lift position** button, display shows:

Enter / change values

The dialog is subdivided into entry for position in %
and entry for the remaining time at the position.

Enter lift position in % and press **OK** button to accept

or

move lift to the desired position using the **Lift** button and use Arrow
button to accept the value.
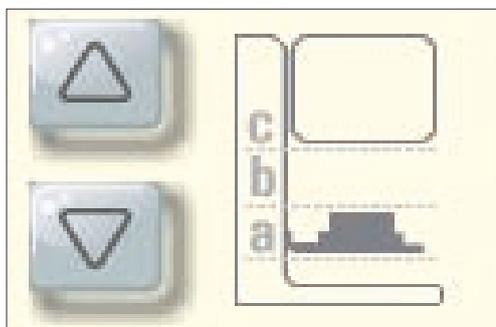
Time for remaining in the positions:

The time for position **c** is determined automatically:

Time for position **a** or **b**

• Press desired field for position **a** or **b**
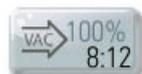• Enter the **value**

The available entry values are displayed.

Apply the value using the **OK** button **or** retain the last value using the
Cancel button and return to the Firing curve screen.

For the predrying phase, 3 lift positions are available.

Position a – lower position	**entry value 0 – 30%**
Position b – middle position	**entry value max. 60%**
Position c – upper position	**entry value max. 100%**

The time values of the individual positions depend on the predrying time. The time value for **position c** is determined automatically.

In the event of a change in the predrying time of more than 3:00 min., the time for **position a** and **position b** is retained and the time for **position c** is adapted.
In the event of a change in the predrying time of **less** than 3:00 min., predrying is completed in **position b** with the lift position 50%.
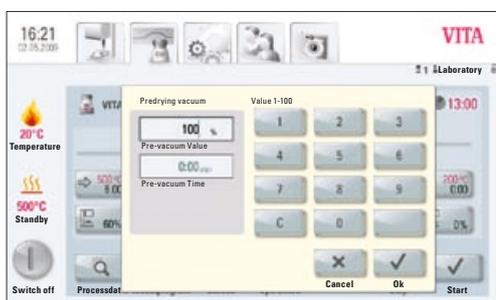
13.4 Prevacuum

Press the **Prevacuum** button, display shows:

Enter / change values

- Move to the **Time** or **Value** % field
- Enter the **value**

Entry ranges:
Time   0 – 30:00 min/sec.
Value % 0 – 100%

The available entry values are displayed.

Apply the value using the **OK** button **or** retain the last value using the **Cancel** button and return to the firing curve screen.

The **Prevacuum** setting creates the vacuum inside the firing chamber, before the temperature rise becomes active. On entering the **time** 0:00, the prevacuum is deactivated.
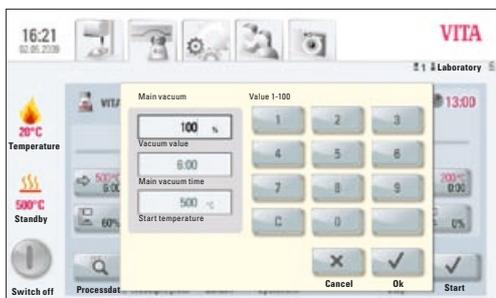
13.5 Main vacuum

Press the **Main vacuum** button, display shows:

Enter / change values

- Move to the **Time** or **Value** % or °C field
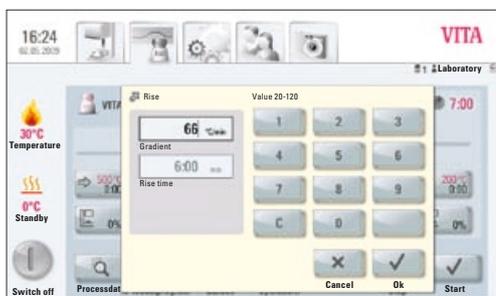- Enter the **value**

Entry ranges:
Value %   50 – 100%
Time   0 – 80:00 min/sec.
Temperature °C   200°C – 1,190°C
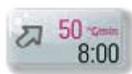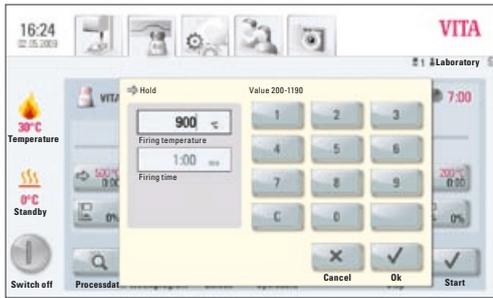
The available entry values are displayed.

Apply the value using the **OK** button **or** retain the last value using the **Cancel** button and return to the firing curve screen.

The time values for switching the vacuum pump on and off depend on the preset program values. If the end temperature or predrying temperature are changed, the vacuum time is adapted to the rise time.

The max. vacuum time is calculated from the rise time plus the temperature holding time at the end temperature.

13.6 Rise time – rise temperature

Press **Rise** button, display shows:

Enter / change values

- Move to the **°C/min** or **min** field
- Enter the **value**

Entry value °C/min   20°C to 120°C
Entry value min/sec.   03:00 to 40:00 min/sec.

The available entry values are displayed.

Apply the value using the **OK** button **or** retain the last value using the **Cancel** button and return to the firing curve screen.

After entering a value °C/min or min/°C, the 2nd value is automatically calculated and displayed.

If the calculated temperature rise is below 20°C/min. due to entering a value for the temperature rise in min/sec., or it exceeds the max. value of 120°C, a respective message is displayed.

If, after entering the temperature rise, the predrying temperature or the firing temperature are changed, the value °C/min. is retained, and the time in min/sec. is adjusted.

13.7 Firing temperature and holding time

⇨ 810 °C
1:00

Press **Firing temperature** button, display shows:

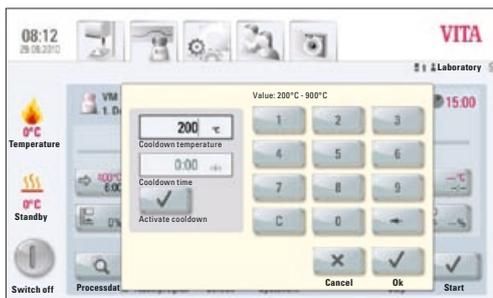**Enter / change values**

- Move to the **°C** or **min** field
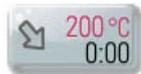- Enter the **value**

Entry value   max. 1,190°C
Entry value   max. 40:00 min/sec.

The available entry values are displayed.

Apply the value using the **OK** button **or** retain the last value using the **Cancel** button and return to the firing curve screen (see sect. 13, figure 1).

13.8 Cooldown temperature and holding time

⇘ 200 °C
0:00

Press **Cooldown** temperature, display shows:

Enter / change values

- Move to the **°C** or **min** field
- Enter the **value**

Entry value   200°C – 900°C
Entry value   0 – 40:00 min/sec.

The available entry values are displayed.

ℹ The field **Activate cooldown** is automatically activated when entering the temperature or time – button with activation control.

Deactivating cooldown

Press **Deactivate cooldown** – button without activation control.

Apply the value using the **OK** button **or** retain the last value using the **Cancel** button and return to the firing curve screen (see sect. 13, figure 1).

13.9 Cooldown lift position

Press **Lift position** button, display shows:

Enter / change values

- Move to the **°C** or **min** field
- Enter the **value**

The available entry values are displayed in the dialog box.

Apply the value using the **OK** button **or** retain the last value using the **Cancel** button and return to the firing curve screen (see sect. 13, figure 1).

ⓘ The same procedure is used to enter and change the values of the 2nd temperature rise and 2nd holding time.

13.10 Changes after starting a firing program

Program values may be changed after starting a firing program. To avoid incorrect firing, changes, which automatic settings have on other program sections, cannot be performed, such as changing the rise time, which will automatically adjust the vacuum time.

The password request is deactivated here; it is not possible to save and the change is only applied temporarily.

Generally, **only an inactive program** section can be changed. The other program sections, which can still be changed, are identifiable by the display of the button (dark button). If a program section that is still available is selected for a change, and if it becomes active in the meantime, the program switches to the firing curve screen and the program continues running with the value previously obtained.

In the dialog box, the time display shows the time still available for a change.

The following values can be modified:

- Firing temperature
- Holding time for the firing temperature
- Cool down temperature
- Holding time for cooling temperature

When the end temperature is changed, the °C/min gradient is always maintained, the rise time and the vacuum time are adjusted accordingly.

13.11 Quickstart

If the firing chamber temperature is higher than the program's predrying temperature or the start temperature when a firing program is started, the **Quickstart** screen is displayed.

The Quickstart button is only active in firing programs without predrying.

In **Quickstart**, the following options can be selected:

- **Slow cooldown** to the start temperature without using the vacuum
- **Fast cooldown** to the start temperature by switching on the vacuum pump
- **Quick Start** program start at the current firing chamber temperature

On selecting **Quickstart**, the gradient (°C/min) is retained and the rise time is adjusted. Likewise, in a program with vacuum, the vacuum time is adjusted to the time of the temperature rise. The adjusted values are displayed and must be confirmed by pressing the **OK** button.

Figure 1 shows Materials screen

Figure 2 shows Programs screen

Figure 3 shows User profiles screen

14 Create and edit materials, programs and user profiles

At the appropriate level in the display, the **Edit** button for **Materials**, **Programs** and **User profiles** (users) is shown.

Edit

With this button, the yellow editing level is activated, which includes the following options:

- Create **new** material, programs, user profile
- **Modify** material, programs, user profile
- **Duplicate** material, programs, user profile
- **Delete** material, programs, user profile
- **Position** material, programs, user profile
- **Import** material, programs, user profile from USB stick to control unit
- **Export** material, programs, user profile from control unit to USB stick

 Materials and programs listed under User VITA cannot be changed.

14.1 Create a new material

New materials can be created under **Material** or under **User**.

Material

On pressing the **Material** tab, the stored materials are displayed directly.

User

Pressing the **User** tab shows the created user profiles and, after selecting a user, the stored materials are displayed.

Figure 1 – display shows materials

Figure 2 – display shows editing level for materials

Figure 3 – entries for material

1. Select the Material tab

• Press **Edit** button

• Press **New** button

2. Enter material name (max. 12 characters)
• Press **Material name** label field – keypad is shown.
• Enter name
• Press **OK** button
• **Select container** (3 options)

or
• Select program for pressing (see press programs)

or
• Select 2-step program for crystallization firings
  (see 2-step programs)

or
• Select program for Blocs
• **Select color** (5 options)
• Press **OK** button to accept **or** press **Cancel** button
  to return to Figure 2 (editing level)

14.2 Change material

VITA

Materials and programs stored under the **VITA** user cannot be changed.
When pressing the **Edit** button, the message "VITA user can not be changed"
is displayed.

Laboratory / **Doc**
Practice

The following functions are provided for the materials and programs listed
under **Laboratory** user (for VITA vPad clinical "**Practice**") and **Doc** user
(for VITA vPad clinical):
• Change
• Duplicate
• Delete
• Position
• Import
• Export

• In figure 1 Material, press the **Edit** button – the editing level is displayed
• Select **Material** to be modified
• Press the **Modify** button
• Enter or select the desired changes, name, color or container
  (see figure 3)
• Apply using the **OK** button **or** press the **Cancel** button
  to return to figure 2.

The display shows the modified material.
Press the **Back** button – the display shows figure 1 Materials.

Please note: All program values and program names for VITA materials
can be changed. The VITA materials names and VITA containers cannot be
changed.

14.3 Duplicate material (copy)

• In figure 1 Material, press the **Edit** button.
  The editing level is displayed.
• Select the **Material** to be duplicated.
• Press the **Duplicate** button
• The material with associated programs is added and marked
• for identification with an additional number (e.g. VITA VM 13 (2))
• Press **Back** button – display shows figure 1 Materials

The material name can be changed using the **Modify** mode (see sect. 14.2).

Figure 1 – display shows materials

Figure 2 – display shows editing level for materials

14.4 Delete material

- In figure 1 Material, press the **Edit** button – the editing level is displayed
- Select the **Material** to be deleted
- Press the **Delete** button
- Apply using the **OK** button **or** press the **Cancel** button to return
- Press **Back** button – display shows figure 1 Materials

⚠ **Warning: If a material is deleted, the programs stored for the material will also be deleted.**

14.5 Position material

- In figure 1 Material, press the **Edit** button – the editing level is displayed
- Select the **Material** having its position changed
- Press the **Position** button – the material group moves 1 digit to the right.
- Press **Back** button – display shows figure 1 Materials

14.6 Import material

- In figure 1 Material, press the **Edit** button – the editing level is displayed.
- Select the **Import** button
- Select **Data** from the USB stick
- Press **Import** button – data are transferred to the control unit
- Press **Back** button – display shows figure 1 Materials

⚠ **Warning: To import data, the USB stick containing the data to be imported must be inserted into the control unit.**

14.7 Export material

- In figure 1 Material, press the **Edit** button – the editing level is displayed
- Select the **Material** to be exported
- Press the **Export** button
- Press **Save or Cancel** button
- **Back** button – display shows figure 1 Materials

⚠ **Warning: To export data, the USB stick must be inserted into the control unit.**

14.8 Create / modify programs

Programs can be created or modified under **Material** or under **User**.

Material

On pressing the **Material** tab, the stored materials are displayed directly.

User

Pressing the **User** tab shows the created user profiles and, after selecting a user, the stored materials are displayed.

Figure 1 shows materials

1. Select the material

2. Select program for editing

Figure 2 shows programs

Figure 3 shows editing level

Press the **Edit** button – display shows yellow editing level (figure 3).

When selecting a user with a password, the keypad is displayed to enter the password after pressing the **Edit** button.

After entering the password, figure 3 Editing level is displayed.

Figure 4 shows entry of program names

- Press **New** button – keypad is shown (see figure 4)
- Enter name – max. 20 characters
- Press **OK** button – display shows the newly created program.
  The new program may be displayed on a new page.

Figure 1 shows materials

Figure 2 shows programs

Figure 3 shows editing level

Figure 4 shows entry of program names

- Use keys to change pages
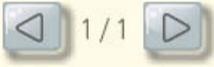
- Program values are entered and saved after selecting the program in the firing curve view (see sect. 13).

14.9 Modify programs

- Select material in Figure 1
- In figure 2 Firing programs, press the **Edit** button – the editing level is displayed
- Select the **program** to be modified
- Press the **Modify** button
- Use the keypad to enter the desired changes (name)
- Press the **OK** button

14.10 Duplicate programs

- Select material in figure 1
- In figure 2 Firing programs, press the **Edit** button – the editing level is displayed
- Select the **program** to be duplicated
- Press the **Duplicate** button

The program is added and marked with an additional number.
For name changes, see sect. 14.9

14.11 Delete programs

- Select material in figure 1
- In figure 2 Firing programs, press the **Edit** button – the editing level is displayed
- Select the **program** to be deleted
- Press the **Delete** button
- Press the **OK** button to delete **or** go back using the **Cancel** button

14.12 Change program position

- Select material in figure 1
- In figure 2 Firing programs, press the **Edit** button – the editing level is displayed
- Select the **program** to be repositioned
- Press the **Position** button - the program is shifted 1 digit to the right

14.13 Import programs

- Select material in figure 1
- In figure 2 Firing programs, press the **Edit** button – the editing level is displayed
- Press the **Import** button
- Select **program** to be imported from the USB stick
- Press **Import or Cancel** button

⚠ **Warning: To import data, the USB stick containing the data to be imported must be inserted into the control unit.**

14.14 Export programs

- Select material in figure 1
- In figure 2 Firing programs, press the **Edit** button – the editing level is displayed
- Select the **program** to be exported
- Press the **Export** button
- Press the **OK or Cancel** button

⚠ **Warning: To export data, the USB stick must be inserted into the control unit.**

15   Create / modify user profiles

IIn the VITA **vPad comfort** control unit, up to 4 users can be created.
In the VITA **vPad excellence** control unit, up to 12 users can be created.

User

Press the **User** tab – the display shows all users

User profile **VITA** is set up and contains all of the VITA original programs.
These programs cannot be modified and are used as a backup copy of the
factory settings.

The user profile **Laboratory** (for VITA vPad clinical "**Practice**") is a copy
of the original VITA programs. These programs can be customized by
users depending on their individual needs. VITA material names and VITA
containers, however, cannot be modified.

All materials available for CEREC practices and the relevant programs are already
prestored for user **Doc** that is exclusively available for the VITA vPad clinical unit.

Program values of newly created User profiles can be modified.

For user profiles already created with password protection, the **keypad** is
displayed for entering the password.

If a new user profile is created, a copy of the VITA original programs is added
automatically.
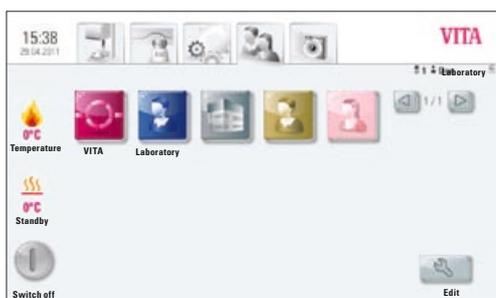
Figure 1 shows user profile view
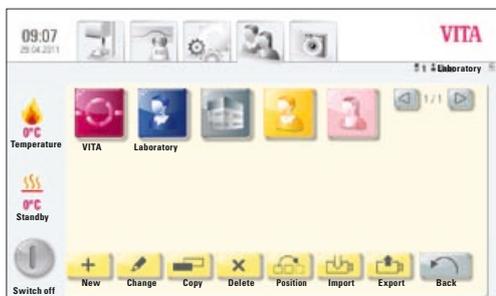
Figure 2 shows editing level

Press **Edit** button -
display shows figure 2 for editing the users.

Press **New**. The display shows figure 3

Create a new user profile

*   Move to the **label field** – the keypad is displayed
*   Enter the **user name** – max. 12 characters
*   Press the **OK** button
*   Select **Symbol** (10 options)
*   Apply using the **OK** button **or activate password protection**
    or press the **Cancel** button to return to figure 2
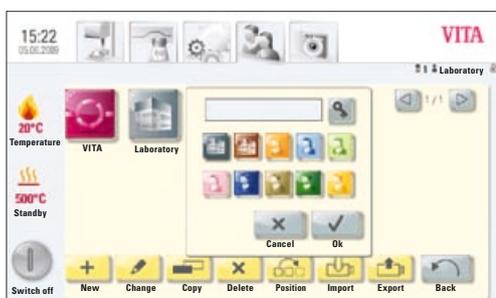
Figure 3 shows entry for a new user

15.1 Activate / enter the password:

- Press the **Password** 🔑 button – the **keypad** is shown
- Enter the **password**
- Confirm with **OK** button
- Re-enter the **password**
- Press the **OK** button **or Cancel** button - the keypad is removed

Password-protected programs can be used by all users;
active programs can be modified but not saved.

15.2 Delete the password

- Press the **Password** 🔑 button – the **keypad** is shown
- Enter the **password**
- Press the **OK** button – the keypad is removed
- Press **Modify** button
- Press the **Password** 🔑 button – the **keypad** is shown
- Press **OK** button twice to confirm empty label field –
  password is deleted

15.3 Modify a user profile

- In figure 1, User Profile, press the **Edit** button –
  the editing level is displayed
- Select the **user profile** to be modified
- Press the **Modify** button.
  For password-protected users, the **keypad** for entering
  the password is shown.
- Enter the **password**
- Press the **OK** button
- Move to the **label field** – the keypad is shown
- Modify the **user name** – max 12 characters
- Press the **OK** button
- Modify the **Symbol** (10 options)
- Press the **OK** button **or Cancel** button

15.4 Duplicate a user profile

- In figure 1, User Profile, press the **Edit** button
- Select the **User profile** to be duplicated
- Press the **Duplicate** button

The user profile is added and marked with an additional number for
identification, for example laboratory (2).

Figure 1 shows view of user profiles
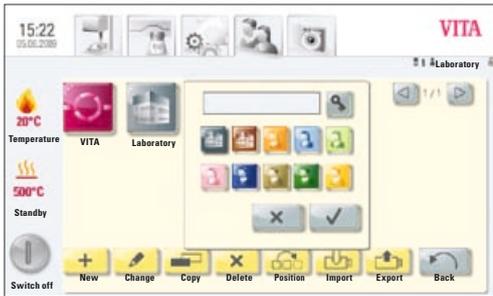
Figure 2 shows editing level

15.5 Delete a user profile

- In figure 1, User Profile, press the **Edit** button
- Select the **user profile** to be deleted. For password-protected users, the keypad for entering the password is shown.
- Enter the **password**
- Press the **OK** button
- Press the **Delete** button
- Press the **OK** button **or Cancel** button

15.6 Change user profile position

- In figure 1, User Profile, press the **Edit** button
- Select **the user profile** to be positioned
- Press the **Position** button –
  the user profile is shifted to the right (1 digit)

15.7 Import a user profile

- In figure 1, User Profile, press the **Edit** button
- Press the **Import** button
- Select the **user profile** to be imported
  from the USB stick
- Press **Import** button **or** use **Cancel** button to go back

⚠ **Warning: To import data, the USB stick containing the data to be imported must be inserted into the control unit.**

15.8 Export a user profile

- In figure 1, User Profile, press the **Edit** button
- Select the **user profile** to be exported
- Press the **Export** button
- Press the **Apply** button **or** use **Cancel** button
  to go back

⚠ **Warning: To export data, the USB stick must be inserted into the control unit.**

16 Press programs

PM 9

The programs stored under this material button are VITA press programs.
To create materials of other manufacturers, see sect. 14.1 Creating a new
material.

Enter/change values

Press the **Press material** button,
display shows figure 1 Available press programs.

1. Select desired press program

Figure 1 shows press programs

2. Selected press program is displayed
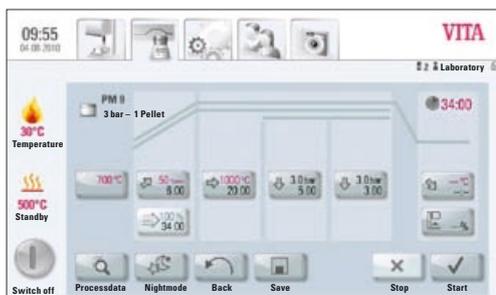
Figure 2 shows program view/firing curve

16.1 Start temperature for press program

Press field **750°C with start temperature**, display shows:

Enter / change start value

- Press 750°C field
- Enter **value**

Range of values   200°C – 900°C

Values that can be entered are displayed.

- Press **OK** button to accept the value **or** use **Cancel** button
  to retain the previous value; return to figure 2 Firing curve.

16.2 Rise time / rise temperature

Press **Rise time / rise temperature** field.

Enter/change values, see sect. 13.6 Enter/change values.
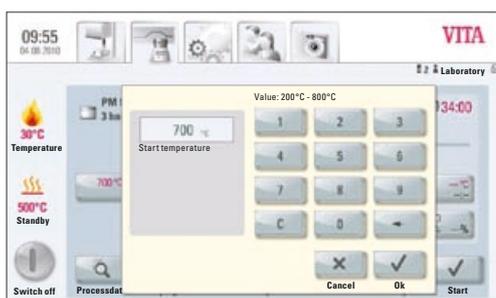
16.3 Vacuum time

The vacuum time in the press program cannot be adjusted or changed.
The vacuum is automatically adjusted during the entire pressing time.

16.4 Pressing temperature/pressing time

Press **Pressing temperature/pressing time** field.

Enter/change values
see sect. 13.7 Enter/change values.

16.5 Pressing time 1 and press pressure

Press **Pressing time 1/press pressure** field.

Enter/change values

- Press **Min** field
- enter **value**

Range of time values   0 – 40:00 min/sec.

Values that can be entered are displayed.

Use **Change pressure** button to select the press pressure.
For adjusting the press pressure, see sect. 18.3.

- Press **OK** button to accept the value **or** use **Cancel** button to retain
  the previous value; return to figure 2 Firing curve, see section 16.
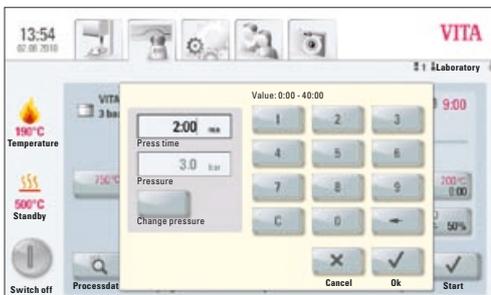
16.6 Pressing time 2 and press pressure

Press **Pressing time 2/press pressure** field.

Enter/change values
See sect. 16.5.

The default pressing time 1 is automatically ended if the press plunger has
reached its final position and no measurable change of stroke occurs.
If no change of stroke is measured, pressing time 2 is activated.
The pressing time runs down according to the setting; the press process
is completed and the lift is moved to the lower position.
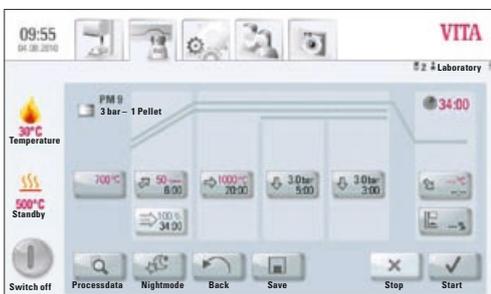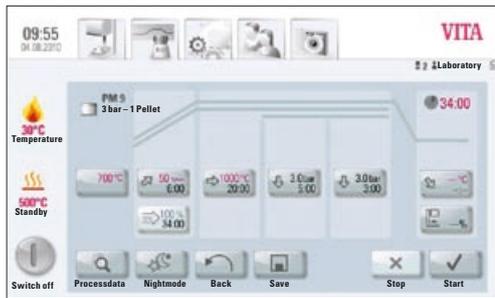
Figure 1

16.7 Starting a press program

⚠ **Note! The press object is inserted only after the start temperature has been reached.**

After selecting the press program, the display shows figure 1:

- Press **Start** button – lift is moved into the chamber
- Firing chamber temperature rises to the start temperature
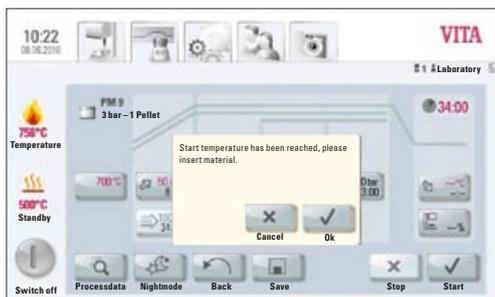
Figure 2

After reaching the start temperature, the display shows figure 2:

- Press **OK** button – lift is moved to the lower position
- Display shows figure 3 "Please insert material"
- Insert press pellet
- Press **OK** button – lift is moved into the chamber.
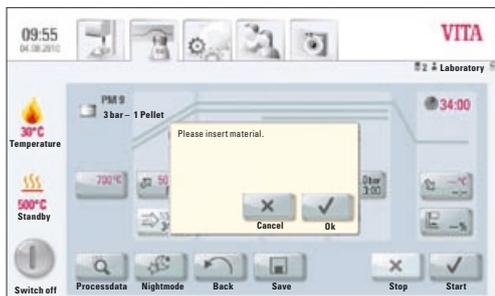
Figure 3

While the press pellet is moved into the chamber, the pressing cylinder is extended and retracted.

- Once it is retracted, the number of pellets inserted (for VITA materials) is displayed.

- Press **OK** or **Cancel** button to confirm.
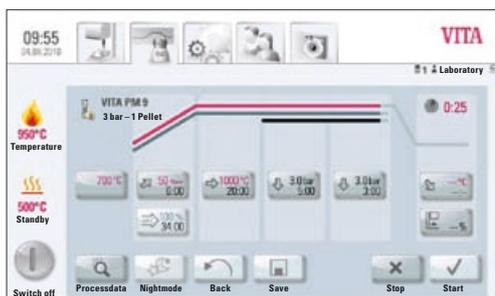
Figure 4

While the program is running, the display shows figure 4:

- red curve – temperature progress
- light grey curve – vacuum progress
- black curve – pressure progress

⚠ **To achieve correct pressing, it is required to place the press object in the center of the lift plate.
A firing socket suitable for the size of the press muffle with 2 small press plates being inserted must be used and placed on a level surface.**

17 Photo Viewer

Photo

Pressing the **Photo** tab opens the saved images folder
in the control unit.

By pressing the name field, the image is selected and opened
using the **Open** button.

The memory capacity of the VITA vPad comfort control unit is 1 GB;
the memory capacity of the VITA vPad excellence control unit is 2 GB.
Images can be displayed and saved. Images are opened in JPEG and PNG
formats.
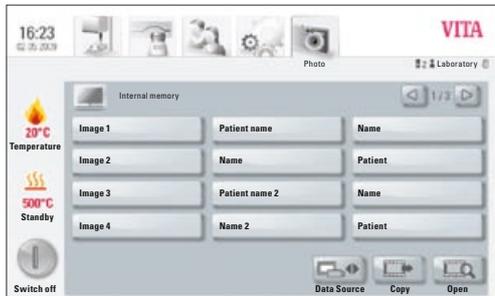
Data source

Using the **Data Source** button, the internal memory in the control unit
or a USB port (e.g. USB stick with images) is selected.
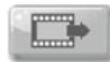
Copy

Using the **Copy** button, images can be copied from the internal memory
in the control unit to the USB stick or from the USB stick to the control unit.

Open

The selected image is displayed using the **Open** button.
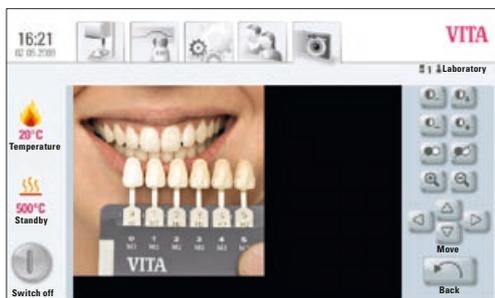
17.1 Image settings

The following display options are available:

- Contrast
- Brightness
- Zoom
- Black / white
- Move

18 Settings

Settings

Press **Settings** tab

Display shows:

Figure 1 Settings without combipress furnace

or

Figure 1

Figure 2 Settings with combipress furnace

Figure 2

18.1 Multifurnace

Multifurnace

Identification of connected furnaces. It is possible to provide the furnace with a name chosen by the user (10 characters).

The control unit saves the names of all the furnaces.

VITA vPad comfort – max. 2 devices can be connected.
VITA vPad excellence – max. 4 devices can be connected.

Figure 1 shows vPad excellence control unit
with one VITA VACUMAT 6000 MP (combipress furnace)
and two VITA VACUMAT 6000 M (ceramic furnaces).

Figure 1

- Press **Multifurnace** button under Settings –
  display shows the connected devices (see figure 2)
- Press desired **device** to enter name – confirm entry
- Display shows **keypad** –
  enter name and confirm with **OK** button

Figure 2

18.2 Furnace settings

Furnace settings
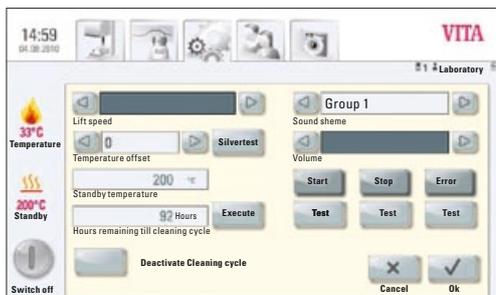
Press **Furnace settings** button, display shows:

- Lift speed
- Temperature calibration
- Cleaning firing
- Sound

Lift speed

The lift speed can be continuously adjusted using the slide control.

Temperature calibration with silver wire test

With this program and the VITA silver wire test set (VITA Order No. B 230), the temperature in the firing chamber can be checked and readjusted by up to plus/minus 20°C. During calibration, the prerequisites for performing the test (instructions in the silver wire test set) with the silver wire must be strictly observed. Deviations will result in incorrect measurements and therefore incorrect settings.

A preset program is available for calibrating the firing chamber temperature. 2 program sequences are required for checking the firing chamber temperature with the silver wire test.

The first program run must be performed at 955°C (set in the program); the silver must not be molten after this.

The second program must be performed at 965°C; this temperature value must be entered. After this program run, the silver must have melted into a ball.

Deviations of up to plus/minus 20°C can be entered.

Result of the silver wire test:

Temperature too low: Enter correction with minus symbol in front
Temperature too high: Enter correction without any symbol in front (plus symbol is added automatically).

Cleaning firing

Cleaning firing is performed automatically after the preset time.
In this program, the firing chamber is heated up and impurities
can evaporate from the slightly opened firing chamber.
It is recommended to carry out this firing in regular intervals.
The cleaning firing can also be ended at any time.

Sound

In the sound program, various acoustic signals can be set:
Program start, program end, alarm/service message.
VITA vPad comfort, VITA vPad excellence and VITA vPad clinical feature
6 sound groups that can be selected individually. Each sound group consists of
3 signals to indicate program start, program end and alarm.

The individual sounds can be played using the **Test** button.

18.3 Adjust press pressure

The press pressure can be adjusted for the various press materials.

Press pressure

Press **Press pressure** button, display shows the settings for the press
pressure.

- Press 5.0 bar field
- The higher press pressure (e.g. 5 bar) is adjusted with the pressure
  regulator at the vacuum pump.
- Press 3.0 bar field
- The lower press pressure (e.g. 3 bar) is adjusted with the pressure
  regulator 2 (see sect. 9.2) at the rear of the device.
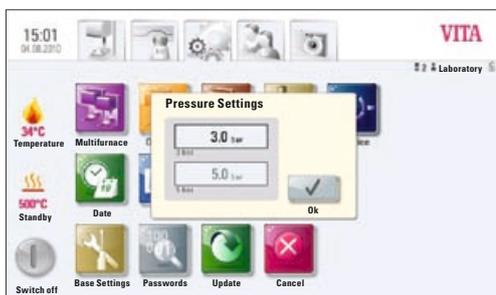
**ⓘ Note! When adjusting the press pressure, it must be ensured
that the pressure is initially set to zero and then set slowly
to the desired value of 3 bar, for example.**

This is required to relieve the residual pressure in the system.

The respective field is activated by pressing the **OK** button.

ⓘ If the 3.0 bar and 5.0 bar fields are pressed again, other values
than 3.0 bar will be displayed in the 3.0 bar field since the residual
pressure in the system leads to incorrect values.
Therefore it is required (for 3.0 bar setting) to set the pressure
to 0 and then to 3.0 bar again.

If the pressure was set accordingly, no further settings are required
(also if a different value is displayed!).

The program displays a pressure value that differs considerably.
In this case, the **OK** button is pressed to confirm the message
and the press process is continued.
During the active press program, the pressure can be readjusted
using the pressure regulator.

18.4 Device data

Device data

Press **Settings** tab, display shows:

Device information:

- Furnace revision – software information
- Furnace serial no. – device no.
- Furnace name – name of the device
- vPad serial no. – serial no. of control unit
- Hotline no. for service
- vPad revision – indicating the software version
- Operating hours for the device
- Heating hours
- Heating hours for the muffle

Export job data

Firing data storage for quality assurance.

- Storage of firing data target and actual values (see sect. 12.1 Process data)
- Storage of the following data:
  – user name
  – device no.
  – date of the firing process,
  – job no.

These data are stored in the control unit and exported via the USB stick
to the administration program (FDS – Firing Data System) on the PC,
where it can also be processed further, printed out and archived.

ⓘ The firing data administration program FDS is a special accessory
and must be ordered separately, Prod. No. D34230NG

Export operating data / device information / all files

All program sequences and operating data are saved automatically in the
control unit.

If, for example at the end of a firing program, an unsatisfactory firing result is
obtained or an error in the program sequence should occur, the operating data,
device information or even all the device data can be exported to a USB stick
and emailed to
instruments-service@vita-zahnfabrik.com for evaluation.

18.5 Date

Date

Setting options:

- Date and time

Selection option for the time format and date format.

18.6 vPad

vPad

Press **vPad** button, display shows:

Calibration of control unit –
The vPad should be calibrated when the display can no longer be precisely operated.

Press the **Calibration** button – display turns dark –
press the illuminated circles in the display, and the display is activated again.

Display brightness –

Set the desired brightness level using the slider.
Press the **OK** or **Cancel** button.

18.7 Start profile

Start profile

Select the **User profile** displayed immediately after switching on the device. On new devices, the control unit is started with the VITA user profile.

Press **Start profile** button, display shows all user profiles available.

Select the desired user profile.

The new start profile is only displayed after restarting the unit.

18.8 Languages

Languages

- Selects the language
- Selects the date and time formats
- Selects the temperature display in °C or °F

18.9 Basic settings – factory settings:

Basic settings

The following settings are reset to the factory settings:

- Start profile is set to VITA user profile
- Display brightness
- Program interruption
- Lift speed
- Language
- Date and time format
- Personal program settings and individual
  user profiles are deleted

18.10 Passwords

By entering a password, the device system settings can be protected.

Passwords

Password setting for the system:
On activating the system password under **Administrator**, no changes
to the system (parameter changes, various settings, etc.) can be performed
without first entering the password.

In the "Enter password" screen, any existing password can be deleted
by pressing the **OK** button twice (see sect. 15.2).

18.11 Update

Update

Software updates are loaded onto the control unit using a USB stick.

See **Download / VITA Equipment / Software Updates** on the website **http://www.vita-zahnfabrik.com** for recent software updates.

To be informed about new software updates by e-mail, go to **Service / Equipment servicing** to subscribe to the **"VITA Equipment Update Messenger"** (free of charge).

The update is copied to a USB stick, which is inserted into the control unit. On pressing the Update button, the new software is detected and installed.

⚠ **Warning: While updating leave the USB stick in the control unit and do not press any button.**

18.12 Cancel a firing program

Cancel

A firing program that has been started can be interrupted by pressing the **STOP** button once or by pressing the **OK** button to confirm the message "Do you want to stop the firing process".

19 Error messages

Message on the display	Observed event	Testing / elimination
Vacuum is not achieved	Program with vacuum is interrupted if a value of at least 30% is not reached within 30 secs	• Clean/test/replace the lift plate gasket. • Clean the sealing lip on the firing chamber floor. For cleaning work, see VACUMAT 6000 M or 6000 MP user manuals. • Check the vacuum pump independently of the device. • Check the vacuum system in the furnace.
Fan does not work	The running firing program has been interrupted	• Check the fan connection on the board. • Clean/replace the fan.
The lift is blocked	The lift travels down too far	• The end switch for the lower position is not activating. The respective LED must light up when the end switch is pressed. • Check/adjust/replace the end switch.
The temperature inside the firing chamber is more than 1,200°C	The display indicates more than 1,200°C	• This error can be triggered by various causes. To detect/eliminate the error, specialist knowledge and technical measuring devices are required. • Replace the CPU board.
The temperature sensor is faulty	Program is interrupted	• Check the thermoelement connection on the board. • Check the thermoelement connection in the firing chamber. • Check the thermoelement connection in the firing chamber. • Replace the thermoelement.
The target temperature in the firing chamber has been too low / too high for more than 5:00 mins	Temperature rise does not correspond to the prescribed time	• Heater faulty • Triac faulty • Triac control faulty
The temperature regulation caused an error	No temperature rise	• Firing muffle or Triac faulty
The heater cannot be controlled correctly	Temperature rise absent or too fast	• Firing muffle faulty; replace it
Continuous tone for approx. 6 secs.	Continuous tone	• Fuses are faulty • Replace the faulty fuse • Replace the plug for the heater connection on the board; check the CPU – replace the board

20 Alphabetical order of contents
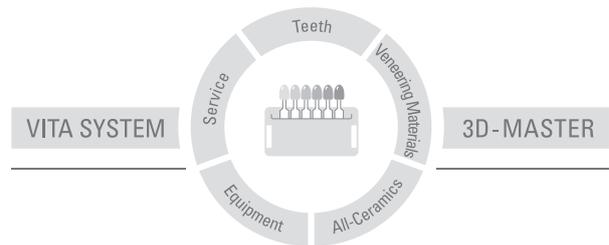
With the unique VITA SYSTEM 3D-MASTER all natural tooth shades are systematically determined and completely reproduced.

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