# **VITA vPad excellence**

Operating manual



VITA shade determination

VITA shade communication

VITA shade reproduction

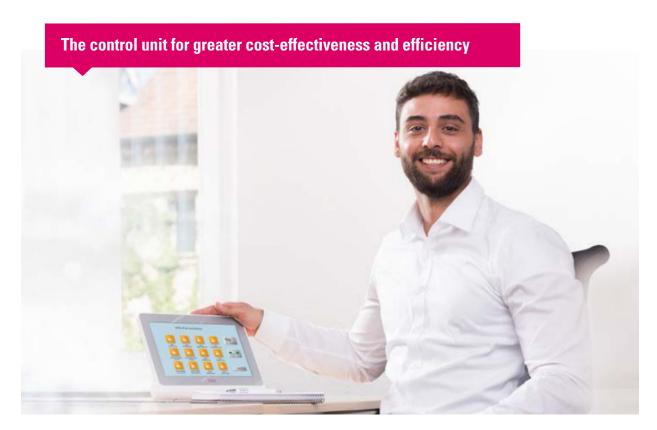
VITA shade control

Date of issue: 09. 18



VITA – perfect match.





Dear Customer,

Congratulations and thank you for choosing a VITA vPad excellence for the operation and control of the VITA VACUMAT 6000 M ceramic firing furnace, of the VITA VACUMAT 6000 MP combipress furnace and / or of the VITA ZYRCOMAT 6000 MS high-speed sintering furnace.

The VITA vPad excellence is a state-of-the-art control unit that complies with all international safety standards.

In order to ensure that you are able to operate the VITA vPad excellence safely and effectively, please read this operating manual and all the relevant notices carefully. The operating manual must always be kept close to the device. It must be read and used by all persons who operate, care for and maintain the system.

I wish you every success working with this VITA device.

#### **Onur Yildirim**

Product Manager for VITA dental devices and accessories, VITA Zahnfabrik

#### **Explanation of symbols:**









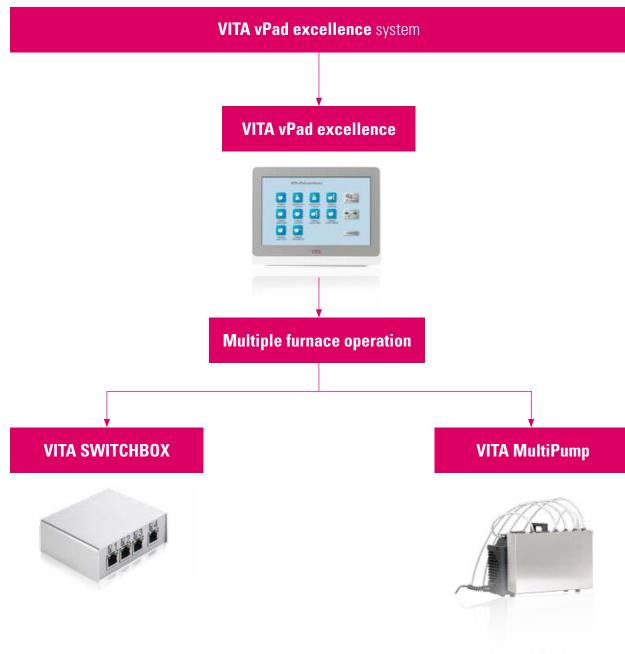






### 1. The system

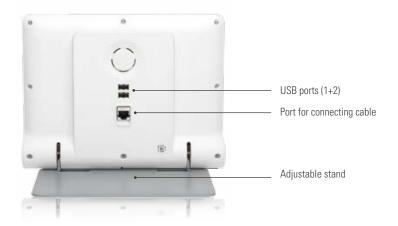
> 1. The system 2. First use



- With the vPad excellence, you can operate up to four firing devices:
  - o VITA VACUMAT 6000 M ceramic firing furnace
  - o VITA VACUMAT 6000 MP combipress furnace
  - o VITA ZYRCOMAT 6000 MS high-speed sintering furnace
- VITA SWITCHBOX: an adaptor for connecting 2-4 firing devices to the vPad excellence.
- VITA MultiPump: an adaptor for operating 1-4 VITA vacuum firing devices with a vacuum pump for:
  - o ceramic firing furnace VITA VACUMAT 6000 M
  - o Combipress furnace VITA VACUMAT 6000 MP
- The VITA vPad excellence is compatible with the VITA SWITCHBOX and the VITA MultiPump.

### 1.1 The control unit





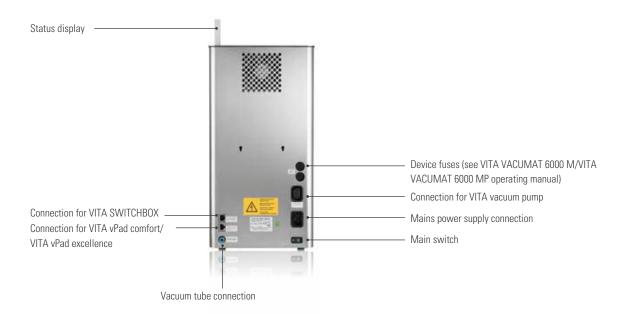
- What? Control unit for up to four firing devices.
- What for? For intuitive operation through intelligent menu navigation.

권 2. First use

### 2.1 Connections of the VITA VACUMAT 6000 M

▶ 1. The system 2. First use 3. Operation

(see also the VITA VACUMAT 6000 M Operating Manual)



#### 2.2 Connections of the VITA VACUMAT 6000 MP

(see also the VITA VACUMAT 6000 MP Operating Manual)



### 2.3 Connections on the VITA ZYRCOMAT 6000 MS

(see VITA VACUMAT 6000 MS Operating Manual)



### **2.4 Starting up the firing system**

- Note:
  - Please also refer to the installation and startup instructions in the VITA VACUMAT 6000 M / VITA VACUMAT 6000 MP or VITA ZYRCOMAT 6000 MS Operating Manual.
  - 1. Connect the connecting cable delivered in the package with the VITA vPad excellence and the VITA VACUMAT 6000 M/ VITA VACUMAT 6000 MP or VITA ZYRCOMAT 6000 MS.
  - 2. Connect the VITA vacuum pump (VITA VACUMAT 6000 M/VITA VACUMAT 6000 MP only).
  - 3. Connect the vacuum hose of the VITA vacuum pump (VITA VACUMAT 6000 M/VITA VACUMAT 6000 MP only).
  - 4. Connect the mains power cable.
  - 5. Switch on the device at the main switch.
  - 6. Lift path measurement: The lift goes down to the low position, up to the high position and down again to the low position.
  - If you are using a VITA VACUMAT 6000 MP, please also connect the compressed air connection (max. 5 bar) to the pressure regulator of the VITA vacuum pump. Attach the enclosed hose clamps to the compressed air hose: 1x at the outlet from the laboratory compressed air line and 1x at the pump supply inlet.
- Please note:
  - · Attach the VITA firing/sintering base to the lift plate.
  - Commissioning the device without a firing/sintering base will lead to high heat exposure, thus damaging the device.

### 2.5 VITA SWITCHBOX

- When starting up two or more VITA devices with one VITA vPad excellence and the VITA SWITCHBOX, pay attention to the numerically identified connections of the VITA SWITCHBOX.
- Note:
  - One VITA dental furnace must always be connected to connection no. 1.

### 🖪 2.6 VITA MultiPump

• To supply up to four firing devices (VITA VACUMAT 6000 M or VITA VACUMAT 6000 MP) at the same time with one VITA vacuum pump, use the VITA MultiPump.

3. Operation

#### 3.1 Gesture controls of the control unit

2. First use > 3. Operation 4. Settings





#### **Swiping**

To go to the next desktop, swipe right or left on the desktop.



#### **Zooming**

You can maximize or minimize photos or PDFs by using two fingers to enlarge or contract the image.





#### **Scrolling**

Swipe downwards or upwards to move between pages in a PDF.



#### **Brief tap**

By briefly tapping a firing program, for example, you open the firing window.



#### Long tap

With a long tap, you will call up additional functions, such as the desktop editing menu or the button editing menu.



#### Rotating

Photos can be rotated 90°.

### 2 3.2 System functions



- You can display function areas by tapping the top and the side areas of the screen. You can hide the two function areas by tapping the arrows on the edge of the screen.
- The function areas contain additional buttons that you can fade in to the left by swiping up / down, or at the top by swiping to the left / right.
- The status area shows the currently selected firing device, the selected profile and the name of the opened desktop.





3.3 Sleep mode



2. First use > 3. Operation 4. Settings



- What? By pressing the button for at least 2 seconds, you place the selected firing device in sleep mode. Carry out the action in succession for all connected firing devices. The vPad excellence goes into sleep mode along with the last firing device.
- · What for? Energy saving.

# 🖪 3.4 Moving the lift plate up and down 👪 🔢





- What? By briefly tapping the lift plate button, you fully (100%) move the lift plate up or down. With a long tap on the button, the lift plate gradually moves up or down.
- What for? If you are no longer using the firing device, for example, you can move the lift plate up to prevent dust or moisture buildup in the combustion chamber.

### 3.5 Standby temperature



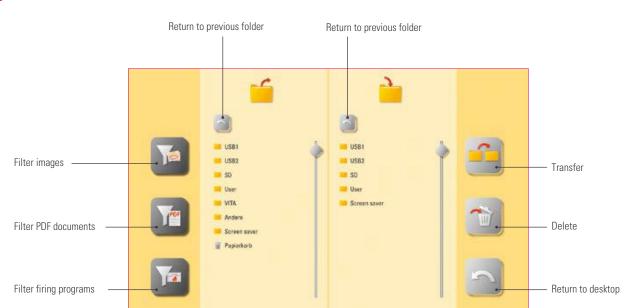
Note:

- What? With a brief tap, the firing chamber is closed and the firing chamber temperature rises to the individually adjustable standby temperature (default: 500 °C). With a long tap on the button, the firing chamber is closed and the firing chamber temperature is preheated to the set standby temperature of 200 °C (this cannot be changed). Once the standby temperature has been reached, it should be held for 20 minutes. After that, the firing unit is ready for firing.
- What for? Prevents loss of time by preheating the firing unit so that firing can begin quickly.

#### VITA AntiCon.

If the firing unit is switched off for an extended period of time, the firing chamber is heated for 5 minutes while slightly open the next time the firing unit is switched on and the standby temperature is activated. This allows the condensed water on the insulation to evaporate.

## 3.6 File Manager



- File Manager for creating a custom profile, desktop and flexible file management.
- Firing programs, PDF documents and photos can be copied and deleted.
- The "VITA" folder contains all pre-installed firing programs for VITA materials, which you can transfer into the desired profile and onto a desktop.
- The "Other" folder contains pre-installed firing programs for other materials, which you can also transfer to the desired profile and onto a desktop.
- The "Screensavers" folder contains photos that can be called up by activating the screensaver.
- Open a photo in the File Manager with a long tap in the File Manager.
- Files deleted from the desktop are collected in the recycling bin and can be recovered as needed from this folder, or permanently deleted.

### Example: Transfer a firing program to the File Manager



2. First use > 3. Operation 4. Settings

1 Tap the File Manager.



2 Select the "VITA" folder.





4 Select the firing, for example, "VITABLOCS GLAZE LT SPRAY."



5 Select the "User" file.



6 Select the "User" profile, for example.



7 Activate, for example, the "New screen" desktop.



8 Start the transfer.







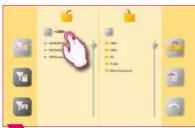
10 Transfer completed.

- Example of transferring the "VITABLOCS GLAZE LT SPRAY" firing program in the "User" profile to the "New Screen" desktop.
- To transfer a firing program in the File Manager, you must first create a new profile. The "VITA" profile and the associated desktop cannot be altered.

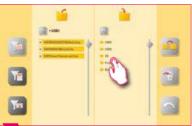
### **2** Example: Import firing programs from a USB drive



1 Select, for example, "USB1."



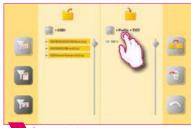
2 Mark the firing programs.



3 Press "Profile."



4 Select a profile.



5 Select desktop.



6 Confirm.



7 Firing programs have been imported.

### Note:

• You cannot import any firing programs into the "VITA" profile.

## **Example: Exporting firing programs to a USB drive**

2. First use > 3. Operation 4. Settings



1 Select the "Profile" file.



2 Select a profile.



3 Select desktop.



4 Select the firing program you wish to export.



5 Select "USB1."



6 Confirm.



7 Firing programs have been exported.

### Note:

• No firing programs can be exported from the "VITA" folder.

### Example: Importing photos into the "Screensaver" folder



1 Select, for example, "USB 1" after you have connected the USB drive.



2 Mark the photos that you would like to transfer.



3 Select "Screensaver" file.



4 Confirm.



5 Transfer completed.

#### Note:

• Example for importing photos into the "Screensaver" folder.

# 🖪 3.7 Web browser 🖠



- What? You can call up web pages in the internet using the web browser.
- What for? Information from the internet can be viewed directly in the vPad excellence.

### Example: Call up web page and set bookmark

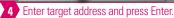


1 Call up web browser.

















7 Generated link on the desktop.









- What? Here you will find all processing and operating instructions for VITA CAD / CAM materials, VITA veneering materials and VITA devices integrated into the software.
- What for? Quick assistance, thanks to preinstalled processing instructions and operating manuals.

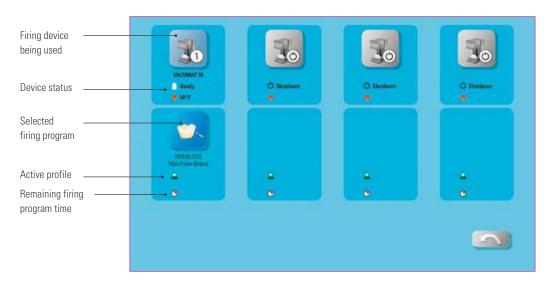
### 3.9 Multifurnace overview







1 Select "Multifurnace overview"



#### Note:

- What? Here you can see all firing devices that you can control using the VITA vPad excellence.
- Change firing device: To change the firing device, tap on the desired furnace. This will then be active and can be used. The active device is displayed in the main menu in the Multifurnace overview button.
- No firing active: If you press the firing device button, you will return to the overview to select a firing program.
- Firing active: If you press the firing device or firing program button, you will go directly to the selected firing program.
- What for? Provides the option of clearly and rapidly controlling up to four firing devices.

### 3.10 Profile change





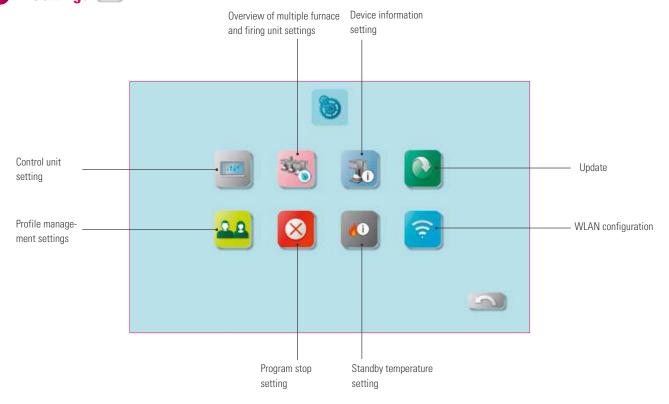


1 Select "Profile change."

- What? Here you will find the profiles created in Profile Management. In this overview, you can change the profile.
- What for? The overview of all existing profiles enables you to rapidly change profiles.

🖪 4. Settings 🕥

3. Operation > 4. Settings 5. Desktop management



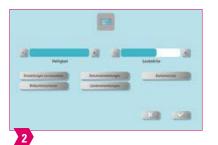
### Note:

- What? Here you will find information and setting options for the firing / sintering unit and the control unit.
- What for? For changing factory settings, performing updates, viewing operating data, configuring the WLAN and managing profiles.

# 🔰 4.1 Control unit settings 📟



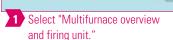


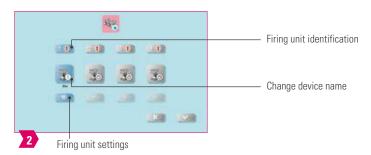


- **Restore settings**: Here all individual profiles and desktops can be permanently deleted and the factory settings can be restored. It is recommended that you save the profiles and desktops beforehand on a USB drive. After the reset, the guided initial setup is performed again.
- Screensaver: Photos in the File Manager can be accessed under the "Screensaver" folder.
- Data settings: Data and time can be changed.
- Country settings: Temperature unit, time and date format and language can be set.
- **System protection:** A password for the settings can be saved. If the "Settings" button is tapped again, a password query appears.
- **Delete web cache:** Entered web passwords, cache and cookies can be deleted.

## 2 4.2 Multifurnace overview and firing unit settings







#### Note:

- Identification of the firing unit: If the button is tapped, the light stick for the associated instrument lights up.
   The firing unit can be identified.
- Change device name: With a brief tap on the firing device button, the name of the firing unit can be changed.
- **Change position of the firing devices:** You can change the position of the firing devices by tapping the button of the firing device to be moved until it becomes transparent. You can then move this to the desired position.

## Firing unit settings





### Note:

#### Temperature calibration using the VITA VACUMAT 6000 M / MP Silver Test:

- With the Silver Test program and the VITA Silver Test Set, you can test the temperature in the firing chamber and readjust within the range of plus / minus 40 °C.
- During a calibration, please adhere to the instructions on performing the test with the silver probe (instructions in the Silver Test Set).
- A preset program is available for the calibration of the combustion chamber temperature. To test the firing chamber temperature using the silver probe, two program sequences are necessary: The first program sequence must be performed at 955 °C (specified in the program). The silver may then be thickened only slightly. The second program sequence must be performed at 965 °C (temperature value must be entered). After this program sequence, the silver must be melted into a ball. Deviations within the range of plus / minus 40°C may be entered.
- Result of the Silver Test: If the temperature is too low, correct the entry with the minus sign. If the temperature is too high, enter the corrected value without a minus or plus sign before it (automatic plus). The correction value corresponds to about 1°C and is entered in the input field for temperature adjustment (offset).

#### Temperature calibration for VITA ZYRCOMAT 6000 MS

• To calibrate the temperature, please contact your responsible service partner.

3. Operation > 4. Settings 5. Desktop management

#### Cleaning firing in the VITA ZYRCOMAT 6000 MS

- After about 300 operating hours, the message to conduct a cleaning firing is displayed.
- Press the "Execute" button to display the program and the "Start" button to activate it. Conducting the cleaning program is absolutely necessary if the oxide layer of the heating elements show flaking.
- Cleaning firing also acts as regeneration firing for the heating rods, as it restores the protective glass coating where necessary (please observe the "Sintering chamber cleaning program" section of the sintering furnace operating manual for this process). If the oxide layer shows signs of severe flaking, or still shows signs of flaking after cleaning firing, repeat the cleaning firing process. We recommend continual inspection of the coating on the heating elements for flaking. If necessary, run the cleaning program before the system reaches the 300 operating hours.
- Please confirm that you wish to save the configuration.
- You can also start cleaning firing manually. To do this, press the "Execute" button and start the firing process.

#### Cleaning firing in the VITA VACUMAT 6000 M/MP

- After about 100 operating hours, the message to conduct a cleaning firing is displayed. With this program, the firing chamber is heated up and contaminants can evaporate from the slightly opened firing chamber. We recommend carrying this firing process out regularly.
- You can stop the cleaning firing process at any time.
- You can also start cleaning firing manually. To do this, press the "Execute" button and start the firing.

### Sound settings





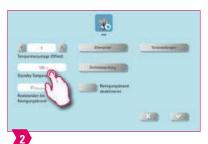


Select "Tone settings.

- Here, various sound signals can be set: program start, program end, alarm / service notice. There are six freely selectable sound patterns available for these three sound signals.
- The tones can be tested using the "Program start" and "Program end" buttons.

### Standby temperature

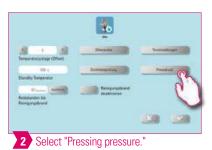




- Note:
  - Here, you can change the standby temperature (Standby Temperature).

### Pressing pressure settings







- Note:
  - The VITA VACUMAT 6000 MP is provided with an automatic ventilation function. The setting of the pressing pressure ensures that the device automatically vents in between. Residual pressure in the system is reduced, and the correct pressure is displayed. By activating the "5.0 bar" or "3.0 bar" field, you can carry out a venting manually. 5 bar setting: Tap the "5 bar" field and set the higher pressing pressure (5 bar) with the built-in pressure regulator on the VITA vacuum pump. 3 bar setting: Tap the "3 bar" field and use the pressure regulator on the back of the device to set the device to the lower pressing pressure (3 bar). Perform this pressure control slowly and wait at least four seconds to complete the pressure setting until the final pressure value is reached. Carry out the adjustment slowly.
  - An excessively deviating pressure setting is displayed in the program. Confirm the message and the pressing process is continued.
  - The pressure can be regulated again with a pressure regulator while the pressing program is running.

### 4.3 Device information settings

3. Operation > 4. Settings 5. Desktop management





1 Select "Device information setting."

## Note:

#### **Exporting firing and process data:**

- The firing and process data are saved in the control unit and can be exported with the "Process data" button to a USB drive. To do this, plug the USB drive into the USB input and press the "process data" button.
- You can use a USB drive to export the data for the program to analyze the process data (Firing Data System, FDS) to your PC.

#### Export operating data / device information / all data:

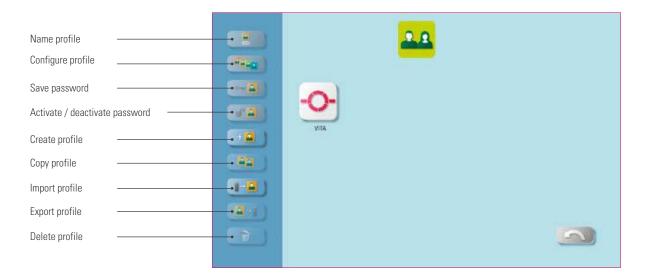
All the program sequences and operating data are automatically saved in the control unit. In the case of an unsatisfactory
firing result or errors in the program sequence, you can export the operating data, the device information or even all device
data to a USB drive and send it by e-mail to instruments-service@vita-zahnfabrik.com for evaluation. To do this, connect an
empty USB drive to the USB input and tap the corresponding button to transfer operating data / device information / all
data to a USB drive.

# 🕦 4.4 Profile management settings 🏜





1 Select "Profile management settings."



- You create an individual profile with the Profile Manager.
- You can rename this individual profile, configure it, protect it with a password and copy or delete it.
- You can import and export individual profiles.
- The "VITA" profile cannot be changed.

### Example: Create a new profile

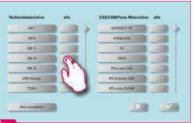
3. Operation > 4. Settings 5. Desktop management



1 Click on "Create profile."







4 For example, all VM13 firings are selected.



5 To select individual firings, tap the material button.



6 Select individual firings for VITABLOCS

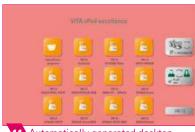












11 Automatically generated desktop for VM13.



10 Automatically generated desktop for VITABLOCS.

- Selecting the firing programs will automatically generate one or more desktops for the newly created profile.
- Desktops always have the color of the profile button as the background color.

### **Example: Renaming a profile**



Select a profile and then click on "Rename profile."





3 Unnamed profile.

#### Note:

• Example for renaming a profile.

### Example: Configuring a profile



Select a profile and then tap "Configure profile."





#### Note:

- Desktops always have the color of the profile button as the background color.
- If you change the profile button color, all subsequently created desktops are assigned the same color as background color.
- Using different colored profiles (and desktop colors), you immediately recognize your own profile. This reduces the danger of accidentally using the wrong profile.

### **Example: Copy profile**



1 Select the profile that is supposed to be duplicated.



2 Click on "Copy profile."



3 Final duplicated profile button.

### Note:

• Example for copying a profile.

### Example: Export profile



3. Operation > 4. Settings 5. Desktop management

1 Select the profile that is supposed to be exported.













5 The desired profile has been exported.

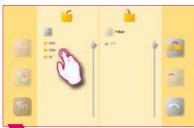
### Note:

• Connect a USB drive to the vPad to export a profile.

### Example: Import profile



1 Select "Import profile."



2 Select the USB access.



3 Select profile.









• Connect a USB drive with the vPad to import a profile.

-038

# 2 4.5 Abort setting





- 1 Select "Cancel setting."
- **₩** Note:
  - The confirmation query "Should the firing be stopped?" can be activated and deactivated if you wish to cancel a firing program.
  - When this option is active, it is not possible to stop the firing process prematurely until the message has been confirmed.

# 2 4.6 Standby temperature setting





- Note:
  - In active standby mode (Auto Standby), Standby is always queried.
  - In inactive standby mode (Auto Standby), Standby is not queried. This must be manually started.

Time of the standby mode query	Possible standby modes
Open firing program, no action, close firing program	Query for Standby / No Standby
Firing manually stopped, quit firing	Request Rapid Cooling / Standby/ No Standby
Firing completed	Request Rapid Cooling / Standby/ No Standby

- Note:
  - **Rapid cooling** is only active if the firing chamber temperature is 50 °C higher than the standby temperature. Then the lift remains in the lower position and the VITA vacuum pump is connected. After reaching the standby temperature minus 50 °C, the lift moves in and the firing chamber is heated to the standby temperature.
  - Standby: Standby is activated.
  - No Standby: Standby is not activated.

2 4.7 WLAN configuration setting

3. Operation > 4. Settings 5. Desktop management





1 Select "WLAN configuration."

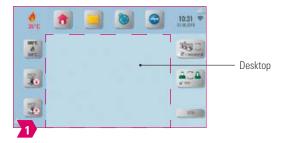
### **₩** Note:

• Here you can select your desired network and, if required, enter a network key to establish an internet connection.

After successful connection, the web browser can be used.



### **■** 5. Desktop management

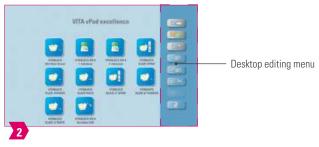


4. Settings > 5. Desktop management 6. Button management

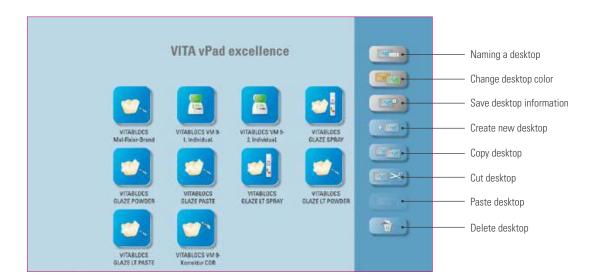
- Note:
  - The area outlined in magenta is the desktop. This is the workspace where firing programs, photos, PDFs and bookmarks from the web browser can be stored.

### 2 5.1 Desktop editing menu





- Note:
  - Press on the desktop and hold until the desktop editing menu appears. You can hide the desktop by briefly tapping it.



- Note:
  - What? The desktop editing menu is used to manage all desktop functions.
  - What for? For fast setup and customization of the desktop.

### 5.2 Naming the desktop









3 Enter the desktop name.





#### Note:

- What? This function allows you to assign your own name to the desktop.
- What for? For customized allocation of the desktop according to patient or indication.

# 5.3 Changing the desktop color













5 Final changed desktop color.

- What? Determination of the background color for each individual desktop.
- What for? To more easily distinguish between multiple desktops, thanks to clear color coding.

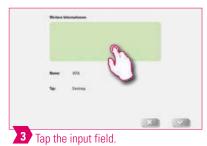
5.4 Save desktop information



4. Settings > 5. Desktop management 6. Button management

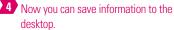
















6 The "Info Symbol" next to the desktop name shows that information has been saved to this desktop.

- Note:
  - What? You can store information about the desktop here.
  - What for? This function gives you access to all information about the desktop in one location.

### 5.5 Creating a new desktop





desktop editing menu is activated.



2 Select "Create new desktop."



3 Added desktop.

- Note:
  - When you create a new desktop, a new workspace with twelve possible buttons is created.

### 🔼 5.6 Copying a desktop 🕮





2 Select "Copy desktop."



the desktop editing menu is activated.

VITA yPad excellence 4 Select "Paste desktop."



· Note:

- What? This function allows you to duplicate the desktop. The name of the copied desktop is indicated by a number in parentheses, for example (2).
- What for? You can change a duplicate desktop while retaining the original, for example.

### 🛂 5.7 Cutting a desktop 📖 🎽





desktop editing menu is activated.



2 Select "Cut desktop."



VITA vPart excellence Select "Paste desktop."



### Note:

• This feature allows you to place the entire desktop in a new location to customize the desktop sequence.

2 5.8 Pasting a desktop



4. Settings > 5. Desktop management 6. Button management

- Please note:
  - This function is only active in combination with the desktop copy function and the desktop paste function.
- 5.9 Deleting a desktop







- Note:
  - This function can free up memory if the desktop is not reused.
  - If the desktop has been deleted by mistake, it can be restored from the Recycle Bin folder in File Manager.



4 6. Button management

### 2 6.1 Button editing menu



1 Hold down the button until the button editing menu is activated.



Tap the desktop area to close the editing menu.

5. Desktop management > 6. Button management 7. Firing window



- Note:
  - Available functions of the button editing menu.

# 6.2 Multi-selection



Hold down the button until the button editing menu is activated.



2 Multiple buttons can be selected for an action.

- Note:
  - You can select up to twelve buttons at the same time and perform an action for these buttons. The "Name button," "Configure button" and "Button information" buttons are disabled when multiple buttons are selected.

# • 6.3 Moving a button



Hold down the button until it becomes transparent and then move it.



#### **Ω**- Note:

- What? This function allows you to reposition the button on the desktop.
- What for? You can rearrange the buttons to meet your needs.

# • 6.4 Naming a button



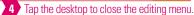


Hold down the button until the button editing menu is activated.











- What? This function allows you to change the name of the button.
- What for? You can choose personalized and familiar names.

1 6.5 Configuring a button



5. Desktop management > 6. Button management 7. Firing window



1 Hold down the button until the button editing menu is activated.



2 Select "Configure button."



3 Select the icon and background color.





- What? This function allows you to freely select icons and background colors for firing programs.
- What for? For the individual design of the firing program buttons.

### • 6.6 Save button information





1 Hold down the button until the button editing menu is activated.



2 Select "Save button information."



3 Tap the green field to activate the input field.



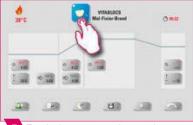




5 Tap the desktop to close the editing menu.



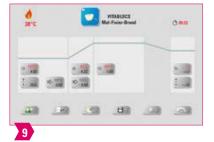
6



7 Tap the button to see the saved information.



8 Tap a "dark" surface to close the window.



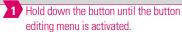
- What? You can store information about the button and access it anytime.
- What for? For example, if you want to change firing parameters, you can link this information directly to the button.

• 6.7 Creating a new firing program



5. Desktop management > 6. Button management 7. Firing window



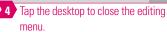






3 Choose between firing curve types.



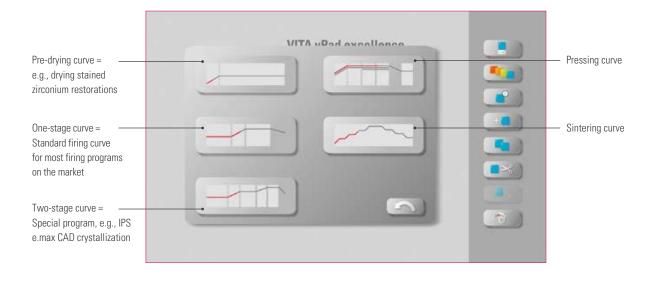




5 Final added firing program.

- This function allows you to create and customize firing programs.
- In addition to the "Create new firing program" function, a button with predefined firing parameters can also be created via the File Manager.

#### Firing curve types



### 6.8 Copying a button





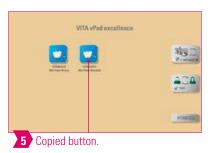
Hold down the button until the button editing menu is activated.





3 Select desktop and activate button editing menu.





- What? This function allows you to copy the button to any number of desktops. The original firing program button remains available. The name of the copied button is indicated by a number in parentheses, for example (2).
- What for? You can copy an original firing program, for instance, and then modify it. The original firing program remains unchanged.

# 🚺 6.9 Cutting a button 🛂



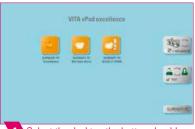


1 Hold down the button until the button editing menu is activated.



2 Select "Cut button."





4 Select the desktop the button should be added to.



5 Activate button editing menu.



- What? You can cut out a button and reposition it.
- What for? This eliminates the time-consuming task of restoring a modified firing program.

6.10 Pasting a button

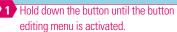
- - This function is only active in combination with the cut function and the paste function.

5. Desktop management > 6. Button management 7. Firing window

6.11 Deleting a button









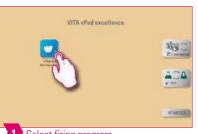


- Note:
  - What? This function deletes the selected button.
  - What for? This function can free up memory if the button is not reused. Accidentally deleted buttons can be restored in the File Manager from the recycling bin source folder.



1. Firing window

# • 7.1 Firing program: one- and two-step curve



1 Select firing program.



6. Button management > 7. Firing window 8. Technical data / information

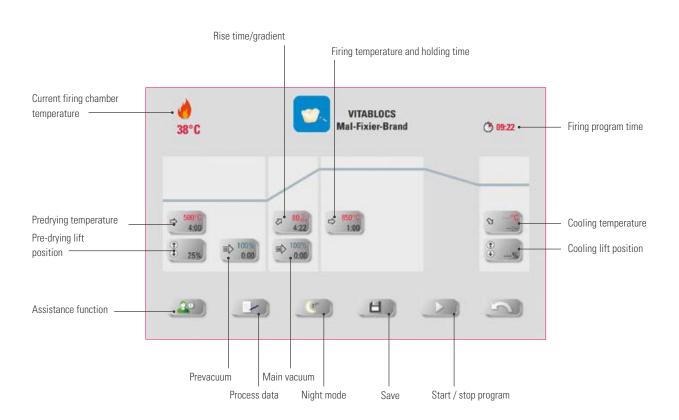
2 Multifurnace: Press and hold the firing program button to move it if you want to use another firing device.



3 Briefly press firing program to go to the firing window.



4 Firing window with single-stage curve.



#### Note:

- Modified parameters will affect the active firing process. If you want to make permanent changes to the firing programs, you will need to save them.
- Process data: Used for quality assurance and traceability.
- Night mode: Tapping the button activates the night program, i.e., after a firing program runs, the lift moves back in after the firing chamber temperatures sinks to 200 °C, and the display and heating are switched off. To switch the device back on, turn the main switch off and then on again. Night mode must be activated before starting a firing program.
- The two-stage firing curve has an extra gradient/rise time and firing temperature/holding time compared to the singlestage curve.
- If the furnace is connected individually, the firing program overview opens after briefly tapping the firing program.
- If several furnaces are connected, the multi-furnace selection opens after the selection of the firing program.
- In the multi-furnace selection, the firing program is set to the first furnace available for this type of firing.
- If another furnace is to be used, hold down the firing program and move it to the next available furnace.
- If you now briefly tap the firing program, the firing window opens.

# Assistance function





Select, for instance, item 1 "Prepare restoration."



3 Tap on a word highlighted in blue to open an image / video.





Choose this option to open the material overview for the "Prepare restoration"



6 Choose this option to open the "Prepare restoration" video overview.



7 Video overview for the "Prepare restoration" item.

- What? Software-based assistance function for supported step-by-step firing.
- What for? This function assists you by providing step-by-step instructions for the "Prepare restoration," "Restoration in the furnace" and "Rework restoration" functions.

Process data



- Note:
  - What? A function that allows quality assurance and traceability.
  - What for? Job number, name, notes, profile, material name, firing program name, firing program data, target and actual values, device type, device serial number, date and time of the firing process are automatically saved.

6. Button management > 7. Firing window 8. Technical data / information

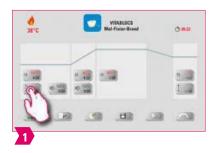
- Data can later be exported to a USB drive and transferred to the firing data management program FDS (Firing Data System) on the PC.
- Predrying temperature / predrying time





- Modifiable parameters:
  - Pre-drying temperature: 60°C 800°C
  - Pre-drying time: 0:00 min 60:00 min
- Note:
  - The possible values to enter are displayed above the number field.
  - Predrying is used for evaporating processed fluids prior to the actual firing process.

# Pre-drying lift position





#### Modifiable parameters:

#### **Lift position:**

- Value c: highest lift position entry: min. value b max. 100 %
- Value b: middle lift position entry: min. value a max. value c
- Value a: lowest lift position entry: 0 % max. value b

#### Adjusting the lift position:

- o Enter lift position in % and accept by choosing "Confirm" or
- o move the lift into the desired position using the arrow button and save the value by choosing the "Enter" button.

#### Confirming time value for position:

- Tap the input field for time a or b and enter time.
- Value for c is determined automatically.

#### Please note:

- The time values for the individual lift positions depend on the total pre-drying time.
- Together, the settings for individual time values cannot add up to more than the total pre-drying time.

#### Prevacuum



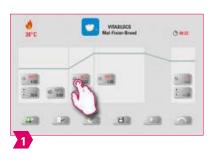


### Modifiable parameters:

Pre-vacuum time: 0:00 min - 60:00 min

- The "Prevacuum" setting enables you to build up the vacuum in the firing chamber before the temperature rise is active.
- Entering the time 00:00, will switch off the pre-vacuum.
- The possible values to enter are displayed above the number field.
- Special ceramics can be fired using the prevacuum.

### Rise time/gradient





6. Button management > 7. Firing window 8. Technical data / information

#### Modifiable parameters:

• Rise time: 0:05 – 120:00 min

• Rise gradient: 2 °C/min – 120 °C/min

#### Note:

- The rise time is automatically calculated and adjusted after the pre-drying temperature or firing temperature is entered.
- Once one of the gradient or rise times has been entered, the other will be calculated and adjusted automatically.
   The actual values to enter are displayed above the number field.
- For the two-stage firing curve, the same procedure applies to the program values in the second rise time for entering and changing the values.
- For reliable firing results with a good degree of gloss and correct color reproduction.

# Main vacuum





### Modifiable parameters:

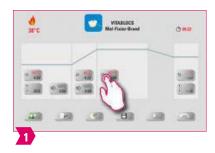
• Main vacuum time: 0:00 min − 180:00 min

• Vacuum value: 0 % − 100 %

• Starting temperature: min. predrying temperature – max. firing temperature

- The time values for switching the vacuum pump on and off are dependent on the indicated program values. If the final temperature or the pre-drying temperature changes, the vacuum time is then adjusted to the rise time.
- Recommendation: First set the temperature parameters and finally the vacuum.
- The max. vacuum time is calculated from the rise time, plus the holding time at the final temperature.
- The possible values to enter are displayed above the number field.
- The main vacuum extracts air that would otherwise be trapped in the ceramic and can render it cloudy with a milky appearance.

# Firing temperature and holding time





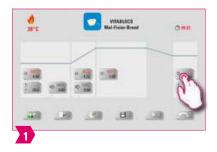
#### Modifiable parameters:

- Firing chamber temperature: pre-drying temperature plus 10°C − 1200°C
- Holding time: 00:00 min 60:00 min

#### Note:

- The possible values to enter are displayed above the number field.
- For the two-stage firing curve, the same procedure applies to the program values in the second rise time for entering and changing the values.
- For reliable firing results with a good degree of gloss and correct color reproduction.

# **Orange Cooling temperature**



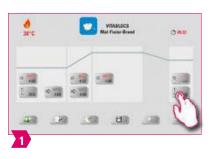


### Modifiable parameters:

- $\bullet$  Cooling temperature: 60°C 900°C, or holding temperature minus 10°C
- Entered value 0 60:00 min./sec.

- The "Activate cooling" button is automatically activated when the temperature or time is entered and must then be pressed. The possible values to enter are displayed above the number field.
- Deactivate cooling: Press "Activate cooling" button.
- For slow cooling of the restoration to prevent thermal stress on the material.

• Cooling lift position





6. Button management > 7. Firing window 8. Technical data / information

- Modifiable parameters:
  - Cooling lift position: 0 % − 100 %
- Note:
  - The possible values to enter are displayed above the number field.
  - This is for adjusting the speed at which the cooling temperature is reached. The more closed the furnace, the slower the cooling.

# 7.2 Firing program: pressing curve







2 Multifurnace: Press and hold the firing program button to move it if you want to use another firing device.



3 Briefly press firing program to go to the firing window.

#### Firing temperature and holding time Pressing time and pressing pressure 1 Rise time/gradient Pressing time and pressing pressure 2 Current firing chamber PM 9 3 bar temperature 1 Pellet → 29:00 • Firing program time Cooling temperature/cooling Start temperature time 100% 29:00 Main vacuum Cooling lift position H Assistance function Process data Night mode Start/stop program Save

- Modified parameters will affect the active firing process. If you want to make permanent changes to the firing programs, you will need to save them.
- Night mode: Pressing the button activates the night program, i.e., after a firing program runs, the lift moves back in after the firing chamber temperature sinks to 200 °C, and the display and heating are switched off. To switch the device back on, switch the main switch off and then on again. Night mode must be activated before starting a firing program.
- All buttons (except for Start temperature, Pressing time / pressure 1, Pressing time / pressure 2) are described under 7.1.
- The main vacuum cannot be altered in the pressing program. The vacuum is controlled automatically throughout the entire pressing time.
- If the furnace is connected individually, the firing program overview opens after briefly tapping the firing program.
- If several furnaces are connected, the multi-furnace selection opens after the selection of the firing program.
- In the multi-furnace selection, the firing program is set to the first furnace available for this type of firing.
- If another furnace is to be used, hold down the firing program and move it to the next available furnace.
- Now briefly tap the firing program, and the firing window will open.

Start temperature



- Note:
  - Starting temperature: 60 °C − 800 °C
  - The possible values to enter are displayed above the number field.

# Pressing time and pressing pressure 1





- Note:
  - Pressing time: 0:00 min 120:00 min
  - Pressing pressure: The pressing pressure is changed using the "Change pressing pressure" button.

6. Button management > 7. Firing window 8. Technical data / information

• The predetermined pressing time 1 is automatically terminated when the pressing stamp has reached its final position and there is no more measurable path change. Then it switches automatically to pressing Time 2.

### Pressing time and pressing pressure 2



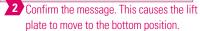


- Note:
  - Pressing time: 0:00 min 120:00 min
  - Pressing pressure: The pressing pressure is changed using the "Change pressing pressure" button.
  - Pressing time 2 runs in accordance with the set time.

# Starting the pressing program









Once you have inserted the pressing material, confirm the message. The lift plate will move into the firing chamber.

#### **₩** Note:

- While the pellet is retracted, the pressure cylinder will temporarily move in and out. If the pellet count is wrong, a message is displayed after it retracts.
- Red curve: temperature; light gray curve: vacuum; black curve: pressure.

# 7.3 Firing program: sintering curve



1 Select sintering program.

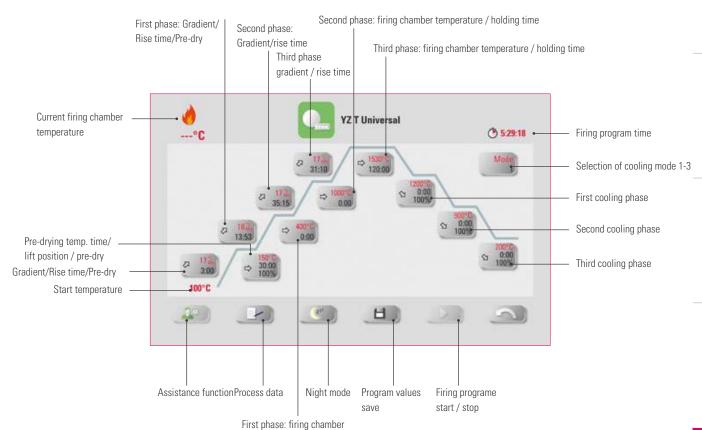


6. Button management > 7. Firing window 8. Technical data / information

2 Multifurnace: Press the firing program and hold and move if you want to use another firing device.



3 Briefly press firing program to go to the firing window.



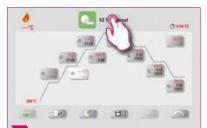
# Note:

- Modified parameters will affect the active firing process. If you want to make permanent changes to the firing programs, you will need to save them.
- You can find the description of the buttons on the lower border of the display under 7.1.
- In high-speed mode (gradients of more than 20°C/min), the heating elements are subject to very high loads. A shortened operating time is to be expected.
- If the furnace is connected individually, the firing program overview opens after briefly tapping the firing program.
- If several furnaces are connected, the multi-furnace selection opens after the selection of the firing program.

temperature / holding time

- In the multi-furnace selection, the firing program is set to the first furnace available for this type of firing.
- If another furnace is to be used, hold down the firing program and move it to the next available furnace.
- Now briefly tap the firing program, and the firing window will open.
- The possible values for the individual phases are displayed above the number field.

# Activating/deactivating Pre-drying (VITA Pre-dry)



1 Select firing chamber temperature / holding time.



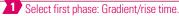
2 Activate pre-dry.



3 Once you have done this, confirm.

### Activating/deactivating the first phase







2 Activate first phase.



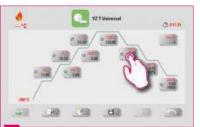
3 Once you have done this, confirm.



#### Note:

• To de-activate pre-dry and the phase one, remove the corresponding check mark and confirm. Save your change.

# Activating/deactivating controlled cooling



1 Select the first cooling phase.



6. Button management > 7. Firing window 8. Technical data / information

2 Select first cooling phase: "Controlled cooling."





4 Select the second cooling phase.



5 Select second cooling phase: "Controlled cooling."





7 Select the third cooling phase.



Select third cooling phase: "Controlled cooling."





• To deactivate cooling phases 1-3, remove the corresponding check marks and confirm. Save your change.

# Ocoling mode 1





- Note:
  - You can adjust the cooling phases to suit your individual needs.

# Cooling mode 2







- Note:
  - There are three fixed cooling positions.
  - Lift position at the following temperatures:
    - $_{\odot}$  Temperature: > 1200 °C, lift position: 80 %
    - $_{\odot}$  Temperature: < 1200 °C, lift position: 60 %
    - $_{\odot}$  Temperature: < 900 °C, lift position: 40 %
    - $_{\odot}$  Temperature: < 400 °C, lift positon: 0 %

### October 2 Cooling mode 3







- Note:
  - The lift remains in the upper position and moves to the lower position after cooling to 400 °C.

# 7.4 Changes after program start

- - Changes to program values are possible after starting a firing program. To avoid misfires, changes which automatically impact other program areas are not allowed, such as changing the rise time, which causes an automatic adjustment of the vacuum time.

6. Button management > 7. Firing window 8. Technical data / information

- Please note:
  - You can only change non-active program areas. The program areas that can still be changed are identified by the button display (dark button).
  - If a program area that is still available is selected for changing and it becomes active, the display switches to the image of the firing curve and the program continues to run with the previously contained value.
  - If the final temperature is changed, the °C/min gradient is always retained, and the rise time and vacuum time are adjusted accordingly.



# **1** 8. Technical data

# 8.1 Specification and symbols

#### **Specifications**

Dimensions (width/depth/height)	260 mm/150 mm/200 mm
Net weight	1.6 kg
Temperature for operation	10°C to 35°C
Humidity for operation	Max. 80% RH
Application area	Approved for indoor operation only

7. Firing window > 8. Technical data / information 9. Additional information

#### **Symbols**

	CE marking	The VITA vPad excellence complies with the applicable regulations of the European
C€		Union (EU). The declaration of conformity can be requested from VITA (Regulatory Affairs Department) at: www.vita-zahnfabrik.com.

# **B** 8.2 Information

#### Basic information on the instrument design

- The instrument is designed according to state-of-the-art technology and recognized safety standards.
- However, inappropriate use may endanger the health and safety of the user or third parties and lead to a risk of damage to the instrument and other material property.

#### **Unauthorized modes of operation**

- Do not operate the control unit with sharp-edged or hot objects. This causes damage to the touch screen.
- The operation of the instrument 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 when using equipment modified by the user, are not permitted.

#### **Authorized modes of operation**

- The operation of the device is only permitted if this operating 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, is considered misuse, as is the handling of hazardous materials or substances that are dangerous to personal health.
- Repairs and servicing of any kind may only be carried out by specially trained personnel.

#### Please note:

• 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.

# 8.3 Safety functions

If the firing device is operated with a VITA vPad excellence, it is equipped with the following safety and monitoring functions:

- 1. Temperature sensor monitoring
- 2. Power supply failure protection
- 3. Obstruction sensor
- 4. Temperature protection switch
- 5. Automatic temperature calibration
- 6. Pellet detection and press path detection (VITA VACUMAT 6000 MP)

#### **Temperature sensor monitoring**

Temperature sensor monitoring detects failure of the temperature probe in the sintering chamber. If a failure of the temperature sensor has been detected, the sintering chamber is prevented from heating up and an error message is displayed.

#### Power supply failure protection

The device is equipped with a power supply failure protection. This element prevents firing programs from aborting in the event of a short-term power failure. If the power failure time lasts less than 15 seconds, the current program will continue to run even though the display will remain out of service for the duration of the power failure. The current program is aborted if power is interrupted for more than two minutes. An error message is displayed once power is restored.

#### Finger trapping protection

The vertical movement of the firing devices is controlled by computer. Any objects that are caught, are detected and the drive is switched off, if necessary. This prevents injuries caused by pinching. The system may still be operated without any restrictions after the drive is switched off.

#### **Temperature protection switch**

The temperature protection switches are built into the housing of the sintering unit and prevent overheating of the sintering unit in case of malfunction of the heating control by switching off the heating. An error message is displayed if this type of malfunction occurs. The sintering system may not be used again until the system cools down. This can take some time.

#### **Automatic temperature calibration**

Automatic temperature calibration is conducted automatically each time after the device is switched on. This temperature calibration takes into consideration and corrects all deviations occurring in the electronic components for temperature measurement and temperature control. A constant temperature control of  $\pm$  1 °C is achieved even with a long operating time of the instrument.

### 8.4 Cleaning the control unit

Clean the display at regular intervals with a screen cleaner.

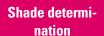
 Screen cleaners are especially good since they do not cause any scratches, have an antistatic effect and prevent the control unit from getting dirty again.

# 9. Additional information

#### 9.1 Delivery scope of the VITA vPad excellence

Article	Scope of supply
VITA vPad excellence	1x
Operating manual	1x
Connecting cable	1x

### 9.2 VITA system solutions



CAD/CAM fabrication

Shade modification\*

Firing preparation

Firing\*

**Polishing** 

Luting



 For digital shade determination, use VITA Easyshade V, and for traditional shade determination, the VITA Linearguide 3D-MASTER or VITA classical A1–D4 can be used.



 For CAD/CAM fabrication, VITA offers you highly esthetic feldspar and glass ceramic materials – simply select the material solution that meets your individual requirements.



• Use **VITA AKZENT Plus** masking and glazing stains for feldspar and glass ceramics.



 Use VITA platinum pins and VITA Firing Paste to ensure that the restoration is securely placed on the firing tray.



 The VITA VACUMAT 6000 M/MP is the ideal solution for crystallization, glaze, stain and corrective firing.



 In the case of VITA feldspar ceramics, use polishing systems suitable for silicate ceramics (e.g., VITA Karat diamond polishing set).



• Use the **VITA SUPRINITY Polishing Set** for VITA glass ceramics.



 Full-adhesive or self-adhesive luting with VITA ADIVA LUTING SOLUTIONS is possible for restorations made of feldspar and glass ceramics.

<sup>\*)</sup> **Note:** The feldspar ceramic material can be inserted immediately after milling and polishing. Crystallization firing is mandatory for the glass ceramic.

# 9.3 Error messages

Display	Recognition	Cause/correction
Vacuum is not achieved.	Program with vacuum is stopped if a value of at least 30 % is not reached within 30 seconds.	<ul> <li>Clean/test/replace the lift plate seal.</li> <li>Clean the edge seal on the firing chamber floor. For cleaning work, see the VITA VACUMAT 6000 M or VITA VACUMAT 6000 MP Operating Manual.</li> <li>Inspect the vacuum pump separately from the device.</li> <li>Inspect the vacuum system of the firing device.</li> </ul>
Ventilator is not functioning.	Running firing program is stopped.	Inspect the ventilator connections on the circuit board.      Clean/replace ventilator.
The lift is blocked.	Lift moves too far down.	<ul> <li>Sensor for lower position does not work.</li> <li>The corresponding LED must light up when the sensor is activated.</li> <li>Inspect / adjust / replace the sensor.</li> </ul>
The temperature in the firing chamber is more than 1200 °C.	Display shows more than 1200 °C.	This error can be triggered by several causes. Recognizing/correcting these errors requires specialized knowledge and technical measuring equipment.  Replace CPU circuit board.
Temperature sensor is defective.	Program is stopped.	Inspect the connection of the thermoelement to the circuit board. Inspect the connection of the thermoelement to the firing chamber. Inspect the connection of the thermoelement in the firing chamber. Replace thermoelement.
The target temperature in the firing chamber has fallen short / been exceeded for longer than 5 minutes.	Temperature rise does not correspond to the set time.	Defective heating.     Defective triac.     Triac control system defective.
The temperature control has caused an error.	No temperature rise.	Firing muffle or triac is defective
The heating cannot be properly activated.	No or too fast temperature rise.	Firing muffle is defective, replace.
Continuous tone for about 6 seconds.	Continuous tone	Fuses defective, replace.     Inspect plug for connecting the heater to the circuit board – replace CPU circuit board.

#### Additional error message from the VITA ZYRCOMAT 6000 MS

8. Technical data / information > 9. Additional information

Display	Recognition	Cause/correction
Ventilator power board defective.	Running program is stopped, heating off.	<ul> <li>Inspect connections to the circuit board.</li> <li>Inspect/replace ventilator.</li> </ul>
Temperature sensor defective.	Running program is stopped, heating off.	<ul> <li>Inspect connections to the circuit board.</li> <li>Inspect/replace ventilator.</li> </ul>
Relay error.	Running program is stopped, heating off.	Replace power board.

#### 9.4 VITA warranty and consumer protection

The VITA warranty and consumer protection document can be found on the homepage or at the following link: https://www.vita-zahnfabrik.com/de/Oefen/VITA-Garantie-50694,27568.html

#### 9.5 Update messenger

Software updates are available as a download at the website of VITA Zahnfabrik. To automatically have the latest device information emailed to you, an option to register is provided at www.vita-zahnfabrik.com/updatemessenger.

#### 9.6 Spare parts

Spare parts must comply with the technical requirements specified by the manufacturer. This can only be ensured by using original VITA spare parts.

#### 9.7 Competitor materials

The VITA vPad excellence includes firing programs for Celtra Duo, IPS e.max CAD, IPS e.max ZirCAD, IPS Empress CAD, Celtra Ceram, Celtra Press and n!ce. However, it should be noted that the firing processes for IPS e.max CAD must be carried out on an Ivoclar Vivadent firing tray. The firings for IPS Empress CAD, IPS e.max ZirCAD, Celtra Duo, Celtra Ceram and n!ce can be carried out on the firing tray W with VITA platinum pins. The current firing parameters for Celtra Duo, Celtra Ceram, Celtra Press, IPS e.max CAD, IPS Empress CAD, e.max ZirCAD and n!ce are intended as guidelines only. Users must check for themselves that the equipment is suitable for the intended application.

#### 9.8 Copyright information

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Mr. Udo Wolfner and his team (Internal Sales Department) will be glad to assist you with orders or questions about the delivery, product data and marketing materials.

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Fax +49 (0) 7761/56 22 99
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Mail info@vita-zahnfabrik.com

#### **▶ VITA** instruments service

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If you have technical questions concerning VITA product solutions, you can contact our technical specialists, Mr. Ralf Mehlin and Mr. Daniel Schneider.

Phone +49 (0) 7761/56 22 22 Fax +49 (0) 7761/56 24 46 8 am to 5 pm CET e-mail info@vita-zahnfabrik.com

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