VITA SMART.FIRE®

Operating manual

| VITA shade determination | VITA shade communication | VITA shade reproduction | VITA shade control |

Date of issue: 05.17

VITA – perfect match.

VITA

The efficient firing unit for chairside restorations

Dear customer,

Congratulations and thank you for choosing the VITA SMART.FIRE
firing system.

The VITA SMART.FIRE firing system is manufactured using the highest quality standards,
and is equipped with modern hardware and software, for easy and intuitive control and
operation.

In order to use the firing system safely and effectively, please read this manual
completely before use. This operating manual must always be kept close to the device.
It must be read and used by all persons who operate, clean and maintain the system.

I hope you enjoy the VITA SMART.FIRE firing system and achieve great results!

Onur Yildrim
Product Manager for VITA Dental Devices and Accessories, VITA Zahnfabrik

Explanation of symbols:

- **System/technology info**   - **Please note**   - **Modifiable parameters**
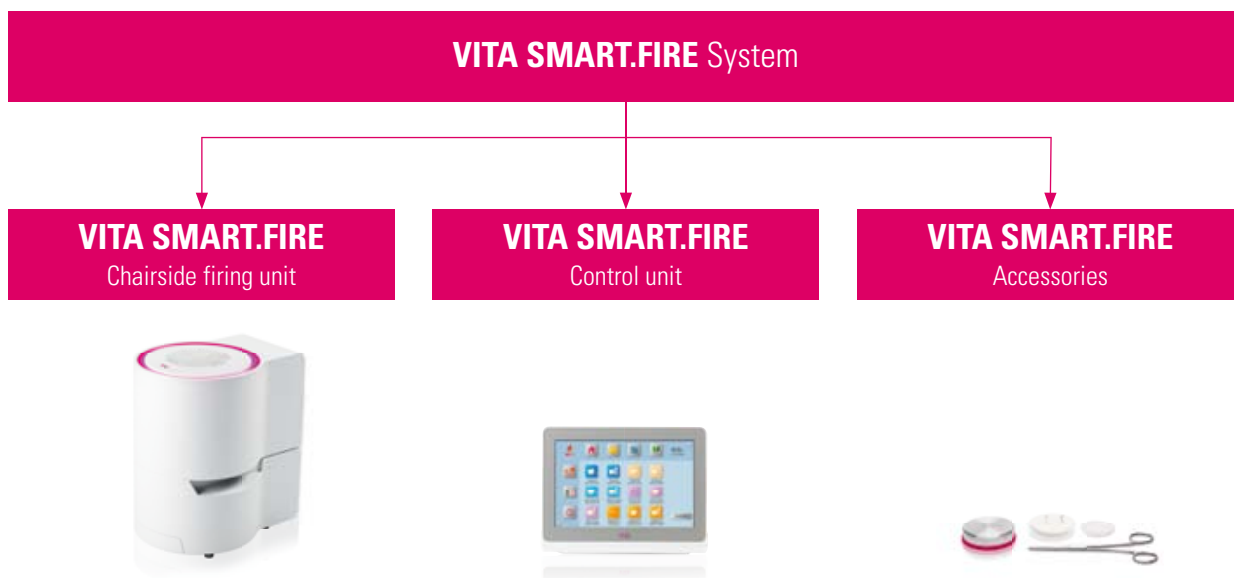
- **Note**   - **Process**   - **Hotline and support**

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📕 **1. The system**

VITA SMART.FIRE System		
VITA SMART.FIRE Chairside firing unit	**VITA SMART.FIRE** Control unit	**VITA SMART.FIRE** Accessories

📕 **1.1 The firing unit**

Furnace head

Firing platform

Base
Accessory drawer

Main switch

Mains power supply connection

Power connection for vacuum pump

VITA SMART.FIRE
Made in Germany
Nr. 2920170051

Control unit connection

Vacuum

Fuses

💡 **Note:**
- What? Space-saving chairside firing unit for convenient use.
- What for? For crystallization, glaze, stain and corrective firing.

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🗋 1.2 The control unit

USB ports (1 + 2)
Firing unit port

SD card slot

💡 Note:
- What? Control unit with preinstalled programs for all common chairside materials.
- What for? For intuitively easy firing.

🗋 1.3 Accessories

Platinum pins = 2 pieces (molar, anterior tooth)
Firing tray Ø = 60 mm
Fibrous pad firing support Ø = 44 mm
Firing pliers L = 160 mm

Cooling table Ø = 70 mm
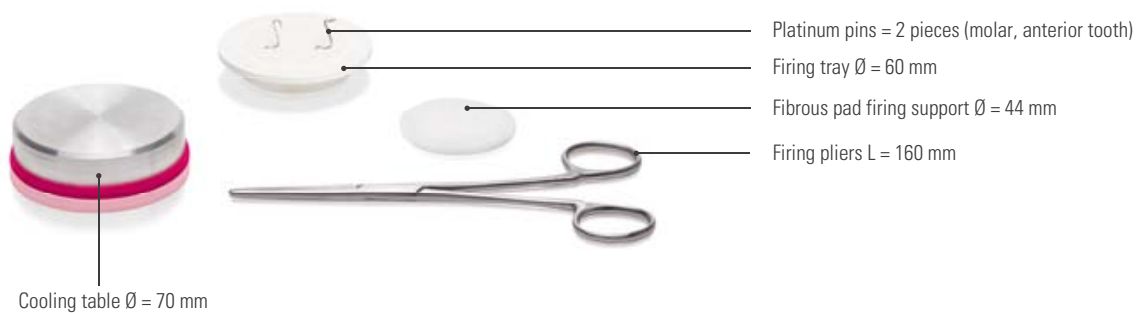
💡 Note:
- What? Accessory set integrated into the firing unit for convenient firing.
- What for? For convenient access to all important accessories.

2. First use

2.1 Starting firing in 6 steps

1 Connect the firing unit and the control unit to the connecting cable.

2 Connect the firing unit to the power supply.

3 Turn on the main switch.

4 Push the cover of the accessory compartment inwards.

5 Select the firing program.
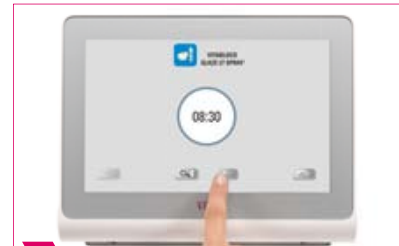
6 Start the firing process.

Note:
- Ensure that the metal ring around the firing platform is free of dust and other particles.
- Wipe it off with a dry cloth.

Please note:
- The firing unit may not be connected to power strips with an extension because there is a risk of fire if electrical cables are overloaded.

2.2 Setting up the firing unit
- Please ensure that the following conditions are met.

Please note:
- The distance between the firing unit and the nearest wall must be at least 20 cm.
- There should be at least 15 cm of clearance above the firing unit when the firing chamber is open.
- Do not place the control unit in the heat emissions range of the firing chamber.
- The distance between the firing unit and the control unit must be at least 20 cm.
- The ventilation openings on the top of the firing unit must not be covered.
- Set up the device in such a way that the main switch can be easily accessed and the power supply cable can be easily disconnected.
- Ensure that the unit is installed on a heat-resistant and non-flammable surface.
- The emissions and heat radiation of the device are within a non-hazardous range. However, nearby, temperature-sensitive surfaces and materials could still be damaged by heat.
- Avoid exposing the unit to direct sunlight.
- Do not place flammable objects near the firing unit.

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2.3 Closing the firing unit and control unit

- When the unit is not in use, move the firing chamber downwards and switch off the unit from the main switch.
- Closing the firing chamber protects against moisture ingress.

2.4 Cleaning the firing unit and control unit

VITA SMART.FIRE Furnace

- Disconnect the unit from the power supply before cleaning.
- The housing must only be cleaned with a damp cloth and no cleaning agent.
  No flammable liquids or solvents may be used.
- The inside of the firing chamber does not need to be cleaned.

VITA SMART.FIRE 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 further dirt accumulation.

Please note:

- Damage to the display resulting from improper use during operation or cleaning is excluded from the VITA warranty.

⊞ 3. Operation

3.1 Gesture controls of the control unit

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

Zooming
You can zoom in and out of photos or PDFs by spreading and pinching with two fingers.

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

Short tap
You open the basic firing window with a short tap (see 3.2).

Long tap
You can call up an additional function, such as the desktop editing menu
or the button editing menu, with a long tap.

Rotating
Photos can be rotated by 90 °.

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❯ 3.2 Starting firing and basic firing window

Status display

Back button

Start and stop firing

Assistance function

Detailed firing window
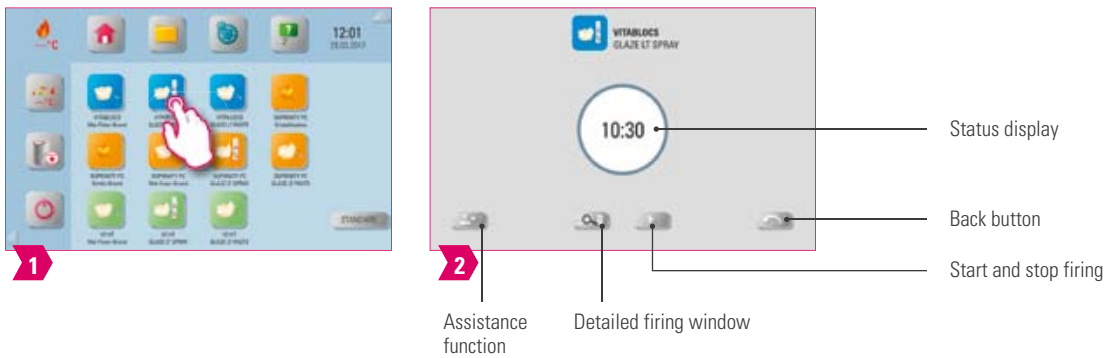
💡 Note:

• Select the firing program by briefly tapping the program button and go to the basic firing window.

❯ 3.3 Firing status indicators in the basic firing window

1 1st phase: The icon lights up gray. The firing is ready.

2 2nd phase: The icon lights up green. The heating/cooling phase starts.

3 3rd phase: The icon lights up blue. The firing process is activated.

4 4th phase: The firing process is completed.
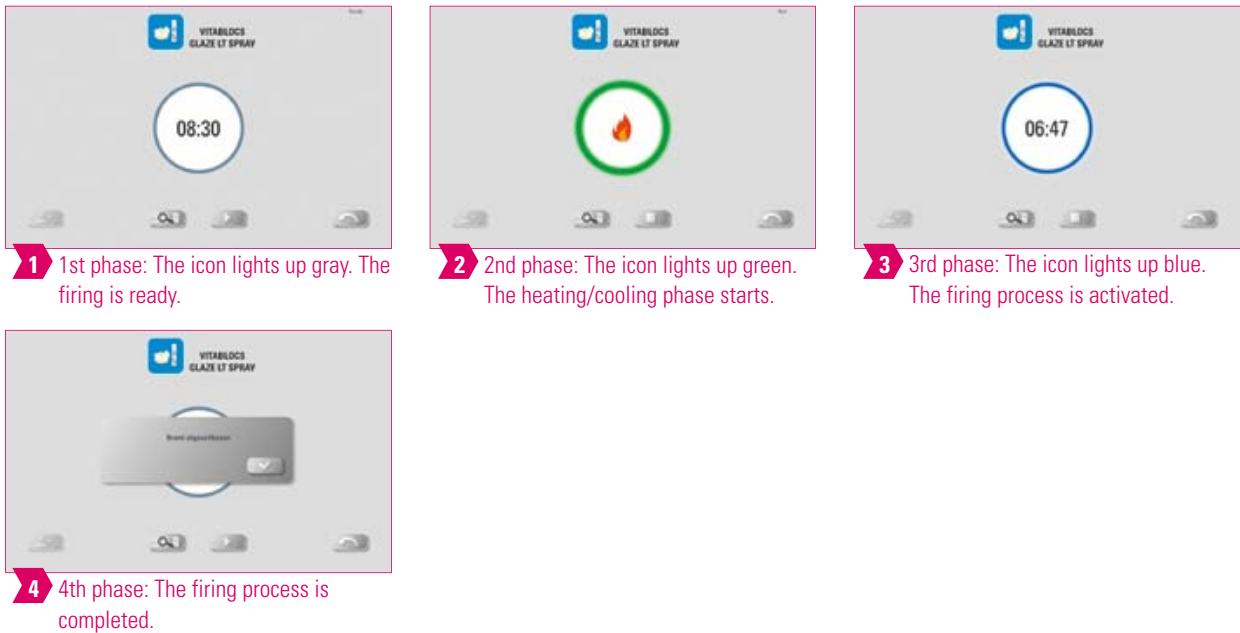
❗ Please note:

• If the icon lights up red, there is an error message.

❯ 3.4 Assistance function

1 Tap the assistance function.

2 Select item 1, "Prepare restoration."
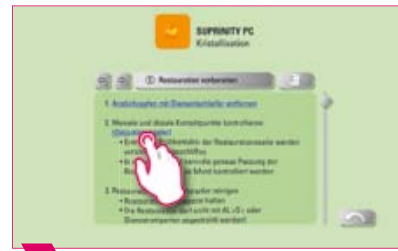
3 Tap on a word highlighted in blue to open an image.

4 Example: articulating paper.

5 Choose this option to open the "Prepare restoration" overview.

6 Choose this option to return to the basic firing window.

💡 Note:
- 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.

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❯ **3.5 System functions**

1 ▸ Hidden function area

2

Displayed function area

Desktop area

💡 **Note:**
- 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.

Return to home desktop

File manager

Settings

Current firing chamber temperature

Standby temperature

Open/close firing chamber

Sleep mode

General help

Current desktop displayed

💡 **Note:**
- The function buttons are used for controlling system functions and are found in the displayed function areas.

3.6 Sleep mode

Note:
- What? The control unit and the firing unit are placed in sleep mode. You wake up the system by tapping the screen.
- What for? Saves energy.

3.7 Standby temperature

Note:
- What? The firing chamber is closed and the firing room temperature rises to the defined standby temperature (380° C by default). Once the standby temperature has been reached, it should be held for 20 minutes. The firing unit will then be ready for firing processes.
- What for? Prevents loss of time by automatically preheating the firing unit so that firing can begin quickly.
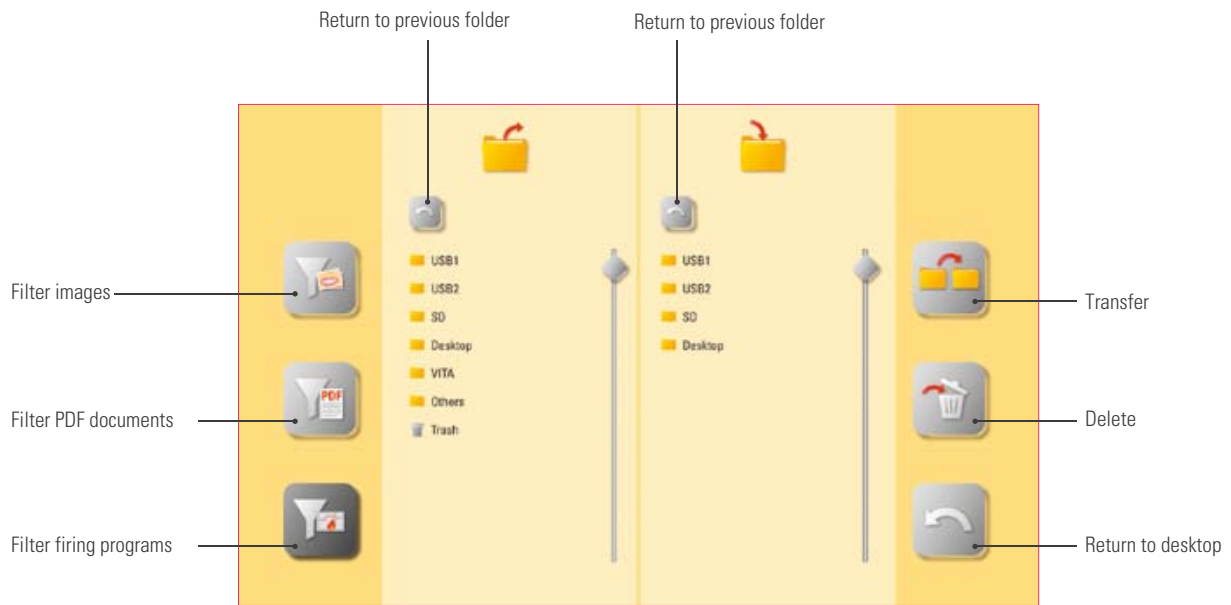
VITA AntiCon.
If the firing unit is switched off for an extended period of time, the firing chamber is heated for 5 minutes while slightly open when the firing unit is switched on again and the standby temperature is activated. This allows the condensed water on the insulation to evaporate.

Auto standby mode.
If standby mode remains active when the firing unit is switched off, auto standby mode is activated after the burner unit has been switched on again. The firing unit automatically adopts the most recently set standby temperature. It is deactivated by pressing the standby temperature again. If standby mode remains active when the firing unit is switched off, auto standby mode is also deactivated and must be switched on after the unit is switched on again.

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3.8 File manager

Return to previous folder

Return to previous folder

Filter images — Transfer

Filter PDF documents — Delete

Filter firing programs — Return to desktop

USB1
USB2
SD
Desktop
VITA
Others
Trash

USB1
USB2
SD
Desktop

Note:
- File manager for creating a custom desktop and for flexible file management.
- It allows you to copy and delete firing programs, PDF documents and images.
- The "VITA" folder contains all preinstalled programs for VITA materials. You can transfer these programs to the desired desktop.
- The "Others" folder contains preinstalled firing programs for other materials. You can transfer these programs to the desired desktop.
- Files deleted on the desktops are collected in the recycling bin and can be recovered from this folder if necessary.

❯ Example: transferring a program in the file manager

1 Tap the file manager.
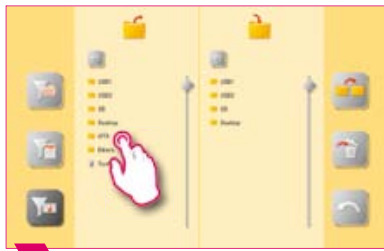
2 Select the "VITA" folder.

3 Select the folder, for example "VITABLOCS."

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

5 Activate e.g. the folder "Standard."

6 "Standard" folder activated.

7 Start the transfer.

8 Return to the "Standard" desktop.

9 Transfer completed.

Note:
- Example of transferring the VITABLOCS GLAZE LT SPRAY firing program to the "Standard" desktop.

❯ 3.9 Settings

Control unit settings

1

2

Firing unit settings
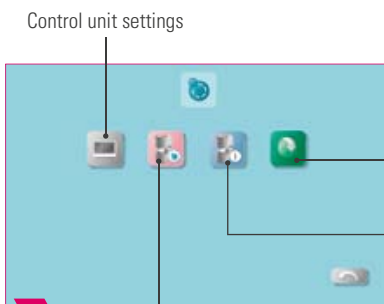
Update

Information about firing unit and control unit

Note:
- What? This area contains information and settings for the firing unit and the control unit.
- What for? For changing factory settings, performing updates and viewing operating data.

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❯ **3.10 General help**

💡 **Note:**

- What? The "General Help" function button takes you to all processing and operating instructions for VITA CAD/CAM materials, VITA veneering materials and VITA devices integrated into the software. Swipe left to go to the next help page. The help function consists of three pages.
- What for? Quick assistance thanks to preinstalled processing instructions and operating manuals.

🔲 4. Desktop management
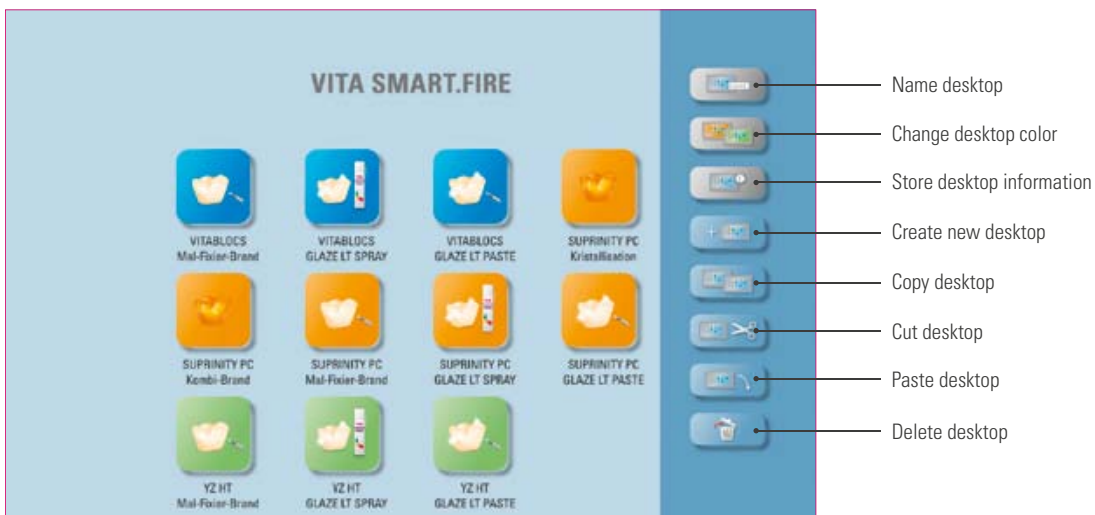

Desktop

💡 Note:
- The area outlined in magenta is the desktop. It is the workspace where firing programs, images and PDFs can be stored.

🔲 4.1 Desktop editing menu

Desktop editing menu

💡 Note:
- Hold down the desktop until the desktop editing menu appears. You can hide the desktop by briefly tapping it.

- Name desktop
- Change desktop color
- Store desktop information
- Create new desktop
- Copy desktop
- Cut desktop
- Paste desktop
- Delete desktop

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

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❯ 4.2. Naming the desktop

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

2 Choose "Name desktop."

3 Enter the desktop name.

4 Tap the desktop to close the editing menu.

5 Renamed desktop.

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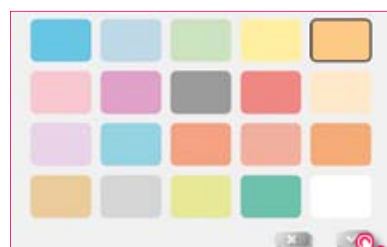- What for? For customized allocation of the desktop according to patient or indication, for example.

❯ 4.3 Changing the desktop color

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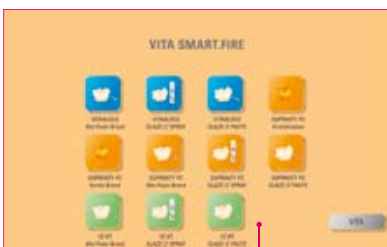

2 Choose "Change desktop color."

3 Create desktop color.

4 Tap the desktop to close the editing menu.

5 Changed desktop color.

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

❯ **4.4 Desktop info**

1 Hold down the desktop until the desktop editing menu is activated

2 Choose "Desktop info."

3 Tap the input field.

4 Now you can add information about the 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.

❯ **4.5 Creating a new desktop**

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

2 Choose "Create new desktop" to create another new desktop.

3 Added desktop.

💡 **Note:**

- When you create a new desktop, a new workspace with 12 possible buttons is created.

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4.6 Copy desktop

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

2 Select "Copy desktop."

3 Desktop editing menu is automatically hidden.

4 Select the desktop and activate the editing menu.

5 Select "Paste desktop."

6 Copy of the 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.

4.7 Cutting a desktop

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

2 Select "Cut desktop."

3 Select the new desktop and activate the editing menu.

4 Select "Paste desktop."

5 Repositioned desktop.

Note:
- This function allows you to completely reposition the desktop or customize the desktop sequence.

4.8 Pasting a desktop

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

4.9 Deleting a desktop

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

2 Select "Delete desktop" to delete the current desktop.

Note:
- This function deletes the current desktop. This function can free up memory if the desktop is not reused.

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5. Button management

5.1 Button editing menu

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

2 Tap the desktop to close the editing menu.

3

- Naming button
- Configure button
- Store information button
- Create new firing program
- Copy button
- Cut button
- Paste button
- Delete button

Note:
- Functions available in the button editing menu.

5.2 Multi-selection

1 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 12 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.

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❯ 5.3 Moving a button

1 Hold down the button and move it to the desired position.

2 Repositioned button.

💡 **Note:**
- What? This function allows you to reposition the button on the desktop.
- What for? You can rearrange the buttons to meet your needs.
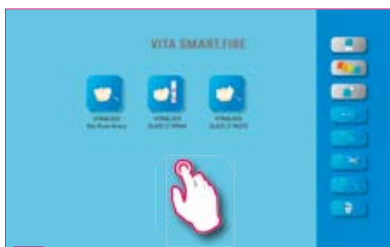
❯ 5.4 Naming a button

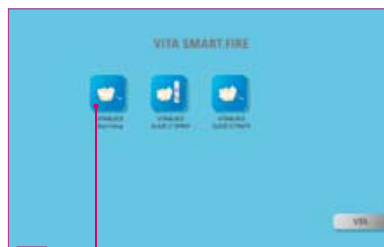**1** Hold down the button until the button editing menu is activated.

2 Select "Name button."

3 Enter button name.

4 Tap the desktop to close the editing menu.

5 Named button.

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

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5.5 Configuring a button

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

2 Select "Configure button."

3 Select the icon and background color.

4 Tap the desktop to close the editing menu.

5 Configured button.

Note:
- What? This function allows you to freely select icons and background colors for firing programs.
- What for? For customizing firing program buttons.

5.6 Storing button information

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

2 Select "Store button information."

3 Add your own information about the button.

4

5

6

Note:
- 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.

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❯ 5.7 Creating a new firing program `+ ▢`

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

2 Select "Create new firing program."

3 Choose between three firing curve types.

4 Tap the desktop to close the editing menu.

5 Added button.

💡 Note:

- This function allows you to create and customize firing programs.
- In addition to the "Add button" function, a button with predefined firing parameters can also be created via the file manager.
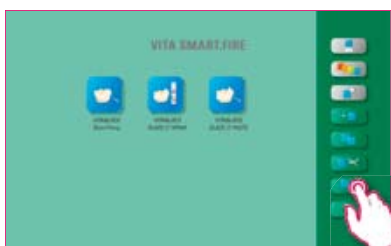
❯ 5.8 Copying a button `▢▢`

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

2 Select "Copy button."

3 Select the desktop and activate the button editing menu.

4 Select "Paste button."

5 Copied button.

💡 Note:

- What? This function allows you to copy the button to any number of desktops. The "original" firing program button is retained. The name of the copied button is indicated by a number in parentheses, for example (2).
- What for? For example, you do not need to restore a modified firing program because you can still access the original firing program.

❯ 5.9 Cutting a button

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

2 Select "Cut button."

3 Select the desktop and activate the button editing menu.
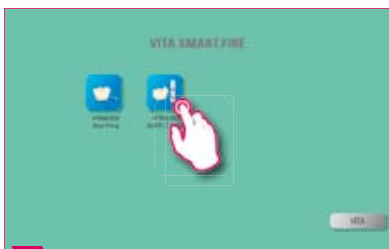
4 Select "Paste button."

5 Cut button.

💡 **Note:**
- What? You can simply cut out a button and reposition it.
- What for? This eliminates the time-consuming task of restoring a modified button.

❯ 5.10 Pasting a button

💡 **Note:**
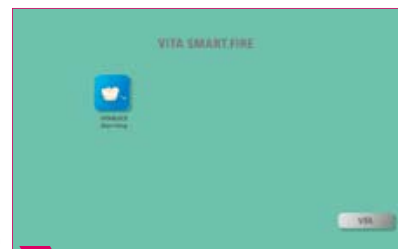- This function is only active in combination with the cut function and the paste function.

❯ 5.11 Deleting a button

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

2 Select "Delete button."
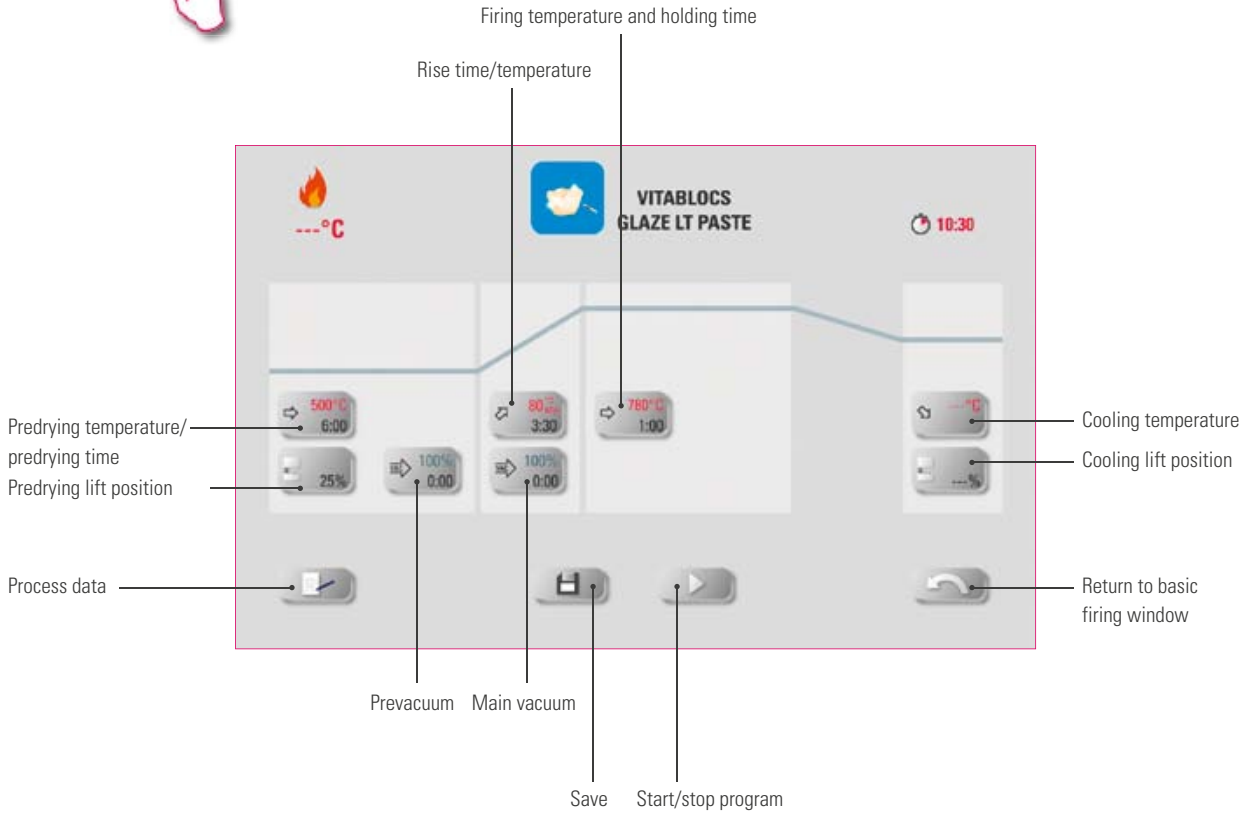
3 Deleted button.

💡 **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 from the recycling bin source folder in the file manager.

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6. Detailed firing window

6.1 Detailed firing window for firing process

Rise time/temperature

Firing temperature and holding time

Predrying temperature/
predrying time
Predrying lift position

Process data

Prevacuum   Main vacuum

Save   Start/stop program

Cooling temperature

Cooling lift position

Return to basic
firing window

Note:

• The firing curve is displayed in the detailed firing window so that you can view firing parameters and, if necessary, adjust them to your specific needs.

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❯ 6.2 Predrying temperature / predrying time ⇨ 500° C 6:00
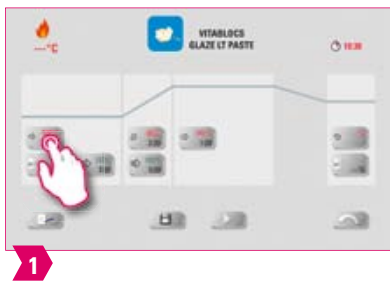
Values are saved

Old values are retained and the system returns to the firing curve

🔥 Modifiable parameters

- Predrying temperature: 60 °C – 600 °C
- Predrying time: 0:00 min to 20:00 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.

❯ 6.3 Lift position for predrying 25%

Values are saved

Old values are retained and the system returns to the firing curve

🔥 Modifiable parameters

- 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

💡 Note

- Adjusting the lift position:
  - Enter lift position in % and accept by choosing "Confirm" or
  - move the lift into the desired position using the arrow buttons 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 of the individual lift positions depend on the total predrying time.
- Together, the individual time values can be only be set to a maximum of the total predrying time.

❯ 6.4 Prevacuum
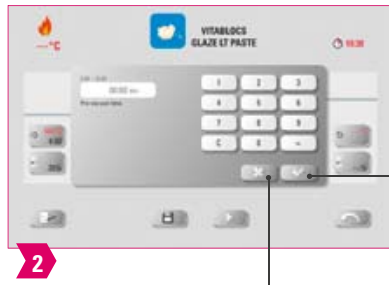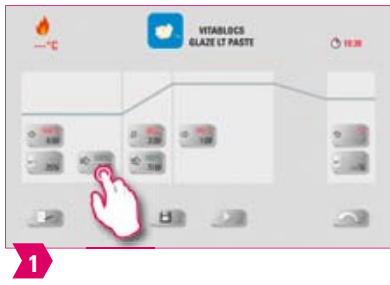
Values are saved

Old values are retained and the
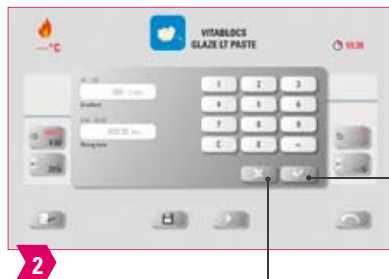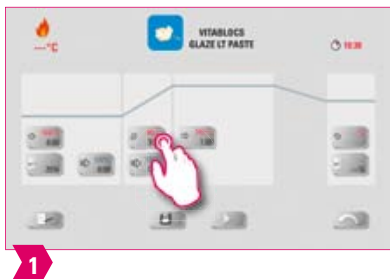system returns to the firing curve

🔥 Modifiable parameters:
- Prevacuum time: 0:00 min – 10:00 min

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

❯ 6.5 Rise time/gradient

Values are saved

Old values are retained and the
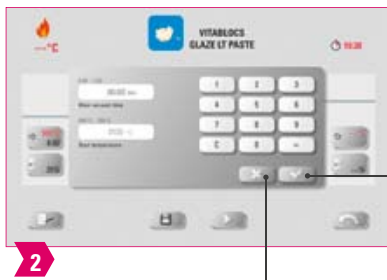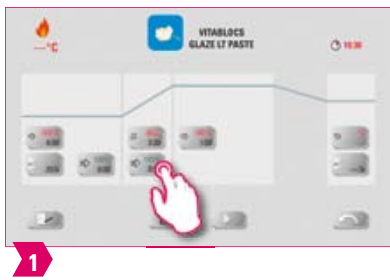system returns to the firing curve

🔥 Modifiable parameters:
- Rise time: 0:05 min – 60:00 min
- Rise gradient: 10 °C/min – 120 °C/min

💡 Note:
- The gradient is automatically calculated and adjusted after the predrying temperature or preheating time is entered.
- The preheating time is automatically calculated and displayed after the gradient is entered. The actual values to enter are displayed above the number field.
- For reliable firing results with a good degree of gloss and correct color reproduction.

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❯ 6.6 Main vacuum

Values are saved

Old values are retained and the
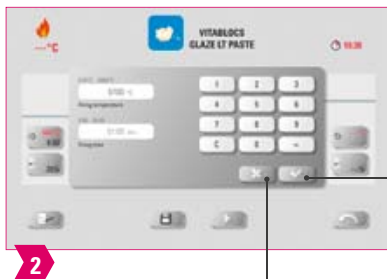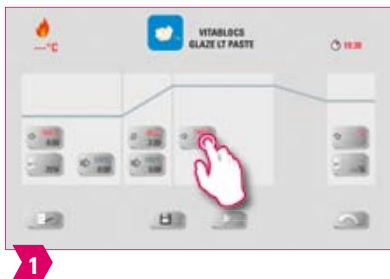system returns to the firing curve

Modifiable parameters:
- Main vacuum time: 0:00 min – 90:00 min
- Starting temperature: min. predrying temperature – max. firing temperature

Note:
- The time values for switching the vacuum pump on and off are dependent on the indicated program values. If the final temperature or the predrying temperature changes, the vacuum time is then adjusted to the rise time.
- The max. vacuum time is calculated from the rise time plus the holding time at the final temperature. The actual 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.

❯ 6.7 Firing chamber temperature and holding time

Values are saved

Old values are retained and the
system returns to the firing curve

Modifiable parameters:
- Firing chamber temperature: predrying temperature plus 10 °C – 1050 °C
- Holding time: 0:00 min – 30:00 min

Note:
- The actual values to enter are displayed above the number field.
- For reliable firing results with a good degree of gloss and correct color reproduction.
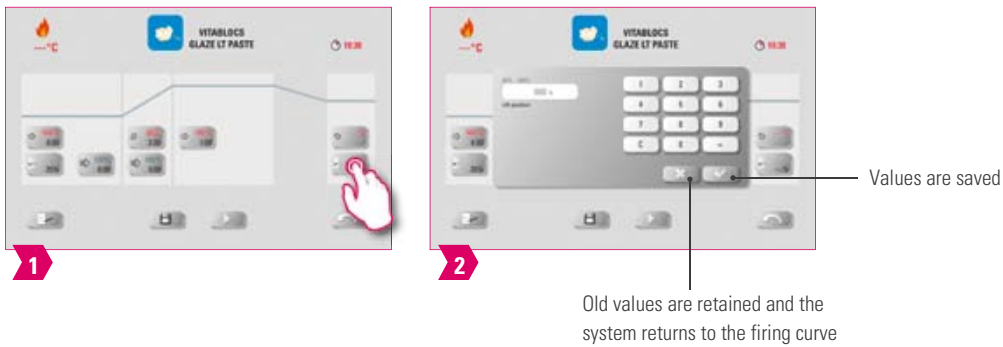
6.8 Cooling temperature ⬏ ---° C

Values are saved

Old values are retained and the
system returns to the firing curve
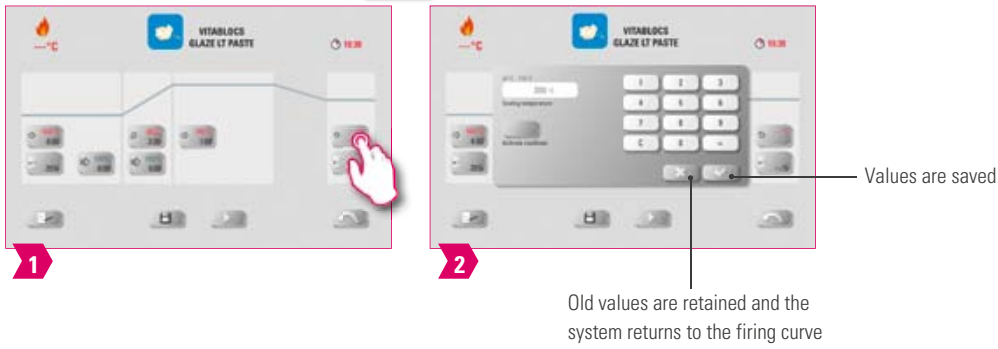
Modifiable parameters:
- Cooling temperature: 60 °C – 800 °C

Note:
- The "Activate cooling" button is automatically activated when the temperature is entered and must be pressed.
  The actual 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.

6.9 Lift position for cooling ---%

Values are saved

Old values are retained and the
system returns to the firing curve

Modifiable parameters:
- Cooling lift position: 0 % – 100 %

Note:
- The actual 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 oven,
  the slower the cooling.

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6.10 Changes after program start

Note:

- Changes of 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.

Please note:

You can only change non-active program areas. The program areas that are still possible to change can be recognized by the button display (dark button).

If a program area that is still available is selected for changing and it becomes active in the meantime, the display switches to the image of the firing curve and the program continues to run with the previously contained value. The dialog field shows the time that is still available for a change.

The following values can be changed:
- Firing temperature
- Holding time for the firing temperature
- Cooling temperature

If the final temperature is changed, the ° C/min gradient is always retained, and the rise time and vacuum time are correspondingly adjusted.
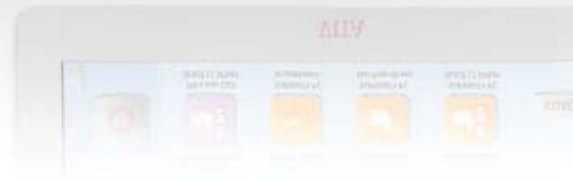
Chairside firing unit

Control unit

Integrated accessory set

7. Scope of supply/system solutions

7.1 VITA SMART.FIRE items

Article	Scope of supply	Prod. No.
VITA SMART.FIRE chairside firing unit 1) 220 V – 230 V 2) 110 V 3) 100 V	1x	 **DSF220** **DSF110** **DSF100**
VITA SMART.FIRE control unit	1x	
Firing platform	1x	**D62035**
Firing trays	1x	**D62102**
Firing pliers	1x	**D62103**
Fibrous pad firing supports	1x	**D62104**
Platinum pins (1 anterior and 1 posterior pin)	2x	**B207N2**
Cooling table	1x	**D62100**
Insert for accessory drawer	1x	**D62105**
Cable for connecting firing unit and control unit	1x	**D63021**
Power cable 1) 220 V – 230 V EU 2) 110 V 3) 2220 V – 230 V GB 4) 220 V – 230 V CN 5) 220 V – 230 VCH 6) 220 V – 230 VZA 7) 220 V – 230 VAU 8) 220 V – 230 V IL	1x	 **D47013** **D47014** **D47015** **D47016** **D47017** **D47021** **D47022** **D47023**
Operating manual for the VITA SMART.FIRE firing system	1x	
VITA Dental Equipment DVD	1x	**10228M**

Note:
- All VITA SMART.FIRE components can be individually reordered.

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7.2 VITA system solutions

Shade determination

- 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.

CAD/CAM Fabrication

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

Shade modification*

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

Firing preparation

- Use **VITA platinum pins** and **VITA FiringPaste** to ensure that the restoration is securely placed on the firing tray.

Firing*

- Use the **VITA SMART.FIRE firing unit** for crystallization, glaze, stain, and corrective firing of all common chairside materials.

Polishing

- For 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.

Luting

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

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

8. Technical data / information

8.1 Technical data of firing unit

Dimensions (Ø / depth / height)	230 mm / 300 mm / 340 mm (closed)
Net weight	12 kg
Firing chamber internal dimensions (Ø / height)	80 mm / 43 mm
Firing chamber temperature	Max. 1050 °C
Electrical connection	Specified on identification plate, tolerance ±10 %
Power consumption	Max. 950 W (230 V), max. 1100 W (100 V, 110 V)
Temperature range for operation:	10 °C to 35 °C
Humidity for operation	Max. 80 % RH
Operating altitude	Max. 3,800 m above sea level
Classifications	EN 60601-1:2010 UL 60601-2:2012 (3rd Ed.) CAN/CSA-C22.2 NO. 61010-12 $C\epsilon$
Application area	Approved for indoor operation only

8.2 Technical data of firing unit

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

8.3 Symbols

	Article	Scope of supply
⚡	Hazardous voltage	This pictogram warns the user about hazardous voltage. Before opening the instrument, always disconnect it from the mains current by unplugging the AC adapter.
🔥	Hot surface	This pictogram warns the user about hot surfaces Burns are possible.
🗑	Separate disposal	This unit and all accessories labeled with this symbol are subject to Directive 2002/96/EC (WEEE) and the applicable national regulations and may not be disposed of as unsorted municipal waste in the European Union (EU). Old units can be returned to VITA Zahnfabrik.
CE	CE marking	VITA SMART.FIRE complies with the applicable regulations of the European Union (EU). The declaration of conformity can be requested from VITA (Regulatory Affairs Department) at: www.vita-zahnfabrik.com

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⚏ 8.4 Information

Basic information on the instrument design
- The instrument is designed according to the state of art technology and recognized safety standards.
- However, if it is used inappropriately, hazards for the health and safety of the user or third parties, as well as the risk of damaging the instrument and other material property, may arise.

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.
- The unit may not be used without the firing platform. The firing platform must always be inserted in its designated recess on the bottom of the firing unit. The unit may not be used with a flammable narcotic agent with air or nitrous oxide.
- The device is equipped with a fan. The fan is temperature-controlled. Activation, deactivation and speed of the fan are controlled automatically. The fan prevents excessive heating of the unit and therefore contributes to the overall operating safety. The openings in the top cover of the firing chamber must not be covered or closed.

Authorized modes of operation
- The insulation of the firing chamber contains ceramic mineral fibers (Index No. 650-017-00-08), which is classified as a CAT 2 carcinogen (Annex VI, EC 1272/2008). When working with the firing chamber or exchanging the firing muffle, fiber dust may be discharged.
- Exposure to this dust can be potentially hazardous to health if inhaled and result in irritation of the skin, eyes and respiratory organs. Therefore, always follow these instructions when replacing parts of the firing chamber:
- Wear long-sleeved protective clothing.
- Wear safety goggles as well as protective gloves.
- Use a dust vacuum system or wear a FFP 2 respirator.
- Once work has been completed, rinse the dust from unprotected skin using cold water.
- Wash workwear separately from everyday clothing.
- 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, as well as handling of hazardous materials or substances injurious to health, is considered to be contrary to the recommended use.
- 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.

8.5 Safety functions

The firing unit has the following safety and monitoring features:
1. Temperature sensor monitoring
2. Power supply failure protection
3. Obstruction sensor
4. Temperature protection switch
5. Automatic temperature calibration

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

Power supply failure protection
The instrument is equipped with 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 15 seconds. An error message is displayed once power is restored.

Obstruction sensor
The vertical movement of the firing head 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
Temperature protection switches are installed in the housing of the firing unit and prevent the firing unit from overheating by switching off the heater if the heating control system malfunctions. An error message is displayed if this type of malfunction occurs. The firing system may not be used again until the system cools down. This can take some time.

Automatic temperature calibration
The temperature is automatically calibrated each time the furnace is switched on.
This temperature calibration takes into consideration and corrects all deviations occurring in the electronic components for temperature measurement and temperature regulation. In this way, a constant temperature of ± 1 °C is achieved, even if the unit is operated for a long period.

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9. Additional information

9.1 VITA warranty and consumer protection

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

9.2 Update messenger

Software updates are available as a download on the website of the supplier, VITA Zahnfabrik.
An option to register so that the latest information on the device is automatically emailed to you is also provided at
http://www.vita-zahnfabrik.com/updatemessenger.

9.3 Spare parts

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

9.4 Patents and trademarks

VITA SMART.FIRE® is a registered trademark of VITA Zahnfabrik. Other trademarks mentioned in this document are the property of the respective company.

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9.6 Hotline and support

We are here to help

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

Phone +49 (0) 7761 / 56 28 84
Fax   +49 (0) 7761 / 56 22 99
8:00 a.m. to 5 p.m. CET
E-mail: info@vita-zahnfabrik.com

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

Phone +49 (0) 7761 / 56 22 22
Fax   +49 (0) 7761 / 56 24 46
8:00 a.m. to 5 p.m. CET
E-mail: info@vita-zahnfabrik.com

VITA instruments service
Please do not hesitate to contact us if you have any questions concerning VITA instruments.

Phone +49 (0) 7761 / 56 21 11
Fax   +49 (0) 7761 56 21 02
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More information on VITA SMART.FIRE
is available at www.vita-zahnfabrik.com

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