

# VITA VACUMAT® 6000 M

Operating manual



VITA shade taking

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue: 10.13



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## 1 Introduction

### Dear Customer,

Thank you for deciding to purchase our VITA VACUMAT 6000 M. This tried and tested heating system for dental ceramic furnaces, with its quartz/Kanthal firing muffle and a newly developed insulating material in the firing chamber, is your guarantee of many years of constant firing results with all types of ceramic materials.

The high-quality temperature control and automatic temperature adjustment function ensures an accuracy of plus/minus 1 °C

This device has been designed in accordance with the latest technological benchmarks and complies with all international safety standards. Nevertheless, incorrect use can be dangerous – please read this operating manual and bear in mind the information provided.

Reading and understanding this operating manual will help you maintain safety, reduce expenses as a result of repairs and downtime, and increase the reliability and service life of the device. All of the illustrations and drawings in this operating manual are intended for general explanatory purposes and are not authoritative for the detailed construction of the device.

The operating manual must always be kept close to the device. It must be read and followed by all persons responsible for performing tasks such as operation, troubleshooting during operation, and cleaning and servicing (maintenance, inspection, repairs), either with or on the device.

We hope that you will find using VITA VACUMAT 6000 M to be an enjoyable and successful experience.

### Copyright

The confidentiality of this operating manual must be maintained. It must only be used by authorized persons. It may only be transferred to third parties with the written approval of VITA Zahnfabrik H. Rauter GmbH & Co. KG.

The entirety of the documentation is protected by the Copyright Act.

The dissemination or duplication of documents, even in the form of excerpts, and the use and communication of their content is prohibited except where expressly permitted.

Violations are punishable by law and will result in obligatory claims for compensation of damages.

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## 2 Delivery scope

### Device supplied in a special box with:

- 1 **VITA VACUMAT 6000 M** furnace, **with a painted or stainless steel finish**
- 1 firing socket
- 1 plug-in status display
- 1 connection cable for the mains power supply
- 1 pair of furnace tweezers
- 1 pack of firing trays A + B
- 1 pack of firing bases G
- 1 operating manual
- 1 connection cable for the control unit
- Vacuum tube

### 2.1 Control unit

The VITA VACUMAT 6000 M can be equipped with the following control units:

- VITA vPad easy with LCD display, memory for 200 firing programs.
- VITA vPad comfort with 7" color touch screen display, photo viewer, memory for 500 firing programs for control of 1 or 2 VITA VACUMAT 6000 M / 6000 MP or VITA ZYRCOMAT 6000 MS.
- VITA vPad excellence with 8.5" color touch screen display, photo viewer, memory for 1000 firing programs for control of 1 to 4 VITA VACUMAT 6000 M / 6000 MP or VITA ZYRCOMAT 6000 MS.
- VITA vPad clinical with 7" color touch screen display, photo viewer, memory for up to 500 firing programs for control of 1 or 2 VITA VACUMAT 6000 M / MP or VITA ZYRCOMAT 6000 MS.

**i** An additional switchbox and a connection cable are required for the operation of 2 or more VITA VACUMAT 6000 M / 6000 MP or VITA ZYRCOMAT 6000 MS with a VITA vPad comfort, VITA vPad excellence or VITA vPad clinical control unit.

**Read the information about this in the operating manual of the corresponding control unit.**

### 2.3 Accessories (subject to additional charges):

- Lateral cover plates, set of 2
- Firing object storage tables, set of 2
- Vacuum pump: 230/240 volts, 50/60 Hz, 115 volts, 50/60 Hz or 100 volts/60 Hz.
- FDS (firing data system) firing data management
- Magnetic numbers, 1-4, set of 4

## 3 Technical information

### 3.1 General description of the VITA VACUMAT 6000 M furnace

- High-performance technology with highest temperature accuracy for optimal firing results
- Time-saving operating convenience, modest spatial requirements
- Sheet steel casing with a painted or stainless-steel finish
- Extendable firing object storage tables
- Optical status display
- Firing chamber lined with high-quality insulating material
- Quartz firing muffle
- Temperature sensor (platinum / rhodium-platinum)
- Automatic temperature calibration before the start of each program
- Temperature accuracy to plus/minus 1 °C (33.8°F)

## 4 Technical data

### 4.1 Dimensions/weights

#### 4.1.1 VITA VACUMAT 6000 M furnace

- Width: 230 mm
- Depth: 325 mm
- Height: 444 mm
- Casing, Weight: Painted steel 13 kg, stainless steel 15 kg
- Usable measure of (firing chamber): Diameter: 90 mm, height: 55 mm
- Firing temperature: max. 1,200°C

### 4.2 Electrical specifications

#### 4.2.1 Furnace

- Power supply: 230 volts AC, 50 Hz  
or 100/110 volts AC, 50/60Hz
- Power consumption: max. 1,500 watts

#### 4.2.2 Vacuum pump (accessory not included in the price)

- Power supply: 230 volts, 50/60 Hz  
or 100/110 volts, 50/60 Hz
- Power consumption: max. 200 watts
- End vacuum: <960 mbar
- Dimensions: 320 x 110 x 220 mm
- Weight: approx. 6.4 kg

## 5 Intended use

### Basic information on the device construction

The device is constructed according to a state of the art design and recognized safety regulations. However, if it is used inappropriately, hazards for the health and safety of the user or third parties may arise as well as the risk of damaging the device and other valuable assets.






### Unauthorized modes of operation

The operation of the device with power sources, products, etc. which are considered hazardous or capable of negatively impacting the health of the operating personnel is not permitted. The use of equipment modified by the user is also prohibited.

### Authorized modes of operation

The operation of the device is only permitted if this operating manual has been read and understood thoroughly and the procedures described in it have been observed. Any other or additional use, e.g. the processing of products other than those intended as well as the handling of hazardous materials or substances injurious to health is considered to be contrary to the recommended use. The manufacturer/supplier will not be liable for any damage resulting from such unauthorized use. The risk of such use is borne exclusively by the user.

## 6 Safety instructions

6.1 Pictograms		
<b>Hazardous voltage</b>	This pictogram warns of hazardous voltage. Before opening the device, it must be disconnected from the mains power supply by pulling out the mains plug.	
<b>Hot surface</b>	This pictogram warns against the presence of hot surfaces. Burn injuries may occur.	
<b>Seperate disposal</b>	Observe separate disposal of electrical and electronic devices; do not dispose of them with household waste. The black bar under the "Trashcan" icon means that the device was sold after 13.08.2005. Please note that the device is subject to European Community Directive 2002/96/EC (WEEE) and the national laws in force in your country and must be handed over for appropriate disposal. Contact your dealer when the device needs to be disposed of.	
<b>Note</b>	This pictogram warns of hazardous situations involving the possibility of personal injury or damage to the device.	
<b>Information</b>	This pictogram highlights useful tips, explanations and additional information concerning the operation of the device.	

### 7 Ambient conditions

- Indoor use
- Ambient temperature: 2°C to 40°C
- Relative humidity: 80% at 31°C
- Maximum altitude: 3,800 m
- Rated voltage fluctuations must not exceed plus/minus 10% of the rated voltage

### 8 Safety features

Combined with a control unit:

**VITA vPad easy or  
VITA vPad comfort or  
VITA vPad excellence or  
VITA vPad clinical**

the furnace has the following safety and monitoring features:

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

## 9 Installation and first use

### 9.1 Installation location

- Install the device in a dry, heated room. The distance to the closest wall should be at least 25 cm. (see sect. 7. Ambient conditions)
- When the temperature is below 15°C (59°F) (e.g. after transport), leave the device to stand for approx. 30 minutes before using it for the first time at room temperature.
- Ensure that the device is on a heat-resistant surface. The radiation and heating of the device is in the non-hazardous range. However, heat sensitive surfaces of furniture and veneers could become somewhat discolored over time due to the constant influence of heat.
- Prevent direct sunlight from coming into contact with the device.
- Do not place any flammable objects in the vicinity of the device.  
Do not place the control unit directly in the heat radiation area of the firing chamber.
- Do not set up the device in such a way that it becomes difficult to press the main switch and pull out the power supply cord.

Before using for the first time, read the corresponding operating manual for the control unit.

### 9.2 Device connections





### 9.3 Status display

The status display indicates following operation status:

- green – furnace in standby-mode
- blue – firing program active
- red – error

Please see operating manual of the corresponding control unit.

### 9.4 Fuses




On the back of the device (see sect. 9.2), there are 2 device fuses.  
The identification plates show information about the fuse ratings used in the device. Fuses with other ratings must not be used.

230-volt model

**T 8 H 250 V**

100/110-volt model

**T 15 H 250 V**

9.5 Information about the identification plates		
<b>Hazardous voltage</b>	This pictogram warns of hazardous voltage. Before opening the device, it must be disconnected from the mains power supply by pulling out the mains plug.	
<b>Residual voltage</b>	After the back-plate has been removed, a voltage of up to 400 volts may still exist in components in the area of the power supply unit on the circuit board, even when the device is switched off.	
<b>Note</b>	<b>Do not place any objects in the area of the lift plate.</b> When the device is switched on, the lift will move down to the lower position. When putting down the firing objects, use the laterally extendable storage plates.	

**The manufacturer is not liable for accidents to the user occurring when the device is open!**

Never start up the device without the firing socket attached.  
In continuous operation (max. final temperature, max. firing time), some parts of the firing chamber may reach high temperatures (above 70°C (158°F)).

Do not reach into the open firing chamber when the device is switched on.  
There is a risk of touching electrically live or hot parts.

### 9.6 Connecting the device to the mains power supply

| **⚠ Important! Before first use, read section 6 on safety information!**

For information about the connections, see sect. 9.2

- Attach the connection cable to the control unit and the furnace.
- Plug in the status display.
- Connect the vacuum pump, power supply and tube connection.
- Connect the device to the mains power supply using the supplied mains power cable.

| **⚠ Important! Avoid connecting to multiple-outlet power strips with extension cords. In the event of overloading, a risk of fire exists.**

- Switch on the device at the main switch. The lift moves to the lower position.
- Clean or wipe the lift plate and the lift plate gasket (dust particles from the insulation are deposited during transportation of the device).
- Attach the firing socket to the lift plate.

| **⚠ Important! Never start up the device without the firing socket attached!**

### 9.7 Switching off the device, or stopping its operation

When the device is not in operation, the lift should be moved into the firing chamber and the device must be switched off at the main switch (see sect. 9.2). Closing the firing chamber protects the insulation and prevents the absorption of moisture.

**For instructions on how to do this, please read the operating manual of the corresponding control unit.**

## 10 Cleaning the furnace

### **Before each cleaning operation, remove the power supply plug!**

It is not necessary to clean the inside of the firing chamber. Cleaning the casing of the firing chamber at regular intervals with a damp cloth contributes to its operating safety.

**In all cleaning work, you must never use any detergents or flammable liquids.**

### 10.1 Cleaning firing for the firing chamber

Consult the operating manual of the corresponding control unit for information about the cleaning firing.

### 10.2 Firing chamber insulation

The firing chamber contains insulating material comprised of ceramic mineral fibers (index no. 650-017-00-08) that have been classified as category 2 carcinogens (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 potentially be carcinogenic on inhalation, as well as result in irritation of the skin, eyes and respiratory organs.

When exchanging the firing muffle, proceed as follows:

- 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 dust from unprotected skin using cold water. Wash workwear separately from everyday clothing.

## 11 CE mark

With the CE mark, a legally binding declaration is made to the effect that the device corresponds to the fundamental requirements of European Community Directive 2006/95/EC (Low-Voltage Directive) and European Community Directive 2004/108/EC/EMC (EMC Directive).

## 12 Fan

The device is equipped with a fan.

Activation, deactivation and speed of the fan are controlled automatically.

The fan prevents excessive heating of the device and contributes to its general operating safety. If the fan fails, an error message is shown on the display.

(For information about this, refer to the Error Messages section of the control unit's operating manual.) For safety reasons, the device must not be operated without a fan. The upper cover of the firing chamber and the openings in the rear cover must not be closed or blocked.

## 13 Mains power supply failure

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

### **Mains voltage failure time less than approx. 15 sec.**

The program continues to run and is not interrupted. The display is out of order during this period. The display shows the running program again following the mains power supply program interruption.

### **Mains voltage failure time longer than approx. 15 sec.**

The program is interrupted, and the display is out of order. After the reconnection of the mains power supply, the display shows the power failure for information purposes.

**| ⚠ Important! Once the mains power supply is reconnected, the time required to switch the control unit back on again is approx. 20 sec.**

## 14 Warranty and liability

The warranty and liability comply with the terms and conditions set in the contract.

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

### 14.1 Spare parts

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

### 14.2 Service

Further information on this device is available on our homepage:

**<http://www.vita-zahnfabrik.com>**

Software updates are available for download under **Dokumente & Media / Downloadcenter / Product Information / Software Updates.**

Furthermore, you can also register under **NEWSROOM / Update Messenger** in order to receive e-mail notification via the **Update Messenger** about current information on the unit.

In case of technical queries regarding the device or regarding repair services and warranty provisions, contact us at:

**Email: [instruments-service@vita-zahnfabrik.com](mailto:instruments-service@vita-zahnfabrik.com)**

**Phone: +49 (0) 7761 / 562 -105, -106, -101.**



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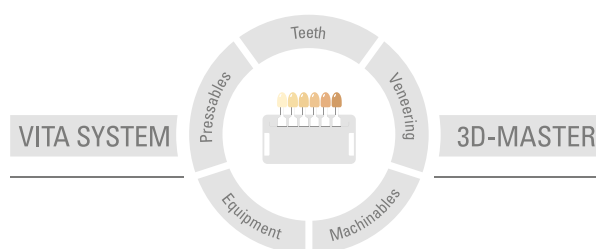
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With the unique VITA SYSTEM 3D-MASTER all natural tooth shades are systematically determined and completely reproduced.



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After the publication of these information for use any previous versions become obsolete. The current version can be found at [www.vita-zahnfabrik.com](http://www.vita-zahnfabrik.com)

VITA Zahnfabrik has been certified in accordance to the Medical Device Directive and the following products bear the CE mark:



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