

VITA VACUMAT® 6000 MP

Operating manual



VITA shade determination

VITA shade communication

VITA shade reproduction

VITA shade control

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Table of contents

1	Introduction	4
2	Scope of delivery	5
2.1	Control unit	5
2.2	Accessories (can be purchased separately)	5
3	Technical information	6
3.1	General description of the furnace VITA VACUMAT 6000 MP	6
4	Technical data	6
4.1	Dimensions/weights	6
4.1.1	Furnace VITA VACUMAT 6000 MP	6
4.2	Electrical data	6
4.2.1	Furnace	6
4.2.2	Vacuum pump	6
5	Intended use	7
6	Safety information	7
6.1	Pictograms	7
7	Ambient conditions	8
8	Safety functions	8
9	Installation and first use	9
9.1	Installation location	9
9.2	Device connections	9
9.3	Pressurized air connection	10
9.4	Status display	10
9.5	Fuses	10
9.6	Information about the identification plates	10
9.7	Connecting the device to the mains voltage	11
9.8	Switching off the device or stopping its operation	11
10	Cleaning the furnace	12
10.1	Cleaning firing for the firing chamber	12
10.2	Firing chamber insulation	12
11	CE mark	12
12	Fan	12
13	Mains power supply failure	13
14	Warranty and liability	13
14.1	Spare parts	13
14.2	Service	13
15	Alphabetical table of contents	14

1 Introduction

Dear Customer.

Thank you for choosing to purchase a VITA VACUMAT 6000 MP. This well-designed and proven heating system for ceramic furnaces uses a quartz/Kanthal firing muffle and newly developed insulating material in the firing chamber, which ensures many years of uniform firing results with all ceramic materials.

The high-quality temperature control and automatic temperature adjustment ensures a precision of plus/minus 1°C.

This device has been designed according to the the latest technological benchmarks and complies with all international safety standards. However, incorrect usage can impact the health and safety of the user, as well as damage the device. Please read this operating manual carefully and follow 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 the VITA VACUMAT 6000 MP to be an enjoyable and successful experience.

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Violations are an offense and liable to compensation.

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2 Scope of delivery

Device supplied in a special box with:

- 1 VITA VACUMAT 6000 MP furnace, coated or in stainless steel
- 3 firing sockets and 2 sets of pressure discs
- 1 plug-in status display
- 1 cable for mains power connection
- 1 furnace tweezer
- 1 package of firing trays A + B
- 1 package of firing trays G
- 1 dental equipment DVD
- 1 cable for the control unit
- 1 pressure regulator for attachment to the vacuum pump
- 1 pressure tube, vacuum tube

2.1 Control unit

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

- VITA vPad comfort with 10" TFT-Display, photo viewer, memory for 500 firing programs for control of 1 VITA VACUMAT 6000 M / VITA VACUMAT 6000 MP and VITA ZYRCOMAT 6000 MS.
- VITA vPad excellence with 10" TFT-Display, photo viewer, memory for 1000 firing programs for control of 1 to 4 VITA VACUMAT 6000 M / VITA VACUMAT 6000 MP and VITA ZYRCOMAT 6000 MS.

i To operate with 1 VITA VACUMAT 6000 M / 6000 MP or VITA ZYRCOMAT 6000 MS, the VITA vPad comfort can be used. An additional VITA SWITCHBOX is required for the operation of 2 or more VITA VACUMAT 6000 M / 6000 MP / ZYRCOMAT 6000 MS with a VITA vPad excellence. You will need the VITA MultiPump and the VITA vPad excellence for operation with a VITA vacuum pump for up to 4 VITA VACUMAT 6000 M or VITA VACUMAT 6000 MP.

Please read the information in the operating manual of the corresponding control unit.

2.2 Accessories (can be purchased separately):

- Side panels, set of 2 pc. each
- Vacuum pump: 230/240 V, 50/60 Hz, 115 V, 50/60 Hz or 100 V/60 Hz.
- FDS (Firing Data System) – firing data administration program for PC
- Magnetic numbers 1-4, set of 4 pc. each

3 Technical information

3.1 General description of the furnace VITA VACUMAT 6000 MP

- High-performance technology – extremely accurate temperature control for optimum firing results
- Time-saving, user-friendly convenience and a small footprint
- Casing made of coated or stainless steel plate
- Optical operating status display
- Firing object storage tables, extendable
- High-quality material used to insulate firing chamber
- Quartz firing muffle
- Temperature sensor (platinum/rhodium-platinum)
- Automatic temperature calibration before every program startup
- Temperature accuracy +/- 1°C
- Pneumatic pressing mechanism

4 Technical data

4.1 Dimensions / weights

4.1.1 Furnace VITA VACUMAT 6000 MP

- Width: 230 mm
- Depth: 370 mm
- Height: 630 mm
- Housing, weight: lacquered steel 18.7 kg, stainless steel 20.1 kg.
- Effective dimensions of the firing chamber: diameter: 90 mm, height: 55 mm
- Firing chamber temperature: max. 1200°C

4.2 Electrical data

4.2.1 Furnace

- Electrical connection: 230 V AC, 50 Hz
or 100/110 V AC, 50/60 Hz
- Power consumption: max. 1500 W

4.2.2 Vacuum pump

- Electrical connection: 230 V, 50/60 Hz
- or 100/110 V, 50/60 Hz
- Power consumption: max. 200 W
- Final vacuum: < 960 mbar
- Dimensions: 320 x 110 x 220 mm
- Weight: approx. 6.4 kg

5 Intended use

Basic information on the instrument design

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






Unauthorized modes of operation

The operation of the device with power sources, products, etc., which are subject to hazardous materials regulations, using equipment modified by the user or operation that could have any negative impact on the health of the operating personnel, is 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, as well as handling of hazardous materials or substances injurious to health, is considered to be contrary to the recommended use. The manufacturer/supplier will not be liable for any damage resulting from such unauthorized use. The risk of such use is borne exclusively by the user.

6 Safety information

6.1 Pictograms		
Hazardous voltage	This pictogram warns the user about hazardous voltage. Before opening the unit, always disconnect the device from the mains current by unplugging the AC adapter.	
Hot surface	This pictogram warns the user about hot surfaces that can cause burns.	
Separate disposal	Dispose of electrical and electronic equipment separately, not with household waste. The black bar under the "wheeled bin" symbol indicates that the device was placed on the market after August 13, 2005. Please note that the device is subject to European Community Directive 2002/96/EC (WEEE) and the national laws valid in your country, and it must be disposed of accordingly. Contact your dealer if you need to dispose of the device.	
Note	This pictogram warns of hazardous situations with the risk of personal injury or damage to the device.	
Information	This pictogram points to useful pieces of advice, explanations and supplements regarding the handling of the equipment.	

7 Ambient conditions

- Use indoors
- Ambient temperature 2°C to 40°C
- Relative humidity: 80% at 31°C
- Max. altitude: 3800 m above sea level (standard elevation zero, NHN).
- Fluctuations in nominal voltage are not greater than plus/minus 10% of the nominal voltage.

8 Safety functions

The furnace is in operation with the control unit

VITA vPad comfort or VITA vPad excellence

and has the following safety and monitoring features:

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

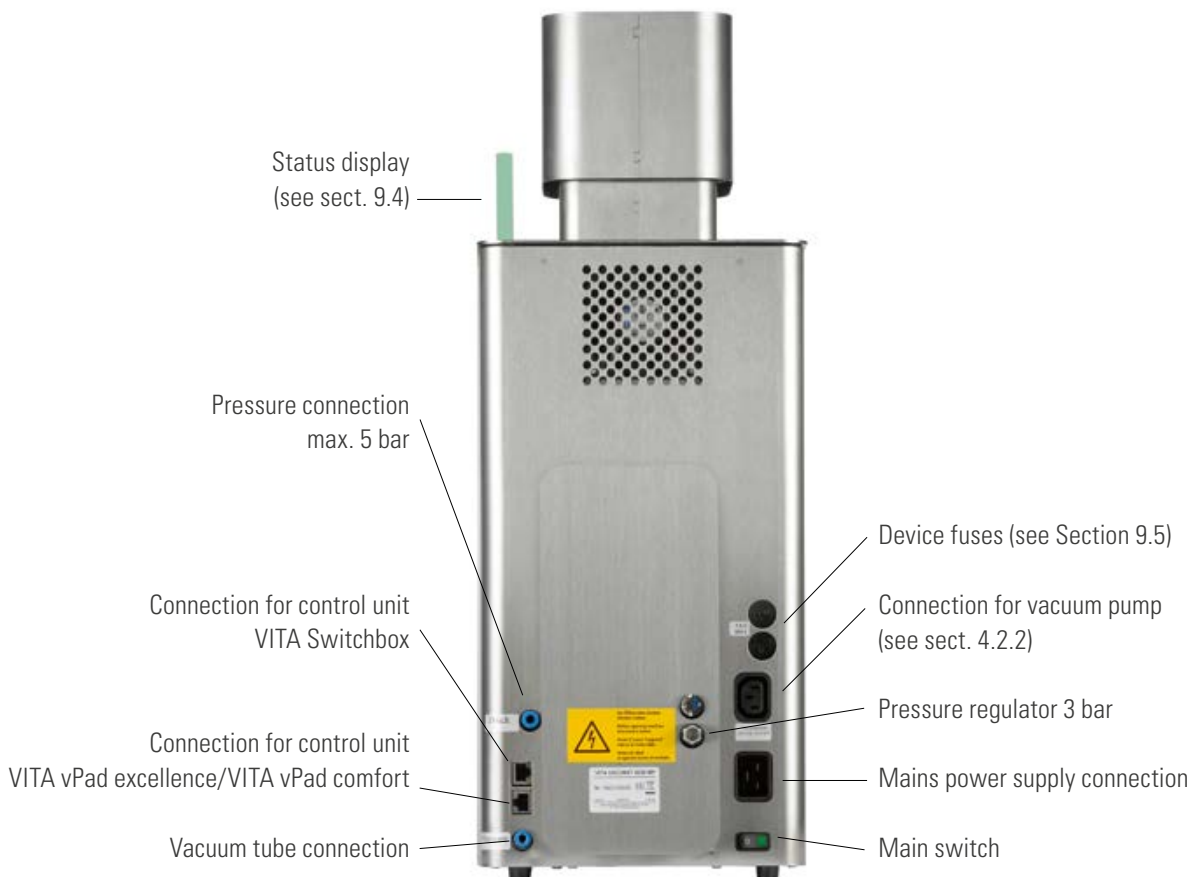
9 Installation and first use

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 also Section 7. Ambient conditions).
- When the temperature is below 15°C (e.g., after transport), leave the device to stand for approx. 30 minutes at room temperature before using it for the first time.
- Ensure that the surface where the device is installed is heat-resistant. The radiation and heating of the device is within a non-hazardous range. Nevertheless, 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 makes it difficult to press the main switch and pull out the power supply cord.

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

9.2 Device connections





9.3 Pressurized air connection

The vacuum pump is equipped with a pressure regulator.

The input pressure from the laboratory pressurized air network should be a maximum of 6 bar.

Set the pressure output of the device to a maximum of 5 bar.

See the operating manual regarding the settings for the pressing pressure VITA vPad excellence/comfort (see Section 19.3)

9.4 Status display

The status display shows the following operating modes:

- Green – device in standby operation
- Blue – program active
- Red – error

Read the corresponding operating manual for the control unit.

9.5 Fuses




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

230 V model

T 8 H 250 V

100/110 V model:

T 15 H 250 V

9.6 Information about the identification plates		
Hazardous voltage	This pictogram warns the user about hazardous voltage. Before opening the unit, always disconnect the device from the mains current by unplugging the AC adapter.	
Residual voltage	After the back plate has been removed, a residual voltage of up to 400 V may still be present in components in the area of the power supply unit on the circuit board, even when the device is switched off.	
Note	Do not place any objects in the area of the lift plate. When the device is switched on, the lift will move down to the lower position. For setting down 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 operate the device in any case without the firing socket installed. In continuous operation (max. firing temperature, max. firing time), some parts of the firing chamber may reach high temperatures (above 70°C). Do **not** reach into the open firing chamber when the device is switched on. There is a risk of touching electrically live and hot parts.

9.7 Connecting the device to the mains voltage

| ⚠ **Important! Before first use, please read Section 6 Safety Information!**

For information about the connections, refer to Section 9.2

- Attach the connection cable to the control unit and the furnace.
- Plug in the status display.
- Connect the vacuum pump, electrical connection and tubing connection.
- Connect the device to the mains power supply using the mains power cable supplied.
- Install the pressure tube for the pressing mechanism.

| ⚠ **Important! Avoid electrical multiway socket outlets with extensions, as there is a risk of fire with overload.**



- 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.
- To accommodate the investment ring, 2 firing sockets are available, each with 2 pressure discs with different diameters.

| ⚠ **Important: For pressing, always insert both pressure discs into the firing socket.**



| ⚠ **Important! Never operate the device in any case without the firing socket installed!**

9.8 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 Section 9.2). Closing the firing chamber protects the insulation and prevents moisture absorption.

Please read the operating instructions for the control unit used.

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 control unit for information about the cleaning firing.

10.2 Firing chamber insulation

The firing chamber contains ceramic mineral fibers as insulation material (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 potentially be carcinogenic on inhalation, as well as result in irritation of the skin, eyes and respiratory organs.

When exchanging the firing muffle, please proceed as follows:

- 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 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 that the device meets the essential requirements of European Community Directive 2006/95/EC (Low-Voltage Directive) as well as of European Community Directive 2004/108/EC (EMC Directive).

12 Fans

The device is equipped with two fans. The fans are temperature-controlled. Activation, deactivation and speed of the fans are controlled automatically.

The fans prevent excessive heating of the device itself and the pressing mechanism and contribute to the overall operating safety.

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

Mains voltage failure time less than approx. 15 sec.

The program continues to run and is not interrupted. The display is out of order during this period. Once mains power is supplied again and the program interruption is over, the running program reappears in the display.

Mains voltage failure time longer than approx. 15 sec.

The program is interrupted and the display is out of order. Once mains power is supplied again, the display indicates that there was a power failure.

⚠ Important! Once mains power is supplied again, the time required for the control unit to switch back on again is approx. 20 seconds.

14 Warranty and liability

The warranty and liability are based on the terms and conditions stipulated 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 specified by the manufacturer. This is always ensured when using original VITA spare parts.

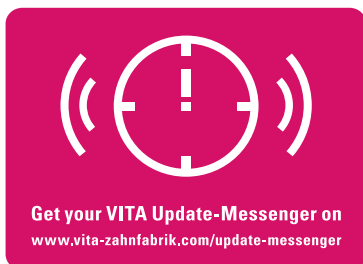
14.2 Service

Additional information on this device is available on our homepage:

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

Software updates are available for download under **Documents & Media / Download Center / Product Information / Software Updates.**

An option to register is also provided via **Service / Update Messenger** so that the latest information on the device is automatically emailed to you.



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

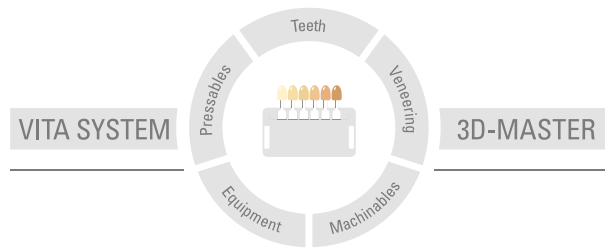
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15 Alphabetical table of contents

A		P	
Accessories	5	Pictograms	7
Ambient conditions	8	Power failure protection	13
Authorized modes of operation	7	Pressure connection	10
C		S	
CE mark	12	Safety functions	8
Cleaning the device	12	Safety information	7
Cleaning work	12	Scope of delivery	5
Connecting the device to the mains voltage	11	Service	13
Copyright	4	Spare parts	13
D		Startup	9
Device connections	9	Status display	9, 10
Dimensions/weights	6	Switching off the device	11
Disposal	7	T	
E		Technical data	6
Electrical data	6	Technical information	6
F		U	
Fan	12	Unauthorized modes of operation	7
Firing chamber insulation	12	V	
Fuses	10	Vacuum pump	6
G		VITA vPad comfort	5
General description	6	VITA vPad excellence	5
Guarantee	13	I	
I		Identification plates	10
Installation and first use	9	Installation location	9
Installation location	9	Installation plates	10
Installation plates	10	Intended use	7
Intended use	7	L	
L		Liability	10, 13
M		M	
Mains power supply failure	13	Mains power supply failure	13
Mains voltage failure time	13	Mains voltage failure time	13

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After the publication of this information for use any previous versions become obsolete. The current version can be found at www.vita-zahnfabrik.com

VITA VACUMAT® 6000 MP is CE marked within the meaning of EC Guideline 2006/95/EC, 2004/108/EC and 2011/65/EC.

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