

# VITAVM<sup>®</sup>13

## Product Information

**NEW:**  
More dynamics of light, more luminosity,  
more shades



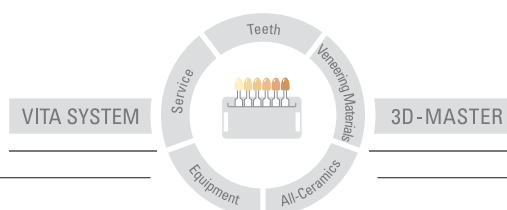
VITA shade taking

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue: 03.11



**VITA**

For veneering metal substructures  
in the conventional CTE range.  
Available in the VITA SYSTEM 3D-MASTER  
and VITA classical A1–A4 shades.

VITA LabNews – now available at  
[www.vita-zahnfabrik.com/labnews](http://www.vita-zahnfabrik.com/labnews)

## VITAVM.13 Perfectly matched with all indications

### Veneering Material · VITAVM®13

available in VITA SYSTEM 3D-MASTER and VITA classical A1 – D4 shades



#### Matched with all alloys

high gold content

reduced gold content

palladium-based

non-precious metal

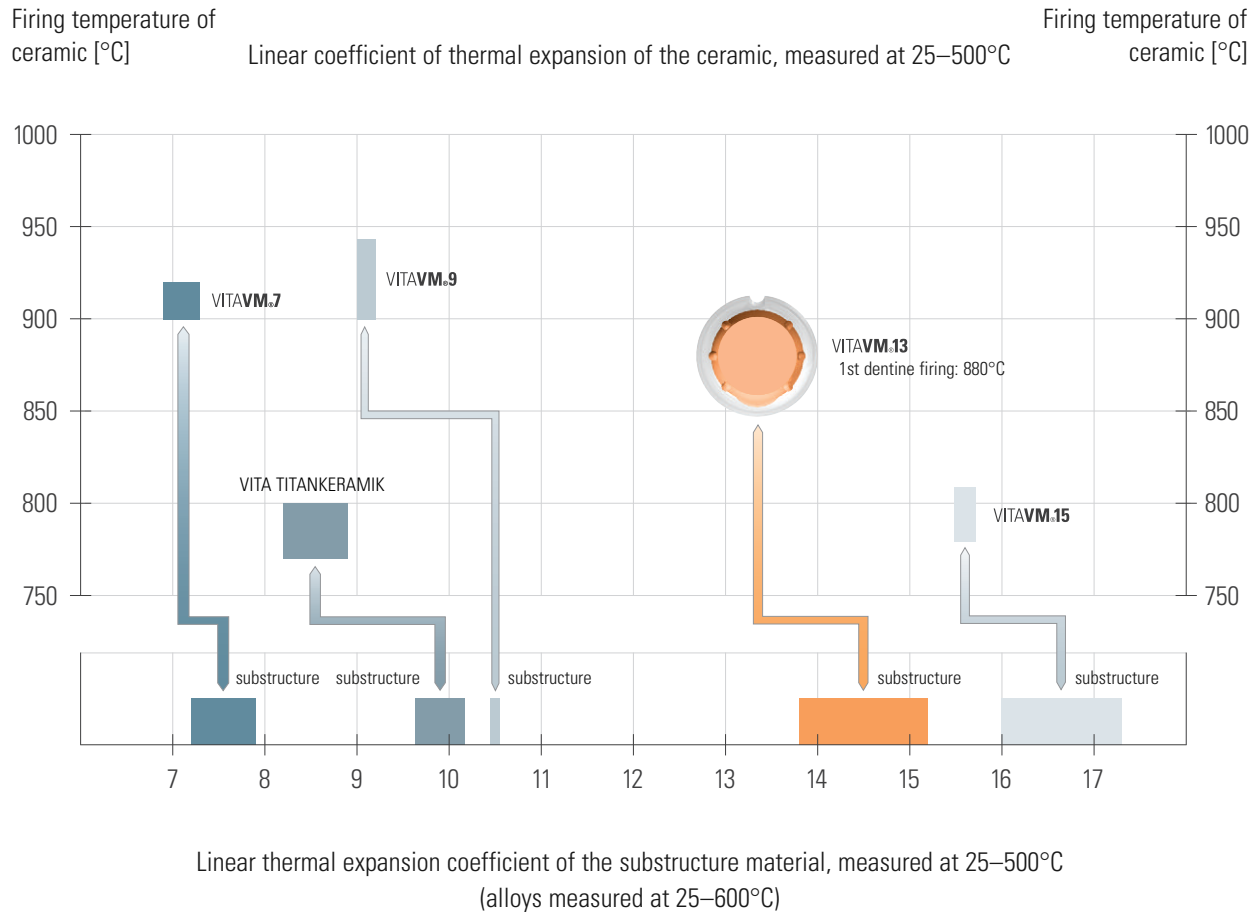


VITA VM 13 was developed as a feldspar veneering ceramic for alloys in the conventional CTE range of approx. 13.8 – 15.2.

The CTE range and the firing temperature of VITA VM 13 are perfectly matched with high gold content, reduced gold content, palladium-based and non-precious metal alloys.

With the firing temperatures of VITA VM 13 distortion of the alloy can be virtually ruled out.

## VITAVM.13 Reliable use thanks to unmistakable classification



### Veneering material

VITA VM 7  
CTE (25–500°C) 6.9–7.3 · 10<sup>-6</sup> · K<sup>-1</sup>

VITA TITANKERAMIK  
CTE (25–500°C) 8.2–8.9 · 10<sup>-6</sup> · K<sup>-1</sup>

VITA VM 9  
CTE (25–500°C) 9.0–9.2 · 10<sup>-6</sup> · K<sup>-1</sup>

VITA VM 13  
CTE (25–500°C) 13.1–13.6 · 10<sup>-6</sup> · K<sup>-1</sup>

VITA VM 15  
CTE (25–500°C) 15.5–15.7 · 10<sup>-6</sup> · K<sup>-1</sup>

### Substructure material

VITA In-Ceram ALUMINA CTE (25–500°C) 7.2–7.6 · 10<sup>-6</sup> · K<sup>-1</sup>  
VITA In-Ceram SPINELL CTE (25–500°C) 7.5–7.9 · 10<sup>-6</sup> · K<sup>-1</sup>  
VITA In-Ceram ZIRCONIA CTE (25–500°C) 7.6–7.8 · 10<sup>-6</sup> · K<sup>-1</sup>  
VITA In-Ceram AL CTE (25–500°C) approx. 7.3 · 10<sup>-6</sup> · K<sup>-1</sup>

For titanium and titanium alloys  
CTE of titanium (25–500°C) approx. 9.6 · 10<sup>-6</sup> · K<sup>-1</sup>  
CTE of Ti6Al4V (25–500°C) approx. 10.2 · 10<sup>-6</sup> · K<sup>-1</sup>

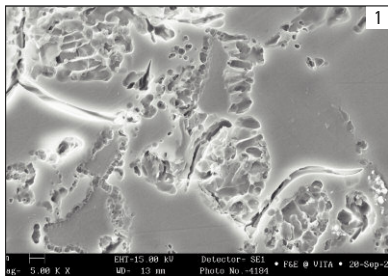
VITA In-Ceram YZ  
CTE (25–500°C) approx. 10.5 · 10<sup>-6</sup> · K<sup>-1</sup>

High gold content, reduced precious metal content, palladium-based and non-precious metal alloys  
CTE (25–600°C) 13.8–15.2 · 10<sup>-6</sup> · K<sup>-1</sup>

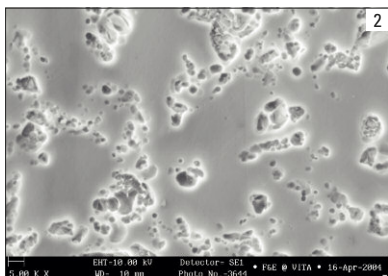
Multi-indication alloys  
CTE (25–600°C) 16.0–17.3 · 10<sup>-6</sup> · K<sup>-1</sup>

\*Further information on alloys is available under downloads in the internet.

## VITAVM.13 Homogeneous surface



**Fig. 1:** SEM photo of the surface of a ceramic with a conventional structure (magnification 5000 x)



**Fig. 2:** SEM photo of the surface of VITA VM 9 (magnification 5000 x)

### The conventional ceramic

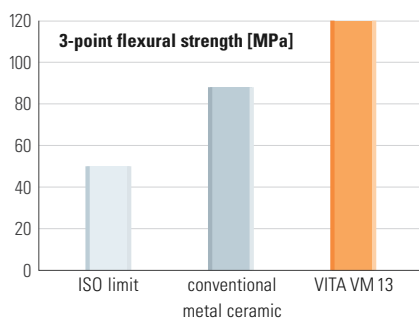
The etched surface reveals agglomerates of leucite crystals. The differences in the CTE of the leucite agglomerates and the glass phase may result in stress cracks.

### The fine difference

With VITA VM 13, a ceramic has been developed which – compared to conventional ceramics – reveals a clearly more homogeneous distribution of the crystal and glass phases after firing. This innovative fine structure is unrivaled and characteristic for all components of VITA VM – for metal-ceramic or all-ceramic alike.

The etched surface of VITA VM 13 reveals extremely fine and homogeneous distribution of the leucite crystals in the glass phase, which avoids the formation of stress cracks and creates a smooth and perfectly dense surface which provides VITA VM 13 with excellent milling and polishing properties. Moreover the accumulation of plaque is considerably reduced and easy care and cleaning of restorations are enabled.

Additionally, the low solubility of VITA VM 13 guarantees high resistance in situ and ensures an extended period of wearing.



### Improved physical properties

Compared to conventional metal ceramics, VITA VM 13 features a variety of improved physical properties. These include the reduced firing temperature (1st dentine firing: 880°C), the flexural strength, bonding strength and thermal resistance with lower solubility in acids.

Flexural strength of VITA VM 13 compared to a conventional metal ceramic and the ISO limit according to ISO 6872.

## VITAVM.13 Advantages at a glance

All fine-structure ceramics of VITA are convincing because of their excellent enamel-like properties, which is documented by the studies of the dental center of the University of Zurich and the Goldman School of Medicine of the University of Boston carried out with VITA VM 7 and VITA VM 9.

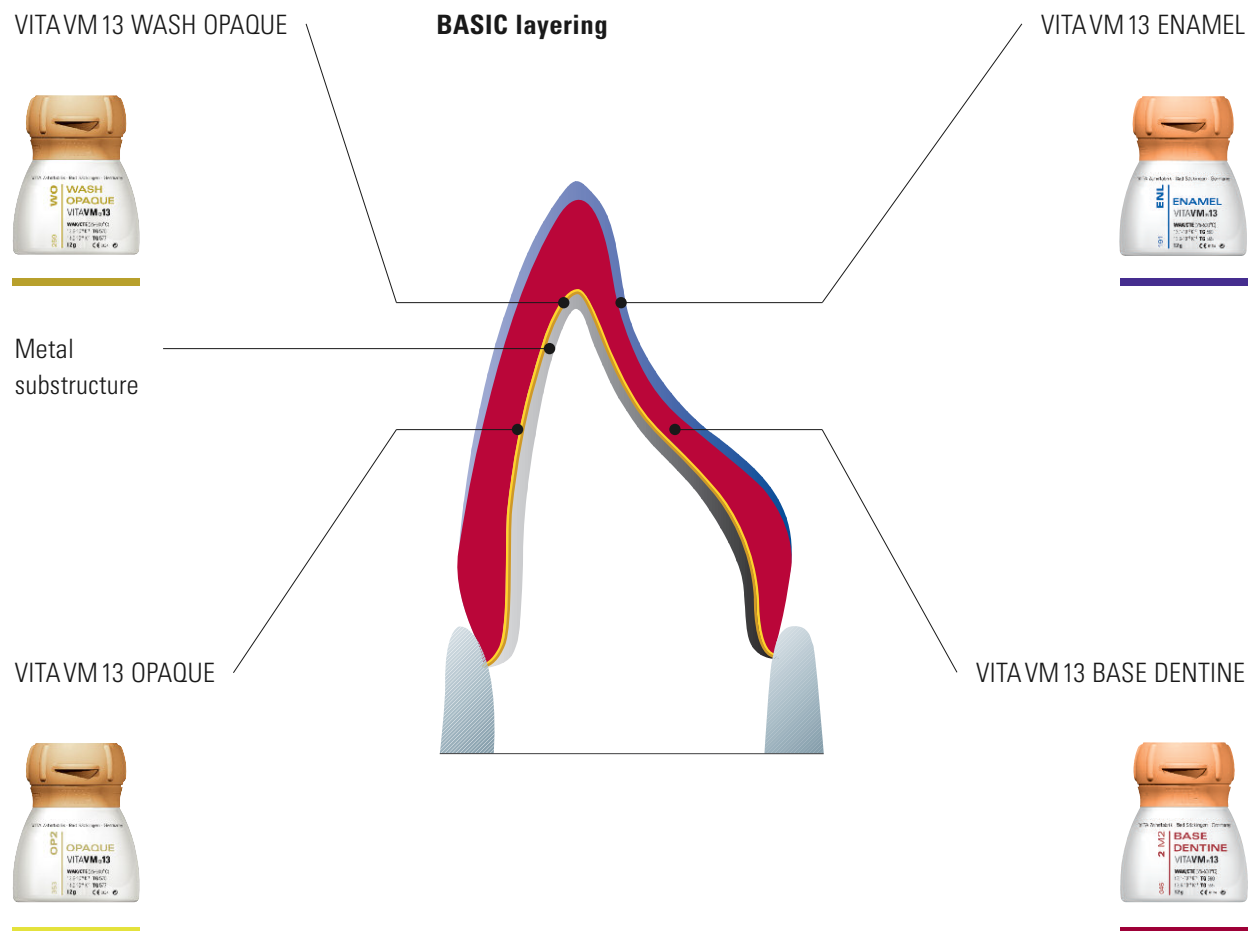
(Literature: E. A. McLaren, R. A. Giordano II, R. Pober, B. Abozenada „Zweiphasige Vollglas-Verblendkeramik“, Quintessenz Zahntech 30, 1, 32–45 [2004] )

### Advantages of the innovative fine-structure ceramic:

- Excellent bonding to ensure reliable results
- Optimal processing characteristics such as superior stability, minimized shrinkage behavior and high edge stability
- Outstanding firing stability even after several firing processes
- Superior milling and polishing properties, especially in situ
- Homogeneous and dense surfaces
- Proven high similarity with enamel
- More dynamics of light, more luminosity, more shades thanks to a comprehensive range of additional materials for individualization



## VITAVM.13 Efficiency thanks to two layering types



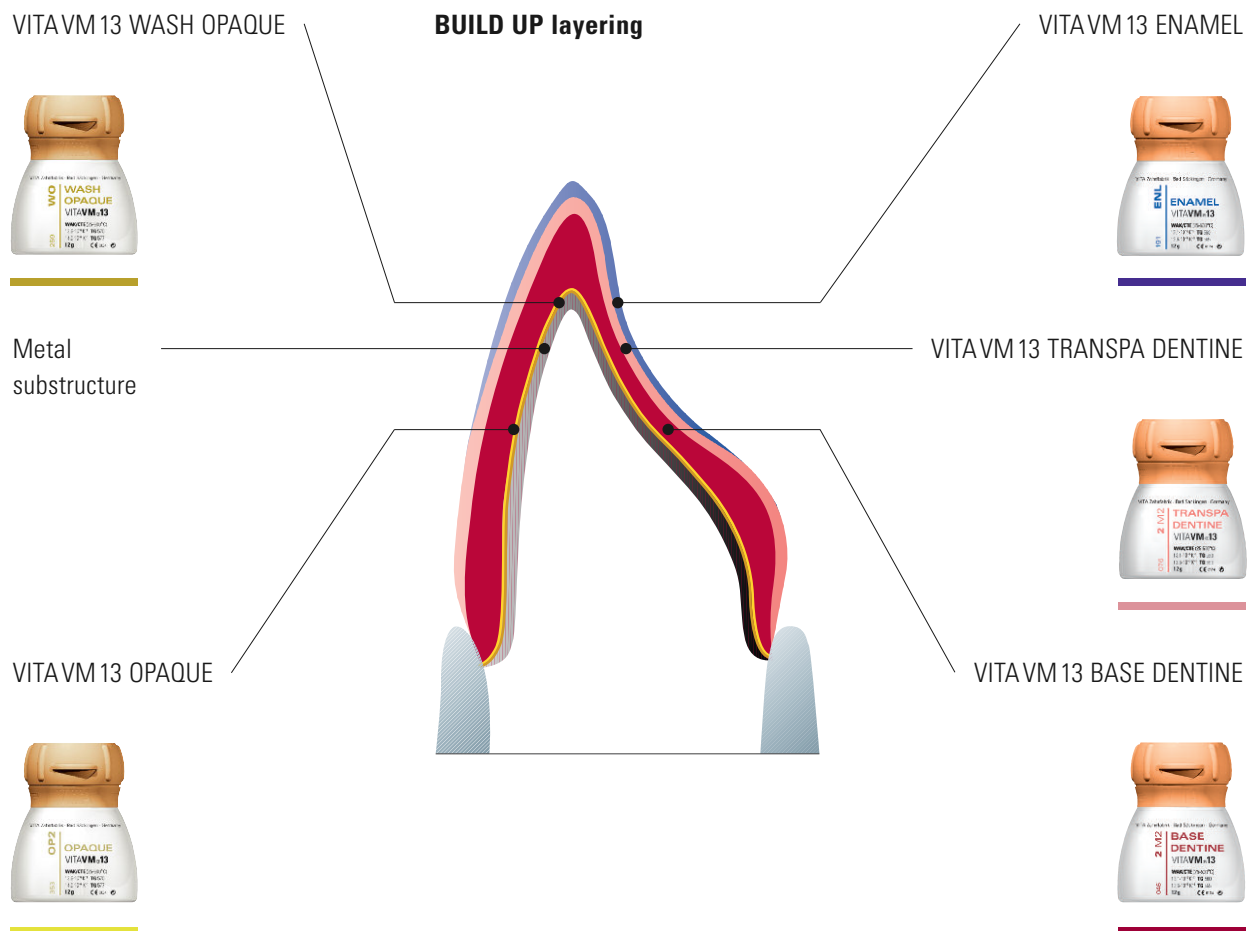
The VITAVM layering concept is based on the structure of natural teeth and differs clearly from all familiar layering concepts.

### BASIC layering

The shade-intensive VITAVM 13 BASIC layering, after the application of WASH OPAQUE and OPAQUE, consists of two porcelains:

- BASE DENTINE
- ENAMEL

Thanks to the color-bearing BASE DENTINE, this two-layer variation offers an ideal solution in particular for the reproduction of the optimal shade of restorations with thin walls. It always provides a safe and efficient way to achieve high-quality solutions. After the application of OPAQUE, the user is able to prepare a natural restoration with a lifelike appearance with only two layers.



### **BUILD UP layering**

The translucent VITA VM 13 BUILD UP layering, after the application of WASH OPAQUE AND OPAQUE, consists of three porcelains:

- BASE DENTINE
- TRANSPA DENTINE
- ENAMEL

The combination of color-bearing BASE DENTINE and translucent TRANSPA DENTINE creates an enhanced effect of depth in demanding high end restorations and results in even more convincing reproductions of natural teeth.

### **Individualizing**

For both layering types a perfectly matched range of additional materials is available individual characterization of restorations.

## VITAVM.13 Matched additional materials for top-quality individualization



Example of an aged tooth with lifelike appearance and effect of depth. This tooth was layered using BASE DENTINE, ENAMEL and individual additional materials.

### VITAVM.13 EFFECT OPAL

To prepare bluish effects on the surface with opal shimmer

### VITAVM.13 BASE DENTINE 50% + VITA INTERNO® 50%

To create incisal characteristics and discoloration

### VITAVM.13 EFFECT ENAMEL

For warm, yellow translucency in the central area of the tooth

### VITAVM.13 ENAMEL

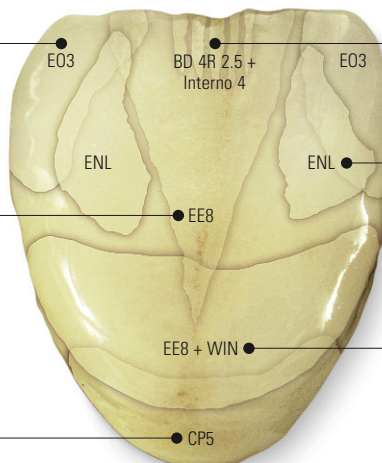
For brightening the mesial and distal areas

### VITAVM.13 CHROMA PLUS

To increase the saturation in the cervical area

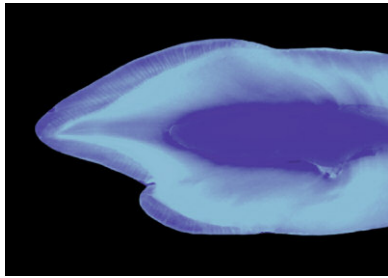
### VITAVM.13 EFFECT ENAMEL 50% + WINDOW 50%

To increase the effect of depth in the body area with a reddish effect





## VITAVM.13 Natural esthetics

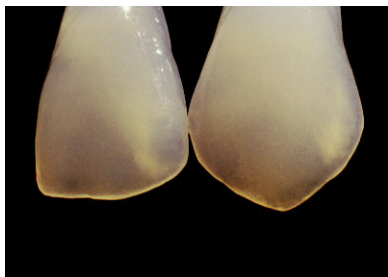


### Vivid play of colors with VITAVM®13

The objective of any esthetic dental restoration is the reproduction of the fluorescence and opalescence of natural teeth. Like all VITAVM materials, VITAVM 13 excels in its refraction and reflection behavior which is similar to that of enamel.

The picture taken under UV light clearly shows that different levels of fluorescence are found in natural teeth.

Numerous VITAVM materials contain pigments which add fluorescence to the restorations. The use of fluorescent and opalescent additional materials leads to individual and esthetically appealing results. VITAVM EFFECT LINER and VITAVM MAMELON materials, for example, feature particularly distinctive fluorescence.









Picture taken at daylight: wide range of opal effects

The VITAVM EFFECT OPAL materials were especially developed to create the opal effect found in translucent and young teeth.

**NEW:** 5 iridescent EFFECT Opal materials featuring opalescence unaffected by firing









## VITAVM.13 Modular and efficient arrangement of assortments

	<p><b>VITAVM.13 BASIC KIT*</b></p> <p>BASIC assortment for BASIC layering (also available as BASIC KIT SMALL with reduced selection of materials)</p>
	<p><b>VITAVM.13 BUILD UP KIT*</b></p> <p>Add-on assortment for BUILD UP layering (also available as BUILD UP KIT SMALL with reduced selection of materials)</p>
	<p><b>VITAVM.13 CLASSICAL COLOR KIT</b></p> <p>Assortment for VITAVM 13 3D-MASTER customers wishing to add VITA classical A1–D4 shades to their current assortment.</p>
	<p><b>VITAVM.13 PROFESSIONAL KIT**</b></p> <p>For incorporating all natural effects and characteristics (also available as PROFESSIONAL KIT SMALL with reduced range of materials)</p>
	<p><b>VITAVM.13 BLEACHED COLOR KIT</b></p> <p>Ultra-bright shades for the reproduction of bleached teeth</p>
	<p><b>VITAVM.13 GINGIVA KIT**</b></p> <p>Gingiva materials with natural effects</p>
	<p><b>VITAVM.13 MARGIN KIT**</b></p> <p>To create ceramic shoulders</p>

\* Available in VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades

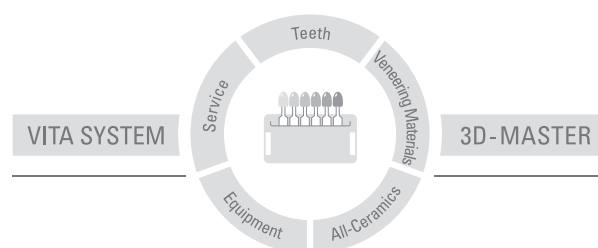
\*\* Can be used for VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades

## VITAVM.13 A perfectly harmonized complete system

	<p><b>VITA Easyshade® Advance*</b></p> <p>VITA Easyshade Advance enables you to determine the correct tooth shade quickly and to verify restorations. The cordless, mobile and lightweight unit is easy to operate and displays the tooth shade within a few seconds. The high measuring accuracy of VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades is based on its spectrophotometric measuring principle which is the precondition to achieve perfect results.</p>
	<p><b>VITA Linearguide 3D-MASTER/VITA Toothguide 3D-MASTER®</b></p> <p>With the VITA SYSTEM 3D-MASTER you can determine the correct tooth shade swiftly and accurately. The new VITA Linearguide 3D-MASTER is an alternative to the proven VITA Toothguide 3D-MASTER and features different linear arrangement of the shade tabs.</p>
	<p><b>VITA classical A1–D4 shade guide</b></p> <p>The original – for the determination of the tooth shade in VITA classical A1–D4 shades.</p>
	<p><b>VITA VACUMAT® 6000 M furnace</b></p> <p>The fully automatic microprocessor-controlled firing unit is ideal for all dental ceramic firing requirements. The furnace offers superb quality and a host of new features to ensure first-rate firing results, user safety, convenience and reduction of working time. Available in stainless steel or anthracite finish.</p>
	<p><b>VITA VACUMAT "New Generation" – for perfect individual solutions</b></p> <p>The modular firing system comprises the premium furnace VITA VACUMAT 6000 M for all dental-ceramic firings and three freely selectable control units (vPad easy, vPad comfort and vPad excellence), which enable up to four furnaces to be controlled with one control unit. The user decides only for the modules that he really requires and can add further components (furnace, control unit, accessories) to the system at any time. This way he is enabled to configure a very favorably-priced furnace system that is perfectly matched to his requirements.</p>
	<p><b>VITA AKZENT®</b></p> <p>The assortment of stains (powders) with 20 fluorescent shades is used to create natural shade effects on the surfaces.</p> <p><b>VITA INTERNO®</b></p> <p>The materials allow to create in-depth shade effects. Their high fluorescence adds very high luminosity to the shades.</p>


VITA VM 13 veneering ceramic is available in VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades. Shade compatibility with all VITA 3D-MASTER and VITA classical materials is ensured.

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



**Please note:** Our products should be used according to the working instructions. We cannot be held liable for damages resulting from incorrect handling or usage. The user is furthermore obliged to check the product before use with regard to its suitability for the intended area of applications. We cannot accept any liability if the product is used in conjunction with porcelains and equipment from other manufacturers which are not compatible or not authorized for use with our product. Furthermore, our liability for the correctness of this information is independent of the legal ground and, in as far as legally permissible, is limited to the invoiced value of the goods supplied excluding turnover tax. In particular, as far as legally permissible, we do not assume any liability for profit loss, for indirect damages, for consequential damages or for claims of third parties against the purchaser. Claims for damages based on fault liability (culpa in contrahendo, breach of contract, unlawful acts, etc.) can only be made in the case of intent or gross negligence. The VITA Modulbox is not necessarily a component of the product. Date of issue of these instructions for use: 02.11

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

VITA Zahnfabrik is certified according to the Medical Device Directive and the following products bear the CE mark  0124 :

**VITAVM<sup>®</sup>13 · VITA AKZENT<sup>®</sup> · VITA INTERNO<sup>®</sup>**

US 5498157 A · AU 659964 B2 · EP 0591958 B1

The photos on page 9 were provided with the kind support of Mr. Claude Sieber.

# VITA

VITA Zahnfabrik H. Rauter GmbH & Co. KG  
Postfach 1338 · D-79704 Bad Säckingen · Germany  
Tel. +49(0)7761/562-0 · Fax +49(0)7761/562-299  
Hotline: Tel. +49(0)7761/562-222 · Fax +49(0)7761/562-446  
[www.vita-zahnfabrik.com](http://www.vita-zahnfabrik.com) · [info@vita-zahnfabrik.com](mailto:info@vita-zahnfabrik.com)

