

VITAVM[®].7

Product information



VITA shade taking

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue: 09.13

VITA shade, VITA made.

VITA

For veneering all-ceramic substructures
in the CTE range of 7.2–7.8
Exclusively available in
VITA SYSTEM 3D-MASTER shades

VITA LabNews – now available at:
www.vita-zahnfabrik.com/labnews

VITAVM.7 Perfectly matched with all indications

Veneering Material · VITAVM.7

Available in VITA SYSTEM 3D-MASTER shades



Milling technique Glass infiltration

VITA In-Ceram ALUMINA

VITA In-Ceram ZIRCONIA



Slip technique Glass infiltration

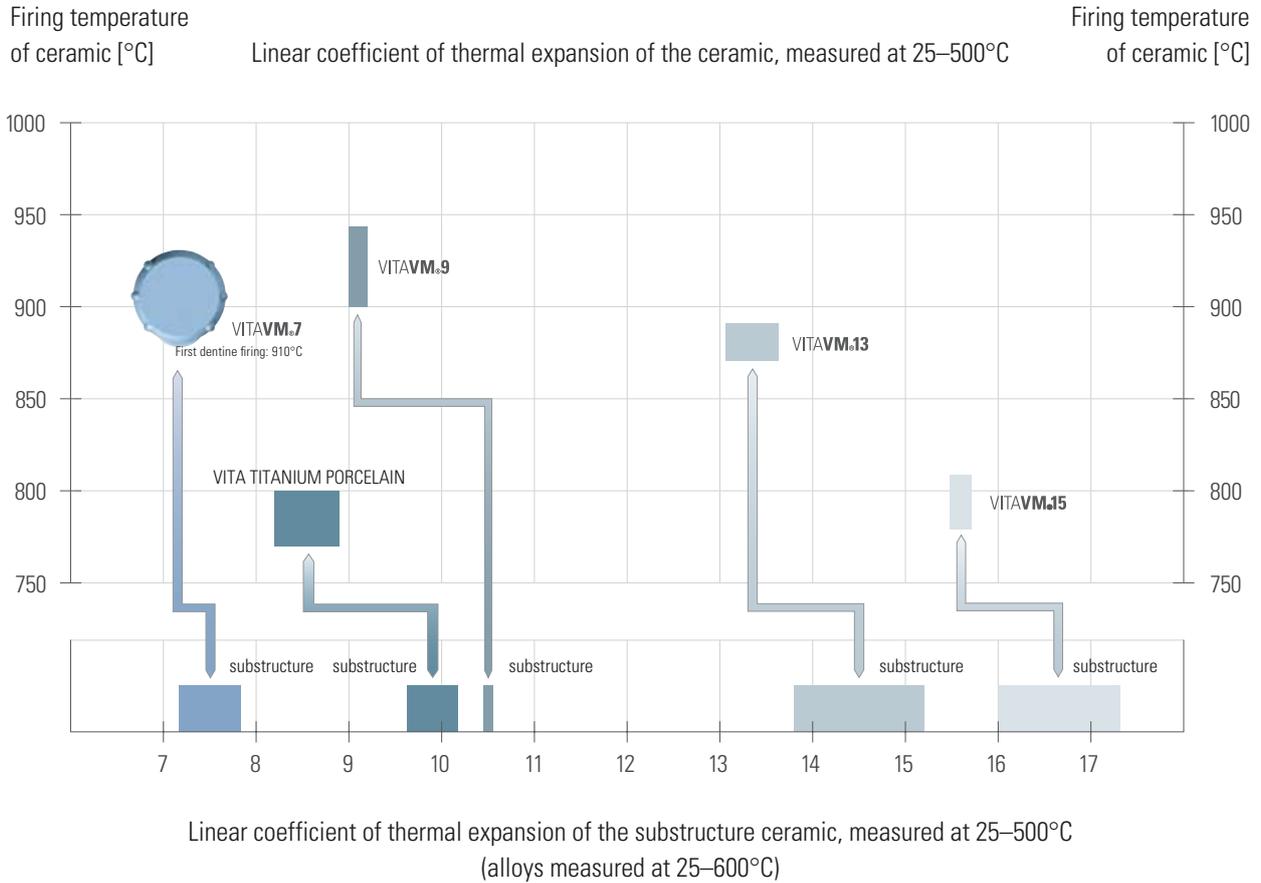
VITA In-Ceram ALUMINA

VITA In-Ceram ZIRCONIA



VITA VM 7 was developed as a special fine-structure feldspar veneering ceramic for all-ceramic substructure materials in the CTE range of $7.2\text{--}7.8 \cdot 10^{-6} \cdot \text{K}^{-1}$ (e.g. VITA In-Ceram ALUMINA, ZIRCONIA).

VITAVM.7 Reliable use thanks to unmistakable classification



Veneering material	Substructure material
VITA VM 7 CTE (25–500°C) $6.9\text{--}7.3 \cdot 10^{-6} \cdot \text{K}^{-1}$	VITA In-Ceram ALUMINA CTE (25–500°C) $7.2\text{--}7.6 \cdot 10^{-6} \cdot \text{K}^{-1}$ VITA In-Ceram ZIRCONIA CTE (25–500°C) $7.6\text{--}7.8 \cdot 10^{-6} \cdot \text{K}^{-1}$
VITA TITANIUM PORCELAIN CTE (25–500°C) $8.2\text{--}8.9 \cdot 10^{-6} \cdot \text{K}^{-1}$	for titanium and titanium alloys Titanium CTE (25–500°C) approx. $9.6 \cdot 10^{-6} \cdot \text{K}^{-1}$ Ti ₆ Al ₄ V CTE (25–500°C) approx. $10.2 \cdot 10^{-6} \cdot \text{K}^{-1}$
VITA VM 9 CTE (25–500°C) $9.0\text{--}9.2 \cdot 10^{-6} \cdot \text{K}^{-1}$	VITA In-Ceram YZ CTE (25–500°C), approx. $10.5 \cdot 10^{-6} \cdot \text{K}^{-1}$
VITA VM 13 CTE (25–500°C) $13.1\text{--}13.6 \cdot 10^{-6} \cdot \text{K}^{-1}$	High gold content, reduced precious metal content, palladium based and non-precious alloys CTE (25–600°C) $13.8\text{--}15.2 \cdot 10^{-6} \cdot \text{K}^{-1}$ *
VITA VM 15 CTE (25–500°C) $15.5\text{--}15.7 \cdot 10^{-6} \cdot \text{K}^{-1}$	Multi-indication alloys CTE (25–600°C) $16.0\text{--}17.3 \cdot 10^{-6} \cdot \text{K}^{-1}$ *

* visit the download section of our website for more information about alloys

VITAVM[®]7 Homogeneous surface

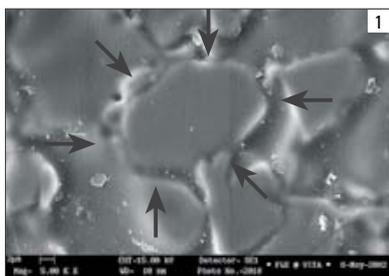


Fig. 1: SEM image of the etched surface of VITADUR ALPHA (magnification 5000 x).

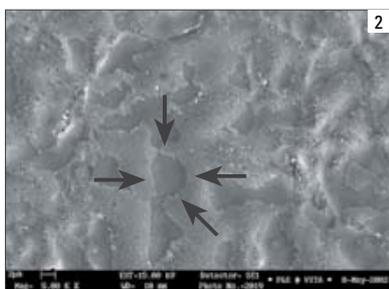


Fig. 2: SEM image of the etched surface of VITA VM 7 (magnification 5000 x).

The conventional metal ceramic

The structure of a conventional ceramic reveals phases that can be clearly distinguished. Etching with hydrofluoric acid leads to considerable abrasion in one phase, so that the glass phase that has been etched less strongly protrudes almost like an "elevation". This phase is marked with arrows.

The fine difference

With VITA VM 7, a ceramic structure has been developed which clearly reveals more homogeneous distribution after firing than conventional ceramics. As a result, the formation of stress cracks is avoided and a smooth and perfectly dense surface is created, which provides VITA VM 7 with excellent milling and polishing properties. The accumulation of plaque on the ceramic surface is considerably reduced and easy care and cleaning of restorations are enabled.

A modified manufacturing process helped to create a new type of ceramic. Compared to conventional ceramics, the structure that is obtained after firing reveals particularly homogeneous distribution of the crystal and glass phase. This type of structure is described as a "fine structure". This innovative fine-structure ceramic is unrivaled and characteristic for all ceramic components of the VITA VM concept – whether for metal or all-ceramic materials.

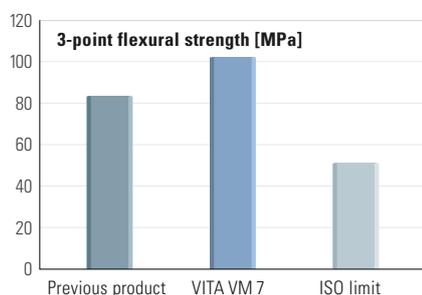
The low solubility of VITA VM 7 ensures high resistance in the oral environment and a prolonged period of wearing.

Flexural strength

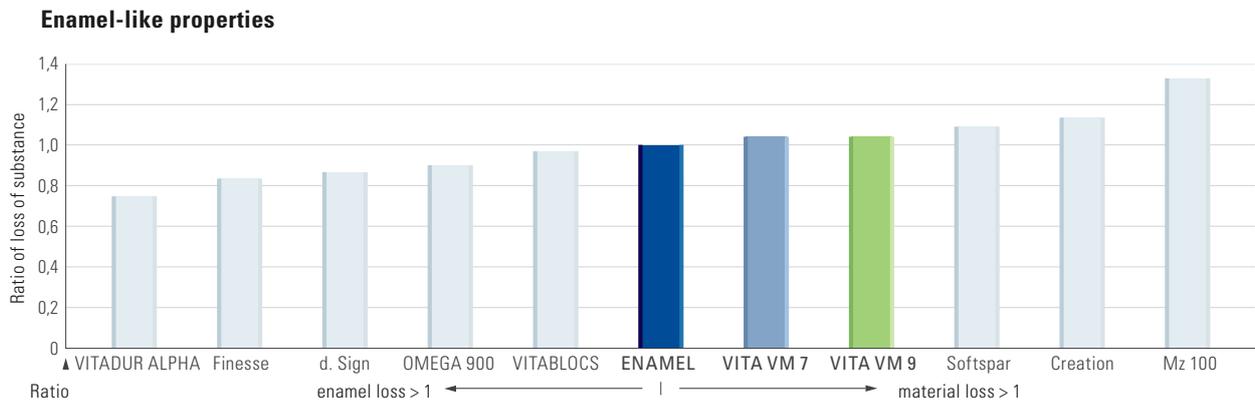
The flexural strength values of VITA VM 7 are more than twice as high as the values required by the ISO standard. This excellent result underlines the high reliability of restorations layered with VITA VM 7.

Thermal shock resistance

Perfect thermal shock resistance of the substructure and VITA VM 7 is an indicator for long-term clinical success.



VITAVM[®]7 Enamel-like abrasion behavior



All fine-structure ceramics of VITA are convincing because of their excellent enamel-like properties, which is documented by the studies of the Dental Clinic 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. The left half of the diagram shows the increasing enamel loss caused by abrasion. The right half shows the increasing substance loss. The abrasion properties of VITA VM 7 and VITA VM 9 are very similar to those of natural enamel.

(Prof. Dr. Russel A. Giordano II, Boston University Prof. Dr. Edward A. McLaren, UCLA, 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:

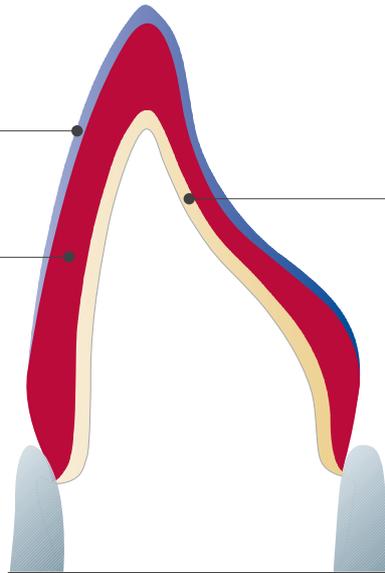
- Excellent bonding ensures reliable results
- Optimal processing characteristics such as superior stability, minimized shrinkage behavior and high edge stability
- Outstanding firing stability even after several firing processes
- Excellent grinding and polishing properties, especially in situ
- Homogeneous and dense surfaces
- Proven similarity with enamel
- Comprehensive range of additional materials for individualization
- Compatible with VITA AKZENT Plus and VITA INTERNO materials
- Five iridescent Effect Opal materials featuring opalescence unaffected by firing.

VITAVM[®]7 Efficiency thanks to two layering types

VITA VM 7 ENAMEL



BASIC layering



all-ceramic substructure
(CTE 7.2 – 7.8)

VITA VM 7 BASE DENTINE



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

BASIC layering

Color-intensive VITAVM BASIC layering includes the application of two materials:

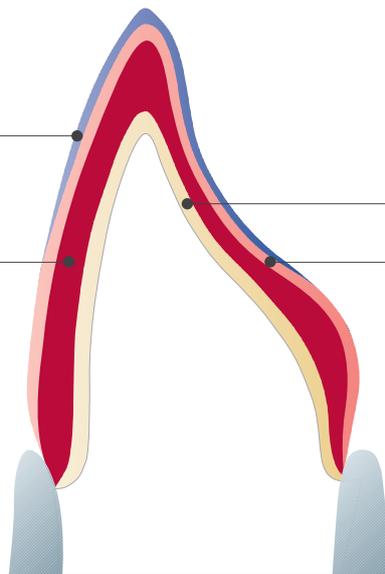
- BASE DENTINE
- ENAMEL

Thanks to the color-bearing BASE DENTINE, this two-layer variation is particularly suited for the reproduction of the shade of restorations with thin walls. It always provides a reliable and efficient solution. The user is able to prepare a natural restoration with a lifelike appearance with only two layers.

VITA VM 7 ENAMEL



BUILD UP layering



all-ceramic substructure
(CTE 7.2–7.8)

VITA VM 7 BASE DENTINE



VITA VM 7 TRANSPA DENTINE



BUILD UP layering

Translucent VITA VM BUILD UP layering includes the application of three materials:

- 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, which results in even more convincing reproduction of the natural example.

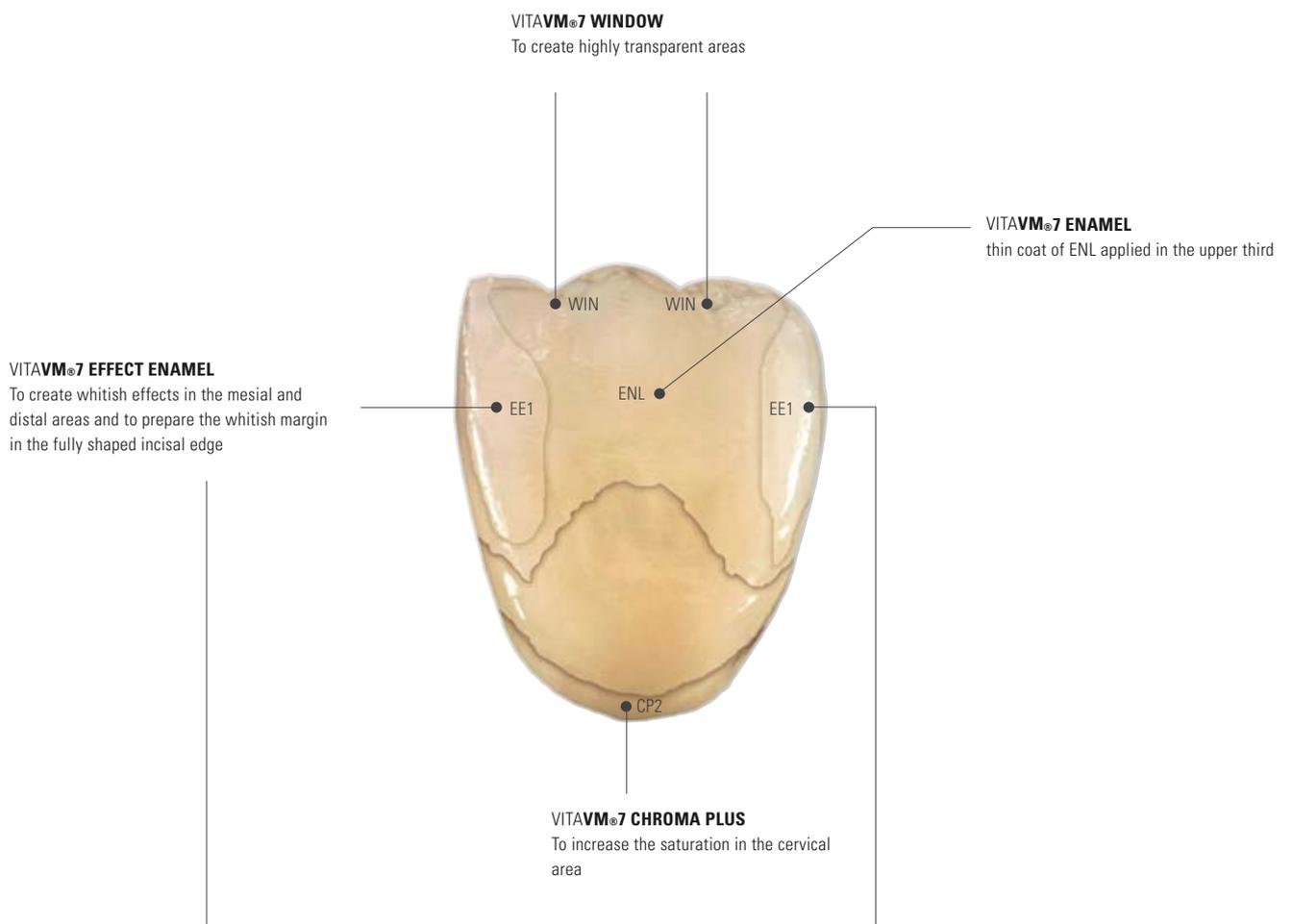
Individualization

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

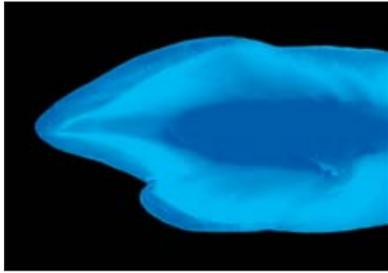
VITAVM®7 Matched additional materials for top-quality individualization



Example of a young tooth with fully intact incisal edge and whitish margin. This tooth was layered with BASE DENTINE, ENAMEL and individual additional materials.



VITAVM®7 Natural esthetics



Vivid play of colors with VITAVM®7

The objective of any esthetic dental restoration is the reproduction of the fluorescence and opalescence of natural teeth. Like all VITA VM materials, VITA VM 7 excels in its refraction and reflection behavior which can be compared to that of enamel.

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

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



Picture taken at daylight: abundance of variations of opal effects

The VITA VM EFFECT OPAL materials were especially developed to create the opal effect found in the surface of translucent and young teeth.

Five iridescent Effect Opal materials featuring opalescence unaffected by firing.



VITAVM®7 Modular and efficient arrangement of assortments

	<p>VITAVM®7 BASIC KIT Basic assortment for BASIC layering (also available as BASIC KIT SMALL with reduced range of materials)</p>
	<p>VITAVM®7 BUILD UP KIT Add-on assortment for BUILD UP layering (also available as BUILD UP KIT SMALL with reduced range of materials)</p>
	<p>VITAVM®7 PROFESSIONAL KIT For incorporating all natural effects and characteristics (also available as PROFESSIONAL KIT SMALL with reduced range of materials)</p>
	<p>VITAVM®7 BLEACHED COLOR KIT Ultra-bright shades for the reproduction of bleached teeth</p>
	<p>VITAVM®7 GINGIVA KIT Gingiva materials with natural effects</p>
	<p>VITAVM®7 MARGIN KIT For ceramic shoulder design</p>

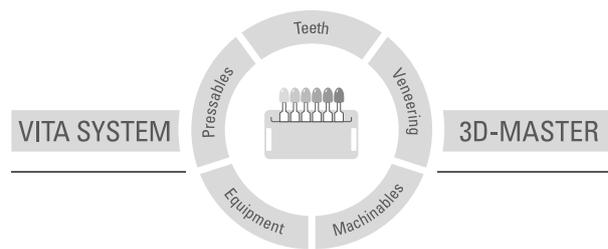
VITAVM.7 Comprehensive, coordinated system

	<p>VITA Easyshade® Advance 4.0</p> <p>VITA Easyshade Advance 4.0 is a further refinement of VITA Easyshade Advance. This digital shade measurement device allows any user to determine the shade of natural teeth or to verify restorations in a matter of seconds, regardless of the ambient lighting. The tooth shade measured is indicated in VITA classical A1–D4, VITA SYSTEM 3D-MASTER and in VITABLOC shades. Automatic activation, Bluetooth®, VDDS interface, bleaching mode and numerous other innovative features guarantee maximum precision for even greater reliability and comfort.</p>
	<p>VITA Linearguide 3D-MASTER/VITA Toothguide 3D-MASTER®</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) arrangements of the shade sample teeth.</p>
	<p>VITA In-Ceram® ALUMINA</p> <p>VITA In-Ceram ALUMINA (Al_2O_3) provides the perfect synthesis of esthetics and strength.</p> <p>VITA In-Ceram® ZIRCONIA</p> <p>VITA In-Ceram ZIRCONIA ($Al_2O_3 ZrO_2$) offers ultimate masking power for discolored stumps.</p>
	<p>VITA VACUMAT® 6000 M furnace</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.</p> <p>Available in stainless steel or anthracite finish.</p>
	<p>VITA VACUMAT New Generation for perfect individual solutions</p> <p>The modular firing system comprises the premium furnace VITA VACUMAT 6000 M for all dental-ceramic firings and four freely selectable control units (vPad easy, vPad comfort, vPad excellence and vPad clinical), which enable up to four furnaces to be controlled with one control unit. The user can choose only the modules that they require and can add further components (furnace, control unit, accessories) to the system at any time. That way, you are able to configure a very favorably-priced furnace system that is perfectly matched to your requirements.</p>
	<p>VITA AKZENT® Plus</p> <p>New applications require innovative, versatile materials. With VITA AKZENT PLUS stains, users can optimize the shade of all types of dental ceramic restorations simply and efficiently, regardless of the CTE of the restoration.</p>
	<p>VITA INTERNO®</p> <p>The materials offer the ability to create in-depth shade effects. Their high fluorescence adds very high luminosity to the shades.</p>

For more information visit www.vita-zahnfabrik.com

VITA VM 7 veneering material is available in VITA SYSTEM 3D-MASTER shades. Shade compatibility with all VITA SYSTEM 3D-MASTER materials is ensured.

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



Please note: Our products must be used in accordance with the instructions for use. We accept no liability for any damage 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 application. We cannot accept any liability if the product is used in conjunction with materials and equipment from other manufacturers that are not compatible or not authorized for use with our product. Furthermore, our liability for the accuracy of this information is independent of the legal basis and, in as far as legally permissible, shall always be limited to the value as invoiced of the goods supplied, excluding value-added tax. In particular, as far as legally permissible, we do not assume any liability for loss of earnings, indirect damages, ensuing damages or for third-party claims 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 this information: 09.13

After the publication of these working instructions any previous versions become obsolete. The current version can be found at www.vita-zahnfabrik.com

VITA Zahnfabrik has been certified in accordance to the Medical Device Directive and the following products bear the mark  0124:

VITAVM₇ · VITA In-Ceram® · VITA AKZENT® Plus · VITA INTERNO®

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

VITA

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