VITABLOCS®
Proven a million times over

Date of issue: 10.19

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

VITA – perfect match.

VITA CAD/CAM MATERIALS – for ideal solutions. Proven a million times over.
CONCEPT AND BENEFITS

VITABLOCS® are feldspar ceramic blanks for resistant, highly esthetic restorations and are clinically proven a million times over. Read more about the optical properties and clinical long-term stability on the following pages.
• tooth-colored feldspar ceramic blanks for unsurpassed integration of the shade, proven a million times over

• ideal solutions for esthetic reconstructions of minor defects and for highly esthetic restorations in the visible region

VITABLOCS® – RELIABLE, HIGHLY ESTHETIC AND COST-EFFECTIVE

What?

What for?

With what?

• VITABLOCS blanks are available in the following versions
  • monochromatic, tooth-colored: VITABLOCS Mark II
  • polychromatic, tooth-colored: VITABLOCS TriLuxe forte/RealLife
VITABLOCS® RealLife®

VITABLOCS TriLuxe forte®

VITABLOCS® Mark II

- monochromatic, tooth-colored feldspar blanks for small, defect-oriented restorations with shades that match those of residual teeth

VITABLOCS TriLuxe forte®

- polychromatic, tooth-colored feldspar blanks with integrated four-layer shade gradient to reproduce the natural play of colors in the esthetic region

VITABLOCS RealLife®

- polychromatic, tooth-colored feldspar blanks with integrated 3D-layer structure to reproduce the natural shade gradient in the anterior region
THE ADVANTAGES

Reliable

- fabricating reliable restorations, thanks to a durable material with very good clinical long-term reliability

Highly esthetic

- highly esthetic restorations, thanks to a material with superior play of colors and light

Cost-effective

- cost-effective reconstruction, thanks to time-saving CAM fabrication and efficient finalization polishing without any firing process
CLINICAL EXAMPLES

With VITABLOCS®, practices and laboratories achieve predictable results with natural appearance and increased durability for high patient satisfaction. See for yourself!
**CASE STUDY 1: Natural anterior reconstruction using a polychromatic VITABLOCS RealLife blank**

1. Highly rotated and non-vital central incisor 11.
2. Leveling of the dental arch within the scope of preparation.
3. Optimum adjustment of the shade and translucency gradient.
4. Positioning of the crown restoration before milling.

Photos provided by: Dr. Shoji Nakamura, dentist, Tokyo, Japan

**CASE STUDY 2: Lifelike anterior restoration using a polychromatic VITABLOCS TriLuxe forte blank**

1. Discoloration of the root canal treated incisor.
2. Virtual copy of the original morphology of tooth 11.
3. Adjusting the shade and translucency gradient.
4. Natural appearance of the monolithic restoration on the model.

Photos provided by: Dr. Mon Li, dentist/Sally Hsieh, dental technician, CEREC Asia, Taipei, Taiwan

**CASE STUDY 3: Highly esthetic anterior reconstruction using a polychromatic VITABLOCS RealLife blank**

1. Clinical situation prior to the optical impression.
2. Optical impression.
3. Initial crown after fine morphological adjustments in situ.

Photos provided by: Dr. Andreas Kurbad, dentist, Viersen, Germany

**CASE STUDY 4: Permanent inlay restoration using a monochromatic VITABLOCS Mark II blank**

1. Initial situation with insufficient composite restorations.
2. CAD/CAM-specific inlay preparation of the teeth.
3. Try-in of the VITABLOCS Mark II inlays.
4. Application of the adhesive.

Photos provided by: Dr. Alessandro Devigus, Bülach, Switzerland
CASE STUDY 2: Lifelike anterior restoration using a polychromatic VITABLOCS TriLuxe forte blank

5. Final integration of the monolithic crown into the esthetic region.

6. The permanently bonded VITABLOCS RealLife restoration in situ.

5. The highly esthetic, monolithic result in situ.

6. Exact reproduction of the shade effect with VITABLOCS.

5. Completed crown after endodontic treatment and with post-core construction.

6. Final result in situ on tooth 21.

5. Removal of excess material in the approximal area using flexible discs.

6. Final VITABLOCS Mark II inlays after polishing in situ.
In clinical long-term studies and test series, VITABLOCS® ceramics demonstrate excellent stability. Another positive feature is cost-efficient and precise processing. Key facts and evidence can be found on the following pages.
EVIDENCE FOR EXCELLENT LONG-TERM RELIABILITY

1. VITABLOCS® – 30 years of clinical reliability

VITABLOCS posterior crowns

Initial situation

Result after 20.5 years
Source: PD Dr. Andreas Bindl, dentist, Zurich, Switzerland

VITABLOCS inlays

Initial situation

Result
Source: Dr. A. Devigus, dentist, Bülach, Switzerland

"I've been successfully using VITABLOCS ceramics in my practice for more than 20 years."
Dr. A. Devigus, Bülach, Switzerland, 03/19

1985
VITABLOCS®
Treatment of first patient

1991
VITABLOCS® Mark II

2003
VITABLOCS® TriLuxe
“I really enjoy working with VITABLOCS TriLuxe forte because I can quickly achieve an esthetic result.”

Dr. A. Reiger, Talheim, Germany, 12/18

“The unique thing about VITABLOCS RealLife is the natural shade effect.”

Dr. G. Kade, Waldkirch, Germany, 11/18

Source: Dr. A. Bindl, dentist, Zurich, Switzerland; G. Lombardi, dental technician, Dübendorf, Switzerland
2. Very good long-term durability of VITABLOCS® ceramics

EVIDENCE FOR EXCELLENT LONG-TERM RELIABILITY

17-year results of VITABLOCS Mark II molar crowns

N = 241 molar crowns
Survival rates:
- classic preparation 92.0 %
- reduced preparation 92.3 %
- Endo preparation 87.5 %

Source: External study 2016, University of Zurich/practice am Zürichberg, Survival rate of CAD/CAM crowns in the posterior area on different preparation geometries without consideration of biological failures (PD Dr. Andreas Bindi, [1], see back of brochure)
VITABLOCS

- show very good clinical long-term durability in studies and often achieve what is considered the gold standard for success/survival rates.

Source: External study 2006, Clinical results of CEREC manufactured inlays from the dental practice over a period of 18 years (Reiss B. Int J Comput Dent, 9, 11 - 22 [2], see back of brochure)

*Note: The graph primarily shows the survival rate for VITABLOCS ceramics, however, it also includes a small percentage of Dicor MGC restorations (~10%). Both materials produced comparable results.

N = 1011 restorations

Survival rate:

84.4 %

84.4 % survival
1. Good load capacity after adhesive bonding

VITABLOCS

- Feldspar ceramic crowns feature high load capacity after adhesive bonding and achieve fracture load values of more than 2000 Newton (= final fracture) in tests.
- After hydrofluoric acid etching, feldspar ceramics reveal a retentive surface for good micromechanical retention.

Fracture load study: VITABLOCS crowns

SEM picture: HF-etched feldspar ceramic with retentive surface structure
Source: Internal study VITA F&E; SEM picture of VITABLOCS, etched with 5% hydrofluoric acid for 60 seconds, magnification x 5000 (A. Coldea 2010 [3], see back of brochure)

Note: The use of conventional bonding for VITABLOCS restorations has not been approved by VITA!
2. Enamel-like wear resistance

**Natural abrasion behavior**

- **VITABLOCS Mark II**
- **Enamel**


**VITABLOCS**

- In tests, feldspar ceramics reveal natural, enamel-like wear resistance, thanks to the particularly fine crystal structure.

**Abraded surfaces after 14.5 years**

SEM photo; functionally intact occlusal surfaces of VITABLOCS crowns after 14.5 years

Source: External study 2016, University of Zurich/ practice am Zürichberg, Epoxy model of impression after 14.5 years, vapor-plated with gold, b/w photo of the model (PD Dr. Andreas Bindl), [1], see back of brochure)
EVIDENCE FOR PRECISE AND EFFICIENT CAM FABRICATION

1. Precise results for exact marginal fit

VITABLOCS
- enables restorations with precise marginal areas to achieve an exact marginal seal, thanks to high edge stability.
- produces high marginal precision in tests for objects with thinning marginal areas.

Source: Internal study VITA R&D, Study of standardized triangular-shaped bodies (30° wedge, top view) from material samples mentioned above, magnification x 200, report 05/10 [3], see back of brochure.
2. Fast fabrication in a few minutes

<table>
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<th>Inlay</th>
<th>Anterior crown</th>
<th>Posterior crown</th>
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Source: Internal study VITA R&D, Milling times for three restoration types with Sirona MC XL, report 05/12, [3], see back of brochure

VITABLOCS

- enables fast fabrication of restorations, since seating can be done immediately after the CAM process and polishing.
- demonstrated fast processing properties with CAM techniques/equipment within a few minutes.
SYSTEMS AND COMPONENTS

VITABLOCS® blanks are available in numerous versions, geometries and shades. Perfectly matched system components enable efficient processing. Read on to learn more.
AVAILABLE VERSIONS, GEOMETRIES, CHROMATICITIES

**VITABLOCS® Mark II**
for small, esthetic reconstructions

- **Geometry**
- **Chroma**
  - monochromatic

  **Block:**
  - I-10
  - I-12
  - I-14

**VITABLOCS TriLuxe forte®**
for highly esthetic crowns and veneers in the visible region

- **Geometry**
- **Chroma**
  - multichromatic

  **Block:**
  - TF-12
  - TF-14
  - TF-14/14

**VITABLOCS RealLife®**
for highly esthetic anterior crowns

- **Geometry**
- **Chroma**
  - multichromatic

  **Block:**
  - RL-14/14
### AVAILABLE SHADES

**VITA SYSTEM 3D-Master range of shades**

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**VITA classical A1–D4**

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*) Only for I12, I14

### RECOMMENDED INDICATIONS

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<td>Posterior crown ²</td>
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<td>Veneer structure for the VITA Rapid Layer Technology</td>
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* recommended  • possible  ¹) molars only  ²) not recommended for implant restorations
AVAILABLE GEOMETRIES (geometries in mm)

- VITABLOCS Mark II: I10: 8 x 10 x 15; I12: 10 x 12 x 15; I14: 12 x 14 x 18
- VITABLOCS TriLuxe forte: TF-12: 10 x 12 x 15; TF-14: 12 x 14 x 18; TF-14/14: 14 x 14 x 18
- VITABLOCS RealLife: RL-14/14: 14 x 14 x 18

AVAILABLE SYSTEM COMPONENTS

- Individualization with VITA VM 9
- Characterization with VITA AKZENT Plus
- Bonding with VITA ADIVA LUTING SOLUTIONS
SYSTEM COMPATIBILITY

VITABLECS – SYSTEM SOLUTIONS*
VITA offers VITABLECS with specific holder systems for the CAD/CAM systems:
- CEREC/inLab (Dentsply Sirona), PlanMill 40/PlanMill 40 S (Planmeca),
- Ceramill mikro IC/Ceramill Motion 2/Ceramill Matik (Amann Girrbach AG),
- TS150 (Glidewell Laboratories), KaVo ARCTICA/Everest (KaVo Dental GmbH)

VITABLECS – UNIVERSAL SOLUTIONS*
VITA offers VITABLECS with the universal holder system for the CAD/CAM systems:
- CORITEC line (imes-icore GmbH), DGSHAPE DWX-4W (DGSHAPE Corporation),
- CS 3100 (Carestream Dental, Inc.), N4/S1/S2/Z4/R5 (vhf camfacture AG)
- Zfx InhouseEx (Zfx GmbH), Organical Desktop line (R+K CAD/CAM Technologie GmbH & Co. KG)

*) Note: The range of VITA CAD/CAM material versions/geometries/shades available may vary for individual CAD/CAM system partners or systems.

ADHESIVE BONDING SYSTEMS

Recommended system
- VITA ADIVA LUTING SOLUTIONS (full-/self-adhesive*)

Other systems
- Variolink Esthetic (Ivoclar Vivadent), Vitique (DMG)
- NX3 (KerrHawe), Calibra Ceram (DENTSPLY),
  RelyX Ultimate (3M ESPE), Bifix QM (VOCO)
- PANAVIA V5 (Kuraray), DuoCem (Coltène)

*) Self-adhesive systems may only be used for crown restorations.
The feldspar ceramic material can be inserted immediately after milling and polishing. As a result, the process steps mentioned above are optional for feldspar ceramics.

### IDEAL SOLUTIONS IN THE PROCESS

- **Shade determination**
  - For digital shade determination, use VITA Easyshade V, and for visual shade determination, the VITA Linearguide 3D-MASTER or the VITA classical A1–D4 shade guide can be used.

- **CAD/CAM fabrication**
  - For CAD/CAM-fabrication, VITA offers VITABLECS Mark II, TriLuxe forte and RealLife – simply select the material solution that fulfills your individual requirements.

- **Characterization Glaze**
  - For feldspar ceramics, use VITA AKZENT Plus stains and VITA VM 9 veneering material.

- **Firing**
  - Glaze, stains and/or individualization firing can be carried out with the VITA VACUMAT 6000 M furnace or with VITA SMART.Fire.

- **Polishing**
  - In the case of VITA feldspar ceramics, use polishing systems suitable for silicate ceramics (e. g., VITA Karat diamond polishing set).

- **Bonding**
  - VITA ADIVA LUTING SOLUTIONS includes all products for self-adhesive and full adhesive bonding.

*Note “Optional process steps”

The feldspar ceramic material can be inserted immediately after milling and polishing. As a result, the process steps mentioned above are optional for feldspar ceramics.
• For digital shade determination, use VITA Easyshade V, and for visual shade determination, the VITA Linearguide 3D-MASTER or the VITA classical A1–D4 shade guide can be used.

• For CAD/CAM-fabrication, VITA offers VITABLOCS Mark II, TriLuxe forte and RealLife – simply select the material solution that fulfills your individual requirements.

• For feldspar ceramics, use VITA AKZENT Plus stains and VITA VM 9 veneering material.

• Glaze, stains and/or individualization firing can be carried out with the VITA VACUMAT 6000 M furnace or with VITA SMART.FIRE.

• In the case of VITA feldspar ceramics, use polishing systems suitable for silicate ceramics (e. g., VITA Karat diamond polishing set).

• VITA ADIVA LUTING SOLUTIONS includes all products for self-adhesive and full adhesive bonding.

NOTES
WE WILL BE GLAD TO HELP

More information about the products and processing is also available at [www.vita-zahnfabrik.com](http://www.vita-zahnfabrik.com)

**Hotline Sales Support**
Mr. Udo Wolfner and his team (Internal Sales Department) will be glad to assist you with orders or questions about the 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

Additional international contact information can be found at [www.vita-zahnfabrik.com/contacts](http://www.vita-zahnfabrik.com/contacts)
VITA CAD/CAM MATERIALS – for ideal solutions. Proven a million times over.

Ideal solutions for temporary restorations/auxiliaries

Ideal solutions for implant-supported restorations

Ideal solutions for substructures/fully anatomical bridges

Ideal solutions for single-tooth restorations

Over the course of 30 years, more than 20 million single-tooth restorations have been fabricated using esthetic tooth-colored VITA CAD/CAM ceramics. Today, practices and laboratories can choose the ideal material solution for their individual needs, from highly esthetic feldspar ceramics, high-strength glass ceramics and innovative hybrid ceramics to treat a variety of single-tooth indications. In addition, these CAD/CAM ceramics are distinguished by simple and efficient processing.
Literature:

1. PD Dr. A. Bindl 2016
Überlebensrate von CAD/CAM-Kronen im Seitenzahngebiet auf unterschiedlichen Präparationsgeometrien, University of Zurich/practice am Zürichberg, Switzerland

REM-Foto nach einer Liegezeit von 14,5 Jahren, University of Zurich/practice am Zürichberg, Switzerland.

2. Dr. B. Reiss 2006

3. Internal studies, VITA F&E
VITA Zahnfabrik H. Rauter GmbH & Co. KG
Ressort Forschung und Entwicklung
Spitalgasse 3, 79713 Bad Säckingen, Deutschland

Dr. Enno Bojemüller, Leiter Festkörperanalytik VITA F&E,
VITA Zahnfabrik, Bad Säckingen
Dr.-Ing. Andrea Coldea, Materialentwicklung F&E,
VITA Zahnfabrik, Bad Säckingen
Dr. Bert Müller, Projektleiterin VITA F&E, VITA Zahnfabrik, Bad Säckingen
Prof. Dr. Dr. Jens Fischer, Ressortleiter F&E, VITA Zahnfabrik, Bad Säckingen

Detailed test data can be provided upon request.


5. I. Krejci 1991

More information about VITABLOCS can be found at: www.vita-zahnfabrik.com.

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 applications. 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 and this results in damage. The VITA Modulbox is not necessarily a component of the product. Date of issue of this information: 10.19

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 Zahnfabrik has been certified and the following products bear the CE mark:

- VITABLOCS® Mark II
- VITABLOCS TriLuxe forte®
- VITABLOCS RealLife®
- VITAVM®9
- VITA AKZENT® Plus

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