

VITAPM[®]9 | VITAVM[®]9 ADD-ON

Working Instructions



**NEW! Incl. VITA PM[®]9 HT-Pellets
and VITA VM[®]9 ADD-ON**

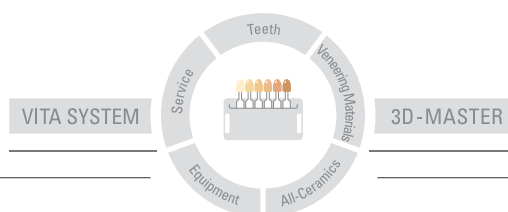
VITA shade taking

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue: 11.09



VITA

Press ceramic system for overpressing yttrium-stabilized zirconium oxide frameworks and for the fabrication of inlays, onlays, veneers and anterior crowns

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The material

VITA PM 9 (Pressable Material) is based on the proven fine-structure feldspar ceramic VITA VM 9 and is used for overpressing yttrium-stabilized colored ZrO_2 frameworks in the CTE range of approx. $10,5 \cdot 10^{-6} \cdot K^{-1}$, such as frameworks made from VITA In-Ceram YZ. It is also indicated for the fabrication of single- or multi-surface inlays, onlays, partial crowns, veneers and anterior crowns using the substructure-free staining or layering technique.

Restorations made from VITA PM 9 can be easily individualized (layering technique) with VITA VM 9 ceramic materials or characterized (staining technique) with VITA AKZENT stains. Due to their noticeably lower strength, restorations without zirconium oxide support may only be cut back very slightly to individualize them with VITA VM 9 later on. These substructure-free restorations require adhesive cementation. The VITA PM 9 press pellets exhibit natural fluorescence to fulfill the patients' wishes for individual aesthetic restorations with a favorably priced range of press pellets in different colors.

Advantages

- All-in one press ceramic for the applications listed below:
 - Technique of overpressing zirconium oxide
 - Substructure-free staining and layering technique
 - Staining technique
 - Layering technique
- Allows reduced inventory thanks to a clearly structured range of different press pellets in three different translucency levels
- Identical press procedure for all applications
- Shades matched to the most modern shade system available on the market – VITA SYSTEM 3D-MASTER
- Can be individualized with the fine-structure ceramic VITAVM 9
- Excellent bond to yttrium-stabilized ZrO₂ frameworks
- The fine-structure composition of VITA PM 9 provides
 - high material homogeneity (see fig. below)
 - excellent milling and polishing characteristics in the laboratory and in situ
 - homogeneous and dense surfaces
 - superior aesthetic results
- High-quality press ceramic investment material for precise press results
- Time-saving since reaction layer of the investment material on pressed and overpressed restorations is avoided

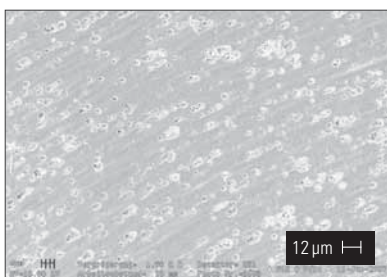


Fig.1: SEM photo of the etched framework of a VITA PM 9 restoration with a highly uniform structure of the leucite crystals (etched with 5% HF for 120 sec, magnification x 1000)













Fig.2: Computer tomographic image (perspective) of a VITA PM 9 press pellet. The structure of the ceramic does not reveal any defect.

Technical data

Property	Value
CTE (25–500 °C)	$9.0-9.5 \cdot 10^{-6} \cdot K^{-1}$
Flexural strength	approx. 100 MPa
Acid resistance	$< 10 \mu g/cm^3$

* The technical/physical values are typical measuring results and refer to internal samples and measurements carried out with measurement equipment available on site. If samples are prepared using different methods and measurement equipment, other measuring results may be obtained.

	VITAPM ₉	
	Overpressing technique	Substructure-free staining and layering technique
	—	●
	—	●
	—	●
	—	●
	●	●
	●	—
	●	—
	●	—
Characterization	VITA AKZENT	VITA AKZENT
Individualization	 with all VITA VM 9 materials	 only with VITA VM 9 ADD-ON materials

● recommended

Indication:

- **Overpressing technique**
Overpressing of colored and non-colored partially yttrium-stabilized ZrO₂ crown and bridge frameworks in the CTE range of approx. $10,5 \cdot 10^{-6} \cdot K^{-1}$, such as frameworks made from VITA In-Ceram YZ. *
- **Substructure-free staining and layering technique**

Individualization:

- Overpressing technique:
With all VITAVM 9 materials
- Substructure-free staining and layering technique:
With all VITAVM 9 ADD-ON materials.
Glaze LT is used for subsequent glazing.

Characterization:

- With the stains of the VITA AKZENT assortment.

* If the processing instructions and the guidelines on framework design recommended by VITA are observed, VITA PM9 is suitable for all frameworks made from 3Y-TZP (-A). Since the function depends on a variety of parameters, only the user can ensure the quality in the individual case.

Contraindication

- Premolar and molar crowns without zirconium dioxide framework
- Bridges without zirconium dioxide framework
- Overpressing of zirconium oxide frameworks beyond the CTE value given
- For patients with parafunctions (e.g. bruxism)
- In cases of insufficient oral hygiene
- If minimum layer thicknesses of the ceramic can not be adhered to

⚠ Note:

VITA PM9 is not suitable for overpressing VITA In-Ceram SPINELL, VITA In-Ceram ALUMINA, VITA In-Ceram ZIRCONIA, VITA In-Ceram AL and Al₂O₃ frameworks of other manufacturers.

VITA PM9 is not suitable for overpressing frameworks made of alloys and titanium.

The shade concept

VITA PM9 is available in 10 VITA SYSTEM 3D-MASTER shades for Pressable Materials (= P) and each shade is available in three different translucency levels:

Opaque (O) Dentine shades

0 M1P-O	0 M2P-O	1 M1P-O	1 M2P-O	2 M1P-O	2 M2P-O	2 M3P-O	3 M1P-O	3 M2P-O	3 M3P-O

Translucent (T) Dentine shades

0 M1P-T	0 M2P-T	1 M1P-T	1 M2P-T	2 M1P-T	2 M2P-T	2 M3P-T	3 M1P-T	3 M2P-T	3 M3P-T

High Translucent (HT) Dentine shades

0 M2P-HT	1 M1P-HT	1 M2P-HT	2 M2P-HT	3 M2P-HT

High Translucent (HT) Enamel shades

EN0P-HT	EN1P-HT	EN2P-HT	ENLP-HT enamel light	ENDP-HT enamel dark

Selection of pellets

The recommendations on the selection of pellets depend on the indication and on the minimum layer thickness for the pressing technique: 0.7 mm

The first selection criterion is defined by the indication:

Overpressing technique	Substructure-free staining and layering technique
O-pellets T-pellets	T-pellets: primarily for anterior crowns HT-pellets: primarily for inlays, onlays veneers

The HT-pellets are available in:

Dentine shades	Enamel shades
0 M2P, 1 M1P, 1 M2P, 2 M2P, 3 M2P	EN0P, EN1P, EN2P, ENLP, ENDP

The following aspects need to be considered for the specific selection of the HT-pellets:

- Just like all PM 9 pellets, the HT-pellets are also based on the respective dentine shades of the VITA SYSTEM 3D-MASTER which forms the coordinate system or the zero point.
- If restorations are to be reproduced which are primarily in the incisal or translucency area, it is recommended to select a pellet which is one level lighter or one chroma level lower than the selected dentine shade to prevent the restoration from appearing too dark or exhibiting excessively high chroma.
- Based on the dentist's shade determination and independent of the tooth area to be reproduced, the following HT-pellet shades can be recommended:

Determined tooth shade	Restoration replaces dentine and enamel	Restoration replaces mainly enamel	Restoration replaces exclusively enamel
0 M1	0 M2P-HT	EN0P-HT	ENLP-HT
1 M1	1 M1P-HT	EN1P-HT	
1 M2	1 M2P-HT	EN2P-HT	
2 M2	2 M2P-HT	1 M2P-HT	
3 M2	3 M2P-HT	2 M2P-HT	ENDP-HT

- Moreover, the shade of the prepared stump needs to be taken into account. These shades can be reproduced with the VITA SIMULATE preparation material (cf. page 36).

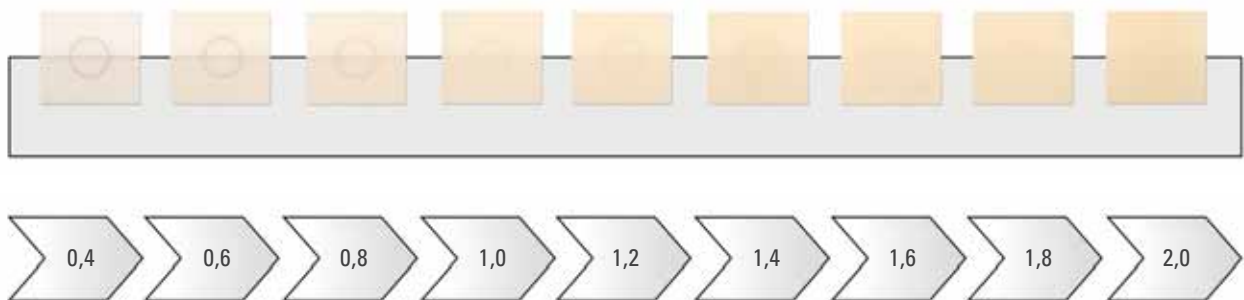
Influence of the stump shade on a crown pressed from a HT-pellet in the shade 2M2P:



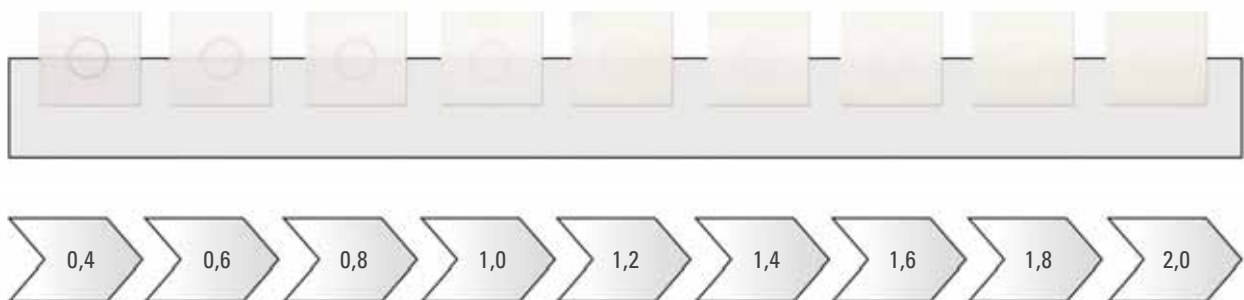
- If large areas of dentine must be integrated, a T-pellet with a lower translucency should be selected to avoid a loss in lightness by "greying".

Change of the shade effect (chroma and lightness) for different layer thicknesses of the press ceramic:

Example: 2 M2P-HT



Example: ENLP-HT

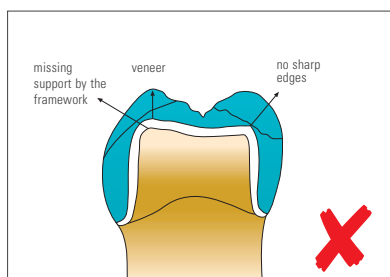


Indication

Overpressing technique – indication										
								recommended VITA PM 9 pellets	Characterization	Individualization
										with all VITAVM 9 materials

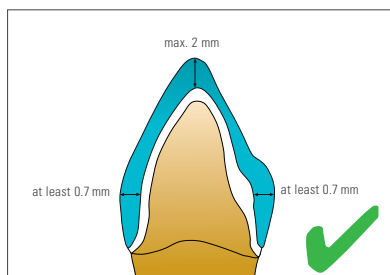
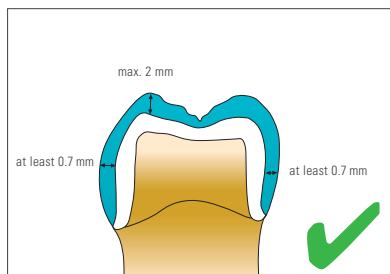
recommended

Minimum and maximum layer thicknesses for the overpressing technique




⚠ Important:

The overpressing technique requires uniform and complete support of VITA PM9 by the zirconium oxide framework to avoid clinical failure caused by chipping or cracks in the veneer. The framework must not exhibit any sharp edges.



- Please observe the minimum wall thicknesses in mm and minimum connector areas in mm² of the frameworks made from VITA In-Ceram YZ on page 11.

Minimum wall thicknesses in mm and minimum connector areas in mm² for zirconium oxide frameworks

VITA In-Ceram YZ [®] – Indication		mm/mm ²
Incisal/occlusal wall thickness Primary elements – double crowns		0.7
Incisal/occlusal wall thickness Single crown framework		0.7
Incisal/occlusal wall thickness Abutment crowns of bridge frameworks with one pontic		0.7
Incisal/occlusal wall thickness Abutment crowns of bridge frameworks with two pontics		1.0
Circular wall thickness Primary elements – double crowns		0.5
Circular wall thickness Single crown framework		0.5
Circular wall thickness Abutment crowns of bridge frameworks with one pontic		0.5
Circular wall thickness Abutment crowns of bridge frameworks with two pontics		0.7
Connector area ¹⁾ Anterior bridge framework with one pontic		7
Connector area ¹⁾ Anterior bridge framework with two pontics		9
Connector area ¹⁾ Posterior bridge framework with one pontic		9
Connector area ¹⁾ Posterior bridge framework with two pontics		12
Connector area ¹⁾²⁾ Cantilever bridge framework		12

¹⁾ Connector area: juncture of abutment crown - pontic or between 2 pontics

²⁾ Cantilever bridge unit should be 1/3 smaller in its vestibular-oral dimension



⚠ Important:

Prior to waxing up, the zirconium oxide framework must be weighed to determine the required number of press pellets later on (see note on page 13).



Waxing up

Separate the model with a standard plaster-wax separating liquid. The wax model is prepared directly on the sintered zirconium oxide framework. The framework must not be fired with a liner or VITA VM 9 EFFECT BONDER. The framework must be clean before waxing up. Only wax for all-ceramic systems that burns without leaving any residue (e.g. VKS wax, Yeti) may be used for the wax-up. Additionally, the moulds to be pressed can be milled from the VITA CAD-Waxx polymer blocks using the inLab CAD/CAM technique.



A fully anatomical wax-up is prepared. If individualization is carried out using VITA VM 9, the model may also have a reduced anatomical size.

Precise waxing up is particularly essential at the preparation margins. Sharp edges (e.g. fissures that are too deep and sharp bulges) must be avoided in order not to press investment material into the ceramic during the pressing process.



⚠ Important:

The minimum layer thickness of the wax-up is 0.7 mm to avoid incomplete pressing. The layer thickness for the cusp, however, should not be more than 2 mm to avoid the risk of chipping. Adequate support of the framework must always be ensured (see information on page 10).



Attaching the press sprues

Wax wires with a **minimum** length of 3 mm and a **maximum** length of 8 mm and a diameter of **at least** 4 mm are attached to the wax-ups similar to metal casting. The sprues must not taper towards the wax-up. Crowns and bridges are always sprued at the thickest point: incisal at the thickest cusp. At least one press sprue is required for each bridge unit. In the case of bridges, the sprue is always attached to the external cusp.



⚠ Note:

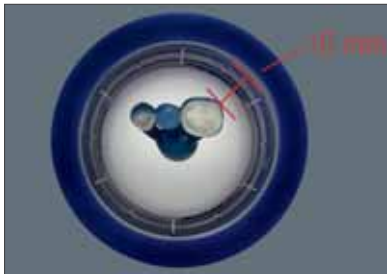
The wax weight is calculated from the difference of the unveneered zirconium dioxide framework and the framework with the wax-up (including the sprues).



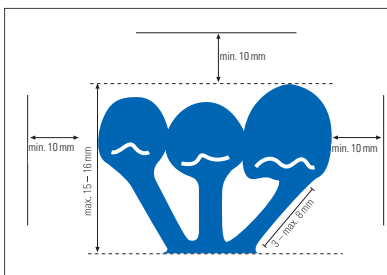
Attachment points between the press sprue, press object and the sprue former must be rounded. Sharp edges must be avoided.

Rounded press sprues are attached with wax to the center of the sprue former and have an angle of 45-60° towards the investment ring wall (minimum distance of 10 mm).

A small quantity of Vaseline is applied to the sprue former to enable simple removal later on.



The sector markings on the inner side of the investment ring allow fast and controlled detection of the press object during devesting.



Press object and press sprue should form a single line to allow unobstructed pressing of the ceramic.

If several press objects are placed in one investment ring, the margins of the objects should be equally high. The press objects should be aligned symmetrically.



Investing

⚠ Important:

Prior to investing, the wax weight including the press sprues must be determined to calculate the required quantity (max. 2 pieces) of VITA PM 9 press pellets.

The wax weight is calculated from the difference between the unveneered zirconium dioxide framework and the framework with the wax-up.

Reference value for the number of press pellets to be used	
1 x 2g press pellet	max. wax weight: 0.4 g
2 x 2g press pellet	max. wax weight: 1.2 g



VITAPM[®] investment material

is a graphite-free, phosphate-bonded investment material for speed preheating, in particular for VITA PM 9.

⚠ Note:

Cloudy VITA PM investment material mixing liquid must not be used. Please observe the expiration date!

Storage	Keep powder in cool, dry place	Do not store the mixing liquid below 5°C as it is sensitive to frost.
Processing temperature	approx. 22°C (room temperature)	
Mixing ratio	100 g powder - 22 ml mixing liquid	Mixing ratios: • Powder (g): 100 Mixing liquid (ml): 22 • Powder (g): 200 Mixing liquid (ml): 44

		Bag 1 x 100g		Bag 2 x 100 g (200g)	
Adjusting the concentration	Concentration (%)	Mixing liquid (ml)	Dist. water (ml)	Mixing liquid (ml)	Dist. water (ml)
	90	20	2	40	4
	85	19	3	38	6
	80	18	4	36	8
	75	17	5	34	10
	70	15	7	30	14
	65	14	8	28	16
	60	13	9	26	18
	55	12	10	24	20
	50	11	11	22	22

Expansion control (%)		
	Mixing liquid (ml)	Dist. water (ml)
Overpressing technique (crowns, bridges):	75 %	25 %
Substructure-free staining and layering technique:		
Anterior crowns	75 – 80 %	25 – 20 %
Veneers	70 %	30 %
Inlays, one-surface and two-surface	50 – 60 %	50 – 40 %
MOD inlays	75 %	25 %
Onlays	85 – max. 90 %	15 – 10 %

- When preparing anterior crowns, attention has to be paid to the fact that the higher expansion value (80 %) will result in enhanced fit of thin and small-sized preparations. Expansion values given above are reference values which may vary and have to be adjusted accordingly due to different preparation models, preheating furnaces and press temperatures.

Stirring		Use a spatula to stir the investment material by hand until the powder has been wetted thoroughly.
Time for mixing in vacuum	60 seconds	Place in vacuum but do not activate the stirring mechanism. Mix for 60 seconds. Proper function of the vacuum stirrers must be checked repeatedly. Inadequate vacuum results in inaccurate fit and bubbles on the casting.
Processing time span	approx. 6 minutes at approx. 22°C (room temperature)	The processing time span depends on the room temperature. Heat reduces the processing time span.
Setting time	30 minutes after beginning of mixing 1. Remove sprue base and level gauge after 20 minutes. 2. Leave ring for 10 minutes to cool down.	Fill the ring with investment material: the vibrator should only be used if the flow behavior needs to be improved. Avoid excessive vibration! This will lead to the formation of bubbles and breakdown of the mixture.
Placing the ring	1. Straighten bottom of the ring (plaster knife/abrasive paper) 2. After 30 minutes place the ring into the furnace preheated to 850°C.	
Preheating temperature	850°C	
Holding time	Holding time of ring once preheating temperature (850°C) is reached again. 100 g ring: at least 50 minutes 200 g ring: at least 75 minutes If three 100 g or 200 g rings (or more) are placed into the preheating furnace, the holding time must be increased by 15 minutes.	

⚠ Note:

Do not open the furnace during preheating as this would cause aggressive combustion. Investment materials contain quartz sand or quartz powder! Take suitable measures to avoid inhalation, such as wearing a dust respirator, for example type FFP3SLD.





Pour a thin stream of investment material into the investment ring up to the marking and avoid the formation of bubbles.



Use your thumb to pull the ring slightly to the side before the level gauge is placed on; this way air can escape more easily.



Setting time: 30 minutes after beginning of mixing

Once the investment material has set for 20 minutes, use both thumbs to press the mould downwards out of the silicone ring.



After removing the mould from the silicone ring, allow to evaporate for 10 min before it is placed into the preheating furnace. This way cracks will be avoided during preheating.

The level gauge determines the height of the investment material mould and the straight position in the press furnace. Any defect on the base must be smoothed or carefully removed with a plaster knife.

⚠ Important:

Check vertical position of the ring to avoid any problems during pressing.

Preheating

The investment ring should be placed in the center of the preheating furnace. The preheating furnace should only be filled up to half of its capacity. The correct temperature in the preheating furnace should be checked in regular intervals (e.g. using the silver test set).

⚠ Important:

Please adhere to the preheating parameters for the VITA PM investment material:

Preheating temperature: 850°C

Holding time of the investment ring when the preheating temperature is reached (850°C)

100 g investment ring: **at least** 50 min

200 g investment ring: **at least** 75 min

If three 100 g or 200 g investment rings or more are placed into the preheating furnace, the holding time needs to be extended by 15 minutes.

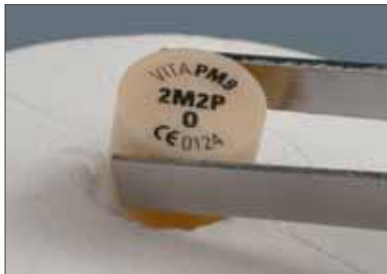
The disposable press plungers and the VITA PM 9 pellets are not preheated.

Do not place investment ring together with other casting objects (metal casting rings) or solder models into the preheating furnace to avoid the risk of discoloration caused by metal oxides. Investment material residue or dirt must not reach the sprue. Blow into the sprue if required.

Preparing for pressing

⚠ Important:

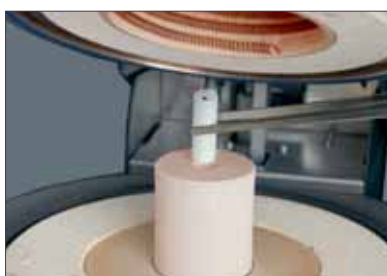
After preheating, the ring should be quickly transferred from the preheating furnace to the press furnace to avoid heat losses. Do not put down the ring while transferring it! The cold VITA PM 9 press pellets must be placed into the investment ring with the rounded side facing downward (stamped VITA logo). This way abrasion of the investment material in the press sprue is avoided. The printed side is facing upward (see fig.) for control purposes.





Inserting the VITA PM 9 press pellet



Placing the disposable press plunger with the black dot facing upward. The front which features slightly rounded edges must face downward.







Recommended firing - VARIO PRESS® 300 press furnace (Zubler)*

Predr. temp. °C	 °C/min.	Temp. approx.	 min.	Pressing time	Pressure
700	60	1000	20.00	6.00	low





* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the press parameters (temperature, pressure) must be adjusted correspondingly. The crucial factors for the pressing process are not the press parameters displayed by the unit but the appearance and the surface condition of the restoration to be pressed after the pressing process.

Recommended firing - Programat® EP 600 press furnace (Ivoclar)*

Predr. temp. °C	 min.	 min.	 °C/min.	Temp. approx.	 min.	Pressure	Stop speed
700	0.00	6.00	50	1000	20.00	Mech.	300 µm/min

* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the press parameters (temperature, pressure) must be adjusted correspondingly. The crucial factors for the pressing process are not the press parameters displayed by the unit but the appearance and the surface condition of the restoration to be pressed after the pressing process.

Recommended firing - Cergo® Press press furnace (DeguDent)*

Predr. temp. °C	 min.	 min.	 °C/min.	Temp. approx.	 min.	Pressure	Pressing time
700	0.00	6.00	50	1000	20.00	4.7	10.00

* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the press parameters (temperature, pressure) must be adjusted correspondingly. The crucial factors for the pressing process are not the press parameters displayed by the unit but the appearance and the surface condition of the restoration to be pressed after the pressing process.

⚠ Important:

Remove the muffle from the furnace immediately after completion of the press program and let it cool down to room temperature.
Do not quench in cold water.



Devesting

Determine the exact depth of press using a second press plunger. The depth is marked on the outside of the ring using a pen. The pressed objects are located within the markings (lines). Cut deep into the investment material alongside the marking with a separating disc. Split the investment material carefully using a plaster knife. Do not use a hammer.



Sandblast with glass beads with a grain size of 50 µm at a pressure of 4 bars. Once the object to be pressed can be seen, reduce the pressure to 2 bars.

⚠ Important:

The cervical region is sandblasted at low pressure and at a flat angle.

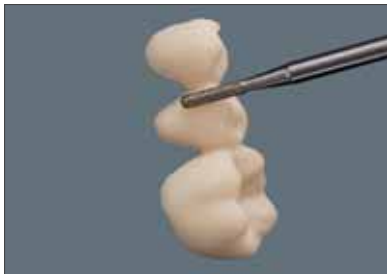


Exposed restoration after sandblasting.



Cutting off

Cut off the press object from the press sprue using a diamond disc whilst exerting only little pressure and keep largest possible distance to the object (restoration) to avoid cracks which may result when cutting off the sprues. Generally, overheating of the ceramic must be avoided since this may result in microcracks.



Finishing

Use only fine-grit and sharp diamond tools for grinding. Exert little pressure and adjust a low speed. Avoid the generation of heat. Minimum layer thicknesses must be adhered to.

⚠ Note:

Cooling with water is recommended when cutting off the sprues and finishing.

⚠ Important:

Since dust is formed when grinding sintered dental ceramic products, always wear a face mask or grind when wet. Additionally, it is recommended to work behind a safety shield and use an extraction unit.





Characterization of the shade (staining technique)

VITA AKZENT stains or glaze material are suitable for characterizing the shade and for glazing of overpressed VITA PM 9 restorations.

Please observe the respective working instructions.



Alternatively, stains-fixation firing can be previously carried out.

Recommended firing* of VITA AKZENT®

Glaze and AKZENT® Glaze Spray in the VITA VACUMAT®

	Predr. temp. °C	→ min.	↗ min.	↗ °C/min.	Temp. approx.	→ min.	↘ °C	VAC min.
Stains-fixation firing with VITA AKZENT	500	4.00	3.15	80	760	1.00	–	–
Glaze firing with AKZENT Glaze/Glaze Spray	500	4.00	5.00	80	900	1.00	600**	–

* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the firing parameters must be adjusted correspondingly. The crucial factors for the firing process are not the firing temperature parameters displayed by the furnace but the appearance and the surface condition of the restoration after the firing process.

** Long-term cooling down to the respective temperature is recommended for the respective last firing cycle; the lift position for VITA VACUMAT furnaces should be > 75°.



Individualization of the shade (cut-back technique)

Restorations made from VITA PM 9 can be individualized with the materials of the VITAVM 9 fine-structure ceramic.

The firing parameters for the conventional VITAVM 9 layering technique must be used. Please observe the information in the Working Instructions No. 1190E.



Recommended firing of VITAVM®9*/VITA AKZENT® in the VITA VACUMAT®

	Predr. temp. °C	→ min.	↗ min.	↗ °C/min.	Temp. approx. °C	→ min.	↘ °C	VAC min.
Dentine firing	500	6.00	7.27	55	910	1.00	600**	7.27
Stains-fixation firing with VITA AKZENT	500	4.00	3.15	80	760	1.00	600**	–
Glaze firing	500	–	5.00	80	900	1.00	600**	–
Glaze firing VITA AKZENT Glaze/Fluid, Glaze Spray	500	4.00	5.00	80	900	1.00	600**	–
Correction firing with CORRECTIVE	500	4.00	4.20	60	760	1.00	500**	4.20

* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the firing parameters must be adjusted correspondingly. The crucial factors for the firing process are not the firing temperature parameters displayed by the furnace but the appearance and the surface condition of the restoration after the firing process.

** Long-term cooling down to the respective temperature is recommended for the respective last firing cycle; the lift position for VITA VACUMAT furnaces should be > 75°.



Completed posterior bridge on the working model.

Clinical aspects

Fitting

When fitting restorations, it must be ensured that they are not removed with a hook or a probe but with dental floss or rubber dam in order not to damage them.

Cementing overpressed zirconium oxide restorations

Adhesive cementation with composites or conventional cementation with zinc phosphate or glass ionomer cements can be used for crowns and bridges made from zirconium oxide press ceramic (overpressing technique) since they exhibit high natural strength. See also VITA brochure 1696 "VITA All-Ceramics, Clinical Aspects".



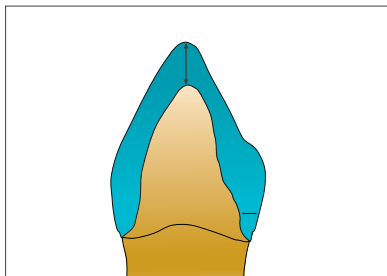
Zirconium oxide bridge (21-23) overpressed with VITA PM 9 immediately after seating.

Clinical photo: Schmid Zahntechnik, Regensburg (Germany)

Indication

Substructure-free staining and layering technique – indication										
								recommended VITA PM 9 pellets	Characterization	Individualization
●	●	●	●	●				T, HT	VITA AKZENT	only with VITA VM 9 ADD-ON materials

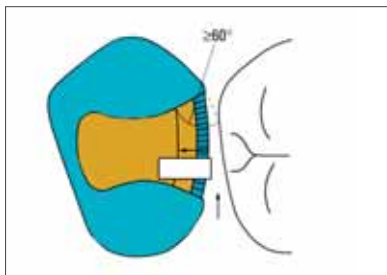
● recommended



Layer thicknesses

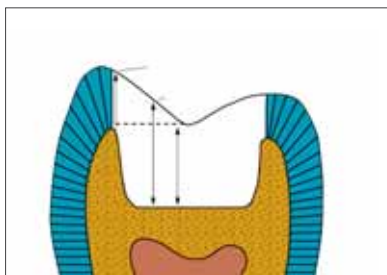
Anterior crowns

Ceramic layer thickness – incisal: at least 1.5 mm
 Ceramic layer thickness – cervical: at least 1.0 mm

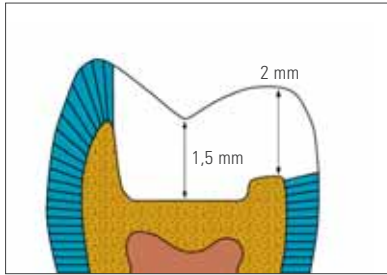


Inlays

Ceramic layer thickness below the deepest point of the fissure: at least 1.5 mm
 Ceramic layer thickness in the area of the isthmus: at least 1.5 mm
 Width of the approximal step: at least 1.0 mm



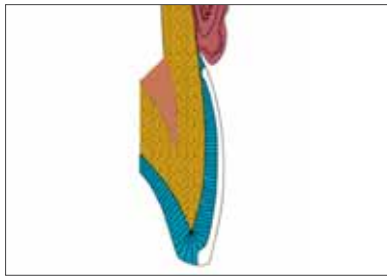
If the cavity margin is close to the cusp tip: 2.5 mm



Onlays

Ceramic layer thickness in the area of cusp preparation: at least 1.5 – 2 mm

Ceramic layer thickness at the bottom of the fissure: at least 1.5 mm



Veneers

Average ceramic layer thickness: at least 0.7 mm

Incisal: at least 1 mm



Preparation of the model

Application of the spacer

Undercuts must be blocked out prior to the preparation of the model.

To create space for the cementation material (composite), 2-3 coats of easily removable die spacer, such as VITA In-Ceram interspace varnish, must be applied to the die up to a distance of 1 mm to the preparation margin (corresponds to approx. 30 – 50 µm).



Separate the plaster dies using a standard plaster-wax separating agent.

Only wax which burns without leaving any residue (e.g. VKS wax, Yeti) may be used for modelling. A fully anatomical wax-up is prepared.



Precise waxing up is particularly essential at the preparation margins.

Sharp edges (e.g. fissures that are too deep and sharp cusps) must be avoided since they may result in the fact that investment material is pressed into the ceramic during the pressing process.



It is also possible to use the inLab CAD/CAM technique to mill the units to be pressed from VITA CAD-Waxx polymer blocks.

⚠ Important:

The minimum layer thickness of the wax-up or the CAD-Waxx mould is 0.7 mm to avoid incomplete pressing.



Attaching the press sprues

Wax wires with a min. length of 3 mm and a max. length of 8 mm are attached to the wax-ups or the moulds milled from VITA CAD-Waxx similar to metal casting.

A wax wire with a diameter of **3.0 mm** can be attached to inlays. A wax wire with a diameter of **at least 4.0 mm** must be attached to all other large-size restorations such as veneers and crowns.



⚠ Important:

Prior to investing, the wax weight including the press sprues must be determined to calculate the required quantity (max. 2 pieces) of VITA PM 9 press pellets.



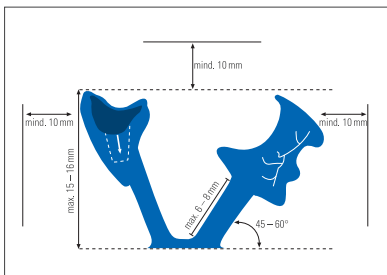
Attachment points between the press sprue, press object and the sprue former must be rounded. Sharp edges and narrow points must be avoided. The sprues must not taper towards the wax-up.



If several restorations are to be pressed, they must be aligned symmetrically in the center of the ring.



Sprued anterior mould made from VITA CAD-Waxx.



Correct spruing for the substructure-free staining and layering technique

Press sprues are attached with wax to the center of the sprue former and have an angle of 45°-60° towards the investment ring wall (minimum distance of 10 mm).

If several objects are invested in one investment ring, the margins of the objects should be equally high.

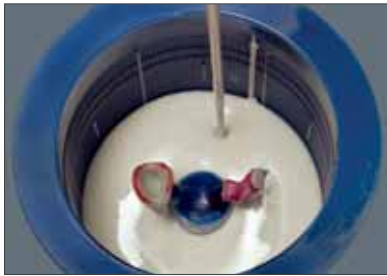


The sector markings on the inner side of the investment ring allow fast and controlled detection of the press object during devesting.



Investing

Please adhere to the processing parameters (mixing ratios and mixing times) for the VITA PM 9 investment material on page 14 et sqq.



Pour a thin stream of investment material into the investment ring up to the marking.



Use your thumb to pull the ring slightly to the side, before the level gauge is placed on; this way air can escape more easily.



Setting time: 30 minutes after beginning of mixing

Once the investment material has set, use both thumbs to press the mould downwards out of the silicone ring.



After removing the mould from the silicone ring, allow to evaporate for 10 min before it is placed into the preheating furnace. This way cracks will be avoided during preheating.

The level gauge determines the height of the investment material mould and the straight position in the press furnace. Any defect on the base must be smoothed or carefully removed with a plaster knife to ensure the correct vertical position of the mould in the press furnace and to avoid problems during pressing.

⚠ Important:

Check vertical position of the ring to avoid any problems during pressing.

Preheating

Place the investment ring into the preheating furnace.

The preheating furnace should only be filled up to half of its capacity.

⚠ Important:

Please adhere to the preheating parameters for the VITA PM investment material:

Preheating temperature: 850°C

Holding time of the investment ring when the preheating temperature is reached (850°C) again

100 g investment ring: **at least** 50 min

200 g investment ring: **at least** 75 min

If three 100 g or 200 g investment rings or more are placed into the preheating furnace, the holding time needs to be extended by 15 minutes.

The disposable press plungers and the VITA PM 9 pellets are not preheated.

Do not place investment ring together with other casting objects (metal casting rings) or solder models into the preheating furnace to avoid the risk of discoloration caused by metal oxides. Investment material residue or dirt must not reach the sprue. Blow into the sprue if required.

Preparing for pressing

⚠ Important:

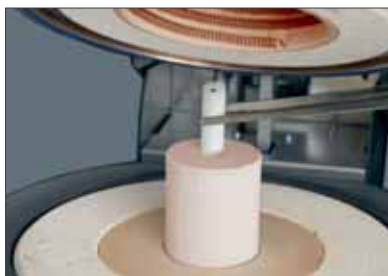
After preheating, the ring should be quickly transferred from the preheating furnace to the press furnace to avoid heat losses. Do not put down the ring while transferring it! The cold VITA PM 9 press pellets must be placed into the investment ring with the rounded side facing downward (stamped VITA logo).

This way abrasion of the investment material in the press sprue is avoided.

The printed side is facing upward (see fig.) for control purposes.





Inserting the VITA PM 9 press pellet







Placing the disposable press plunger with the black dot facing upward. The front which features slightly rounded edges must face downward.

Recommended firing – VARIO PRESS[®] 300 press furnace (Zubler)*

Predr. temp. °C	 °C/min.	Temp. approx	 min.	Pressing time min.	Pressure
700	60	1000	20.00	6.00	low





* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the press parameters (temperature, pressure) must be adjusted correspondingly. The crucial factors for the pressing process are not the press parameters displayed by the unit but the appearance and the surface condition of the restoration to be pressed after the pressing process.

Recommended firing – Programat[®] EP 600 press furnace (Ivoclar)*

Predr. temp. °C	 min.	 min.	 °C/min.	Temp. approx	 min.	Pressure	Stop speed
700	0.00	6.00	50	1000	20.00	Mech.	300 µm/min

* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the press parameters (temperature, pressure) must be adjusted correspondingly. The crucial factors for the pressing process are not the press parameters displayed by the unit but the appearance and the surface condition of the restoration to be pressed after the pressing process.

Recommended firing – Cergo[®] Press press furnace (DeguDent)*

Predr. temp. °C	 min.	 min.	 °C/min.	Temp. approx	 min.	Pressure bar	Pressing time min.
700	0.00	6.00	50	1000	20.00	4.7	10.00

* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the press parameters (temperature, pressure) must be adjusted correspondingly. The crucial factors for the pressing process are not the press parameters displayed by the unit but the appearance and the surface condition of the restoration to be pressed after the pressing process.

⚠ Important:

Remove the muffle from the furnace immediately after completion of the press program and let it cool down to room temperature.
Do not quench in cold water.



Desting

Determine the exact depth of press using a second press plunger. The depth is marked on the outside of the ring using a pen. The pressed objects are located within the markings (lines). Cut deep into the investment material alongside the marking with a separating disc. Split the investment material carefully using a plaster knife. Do not use a hammer.



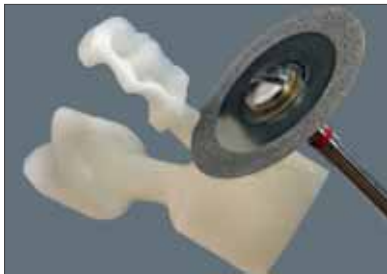
Sandblast with glass beads with a grain size of 50 µm at a pressure of 4 bars. Once the object to be pressed can be seen, reduce the pressure to 2 bars.

⚠ Important:

The cervical region is sandblasted at low pressure and at a flat angle.



Exposed restoration after sandblasting.



Cutting off

Cut off the press object from the press sprue using a diamond disc whilst exerting only little pressure and keep largest possible distance to the object (restoration) to avoid cracks in the pressed object which may result when cutting off the sprues. Generally, overheating of the ceramic must be avoided since this may result in microcracks.



⚠ Important:

Cooling with water is recommended when cutting off the sprues and finishing.

Fitting

Use lipstick, control pastes or occlusion spray (e.g. Occluspray, Hager & Werken) when fitting the restoration.



Inlay fitted on the die.



Finishing

Use only fine-grit and sharp diamond tools for grinding. Exert little pressure and adjust a low speed. Avoid the generation of heat. Minimum layer thicknesses must be adhered to.

Note:

Cooling with water is recommended when cutting off the sprues and finishing.

Important:

Since dust is formed when grinding sintered dental ceramic products, always wear a face mask or grind when wet. Additionally, it is recommended to work behind a safety shield and use an extraction unit.



Characterization of the shade (staining technique)

VITA AKZENT stains or glaze material or the stains and glaze paste of the VITA SHADING PASTE assortment are suitable for characterizing the shade and for glazing of overpressed VITA PM 9 restorations.

Important:

Only the low-melting glaze materials Glaze LT powder or paste may be used for glazing.

Recommended firing* of VITA AKZENT Glaze LT powder and paste in the VITA VACUMAT®

	Predr. temp. °C	→ min.	↗ min.	↗ °C/min.	Temp. approx.	→ min.	↘ °C	VAC min.
Stains-fixation firing with VITA AKZENT	500	4.00	3.15	80	760	1.00	500**	–
Glaze firing with Glaze LT powder	500	4.00	3.30	80	780	1.00	500**	–
Glaze firing with Glaze LT paste	500	6.00	3.30	80	780	1.00	500**	–

* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the firing parameters must be adjusted correspondingly. The crucial factors for the firing process are not the firing temperature parameters displayed by the furnace but the appearance and the surface condition of the restoration after the firing process.

** Long-term cooling down to the respective temperature is recommended for the respective last firing cycle; the lift position for VITA VACUMAT furnaces should be > 75°.

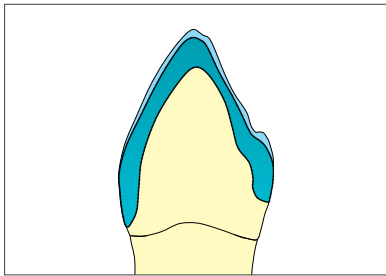


Individualization (cut-back technique)

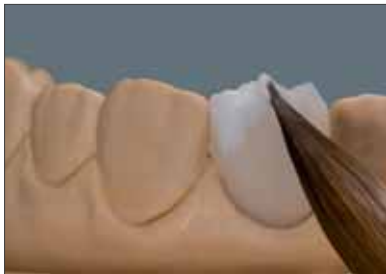
⚠ Important:










Restorations made from VITA PM 9 without zirconium oxide support may only be individualized with the low-melting VITA VM 9 ADD-ON materials at 780°C to avoid any deformation during firing.

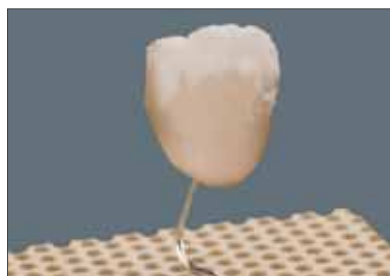
Use VITA Glaze LT powder or paste for glazing at 780°C (low temperature).



Since substructure-free VITA PM 9 restorations have a lower strength than restorations with zirconium oxide support, they may only be cut back up to one third to individualize them with VITAVM9 ADD-ON materials later on. Deep notches must be avoided prior to individualizing.



VITAVM[®]9 ADD-ON – low-melting materials (800°C) – especially for individualizing substructure-free restorations made from VITA PM 9 – based on the fine-structure veneering ceramic VITA PM 9 – 8 different shades		Des.	Prod. No.	Shade	
		ADD1	B4229112	transparent	
		ADD2	B4229212	enamel light	
		ADD3	B4229312	enamel dark	
		ADD4	B4229412	whitish transparent	
		ADD5	B4229512	yellowish transparent	
		ADD6	B4229612	orange translucent	
		ADD7	B4229712	red translucent	
		ADD8	B4229812	blue translucent	



Crowns should only be fired on platinum pins.
Do not use ceramic firing trays.

Recommended firing – VITAVM[®]9 ADD-ON/Glaze LT*

	Predr. temp. °C	 min.	 min.	 °C/min.	Temp. approx.	 min.	 °C	VAC min.
VITAVM 9 ADD-ON	500	6.00	6.14	45	780	1.00	500**	6.14
Glaze firing with Glaze LT powder ¹⁾	500	4.00	3.30	80	780	1.00	500**	–
Glaze firing with Glaze LT paste	500	6.00	3.30	80	780	1.00	500**	–

* The user should consider this information only to provide basic values. If surface, transparency and degree of gloss do not correspond to the result that is achieved under optimal conditions, the firing parameters must be adjusted correspondingly. The crucial factors for the firing process are not the firing temperature parameters displayed by the furnace but the appearance and the surface condition of the restoration after the firing process.

¹⁾ To achieve an optimal result during glaze firing, VITA Glaze LT powder should be mixed with VITA AKZENT FLUID to obtain a pasty consistency.

** Long-term cooling down to the respective temperature is recommended for the respective last firing cycle; the lift position for VITA VACUMAT furnaces should be > 75°.



Completely individualized restoration on the working model.



VITA SIMULATE

VITA Simulate Preparation Material shade indicator with 6 shade tabs.



It is recommended to use VITA SIMULATE Preparation Material for substructure-free, highly translucent anterior restorations made from VITA PM 9 to prepare an artificial die in the shade of the prepared tooth which allows to reproduce the shade result more easily and safely. Please observe the information in the respective Working Instructions No. 1461E.



Cementation of substructure-free restorations made from VITAPM[®]9

Restorations without oxide ceramic substructures (substructure-free staining and layering technique), such as inlays, onlays, veneers and anterior crowns, must be cemented adhesively (e.g. with VITA DUO CEMENT) using a dentine bonding system (e.g. VITA A.R.T. BOND).

See also VITA brochure 1696 "VITA All-Ceramics, Clinical Aspects".





VITA PM®9 assortments

VITAPM®9 ACCESSORY KIT		
Quantity	Content	Product designation
56 pcs	100g	PM 9 investment material
1	60ml	Measuring cup
1	900ml	PM 9 investment material mixing liquid
1	3 parts	200g investment system
50 Stk.	–	Disposable press plunger
1 piece	–	Working Instructions, VITA PM 9, 1450
1 piece	–	Working Instructions, investment material, 1414

Prod. No. EPM9ACCKIT



VITAPM®9 TRANSLUCENT PELLET KIT		
Quantity	Content	Product designation
10	Pack cont. 5 pcs each	VITA PM 9 press pellets „T”, 0 M1P, 0 M2P, 1 M1P, 1 M2P, 2 M1P, 2 M2P, 2 M3P, 3 M1P, 3 M2P, 3 M3P
1	–	VITA PM 9 shade indicator, 10 shade tabs "T"
1 piece	–	Working Instructions VITA PM 9, 1450

Prod. No. EPM9TKIT



VITAPM®9 HIGH-TRANSLUCENT PELLET KIT		
Quantity	Content	Product designation
10	Pack cont. 5 pcs each	VITA PM 9 press pellets „HT”, 0 M2P, 1 M1P, 1 M2P, 2 M2P, 3 M2P, EN0P, EN1P, EN2P, ENLP, ENDP
1	–	VITA PM 9 shade indicator, 9 shade tabs "HT"
1 piece	–	Working Instructions VITA PM 9, 1450

Prod. No. EPM9HTKIT



• **Individual packs**

VITAPM[®]9 press pellets

Available in packs cont. 5 pellets in the 10 shades 0M1P, 0M2P, 1M1P, 1M2P, 2M1P, 2M2P, 2M3P, 3M1P, 3M2P, 3M3P each available in the O (opaque) and T (translucent) variations. The HT (High Translucent) variation is available in the following ten shades: 0 M2P, 1 M1P, 1 M2P, 2 M2P, 3 M2P, EN0, EN1, EN2P, ENLP and ENDP.



VITAPM[®]9 shade indicators O, T and HT

Prod. No. E005 (Opaque)
E010 (Translucent)
E009 (High Translucent)



VITAPM[®] disposable press plungers

Pack cont. 50 disposable press plungers, diameter of 12 mm for 2 g pellets. Suitable for all press ceramics. Time-consuming sandblasting of the aluminium oxide plungers is no longer required and the unique composition of the plungers avoids microcracks in the press cone.

Prod. No. E001



VITAPM[®] investment system, 200 g

Pack with investment ring, sprue base and level gauge. Thanks to the clearly visible markings on the inner side, the silicone investment ring allows fast and controlled detection of the pressed object and thus saves time and material during sandblasting.

Prod. No. E004



VITAPM[®] investment material

Phosphate-bonded and graphite-free investment material for speed heating, especially for VITA PM 9 press ceramic. Content: pack of 56 bags, 100 g each and bottle cont. 900 ml of investment material mixing liquid.

Prod. No. EEM100



VITAPM[®] investment material mixing liquid

Bottle cont. 900 ml. Special mixing liquid for VITA PM investment material.

Do not store below 5°C since the product is sensitive to frost!

Prod. No. EEF900



• **Materials for shade characterization and individualization**

VITA AKZENT[®]

Assortment containing 20 fluorescent stains (powders) for surface individualization and reproduction of discoloration effects.

Prod. No. BATSET



VITA AKZENT[®] Glaze Spray

VITA AKZENT Glaze Spray consists of ready-to-use spray-on VITA AKZENT glaze powder for glazing all-ceramic and metal ceramic restorations such as inlays, onlays, crowns and bridges. VITA AKZENT Glaze Spray can be processed together with the ceramic stains of the VITA AKZENT assortment.

Prod. No. BAT2515



VITA Glaze LT, powder 7.5 g

Low-melting glaze material (powder) especially for glazing restorations made from VITA PM 9 which were individualized with VITA VM 9 ADD-ON materials.

Prod. No. B00705



VITA Glaze LT, paste 4 g

Low-melting glaze material (paste) especially for glazing restorations made from VITA PM 9 which were individualized with VITA VM 9 ADD-ON materials.

Prod. No. B00704



VITA Firing Paste

Ready-to-use, fireproof material for simple and fast fabrication of individual firing trays. The soft, creamy consistency results in exceptional processing characteristics. Inlays, onlays, veneers and crowns can be easily fixed on platinum pins or directly on the firing tray or fibrous pad. After firing, the material can be easily removed from the firing object.

Do not sandblast!

Prod. No. EFP12 Standard pack, 1 syringe cont. 12 g

Prod. No. EFP123 Large pack, 3 syringes cont. 12 g each



VITA Karat diamond polishing set*

Assortment incl. 5 g diamond polishing paste, 20 felt wheels, Ø 12 mm and a mandrel, nickel-plated

*for indirect use only

Prod. No. B068



VITAVM[®]9

Special fine-structure veneering material for yttrium-stabilized zirconium oxide frameworks in the CTE range of approx. 10.5 (such as VITA In-Ceram YZ) and for individualizing restorations made from VITA PM9 and VITABLOCS.



VITAVM[®]9 ADD-ON Kit

Low-melting materials in eight different shades based on the fine-structure veneering ceramic VITAVM 9. They are especially used for individualizing substructure-free restorations made from VITA PM 9.

VITAVM [®] 9 ADD-ON Kit		
Quantity	Content	Material
1	12g	VITAVM 9 ADD-ON, ADD1
1	12g	VITAVM 9 ADD-ON, ADD2
1	12g	VITAVM 9 ADD-ON, ADD3
1	12g	VITAVM 9 ADD-ON, ADD4
1	12g	VITAVM 9 ADD-ON, ADD5
1	12g	VITAVM 9 ADD-ON, ADD6
1	12g	VITAVM 9 ADD-ON, ADD7
1	12g	VITAVM 9 ADD-ON, ADD8
1	12g	VITAVM 9 Glaze LT
1	50ml	VITAVM MODELLING LIQUID
1	20ml	VITA AKZENT Fluid
1	piece	Firing tray
1	piece	VITAVM 9 ADD-ON shade indicator
1	piece	a&e brush, No. 3/0
1		Working Instructions VITA PM 9, 1450

Prod. No. BV9AOK



• **Additional accessories**

VITA In-Ceram[®] interspace varnish

Bottle cont. 30 ml of red die varnish. One coat has a thickness of approx. 15 µm. Can be completely removed with the steam cleaner. Use interspace varnish thinner to clean the application brush.

Prod. No. HD30 (varnish) / HDV30 (thinner)



VITA OXY-PREVENT

Syringe cont. 3 ml of neutral-colored, low-viscous glycerine gel for the fixation of VITA PM 9 restorations on the model or for direct use as a try-in paste.

Prod. No. FOP3



- **Shade determination**

VITA SIMULATE Preparation Material

Light-curing composite in six shades incl. shade indicator and accessories for the fabrication of artificial dies to simulate the shade of the prepared tooth and to achieve reliable shade reproduction. Especially recommended for the fabrication of substructure-free, highly translucent anterior crowns made from VITA PM 9 in which the shade effect is largely influenced by the color of the die.

Prod. No. ESPKIT



VITA Easyshade Compact®

VITA Easyshade Compact enables the user to determine the accurate tooth shade quickly and to verify restorations. The cordless, portable and lightweight unit is easy to handle and displays the correct tooth shade within a few seconds. The high measuring accuracy of VITA SYSTEM 3D-MASTER and VITAPAN classical A1-D4 shades is based on its spectrophotometric measuring principle and is the prerequisite for perfect results.

Prod. No. DEASYCS220



VITA Linearguide 3D-MASTER/VITA Toothguide 3D-MASTER®





The tooth shade is quickly and precisely determined with the VITA LINEARGUIDE 3D-MASTER. The modern design and the linear structure enable the appropriate shade to be found quickly. The VITA Linearguide 3D-MASTER is an alternative to the proven VITA Toothguide 3D-MASTER and features different (linear) arrangement of the tooth shade samples (tabs).

Prod. No. B363





Recommended equipment and materials	
Blocking out material	Die Bloc Liquid oder Paste, Fa. Yeti
Die sealant	Margidur, Benzer Dental Sekundenkleber 1733, Renfert
Spacer varnish	VITA In-Ceram interspace varnish and thinner
Separating agent plaster against wax	Palaferm insulation, Heraeus Kulzer/Picosep, Renfert Yeti Lube Superfine, Yeti/CM insulating agent, Cendres & Metaux SA
Modelling waxes	Waxes especially developed for the pressing technique: VKS-Wachs, Yeti Dental/S-U Ceramo-Carving-Wax, Schuler Dental GEO Classic-transparent, Renfert
Separating spray, investment ring	Silicone spray, Ceramay
Instruments for devesting	Diamond disc for investment material (Ø 45 mm), NTI Diamond disc for investment material 924XC.104.400, Komet
Tools for finishing	Diagen-Turbo-Grinder, Bredent (to remove the press sprues) Diamond instruments, Rotring (NTI, Komet, Meisinger, Accurata)
Turbines with water spray	Turbine milling unit D-FK 20, Harnisch + Rieth KaVo K-AIR plus, KaVo NKS Presto Aqua, AmannGirrbach/Turbo-Jet, Accurata
Materials for fitting	Occluspray (Hager & Werken) Ceramil Marker (AmannGirrbach)
Polishing materials	VITA Karat diamond polishing paste Rubber polisher for high luster polishing, Shofu

Problem	Cause	Remedy
Object not completely pressed	<ul style="list-style-type: none"> • Insufficient material quantity • Minimum layer thickness of the press ceramic not adhered to • Press temperature too low • Press time too short • Press pressure too low 	<ul style="list-style-type: none"> • Calculate wax weight and determine number of pellets • Adhere to minimum layer thickness of 0.7 mm • Check press parameters, calibrate furnace
Press streaks on the margins	<ul style="list-style-type: none"> • Incorrect spruing 	<ul style="list-style-type: none"> • Inlays with the margins facing to the outside, all wax objects must have the same height, sprue press sprue and wax object in one line
Press streaks on wax objects and the press sprues	<ul style="list-style-type: none"> • Cracks in the investment material 	<ul style="list-style-type: none"> • Adhere to the working instructions, observe setting time
Burst investment ring after pressing	<ul style="list-style-type: none"> • Press temperature or press pressure too high • Investment ring is not perpendicular to the press plunger • Insufficient wall thickness of the investment ring 	<ul style="list-style-type: none"> • Check press parameters • Level the base after setting and ensure proper position in the furnace • Invest press object with a minimum distance of 10 mm to the investment ring
Cracks in the press ceramic	<ul style="list-style-type: none"> • Incorrect processing of the zirconium oxide framework • Overheating in some areas of the press ceramic during processing • Preheating time too short • Excessive blasting pressure during deinvesting • Wax was used which did not burn without leaving any residue • Incorrect spruing, outside the center of heat 	<ul style="list-style-type: none"> • Use suitable tools for processing the zirconium oxide framework, grind when wet • Cool with water and use max. speed of 5,000 rpm • Adhere to the preheating parameters depending on the number of rings • Sandblast at max. 2 bars and use 50 µm glass beads • Use titanium dioxide-free wax which burns without leaving any residue • Ensure correct spruing
Bubbles in the press ceramic	<ul style="list-style-type: none"> • Press temperature too high • Wax was used which did not burn without leaving any residue • Zirconium oxide framework not cleaned prior to waxing up 	<ul style="list-style-type: none"> • Reduce press temperature • Use wax which burns without leaving any residue • Clean framework prior to waxing up

Problem	Cause	Remedy
Inclusions of investment material in the press ceramic	<ul style="list-style-type: none"> • Sprues are not properly waxed • Edges too sharp (fissures) 	<ul style="list-style-type: none"> • Ensure smooth transitions during spruing; all sharp edges (fissures) must be avoided
White spots, streaks, porosities or discoloration in the press ceramic	<ul style="list-style-type: none"> • Press temperature too high • Wax was used which did not burn without leaving any residue • Effect Bonder or Liner used • Alcohol-based wax-plaster separating agent was used 	<ul style="list-style-type: none"> • Check press parameters • Use wax which burns without leaving any residue • Do not use Effect Bonder or Liner • Use alcohol-free separating agent
Deformed press object after layering/glazing	<ul style="list-style-type: none"> • VITAVM 9 ADD-ON materials were not used for substructure-free press restorations • Minimum thickness of the pressed object not adhered to • Glaze firing of substructure-free press restorations performed without Glaze LT 	<ul style="list-style-type: none"> • Use only VITA VM 9 ADD-ON materials for substructure-free press restorations • Observe minimum layer thickness of 0.7 mm • Use only Glaze LT for glaze firing substructure-free press restorations which were coated with VITA VM 9 ADD-ON material

The following products require hazard label identification:		
<p>VITA In-Ceram® interspace varnish</p> <p>VITA In-Ceram® interspace varnish thinner</p>	<p>Irritant (Xi) Prolonged or repeated skin contact may cause dermatitis (skin inflammation) due to the degreasing effect of the solvent. Anesthetizing effect. Irritates the eyes. Repeated exposure may lead to dry and rough skin. Vapors may cause drowsiness and dizziness.</p> <p>Highly flammable (F) Keep container tightly closed. Store at a cool and dry place in well-sealed containers. Keep away from sources of ignition – no smoking. Take precautionary measures against static discharges. Product must not reach the sewage system. Product must be disposed of in accordance with the regulations of the authorities.</p>	 
<p>VITA Firing Paste</p>	<p>Toxic (T), Irritant (Xi) Classification of the fiber according to EU Directive 97/69/EC: Carc. Cat.2. May cause cancer by inhalation. Avoid the release of dust; do not blow with compressed air. Use local extraction system or wear particle-filtering respiratory half mask. Irritates the skin. Keep out of children's reach.</p>	 

Please refer to the safety data sheet for detailed information!

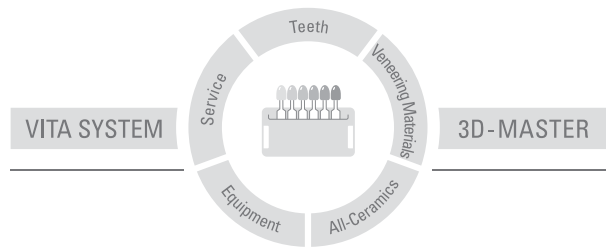
<p>Personal protective equipment</p>	<p>Wear suitable protective clothing, gloves and eye/face protection.</p> <p>Since dust is formed when grinding sintered dental ceramic products, always wear a face mask or grind when wet. Additionally, it is recommended to work behind a safety shield and use an extraction unit.</p>	   
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VARIO PRESS® is a registered trademark of Zubler GmbH, D-89091 Ulm, Germany.

Cergo® press is a registered trademark of DeguDent GmbH, D-63457 Hanau, Germany.


Programat® EP 600 is a registered trademark of Ivoclar Vivadent, FL-Schaan.

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 working instructions: 11-09

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

VITAVM[®]9 · VITAPM[®]9 · VITA In-Ceram[®] YZ · VITA AKZENT[®]

US 5498157 A
AU 659964 B2
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