VITA AMBRIA® PRESS SOLUTIONS

Instructions for use

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

Date of issue: 01.20

VITA – perfect match.

The press ceramic system for brilliant, highly accurate and reliable restorations

Dear Customers,

Congratulations and thank you for choosing VITA AMBRIA!

With VITA AMBRIA PRESS SOLUTIONS, you can expect an ideally matched material system made of zirconia-reinforced lithium disilicate glass ceramic pellets and various system components.

To safely and simply process all VITA AMBRIA system components, please read the processing instructions all the way through before the first use.

For detailed information on the accompanying system components, please read all the working instructions provided in the relevant chapter for the system component.

We hope you enjoy VITA AMBRIA and achieve great results!

Your VITA Product Management-Team

Explanation of symbols:

- System/technology info
- Please note
- Note
- Note
- Process
- Tips
- Links/Tutorials

Note:

- What? Zirconia-reinforced lithium disilicate glass ceramic press system.
- What for? For the production of delicate reconstructions such as veneers, inlays/onlays, as well as full/partial crowns and three-unit bridges, up to the second premolars.
- With what? The press ceramic system includes press ceramic pellets in two levels of translucency (T/HT) and two geometries (S, L), muffle system, investment material and liquid, as well as press plungers.

1. Material system / processes

VITA AMBRIA –
Efficiency with system.

*) Optional process step: does not apply for monolithic restorations.

1.1 Restoration concepts and processing variants

Degree of translucency	Processing technique		Indications										
	Staining technique	Veneering technique/ partial veneering	Occlusal veneer*	Veneer	Inlay	Onlay	Partial crown	Anterior crown	Posterior crown	Bridge anterior tooth region	Bridge premolar region	Abutment (mesostructure)	Abutment crown
T Translucent	●	●	○	○	○	○	○	●	●	●	●	●	●
HT High Translucent	●	○	●	●	●	●	●	○	○	○	○	○	○

● recommended ○ possible

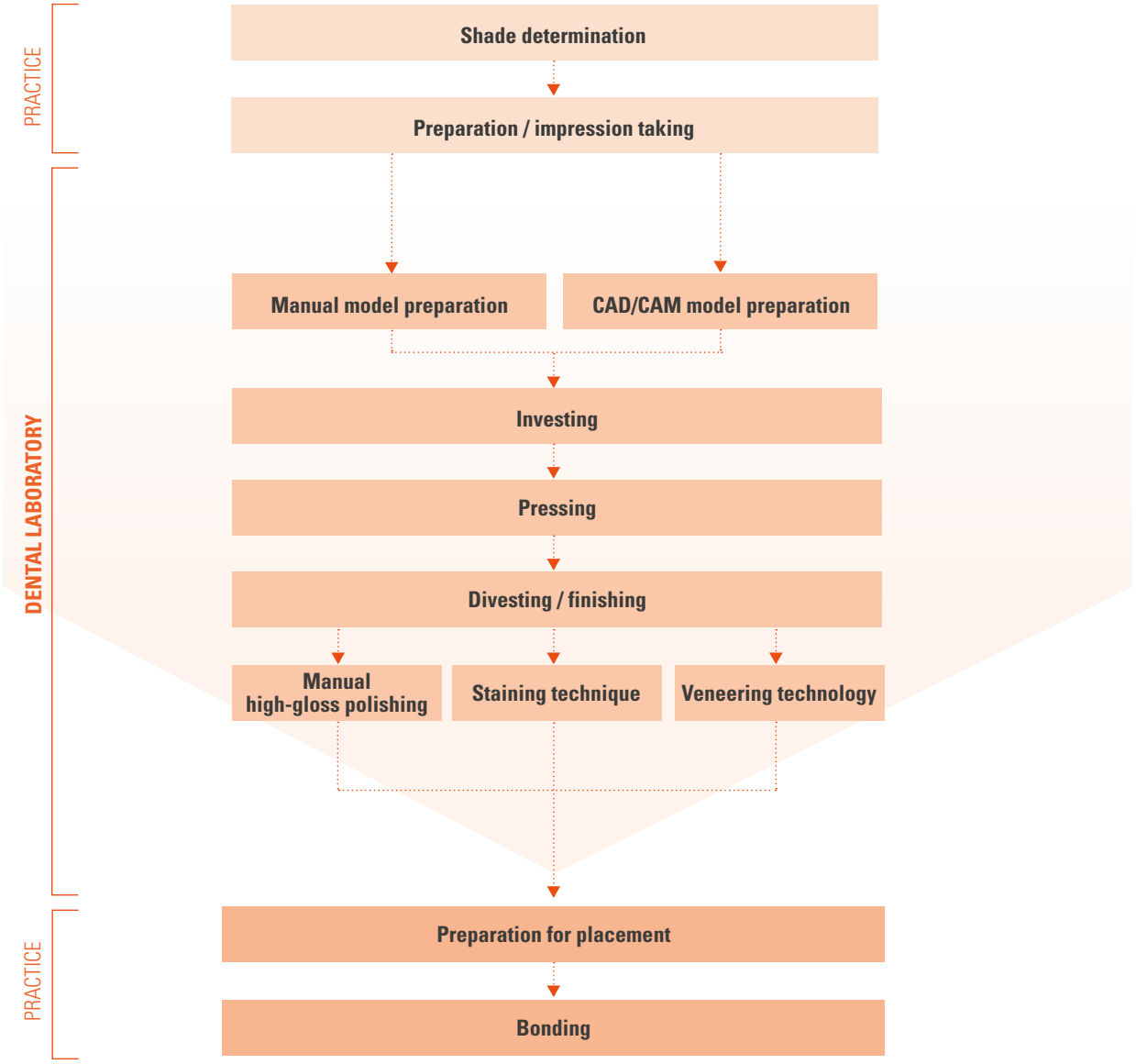
*) Partial veneering must not be used for occlusal veneers (Table Tops)

Note:

- **Available materials**
  - **VITA AMBRIA T (Translucent):**
    The T-pellets are particularly suitable for the production of crowns and three-unit bridges using veneering or staining technique, due to their lower translucency and matching to the respective dentin shade.
  - **VITA AMBRIA HT (High Translucent):**
    The HT pellets are especially suitable for the manufacture of inlays, onlays, veneers and partial crowns, thanks to their greater translucency and a shade determination that corresponds to a dentin / incisal edge mixture.
  - **Mechanical polishing:**
    VITA SUPRINITY Polishing Set clinical / technical for professional pre-polishing and high gloss polishing.
    VITA Karat Diamond polishing paste for extraoral polishing.
  - **Staining technique:**
    VITA AKZENT PLUS STAINS, GLAZE LT and FLUOGLAZE LT for shade characterization and glazing of VITA AMBRIA restorations.
  - **Veneering technique / partial veneering:**
    VITA LUMEX AC for the veneering of anatomically reduced restorations made of VITA AMBRIA.

1.2 Workflow/process options for fabrication variants

Process steps in the practice and laboratory



2. Design guidelines

2.1 Design parameters

Minimum thicknesses of VITA AMBRIA for staining technique (measurements in mm)								
	Occlusal Veneer	**Veneer**	**Inlay/ Onlay**	**Partial crown**	**Crowns**		**Bridges**	
					Anterior tooth	**Posterior tooth**	**Anterior area**	**Premolar area**
circum-ferential	1.0	0.3–0.6	1.0 isthmus width	1.5	1.2	1.5	1.2	1.5
incisal / occlusal	1.0	0.4–0.7	1.0	1.5	1.5	1.5	1.5	1.5
Connector cross-section	–	–	–	–	–	–	16 mm²	16 mm²
max. pontic width	–	–	–	–	–	–	11	9

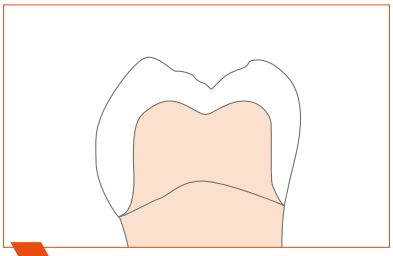
Minimum layer thicknesses of VITA AMBRIA for partial veneering (measurements in mm)								
	Occlusal Veneer	**Veneer**	**Inlay/ Onlay**	**Partial crown**	**Crowns**		**Bridges**	
					Anterior tooth	**Posterior tooth**	**Anterior area**	**Premolar area**
circum-ferential	–	0.4	–	1.5	1.2	1.5	1.2	1.5
incisal / occlusal	–	0.5	–	0.8	0.6	0.8	0.8	0.8

Total layer thickness of the restoration	**0.8**	**1.0**	**1.2**	**1.5**	**1.8**	**2.0**	**2.5**	**3.0**
Minimum layer thickness for VITA AMBRIA	0.4	0.5	0.6	0.8	1	1.1	1.3	1.6
Maximum layer thickness of veneering with VITA LUMEX AC	0.4	0.5	0.6	0.7	0.8	0.9	1.2	1.4

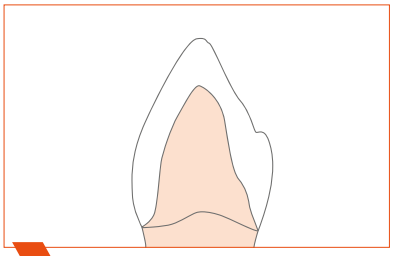
Note:

- With partial veneering, a reduced substructure that supports the tooth shape is pressed, which is then supplemented with the veneering ceramic VITA LUMEX AC and used to build up the tooth into its complete shape.
- Occlusal veneers, inlays and onlays are not suitable for the veneering.
- The highly stable substructure made of VITA AMBRIA press ceramic must make up at least 50% of the total thickness of the restorations.
- A uniform layer thickness of VITA LUMEX AC across the entire surface to be veneered must be ensured.
- However, VITA LUMEX AC should not exceed a total thickness of 1.5 mm (a thickness of between 0.7 and 1.2 mm is optimal).

2.2 Design of fully anatomical restorations



Posterior crown design



Anterior crown design

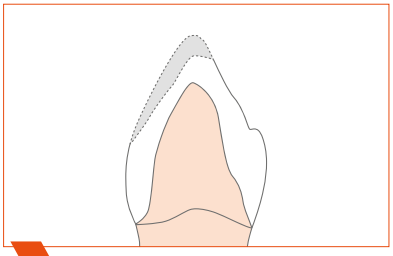
Note:

- The applicable minimum wall thicknesses for the respective material variant must be observed.
- The aim is to obtain a uniform wall thickness.

Note:

- You will find information on ceramic-compatible preparation in the brochure "Clinical Aspects," No. 1696.

2.3 Design for partial veneering / cut-back



Anterior substructure design for cut-back

Note:

- Sharp edges on the substructure should generally be avoided.
- Minimum wall thicknesses for substructures must be observed.
- When designing substructures, an anatomically reduced tooth shape must be observed.
- The cusp should be supported according to the anatomical progression.
- A uniform layer thickness of the veneer across the entire surface to be veneered must be ensured.

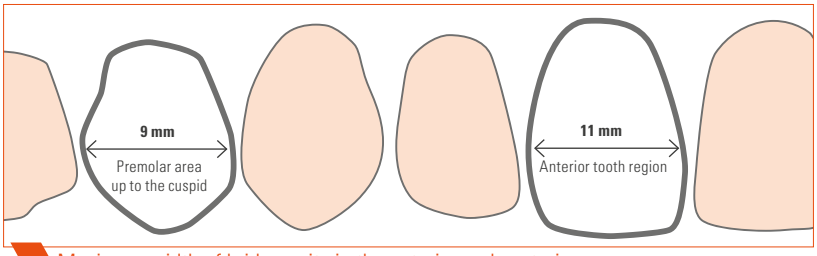
Please note:

- For implant-supported restorations, depending on the fabrication process, sharp edges may exist on the abutment which may cause fracture of the respective superstructures during the period of wearing. These sharp edges must be avoided in general and can be rounded off, for example, with wax before the scan.

Note:

- You will find information on ceramic-compatible preparation in the brochure "Clinical Aspects," No. 1696.

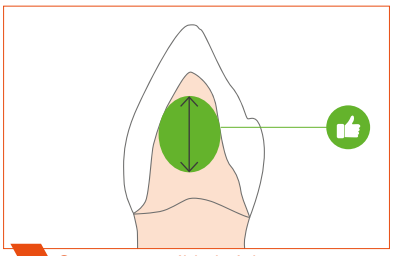
2.4 Design of the connectors for bridges



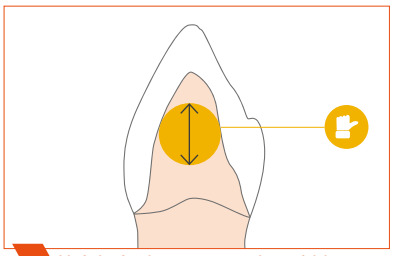
Maximum width of bridge units in the anterior and posterior areas

Please note:

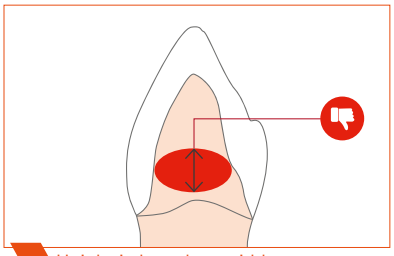
- The maximum approved bridge unit widths in the anterior and premolar areas are different, due to the differing height of the chewing load.
- The approved bridge unit width in the anterior tooth region is 11 mm. In the premolar region (from the cuspid up to the second premolar), it is 9 mm, These limits must not be exceeded.



Greatest possible height



Height is the same as the width



Height is less than width

Note:

- The height of the connector surfaces is the highest possible that can be selected (Fig. 1).
- The height should be at least as high as the width (Figs. 1 and 2).
- Sharp corners and edges are to be avoided.

Note:

- You will find information on ceramic-compatible preparation in the brochure "Clinical Aspects," No. 1696.

3. Model preparation

3.1 Model and stump preparation

1 Master model with removable stumps.

2 Model after the application of stump hardener.

Note:

- A die model or saw-cut model is created as a working model.
- Undercuts must be blocked out.
- Application of stump hardener for surface hardening and to protect the stump is recommended.
- The stump hardener must not result in a change of volume of the stump.

3.2 Spacer application

1. Layer of spacer up to a max. of 1 mm to the preparation margin of the veneer.

2. Layer of spacer. Identical procedure for crowns.

1. Layer of spacer up to a max. of 1 mm to the preparation margin.

2. Layer of spacer for anterior and posterior bridges.

3. Layer of spacer to the intercoronal surfaces of the abutment teeth.

1. Layer of spacer - procedure for inlays, onlays and partial crowns

2. Layer of spacer.

3. Layer spacer.

Note:

- The application of the spacer should be +/-10 µm per layer.
- For VITA AMBRIA restorations on abutments, proceed in a manner similar to that for natural stumps.

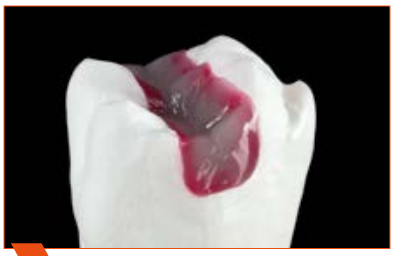
Links/tutorials:

- Learn more in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/prep"

3.3 Fully anatomical model preparation

Fully anatomical wax model preparation of an anterior crown.

Fully anatomical wax model preparation of a posterior crown.



Wax model preparation of an inlay.

Margin fitting of an inlay model preparation.

Note:

- After model creation and stump preparation, the wax model of the restoration is prepared.
- Before the investment, contact points should be minimally reinforced.
- Especially in the case of inlays, care should be taken to achieve a good margin fit.

3.4 Model preparation for partial veneering / cut-back

1 Fully anatomical wax model preparation of a bridge.

2 Place silicone key before the reduction.

3 Check reduction of the model preparation with the silicone key.

1 Fully anatomical wax model preparation of a veneer.

2 Reduction in the upper third for cut-back.

Note:

- First prepare a fully anatomical model of restorations, and then do the cut-back.
- Reduce the wax model preparation in the incisal third only.
- Do not design extreme mamelons, which can create points and edges.
- The minimum wall thickness of the press material and layer material must be observed.

Please note:

- For conventional model preparation, only organic, residue-free, combustible waxes may be used.
- Observe the stipulated minimum layer thicknesses and connector cross-section dimensions with regard to processing technique and indication.
- A precise wax-up of the restoration must be observed, in particular at the preparation margins.
- Over-modeling at the preparation margins must be avoided so that a time-efficient finishing process is guaranteed after pressing.
- For a precise fit of fully anatomical restorations after the application of stain and glaze, disengage the wax-up as the materials cause minimal volume change.

Links/tutorials:

- Learn more in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/wax

3.5 CAD/CAM model preparation

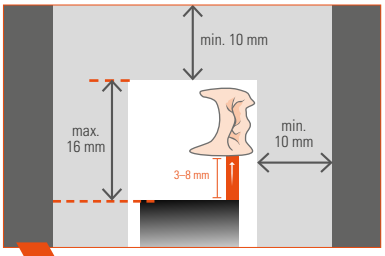
Note:

- The following steps must be completed when using CAD/CAM model preparation:
  - Scan the model
  - Design with design software
  - Mill the restoration out of milling waxes or milling acrylics

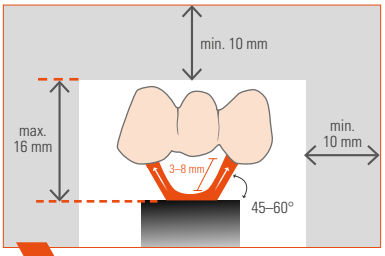
Please note:

- Milling waxes, milling acrylics or acrylics for 3D printing must first be checked for residue-free combustion.
- Observe the stipulated minimum layer thicknesses and connector cross-section dimensions.
- When using milling acrylics or acrylics for 3D printing:
  - To avoid unevenness on the surface of the investment material during heating, acrylics must be coated with a thin layer of wax. It is recommended to shorten the crown margin by approx. 1-2 mm and to wring it with cervical wax.

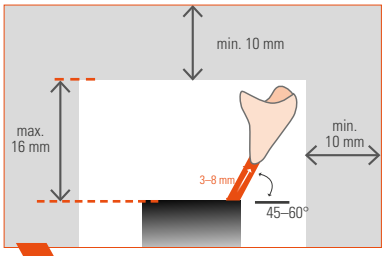
3.6 Spruing 100 g / 200 g muffle system



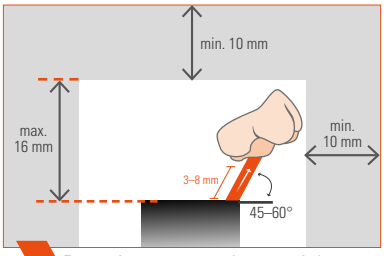
Inlay in 100 g investment ring



Three-unit bridge



Veneer or anterior crown



Posterior crown, onlay, partial crown

Note:

- In order to achieve a trouble-free flow during the press process, the spruing must always be in the flow direction and at the strongest point.
- Observe a 10 mm minimum distance between the wax objects and the silicone ring.
- Do not exceed the maximum length (wax object + sprues) of 16 mm.
- Sprue the restoration on the investment base at a 45 – 60° angle.
- Check for correct spruing with the aid of the transparent silicone ring.

Tip:

- For easier investing, it is recommended that the crowns be sprued with the inside up.

Links/tutorials:

- Learn more in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/sprue

3.7 Process for spruing

Attaching the sprues		
	Single tooth restorations	**Three-unit bridges**
Investment base	100 g and 200 g	200 g
Wax wire	ø 3–4 mm	
Length of wax wire	min. 3 mm, max. 8 mm	
Length of wax wire incl. object	max. 16 mm	
Sprue attachment point at the wax object	strongest site of the Model preparation	at both retainers, **no** wax sprue at the pontic
Sprue angle to the wax object	axial	
Sprue angle on the investment base	for 100 g investment ring: 80–90 °; for 200 g investment ring: 45–60°	
Design of the sprue attachment points	round and slightly tapered, no sharp angles and edges	
Distance between the objects	min. 3 mm	
Distance to the silicone ring	min. 10 mm	

	S-Pellet (small pellet)	**L-Pellet (large pellet)**
wax weight	up to a max. of 0.75 g	up to a max. of 1.7 g
Muffle system	100 g and 200 g	only 200 g

Please note:

- Prior to investing, the wax weight (including the sprues) must be determined to select the required VITA AMBRIA press pellet.
- Different types of restorations (e.g., inlays and crowns) cannot be invested with each other since the investment material must be mixed in a different ratio, depending on the type of restoration.
- Depending on the muffle system (100 g / 200 g), there are different guidelines for spruing.
- The 200 g investment ring should be sprued at a 45 - 60° angle, and the 100 g investment ring should be steeper, at an angle of 80 - 90°.
- Depending on the number and/or the weight of the restorations, the 100 g or 200 g muffle system is selected.
- When using a Programat EP 500 (Ivoclar Vivadent), please note the following:
  If only one object is invested, a second short (blind) sprue must be attached. This ensures that the switch-off function of the furnace is properly activated at the end of the pressing procedure.

4. Investing / pressing / divesting

4.1 Expansion control

Liquid concentration		
Indication	**Mixing liquid [%]**	**dist. water [%]**
crown	60 – 70	40 – 30
Three-unit bridge	65 – 75	35 – 25
Veneer, table top	50 – 60	50 – 40
Inlay (one-/two-surface)	34 – 45	65 – 55
MOD inlay	40 – 50	60 – 50
Onlay	85 – max. 90	15 – 10

Note:

- For premolar and anterior crowns, attention has to be paid to the fact that the higher expansion value will result in enhanced fit of thin and small-sized preparations.
- Expansion values given above are reference values. Deviations from this are possible, due to different preparation templates, preheating furnaces, press temperatures, etc.
- When using acrylics, the expansion may deviate from the table above.

Please note:

- Use a total of 23 ml of liquid for 100 g of powder.
- Use a total of 46 ml of liquid for 200 g of powder.

4.2 Investing

1 Before investing, check wax weight and spruing.

2 Fill investment material in a thin stream up to the restorations.

3 Fill in investment material up to the margin.

4 Set the timer for at least 20 minutes to adhere to the required time period.

Note:

- Investment is performed with the VITA AMBRIA INVEST investment material. For investing, use the appropriate VITA AMBRIA MUFFEL SYSTEM.

Please note:

- Do not spray wax surface tension reducing agent onto the wax objects.
- Observe a processing temperature of the investment material of 18 up to a max. of 25 °C.
- Stir investment material, avoiding the inhalation of dust while doing so. Wear a mask.
- Finely invest the cavities with a thin instrument (e.g., a small brush) and make sure that the fine wax margins are not damaged.
- Place silicone ring on investment ring without damaging the wax objects.
- The silicone ring must sit flush on the investment base.
- Carefully fill the investment ring under light vibration up to the margin.
- Allow the investment ring to set while avoiding any vibrations.
- After a setting time of 20 - 30 minutes, place the investment ring in the preheating furnace.

Note:

- Detailed information on the processing of the investment material can be found in the VITA AMBRIA INVEST Instructions for use 920-02800.

Links/tutorials:

- Learn more in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/invest

Investing process		
Process	**Duration**	**Clarification**
1. Manual stirring	Mix by hand for 20-30 seconds	First add the required quantity of liquid to the beaker. Then add the investment material. Use a spatula to stir the investment material by hand until the powder has been wetted thoroughly.
2. Machine stirring	60 seconds	Mix for 60 seconds under vacuum. Proper function of the vacuum stirrers must be checked repeatedly. Inadequate vacuum results in inaccurate fit and bubbles on the casting.
3. Investing	–	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.

Please note:

- The processing time span is 5 – 9 min. at approx. 21 °C room temperature.
- The processing time span depends on the room temperature, and heat shortens the processing time.

4.3 Preheating

1 Remove the investment ring with a turning movement.

2 Press the investment ring carefully out of the silicon ring.

3 Break the edges of the investment ring without allowing investment material to fall into the channel.

4 Place the investment ring in the furnace with the opening facing down. No contact with the furnace wall.

! Single-use press stamps and pellets must not be preheated.

Investing process		
Process	**Duration**	**Clarification**
1. Setting of the investment material	At least 20 min. At least 30 min.	Remove sprue base and level gauge after 20 minutes.
2. Placing the investment ring	After no more than 30 min. at 850 °C	Straighten bottom of the investment ring (e.g., plaster knife)
3. Preheating the investment ring	When setting the investment ring	preheating temperature 850°C, preheat furnace in good time!
Holding time	100 g investment ring: at least 50 min. 200 g investment ring: at least 75 min.	Once the preheating temperature (850 °C) has been reached again. If three 100 g or two 200 g investment rings or more are placed in the preheating furnace, the holding time must be increased by 15 minutes.

Note:

- The following additional steps are required to prepare for preheating:
  - Carefully remove defects from the bottom of the investment ring using a plaster knife.
  - Ensure an upright position (90° angle).
  - When preheating several investment rings, mark the rings with the pellet shades.

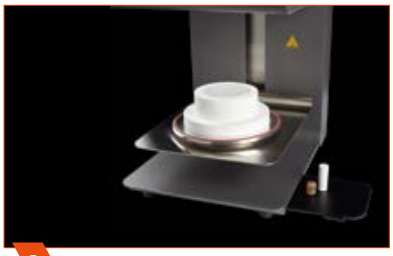
Please note:

- When performing multiple speed investments, there should be a time lag between each one.
- The investment rings should be transferred to the preheating furnace in intervals of approx. 20 minutes.
- When loading the preheating furnace, take care that the furnace temperature does not drop too much.
- The indicated holding time applies once the preheating temperature has been reached again.
- To avoid overfiring, when processing acrylics, the investment ring must be placed in the preheating furnace at 250 °C and held for one hour. Then gradually heat it up.
- 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.

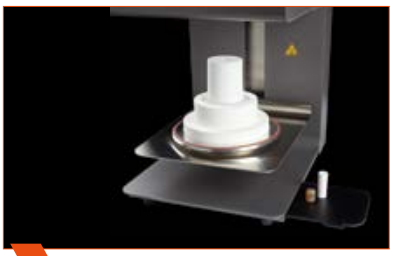
4.4 Pressing

1 The target temperature is shown on the display once it is reached.

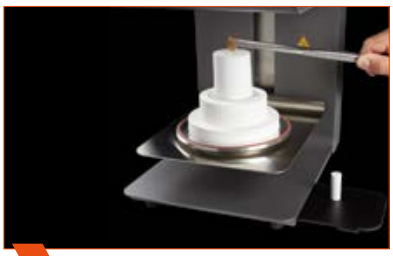
2 After opening the furnace, the message "Insert press material" appears.



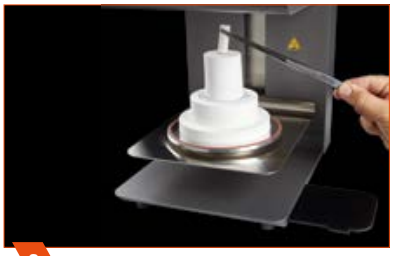
3 Prepare a cold press pellet and a cold plunger in the required shade.



4 Place the hot investment ring on the universal press disc.



5 Insert the press pellet with the logo side up.



6 Place the disposable press plunger with the point up on the pellet.

7 Start the press process using the start button.

8 After removing the investment ring, allow it to cool in a protected place.

Loading the ring		
	100 g investment ring	**200 g investment ring**
Single tooth restorations	1 small pellet (S)	1 small pellet (S) or 1 large pellet (L)
Three-unit bridges	–	max. 1 large pellet (L)
Press pellet and disposable press plunger	fill with cold pellets	

Note:

- Switch the press furnace (VITA VACUMAT 6000 MP) on early in order to complete the preheating phase in time. Alternatively, a press program for warming up can also be run.
- Call up the press program for VITA AMBRIA in the desired translucency level and have the desired pellet ready.
- Place hot investment ring in the hot press furnace within 30 seconds after removal from the preheating furnace.
- Remove the investment ring immediately after pressing with the muffle tongs from the press furnace.

Please note:

- Do not speed up cooling – no blowing with pressurized air.
- The press pellets can only be used once.

Links/tutorials:

- Learn more in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/press

4.5 Divesting

1 Determine the press depth by marking with a second press plunger.

2 Cut deep into the investment material along the marking.

3 Split the investment material carefully using a knife on the predetermined breaking point.

4 Perform rough divestment with Al_2O_3 (50 µm grain size) at a pressure of 4 bar.

5 Fine divestment and removal of reaction layer at a pressure of 2 bar.

6 Final blasted restoration without reaction layer.

Note:

- Remove the reaction layer with Al_2O_3 (50 µm) or polishing beads at a max. pressure of 2 bar.
- Completely remove reaction layer both inside and outside, as residues of the reaction layer can lead to bonding problems between the press ceramic and the veneering ceramic.

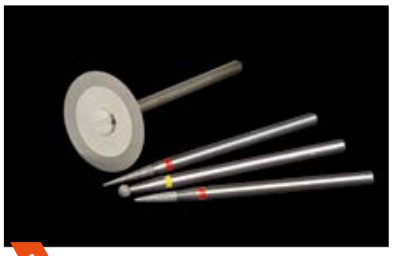
Please note:

- The restorations must be blasted at a flat angle.
- When divesting, in order not to damage the pressed restorations around the margins, the required direction of blasting and the distance to the object need to be observed.

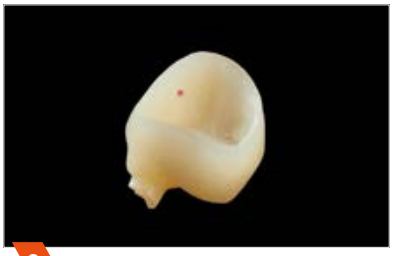
Links/tutorials:

- Learn more in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/devest

4.6 Finishing for monolithic restorations



1 Separate and process with suitable grinding instruments only.



2 Restoration with separated press sprue.

3 Fit restoration and check contact points.

4 Grind press sprue.

5 Process surface individually.

6 Clean grinding dust and contact agents from surface.

Links/Tutorials:

- Learn more now in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/rework

4.7 Finishing for veneering technique

1 Separate press sprue with a thin diamond separating disc.

2 Fit restoration and grind press sprues.

3 Inspect cut-back with silicon key. Limit reduction to the incisal third.

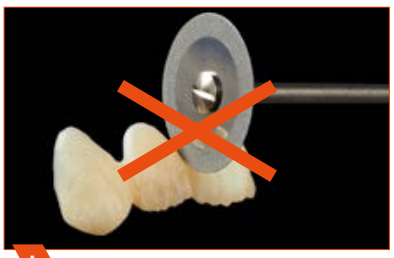
4 Finish the restoration. Strive for round transitions.

5 Restoration on the model after finishing.

6 Blast restoration with Al_2O_3 and at a max. of 2 bar pressure.

7 Clean the restoration thoroughly with a steam jet before partial veneering.

! Avoid pointed edges and deep fissures in the morphology of mamelons.



! Do not separate the restoration with a separating disc to avoid predetermined breaking points.

Note:

- Only work with suitable abrasives (special glass ceramic abrasives or fine grain diamonds), and avoid overheating of the glass ceramic.
- Using a thin diamond disc with low pressure application and continuous moistening, separate the press sprue at the greatest possible distance from the object to avoid possible cracking.
- Remove spacer from the model die and carefully check the fit of the restoration and adjust it.
- Check approximal / occlusal contact points and grind, if needed.
- Carefully adjust the attachment point of the sprue.

Please note:

- Unsuitable grinding tools and high pressure can cause local overheating or chipping of the margin.
- Keep adjustments to a minimum.
- Do not separate the bridge connectors with the help of a cutting disc, as this will result in predetermined breaking points.
- Minimum wall thicknesses must be ensured when finishing/adjusting the restoration!

Links/Tutorials:

- Learn more now in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/rework

4.8 Tempering

Note:

- Once the restoration has been adjusted and fitted, tempering can be carried out.
- This causes superficial smoothing of the processed restoration and also contributes to an increase in stability.

Please note:

- After tempering, the restoration must not be blasted again, as this will again reduce stability.
- The firing chamber must not be opened during long-term cooling.

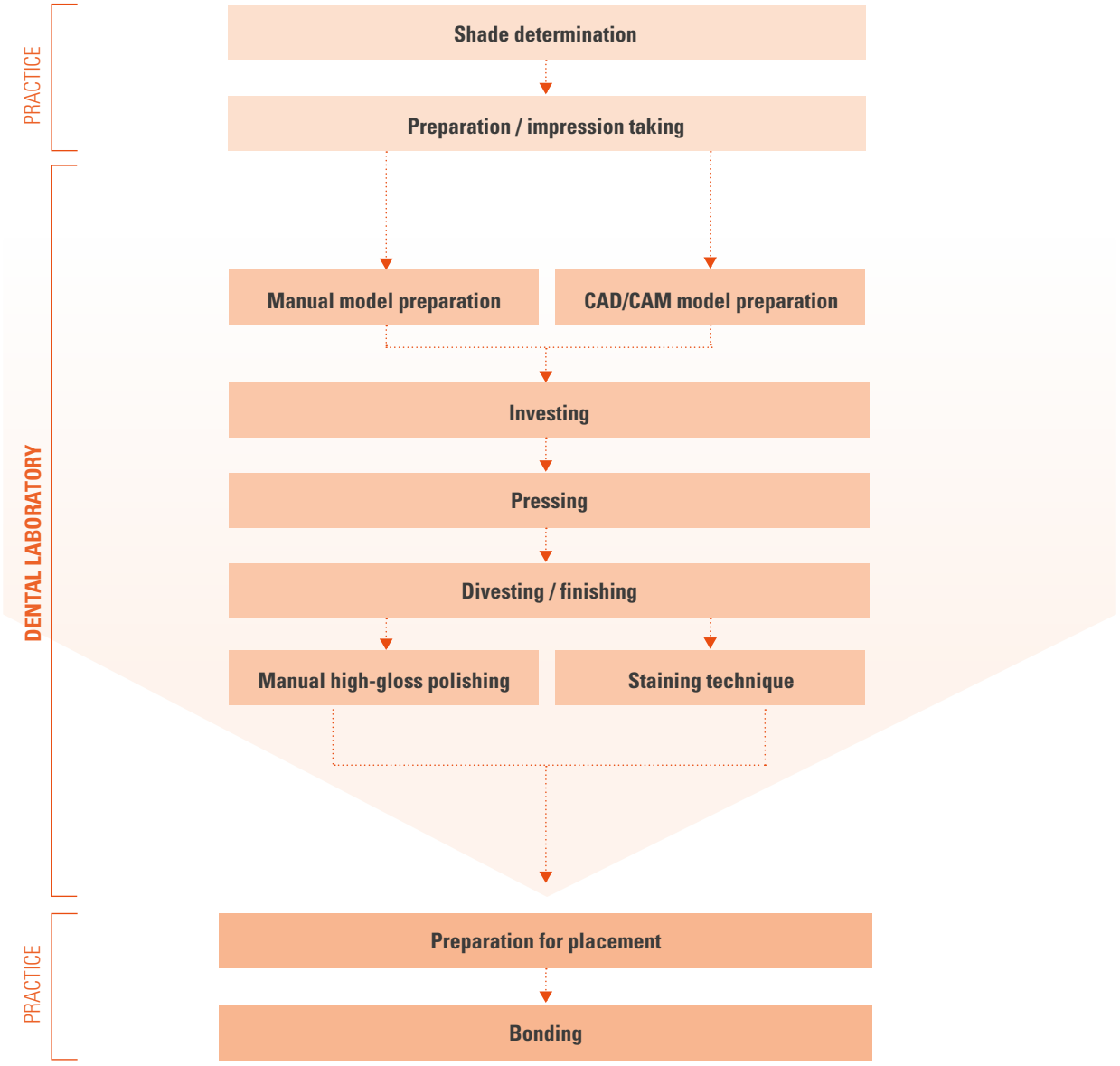
Note:

- For more information on the firing parameters, please refer to the chapter Shade reproduction/Firing under item 7.4 in these Instructions for use.

5. Staining technique / polishing

5.1 Workflow options for monolithic restorations

Process steps in the practice and laboratory



Note:

- Workflow for monolithic restorations (manual polishing or staining technique) made from VITA AMBRIA Press Pellets.

5.2 Manual high-gloss polishing

1 Prepolishing with a rough prepolishing wheel.

2 Prepolishing with a rough prepolishing lens.

3 High-gloss polishing with a fine high-gloss polishing wheel.

4 Optionally increase the degree of gloss with the use of polishing paste.

5 Clean using a steam jet.

6 Final restoration with high-gloss polishing.

Note:

- Prepolish with the pink VITA SUPRINITY polishing instruments at a speed of 7,000 – 12,000 rpm.
- Perform high-gloss polishing with the gray VITA SUPRINITY polishing instruments at a speed of 4,000 – 8,000 rpm.

Please note:

- Avoid generating heat during prepolishing and high-gloss polishing!
- Ensure a reduced and uniform pressure.
- Tempering can be conducted beforehand to increase durability.

Tip:

- An even higher degree of gloss can be achieved with VITA KARAT diamond polishing paste (for extraoral use only).

Note:

- For information on bonding restorations made of VITA AMBRIA, please refer to the brochure #10146 (bonding recommendations).

5.3 Staining technique

1 Roughen the restoration and carefully remove all dust particles.

2 Prepared crown on the model.

3 Application of glazing material.

4 Use stains to characterize buccal and ...

5 ... occlusal area with stains.

6 Restoration after firing.

! Alternatively, you can work with low-fusing spray glaze.

Note:

- The VITA AKZENT Plus stain and glazing materials are available for characterization.
- Clean the pressed restorations with a steam jet prior to staining to remove grease or dirt residues.
- To intensify the shading, repeat the application of shade, instead of applying the shade more thickly.
- To improve the wettability, apply VITA AKZENT Plus Fluid to the surface to be stained.

Please note:

- Restorations made of VITA AMBRIA and VITA LUMEX AC must be glazed with VITA AKZENT Plus GLAZE LT (powder, spray).
- Poor gloss will result if glaze material is applied too thinly. Avoid excessive application of glaze material and the formation of puddles.
- When using the glazing spray, spray the glaze on evenly from a distance of 10 to 15 cm while pressing the valve intermittently.
- The inner surfaces of the restoration must not be sprayed with the glazing spray.
- To increase durability, tempering can be done beforehand.

Note:

- For information on bonding restorations made of VITA AMBRIA, please refer to the brochure #10146 (bonding recommendations).

Links/tutorials:

- Learn more in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/stain

5.4 Recommendations on characterization and glazing

Note:

- **Characterization with stains**
  - For additional imitation of the incisal edge and the translucency in the incisal and occlusal region, VITA AKZENT Plus EFFECT STAINS (e.g., ES10, ES11, ES12, ES13) can be used.
  - For individual characterization of the cusps and fissures, the VITA AKZENT Plus EFFECT STAINS ES05–ES07 can be used.
  - To intensify the shade in the body of the tooth, the VITA AKZENT Plus CHROMA STAINS are available.

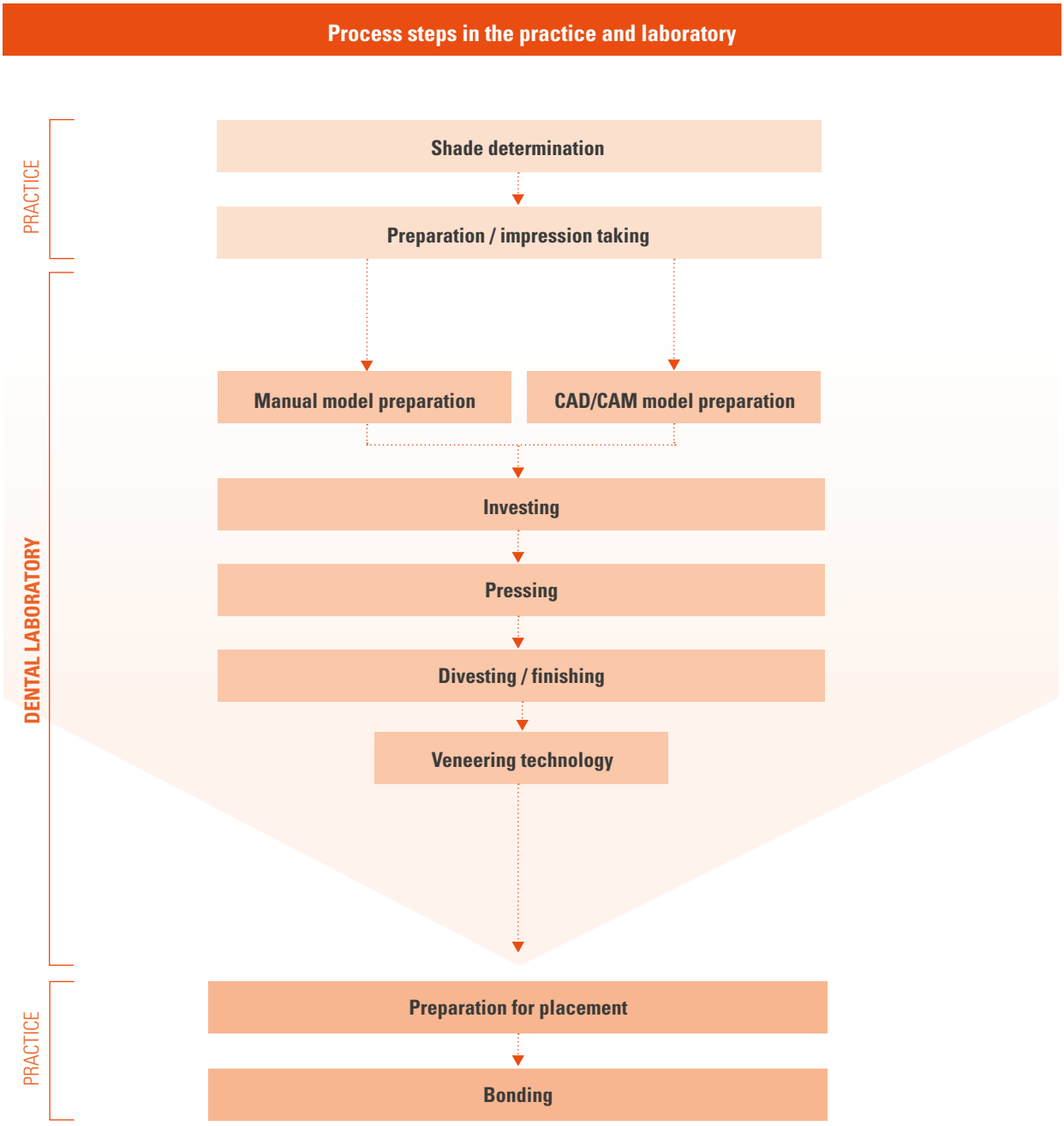
- **Glaze firing with glazing materials**
  - The glaze firing can be done with either powder, pastes or spray materials.
  - VITA AKZENT Plus FLUOGLAZE LT Spray is available for increasing fluorescence.
  - Approximal contacts that are too weak or missing can be filled with VITA AKZENT Plus FINISHING AGENT.
  - Glaze material on the inner surface of the restoration absolutely must be removed with a brush BEFORE firing.

Note:

- Detailed information on characterization and glazing can be found in the VITA AKZENT PLUS Working Instructions, No. 1925.

6. Veneering technique

6.1 Workflow for partially veneered restorations



Note:

- Workflow for partially veneered restorations (cut-back) made of VITA AMBRIA Press Pellets.

6.2 Cut-back and partial veneering: example of bridge restoration

1 Cleaned restoration.

2 Filling out the shape with VITA LUMEX AC enamel and translucency materials.

3 Restoration after the first firing.

4 If necessary, perform shape corrections and fire again.

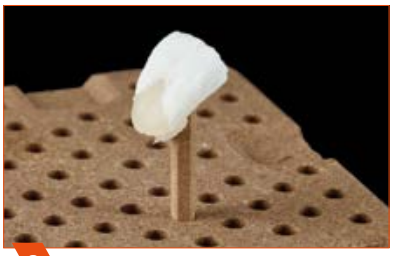
5 Final finished restoration after second firing.

6 Completed restoration after glaze firing.

6.3 Cut-back and partial veneering: example of veneer restoration

1 Fit, finish and reduce restoration after the press process.

2 Filling out the shape with VITA LUMEX AC enamel and translucency materials.



3 Fix veneer on the firing tray with VITA Firing Paste.

4 Veneer after the first firing

5 Final restoration after high-gloss polishing.

Note:

- With the cut-back technique, VITA LUMEX AC translucency and incisal materials are applied to the reduced VITA AMBRIA restoration in the incisal or occlusal area.
- The anatomical shape is completed again with the VITA LUMEX AC materials.

Please note:

- When adding VITA LUMEX AC in the cut-back technique, a washbake is NOT required.
- VITA LUMEX AC MODELLING LIQUID is recommended for mixing VITA LUMEX AC materials.
- Tempering can be conducted beforehand to increase durability.

Note:

- For detailed information on veneering, please see the VITA LUMEX AC Instructions for Use #10605.
- For information on bonding restorations made of VITA AMBRIA, please refer to the brochure #10146 (bonding recommendations).

Links/tutorials:

- Learn more in tutorial videos: www.vita-zahnfabrik.com/tutorial/ambria/all/ifu/veneer

7. Shade reproduction/firing

7.1 Shade reproduction using staining technique

Characterizing a fully anatomical restoration with VITA AKZENT PLUS			
Tooth shade	**Pellet shade**	**CHROMA STAINS**	**EFFECT STAINS**
0M1	0M1	–	**Individual application:** ES01–ES07 **Incisal:** ES10, ES11, ES12, ES13
0M2	0M1	–	
0M3	0M3	–	
A1	A1	–	
A2	A2	–	
A3	A3	–	
A3.5	A3	CS A	
A4	A3	CS A	
B1	B1	–	
B2	B2	–	
B3	B2	CS B	
B4	B2	CS B	
C1	A1	CS C	
C2	C2	–	
C3	C2	CS C	
C4	C2	CS C	
D2	D2	–	
D3	D2	CS D	
D4	D2	CS D	

Note:

- Detailed information on characterization and glazing can be found in Instructions for Use #10375 (VITA AKZENT Plus CHROMA STAINS) and #1925 (VITA AKZENT Plus).

7.2 Shade reproduction using partial veneering

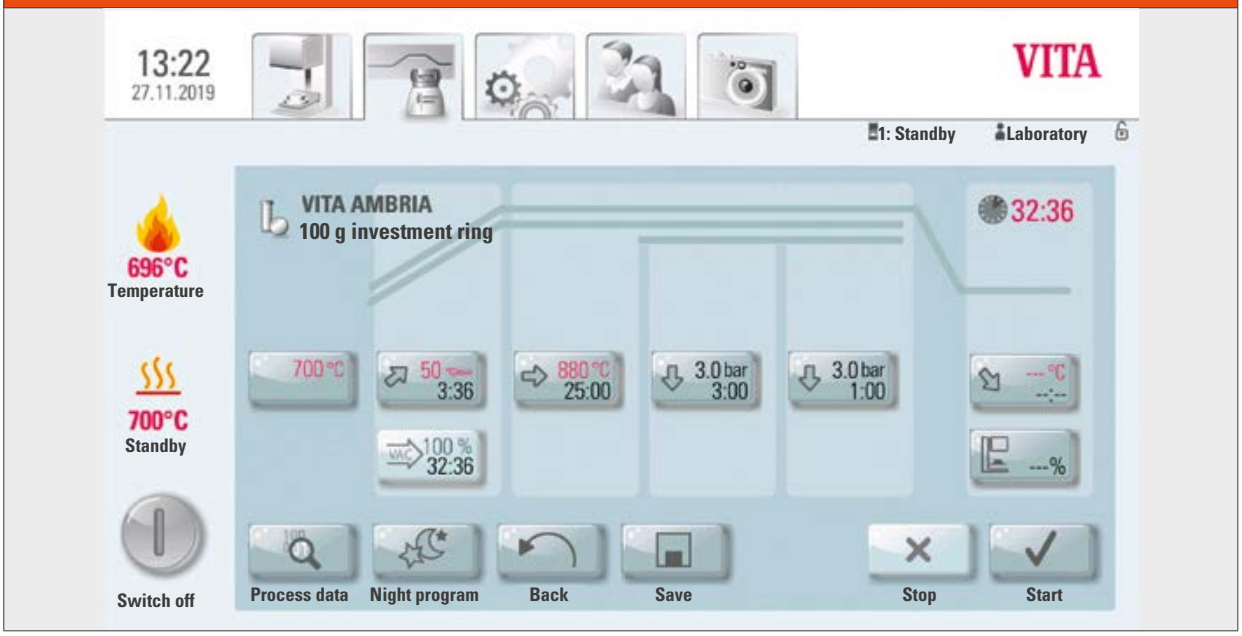
Characterizing a fully anatomical restoration with VITA AKZENT PLUS					
Tooth shade	**Pellet shade**	**VITA LUMEX AC enamel materials**	**VITA LUMEX AC translucent materials**	**CHROMA STAINS**	**EFFECT STAINS**
0M1	0M1	light	**INDIVIDUAL APPLICATION:** **OPAL TRANSLUCENT** opal-neutral opal-sky opal-azure **TRANSLUCENT** smoky-white light-blonde misty-rose sunlight sun-intense deep-blue water-drop foggy-grey **PEARL** shell	–	**Individual application:** EFFECT STAINS ES01–ES07 **Incisal application:** EFFECT STAINS ES10, ES11, ES12, ES13
0M2	0M1	light		–	
0M3	0M3	light		–	
A1	A1	light		–	
A2	A2	light		–	
A3	A3	light		–	
A3.5	A3	medium		CS A	
A4	A3	medium		CS A	
B1	B1	medium		–	
B2	B2	medium		–	
B3	B2	medium		CS B	
B4	B2	medium		CS B	
C1	A1	medium		CS C	
C2	C2	medium		–	
C3	C2	light		CS C	
C4	C2	light		CS C	
D2	D2	medium		–	
D3	D2	medium		CS D	
D4	D2	medium		CS D	

Note:

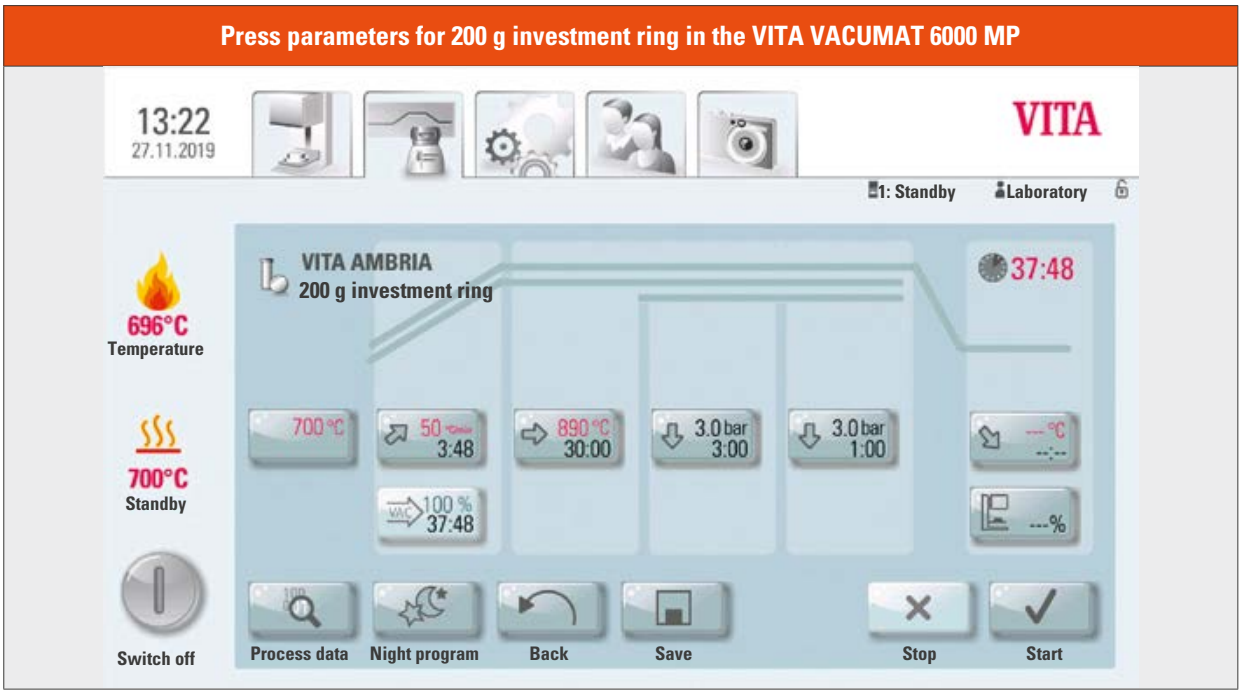
- For detailed information on veneering, please see the VITA LUMEX AC Instructions for Use #10605.

7.3 Press parameters

Press parameters for 100 g investment ring in the VITA VACUMAT 6000 MP



Press parameters for 200 g investment ring in the VITA VACUMAT 6000 MP

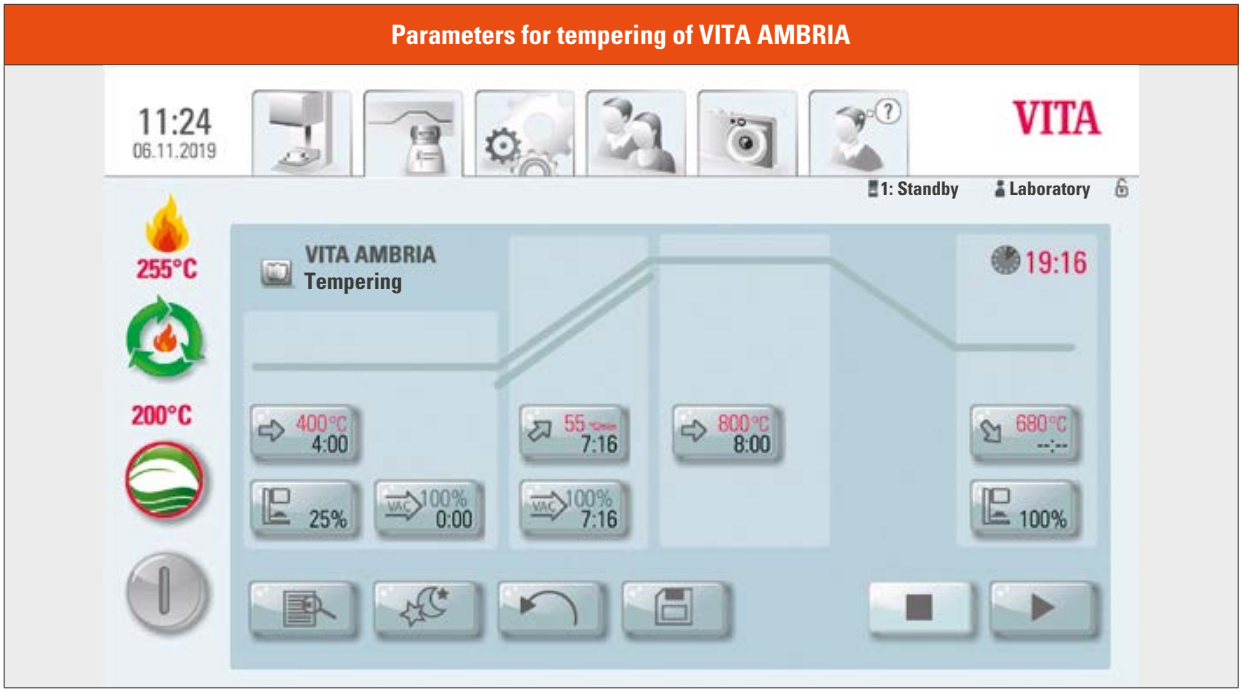


Note:

- The recommended press parameters apply for both T and HT pellets.

7.4 Tempering

Parameters for tempering of VITA AMBRIA



Note:

- Tempering causes a superficial smoothing of the processed restoration and contributes to an increase in strength (550 MPa).

Please note:

- After tempering, the restoration may no longer be blasted; otherwise, the strength will be reduced again.
- The firing chamber must not be opened during long-term cooling.

7.5 Firings for staining / glazing

Firing parameters for staining technique with VITA AKZENT Plus						
VITA VACUMAT 6000 M	**Predry. °C**	**→ min.**	**approx. temp. °C**	**→ min.**	**VAC min.**	**↘ °C**
Stains fixation firing	400	4.00	700	1.00	–	–
Glaze firing	400	0.00	750	1.00	–	500*
Glaze firing with VITA AKZENT Plus GLAZE LT Powder/Spray	400	4.00	750	1.00	–	500*

7.6 Firings for veneering technique

Firing parameters for partial veneering with VITA LUMEX AC						
VITA VACUMAT 6000 M	**Predry. °C**	**→ min.**	**approx. temp. °C**	**→ min.**	**VAC min.**	**↘ °C**
First dentine firing	400	6.00	760	1.00	7.16	–
Second dentine firing	400	6.00	755	1.00	7.16	500*
Stains fixation firing	400	4.00	700	1.00	–	–
Glaze firing	400	4.00	750	1.00	–	500*
Glaze firing with VITA AKZENT Plus GLAZE LT Powder/Spray	400	6.00	750	1.00	–	500*

*) Long-term cooling down to the respective temperature is recommended for the respective last firing cycle. The lift position for VITA VACUMAT 6000M furnaces should be > 75%. The fired items must be protected from drafts after opening the furnace.

7.7 Recommendations for firing

Note:

- The use of ceramic trays and posts is not recommended because the restorations may stick to them.
- If ceramic trays and posts are still used, it is recommended that they be covered with platinum foil or a small amount of VITA Firing Paste to avoid direct contact with the restoration.
- If other, untested furnaces are used, the following should always be observed:
  - Furnaces must have a function for controlled long-term cooling, as well as a vacuum.
  - Calibrate the furnace before the first use of VITA AMBRIA. Adhere to the manufacturer's specifications when calibrating.
- After the firing process, remove VITA AMBRIA restorations from the furnace and allow to cool to room temperature, protected from drafts. Restorations that are still hot must not be touched with metal tongs, blasted or quenched.

Please note:

- Fibrous pad firing supports and platinum pins are recommended for firing.
- The firing parameters provided are matched to the VITA VACUMAT furnaces (optimal adjustment to the VITA VACUMAT 6000 series).
- If a VITA furnace is not used, temperature adjustments by +/- 5 °C up to a max. of +/- 10 °C may be necessary.

Tip:

- To avoid excessive glazing or underfiring, the firing temperature should be checked regularly.

8. Technical data/information

8.1 Technical / physical data

Property	Unit	Value
CTE	$10^{-6} \cdot K^{-1}$	approx. 9.4
Biaxial strength (after pressing)	MPa	approx. 400
Biaxial strength (after tempering)	MPa	approx. 550
Solubility	$\mu g/cm^2$	approx. 30

8.2 Chemical composition

Components	Wt%
ZrO_2 (zirconia)	8–12
SiO_2 (silicon dioxide)	58–66
Li_2O (lithium oxide)	12–16
Pigments	< 10
Various	> 10

Note:

- The technical/physical values given are typical measurement results and refer to in-house manufactured samples and measuring instruments in the company.
- If samples are prepared using different methods and measurement equipment, other measuring results may be obtained.

8.3 Indication overview

VITA AMBRIA is approved for:
○ Occlusal veneers (Table Tops)*, veneers* ○ Inlays*, onlays*, partial crowns* ○ Crowns in the anterior and posterior area ○ Three-unit bridges in the anterior tooth region up to the second premolar as a terminal pillar ○ Single tooth restorations as implant suprastructures for anterior and posterior teeth ○ Three-unit bridges as implant suprastructures up to the second premolar on implant abutments ○ Single tooth mesostructures in the anterior and posterior areas ○ Abutment crowns in the anterior and posterior areas

*) For adhesive bonding only.

Note:

- VITA AMBRIA are zirconia-reinforced lithium disilicate glass ceramic pellets for the manufacture of restorations using press technique.

8.4 Contraindication

Contraindications:
○ In cases of inadequate oral hygiene ○ In cases of inadequate preparation results (such as tangential preparation, for example) ○ Insufficient hard tooth substance ○ In cases of insufficient space available ○ Hyperfunction: for patients diagnosed with excessive occlusal function, in particular teeth grinders and clenchers ○ Restoring devitalized teeth of patients with hyperfunctions ○ Endodontic crowns ○ Posterior bridges in the area of molars ○ In cases of bridges with more than three units ○ Inlay-retained bridges / Maryland bridges ○ Cantilever bridges ○ In patients with allergies or sensitivities to the ingredients ○ Conventional or self-adhesive incorporation of inlays, onlays, veneers, partial crowns and occlusal veneers (Table Top) ○ Temporary seating of restorations

Please note:

- Successful processing of VITA AMBRIA is not guaranteed in the following cases:
  - ○ Pressing of several VITA AMBRIA pellets in one investment ring.
  - ○ Veneering with veneering ceramics that are not suitable for the veneering of VITA AMBRIA or that have a firing temperature > 770 °C.
  - ○ Exceeding the stipulated minimum wall and connector thicknesses.
  - ○ Overpressing: VITA AMBRIA is not suitable for the overpressing of zirconia and metal substructures.

8.5 General notes on handling

Note:

- Please check the packaging and the material immediately after receipt for an intact condition.
- The packaging must be sealed.
- The manufacturer's name, VITA Zahnfabrik, and the CE marking must be present on the packaging.

Please note:

- Store the VITA AMBRIA pellets in the original packaging and in a dry place.
- The materials must not be contaminated with foreign substances (e.g., during the press process).

- Please read through the Working Instructions carefully before you take the press pellets out of the packaging. They contain important information on processing that is useful for your safety and the safety of your patients.
- If not all of the instructions in this leaflet are followed, the VITA AMBRIA press pellets must not be used to make dentures.

- Information regarding general risks of dental treatment. These risks do not relate specifically to VITA products but need to be taken into account by all users:
  - Dental treatment and the integration of dental restorations entail the general risk of iatrogenic damage to hard tooth substance, pulp and/or oral soft tissue. The use of bonding systems and the integration of dental restorations involve the general risk of postoperative hypersensitivity.
  - In the event of non-compliance with the Instructions for Use of the products in use, the product characteristics cannot be ensured, so that product failure and irreversible damage to the natural hard tooth substance, pulp and/or oral soft tissues may result.
  - The success of any restoration depends on its fit onto the underlying tooth structure with minimal discrepancies.
  - The ability to produce a routinely smooth, sound and well-fitting restoration requires strict adherence to certain fundamentals.
  - A deficient margin leads to new formation of plaque resulting in gingival inflammation and marginal leakage which can lead to secondary caries, sensitivity, gingival recession, cement dissolution, and debonding of the restoration or decrease in color match.
  - Our products must be used in accordance with the current version of the instructions for use.
  - Any incorrect use may cause damage.
  - 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.
  - If serious incidents have occurred in connection with the product, they must be reported to VITA Zahnfabrik H. Rauter GmbH & Co. KG and the competent authority of the Member State in which the user and/or patient is established.

8.6 Symbol explanations

Medical device	MD	Manufacturer	
For dental users only	Rx only	Date of manufacture	
Observe instructions for use		Expiration date	
Temperature limit		Product number	REF
Store in a dry location		Lot number (batch)	LOT
Do not reuse			

8.7 Safety at work / health protection

Safety at work and health protection	• While work is in progress, wear suitable safety goggles/face protection. • Only perform work under an extraction unit. • Wear light mouth protection when working.	

8.8 Safety data sheets

VITA AMBRIA INVEST P	**Important** • Contains quartz and cristobalite. • Causes damage to the lungs through prolonged or repeated exposure. Route of exposure: inhalation. • Do not inhale dust. • If you feel unwell, contact a doctor. Dispose of contents according to local regulations.	
VITA AKZENT PLUS: – **GLAZE LT** Spray – **FLUO GLAZE LT** Spray	**Danger** • Extremely flammable aerosol Spray-on ceramic glaze material. • For dental applications only. Not for intraoral use. Shake well before use. Pressurized container. May burst if heated. Do not puncture or burn. Protect from direct sunlight and temperatures above 50 C°. Do not pierce or burn even after use. Do not spray into flames or onto glowing objects. Keep away from ignition sources. - No smoking. • Keep away from heat, sparks, open flame, hot surfaces	
VITA Firing Paste	**Health hazard / caution** • May cause cancer by inhalation. Causes skin irritation. For commercial use only. • Wear protective gloves/protective clothing/eye and face protection. Use personal protective equipment as required. Special treatment: remove contaminated clothing and wash before wearing again. Keep locked up. • Dispose of contents/container in accordance with local/regional/national/international regulations. Hazardous dust is formed when crushing in the dry condition (after firing).	

Note:

- You can find detailed information on the corresponding data safety sheet.
- The corresponding safety data sheets can be obtained at www.vita-zahnfabrik.com/downloadcenter or by fax at (+49) 7761 562-233.

8.9 Variants, geometries and shades

VITA AMBRIA types/shades

VITA AMBRIA Press pellets

for delicate veneers, esthetic full/partial crowns and three-part bridges up to the second premolars

Degree of translucency	size	Chroma
• TRANSLUCENT T • High Translucent HT	• S • L	• mono-chromatic

VITA classical A1–D4/Bleached Shades

Shades	0M1	0M3	A1	A2	A3	B1	B2	C2	D2
Translucent	✓	✓	✓	✓	✓	✓	✓	✓	✓
High Translucent	✓	✓	✓	✓	✓	✓	✓	✓	✓

8.10 VITA System Solutions

Shade determination

- For digital shade determination, use **VITA Easyshade** V, and for visual shade determination, use a **VITA shade guide**.

Modeling

- For modeling, use a residue-free combustible modeling or milling wax.

Investing

- For investing, use the coordinated investment material system **VITA AMBRIA** INVEST P + F and the **VITA AMBRIA** MUFFEL SYSTEM.

Pressing

- For pressing, use **VITA AMBRIA** Pellets, the combipress unit **VITA VACUMAT 6000 MP** and the disposable press plunger **VITA AMBRIA** PLUNGER.

Veneering*

- Veneer your reconstructions with the veneering ceramic **VITA LUMEX** AC, which is ideally matched to VITA AMBRIA.

Characterization Glazing

- Characterize and glaze restorations with the **VITA AKZENT** PLUS stains/glazing materials.

Polishing

- Polish restorations with the recommended **VITA SUPRINITY** Polishing Set.

Bonding

- Bond restorations fully or self-adhesively with **VITA ADIVA** LUTING SOLUTIONS.

*) Optional: Veneering with VITA LUMEX AC is an optional process step and is not necessary for the monolithic restoration concept.

NOTES

WE ARE HERE TO HELP

More information on products and processing is also available at **www.vita-zahnfabrik.com**

Hotline Sales Support
Mrs. Carmen Holsten and her team
(Internal Sales Department)
will be glad to assist you with
orders or questions about delivery,
product data and marketing materials.

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8:00 a.m. to 5:00 p.m. CET
Email info@vita-zahnfabrik.com

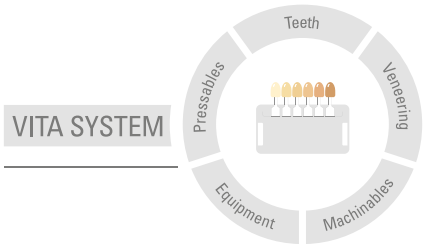
Technical hotline
If you have technical questions
concerning VITA product solutions,
you can contact our technical
specialists Mr. Ralf Mehlin or
Mr. Daniel Schneider.

Phone +49 (0) 7761 / 56 22 22
Fax +49 (0) 7761 / 56 24 46
8:00 a.m. to 5:00 p.m. CET
Email info@vita-zahnfabrik.com

You can find additional international contacts at **www.vita-zahnfabrik.com/contacts**

For more information on VITA AMBRIA PRESS SOLUTIONS: **www.vita-zahnfabrik.com/ambria**

You can find more information on VITA AMBRIA at:
www.vita-zahnfabrik.com/ambria



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