low, low press

estetic ceram

Instruction for use

estetic ceram ag

CE 0483

low, low press Content

estetic ceram

low

The estetic ceram layering ceramic **low** is a leucite glass ceramic and is coloured according to the Vita®* classical shade guide A1-D4. The **low** layering ceramic is only intended for dental applications and for use by trained professionals.

Indication

- Veneering of suitable dental alloys for metal-ceram technology with a thermal expansion (CTE) of 16 - 17 x 10^{-6} x K^{-1} (25 - 500 °C)
  - Precious metal alloys.
  - CoCr alloys.
  - In addition, **low** is also suitable as a layering ceramic for frameworks made of **low press**.
- The frameworks must have an anatomically reduced shape, have sufficient stability and allow uniform ceramic layer thicknesses with a maximum layer thickness of 1.5 - 2 mm. Edges and tips are to be rounded off. Missing substance must be replaced with an alloy.

Contraindication

- Combinations with ceramic materials outside of the described range of product systems and/or material from another manufacturer.
- Use of non-approved framework materials.
- Sharp edges and corners on the framework or non-anatomically reduced frame shapes.
- Dental ceramic and complete ceramic restorations made of glass ceramics are not recommended for patients with bruxism or parafunction.

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low Framework Fabrication

prepared precious metal alloy framework

The fabrication of metal framework (casting, processing, cleaning/oxidation) must be performed according to the manufacturer's instructions. The framework must have a reduced anatomical shape and should provide enough space for an even coating of layering ceramic < 2 mm. Sharp edges and corners need to be rounded off.

Important note: Cleaning of framework before any porcelain application.
Base metal alloys (Cobalt-Chromium) create water-soluble chromium oxides during every heat treatment process. The oxide must be removed before porcelain application.
Clean the framework and the layering with steam or water and brush thoroughly before another porcelain application.

low Opaque Bake

framework after opaque bake

The opaques are made in a modern paste form or as powders.
The paste has a ready-to-use consistency and can be applied as a covering layer that doesn't flow. The canned material allows the original consistency to be recreated, simply by mixing it, in case the opaque separates after prolonged storage.

Please pay attention with all pastes: Water reacts with the paste like an extreme thinning agent, therefore after washing the brush with water please dry it before applying opaque paste to it. Wet the brush before use with **opaque liquid** only! Apply the first opaque layer on the clean, dry framework with a flat brush, so that optimum coverage of the metal has been reached (no suction!).

1st Opaque Bake
After the opaque application, the crown or bridge is dried under the open furnace at a starting temperature of 400 °C for 1-2 minutes. Subsequently the furnace is closed with a 6 minute drying time and heated at a rate of 55 K/min with vacuum (vacuum starting at 450 °C) to 800 °C. Hold time: 2 minute (without vacuum)

2 nd Opaque Bake
Clean the framework and the layering with steam or water and brush thoroughly before another porcelain application.
With the application of the second opaque layer the metal frame work is completely covered. Continue with the same procedure as in the first powder opaque bake (800 °C).

low Margin Bake

prepared precious metal alloy cap

coping after opaque bake

coping before margin bake

coping after margin bake

1st Margin Bake
Apply a thin layer of **isolation liquid** to the shoulder of the die. Mix the margin powder with **modeling liquid L2 (margin)** to a creamy consistency. Apply margin shoulder ceramic mix in small portions and condense by tapping, suction any excess liquid and dry well. Clean the framework and the layering with steam or water and brush thoroughly before another porcelain application. After the margin application, the crown or bridge is placed on a firing tray at a starting temperature of 400 °C. Subsequently the furnace is closed with a 4 minute closing time and then heated at a rate of 45 K/min with vacuum (vacuum starting at 450 °C) to 780 °C (bake temperature). Hold time: 1 minute without vacuum. After the first bake, place the crown on the die and remove excess materials.

2 nd Margin Bake
A second margin application follows where necessary to optimize the fit. 2nd bake see first bake (770 °C).

Important note: Clean the framework and the layering with steam or water and brush thoroughly before any further porcelain application.

low Dentine/Incisal Bake

before dentine bake*

after dentine bake

before incisal bake

after incisal bake

Mix ceramic powder (dentine and correlated incisal) with **modeling liquid** to a creamy consistency. Apply Opaque dentine, dentine and incisal ceramic in small portions to the cervical and interdental area and compact by light vibration. Then more opaque dentine, dentine or incisal is applied according to the tooth layering.

Important note: Clean the framework and the layering with steam or water and brush thoroughly before any further porcelain application.

1st Dentine/Incisal Bake
After the dentine application the crown is placed on a firing tray at a starting temperature of 400 °C. Subsequently the furnace is closed with a 4 minute closing time and then heated at 45 K/min with vacuum (vacuum starting at 450 °C) to 760 °C (bake temperature). Hold time: 1 minute (without vacuum).
After the first dentine/incisal firing is complete, trim the crown or bridge and clean. Next, apply a second layer of dentine and incisal for the second dentine firing to complete.

2nd Dentine/Incisal Bake
Same procedure as by the first dentine firing, except with a firing temperature of 750 °C. Any further dentine firings should be carried out at 740 °C.

* Dentine and incisal firing is of course also possible in one go and is common practice.

low Glaze Finish/Glaze Firing

elaborated for stains/glaze firing

after stains/glaze firing

After completely finishing the surface with a diamond instrument, thoroughly clean the crown or bridge. Apply the **glaze LFU paste** or the **glaze LFU powder** mixed with the **glaze liquid** in a thin layer.

For colour characterization, estetic ceram estetic ceram **glaze, shades & stains LFU** can be applied and fired. For the firing, please refer to the firing table or to the separate instructions for use.

Glaze Firing

After the stains/glaze application the crown or bridge is placed on a firing tray at a starting temperature of 400 °C. Subsequently the furnace is closed with a 4 minute closing time and then heated at 45 K/min without vacuum to 710°C (bake temperature). Hold time: 1 minute (without vacuum).

Natural Glaze

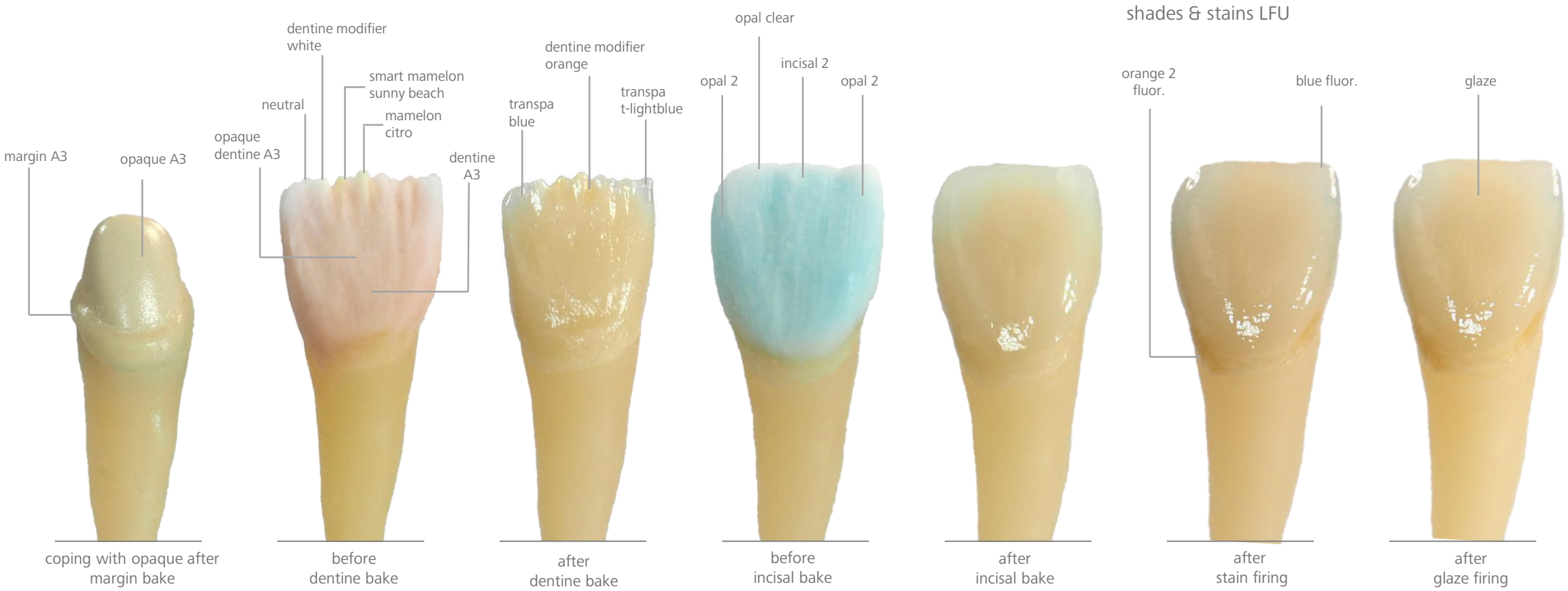
Place the crown on a firing tray at a starting temperature of 400 °C. Subsequently close the furnace with a 4 minute closing time and then heat at a rate of 45 K/min with vacuum to 740 °C (bake temperature). Hold time: 1 minute (without vacuum).

low Modeling «nature»

For the simpler «nature» modeling, a thin layer of opaque dentine can be applied after the opaque firing to create a deep effect. The tooth body is built up with dentine materials, slightly contoured and covered with incisal material. After the dentine/incisal firing has been completed, **shades & stains LFU** can be used to highlight aspects of the finished crown that match the tooth colour. The gloss finish can then be made with the **glaze LFU**. (Firing chart on page 39)

low Colour Matching

low Modeling «individual»



For the «individual» modeling, a thin layer of opaque dentine was applied after the opaque and margin firing for the optical depth effect. Dentine, modifiers, mamelons and various transpa materials were then applied analogously to the internal structure of natural teeth. After the dentine firing, the crown was completed with various incisal and opal materials and fired. Special colour aspects of the finished crown can be highlighted with the **shades & stains LFU**. With the **glaze LFU** the crown got its gloss finish. (Firing chart see page 39)

Coloured Modeling Liquids

estetic ceram

If desired, our ceramic powders can be coloured with coloured modeling liquid. This makes it easier for the dental technician to distinguish between the powders when layering.

low Monolayer

monolayer
M1

monolayer
M2

monolayer
M3

estetic ceram **low monolayer** materials combine the properties of dentine and incisal. With **low monolayer** it is possible to produce all 16 Vita® * tooth shades with coordinated transparency and fluorescence simply, quickly and efficiently with just 3 ceramic materials.

Note: Combination table on page 38.

colour matching

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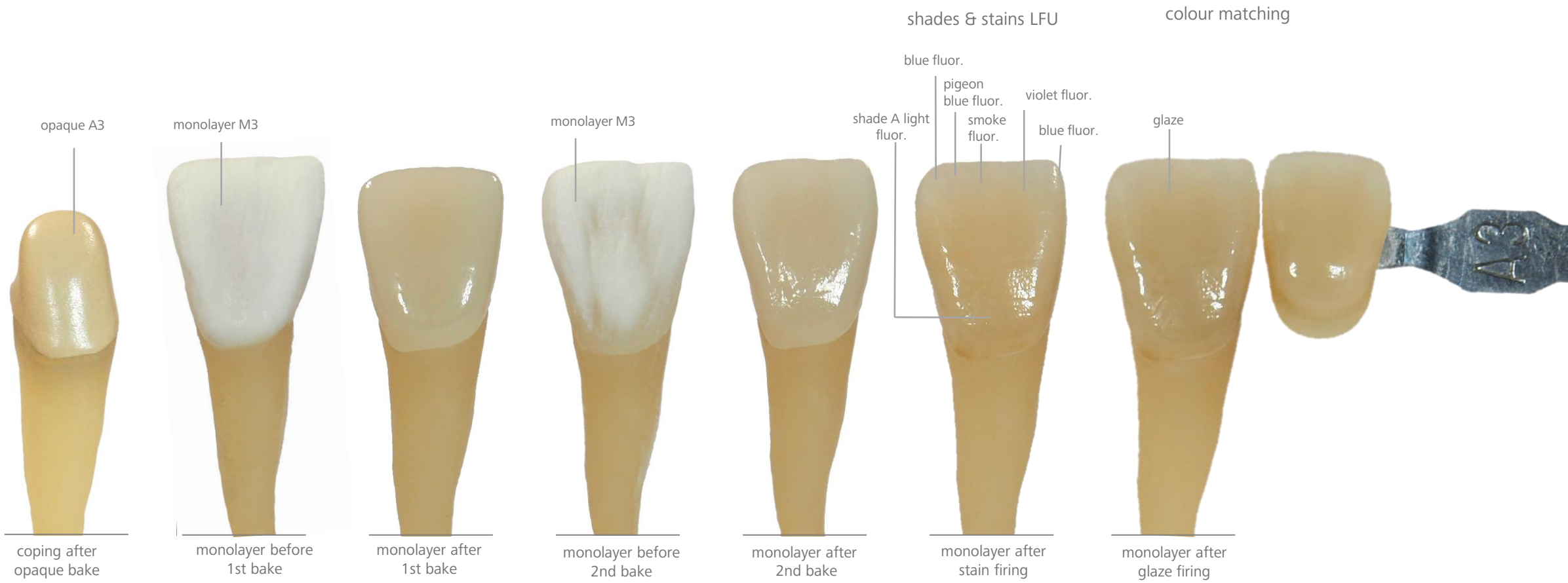
low Monolayer Modeling



In order to obtain the tooth shade A3, the complete tooth shape can be enlarged with the **low monolayer** M3 and applied to the coping that was opaque with opaquer A3. After firing and finishing the crown, the tooth shade (A3) can be optimally matched to the Vita® * shade guide with estetic ceram **shades & stains LFU**. (see the matching colour assignment of the **shades LFU** in the combination table on page 38. The gloss finish can be achieved with the estetic ceram **glaze LFU**.

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low Gingiva

estetic ceram

Colour overview

gingiva 1 bright | gingiva 2 middle | gingiva 3 | gingiva 4 dark | gingiva 5 dark orange | gingiva 6 violet | gingiva 7 light orange | gingiva 8 middle orange | gingiva 9 orange | gingiva 10 rose | gingiva 11 bright | gingiva 12 dark

gingiva 13 dark pink | gingiva 14 brown | gingiva 15 violet | gingiva 16 brown pink | gingiva 17 flamingo | gingiva 18 rose orange | gingiva 19 dark pink opaque | gingiva 20 violet brown | gingiva 21 neutral | gingiva 22 pink light | gingiva 23 intensive red

The **low gingiva** powders are used for reconstruction in the gum area. For this, our gingiva powders can be individually combined with each other depending on the colour you want. The illustration shows a dental work in which several **low gingiva** materials were combined in order to achieve a natural appearance of the gum restoration.

low Gingiva

estetic ceram

Colour overview on the model

low Correction Bake

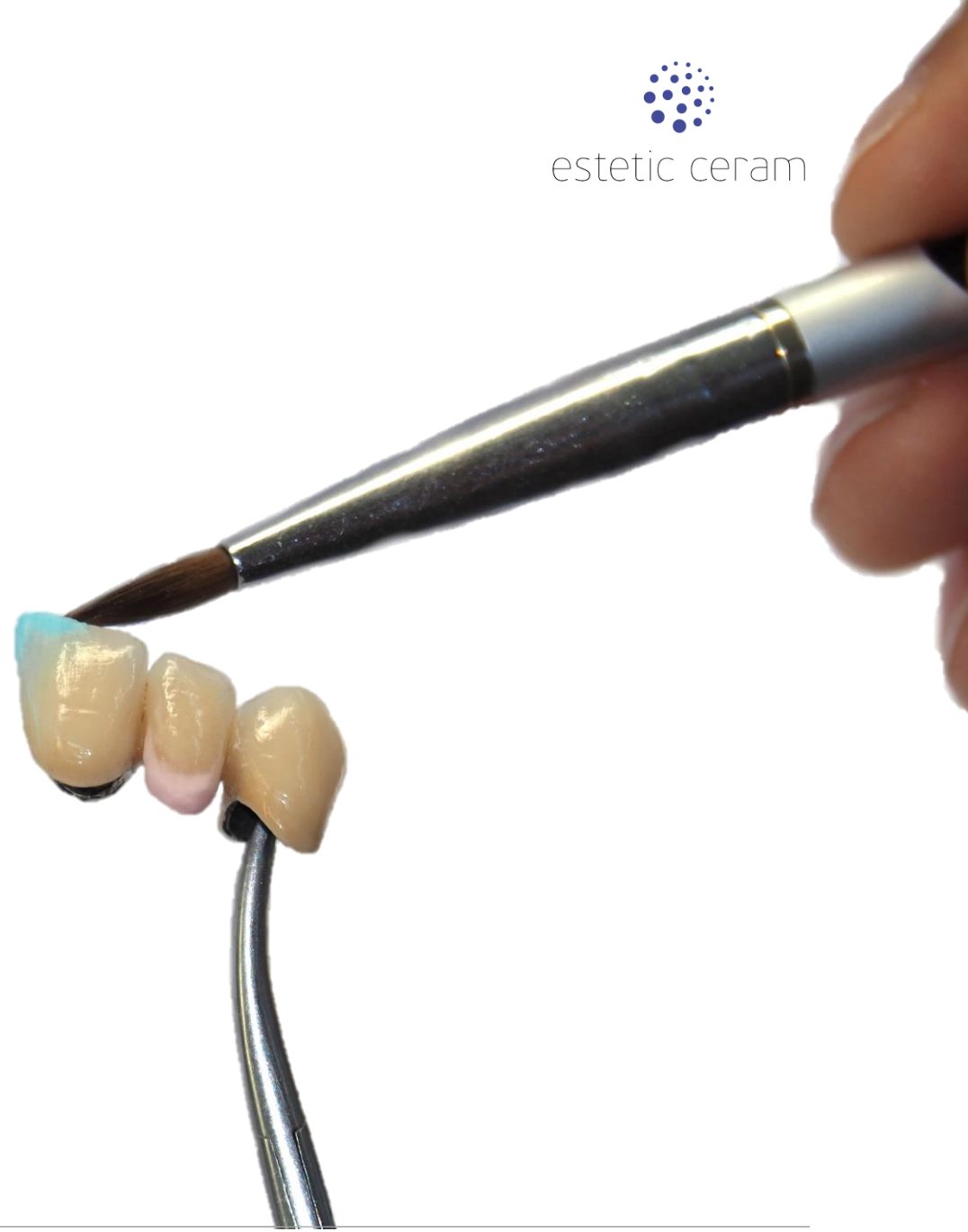
correction dentine

correction incisal

correction neutral

Small corrections to the aproximal contacts or to the pontic of the completed restoration can be applied with dentine or incisal-coloured powders from the estetic ceram **LFC 710** product lines without affecting the layering. To do this, mix the **LFC 710 correction** powder with **modeling liquid** to a creamy consistency and apply in small portions to the desired areas and model. After application, place the work on a firing tray and fire according to the firing table (Page 39) with the respective program for **LFC 710**.

bridge after correction bake



low press

Indication

The estetic ceram **low press** pressable ceramic is a leucite based glass ceramic and is coloured according to the VITA* classical shade scale A1-D4.

The **low press** ceramic is intended for dental applications and for use by trained professionals.

The mechanical strength and optical properties of **low press** qualify it for the production of crowns, inlays, partial crowns/onlays and veneers. The objects can be finished in the painting or layering technique with estetic ceram **low** veneering ceramic materials and **shades & stains LFU** and **glaze LFU**. Pressed restorations from **low press** have to be well bonded to the dentin by using an appropriate dental adhesive material. The preparation of the tooth must be carried out based on the adhesive bonding and the required minimum wall thickness.

Contraindication

- Combinations with ceramic materials outside of estetic ceram's described range of product systems and/or material from another manufacturer.
- Use of non-approved framework materials.
- Sharp edges and corners on the framework or non-anatomically reduced frame shapes.
- Dental ceramic and complete ceramic restorations made of **low press** are not recommended for patients with bruxism or parafunction.

* VITA ist ein eingetragenes Markenzeichen der VITA- Zahnfabrik, Bad Säckingen

low press Preparation Instructions

The preparation of the hard tooth substance follows the generally known rules for all-ceramic dentures:

- Preparation of a step with a rounded inner edge or chamfer.
- Preparation of a retentive surface and sufficient height for conventional cementation.

The minimum wall thicknesses of the individual indications and processing techniques can be found in the following table:

		Veneer [mm]	Inlay [mm]	Onlay [mm]	Crowns	
					Anterior crown [mm]	Posterior crown [mm]
Staining technic	circular	0.5 - 0.7	1.5	1.5	1.5	1.5
	incisal/occlusal	0.7 - 1.5	1.5	1.5	1.5	1.5
Reduced layering technic (cut-back)	circular	0.5 - 0.7	--	1.5	1.5	1.5
	labial/occlusal	1.5	--	1.5	1.5	1.5
Layering technic	circular	--	--	--	1.5	1.5
	incisal/occlusal	--	--	--	1.5	1.5

Please note: The entire wall thickness of the restoration must always consist of at least 50% of the press ceramic! If a lot of hard tooth substance needs to be replaced, this is done with a reinforced layer of the press ceramic low press and not with layer material.

low press Wax Up - **Staining Technic**

Full crown

Wax crown for staining technic

Wax framework for **staining technic** (**glaze**, **shades & stains LFU**)
Usable ingots: **Dentin, Dentin O, Dentin OO, HO**

Model preparation

Prepare a segmented plaster working model as usual.
Depending on the dentists preparation, spacer application to the plaster model is recommended.
For partial crowns, crowns and veneers, apply two layers up to 1 mm apical of the preparation margin.
For Inlays and Onlays apply two layers to the walls and three layers to the bottom, up to 1mm distance to the preparation margin.

Wax up

The objects are contoured in wax that burns without residues. Contour according desired finishing technique. Consider anatomical form and functional detail of occlusal surfaces. Avoid over contouring, especially in the marginal area.
Always respect minimum wall thickness and the right proportion between press ceramic and layering ceramic.
For cut-back and layering technique create reduced anatomical forms and avoid sharp edges or tips.

Reduced crown (cut-back)

Wax crown cut-back for layering technic (incisal)

Wax framework for **layering technic** (**incisal**)
Usable ingots: **Dentin, Dentin O, Dentin OO, HO**

Model preparation

Prepare a segmented plaster working model as usual.
Depending on the dentists preparation, spacer application to the plaster model is recommended.
For partial crowns, crowns and veneer,s apply two layers up to 1 mm apical of the preparation margin.
For Inlays and Onlays apply two layers to the walls and three layers to the bottom, up to 1mm distance to the preparation margin.

Wax up

The objects are contoured in wax that burns without residues. Contour according desired finishing technique. Consider anatomical form and functional detail of occlusal surfaces. Avoid over contouring, especially in the marginal area.
Always respect minimum wall thickness and the right proportion between press ceramic and layering ceramic.
For cut-back and layering technique create reduced anatomical forms and avoid sharp edges or tips.

low press Wax Up - **Staining Technic**

Inlay

Wax-Inlay for staining technic

Wax-Inlay for **staining technic** (**Glaze**, **shades & stains LFU**)
Usable ingots: **T, OT, CT, OCT**

Model preparation

Prepare a segmented plaster working model as usual.
Depending on the dentists preparation, spacer application to the plaster model is recommended.
For partial crowns, crowns and veneers, apply two layers up to 1 mm apical of the preparation margin.
For Inlays and Onlays apply two layers to the walls and three layers to the bottom, up to 1mm distance to the preparation margin.

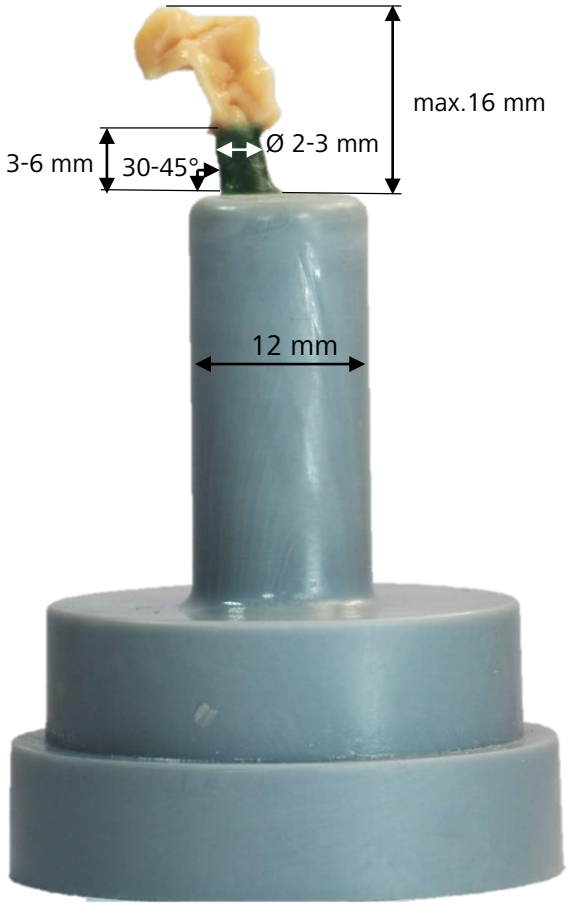
Wax up

The objects are contoured in wax that burns without residues. Contour according desired finishing technique. Consider anatomical form and functional detail of occlusal surfaces. Avoid over contouring, especially in the marginal area.
Always respect minimum wall thickness and the right proportion between press ceramic and layering ceramic.
For cut-back and layering technique create reduced anatomical forms and avoid sharp edges or tips.

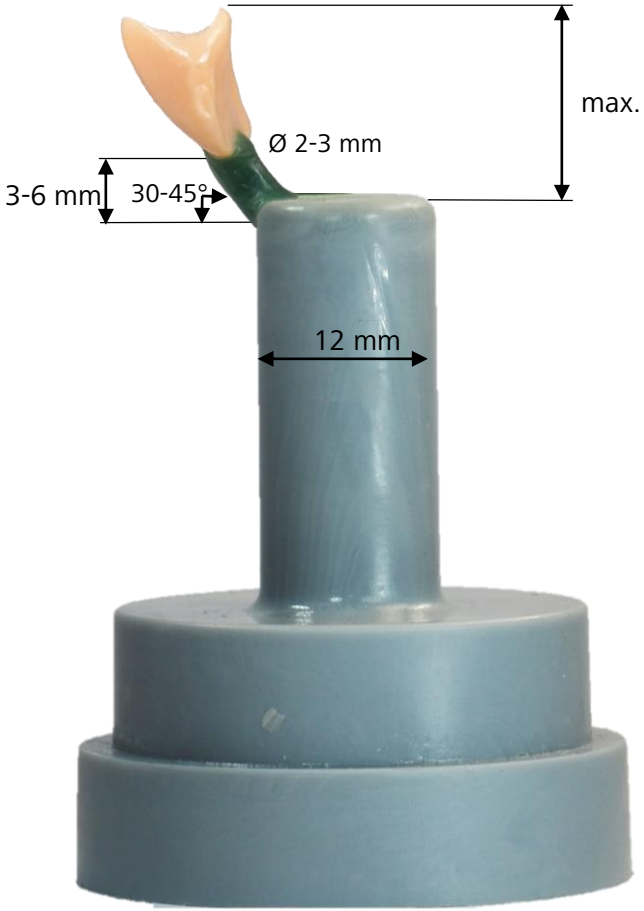
low press Sprueing

estetic ceram

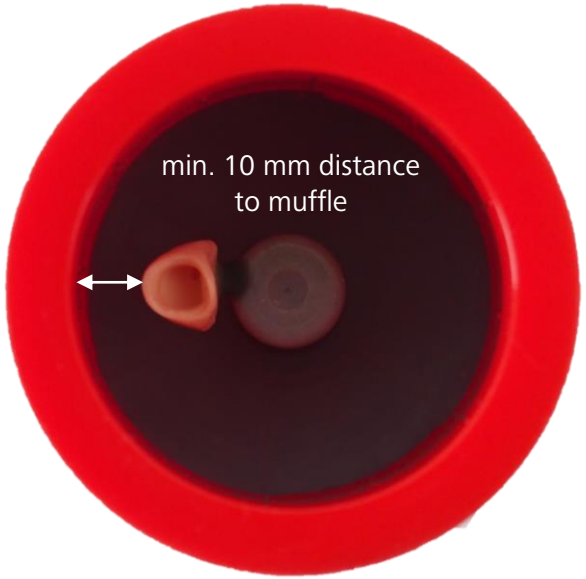
Inlay



Anterior crown



Muffel



Attach a **3-6 mm** long wax wire (**Ø 2-3 mm**) directly at the thickest point in the direction of flow to the modelled object. Round up the connection between sprue and object and between ring system and sprue. Attach sprue always in flow direction.
Sprue and wax object must not be longer than **16 mm**. Keep a distance between silicone ring and wax object of about **10 mm**.

low press Determine wax weight

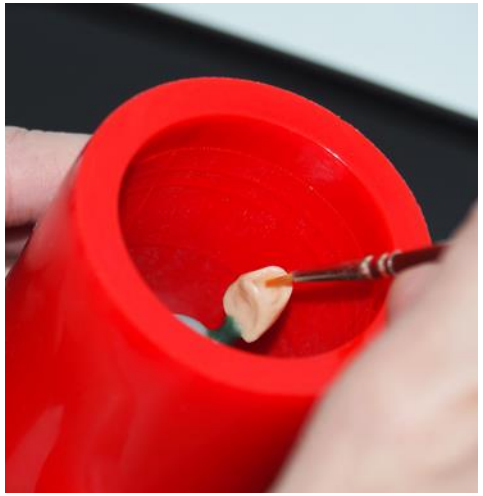
Note: Weight the empty press base - then weigh the press base with the respective modeled object.

up to max. 0.6 g wax weight	1 ingot [2g]
up to max. 1.4 g wax weight	2 ingots [2g x 2g]

low press Investing

Note: Please follow carefully the instructions of the investment manufacturer.

components required



fill the inner volume of the crown with investment

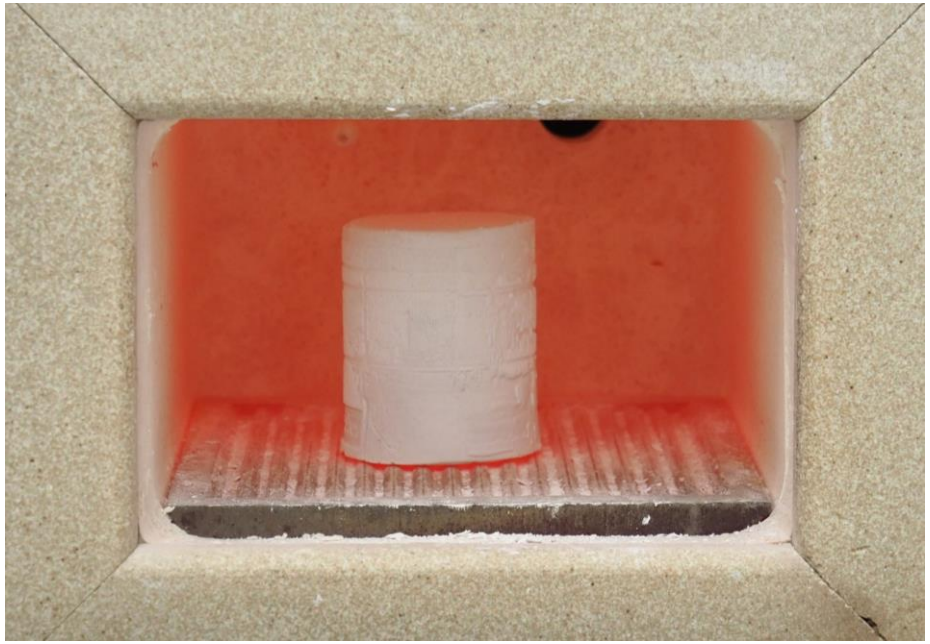
fill up the muffle

put on muffle cover

Fill investment bubble free in the silicone ring. Remove excess investment material after the setting time and make sure that the muffle stands straight.

low press Preheating

Note: Please follow carefully the instructions of the investment manufacturer.



Furnace

Investment rings must be preheated for at least 60 minutes at 850 °C in the burnout furnace.

Important Note: Place ingots and single-use plunger **without preheating** in the muffle before entering the press furnace.

low press Press

Note: Temperatures and times were determined in **Zubler Vario Press 300** furnaces. Please adjust parameters according to your results in your particular furnace.
See press programmes (page 31).


ingot, single-use plunger and muffle


Place the ingot into the muffle


Place the plunger on top of the ingot.


Muffle in pressing furnace

Before pressing, please start the programme of the empty furnace once, to assure complete heating of all furnace parts. When press furnace is prepared, open the press furnace. Take the muffle ring out of the preheating furnace and place ingot and plunger in the ring. Put the ring in an upright position on the table of the press furnace and start the programme immediately.

Important Note: Place ingots and single-use plunger **without preheating** in the muffle before entering the press furnace.

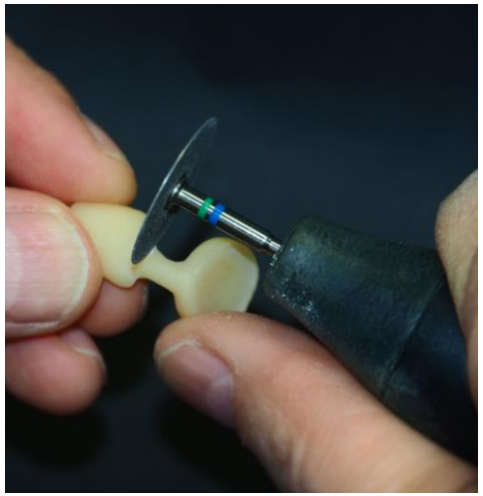
low press Devesting

mark the position of plunger on the outside of the investment ring

remove excess investment

Mark the end position of the plunger on the ring and remove excess investment with a cutting wheel. Divest objects, beginning with polishing/glass beads (50 µm) at 4 bar pressure until pressed objects become visible. Divest completely with 2 bar pressure.

low press Finishing



cut the sprue

Only use suitable cutting and grinding tools for all ceramic objects, to cut sprues, finish the surface and to adjust fit. Avoid excessive grinding and do not overheat the pressed ceramic objects. Work with little pressure at a low rotation speed.

Fit the object to the segment model using Occlu-spray. Adjust fit by removing contact points with a diamond grinder.

Round out the sprue connecting areas following form and function of the restoration. To clean the object, sandblast the entire outer surface carefully with aluminium oxide at 1 bar pressure and steam afterwards.

low press Modelation - **Staining technic**

Full crown (Dentin, Dentin O, Dentin OO, HO)

wax crown (for staining technic)

low press crown elaborated for stains/glaze firing

after stains/glaze firing

low press Modelation - **Layering technic**

Reduced crown (Dentin, Dentin O, Dentin OO, HO)

Wax crown (for incisal layering)

Framework made of low press

before incisal bake

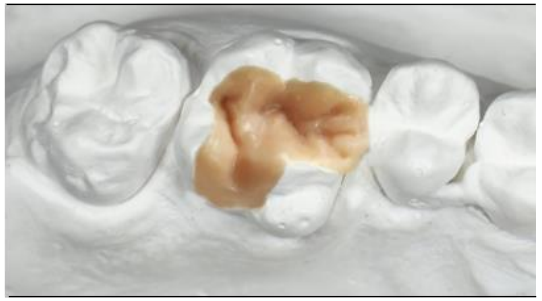
after incisal bake

elaborated for stains/glaze firing

after stains/glaze firing

low press Modelation - **Staining technic**

Inlay (CT, OCT, T, OT)



Wax inlay (for staining technic)

low press inlay before stain/glaze firing

after stain/glaze firing

shades & stains LFU

shades LFU


shade A light fluor.


shade B light fluor.


shade C light fluor.


shade D light fluor.


shade A fluor.


shade B fluor.


shade C fluor.


shade D fluor.

Body colours

Area of application: Body colours for the characteristic colouring of A - D colours.

stains LFU

stains LFU

estetic ceram


white fluor.


snow white fluor.


vanilla fluor.


beige fluor.


yellow fluor.


yellow 2 fluor.


orange fluor.


orange middle fluor.


orange 2 fluor.


champagne fluor.


safari fluor.


safari + fluor.


olive fluor.


khaki fluor.


rose fluor.


rose pink


red purple fluor.


blue rose fluor.


purple fluor.


red


red bright


smoke fluor.


blue fluor.


pigeon blue fluor.


green fluor.


brown fluor.


dark brown fluor.


red brown fluor.


black fluor.


grey fluor.

Effect colours

Area of application: Effect colours for extensive characteristic colouring.

Note: The colours shown are only a selection of our wider range.

stains LFU

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Recommendation for the gingival area

The listed **stains LFU** without fluorescence are ideal for an individual shade design in the gingival area.

low Combinations Table

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Combinations table	A					B				C				D		
Tooth colour	**A1**	**A2**	**A3**	**A3,5**	**A4**	**B1**	**B2**	**B3**	**B4**	**C1**	**C2**	**C3**	**C4**	**D2**	**D3**	**D4**
low opaque	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low margin	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low margin (SM)	1 + 2*	2	2	3 + 4*	4 + 5*	1 + 2*	1 + 3*	3	3 + 5*	1 + 5*	1 + 5*	5	5	2 + 5*	2 + 5*	3 + 5*
low opaque dentine	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low dentine	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low chroma modifier	A					B				C				D		
low incisal	1	2	2	4	4	1	2	3	4	2	2	3	4	1	2	3
low opal incisal	1	2	2	4	4	1	2	3	4	2	2	3	4	1	2	3
low monolayer	M1	M2	M3	M3	M3	M1	M2	M3	M3	M1	M3	M3	M3	M1	M2	M2
Shade LFU	A					B				C				D		
shades LFU (monolayer)**	A light	A light	A light	A light	A	B light	B light	B	B	C light	C light	C	C	D light	D light	D light

* Margin (SM) mixing ratio 1:1
** The shades LFU colour combinations were specially designed for the colour scheme of the low monolayer.

low, low press

Firing/Pressing Chart

Note: The given firing temperatures were determined in a Zubler Vario 300 dental furnace and are approximate values. For other furnace types, corrections to the firing temperatures may be necessary.

Firing parameters	Start temperature [°C]	Closing time [min]	Vacuum start [°C]	Heating rate [K/min]	(Vacuum end) 1st Bake [°C]	(Vacuum end) 2nd Bake [°C]	(Without vacuum) Holding time [min]
low opaque	400	6	450	55	800	800	2
low margin	400	4	450	45	780	770	1
low dentine/incisal	400	4	450	45	760	750	1
low monolayer	400	4	450	45	760	750	1
low natural glaze	400	4	450	45	740	---	1
LFU glaze/stains	400	4	---	45	710	---	1
LFC 710 correction	400	4	450	45	710	---	1

Please Note: Delayed furnace opening (min. 2 minutes) is recommended after each main fire, especially with voluminous layers, starting with the margin fires.

Press parameters low press	Muffle size [g]		Start temperature [°C]	Heating rate [K/min]	Vacuum start [°C]	Final temperature [°C]	Pressing time [min]	Holding time [min]	Pressure
Zubler Vario Press 300	100		700	60	700	925	8	18	high
	200		700	60	700	940	8	20	high

low press Correlation Table

estetic ceram

				Processing technology (recommendation)		Indications (recommendation)				
Colour system	Colour system description	Colour range	Field of use	Staining technic	layering (cut-back)	Inlays	Partial crown (Onlay)	Veneer	Anterior crown	Posterior crown
CT	Coloured Transpa	incisal	inlay, onlay, veneer	+	-	+	+	+	-	-
OCT	Opaque Coloured Transpa	incisal	inlay, onlay, veneer	+	-	+	+	+	-	-
T	Transpa	incisal	inlay, onlay, veneer	+	-	+	+	+	-	-
OT	Opaque Transpa	incisal	inlay, onlay, veneer	+	-	+	+	+	-	-
WO	White Opaque	bleach dentine	crowns	+	+	-	+	+	+	+
D	Dentine	dentine	crowns	+	+	-	+	+	+	+
DO	Dentine Opaque	dentine	crowns on slightly discolored dies	+	+	-	+	+	+	+
O	Opaque	dentine	crowns	+	+	-	+	+	+	+
HO	High Opaque	dentine	crowns	+	+	-	+	+	+	+

+ recommended use - not recommendable

low press Combinations Table

estetic ceram

Inlays - staining technic

Combinations table		A					B				C				D		
Colour system (Ingots)	Areas of application	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low press CT	For small, flat inlays with a grayish edge and low brightness value	1	1	2	3	4	1	2	2	3	1	1	4	4	1	2	4
low press OCT	For small to medium-sized inlays with a grayish incisal and low brightness value and or discoloured dies	1	1	2	3	4	1	2	2	3	1	1	4	4	1	2	4
low press T	For medium-sized inlays with a grayish / whitish incisal with a medium brightness value	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
low press D	For large and deep inlays with a whitish incisal with a higher brightness value	B0	-	A1	A2	A2	B0	B1	B2	B2	B0	B1	C2	C2	B0	A2	C3
low press DO		-	A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

low press Combinations Table

Partial crowns - staining technic

Combinations table		A					B				C				D		
Colour system (Ingots)	Areas of application	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low press T	For partial crowns with a grayish incisal and medium brightness value	1	1	2	2	2	1	1	1	1	1	1	2	2	1	1	1
low press D	For partial crowns with a whitish incisal with a higher brightness value	B0	-	A1	A2	A2	B0	B1	B1	B3	B0	C1	C2	C2	B0	A2	C3
low press DO		-	A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

low press Combinations Table

estetic ceram

Veneers - staining technic

Combinations table		A					B				C				D		
Colour system (Ingots)	Areas of application	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low press CT	For veneers with a layer thickness of up to 0.7 mm with a low brightness value, very grayish	1	2	2	3	3	1	2	3	3	4	4	4	4	4	4	4
low press OCT	For veneers with a layer thickness of up to 0.7 mm with a low brightness value, ideal for slightly discoloured dies	1	1	2	3	4	1	2	2	3	1	1	4	4	1	2	4
low press T	For veneers with a layer thickness over 0.8 mm grayish with normal brightness value	1	1	1	2	2	1	1	1	2	1	2	2	2	1	2	2
low press OT	For veneers with a layer thickness of over 0.8 mm with a higher brightness value	1	1	1	2	2	1	1	1	2	1	2	2	2	1	2	2

low press Combinations Table

Veneers - combined staining/-layering technic

Combinations table		A					B				C				D		
Colour system (Ingots)	Areas of application	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low press D	For veneers with a layer thickness of up to 0.8 mm for non-discoloured dies	A0	A0	A1	A2	A3	B0	B1	B2	B2	B0	C1	C1	C2	D2	D3	D4
low press DO	For veneers with a layer thickness of over 0.8 mm for slightly discoloured dies	A0	A0	A1	A2	A3	B0	B1	B2	B2	B0	C1	C1	C2	D2	D2	D2

low press Combinations Table

Full crowns - staining technic

Combinations table		A					B				C				D		
Colour system (Ingots)	Areas of application	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low press D	For full crowns with a layer thickness of up to 0.8 mm for non-discoloured dies	A0	A1	A2	A3	A3	B0	B1	B2	B2	B0	C1	C2	C2	B0	D2	D2
low press DO	For full crowns with a layer thickness of over 0.8 mm for slightly discoloured dies	B0	A0	A1	A2	A3	B0	B1	B2	B2	B0	C1	C2	C2	C1	D2	D2

low press Combinations Table

Full crowns - layering technic

Combinations table		A					B				C				D		
Colour system (Ingots)	Areas of application	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low press D	For full crowns with a layer thickness of up to 0.8 mm for non-discolored dies	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
low press DO	For full crowns with a layer thickness of over 0.8 mm for slightly discolored dies	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4

low, low press Technical Data

estetic ceram

low, low press comply to all applicable standards for dental porcelains (DIN EN ISO 6872 / DIN EN ISO 10993-5). All limits are undercut and thresholds are outperformed.

Materials classification	
Material:	Silicate glass ceramics
Chemical composition:	Mayor glass ceramic constituents: SiO_2, Al_2O_3, K_2O, Na_2O, CaO, B_2O_3

Physical-chemical propertis acc. to DIN EN ISO 6872:2019 - Low					**Physical-chemical propertis acc. to DIN EN ISO 6872:2019 - Low press**				
Type:	1 ☒ 2 ☐	**class:**	1 ☒ 2 ☐ 3 ☐	a ☐ b ☒ c ☐	**Type:**	1 ☐ 2 ☒	**class:**	1 ☐ 2 ☒ 3 ☐	a ☐ b ☐ c ☐

Physical-chemical properties acc. to DIN EN ISO 6872

Property	Spezification opaque	Spezification margin, dentine, incisal	Spezification PFM 710 correction	Spezification low press
Coefficient of thermal expansion (25 - 500 °C) [$\cdot 10^{-6} \cdot K^{-1} \pm 0.5$]	2 x: 14.0 4 x: 14.0	(25 - 450 °C) [$\cdot 10^{-6} \cdot K^{-1}$] 2 ×: 14.0 4 ×: 14.0	(25 - 450 °C) [$\cdot 10^{-6} \cdot K^{-1}$] 2 ×: 13.0 4 ×: 13.0	15.0
Transformation temperature Tg [°C ± 20]	2 x: 520 4 x: 520	2 ×: 480 4 ×: 480	2 ×: 470 4 ×: 470	580
Bending strength [MPa]	≥ 50	≥ 50	≥ 50	≥ 100
Solubility [µg/cm²]	< 100	< 100	< 100	< 100

low, low press

Regulatory Information

low, low press meet all requirements of applicable directives and regulations for medical devices. The manufacturing complies to a certified Quality Management System acc. **ISO 13485, annex 2** of **Medical Device Directive 93/42, annex IX, Chapter 1 of regulation (EU) 2017/745** and further international requirements.

Medical device classification acc. annex IX, rule 8 of MDD 93/42:	**IIa**
Medical device classification acc. annex VIII, rule 8 of MDR 2017/745	**IIa**
UMDNS Code:	**16-187 Dental-ceramics**
MDR Code acc. MDCG 2019-14:	**MDT 2003, MDN 1103**
low classification acc. DIN EN ISO 6872:	**type 1, class 1**
Low press classification acc. DIN EN ISO 6872:	**type 2, class 2**

low, low press

Warnings

Use only by trained specialists.

Wear protective goggles or suitable face protection when finishing the ceramic restorations. Remove splinters and dust with a suction device or wear a suitable dust mask.

Be careful with the high temperatures when burning. There is a risk of burns! Use oven tongs / tweezers and gloves!

Use only in a clean work environment! Contamination of the aids (waxes) and devices (mixing plate, preheating furnace) through residues from alloy processing, especially CoCr or NiCr alloys, can lead to discoloration of the ceramic.
Noble metal-free alloys based on cobalt-chromium or nickel-chromium form water-soluble oxides with every fire, which must be removed from the ceramic mass before each application. The framework or framework that has already been veneered must be cleaned thoroughly with steam or under running water with a brush before each ceramic application.

There are different firing conditions due to the different ceramic furnaces on the market. This fact must be taken into account and clarified by the customer on his own responsibility!
The specified firing temperatures are only guide values!

Recommended storage conditions: 12-38 °C and normal humidity 40-60%. Store in tightly closed original containers. Protect from direct sunlight. Do not put mixed powders back into the can. Use clean, dry instruments for removal.

Label Symbols

- Manufacturer
- Date of manufacture YYYY MM
- MD Medical Device
- LOT Batch code /LOT number
- REF Reference number
- UDI Unique Device Identification
- Caution, consult instruction for use

Manufacturer Information

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