Instructions for use

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Livento® press **Soprano® 10**

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Medtech

Index

Product description

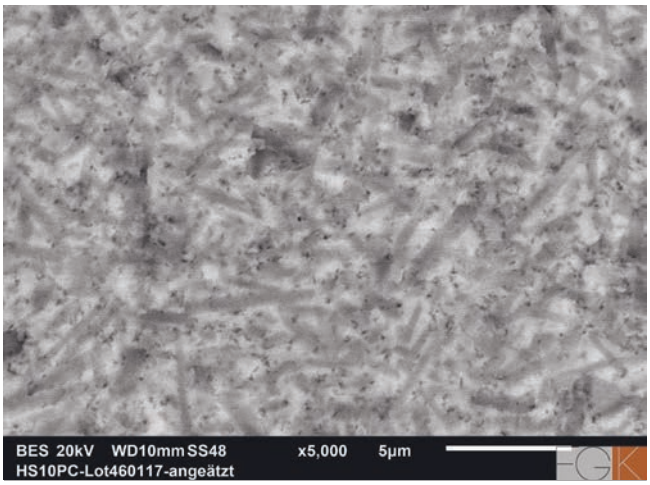
Product name
Pressed ceramic: Livento® press
Veneer ceramic: Soprano® 10

Livento® press
Livento® press is a lithium disilicate glass ceramic ingot for the press technique.

Due to state-of-the-art manufacturing technology, Livento® press offers a homogeneous structure, high strength with outstanding fit and colour-stability, even after multiple firing. The resulting restorations display true to life aesthetics.

The shades of the ingots are based on the VITA Classic shade system[1], shade scale A, B, C and D.

Livento® press	
Bending strength (MPa)[2]	$400^{+/-50}$ MPa
Transformation temperature[2]	520 °C
CTE (–500 °C)[2]	$10 \times 10^{-6} \times K^{-1}$ (pressed)
Classification[2]	Type: 2 Class: 3a
Chemical composition	Major components solidly integrated into the network of the glass ceramic include: SiO_2, Al_2O_3, Li_2O, P_2O_5, K_2O, CaO and B_2O_3



Press ingot
One ingot size up to max. 0.9 g wax weight
Diameter: 13 mm

[1] VITA is a registered trademark of VITA Zahnfabrik H. Rauter GmbH & Co. KG, Bad Säckingen, Deutschland.
[2] According to DIN EN ISO 6872:2015

The Livento® press ingot concept

		Processing			Indications										
Pellet range	Description Characterisation	Staining	Reduced layer technique (cut-back)	Layer technique	Veneer	Veneer occlusal	Thin veneer (0.3 mm)	Inlay	Onlay	Partial crown	Anterior tooth crown	Posterior tooth crown	Bridge (max. 3-units), Premolar area	Hybrid abutment crown
Bleach	Medium transparency in four bleach shades. Bleach 1 with the highest brightness, Bleach 4 with the highest chroma.	■	■	■	■	■	■	■	■	■	■	■	■	–
ET	Comes closest to natural enamel transparency. Particularly suited for additional veneers.	■	■	–	■	■	■	■	■	■	–	–	–	–
MT	Pronounced medium transparency. Comes closest to natural dentine.	■	■	■	■	■	■	■	■	■	■	■	■	■
LT	Low transparency with high brightness and a medium degree of opacity. Particularly suited for a thickness from 0.7 mm.	■[3]	■	■	–	–	–	–	–	■	■	■	■	■
HO	High opacity. Provides excellent coverage, even at low layer thicknesses. Particularly suited as framework material.	–	■	■	–	–	–	–	–	–	■	■	■	■
Opal	Comes closest to natural enamel transparency. With outstanding opalescent properties. Particularly suited as additional veneers.	■	■	–	■	■	■	■	■	■	–	–	–	–

■ Ideal application
■ Possible application

Soprano® 10

Soprano® 10 is a silicate glass ceramic and developed for veneering Livento® lithium disilicate glass ceramic and zirconium oxide. The portfolio includes a balanced manageable range of different ceramic materials such as Margin, Frame Modifier, Opal, Dentine, Opaque Dentine, Enamel and Effect Materials. The ceramic shades are based on the VITA Classic shade system[4], shade scale A, B, C and D.

The ceramic displays a thixotropic behaviour, i.e. Soprano® 10 remains viscous during processing and remains stable after completion of modelling. This allows precise and time-saving modelling. The materials continue to display high brightness and colour-stability even after multiple firing processes.

[3] Only for posterior teeth from the second premolar onwards
[4] VITA is a registered trademark of VITA Zahnfabrik H. Rauter GmbH & Co. KG, Bad Säckingen, Deutschland.

Soprano® 10	
Transformation temperature[5]	500 °C
CTE (–500 °C)[5] (after 2 and 4 firings)	$9 \times 10^{-6} K^{-1}$
Classification[5]	Type: 1 Class: 1b
Chemical composition	Major components solidly integrated into the network of the glass ceramic include: SiO_2, Al_2O_3, K_2O, Na_2O, CaO, B_2O_3

Characteristics	
Ceramic material	**Description**
Frame Modifier	Highly fluorescent. Optimises the bond of veneer ceramic on zirconium oxide. ⚠ Use special frame liquid (red liquid)! Do not use with Livento® press.
Margin	Tooth-coloured shoulder material for zirconium oxide veneers. High opacity and fluorescence for increased depth effect. ⚠ Use normal modelling liquids. Do not use with Livento® press.
Opaque dentine	Opacity level is approx. 90%. Covers extremely well. Available in the respective tooth shades.
Dentine	Opacity level is approx. 70%. Natural light refraction. Material in red identification colour.
Enamel	Very similar to natural enamel, with an opacity of around 50%. Material in blue identification colour.
Enamel Effect	Is not colour-specific and can be used for all tooth shades, depending on the desired effects.
Enamel Effect Enhancer	Semi-transparent material for mixing with Enamel and Enamel Effect.
Opal	Natural opalescence in four stages and hazes.
Opal Effect	Natural opalescence, more transparent than Opal material. Special to the range is the Clear material.
Fossa, Cuspid	For accenting white cusps and orange fissures
Mamelon	Can be mixed with all ceramic materials. Characterization of the mamelon structure in the incisal area.
Flu-Shade	Highly fluorescent stain corresponding to the base colour for use as framework colour or glazing colour. Universal stain for all ceramics. ⚠ Can only be used superficially for high melting ceramics. Mix colour paste well before use!
Flu-Stain	Highly fluorescent stain. Universal stain for all ceramics. ⚠ Can only be used superficially for high melting ceramics. Mix colour paste well before use!

[5] According to DIN EN ISO 6872:2015

General information

For the exact specifications of Livento® press and Soprano® 10, please refer to the material data sheet and the safety data sheet. You will find the data sheets mentioned free of charge at www.cmsa.ch.

 Important information for the specialist/observe instructions for use.

 Warning symbol for increased caution.

Intended use

The intended use for Livento® press is for permanent crowns and bridges.

The intended use of Soprano® 10 is as veneer material for crowns and bridges on lithium disilicate and zirconium oxide frameworks.

Disposal

Livento® press and Soprano® 10 waste can be disposed of with normal household refuse.

Instructions for use

Indications
- Veneers
- Inlays and onlays
- Partial crowns
- Anterior and posterior tooth crowns
- Hybrid abutment crown
- 3-pontic bridge in anterior tooth region
- 3-pontic bridge in the premolar region up to max. 2nd premolar as a perminent abutment

Contraindications
- Bruxism and parafunctions
- Free-end bridges and extension pontics
- 3-pontic bridge in molar region
- Patients with profoundly reduced residual dentition
- Falling below the necessary connector and minimum strengths
- Combination with materials outside the described Livento® press/Soprano® 10 product system and/or with materials from third party suppliers
- As a matter of principle, all indications not listed are to be regarded as contraindications.

Warnings
Please carefully read instructions for use before commencing work with this material. The manufacturing work must be carried out by qualified specialists.

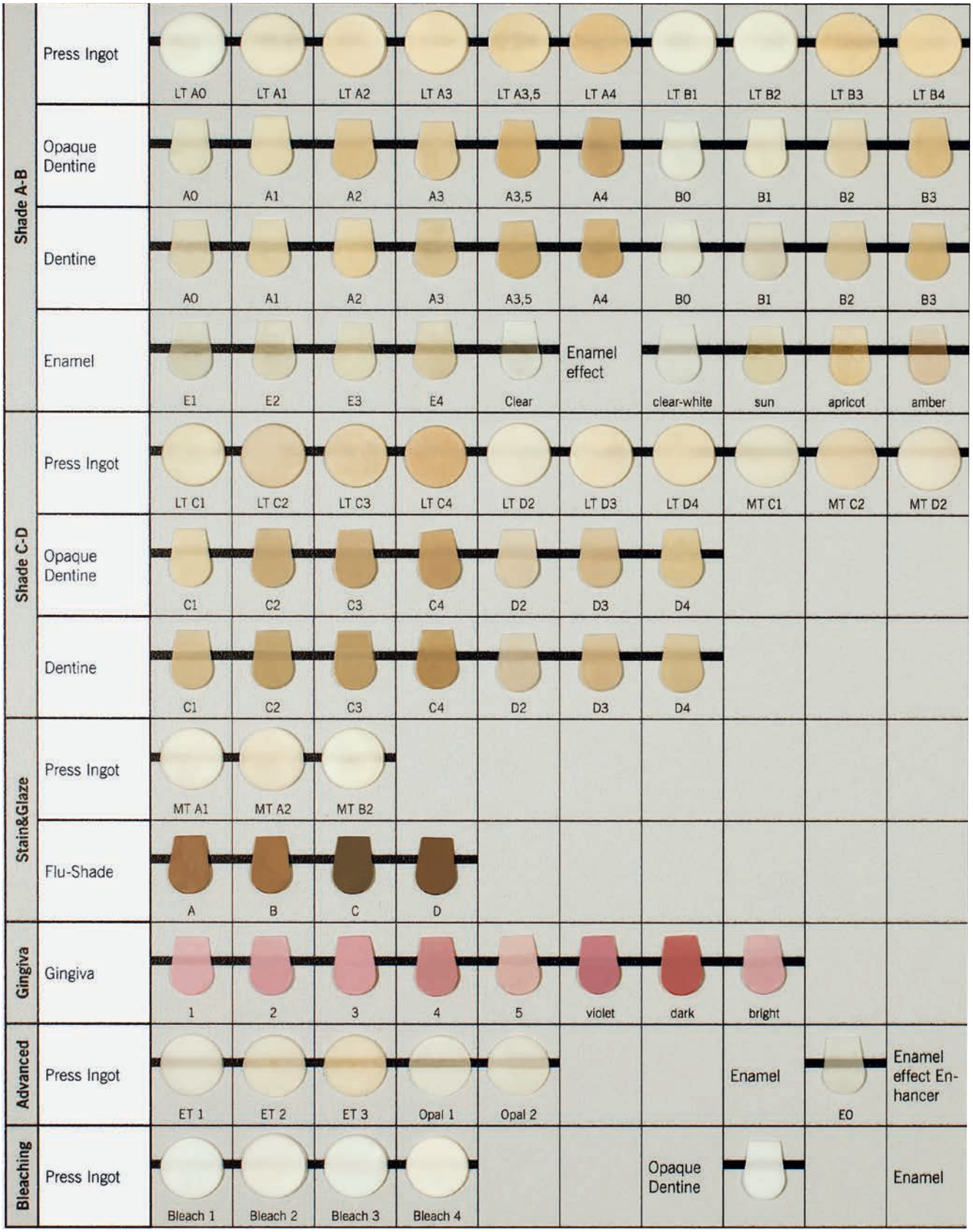
For information and additional details, please contact your Cendres+Métaux representative.

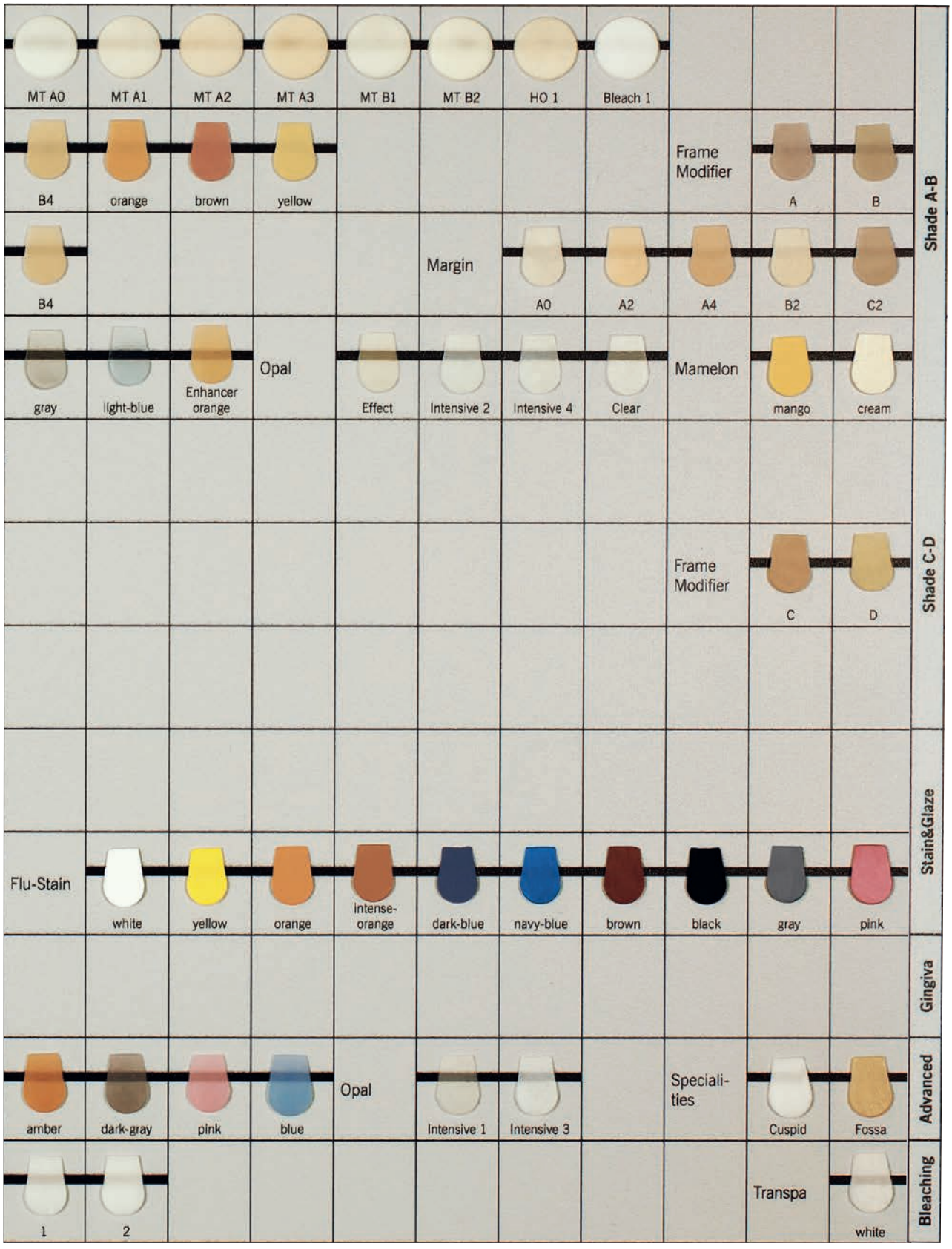
Preventive measures
When grinding Livento® press and Soprano® 10 wear protective goggles with a dust mask and use a suction unit.

Side effects
No known side effects if used as intended.

Introduction to processing

Shade table




MT A0
MT A1
MT A2
MT A3
MT B1
MT B2
HO 1
Bleach 1
B4
orange
brown
yellow
Frame Modifier
A
B
Shade A-B
B4
Margin
A0
A2
A4
B2
C2
gray
light-blue
Enhancer orange
Opal
Effect
Intensive 2
Intensive 4
Clear
Mamelon
mango
cream
Frame Modifier
C
D
Shade C-D
Flu-Stain
white
yellow
orange
intense-orange
dark-blue
navy-blue
brown
black
gray
pink
Stain&Glaze
Gingiva
amber
dark-gray
pink
blue
Opal
Intensive 1
Intensive 3
Speciali-ties
Cuspid
Fossa
Advanced
1
2
Transpa
white
Bleaching

Preparation notes

– In principle: anatomically reduced tooth shape
– Step preparation with rounded inner edge or preparation of a chamfer
– Generally avoid edges and corners in the preparation
– Depending on the indication, only remove so much hard tooth substance to allow remaining within the following minimal wall thicknesses, the connector cross-sections for bridges and the maximum widths of the pontics.

Minimum thickness layer

Overview on the minimum wall thicknesses (in mm) and connector cross-sections (in mm²)

Processing technique		Veneer	Inlay	Onlay	Partial crown	Anterior tooth crown	Posterior tooth crown	Anterior tooth bridge (max. 3-pontic)	Posterior bridge (max. 3-pontic), Premolar area
Staining technique	circular	0.3–0.6	1.0	1.5	1.5	1.2	1.5	1.2	1.5
	incisal/occlusal	0.4–0.7	1.0	1.5	0.8	1.5	1.5	1.5	1.5
Reduced layer technique	circular	0.5	–	1.5	1.5	1.2	1.5	1.2	1.5
	labial/occlusal	0.4	–	0.8	0.8	0.4	0.8	0.8	0.8
Layer technique	circular	–	–	–	–	0.6	0.8	0.8	0.8
	incisal/occlusal	–	–	–	–	0.6	0.8	0.8	0.8
	Principle	–	–	–	–	Supporting tooth/cusp form			
Maximum width of bridge pontic								11	9
Connector cross-sections								16	16

⚠ At least 50% of the entire wall thickness must be made up of the high-strength pressed ceramic Livento® press!

Model preparation

The master model is created as usual.

In the case of plaster models it is useful to first harden the surface with a sealer without a change in volume.

Then the spacer is applied in several layers depending on the preparation. In the case of veneers, partial crowns and crowns, apply the spacer in two layers up to a maximum of 1 mm to the preparation margin. In the case of inlays and onlays, apply up to three layers to a maximum of 1 mm above the cavity base.

Waxing
Model the restoration according to the criteria described in points 5.2 and 5.3 with a residue-free burning wax (ash-free) as per desired processing technique (layer, cut-back or stain technique). Special attention is to be paid to the preparation margin: do not over-build to avoid time-consuming finishing after pressing.

Example of a fully anatomically modelled anterior tooth crown

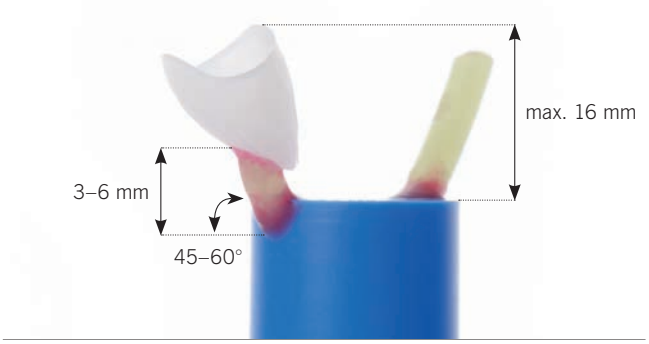
Example of a reduced modelled anterior tooth crown

Example of a reduced modelled anterior tooth bridge

Sprueing

Tip

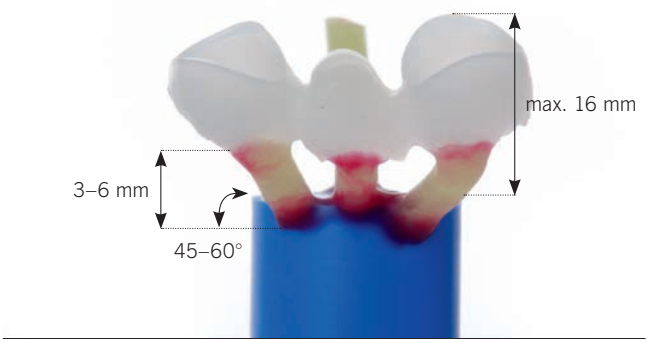
When sprueing one crown only, fit a pressure compensation channel!



Crown

Tip

When sprueing one bridge only, fit a pressure compensation channel!

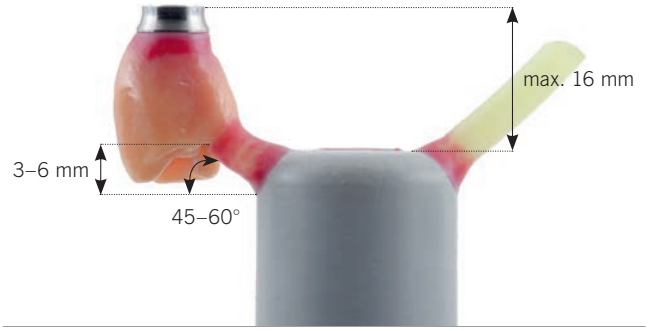


Bridge

Tip

When sprueing one hybrid abutment crown only, fit a pressure compensation channel!

⚠ Invest without abutment!



Hybrid abutment crown

Information on sprueing	
Press plunger	Diameter 13 mm Livento® press (Cendres+Métaux SA) Disposable press plunger, article no. 08055017
Mould systems	Can be processed with all conventional 13-mm mould systems.
Size of the investment ring	100 g, 200 g or 300 g **Recommendation:** press in an investment ring 200 g or 300 g to reduce the risk of cracks or chips of the investment material. Furthermore, this improves temperature retention and increases the precision of the fit.
Diameter of the wax wire	2.5–4 mm
Length of press channel (wax wire)	3–6 mm
Sprue point at the object	At the thickest part of the object
Sprue angle to the object	Axial in pressing direction
Sprue angle to investment ring base	45–60°
Design of sprueing points	Trumpet shape, without edges and angles
Distance between various objects	At least 3 mm
Distance to margin of investment ring	At least 10 mm
Overall length of wax object and press channel	Maximum 16 mm
Object position in investment ring	In general, the cervical edges of the waxing face towards the centre.
Pressure compensation channel	**Recommendation:** when pressing single objects (crown or bridge!) 180° opposite to the object, in the length of the object
Sprued angle for the hybrid abutment crown	Position of the screw channel parallel to the press stamp

Investing
Investing can be performed with either the fast pressing technique (speed technique) as well as the conventional preheating technique.

Please weigh the wax object including the pressing channel to avoid pressing with too little material. This can either be done by determining the difference between the unloaded and loaded investment ring or by weighing the wax objects including the wax wire.

– Up to maximum 0.9 g wax weight: 1 press blank
– Up to maximum 1.9 g wax weight: 2 press blanks

Mixing ratio
Mixing ratio 26 ml liquid: 100 g powder

Concentrate mixtures

40–60 %	Expansion fluid for inlays, onlays, depending on preparation and size
60–70 %	Expansion fluid for single crowns
70–85 %	Expansion fluid for posterior and anterior tooth bridges
100 %	Expansion fluid for refractory stumps

Please note: The higher the amount of concentrate in the liquid, the higher the expansion values.

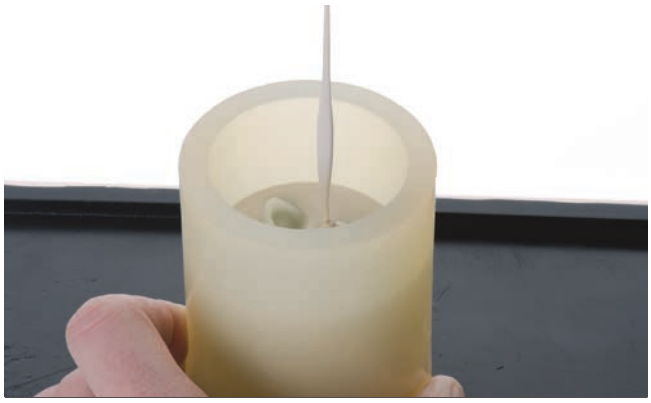
Investment material Livento® invest	
Manufacturer	Cendres+Métaux SA, Switzerland
Article No.	08055014 (pack with 50 × 100-g bags) 083739 (1 litre liquid concentrate)

Description
– Special investment material for lithium disilicate and other pressable ceramics
– The fabrication of a refractory die is also possible.

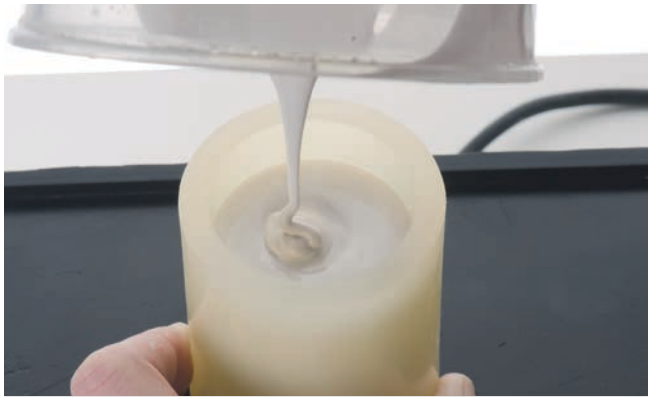
Observe the manufacturer's instruction for use enclosed in the packaging for correct processing of the investment material and the timing instructions!

Set model vibrator to the minimum setting. Fill material carefully but progressively to the rim of the ring former.

Then fill the ring former carefully bubble-free until it is covered completely.



Once the object is covered, switch off the shaker and fill the investment ring up to the marking with the remaining investment material.



Slightly push out the silicone rim of the investment ring, place the ring lid and rotate once clockwise by 180° (elimination of bubbles).

Preheating

Check temperature precision of the burnout furnace regularly.

Please follow the manufacturer's work instructions.

After setting of the investment material according to manufacturer's indications, the investment ring is prepared for preheating.

1. Carefully turn and remove the investment ring.
2. Carefully turn and remove the investment ring base, too.
3. Remove rough spots dry with a plaster knife or a belt grinder.
4. Please make sure that no investment material enters the sprue channel.

The investment ring base should have a 90° angle and be situated flat on the investment ring holder in the pressing furnace. Blanks and disposable press plungers may not be preheated.

Positioning of the investment rings in the preheating furnace

- In case of a ribbed floor (furnace without floor heating!), the investment ring can be placed directly with the opening facing downwards.
- In case of flat floors, please make sure that the wax burnout occurs outside of the investment ring, e.g. by tipping the investment ring in direction of the rear wall.
- In case of furnaces with floor heating, please ensure that the investment ring is placed in a distance of approx. 10 mm from the floor.

Pressing

- The press furnace must be sufficiently preheated before pressing in order to avoid incomplete pressing due to the cooled investment ring.
- Wear gloves for heat protection.
- Depending on the age and condition of the press furnace and the number of firing cycles performed, deviations in given pressing temperatures are possible for the same device types. Recommendation: conduct a trial pressing.

As soon as the press furnace is ready for pressing, remove the preheated investment ring from the preheating furnace and place in the immediate vicinity of the press furnace. While the press furnace opens, immediately load the investment rings. First insert the required press ingot, then the press plunger.

- Insert the press blank into the investment ring with the unprinted side first.
- Use a maximum of 2 press ingots per press channel.
- If reusable Al_2O_3 press plungers are used, it may be necessary to adjust the pressing temperature!

Then place the loaded investment ring upright immediately on the firing table of the press furnace and start the programme according to the pressing programmes listed in the following.

Pressing programmes (reference values) with Livento® press

	Starting temperature	Temperature rise	Final temperature	Dwell time	Pressing time	Vacuum start	Pressing pressure
	°C	°C	°C	min.	min.	°C	
Dekema press-i-dent (100 g)	700	60	910	20	automatic	700	Level 5
Dekema press-i-dent (200 g)	700	60	920	20	automatic	700	Level 5
Ivoclar Programat (100 g)	700	55	910	15	automatic	700	E 300
Ivoclar Programat (200 g)	700	60	912	25	automatic	700	E 300
Zubler Vario Press (100 g)	700	60	900	18	3	700	Low
Zubler Vario Press (200 g)	700	60	915	20	3	700	Low
Dentsply Multimat NTxpress (100 g)	700	60	930	15	3	700	–
Dentsply Multimat NTxpress (200 g)	700	60	950	18	3	700	–

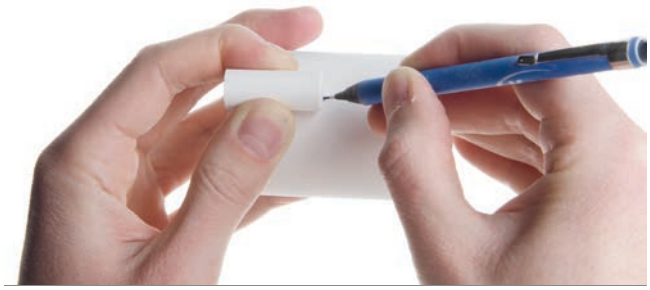
After completion of the pressing programme, immediately remove the investment ring from the press furnace with ring tongs and place on a cooling grid.

Cooling down to room temperature should be performed in a draught-free area.

Cooling takes approx. 60 minutes and must not be accelerated.

Divestment and cleaning

Mark the end of the press plunger.



Separate the excess investment material with a large, suitable cutting disk.

Further rough divestment can be performed with Al_2O_3, grain 50 μm–110 μm, at 4 Bar pressure.

⚠ The pressed crowns must not be sandblasted!

Subsequent fine divestment is performed for the investment material Livento® invest with glass beads 50 μm and a pressure of 2.5 to 3 Bar. If the correct blasting direction and distance of the blasting material are complied with, even the most delicate margins will not be damaged. When using Livento® invest, subsequent removal of the reaction layer with an etching liquid in the ultrasonic bath is no longer required. This saves time.

Alternatively, waterjet devices such as, for example, Atlantis by Effegi Brega can be used for efficient and health-caring divestment.

Finishing

Only rotary instruments suitable for glass ceramics may be used for finishing Livento® press. Otherwise this can lead to chipping at the edges as well as to overheating.

⚠
- Limit grinding to an absolute minimum, i.e. avoid over-sizing when waxing the press object.
- Operate at low speed and with little force.
- Overheating of the ceramic is to be avoided under all circumstances.
- Anatomically shape the connection point of the sprue after separation.
- In the case of bridges, the connections may not be separated afterwards to avoid predetermined breaking points.
- When steam cleaning, avoid overheating the area of the metal instrument that holds the ceramic.

Briefly blast the finished press restoration with Al_2O_3 and 1 Bar pressure and then clean thoroughly with a steam jet prior to staining or applying the veneer ceramic.

Result of a crown after cleaning, without any finishing, fitted or the die.

Separation from sprue with diamond cutting disk.

Finishing of the crown is performed with rotary instruments suitable for glass ceramics.

Processing instructions

Livento® press and staining technique

Stain & Glaze shade table


Flu-Shade A


Flu-Shade B


Flu-Shade C


Flu-Shade D


Flu-Stain white


Flu-Stain yellow


Flu-Stain orange


Flu-Stain intense-orange


Flu-Stain dark-blue


Flu-Stain navy-blue


Flu-Stain brown


Flu-Stain black

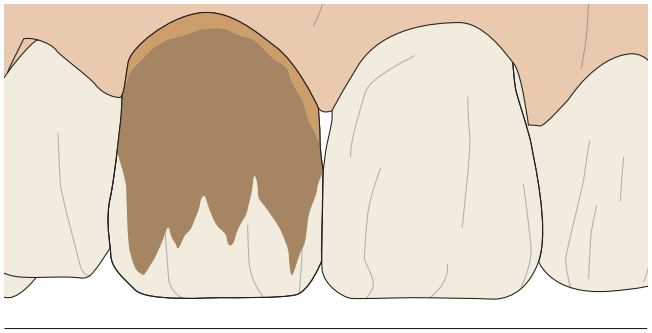

Flu-Stain gray


Flu-Stain pink

⚠ Staining pastes separate after long periods of not being used. Prior to application it is essential to mix well with the spatula included in the kit until homogeneous and no more grains are visible. The surface then displays an even satin glow.

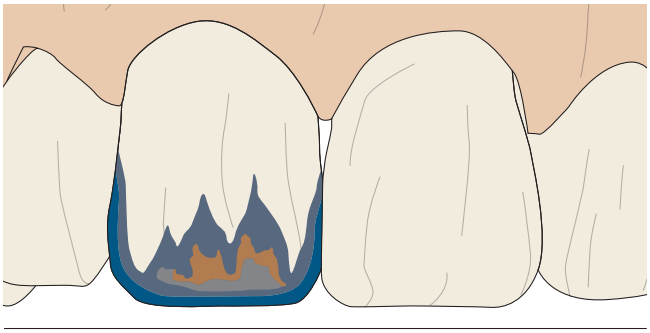
Basic instructions for staining (according to Robert Arvai, Chur)

Suggestion for the anterior region



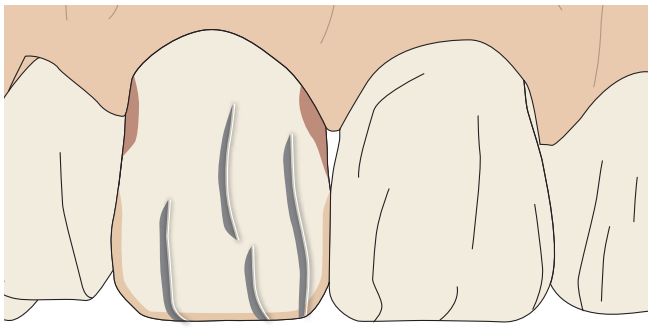
Step 1

- Flu-Shade A, B, C or D
- Flu-Stain orange or intense-orange



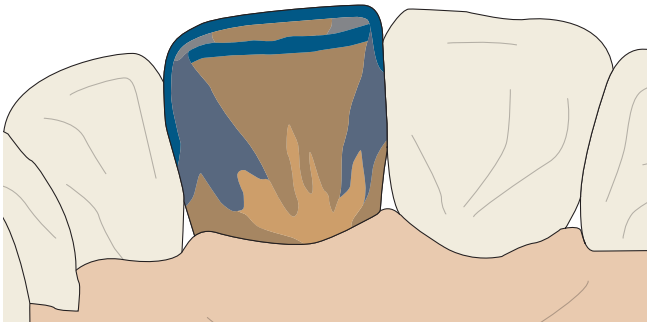
Step 2

- Flu-Stain navy-blue
- Flu-Stain dark-blue
- Flu-Stain intense-orange
- Flu-Stain gray



Step 3

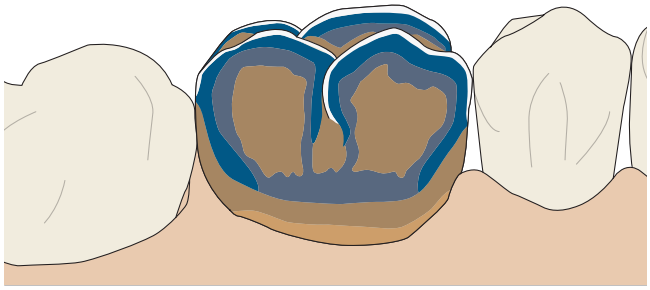
- Flu-Stain gray, staining direction distal
- Flu-Stain white and Flu-Stain orange mixed at 50%:50%
- Flu-Stain pink, applied very thinly
- Flu-Stain white for enamel cracks



Step 4

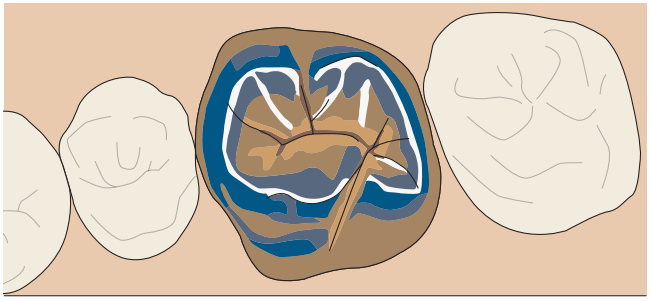
- Flu-Shade A, B, C or D
- Flu-Stain navy-blue
- Flu-Stain dark-blue
- Flu-Stain gray
- Flu-Stain orange or intense-orange

Suggestion for the posterior region



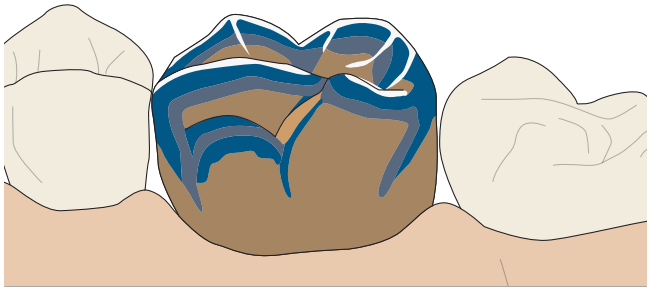
Step 1 (buccal)

- Flu-Shade A, B, C or D
- Flu-Stain orange or intense-orange
- Flu-Stain navy-blue
- Flu-Stain dark-blue[6]
- Flu-Stain white



Step 2 (occlusal)

- Flu-Shade A, B, C or D
- Flu-Stain orange or intense-orange
- Flu-Stain navy-blue
- Flu-Stain dark-blue[6]
- Flu-Stain white
- Flu-Stain brown



Step 3 (palatal)

- Flu-Shade A, B, C or D
- Flu-Stain orange or intense-orange
- Flu-Stain navy-blue
- Flu-Stain dark-blue[6]
- Flu-Stain white

Tips

- Prior to staining, blast the crown matt with 50 μm Al_2O_3 and a maximum of 1 Bar pressure.
- Apply colours (shade and stain) without the addition of glazing liquid if at all possible. This avoids clouding or washing of the colour towards the edge.
- Mix glazing material with a little glazing liquid.
- Soak up the excess glaze from the posterior teeth occlusally from the fissures with a blotting paper point.
- Apply the shades from incisal to gingival in thin layers.

Firing table

	Closing time	Starting temperature	1st firing	2nd firing	Temperature rise	Start vacuum	Dwell time
	min.	°C	°C	°C	K/min.	°C	min.
Stain	4	450	750	750	45	without	1
Glaze	4	450	750	750	45	without	1

[6] Flu-Stain gray for A3.5 and A4!

Livento® press veneered with Soprano® 10

Shake bottle well before every use.
The stated firing temperatures are reference values and can differ by type of furnace and age of the device.
Recommendation: conduct a ceramic test firing.

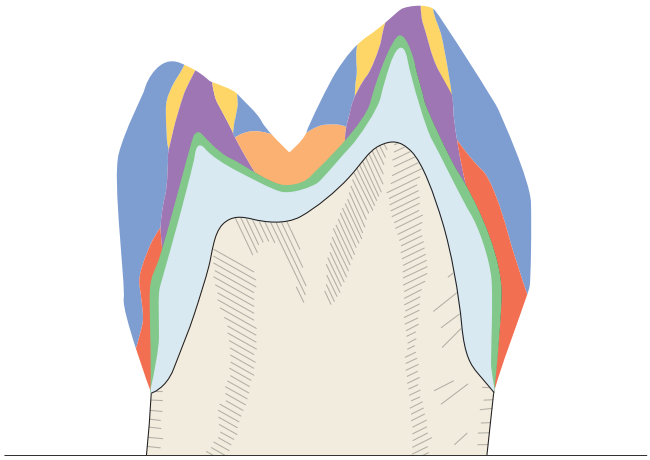
The stains can also be applied to Livento® press framework prior to layering.
Avoid any sharp edges when using the reduced layering technique (cut-back).

The ceramic material Repair (Enamel E2) can be used for small repairs of the reconstruction after glaze firing. Firing temperature is 720° C.

Combination table

	A					B				C				D		
	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Enamel	1	2	2	4	4	1	2	3	4	2	2	3	4	1	2	3

Example of a molar layering technique

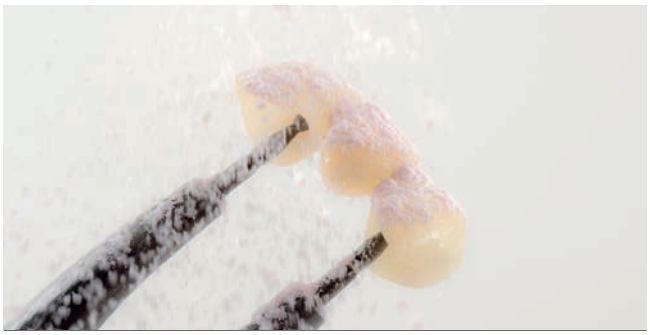


Dentine
Dentine-enamel mixture 50%:50%
Enamel Effect
Enamel
Dentin-Fossa-Mix, mixed at 50%:50%
Framework in Livento® press
Wash with Stains + Dentin

Blast bridge framework with 50 μm Al_2O_3 and steam clean.

The bridge framework customised with stains.

Sprinkle dentine powder directly on the still wet bridge framework. Remove excess.



The bridge framework sprinkled with dentine powder ready for framework characterisation firing **at 780 °C.**

The bridge framework after framework characterisation firing, ready for layering.

Apply the Opaque Dentine to the cervical and lingual regions.

Layering of the Dentine directly on the Opaque Dentine.

Application of a Dentine-Enamel mixture 50%:50%.

Apply a further minimal Enamel layer to the anatomically reduced form and condense the surface well with a “big brush”.

Separate bridge connections interdentally down to the framework.

The work is now ready for the 1st dentine firing which is performed at 2° C lower than the framework characterisation firing, at 778° C.

Directly after the first dentine firing.

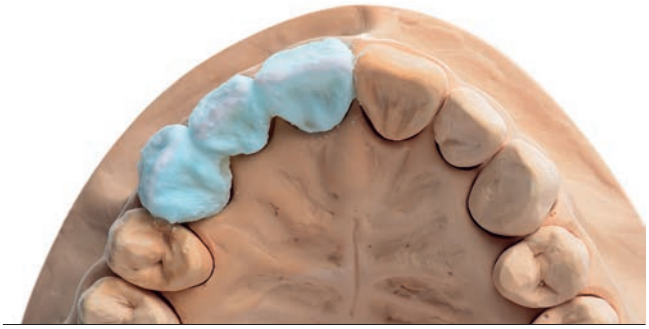
Staining or characterisation is now virtually completed.

Cut back of the dentine build-up.

Completion of the anatomical form via transparent and cutting materials with slight over-contouring. This is performed with alternate layering of the various materials. Interdental separation is performed down to the framework. Then the surface is condensed with a “big brush”.

Final finishing of the surface and contour is performed with proven ceramic-bonded stones or diamonds.

2nd dentine firing is at 770° C.



Option 1
The restoration can be finished with stains and glaze. This is performed at a firing temperature of **740° C,** without vacuum.

Option 2
Performing a “self-glaze” firing (without stains and glaze) at **785° C,** with vacuum, but without dwell time. Subsequent manual polishing with suitable polishing agents is then essential to achieve the desired level of gloss.

Finished restoration

Firing table (on a Livento® press framework)	Closing time	Starting temperature	1st firing	2nd firing	Temperature rise	Start vacuum	Dwell time
	min.	°C	°C	°C	K/min.	°C	min.
Framework characterisation	4	450	780	–	45	450	1
Dentine/Enamel	4	450	778	770	45	450	1
Self-glaze	4	450	785	–	45	450	–
Glaze	4	450	740	740	55	without	1
Repair	4	450	720	–	45	450	1

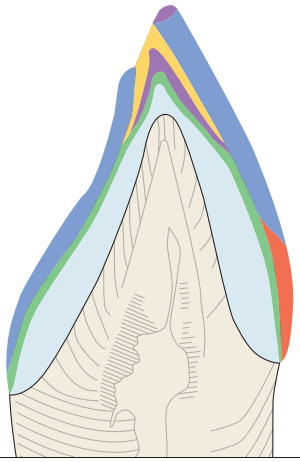
Soprano® 10 veneered on zirconium oxide

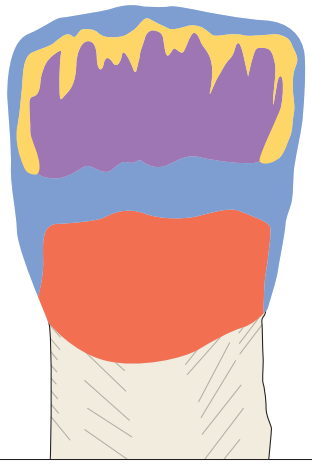
- The framework must have no sharp edges.
- For larger volume cases, the firing temperature is to be increased by 20–30° C.
- For veneers on zirconium oxide, particularly in case of larger volume layers, delayed opening of the furnace (min. 2 minutes) is recommended after each main firing, starting with the margin firings.

Combination table

	A					B				C				D		
	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Frame Modifier	A	A	A	A	A	B	B	B	B	C	C	C	C	D	D	D
Enamel	1	2	2	4	4	1	2	3	4	2	2	3	4	1	2	3

Layer pattern using anterior tooth as example





Cut

from labial

Dentine
Dentine-enamel mixture 50%:50%
Effect materials
Enamel
Wash with stains
Framework in zirconium oxide

Mix the Frame Modifier corresponding to the stain with the special liquid to a creamy consistency and apply thinly to the zirconium oxide framework.

Firing temperature: **970° C.**

Crown after finished Frame Modifier firing.

Reduce the coping if required and isolate the die.

Build up the margin region then fire.

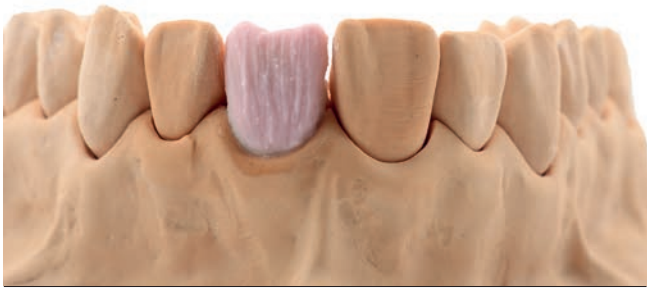
Firing temperature: **840° C.**

After the margin is fired, apply glazing fluid thinly across the entire surface and sprinkle with Margin powder. The rougher surface increases the bond. This increases light refraction and the depth effect.

Firing temperature: **830° C.**

Apply the Opaque Dentine to the cervical and lingual region.

Apply Dentine layer directly on the Opaque Dentine.



Application of a Dentine-Enamel mixture 50%:50%.

Slighty over-contour the anatomical form with translucent and enamel powders according to the desired shade. Then condense the surface with a “big brush”.

The work is now ready for the 1st dentine firing at **780° C.**

After the 1st firing without any finishing.

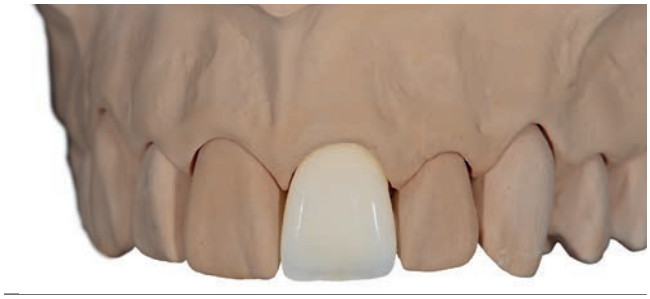
Final finishing of the surface and contour is performed with conventional ceramic-bonded stones or diamonds.

The 2nd firing is a pure correction firing. Only small shape corrections are performed with cutting and transparent materials.

2nd Dentine firing at **770° C.**

Option 1
The restoration can be finished with stains and glaze. This is performed at a firing temperature of **740° C,** without vacuum.

Option 2
Performing a “self-glaze” firing (without stains and glaze) at **785° C,** with vacuum, but without a hold time. Subsequent manual polishing with a suitable polishing agent is then essential to achieve the desired level of lustre.



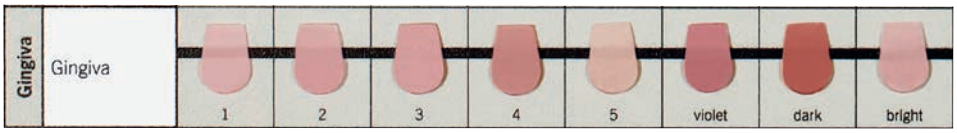
Finished restoration

Firing table							
(on a zirconium dioxide framework)	**Closing time**	**Starting temperature**	**1st firing**	**2nd firing**	**Temperature rise**	**Start vacuum**	**Dwell time**
	min.	**°C**	**°C**	**°C**	**K/min.**	**°C**	**min.**
Frame Modifier	4	450	970	960	60	450	1
Margin	4	450	840	830	45	450	1
Dentine/Enamel	4	450	780	770	45	450	1
Self-glaze	4	450	785	–	45	without	–
Glaze	4	450	740	740	55	without	1
Repair	4	450	720	–	45	450	1

Soprano® 10 Gingiva

Shade table

The firing temperatures are analogue to those of dentine/enamel firing.

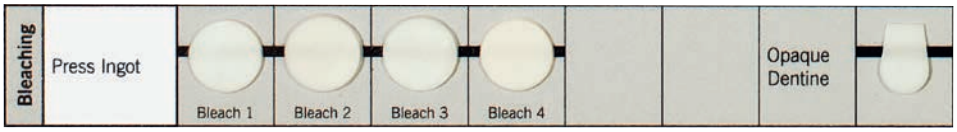


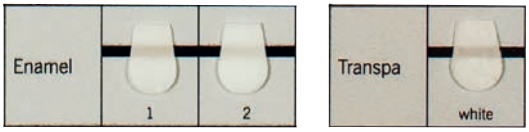
Livento® press/Soprano® 10 Bleach

Shade table

The press programmes are analogue to the A, B, C and D shades.

The firing temperatures of the special veneer ceramics are analogue to those of dentine/enamel firing.



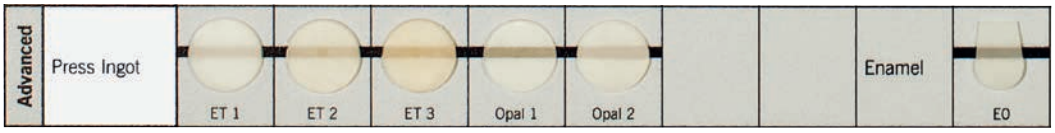


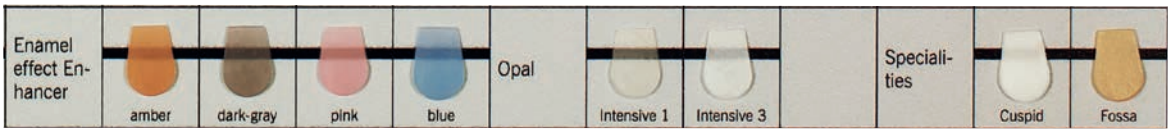
Livento® press/Soprano® 10 Advanced

Shade table

The press programmes are analogue to the A, B, C and D shades.

The firing temperatures of the special veneer ceramics are analogue to those of dentine/enamel firing.





Integration and follow-up

Cementation
Choosing the correct cementation options available today are crucial for a harmonious colour effect of a full ceramic restoration. Depending on the indication, Livento® press restorations can be fixed in an adhesive, self-adhesive or conventional manner.

Brief description of the cementation methods
a) Conventional cementation
In this method of cementation, attachment is virtually based only on the static friction between the restoration and the cementation material. To provide conventional cementation, a retentive reparation with a preparation angle of 4° to 6° is necessary to achieve the highest possible static friction. Please note: in conventional cementation, the overall strength is not increased by fixing the ceramic restoration!

b) Adhesive cementation
In adhesive cementation, the attachment is largely based on a chemical-micromechanical bond, on the one hand between the restoration and the cementation material, on the other, between the preparation and the cementation material. A micromechanical bond to dentine and enamel is created using special adhesive systems. In this type of cementation, static friction plays a subordinate role, therefore a retentive preparation is not necessary. In adhesive cementation, the overall strength is increased by fixing the ceramic restoration!

c) Self-adhesive cementation
In self-adhesive cementation, attachment is based on a chemical-micromechanical bond as well as static friction. Retentive preparation is therefore recommended. As the cementation material has self-etching properties with regard to the tooth substance, no additional pretreatment of the tooth surface is necessary.
Please note: in self-adhesive cementing, the overall strength of the ceramic restoration is **not** increased!

Type of restoration	Conventional cementation	Adhesive cementation	Self-adhesive cementation
Veneers	–	■	–
Inlays, onlays and partial crowns	–	■	–
Anterior and posterior tooth crown	■	■	■
3-pontic bridges	■	■	■

Please observe correct processing according to the manufacturer's instruction for use enclosed in the packaging.

Before cementation of the restoration, etch the inner surface with 5–9% hydrofluorid acid.

Notes on care
Restorations made of Livento® press and Soprano® 10 require regular professional cleaning, the same as own teeth.

Ideal is the use of toothpastes with a low RDA[7] value of 7 to avoid rapid abrasion of the ceramic. This benefits the health of the gums and the teeth as well as the overall aesthetic appearance.

Traceability
The batch numbers must be documented to ensure traceability.

[7] Relative Dentine Abrasion

Product range and ordering information

Order No.	Product	Description	Kit	Refill
08055072	Livento® press – Soprano® 10	Intro Kit A2 complete		
08055137	Livento® press	LT A1	3 pc	5 pc
08055160	Livento® press	MT A2	3 pc	5 pc
08055173	Soprano® 10	Margin A2	5 g	5 g
08055176	Soprano® 10	Opaque Dentine A2	5 g	15 g
08055177	Soprano® 10	Dentine A2	5 g	15 g
08055178	Soprano® 10	Mamelon Cream	5 g	15 g
08055215	Soprano® 10	Enamel E2	5 g	25 g
08055179	Soprano® 10	Enamel Effect light-blue	5 g	15 g
08055180	Soprano® 10	Opal Effect	5 g	15 g
08055181	Soprano®	Flu-Shade A	5 g	5 g
08055182	Soprano®	Flu-Stain dark-blue	5 g	5 g
08055183	Soprano®	Flu-Stain brown	5 g	5 g
08055184	Soprano®	Glaze Paste	5 g	5 g
08055283	Soprano®	Glaze Fluid	25 ml	25ml
08055277	Soprano®	Modeling Liquid	25 ml	100 ml
08055014	Livento® invest		5x100g	50 x 100 g
083739	Livento®	Liquid	250ml	1000 ml
08055017	Livento® press	Disposable Pressplunger (13 mm)	5 pc	50 pc
08055073	Livento® press – Soprano® 10	Shade A-B Kit complete		
08055142	Livento® press	LT A0	3 pc	5 pc
08055137	Livento® press	LT A1	3 pc	5 pc
08055143	Livento® press	LT A2	3 pc	5 pc
08055144	Livento® press	LT A3	3 pc	5 pc
08055145	Livento® press	LT A3.5	3 pc	5 pc
08055146	Livento® press	LT A4	3 pc	5 pc
08055147	Livento® press	LT B1	3 pc	5 pc
08055148	Livento® press	LT B2	3 pc	5 pc
08055149	Livento® press	LT B3	3 pc	5 pc
08055150	Livento® press	LT B4	3 pc	5 pc
08055158	Livento® press	MT A0	3 pc	5 pc
08055159	Livento® press	MT A1	3 pc	5 pc
08055160	Livento® press	MT A2	3 pc	5 pc
08055161	Livento® press	MT A3	3 pc	5 pc
08055162	Livento® press	MT B1	3 pc	5 pc
08055163	Livento® press	MT B2	3 pc	5 pc
08055141	Livento® press	HO 1	3 pc	5 pc
08055169	Livento® press	Bleach 1	3 pc	3 pc
08055185	Soprano® 10	Frame Modifier A	5 g	5 g
08055186	Soprano® 10	Frame Modifier B	5 g	5 g
08055187	Soprano® 10	Margin A0	5 g	5 g
08055173	Soprano® 10	Margin A2	5 g	5 g
08055188	Soprano® 10	Margin A4	5 g	5 g
08055189	Soprano® 10	Margin B2	5 g	5 g
08055190	Soprano® 10	Margin C2	5 g	5 g
08055191	Soprano® 10	Opaque Dentine A0	15 g	15 g
08055192	Soprano® 10	Opaque Dentine A1	15 g	15 g
08055176	Soprano® 10	Opaque Dentine A2	15 g	15 g
08055193	Soprano® 10	Opaque Dentine A3	15 g	15 g
08055194	Soprano® 10	Opaque Dentine A3.5	15 g	15 g
08055195	Soprano® 10	Opaque Dentine A4	15 g	15 g
08055196	Soprano® 10	Opaque Dentine B0	15 g	15 g
08055197	Soprano® 10	Opaque Dentine B1	15 g	15 g
08055198	Soprano® 10	Opaque Dentine B2	15 g	15 g
08055199	Soprano® 10	Opaque Dentine B3	15 g	15 g
08055200	Soprano® 10	Opaque Dentine B4	15 g	15 g
08055201	Soprano® 10	Opaque Dentine orange	15 g	15 g
08055202	Soprano® 10	Opaque Dentine brown	15 g	15 g

Order No.	Product	Description	Kit	Refill
08055203	Soprano® 10	Opaque Dentine yellow	15 g	15 g
08055204	Soprano® 10	Dentine A0	15 g	15 g
08055205	Soprano® 10	Dentine A1	15 g	15 g
08055177	Soprano® 10	Dentine A2	15 g	15 g
08055206	Soprano® 10	Dentine A3	15 g	15 g
08055207	Soprano® 10	Dentine A3.5	15 g	15 g
08055208	Soprano® 10	Dentine A4	15 g	15 g
08055209	Soprano® 10	Dentine B0	15 g	15 g
08055210	Soprano® 10	Dentine B1	15 g	15 g
08055211	Soprano® 10	Dentine B2	15 g	15 g
08055212	Soprano® 10	Dentine B3	15 g	15 g
08055213	Soprano® 10	Dentine B4	15 g	15 g
08055214	Soprano® 10	Enamel E1	25 g	25 g
08055215	Soprano® 10	Enamel E2	25 g	25 g
08055216	Soprano® 10	Enamel E3	25 g	25 g
08055217	Soprano® 10	Enamel E4	25 g	25 g
08055218	Soprano® 10	Enamel Clear	25 g	25 g
08055180	Soprano® 10	Opal Effect	15 g	15 g
08055219	Soprano® 10	Opal Intensive 2	15 g	15 g
08055220	Soprano® 10	Opal Intensive 4	15 g	15 g
08055221	Soprano® 10	Opal Clear	15 g	15 g
08055222	Soprano® 10	Enamel Effect clear-white	15 g	15 g
08055223	Soprano® 10	Enamel Effect sun	15 g	15 g
08055224	Soprano® 10	Enamel Effect apricot	15 g	15 g
08055225	Soprano® 10	Enamel Effect amber	15 g	15 g
08055226	Soprano® 10	Enamel Effect gray	15 g	15 g
08055179	Soprano® 10	Enamel Effect light-blue	15 g	15 g
08055227	Soprano® 10	Enamel Enhancer orange	15 g	15 g
08055228	Soprano® 10	Mamelon mango	15 g	15 g
08055178	Soprano® 10	Mamelon cream	15 g	15 g
08055229	Soprano® 10	Repair	15 g	15 g
08055284	Soprano®	Frame Liquid	25 ml	25 ml
08055277	Soprano®	Modeling Liquid	100 ml	100 ml
08055283	Soprano®	Glaze Fluid	25 ml	25 ml
08055074	Livento® press – Soprano® 10	Shade C-D Kit complete		
08055151	Livento® press	LT C1	3 pc	3 pc
08055152	Livento® press	LT C2	3 pc	3 pc
08055153	Livento® press	LT C3	3 pc	3 pc
08055154	Livento® press	LT C4	3 pc	3 pc
08055155	Livento® press	LT D2	3 pc	3 pc
08055156	Livento® press	LT D3	3 pc	3 pc
08055157	Livento® press	LT D4	3 pc	3 pc
08055164	Livento® press	MT C1	3 pc	3 pc
08055165	Livento® press	MT C2	3 pc	3 pc
08055166	Livento® press	MT D2	3 pc	3 pc
08055326	Soprano® 10	Frame Modifier C	5 g	5 g
08055230	Soprano® 10	Frame Modifier D	5 g	5 g
08055231	Soprano® 10	Opaque Dentine C1	15 g	15 g
08055232	Soprano® 10	Opaque Dentine C2	15 g	15 g
08055233	Soprano® 10	Opaque Dentine C3	15 g	15 g
08055234	Soprano® 10	Opaque Dentine C4	15 g	15 g
08055235	Soprano® 10	Opaque Dentine D2	15 g	15 g
08055236	Soprano® 10	Opaque Dentine D3	15 g	15 g
08055237	Soprano® 10	Opaque Dentine D4	15 g	15 g
08055238	Soprano® 10	Dentine C1	15 g	15 g
08055239	Soprano® 10	Dentine C2	15 g	15 g
08055240	Soprano® 10	Dentine C3	15 g	15 g
08055241	Soprano® 10	Dentine C4	15 g	15 g
08055242	Soprano® 10	Dentine D2	15 g	15 g

Order No.	Product	Description	Kit	Refill
08055243	Soprano® 10	Dentine D3	15 g	15 g
08055244	Soprano® 10	Dentine D4	15 g	15 g
08055075	Livento® press – Soprano®	Stain&Glaze Kit complete		
8055159	Livento® press	MT A1	3 pc	5 pc
08055160	Livento® press	MT A2	3 pc	5 pc
08055163	Livento® press	MT B2	3 pc	5 pc
08055181	Soprano®	Flu-Shade A	5 g	5 g
08055245	Soprano®	Flu-Shade B	5 g	5 g
08055246	Soprano®	Flu-Shade C	5 g	5 g
08055247	Soprano®	Flu-Shade D	5 g	5 g
08055248	Soprano®	Flu-Stain whith	5 g	5 g
08055249	Soprano®	Flu-Stain yellow	5 g	5 g
08055250	Soprano®	Flu-Stain orange	5 g	5 g
08055251	Soprano®	Flu-Stain intense-orange	5 g	5 g
08055182	Soprano®	Flu-Stain dark-blue	5 g	5 g
08055252	Soprano®	Flu-Stain navy-blue	5 g	5 g
08055183	Soprano®	Flu-Stain brown	5 g	5 g
08055253	Soprano®	Flu-Stain black	5 g	5 g
08055254	Soprano®	Flu-Stain gray	5 g	5 g
08055255	Soprano®	Flu-Stain pink	5 g	5 g
08055283	Soprano®	Glaze Fluid	25 ml	25 ml
08055184	Soprano®	Glaze Paste	5 g	5 g
08055076	Soprano® 10	Gingiva Kit complete		
08055256	Soprano® 10	Gingiva 1	5 g	5 g
08055257	Soprano® 10	Gingiva 2	5 g	5 g
08055258	Soprano® 10	Gingiva 3	5 g	5 g
08055259	Soprano® 10	Gingiva 4	5 g	5 g
08055260	Soprano® 10	Gingiva 5	5 g	5 g
08055261	Soprano® 10	Gingiva violet	5 g	5 g
08055262	Soprano® 10	Gingiva dark	5 g	5 g
08055263	Soprano® 10	Gingiva bright	5 g	5 g
08055077	Livento® press – Soprano® 10	Advanced Kit complete		
08055138	Livento® press	ET 1	3 pc	5 pc
08055139	Livento® press	ET 2	3 pc	5 pc
08055140	Livento® press	ET 3	3 pc	5 pc
08055167	Livento® press	Opal 1	3 pc	3 pc
08055168	Livento® press	Opal 2	3 pc	3 pc
08055268	Soprano® 10	Enamel E0	5 g	5 g
08055269	Soprano® 10	Opal Intensive 1	5 g	5 g
08055270	Soprano® 10	Opal Intensive 3	5 g	5 g
08055271	Soprano® 10	Enamel Effect Enhancer amber	5 g	5 g
08055272	Soprano® 10	Enamel Effect Enhancer dark-gray	5 g	5 g
08055273	Soprano® 10	Enamel Effect Enhancer pink	5 g	5 g
08055274	Soprano® 10	Enamel Effect Enhancer blue	5 g	5 g
08055275	Soprano® 10	Cuspid	5 g	5 g
08055276	Soprano® 10	Fossa	5 g	5 g
08055078	Livento® press – Soprano® 10	Bleaching Kit complete		
08055169	Livento® press	Bleach 1	3 pc	3 pc
08055170	Livento® press	Bleach 2	3 pc	3 pc
08055171	Livento® press	Bleach 3	3 pc	3 pc

Order No.	Product	Description	Kit	Refill
08055172	Livento® press	Bleach 4	3 pc	3 pc
08055264	Soprano® 10	Bleach Opaque Dentine	5 g	5 g
08055265	Soprano® 10	Bleach Enamel 1	5 g	5 g
08055266	Soprano® 10	Bleach Enamel 2	5 g	5 g
08055267	Soprano® 10	Bleach Transpa-white	5 g	5 g
	Consumables			
08055014	Livento® invest		50 x 100 g	
083739	Livento® / CM20	Liquid	1000 ml	
08055017	Livento® press	Disposable Pressplunger	50 pc	

Symbols

Manufacturer

Reference number

Lot number

Quantity

This symbol on our packaging indicates that the instructions for use for the respective product can be found on our website www.cmsa.ch/docs.

Rx only

Attention: according to US federal law, this product may only be sold by or on behalf of a physician.

CE
1250

Cendres+Métaux products with CE labelling meet the requirements of the Medical Device Directive 93/42/EEC.

Warning symbol for increased caution

Disclaimer/Validity

The issuing of these instructions for use renders all previous versions invalid. The manufacturer rejects any liability for damages resulting from non-compliance with these instructions for use. In case of complaints, please always include the batch number. Use of the product must be carried out exclusively by skilled persons.

Availability

Country-specific differences in product range are possible.

Copyright and trademarks

Further information

Note of thanks
We would like to thank Mr. Robert Arvai, ArDenta Dental Labor in Chur (Switzerland), for the documentation of the processing steps and the valuable input and suggestions in creating these instructions for use.

FAQs
Information is available on our website www.cmsa.ch.

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