

Prior to use, carefully read the instructions for use.

**GC Initial LiSi Press**

LITHIUM DISILICATE GLASS CERAMICS

For use only by a dental professional in the recommended indications.

**INDICATIONS FOR USE**

1. Occlusal veneers
2. Thin veneers
3. Veneers
4. Inlays
5. Onlays
6. Crowns in the anterior and posterior region
7. 3-unit bridges in the anterior region
8. 3-unit bridges in the premolar region up to the second premolar as the terminal unit
9. Crown or splinted crown on top of an implant abutment
10. 3-unit bridges up to the second premolar placed on top of an implant abutment

Trans.	Processing technique			Indications					
	Staining technique	Cut-back	Full layering	Veneer	Inlay	Onlay	Table-top crown	Anterior/Posterior crown	3-unit bridge
HT	✓			✓	✓	✓	✓		
MT	✓	✓		✓	✓	✓	✓	✓	✓
LT		✓	✓				✓	✓	✓
MO			✓					✓	✓

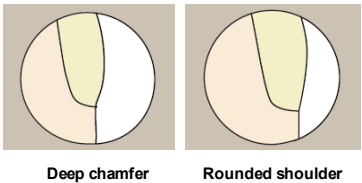
**CONTRAINDICATIONS**

- Not suitable for patients with:
- Severely reduced residual dentition.
  - Severely reduced occlusal vertical dimension.
  - Parafunctions (e.g., suffering from bruxism).

**PREPARATION DESIGN**

When designing restorations, the following preparation guidelines and minimum dimensions should be maintained:

- Preparation guidelines for all-ceramic restorations
- 1) Prepare margins with deep chamfer or rounded shoulder. fig. 1
  - 2) Avoid having margins in direct occlusal contact with the opposing tooth.
  - 3) Antagonist contacts must be taken into consideration.



#### Occlusal veneer

- 1) Reduce the anatomical shape and observe the stipulated minimum thickness.
- 2) Reduce the incisal crown third – in the occlusal area by approx. 1.0mm.

#### Thin veneer

- 1) If possible, the preparation should be located in the enamel.
- 2) Reduction in the cervical and/or labial area by 0.3mm, and the incisal edge by 0.4mm.

#### Veneer

- 1) If possible, the preparation should be located in the enamel.
- 2) Reduction in the cervical and/or labial area by 0.6mm, and the incisal edge by 0.7mm.

#### Inlays

- 1) A preparation depth of at least 1.0 mm and an isthmus width of at least 1.0 mm must be observed in the fissure area.
- 2) Do not prepare undercuts.
- 3) Ensure that the cavity walls form an angle of 6 degrees with the long axis of the tooth.
- 4) All internal edges and angles should be rounded.

#### Onlay

- 1) A preparation depth of at least 1.0 mm and an isthmus width of at least 1.0 mm must be observed in the fissure area.
- 2) Do not prepare undercuts.
- 3) Ensure that the cavity walls form an angle of 6 degrees with the long axis of the tooth.
- 4) All internal edges and angles should be rounded.
- 5) Provide at least 1.0mm of reduction in the cusp areas.

#### Crowns in the anterior region

- 1) Width of the shoulder/chamfer should be at least 1.0mm.
- 2) Reduce the incisal crown third – in the incisal area – by approx. 1.5mm.
- 3) Reduce the vestibular and/or oral area by approx. 1.2mm.

#### Crowns in the posterior region

- 1) Reduce the anatomical shape and observe the stipulated minimum thickness.
- 2) Width of the shoulder/chamfer should be at least 1.0mm.
- 3) Reduce the incisal crown third – in the occlusal area by approx. 1.5mm.

#### 3-unit bridges

- 1) The maximum acceptable pontic width is different in the anterior and posterior region. The pontic width is determined on the unprepared tooth.
- 2) In the anterior region (up to the canine), the pontic width should not exceed 11mm.
- 3) In the premolar region (up to the second premolar), the pontic width should not exceed 9mm.

## WAXING UP

Please use elastic ring system for 3g of GC Initial LiSi Press ceramic ingot.

Fabricate the working model and apply a die spacer. [fig. 2](#)

The restoration is waxed up and the patterns are sprued with a wax onto the ring base former.



Note:

Always attach the sprues in the direction of flow of the ceramic material and at the thickest part of the wax pattern so that smooth flowing of the viscous ceramics during pressing is achieved.

If only one object is invested and pressed in a furnace, a second short (blind) sprue must be placed. [fig. 3](#)

Make sure to keep the space noted in the figure for the wax pattern to assure stability during the pressing procedure. [fig. 4](#)

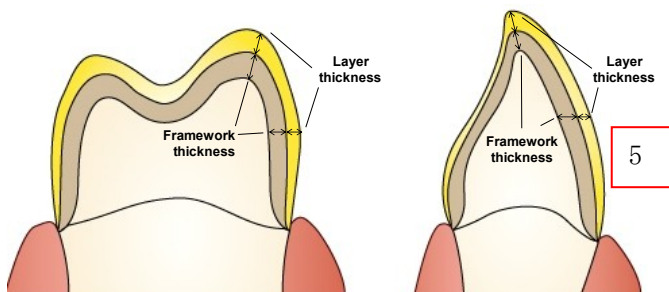
In this system, definitive wax weight is 0.4g (min.) – 0.8g (max.).

In the layering technique, the following guideline regarding minimum GC Initial LiSi Press framework thickness and maximum layer thickness have to be observed.

### Minimum GC Initial LiSi Press Framework and Maximum Layer Thickness [fig. 5](#)

Overall thickness of the restoration	0.8	1.0	1.2	1.5	1.8
Minimum framework thickness	0.4	0.5	0.6	0.8	1.0
Maximum layer thickness	0.4	0.5	0.6	0.7	0.8

Dimensions in mm



## INVESTING

### GC LiSi PressVest

The investing is carried out with GC LiSi Press Vest, a specially developed phosphate bonded investment, offering easy removal of the reaction layer. (For details please refer to the special instructions for use.) [fig. 6](#)

Place the cylinder onto the ring base.

Carefully fill the cylinder with investment material up to just below the edge. [fig. 7](#)  
Put on the mould base former, turning gently (investment should extrude a little through the opening). [fig. 8](#)

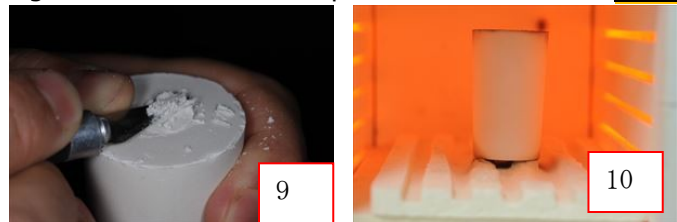


## PREHEATING

After setting, remove the mould base former and ring base former.  
Carefully push the investment ring out of the cylinder.

Smooth the underside by using a plaster knife (check the 90° angle and stable position). [fig. 9](#)  
Place the investment ring with the funnel facing down in the furnace pre-heated to 850°C. [fig. 10](#)

Note: For the investment material, please follow the manufacturers' instructions for use especially under the holding time at 850°C.



## PRESSING

Remove the investment ring from the preheating furnace immediately after completion of the preheating step.

Insert the cold GC Initial LiSi Press ingot into the investment ring with the rounded, non-imprinted side facing down. [fig. 11](#)

Place a plunger into the investment ring. [fig. 12](#)

Place the completed investment ring in the center of the ceramic press furnace. [fig. 13](#)  
Start the selected press program.



## Pressing Program

### DEKEMA AUSTROMAT 644 (PANAMAT Press)

	HT/MT/LT		MO	
Ring Size	100g	200g	100g	200g
Start temperature	700°C	700°C	700°C	700°C
Heat rate	60 °C/min	60 °C/min	60 °C/min	60 °C/min
Final temperature	893°C	913°C	907°C	923°C
Holding time	25min	25min	25min	25min
Press duration	5min	5min	5min	5min
Press level	5	5	5	5

### DEKEMA AUSTROMAT 654 Press-i-dent

	HT/MT/LT		MO	
Ring Size	100g	200g	100g	200g
Start temperature	700°C	700°C	700°C	700°C
Heat rate	60 °C/min	60 °C/min	60 °C/min	60 °C/min
Final temperature	898°C	915°C	905°C	920°C
Holding time	25min	25min	25min	25min
Press duration	Auto2	Auto2	Auto2	Auto2
	5min	5min	5min	5min
Press level	5	5	5	5

### Ivoclar Vivadent EP600, EP5000

	HT/MT/LT		MO	
Ring Size	100g	200g	100g	200g
Stand-by temperature	700°C	700°C	700°C	700°C
Temperature increase	60°C/min	60°C/min	60°C/min	60°C/min
Holding temperature	898°C	910°C	903°C	913°C
Holding time	25min	25min	25min	25min
Stop speed	300□m/min	300□m/min	300□m/min	300□m/min

Note:

We advise to use **one-way press plungers**.

**Only one ingot per investment ring may be used for pressing**

Please follow the ceramic press furnace manufactures' instructions for use.

Avoid rapid cooling after the end of press cycle.

## DEVESTING

After cooling, mark the length of plunger on the investment ring. [fig. 14](#)

Cut along the marking with a suitable cut-off disk. [fig. 15](#)

Carefully break into the 2 sections. [fig. 16](#)

Rough devesting is carried out by blasting with glass beads at 4 bar pressure.

Fine devesting is carried out by blasting with glass beads at 2 bar pressure. [fig. 17](#)

Carefully cut off and finish the sprues with a suitable cut-off disk.



Note:  
Do  
not  
use

aluminum oxide for devesting.

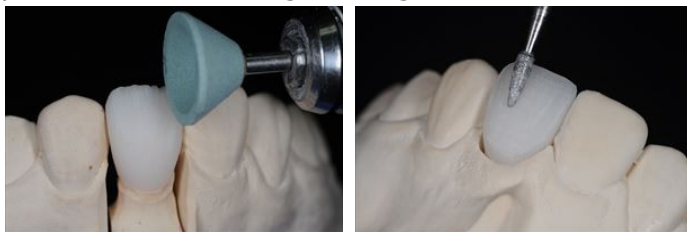
Using GC LiSi PressVest investment guarantees the reduction of the reaction layer and can be accordingly completely removed by blasting with glass beads.

You do NOT need to put pressed objects in hydrofluoric acid.

Avoid overheating during cutting off the sprues.

## FINISHING AND POLISHING

Finish and polish the glass-ceramic, using suitable grinding instrument in low rpm with light pressure. Overheating of the glass-ceramic must be avoided. [fig. 18](#)



## GLAZE, STAINING AND LAYERING

For glazing, staining and layering, please use our dedicated GC Initial Lustre Pastes NF and GC Initial LiSi veneering ceramic for best results.

fig. 19

### Note:

Please follow the manufacturers' instructions for use for the materials of glazing, staining, and layering.

When firing, do not heat or cool the restorations quickly. Rapid change in temperature could break the material.

When firing, proper furnace tray (honeycomb tray) and support pin (in combination with the GC Initial Firing Foam) should be used.



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## CEMENTATION

1. Preparations Etching protocol
  - Apply hydrofluoric acid gel (5-9, 6%) for 60 seconds to the inner surfaces of the restoration
  - Wash with water spray or an ultrasonic cleaner and dry.
  - Condition the etched surfaces with a silane coupling agent such as CERAMIC PRIMER II or G-Multi PRIMER and allow it to dry.
2. Cementing
  - Cement with an adhesive resin cement such as G-CEM LinkForce or self-adhesive resin cement such as G-CEM LinkAce.

### NOTE:

1. Prior to using CERAMIC PRIMER II , G-CEM LinkForce or G-CEM LinkAce, refer to the respective instructions for use.
2. In case the preparation is non-retentive, an adhesive resin cement (such as G-CEM LinkForce) is preferred.

## SHADE

HT: (High Translucency) HT-EXW, HT-BLE, HT-E57, HT-E58, HT-E59, HT-E60,

MT: (Medium Translucency) MT-B00, MT-B0, MT-A1, MT-A2, MT-A3, MT-B1, MT-B2, MT-C1, MT-C2, MT-D2

LT: (Low Translucency) LT-A, LT-B, LT-C, LT-D

MO: (Medium Opacity) MO-0, MO-1, MO-2

Translucency Level	Bleach	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
HT	HT-BLE	HT-E58		HT-E59		HT-E60	HT-E57	HT-E59			HT-E60	HT-E59		E60	HT-E59		
MT	MT-B00	MT-B0	MT-A1	MT-A2	MT-A3			MT-B1	MT-B2			MT-C1	MT-C2			MT-D2	
LT		LT-A					LT-B				LT-C				LT-D		
MO	MO-0	MO-1	MO-2			MO-1	MO-2		MO-1	MO-2							

## PACKAGE

Ingot 3g x 5 pieces

## STORAGE

Recommended for optimal performance, store at room temperature (4-25°C / 39.2-77.0°F) away from direct sunlight and high humidity.

Shelf life: 10 years from the date of manufacture

## CAUTION

- 1) Practitioner with a history of any sensitivity reactions such as rash or dermatitis to this product should not use the products.
- 2) In rare cases the product may cause sensitivity in some people. If any such reactions are experienced, discontinue the use of the product and refer to a physician.
- 3) GC Initial LiSi Press is for single use only.
- 4) When grinding the restorations, use a dust collector and wear a dust mask to avoid inhalation of dust.
- 5) Restorations should not be blasted with aluminum oxide over 1.5 bar. Blasted surface should not be intraorally exposed.
- 6) Follow the preparation guidelines and minimum dimensions.
- 7) For only recommended indications.
- 8) Personal protective equipment (PPE) such as gloves, face masks and safety eyewear should always be worn.