CERPRESS SL®

SENSATION SL®

PRESSABLE CERAMIC MANUAL

CONTENTS

TERMS AND ORDERING INFORMATION

Dillon Company Inc. commitment to service:

Our primary mission is to provide the dental profession with unique products adding value and service. Our customer service representatives are trained on product knowledge to assist in processing your order accurately and efficiently in a friendly and professional manner. We guarantee satisfaction with every Dillon Company Inc. product.

Easy Ordering:

Monday - Friday: 8:30am - 5:00pm (Eastern Standard Time)
Toll-Free 800.535.2633 Local 401.464.5850
Fax 24 hours 401.464.5862
www.leachdillon.com; email: info@leachdillon.com

Shipping:

UPS: Ground
Fed Ex: Overnight (am & pm)
Economy (2 day)
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Minimum Order:

There is a minimum order of $50, or a service charge will be incurred.

Returns:

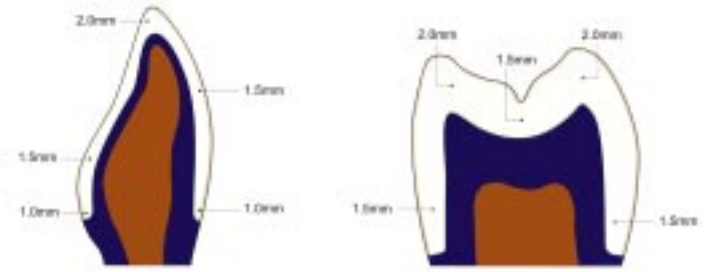
All returns are subject to a 25% handling charge if received in saleable condition.
Items must be returned complete, unused and in the original packaging with seals intact.
Any return requiring repackaging is subject to an *additional* 10% handling charge.
Merchandise will not be accepted for credit if they are used, discontinued, obsolete or returned 90 days after invoice date.

CERPRESS SL® PRESSABLE CERAMIC

TOOTH PREPARATION GUIDE

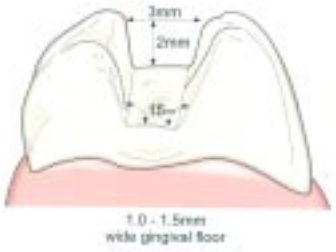
CROWNS:

- A minimum reduction of 1.0 mm axially and 1.5 mm to 2.0 mm incisally and occlusally.
- Shoulder preps should be either 90 shoulder with a rounded gingivio-axial line angle or a deep chamfer prep with no more than 120 angle
- All sharp points and line angles should be rounded.
- Remove any undercuts and reate a passive fit.



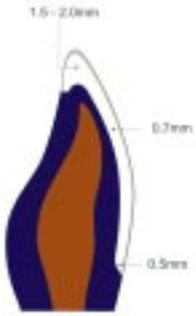
INLAYS / ONLAYS:

- Occlusal reduction must be a minimum 2.0 mm and the isthmus width must be no less than 3.0 mm
- Internal walls should be tapered 15 angle for passive fit.
- 90 shoulder or chamfer at gingival margin.
- All sharp line angles must be rounded
- Do not put margin (porcelain / enamel junction) at area of contact
- Remove any undercuts and create a passive fit.



VENEERS:

- A minimum incisal reduction of 1.0 mm.
- A minimum mid-body reduction of 7.0 mm
- Chamfer preparation all around, maintain interproximal contact.
- Remove any undercuts and create a passive fit.
- Do not put margin (porcelain / enamel junction) at area of contact.



IMPORTANT TIPS
For Successful Placement

- Only use Dual Cure Composite Luting Agent for seating.
- Follow minimal thickness requirements
- NO Feather edge or bevel margins
- Do Not use high speed handpieces. Low speed only
- Do Not use carbides. Diamonds Only.
- Adjust restoration out of the oral environment or after bonding.

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Pressable Ceramic Instructions

DIE PREPARATION:

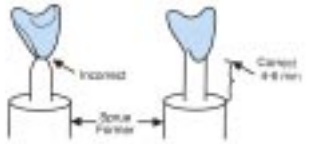
- Block out any undercuts and eliminate all sharp line angles.
- Apply one coat of Lab® Die-Aid™ die hardener to die.
- Apply one coat of Cerpress SL® Prep Shade Die Spacer
  Allow 30 minutes to dry
- Apply another coat of Lab® Die-Aid™ OVER the Prep Shade Die Spacer.
- If a pencil is used to mark the margins, apply a coat of die hardener over the marking so it doesn't come off on the wax up.
- Do Not use debubblizer. Use Cerpress SL Surface Tension Relief Spray.

WAX UP:

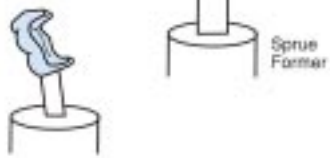
- Use Cerpress SL Wax. It is important that Ash Free Wax is used.
- ***Layering Technique.*** Cerpress SL pressable substructure should ALWAYS be thicker than the Sensation SL build-up layer.
- The minimum thickness for a layered restoration should be no less than 0.8mm.
- It is ideal to wax up the restoration to 75% of the final thickness, maintaining the overall shape of the restoration.
  It is better to press the substructure thicker than desired, because you can alway grind it down after pressing.
- ***Staining Technique.*** Wax the restoration to full contour.
- Try to avoid making the central fossae areas on the occusion too thin. A thickness of 0.8mm should be maintained for pressing purposes. It can be ground down after pressing if needed.

SPRUING:

- Place a small amount of wax on top of sprue former, keeping it flat
  Do Not create a mount of wax on the sprue former.
- Use an 8 or 6 gauge direct sprues (Creare® Sprue Rods).
  Do Not use indirect sprues or plastics sprues.
- The sprue length should be between 4-8mm long.
- Attach sprue to the incisal edge, making sure the connection to the coping is NOT pinched. or it will restrict the glass from flowing.
  (see diagram below)



- Sprue the pattern from 0º to 30º from vertical.
- When spruing multiple units, make sure the margins of all the units are the same height.
- Sprue posteriors (full & onlays) to the mesial or distal contact area.
  If the contact area is undesireable then sprue on the linqual or buccal cusp to the THINNEST area.



Phantom Sprue is a dummy sprue without a restoration attached. It is used to relieve the pressure created when the investment mold is too small to handle the amount of ceramic entering the ring.

For units 0.3 gms or less (small inlays, veneers, etc.) use a phantom sprue. The phantom sprue should be the same height as the sprued unit.

Another popular technique is to wax a duplicate unit and use that as a phantom, providing a spare restoration in case of problems with the original.

INVESTING:

- Spray the wax patterns with Cerpress SL Surface Tension Relief Spray. Do Not use soap based debubblilizer.
- Use Creare®Vest Universal Rapid Fire Investment.
  This is a Universal investment for both pressables and all types of alloys.

Mixing Ratios:	10ml of investment liquid 13ml of distilled H_2O
Inlays:	5ml of investment liquid 18ml of distilled H_2O

These ratios may change based on your laboratory conditions. For more expansion use more liquid and less water.

- Wipe out the mixing bowl before investing - to eliminate excess moisture which can effect total mixture.
- Thoroughly mix the liquid and water together before introducing the powder.
- Hand spatulate 15-20 secs.
- Mix 60 secs under full vacuum.
- Invest as normal. Making sure the investment is poured to the top of the Cerpress Ring.

- Push the leveling ring into place until is displaces the investment and sits firmly on the ring.
  Make sure there is NO investment on the edge of the ring before placing the leveling ring. This will push up the leveling ring during the bench set and cause an uneven ring.

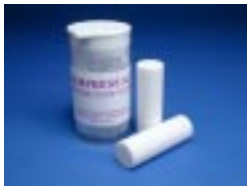
- Bench set 25-30 mins. Then remove from ring.
- Scrape the bottom and edges of ring with a knife to ensure a flat surface. DO NOT USE A BELT SANDER.

- Place ring into preheated oven.
  BURN OUT TEMP = 850°C/1560°F
  HOLD TIME = 50 MINS
- Place Plunger in the burnout furnace at the same time as ring.
- Follow pressing instructions.

IMPORTANT: Weigh all the wax patterns which are going into one ring.
Weigh with sprue attached.
0-0.5 gms = 1 Pellet
0.6-1.0 gms = 2 Pellets

PRESSING:

- Preheat plunger prior to pressing. (Minimum 15 mins)
- DO NOT preheat Cerpress pellets
- Start the pressing cycle.
- While the investment mould is in the furnace, rotate the mould so that the open end is facing upwards.
- Place the pellet(s), then the plunger into the mould and place the mould in the pressing furnace when prompted. Do not place ring on a cool surface during this process.



Pressing Cycle:

Entry Temp:	800°C / 1472°F
Heat Rate:	40°C / 72°F
High Temp:	930°C / 1706°F
Hold Time:	15 minutes
Press Time:	8 minutes
Cool	2 minutes
Air Pressure:	60 psi / 4 bars

Note: If the pressing appears low in value and porosity is present then the pressing temperature is too high. Reduce the temp. 20°C / 35°F at a time until the problem disappears.

The pressing temperature should be as low as possible with out getting a misspress.

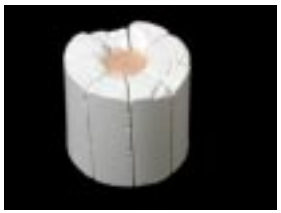
- After cycle is complete let bench cool.
  DO NOT QUICK COOL
  DO NOT PLACE ON METAL HEAT SINK

DIVESTING:

- Investment ring should be cool to the touch
- Using a spare plunger mark the depth of the plunger in the ring. *(It is $1^{1/2}$" in length)*

- Then using a fine separating disc, cut at the mark around the investment down to the plunger.

- Separate the ring at the score line, gently twist and remove the top half of the investment.



- Make vertical cuts around the ring with a small separating disc. Separate the sections with a murphy knife.
- Blast the remaining investment with glass beads. As the restoration becomes exposed drop the pressure down to 30-40 psi

- Using a thin diamond disc, score around the entire sprue connection slowly. Keep circling the connection until the restoration is removed from the sprue. Do Not apply pressure to the pressed unit while cutting through the sprue.

- Clean the plunger with glass beads.
  Do Not use AlOx, grinding stones or acid.

FINISHING

- Fit the restoration to the die using Lab® Liqua-Mark® or Micro-Red®. Paint a coating on the die and allow a couple of minutes to dry. Then place the restoration on the die to indicate any bubbles or high spots. Remove any interference with a tapered fin diamond and proceed very carefully not to chip or heat up the restoration.
  DO NOT USE CARBIDE BURS OR HIGH SPEED HANDPIECES.

- Remove any remaining sprue attachment using a fine grit Diamon-All® cutting instrument.

- When finishing the Cerpress substructure:
  - ALWAYS USE SLOW SPEED
  - NEVER USE SHARP EDGE CARBIDE, Diamonds are preferrable.
  - KEEP RESTORATION COOL - DO NOT HEAT UP!

Diamon-All® Superfine Pencil

The minimum thickness of the pressed core should be no less than 0.8mm and the thickness of the pressed ceramic should always be thicker than the Sensation layering porcelain. Ideally it should be a 2/3 core to 1/3 build up layer.

REPAIR CRACKED CORE

- If the core is cracked after divesting, fill restoration completely with Custom Peg Putty, then place a small amount of Custom Peg Putty on a firing tray and place the pressed core into the patty and fire accordingly (see below).

Entry Temp:	400°C/752°F
Heat Rate:	45°C/80°F
Vacuum:	Full
High Temp:	890°C/1634°F
Hold Time:	2 minutes
Cool Time:	3 minutes

BUILD UP TECHNIQUE

- Sensation SL is a fine grain self condensing porcelain; for best results do not over condense or vibrate. Simply blot the porcelain from the cervical third using a clean tissue.
  GOLDEN RULE: THE WETTER THE BETTER.

- When using modelling liquids use a 4 minute dry time.
  When using Sensation Tear Free or Wilkinson Rapid Fire Liquid
  DO NOT USE ANY DRY TIME

- The appearance of the porcelain after the first bake should have a slight shine to it with a little bit of texture. If it feels rough like an emory board and has a whitish, opaque apperance it is under fired.

- Do Not fire pressable ceramic crowns on firing pegs. The crowns will heat up and expand then drop further on the peg, causing it to crack when cooling.
  Fire on Custom Peg Putty, an instant refractory material. Use Custom Peg Putty to make a custom peg.
  Dispense the putty into the crown, then create a small patty on a firing tray and place restoration on the patty.
  OR
  Dispense a small amount of custom peg putty into the restoration and then place the restoration on a very thin (paper clip size) metal peg.

Sensation SL Low Fusing Stains: The Sensation SL Low Fusing Stains are fluorescent stains, which can be used internally. Mixing the fluorescent stains with the clear, opal or neutral incisal powders can create incisal modifiers. These stains can also be applied in the incisal build up in its concentrated form and overlay the incisal powders to create such characteristics as crack lines and decalcification areas. They can also be used to stain the pressed substructure prior to porcelain build-up for underlying modification.

Staining Translucent Restorations:

After finishing and seating the restoration use the A, B, C, D stains with the proper translucent pellet (T1-T4) to achieve the correct Vita® Lumin® shade.

For example: To achieve an A1, stain the translucent (T1) restoration with the A stain.

To achieve an A2, use a heavier coat, or stain the restoration twice.

see the Translucent Pellet Shade Conversion Chart.

CERPRESS SL / SENSATION SL

Firing Schedules

Pressing Schedule:

Entry Temp:	800°C/1472°F
Heat Rate:	40°C/72°F
Pressing Temp:	930°C/1706°F
Hold Time:	15 minutes
Press Time:	8 minutes
Cool Time:	3 minutes

Opaque Schedule:
1st & 2nd Firing

Dry Time:	10 minutes
Low Temp:	400°C/750°F
Heat Rate:	37°C/67°F
Start Vacuum:	475°C/887°F
High Temp:	820°C/1508°F
Hold Time:	2:30 minutes NO vacuum
Cool Time:	1 minute

Dentine / Incisal Schedule:
1st & 2nd Firing

Dry Time:	4 minutes
Low Temp:	400°C/750°F
Heat Rate:	37°C/67°F
Start Vacuum:	475°C/887°F
High Temp:	770°C/1420°F
Hold Time:	1:15 minutes NO vacuum
Cool Time:	1 minute

Additional firings drop temperature 5C/10F

Stain & Glaze: Layering Technique

To be used when layering Sensation SL over the core.

Dry Time:	4 minutes
Low Temp:	400°C/750°F
Heat Rate:	37°C/67°F
Start Vacuum:	475°C/887°F
High Temp:	750°C/1380°F
Hold Time:	1:15 minutes NO vacuum
Cool Time:	1 minute

Stain & Glaze: Staining Technique

To be used when glazing only presssable core with NO porcleain build-up

Dry Time:	4 minutes
Low Temp:	400°C/750°F
Heat Rate:	37°C/67°F
Start Vacuum:	475°C/887°F
High Temp:	780°C/1436°F
Hold Time:	2 minutes NO vacuum
Cool Time:	1 minute

Glazing Tips:
Follow these few suggestions for better results

- Mix the glaze to a thick paste-like consistency. Apply it on the restoration thin, so any surface texture doesn't get filled in.
- High Temperature. If there is no porcelain on the restoration the pressable core will withstand a much higher temperature than the layering porcelain. Follow the temperatures below.
- Longer hold time. Increase the hold time to 2 to 2 1/2 minutes.
- 2 firings. To properly glaze a pressable ceramic core 2 separate glaze cycles must be used
- For the final touch polish the restoration with Diamon-all Polishing Paste

CERPRESS SL®

CONVERSIONS & TABLES

High Opacity Pellet Shade Conversion

PELLET	H00	H01	H02	H03	H04
SHADES	A00, A0 A1, B00 B0, B1	A2, B2, C1 C2, D2	A3, A3.5 A4, D3	B3, B4	C3, C4 D4

Stain Pellet Shade Converstion

PELLET	T1	T2	T3	T4
VITA	A1/A2	A3/A3.5	B3/B4	C2/C3
LUMIN	B1/B2	A4/D3	D4	C4
SHADES	C1/D2			

High Translucent Shaded Pellets

A00
A0
A1
A2
A3
A3.5
A4
B00
B0
B1
B2
B3
B4
C1
C2
C3
C4
D2
D3
D4

Medium Opacity Pellets

MA00
MA0
MA1
MA2
MB00
MB0
MB1
MB2
MC1
MC2
MD2
MT1
MW

ENAMEL SHADE TABLE

DENTINE	ENAMEL
A1	58
A2	58
A3	59
A3.5	59
A4	60
B1	57
B2	59
B3	59
B4	59
C1	60
C2	59
C3	59
C4	60
D2	60
D3	59
D4	60

New
High Opacity Pellets (70%)
HA0
HA1
HB0
HB1

Cerpress SL Pressable Ceramic System

Press-To-Metal® Technique

- Prepare model & die as normal, blocking out undercuts and applying die spacer.

  When pressing a bridge, it is important that the Creare® High Strength Wax pontics are used.

- Wax up your metal framework as a normal PFM, keeping the wax up anywhere from 1 mm to 4 mm from the margin.

Recommended Alloy CTE: 15.8-16.6 @ 500C

- Sprue, cast and finish the framwork as normal Eliminate any sharp areas.
- Condition the alloy according to manufacturers recommendation.
- Opaque the framework. .

IMPORTANT: Measure the thickness of the opaque and the metal framework.
This measurement will be used to determine the thickness of the wax up.

IMPORTANT: Weigh the opaqued framework before waxing the restoration.
This weight will be used to calculate the weight of the wax up in determining the number of pellets used.

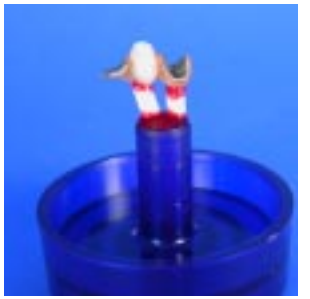
- Die Lube the master die
- Wax directly to the opaqued casting
- Wax to full contour, or an even thickness of 0.8mm. Use Cerpress SL Carving Wax.
- Seal margins, using Creare Brown Cervical wax.

IMPORTANT: Measure the thickness of the final wax up and subtract the previous measurement (thickness of the metal and opaque) to determine the thickness of the wax up.
The minimum thickness should be 0.8 mm.
The pressed core can be finished down after pressing.

- Sprue the wax patterns using 6-8 gauge sprues.

IMPORTANT: Weigh the sprued wax up.
Then subtract the weight from the previous weight of the opaqued framework to determine the weight of the wax.

0.5 gms or less = 1 pellet
0.6 - 1 gms = 2 pellets



- Invest, Press and Divest as a normal pressable ceramic restorations. *Follow pressing schedule.*

- Finish and layer porcelain as a normal pressable ceramic restoration. *Follow firing schedule.*

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