VINTAGE PRESS OVER

porcelain designed to be worry-free

Instructions for Use
VINTAGE PRESS OVER

Processing with Vintage Press Over is easy and efficient. Simply put, it’s worry-free!

Vintage Press Over is a leucite reinforced feldspar porcelain and is partially based on the Classical shade system. New color research allowed Shofu to include two lighter colors to accommodate bleached teeth.

Vintage Press Over system features unique pre-blended dentin and opal enamel pellets designed to be pressed over conventional PFM alloys.

Vintage Press Over porcelain is compatible with all the usual porcelain PFM alloys with a CTE range of:

13.5 - 15.2 x10-6 (25˚ - 500˚)

Indications:

Shofu Vintage Press Over may be utilized for Press-To-Metal crowns or Press-To-Metal bridges, All-Ceramic inlays, onlays, veneers and full crowns. This ensures a uniform appearance throughout the mouth, regardless of restoration type. It also enables the technician to press both All-Ceramic and Press-To-Metal patterns in the same ring, thereby economizing ingot material.

Two Press Techniques are available for the user: Press-To-Metal and All-Ceramic.

Section 1:

Press-To-Metal Technique

This technique is used to achieve highly esthetic restorations, which does not need additional porcelain layering by the Ceramist. Model your restoration to its full anatomic proportions over a metal coping. Sprue and invest the restoration. The porcelain pellet can be pressed in any conventional porcelain press furnace.

After divesting and contouring the restoration a lifelike, natural appearing restorations can be obtained with Shofu Vintage LF Porcelain Stains.
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Section 2:

All-Ceramic Technique with Low Fusing Stain

With this technique, accurate full contour crowns, inlays, onlays or veneers can be easily achieved without a metal substructure. Wax to full contour, sprue and invest restoration. Vintage Press Over pellet can be pressed in any conventional porcelain press furnace.

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Section 1

Press-To-Metal Technique

1.1 Model Fabrication Technique

Prepare dies in conventional manner

Finish margins with deep chamfer or porcelain shoulder.

Only use organic wax that leaves no residue after burn out.

Avoid sharp fissures and/or deep undercut.

Trapped investment could contaminate pressed ceramic.

1.2 Metal Framework Design and Wax-up

The crown or bridge framework should be designed in such a way that they correspond to the teeth which are to be replaced. Make sure that there are no sharp angles or undercut areas. The recommended wall thickness for a single crown is 0.3mm for precious bonding alloy. It is important to avoid occlusal contact at connector areas.
Metal finishing

It is important that the metal framework be free of porosity and casting defects.

1. Use caution finishing the metal framework. Pay close attention to pointed and sharp edges on the framework. Use tungsten carbide and porcelain bonded abrasives. Avoid contaminated grinding stones, and too thin a framework.

2. Technician should pay close attention when divesting and finishing frameworks so as not to contaminate with any foreign particles from finishing instruments.

3. Aluminum oxide is recommended for divesting the metal crowns.

4. Use crosscut carbide burs for finishing. Work in one direction at a slower speed to avoid smearing or folding the metal over itself.

**Note:** **Bubbling of Paste Opaque and Porcelain can occur in later firings, if instructions are not followed.**

When fabricating a Press-To-Metal restoration the following parameters must be observed:

| Metal frame 0.3mm - 0.5 mm | Opaque 0.1mm - 0.2mm |

**Note:** **Final wax thickness should measure no less than 0.8mm exclusive of opaque metal framework.**

1. Wax abutment copings by using common wax technique.

2. No need for hollow pontic system.

Hollow pontic may generate inside stress which could cause cracking.
1.3 Opaque Framework

PASTE OPAQUE

Paste Opaque must be used with the Vintage Press Over. Halo Paste Opaque is ready to use, but it may require initial mixing to achieve proper consistency. If necessary, paste opaque can be thinned with opaque modeling liquid. A small amount of paste is put onto a glass slab or dry mixing pad and a thin even layer is applied onto the dry framework. Fire according to the firing table. The fired surface should have a silky mat sheen.

Note: In order to guarantee the elimination of the organic components within the paste opaque it is very important that the preheating and firing times are followed.

A second layer of paste opaque is applied to achieve the optimum coverage of the metal. When characterization is required in the cervical area; this can be achieved by using the modifiers offered within the system, with the corresponding opaque, to achieve the desired aesthetic result.

Note: Only use paste opaque modifiers.

Opaque all areas which will receive pressable material, as well as, the lingual “T” bar handle.

Use Vintage Halo Paste Opaque (Liquid) to clean or remoisten brush. This will prevent bubbling of paste opaque.

### FIRING SHOFU VINTAGE PRESS OVER

<table>
<thead>
<tr>
<th>Dry Time (min)</th>
<th>Entry Temp ºC (°F)</th>
<th>Vacuum</th>
<th>Heat Rate ºC/min (°F/min)</th>
<th>Vacuum Final ºC (°F)</th>
<th>High Temp ºC (°F)</th>
<th>Hold Time (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firing of Paste Opaque I &amp; II</td>
<td>7 - 9 (450 (842))</td>
<td>full</td>
<td>50–60 (122–140)</td>
<td>950/940 (1742/1724)</td>
<td>950/940 (1742/1724)</td>
<td>0.5–1.0</td>
</tr>
</tbody>
</table>

* Full vacuum up to high temp.
2.0 Determine Press Ingot Weight

Weigh opaqued metal framework and weigh metal substructure after full contour wax up with attached sprues. The difference in weight is the amount needed for the Press Over pellet.

Use one pellet for up to a maximum of 0.5 gr. of wax

Use two pellets for up to a maximum of 1.2 gr. of wax

2.1 Pressable Wax Up

Wax restoration to full contour; make sure to observe the minimum 0.8mm wax thickness all around. This is particularly important on the occlusal table, in the central groove area, and interproximally.

Note: Maintain a minimum 0.8mm wax thickness over the copings to insure unrestricted flow of the pressable ceramic to all areas of the restoration(s).

2.2 Spruing

Connect one sprue to each individual pontic and abutment.

Connect sprues using conventional crown & bridge casting techniques and invest using an appropriate casting investment.
Attach wax sprue (3mm in diameter) to the broadest place on the wax restoration.

Sprue should be 3-5mm long, not tapered and with a smooth transitions into the restoration as well as onto the ring base.

Make sure press ceramic flows axial to the restoration.

For smaller inlays, a thinner wax sprue can be used.

Attach/Wax the sprue and position

1. Attach/Wax the sprue to the edge of the ring base at an angle of 40°- 50°

2. The wax pattern should be located above the divesting cutting line.

3. Always keep a minimum distance of 2mm or 3mm between wax patterns. If needed turn wax pattern slightly.

4. Maintain a distance of 5mm to the outer wall and position all restorations in the same horizontal plane.
3.1 Investing and Burnout

Rapid or overnight burn-out can be used.

The Shofu Ring set should be used for investing wax patterns.

User can choose their preferred Investment.

The investment should be processed according to the manufacturer’s instructions.

No liability can be expected regarding the success of the investing processes.

Grease base former and leveling cap with Vaseline.

Wrap Shofu paper cuff around ring and base former.

Mix investment according to manufacturer’s instructions.

Carefully fill wax pattern using a brush or small instrument.

When transporting the ring, hold from the base former, not the sides of the ring.

Remove the investment button created by the leveling cap with a dry knife.

Keep the top surface and the bottom surface parallel.

Any defects and investment residues must be removed before placing the ring in the burn out furnace. Place the ring with opening down.

Add 15 minutes for each additional 100g ring. Add 30 minutes for each additional 200g ring in the burn out furnace.

Note: The press pellets should not be preheated. Always use disposable plunger.

Insert the ceramic ingot(s) of the desired shade and the disposable plunger into the canal of the investment ring.

Use one ingot for up to two crowns and two ingots for three or more crowns; however, if the wax pattern(s) weight is 0.5g or less, use one ingot, and if the weight is between 0.6 g and 1.2 g, use two ingots.

Make sure no debris gets into the press canal and keep bottom of investment ring clean, so even placement is ensured in press furnace.
4.1 Pressing Procedure and Parameters

Before starting:

1. Establish correct pressing temperature in press furnace! This is crucial for best press results.

2. Check furnace parameters, as temperature inside of the muffle might vary from furnace to furnace.

Set up initial furnace calibration

Establish optimal pressing cycle for your furnace

Calibrate press furnace regularly

Insert the ceramic ingots and press disposable plunger into the ring, then center the ring on the pressing platform. Please refer to the press furnace manufacturer’s instructions for pressing procedure.

Make sure disposable plunger, ceramic ingot and sprue base have same dimensions.

Note: Overly long press times can cause problems including: Split rings or porosity, over-vitrified, brittle or fractured restorations. If more material is required to finish your restoration successfully, cut a Shofu Press Over ingot in half.

<table>
<thead>
<tr>
<th>SHOFU VINTAGE PRESS OVER</th>
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</thead>
<tbody>
<tr>
<td><strong>Ring Size</strong></td>
</tr>
<tr>
<td>100gm &amp; 200gm</td>
</tr>
</tbody>
</table>

* These pressing times are only a recommended starting point. Each ring may require more or less pressing time depending upon the size and number of patterns.
Note: Find ideal pressing temperature for each furnace! Try to determine the temperature at which every restoration is pressed completely; that pressing temperature is considered ideal.

Follow the pressing schedule. After pressing, remove the investment ring immediately from the furnace and cool to room temperature.

5.1 Divesting

Divest the restoration once the ring has cooled to room temperature. Blast upper side of ring with Glassbeads at 40 psi to expose pressed restoration.

When the pressed ceramic is exposed, lower the sandblasting pressure to less than 30psi (0.2Mpa) and continue blasting carefully so no damage is done to the restorations.

5.2 Fitting

To cut the sprue, use a diamond disk. Create a line around the sprue, 2mm from the crown at a low speed, and then carefully cut through the sprue. In this case only limited crack propagation takes place and will not spread into the crown.

OPTIONAL

6.1 Stain and Glaze Technique for Vintage™ Press Over Pellet

The color intensity of the pressed over metal restoration can be changed
with Shofu Vintage™ LF stains. Depending on the desired intensity, multiple stain firings may be required. Mix the glaze powder to a gel-like consistency for easier processing. Then apply glaze and stain evenly onto the restoration. During application, make sure that the fissure base and the margins are not over-contoured with glaze. Remove excess if necessary.

### SHOFU VINTAGE PRESS OVER FIRING SCHEDULE

<table>
<thead>
<tr>
<th></th>
<th>Dry Time (min)</th>
<th>Entry Temp. °C (°F)</th>
<th>Vacuum</th>
<th>Incr. Temp. °C/min (°F/min)</th>
<th>Vacuum Final Temp.</th>
<th>Final Temp. °C (°F)</th>
<th>Hold Time (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Glaze</td>
<td>5-7</td>
<td>650 (1202)</td>
<td>No</td>
<td>No</td>
<td>910-930</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Vintage™ LF stain Glaze Firing</td>
<td>5</td>
<td>400 (752)</td>
<td>Full</td>
<td>45 (113)</td>
<td>745 (1373)</td>
<td>745 (1373)</td>
<td>1</td>
</tr>
</tbody>
</table>

*Drying time/temperature is oven dependent; it's very important in eliminating steam tears. Call Shofu technical support for additional info. The information above is a recommended guideline.

### 6.2 Ceramic Cut Back for Layering Technique with Vintage Halo Porcelain

The cut back is an optional step to achieve additional iridescences and modifications to the incisal area. Using clean diamond disks, diamond impregnated silicon/rubber wheels CeraMaster™ and CeraMaster™ Coarse or Dura Green® Stones by Shofu, carefully reduce labial surfaces.

Note: Maintain the same minimum thickness at the margin areas (0.8mm) and maintain a majority thickness ratio of at least 80%
pressable core, no more than 20% ceramic overlay material. Not following these instructions may lead to failure in the final restoration.

Before layering the restoration with Shofu Vintage Porcelain, the surface of the pressable restoration should be blasted lightly with 50 micron aluminum oxide (20 psi), followed by careful cleaning.

**OPTIONAL: ONLY IF CUTBACK IS DESIRED**

<table>
<thead>
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<td><strong>Dry Time</strong></td>
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<tr>
<td>(min)</td>
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<tr>
<td>Firing of Body, Dentin, &amp; Translucent, 1st Firing</td>
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<td>Self-Glaze</td>
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**Section 2**

**All-Ceramic Technique with Low Fusing Stain**

Simplicity is a benefit of Shofu Press Over. Unlike other systems which require the technician to choose a pellet specific to the color; Shofu Press Over pellets can be used for the Press-To-Metal and All-Ceramic techniques. The technician has the freedom to choose a pellet, which gives the greatest color match advantage.

**1.1 Indications**

Follow Prep-guide lines for All-Ceramic restorations.

For single tooth anterior and posterior restorations with shoulder or deep chamfer preparations. Use MonoCem™ Self-Adhesive Resin Cement by Shofu or an adhesive bonding material.

**Contraindications**

Pressable ceramic should not be used for patients with bruxism or insufficient tooth reductions.
2.0 Determine Press Ingot Weight

Weigh full contour wax with attached sprues. The difference in weight is the amount needed for the Press Over pellet.

Use one pellet for up to a maximum of 0.5 gr. of wax.

Use two pellets for up to a maximum of 1.2 gr. of wax.

2.1 Pressable Wax-Up

Wax restoration to full contour; make sure to observe the minimum 0.8mm wax thickness all around. This is particularly important on the occlusal table, in the central groove area, and interproximally.

Note: Maintain a minimum 0.8mm wax thickness over the copings to insure unrestricted flow of the pressable ceramic to all areas of the restoration(s).

2.2 Spruing

Connect one sprue to each individual pontic and abutment.

Attach wax sprue (3mm in diameter) to the broadest place on the wax restoration.

Sprue should be 3-5mm long, not tapered and with a smooth transitions into the restoration as well as onto the ring base.

Make sure press ceramic flows axial to the restoration.

For smaller inlays, a thinner wax sprue can be used.

Attach/Wax the sprue and position

1. Attach/Wax the sprue to the edge of the ring base at an angle of 40°- 50°

2. The wax pattern should be located above the divesting cutting line.
3. Always keep a minimum distance of 2mm or 3mm between wax patterns. If needed turn wax pattern slightly.

4. Maintain a distance of 5mm to the outer wall and position all restorations in the same horizontal plane.

3.1 Investing and Burnout

Rapid or overnight burn-out can be used.

The Shofu Ring set should be used for investing wax patterns.

User can choose their preferred Investment.

The investment should be processed according to the manufacturer’s instructions.

No liability can be expected regarding the success of the investing processes.

Grease base former and leveling cap with Vaseline.

Wrap Shofu paper cuff around ring and base former.

Mix investment according to manufactures instructions.

Carefully fill wax pattern using a brush or small instrument.

When transporting the ring, hold from the base former, not the sides of the ring.

Remove the investment button created by the leveling cap with a dry knife.

Keep the top surface and the bottom surface parallel.

Any defects and investment residues must be removed before placing the ring in the burn out furnace. Place the ring with opening down.
Add 15 minutes for each additional 100g ring. Add 30 minutes for each additional 200g ring in the burn out furnace.

**Note:** The press pellets should not be preheated. Always use disposable plunger.

Insert the ceramic ingot(s) of the desired shade and the disposable plunger into the canal of the investment ring.

Use one ingot for up to two crowns and two ingots for three or more crowns. However, if the wax pattern(s) weight is 0.5g or less, use one ingot, and if the weight is between 0.6 g and 1.2 g use two ingots.

Make sure no debris gets into the press canal and keep bottom of investment ring clean, so even placement is ensured in press furnace.

### 4.1 Pressing Procedure and Parameters

**Before starting:**

1. Establish correct pressing temperature in press furnace! This is crucial for best press results.

2. Check furnace parameters, as temperature inside of the muffle might vary from furnace to furnace.

Set up initial furnace calibration

Establish optimal pressing cycle for your furnace

Calibrate press furnace regularly

Insert the ceramic ingots and disposable plunger into the ring. Then center the ring on the pressing platform. Please refer to the press furnace manufacturer’s instructions for pressing procedure.
Make sure disposable plunger, ceramic ingot and sprue base have same dimensions.

**Note:** Too long press times can cause problems including: Split rings, porosity, over-vitrified, brittle or fractured restorations. If more material is required to finish your restoration successfully, cut a Shofu Press Over ingot in half.

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Follow the pressing schedule. After pressing, remove the investment ring immediately from the furnace and cool to room temperature.

### 5.1 Divesting

Divest the restoration once the ring has cooled to room temperature. Blast upper side of ring with Glassbeads at 40 psi to expose pressed restoration.

When the pressed ceramic is exposed, lower the sandblasting pressure to less than 30psi (0.2Mpa) and continue blasting carefully so no damage is done to the restorations.
6.1 Stain and Glaze Technique with LF stain for Vintage™ Press Over Pellet

The color intensity of the base-pressed restoration can be changed with the Shofu Vintage LF stains (PN 8507). Depending on the desired intensity, multiple stain firings may be required. Mix the glaze powder to a gel-like consistency for easier processing. Then apply glaze and stain evenly onto the restoration. During application, make sure that the fissure base and the margins are not over-contoured with glaze. Remove excess if necessary.

To achieve easy shade reproduction use the Shofu Die color checker material PN 8030.

Separate the inside of the metal free coping with the Vintage Isolation (separation) liquid. Apply the DIE COLOR CHECKER material into the coping and place die stick in the center. Light cure the die checker material with the coping for 3 minutes, then remove the die and cure the die for another 3 minutes. (The material cures under visible light of 400 - 500 nm.)

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<table>
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<tr>
<th></th>
<th>Dry Time (min)</th>
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<th>Vacuum</th>
<th>Incre. Temp. °C/min (°F/min)</th>
<th>Vacuum Final Temp.</th>
<th>Final Temp. °C (°F)</th>
<th>Hold Time (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vintage™ LF stain Glaze Firing</td>
<td>5</td>
<td>400 (752)</td>
<td>Full</td>
<td>45 (113)</td>
<td>745 (1373)</td>
<td>745 (1373)</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: It is possible to mix glaze and stain together.
SHOFU VINTAGE PRESS OVER

<table>
<thead>
<tr>
<th>Size</th>
<th>Entry Temp (B) °C</th>
<th>Start Vacuum (V1) °C</th>
<th>Incr. Temp (T) °C/min</th>
<th>High Temp (T2) °C</th>
<th>Hold Time (H) (min)</th>
<th>Repress Time (N) (min/gm)</th>
<th>Release Vacuum (V2) °C</th>
<th>Pressure (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100gm &amp; 200gm</td>
<td>700 (1292)</td>
<td>700 (1292)</td>
<td>50 (122)</td>
<td>940 (1724)</td>
<td>20</td>
<td>10 min* 100gm</td>
<td>940 (1724)</td>
<td>2.5 - 5</td>
</tr>
</tbody>
</table>

* These pressing times are only a recommended starting point. Each ring may require more or less pressing time depending upon the size and number of patterns.

OPTIONAL: ONLY IF CUTBACK IS DESIRED

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<td>Firing of Paste Opaque I &amp; II</td>
<td>7–9</td>
<td>450 (842)</td>
<td>full</td>
<td>50–60 (122–140)</td>
<td>940–950 (1724–1742)</td>
<td>940–950 (1724–1742)</td>
<td>0.5–1.0</td>
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<tr>
<td>Firing of Body, Dentin, &amp; Translucent, 1st Firing</td>
<td>5–7</td>
<td>650 (1202)</td>
<td>full</td>
<td>50–60 (122–140)</td>
<td>920–940 (1688–1724)</td>
<td>920–940 (1688–1724)</td>
<td>0</td>
</tr>
<tr>
<td>Correction Body Bake, 2nd Firing</td>
<td>5–7</td>
<td>650 (1202)</td>
<td>full</td>
<td>50–60 (122–140)</td>
<td>910–930 (1670–1706)</td>
<td>910–930 (1670–1706)</td>
<td>0</td>
</tr>
<tr>
<td>Self-Glaze</td>
<td>5–7</td>
<td>650 (1202)</td>
<td>No Vacuum</td>
<td>50–60 (122–140)</td>
<td>No Vacuum</td>
<td>910–930 (1670–1706)</td>
<td>0</td>
</tr>
</tbody>
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*Drying time/temperature is oven dependent; it's very important in eliminating steam tears. Call Shofu technical support for additional info. The information above is a recommended guideline.

STAIN & GLAZE TECHNIQUE WITH LF STAIN FOR VINTAGE™ PRESS OVER PELLET

<table>
<thead>
<tr>
<th></th>
<th>Dry Time (min)</th>
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<th>Incr. Temp °C/min</th>
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