Thank you for purchasing the Project CRS™ Vacuum Pressing System. When combined with a vacuum pump, you'll find it a versatile and practical addition to your arsenal of tools. The system is designed for woodworkers looking for a simple and affordable method of veneering wood panels and with its companion clamping kit, the system can be used for clamping wood projects for routing, sanding and carving. With an integrated bleeder fitting, the vacuum level is highly adjustable though the range depends in the flow of your vacuum pump.

This guide will help you get your vacuum press/clamp assembled as quickly as possible. If you have any questions, feel free to contact us through the VeneerSupplies.com website.

**Kit Contents**

- Thread-Sealing Tape
- Heavy-Duty Vacuum Tube
- Lock-On Vacuum Connector
- Brass Pipe (2”)
- Vacuum Valve
- Heavy Duty Vacuum Gauge
- Vacuum Bleeder Fitting
- Brass Pipe (1”)
- 1/4” NPT x 3/8” Barb Brass Fitting
- 1/8” NPT x 3/8” Barb Brass Fitting
- Brass Cross Fitting
- High-Flow Vacuum Filter

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Any dispute or claim between you and Us arising in any way out of the use of this site or any product contained within this site will be resolved by BINDING ARBITRATION, rather than in a court. This obligation applies to both parties, regardless of the legal theory or cause of action involved (tort, product liability, misrepresentation, negligence, etc.). Both you and Us agree to waive the right to bring a lawsuit to be decided by judge or jury regarding any such claims or disputes, and instead agree to have such claims or disputes resolved by an arbitrator.

Governing Law
The arbitrator shall be agreed upon by the parties and the arbitration shall take place in Harford County, Maryland in accordance with Maryland law.

Procedure
If the parties cannot agree on a mutually acceptable arbitrator, the arbitration will be conducted through the American Arbitration Association (“AAA”) and in accordance with its rules. The AAA’s rules are available to view at https://www.adr.org. Both parties agree to equally share the administrative expense of the arbitration, unless the arbitrator finds that the claim was brought in bad faith and orders one party to pay the cost of the proceedings as part of the arbitration award. Both parties are responsible for paying the costs of their own counsel, experts, and witnesses. Judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. Before commencing an arbitration under this Agreement, the aggrieved party will first present the claim or dispute to the opposing party by (certified mail, regular mail). Our notice address to submit claims or disputes is: JWW Services Inc., 217 E. Jarrettsville Rd., Suite 5, Forest Hill, MD 21050. If the claim or dispute is not resolved within 90 days, the aggrieved party can commence arbitration proceedings in accordance with this Agreement.

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All arbitrations conducted under this Agreement shall be conducted only on an individual (and not a class-wide) basis; and an arbitrator shall have no authority to award class-wide relief. Your use of this document indicates your acceptance that this Agreement specifically prohibits you from commencing arbitration proceedings as a representative of others or joining in any arbitration proceedings brought by any other person.

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This warning is provided to comply with California’s Proposition 65 (Assembly Bill 1953) product labeling law and may apply to other states. Brass fittings and other products may contain chemicals known to the state of California to cause cancer, birth defects or other reproductive toxicity. Brass fittings may contain lead and are not for use with potable water. As with any product of this nature, we recommend washing your hands after contact with brass parts. We provide this warning based on our knowledge concerning the possible presence of one or more such chemicals, without attempting to evaluate the level of exposure. Visit www.p65warnings.ca.gov for details.
Assembly

1. Apply thread sealing tape to the male thread sides of the brass fittings below.
   a. Brass Pipe (2”)
   b. Brass Pipe Nipple (1”)
   c. Vacuum Valve
   d. Vacuum Bleeder Fitting
   e. Vacuum Gauge
   f. 1/8” NPT x 3/8” Barb Brass Fitting
      (do not apply thread sealing tape to the 1/4” NPT x 3/8” barb brass fitting)

   *Two or three layers of tape should be applied to the fitting in the direction of the*
   *threads. Hold the fitting in your right hand. Apply the starting end of the tape to the*
   *top threaded portion of the fitting and rotate the fitting away from you. The fitting*
   *should be rotating in the same direction as if it were being inserted into another fitting."

   *Thread sealing tape is not shown in the assembly pictures below for the sake of clarity.*

2. Loosely attach the 2” brass pipe to the intake port on the vacuum pump.

3. Attach the brass cross and tighten it firmly. This will also tighten the 2” brass pipe. After
   the brass cross begins to become snug, continue turning until the brass cross is oriented
   horizontally as shown below.

4. Loosely attach the short brass pipe nipple to the opposite side of the brass cross. The side
   of the nipple with the thread sealing tape is the side that is attached to the brass cross.

5. Attach the vacuum valve to the forward-facing port of the brass cross using a 11/16”
   wrench. The valve should be oriented so the handle is facing upright when fully tightened.

   *The vacuum valve allows the user to quickly and easily adjust the amount of vacuum being*
   *applied to the project.*

6. Attach the vacuum bleeder fitting to the vacuum valve using 9/16” and 11/16” wrenches.

   *The fitting which we call a "bleeder" can be used for many purposes such as for muffling*
   *the vacuum pump exhaust. However, for this kit the bleeder fitting simply filters the air*
   *going back into the system when the vacuum level is adjusted by the vacuum valve.*

7. You can now turn/tilt the entire brass assembly so the gauge is angled up by 40° and then
   attach the vacuum gauge to the top port on the brass cross.
8. Attach the vacuum gauge to the brass cross. Use a 9/16” wrench on the base of the gauge to prevent damage. Do not apply force to the gauge housing.

*If the gauge needle is not at zero, carefully lift the edge of the rubber plug at the top of the gauge. Excess pressure inside the gauge will escape and the needle will reset.*

9. Attach the vacuum filter. Make note of the arrow embossed on the side of the filter head. This arrow should be pointing toward the pump. Do not over-tighten the filter. Even when the filter is hand tight, it will still provide a very good seal. The final position of the filter should be the 6 o’clock or vertical position as shown in the picture below.

10. Attach the 1/4" NPT x 3/8" barb brass fitting to the open port on the vacuum filter. Thread sealing tape is not used on this part. Avoid over-tightening this fitting. Snug is adequate.

11. Attach the 10-foot piece of braided vacuum tube to the barbed brass fitting on the filter.

12. Attach the 1/8” NPT x 3/8” barb brass fitting to the lock-on connector on the end of vacuum tube using a 5/8” and a 9/16” wrench. This fitting should have thread sealing tape applied.

13. Slide the brass barb fitting (which is attached to the lock-on connector) onto the remaining open end of the braided vacuum tube.
How to Use the CRS™ Vacuum Press System

Apply the bag closure to the vacuum bag when the project is prepared and placed inside. Pull back the sleeve on the lock-on connector and slide it onto the brass stem* on the vacuum bag. Release the sleeve while gently pushing the downward to snap the lock-on connector into position.

Apply power to the vacuum pump and close the vacuum valve by turning the handle to the horizontal position. The gauge will show how much vacuum is being applied to the bag. The ideal vacuum level for most veneering projects is 21” of Hg. Observe the vacuum gauge as the indicator needle moves toward this ideal vacuum level. When the needle passes the 21” of Hg mark on the gauge, slowly open the vacuum valve. Doing so will allow a small amount of air to vent back into the system and the gauge needle will move backward. Adjust the position of the vacuum valve handle until the gauge needle settles at the 21” mark. No further adjustment should be needed during the pressing time for the project.

Keep in mind that this system is designed to run continuously while the adhesive is setting up. The vacuum pump will not restart if there is any vacuum shown on the gauge. In the event that you need to turn off the system during the pressing, you will need to temporarily disconnect the lock-on connector from the vacuum bag before turning on the pump again. When the pump is running, re-attach the lock-on connector to the bag.

* The vacuum bags offered at VeneerSupplies.com include a special brass stem that mates with the lock-on connector included with this vacuum press kit.

Warnings
1. Do not allow the vacuum press system to run unattended.
2. The vacuum gauge is a sensitive instrument and will be rendered inaccurate if dropped or struck with a hard object.
3. The vacuum pump may be hot during and after use. Exercise care when handling the vacuum press system.

Pressing Time
The adhesive used on your project will determine how long the panel needs to be pressed in the bag. Follow the instructions on the adhesive bottle for clamping time. Excess clamping time for some adhesives can be problematic so avoid pressing the project for too long.

When the suggested pressing time is complete, unplug the vacuum system and remove the lock-on connector from the bag by depressing the spring clip.

Your CRS™ Vacuum Pressing System Is Now Complete!
I've written a short but helpful article that explains what else you will need to use your vacuum press. The article also includes a step by step guide to using your system for vacuum pressing a veneered panel. Follow the guide carefully and your first veneer project will turn out perfectly.

Check it out here...
Using the CRS System with Podz™ Vacuum Clamping Jigs
(Optional)

If you ordered your CRS system with the optional Podz™ clamping kit, assemble the jigs using the instructions included with the kit.

Begin preparing the system and Podz jigs for use by attaching the tube adapter from the lead Podz clamping jig to the lock-on connector from the CRS vacuum system. Turn the vacuum valve to the 4 o'clock position. When the system is running, this will allow a small amount of air to vent back into the system and is necessary for releasing the vacuum clamped project when the system is turned off. See the full Podz instructions for details.

Attach the power cord from the vacuum pump to the end of the power cord on the electric foot pedal that is included with the Podz clamping option for the CRS system. Plug the cord assembly into a standard 120v wall socket. Press the back side of the pedal to turn the system on. To turn the system off, press the front side of the pedal.

**How It Works**

Turn the system on via the foot pedal and place your project panel onto the Podz jigs. Adjust the vacuum valve handle as needed to create an ideal balance of vacuum clamping force and release time. The release time is the amount of time it takes for the vacuum to bleed out of the system (when it is turned off) so that the clamped project panel can be removed from the Podz jigs. Increase the clamping force by moving the vacuum valve handle toward the horizontal or 3 o'clock position but be aware that doing so can increase the amount of time it takes for the Podz jigs to release the clamped panel.

Press the back edge of the foot pedal to turn the vacuum pump on. Place the work piece onto the vacuum jig and you should feel the vacuum pressure pull the work piece solidly onto the jig. If the clamping piece is very porous and causes inadequate vacuum, you may wish to adjust the bleeder fitting to reduce the amount of air allowed back into the system.

To release the pressure from the Podz jigs, press down on the front edge of the pedal. You may hear the flow of air from the bleeder fitting as the vacuum from the jig is unloaded and the work piece is released.