

VeneerSupplies.com
Project:CRS™
VACUUM PRESSING SYSTEM

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 clamping wood projects for routing, sanding and carving. With an integrated bleeder valve, the system is fully adjustable from 840 to 1750 lbs of pressure per square foot.

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")



3/8" Brass
Barb Fittings



Brass Cross
Fitting



High-Flow
Vacuum Filter

Warning: Brass products may contain chemicals known to the state of California to cause cancer or reproductive toxicity.

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Assembly

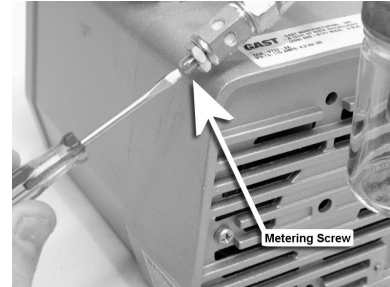
1. Apply thread sealing tape to the male side of the brass pipe (2"), brass short pipe, vacuum valve, vacuum bleeder, brass fittings attached to vacuum tube, and vacuum gauge.
2. Loosely attach the long brass pipe to the intake of the vacuum pump.
3. Attach the brass cross and tighten it firmly. This will also tighten the long pipe from the step above. After the brass cross begins to become snug, continue turning until the fitting is oriented horizontally as shown.
4. Loosely attach the short brass pipe to the brass cross. It is attached to the opposite port of the long pipe.
5. Attach the vacuum filter. Make note of the arrow on the top of the filter. This arrow should be pointing toward the pump. Do not over-tighten the filter. Even when the filter is less than hand tight, it will still provide an air-tight seal. The final position of the filter should be the 6 o'clock or vertical position. You may need a separate wrench or pliers to hold the brass cross in place as you tighten the filter.
6. Attach the vacuum gauge to the top port on the brass cross. Do not apply force to the gauge housing. Use a 9/16" wrench on the base of the gauge to prevent damage. Do not apply force to the gauge housing. The air bubble inside the gauge is normal. This bubble keeps the gauge accurate regardless of altitude. To zero/reset the gauge needle, carefully remove the brass insert at the top of the gauge while held in the upright position. Any excess pressure inside will escape and the gauge needle will reset. Be sure to re-install the brass fitting when finished.
7. Attach the vacuum valve to the bottom port of the brass cross using a 5/8" wrench. After the valve is snug, continue turning the fitting until the handle is facing upward.
8. Attach the bleeder fitting to the vacuum valve with a 9/16" wrench.
9. You can now turn the entire brass assembly so the gauge is angled up by 40°. This will make it easier to see the gauge when the system is in use.
10. Using 9/16" wrench, attach the brass barbed fitting to the filter's intake.
11. Slide the vacuum tube onto the barbed fitting on the vacuum filter.
12. Attached the remaining barbed fitting to the other end of the vacuum tube.
13. Do not attach the lock-on vacuum connector to the brass fitting on the vacuum tube yet. Instead, you'll need to cover the end of the fitting with tape. Any non-porous tape will work fine. This tape will be removed after step #13.
14. Turn the vacuum valve handle so it is in-line with the gauge (either at the 6 o'clock or 12 o'clock position). Plug in the pump and let the unit run. You should see the vacuum gauge immediately rise.



15. Slightly loosen the locking nut on the bleeder valve and adjust the metering screw until you have reached the desired vacuum level for vacuum clamping.

Do not force the metering screw. If it does not turn easily, then further loosen the locking nut.

To increase the vacuum pressure, turn the metering screw clockwise. I recommend 18" of Hg for standard clamping projects. Keep in mind that increased vacuum clamping pressure is directly related to the time it will take for the unit to release the work piece between clamping cycles. Setting the unit higher than 18" will cause a delay in the release of the work piece that some users would consider too lengthy.



This adjustment is also helpful for users who are vacuum pressing fragile assemblies that require less pressure. Simply use the metering screw to dial in the level of vacuum your project calls for.

16. You can now remove the tape from the tube end and attach the lock-on connector with two wrenches (9/16" and 5/8").
17. During the initial pull-down of the vacuum bag, you'll want to close the vacuum valve so the full power of the pump is be used to create the initial vacuum. After the bag has reached the adequate amount of pressure, you can open the vacuum valve to bleed off excess vacuum.

Completed Assembly

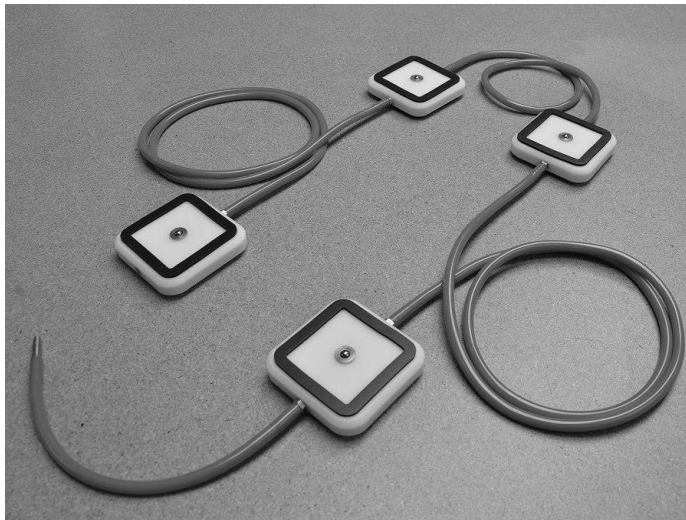


Your system may appear different from the image shown depending on the vacuum pump you use with the CRS kit.

Using the CRS Kit for Vacuum Clamping with Podz™ Vacuum Jigs (Optional)

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

To clamp a work piece to the vacuum jigs, turn the vacuum valve handle on the CRS system towards the bleeder fitting. Attach the tube adapter from the lead Podz clamping jig to the lock-on connector from the vacuum system. Then connect the power plug from the vacuum pump to the plug on the foot pedal and plug this into a wall socket.



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 pressure is inadequate, you may wish to adjust the bleeder valve.

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 pressure from the jig is unloaded and the work piece is released.

Vacuum Pressing Veneer

Of course, the main use for this system is pressing veneer in a vacuum bag. For ordinary veneer pressing, simply turn the handle on the vacuum valve to the closed position (left or right). This will allow full and unbreached air flow between the vacuum bag and the vacuum pump. Once the vacuum gauge has reached 21" of Hg, you can adjust the vacuum valve handle to make fine adjustments in vacuum pressure. Turn the handle toward the downward position until the vacuum gauge steadies at 21" of Hg. This is the ideal pressure for most veneers and adhesives. If a coarse adjustment is needed, simply re-adjust the bleeder valve.

Keep in mind that this system is designed to run continuously during the entire vacuum pressing project. In the event that you need to turn off the system during a pressing, you will need to temporarily disconnect the lock-on connector from the vacuum bag before turning on the pump. When the pump is running, re-attach the lock on connector to the bag. Remember - this pump will not restart if there is vacuum pressure in the system.

