

Thin Air Press™ Kit

QUESTIONS & ANSWERS

MANUAL VACUUM KIT

What is it? The Thin Air Press Kit is an inexpensive alternative to an electric vacuum veneering system.

What's in the box? An airtight vinyl vacuum bag with a one-way valve attached, a manual vacuum pump, a length of Breather Netting and 2 rolls of Replacement Sealing Tape.

What does it do? It can bend glued layers of veneer over a mold, or laminate a sheet of veneer onto a substrate.

How does it work? Insert a project into the bag, seal the open end, and remove all the air out of the bag by connecting the pump to the one-way valve and pumping for about a minute. Atmospheric pressure forces the veneers into the shape you want for your project.

How much pressure can it pull? The hand vacuum pump is capable of creating as much vacuum as a much larger (and more expensive) electric pump. When the bag is properly sealed, the manual pump can create between 12 and 14 psi, or 24 HG, the equivalent of 3,000 lbs of pressure over a project!

What's HG? "HG means "inches of mercury" (HG is the name for mercury in the periodic table).

Can I use a vacuum cleaner instead? A vacuum cleaner is a high volume low pressure pump and will not be able to pull the necessary vacuum out of the vacuum bag. The manual vacuum pump is a high pressure low volume pump, which makes the difference.

Can I use this with Steam Bending? No, as steam bending gives you too short a working time to be able to get the project into the bag and sealed.

VACUUM BAG

How thick is the bag? 20 mils thick

Can I reuse it? The bag is designed to be used many times over. If by chance a hole is punctured, a strip of 2" clear packing tape will seal the hole.

My Bag is leaking! Most often, if the bag will not hold a vacuum it is because the seal is not completely pressed down, especially at the outer edges. Pay careful attention all along the butyl seal, if there are any tiny gaps in the seal, the air will find a way in. As it is necessary to work quickly, not sealing the bag completely is the most common problem to losing vacuum pressure.

Why has my bag lost pressure? It takes a few minutes for the air to leach out of certain substrates in the vacuum bag. It is a good idea to check the bag within 10 minutes of the pressing by tugging at the sides. If the vinyl can be pulled away from the project, pump another 10 times to ensure a good tight vacuum.

The bag has a hole in it! 2" clear packing tape will seal a hole or a tear easily. The butyl replacement sealing tape can also be used to seal any gaps.

Will glue stick to the bag? No, water-based glues, epoxy and other polyurethane glues will not stick to the bag or netting.

PUMP

This looks familiar? Is this a wine pump? Yes! The wine industry uses this same pump and stopper to preserve an opened bottle of wine by removing all of the air from the bottle so that the wine does not oxidize.

My pump feels sticky and dry! The pump slide can be lubricated with a drop of vegetable oil.

My pump isn't drawing air from the bag! Add some water to the sleeve, which helps the slide remove more air.

SEAL

How do I make it airtight? After removing (and saving) the paper strip, press the vinyl along the inner edge pressing the air out of the bag. Press firmly along the entire strip making sure there are no gaps at all. Use a rounded block of wood to press the sealing tape into the edge seams. Check both sides of the bag to make sure there are no leaks on either side.

How do I get my bag open? After pressing the sides of the grey valve and releasing the pressure, force your thumb into the centre of the sealing tape strip, pushing the tape all onto one side of the bag. When you can clearly see your thumb through the vinyl, grasp the bag firmly and forcefully snap the bag apart. The idea is to do it quickly which helps to break the seal and the tape should remain all on one side of the vinyl. Then replace the paper strip along the tape to preserve it and make it easier to open the bag for the next project.

Can I replace the seal? 2-pack rolls of 14" Replacement Sealing Tape are available in the event the sealing tape gets sawdust or glue in it. One package will replace 2 seals on the 14 x 47" bag, and one 2-pack is enough to replace one seal on the 26 x 28" bag.

BREATHER NETTING

What it is for? Breather Netting is great for helping remove all the air evenly from the bag while pumping.

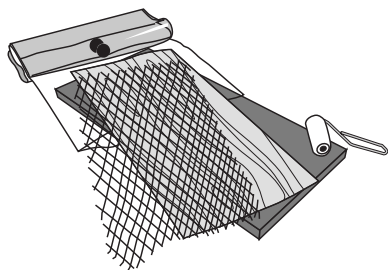
How do I use it? The netting is stretchy, and can either be used as a tube, which serves to hold the stack of veneers and mold, or cut with scissors into flat pieces and wrapped around an irregular item.

Will it leave a pattern on my project? No, unless the wood is as soft as balsa wood.

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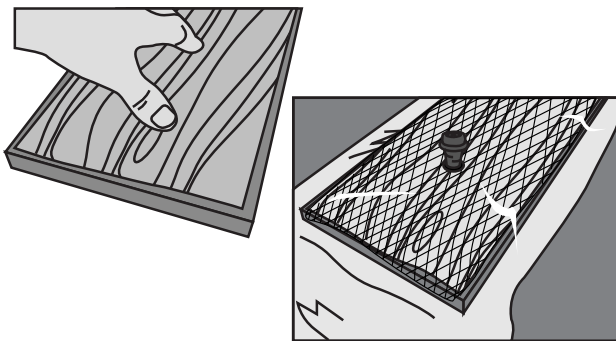
THIN AIR PRESS PROJECTS



VACUUM VENEER ONTO A SUBSTRATE

To laminate a sheet of veneer to a flat surface:

- Cut veneer sheet slightly smaller than the substrate you will be laminating it to. Do not allow veneer to overhang on any edge while being pressed.
- When applying veneer to sheet materials such as plywood, apply the glue to the substrate and not to the veneer.
- Both water-based and epoxy glues will work well with your TAP kit. When laminating projects, choose a glue that has a long open time.

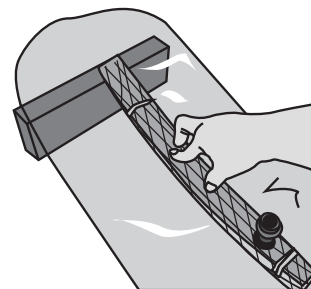
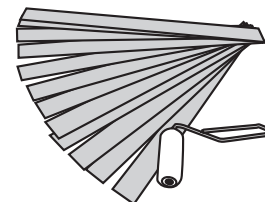


- Set the veneer on the substrate and cut the breather netting so that it overhangs the project.
- Insert stack into the TAP bag and ensure that the breather netting is between the valve and veneer.
- Attach hand pump to nozzle and remove air from the TAP bag.

FREEHAND VENEER BENDING

This example of bending veneer by hand into a curved shape involves cutting and stacking many strips of veneers:

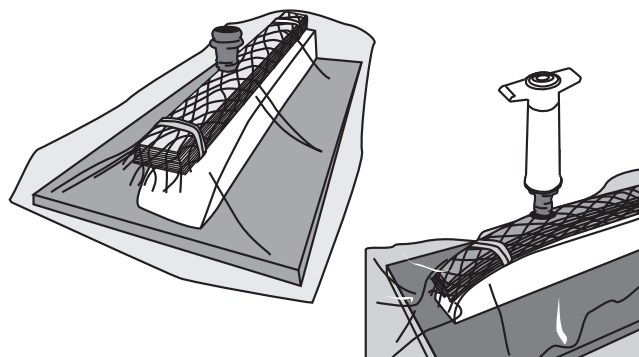
- Apply glue to each layer of veneer.
- Wrap breather netting around stack of layers and secure with elastic bands.
- Insert into TAP bag and begin to pump the air out.
- As the air is being evacuated, manually bend the stack of veneer by pressing and/or twisting.
- Once all the air is out, the TAP will hold the form in the final shape while the glue dries.



STACKED VENEER BENDING USING A MOLD

Create consistently shaped items using a mold:

- Make a negative mold in the shape you want your veneer form to end up as, using standard insulating foam. Hand-shape the foam using a rasp, file or saw.
- Follow the same steps as the previous example to glue layers of veneer, then add a stiffener board inside the TAP bag and under your foam mold. Veneers will bend over the mold as air is pumped out.



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