WineEasy™

Assembly, Operation, & Maintenance

Congratulations on your purchase and thank you for selecting the WineEasy™ from Blichmann Engineering™. We are confident that it will provide you years of service and many gallons of outstanding beer. This manual will familiarize you with the use, assembly, and the sanitation procedures for the product.

IMPORTANT INFORMATION

PLEASE READ AND THOROUGHLY UNDERSTAND THIS MANUAL PRIOR TO USE FOR IMPORTANT SAFETY INFORMATION!

WARNING: Sections labeled “Warning” can lead to serious injury or death if not followed. Please thoroughly read these sections and understand them completely before use. If you do not understand them or have any questions, contact your retailer or Blichmann Engineering (www.BlichmannEngineering.com) before use.

CAUTION: Sections labeled “Caution” can lead to equipment damage or unsatisfactory performance of the equipment. Please read these sections thoroughly. If you have any questions, contact your retailer or Blichmann Engineering (www.BlichmannEngineering.com) before use.

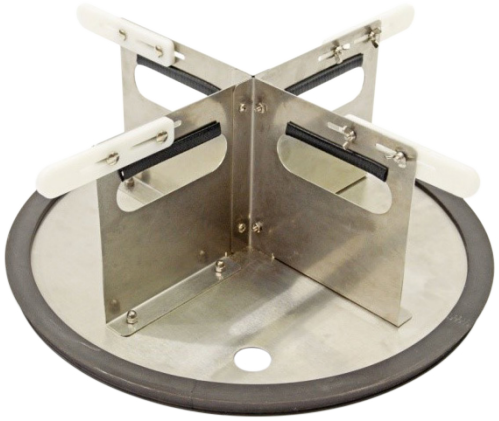
IMPORTANT: Sections labeled “Important” should specifically be followed to ensure satisfactory results with the product.

Base Fermentor

Description	Quantity
20,30 or 55 gal fermenting tank assembly with lid	1
Stainless steel pressure plate in 20, 30 or 55 gal size (disc with tabs)	1
Stainless steel perforated false bottom in 20, 30 or 55 gal size	1
¼ -20 stainless wing nut and large washer	1
Tri-clamp bulkhead fitting with o-ring (2ps-nut and fitting)	1
Tri-clamp tightening tool (1″ dia disc with 3 small tabs)	1
Tri-clamp butterfly valve (1″)	1
Tri-clamp 90 deg elbow (1″)	1
Tri-clamp cover cap	1
Tri-clamp clamps (1″)	3
Tri-clamp gaskets (1″)	3
20, 30 or 55 gal ring stand assembly	1

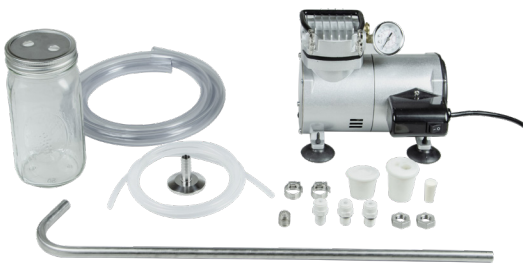
Press Piston

Description	Quantity
20, 30 or 55 gal disc with (8) 10-32 suds and acorn nuts installed	1
20, 30 or 55 gal silicone wiper seal	1
Stainless steel guide plates	4
White plastic guide bars	4
10-32 carriage bolts and wing nuts	8
10-24 Phillips head maching screws and nuts	8
Short pieces of black protective edge trim	4



Vacuum Press Kit

Description	Quantity
Vacuum Pump	1
Hose clamps	2
½″ barb x 1″ tri-clamp fitting	1
6 ft piece of ½″ ID vinyl hose	1
7 ft piece of ¼″ OD hard plastic vacuum tube	1
½″ stainless steel racking cane	1
#7 two-hole silicone stopper	1
#7 solid silicone stopper	1
#00 solid tan rubber stopper (used to plug the racking tube hole for degassing)	1
¼″ quick connect	3
¼″ NPT stainless nut	2
Ball wide mouth quart mason jar	1
Black o-ring	2
SS jar lid	1
Cone spring for racking cane	1



Product Assembly

Assembling the WineEasy™ fermentor:

Select the size or sizes that meet your needs: either one unit or multiple units of the same size. Or even a combination of different sizes to suit your needs. See our web page for a guide to select fermentor sizes that best fit the needs of your home winery.

Each fermenting tank comes equipped with a fermenting tank with lid, ring stand, bottom valve assembly, false bottom, and pressure plate. The ring stand (Figure 1) is pre-assembled. The fittings at the bottom of the fermenting tank, as well as the other components, will need to be assembled.

IMPORTANT: We recommend that you assemble the product well in advance of first use to ensure you are familiar with the product and are not missing any parts.

IMPORTANT: Prior to assembling the fermentor it is important to ensure that the tank has not been bent from shipping. Use a tape measure to check for circularity – the difference in inside diameter all around the tank should be less than 1/8". If it is slightly out of round, simple lay the fermentor on its side and push gently to reshape it. Otherwise contact your retailer.

Figure 1

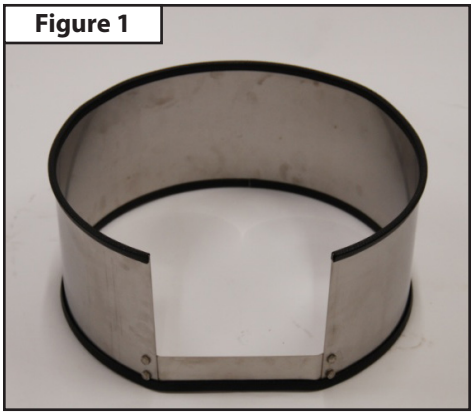
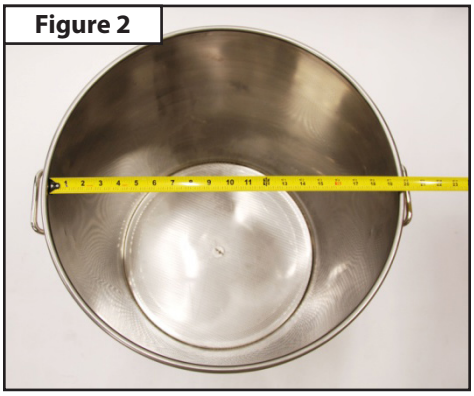


Figure 2



The first step of assembly is placing the stand (ring) on a level floor. Placing a tarp under it is recommended if you do not have stain proof flooring.

After soaking all the fittings in sanitizer begin assembly of the bulkhead fitting in the bottom of the fermentor. Install the nut (the threaded part with 3 notches) in the inside of the tank, and thread the mating tri-clamp fitting into the nut taking care to ensure that the black o-ring is in place as shown in the figures below.

Then install the special tool (1" diameter disc with 3 prongs on it) on a ratchet wrench with extension bar as shown in the pic. Tighten it firmly with an adjustable wrench on the outside. Do NOT use Teflon tape on these threads! Note that the wrenches are not supplied.

Figure 3

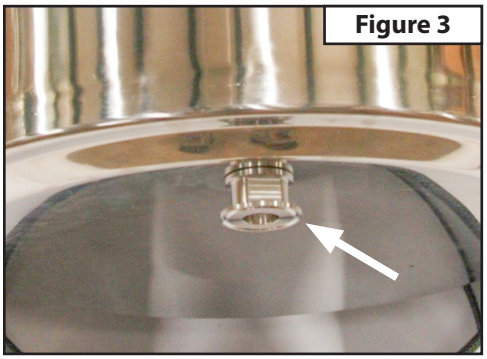


Figure 4

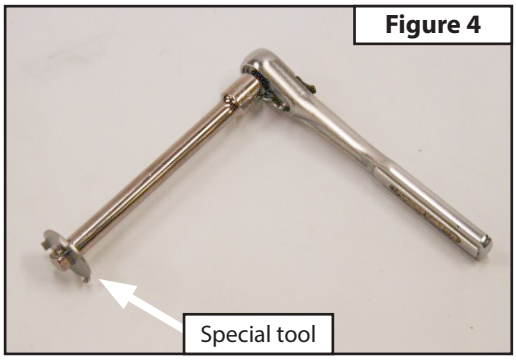


Figure 5

Cut-away WineEasy™ for clarity

Next, assemble the bottom drain assembly as shown. Be sure to use a black gasket between each set of tri-clamp flanges.

IMPORTANT: Be sure that the valve handle rotates away from the elbow or you will not be able to operate the valve in use!

Figure 6

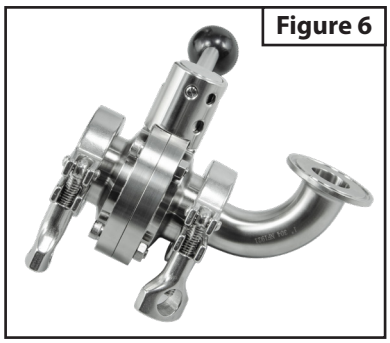
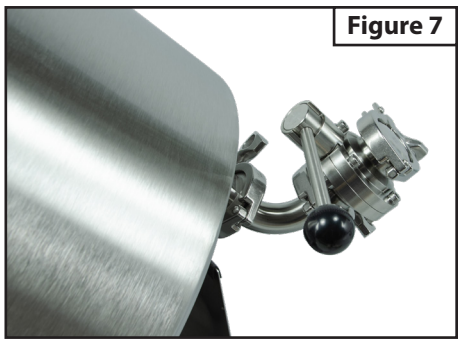


Figure 7



Place the tank back on the stand and center the valve and tank on the stand. Then fill the tank about ¼ full with a sulfite/citric acid sanitizing solution. Using a pump and hose, or a sauce pan, flood the walls of the tank and the lid with sanitizer for a few minutes. If using StarSan[tm], simply spray the walls and lid and wait 2-3 min and spray the walls one last time. Place the pressure plate (disc with tabs) on the bottom of the tank making sure it is clear of the drain fitting and sits flat on the bottom.

IMPORTANT: The tabs must face upward! Installing the tabs downward will block off most of the perforated screen causing the press to malfunction!

The screw-eye in the false bottom (**Figure 9**) is used as a handle to remove the false bottom after use, and then place it on the bottom of the fermentor. Use the large fender washer and wing nut (**Figure 10**) to secure it to the bottom of the fermentor. Finger tight is plenty – do not over tighten.

If using StarSan[tm] spray sanitizer, simply spray all surfaces of the pressure plate and false bottom before installing them in the tank.

After assembly, flood the surfaces one last time with sanitizer, then place a pan under the drain valve and open it allowing the sanitizer to drain.

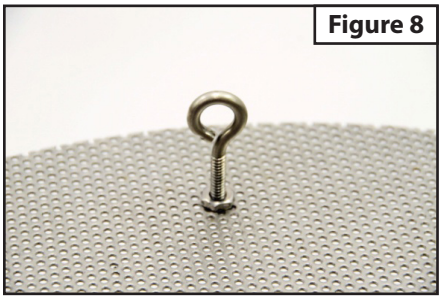


Figure 8

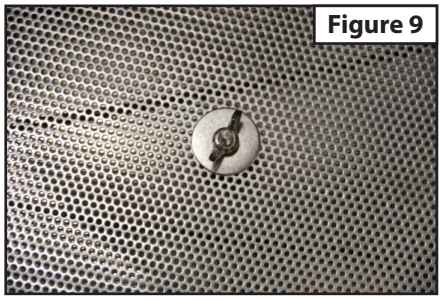


Figure 9

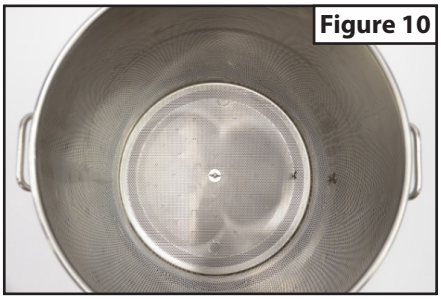


Figure 10


Figure 11

Cut-away WineEasy™ for clarity

At this point the fermentor can be filled with must (crushed fruit). If you do not have access to a crusher/Destemmer, you can place whole clusters in the tank and crush them with a device such as a punchdown tool or a commercial grade potato smasher.

Vacuum press kit - You will only need ONE vacuum press kit (right) for your winery no matter what quantity or size fermentors you have. The vacuum press kit can also be used to degas your wine. Each vacuum press kit includes a vacuum pump, vacuum hoses, fittings, drilled stopper, solid stopper, stainless racking tube and liquid trap.

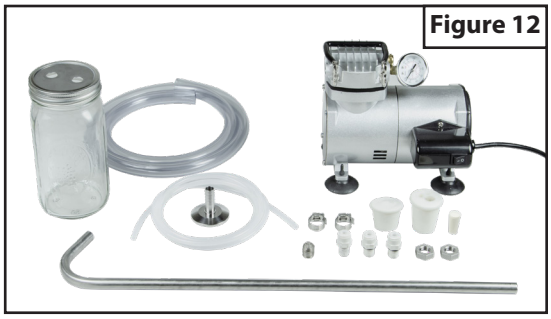


Figure 12

Piston assembly - You will need ONE piston assembly for each different size fermentor you have in your winery. If you have multiple fermentors of ONE size you only need ONE piston. Each piston assembly comes equipped with a piston plate, four guide plates, four guide bars, and a silicone wiper seal.

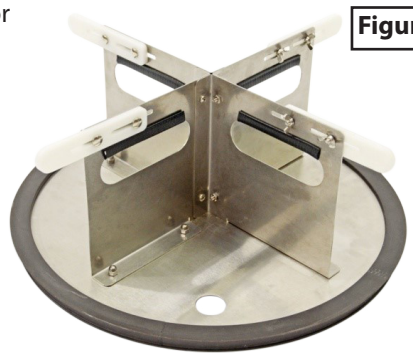


Figure 13

Sanitation:

Caution: do **NOT** use any cleaner or sanitizer containing **chlorine** such as bleach on stainless steel. Over time, this will pit and erode stainless steel. Never soak parts overnight of extended periods in sanitizer as this may lead to galvanic corrosion of the parts. Any other non-chlorine sanitizer is acceptable to use.

Sanitizers: A sulfite/citric acid solution is the traditional choice. Another option is StarSan™ from Five Star Chemicals. This food grade no-rinse phosphoric acid based product is very popular in the food and brewing industry. It contains a surfactant which will penetrate crevices better than other sanitizers, and works outstanding in a spray application. Contact your home wine making store for availability.

Cleaners: Caustic (soda ash) is the traditional cleaner for stainless in the home and commercial wine making industry, and may be used on any of the fittings and parts of the WineEasy™. A safer option to caustic is another product from Five Star Chemicals - PBW (powdered brewery wash). This product is an environmentally friendly alkaline cleaner with a surfactant to lift heavy soils. A hot water rinse is all that's needed after cleaning.

Warning: Caustic is a hazardous chemical and will dissolve skin! It is particularly dangerous if it enters the eye. Always use safety glasses and protective gloves when using caustic, and always follow the manufacturer's recommendations when using their product!

Initial Cleaning: Prior to the first use, and after each subsequent use, scour the lid and tank with caustic (or PBW) and a Scotch-brite™ type green scouring pad or a sponge to remove any remaining manufacturing residues and oil. Do not use a steel wool scouring pad as the metal particles will rust on the surface of the parts. Rinse well and allow to dry thoroughly. Drying thoroughly allows a protective layer to naturally re-form on the surface of the stainless steel as the oxygen in the atmosphere naturally reacts with the chromium in the stainless to form CrO_2 – a highly corrosion resistant compound. This reaction is what makes stainless steel stainless! Scrub the fittings with a nylon brush and caustic or hot PBW and rinse with hot water then into your sanitizer. If you are not going to immediately use the fermentor, dry the fittings and seals thoroughly, and store them in a new plastic zip-lock bag inside your fermentor.

Before each use: After washing, soak all fittings, valves, o-rings and lid seal in a sanitizing solution.

CAUTION: only fill the fermentor ¾ full to allow adequate space for the cap to rise!

Capacity chart:

	Gross Volume (gal)	Max Must Volume (gal)	Max Must (lb/Kg)*	Gross Finished Wine (gal)*
20 gal	20	15	150/68	10
30 gal	30	23	230/104	15
55 gal	55	42	420/190	27

*Finished wine and must weight/vol are approximations due to varietal differences and other variables.

Ferment as you would any primary alcoholic fermentation punching down the cap 2-3 times daily. The lid provides a fairly tight seal and the CO_2 production from fermentation will keep oxygen out of the fermentor during alcoholic fermentation. If you spill wine or skins on the lip of the tank or lid while punching the cap, wipe it off with a paper towel soaked in sulfites or vodka to reduce the chances of bacterial contamination from fruit fly infestation. We also recommend using a sanitized rubber spatula to wipe any skins off the sidewall of the fermentor after each punch-down.

When alcoholic fermentation is complete you are ready for the free run and pressing step.

Assembling the press piston: Assemble the press piston as shown in the pictures below. Make sure that you don't over tighten the fasteners and damage the threads. Also, take special note of the orientation of the seal. Orienting it in an inverted position will keep the food-grade seal from functioning properly! Soak the seal in a sanitizing solution. Spray the surfaces of the press piston with StarSan™ and let sit for 5 minutes and then repeat. Or flood with a sulfite/citric acid solution. Install the seal back on the press piston ensuring that the seal is oriented as shown.

Caution: Failure to orient it correctly will prevent it from sealing properly!

Figure 14

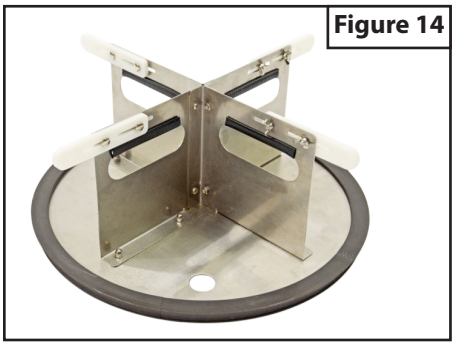


Figure 15

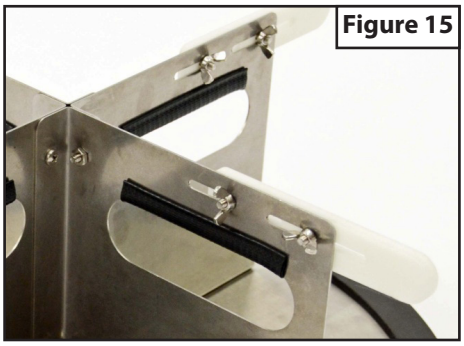


Figure 16

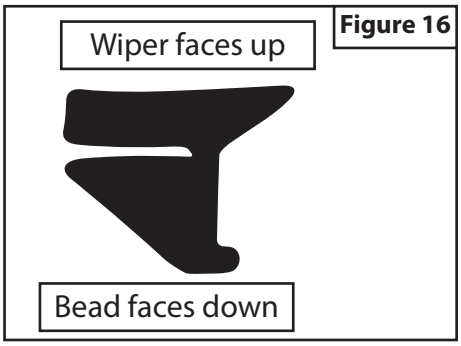
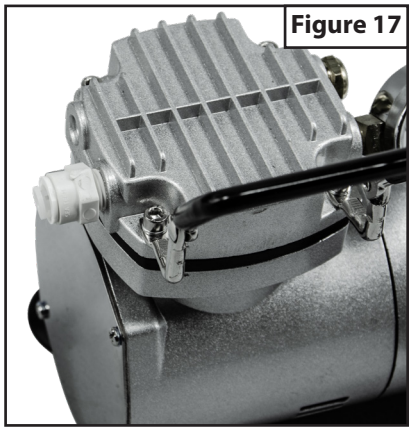


Figure 17



Install vacuum fittings on pump:

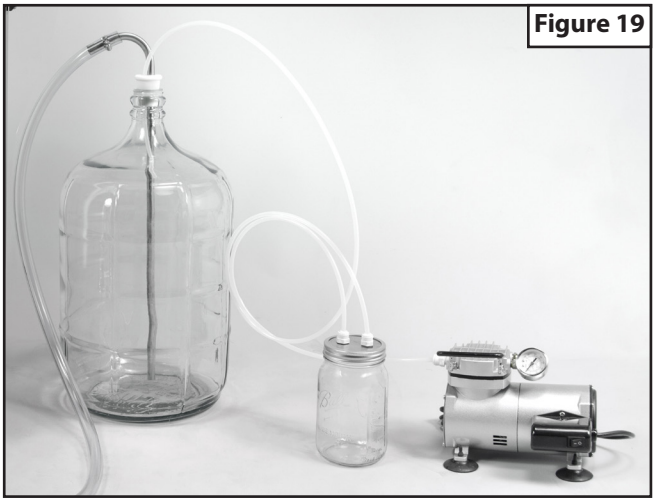
Install the ¼" NPT quick connect to the vacuum pump as shown. Do not overtighten. A black o-ring not required on this fitting.

Assembling the liquid trap:

Install the ¼" quick connect into the lid with the stainless steel nuts. Install the quick connects and black o-rings on the side of the lid with smooth holes. Do not overtighten. Cut 2 feet of the ¼" hard plastic tube and connect the piece from the vacumm pump to the jar lid as shown in **Figure 19**. Use the 5 foot piece of hard plastic tube to connect from the liquid trap to the 2 hole stopper as shown in **Figure 19**.

Figure 18

Figure 19



Draining the free run wine:
You can drain the free run wine using gravity, or by siphoning it using the vacuum pump. An optional leg extension kit (**Figure 20**) is available for our 20 and 30 gallon models to make gravity draining easier if you don't wish to vacuum siphon. The 55 gallon model is too big to be safely supported by the legs.

Figure 20

Gravity draining your free run wine: Use the ½" hose, racking tube, and tri-clamp barb fitting provided in the vacuum press kit and then connect to the drain valve as shown below. You will need to elevate the fermentor above the carboy for the flow to begin. Be sure to sanitize all parts before assembly. Run the free run wine directly into a carboy or other fermentor until the level of the wine in the fermentor is about ½ way down making sure that you do not drain out all the wine. Please note that the picture below shows the vacuum pump and hoses installed – leave these fittings disconnected for gravity draining.

Vacuum siphoning your free run wine: This is our recommended method. Please note that this is no different than simply elevating your fermentor. Connect the vacuum pump system as shown in the pictures below. Open the valve on the fermentor and then turn on the vacuum pump. Wine will begin to flow from the fermentor, through the racking tube and into the carboy.

Caution: The liquid catch is intended to be an emergency backup only to prevent wine from getting sucked into and damaging the vacuum pump! Be ready to close the valve on the tank when the carboy is full and BEFORE the wine reaches the ¼" vacuum hose. Immediately close the valve on the fermentor and turn off the vacuum pump. Remove the ¼" vacuum hose.

Warning! Risk of personal injury or equipment damage! Always ensure that your carboys have no scratches nicks or cracks prior to applying vacuum to them. A defective carboy can implode (collapse inward). If you are unsure, fill a carboy with water first and apply the vacuum. To add a measure of protection and minimize accidental mess **always place your carboy in a plastic bucket and wear safety glasses and protective gloves! Keep all children and unnecessary people away from the carboy**. For metallic, plastic, or other containers always contact the manufacturer to confirm if a full vacuum is allowable with their equipment. Blichmann Engineering, LLC is not responsible for the collapse of any equipment!

IMPORTANT: Do not run all of the free run wine out of the pot prior to installing the press piston as some wine is needed to initiate the pressing process.

Figure 21

Installing the press piston:

IMPORTANT: Do not punch down your cap within 12 hours of pressing. This will allow your pomace to remain more permeable thereby increasing the efficiency of the press and reduce the chances of plugging the false bottom. If your cap has fallen, simply proceed without stirring within 12 hours.

When the level in the fermentor has reached the half way point stop draining and close the valve on the fermentor and turn off the pump. Use a sanitized rubber spatula to wipe any skins or residue off the interior sidewall of the fermentor. Then spray the sidewalls with sulfites which will act as a lubricant for the wiper seal of the press piston. Loosen the wing nuts on the white plastic guide bars and move them in as far as possible.

After sanitizing the surfaces of the piston, spray a sulfite solution on the seal of the press piston and place it on the top of the fermentor and press down firmly – try to keep the piston as level as possible at all times. Do NOT install the solid stopper at this time so air can escape through the piston. When the top of the piston is even with the top of the fermentor, or it has reached the surface of the wine and pomace, move the white guide bars so they contact the wall of the fermentor and tighten the wing nuts.

IMPORTANT: The purpose of the guide bars is to ensure that the piston remains horizontal at all times. Make sure the face of the piston is not tilted and is as level as possible and then tighten the guide bars. Continue to slide the piston down until it is resting on the surface of the pomace. Install the solid stopper firmly into the hole in the plate at this time.

Connect the vacuum pump kit as shown on page 7 (**Figure 21**) if you have not already done so. Open the valve on the fermentor and turn on the vacuum pump.

At this time you will notice the piston slowly moving down as the carboy fills.

Note: Initially (and when free-running), the pressure gauge on the vacuum pump will move wildly, but as you begin pressing the pomace it will stabilize and gradually increase.

IMPORTANT: Wet the top of the seal with sulfite spray and press it against the wall of the fermentor periodically with the tip of your finger to ensure a tight seal. Spray the seal with sulfites occasionally to help maintain the seal. If at any time you hear a hissing sound check that the piston is not tilted at an angle and that the seal is pressed firmly against the wall of the fermentor.

Note: It is normal during pressing for bubbles to be in the hose, particularly as the vacuum increases. This is not air entering the system – it is carbon dioxide coming out of solution (your wine is degassing).

When the pump has reached 450-550 mm of mercury and the wine flow has slowed to a slow trickle, the pressing is complete and the valve on the tank can be closed and the pump turned off. Some additional wine may be extracted by waiting 15-20 min for additional wine to permeate through the pomace as the pressure from the vacuum is still applied inside the tank. After this wait, the vacuum pump can be turned back on (wait for the gauge to read 450-550 mm Hg) and then open the valve on the tank.

Optional Double Press Process: To improve efficiency by a few additional percentage points, stop the pressing operation at 300-350 mmHg and then close the valve and remove the piston. Then using a sanitized scoop, loosen and gently mix the pomace bed particularly where it has pressed against the perforated false bottom. Level the bed with the scoop and replace the piston. This will allow the remaining wine to flow more freely through the pomace.

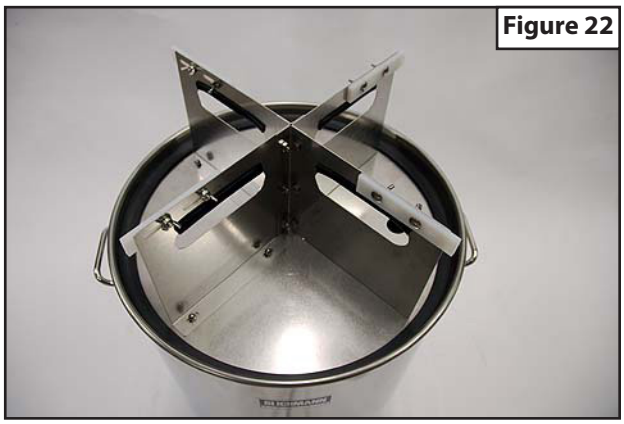


Figure 22

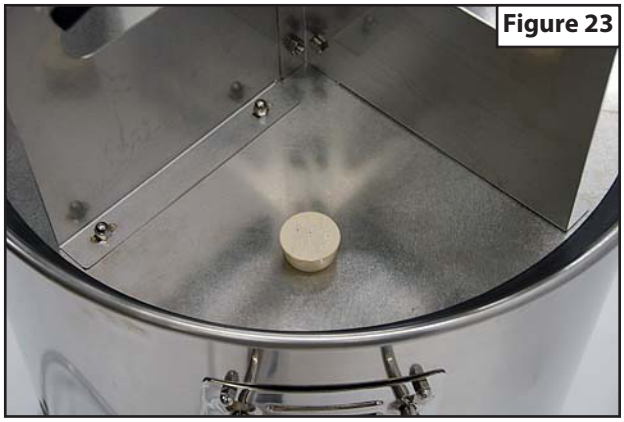


Figure 23

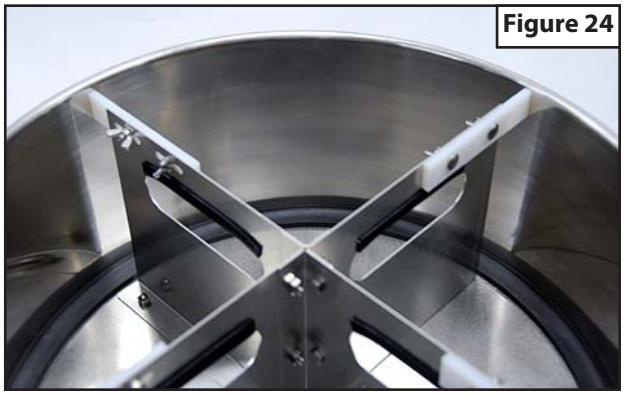


Figure 24

Vacuum Degassing Your Wine:

Figure 25

Another feature of the WineEasy vacuum pressing system is that it doubles as a vacuum degassing system! We have included a small #00 stopper so you can plug the ½" racking cane hole in the stopper and then you're all set to degas your wine. Simply connect as shown in the pic to the right. Normally degassing is done in about 30 to 40 minutes. The pump should reach between 450 and 550 mm mercury on the gauge

IMPORTANT: as with pressing your wine, it is important that you do not suck wine into the vacuum hose. Your wine will "boil" as the CO2 comes out of solution so watch closely. If your carboy is quite full you may need to remove some wine to prevent wine from entering, topping back up after you are done.

Tip: If the pump isn't reaching full suction, check for leaks in system.

Racking Your Wine:

The included ½" stainless steel racking cane used for the pressing operation can also be used as a high flow racking cane for transferring your wine. We include a cone shaped spring that can be placed over the end of the racking cane to hold it off the bottom of the fermentor to leave lees behind.

IMPORTANT: Do NOT use the cone spring when pressing! This may cause the racking cane to plug. Only use the spring when you are racking.

Bulk Storage Procedure:

1. Assemble and sanitize the WineEasy™ fermentor, but leave out the pressure plate and false bottom screen.
2. Assemble and sanitize the piston as usual, and assemble a tri-clamp bulkhead in the hole of the piston. Leave the cap off until later.
3. Fill with wine.
4. Press the piston into the fermentor. Be sure to press out all the air and continue to push until wine fills the bulkhead.
5. Place a sanitized gasket and cap on the bulkhead.

Cleaning & Maintenance

To remove the piston assembly, remove the solid stopper and move the white guide bars inward all the way. Rewet the walls of the fermentor with sulfites and holding the piston by the handles, rock the piston side to side to get it freed and moving. Lift firmly and remove it.

Cleanup is simple – Use a scoop to remove the pomace that is now quite dry and place it in a plastic pail which can be carried to the disposal site. Then completely disassemble the fermentor and wash with your preferred cleaning agent and spray with sanitizer. Drain and dry thoroughly. Soak all fittings in sanitizer and dry thoroughly. Soak only for the prescribed time for the sanitizer being used and do not soak for extended periods to avoid galvanic corrosion issues. We recommend storing it with the lid OFF for a few days to ensure everything is completely dry.

Troubleshooting:

The WineEasy™ is quite simple to operate but if a problem does arise please read through this section prior to contacting your retailer for assistance.

Wine was flowing but has stopped. This is normally from seeds bypassing the screen and plugging your drain hose or fitting. Simply close the drain valve and remove the hose and remove any seeds or other matter. Reassemble and continue. Seeds will not normally get under the false bottom, but may if it is not pressed firmly against the ledge of the pot. Always ensure, at time of assembly, that the wing nut is fully tightened and the false bottom is sitting completely flat across the ledge on the tank.

Blichmann Engineering Product Warranty

A. Limited Warranty

1. Blichmann Engineering warrants to the original purchaser that this product will be free from manufacturing defects in material and workmanship for a period of one (1) year from the date of purchase by the customer. Proof of purchase is required. Blichmann Engineering's obligation to repair or replace defective materials or workmanship is the sole obligation of Blichmann Engineering under this limited warranty.
2. This product is for home use only. The limited warranty covers only those defects that arise as a result of normal use of the product and does not cover any other problems, including, but not limited to, those that arise as a result of:
    a. Improper maintenance or modification;
    b. Damage due to incorrect voltage or improper wiring by customer;
    c. Operation outside of the product's specifications;
    d. Carelessness or neglect to operate the product in accordance with instructions provided with the product;
    e. Damaging the tamper label on the product;
    f. Damage by over-tightening the fasteners;
    g. Failure to follow cleaning and / or maintenance procedures; or
    h. Exceeding published operational temperatures.
3. Blichmann Engineering reserves the right to request delivery of the defective component for inspection before processing the warranty claim. If Blichmann Engineering receives, during the applicable warranty period, notice of a defect in any component that is covered by the warranty, Blichmann Engineering shall either repair or replace the defective component with a new or rebuilt component at Blichmann Engineering's option.
4. Blichmann Engineering must be notified within seven (7) days of the delivery date of any shipping damage. Customer is responsible for shipping damage outside of this time period. Approval for return must be provided by Blichmann Engineering prior to any return. Customer is responsible for keeping all original packaging material for warranty returns. Blichmann Engineering is not responsible for damage from improperly packaged warranty returns, and these repair costs will be the sole responsibility of the customer. Shipping costs for warrantee returns are covered only for the contiguous United States.
5. Blichmann Engineering's limited warranty is valid in any country where the product is distributed.

B. Limitations of Warranty

1. Any implied warranty that is found to arise by way of state or federal law, including any implied warranty of merchantability or any implied warranty of fitness, is limited in duration to the terms of this limited warranty and is limited in scope of coverage to this warranty. Blichmann Engineering disclaims any express or implied warranty, including any implied warranty of fitness for a particular purpose or merchantability, on items excluded from coverage as set forth in this limited warranty.
2. Blichmann Engineering makes no warranty of any nature beyond that contained in this limited warranty. No one has authority to enlarge, amend, or modify this limited warranty, and Blichmann Engineering does not authorize anyone to create any other obligation for it regarding this product.
3. Blichmann Engineering is not responsible for any representation, promise, or warranty made by any independent dealer or other person beyond what is expressly stated in this limited warranty. Any selling or servicing dealer is not Blichmann Engineering's agent, but an independent entity.

C. Limitations of Liability

1. The remedies provided in this warranty are the customer's sole and exclusive remedies.
2. Except for the obligations specifically set forth in this warranty, in no event shall Blichmann Engineering be liable for direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory and whether or not advised of the possibility of such damages.
3. This warranty does not cover, and in no event shall Blichmann Engineering be liable for, travel, lodging, or any other expense incurred due to manufacturing defects in material and workmanship, or any other reason.
4. Any performance of repairs after the warranty coverage period has expired or performance of repairs regarding anything excluded from coverage after this limited warranty shall be considered good-will repairs and they will not alter the terms of this limited warranty, or extend any warranty coverage period.
5. Venue for any legal proceedings relating to or arising out of this warranty shall be in Tippecanoe County, Indiana, United States, which courts will have exclusive jurisdiction.

D. Local Law

1. This warranty gives the customer specific legal rights. The customer may also have other rights that vary from state to state in the United States or other countries.
2. To the extent that this warranty is inconsistent with local law, it shall be deemed modified, only to the extent necessary to be consistent with such local law.

This product uses food grade materials anywhere the product touches the beverage.

Warning: This product contains or may contain chemical(s) known to the State of California to cause cancer, birth defects, or other reproductive harm.