



GO FERMENTOR/SMARTBARREL WINERY PLANNING GUIDE

INSTANT WINERY! No infrastructure needed. No installation. No water usage. No wastewater generation. No building permits. No expensive press to purchase, maintain and clean. Fully automated punch – just set and forget. Estimate 2-4 manhours /batch total. Here is everything you need to build your own winery.

Capacity per GOfermentor: Grapes: min 1/3 ton max 1 ton (300 to 1000 Kg)
Juice (white wine): max 250 gallon (950 liter)

Typical wine yield: 130 to 160 gallons per ton grapes.

Grape Handling:

1. I am using grape clusters:

1.1. I have a destemmer

My destemmer can pump grapes

Good. All you need is a hose to connect it to the 2 inch Triclamp fill port on the GOliner.

My destemmer cannot pump grapes

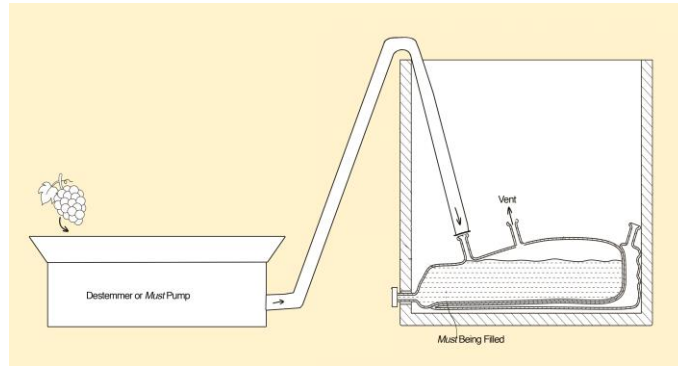
You have 2 choices. If you have a *must* pump capable of pumping destemmed grapes, then you can use this to pump from the destemmer to the GOliner 2 inch Triclamp fill port. If you do not have a suitable pump, then you can cut the liner (see manual) and fill the grapes by gravity discharge, or by hand. The reseal the cut with our special food grade tape.

1.2. I do not have a destemmer

You should purchase a destemmer with an internal pump. This can directly fill the GOliner using a hose. It eliminates the need for an expensive *must* pump. Appendix 1 provides details on a suitable destemmer and required fittings.

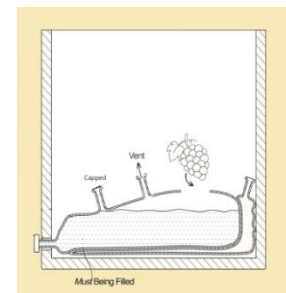


Best option for
new winery



1.3. I want to use whole cluster

You can cut the liner at a specific spot (see manual) and insert whole clusters by hand. We supply a food grade tape to reseal the liner.



2. I am using machine picked (destemmed grapes)

You need a *must* pump+auger to transfer grapes into the GOliner using a 2 inch hose. If you do not have a pump then you can cut the liner at a specific spot (see manual) and fill by gravity, or by hand. We supply a food grade tape to reseal the liner.

3. I am using juice or concentrate

You cannot make award-winning wine from juice or concentrate. The GOfermentor is designed to make quality wine from fresh or frozen grapes.

Fermentation:

Fermentation is done in the unique GOfermentor. Grapes are filled into the single-use GOLiner as described in the previous section. Fermentation, punch-down, and pressing are all performed in the GOfermentor.

Equipment:

The GOfermentor equipment can be purchased online from www.GOfermentor.com. Current prices are listed below for reference but are subject to change.

Required Components:

- | | |
|--|---------|
| 1. GOfermentor NET controller with accessories | \$ 1200 |
| 2. GObase outer container with pallet base. | \$ 500 |

Options:

- GOtemp Sampling/Temperature probe. \$ 500

Includes hand sampler. Highly recommended.

- GOcooler heat exchanger plate with valve. \$ 600

This is needed if you are making white wine or need to control a hot fermentation. You **must** have recirculating cooling water or glycol piped to the control valve (1/2" NPT process connections). The GOcooler requires the GOtemp sampling/temperature probe.

Physical space and power:

The GOBase outer container determines the floor space and height. The fermentation bag is placed inside the GOBase container. The GOBase container can be moved by pallet jack or fork lift. The GOfermentorNET control panel attaches to the GOBase. One controller is required per base.

Electrical power:	110 VAC (10A). 220 VAC optional.
Floor space:	48" x 48" by 60 inches height. Minimum doorway width 46"
Weight :	90 Kg (200 lbs) empty; 1100 Kg (2500 lbs) operating max weight
Storage:	Can fold up and stack 5 high

Disposables:

New GOLiner bag for each fermentation run. These cost \$ 100 each.

Pressing:

Traditionally pressing is done using a dedicated press. These presses cost between \$ 3,000 to \$ 20,000. In addition to the cost, they require tedious cleaning and maintenance. In contrast, the GOfermentor does NOT need any external press. Pressing is done in the GOliner itself, eliminating the cost of a press and required labor and washing. Closed pressing in the bag also prevents oxidation.

1. I am making red wine

Pressing is done after fermentation is complete and the clean wine is pressed out leaving the waste skins and seeds (*pomace*) behind.

2. I am making white wine

Pressing is done before fermentation and the grape juice is pressed out leaving the waste skins and seeds (*pomace*) behind. Then the juice is fermented.

Pressing in a GOfermentor can be done after fermentation (red wine) or before (white wine).

1. I have a press

If you want to use your press you need to transfer the fermented *must* from the GOfermentor to the press.

2. I do not have a press

All components necessary to press out the wine/juice are provided with the GOfermentor. You need to provide a suitable wine pump capable of self-priming with at least a 1 ½ inch Triclamp process connection. Pump should be variable speed and reversible. if you do not have a wine pump there are some recommendations in Appendix 1.

At the completion of fermentation, simply remove and cap the GOliner vent. Remove the GOtemp probe and insert the supplied pressing tube into this port. Connect the other end of the pressing tube to a wine pump and pump out the free-run wine into a suitable collection liner. Next, activate the PRESS function on the GOfermentor controller and the secondary bag will inflate squeezing the pomace dry. When the pressing is complete, remove the GOpres tube and dispose of the residual *pomace* as described next.

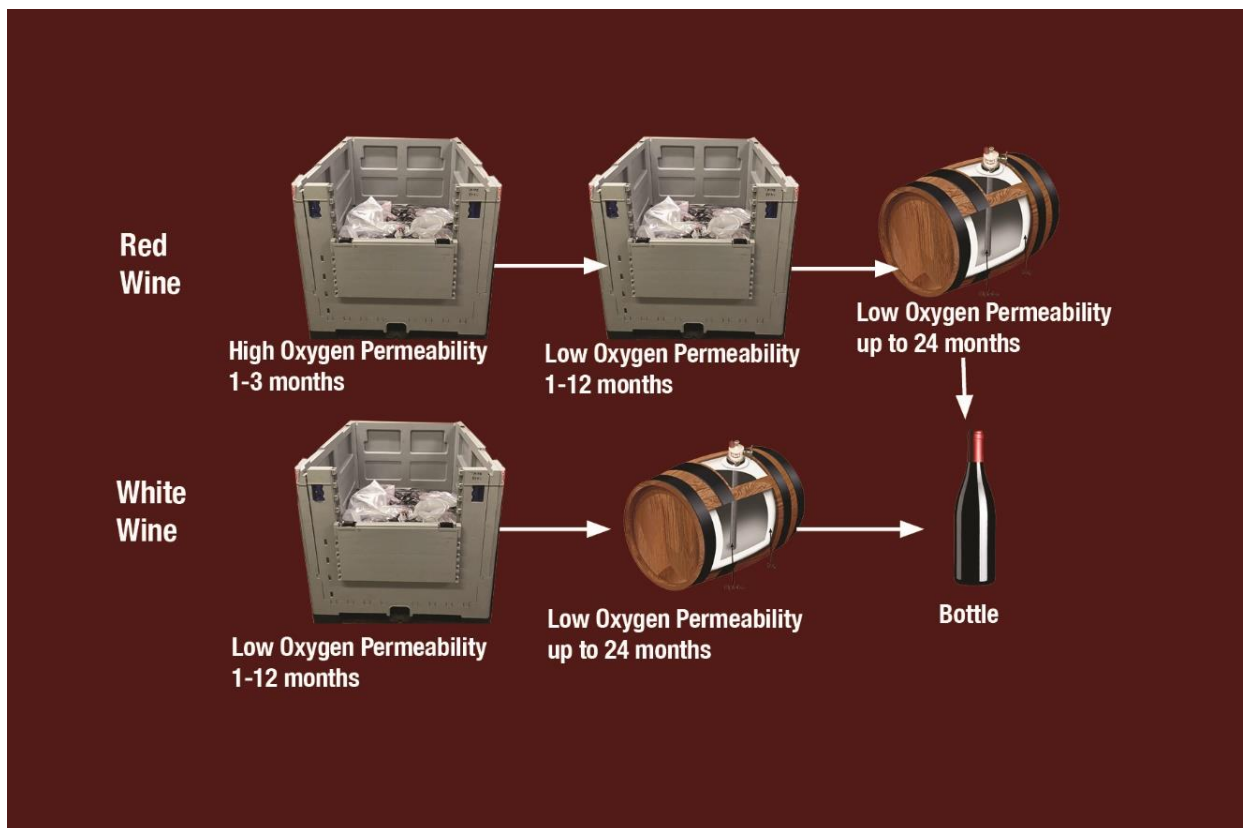
Disposal:

The easiest way to get the waste pomace-filled liner out of the GObase is to twist the top of the liner and tie a lifting strap. The pomace may weigh as much as 500 lbs so use a winch, automotive engine lifter, or forklift to lift it out. You can dispose the *pomace* in compost heap, or spread it into the vineyard as fertilizer. The empty liner can be disposed in household garbage. It is not UV stabilized and will rapidly disintegrate in a landfill.

Racking:

Racking is the process of settling the raw wine. In the GOfermentor+Smartbarrel winemaking system all racking is done in single-use liners. These liners eliminate cleaning, prevent contamination, and minimize oxidation. Secondary malolactic fermentations can be performed in the liners. Oaking can be performed in the liners using various oak products. Sulfite additions can be reduced or even eliminated due to the closed nature of the system.

The SmartBarrel® concept uses a patented dip tube assembly that is mounted on the top port of each liner. Wine is pumped in and out of the liner through this dip tube assembly. Samples can be taken using the ASPIRATOR device (available from GOfermentor).



First racking:

During pressing, the red wine is pumped out and collected in a Smartbarrel SB-L330 liner. With white wine, there is no pressing, and the fermented wine is simply pumped to SmartBarrel SB-L330 liner. This liner can be placed in a GOBASE outer container, or any suitable macro/harvest bin. After filling, the headspace is vacuumed out using the ASPIRATOR device. It can now left undisturbed for a few weeks to let the yeast (lees) settle out.

Second racking:

The wine is pumped out through the diptube to another Smartbarrel liner. The diptube removes the upper layers of wine first as the liner collapses making it easy to stop the transfer as soon as sediment is detected. Sedimented yeast is left behind in the first liner and discarded. A secondary malolactic bacterial fermentation may occur within weeks or months. This is considered desirable to soften acidity and prevent its spontaneous occurrence later in the bottle. Malolactic may be encouraged by inoculation with commercial bacteria and holding the wine at 70°F.

Third racking:

Wine is pumped from the second racking liner to a fresh liner. This racking is typically used to oak and allow sediments to settle further. Wine may be clarified using conventional agents such as bentonite.

Final racking:

Clarified wine may be transferred to a final liner for blending prior to bottling. SmartBarrel liners are also available in a 60 gallon format for long term storage in conventional barrel racks.

EQUIPMENT REQUIRED FOR SMARTBARREL RACKING:

GOBASE containers or macro/harvest bins
SmartBarrel IBC and/or 60 gallon barrel diptube kits (reusable)
SmartBarrel SB-L330 330 gallon liners (single-use)
SmartBarrel SB-L60 60 gallon barrel liners
SmartBarrel ASPIRATOR (at least one required)




Wine Transfer pump and hoses/fittings (see Appendix 1 for suitable pumps)

APPENDIX 1

Support Equipment Required:

Besides the GOfermentor and SmartBarrel you will need some support equipment. This will depend on what you already have and what you are willing to spend. Here is a basic list and budget prices. These items are available from a number of web-based suppliers. We have no connection with these suppliers and receive no compensation from them for recommending their products. However, the items listed here have been tested to work with the GOfermentor.

ITEM	DESCRIPTION	BUDGET
Destemmer w/built-in pump	 https://morewinemaking.com/products/motorized-destemmer-wscrew-feed-pump-3.html .	\$ 2500
Hoses and fittings needed to fill GOfermentor	2 x https://www.brewershardware.com/2-Tri-Clover-Compatible-X-2-Hose-Barb.html 1 x https://www.brewershardware.com/Tri-Clover-Compatible-Clamp-Style-Concentric-Reducer-2-5-X-2-0-TCCRED25X20.html 1 x https://www.brewershardware.com/2-5-Tri-Clover-Clamp-TC25CLAMP.html?category_id=323 1 x https://www.brewershardware.com/2-Tri-Clover-Clamp.html?category_id=323 10 ft crush proof hose https://www.usplastic.com/catalog/item.aspx?itemid=33945 1 x 2.5 triclamp gasket 1 x 2.0 Triclamp gasket. Couple of 2 inch hose clamps.	\$ 500
Wine pump – electric Needed for pressing and racking	 https://morewinemaking.com/products/euro-30-wine-pump-remote-control-1.html	\$ 2500

<p>Alternative Wine pump – air driven (need compressor)</p>	 <p>https://www.grainger.com/product/DAYTON-Double-Diaphragm-Pump-22A602</p>	<p>\$ 2000</p>
<p>Chiller 1 -3 ton Cheaper to have custom installed but portable unit is suitable</p>	 <p>https://www.morebeer.com/products/kreyer-chilly-45-128-ton-glycol-chiller-system-220v-1-phase.html</p>	<p>\$ 2000 - \$ 5000</p>
<p>Totes, barrels, bins, hoses for racking</p>	<p>US plastics is a good source. Brewershardware.com for Triclamp fittings.</p>	<p>\$ 1000</p>
<p>Bottling equipment Semi automatic Need level type filler NOT volumetric</p>	 <p>http://xpressfill-com.3dcartstores.com/Level-fillers_c_11.html</p>	<p>\$ 3000</p>
<p>Corker</p>	<p>Many options – from hand operated to fully automatic units Check web for options and suppliers</p>	<p>Varies</p>
<p>Essential laboratory gear</p>	<p>Morewine.com has most items you need</p>	<p>\$ 1000</p>
<p>Means of lifting pomace bag out of GOBASE</p>	<p>Need winch, lift, or forklift.</p>	

Support:

Have no doubts. We have perfected this unique system over four years and have several patents. We have made many award-winning wines, as have our customers. Please check our website for technical reports, research trials, and customer case studies.

Contact us if you have questions or just want to learn more. We will help you with your setup and train you to run everything. It does not take more than 1-2 hours. Equipment carries 12 month warranty. Made in USA.

Sales: sales@GOfermentor.com

Technical: tech@GOfermentor.com

Website: www.GOfermentor.com

Telephone: (USA) 908 877 5359

Become an expert:

Learn about winemaking and become an expert. Some publications you should read:

1. Jackson, Ronald S. Wine Science, Third Edition: Principles and Applications. Elsevier, Inc. 2008.
2. Dharmadikari, Murli. Micro vinification: A practical guide to small scale wine production. Midwest Viticulture and Enology Center, Dept. of Fruit Science, Southwest Missouri State University, 2001
3. Peynaud, Emile. Knowing and Making Wine. Translated from the French by Alan Spencer. J. Wiley, New York, 1984.
4. Zoecklein, Bruce W., Kenneth C. Fugelsang, Barry H. Gump and Fred S. Nury. Wine Analysis and Production. Chapman and Hall, New York, 1995.

<https://morewinemaking.com/content/winemanuals>

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