

# Barrelworks

**With proper use & care your wood will provide superb results for many years to come!**

Barrelworks never recommends leaving wood vessels dry unless they are virgin wood barrels still wrapped in their original plastic wrapping. All used wooden vessels should be filled with liquid after delivery as soon as possible. Within 5 days of receipt, used vessels should be filled and maintained according to the below instructions. *If there are any leaks or issues that cannot be corrected using the guidelines below, those issues or concerns thereof must be communicated to Barrelworks **within 10 days of delivery**.* Although we stand behind all of the products that we sell, and will provide guidance and consultation at any time, improper storage or handling of wood vessels can result in irreversible damage. We are not responsible for wood drying or other problems caused by misuse or neglect. Barrelworks is not responsible in any event for any loss of product, or degradation thereof, in connection with the use of wood vessels. Below you'll find portions specific to *barrels & puncheons* and *casks & foeders*.

## **(RE)HYDRATION**

Both new and used vessels need to be (re)hydrated or “swelled” prior to use to prevent avoidable leakage while filled. Freshly dumped barrels that are still wet may not need swelling at all; this decision should be made on a casebycase basis and is at the discretion of the purchaser. Swelling of the wood tightens the seal between staves and conditions the wood for use. Older/dryer, used vessels sometimes release water during the rehydration process, however as the the wood soaks, the staves should swell and tighten, stopping any leaks. Depending on the size & condition of your vessel, the total length of the process may take a few hours and up to 5 weeks. Once fully rehydrated, your vessel should be watertight. You will want to proceed with these steps just prior to filling. For used vessels, which may take longer to rehydrate, make sure to give yourself ample time.

### **Hot Water Soak:**

#### ***Barrels & Puncheons***

1. Fill the barrel with 1/10th its volume of hot (175oF; 80oC) water.
2. Insert the bung and roll the barrel being sure to coat all interior surfaces with water.
3. Stand the barrel on end, fill the head area (on the outside of the barrel) with hot water.
4. Let it stand for at least 30 minutes before repeating on the opposite end.
5. If there is a suction on the bung when it is removed, the barrel is sealed.
6. Drain the barrel and let it cool.
7. Rinse with cold water is recommended before filling.

### **Cold Water Soak:**

#### ***Barrels & Puncheons***

1. Fill the barrel 1/3 full with cold water and let it stand for 34 hours.
2. Fill the barrel 2/3's full and let it stand for another 34 hours.
3. Fill the barrel completely, keeping it toppedup until the barrel seals.
4. Drain completely before filling.

### ***Casks & Foeders***

It may be necessary to top off or maintain a constant water supply. Whenever possible, use a spray ball through the top manway or port. This will help gradually humidify the walls.

1. Fill vessel approximately 1/3 with cold water to help the bottom head (*foeders*) or belly (*casks*) expand and the hoops to tighten.
2. Used Vessels: If any hoops have shifted, gently tap them back into place before filling.
3. Wait 24 hours. You may see leaks from between the staves or around manways/accessories; this is normal. Continue maintaining the water supply at 1/3 of the vessel's capacity until the bottom head or belly is watertight before proceeding.
4. Finish filling the container in two stages (2/3 full, completely full) letting it rest for at least 24 hours between each stage. Should there be any leakage, let the wood expand longer between each stage.
5. Swell the top head by overfilling such that water coats the top of the vessel.
6. Once the vessel is watertight, leave the water to rest for 2 days to allow the wood to settle.
7. Should you still be experiencing leaks, drain and refill the vessel and let rest for another 24 days.
8. Used Vessels: This step will likely need to be repeated for an additional week or two depending on the age of the used vessel.
9. Drain completely before filling. Begin filling your vessel before the wood has dried.

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## STORAGE CONDITIONS & CLEANING

### Storage Conditions

The space where your vessel is stored should be kept cool and humid to best preserve the wood. These ambient conditions will reduce expansion and contraction of wood and prevent drying. Failure to follow these best practices may result in a higher rate of needed servicing and repairs.

|             | Minimum | Ideal   | Maximum |
|-------------|---------|---------|---------|
| Humidity    | 70%     | 75-80%  | 85%     |
| Temperature | 50°F    | 65-70°F | 75°F    |

Proper ventilation is necessary. Ideally there is no stagnant air with the full cellar volume of air replaced daily.

If your storage space is dry, “water” the floor (keep the ground moist or place containers of water on the ground) to increase the level of humidity. To achieve the longest possible life of wooden vessels, it is recommended that they be kept constantly filled with liquid. If you cannot keep product in your vessel, please refer to the list below to find the best storage solution for your needs.

### Cleaning

A fresh water rinse is always the preferred method for cleaning, especially if the vessel is to be immediately refilled (as is recommended). Vessels should be rinsed until all deposits have been removed to prevent the growth of spoilage organisms. Repeat rinsing as necessary. Aggressive chemicals are never recommended they will strip the character from the wood.

### *Casks & Foeders:*

Take special care with used, reconditioned casks or foeders. Depending on their age, they are often reconditioned with paraffin, beeswax or other sealant between the staves. Hot water (>100°F) might melt the filler and create leaks. These are common products & methods used for cleaning and or storage: Logic's Barrel OxyFresh – A nontoxic, oxygen based cleaner specifically designed to refresh and “open” the wood of older barrels without stripping character. Can be used as a temporary storage solution in between uses. Although it will remove organic soils and molds, and therefore “bugs”, it does not prevent future growth. Potassium MetaBisulfite & Citric Acid – 2:1 solution (8 grams & 4 grams in 1 gallon of water). Inexpensive and effective enough cleaning power but best as a temporary storage solution in between uses and replacing every 1-2 months. Should not be used with sour program barrels and when “bugs” are involved as potassium metabisulfite prevents the growth of yeast & bacteria. Sulfur – Comes in a flammable stick or disc form to be burned in enclosed, dry, and empty barrels to prevent microbial growth. Although risky it is effective and inexpensive. If using we highly recommend purchasing the proper holder to safely use. Steaming – A fast and effective way to remove microbial growth and rehydrate at the same time while conserving water. Will strip character from the barrel. It is imperative that you allow the steam to escape and not build pressure in the vessel. Ozone Water – While ozone machines may be expensive, they are one of the most effective ways to clean and sanitize without the use of chemicals. It is able to penetrate the wood in places steam and hot water cannot without effecting the flavor impact of the wood and does so in only 25 minutes of contact. Western Square's Barrel Washing System or Barrel Master – Steel racks produced in the U.S. that allow you to clean barrels & puncheons in place.



With the “Washing System” move full racks by fork lifting onto the system with wheels and greater clearance to easily rack and clean.



With the “Barrel Master” you can store, rack, and clean barrels in the same place.

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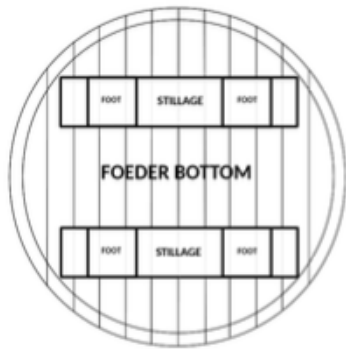
## INSTALLATION

### *Barrels, Puncheons & Casks (under 1hL):*

Barrels should be kept off of the ground and other surfaces subject to moisture such as wood. We recommend steel racks such as Western Square's. If you haven't already received information, please inquire. As the East Coast distributor for the most trusted rack manufacturer in the U.S., we stock all standard styles for common sizes or can custom order for odd sizes.

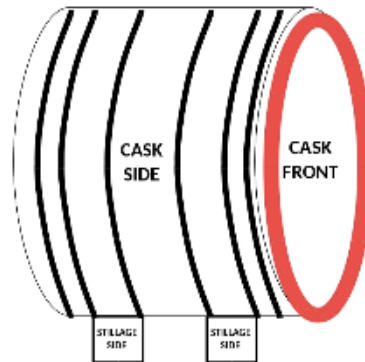
### *Casks & Foeders:*

Should ONLY be installed on stable and nearly level ground with the stillage that was provided with the vessel.



*Foeders*

Install the saddles (stillage) perpendicular to the head pieces.



*Casks*

Install the saddles (stillage) between the two largest bands at the front and back.

## USAGE

### Pressure

Never use high pressure water or steam under closed conditions to clean your vessel. Please refer to the section concerning cleaning for recommended methods.

Never use Co2 or apply pressure to the inside. Pressure of any sort will cause irreparable damage to fibers of the wood causing staves to crack or accessories to become dislocated. If you absolutely must use pressure, you are doing so at your own discretion. It should be kept to below 5PSI and for a brief amount of time.

### Leaks

Leaks from between the staves or around accessories are normal, however leaks from the center of a stave are not. Please contact us immediately should this happen so that we may have the opportunity to remedy the problem quickly. Barrel putty is available and can be used to fill in normal leaks in between staves and around accessories.

### *Casks & Foeders:*

If your vessel has a wooden manway, we recommend keeping it in place to insure proper fit and a quality seal. If you **must** remove the wooden manway, do so for a brief amount of time otherwise you may need to let the vessel and manway completely dry before putting back in place.

Please reach out to us anytime with questions or issues. We'll respond as quickly as possible.