



# FERMENATOR™

## Supplementary Operation, Assembly, Maintenance Manual for F3-42 model and optional attachments

Article number	Article
017.851.42	Fermentor Conical Standard 158 L (42 gal)
017.853.42	Fermentor Leg extension for 158 L (42 gal)
017.854.42	Fermentor Casters for 158 L (42 gal)

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

**\*\*\*\* PLEASE READ THOROUGHLY PRIOR TO USE FOR IMPORTANT SAFETY INFORMATION \*\*\*\***

### Unpacking:

Please ensure that you have the following items packaged with your fermentor:

- 1 Stainless steel extension "lid"
- 2 Cross-braces (one marker "R", one marked "L")
- 3 Leg braces (shorter braces)
- 1 Bag misc ¼-20 hardware
- 2 "Arrow" labels (may be installed on lid and 27gal tank if purchased as a complete unit)
- 1 P-clip for blow-off hose
- 1 Black grommet for blow-off hose elbow
- 1 ¾ X ¾ barbed elbow (nylon)
- 1 ¾ X 6ft vinyl blow-off hose (trim to length desired)

# About This Manual:

This is the supplementary manual for the 42 gallon model (158 L) and must be used in conjunction with the 017.851.27 manual. If you purchased this as an upgrade, that manual should also have been included for your convenience. Please contact Blichmann Engineering for a copy of that manual if you did not receive it. This supplemental manual is broken down into the following sections:

**Assembly:** Proper assembly procedures to ensure reliable, safe, leak-free operation of your Fermentor™. We recommend an initial assembly to familiarize you with the process prior to your first use.

**Sanitation:** Steps to properly sanitize your fermentor before each use.

**Operation:** Techniques to get the most out of your fermentor.

**Storage & Maintenance** Get years of service by properly maintaining and storing your fermentor.

## IMPORTANT !!

**Warning:** Sections labeled “Warning” can lead to serious injury or death if not followed. Please read these thoroughly 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](http://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](http://www.BlichmannEngineering.com)) before use.

## Assembly:

The 42 gallon (158 L) model is a modular design and is sold in 2 configurations.

(1) as a complete unit, and

(2) as an optional modular “extension” for our gallon (017.851.27) unit.

The only difference is that the 42 gal complete unit (017.851.42) does not include the 27gal model lid in addition to the 42 gal extension (017.851.42ext) .

Note that the capacity of the extension is actually 57 L or 15 US gal (27+15=42 gal gross capacity)

**Note:** We recommend a trial assembly of your new Fermentor™ before using it to ferment so you are familiar with the procedures and you are sure you have all the parts. When you are ready to use the fermentor for an actual brewing session, read the sanitizing procedures before assembling your Fermentor™ since many parts are sanitized before assembly. Note that some of the components have not been pre-assembled at the factory to prevent shipping damage.

## Installing fittings

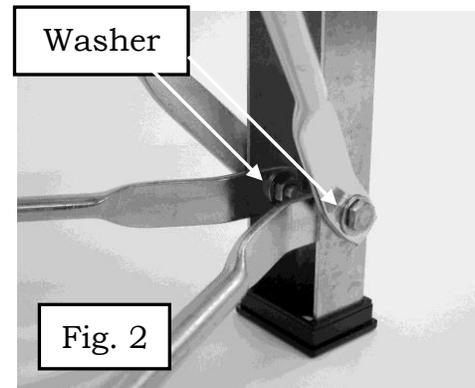
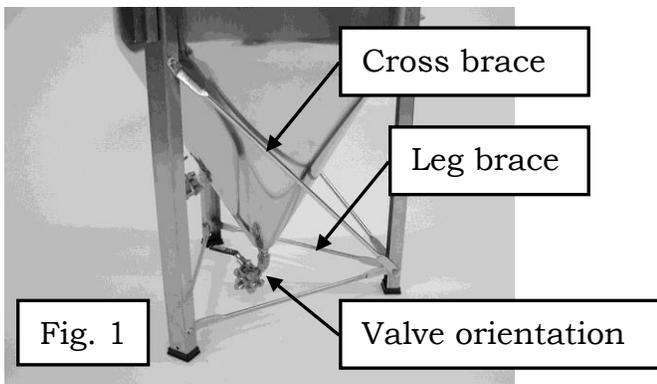
Consult the Fermentor 27 gallon manual (017.851.27) for installation of fittings for the 42 gallon model since the procedure is identical.

## Leg Braces For F3-42 Model Only (017.853.42)

The weight of a full 158 L or 42 gal model requires additional bracing to be added to the unit, even without the optional leg extensions for added strength and stability.

**Warning:** This unit weighs about 450lb (204 kg) when full, so be sure the floor where you will be using the unit can withstand that much weight and floor pressure (point load of each leg pad is approx 100 PSI, or 150lb (about 68 kg) per leg). Do not use this product where a spill could cause property damage!

Assemble the three leg braces (3 horizontal bars) and cross braces (2 angle bars) as shown in Fig. 1. It is recommended that you install all of the hardware finger tight first, and tighten the assembly when all fasteners are in place. This will allow slight adjustments of position as needed for ease of assembly. Note that the horizontal braces (leg braces) go on the inside of the leg, and the cross braces go on the outside of the leg. The washers also go on the inside of the leg as shown to cover the holes in the horizontal leg brace. Washers are also needed on the outside of the cross braces to cover the slotted hole as shown in Fig 2. Orient the bottom dump valve at an angle as shown in Fig 1 so that it does not interfere with the leg brace when connecting the hose barb and hose to the bottom dump assembly.



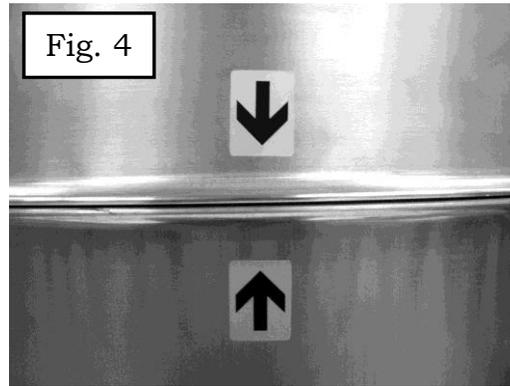
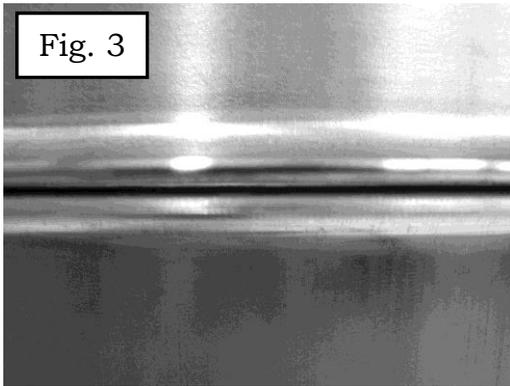
## Extension lid assembly

**Important:** Follow the initial lid alignment procedure closely to ensure that you will not have leaks at the lid/tank seal area!! If you have purchased the extension at the same time as the 102 L (or 27 gal) unit or purchased a complete 158 L (42 gal) unit, the lid alignment procedure will have been done for you at the factory. If you purchased the extension separately, you will need to align the lid.

The lip of the tank and of the extension lid are not perfectly flat, rather they are slightly shaped like a Pringle potato chip. This is an unavoidable result of the manufacturing process of the tank, so a simple alignment procedure is needed to “custom fit” the extension lid to the tank.

### Lid alignment procedure

Place the extension lid on the tank without the lid seal in place. Slowly rotate the lid making note of the gap between the lips as shown in Fig 3. The goal of the alignment procedure is to minimize the amount of gap between the lip of the tank and the lip of the extension lid. Using your thumb and index finger you can rock the extension lid and get a feel for the amount of gap present. Rotate the lid about 15 degrees at a time and select the position where the gap around the lid is minimized. Place the arrow labels supplied with the hardware kit on the rear of the tank as shown in Fig. 4 so you can quickly realign the extension lid for future uses. If you have more than one unit, we recommend using an engraver or permanent marker to mark each tank and lid with a matching number or letter so that the same extension lid is used with the same tank each time.

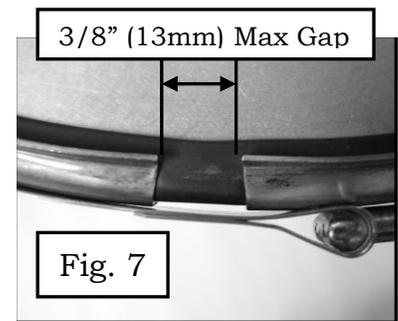
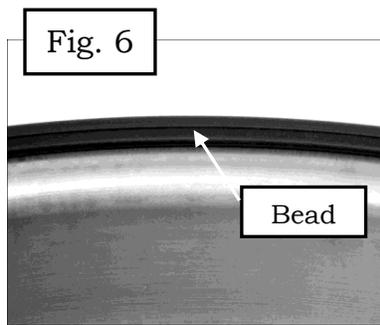


The alignment procedure is now complete.

**Lid installation procedure:**

Place the extension lid upside down on the tank as shown in Fig. 5. Install the U-shaped lid seal over the edge of the extension lid (not on the tank) with the small bead on the seal facing toward the lip of the tank as in Fig. 6. Be sure the lid is centered on the tank as much as possible and that the alignment arrows match up. Place the V-band clamp around the lid and tank lip and start the T-nut on the clamp stud. The V-band clamp can be installed with either side up and with the clamp in any orientation. Initially tighten the clamp to about 1/2" to 3/4" (13-17mm) of gap between the band segments (Fig. 7), then, using a rubber or wood mallet, gently tap the outside perimeter of the V-band clamp to seat the clamp firmly and evenly all the way around the lid seal. Start at the opposite side of the T-handle and work your way around to the handle. **Retighten the clamp so the segment gap is less than 3/8" (13mm) as shown in Fig. 7**

**Note:** ALWAYS apply a dab of Vaseline or drop of oil on the threads of the draw bolt before each use to prevent wear and galling of the threads. Galled or worn threads are NOT covered under warranty.



**Warning:** Failure to correctly install and tighten the lid clamp can cause the lid to blow off during pressurization resulting in serious injury or death! Please contact your Authorized Fermentor™ Distributor or Blichmann Engineering ([www.BlichmannEngineering.com](http://www.BlichmannEngineering.com)) if you have any questions about proper assembly. Do not operate the unit until you are certain that you understand the proper installation procedure.

**Blow-off hose assembly**

The volume of CO2 flow generated during fermentation requires the use of a blow-off hose during primary fermentation. Since this is a sealed blow-off system, it can also be used for secondary fermentation in lieu of an airlock. Referring to Fig. 8 install the "P" clip on the tank as shown using a 1/4-20 bolt. Note that a washer needs to be installed on the top of the P-clip. The purpose of the P-clip is to hold the blow-off hose neatly in place. If you are installing the leg extensions, an additional P-clip

is provided. Insert the black grommet in the extension lid as shown in Fig. 9, followed by the 3/4 X 3/4 barbed elbow. Attach the hose and route it to a bucket filled with sanitizer (not included) as shown in Fig. 10. A plastic ice-cream bucket with a lid works well, but be sure to cut an oversize hole in the lid to allow the CO2 gasses to escape.



Fig. 8

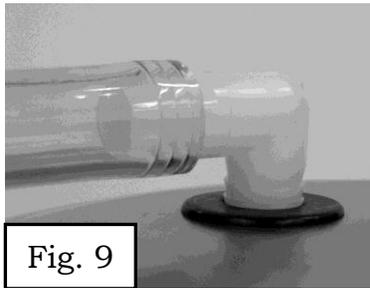


Fig. 9



Fig. 10

**Carry Handles**

**Warning:** The 27gal (102 L) and 42 gal (158 L) models are too heavy to move when full. DO NOT attempt to move these units when full. The carry handles are provided to move it only when empty.

**Optional Leg Extension Kits (017.853.42)**

The leg extensions allow for gravity draining into a keg or bottling bucket. Additional bracing is required for the 42 gallon model as compared to the 27 gallon one to bear the additional weight of the unit. assemble the three leg braces (horizontal bars) and cross braces (angles bars) as shown in Fig. 11 and Fig. 12. It is recommended that you install all of the hardware finger tight first, and tighten the assembly when all fasteners are in place. This will allow slight adjustments of position as needed for ease of assembly. You will have 3 cross braces with an “L” stamped on one end, and 3 cross braces with an “R” stamped on the end. Note that the horizontal braces go on the inside of the leg, and the cross braces go on the outside of the leg. The washers also go on the inside of the leg as shown to cover the holes in the horizontal leg brace. Washers are also needed on the outside of the cross braces to cover the slotted hole as shown in Fig. 13 below.

**Note:** If you purchased the 42gal extension only and already owned 27gal leg extensions you will need additional cross braces as these are not included with the 27 gal leg extension kit. Please contact your retailer for these braces, and DO NOT operate without them!!

**Note:** it is not necessary to install the 90 deg elbow on the bottom dump assembly when using the leg extension kit. This will allow the trub and yeast to flow more freely from the dump valve (see Fig. 11).

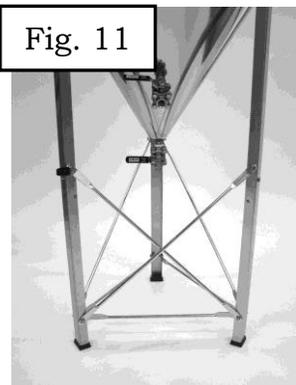


Fig. 11

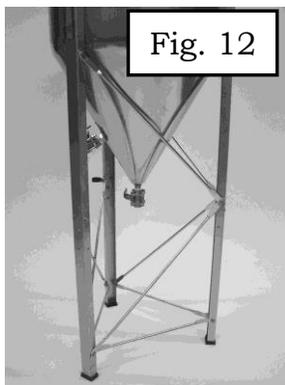


Fig. 12

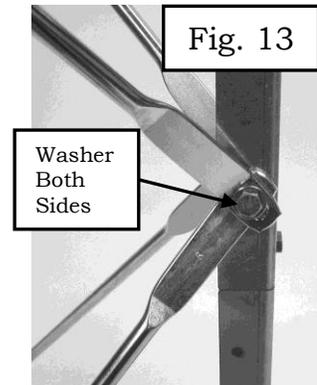


Fig. 13

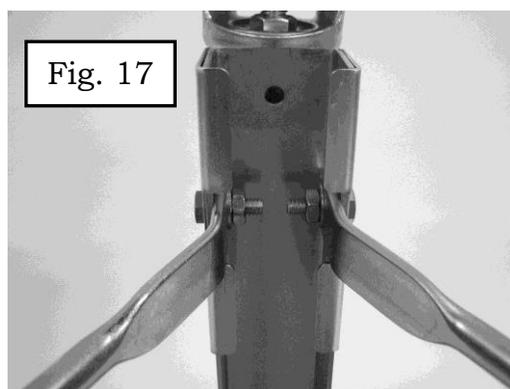
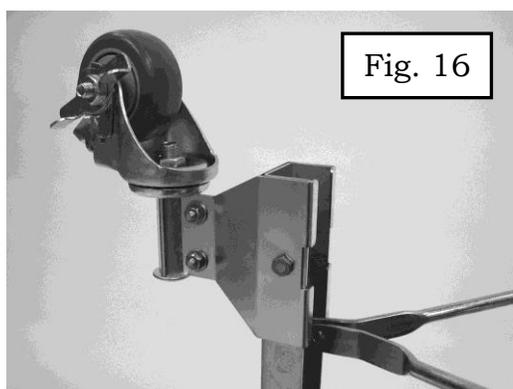
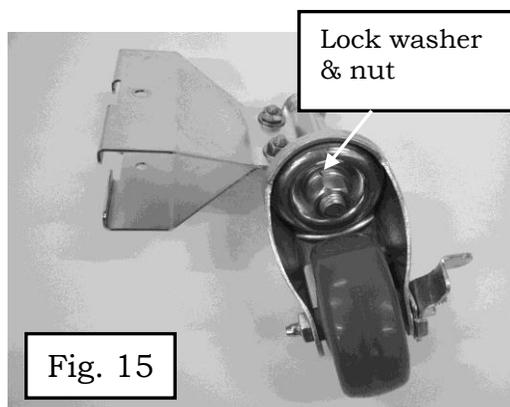
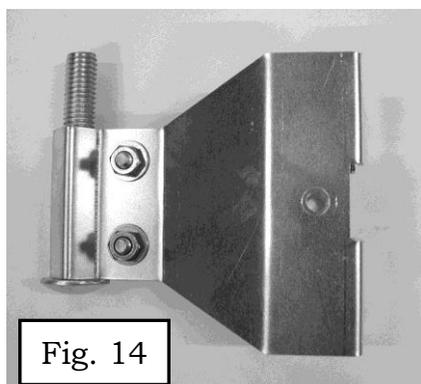
Washer  
Both  
Sides

## Optional Casters (017.854.42)

### Warning:

To assemble the casters, begin by pre-assembling the brackets as shown in Fig. 14 using two ¼-20 X ½” long bolts and washers. It is recommended that you install all of the hardware finger tight first, and tighten the assembly when all fasteners are in place. This will allow slight adjustments of position as needed for ease of assembly. Insert the large carriage bolts through the bracket and into the hole in the caster. Place a lock washer and nut on the bolt and finger tighten as shown in Fig 15. Invert your Fermentor and place on a soft surface to prevent scratching. Place a caster assembly over each leg and hold in place with two ¼-20 X ¾” long bolts as shown in Fig. 16. Do not install nuts or washers at this time. Place the leg braces on the inside of the leg one at a time, installing washers and nuts on the bolts finger tight as shown in Fig. 17. Note that the braces go on the inside of the leg. Note Fig. 18 showing the position of the cross braces which go on the outside of the bracket. Tighten all of the fasteners at this time, and invert the Fermentor onto the wheels. The wheels are non-marking to protect your floors, and feature a wheel lock to keep the unit in place and prevent accidental movement.

**Warning:** Keep all wheels locked at all times unless moving the unit. Be sure all obstacles are out of the path of the Fermentor, especially small objects which will wedge under the wheels and cause it to suddenly stop moving. This will present a tipping hazard! While moving, keep both hands on the unit, and move slowly to prevent accidental tipping. When the unit is in its final location, lock all the wheels by depressing the wheel lock (Fig. 19) with your foot.



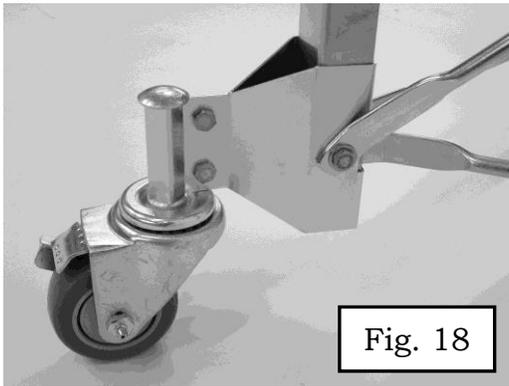


Fig. 18



Fig. 19

## Sanitation:

The sanitation procedure for 017.851.42 model is identical to the 017.851.27 model, so please reference that manual for the sanitation and cleaning procedures.

Dry the outside of the tank thoroughly with a cloth and if any fittings are leaking, tighten them as required, taking care not to bend the tank. If you detect a leak at the lid seal joint, check that you have the arrows lined up properly and have completely followed the alignment procedure outlined earlier. If a leak still persists, please contact your local dealer for assistance.

## Operation:

The operation procedure for this model is identical to the 27 gallon model (017.851.27), so please reference that manual operation procedures.

**\*\*\* IMPORTANT \*\*\***

### Maximum Fermentables Capacity

Art. Number	Model	Beer	Wine
017.851.42	158 L or 42 gal	125 L or 33 US gal	136 L or 36 US gal

**Warning:** Exceeding these capacities can cause the fermentation material (krausen) to clog the pressure relief valve and airlock causing a dangerous overpressure of the fermentor. Approximately 30% excess capacity is required for krausen space for beer and approximately 20% for wine.

**Warning:** Do not use loose whole hops, wood chips, grape skins, or other similar material in the fermentor. Use a hop bag to prevent loose material from plugging the pressure relief valve or airlock, which may cause a dangerous overpressure of the fermentor.

It is highly recommended that you use a blow-off tube for primary fermentation!

**Warning:**

- **Do not exceed 3 PSI (6 ft of lift above the racking arm)**
- Do not tamper with, or press on the pressure relief valve piston
- Do not leave the fermentor unattended during pumping
- Do not use loose whole hops, wood chips, grape skins, or other similar material in the fermentor. Use a hop or grain bag to prevent loose material from plugging the pressure relief valve or airlock causing a dangerous overpressure of the fermentor.
- Ensure that the surfaces of the pressure relief valve piston and seat are free from fermentables or other material **prior** to pressurization. Clean as needed. Failure to do so may cause sticking and subsequent malfunction of the relief valve system.

**\*\*\*Failure to follow these warnings could result in serious injury or death.  
This fermentor is NOT to be used for force carbonation!**

## **After Use Cleaning, Storage, and Maintenance:**

Cleaning, maintenance, and storage procedures are identical for the 017.851.42 and 017.851.27 models – please consult the manual for 017.851.27.