



FERMENATOR™

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

Congratulations on your purchase, and thank you for selecting the Fermentator™ 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 1/4-20 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 3/4 X 3/4 barbed elbow (nylon)
- 1 3/4 X 6ft vinyl blow-off hose (trim to length desired)

About This Manual:

This is the supplementary manual for the F3-42 model and must be used in conjunction with the F3-27 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 Fermentator™. 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) 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.

Assembly:

The F3-42 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 F3-27 unit. The only difference is that the F3-42 complete unit does not include the 27gal model lid in addition to the 42gal extension. Note that the capacity of the extension is actually 15 US gal (27+15=42 gal gross capacity).

Note: We recommend a trial assembly of your new Fermentator™ 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 Fermentator™ 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 Fermentator F3-27 manual for installation of fittings for the F3-42 model since the procedure is identical.

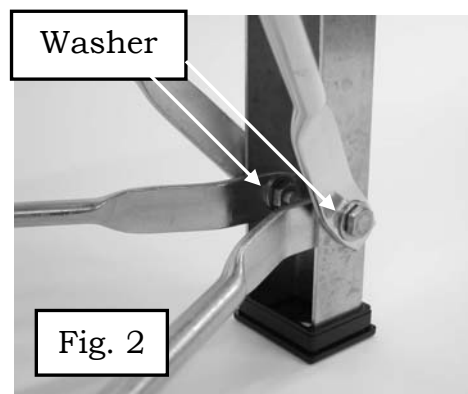
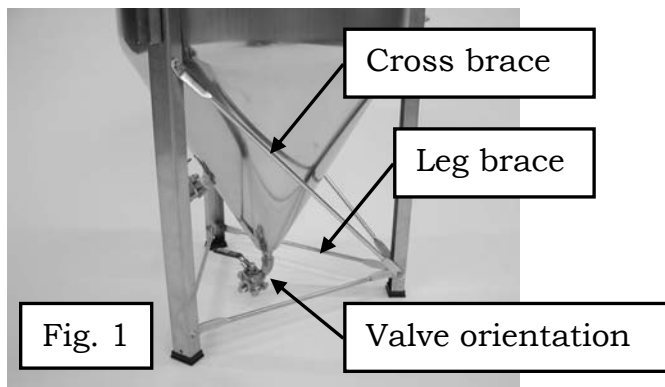
Leg Braces For F3-42 Model Only

The weight of a full 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 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 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.



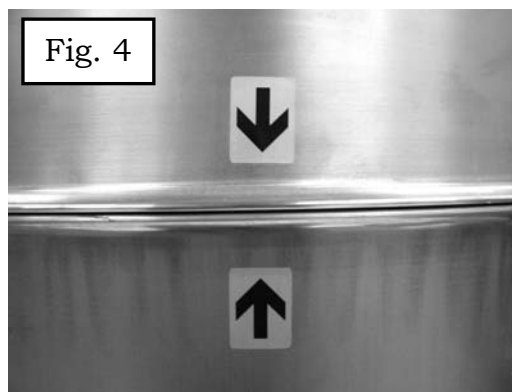
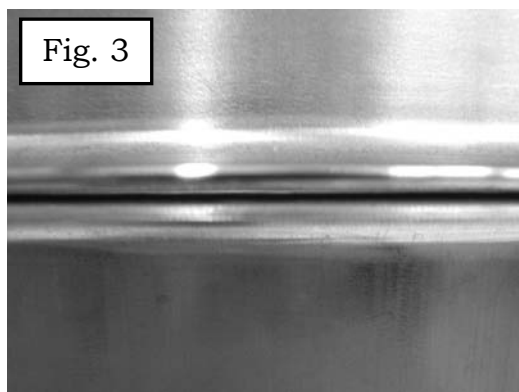
Extension lid assembly

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 27 gal unit or purchased a complete 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.

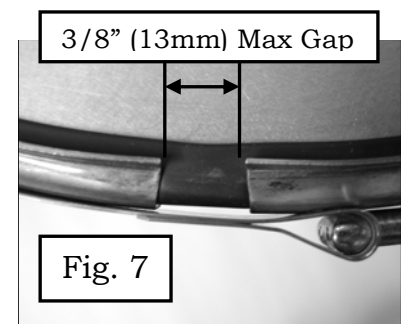
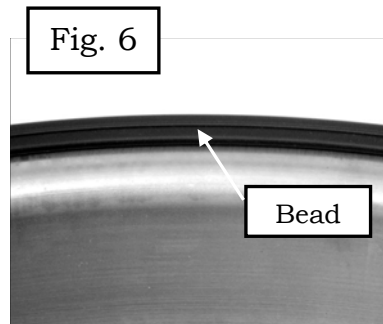


The alignment procedure is now complete.

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**

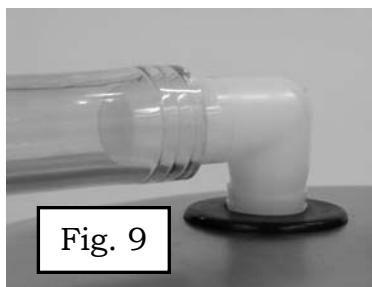
Note: ALWAYS apply a dab of Vaseline or drop of oil on the threads of the draw bolt before each use to prevent wear and galling of the threads. Galled or worn threads are NOT covered under warranty.



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) 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.



Carry Handles

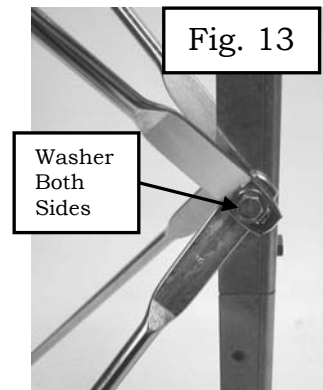
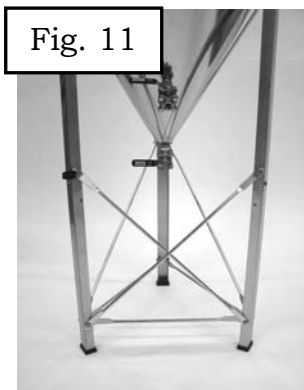
Warning: The 27gal and 42gal models are too heavy to move when full. DO NOT attempt to move these units when full. The carry handles are provided to move it only when empty.

Optional Leg Extension Kits

The leg extensions allow for gravity draining into a keg or bottling bucket. Additional bracing is required for the F42 model as compared to the F3-27 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).



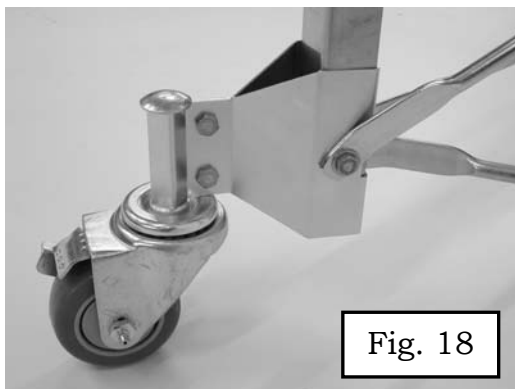
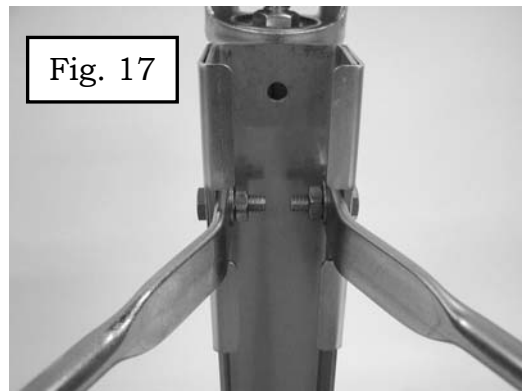
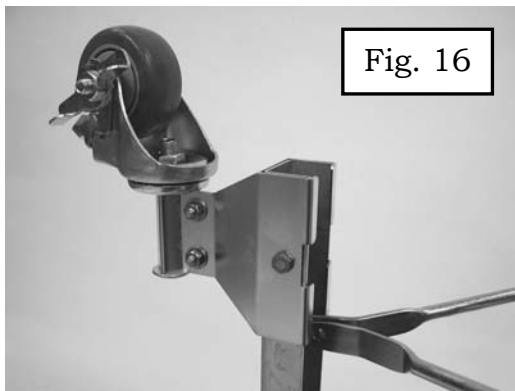
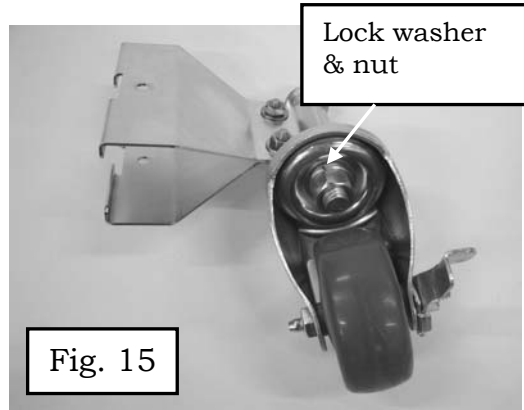
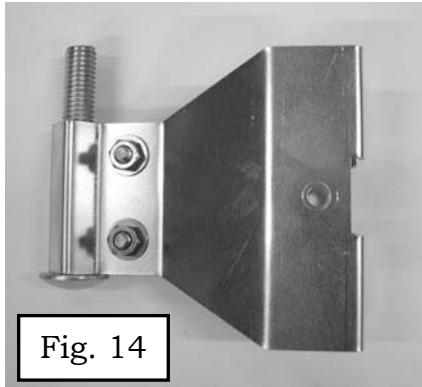
Optional Casters

Warning:

To assemble the casters, begin by pre-assembling the brackets as shown in Fig. 14 using two $\frac{1}{4}$ -20 X $\frac{1}{2}$ " 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 Fermenter and place on a soft surface to prevent scratching. Place a caster assembly over each leg and hold in place with two $\frac{1}{4}$ -20 X $\frac{3}{4}$ " 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 Fermentator 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 Fermentator, 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.



Sanitation:

The sanitation procedure for the F3-42 model is identical to the F3-27 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 Blichmann Engineering via email: John@BlichmannEngineering.com for assistance.

Operation:

The operation procedure for the F3-42 model is identical to the F3-27 model, so please reference that manual operation procedures.

***** IMPORTANT *****

Maximum Fermentables Capacity

	Beer	Wine
42 gal model:	33 US gal	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 F3-42 and F3-27 models – please consult the F3-27 manual.

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. 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 warranty 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.

D. Local Law venue for any legal proceedings relating to or arising out of this warranty shall be in Tippecanoe County, Indiana, United States, which courts

1. ~~This warranty gives the customer~~ venue for any legal proceedings relating to or arising out of this warranty shall be in Tippecanoe County, Indiana, United States, which courts 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.