FermZilla Conical

Instruction Manual
(for 27L and 55L models)

This instruction sheet contains vital information that is related to the safe usage and handling of the FermZilla Uni Tank. It is vital that you read this instruction sheet from front to back before using the product! THIS IS FOR YOUR OWN SAFETY

Ferment, Clarify, Dispense. The uni tank that does it all.
WARNINGS

1. Do not add any liquid which is above 50°C (122°F) to the Fermzilla. Only clean, wash or sanitise the fermenter with cold water.
2. Under no circumstances apply more than 2.5bar (35PSI) to the fermenter tank and do not connect an unregulated pressure source.
3. If you connect external pressure source ensure it has independent PRV pre-set to 45psi or below.
4. Do not tamper with the pressure relief valve. Only use the red colored pressure relief valve supplied by KegLand and ensure the pressure relief valve is regularly cleaned and maintained.
5. If the fermenter is scratched, damaged or has been under any physical duress; do not use the fermenter under pressure.
6. Keep the fermenter out of direct sun or heat. Do not expose to UV rays of any sort.
7. If you are using a heat belt to warm the fermenter then only have the heat belt sitting below the liquid level. Do not use an unregulated heat source, only use heat sources which are plugged into a temperature controller set below 45°C.
8. If you use the fermenter under pressure hydro test the fermenter every 24months to ensure it is safe to use.
9. Do not use Sodium Metabisulphite or Stellarsoda in the FermZilla. Only use chemical cleaners and sanitizers that are approved by Kegland. These include:
   a) Super Kill Ethyl Sanitiser Spray (effective for sanitising the exterior of the FermZilla) (KL05371)
   b) StellarSan (mixed to the correct specification) (KL05357)
   c) StellarClean (not to be left in the FermZilla for more than 30 minutes) (KL05494)
   ... Or contact www.kegland.com.au for more information regarding other compatible chemical cleaning products.
10. Keep the butterfly valve always open during fermentation. Only close the butterfly valve once fermentation has ceased and hydrometer readings are stable for 3 consecutive days.
11. Open the butterfly valve and ensure the system (including the collection container) is depressurized prior to removing the collection container.
12. Do not over tighten carbonation caps onto the threads of the lid or collection container, doing so could result in the thread being stripped. We recommend using the plastic carbonation and line cleaning cap (KL10788).
13. Do not over tighten the stainless steel handles onto the neck of the FermZilla.
14. Avoid lifting the Fermzilla while full.
15. Always conduct a leak test prior to beginning fermentation if pressure fermenting.
Three Piece AirLock (KL01595) & Black Cap & Fitted Gromet

Threaded Lid Ring (KL11396) & FlatLid (KL11402) & Lid O-Ring (KL14267)

Replacement FermZilla Conical Standard Tank (KL11327 – 27L PET) (KL11334 – 55L PET)

Cornelius Type Pressure Relief (PRV) RED 35psi/2.5bar (KL05333)

Liquid/Gas Ball Lock Post Carbonation Cap Assembly (KL10788 – Plastic) (KL00826 – Stainless)

NOTE: This is sold separately as an upgrade the starter kit. This is recommended for fermenting under pressure. Standard plastic bottle caps can be used here too.

Silicone Dip Tube & Stainless Float Assembly for 55L and 27L (KL14076)

NOTE: This is sold separately as an upgrade the starter kit. This is recommended for fermenting under pressure.

Butterfly Dump Valve Assembly (KL11464)

1L Collection Container with Lid, Caps and O-ring (KL11365)

304 Stainless 8 Leg Stand (KL11419)
FermZilla – Lid Assembly

1. Ensure the lid assembly has the o-ring attached.

2. Apply some food grade lubricant to the o-ring to extend the life of this o-ring and threads. Adding lubricant will also improve the sealing ability of the o-ring.

3. Place the lid onto the neck of the tank and screw down the threaded lid ring.

4. Use one of the bottle caps to close one of the holes in the lid.
5. Ensure the Red PRV is placed into the pressure relief valve.

6. Push the three piece air-lock into the silicone bung then push both parts into the remaining hole in the lid.

**FermZilla – Dump Valve Assembly**

1. Ensure the double threaded spigot has both the o-ring around the base and the cone shaped seal around the conical part of the threaded spigot. (see below)
2. Once the threaded spigot sticks out the bottom of the FermZilla use the thread ring to secure the spigot onto the tank.

**NOTE:** This is a **LEFT HAND THREAD**. This has been designed with a left hand thread so it does not come undone when you tighten the Butterfly Valve Assembly onto the Dump Valve Adaptor. Do up the Thread Ring hand tight. This should be all that is required to get a good seal. (see right) This has been designed so that when pressure increases inside the tank the seal pushes harder against the tank. For this reason, it is not important to overtighten this part of the fermenter. A small amount of keg lubricant can help make it easier to thread.

3. Locate the butterfly dump valve and screw this onto the spigot. This is a **RIGHT HAND (regular) THREAD**. Screw this onto the spigot firmly. Once again do not over tighten this fitting as additional tightness will not improve the sealing performance. A small amount of keg lubricant on the o-ring can help ensure your o-rings stay in good shape, seal well and screw on securely.

**NOTE:** When the handle on the butterfly dump valve is horizontal the gate is closed. When the handle is in the vertical position the gate is open.
FermZilla – Dump Valve Disassembly

The FermZilla dump valve assembly can be disassembled to allow for thorough cleaning or o-ring maintenance. Sometimes this assembly can be difficult to remove if over-tightened but can be undone following the correct method. Because the diameters of the fittings are large, the forces required to seal the fittings are much higher, so at times can be difficult to undo.

Disassembly can be done through the following steps:

1. **Tightening the body coupling**: first, ensure the spigot’s collar is tightened down securely, so that when you undo the valve part, it doesn’t freely spin in the body (remember, this part is left-hand threaded). One trick to get the collar up super tight is to pressurise the vessel before tightening. This will push down the spigot and bulge the vessel enough to screw down the collar even tighter, it will also make the body easier to grip. The KegLand Adjustable Easy Opening Tool is handy for ensuring you tighten it as far as it can go and ensuring the fittings are dry will ensure they don’t slip. At no point use the valve itself to tighten this, as it will only make step 2 harder. Once tightened, depressurise the vessel.

2. **Unscrewing the valve**: with the spigot assembly securely tightened, grip the body of the fermenter and firmly twist off the valve part of the assembly counter-clockwise.

   One trick to make this easier with only one set of hands is to secure the handle of the valve in the FermZilla frame and twisting off the body instead (see picture to the right). If the spigot assembly spins freely in the body of the FermZilla, repeat step one.

   *Alternatively, if you have the steel handles securely mounted to the top of the vessel, you could also use these handles to lock into the frame again to allow you to turn off the valve.*

3. **Unscrewing the body coupling**: Now that you have successfully removed the butterfly valve, you can proceed with removing the body coupling/spigot assembly. Remember, this is a left-handed thread, so turn the fitting off clockwise.

   The trick to getting the entire assembly apart is ensuring the spigot collar is tight enough in the first place that is doesn’t spin when attempting to screw off the valve.

*Please refer to this instructional video for a visual demonstration of how to do this process.*
FermZilla – Collection Container

The collection bottle has several uses. Its primary function is to collect and harvest yeast however it can also be used for other purposes such as:

1. Reagent Bottle
2. Dry Hopping Bottle
3. Beer Sampling Bottle
4. Collection and disposal of unwanted trub or hop material
5. Carbonation of small samples of product
6. Yeast culturing container

The FermZilla collection container has also conveniently manufactured with heat resistant Tritan plastic meaning it’s not only robust and chemical resistant, but also heat resistant and will handle extended contact in hot water 100C (212F)

FermZilla – Collection Container Assembly

1. It is suggested to first apply food-grade lubricant to the o-ring on the collection container. Suitable lubricant can be sourced on our website (KL07221).
2. Screw the lubricated collection container into the thread on the bottom of the dump valve assembly.
3. Tighten with the collection container removal tool (KL14250). Make sure to not overtighten, tighten just enough to form a leak-proof seal.

FermZilla – Collection Container Disassembly

1. Prior to removing the collection container, open the butterfly valve and release the pressure in the vessel by pulling on the pressure relief valve on the lid of the FermZilla until all the gas is evacuated.
2. Close the butterfly valve if there is liquid in the FermZilla.
3. Using the collection container removal tool to rotate the collection container clockwise to loosen the container.
FermZilla – 304 Stainless Steel Handles Assembly

1. Insert a bolt into a hole of each of the handles.
2. Screw a nut onto the bolt. Don’t tighten this nut yet.
3. Place the handles around the collar of the FermZilla as shown in the image to the right.
4. Insert the second bolt into the remaining holes on the handle and screw the remaining nut onto this bolt.
5. Tighten the two nuts while holding the bolts to prevent them from spinning. Do not overtighten as it can warp the opening of the FermZilla. The handles should be able to freely rotate around the neck of the FermZilla. If they cannot rotate then it is too tight.

NOTE: It is suggested to orientate the handle during assembly such that the exposed thread of the bolt furthest away from you is oriented to the left such that when undoing the collar of the FermZilla it reduces the risk of hitting your hand on this exposed thread of the bolt. This orientation is shown above to the right.

Yeast Harvesting and Trub Dumping:

6. In order to harvest yeast simply screw the yeast collection bottle onto the Butterfly Valve. You can insert this bottle right from the start of fermentation.
7. Fermentation is no different to any other fermenter. Once the wort is inside the fermenter pitch yeast as you would normally.
8. Once the collection bottle has been fitted open the butterfly valve yeast can fall down into the collection bottle. The butterfly valve is open when the handle is facing in the vertical direction and it’s off when it’s in the horizontal position.
9. By chilling the fermenter this will accelerate the process of the yeast falling out of suspension and it will greatly speed up the clarification process. The easiest way to chill the FermZilla is by fermenting in a dedicated fermentation fridge.
10. Once the bottle is full of yeast you can re-cap and store in the fridge for your next brew or discard, rinse and sanitise if you just want to dump the trub.
Cleaning the FermZilla:

1. Remove the FermZilla collection container and the lid.
2. Rinse the walls of the FermZilla vessel, collection container, lid and butterfly valve (including the external face and threads of the butterfly valve) with cold water. A garden hose is particularly useful for rinsing and dislodging yeast/hop matter.
3. Use a non-abrasive cloth to remove any stuck on particulate matter from the walls of the FermZilla, lid, collection vessel and butterfly valve.
4. Close the butterfly valve and leave the collection vessel unattached.
5. Clean the collection vessel by filling it with cold water and add ¼ scoop of StellarClean, attach the lid and shake to dislodge any yeast/hop matter.
6. Fill the FermZilla with cold water and add StellarClean according to the instructions on the tub. Reattach the lid and shake the full FermZilla to coat all surfaces.
7. StellarClean can be left in the vessel for up to 30 minutes.
8. Remove the lid and drain the StellarSan by opening the butterfly valve and then rinse using cold water.
9. Fill the FermZilla and collection vessel with cold water again and add StellarSan according to the instructions on the tub. Reattach the lid and shake the full FermZilla to coat all surfaces.
10. StellarSan can be left in the vessel until the next fermentation.

NOTE: Following adding StellarClean and StellarSan the FermZilla can be pressurised (if the pressure kit, KB02113 or KB01609, is attached) to push cleaner or sanitiser into the crevices of the dump valve assembly to get a more thorough clean.

Cleaning the Pressure Relief Valve (RPV):

It is important to regularly clean the PRV to ensure that no beer has dried onto the PRV for example from a very active fermentation or from moving the FermZilla. If wort or beer has dried on to the PRV it can result in the spring within the PRV not opening when required if the pressure in the vessel gets above 35 psi.

To clean the PRV simply unscrew it from the lid and soak in StellarClean for 30 minutes, then rinse and soak in StellarSan or spray the internal surface with Super Kill Ethyl sanitiser spray. An easy way to add cleaning the PRV to your cleaning regime is to simply remove the PRV and place it into the cleaning/sanitising solution in the FermZilla.
Cleaning a BlowTie Spunding Valve (If applicable):

If fermenting under pressure and fermentation has been particularly active and krausen or beer has entered the BlowTie Spunding Valve you will need to disassemble the BlowTie and clean it to ensure that it operates correctly and releases pressure above the set pressure. Follow these steps to disassemble and clean a BlowTie Spunding Valve:

1. Completely remove the yellow adjustment knob and spring.
2. Unscrew the four large screws on the face of the Blowtie Spunding Valve and the two small screws on the housing of the integrated pressure gauge.
3. Remove the integrated pressure gauge housing and the integrated pressure gauge by gently pulling up on the dial.
4. Remove the face of the BlowTie Spunding Valve.
5. Remove the diaphragm assembly.
6. Remove the collets on the duotight fittings.
7. Remove the o-rings within the duotight fittings.
8. Soak all components in StellarClean solution for 30 minutes and then reassemble.

BlowTie Spunding Valve Breakdown Cleaning Video
Conducting a Leak/Pressure Test (if fermenting under pressure)

If you are planning to ferment under pressure it is essential to conduct a leak test before adding wort to the FermZilla to ensure that the FermZilla will hold pressure throughout fermentation.

A leak test can be conducted via multiple methods which are outlined below. It is a good idea to perform both of the pressure test methods to be certain your FermZilla is holding pressure with no leaks.

1. **Pressure decay test**

   Step 1. Ensure the FermZilla is empty and the pressure lid is firmly in place with the lid ring hand tight.

   Step 2. Set the pressure in the FermZilla to the highest pressure you will be fermenting at using your CO₂ cylinder and regulator. This will usually be between 10-15psi.

   Step 3. Remove and swap the gas supply grey ball lock disconnect for a blowtie spunding valve set at between 10-15psi.

   Step 4. Leave the FermZilla to sit with the spunding valve attached for a few hours (overnight is preferred). Then check if the pressure on the gauge of the spunding valve has decreased from its set pressure.

   If the pressure has dropped then this indicates that there is a leak in the system. The source of this leak needs to be determined and fixed before proceeding with pressure fermentation.

   Note: If the FermZilla is not empty during this test it can result in a false positive result as the CO₂ will dissolve into solution. Hence it is essential this is performed with the FermZilla is empty.
2. **Bubble Test**

Step 1. Ensure the FermZilla is empty and the pressure lid is firmly in place with the lid ring hand tight.

Step 2. Set the pressure in the FermZilla to the highest pressure you will be fermenting at using your CO₂ cylinder and regulator. This will usually between 10-15psi.

Step 3. Spray all connections with soapy water and look for the formation of bubbles. This includes all push fit connections and connections between the regulator and CO₂ cylinder.

If bubbles are formed at any of these connections this indicates a leak which needs to be fixed.

Alternatively, the FermZilla can be pressurised and then disconnect from gas and the lid of the FermZilla submerged in water. The formation of bubbles in the water indicates the presence of a leak.

The following instruction manual will assist with identifying and fixing leaks on the FermZilla.

**FermZilla Leak Fix Instruction Manual**

For a comprehensive guide to pressure fermentation have read through the following blog post:

Hydro-Test Instructions

The expiry-date of the PET tank is stamped on the body of the FermZilla as shown below:

FermZilla’s which are past their expiry date should not be used under any pressure until they have passed a hydro test.

Instructions on how to safely conduct a hydro test can be found in the pdf below:

FermZilla Hydro Test Instruction Manual
5 GREAT TIPS TO GET YOU STARTED

1. No need to do a whirlpool in your kettle
   Due to the fact that you now have a conical fermenter there is no need to do a whirlpool in your kettle. Once your wort has cooled you can dump all trub and hop material from your boil into your fermenter. The boiled hops and trub will settle out in the cone quickly and you can easily dump this directly from the butterfly valve. The clear tank wall will enable you to separate clear wort from trub far more easily than in your kettle and collect the trub into the collection jar.

2. Dry hop without compromise
   Traditionally, most home brewers who want to dry hop are forced to remove the lid of the fermenter to insert hops. Removing the fermenter lid increases the risk of contamination and it also introduces significant amounts of oxygen to your fermented beer. You can avoid these issues by dry hopping with the collection bottle. After yeast has been collected and the butterfly valve is clear of debris, simply fill the collection bottle with your favorite hop and re-fit this to the butterfly valve. The hops will float up through the beer and introduce a fantastic hop aroma.
   Note: If you have a CO2 cylinder you can also purge the oxygen out of the hops before connecting to the butterfly valve.

3. Naturally ferment under pressure
   Some people believe that beer that is naturally fermented under pressure is the traditional and best way to ferment. Almost all large commercial breweries inherently ferment under some degree of pressure due to the fact that they have tall tanks and the pressure at the bottom of the tank is significant even if no pressure has been applied to the headspace of the tank. With the FermZilla it’s possible to ferment at higher temperatures, faster speeds and produce cleaner beers. In order to do this we would recommend you to purchase the additional parts:
   a. 2 x Carbonation caps. Either KL00826 for the stainless-steel ones or KB02113 for the plastic ones.
   b. Silicone dip tube with stainless float (KL09241).
   c. Duotight – Blowtie 2 Spunding Valve (KL15042) or Blowtie spunding valve kit (KL09706)
4. **Oxygen-free transfers**

   Easily avoid oxygen getting into your beer and staling it prematurely by transferring under CO2 pressure in a closed loop system straight to your kegs! Oxygen is the enemy of beer, by going straight from the floating dip tube on the FermZilla to the liquid post on your keg, you can be sure your precious beer won’t come into any contact with the outside out.

5. **Make yeast starters in the collection container**

   You can make up to 900ml starters in the microwave, boiled directly in the collection jar! Simply remove the collection jar o-ring (not microwaveable and needs to be removed to allow for steam to exit) and any lube, put your starter wort in there and rest the lid on top of the jar (don’t screw the lid down and make sure you’re using plastic bottle caps on the accessory ports) before microwaving on a lower power setting. After boiling for a minute in the microwave, remove, add back on the oring, throw in a sanitised stir bar and place some sanitised foil over the opening before allowing to cool. Pitch yeast and place onto stirplate.

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**Some points on using the FermZilla without pressure:**

The FermZilla’s were designed to be used optimally with a source of CO2 pressure. While they were not designed with gravity-only operation in mind, there is some workaround that will allow you to get most of the FermZilla’s benefits without a source of CO2.

**Taking hydrometer samples and bottling:**

By attaching a ball lock post to the bottom of the collection jar, you now have a variety of removable options at your fingertips. You can connect a sanitised picnic tap (KL00963) mounted to a disconnect (to allow to take hydrometer samples. Simply slip some 10mm hose over the end of this and you now have a simple bottling gun! Just make sure the FermZilla is elevated so that gravity can carry your beer down to the bottle. You may need to squirt out some of the trub and yeast sediment before getting clear beer. Crash cooling will make the trub compact faster.