



MoreInstructions™

Cellar Keg Topping System for Barrels

Keg Like A Pro!

Congratulations on your purchase and welcome to keggering! This guide is designed to teach you how to clean, sanitize, fill, and dispense your wine using a cellar keg.

Whether you are looking for an ideal system for topping-up barrels, or just want to serve wines by the glass from your cellar, keggering is a great way to safely store and dispense small amounts of wine while completely avoiding oxygen exposure. The process involved in keggering wine may seem a little intimidating at first glance, but it is actually pretty straightforward. We're sure that after reading this manual you will be keggering like a pro in no time. Let's get started!



Cellar Keg Shown with
Optional Equipment

Cellar Keg Includes:

- New Stainless steel 15.5 gallon capacity keg
- 4" opening with Tri-Clamp connection
- 4" Clamp and gasket included
- 1.5" Tri-Clamp wine output
- 1/4" NPT threaded coupler welded into lid for gas connection
- Pressure relief "blow-off" valve to protect against over pressurizing

You May Also Need:

Hardware:

- Cellar keg (R652)
- 1.5" Butterfly Valve (H661)
- 1.5" T.C. Clamp (2) (H652) and EPDM Gasket (2) (H656)
- 1.5" TC x 1/2" Barb (H672)
- 10-15 ft of Silicone tubing (H985) **Note:** We recommend making the line long enough to reach your highest stacked barrel
- Topping gun (R620)
- Hose Clamps (2) (H960)
- 5 ft - 5/16" Inner Diameter (I.D.) Gas Line (D1700) **Note:** A longer length gas line makes it easier to move the keg around while topping without having to also move your gas tank.
- Nitrogen/Argon Regulator - (D1070)
- Nitrogen or Argon Tank - 20 cubic ft. or more (D1054)
- Female Gas Line Quick Disconnect with Shut-Off (H550B)

For Cleaning/Sanitizing:

- Cleanser such as PBW (CL25A)
- Sanitizer such as Star San (CL62)
- Soft Scrub Pad (CE27) and/or Carboy Brush (CE40)
- 1/2" Line Brush (CE60)
- 6 gal Plastic Bucket (FE340)

You May Also Need:

- Keg Lube, such as Lubrifilm (CL50)
- Replacement Keg O-Rings (KEG500)
- Replacement Poppets (KEG540)
- Replacement Body Connects (KEG460/KEG470)

The Keg

The keg is made from stainless steel and designed to hold 15.5 gallons of liquid. The Cellar keg is made up of the following:



A) The Shell:

This is the body of the keg that holds the liquid and is made of stainless steel.



B) The Lid:

The lid is made up of a circular plate with a large tube passing through it (the “Beverage-Out” tube). Along with the tube the lid has a gas connect and pressure relief valve connected to it. The pressure relief valve is there for safety and is set to release at 20 PSI (pounds per square inch). The keg is sealed by clamping the lid to the keg with a large 4” TC clamp and gasket.



C) The 4” TC Clamp and EPDM Gasket:

The large 4” TC clamp and gasket are used to attach the lid to the top of the keg of the keg.



D) The 1.5” Butterfly valve:

The butterfly valve connects to the large metal tube coming out of the cellar keg. It works just like a faucet in your kitchen; when open wine is allowed to flow out. You connect it to the keg with a 1.5” TC clamp and gasket.



E) The 1.5” TC Clamp and EPDM Gasket:

The 1.5” TC clamp and gasket are used to attach the butterfly valve to the end of the tube coming out of the keg.



F) The 1.5” TC x 1/2” Barb:

This is the part that connects the 1/2” tubing to the Butterfly Valve. You attach this to the valve using the second 1.5” TC clamp and gasket.



G) The 1/2” Silicon Tubing:

The silicon tubing connects the topping gun to keg (via the 1/2” barb shown above). Hose clamps should be used to seal both connections.



H) The Topping Gun:

The topping gun is used to dispense the wine. Just like a nozzle attachment on a garden hose, squeezing the lever allows the wine to flow.

Cleaning/Sanitizing

To Clean:

1. If the keg is dirty or has residue left over from the last use, use PBW and some warm to hot water to clean it:
 - A)** Completely dismantle the keg by taking off the clamp, gasket, and the keg lid. Remove the gas connect and the pressure relief valve by unscrewing them from the lid and put them in a bucket (take care to remove all the white, Teflon tape from both the male and female threads). Fill the keg at least half way, drop in the keg lid (but don't seal it up) and allow to soak for 30-60 minutes.
 - B)** Next place the butterfly valve, clamps and gaskets in a bucket, being sure the valve is set to the "open" position before dropping it in. Then, add the silicon tubing, the 1/2" barb fitting and the topping gun to the bucket. Finally fill the bucket with enough warm to hot water to submerge all of the items and stir in some PBW. You may need to lift the tubing out from the bucket and lower it back into the liquid to get the air pockets out.
2. While everything in the bucket is soaking in PBW, use a carboy brush or a soft scrub pad (**not** steel wool) to clean the shell of the keg inside and out. Pay close attention to crevices and out of sight areas - make sure they are cleaned thoroughly. Clean the Beverage-Out Tube and the silicon tubing with a 1/2" Line Brush and some PBW solution.
3. Drain the keg and the bucket containing the fittings and rinse everything well with warm to hot water. The PBW may be used on another keg/keg parts or dumped at this time.
4. Clean and inspect all pieces for signs of wear or breakage. Replace if needed.
5. Now that everything is clean and rinsed we can sanitize the keg assembly.

To Sanitize:

1. Mix up a 5 gal bucket of sanitizer (we recommend StarSan). Using a scrub cloth, wipe down the entire inside surface of the keg, starting with the inside surface of the lid then moving down the walls from the top. Then repeat. Once you're finished, pour about half the bucket of sanitizer into the keg.
2. Next place the gas-in connection and pressure relief fitting in the bucket of sanitizer, along with the 4" Tri-Clamp and Gasket as well as your 1.5" clamps, gaskets and butterfly valve. Allow these parts to soak for the recommended time for your sanitizer (1 minute for StarSan).
3. Install the lid on the keg, clamping it in place with the half-bucket's worth of sanitizer still inside. Re-install the gas-in and pressure relief fittings on the keg lid, and install your butterfly valve on the beverage-out wand of the keg.
4. Connect a piece of tubing to the butterfly valve and put the other end in your sanitizer bucket.
5. Connect your gas line to the keg, and using the lowest pressure possible to get liquid to flow, push the sanitizer out of the keg and back into your bucket. This will purge the keg of any air (replacing it with inert gas) and sanitize the inside of the beverage-out tube as well as the valve.

Note: One of the main reasons that we suggest using a no-rinse sanitizer such as StarSan is that at this point you are finished and have a sanitary, purged space to put your wine into. If you were working with a sanitizer that needed to be rinsed out, such as a Metabisulfite solution, opening the keg to do so would disperse the inert gas that you just put in there.

The Nitrogen/Argon Set-Up

The Nitrogen/Argon setup consists of two main parts: the Nitrogen/Argon tank and the Nitrogen/Argon regulator. Turning the handle on the tank counterclockwise turns the tank on. We highly recommend that a Nitrogen/Argon tank of 20 ft³ or more is used, along with a regulator like the one pictured. Although smaller, more portable systems are available, they are not practical for cellar work.

Helpful tip: One 20 ft³ tank is enough to push 9 15-gallon cellar kegs (assuming no loss of gas).



Selecting the Right Gas

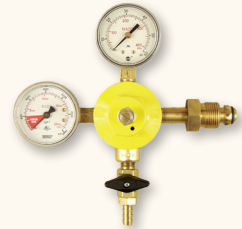
Nitrogen, Argon and CO₂ are three inert gasses commonly used in winemaking because they do not react with wine (like oxygen does). Choosing which of these gasses is best suited for your needs will depend on whether you will be kegging, or kegging and purging headspaces:

- **CO₂:** *Good for purging, not for kegging!* CO₂ is heavier than air so it makes a good protective blanket in headspaces. However, compared to Nitrogen or Argon, CO₂ goes into solution under relatively low pressure. This means that if you use CO₂ to push wine out of a keg – or a barrel - you can inadvertently carbonate your wine. Therefore we do not recommend using CO₂ in a kegging system.
- **Nitrogen:** *Good for kegging, not for purging!* Unlike CO₂, Nitrogen will not diffuse into wine at low pressures so it is safe to use it in a kegging set-up. However, Nitrogen is lighter than air so you cannot use it to form a protective blanket. As long as you are using Nitrogen to push the wine in kegs and not purge headspaces, then it is a fine choice.
- **Argon:** *Good for both kegging and purging!* Argon will not diffuse into wine so it is safe to use in kegs. As an added benefit, Argon is also heavier than air and can therefore be used to effectively purge headspaces in carboys and tanks. Because of these dual qualities we recommend using Argon for all of your cellar gas needs. It's the one gas that does it all!

The Regulator

How it Works:

The Regulator essentially takes the pressure of the gas in the tank and reduces it to a lower, controlled pressure. The regulator attaches to the tank with a threaded male hex piece. The body of the regulator has two gauges: the one on top is the adjustable pressure and the one on the side reads the pressure of the gas in the tank. The gauge that measures the tank pressure will remain fairly steady until most of the gas is gone from the tank. At that point, the gauge will start plummeting into the red, which means it will soon be time to get your tank filled, or swap it for a full one.



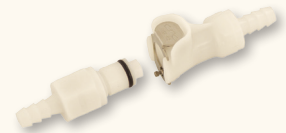
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You can adjust the flow of gas by turning the screw in the main body of the regulator. This threaded fitting will usually be screwed all the way out when it is new, but it will not actually come completely apart from the regulator body. To engage it, thread it in slowly till the threads start to connect. The more you thread it in, the more the PSI will build and the more the gas will flow. Once the desired pressure is reached, moving the locknut until it hits the body of the regulator maintain your selected pressure.

On the bottom of the regulator is an on/off valve as well as a one-way valve, commonly called a check valve. These allow for ease of turning the gas flow on and off, and protect the regulator from anything flowing back up the gas line and into it.

Connecting the Regulator to the Keg:

Clearly the regulator must be connected to the keg in order to have gas flow into the keg and push the wine out. This system uses our CPC Sealing Quick Disconnects (QDs) to make that connection, and to make it easily undone as well. The Keg comes with a Male CPC QD (H551) threaded into the lid assembly, and we suggest that you install the Female CPC QD (H550B) into the tubing that runs off of your regulator. Most gas equipment is supplied with 5/16" barbed fittings for attaching tubing to, and the Argon/Nitrogen regulator that we sell is no exception, so you should work with 5/16" tubing. The barb on the Female CPC QD is 1/4" - the 1/16" difference between this and the 5/16" tubing can easily be handled with a hose clamp.



Checking the System for Leaks:

When you first assemble your gas system, or if you add or modify anything, you should always check for gas leaks. The easiest way to check for leaks is to put all of the tubing and any connections (excluding the regulator and any other parts that may become damaged in liquid) into a bowl of water with the gas turned on. If a leak is present, you will see bubbles when submerged under water. Another great way to check for leaks is to use Star

San, which is known for foaming, in conjunction with a spray bottle or washcloth. Commercial leak detectors are available, but they are not necessary for small-scale systems.

Filling the Keg

A cellar keg can be filled in two ways: by sliding the lid over just enough to get a racking cane into the keg; or by filling through the beverage-out tube itself, as long as the lid is unsealed (i.e.: the clamp is off) so that the gas inside can be displaced by the incoming wine. The advantage to filling through a racking cane is that it is easier to see the fill level in the keg, however filling through the beverage-out tube is convenient in that it offers better protection against oxidation and does not require any additional equipment.

Avoiding oxygen:

1. As mentioned earlier in the sanitization section, the best way to avoid oxygen exposure when kegging is to make sure the oxygen is removed before filling your keg. This is best done during the sanitization process by pushing the sanitizer out with inert gas. We recommend this as the most effective technique for removing oxygen from a keg. **Note:** *since the lid is never opened during the purging both Nitrogen and Argon will work here.*
2. Another method for purging the oxygen from your keg is to sanitize your gas line and lower it to the bottom of the keg. Turn on the gas just enough to create a slow bleed and let it start to fill the keg. After about a minute, begin checking the level of the gas by trying to lower the flame of a lighter past the rim of the keg opening. The flame will stay lit as long as there is oxygen to burn. When the flame goes out there is no longer oxygen in the keg. It is now safe to fill. **Note:** *since the lid is open during the purging, only Argon can safely be used for this technique.*
3. The final method for removing oxygen from the keg would be to purge the remaining headspace left at the top of the keg once it has been filled. This is done by sliding the lid to the side while the gas is hooked up and turned on low. You don't lift the lid just move it over until you have a ½" gap. Allow the gas to flow for 5-10 seconds until all of the oxygen in the headspace of the keg has been replaced by inert gas. Close the lid and turn off the gas. **Note:** *Even though you can purge the oxygen at the end of the transfer, this is the least recommended way to limit oxygen exposure because the wine remains in contact with oxygen during the entire filling process.*

Dispensing From a Keg

To Dispense Kegged Wine:

1. Sanitize everything, including the gas connect, butterfly valve, clamps, gaskets, tubing, ½" barbed fitting, and topping gun.
2. If you haven't already done so, attach your Gas-In Quick Disconnect to the Gas-In Body Connect on the keg. Set your regulator to 5-10 PSI. Use the lowest amount needed to move the wine. **Note:** *Longer lines need higher PSI settings than shorter ones to overcome the physics of line restriction.*
3. Assemble the tubing and topping gun set-up and connect it to the butterfly valve.
4. Open the butterfly valve and turn your gas on at the regulator.
5. Squeeze the handle on the topping gun and the wine will flow!
6. Enjoy!

Some Helpful Tips

- We recommend storing the keg with both the gas and the beverage lines disconnected from the keg (remember to sanitize the gas and beverage connections before connecting them the next time the keg is used). **Note:** *Do not store the keg with the silicon tubing connected to it and the valve open. While silicon is impervious to liquid, over time it can diffuse air across the tubing wall. Storing the keg open with the silicon tubing attached can possibly result in oxidation problems.*

- We strongly suggest breaking down and cleaning the beverage line after each use. This will make it easy to clean and won't allow any bacteria to grow in the line until the next use. Take it apart; run warm to hot water through the silicon tubing, ½" barbed fitting, and topping gun. Drop it in some Star-San or PBW for a couple of minutes. Rinse everything with warm to hot water and allow them to dry (hanging the hose so that there are no loops and both ends hang straight down to facilitate draining).