How to Assemble a Cornelius Keg

Cornelius 19 litre ‘Post mix’ kegs are commonly used by home brewers to keg homebrewed beer. It is generally easier to keg beer than it is to bottle beer. Used Cornelius kegs are quite affordable and very easy to clean and maintain.
There are a decent amount of components that make up a Cornelius keg, and whether one is rebuilding a used keg or putting one together from spare parts, it is helpful to know what goes into assembling a Cornelius keg.



Steps

Collect the keg components. The components consist of the keg tank, a long liquid dip tube and o’ring, a short gas dip tube and o-ring, one lid and o-ring, a pressure relief valve for the lid, one gas plug (post) with o-ring, one liquid plug (post) with o-ring, and two small poppet valves that fit inside the plugs (posts). There are a total of five o-rings. There are different types of Cornelius kegs, and different brands of similar kegs are generally referred to as Cornelius kegs. Be sure that the components that you have for a specific keg all correspond with a specific keg design. The pin lock type of keg is generally not used, and it is far more common to find and use the ball-lock variety. If rebuilding a keg, all of the o-rings are usually replaced with new ones, as they can absorb soda odours, and possibly harbour bacteria and the like.

Clean and sanitise all of the components if necessary. There is little reason to assemble a dirty keg! Used kegs usually still have residue in and on them, and must be completely and thoroughly cleaned as well as sanitised. Completely disassembled kegs can be soaked overnight in a solution of keg and line cleaner, scrubbed, rinsed, and then sanitised (don’t use Sodium metabisulphite). Be sure to remove the o-rings during this process, and replace them if necessary. Note that the plug (post) o-rings are not easily removed, so should be kept on during cleaning and sanitising unless the keg is being completely rebuilt.



Slide the o-ring on the long liquid dip tube and insert the dip tube into the keg through the ‘out’ port. The end of the tube will usually angle in to the centre of the bottom of the keg.
Slide the o-ring on the short gas dip tube and insert the tube into the ‘in’ port.


Install the o-rigs on the plugs (posts) if not already installed and place the small poppet valves in the liquid and gas plugs (posts).

Securely screw the plugs with the poppet valves onto the keg tank over the dip tubes so that a good seal is formed. Use a combination or ring spanner or a socket that can properly fit both plugs (posts). Keg plugs (posts) come in different sizes, but many will fit a 7/8" or 11/16". For common Cornelius kegs, the base of the liquid "out" plug (post) will be hexagonal. The liquid ‘out’ and gas ‘in’ plugs are not interchangeable. The keg plug (post) for the gas inlet will only connect properly to the keg connector (disconnect) that attaches the keg to the gas cylinder, and the liquid ‘out’ post will only connect properly to the keg connector (disconnect) that attaches the keg to the beer faucet.
Fit the large o-ring on the lid, and screw in the pressure relief valve.



Tips

Pressure-test newly assembled kegs before filling with beer, as a properly assembled keg must be able to hold pressure. This is done by pressurising the keg with CO^2 (using a CO^2 cylinder and regulator) and checking for leaks. A bleeder valve assembly can be used to monitor the pressure. Connect the bleeder valve to the gas ‘in’ plug (post). The source of the leak can be found by spraying the lid and plug (post) areas with soapy water and checking for bubbles (leaks found this way will require that you do the entire cleansing process again, soap is a killer for good brew), as well as by listening for hissing noises. Relieve the pressure by pulling the pressure relief valve or by using the bleeder valve assembly.

Use keg lube to help ensure airtight seals.

A good seal may not be formed until the seals are moistened with the beer that has been kegged. For example, gas may leak from the poppet valves until a little beer or beer foam moistens them from inside.

When cleaning and sanitising disassembled kegs, the inside of the keg tank as well as the top portion of the tank should be soaked in cleanser and sanitiser. To do this first fill the keg with cleanser or sanitiser and let it sit for the required amount of time (this is variable, read the cleanser and sanitiser instructions). Then invert the filled keg into a bucket, large pot, or other large container that can hold water, and let the top portion soak upside down in the solution for the required amount of time. When the keg is inverted, let about half of the solution drain into the container, but allow some to remain in the inverted keg so that it is partially full of solution. This will enable it to remain inverted and submerged.