



## Equipment

Your keg system includes the following equipment:

- 1 or 2 x 19 Litre stainless steel ball lock kegs.
- 1 x double gauge CO<sub>2</sub> regulator.
- 1 x plastic gas line disconnect (grey)
- 1 x plastic beer line disconnect (black)
- 1 x 2 or 4 metre length of 6mm beer/gas line
- 2 or 4 stainless line clamps (To attach the beer/gas line to fittings)
- 1 pack of cleaning liquid or powder

You will also have one of the following beer dispensers:

1. Plastic tap & disconnect that mounts directly onto your keg.
2. Stainless Steel hand held Beer Gun with 2 metres of beer line & black beer disconnect
3. Fridge Tap that is mounted through the fridge door with 2 metres of 6mm beer line & black beer disconnect

You will need to arrange the following:

1. CO<sub>2</sub> bottle
2. Converted fridge to hold your keg/s

## Keg

The keg used in this system is a new 19L keg. They are stainless steel with a hatch cover for easy cleaning and filling. They include gas in and beer out valves as well as a safety release valve.

## Disconnects

The keg is fitted with ball lock (snap lock) fittings. The disconnects are made from hardened plastic and work on the same principal as your standard garden hose fittings; they click on and off for easy connection and disconnection of the beer and gas lines from the keg. The grey disconnect is the gas connection and the black disconnect is for dispensing the beer.

## CO<sub>2</sub> Gas Bottle

A gas bottle has not been supplied with your keg system because you have the option to rent or buy a gas cylinder. Your specialist homebrew supplier can provide more information about this.

## Regulator

A full CO<sub>2</sub> bottle holds a pressure of approximately 5600 kpa (800 psi). This is more than the 250 to 300 kpa (35 - 47 psi) that you will need to pressurise your system. The regulator is the piece of equipment that reduces the pressure to workable levels. It screws onto the gas bottle and reduces the pressure to safe levels.

The regulator is adjusted by turning the knob. There are two gauges on the regulator, one displays the gas bottle pressure and the other displays the pressure inside the keg. The CO<sub>2</sub> in the bottle starts out as a liquid. The pressure of the gas in the headspace of the bottle will be between 5000 - 5600 kpa (700 and 800 psi) depending upon the temperature of the bottle.

The pressure gauge on the regulator that shows the high pressure from the gas in the bottle will only begin to fall when all the liquid is gone. Therefore the best way to determine how much CO<sub>2</sub> remains in the bottle is by weight not pressure, so weigh your bottle when you first get it. The bottle will be weighed and stamped when empty. The empty bottle weight is on a tag around the neck of the bottle.

## Preparing the Fridge

The easiest way to protect and serve your beer is to store the keg in a fridge. Your fridge may need to be rearranged to fit the system. Please ensure that it is on a level base.

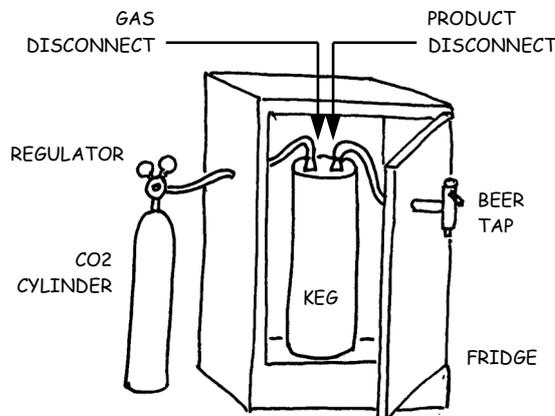
Some fridges have wiring or plumbing in the internal walls of the fridge therefore the following procedure will need to be performed by someone experienced with your particular fridge. They will need to drill a small hole to bring the gas line from the regulator into the fridge. Whether they choose the side or back of fridge depends on your preference and the location of existing wires and plumbing. Use a 12mm drill bit to drill the hole.

Before sealing the gas line ensure there is sufficient length of line to reach the gas bottle, which will be stored outside the fridge.

**CAUTION:** Take care when drilling any holes through the walls of your

fridge. Make sure all power is disconnected prior to drilling.

If your keg system has a beer gun it comes supplied with the correct length of beer line and no more holes are necessary.

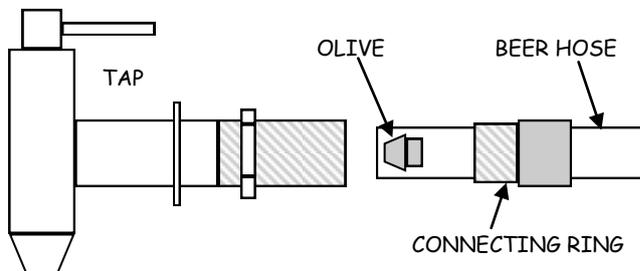


If you have a fridge tap, you will need to drill more holes. The position of the tap is again a personal choice. If you require the tap to be fitted onto the door of the fridge then make sure there is enough beer line so that the door can be opened fully. If you decide to have the tap fitted to the door, when the back nut is tightened it may collapse the wall of the fridge door. We have found a small length of PVC pipe pushed over the shank of the tap allows the tap to be tightened so that it is secure, without damaging the wall of the door.

### NOTE - Connection of hose to tap

(not applicable to beer gun)

Slide connecting ring over the hose with the threaded part facing the end of the hose.



Heat the hose in boiling water for a minute then force the "olive" into the hose as shown above. It must be completely inside the hose. This is difficult but can be done when the hose is softened in boiling water.

Insert the hose into the back of the tap & screw in the connecting ring firmly.

<b>Australian Home Brewing's Brewcraft Centres</b>
24 Eskay Road Oakleigh South (03) 9579 1644
50 Burgundy Street Heidelberg (03) 9455 1311
143 Church St Richmond (03) 9429 2066
Terrific web site & on-line shop <a href="http://www.liquorcrafter.com.au">www.liquorcrafter.com.au</a>
Call (03) 9579 1644 for your nearest supplier.
Or if there is no good supplier nearby, you can use our mail order service

# USING YOUR KEG SYSTEM

## Fermenting your Beer

Ferment your beer in the normal way. When fermentation is complete add Brewcraft liquid Clearfine (to clear your brew) and stand in a cool place or place in the fridge. (If you are using a heater pad or similar, make sure it is turned off at this point). It will usually take 2 days to settle and the beer to become bright. When the beer is clear you can transfer it to the keg using food grade plastic tubing.

Note: Using SAF yeasts will also aid in the clarification of the beer.

## Cleaning and Sterilising Your Keg:

Once fermentation is complete you must clean and sterilise the keg. We recommend that you use Brewcraft Keg and Line cleaner. The following outlines how to clean and sterilise your keg system.

- Release any pressure in the keg by operating the pressure relief valve
- Remove the lid and rinse out any remaining beer from the previous batch.
- Add 5 teaspoons of Brewcraft Keg and Line cleaner to 5 litres of warm water and swirl around the keg. Leave to stand for 5 minutes.
- Empty the keg and scrub the inside surface with a demi-john brush to remove any build up.
- Add 2 teaspoons of Brewcraft Keg and Line cleaner, to 2 litres of warm water, fit the hatch cover and swirl contents around the keg.
- Connect up the gas disconnect to the IN post and the black disconnect to the OUT post.
- Adjust the pressure to 70kpa (10psi) and open the tap or beer gun to run some steriliser through the beer line and out the tap.
- Let it stand for 5 minutes and repeat the process to sterilise the inside of the beer line.
- Disconnect the gas inlet and release the pressure from inside the keg, drain the keg and refill with clean water.
- Reconnect the gas and set at 70kpa (10psi) and now open the tap so that the water in the keg replaces all the steriliser in the line.

Disconnect the gas and empty out any water from the keg.

Your keg and beer line are now ready for use. Note: Do not use other sterilizers in your beer keg system.

## Transferring Your Beer to the Keg

The follow outlines how to transfer your beer to the keg.

- Connect the beer gas line to the keg and purge with beer gas by lifting the safety valve. This gas protects the beer when it is drained into the keg.
- Disconnect the gas and release the remaining pressure.
- Open the top of the keg and transfer beer using 12mm food grade tubing. This tubing attaches to your fermenter tap & fills the keg from the bottom without splashing the beer. Two meters should be long enough.

You will notice that there is a tube in the keg running from the top of the keg to the centre at the bottom. This is called the Dip Tube and is the tube used to draw the beer from the keg. There is also another tube that is quite short in length. This is the CO<sub>2</sub> inlet, where the CO<sub>2</sub> is injected into the beer. Your keg should be filled to approximately 50 mm (2 inches) from the bottom of this tube.

Any remaining beer can be bottled using 1-heaped teaspoon of castor sugar per 750 ml bottle and seal securely.

Once the keg is full, replace the hatch cover and move keg to the prepared fridge. Connect the gas line to the gas bottle. Turn the gas bottle on and set the pressure on the regulator to between 70 and 100 kpa (10 - 15 psi) and connect the gas line to the keg.

## Priming the Keg with Co<sub>2</sub>

You need to purge the headspace of the keg of any oxygen to protect the beer from oxidation. By releasing the pressure release valve, the CO<sub>2</sub> will flow into the keg and the air will flow out through this valve. This is called burping the keg and is best done in three short bursts.

## Carbonating

Make certain the pressure at the regulator is set to around 70 kPa (10 PSI) only, this will prevent a potential sudden burst of high pressure at connection.

Attach the gas coupling from your CO<sub>2</sub> bottle to the inlet post (the post connected to the short tube). Increase the pressure gauge to between 240 – 275 kPa (35 – 40 PSI) and, use a gentle rocking motion for 3-4 minutes to evenly disperse the CO<sub>2</sub> into the beer through the dip tube. The bubbles will permeate from the dip tube through the beer.

In short bursts, release some pressure from the valve located in the lid of the keg. This will eliminate any effect of equalization and subsequent reduced flow of CO<sub>2</sub> while carbonating. After 3-4 minutes is up, disconnect the gas coupling from the post and refrigerate, (if you hadn't done so before). The beer will now have sufficient carbonation.

## Dispensing

Now for the good part pulling that first beer! First reduce your keg from carbonating pressure to dispensing pressure by turning down the knob on the regulator. If the pressure doesn't come down as you turn the screw you may have to vent the keg using the safety relief valve to release the excess pressure. A suggested dispensing pressure is 100kpa (15 psi).

Even though the beer that you have kegged may have been clear you will still get some sediment at the bottom of the keg so the first glass may be a little cloudy. We suggest pulling a couple of glasses through until it clears. Whether using a gun or a tap always dispense with it fully open, if it is only partway opened you will end up with all froth and no beer.

## Important note about the Regulator

When turning off your gas always turn central dial (part B in attached diagram). Do not switch off using swing tap on gas outlet (part C in attached diagram) as this will put excess stress and pressure inside the regulator. This may also lead to false readings on the dials.

## IMPORTANT POINTS

Beer matures quicker in kegs than in bottles.

The beer will keep indefinitely in the keg as long as you have been careful with cleaning and sterilising. As the beer is dispensed it is replaced by sterile CO<sub>2</sub>, this protects the beer while dispensing.

To further improve the clarity of your kegged beer, transfer the cleared beer into a clearing cube and store in a fridge for 3 days prior to transferring to the keg. This should be done at the time that you add the finings. This will further reduce any sediment that may be transferred into your keg.

To convert kpa to psi divide kpa by 7 (7 kpa = 1psi).

## OPTIONAL GASSING METHODS

A quicker alternate way of gassing your keg is as follows. First fill the keg with beer from your fermenter and seal the lid. Secondly connect the gas line to the inlet valve of the keg and turn the regulator to between 250 and 300 KPA. You will hear the gas going in, it sounds a bit like water boiling.

When the noise stops, disconnect the gas line and place the keg on the floor on its side and roll it quite vigorously under your foot for about 10-15 seconds. This will mix the gas with the beer.

Repeat this process three times, then stand the keg in your fridge without the gas connected for 24-36 hours to chill the beer down. Then reconnect the gas at between 80-100 KPA and pour yourself a beer.

## TROUBLE-SHOOTING

**Beer flat & too frothy** Over gassed, release all pressure using the safety valve in the lid. Gently rock the keg to release excessive beer gas until the pouring improves.

**Beer pours too fast** Back off the regulator pressure to 70 kPa (10 PSI) or less.

**Beer is flat or no head** Repeat the carbonation process. Check keg 'O' rings.

**Beer wont pour** Check CO<sub>2</sub> is turned on. Or bottle may be empty or beer is frozen.

**Keg empties too fast** Slow down drinking habits, decrease social circle, and make some more beer.