SETTING UP YOUR KEG SYSTEM

The Equipment

You have the choice of the following systems:

1. **Stainless Steel Beer Gun**
   - ❖ Hand held beer gun
   - ❖ 1 metre 4mm line
   - ❖ 1 black disconnect
   - ❖ 1 x stainless clamp
2. **Fridge Tap that is mounted through the fridge door (Optional)**
   - ❖ Fridge tap
   - ❖ 1 metre 4mm beer line
   - ❖ 1 black disconnect
   - ❖ 1 x Stainless clamp

Your keg system also includes the following equipment:

- ❖ 1 x 19 litre ball lock keg
- ❖ 1 x double gauge CO2 Micromatic regulator
- ❖ 1 x Grey plastic disconnect
- ❖ 1 x 1.5 metre 6mm gas line
- ❖ 1 x stainless hose clamp (to attach the gas line to the regulator)

You will need to arrange the following:

- ❖ CO2 Tavern Gas bottle
- ❖ Converted fridge to hold your keg/s

Keg

The keg used in this system is a reconditioned 19 litre and new 23 litre kegs. They are stainless steel with a hatch cover for easy cleaning and filling. They include gas in and out valves as well as a safety release valve.

Disconnects

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

CO2 Bottle

A gas bottle has not been supplied with this system however they can be hired from you local CO2 supplier (BOC, Airliquide etc). The gas bottle comes in various sizes. The most common and easy to handle is the “D” size bottle. Other sizes are available but you may find them heavy to move or lift and unsightly.

Regulator

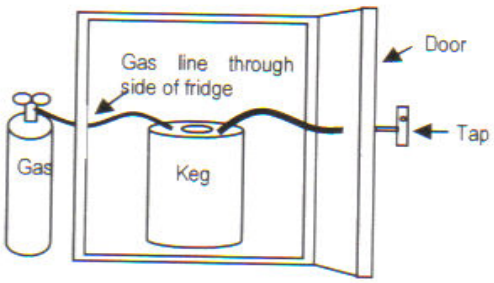
A full CO2 bottle holds a pressure of approximately 5600 kpa (800 psi). This is more than the 250 to 300 kpa (35-47 psi) that you will need to pressurize your system. The regulator is the piece of equipment that reduces the pressure to workable levels. It screws onto the gas bottle and reduces the

safe pressure levels. The regulator is adjusted by the turning knob. There are two gauges on the regulator, one displays the gas bottle pressure and the other displays the pressure inside the keg. The CO2 in the bottle starts out as liquid. The pressure of the gas in the headspace of the bottle will be between 5000 5600 kpa (700&800 psi) depending upon the temperature of the bottle. The pressure gauge on the regulator that shows the high pressure from the gas bottle will only determine how much CO2 remains in the bottle is by weigh not pressure, so weight your bottle when empty. The empty bottle weight is on the 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 your fridge 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 the fridge depends on your preference and the location of existing wire and plumbing. Use a 12mm drill bit to drill the hole. Insert a rubber grommet if required on the inside and outside wall of your fridge. **CAUTION: Take care when drilling any hole through the walls of your fridge. Make sure all power is disconnected prior to drilling**

If your keg system has a beer gun it come 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 that there is enough beer line so that the door can be fully opened. 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 slightly Use a small piece of PVC pipe pushed over the shank of the tap allow the tap to be tightened so that it is secure, without damaging the wall of the fridge door.



USING YOUR KEG SYSTEM

Fermenting your Beer

Ferment your beer in the normal way. When fermentation is complete, rack your beer into a second fermenter, mix finings into 200ml of boiled water, add 3 teaspoons of dextrose, mix well and add to your beer in second fermenter. The beer will clear better the colder it is. A lot of brewers will put the second fermenter into the fridge for 3-7 days to clear. If you are using a heater pad make sure that it is turned off at this point. When the beer is clear, transfer the beer into the keg using a clear siphon hose that can be fitted to your tap on the fermenter. You may find that your brew store has some of this type of hose.

CLEANING AND STERILISING YOUR KEG

Once you have finished your keg you must clean and sterilize all equipment that has come into contact with it and all brew fermenters with pink stain the following outlines how to sterilize 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 1 tablespoon of pink stain and 3 litres of warm water replace lid and swirl around inside of keg. Leave stand overnight. There is a chance that the pink stain will leave a brown stain on some grades of stainless steel. If you're concerned about this use the Cellarman cleaner instead of the pink stain.
- Empty keg and using left over solution to clean up around the top of the keg with brush to remove any buildup of residue.(remember to pour some of the solution down the dip tube because all your beer comes up this dip tube)
- Empty all of the contents out and let stand and dry, once this is complete rinse out your keg with boiling HOT water and dry ready for next use.
- Add beer line cleaner to keg with 2 litres of warm water, fit the hatch cover and swirl contents around in keg.
- Connect up the gas disconnect to the IN post and the black disconnect to the OUT post.
- Adjust the pressure to 70 kpa (10 psi) and open the tap or beer gun to run some of the sterilizing solution though the beer line and out of the tap.
- Let stand for 5 minute and repeat the process to sterilize the inside of the beer line.
- Disconnect the gas inlet and release the pressure from inside the keg and refill with clean water.
- Reconnect the gas and set at 70 kpa (10psi) and now open the tap so that the water runs through the beer line replacing the solution in the line
- Disconnect the gas and empty out any water from the keg.

CLEARING YOUR BEER

Clearing your beer will keep sediment out of your lines and keg. It also gives you a professional looking and tasting beer. Another advantage is you can transport your keg to a party and the beer will still be crystal clear and ready to drink. Brew beer as normal to the instruction on each pack. After fermentation transfer your beer into another fermenter, do not splash as you will oxidize your beer and it could sour, this is called racking. Dissolve one sachet of beer clear (finings) and 3 tablespoons of dextrose in 200mls boiled water. Add this to the top of the brew and stir gently over the surface. Leave for a minimum 3-7days to clear. The beer will clear better and faster the colder it is. If possible place the second fermenter in a fridge for 3-7 days and this will give you the best result with a really clean and crisp beer. I would not place a beer into the keg without first racking and clearing it, even a black beer like Guinness.

TRANSFERRING YOUR BEER TO THE KEG

The following 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 the beer using siphon hose of the end of the fermenter tap.
- This will help fill the keg without any splashing the beer to much.

You will notice that there is a tube in the keg running from the top of the keg to the bottom. This is called the dip tube and is the tube that draws the beer from the keg. There is also another small tube that is quite short in length. This is the CO2 inlet, where the CO2 is injected into the beer. Your keg should be filled to approximately 50mm (2 inches) from the bottom of this tube. Any remaining beer can be bottled using 1 carbonation drop to a small stubby or 2 carbonation drops to a long neck

Once the keg is full replace the hatch cover and move the keg to the fridge. Connect the gas line to the gas bottle. Turn the gas 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 CO2

You need to purge the headspace of the keg of any oxygen t protect the beer from oxidization. By releasing the pressure release valve, the CO2 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

Beer absorbs gas quicker the colder it is so if your keg has been in the fridge for a day more it will take less time to gas up. Normally I would put the keg into the fridge warm and connect the gas at 300-320kpa for 48 hours exactly. If the keg is already cold connect the gas for 28-30 hours at 300-320kpa. You'll soon learn what suits your system needs best. Also your fridge needs to be set at around 2-3 degrees, the colder the temperature the faster your beer will absorb the gas. Your pouring pressure depends on the length of your beer line. Generally I use 1 metre of line so the pouring pressure is around 25-30 kpa. The pouring pressure is important, if you pour too slow you suck the gas out of your beer resulting in flat tasting beer. If you pour too fast the beer hits the bottom of the glass hard knocking the gas out of your beer. The beer will have a great big head on it but taste flat.

IN A HURRY???

Shaking the keg will make the beer absorb the gas quicker. Once the keg is COLD attach the gas at 300kpa and rock fairly vigorously for 3-4 minutes, take the gas off and let stand and settle for around an hour. If it is not gassy enough, simply re-attach the gas and shake for a further 30 seconds (but remember to let it settle again) If it should be over gassed simply release all the gas and rock the keg gently for 15 -20 seconds and then release the gas again. Repeat this step until the beer pours OK. This method of gassing is very hit and miss, it depends how fast your shaking the keg and what temperature the beer in the keg is at.

WHEN YOU ARE FINISHED FOR THE NIGHT

Having a part empty keg in the fridge is like having a part empty bottle of coke in there – the gas will come out of the liquid because of the empty space above it resulting in flat beer. So all you have to do is fill that space with gas and the beer stays carbonated. Try getting into the habit of putting around 60-100kpa into your keg when you have finished, turn the gas bottle off and disconnect the gas line and beer lines.

Remember to release the gas before starting up or you'll finish up with beer everywhere!

TROUBLESHOOTING

Beer flat & too frothy: Over gassed, release all of the 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 and revise the pouring pressure. Generally a metre of beer line is around 30-35 kpa pouring pressure.

Beer is flat and no head: Repeat the carbonation process. Check keg O-ring

Beer won't pour: Check CO2 is turned on. Or bottle may be empty or beer is frozen

Keg empties too fast: Slow down drinking habits, decrease socials circle and make some more great beers

Beer is too heady and tastes flat: The beer is over gassed and you are losing all the gas in the head when you pour your beer. (A tell tale sign of over gassed beer is that the line from the keg to the tap will turn straight to bubbles when you stop pouring. Simply degas the keg as explained in section "IN A HURRY" or you are trying to pour the beer too quick – turn the gas pressure down.

Beer looks dead and tastes flat: Easy one-the beer in under gassed. Take the beer line off, turn the gas up to 300kpa and shake the keg for 30 seconds then leave settle for a while and try again. Or you can just leave the gas on 300kpa for around 4-6 hours.