KEG KING

KEGMASTER™

Series 4 and FasTap Kegerators

User Instruction Manual

Designed & Engineered by Keg King

https://www.kegking.com.au
Keg King is a registered business name of MCH Australia Pty Ltd

Warnings and General Safety

WARNING

Beware of electricity around liquids!
Ensure power cords are placed well away
from any potential spills and pooling condensation.

WARNING

DO NOT power up the refrigeration unit until it has rested upright for 24 hours.
Failure to do so will void the Warranty!

WARNING

The refrigerator needs 100mm clearance at the back and sides.
Failure to do so will void the Warranty!

WARNING

Leaking CO_2 gas can cause suffocation.
Always use CO_2 in a well-ventilated open area, in case leaking occurs.
Never exceed gas pressures of 40psi with your kegs system.

WARNING

This refrigeration unit may require occasional manual defrosting.
DO NOT scrape any ice or frost from the inside walls or cold plates.
Doing so may damage the unit and void the Warranty!

WARNING

This refrigeration unit is designed for FREE STANDING INSTALLATIONS ONLY

WARNING

This refrigeration unit is for INDOOR USE ONLY

Please read the entire manual before operating.

Table of Contents

Keg King

Whether you're a brewer or someone wanting to put drinks on tap in your own home, cafe or office, Keg King offers beverage creation and keg dispense solutions for amateurs and pros!

We don't just sell products, we innovate, design and manufacture our equipment to bring your beverage ambitions to life!

Our brands include:

- King Kegs, our Australian Made P.E.T. kegs
- Apollo P.E.T. Pressure Fermenters & Unitanks
- KegMaster™ Kegerators
- Atomic 15 Brewery Cleaners
- UltraTap Twist FC Faucets
- Spundy spunding valves
- the KegMaster™ Solstice Fridge
- and more!

Check the resellers map on our website to find where our products are available in North America, the United Kingdom, Europe, Australia, New Zealand, and South Africa.
https://www.kegking.com.au/retailers

Since 2009, Keg King's mission is to make the best brewing & dispensing equipment in the world!

Check out our helpful instructional videos on the **Keg King YouTube Channel**
https://www.youtube.com/c/KegKingvideos

Enjoy your KegMaster™ Kegerator!

Introduction

The KegMaster™ Series 4 kegerator, including FasTap editions are a convenient keg refrigerator with the capacity to hold 3 home brew kegs or 1 commercial keg.

The standard Series 4 comes **without** font, taps or beer and gas lines.
FasTap editions include pre-assembled font kits and are the quickest way to get beer on tap in your home, cafe, bar or mancave.

Please check our web site product pages for updated versions of Instruction Manuals.
https://www.kegking.com.au/

Features

- Temperature range -5C to 28C
- Internal Volume: 163L
- Capacity: 3 x Cornelius (Corny) Home Brew Kegs or 1 x Commercial Keg
- Castors for easy moving
- Reversible Door
- Font Fan
- Fits standard fonts (not included)
- Cold air hose for font cooling
- Suitable for free standing installations
- R600a Refrigerant

Unboxing

Please check that the unit is free of damage.

Included Items

1. The KegMaster™ Series 4 kegerator

5. CO_2 Cylinder Bracket

2. Keg King MKIII CO_2 regulator

6. Fridge Shelf

3. Drip Tray

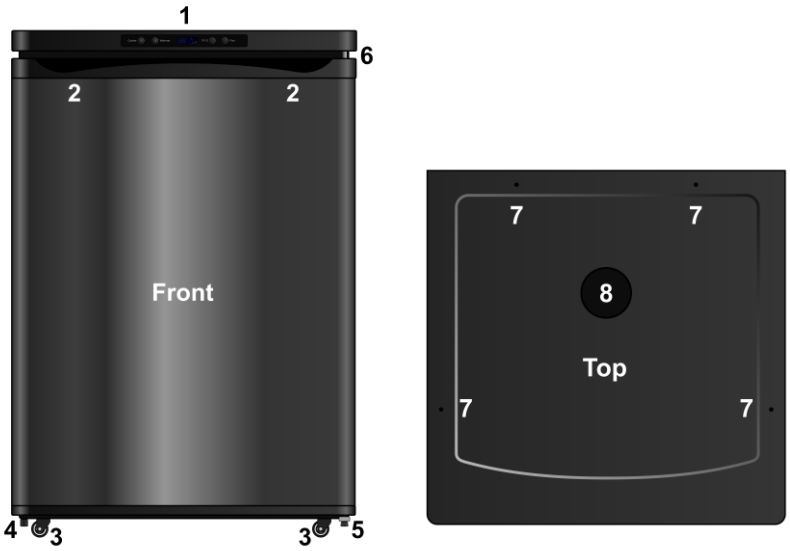
7. Font Cooling Hose

4. Castor Wheels

8. Guard Rail

The FasTap editions also include a pre-assembled font with taps, pre-assembled beer & gas lines with fittings, disconnects and more.

Getting to Know the Unit



1. Control Panel
2. Door Handles
3. Castor Wheels
4. Leveling foot
5. Door Hinge Bracket
6. Hinge Pin
7. Guard rail mounting holes
8. Font hole and plug

The Control Panel

Cooler	Decrease temperature	**°F/°C**	Switch display to Celsius (°C) or Fahrenheit (°F)
Warmer	Increase temperature	**Fan**	Turn Fan on or off

Initial Set Up

WARNING

DO NOT power up the refrigeration unit until it has rested upright for 24 hours.

WARNING

Allow 100mm clearance behind and on both sides of the refrigeration unit.

1. Ensure refrigeration unit has rested upright for 24 hours.
2. Ensure there is a minimum of 100mm (4 inches) clearance behind and on both sides of the refrigeration unit
3. Plug the refrigeration unit into mains power and turn power on.
4. Use the "**°F/°C**" button to switch between Celsius and Fahrenheit.
5. Use the "**Cooler**" and "**Warmer**" buttons to set the desired temperature.
6. Use the "**Fan**" button to turn the Fan on or off.

Door Orientation

The KegMaster™ Series 4 door is reversible. It can be removed and re-attached to swing from the left or right, depending on your preference. If you wish to change the door orientation:

1. If the KegMaster™ unit is powered on, turn off the power and unplug it.
2. Prepare a soft towel or blanket to rest the KegMaster™ on its side.
3. To get access to the underside of the KegMaster™ carefully tip it onto the side wall that is on the opposite side to the door hinge. Rest it on the soft towel or blanket.
4. Unscrew the **Leveling Foot** (4), which should be on the opposite side to the **Door Hing Bracket** (5).
5. Remove the **Door Hinge Bracket** (5) by unscrewing the 2 bolts holding it in place.
6. Remove the door by carefully sliding it away from the upper hinge.
7. Remove the **Hinge Pin** (6) from the top corner of the door or unit.
8. Insert the **Hinge Pin** (6) in the hole in the opposite top corner of the door.
9. Insert the **Hinge Pin** (and door) into the retaining hole in the opposite top corner of unit.
10. Fit the **Door Hinge Bracket** to the opposite bottom corner of the door.
11. With the **Door Hinge Bracket** attached to the door, use the removed bolts to fasten the **Door Hinge Bracket** onto the opposite side of the unit, and tighten firmly.
12. Attach the **Leveling Foot** (4) where the **Door Hinge Bracket** was previously.
13. Tip the KegMaster™ unit back to the upright position.
14. The KegMaster™ unit will need to rest upright for 24 hours before power is reapplied.

WARNING

DO NOT power up the refrigeration unit until it has rested upright for 24 hours. Failure to do so will void the Warranty!

Defrosting the KegMaster™ Kegerator

WARNING

This refrigeration unit DOES NOT automatically defrost and may require occasional manual defrosting. DO NOT scrape any ice or frost from the walls or cold plates. Doing so may damage the unit and void the Warranty!

NOTE: Excessive ice buildup reduces the efficiency of the unit

For tips on how to limit ice and frost buildup please see our Troubleshooting section.

If excess ice or frost has formed on the inside of the KegMaster™ Kegerator:

1. Turn the unit off at the mains power
2. Wait an hour or more for the ice to melt.
   A hairdryer may be used to speed up the process, by gently blowing warm air at the ice.
3. Wipe any liquid or moisture from the internal walls, floor, and ceiling, using an absorbent cloth or towel
4. Turn the unit's power back on.

If excess ice is forming too regularly, see our Troubleshooting tips

Calibrating your KegMaster™ Series 4 Kegerator

When to calibrate your KegMaster™ Series 4 Kegerator

If your kegerator is freezing the chill plate on the inside with a thick layer or ice, it is recommended to set the calibration at -3 and see if the situation improves.

If the KegMaster™ is not cold enough, it is recommended to set it to +2 and see it the situation improves.

How to calibrate your KegMaster™ Series 4 Kegerator?

1. Press and hold both the "**Cooler**" and "**Warmer**" buttons for 5 seconds until the temperature display flashes SC.
2. Release those buttons and press the "**°F/°C**" button.
3. The display now shows the calibration factor, and you can change it with the "**Cooler**" and "**Warmer**" buttons.
4. Once it is at the desired value press the "**°F/°C**" button again to save it.

About Kegs and Kegerators

Kegerators can be used for different keg types and it's important that you understand what types of kegs are available and the types of fittings that are required for each type. You will need to customize your kegerator to suit the kegs that you want to dispense. The keg types can be split up into two main categories: Commercial and Home Brewing Kegs

Commercial Kegs

Commercial Kegs such as the one on the left are usually used by commercial breweries and in Australia are mainly sold as 50L kegs. However, smaller sized kegs do exist, such as 20L, 25L and 30L kegs.

Commercial kegs use several different coupler types as shown below, with the most common types being the A, D and S-type couplings.

90% of all 50L commercial kegs in Australia will use either A or D-types.
The S-type is most often used for imported beers from Europe or Asia.

The device to connect your beer and gas line to the keg is called a "Keg Coupler".
Make sure to know what type of keg coupler you need before purchasing the equipment so you can easily be supplied with the correct one.

A-Type

Also known as the "German Slider", this type of keg is used by Toohey, Coopers, West End, Little Creatures, XXXX and any beer made by Lion Nathan.

To use this keg coupler, just slide the coupling over the top of the keg and engage the handle on the keg coupler.

This is the most common keg coupler type in Australia and approximately 45% of kegs in Australia would use this coupling type.

A-Type Keg

A-Type Coupler

D-Type

Also known as an American Sankey, this type of keg is used by VB, Carlton Draught, and any beers made by Carlton United Breweries.

To use the coupler just push the coupler against the top of the keg, twist clockwise firmly then depress the handle to tap the keg.

About 40% of kegs in Australia would use this coupling.

D-Type Keg

D-Type Coupler

S-Type

This keg coupler is often confused with the D-type keg coupling. It looks very similar however the "well" in the middle of the coupling is slightly deeper. These kegs are used by Asian, American, and other imported beers such as Asahi and Heineken.

To use the coupler just push the coupler against the top of the keg, twist clockwise firmly then depress the handle to tap the keg.

About 10% of kegs in Australia use this coupling.

S-Type Keg

S-Type Coupler

Setting up Commercial Keg Couplers

The gas enters the side of the coupler at about a 30-degree angle and the beer exits the keg coupler out the top of the keg coupler. For that reason, you will need to connect your gas line from your CO_2 regulator to the side of the keg coupler and the beer line from your tap to the top of the keg coupler.

Inside the keg coupler there may be two "one-way" valves. The one on the left is the one-way gas valve and the one on the right is the one-way beer valve. On a kegerator system these valves are not strictly necessary, and you do not know how to use them it is best to just take them out of the coupler.

If using barb-tails (pictured right), the keg coupler should include a hex nut, barb-tail, and rubber washer (as shown to the right).
Always ensure that the rubber washer is between the barb-tail and the coupler body.

Home Brewing Kegs

Home Brewing Kegs, such as those on the left are used by home brewers or small microbreweries. The sizes are typically 19L or 9.5L.

These kegs have 2 separate posts: one for the gas line (usually marked "IN"), and one for the beer line (usually marked "OUT").

The posts are typically either "Ball Lock" or "Pin Lock". The differences between these two types are explained as follows.

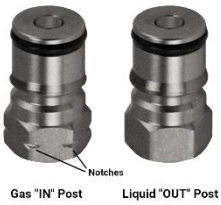
Ball Lock

Originally used by Pepsi for pre-mix syrups, about 85% of home brewers use this type of keg because they are easy to use, have a high availability of spare parts and are inexpensive.

The 2 posts on the kegs look very similar but are not compatible. As you can see on the photo to the left the gas post is slightly different shape to the liquid post. The gas post has a small ground notch (see arrow) which signifies the post is a gas post.

Similarly, the ball lock disconnects are also different from each other.

The grey should only be used for gas and the black should only be used for liquid.



Ball Lock Posts (on the keg)

Ball Lock Disconnects

Pin Lock

Originally used by Coca Cola for pre-mix syrups, about 10% of home brewers use this type of keg.

The 2 posts on the kegs look similar but are not compatible. As you can see on the photo to the left the gas post has 2 pins on opposite sides of the post, and the liquid post has 3 pins equally spaced around the side of the post.

Similarly, the ball lock disconnects are also different from each other.

The disconnect with the grey base should only be used for gas and the disconnect with the black base should only be used for liquid.

Pin Lock Posts (on the keg)

Pin Lock Disconnects

Setting Up Beer and Gas Lines

When Using Stepless Clamps

Stepless clamps grasp the beer line in a perfect circle meaning they do not pinch the line like worm style clamps. The stepless clamps come in different sizes so it is important you have the correct style of clamp for the beer line and barb fitting that you are using. These clamps are a single use item.

To use the clamps the best tool for the job is clamp tool (shown below in photo to left). These tools can be purchased separately (Part number 6530). If you do not have one of these tools the wire cutters (shown below to the right) will do an adequate job.




As shown above, all that is required is a quick single clamp with the tool and the job is done.

When Using Push-In Fittings

Push-In fittings are a great convenient alternative to using clamps on your lines.

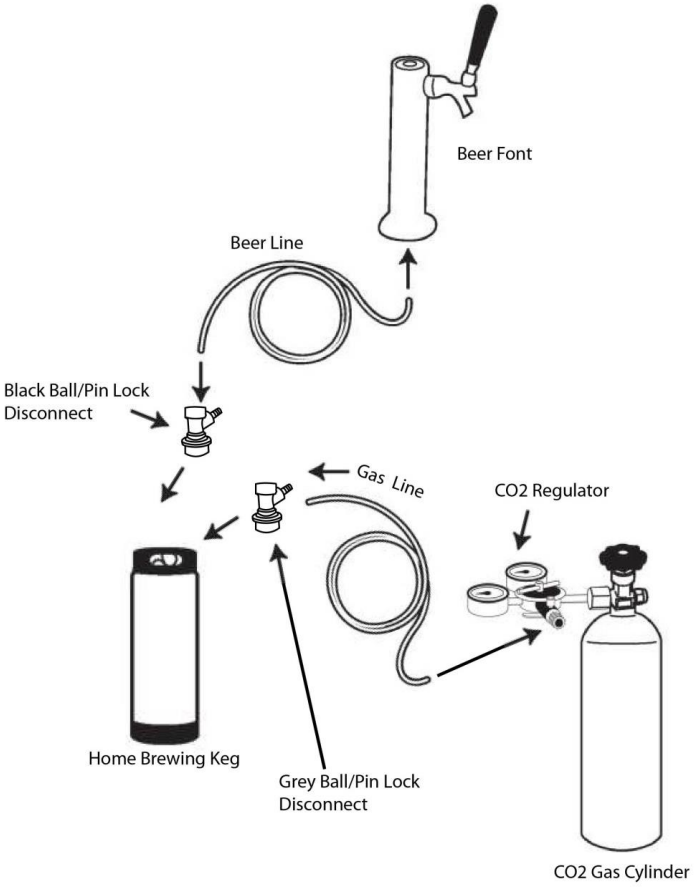
Using an MFL disconnect and a premium FFL to 8mm push-in fitting, just screw the threaded end of the push-in fitting firmly onto the MFL thread of the disconnect. Then push your 8mm line firmly into the other end of the push-in fitting.

WARNING

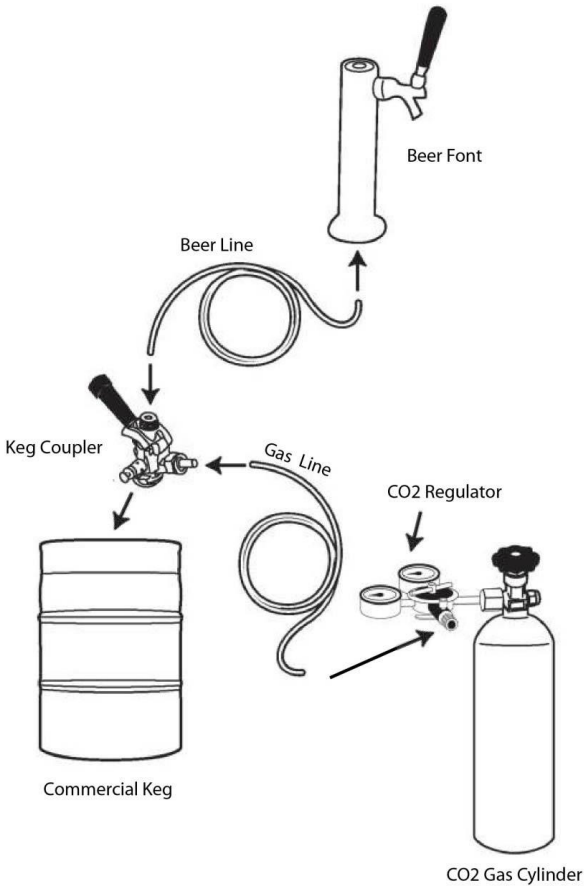
To avoid leaks, ensure your beer and gas lines are cut cleanly and square.

Plumbing your Kegerator

For Home Brew Kegs (Ball or Pin Lock Disconnects)



For Commercial Kegs (usually 50L)



Balancing your Keg System with CO_2

Balancing your keg system is vital for optimum draft beer performance and is especially important when using CO_2 to dispense the beer. To balance your keg system correctly we must first understand Carbonation Level and Keg Storage Temperature.

Carbonation Level

Different beers are carbonated at different levels. The carbonation is measured in "volumes of carbonation". Most draft beers have a carbonation level of about 2.6-2.8 volumes of carbonation. (see Table 1.1).

Keg Storage Temperature

Keg Storage temperature is best measured using a thermometer. Put a full glass of water in the fridge with the keg for 2hrs with a thermometer in the glass. Take a reading with the thermometer. This will give a true reflection of the keg storage temperature. In order to pour without excessive head, the keg storage temperature of most beers should be between 0°C up to 2.5°C. Some very lightly carbonated beers such as English Ales can be dispensed as high as 8°C.
Once you know what carbonation level is (if you do not know assume 2.6 volumes of carbonation) and your keg storage temperature use Table 1.1 to work out the correct dispense pressure. For example, if your keg storage temperature is 1C and the carbonation level is 2.6 volumes then the equilibrium pressure is 70kPa (10.2PSI). The dispense pressure should be 10% above the equilibrium pressure. So, you should set your regulator dispense pressure at 77kPa (11.2PSI).

Setting you dispense pressure below the equilibrium pressure will cause the beer to go flat over time. Setting the dispense pressure above the equilibrium pressure will cause the beer to absorb more carbonation over time.

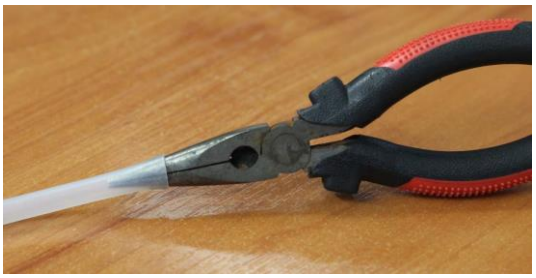
NOTE: Many people make the mistake of using the keg dispense pressure to increase or decrease the flow speed of the beer out of the tap. **THIS IS INCORRECT**. When using CO_2 to dispense, the dispense pressure must be set according to Table 1.1. The method to adjust the speed of flow is to adjust the beer line length and diameter.

Beer line diameter and length adjustment

The beer line on a kegerator is not just a hose to get beer from the keg to tap. It also performs the important function of applying "flow resistance". With too little flow resistance the beer will come out of the tap too fast. With too much flow resistance the beer will come out of the tap too slow. Small internal diameter (ID) beer line with apply more flow resistance and longer beer line will also apply more flow resistance. Most domestic systems work well with the following line length/diameter:
4mm ID Beer Line: 1.5-2.5 Meters
5mm ID Beer Line: 3-4.5 Meters
6mm ID Beer Line: 5-10 Meters

Small ID beer line is often the best choice for kegerators as it means the customer can use a shorter beer line which makes less mess inside the fridge. It also minimizes the amount of beer sitting in the beer lines.

Using 4mm ID beer line you will have 12.5ml per meter in the beer line and a total of approx. 22.5ml.
Using 5mm ID beer line you will have 20ml per meter in the beer line and a total of approx. 70ml.
Using 6mm ID beer line you will have 28ml per meter in the beer line and a total of approx. 210ml.



For the above reasons 4mm ID beer line is often the best choice however the small ID makes it difficult for some customers to fit the ID over the barb fittings on the keg coupler or ball lock disconnects. The Kegerators comes standard with the 5mm ID beer line as a compromise between the two options.

If using 4mm ID, the user may need to stretch the beer line open slightly so it can fit onto the barbs of some of the fittings. The perfect tool for this job is a set of needle nose pliers. Heat the beer line in some boiling hot water for 30 seconds to soften then push onto the needle nose pliers to stretch the internal diameter open. Open the handles on the pliers to further stretch the beer line open.

CO_2 Conversion Chart

		Grams Per Litre of dissolved CO_2 (g/L)											
		4.0 g/L	4.4 g/L	4.8 g/L	5.2 g/L	5.6 g/L	6.0 g/L	4.0 g/L	4.4 g/L	4.8 g/L	5.2 g/L	5.6 g/L	6.0 g/L
		Volumes of Desired Carbonation											
Temperature		2	2.2	2.4	2.6	2.8	3	2	2.2	2.4	2.6	2.8	3
°C	°F	Equilibrium Pressure kPa						Equilibrium Pressure PSI					
0	32	24	37	50	63	76	89	3.5	5.4	7.3	9.1	11.0	12.9
1	34	29	43	56	70	83	96	4.2	6.2	8.1	10.2	12.0	13.9
2	36	34	48	62	76	90	104	4.9	7.0	9.0	11.0	13.1	15.1
3	37	40	54	68	83	97	111	5.8	7.8	9.9	12.0	14.1	16.1
4	39	45	60	74	89	104	119	6.5.	8.7	10.7	12.9	15.1	17.3
5	41	50	65	81	96	111	126	7.3	9.4	11.7	13.9	16.1	18.3
6	43	56	71	87	102	118	134	8.1	10.3	12.6	14.8	17.1	19.4
7	45	61	77	93	109	125	141	8.8	11.2	13.5	15.8	18.1	20.5
8	46	66	83	100	116	132	149	9.6	12.0	14.5	16.8	19.1	21.6
9	48	72	89	106	123	140	157	10.4	12.9	15.4	17.8	20.3	22.8
10	50	78	95	112	130	147	164	11.3	13.8	16.2	18.9	21.3	23.8
11	52	83	101	119	137	154	172	12.0	14.6	17.3	19.9	22.3	24.9
12	54	89	107	125	144	162	180	12.9	15.5.	18.1	20.9	23.5	26.1
13	55	95	113	132	151	169	188	13.8	16.4	19.1	21.9	24.5	27.3
14	57	101	120	139	158	177	196	14.6	17.4	20.2	22.9	25.7	28.4
15	59	106	126	145	165	184	204	15.4	18.3	21.0	23.9	26.7	29.6
16	61	112	132	152	172	192	212	16.2	19.1	22.0	24.9	27.8	30.7
17	63	118	139	159	179	200	220	17.1	20.2	23.1	26.0	29.0	31.9
18	64	124	145	166	187	207	228	18.0	21.0	24.1	27.1	30.0	33.1
19	66	130	152	173	194	215	236	18.9	22.0	25.1	28.1	31.2	34.2
20	68	136	158	180	202	223	245	19.7	22.9	26.1	29.3	32.3	35.5

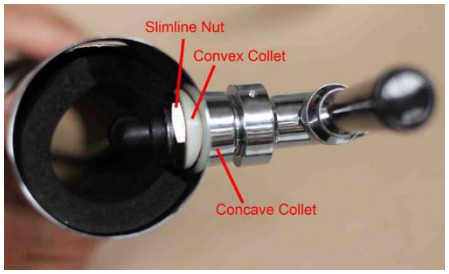
Table 1.1 – Ideally set dispense pressure 10% higher than the "Equilibrium Pressure"

Attaching and Removing Taps from the Font

Attaching and removing the taps from the font may be necessary if you need to change the beer line or taps at any time throughout the life of the kegerator. The kegerators come included with new forward sealing taps.
These forward sealing taps require very little maintenance and are easy to fit.

Step 1 Remove the cap from the top of the font.
(See photo to the left)

Step 2 Feed the beer line up through the bottom of the font and place through slimline nut and convex collet before going through the tap hole.
(See photo to right)



Step 3
Attach beer line to back of the tap, then push the threaded shank of the tap into the tap hole.

Step4
On the inside of the front, place the convex collet onto the tap shank, then tighten the slimline nut to the tap shank to secure to the font. The beer taps various tap assemblies are available.

NOTE: It is important that the user does not over-tighten the faucet collar on the tap. Over tightening of this part will prevent the free and full movement of the tap handle. Over tightening will restrict the tap handle movement preventing the tap from completely opening properly.

IMPORTANT – $C0_2$ Pressure Check

After setting up the kegerator it is important to do a CO_2 pressure check to make sure your system holds pressure. Making sure the system holds pressure is extremely important as it will determine that you have no pressure leaks. This can be done in a few simple steps.

Step 1: With all your hoses and the keg connected turn the pressure on the CO_2 regulator up to 140kPa (about 20psi) then turn off the valve on the top of the CO_2 gas cylinder.

Step 2: Wait 2 hours and check that the pressure on the CO_2 regulator has not dropped since step 1. If the pressure has dropped over the 2-hour period then go over all the hose connections with soapy water to ensure you have no CO_2 leaks then repeat the two steps above.

CO_2 Consumption Rate

The CO_2 cylinder that you use with your kegerator can be used for 2 purposes:

1. **Carbonating** your beer or other drink in the Keg.
2. **Dispensing** your beer or other drink from the Keg.

If you are brewing your own home brew, then you will most likely use the CO_2 gas cylinder to carbonate your beer. This will consume approximately 6 grams of CO_2 per Litre. If you purchase your beer from a commercial brewery, then it will already be carbonated.

Dispensing your beer will consume approximately 6 grams per litre as well regardless of whether you brewed it yourself or not.

Keg King sells 2 different CO_2 cylinder sizes:

1. **2.6kg Gas Cylinder**
   For home brew this will carbonate and dispense approximately 200 Litres.
   For commercial beer that comes already carbonated this will dispense about 400Litres
2. **6kg Gas Cylinder**
   For home brew this will carbonate and dispense approximately 500 Litres.
   For commercial beer that comes already carbonated this will dispense about 900Litres

Additional Keg King KegMaster™ Accessories

Fonts and Taps

The KegMaster™ Series 4 comes standard without any fonts or taps.

Keg King sell a range of fonts and taps

Tap / Faucet Plugs and Brushes

During periods where the kegerator is not used the faucets can be plugged up to prevent contamination or fruit flies getting into the tap. This handy little device fits all tap sizes and shapes and is made from long lasting silicon (See photo to left).

We also sell a faucet brush that can be used to clean out the taps. (See photo to right)

Beer Line Cleaning Equipment

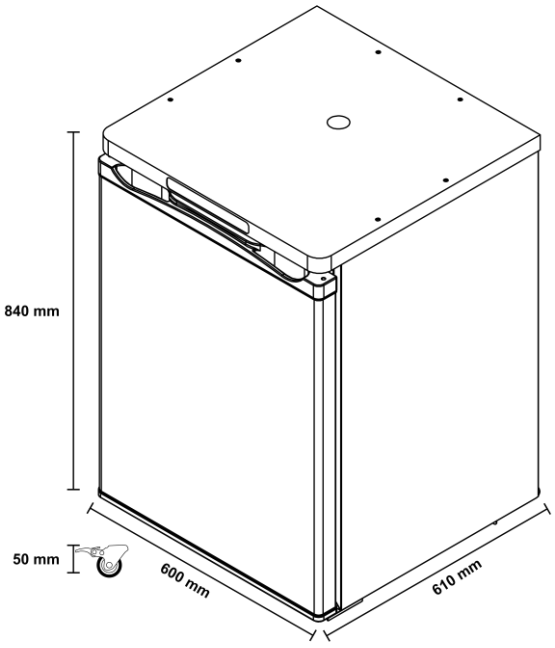
To keep your kegerator in top condition it is recommended to clean your beer lines out between kegs. Keg King supply cleaning chemicals that are perfect for the job. We also sell beer line cleaning caps (See photo to left) that you can use on an old coke bottle and use this to clean out your beer lines or if you are using commercial keg couplers then you should try our 15 liter wash out kegs (see photo to right).

These useful parts will ensure you maintain the quality of your beer.

Troubleshooting

Issue	Remedy
Ice or frost forming inside of the unit	See the "Defrosting the KegMaster™ Kegerator" section
Ice forms too regularly	If excess ice forms too regularly: 1. Avoid opening the door unnecessarily. Opening the door introduces moist air that condenses and forms ice. 2. Ensure there are no gaps in the door seal that may allow ingress of moist air. 3. Ensure fonts and / or the font hole are well sealed from moist air ingress (especially with under-bench installs). 4. If the above has not helped, set the temperature to a slightly higher temperature, or try calibrating your KegMaster™ (see section "Calibrating your KegMaster™ Series 4 Kegerator") Colder temperatures increase moisture condensation and freezing.
The KegMaster™ is too warm	Set the temperature to a slightly lower temperature, or try calibrating your KegMaster™ (see section "Calibrating your KegMaster™ Series 4 Kegerator")
Beers pour with excess foam	Please see our article on reducing beer foam https://www.kegking.com.au/blog/post/help-my-taps-pouring-foam

Specifications



Height:	890 mm with castors 840 mm without castors (not including guard rail, drip try or font)
Width:	600 mm
Depth:	610 mm
Volume:	163 L
Weight:	43 Kg
Power:	220-240V 50Hz
Climate Class:	T
Refrigerant:	R600a (40g)
Insulation:	Cyclopentane