



KOMOS

HOMEBREWING DRAFT SYSTEMS

INSTRUCTION MANUAL

KIT INCLUDES

- Ball Lock Keg
- 5lb Empty CO₂ Tank
- Dual Gauge Regulator
- Duotight Ball Lock QDs
- Beer Faucet
- EVABarrier Beer & Gas Line
- Multi Tool Draft Wrench



INSTRUCTIONS FOR USE:

First, secure a tall glass of beer as this can be a thirsty job. This will be the last time you have to pour from a can or a bottle. Beer on tap is moments away.

1. Assemble your dual gauge regulator with the gas line and gray ball lock quick disconnect (QD). Set aside the regulator adjustment knob for now. The regulator comes with a barb and nut attached to the outlet; replace the barb and nut with the Duotight adapter that was included in the box. All Duotight connections can be threaded on by hand and then should be tightened with a wrench. Insert one end of draft tubing into the Duotight adapter and pull back to lock in place. Insert the other end into the gray ball lock QD and pull back to lock in place.
2. Assemble your beverage line with the black ball lock QD and beer faucet (also called picnic tap or cobra tap). Attach the Duotight adapter to the stem of the picnic faucet and pull back to lock in place. Insert one end of draft tubing into the Duotight adapter and pull back to lock in place. Insert the other end into the black ball lock QD and pull back to lock in place.
3. Connect your dual gauge regulator to the 5 lb CO₂ tank with the included wrench. Do not overtighten the regulator, as you may split the built-in gasket if too much force is applied. Don't thread in the regulator adjustment knob yet. The gauge that goes to 3000 psi is your tank gauge and tells you how much gas is left in the cylinder. A normal 5 lb CO₂ tank will hold from 600–1000 psi of pressure when filled, depending on the ambient temperature where the tank is stored. The gauge that goes to 100 psi (the PRV is rated to blow off at 60 psi) is your outgoing gauge and tells you what amount of pressure is being released into the keg.

4. You are now ready to adjust the pressure on the regulator. Open the valve on top of the CO₂ tank by turning the valve counter clockwise. Now take the regulator adjustment knob and slowly thread it into the middle of the regulator body. Turn the adjustment knob clockwise until the needle on the low pressure gauge (0–100 psi) begins to rise. This adjustment is good for now, we will fine tune the pressure later.
5. Your keg may have arrived holding pressure; pull the keg lid PRV up to release pressure. On the top of your keg, near the valves (also called keg posts or body connects), the words “In” and “Out” are etched. Attach the gray QD to the “In” valve for the CO₂. Attach the black QD to the “Out” valve for the beverage.
6. After everything is connected, you will need to fine tune your CO₂ pressure. Usually 8–12 psi is considered the norm, but different beers might have different requirements and ultimately your preference will rule. You increase the outgoing pressure by turning the adjustment knob clockwise. Turning counterclockwise will decrease the pressure. (Note that pressure needs to be released from the system for the regulator pressure reading to match your decrease adjustment).
7. To fill your keg with your homebrew you will need to clean and sanitize it first. A general pre-sanitizing cleaning of the keg can be performed by scrubbing the inside with a scotch brite pad or carboy brush (if you can't reach into the keg). Remember that you must always clean before you sanitize. Do not use chlorine to sanitize stainless steel as the bleach can pit the stainless steel. Star San, IO Star, or Saniclean are the recommended sanitizers. We also recommend that you remove the keg posts and lid and sanitize those as well. After filling your keg and reattaching the lid, flush the headspace with CO₂ by filling with CO₂ and pulling the PRV on top of the keg lid. Do this 3–5 times to effectively remove the oxygen from the keg.

CARBONATION

Carbonation is influenced by both temperature and pressure. The lower the temperature of the liquid, the higher the CO₂ pressure, and the more surface area for contact between the liquid and CO₂, the easier CO₂ goes into solution. Thus the fastest way to carbonate your beer is to chill it down as much as possible, turn the CO₂ to about 30 lbs psi, and shake it for around 3 minutes. A better quick method is to use the chart below. Select your temperature and desired volume of CO₂ (2.2–2.7 is a good range to start with) and shake the keg until no more CO₂ goes into solution.

The paragraph above explains how to carbonate fast when you need it quick, but just like bottling, your beer is going to benefit from a week or two of aging. What most people do is hook the keg up at whatever pressure CO₂ they are going to dispense at, on average around 8–12 psi. Leave it on, in the refrigerator, for 1–2 weeks after which time the beer will be carbonated. Our personal method of carbonation is to keep our refrigerator at around 38°F. We hook up the gas line assembly to the keg, adjust pressure to 10 psi, and leave it for one week.

A keg of beer can be thought of as having two parts: the beer (liquid) and the headspace (gas). These two parts want to equalize the pressure — your beer will keep accepting CO₂ until the pressures are equal. If you leave your flat beer with 30 psi of CO₂ in the headspace, you will eventually end up with fizz as the beer keeps accepting CO₂ into solution in an attempt to equalize the pressures. If you have a carbonated beverage of any sort (beer, soda, seltzer) and you have no pressure in the headspace, the CO₂ comes out of solution to try and equalize the pressure between the liquid and the gas (headspace). You witness this every time you buy a 2 liter soda bottle and it goes flat in a few days. So the idea is to equalize them at the carbonation level you prefer. The easiest way to do this is to carbonate at the pressure you dispense. It may take a couple of days longer, but your beer ages and clears and dispenses very nicely without foaming problems.

SERVING YOUR BEER:

After drawing off the first few pints, all the sediment around the dip tube in the bottom will be drawn off and you will

start to get clear beer. A nice benefit of the keg is since it is constantly aging at a very cold temperature, the chill haze you see when you chill a bottle of homebrew will settle out within a few weeks.

HOW TO READ THE CARBONATION CHART

First choose the average temperature of the beer on the left side of the chart and then find the level of carbonation you want in the center of the chart. Once you have determined the carbonation level, follow the column up to the top of the chart to find your psi setting.

CARBONATION CHART

		Pounds per Square Inch (PSI)														
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Degrees in Fahrenheit	33	2.23	2.33	2.43	2.53	2.63	2.74	2.84	2.96	3.06	3.15	3.25				
	34	2.18	2.28	2.38	2.48	2.58	2.69	2.79	2.9	3.0	3.09	3.19				
	35	2.14	2.24	2.34	2.43	2.52	2.63	2.73	2.83	2.93	3.02	3.12	3.22			
	36	2.09	2.19	2.29	2.38	2.47	2.57	2.67	2.77	2.86	2.96	3.05	3.15	3.24		
	37	2.04	2.14	2.24	2.33	2.42	2.52	2.62	2.71	2.8	2.9	3.0	3.09	3.18	3.27	
	38	2.0	2.1	2.2	2.29	2.38	2.48	2.57	2.66	2.75	2.85	2.94	3.03	3.12	3.21	
	39	1.96	2.06	2.15	2.25	2.34	2.43	2.52	2.61	2.7	2.8	2.89	2.98	3.07	3.16	3.25
	40	1.92	2.01	2.1	2.2	2.3	2.39	2.47	2.56	2.65	2.75	2.84	2.93	3.01	3.1	3.19
	41	1.88	1.97	2.06	2.16	2.25	2.34	2.43	2.52	2.6	2.7	2.79	2.88	2.96	3.05	3.14
	42	1.85	1.94	2.02	2.12	2.21	2.3	2.39	2.48	2.56	2.65	2.74	2.83	2.91	3.0	3.09
	43	1.81	1.9	1.99	2.08	2.17	2.26	2.34	2.43	2.52	2.61	2.69	2.78	2.86	2.95	3.04
	44	1.78	1.87	1.95	2.04	2.13	2.22	2.3	2.39	2.47	2.56	2.64	2.73	2.81	2.9	2.99
	45	1.75	1.84	1.91	2.0	2.08	2.17	2.26	2.34	2.42	2.51	2.6	2.69	2.77	2.86	2.94
	46	1.71	1.8	1.88	1.96	2.04	2.13	2.22	2.3	2.38	2.47	2.55	2.64	2.72	2.81	2.89
	47	1.68	1.76	1.84	1.92	2.0	2.09	2.18	2.26	2.34	2.42	2.5	2.59	2.67	2.76	2.84
	48	1.65	1.73	1.81	1.89	1.96	2.05	2.14	2.22	2.3	2.38	2.46	2.54	2.62	2.71	2.79
	49	1.62	1.7	1.79	1.86	1.93	2.01	2.1	2.18	2.25	2.34	2.42	2.5	2.58	2.67	2.75
	50	1.59	1.66	1.74	1.82	1.9	1.98	2.06	2.14	2.21	2.3	2.38	2.46	2.54	2.62	2.7
	51	1.57	1.64	1.71	1.79	1.87	1.95	2.02	2.1	2.18	2.26	2.34	2.42	2.49	2.57	2.65
	52	1.54	1.61	1.68	1.76	1.84	1.92	1.99	2.06	2.14	2.22	2.3	2.38	2.45	2.53	2.61
53	1.51	1.59	1.66	1.74	1.81	1.89	1.96	2.03	2.1	2.18	2.26	2.34	2.41	2.49	2.57	
54		1.56	1.63	1.71	1.78	1.86	1.93	2.0	2.07	2.15	2.22	2.3	2.37	2.45	2.52	
55		1.53	1.6	1.68	1.75	1.82	1.89	1.97	2.04	2.12	2.19	2.26	2.33	2.4	2.47	
56		1.5	1.57	1.65	1.72	1.79	1.86	1.93	2.0	2.08	2.15	2.22	2.29	2.36	2.43	
57			1.54	1.62	1.7	1.77	1.83	1.9	1.97	2.04	2.11	2.18	2.25	2.32	2.39	
58			1.51	1.59	1.67	1.74	1.8	1.87	1.94	2.01	2.08	2.15	2.21	2.28	2.35	
59				1.56	1.64	1.71	1.77	1.84	1.91	1.98	2.04	2.11	2.17	2.24	2.31	
60				1.54	1.62	1.69	1.75	1.82	1.88	1.95	2.01	2.08	2.14	2.21	2.27	

Volumes Of CO₂