



REG-2 Dual-Tank CO₂ Regulator Assembly

CAP's dual-tank CO₂ regulator assembly combines a precision regulator/ flow gauge and an industrial solenoid valve. The unique ability to connect the REG-2 to TWO tanks of compressed CO₂ allows double the run time between changing out the tanks. The flow gauge can be set from .5 to 15 SCFH.

- ✓ The REG-2 is designed to work with any control device that is 120 volt.
- ✓ Features a tank pressure gauge to indicate remaining tank pressure.
- ✓ Complete with solenoid valve, 6 foot power cable and 10 ft of ¼" air line.
- ✓ Connect TWO tanks to extend time between changing tanks.



WARNING

Using and transporting compressed gasses can be dangerous if mishandled. Follow your local regulations for transportation and storage of compressed gasses. Even though CO₂ is non-flammable, it is stored at very high pressures up to 1500PSI.

INSTALLATION

- 1) **The tanks / cylinders you are using must be secured in a way so that it will not tip over.** Damage to the top of the cylinder may result in high-pressure gasses being released under tremendous energy.
- 2) The REG-2 uses two standard CGA-320 connections to properly mate to standard compressed CO₂ tanks / cylinders. Before screwing the nuts into place, make sure the cylinder valve and connection nipple is free from dirt or debris.
- 3) **YOU MUST** insert a plastic "washer" between the CGA-320 connection on the REG-2, and the nipple / connector on the tanks / cylinders. Make sure the plastic flowgauge is upright when the connection is tightened. The plastic washer or bushing is squeezed between the two pieces when the CGA-320 nut is tightened creating a seal. **If the seal is not made properly, the CO₂ will leak out of the tank.**
- 4) Connect the ¼" tubing to the ¼" hose barb on the bottom of the solenoid valve. **Using the provided tie-wraps, secure the other end of the ¼" tubing near the back of an oscillating fan for best "mixing" results.**
- 5) Open the tanks / cylinder valve on top of the tank and check for leaks. Spraying the brass connections with a soapy water or glass cleaner makes finding leaks easier. Just look for bubbles.
- 6) The standard 120 volt power cord can be connected to a timer or controller. When the valve is turned on, CO₂ will flow through the flow-gauge to the ¼" hose.
- 7) To set the flow gauge, open the black valve on the unit by rotating the knob counter-clockwise. Opening the valve ½ to 1 full turn will allow you to set the unit from .5 to 15 SCFH. Opening the valve further results in the small metering ball moving up past the top of the printed scale. For larger areas this can be done to increase the flow as long as you are using a controller like the PPM-2a Fuzzy-logic. The PPM-2a will AUTOMATICALLY adjust itself to ANY flow gauge setting.

CONTROLLER OPTIONS

Because of the rather high cost of using compressed CO₂, most people want to have a automatic controller that can actually measure the amount of CO₂ in the air in parts-per-million. The controller ensures you are not using too much CO₂ and reduces waste dramatically. Using a timer to control the CO₂ valve can be done with some success but you may end up quite a bit above or even worse quite a bit below your intended CO₂ level.

CAP offers a full line of CO₂ controllers from simple to sophisticated. Controllers such as the CO₂-2 or CO₂-4 controllers intelligently coordinate your exhaust fans with the REG-2. They also have built-in recycling timers and an optional Part-Per-Million upgrade.

The simple to operate PPM-2a is designed specifically for people who want Part-Per-Million accuracy from their compressed CO₂ system. It automatically adjusts its operation to YOUR specific parameters.

Keep in mind that no two set-ups are exactly alike so it is almost impossible to know exactly how much CO₂ to release simply by "time". Factors such as whether or not your area is sealed or open, cooled by air conditioners or a fan contribute to the imprecise nature of "timed release".

For those of you who still want to try and "guess" the correct flow gauge setting and the time required to bring the level up to your desired level, you can refer to the following chart.

CO₂-2



PPM-2a



To determine how long in minutes it will take to increase the level of CO₂ in your area, first calculate your area's Cu/Ft by multiplying the rooms length x width x height. Compare your Cu/Ft with the numbers down the left side of the chart. When you find a number that closely matches your area, pick a flow gauge setting which will fill the room in a small amount of time usually 2-3 minutes is a good starting point. The quicker the area fills, the better in most cases. Be sure to have lots of air-movement around the plants to properly distribute and "mix" the CO₂ in the area.

	Flow gauge setting															
Area Cu/Ft (Room LxWxH)	0.5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
64	6.7	3.4	1.7	1.1	0.8	0.7	0.6	0.5	0.4	0.37	0.34	0.31	0.28	0.26	0.24	0.22
128	13.4	6.7	3.4	2.2	1.7	1.3	1.1	1.0	0.8	0.7	0.67	0.61	0.56	0.52	0.48	0.45
256	26.9	13.4	6.7	4.5	3.4	2.7	2.2	1.9	1.7	1.5	1.3	1.2	1.12	1.03	0.96	0.90
384	40.3	20.2	10.1	6.7	5.0	4.0	3.4	2.9	2.5	2.2	2.0	1.8	1.7	1.6	1.4	1.3
512	53.8	26.9	13.4	9.0	6.7	5.4	4.5	3.8	3.4	3.0	2.7	2.4	2.2	2.1	1.9	1.8
640	67.2	33.6	16.8	11.2	8.4	6.7	5.6	4.8	4.2	3.7	3.4	3.1	2.8	2.6	2.4	2.2
768	80.6	40.3	20.2	13.4	10.1	8.1	6.7	5.8	5.0	4.5	4.0	3.7	3.4	3.1	2.9	2.7
896	94.1	47.0	23.5	15.7	11.8	9.4	7.8	6.7	5.9	5.2	4.7	4.3	3.9	3.6	3.4	3.1
1024	107.5	53.8	26.9	17.9	13.4	10.8	9.0	7.7	6.7	6.0	5.4	4.9	4.5	4.1	3.8	3.6
1152	121.0	60.5	30.2	20.2	15.1	12.1	10.1	8.6	7.6	6.7	6.0	5.5	5.0	4.7	4.3	4.0
1280	134.4	67.2	33.6	22.4	16.8	13.4	11.2	9.6	8.4	7.5	6.7	6.1	5.6	5.2	4.8	4.5
1408	147.8	73.9	37.0	24.6	18.5	14.8	12.3	10.6	9.2	8.2	7.4	6.7	6.2	5.7	5.3	4.9
1536	161.3	80.6	40.3	26.9	20.2	16.1	13.4	11.5	10.1	9.0	8.1	7.3	6.7	6.2	5.8	5.4
1664	174.7	87.4	43.7	29.1	21.8	17.5	14.6	12.5	10.9	9.7	8.7	7.9	7.3	6.7	6.2	5.8
1792	188.2	94.1	47.0	31.4	23.5	18.8	15.7	13.4	11.8	10.5	9.4	8.6	7.8	7.2	6.7	6.3
1920	201.6	100.8	50.4	33.6	25.2	20.2	16.8	14.4	12.6	11.2	10.1	9.2	8.4	7.8	7.2	6.7
2048	215.0	107.5	53.8	35.8	26.9	21.5	17.9	15.4	13.4	11.9	10.8	9.8	9.0	8.3	7.7	7.2
	* Chart displays number of minutes to bring level up to 1250 PPM. (Based on ambient CO₂ of 375PPM)															

PRECAUTIONS

- 1) After making the compressed gas connections ALWAYS check for leaks using soapy water and a spray bottle.
- 2) DO NOT allow the CO₂ level to rise above 2500 PPM. Levels above 5000PPM can be extremely dangerous.
- 3) The REG-2 SHOULD be connected to a suitable CO₂ controller to regulate the CO₂ level in PPM.
- 4) Using and transporting compressed gasses can be dangerous if mishandled. Follow your local regulations for transportation and storage of compressed gasses. Even though CO₂ is non-flammable, it is stored at very high pressures up to 1500PSI.

WARRANTY

The REG-2 is warranted against defects in workmanship for THREE years.

REG-2 SPECIFICATIONS

Power supply IN	120vac	CO ₂ flow gauge range	.5 to 15 SCFH
CO ₂ Cylinder size	20-50 lb (x2)	Hose outlet size	¼"

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