

Airbrushing Models Using a CO2 Bottle as a Pressure Source

Living as I do, in a condominium, sharing my model room wall with a neighbor with whom I hope to maintain amicable relations, I was reluctant to install a reciprocating compressor and tank. This was primarily due to the noise factor, although size constraints as well as the necessity of draining condensation (water) did not sound favorable to me.

Originally I had a Badger Diaphragm type Model 180-11 which I brought with me when I moved out to the Seattle area from Chicago in '91. is a fine unit and I, in no way wish to criticize it. However, it is not entirely silent as many of you may know. Also, there is a pulsation present in the air delivered.

What to do...

Fortunately, I live near Tim Lawson, whom many of you know. He offered an alternative, using a cylinder of CO2. I investigated and found the advantages CO2 offers are as follows :

1. Air brushing with CO2 is silent (*The neighbor's, remember*). Only a slight "hiss" is heard when the airbrush is spraying.
2. NO moisture trap required. CO2 is a dry gas, no water splatters in the sprayed paint.
3. This installation occupies no more than one square foot of floor space, and is completely portable.
4. No maintenance following the initial investment.

I have been using CO2 for about 4 years now and find I average about 4 to 6 months of painting on a 20 lb. tank. This will certainly vary between model builders, but should offer a guideline.

Right now, to swap an empty tank for a full one costs me \$13.31, tax included. A full tank registers 800 P.S.I. and is fully adjustable at the turn of a screw. I presently have two H# Paasche single action airbrushes hooked up to my tank. With the use of the #1, #3 and #5 tips, these offer all the versatility I require.

In the sketches with this article, I have attempted to illustrate what my installation looks like. (*Editor's note: Pics will be forthcoming as soon as Bob Labouy and I figure out the technical difficulties we're having*)

I'm sure any welding gas supply store can furnish a cylinder. I happen to deal with Central Welding Supply on Highway 99 in Lynnwood. To purchase a 20 lb fully charged CO2 cylinder will cost about \$115.00, plus tax, call it \$125.00. You then own a tank and need only swap it when empty.

Tim Lawson told me the regulator he uses. I obtained mine at Airware Compressor Sales and Service located on 188th St. SW, west of Highway 99 in Lynnwood. (*You may have guessed by now, I live in Lynnwood.*) There are many other outlets for regulators, consult the phone book in your area.

I'm-using a Norgren Regulator Part #R83200NNLA. The tag on it states the primary pressure limit to be 3000 P.S.I.G. max. (*That's "Pounds Per Square Inch Gauge" for any one not knowing*) The secondary , or outlet pressure is 125 P.S.I.G. max Temperature limit is shown as 175; F max.

All threaded connections are 1/4" N.P.T. pipe thread. The item shown in the sketch as "brass fitting to CO2 tank" was purchased where I purchased my CO2 tank. The large brass nut threads onto the tank outlet and is installed using a fiber washer. (*A new washer comes with each full tank.*) The brass pipe end of the fitting is 1/4 N.P.T. pipe thread and screws into the regulator.

The gauges may be obtained where the regulator is purchased.

The pipe nipple to the air brush or brushes (*in case of two, use a pipe tee for hook up*), should all be 1/4" galvanized pipe and all screwed joints should be made up

using thread seal tape of Teflon to assure a leak proof joint. TIGHTEN ALL JOINTS SECURELY!

The approximate cost for the regulator and two gauges should not exceed \$50.00. Pipe fittings, tape, another \$3.00 or \$4.00, and you should be operational. So for about \$175.00 to \$180.00 you have a maintenance free, portable, spray system that is silent, and clean.

Oh yes, when you finish air brushing, don't forget to shut off the tank, also keep the tank away from room heat sources.

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