



LABCONCO CORPORATION 8811 Prospect Ave, Kansas City, MO 64132
(816) 333-8811 or (800) 821-5525 • (816) 363-0130 fax • labconco.com

AtmosPure™ Regeneration Plumbing Kit, No. 5441700

Operation

The AtmosPure Re-Gen Gas Purifier Plumbing Kit 5441700 provides the necessary tubing fittings and tubing to connect a pressurized Reducing Gas tank, Vacuum Pump and Exhaust tubing to the AtmosPure (Figure 1). The required Reducing Gas is a mixture of 4% Hydrogen and 96% Nitrogen. Alternate Reducing Gases are 4% Hydrogen/96% Argon or 4% Hydrogen/96% Helium. This tubing kit permits the Regeneration of AtmosPure's internal Oxygen/Moisture removal column.

Follow the installation procedure below along with the pictorials to install all the connections. Please be warned that a pressure regulator capable of less than 10 psi must be used; failure to use a suitable regulator will cause damage and potential injury.

Installation Procedure

1. First measure and cut the minimum length of the 3/8" OD x 3/16" ID PVC tubing from the supplied roll item 7, needed to connect the Reducing Gas Inlet fitting located on the rear of the AtmosPure to the pressure regulator on the Reducing Gas Tank. Remove the Swagelok nuts from the Reducing Gas Regulator and the Reducing Gas inlet solenoid valve carefully keeping the internal ferrule rings in order. Insert tube ends that have been squarely cut through the compression nuts and ferrule rings, 1/4" past the ferrule rings then insert the internal tube support, item 5 into each end of the tube. The correct order of the three piece Swagelok fitting assembly is: 3/8" compression nut, small ferrule then the larger ferrule. Each ferrule should be oriented with the rings larger diameter facing into the compression nut (Figure 2).
2. With an adjustable crescent wrench tighten the compression nut and tube assembly on to the male thread of the AtmosPure Reducing Gas solenoid valve and the male thread of the Gas Tank Regulator. Assembled correctly, the small and large ferrule rings will be permanently crimped onto the tubing after the compression nuts are tightened. Tighten the compression nuts 1-1/4 turns beyond finger-tight to prevent leaks (Note, the Reducing Gas line is colored green in Figure 1).
3. Next the vacuum tubing is connected from the AtmosPure Vacuum Solenoid Valve to a three-way Y fitting, item 2. Using the Swagelok compression nut and ferrule rings assembly as described above, a short length of the PVC tubing is cut from the remaining PVC tube coil. The Swagelok compression nut and tube assembly is threaded on to the AtmosPure Vacuum Solenoid valve and tightened. Insert a hose

barb item 5, into the opposite tube end, then firmly insert tube into one of the two side by side tube ports of the three-way Y fitting. The tube hose barb insert will be barely visible when inserted correctly.

4. Locate one of the two 3/8" OD x 3/16" ID PVC tubes connecting the glove box Vacuum Solenoid valves to the Vacuum Pump. Cut this tube in half and insert two internal hose barbs into each tube end item 5. Then firmly push each tube end into the remaining two tube ports of the three-way Y fitting (Figure 3). The Vacuum lines are colored red in Figure 1.

Labconco recommends the single side of the three-way Y fitting be attached to the tube that connects directly to the glove box Solenoid Valve. This allows the tubing to hang naturally preventing any sharp bends or creases in the tubing.

5. With the remaining PVC tubing attach one end to the compression nut assembly which is located at the top of the Clear Acrylic Gas Flow Indicator mounted on the side of the AtmosPure. Route this tubing to a Fume Hood so that exhaust gas from the AtmosPure is vented to the outside during the flush phase of a regeneration cycle. Additional PVC tubing #1539500 may be ordered from Labconco if required (The Vent line is colored yellow in Figure 1).
6. This completes the plumbing assembly for the pressurized Reducing Gas tank, Vacuum Pump and Exhaust tubing to the AtmosPure.

Labconco includes extra parts in the accessory kit #5441700 to allow for alternative methods of tubing connections. Also included is item #4 a Brass Swagelok 3/8" tube to 1/4" NPT thread connection fitting with may be used on many gas regulators if one has not been supplied by the vendor. Note, NPT screw thread fittings must be Teflon taped for leak tight seals. Labconco recommends gas regulators with a secondary shut-off valve, which is used to keep the gas tubing from being contaminated when the regulator is changed from an empty to full gas tank.

1	8	1548300	PLUG, 3/8 (GUEST)
16FT.	7	1539500	TUBING, CLEAR PVC - 3/8 O.D. X 3/16 I.D.
6FT.	6	1550900	TUBING, CLEAR PVC - 1.00 O.D. X 0.50 I.D.
10	5	1409900	INSERT, TUBE .375 TUBE O.D. X .188 I.D.
2	4	1410402	CONNECTOR, MALE, BRASS- 3/8 TUBE X 1/4 NPT
2	3	1488800	CLAMP, HOSE
3	2	1544800	TWO-WAY DIVIDER, GUEST
1	1	1548104	STEM- 3/8 O.D. TUBE TO 1/2 I.D. HOSE
QTY.	ITEM	PART NO.	DESCRIPTION

Figure 1

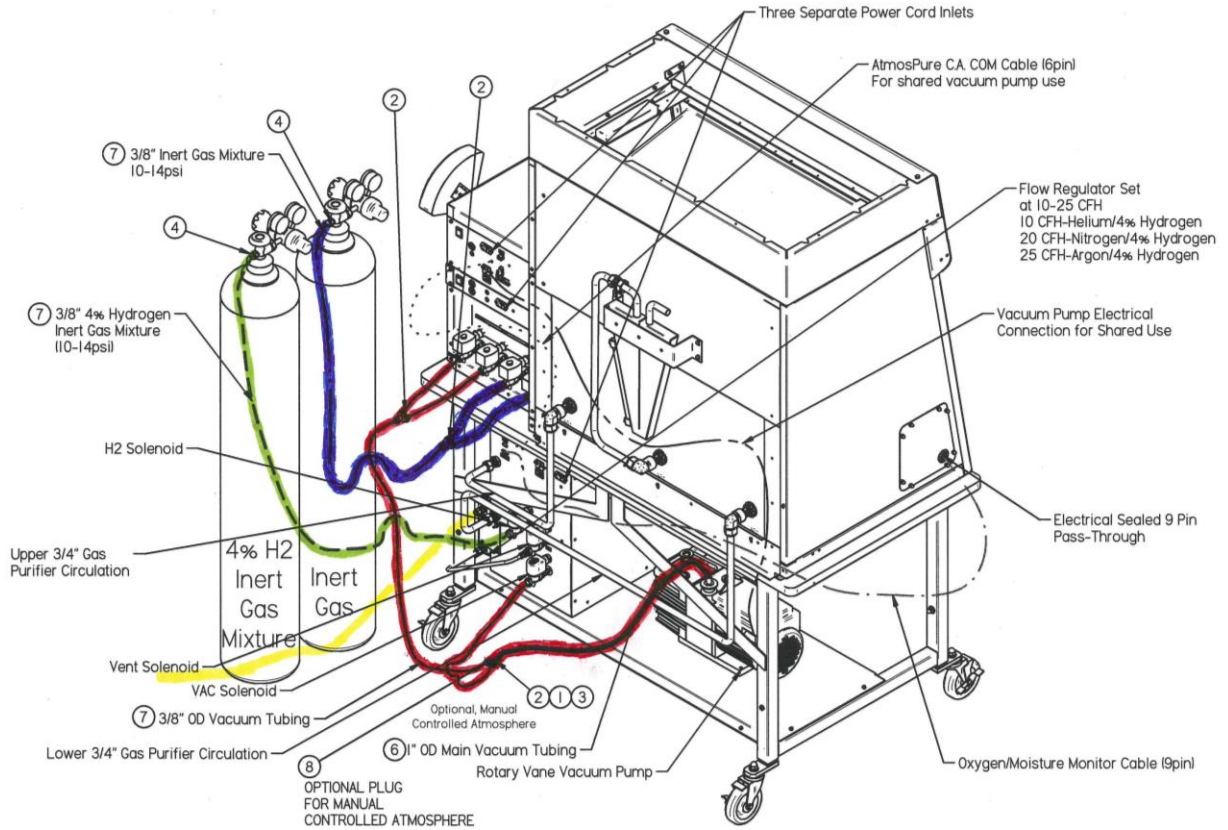


Figure 2

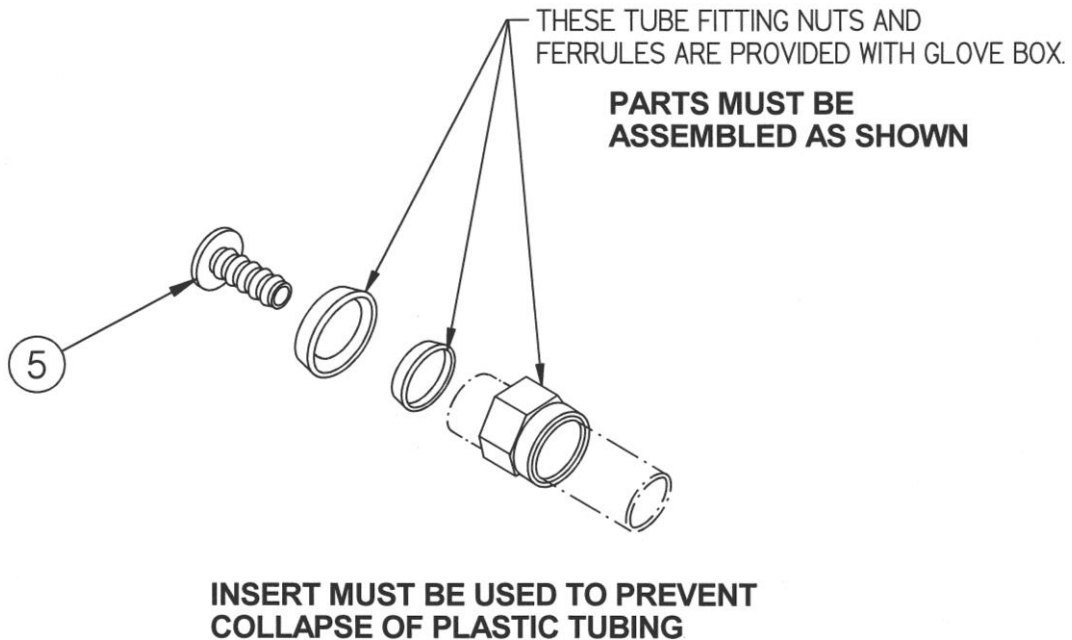


Figure 3

