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(816) 333-8811, Fax (816) 363-0130, (800) 821-5525

Oxygen and Moisture Removal Column No. 5244200

Operation

The Precise Controlled Atmosphere Glove Box protects valuable laboratory materials from the effects of oxygen and moisture exposure. With the aid of the Oxygen and Moisture Removal Column, the Precise Controlled Atmosphere Glove Box can maintain low moisture (<50 ppm) and oxygen (<5 ppm) levels. Experimentations at Labconco have yielded moisture levels below 10 ppm as well as oxygen levels under 1 ppm. Under sealed gloveport conditions, the life span for continuous recirculation operation of the oxygen removal column is approximately 70 days at +1" water column pressure. The life span for moisture control is estimated greater than 9 years for continuous use. **See the attached charts and graphs for life span calculations based on glove box leak rate tests.** In order to obtain the maximum life of the removal column, shut off the manual Auxiliary Valves connected to the oxygen and moisture recirculation loop. We also recommend installing glove port covers when the glove box is not in use. Good operation technique can extend the life of the column for many months. Follow the installation procedure below to properly install the removal column.

Installation Procedure

1. To easily install the 5244200 Oxygen and Moisture Removal Column, the 5242501 Tubing Connection Kit is available from Labconco. Recirculation Pumps 5248200 or 5248201 will also be required to pump the glove box inert air through the Oxygen and Moisture Removal Column. Refer to the installation pictorial and plumbing diagrams attached for proper installation.
2. Close the two Auxiliary Valves located on the glove box main chamber. These valves will be used to connect the Removal Column, and control the recirculation loop.
3. Place the Removal Column on the Support Stand (5244300 ordered separately).
4. Following the instructions provided with Tubing Connection Kit 5242501, properly connect the tubing to the Auxiliary Valves.
5. Remove both shipping End Caps on the Removal Column and install the two female tubing connectors from the 5242501 Tubing Kit using Teflon tape thread sealant. (Save the shipping End Caps.)
6. Route and connect the tubing between the Auxiliary Valves, the two female tube connectors attached to the removal column, and the recirculation pump. (See the instructions included with the Tubing Kit 5242501).
7. Before starting the recirculation pump keep the two auxiliary valves closed, and purge and fill the glove box main chamber with inert gas. 100-150 purge and fill cycles will reduce oxygen and moisture levels to below 3,000 ppm or 0.3%.
8. The two auxiliary valves may then be opened and the recirculation pump turned on to further reduce the oxygen and moisture levels below 100 ppm.

Removal Column Refill Policy

The Oxygen and Moisture Removal Column can be refilled more economically than to purchase a new one. It is recommended that a second removal column be available and stocked by the lab user should the initial column be expended. **For refill, the Oxygen and Moisture Removal Column must be packaged well with End Caps and sent to:**

LABCLEAR

508 29th Ave.

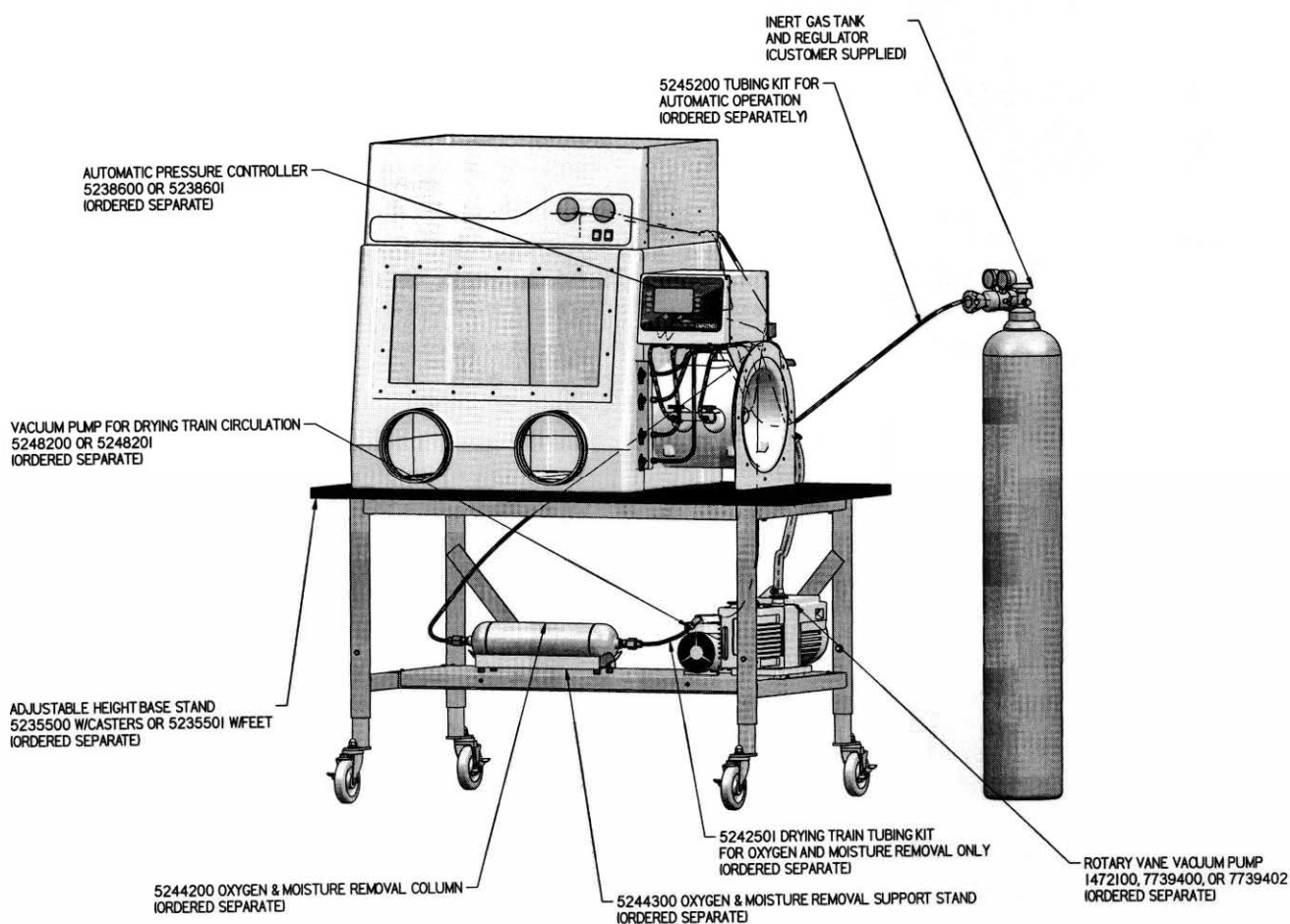
Oakland, CA 94601

Phone: (800) 227-1084, (510) 534-7050

Fax: (510) 534-0454

e-mail: info@labclear.com

technical questions: techsupport@labclear.com



**Typical Tubing Connections for Oxygen & Moisture Removal Shown with the Automatic Pressure Controller
(Tubing Connection Kit 5242501 provides full details)**

Life Span for Oxygen Removal Column & Moisture Trap Removal

Note: Precise Glove Box Volume is 13 cu. ft. or 368 liters; 3000ppm or 0.3% of 368 liters = 1.1 liters of oxygen initially used

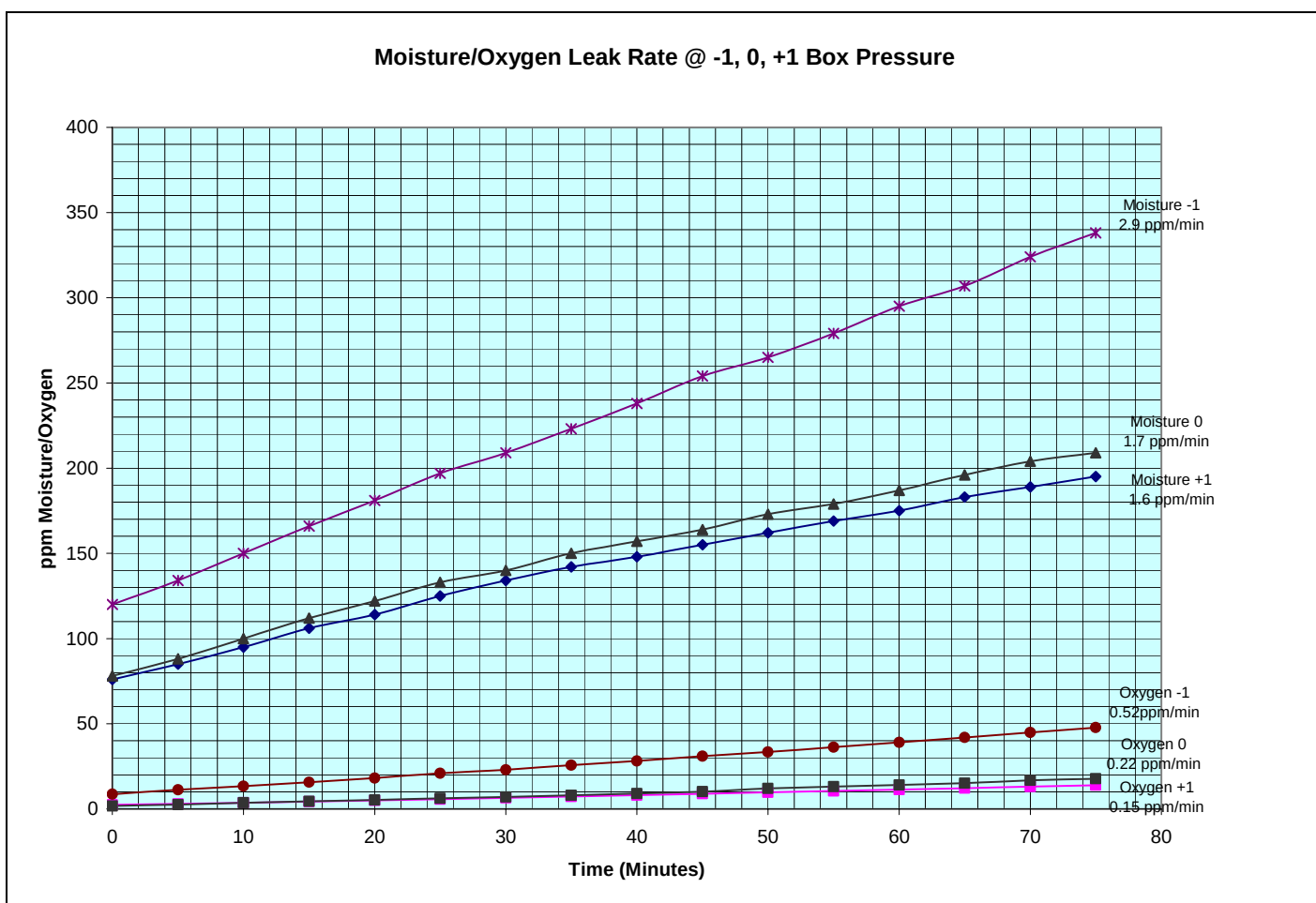
Glove Box Main Chamber Pressure (inches of water)	Oxygen Leak Rate (ppm/min)	Initial Oxygen Capacity Used (ppm)	Catalog# 5244200 Oxygen Column Life (24 hour days)	Total Oxygen Life Capacity (ppm)	Total Oxygen Volume Capacity (liters)	Number of Columns
-1	0.52	3000	21	19022	7	1
0	0.22	3000	51	19022	7	1
1	0.15	3000	74	19022	7	1

Note: All data with glove port covers installed

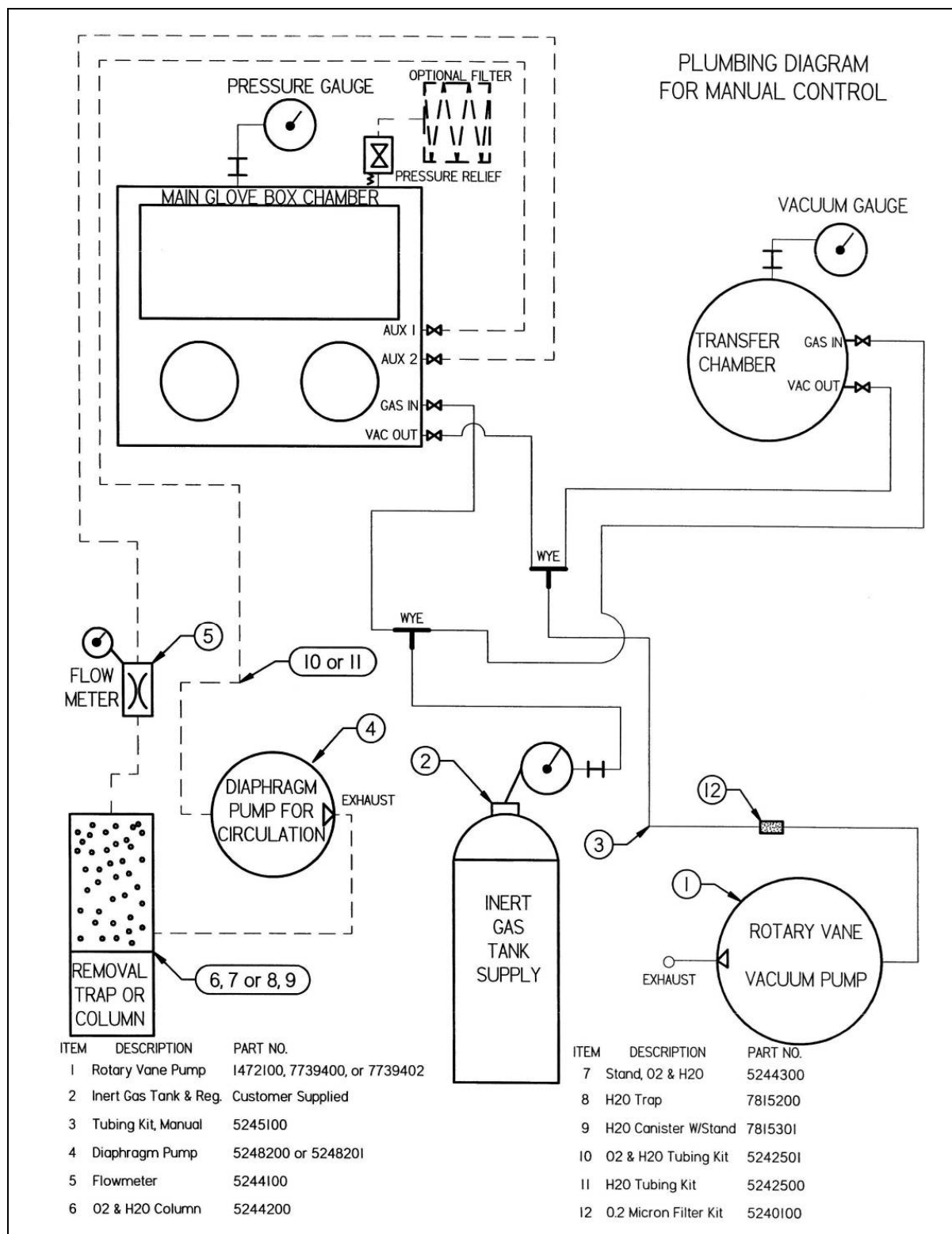
Glove Box Main Chamber Pressure (inches of water)	Moisture Leak Rate (ppm/min)	Initial Moisture (ppm)	Catalog# 5244200 Moisture Column Life (24 hour days)	Total Moisture Life Capacity (ppm)	Total Moisture Weight Capacity (grams of moisture)	Number of Columns
-1	2.9	10000	3318	13864241	100	1
0	1.7	10000	5659	13864241	100	1
1	1.6	10000	6013	13864241	100	1

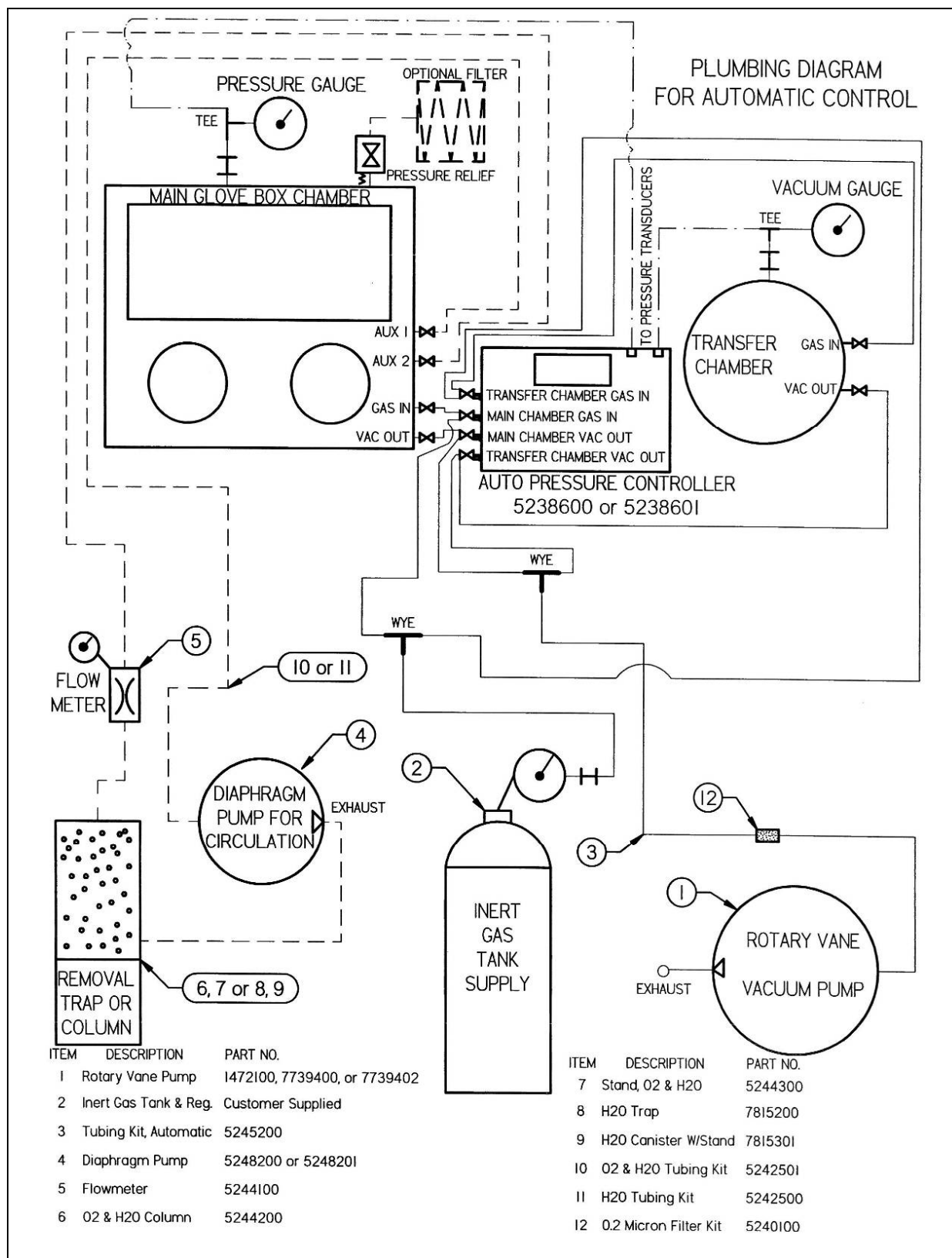
Note: 1ppm of moisture = 7.21ug of moisture inside the 368 liter glove box volume

Note: All data with glove port covers installed



Plumbing Diagrams





Warranty

Labconco provides a warranty on all parts and factory workmanship. The warranty includes areas of defective material and workmanship, provided such defect results from normal and proper use of the equipment.

The warranty for all Labconco products will expire one year from date of installation or two years from date of shipment from Labconco, whichever is sooner, except the following;

- Purifier® Delta® Series Biological Safety Cabinets and PuriCare® Lab Animal Research Stations carry a three-year warranty from date of installation or four years from date of shipment from Labconco, whichever is sooner.
- SteamScrubber® & FlaskScrubber® Glassware Washers carry a two-year warranty from date of installation or three years from date of shipment from Labconco, whichever is sooner.
- Blood Drawing Chairs carry a ten year warranty.
- Carts carry a lifetime warranty.
- Glassware is not warranted from breakage when dropped or mishandled.

This limited warranty covers parts and labor, but not transportation and insurance charges. In the event of a warranty claim, contact Labconco Corporation or the dealer who sold you the product. If the cause is determined to be a manufacturing fault, the dealer or Labconco Corporation will repair or replace all defective parts to restore the unit to operation. Under no circumstances shall Labconco Corporation be liable for indirect, consequential, or special damages of any kind. This statement may be altered by a specific published amendment. No individual has authorization to alter the provisions of this warranty policy or its amendments. Lamps and filters are not covered by this warranty. Damage due to corrosion or accidental breakage is not covered.

Returned or Damaged Goods

Do not return goods without the prior authorization from Labconco. Unauthorized returns will not be accepted. If your shipment was damaged in transit, you must file a claim directly with the freight carrier. Labconco Corporation and its dealers are not responsible for shipping damages.

The United States Interstate Commerce Commission rules require that claims be filed with the delivery carrier within fifteen (15) days of delivery.

Limitation of Liability

The disposal and/or emission of substances used in connection with this equipment may be governed by various federal, state, or local regulations. All users of this equipment are required to become familiar with any regulations that apply in the user's area concerning the dumping of waste materials in or upon water, land, or air and to comply with such regulations. Labconco Corporation is held harmless with respect to user's compliance with such regulations.

Contacting Labconco Corporation

If you have questions that are not addressed in this manual, or if you need technical assistance, contact Labconco's Customer Service Department or Labconco's Product Service Department at 1-800-821-5525 or 1-816-333-8811, between the hours of 7:00 a.m. and 6:00 p.m., Central Standard Time.