LACO TECHNOLOGIES

GAS VENT MODULE

User Manual

Description

P/N	Assembly	Gas Source
TV118018	• 9.4" W x 6.3" H x 4.7" D enclosure • ¼" female NPT gas inlet connection • High-flow, low pressure regulator with 5 psi pressure relief valve • 3' L tubing to connect to TITAN VERSA vent inlet • User manual	Nitrogen or dry air

Users operating with following conditions and applications will benefit from the use of LACO's Gas Vent Module:

- High humidity
- Test areas with high helium backgrounds
- Production test with fast cycles
- High sensitivity testing (< 1×10^{-8} mbar*L/sec)

Venting the test chamber with nitrogen will improve both pump down times and background sensitivity.

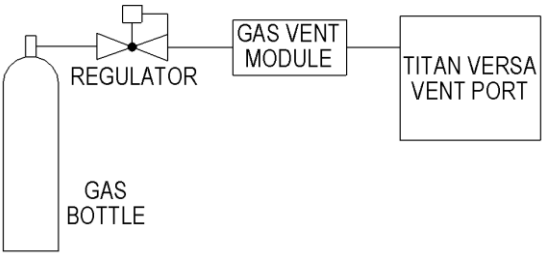
Safety

WARNING

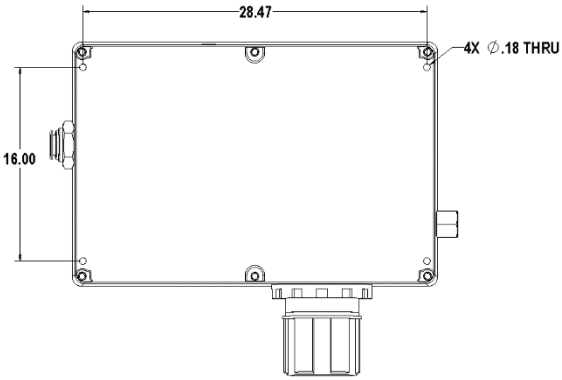
- Ensure either nitrogen gas or dry air is connected to the venting module
- Ensure the leak detection testing is performed in a well-ventilated room
- Ensure the test vent module, with associated tubing and fittings, is operating below the maximum pressure ratings
- Ensure the vent hole on the back of the enclosure is unobstructed. Otherwise, if the pressure release valve is activated, pressure may build up inside of the enclosure, resulting in possible damage or explosion

Installation

To install the gas vent module, refer to this diagram and follow the steps below. Customer is responsible for providing gas source and connection.



1. Secure the enclosure assembly to a rigid surface using the holes in bottom of enclosure.



2. Connect regulator to gas bottle and install gas line from regulator outlet to the vent module inlet. The vent module inlet connection is ¼ female NPT.

3. Set regulator range to 20-70 psi.
4. Spray a soapy water solution onto new joints to ensure they are free of leaks.
5. Adjust regulator output knob pressure to between 10-60 psig. Do not increase pressure over 80 psig.
6. Connect vent module 12mm outlet tubing to vent port (port 1 on TITAN VERSA multi-use ports). For more information on multi-use ports, see Section 5.2.5 of the TITAN VERSA Operations and Maintenance Manual (SMT-07-1037).
7. Adjust regulator knob on module to 2-3 psi in a “no flow” condition.

WARNING

The vent module is equipped with a 5 psi pressure relief valve. Some positive pressure is possible in test chamber, and this can lead to possible injury or death depending on test chamber design. It is the user’s responsibility to ensure the following safety precautions are followed:

- Verify test chamber is designed to handle positive pressure safely;
- or, ensure test chamber door is open or unlatched during venting to cycle to ensure excess nitrogen will escape and not pressurize the chamber.

Operation

1. Adjust regulator knob to 2-3 psi in a “no flow” condition.
2. Put leak detector into leak detector cycle.
3. Verify vent settings as either manual or automatic.
4. Take test out of cycle and observe venting. If vent is set to manual, the user must initiate the chamber vent by pressing the vent icon.
5. Verify the vent occurred correctly by observing the flow of nitrogen into test chamber.

Venting Tips and Recommendations

- Continuing to vent between test cycles will ensure test chamber stays dry and relatively helium free. Note, however, that continual venting will consume more venting gas. The automatic vent method enables a timer that keeps the vent valve open for a determined time.
- Adjust vent settings to determine the optimum performance needed vs. desired gas usage.

Maintenance and Accessories

It is recommended that the user verify the effectiveness of the pressure relief valve every six months by adjusting regulator knob to a pressure over 5 psig. Replace the pressure relief valve if defective.

SNIFFER PROBE ACCESSORIES AND SPARE PARTS	
P/N	Description
LHREG01	Regulator, CGA580 connection, 0-100 psi output, ¼" tube
LMSA0506	Push tube fitting, ¼" male NPT x ¼" tube
LMSA0527	Tubing, polyurethane, ¼" OD, black
LMSA5503	Tubing, polyurethane, 12 mm OD, clear
LMSA5984	Pressure relief valve, 5 psig
LMSA5982	Regulator, 0-30 psi output, with gauge