



MODEL GASG201
GAS GUARD
OPERATIONS MANUAL



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Dear Valued Customer:

Thank you for purchasing CARON Products & Services equipment. We appreciate your business and look forward to being your preferred supplier of controlled environment equipment products in the future.

At CARON, we are committed to continuous quality improvement. Our goal is to supply our customers with highly reliable equipment at a fair price. In order to openly monitor our performance, we would appreciate your feedback on our products and services.

If you have questions, or any suggestions for improvement based on the installation or operation of the equipment you have purchased, please email us at service@caronproducts.com or contact

Dave Figel, Vice President of Engineering/Operations
Jim Lang, Director of Service/Quality

Phone: 800-648-3042 x216
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Thanks again for your business!

WARRANTY INFORMATION

Please review this section before requesting warranty service. At CARON, one of our primary goals is to provide customers with high levels of personal service and top quality products, delivered on time, and backed by technical service and support for the life of the product.

Before contacting us for warranty service, please be aware that there are repairs that are not covered under warranty. These include:

- 1) Calibration of control parameters.
- 2) Damage resulting from improper use.
- 3) Service calls for improper installation including electrical service, gas and water supply tubing, gas supplies, room ventilation, unit leveling, or ambient conditions that are out of specification.
- 4) Customer modifications made to parts or subsystems.
- 5) Shipping damage either obvious or concealed as a result of freight handling.

WARRANTY DEFINED

Caron Products & Services, Inc. (herein after CARON) hereby warrants that equipment manufactured by CARON is free from defects in materials and workmanship when the equipment is used under normal operating conditions in accordance with the instructions provided by CARON, as follows:

COVERED:

- Parts and labor for a period of one (1) year from date of shipment (first six digits of serial number tag contain date of shipment).
- Any part found defective would be either repaired or replaced at CARON's discretion, free of charge, by CARON in Marietta, OH. Parts that are replaced will become the property of CARON.
- This service includes diagnosis and correction of individual CARON product malfunctions, or failures, and may consist of temporary procedures to be followed by the customer while a permanent solution is sought.
- If CARON factory service personnel determine that the customer's unit requires further service, dependent of the model involved, CARON may, at its sole discretion, provide a service technician to correct the problem, or return the unit to the factory. If a unit is to be shipped back to the factory, CARON will pay all ground shipping charges via UPS or other common carrier.
- CARON will have the right to inspect the equipment and determine the repairs or replacement parts necessary. The customer would be notified, within a reasonable time after inspection, of any costs incurred that are not covered by this warranty prior to initiation of any such repairs.

NOT COVERED:

- Cost of express shipments such as Federal Express, UPS Next Day Air, UPS Second Day Air, or any other express shipment charges.
- Any customer modifications of this equipment, or any repairs undertaken without the prior written consent of CARON, will render this limited warranty void.
- CARON is not responsible for consequential, incidental or special damages. In no event will CARON be responsible for damages more than the price of the product.
- Repairs necessary because of the equipment being used under other than normal operating conditions or for other than its intended use.
- Repair or replacement of parts due to the customer's failure to follow normal maintenance instructions.
- Parts considered consumable such as: light bulbs, filters, gases, etc ...
- Damage from use of improper water quality.
- Damage from chemicals or cleaning agents detrimental to equipment materials.
- Force Majeure or Acts of God.

This writing is a final and complete integration of the agreement between CARON and the customer. CARON makes no other warranties, express or implied, of merchantability, fitness for a particular purpose or otherwise, with respect to the goods sold under this agreement. This warranty cannot be altered unless CARON agrees to an alteration in writing and expressly stated herein, shall be recognized to vary or modify this contract.

Ohio Law governs this warranty.

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INTERNATIONAL SYMBOLS AND DEFINITIONS



Help



Information



Warning of hazardous area



Warning of dangerous electric voltage



Earth (ground) protective
conductor

WARNINGS



Local government may require proper disposal

SECTION 1 – EQUIPMENT OVERVIEW

Thank you for purchasing CARON equipment! Before using the equipment, familiarize yourself with key components of the product and thoroughly read this manual.



SECTION 2 -- INSTALLATION



High concentrations of many gases can cause asphyxiation. The use of monitors and alarms is recommended for areas where gas can collect.



Model GASG201 is designed to work with N₂ or CO₂. Do not connect this unit to a combustible gas source.

The model GASG201 Stand Alone Gas Guard from CARON is designed to allow two tanks of either CO₂ or N₂ to be connected to an incubator requiring approximately 15 psig of gas pressure. The unit is designed to automatically switch from the primary tank to the secondary tank when low gas pressure of approximately 10 psig is detected on the primary tank. This allows for a continuous supply of CO₂ or N₂ to an incubator after the primary tank is empty. In addition, the user is notified of a tank empty scenario via an audible and visual alarm.

Connecting a CO₂/N₂ supply



The CO₂/N₂ gas supply should be 99.5% pure and should not contain a siphon tube. Gas pressure to the unit must be regulated to less than 30 psig. Failure to do so could cause tubing to burst.

The CO₂/N₂ gas supplies must be equipped with two stage regulators to ensure that the incoming gas to the GASG201 is regulated to appropriate levels. The high pressure stage should have a 0-2000 psig range, and the low pressure gauge should adjust from 0-30 psig. When connecting the gas supplies, adjust each tank output to 20-25 psig. If the appropriate regulators are not available, contact CARON customer service to purchase them.

Once the cylinder regulators are installed and adjusted on each tank, connect the outlet of the regulator on Tank 1 to the hose barb fitting labeled Tank 1 on the back of the unit using the tubing and clamps provided. Repeat the process for Tank 2. The gas outlet connection on the back of the unit can then be connected to the incubator using the supplied tubing and clamps. Turn on the regulated gas supplies and check the connections closely for leaks.



Connecting Electrical Power



Connect model GASG201 to a grounded circuit. Failure to do so could result in electrical shock.

Model GASG201 requires a standard 115VAC, 15A power connection. The power cord connection is a NEMA 5-15P plug. When the required electrical connection is available, plug the provided power cord into the unit and the appropriate electrical outlet.

Equipment Operation

The power switch is used to turn on/off the operation of the product. If power is off, the unit will allow gas to flow through Tank 1 if required by the incubator.

The factory default “master tank” is Tank 1. When the appropriate gas pressure is supplied to both tanks, the master tank will always be used as the gas source. The unit

will swap from the master tank to the alternative tank whenever a low gas pressure condition is detected.

The alarm switch is used to disable the audible alarm when a low gas condition is detected. The audible alarm can be silenced while a new tank is installed by selecting the silence position. Once a low gas pressure condition is resolved, it is recommended that the alarm switch be returned to audible to ensure audible notification of future low gas pressure conditions. As a reminder, the Tank 1 and Tank 2 alarm lights will be illuminated for as long as a low pressure condition is present on the respective tank.

SECTION 3 – SPARE/REPLACEMENT PARTS

General

Part Number	Description
FUS-151	2 Amp Fuse
SOL-137	3 Way Solenoid
SWT-127	Gas Pressure Switch
POW-109	24V DC Power Supply
TUB-145	3/8" Tygon Tubing
CLM-132	Tubing Clamps

SECTION 4 – SPECIFICATIONS

Model	GASG201
Tank 1 Inlet Pressure Range	Up to 30 psig
Tank 1 Inlet Trip Point	10-12 psig
Tank 2 Inlet Pressure Range	Up to 30 psig
Tank 2 Inlet Trip Point	10-12 psig
Exterior Dimensions	5" W x 6" H x 10" D
Exterior Construction	Painted, Cold Roll Steel
Electrical	115V, 60 Hz, 15 Amp, NEMA 5-15P Plug
Shipping Weight	10 lbs

Specifications are subject to change without notice.

SECTION 5 – ELECTRICAL SCHEMATICS

GASG201 STAND ALONE GAS GAURD 115 VAC, 60 Hz

