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Find the *Thermo / Forma Scientific 3050* at our website: *Click HERE*

Forma Scientific, Inc.
P.O. Box 649
Marietta, Ohio 45750

Telephone: (740) 373-4763
Telefax: (740) 373-4189

Model: 3050/3052

Gas Guard

Manual No. 7013050 Rev-0

IMPORTANT!

READ THIS INSTRUCTION MANUAL.

Failure to read, understand and follow the instructions in this manual may result in damage to the unit, injury to operating personnel and poor equipment performance.



Warning!

Forma Scientific's Model 3050 Gas Guard is designed to be used with CO_2 and N_2 only.

Caution: All internal adjustments and maintenance must be performed by qualified service personnel.

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NOTE:

The material in this manual is for information purposes only. The contents and the product it describes are subject to change without notice. Forma Scientific Inc. makes no representations or warranties with respect to this manual. In no event shall Forma Scientific Inc. be held liable for any damages, direct or incidental, arising out of or related to the use of this manual.

MANUAL NO. 7013050

REV	ECR	DATE	DESCRIPTION	
-	IN-2200	12/12/96	Additional updates for 1010	heg
-	SI-5967	12/12/96	Added RJ-11 wiring color codes	heg
-	15794	12/12/96	Added Alarm system warning	heg
0		12/3/96	Updated for 1010 and FLA Ratings	deg

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General Safety Notes used in this Manual

	Important operating and/or maintenance instructions. Read the accompanying text carefully. Ce symbole attire l'attention de l'utilisateur sur des instructions importantes de fonctionnement et/ou d'entretien. Il peut être utilisé seul ou avec d'autres symboles de sécurité. Lire attentivement le texte d'accompagnement. Wichtige Betriebs- und/oder Wartungshinweise. Lesen Sie den nachfolgenden Text sorgfältig.
	Potential electrical hazards. Only qualified persons should perform procedures associated with this symbol. Ce symbole attire l'attention de l'utilisateur sur des risques électriques potentiels. Seules des personnes qualifiées doivent appliquer les instructions et les procédures associées à ce symbole. Gefahr von Stromschlägen. Nur qualifizierte Personen sollten die Tätigkeiten ausführen, die mit diesem Symbol bezeichnet sind.
	Equipment being maintained or serviced must be turned off and locked off to prevent possible injury. Risques potentiels liés à l'énergie. L'équipement en entretien ou en maintenance doit être éteint et mis sous clé pour éviter des blessures possibles. Geräte, an denen Wartungs- oder Servicearbeiten durchgeführt werden, müssen abgeschaltet und abgeschlossen werden, um Verletzungen zu vermeiden.

√ Always use the proper protective equipment (clothing, gloves, goggles etc.).
√ Always dissipate extreme cold or heat and wear protective clothing.
√ Always follow good hygiene practices.
√ Each individual is responsible for his or her own safety.

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Do You Need Information or Assistance on Forma Scientific Products?

If you do, please contact us 8:00 a.m. to 7:00 p.m. (Eastern Standard Time) at:

1-740-373-4763	Direct
1-800-848-3080	Toll Free, U.S. and Canada
1-740-373-4189	FAX
http://www.forma.com	Internet Worldwide Web Home Page

Forma's **Sales Group** can provide information on pricing and give you quotations. We can take your order and provide delivery information on major equipment items or make arrangements to have your local sales representative contact you. Our products are listed on the Internet and we can be contacted through our Internet home page.

The Forma **Product Service Group** can supply technical information about proper setup, operation or troubleshooting of your equipment. We can fill your needs for spare or replacement parts or provide you with on-site service. We can also provide you with a quotation on our Extended Maintenance Program for your Forma products.

Whatever Forma products you need or use, we will be happy to discuss your applications. If you are experiencing technical problems, working together, we will help you locate the problem and, chances are, correct it yourself...over the telephone without a service call.

When more extensive service is necessary, we will assist you with the selection of a field service organization for on-the-spot repairs by a professional field technician. If your service need is covered by the Forma warranty, we will arrange for the unit to be repaired at our expense and to your satisfaction.

Regardless of your needs, Forma's professional telephone technicians are available to assist you Monday through Friday from 8:00 a.m. to 7:00 p.m. Eastern Standard Time. Please contact us by telephone or fax. If you wish to write, our mailing address is:

Forma Scientific, Inc.
PO Box 649
Marietta, OH 45750

International customers please contact your local Forma Scientific distributor.

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Section 1 - Receiving

1.1 Preliminary Inspection

This item was thoroughly inspected and carefully packed prior to shipment and all necessary precautions were taken to ensure safe arrival of the merchandise at its destination. Immediately upon receipt, before the unit is moved from the receiving area, carefully examine the shipment for loss or damage. Unpack the shipment and inspect both interior and exterior for any in-transit damage.

1.2 Visible Loss or Damage

If any loss or damage is discovered, note any discrepancies on the delivery receipt. Failure to adequately describe such evidence of loss or damage may result in the carrier refusing to honor a damage claim. Immediately call the delivering carrier and request that their representative perform an inspection. Do not discard any of the packing material and under no circumstances move the shipment from the receiving area.

1.3 Responsibility for Shipping Damage

For products shipped F.O.B. Marietta, Ohio, the responsibility of Forma Scientific, Inc. ends when the merchandise is loaded onto the carrier's vehicle.

On F.O.B. Destination shipments, Forma Scientific's and the carrier's responsibility ends when your Receiving Department personnel sign a free and clear delivery receipt. Whenever possible, Forma Scientific, Inc. will assist in settling claims for loss or in-transit damage.

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Section 2 - Introduction

2.1 Description

Forma Scientific's Model 3050 Gas Guard is a monitoring and switching device for CO_2 and N_2 gas supplies. The unit will monitor a two cylinder gas supply. When the active supply tank is depleted, an audible alarm sounds and the gas guard automatically switches to the second tank. The audible alarm is silenced by manually switching the SILENCE switch to the other tank position.

Located on the back of the unit, a voltage selector switch permits the appropriate voltage selection (120V/220V). The unit is also equipped with a single remote alarm contact that monitors alarm conditions such as an empty supply tank, or a power failure to the unit.



Warning!

Forma Scientific's Model 3050 Gas Guard is designed to be used with CO_2 and N_2 only.

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Section 3 - Installation and Start-up

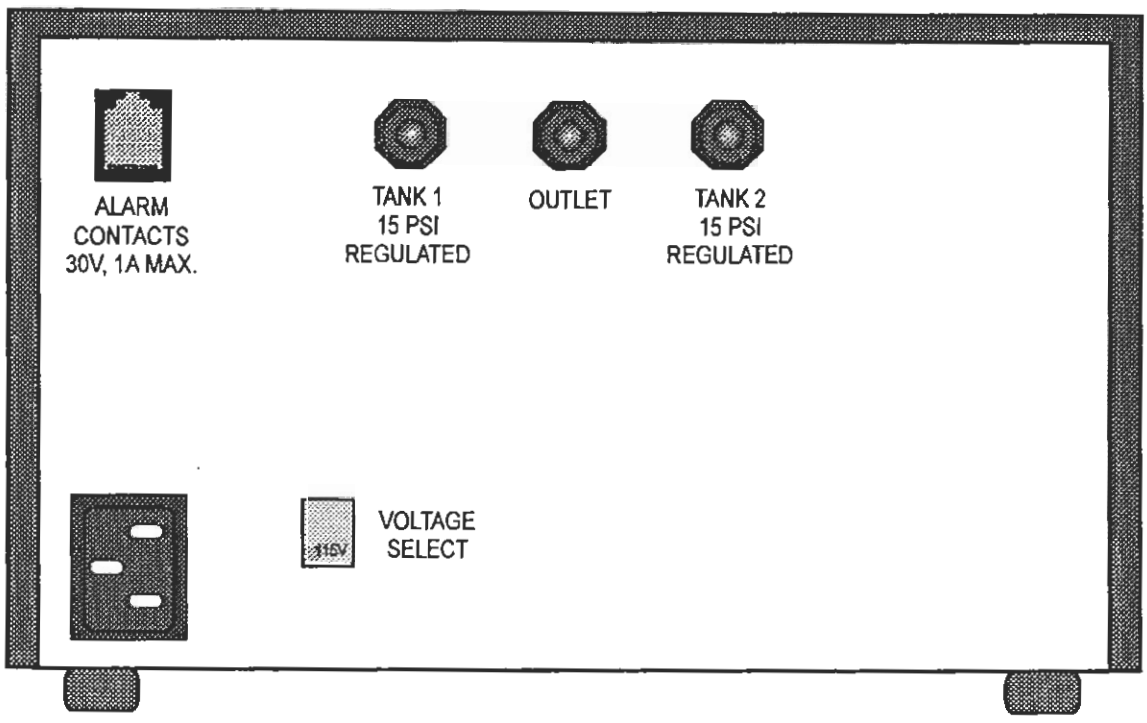


Figure 3-1
Gas Guard, rear view

3.1 Connecting the Gas Tanks



Output pressure from the tanks must be regulated with a dual stage pressure gauge set at 15 PSIG. Supply pressure lower than 13.5 PSIG will cause improper operation of the gas guard and may cause the occurrance of nuisance alarms. Liquid substances must be supplied in tanks without siphon tubes to ensure that only gas enters the incubator.

Connect a regulated gas supply to each of the two inlet fittings located on the back of the unit. The fittings are labeled. Refer to Figure 3-1. Check the connections for leaks.

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3.2 Connecting the Gas Outlet

The gas outlet is located between the inlet fittings. Refer to Figure 3-1. Connect the supply tubing to the barbed outlet and connect the other end to the incubator or other piece of equipment requiring a gas supply. Check the gas outlet for a possible leak.

3.3 Connecting the Gas Guard to a Power Source

Set the voltage select switch to the proper setting (115V or 230V). The voltage select switch has been factory set to 115V and the line cord supplied with the unit is compatible with the 115V convenience outlet on the back of Forma's incubators. Should the application require an alternate cordset, consult the factory.

With the power switch OFF, plug the cord set into the receptacle on the back of the unit. *The cord set is the **mains disconnect** for the gas guard.* Connect the other end of the cord set to an adequate power source. Refer to the serial tag located on the back of the unit or see the Specification section or Electrical Schematics in the back of this manual for specific power requirements.

Note: Forma Scientific, Inc. recommends that the gas guard be connected to separate electrical circuit.

3.4 Start-Up Procedure

1. Turn the CONTROL switch On.

2. Select the active tank using the SILENCE switch.

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Section 4 - Control and Indicating Devices

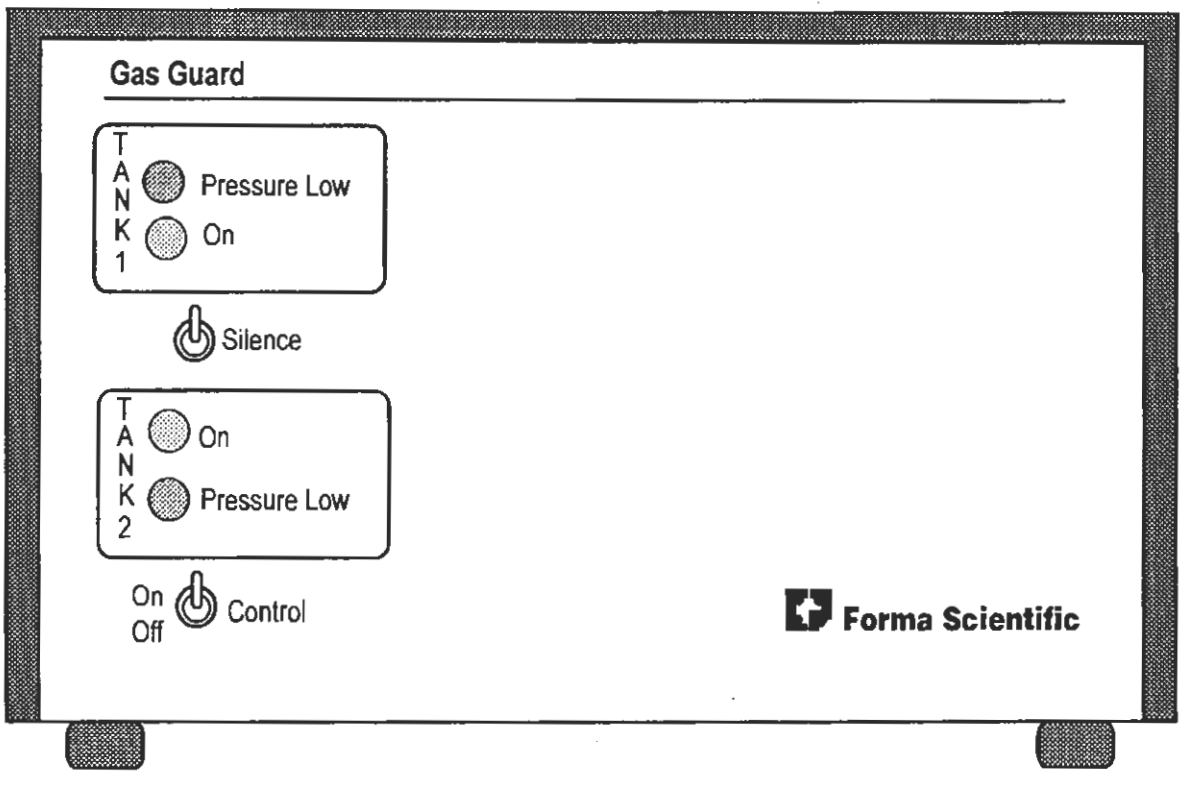


Figure 4-1
Gas Guard, Front View

4.1 Control Switch

The Control switch controls power to the Gas Guard control circuit board. The yellow LEDs on the front panel designate which tank is active and indicate the unit is receiving power.

4.2 Silence Switch

The Silence switch silences the alarm and selects the alternate tank. If the Silence switch fails to silence the alarm, it is an indication that both gas tanks are depleted or incapable of producing 15 PSIG.

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Note: During initial start-up, the incubator connected to the Model 3050 Gas Guard should not be injecting gas.

4.3 Gas Depletion Alarm

The gas depletion alarm sounds automatically when the active supply tank becomes empty. The other tank becomes active with the sounding of the alarm.

Note: Should both supply tanks become depleted, the only way to silence the alarm is to turn the CONTROL switch to Off.

4.4 Active Tank Indicating Lights

The two yellow indicating lights, labeled TANK1 On and TANK2 On, located on the front of the control panel indicate which of the gas tanks is active.

4.5 Pressure Low Indicating Lights

The two red indicating lights, labeled Pressure Low, indicate when a supply tank is depleted. If both tanks are depleted both red indicating lights will be lit.

4.6 Voltage Select Switch (refer to Figure 3-1)

The VOLTAGE SELECT switch located on he back of the unit permits the selection of the proper electrical line voltage (115V or 230V).



Make sure to set the switch to the correct voltage before connecting the unit to power.

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4.7 Remote Alarm Contact (refer to Figure 3-1)

A SPDT relay is provided for monitoring alarm conditions on the Gas Guard. Connections are made by means of an RJ-11, telephone style jack, located on the back of the unit. Figures 4-2 and 4-3 show the connector wiring diagram. A power outage or low gas pressure on the Gas Guard will activate the relay.

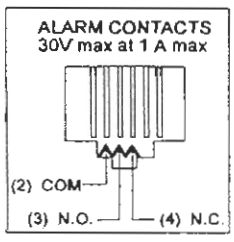
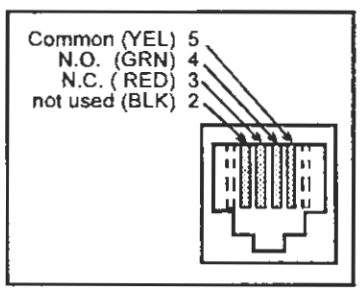


Figure 4-2

IMPORTANT USER INFORMATION

Caution! Stored product should be protected by an activated alarm system capable of initiating a timely response 24 hours/day. Forma Alarms provide interconnect for centralized monitoring.



Stock # 190392
RJ-11 to Screw
Terminal Converter

Stock # 190388
Modular to Modular Cable, 12 ft.
Standard Telephone 4-Cond. Line Cord
(Note Crossed Pinning)

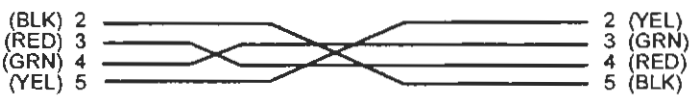


Figure 4-3

A modular to modular cable, Forma stock no. 190388 and an RJ-11 telephone style terminal converter, Forma stock no. 190392 or equivalent may be used to convert to a screw terminal connection. Refer to the above illustration.

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Section 5 - Specifications and Parts List

Specifications - Model 3050/3052

Exterior Dimensions	7.13"W x 5.13"H x 9.25 F-B (18.1 cm x 13.1 cm x 23.5 cm)
Gas Connections	Inlet - two 1/4" barb fittings; Outlet - one 1/4" barb fitting
Inlet Pressure	15 PSIG
Construction	18 Ga. CRS, Heavy-gauge metal with powder coated finish
Electrical Power Connection Installation Category	Switchable from 90-125V/180-250V, 1 PH 50/60 Hz, 1.0 FLA IEC 320 Female Plug (Overvoltage Category) II Pollution Degree 2
Remote Alarm Contact Contact Rating	RJ-11 Phone Jack (C, NO, NC) 30V, 1A Max
Shipping Weight	10 lbs. (4.5 Kg)
Environmental Conditions (Indoor Use only)	Ambient Conditions: 5°C to 40°C Relative Humidity: 80% up to 31°C, then decreasing linearly to 50% at 40°C Altitude: Up to 2000 Meters above sea level

Parts List - Model 3050/3052

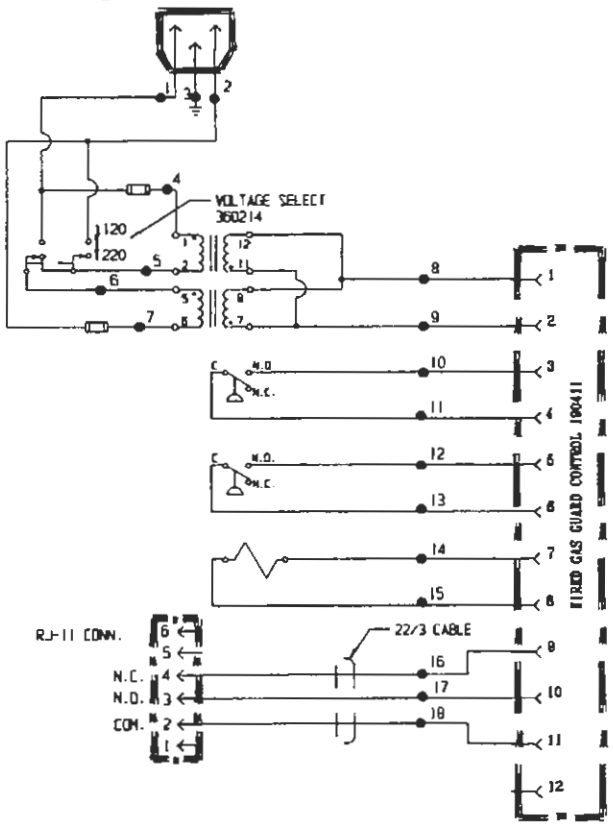
STOCK #	DESCRIPTION
190411	Wired WJ Gas Guard Control
230120	Fuse, BK/GMC-500mA, 250V Time Delay (T)
250108	Solenoid Valve, Brass, 12VDC
360213	Pressure Switch, 12.5 Adjustable
360214	Voltage Select Switch, DPDT
420082	Transformer, 80 VA
430108	Cordset, 10A, 125V
460123	Power Inlet, Snap-In
190388	Cable, 12 Ft.
190392	RJ-11 Telephone Style Jack

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Section 6 - Schematic

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POWER CONNECTION
90-125V / 180-250V 50/60HZ
0.4A /0.2A 1PH 2WIRE



POWER ENTRY, (IEC 320)
460123

500 MA FUSE
230120

TRANSFORMER, 80VA
420082

500 MA FUSE
230120

SUPPLY #1, PRESSURE SWITCH
360213

SUPPLY #2, PRESSURE SWITCH
360213

GAS CONTROL SOLENOID
250108

REMOTE ALARM OUTPUT
(Shown in Alarm State)

WIRE REFERENCE CHART		
NO.	GA.	COLOR
1	22	BLACK
2	22	WHITE
3	22	GRN/YEL
4	22	BLACK
5	22	BLUE
6	22	ORANGE
7	22	WHITE
8	22	BROWN
9	22	YELLOW
10	22	PURPLE
11	22	PURPLE
12	22	ORANGE
13	22	ORANGE
14	22	BLUE
15	22	BLUE
16	22	BLACK
17	22	RED
18	22	GREEN

16, 17, 18 — 22/3 CABLE

NOTES:

⊛	Denotes Terminal Strip Connection	Parts List Reference Number
	Last Relay Number	○ Assembly
	Last Terminal Number	⬠ Panel
	Last Wire Number	○ Refrigeration
		□ Wiring

CUSTOMER APPROVAL/REFERENCE
APPROVED BY
APPROVING FIRM
DATE OF APPROVAL

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Forma Scientific

REV	ECN NO.	DATE	BY	CAD	APPD	DESCRIPTION OF REVISION
1	IN-2200	12-04-96	BKH	KD		IEC-1010 UPDATES
0	N/A	8-19-93	GW	GW	M.H.	RELEASED FOR PRODUCTION

DATE 7-26-93 | DWN GW | CAD GW | APPD M.H. | SCALE NONE
CUSTOMER
JOB TITLE 3050 GAS GUARD
DWG TITLE ELECTRICAL SCHEMATIC
LOCATION INCUBTOR01 | JOB NUMBER | DRAWING NUMBER 3050-70-0-D

Electrical Schematic
Forma Model:
3050
Gas Guard

3050-70-0-D Rev. 1
Page 1 of 1

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Section 7 - Warranty Information

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FORMA STANDARD PRODUCT WARRANTY

Dear Purchaser

Good performance is what you expect when you buy products from Forma Scientific, Inc. We, too, are concerned about performance. That's why we offer the following One Year Protective Warranty:

The Warranty Period starts two weeks from the date your equipment is shipped from our factory. This allows for ample shipping time so that the warranty will go into effect at approximately the same time your equipment is delivered. This same protection extends to any subsequent owner during the warranty period.

During the one year warranty period, component parts proven to be defective in materials or workmanship will be repaired or replaced at our expense, labor included. Installation and calibration is not covered by this warranty agreement. The Forma Scientific, Inc. Service Department must be contacted for warranty determination and direction prior to any work being done.

Expendable items such as glass, filters, pilot lights, light bulbs, and door gaskets are excluded from this warranty coverage. Naturally, our warranty does not cover damage caused by accident, misuse, fire, flood, or acts of God.

Replacement or repair of component parts or equipment under this warranty shall not extend the warranty to either the equipment or to the component part beyond the original one year warranty period. The Forma Service Department must give prior approval for the return of any components or equipment.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL OR IMPLIED. NO WARRANTIES OF MERCHANTIBILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. Forma Scientific, Inc. shall not be liable for any indirect or consequential damages including, without limitation, damages relating to lost profits or loss of products.

A word on installation and operation. We know you expect a proper installation. Your local Forma Sales Office is ready to help with comprehensive site preparation information before your equipment arrives. Printed instruction manuals carefully detail equipment installation, operation, and preventive maintenance.

And about equipment service? Let's face it. Even the best products need service. If this occurs, please call your Forma Service Office at 1-800-848-3080 in the USA. We're ready to answer your questions on equipment warranty, operation, maintenance, service and special applications.

We encourage you to keep this warranty explanation. You may never need it, but it's nice to know the protection is there.

Sincerely,

FORMA SCIENTIFIC, INC.

ISO 9001 REGISTERED

CONDITIONS AND TERMS OF SALE

SPECIFICATIONS AND MATERIAL CHANGES: Forma Scientific, Inc. reserves the right to offer our latest and improved models at time of shipment.

SHIPMENTS: All shipments are FOB Marietta, Ohio, freight prepaid and add. Unless Specific shipment instructions are provided, shipment will be made by the least expensive method.

PRICES: All prices are firm for the delivery period specified based on receipt of a purchase order within 30 days. Purchase Orders received after this time are subject to review and price adjustment. If, after acceptance of a Purchase Order the required delivery date is modified by the purchaser, Forma reserves the right to adjust the price to recover additional expenses incurred, due to increased labor or material cost (including mark-up), inventory expenses, and such like. In addition, Forma Scientific, Inc. will be entitled to invoice and receive payment for 90% of the value of labor and material expended.

TAXES: The prices quoted do not include any state, local or federal taxes.

PAYMENT: All payments are net 30 days from date of shipment. Order acceptance is subject to approval of our Credit Department.

CANCELLATION: Orders shall not be subject to cancellation unless cancellation charges are paid by the purchaser. Custom, non-catalog and modified units are not subject to cancellation under any condition.

DAMAGES OR SHORTAGES: Claims for shortages in shipment must be made within 5 working days of receipt of material. If the outer crate or carton is damaged in any way, purchaser should not sign the bill of lading until the carrier notes such damage on the bill of lading. Without this notation, carriers usually refuse purchaser damage claims. Unauthorized return of goods will be refused at Forma's dock. Authorized returned goods will be allowed at a 20% restocking charge plus whatever expenses are necessary to return material to first class, saleable condition. Custom fabricated or modified equipment is not subject to return under any condition.

DELIVERY: Delivery dates are approximate and based on production at time of quotation. Forma shall not be liable for damages to the purchaser for any default or delay in delivery for any reason. Every effort shall be made to meet the delivery quoted, but failure to meet the estimated delivery will not be considered cause for cancellation and/or claims which may arise from such delay.

LIMITATION OF LIABILITY: In no event, whether as a result of breach of contract, warranty or tort (including negligence and strict liability), shall Forma Scientific, Inc. be liable for any consequential or incidental damages including, but not limited to, loss of profit or revenues, loss of use of the equipment or any associated equipment, down-time costs, cost of substitute equipment, costs of labor, costs due to delays or claims of Purchaser's own customers for such damages. Purchaser agrees to indemnify Forma Scientific, Inc. and hold Forma Scientific, Inc. harmless from any and all liability, claims, demands, actions, suits, expenses or costs, including reasonable attorney's fees relating to such consequential or incidental damages.

The responsibility of Forma Scientific, Inc. for damages due to injuries, or death of employees of the Purchaser, or ultimate user of the equipment being serviced, caused by the equipment, shall be limited to that portion of such damages as might be attributed to the negligence or strict liability of Forma Scientific, Inc. The Purchaser and ultimate user agree to indemnify Forma Scientific, Inc. and hold Forma Scientific, Inc. harmless from any further damages, indemnity or contribution. All warranties, limitations of liability and indemnities provided herein will survive the termination of this agreement.

Forma Scientific's liability for any claim of any kind (including negligence and strict liability) for any loss or damage arising out of, or resulting from, this agreement or from the performance or breach thereof, or from the Services, Products or Parts furnished hereunder shall in no case exceed the price of the same giving rise to the claim.

INSTALLATION: Installation of all equipment shall be by, and at the expense of, the purchaser unless quoted herein. When installation is quoted, it is understood that elevator service will be made available to Forma Scientific, Inc. at no charge to move the equipment to specific locations. If elevator service is not available or if access to the specified location is not adequate, Forma Scientific, Inc. reserves the right to bill the purchaser for the additional cost of work required.

ACCEPTANCE: Orders, terms and specifications are subject to approval of Forma Scientific, Inc., Home Office. No variation shall be binding unless in writing signed by a Forma executive officer.

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FORMA INTERNATIONAL DEALER WARRANTY

Dear Forma Representative:

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The Warranty Period starts two months from the date your equipment is shipped from our factory. This allows for ample shipping time so that the warranty will go into effect at approximately the same time your equipment is delivered. This same protection extends to any subsequent owner during the warranty period. We have provided a means of delaying initiation of the warranty period for those dealers who stock our equipment. The warranty will go into effect upon the installation date when the warranty card has been completed and returned to the attention of the Forma Scientific Service Manager. This delayed warranty beginning is valid for a maximum of six months from the date of shipment from Forma. If no warranty card has been received by Forma within six months, the warranty period will begin two months from the date of shipment from our factory.

During the one year warranty period all component parts proven to be defective in materials or workmanship will be replaced at our expense, excepting labor. Installation and calibration are not covered by this warranty agreement.

Expendable items such as glass, filters, pilot lights, light bulbs, and door gaskets are excluded from this warranty coverage. Naturally, our warranty does not cover damage caused by accident, misuse, fire, flood, or acts of God.

Replacement or repair of component parts or equipment under this warranty shall not extend the warranty to either the equipment or to the component part beyond the original one year warranty period. The Forma Service Department must give prior approval for the return of any components or equipment.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL OR IMPLIED NO WARRANTIES OF MERCHANTIBILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. Forma Scientific shall not be liable for any indirect or consequential damages including, without limitation, damages relating to lost profits or loss of products.

A word on installation and operation. We know that your customer expects a proper installation. The Forma International Sales Office is ready to help with information regarding site preparation before your equipment arrives. Our printed instruction manuals carefully detail equipment installation, operation, and preventive maintenance.

If you require immediate information regarding equipment service for your customer, please contact the Forma Service Manager at telephone: 614/373-4763, telex: 29-8205 or cable: FORMAEX. We are ready to answer your questions on equipment operation, maintenance, service and special applications.

The warranty stated above is in lieu of all other warranties, expressed or implied, of merchantibility, or fitness for particular use.

Sincerely,
Forma Scientific, Inc.

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TAXES: The prices quoted do not include any state, local or federal taxes.

PAYMENT: All payments are net 30 days from date of shipment. Order acceptance is subject to approval of our Credit Department.

CANCELLATION: Orders shall not be subject to cancellation unless cancellation charges are paid by the purchaser. Custom, non-catalog and modified units are not subject to cancellation under any condition.

DAMAGES OR SHORTAGES: Claims for shortages in shipment must be made within 5 working days of receipt of material. If the outer crate or carton is damaged in any way, customer should not sign the bill of lading until the carrier notes such damage on the bill of lading. Without this notation, carriers usually refuse customer damage claims. Unauthorized returns of goods will be refused at Forma's dock. Authorized returned goods will be allowed at a 20% restocking charge plus whatever expenses are necessary to return material to first class, saleable condition. Custom fabricated or modified equipment is not subject to return under any condition.

DELIVERY: Delivery dates are approximate and based on production at time of quotation. Forma shall not be liable for damages to the buyer for any default or delay in delivery for any reason. Every effort shall be made to meet the delivery quoted, but failure to meet the estimated delivery will not be considered cause for cancellation and/or claims which may arise from such delay.

LIMITATION OF LIABILITY: In no event, whether as a result of breach of contract, warranty or tort (including negligence and strict liability), shall Forma Scientific be liable for any consequential or incidental damages including, but not limited to, loss of profit or revenues, loss of use of the equipment or any associated equipment, down-time costs, cost of substitute equipment, costs of labor, costs due to delays or claims of Customer's own customers for such damages. Customer agrees to indemnify Forma Scientific and hold Forma Scientific harmless from any and all liability, claims, demands, actions, suits, expenses or costs, including reasonable attorney's fees relating to such consequential or incidental damages.

The responsibility of Forma Scientific for damages due to injuries, or the death of employees of the Customer, or ultimate user of the equipment being serviced, caused by the equipment, shall be limited to that portion of such damages as might be attributable to the negligence of strict liability of Forma Scientific. The Customer and ultimate user agree to indemnify Forma Scientific and hold Forma Scientific harmless from any further damages, indemnity or contribution. All warranties, limitations of liability and indemnities provided herein will survive the termination of this agreement.

Forma Scientific's liability for any claim of any kind (including negligence and strict liability) for any loss or damage arising out of, or resulting from, this agreement or from the performance or breach thereof, or from the Services, Products or Parts furnished hereunder shall in no case exceed the price of the same giving rise to the claim.

INSTALLATION: Installation of all equipment shall be by, and at the expense of, the purchaser unless quoted herein. When installation is quoted it is understood that elevator service will be made available to Forma Scientific at no charge to move the equipment to specified locations. If elevator service is not available or if access to the specified location is not adequate, Forma Scientific reserves the right to bill the purchaser for the additional cost of work required.

ACCEPTANCE: Orders, terms and specifications are subject to approval of Forma Scientific, Home Office. No variation shall be binding unless in writing signed by a Forma executive officer.

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Declaration of Conformity

Manufacturer's Name:	Forma Scientific, Inc.
Manufacturer's Address:	Millcreek Road Marietta, Ohio 45750 U.S.A.
Product Description:	Gas Guard
Product Designation:	**3050**
Year of Initial Marking (CE):	1995
Affected Serial Numbers:	**"nnnnn-1309" and upwards** (where "nnnnn" may equal any number)

This product conforms to the following European Union Directive(s):

EMC:	89/336/EEC
LVD:	73/23/EEC

This product conforms to the following Harmonized, International and National Standards:

EMC:	**LVD:**
EN 55022, Class B	EN 61010-1:1993
EN 50082-1	IEC 1010-1 Amendment 2
	CSA C22.2 No. 1010.1-92

Louis E. Urschel, Jr.
V. P. of Quality
Forma Scientific, Inc.
5 January 1998

Rev. 2

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Declaration of Conformity

Manufacturer's Name:	Forma Scientific, Inc.
Manufacturer's Address:	Millcreek Road Marietta, Ohio 45750 U.S.A.
Product Description:	Gas Guard
Product Designation:	**3052**
Year of Initial Marking (CE):	1995
Affected Serial Numbers:	**"nnnnn-55" and upwards** (where "nnnnn" may equal any number)

This product conforms to the following European Union Directive(s):

EMC:	89/336/EEC
LVD:	73/23/EEC

This product conforms to the following Harmonized, International and National Standards:

EMC:	**LVD:**
EN 55022, Class B	EN 61010-1:1993
EN 50082-1	IEC 1010-1 Amendment 2
	CSA C22.2 No. 1010.1-92

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