



**INSTALLATION, OPERATION
AND MAINTENANCE MANUAL**

FOR

GH SERIES

ODOR CONTROL HEADS



UNIT MODEL NO. _____
UNIT SERIAL NO. _____
SERVICED BY: _____
TEL. NO: _____

**CANADIAN
HEAD OFFICE
AND FACTORY**

1401 HASTINGS CRES. SE
CALGARY, ALBERTA
T2G 4C8
Ph: (403) 287-2590
Fx: 888-364-2727

**USA
HEAD OFFICE
AND FACTORY**

32050 W. 83rd STREET
DESOTO, KANSAS
66018
Ph: (913) 583-3181
Fx: (913) 583-1406

**CANADIAN
EASTERN FACTORY**

1175 TWINNEY DRIVE
NEWMARKET, ONTARIO
L3Y 5V7
Ph: (905) 898-1114
Fx: (905) 898-7244

SALES OFFICES ACROSS CANADA AND USA

Retain instructions with unit and maintain in a legible condition.
Please give model number and serial number when contacting
factory for information and/or parts.

www.engineeredair.com

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YOU HAVE RESPONSIBILITIES TOO

This installation, operation and maintenance manual cannot cover every possibility, situation or eventuality. Regular service, cleaning and maintaining the equipment is necessary. If you are not capable of performing these tasks, hire a qualified service specialist. **Failure to perform these duties can cause property damage and/or harm to the building occupants and will void the manufacturer's warranty.**



<p>Warning:</p> 	<p>Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operation and maintenance manual thoroughly before installing or servicing this equipment.</p>
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INTRODUCTION


TRI-MED GH oxidizer heads are high quality products designed and manufactured to provide many years of trouble-free operation. We recommend that this manual be read thoroughly to ensure proper installation, efficient operation, and proper maintenance of this equipment. The submittal record is considered to be part of the Installation, Operation and Maintenance Manual.

SAFETY PRECAUTIONS

Read, understand and follow the complete manual before beginning the installation, including all safety precautions and warnings.

<p>Warning:</p>  	<p>This unit contains high voltage circuits. Electrical shock or death could occur if instructions are not followed. This equipment contains moving parts that can start unexpectedly. Injury or death could occur if instructions are not followed. All work should be performed by a qualified technician. Always disconnect and lock out power before servicing. DO NOT bypass any interlock or safety switches under any circumstances.</p>
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<p>Caution:</p> 	<p>This unit generates high concentrations of ozone. Operate only as directed in this manual. Never breathe the air directly discharged from the unit. Ozone can be a respiratory irritant.</p>
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<p>Warning:</p> 	<p>The ETL certification carried by this unit applies for installing the unit in a non-hazardous location. This unit is approved to the UL 867(US)/CSA C22.2 No. 187 (Canada). It is the owner's and/or agent's responsibility to obtain the appropriate approvals to use this unit in a hazardous environment.</p>
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WARRANTY

LIMITED WARRANTY TRI-MED will furnish without charge, F.O.B. factory, freight collect, replacement parts for, or repairs to products covered herein which prove defective in material or workmanship under normal and proper use for a period of twelve (12) months from the date of shipment, provided the customer gives TRI-MED written notice of such defects within such time periods and provided that inspection by TRI-MED establishes the validity of the claim and all pertinent invoices have been paid in full. The repairs or replacements will be made only when the complete product(s) or part(s) claimed to be defective are returned to TRI-MED or a depot designated by TRI-MED, transportation charges prepaid. Repairs or replacements as provided for by this paragraph shall constitute fulfillment of all TRI-MED's obligations with respect to this warranty. Corona plates and filters are considered consumable items and are to be replaced by the owner/operator as per the maintenance schedule. Corona plates broken after original shipment will not be considered a manufacturing defect and replacement will be the responsibility of the owner/operator. This warranty does not apply to any products or parts thereof that have been subject to accident, misuse or unauthorized alterations, or where TRI-MED's installation and service requirements have not been met.

The foregoing warranty is in lieu of all other warranties, express or implied. TRI-MED specifically disclaims any implied warranty of merchantability and/or fitness for purpose. Under no circumstances shall TRI-MED be liable to, nor be required to indemnify, Buyer or any third parties for any claims, losses, labour, expenses or damages (including special, indirect, incidental, or consequential damages) of any kind, resulting from the performance (or lack thereof) of this Agreement or the use of, or inability to use the goods sold hereunder, including, but not limited to, damages for delay, temporary heating/cooling costs, loss of goodwill, loss of profits or loss of use. Furthermore, the parties agree that the Buyer's sole remedy under this Agreement shall be limited to the limited warranty set forth in the preceding paragraph relating to the repair or replacement of any defective goods. Under no circumstances shall any claim or award against TRI-MED exceed the original contract price whether awarded through arbitration, litigation or otherwise.

TRI-MED Warranty is void if:

1. The unit is not installed in accordance with this manual.
2. The start-up and operation of the unit is not performed in accordance with this manual.
3. The unit is operated in an atmosphere containing corrosive substances.
4. The unit is allowed to operate during building construction.

PARTS

Contact the nearest Engineered Air sales office or factory for replacement parts. Be sure to include Model Number, Serial Number, date of installation, the nature of the failure and the description of the part(s) required. Some parts may not be stocked items and must be manufactured or ordered.

RECEIVING

Refer to the back of the packing slip for receiving instructions.

On receipt of the unit, check for damage. Inspect protective covers for punctures or other signs that there may be internal damage. Remove protective covers and check for internal damage. Replace covers if the unit is not being installed at this time. Open access doors and check for internal damage. Close access doors when inspection is complete.

All units are pre-tested at the factory immediately prior to shipping and are ensured to be in good operating condition at that time. If damage is found, refer to the instructions on the back of packing slip.


On receipt of the unit, check the electrical characteristics (see rating plate) to make sure that the electrical supply matches. All parts for field installation are listed on the shipping order form.


TEMPORARY STORAGE

If a unit is to be stored prior to installation the following precautions are required:

- Store in a well drained area that will not accumulate surface water.
- Store in an area where the unit will not be damaged.
- All protective coverings that were provided for shipping must be in place.
- Protect indoor mounted equipment from rain and snow.

INSTALLATION

Warning: 	This unit is not explosion proof. It is not suitable for hazardous locations as defined by the National Electrical Code of the Canadian Electrical Code.
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Warning: 	All wiring and piping installation must be completed by qualified technicians in accordance with all federal, state, provincial and/or local codes.
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Note: Installation shall be in accordance with this manual and all other associated component and control Installation, Operation and Maintenance Manuals.

CODES

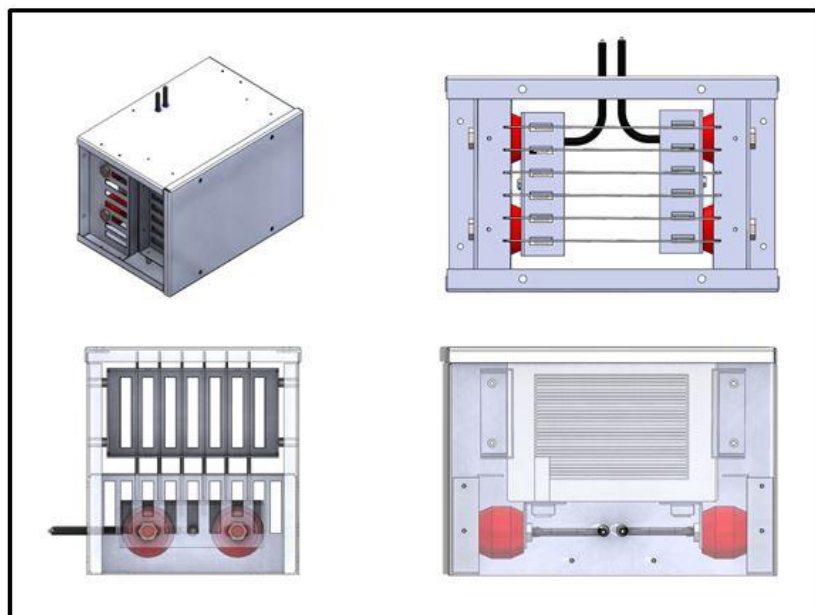
In Canada:

1. The installation of this unit shall be in accordance with the latest edition of the Canadian Electrical Code, Part 1 - C.S.A. Standard C22.1, Provincial and Local Codes, and in accordance with the local authorities having jurisdiction.
2. This unit shall be electrically grounded in accordance with the latest edition of the Canadian Electrical Code, Part 1 - C.S.A. Standard C22.1, Provincial and Local Codes, and in accordance with the local authorities having jurisdiction.
3. The installation of this unit shall be in accordance with all other National, Provincial, and Local Codes, and in accordance with the local authorities having jurisdiction.


In USA:

1. The installation of this unit shall be in accordance with the latest edition of the National Electrical Code, (ANSI/NFPA 70), State and Local Codes, and in accordance with the local authorities having jurisdiction.
2. This unit shall be electrically grounded in accordance with the latest edition of the National Electrical Code, (ANSI/NFPA 70), State and Local Codes, and in accordance with the local authorities having jurisdiction.
3. The installation of this unit shall be in accordance with all other National, State, and Local Codes, and in accordance with the local authorities having jurisdiction.

Assembly Drawing





ELECTRICAL CONNECTIONS

	<p>DO NOT install anything that will interfere with equipment access or rating plate.</p>
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BEFORE STARTING

1. Set all associated electrical switches, controls and disconnect switch to “OFF” position.
2. Tighten all electrical connections.
3. Confirm all shipping materials have been removed. See any supplemental instructions to help identify possible locations.
4. Confirm voltage is within $\pm 10\%$ of rating plate. If not, contact the installing electrical contractor and have the voltage condition corrected before continuing.

MAINTENANCE

<p>Warning:</p>  	<p>This unit contains high voltage circuits. Electrical shock or death could occur if instructions are not followed. This equipment contains moving parts that can start unexpectedly. Injury or death could occur if instructions are not followed. All work should be performed by a qualified technician. Always disconnect and lock out power before servicing. DO NOT bypass any interlock or safety switches under any circumstances.</p>
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The effectiveness of the GH generator head is a function of its ability to convert oxygen (O₂) to ozone (O₃) through high voltage corona plates. It is essential to maintain airflow through clean corona plates. Dirty filters will not only reduce the oxygen across the corona plates, but also can change the air balance. To provide a maintenance history, it is recommended that the owner have a maintenance file.

The following maintenance instructions are to be carried out by qualified service personnel.

MAINTENANCE SCHEDULE

Every installation is different. Therefore, a maintenance schedule needs to be established based on each installation. An initial two-month or 1400 hour inspection must be performed. If the filters and plates are found to be dirty, clean and replace and adjust the maintenance schedule accordingly. A review of the installation should be performed to find the source of the contamination.

Note: Seasonal changes may affect the maintenance requirements. Adjust the schedule accordingly. The maximum time between maintenance checks should be 6 months.

ELECTRICAL

1. Check all wiring for loose connections.
2. Check voltage at unit (while in operation).
3. Check amperage draw against unit rating plate.

CORONA PLATES

Disconnect the power from the unit. Locate the generator head(s) and remove the cover. Each generator head has up to 6 corona plates. Locate the corona plates. Slide them out of their locating grooves and clean. All plates must be cleaned at the same time.

Plate Cleaning:

The oxidizer includes a second complete set of corona plates when delivered new. Alternate plate usage between the two sets. Clean the dirty corona plates by using a dishwasher or hand wash. If cleaning by hand, begin cleaning the plates by spraying or dipping them in cleaning solution. The cleaning solution should be a detergent product that is capable of breaking down oils and greases but leaves no residue when rinsed off. If the plates are rinsed in hard water, then clean compressed air should be used to dry off of the corona plates to prevent hard water deposits.

CORONA PLATE INSPECTION:

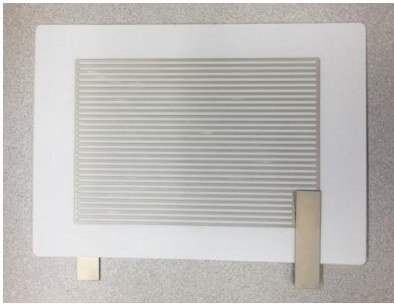
After cleaning, inspect each corona plate for pin holes or other damage. A pin-hole in the plate will cause the generator head(s) to operate incorrectly. Holes or cracks should not be visible on the plate. Replace any corona plates that fail inspection.

After the plates have been checked, reinstall the cover.

TROUBLESHOOTING CHART

Symptoms	Problem	Cure
Power on - blower on - no corona buzz or odor too high	Oxidizer output control not high enough	Adjust Oxidizer Output control higher. Energize additional generator heads. Verify air flow balance across head assembly.
	Corona plates dirty	Clean corona plates. See Plate Cleaning on page 8.
	No voltage at plates after cleaning	Inspect for plate damage and replace damaged plate.
	Defective transformer	Check primary and secondary voltages and replace if required.

Clean Plate



Dirty Plate



Broken Plate

