



**MATHESON
TRI•GAS**

ask. . .The Gas Professionals™



Gas Cylinder Warmers (HQ2015)

Instruction Manual



Read and understand this material before operating or servicing these gas cylinder warmers. Failure to understand how to safely operate these heaters could result in an accident causing serious injury or death. These heaters should only be operated by qualified personnel.

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INTRODUCTION

MATHESON TRI-GAS Cylinder Warmers are designed to prevent stratification of calibration mixtures, and prevent condensation of components, in either indoor or outdoor locations. The HQ2015 series are designed for CSA Class I Division I Groups C & D locations. For successful operation of these warmers, read and understand these instructions prior to use.

Custom cylinder warmers for pressure increase or extreme temperatures are available upon special order.



SAFETY ALERT SYMBOL

The symbol above is used to call your attention to instructions concerning your personal safety. It points out important safety precautions. It means **“ATTENTION! Become Alert! Your Personal Safety is involved!”** Read the message that follows and be alert to the possibility of personal injury or death.



Immediate hazards which WILL result in severe personal injury or death



Hazards or unsafe practices which COULD result in severe personal injury or death



Hazards or unsafe practices which COULD result in minor personal injury or property damage.

SAVE THESE INSTRUCTIONS!

Additional copies of this manual are available upon request.

IMPORTANT SAFETY INSTRUCTIONS



⚠ DANGER

A person who has not read and understood all operating instructions is not qualified to operate this product.

⚠ DANGER

- Do not immerse heater in liquid.
- Keep sharp metal objects away from heater.
- Keep volatile or combustible material away from heater when in use.
- Keep enclosure cover tight while circuits are alive.

Failure to observe these warnings may result in electric shock, risk of fire, and personal injury.

⚠ CAUTION

- Inspect gas cylinder warmer before use. Do not use warmer with torn or worn surfaces.
- Keep enclosure cover tight while circuits are alive.
- Do not repair damaged or faulty warmers.
- Do not crush or apply severe physical stress on warmer or cord assembly.
- Unplug warmer when not in use.
- Use gas cylinder warmer for warming gas cylinder bottles only. Use specific sized heater with same sized cylinder. Do not use for other applications.

Failure to observe these warnings may result in personal injury or damage to the warmer.

⚠ WARNING

End User Must Comply to the Following:

- Only qualified personnel are allowed to connect the electrical wiring.
- All electrical wiring must follow local electrical codes.
- Final installation/wiring is to be inspected by the authority who has jurisdiction in the area that the Gas Cylinder Warmer is installed.
- Explosion hazard: Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- The end-user is responsible for providing a suitable disconnecting device.
- The end-user is responsible for providing suitable over-protection device. It is highly recommended that a ground fault circuit breaker be used.

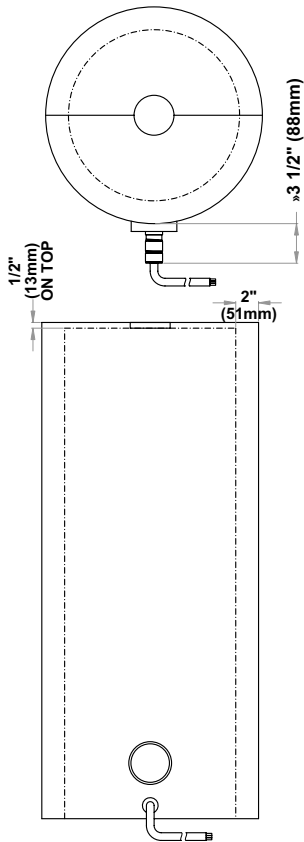
SPECIFICATIONS

Operating conditions:

Operating Ambient Temperature Range:	50°F-95°F (10°C – 35°C)
Temperature Range maintained on Bottom of Cylinder:	90°F-130°F (32°C – 54°C)
Temperature Range maintained on Top of Cylinder:	80°F-120°F (27°C – 49°C)

Self-Regulating Grounded Heating Element	120 or 240 Volts Models
Up to 75 Watts	Water Resistance
Oil and Some Chemical Resistance	Both Indoor and Outdoor Use
HQ2015 Series: CSA Class I Division I Groups C & D	

Part Drawing



OPERATION INSTRUCTIONS

⚠ WARNING

Read and understand this entire manual before operating this gas cylinder warmer.

**VOLTAGE:
120VAC; 240VAC**

STEP 1

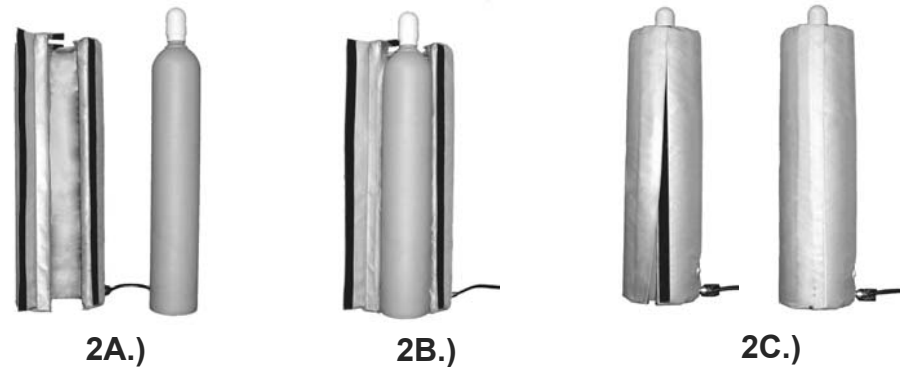
Remove heater from box. Make visual inspection of heater. Do not use if torn or damaged.

STEP 2

Gas cylinder should be placed on a clean, dry surface. **2A.)** Open VELCRO® closure on heater and position around cylinder with the power lead exit on the bottom of the heater. **2B.)** Heater should be positioned on cylinder such that it is covering the cylinder from the floor to the top of the cylinder. **2C.)** Attach VELCRO® closure so heater is tight against the cylinder with no sagging or bundling. Cover any valves on top of cylinder with optional insulating blanket. (sold separately)

STEP 3 (see page 3 for electrical compliance)

Terminate power cord to appropriate electrical power supply. The power cord consists of three color-coded conductors, black, white, and non-insulated. The black wire should be connected to incoming hot line. The white wire should be connected to the neutral (for 120V) or power return (for 240V). The non-insulated wire should be connected to earth ground. The power connections must be adequately rated to electrically support the voltage and amperage of the heater. Follow all local electrical codes for proper electrical connections.



TROUBLESHOOTING GUIDE

Please read this guide prior to contacting MATHESON TRI-GAS. This guide is designed to answer the most commonly asked questions. If you are unable to identify the problem or need additional assistance, please contact Matheson Tri-Gas at **1-800-416-2505 or 215-641-2700, or info@matheson-trigas.com.**

PROBLEM	SOLUTION(S)
Does not heat	Verify heater is connected to proper voltage. The identification label located on the power cord indicates the heater's voltage requirement. Check to see if there is a resistance reading (not an open circuit) in heater using an ohm meter.
Circuit breaker is tripping	Validate that the circuit breaker is capable of handling the amp requirement of heater. The identification label located on the power cord indicates the heater's amperage requirement. Examine heater and cord for any damage.
Does not fit	Confirm that the heater provided was designed to fit around your specified gas cylinder. If the heater was not designed for the specified gas cylinder, please call 1-800-416-2505 or 215-641-2700 for further assistance.
Something has lightly spilled on exterior or interior	Apply any general household cleaner, that does not contain any silicone rubber dissolving type ingredients, with a clean cloth fabric.

LIMITED WARRANTY

This equipment is sold by Matheson Tri-gas (Matheson) under the warranties set forth in the following paragraphs. Such warranties are extended only with respect to the purchase of this equipment directly from Matheson or Matheson's Authorized Agent as new merchandise and are extended to the first Buyer thereof other for than the purpose of resale.

For a period of one year from date of original delivery (ninety days in corrosive service) to Buyer or to Buyer's order, this equipment, is warranted to be free from functional defects in materials and workmanship and to conform to the description of this equipment contained in this manual and any accompanying labels and/or inserts, provided that this equipment is properly operated under the conditions of normal use and that regular and periodic maintenance and service is performed or replacements are made in accordance with the instructions provided. Expendable parts of this equipment are similarly warranted to be free from functional defects in materials and workmanship and to conform to the description of this equipment contained in this manual and any accompanying labels and/or inserts. The foregoing warranties shall not apply if the equipment has been repaired other than by Matheson or a service facility designated by Matheson, or if this equipment has not been operated and maintained in accordance with written instructions provided by Matheson, or has been altered by anyone other than Matheson, or if the equipment has been subject to abuse, misuse, negligence or accident.

Matheson's sole and exclusive obligation and the Buyer's sole and exclusive remedy under the above warranties is limited to repairing or replacing, free of charge, at Matheson's sole discretion, the equipment or part which is telephonically reported to be a problem to the local Matheson Branch Location, and which if so advised, is returned with a written statement of the observed deficiency, not later than seven days after the expiration of the applicable warranty, to the Matheson Tri-Gas Equipment Technology Center during normal business hours, transportation charges prepaid, and which, upon examination, is found to comply with the above warranties. Return trip transportation charges for the equipment or part shall be paid by the Buyer.

MATHESON SHALL NOT BE OTHERWISE LIABLE FOR ANY DAMAGES INCLUDING BUT NOT LIMITED TO INCIDENTAL DAMAGES, CONSEQUENTIAL DAMAGES, OR SPECIAL DAMAGES, WHETHER SUCH DAMAGES RESULT FROM NEGLIGENCE, BREACH OF WARRANTY OR OTHERWISE.

THERE ARE NO EXPRESS OR IMPLIED WARRANTIES WHICH EXTEND BEYOND THE WARRANTIES HEREINABOVE SET FORTH. MATHESON MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE EQUIPMENT OR PARTS THEREOF.

ACCEPTANCE OF THE EQUIPMENT BY THE FINAL BUYER INDICATES THE FINAL BUYER'S ACCEPTANCE OF ALL WARRANTIES AND LIMITATIONS SET FORTH ABOVE.



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