

# Metal Clad Hopper Heater



## Installation Manual



Read and understand this material before operating or servicing these heaters. 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.

**INTRODUCTION**

Thank you for purchasing a BriskHeat® Metal Clad Hopper Heating System. Your heaters are designed to provide a long and efficient service life with function, reliability, and safety in mind. For additional information concerning this, or other BriskHeat® products, please contact your local BriskHeat® distributor or contact us toll free (U.S. / Canada only) at 1-800-848-7673 or 614-294-3376.



**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

Agency Approvals	
MCH series	
	Ordinary Locations
APPROVED	
Approvals valid only when installed in accordance with all applicable instructions, codes, and regulations.	


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

**IMPORTANT SAFETY INSTRUCTIONS**



- Do not immerse heater in liquid.
- Keep volatile or combustible material away from heater when in use.
- Use heater only in approved locations.
- Keep sharp metal objects away from heater.


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



**End User Must Comply to the Following:**

- Only qualified personnel are allowed to connect electrical wiring.
- Disconnect all supply power at the source before making any power connections.
- All electrical wiring must follow local electrical codes and highly recommend following NEC Article 427.
- Final installation / wiring is to be inspected by the authority who has jurisdiction in the area that the heater is installed.
- The end-user is responsible for providing a suitable disconnecting device.
- The end-user is responsible for providing a suitable electrical protection device. It is highly recommended that a ground fault circuit breaker is used.

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



- Never handle the heater while it is in operation; always disconnect the heater from the power source and allow to cool prior to handling.
- Inspect heater before use.
- Never operate heater without a temperature control device.
- Do not wrap the heater over itself.
- If spillage of foreign matter onto heater occurs, disconnect from power source and clean after heater is allowed to cool.
- Never operate a heater without an appropriate heat sink. (Device being heated is considered a heat sink).
- Do not operate heater above rated temperature value.
- Fasten heater to device using approved methods only.
- Do not repair damaged or faulty heaters.
- Do not crush or apply severe physical stress on heater or cord assembly.
- Disconnect heater when not in use.

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

**SAVE THESE INSTRUCTIONS!**

Additional copies of this manual are available upon request.

**⚠ WARNING**

Read and understand this entire manual before operating this electric heater.

**PRIOR TO INSTALLATION**

1. Check for suspected damage to the MCH blanket such as rips, punctures, etc.
2. Verify surface to be heated is free from all sharp edges, weld splatter, rust, oil, etc. Surface must be clean prior to installing heater.
3. Check that the desired placement of the blanket will not cause damage to the blanket through impact shock, vibration, ambient temperature, or by neighboring moving parts.
4. Confirm voltage / wattage rating of heater is appropriate for power supply device or temperature controller. The heater is designed to work at a specific voltage to heat properly. For additional information, contact your local distributor or BriskHeat®.
5. Confirm blanket maximum exposure temperature rating is suitable for environment. The temperature of the internal heating element may run up to 25% higher than the external surface of the blanket. Use extreme caution for applications that require a process temperature near the maximum exposure temperature ratings of the blanket.

- MCH exposure temperature range: -60°F to 800°F (-51°C to 427°C)

6. Confirm all necessary installation hardware and tools are readily available. Depending on the application, this may include...

Tools:

wire strippers
cleaning / prep supplies (varies based on what is being cleaned)

Hardware:

junction box	wire ties	mounting hardware
plug if connecting heater to a receptacle rather than hard wiring to a temperature controller or junction box		
temperature controller and sensor	silicone RTV	insulating material
high-temperature adhesive tape (part # AAT2180)		

**MOUNTING:**

1.) Mark Locations of Mounting Holes to surface. Use “System Drawing” to see how to place metal clad heaters on the hopper. The “System Drawing” should be used when wiring and placing heaters on unit.



2.) a.) Insert Stud in Welder



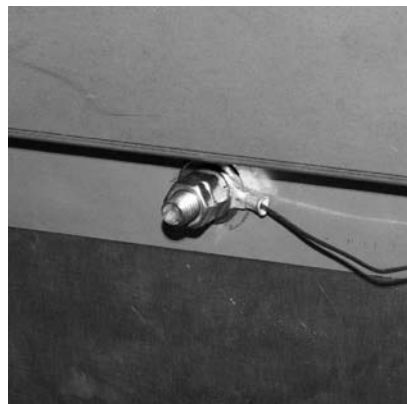
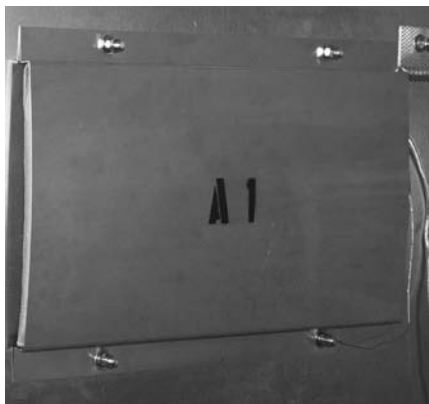
b.) Weld Stud to Hopper Wall



c.) Completed Stud



3.) Ensure surface is clean before placing heater. Place heater in metal cover slot then attach to studs. Install flat washer, ground wire, lock washer, nut, and then install 2nd jam nut to secure heater in place.



(Example shown is for Capacitive Discharge stud welding. If Acr-welding then ferrule is included along with stud.)

**NOTE:** The Metal Clad Hopper Heating System must be connected to an external control device. DO NOT turn on unless temperature controller is applied.

**CONNECTING YOUR HEATING BLANKET TO A POWER SOURCE:**

1. The heater **must** be connected to an external control device. The heater must not be operated without some form of temperature control.



- Your heater is designed to operate at a specific voltage  $\pm 10\%$ . Refer to the label on the heater for proper operating voltage and wattage information. Failure to operate the heater at the specified rating could result in overheating of the heating blanket, the surface being heated, or personal injury. Also note lower-than-rated voltage will result in under-heating.

- All electrical connections must be made by qualified personnel and in accordance with all applicable codes and regulations.

2. Ensure heater is protected by a properly rated circuit breaker or fuse.

3. Use of a ground fault circuit interrupter (GFCI) is highly recommended and may be required according to local electric code.

4. Two wires (same color) should be connected to the power source (or temperature control device) directly, through a junction box, or to a connector that is mated to a receptacle connected to the power source. BriskHeat® Metal Clad Hopper Heaters are non-polarized, allowing either wire to be connected to the neutral or hot. The third wire (if applicable), designated by the color green (or a green stripe), should be connected to ground. For three-phase installation, contact factory.

**TROUBLESHOOTING GUIDE**

Please read this guide prior to contacting BriskHeat®. 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 your local distributor/ representative or us at **1-800-848-7673, 614-294-3376**, or **bhtsales1@briskheat.com**.

PROBLEM	SOLUTION(S)
Does not heat	Verify heater is connected to proper voltage.  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 displays the heater's amperage requirement.  Examine heater and cord for any damage.  Check to see if there is a resistance reading between power leads and the ground lead.

## **WARRANTY INFORMATION**

BriskHeat® warrants to the original purchaser for the period of 5 years from date of shipment. Contact factory at 1-800-848-7673 (toll free, U.S. / Canada) or 614-294-3376 for complete details.

# **BriskHeat®**

BriskHeat® Corporation  
1055 Gibbard Ave, Columbus, OH 43201  
Toll Free: 800-848-7673  
Phone: 614-294-3376  
Fax: 614-294-3807  
Email: [bhtsales1@briskheat.com](mailto:bhtsales1@briskheat.com)  
Web site: [www.briskheat.com](http://www.briskheat.com)