



## BRISKAIRSP-1



## Instruction Manual



Read and understand this material before installing this heater. Failure to understand how to safely install the heater could result in an accident causing serious injury or death. This heater should only be installed by qualified personnel.

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## INTRODUCTION

Thank you for purchasing a BriskHeat<sup>®</sup> Hot Gun for Composite Curing. Your heater is designed to work with an TTQSD S16 temperature control device with functionality, reliability, and safety in mind. For additional information concerning this, or other BriskHeat<sup>®</sup> products, please 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.

***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.

### **⚠ CAUTION**

- 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 and connection kits before use.
- Never operate heater without a temperature control device.
- Do not wrap the heating cable 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.

### **⚠ DANGER**

- 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.

### **⚠ WARNING**

- Only qualified personnel are allowed to connect the electrical wiring.
- Disconnect all supply power at the source before making any heating cable power input 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 suitable electrical protection device. It is highly recommended that a ground fault circuit breaker be used.

**⚠ WARNING**

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

**PRIOR TO INSTALLATION**

1. Check for suspected damage to the heater.
2. Check that the desired placement of the heater will not cause damage to the heater through impact shock, vibration, ambient temperature, or by neighboring moving parts.
3. 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 BriskHeat<sup>®</sup>.

**HOT GUN SET-UP**

1. Perform composite lay-up of mounting pin.
2. Place hot gun into the metal stand with the handle facing upwards (Figure 1). Secure hot gun in place with provided hook and loop fastener strap.
3. Attach high-limit thermocouple (built-in to the hot gun) to the thermocouple extension wire. Connect to high-limit thermocouple input located on the back of TTQSD S16 temperature controller (Figure 2).



Figure 1



Figure 2

4. Attach power cord from hot gun to TTQSD S16 temperature controller.
5. Using the provided roll of AAT260 aluminum adhesive tape, attach the second thermocouple to the front bond line of the click-stud closest to the gun (Figure 3) For best results, ensure that the tip of the thermocouple is on the bond line but not touching the adhesive and the entire assembly is covered with aluminum tape. Plug the process control thermocouple attached to the pin to the controlling thermocouple input on the back of the TTQSD S16 temperature controller (Figure 4).

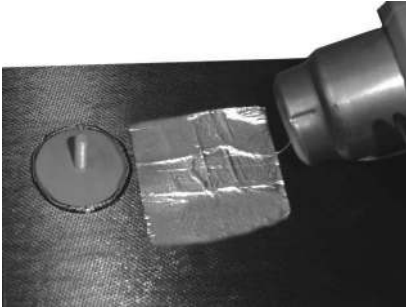


Figure 3



Figure 4

6. Place the output hot gun nozzle 2" (50mm) from the bond line.  
Position the hot at a 20° angle pointing downward at the bond line.

### OPERATION OF HOT GUN

#### **⚠ CAUTION**

The heater must NOT be operated without some form of temperature control.

#### **⚠ WARNING**

- 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 underheating.

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

1. Ensure heater is protected by a properly rated circuit breaker or fuse.
2. Use of a ground fault circuit interrupter (GFCI) is highly recommended and may be required according to local electric code.
3. Plug TTQ3D-16 Controller into wall outlet.
4. Adjust the airflow dial on the back of the hot gun to 2.5 (Figure 5).



Figure 5



Figure 6

5. Open toggle switch on the back of TTQ3D-16 controller to activate hot gun (Figure 6).

*Note: Hot gun blows cold air initially.*

6. Start curing program by pushing red power button on front of TTQ3D-16.
7. To shut down program, push red power button on front and close toggle switch on back of TTQ3D-16.

## STORAGE AND HANDLING

- Never carry hot gun by its power cord.
- Store in a clean, dry location.

## TROUBLESHOOTING GUIDE

Please read this guide prior to contacting BriskHeat<sup>®</sup>. 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 BriskHeat at **1-800-848-7673, 614-294-3376, or [bhtsales1@briskheat.com](mailto: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	Verify that the circuit breaker is capable of handling the amperage 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.
Significant temperature deviations during initial heat-up period	This initial period may last about 5 minutes. The built-in high-limit controller limits the heat-up rate and produces the observed temperature swing. The actual click-stud temperature is rising at a steady rate; however, the controller will indicate an exaggerated surface temperature swing. This is a normal condition. After the initial heat-up period, the expected temperature deviation will be less than +/- 10°F on the controller.



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)

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