Abbeon
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Plastic Working Tools and Industrial Supplies

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Silicone Rubber Heating Blanket with Control

SRL-ADJ & SRP-ADJ Series

⚠	You must read and understand this manual before installing, operating, or servicing this product. Failure to understand these instructions could result in an accident causing serious injury or death. Keep these instructions for future reference.

APPLICATIONS

Intended Applications:

- General purpose surface heating

Prohibited Applications:

- Immersion
- Exposed to weather

APPROVALS

CE — SRL-ADJ, SRP-ADJ

2014 / 35 / EU (Low voltage directive)
IEC 60519-1:2015, 60519-2:2006
2011 / 65 / EU (RoHS 2 directive)

CSA C US — SRL-ADJ, SRP-ADJ

Approvals valid only when installed in accordance with all applicable instructions, codes, and regulations.

IMPORTANT SAFETY INSTRUCTIONS

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.

DANGER

Immediate hazards which **WILL** result in severe personal injury or death.

WARNING

Hazards or unsafe practices that **COULD** result in severe personal injury or death.

CAUTION

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

DANGER

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

DANGER

- Do not immerse or spray any component of the control system with liquid.
- Keep volatile or combustible material away from control and heating system when in use.
- Keep sharp metal objects away from control and heating system.
- Use control and heating system only in approved locations.
- Do not modify this product. Modification will void warranty.

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

WARNING

End-User Must Comply to the Following:

- Only qualified personnel are allowed to connect electrical wiring.
- All electrical wiring must follow local electrical codes.
- The person who performs the final installation / wiring must be qualified for this work.
- The end-user is responsible for providing a suitable disconnect device.
- The end-user is responsible for providing a suitable over-current protection device. It is highly recommended that a ground-fault circuit breaker be used.

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

CAUTION

- Inspect all components before use (see page 9).
- Never handle the heater while it is in operation; always disconnect the heater from the power source and allow cooling prior to handling.
- 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 use control and heating system if any component is damaged.
- Do not repair damaged or faulty control and heating systems.
- Do not crush or apply severe physical stress on any component of system, including cord assembly.
- Unplug control and heating system when not in use.

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

HEATER CHARACTERISTICS / SPECIFICATIONS

Part Series	SRL-ADJ	SRP-ADJ
Operating Temperature Range	Up to 425°F (218°C)	Up to 160°F (71°C)
Max Power Density	2.5W/in² (0.4W/cm²)	1.25W/in² (0.2W/cm²)
Minimum Bend Radius	3" (76mm)	3" (76mm)
Min Exposure Temperature	-60°F (-51°C)	-60°F (-51°C)
Max Exposure Temperature	450°F (232°C)	450°F (232°C)
Max Humidity	95%	95%
Ingress Protection	IP54	IP54
Grounded Heating Element	✓	✓
Moisture and Chemical Resistant	✓	✓
Suitable for Metal Surfaces	✓	✓
Suitable for Plastic Surfaces	✓ *	✓
Suitable for Hazardous Locations		

* Limited applications, consult factory for additional details

INSTALLATION INSTRUCTIONS

Failure to follow these instructions could result in property damage, personal injury, or death.

Requirements:

- Electrical terminations must be completed by qualified persons.
- No special tools or protective equipment is needed to handle this product (specific applications or surfaces may require protective equipment).
- Installation temperature range: -60°F (-51°C) to 131°F (55°C).
- Clearance of 3" (7.5cm) required around vessel during installation.
- Voltage and frequency must be within +/- 10% of the value specified on the product label.

Surface Preparation:

Always install your heater on a clean even surface for optimum performance and extended service life. Debris and residue on the surface can not only damage your heater but may also reduce the effectiveness of the heater by reducing the heat transfer between the surface and the heater.

- Remove or avoid contact with sharp edges including rough corners, weld spatter, exposed bolts, etc.
- Remove or avoid contact with rust, stickers, or other coverings.
- Remove oil, moisture, gel and other liquids.

Instructions:

1. Inspect heater prior to each installation (see inspection procedure).
2. Inspect vessel to be heated for any sharp edges, rust, oil, etc.
3. Ensure that there is no combustible material within 12" (30cm) of the surface to be heated.
4. Mounting

   Heaters supplied with PSA (Pressure sensitive adhesive):
   For PSA Models Only - Installation of heater using factory supplied Pressure Sensitive Adhesive (PSA):

   Peel off the release film (Figure 1) and then press the heater onto the surface of the item being heated using a medium to hard rubber roller (Figure 2). Ensure heating blanket is making intimate contact with the surface to be heated.

   - The pressure sensitive adhesive will cure when the heating blanket is energized and heat is generated. PSA generally cures in twenty minutes at 200°F (93°C) in a 68°F (20ºC) ambient environment. The cure time will vary with temperature of the heating blanket and surrounding ambient conditions. The higher the ambient temperature and set-point of the heating blanket, the faster the cure time.
   - The heating blanket may require a temporary method of attachment to secure the heater until the PSA cures. Use a high-temperature adhesive tape (BriskHeat® Part # AAT2180) to secure the heater.
   - For larger heaters, press the heater onto the surface as the film is removed.

   NOTE: BriskHeat® does not recommend allowing pressure sensitive adhesive to cure at temperatures below 40°F (4°C).

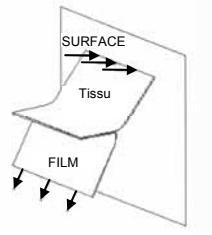

Figure 1:
Film amovible

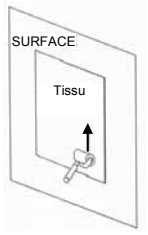

Figure 2:
Roulette

Heater without PSA may be mounted with:

- Factory supplied mechanical fasteners
- High temperature adhesive tape
- Thin layer (<1/8” (3mm)) of RTV

5. Check for any air-gaps between the heater and surface. Air-gaps can reduce heat transfer from the heater causing excess heat.

CONNECTING HEATER TO POWER SOURCE

> ⚠ All electrical wiring must be completed by qualified persons and must be in compliance with local codes and regulations.

Heater equipped with temperature controlling device:

Before connecting the heater to an electrical source, turn the adjustable dial on the heater’s control box in the counter clockwise direction until it stops (this is the off position).

Heaters provided with a plug:

Connect the provided plug to a power supply receptacle.

Heaters provided with wire leads:

The power cable consists of three color-coded conductors: black, white and green. The black wire should be connected to Line 1. The white wire should be connected to Line 2. The green wire should be connected to earth ground. The power connections must be adequately rated to electrically support the voltage and amperage of the heater. The identification label located on the power cord displays voltage and amperage requirements.

OPERATION

SRL-ADJ and SRP-ADJ series:

This product is equipped with a dial adjustable thermostat temperature controller. A maximum temperature is identified on the label: 425°F (218°C) or 160°F (71°C). Adjust dial to desired heat output . To increase temperature output of the heater, turn the adjustable dial in the clockwise direction. To decrease temperature output of the heater, turn the adjustable dial in the counter clockwise direction.

Note: Ambient conditions will affect the dial's position in which the heater begins to heat. In cooler temperature conditions the heater will begin to heat at a lower temperature position on the dial and in warmer temperature conditions the heater will begin to heat at a higher temperature position on the dial.

It is recommended that a thermometer is attached to the vessel being heated. Adjust the dial until you achieve the desired temperature.

Note: Changes in ambient conditions or in the temperature of the contents may cause the temperature to shift over time.

For heating temperature sensitive materials that require a specific set-point or have a tight tolerance temperature range Use of an external temperature controlling device is required. Select a temperature controller with the accuracy necessary for the application and is approved for the location and conditions where the heater is to be used. For lower temperature applications up to 212°F (100°C) BriskHeat recommends the use of a TC4X Digital Temperature Controller. For higher temperature applications BriskHeat recommends the use of a TTD Digital Temperature Controller.

Note: If assistance determining a proper temperature controlling device is required for your application, please contact BriskHeat or your local distributor for application assistance and product solutions.

Install and connect the external temperature controlling device between the heater and the electrical source as shown in Figure 3. Install the temperature controlling device in accordance with manufacturer's installation instructions.

Ensure a grounded connection is provided and if the temperature controlling device does not support a grounded connection, ensure an approved earth ground source is provided.

Mount the temperature sensor on the surface being heated near the heater. Secure the sensor using appropriately rated aluminum or fiberglass adhesive tape.

Set the heater's temperature controlling dial to the maximum temperature setting. Adjust heater output using the external temperature controlling device.

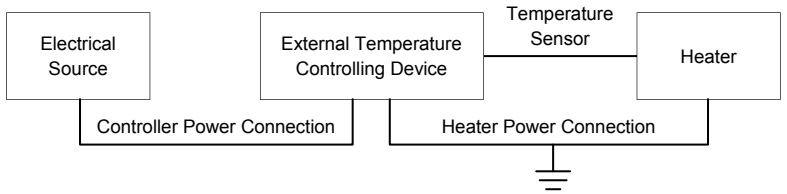

Figure 3

EMERGENCY PROCEDURES

Read and understand these procedures prior to using this heater.
Disconnect power to the heater in the event of an emergency.

Electric Shock:

- Do not touch the injured person while they are still in contact with the electrical current.
- Call your local emergency service if the injured person experiences: severe burns, confusion, difficulty breathing, heart rhythm problems, cardiac arrest, muscle pain and contractions, seizures or a loss of consciousness.

Minor Burns:

- Hold the burned area under cool running water for 10-15 minutes.
- Remove rings or other tight items from burned area.

Major Burns:

- Call your local emergency service.
- Protect the person from further harm.
- Remove rings or other tight items from burned area.
- Monitor breathing and perform CPR if necessary.

Fire:

- Call your local emergency service.
- If it is safe to do so, use a fire extinguisher to fight the fire, otherwise evacuate to a safe distance and wait for help to arrive.
- This heater is built from material that will not support a flame but could ignite nearby combustible material.

MAINTENANCE INSTRUCTIONS

> ⚠ Anyone who reads and understands these instructions is qualified to maintain this heater.

Maintenance:

- All maintenance should be performed after heater has cooled to room temperature and with the electricity disconnected.
- This product should be inspected prior to being installed and at least every 12 months during use.
- Dirt, oil, grease or other foreign matter can be removed with a damp rag and mild household cleaners.
- Do not attempt to repair a damaged heater.

Inspection:

- Inspection should be performed after the heater has cooled to room temperature and with the electricity disconnected.
- The heater should be free of any cuts, cracks, or punctures.
- The power leads should not have any visible breaks in their insulation
- The heater should be free of any build-up of dirt, oil, grease, or other foreign matter.

Storage:

- This product should be stored indoors.

Disposal:

- This product does not contain any hazardous substances and may be discarded with domestic waste.

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TROUBLESHOOTING GUIDE

PROBLEM	SOLUTION(S)
Heater does not warm up	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.
Pressure sensitive adhesive is not adhering	Verify date of manufacture. PSA has a shelf life of 6 months. Ensure there are no air gaps and heater is making intimate contact with surface being heated. Confirm: • Medium to hard rubber roller used for install. • Surface properly cleaned and clear from oil, dirt and residue. • Installation occurred above 40°F (4°C).
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.