

WATLOW SILICONE RUBBER HEATER INSTALLATION SHEET

April, 2012

Watlow silicone rubber heaters have been designed to be simple and quick to install. When installed properly, they are a safe, effective solution for maintaining line temperatures.

WARNINGS:

THESE HEATERS ARE NOT DESIGNED FOR HAZARDOUS LOCATIONS.

THESE HEATERS ARE NOT DESIGNED FOR OUTDOOR LOCATIONS.

THESE HEATERS ARE NOT DESIGNED FOR TOTAL OR PARTIAL IMMERSION.

THESE HEATERS ARE NOT MEANT TO BE OPERATED WHEN NOT SECURED TO A METALLIC PIPE OF RATED DIAMETER.

THESE HEATERS SHOULD ONLY BE INSTALLED ON GROUNDED METALLIC PIPING SYSTEMS WITH A GFI PROTECTED CIRCUIT.

HEATER INSTALLATION INSTRUCTIONS:

1. Before starting an installation, verify the intended circuit(s) on paper to insure that no section of the line will carry more than intended amperage.
2. Make sure that the surface of the metallic pipe is clean and free of burrs that could penetrate the heater insulation or surface defects that would separate the heater from contact with the pipe. Ensure labels are removed from pipe and fixtures.
3. Do not apply power or connect the power supply line or cord to the first heater at this time.
4. Before installing, inspect each heater for damage, particularly on the ends or inside surface that will contact the pipe. Do not use a damaged heater. If you have any questions contact supplier for instructions.
5. Starting at the heater power supply end, install and attach the heaters and unheated insulators in place on the pipe and fittings while ensuring the heaters are not excessively bent or flexed when moving into position. Heaters are designed to fit snug for good heat transfer, but should fit with minimal compression of the insulation or strain of the jacket fasteners. Do not use any other device(s) to hold the heaters in place.
Note: During installation do not drag the heater across sharp objects or elbows as heater damage could occur.
6. It is recommended that after the initial installation of the heaters a second fitting occurs to ensure uniform application of the heaters to the pipework. It may be necessary to make adjustments to the heater fastener to accomplish this.
Note: Improperly installed, poorly fit heaters can lead to local hot spots and premature heater failure.
Note: Do not cut or trim the heaters in efforts to improve fit, this could permanently damage the heater material or circuit.
7. Connect all subsequent connectors.
8. Connect any thermocouple circuits to their respective temperature controller(s).
9. Verify that power is turned off to the controller.
10. Verify that the power supply from the controller to the heaters is properly fused per the manufacturer's recommendations, local codes and NEC requirements.
11. Connect power supply and ground leads from temperature controller to the initial line heater.
12. Adjust temperature control to appropriate setting. Do not exceed 150 degrees C.
13. System should be ready for operation.
14. On initial start-up, observe heaters closely for smoking. Smoking could be a sign of over heating of the line or an individual heater. If smoking occurs, shut down system immediately and do not restart until the problem is resolved.

Maintenance:

There are no periodic maintenance requirements for the silicone rubber heaters. It is recognized that there will be periodic equipment maintenance issues which may require removal and re-installation of heaters. Heaters can be damaged during these maintenance cycles if proper care is not taken.

To remove heaters:

Follow the installation steps outlined above in reverse order. Verify power is turned off to the temperature controller and then disconnect the power supply cable. Disconnect the electrical connections between heaters, remove the flange insulators, and finally remove the heaters.

1. Let heaters cool fully before removing from pipework. Heaters are less resistant to mechanical damage from rough handling when hot.
2. Avoid using the heater lead wires as handles or leverage points. Do not pull heaters off pipe by pulling the lead wires.
3. Fully disengage the jacket fasteners prior to removing the heater. Do not use the force of removing the heater to open the fasteners.
4. Take special care around bracket points when removing heaters. There may be additional fasteners or mechanical interference points not immediately apparent.
5. Avoid any forced removal of heaters. Proper removal is easy and does not require any pulling or tugging. Pulling or tugging on the heaters can damage a heater and cause failure.
6. Examine removed heaters for any sign of exposure to over temperature conditions such as severe discoloration or brittle fabric. Signs of over temperature exposure are indications of improper installation or fit and a reason for further investigation.