

Cartridge Heater Installation Guide

General

WARNING: Cartridge heaters are not intended for use in atmospheres containing flammable vapors, gases, or liquids. Operating our heaters in these types of environments can result in fire or explosion.

Installation

For the closest fit and best performance, holes should be drilled to be as close as possible to the diameter of the cartridge heaters. Nominal cartridge heater diameters are slightly undersized in order to assist in installation (for example, a 1/2" OD cartridge heater is actually 0.498" +0.000"/-0.005").

In order to get a close fit, it may be necessary to drill then ream rather than drill to a final diameter. It is recommended to drill completely through the part you are trying to heat in order to aid potential future heater removal. After drilling, clean and degrease the part in order to remove all debris and lubricants.

In order to assist in heater installation, a high temperature, thermally conductive, and electrically insulative lubricant/grease/paste can be used.

Electrically conductive lubricants are **not** recommended to assist in installation as these have the potential to get on the lead wire side of the heater and cause electrical shorts.

Considerations

1. It is strongly recommended to design the heated part so that the leads are in ambient temperatures and not directly in contact with the heated part. The lead wire insulation has a maximum rated temperature less than that of the heated cartridge, and direct contact could result in melting or damaging the wire insulation.

2. After installation, anchor the lead wires securely to limit their movement. Excessive movement of the lead wires at the entrance to the cartridge can result in damage to the wires. If movement is necessary, it is recommended to wire the heater into a terminal block which will move with the assembly.
3. Protect the lead wires from any type of oil, abrasion, or contamination.
4. Lead wires must not enter the drilled hole in order to prevent damage to the insulation. It is recommended that the lead wire end of the heater cartridge extend past the drilled hole by 1/16" or sit flush with the hole.
5. It is recommended to control the heated part with a process temperature controller and temperature sensor.

Operation

WARNING: Do not operate the heaters at voltages exceeding the rated voltage.

WARNING: Do not operate the heaters at temperatures exceeding the rated maximum operating temperature.