

MEDICAL EQUIPMENT REQUIRING SURFACE HEAT

For high-standard and space-constraint applications requiring precise heat

Application

The medical industry is filled with machines, devices, and instrumentation that require thermal management. In many cases, these parts are highly sensitive, intricate, state-of-the-art apparatus. Examples include:

- Incubators
- Blood analysis equipment
- Medical instruments
- Dental instruments
- Operating room equipment
- Surgical tools
- Laboratory equipment
- Ultrasound equipment
- Sterilizers
- Defibrillators
- Dialysis equipment
- Respirators
- Monitors

These items have extensive medical quality requirements. Because they are dealing with the human condition and play an important role in restoring or maintaining people's health, all components of the devices are held to the same high-quality standards, such as extreme accuracy and repeatability. Medical device qualification procedures and FDA traceability expectations must be achieved, and if all requirements are not fulfilled, consequences could be very negative and harmful. Additionally, space and size constraints are often challenging and require special heater specifications.

Solution

BriskHeat etched foil heaters will meet medical industry requirements to provide precise heating and thermal control. Etched foil heating elements are created using a photolithography process which allows for more even and repeatable heat. Heaters are fabricated using computer-guided tools to complete the primary processes of drilling, imaging, etching, laminating, and excising, in addition to various subprocesses. The result is even heat distribution, accurately shaped heaters that can be as small as 0.5 in (13 mm) square, as thin as 0.0045 in (0.11 mm), and whatever shape is required. Additionally, because of the automated manufacturing process, large quantities of heaters are extremely affordable.

BriskHeat's SDX Digital PID Temperature Controller adds precise temperature control for the most sensitive applications. High amp draw heaters sometimes require a temperature controller designed for higher amp ratings. For applications when the power will be 15-50 amps, BriskHeat's TB4000 or TC4000 are the correct controllers. Both of these can be designed to operate more than one heater.

Additional Applications

Similar high quality and space-constraint requirements exist in other industries such as Aerospace, Telecommunications, and Rapid Prototyping. BriskHeat's etched foil heaters will meet the requirements of these industries as well.



Etched Foil Heaters



SDX

Industries

Analytical Instrumentation/Laboratory
Life Science/Medical/Pharmaceutical
Manufacturing