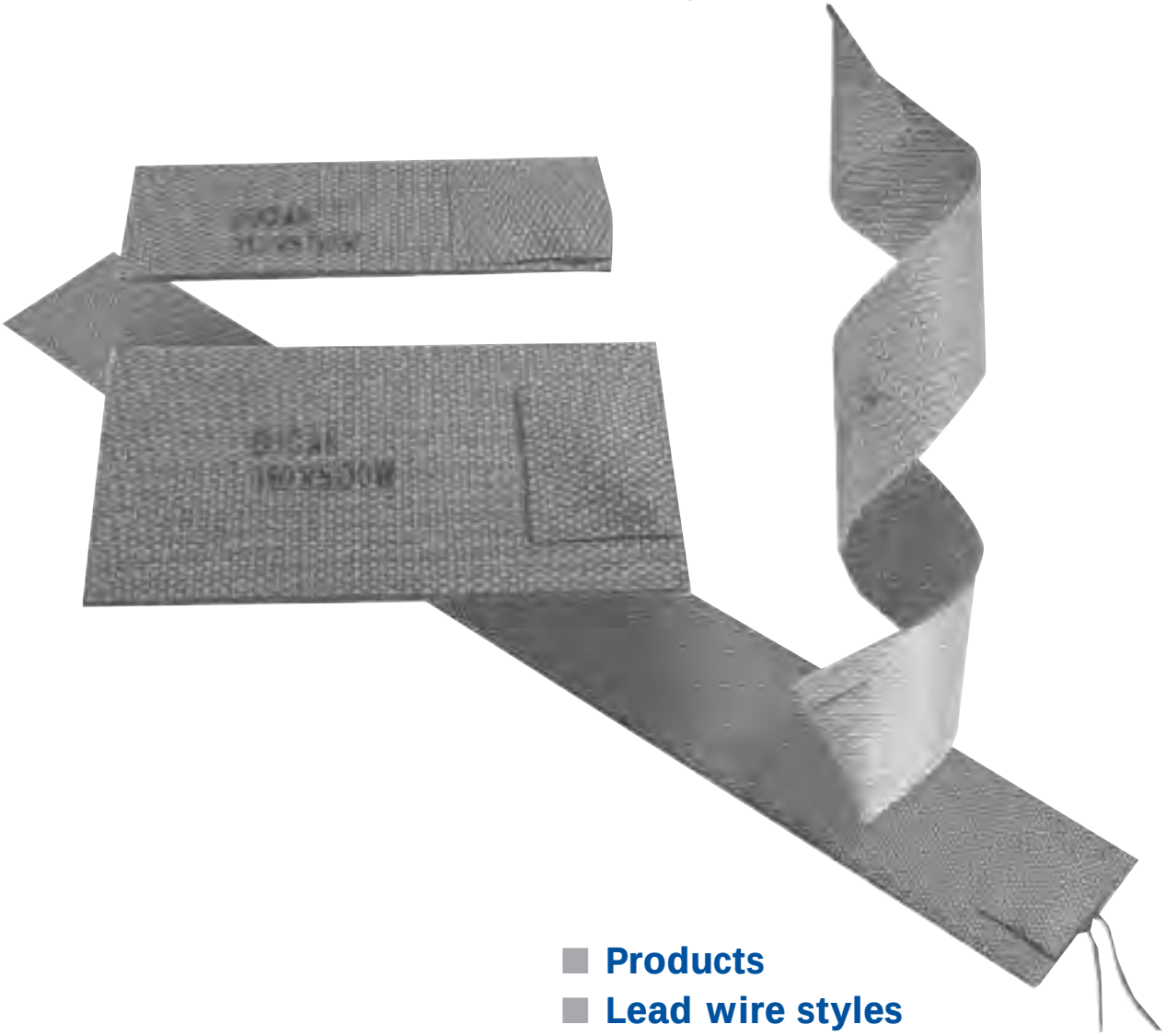
SILFLEX* SILICONE RUBBER HEATERS

SILFLEX fiberglass reinforced silicone rubber heaters are moisture and chemical resistant. Although thin and flexible, they have a rugged construction and can be made to adhere to practically any surface. These heaters can accommodate holes and cutouts, and can come with a PSA back or a thermostat. **SILFLEX** heaters are suitable for temperatures below 500º F.



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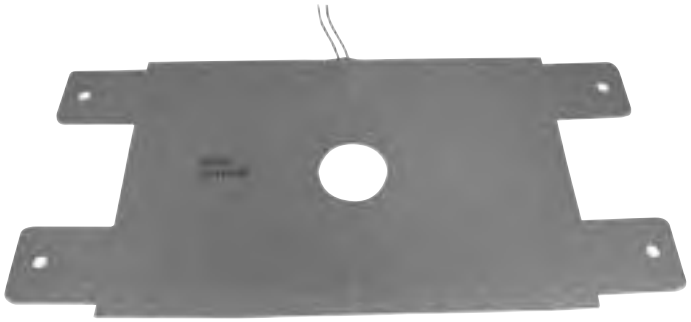
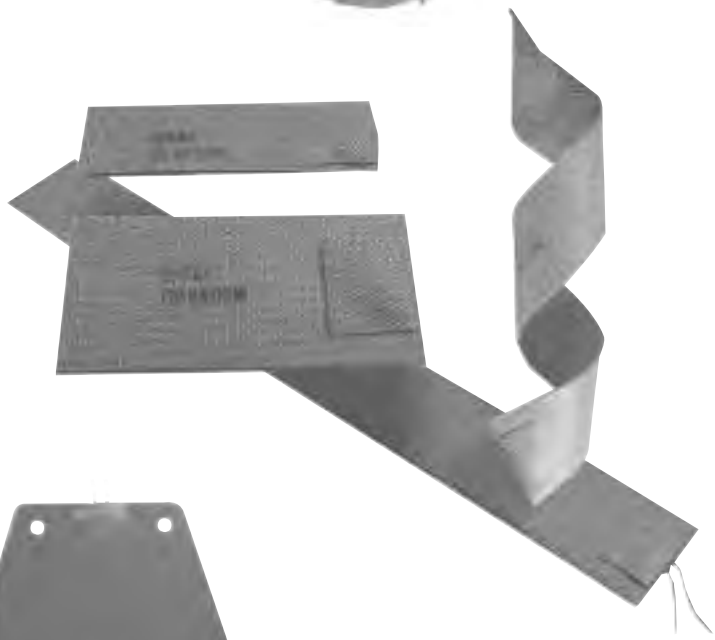
SILFLEX SILICONE RUBBER HEATERS

SILFLEX heaters consist of many layers of silicone rubber sheets that are bonded together through heat and high pressure. A fiberglass grid (which is visible on the surface) reinforces the silicone rubber sheets. It is possible to make the surface of the heaters smooth (i.e. make the grid invisible) by covering the fiberglass with a thin layer of silicone.
A uniformly spiraled resistance wire web that covers the entire surface of the heater is embedded within the layers of silicone rubber. This web could be designed such that holes and cutouts are incorporated on the heater.
When **SILFLEX** heaters are made with a pressure sensitive adhesive backing, a thin layer of aluminum is added prior to the adhesive layer, in order to improve heat transfer and maintain its uniformity. This construction makes **SILFLEX** heaters an ideal solution to the requirements of many low and medium temperature applications, which do not conform to the standard shapes, sizes and dimensions of band, strip, cartridge, tubular and coil heaters.
SILFLEX heaters are CSA certified.



SPECIFICATIONS	
Max size	38” x 98”
Thickness	0.060”
Max temp	450° F
Max voltage	480 VAC
Wattage	+5/-10%
Standard lead wire	12” Teflon Insulated
Dielectric strength	1000 VAC



Lead wire styles

SILFLEX heaters come only with lead-wire terminations. Two styles are available:

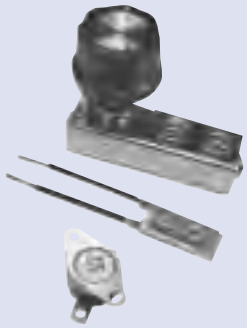
Teflon or silicone lead wires

These leads are sandwiched between the silicone layers, and a small patch is placed on the point of exit to provide extra protection. This causes the formation of a slight bump at the point where the wires are attached. To eliminate this problem, the attachment between the internal resistance wire and the lead wire could be made at an external tab.

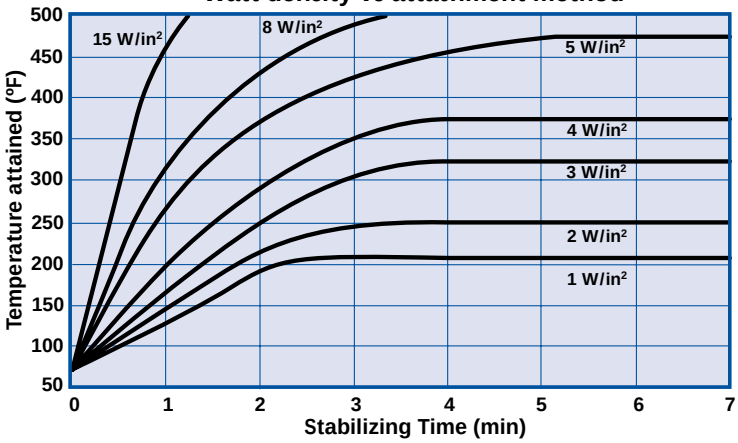
SJO power cables

When **SILFLEX** heaters are used independently in an industrial application, they can be made with power cables that exit from a silicone transition box attached to the heater. Proper electrical plugs are available with the power cables.

SILFLEX heaters can accommodate pre-set or adjustable thermostats, thermal cutoffs and external "J" type thermocouples. Each has a specific temperature range and maximum amperage capability; the factory should be consulted for their availability.



Watt density vs attachment method



The adjacent graph shows the surface temperature that a silicone rubber heater will attain when suspended in 70° F still air. Below 5w/in² watt density applications, the temperature will rise and stabilize at a temperature below the critical 500° F. It is recommended to bond the heater to the surface or even use a pressure plate when the application requires watt densities of above 5w/in².

Attachment methods

RTV adhesives

In the field, a strong bonding to application surfaces could be achieved by using room temperature adhesive pastes. Red colored RTV 106 and transparent RTV 116 are the two types of adhesives
available. Both these RTV materials are adequate for temperatures up to 500° F.

RTV116

RTV106

Pressure sensitive adhesive

SILFLEX heaters could be made with a thin layer of high temperature (300° F) adhesive backing. This adhesive, which can easily bond to practically any surface, is supplied with a protective cover, which can be easily removed before applying the heater to any surface. The watt density of a heater should not pass 5 watt/in^2 when a PSA is used.

Factory vulcanization

This is the most efficient method to bond a heater to a surface. Using high temperature and pressure, **SILFLEX** heaters can be vulcanized to a surface. However, bonding through this method can be carried out only in the factory.

EYELETS

Mechanical fasteners

When a **SILFLEX** heater is wrapped around an application, the ends of the heater can be fastened by attachments used on fabrics. Eyelets with lacing cords, Velcro hook and loop, metallic fasteners with springs, and independent straps are the most commonly used fasteners.

VELCRO

Watt density vs attachement method