



# MICA HEATERS

Mica heaters are to be considered as open heating elements. They are widely used for contact heating, for example for hot plates, braising pans, tub & tanks, tools for plastic & rubber.

Each layer for mica heaters, normally has a thickness per plate of 0,2 and 0,5 mm. Perforations and cutouts for fixing, thermostats and similar can be placed as desired. The total thickness of a mica heater will normally be between 1,5 and 2 mm.

For contact heating it is important to create good contact between the heating element and the subject, for example by means of fixing plates or hose clamps. Lack of contact causes a reduced lifespan or even a breakdown.

### Surface load:

Mica heaters used for contact heating. Assuming a reasonably good tightening, we recommend a surface load of 3-4 W/m<sup>2</sup> and that the operating temperature may not exceed 350°C.

### Degree of protection:

If you wish a higher degree of protection the mica heater must be sealed into a sheet material. Read more in the product sheet for "Shielded mica heaters".

### Insulation:

If one-way heating is required, an insulation material can be placed on the opposite side. A metal plate must be placed between the heating element and the insulation, because the insulation must not be in directly contact with the heating element. Also be aware that the surface load should be reduced.

### Termination:

Depending on the temperature conditions various types of termination can be supplied.

Please pay attention to the area around the termination. The fixing plate must not press on the heating element. This is not applicable for busbar terminations.

Heating elements made with wire termination clamped on their hot zone will be assembled with termination strips into which the cables will be attached. Terminals executed as cables can be put on the surface or on the border.

### Assembly:

It is important to create proper contact between the heating element and the object to be heated. Otherwise, the temperature becomes so high that the heating element may breakdown. Proper contact is ensured by mounting the heater against a flat surface using a cover plate and tightening bolts, which either could be welded onto the object or mounted into treaded holes. Depending on the element's temperature, the plate must be made of steel with material thicknesses of about 3 mm or greater. The bolts have to be positioned correctly to ensure proper contact even with thermal expansion on the cover plate. We recommend a bolt spacing of 100-150 mm. However, this depends on the size of the heater. Mica heaters can optionally be provided with holes and cut-outs to ensure proper contact on the entire heating surface.

Example - mica heater mounted on tub:

