



# SHIELDED MICA HEATERS

Shielded mica heaters are used for contact heating of, for example, extruders, plastic molding machines and tools, as well as external mounting on tubs and tanks.

Encapsulation of mica heaters gives them greater mechanical strength and make them more water resistant. The standard casing material is electro-galvanized plate, but, depending on application, the casing can also be stainless steel.

Shielded mica heaters are manufactured with IP20. We recommend a surface load of max 5 W/cm<sup>2</sup> and that the operating temperature may not exceed 350°C.

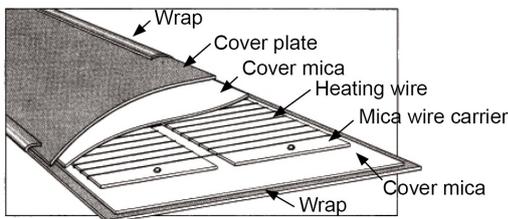
Tightening is of utmost importance for the life span of the heater. When tightening with spring-loaded closure, it should be taken into account that the spring-loaded closure fails to maintain the same torque at temperatures above about 300°C. Retorquing may be necessary.

If the heater is insulated on the outside, one must take into account additional heater temperature increases and reduce its surface load. As a guidance, it may be mentioned that 10 mm of Rockwool® or similar means that the surface load must be reduced by approximately 25%.

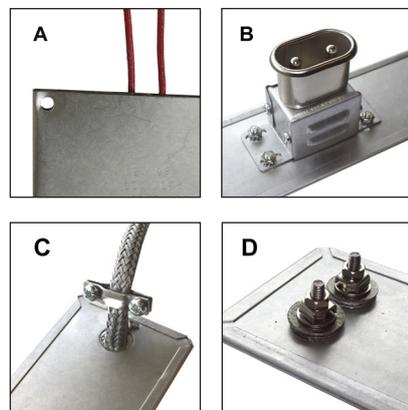
**Design:**

The design consists of a conventional mica heater mounted in a plate casing:

**The heater can be equipped with one of the following terminations:**



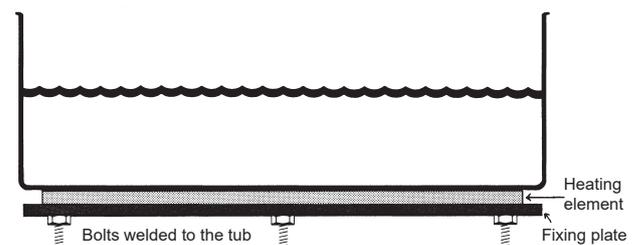
- A: Heat resistant nickel cable
- B: Connection box with 2-pole connection
- C: Heat resistant nickel cable with braiding
- D: M4 screw terminals



**Assembly:**

The heater must be in proper contact with the object to be heated, as the temperature will otherwise become so high that the heater may break. Proper contact is ensured by mounting the heater against a flat surface by means of cover plates and bolts, which are either welded on or screwed on into threaded perforations. Depending on the element's temperature, the plate must be made of steel with material thicknesses of about 3 mm or more. The bolts are positioned so that thermal expansion of the cover plate does not affect contact. We recommend a bolt spacing of 100-150 mm. However, this depends on the size of the heater. Shielded mica heaters can be optionally supplied with perforations and cut-outs so that mounting can be evenly distributed over the entire surface.

Example - Shielded mica heater mounted on tub:



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