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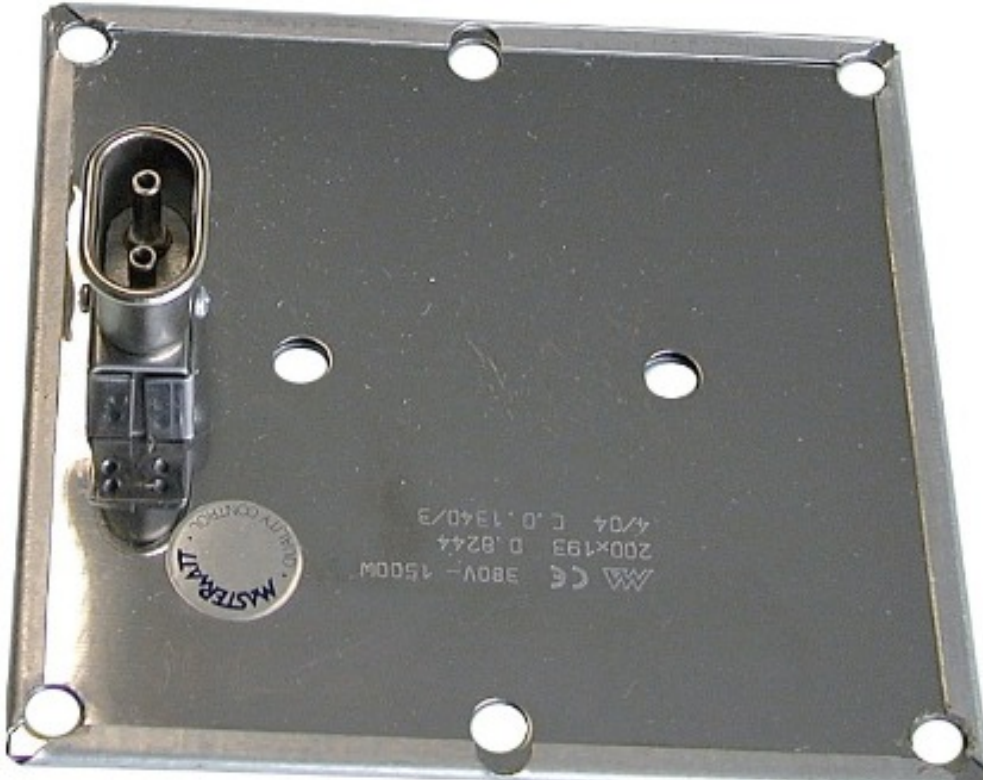
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Технические характеристики на миканитовые плоские нагреватели MIKASTRIP КОМПАНИИ MASTERWATT

Flat heaters MIKASTRIP



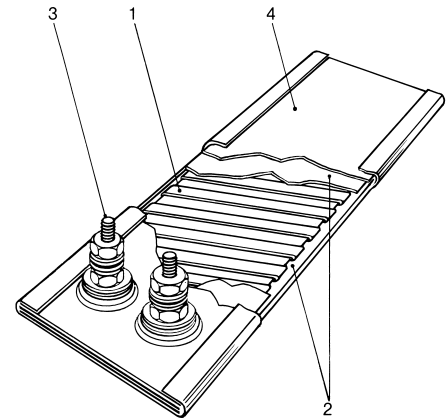
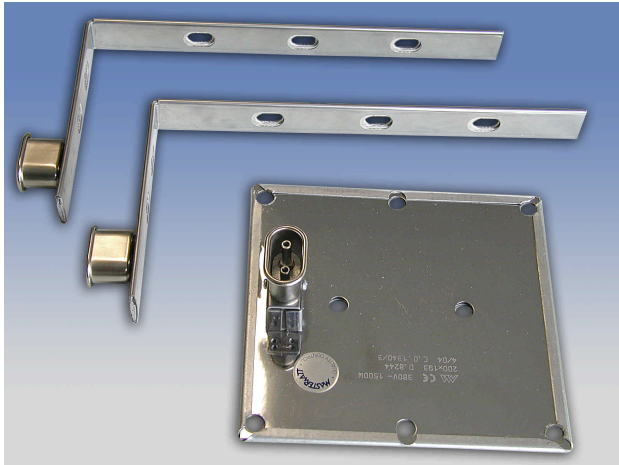
MIKASTRIP micanite flat heaters

MIKASTRIP heaters are flat heater with micanite insulation that are employed in several applications: they are best suited to heat by conduction flat surfaces or, inserted in appropriate slots, to heat metallic masses. They can therefore be used in: extrusion dies, moulds for plastic materials, press moulding plates, vacuum plastic moulding machines, ovens, packing installations and in many other applications. In all cases, the operational temperature shall normally not exceed 280°C.

Thanks to the most advanced technical solutions, to the selection of the most appropriate materials and to the severe quality control procedures, they are characterised by:

- Optimum heat conduction and uniform heat distribution
- High electrical insulation
- Constant Efficiency during lifetime
- Easy installation
- Tight manufacturing tolerances
- Long Operational Life

MIKASTRIP - Flat Heaters for Industrial Applications -



GENERAL CHARACTERISTICS

Thanks to the most advanced technical solutions, to the selection of the most appropriate materials and to the severe quality control procedures, we can produce heaters that present many advantages. In particular it is worth to mention:

- **Optimum heat conduction and uniform heat distribution**
- **High electrical insulation**
- **Constant Efficiency during lifetime**
- **Easy installation**
- **Tight manufacturing tolerances**
- **Long Operational Life.**

The heaters undergo dimensional and electrical controls all along the production phase, as requested by the company Quality Control System that is certified in accordance with ISO 9001:2000 Standard. A 100 % electrical acceptance test allows to verify the compliance of each single heater to the requirements specified in the applicable CEI/EN/UL Specification. In particular, the following tests are performed:

- Verification of the earth connector efficiency
- Measurement of the Insulation resistance
- Measurement of the dielectrical rigidity
- Measurement of the dispersion current
- Measurement of the resistance ohmic value

APPLICATIONS

These heaters are employed in many applications: they are best suited to heat by conduction flat surfaces. In other cases they are inserted in appropriate slots to heat metallic masses. The operational temperature should not exceed 280 °C.

Amongst the applications the following can be listed:

- Extrusion dies
- Moulds for plastic materials
- Press moulding plates
- Vacuum plastic moulding machines
- Ovens
- Incubators
- Boilers
- Test benches
- Packing Installations

Figure 1

- Heated desks for food
- Electrical cabinets (anti-condensatin)

TECHNICAL DATA (see Figure 1)

1. **RESISTIVE WINDING** made of Nickel/Chrome 80/20 DIN 17470, material n° 4869, characterised by large section and consequent low power density, executed with automatic tools which insure reproducibility and uniformity
2. **ELECTRICAL INSULATION** made of high purity continuous mica with a very low presence of binder. The material complies to UL (94 V-O) Specification.
3. **POWER SUPPLY** provided by screw terminals, cables through the heater thickness (minimum envelope solution) or by ceramic terminal board protected from shocks and tearings applied to the cables by special metallic cover
4. **COVER SHEATHS** made of galvanically treated steel. Thanks to its high thermal conductivity, it insures the best heat transmission
5. **POWER SUPPLY CABLE** (optional) suitable for high temperatures, with internal conductors in nickel-plated copper or in pure nickel (for the most severe applications). Internal insulation made of fibreglass and Teflon. Externally protected by a metallic braid sheath.

DIMENSIONS

MIKASTRIP heaters can be manufactured starting from a minimum dimension of 40 x 20 mm. There are no specific limitations for the maximum length. The maximum width is 500 mm. Different shapes can be manufactured. Some of them are shown in Figure 2

POWER

MIKASTRIP heaters are normally manufactured with a specify power around 3.5 W/cm².

HOLES

Holes or slots can be realised onto the heater surface as required. Their dimensions, in any case, shall be coherent with the overall dimensions of the heater.

POWER SUPPLY

MIKASTRIP heaters can be provided with mono-phase power supply and, starting from 120 mm width, also with star and delta three-phase power supply. Solutions with double mono-phase power supply are possible too.

ELECTRICAL CONNECTION

To connect the internal heating circuit to the power supply cable, different solutions exist: screw terminals, cables exiting through the heater thickness (minimum envelope), 2-poles connectors or terminal boards provided with specific metallic covers. All of them insure optimum mechanical resistance, easy mounting of the power supply cable, high electrical insulation, efficient electrical contact (also at high temperatures) and minimum envelope.

Different typologies are available. They are summarised in Figure 3. The constructive details of each terminal board are provided in the Electrical Connections Catalogue.

INSTALLATION

MIKASTRIP heaters, during operation, could undergo distortion stresses induced by heating. To avoid this problem two solutions are possible:

- A. Introduce a counter-flange in charge of keeping constantly pressed the heater onto the surface to be heated, thus preventing the distortion
- B. Request, when ordering, that the MIKASTRIP heater includes an integral counter-flange.

TO ORDER A MIKASTRIP HEATER PLEASE SPECIFY (see Figure 4):

- The length L
- The width H
- The power supply voltage
- The heating power
- The position of the power supply interface
- The terminal board type
- The length of the power supply cable (if required)
- The position and the diameter of the holes (if any)

Note: to specify the position of the power supply interface and of the holes (if any) please follow the example in Figure 4 to define the coordinates.

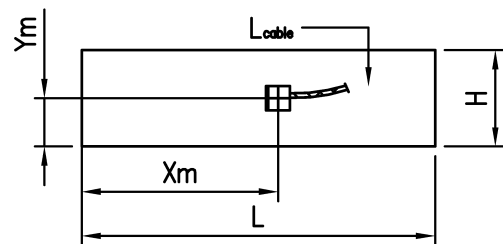


Figure 4: reference system to define power supply desired position

Figure 2: different shapes that can be manufactured for MIKASTRIP heaters

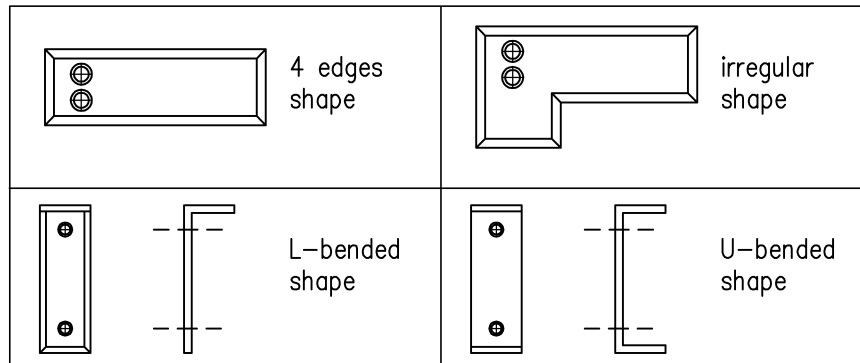
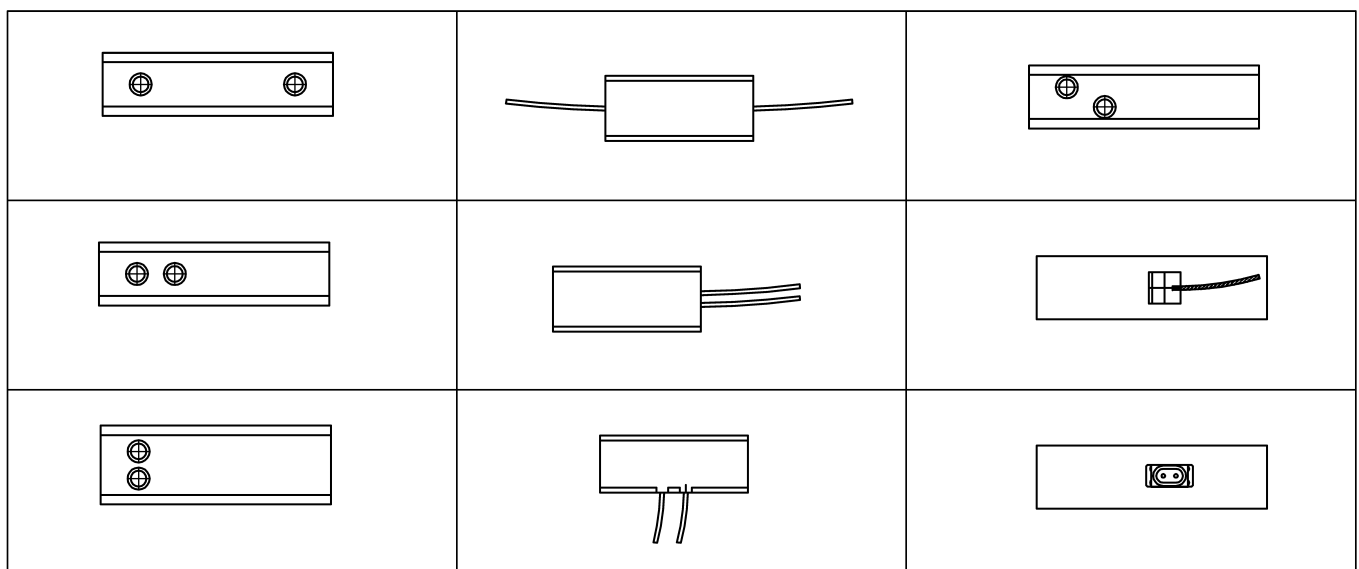


Figure 3: different typologies available for the electrical connection



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