

## Custom design silicone heating mat

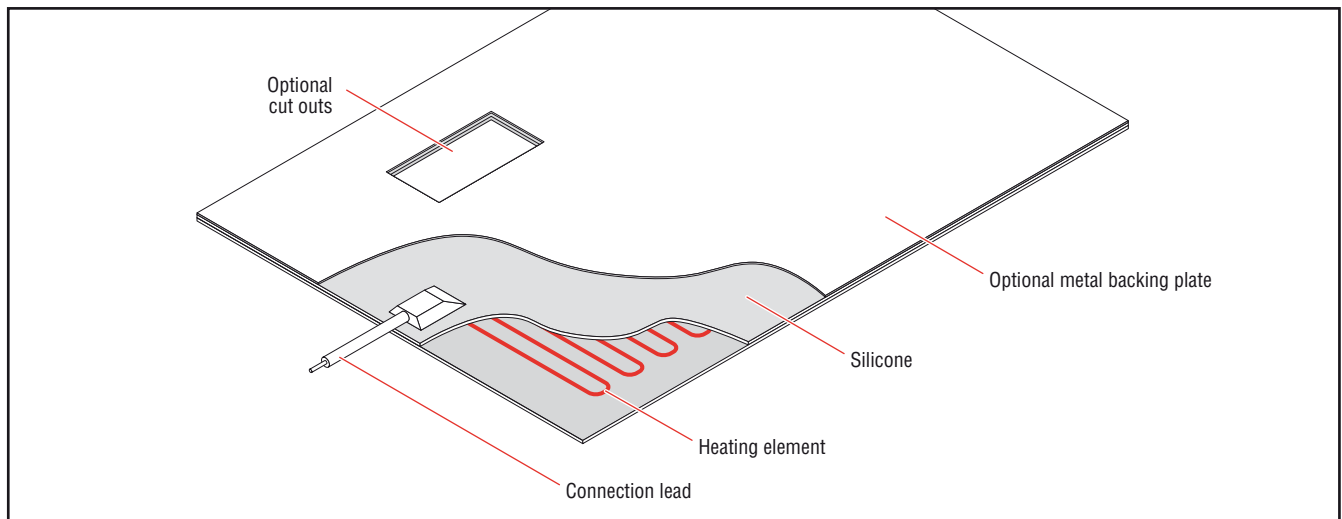
Isopad IP-SM silicone heating mats for industrial use are selected where excellent flexibility and high temperature resistance in thermal processes are needed. The processed silicones have good resistance to ozone, oxygen, weathering, ageing effects, bacterial and fungal attacks. They are also highly resistant to chemicals such as alcohol, acetylene, mineral oil, acids, glucose and glues.

Panels customized to your specification are designed with various options on insulated and metal backings, fixings, cutouts, and controllers. We will advise on the best options for your needs, and as each is different we supply a new technical specification.

To achieve exact surface temperatures, the heating panels are equipped on demand

with Isopad or Chromalox controllers and temperature sensors.

We also provide a range of standard sizes; see our IP-DASI datasheet. For more details on custom or standard versions, contact TC-E.



### Area Specifications

|                                  |   |
|----------------------------------|---|
| Area classification              | Nonhazardous, ordinary area             |
| Ingress protection               | IP65 / IP68 (Only with connection head) |
| Electrical protection class      | Class II (see note)                     |
| Storage temperature              | -20 to +40°C                            |
| Minimum installation temperature | -45°C                                   |

Note: Electrical protection class I with metal sheath

### Standard Manufacturing Sizes

|            |  |
|------------|--|
| Length     | 2000 mm (other sizes on request)                         |
| Tolerances | <400 mm (±2,5) / >400 mm (±4,0) (special sizes excluded) |
| Width      | 900 mm (other sizes on request)                          |
| Tolerances | <400 mm (±2,5) / >400 mm (±4,0) (special sizes excluded) |
| Thickness  | 2,0 to 4,5 mm (other sizes on request)                   |
| Tolerances | ±0,5 mm (special sizes excluded)                         |

### Heater Construction

|                           |  |
|---------------------------|--|
| Type                      | Resistance heating cable   |
| Material                  | Various alloys   |
| Material insulation       | Silicone   |
| Carrier                   | Silicone or silicone-glass-silk mat  |
| Thermal insulation        | On request, e.g. silicone foam mats  |
| Outer protection type     | On request, e.g. stainless steel or aluminium sheet metal  |
| Fixation and closure type | Diverse methods according to application, e.g. adhesive foil, holes, hooks, eyelets, velcro tape, etc. |

General: on request the heating mats can be manufactured with 2-dimensional contours and cut-outs or can be pre-formed for special applications.

### Lead Connection

Connection lead length, lead cross section, maximum operating temperature and connection lead material depend on design

### Temperature Control

|   |  |
|---|--|
| Sensor type   | PT100, Fe-CuNi/J or NiCr-Ni/K according to DIN IEC |
| Sensor lead length, lead cross section, maximum operating temperature and sensor lead material depend on design |  |

### Technical data

|  |   |
|--|---|
| Frequency  | 50-60 Hz                                      |
| Maximum operating voltage  | 480 Vac (~1ph/~3ph)                           |
| Nominal power  | ±10% depending on design                      |
| Minimum installation resistance  | 100 MΩ  |
| Maximum operating temperature  | 200°C (150°C for versions with adhesive foil) |
| Minimum bend radius, maximum area load and maximum compression strength depend on design |   |

### Ordering Information

Contact TC-E to discuss your requirements.