

hotform

Silicone heating elements

Flexible surface mats for food technology



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Components and Systems

Heating elements, thermal sensors and process control – hotset is your partner for the realization of intelligent product and service solutions in the field of industrial heat technology. Based on our international presence and our own production sites, we operate as a component supplier and development service provider for customers in all industries.

We supply you with components for your series production, we implement complex system solutions for you or we take over entire value chains: your requirements, your goals and your wishes always form the centre of our actions. You benefit from flexible production and logistics structures, an interdisciplinary engineering and over four decades of technology experience.

hotset – components. systems. projects.



Flexible surface mats for food technology

With our hotform silicone heating elements you receive a highly efficient and responsive universal solution for surface tempering in food technology. Innovative heat conductor geometry and highly thermally conductive special silicone guarantee fast heat transfer and homogeneous heat distribution. Warming-up, heating, cooking, liquefying, melting, defrosting or keeping warm: During production and processing as well as during the preparation and distribution of foodstuffs hotform silicone heating elements are the guarantor for a reliable and even surface tempering.

hotform silicone elements are FDA-compliant, ultra-flat as well as lightweight and designed for temperatures from $-60\text{ }^{\circ}\text{C}$ to $+270\text{ }^{\circ}\text{C}$. Thanks to their flexibility, they can be used on flat, round, convex and circumferential surfaces of machines, devices, containers and pipelines. They are also suitable for the integration in multilayer systems and sandwich constructions. Size and design can be individually adjusted to your specific application.

Our hotform silicone heating elements are available as ready-to-install system components.

hotform silicone heating elements can be used very versatilely in food technology: In production and processing (machines, processes) as well as in preparation (e.g. canteen kitchens, private consumers) and distribution (e.g. catering, logistics). They can be used as stand-alone solutions, as built-in components or as intermediate layers in sandwich constructions and multilayer systems (e.g. glass fibre mats). Depending on the objective, they are used to warm-up, heat, cook, liquefy, melt, defrost or keep warm liquid, pasty or solid foods.

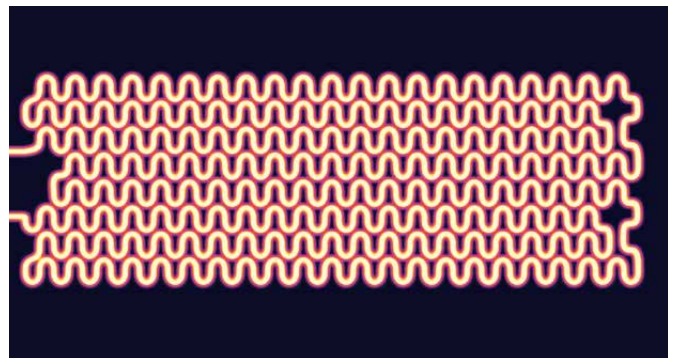
In food technology, hotform silicone heating elements are used in plants, equipment, apparatus, containers and pipelines of many different processes. Here they achieve long service lives and guarantee the long-term functional and operational reliability of thermodynamic and fluid-technical systems and processes. At the same time, they minimize the effort required for their maintenance and repair. hotform silicone heating elements can be controlled with a high degree of control accuracy according to time and temperature.



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Advantages

- Special silicone with high thermal conductivity
- Innovative winding of heat conductor
- Very fast heat transfer
- Excellent heat distribution (maximum homogeneity)
- High energy efficiency
- Temperature resistance from -60 °C to +270 °C
- Light and ultra-flat (up to 0.4 mm)
- Easy, flexible installation
- Minimum installation effort
- High control accuracy, short response time
- Suitable for flat, round, concave and convex surfaces
- UV-resistant
- High weather resistance
- EN 45545-compliant (fire, smoke)
- Waterproof to IP 67
- Easy integration in multilayer and sandwich constructions
- Ready-to-install delivery as mats, bands or molded parts



Thermography – Homogenic heat distribution

Options

- Direct current
- Power cord
- Temperature sensor
- Security limiter
- Thermostat
- Color selection for bulk orders
- Silicone foam

Connection Leads

- Silicone leads -> max. Temp: 180 °C / 356 °F
- FEP leads -> max. Temp: 200 °C / 392 °F
- PFA leads -> max. Temp: 260 °C / 500 °F

Fixation method

- Mechanical (springs, velcro)
- Standard adhesive (up to 160 °C)
- Special adhesive (up to 220 °C)
- Adhesive, reusable

Technical Features

| | |
|---------------------------------------|---|
| Size | Max. 1840 x 580 mm, special sizes available on request |
| Tolerance | ± 1 mm |
| Thickness of Material | Min. 0.4 mm, 1 mm Standard |
| Thickness of Material - Tolerances | ± 0.1 mm |
| Bending Radius | 10 mm |
| Voltage | 12 up to 400 V |
| Power density | Up to 5 W/cm ² |
| Wattage Tolerance | ± 10 % |
| Temperature Resistance | -60...+200 °C / -76...+392 °F (up to 270 °C / 518 °F on request) |
| Thermal conductivity at +100°C | 1 W/m K |
| High voltage test | 1500V AC |
| Standards | UL (on request) EN 45545 (Maximum classi- fication for fire and smoke) EN 50264 and EN 50306 (for rail vehicles) FDA IP67 |



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