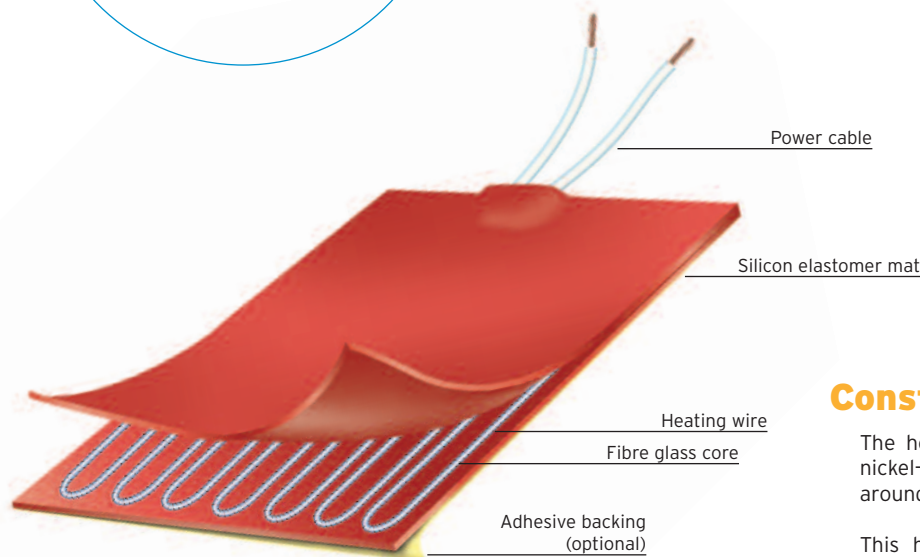


T - TA - TV Silicon elastomer heater mats

Characteristics

- Takes up little space.
- Highly flexible.
- A variety of shapes.
- Quick and easy to fit.
- Any voltage on request.
- Length of power cable: 1 m as standard.
- **T** : Silicon elastomer insulated mats.
- **TA** : with adhesive back for permanent fitting.
- **TV** : factory vulcanised on metal backing.



Use

Consult the pages of the catalogue devoted to the corresponding general operating principles, general instructions for use and accessories.

FLEXELEC S.A.S

10, rue des frères Lumière
Z.A. du Bois Rond
69720 ST BONNET DE MURE - FRANCE
Tel: + 33 (0)4.72.48.30.90
Fax: + 33 (0)4.78.40.82.61
E-mail: flexelec@omerin.com

FLEXELEC Dept

OMERIN ASIA Pte Ltd
51 Goldhill Plaza #08-12/01
SINGAPORE 308900
Tel: + 65.6255.4778
Fax: + 65.6255.4779
E-mail: sales@omerin.com.sg

FLEXELEC (UK) Ltd

Unit 11 Kings Park Industrial Estate
Primrose Hill - KINGS LANGLEY
Hertfordshire - WD4 8ST - UK
Tel: + 44 (0) 1923.274477
Fax: + 44 (0) 1923.270264
E-mail: sales@omerin.co.uk

FLEXELEC Dept

OMERIN GmbH
Buchwiese 16
D-65510 IDSTEIN - GERMANY
Tel: + 49 (0) 6126.94.31-0
Fax: + 49 (0) 6126.83.99
E-mail: omeringmbh@omerin.com

CE

Applications

Military: radars, missiles, temperature maintenance of electronic circuits or protective housings anti-condensation for aiming devices, etc.

Office equipment: photocopiers, printers.

Rolling stock: rear-view mirrors, batteries, vehicle floors, driving cabs for locomotives, locks, tank wagons, etc.

Food service industry: electric hot-plates, double boilers, trays, etc.

Photography: developing and fixing trays.

Medical: X-rays, trays for wax impressions, apparatus for bacteria cultures or blood tests, transformation of cosmetic products, etc.

Various industries: substances in drums, heating trays, distillers, boilers, ultrasound vessels, tanks for electrolysis, process tanks, storage silos and vats, hoppers, conveyor belts, control desks, presses, repair kits for composite materials, etc.

Miscellaneous: photoelectric cells, decomposition toilets, various drying devices, etc.

To ensure that these heating elements enjoy a long service life, we recommend using a control device.



Construction

The heating part is made up of a nickel-chrome or nickel-copper alloy heating wire wound in a spiral around a slender fibre glass core.

This heating element is then placed between two layers of woven fibre glass impregnated with silicon elastomer.

This material is an excellent electrical insulator (approx. 12 kV/mm), a good conductor of heat (7.10^{-4} W/cm/K) and flexible. It can withstand continuous temperatures of around 200°C. The fibre glass weave endows the assembly with good mechanical resistance, while allowing it to remain very flexible.

T - TA - TV

Silicon elastomer heater mats



Heating mats are manufactured to order and their sizes and shapes can be adapted to each situation.

They can be fixed using eyelets or hooks incorporated into the heating mat and, in some cases, vulcanized directly by us onto your metal parts. An adhesive backing can also be provided.

Other options such as double insulation, fuses, thermal cut-out devices or temperature sensors (PT100, PT1000, thermocouple,...) are available.

	T - TA - TV
Heating wire	Nickel-Copper or Nickel-Chrome
Heating element insulation	Silicon elastomer
Max. surface	1.5 m ²
Max. length	3 m
Max. width	1 m
Thickness	~ 3 mm (thicker at connection point)
Max. power	0.5 W/cm ²
Permissible surface temperature	from - 60°C to + 200°C
Max. maintenance temperature	+ 160°C
Tolerance	Power ± 10%

Surface temperature according to power

Power W/cm ²	Surface temperature (°C)
0.05	40
0.10	70
0.15	90
0.20	105
0.25	120
0.30	135
0.35	150
0.40	165
0.45	175
0.50	190
0.55	200
0.60	210
0.70	230
0.80	250
0.90	260
1.00	270

For information, silicon elastomer will rapidly degrade beyond these values.

The above table gives surface temperatures for heating mats according to their power level in W/cm², measured in the following conditions:

Heating mats placed on a 1.5mm thick horizontal aluminium plate in a calm atmosphere at +20°C. The plate is suspended in the air. Temperatures are recorded after stabilising.

Use

Consult the pages of the catalogue devoted to the corresponding general operating principles, general instructions for use and accessories.

FLEXELEC S.A.S

10, rue des frères Lumière
 Z.A. du Bois Rond
 69720 ST BONNET DE MURE - FRANCE
 Tel: + 33 (0)4.72.48.30.90
 Fax: + 33 (0)4.78.40.82.81
 E-mail: flexelec@omerin.com

FLEXELEC Dept

OMERIN ASIA Pte Ltd
 51 Goldhill Plaza #08-12/01
 SINGAPORE 308900
 Tel: + 65.6255.4778
 Fax: + 65.6255.4779
 E-mail: sales@omerin.com.sg

FLEXELEC (UK) Ltd

Unit 11 Kings Park Industrial Estate
 Primrose Hill - KINGS LANGLEY
 Hertfordshire - WD4 8ST - UK
 Tel: + 44 (0) 1923.274477
 Fax: + 44 (0) 1923.270264
 E-mail: sales@omerin.co.uk

FLEXELEC Dept

OMERIN GmbH
 Buchwiese 16
 D-65510 IDSTEIN - GERMANY
 Tel: + 49 (0) 6126.94.31-0
 Fax: + 49 (0) 6126.83.99
 E-mail: omeringmbh@omerin.com