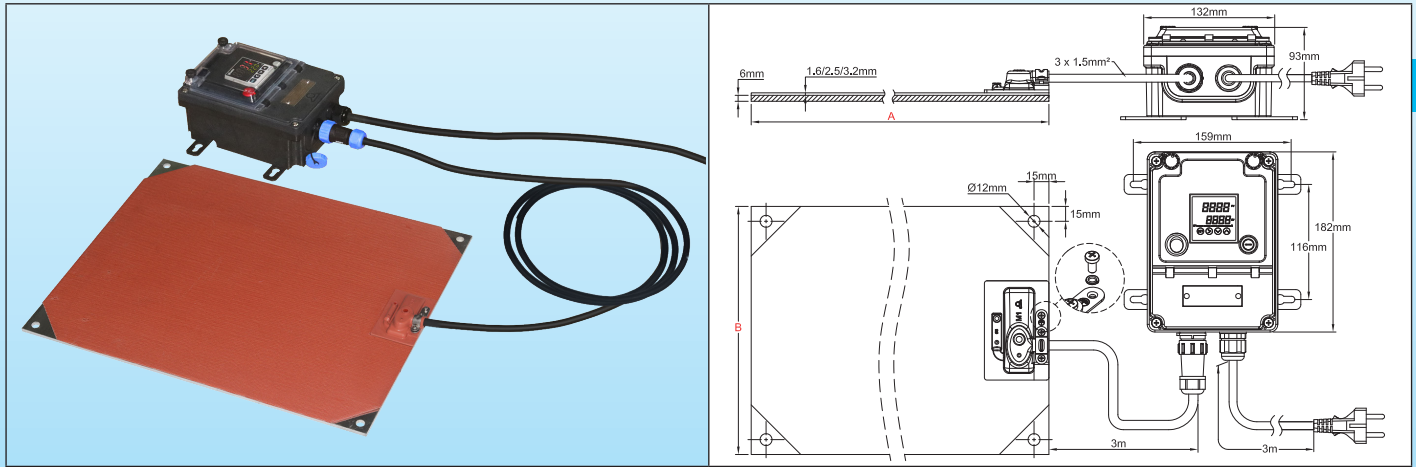


# Non flexible silicone heaters vulcanized on aluminium board, with remote electronic temperature control, double display, PID action.



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

Temperature limiters	Maximum temperature	Mounting	Temperature control	Silicone + aluminum thickness (mm)	Type
Optional	200°C	4 holes	Electronic temperature control, PID action	2.5 + 6	<b>9AM</b>



## Main features

**Non-flexible** silicone rubber heaters are made of fiberglass reinforced laminated silicone rubber sheets, vulcanized together through heat and high pressure on both sides of an embedded specially formed heating wire element. Fiberglass-reinforced silicone rubber gives the heater dimensional stability.

The intimate bonding of the heater on a thick aluminum plate allows to increase the power surface load, and eases the mounting on flat surfaces in industrial applications

Silicone is used because of its high temperature resistance (Permanent temperature up to 200°C (390°F), high thermal conductivity ( $\sim 7 \cdot 10^{-4}$  W/cm.K) and good electrical insulation properties ( $\sim 12$  KV/mm)

This series is distinguished by the use of a remote electronic control system, with PID action and automatic adjustment of parameters, with digital display of the measured value and digital display of the set point, connection by waterproof connector for easy disconnection of the heater, and IP65 ingress protection class for the whole assembly. This allows its use in most of industrial applications

Other general particularities of these heaters are:

- Not affected by vibration or flexing,
- Lightweight,
- Comply with UL94-VO (flame retardant) and ROHS,
- Low smoke and low Toxicity,
- Silicone is non-toxic, and moisture and chemical resistant

## Main applications

Silicone heating elements on aluminum plates are a simple and industrial solution for heating flat surfaces. They are sturdy, easy to install and heat quickly and evenly.

### Some typical examples of applications are:

Heating of hoppers, electrical cabinets, hot plates for the food industry, reheating tank bottoms.

In addition to their temperature control system, they can receive temperature sensors, temperature limiters, thermal fuses.

## Technical features

**Mounting:** By 4 holes dia. 12mm located at the 4 corners, at 15mm from edges

**Length (Dimension A):** Upon customer request (minimum 300mm)

**Width (dimension B):** Upon customer request (minimum 100mm)

**Ingress protection:** IP65.

**Minimum ambient temperature:** -10°C (+15°F)

**Voltage:** 220-240VAC.

**Power tolerance:**  $\pm 10\%$  at 20°C

**Temperature control:** Controller with double display, of process value and of set-point, located in an independent waterproof housing, designed for wall mounting. It is connected to the flexible silicone rubber heater by a cable equipped with a 5-pin waterproof quick connector, facilitating the connection and disconnection with the heater. It controls the temperature by means of a probe placed under a silicone boot on the outer surface of the heater.

**Action:** PID with automatic parameters adjustment by auto-tune function.

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**Sensor input:** Pt100

**Power output:** Solid state relay, maximum 16A 230V.

**Alarm:** 3A 230V relay.

**Display:** 4 digits display configurable in °C or °F

**Power supply:** AC 220-230V 50-60Hz.

**Accuracy:** ±1°C (±2°F) or 0.3% ES ± one digit.

**Self-testing:** Open sensor circuit.

**Ambient temperature:** -10 to 60°C, 20 to 85% relative humidity, non-condensing.

**Temperature display range:** Configurable

**Resolution:** 0.1°

**Read instruction manual before the setting of this temperature controller.**

**Power density:**

- 0.2W/cm<sup>2</sup> (1.3W/in<sup>2</sup>) for plastic materials
- 0.75W/cm<sup>2</sup> (4.8W/in<sup>2</sup>), for usual applications.
- 1W/cm<sup>2</sup> (6.5W/in<sup>2</sup>) for fast heating applications.
- 1.4W/cm<sup>2</sup> (9.1W/in<sup>2</sup>) for huge power applications

Other values on request.

**Thickness of the flexible silicone foil:** 2.5mm

**Thickness of the aluminum board:** 6mm (other values on request).

**Quality control routine tests:** Each element is 100% tested for continuity, resistance and insulation. Tests are made according to EN 60335-1 and EN 50106 standards. See technical introduction.

**Dielectric Strength:** 1750V AC.

**Insulation resistance:** ≥ 10 Megohms.

**Operating temperature:**

See in the technical introduction examples of the temperatures reached by these heaters. They represent the temperature that they may reach if they are not correctly installed.

**Connection cable:**

Insulated rubber power supply cable, for industrial environments, 3 × 1.5mm<sup>2</sup> (3xAWG15) length 3m, Euro plug. UL plug on request.

**Options:**

- Power supply 110/115V
- Power cord with industrial plug 2-pole + earth 16A CEE (IEC60309).
- Surface mounted temperature limiter.
- Grounded mesh wire shield layer
- Silicone foam insulation layer vulcanized on the external surface

## Safety standards:

The heaters have been designed in compliance with EEC Low Voltage Directive (LVD) 2006/95/EC and EMC directive 2004/108/EC. They must be installed in accordance with all local applicable instructions, codes, and regulations.

## Main parts numbers in 220/240V

W/cm <sup>2</sup> (W/in <sup>2</sup> )	300x350mm	Power (Watts, 230V)	350x400mm	Power (Watts, 230V)	400 × 450mm	Power (Watts, 230V)	500x600mm	Power (Watts, 230V)
0.2 (1.3)	9AMB2CAB6A814F30	140	9AMB2CBC6A820F30	200	9AMB2CCD6A828F30	280	9AMB2CEG6A850F30	500
0.75 (4.8)	9AMB8CB6A832F30	320	9AMB8CBC6A845F30	450	9AMB8CCD6A862F30	620	9AMB8CEG6A8A1F30	1100
1 (6.5)	9AMBBCAB6A870F30	700	9AMBBCBC6A8A0F30	1000	9AMBBCCD6A8A4F30	1400	9AMBBCEG6A8B5F30	2500
1.4 (9.1)	9AMBBCCB6A8A0F30	1000	9AMBBCBC6A8A4F30	1400	9AMBCCD6A8A9F30	1900	9AMBBCEG6A8C5F30	3500

\* For UL plug instead of Euro plug, replace F3 with E3 in the part number.