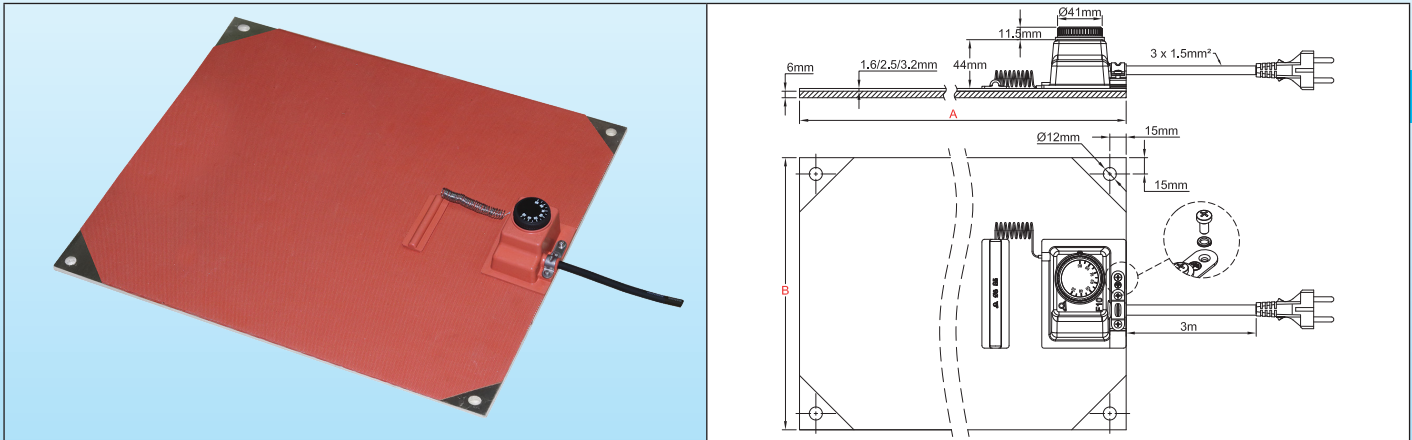


# Non flexible silicone heaters vulcanized on aluminium board, surface mounted adjustable thermostat.



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Temperature limiters	Maximum temperature	Mounting	Temperature control	Silicone + aluminum thickness (mm)	Type
Optional	200°C	4 holes	Surface mounted thermostat	2,5 + 6	<b>9AK</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 ( $\sim 7 \cdot 10^{-4} \text{ W/cm.K}$ ) and good electrical insulation properties ( $\sim 12 \text{ KV/mm}$ )

This series is distinguished by the use of a conventional thermostat mounted on the surface of the heating part, in a compact and economical design.

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
- Very thin profile

## 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:** IP54.

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

**Voltage:** 220-240VAC.

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

**Temperature control:** Single pole bulb and capillary thermostat, adjustable from 20°C to 110°C (+50~230°F) or from 50 to 200°C (120-390°F). Rating 16A 230V (3600W).

**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.

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**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.
- Surface mounted temperature sensor (Pt100, NTC, thermocouple).
- 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

Thermostat setting range	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)
20~110°C** (+50~230°F)	0.2 (1.3)	9AKB2GAB6A814F30	140	9AKB2GBC6A820F30	200	9AKB2GCD6A828F30	280	9AKB2GEG6A850F30	500
	0.75 (4.8)	9AKB8GAB6A832F30	320	9AKB8GBC6A845F30	450	9AKB8GCD6A862F30	620	9AKB8GEG6A8--F30	1100
	1 (6.5)	9AKBBGAB6A870F30	700	9AKBBGBC6A8A0F30	1000	9AKBBGCD6A8A4F30	1400	9AKBBGEG6A8B5F30	2500
	1.4 (9.1)	9AKBFGAB6A8A0F30	1000	9AKBFGBC6A8A4F30	1400	9AKBFGCD6A8A9F30	1900	9AKBFGEG6A8C5F30	3500
50 ~ 200°C** (120~390°F)	0.2 (1.3)	9AKB2LAB6A814F30	140	9AKB2LBC6A820F30	200	9AKB2LCD6A828F30	280	9AKB2LEG6A850F30	500
	0.75 (4.8)	9AKB8LAB6A832F30	320	9AKB8LBC6A845F30	450	9AKB8LCD6A862F30	620	9AKB8LEG6A8A1F30	1100
	1 (6.5)	9AKBBLAB6A870F30	700	9AKBBLBC6A8A0F30	1000	9AKBBLCD6A8A4F30	1400	9AKBBLEG6A8B5F30	2500
	1.4 (9.1)	9AKBFLAB6A8A0F30	1000	9AKBFLBC6A8A4F30	1400	9AKBFLCD6A8A9F30	1900	9AKBFLEG6A8C5F30	3500

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

\*\* For knob printed in °F instead of °C, replace G with F or L with K in the reference.

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