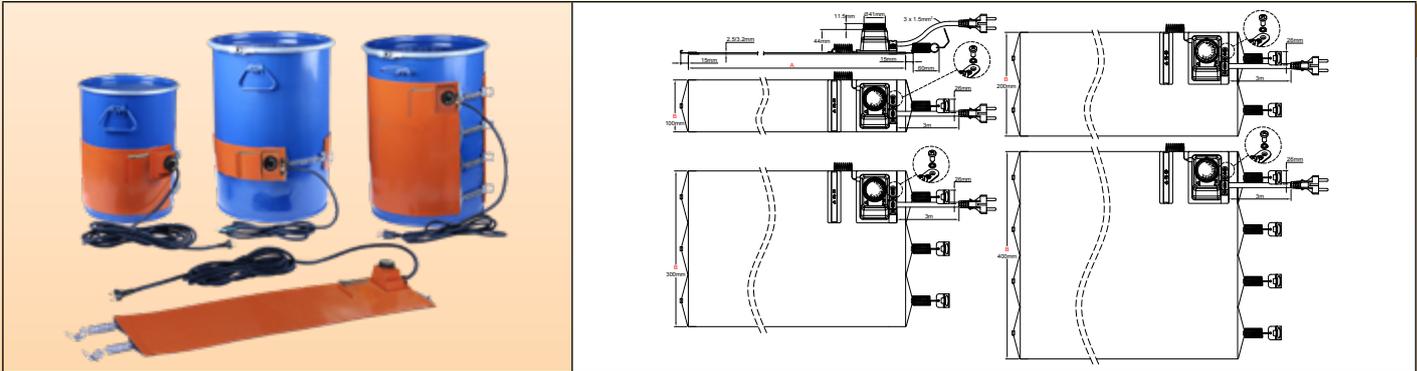


# Silicone rubber heating belts for metal drums, with **surface mounted bulb and capillary thermostat**



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Containers material	Maximum temperature	Tightening	Thermostat	Silicone thickness (mm)	Type
Metal only	200°C	Hooks and springs	Bulb and capillary	2,5 (3,2)	<b>9AB</b>



## Main features

Silicone belt 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 without sacrificing flexibility. Silicone is used because of its high temperature resistance (Constant temperature up to 200°C (390°F), high thermal conductivity (~7 10<sup>-4</sup>W/cm.K) and good electrical insulation properties (~12KV/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

Combining high power density with flexibility silicone heating belts are a simple and economical solution for heating metal drums.

They bring and maintain products to the consistency required for their use. Some typical applications examples are:

- Consistency control of paints, oils, greases, fats, molasses, adhesives, plastics, mastics, resins, syrups,
- Freeze protection,
- Maintaining liquid temperatures at 45-65°C (115-150°F) in food industry water purification systems,
- Maintain polyester resin at 20-25°C (70-80°F) for spray and pour equipment.

## Technical Features

**Clamping on drums:** By spring and hook lock-up that allows adjusting the band to the drum diameter; change position to the right place as content levels fluctuate; and also keeps the band tight to the drum surface, providing good thermal contact. Clamping force of each spring is from 1 to 3DaN in the recommended drums diameter range. The spring is equipped with a pull ring for easy installation and removing of the belt.

**Length (Dimension A):** designed to be used on standard container diameters. Consult factory if a custom size is requested.

**Width (dimension B):** 100mm (4"), 200mm (8") 300mm (12"), and 400mm (16"). **Heating belts must always be applied on cylindrical surfaces without hoops or ribs.**

**Silicone foil minimum bending radius:** 3.2mm (0.125")

**Ingress protection:** IP54.

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

**Voltage:** 220-240VAC.

**Power tolerance:** ±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.

**Power density:**

- 0.75 w/cm<sup>2</sup> (4.8 w/inch<sup>2</sup>), for usual applications.
- 1 w/cm<sup>2</sup> (6.5 w/inch<sup>2</sup>) for fast heating applications

**Thickness of the flexible silicone foil:** 2.5mm. (Optional 3.2mm, for heavy duty applications requiring strong mechanical strength and reinforced insulation).

**Quality control routine tests:** Each element is 100% tested for continuity, resistance and insulation. Tests are made

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according to EN 60335-1 and EN 50106 standards. See technical introduction.

**Dielectric Strength:** 1750V AC.

**Insulation resistance:**  $\geq 10$  Megohms.

**Operating temperature:**

The temperature controlled by the thermostat is that of the heating surface. The temperature of the heated product is generally much lower than that of the surface and depends mainly on the surface power ( $W/cm^2$ ), the quality of the thermal contact with the container, the viscosity, heat capacity and thermal conductivity of the heated product, the good positioning of the heating belt, the set point value, and room temperature (See technical introduction).

You can find in the technical introduction examples of the temperatures reached by silicone heating belts. They represent the temperature that may reach the heating belt if it is not correctly installed (for example: poor thermal contact, empty container or improperly temperature controlled).

**Connection cable:**

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

**Options:**

- 3.2mm reinforced thickness.
- Power supply 110/115V
- Power cord with industrial plug 2-pole + earth 16A CEE (IEC60309)
- Surface temperature limiter.
- Grounded mesh wire shield layer
- Power density reduced to 0.2  $W/cm^2$  (1.3  $w/inch^2$ ) for plastic containers
- Outside thermal insulation by silicone foam layer.

## 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 with 3 meters cord and euro plug\*

(See the technical introduction for the liquids heating time)

Belt width B = 100mm						
Container Liters (Gallons)	Part number with 30-110°C (50-230°F) Thermostat	Part number with 50-200°C (120-390°F) Thermostat	High and low limits of acceptable diameter (measured at no-hoops or no-ribs place) mm (inch)	A Length mm (inch)	Power density $W/cm^2$ ( $W/in^2$ )	Power Watts
57~60 (16)	9ABB8G1102855F30	9ABB8L1102855F30	356-373 (14-14.7)	1020 (40.1)	0,75 (4.8)	550
57~60 (16)	9ABBBG1102874F30	9ABBBL1102874F30	356-373 (14-14.7)	1020 (40.1)	1 (6.5)	740
110~120 (30)	9ABB8G1135875F30	9ABB8L1135875F30	463-480 (18.2-18.9)	1350 (53.1)	0,75 (4.8)	750
110~120 (30)	9ABBBG11358A0F30	9ABBBL11358A0F30	463-480 (18.2-18.9)	1350 (53.1)	1 (6.5)	1000
208~210 (55)	9ABB8G1169895F30	9ABB8L1169895F30	571-588 (22.5-23.2)	1690 (66.5)	0,75 (4.8)	950
208~210 (55)	9ABBBG11698A3F30	9ABBBL11698A3F30	571-588 (22.5-23.2)	1690 (66.5)	1 (6.5)	1300
Belt width B = 200mm						
Container Liters (Gallons)	Part number with 30-110°C (50-230°F) Thermostat	Part number with 50-200°C (120-390°F) Thermostat	High and low limits of acceptable diameter (measured at no-hoops or no-ribs place) mm (inch)	A Length mm (inch)	Power density $W/cm^2$ ( $W/in^2$ )	Power Watts
57~60 (16)	9ABB8G21028A3F30	9ABB8L21028A3F30	356-373 (14-14.7)	1020 (40.1)	0,75 (4.8)	1300
57~60 (16)	9ABBBG21028A7F30	9ABBBL21028A7F30	356-373 (14-14.7)	1020 (40.1)	1 (6.5)	1700
110~120 (30)	9ABB8G21358A7F30	9ABB8L21358A7F30	463-480 (18.2-18.9)	1350 (53.1)	0,75 (4.8)	1700
110~120 (30)	9ABBBG21358B3F30	9ABBBL21358B3F30	463-480 (18.2-18.9)	1350 (53.1)	1 (6.5)	2300
208~210 (55)	9ABB8G21698B2F30	9ABB8L21698B2F30	571-588 (22.5-23.2)	1690 (66.5)	0,75 (4.8)	2200
208~210 (55)	9ABBBG21698B9F30	9ABBBL21698B9F30	571-588 (22.5-23.2)	1690 (66.5)	1 (6.5)	2900
Belt width B = 300mm						
Container Liters (Gallons)	Part number with 30-110°C (50-230°F) Thermostat	Part number with 50-200°C (120-390°F) Thermostat	High and low limits of acceptable diameter (measured at no-hoops or no-ribs place) mm (inch)	A Length mm (inch)	Power density $W/cm^2$ ( $W/in^2$ )	Power Watts
57~60 (16)	9ABB8G31028B0F30	9ABB8L31028B0F30	356-373 (14-14.7)	1020 (40.1)	0,75 (4.8)	2000
57~60 (16)	9ABBBG31028B7F30	9ABBBL31028B7F30	356-373 (14-14.7)	1020 (40.1)	1 (6.5)	2700
110~120 (30)	9ABB8G31358B7F30	9ABB8L31358B7F30	463-480 (18.2-18.9)	1350 (53.1)	0,75 (4.8)	2700
110~120 (30)	9ABBBG31358C6F30	9ABBBL31358C6F30	463-480 (18.2-18.9)	1350 (53.1)	1 (6.5)	3600
Belt width B = 400mm						
Container Liters (Gallons)	Part number with 30-110°C (50-230°F) Thermostat	Part number with 50-200°C (120-390°F) Thermostat	High and low limits of acceptable diameter (measured at no-hoops or no-ribs place) mm (inch)	A Length mm (inch)	Power density $W/cm^2$ ( $W/in^2$ )	Power Watts
57~60 (16)	9ABB8G41028B8F30	9ABB8L41028B8F30	356-373 (14-14.7)	1020 (40.1)	0,75 (4.8)	2800**

\* Cord with UL plug instead of Euro plug, replace F30 by E30 in the Part number.

\*\* Values above 3600W are not compatible with the 16A 230V rating of the single pole thermostat.

\*\*\* Thermostat knob printed in °F instead of °C, replace G by F or L by K in the Part number.

\*\*\*\* 3.2mm reinforced thickness, replace 9ABB by 9ABC in the Part number.

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