

9ABN, 9ABM, 9ABR, 9ABT, 9ABX, 9ABY (Bulb thermostat) Silicone Belt Drum Heaters Instructions and installation Manual P1

⚠ WARNING

Read and understand

this manual before operating or servicing this Silicone belt drum heater. Failure to understand how to safely operate this heater could result in an accident causing serious injury or death.

This heater should only be operated by qualified personnel.

A person who has not read and understood all installation instructions is not qualified to install or operate this product.



INTRODUCTION

Thank you for purchasing a Blue Ink Co. Ltd Silicone Belt Heater. Your heater is designed to provide a long and efficient service life with function, reliability, and safety in mind. For additional information, field comments, or catalogues of other Blue Ink Co. Ltd products, please contact us at: infoblueink@ultimheat.com. Meaningful and constructive field comments will be awarded by a discount or a free heating belt.

Specific and unique features of Blue Ink silicone belt heaters:

- Vertical integration and engineering:** The Ultimheat alliance, with more than 60 year experience in controls and heating elements manufacturing, has developed this range of silicone belt heaters to answer to the most demanding customer requirements. We produce our own core wound heating wires, mold our own silicone parts, mix our own silicone compounds, stamp our own metal parts, produce our own thermostats, and we mold our own plastic housing. Every component of these heaters has been designed for their optimum reliability. We do not just make an assembly from various parts bought off the shelf: we optimize them by using our own design and producing them ourselves using the best raw materials. Our goal is not to propose the highest heating power in the smallest size, and just forgiving the thermal limits of the end user application. It is to make products adapted to the application. Customer feedback is our bible.
- Use of fiber glass core wound heating wire:** Provides improved elasticity. Unlike straight wires, the repeated bending of the belt will not kink or break the heating element.
- Use of two ply fiber glass reinforced silicone fabric:** no metal mesh inside the silicone that kinks, breaks, or short circuits the heater.
- Use of thermal conductive silicone compound:** heat is transferred faster to the container surface, with a more even temperature distribution. Hot spots are reduced because the heat conductive silicone compound provides a more homogenous temperature
- Container surface temperature measurement (international patent applied for):** the temperature of the container surface is measured directly by the thermostat using a high thermal conductive bridge. The thermostat does not measure the temperature of the belt as in competitor's models.
- Anticipation temperature control (patented):** A thermal anticipator circuit is used to avoid the temperature overshoot that occurs with most on-off temperature controllers.
- Maintenance friendly design:** most external components of these heaters can be field replaced by a qualified electrician (Use of original manufacturer's spare parts only). No need for costly vulcanization or bonding.
- A wide range of temperature control systems:** The customer can choose between built in bimetal thermostat, built in bulb and capillary thermostat or remote electronic temperature control
- A wide range of sizes:** silicone belts can be made in 100mm (4"), 200mm (8"), 300mm (12" and 400mm (16"), in standard drum and container diameters. This allows the optimization of the surface power to the application requirements.
- Quality is in the details:** stainless steel clip plates and spring; stainless steel hardware; cord securing saddle; finger saving spring ring; adjustable spring length; high temperature FEP insulated internal wiring; connection for remote timer or switch on electronic control versions; weather resistant stainless steel engraved identification plates
- And more:** If you are concerned with sustainable development and the limitation of energy consumption, take a look at our range of insulated heating jackets. You'll save 30 to 60% of your drum heating energy costs. If you switch from the Blue Ink Silicone heating belt with an electronic temperature control to a Jacket heater, simply disconnect the belt! No need to change the controls, the models are interchangeable

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9ABN, 9ABM, 9ABR, 9ABT, 9ABX, 9ABY (Bulb thermostat) Silicone Belt Drum Heaters Instructions and installation Manual P2

IMPORTANT SAFETY INSTRUCTIONS	
⚠ DANGER	Approvals: this product has been designed in compliance with European Low Voltage Directive (LVD) 2006/95/EC, and related international standards (IEC). It must be installed in accordance with all local applicable instructions, codes, and regulations.
⚠ CAUTION	<p>Never handle the heater while it is in operation; always disconnect the heater from the power source and allow it to cool prior to handling.</p> <p>Inspect the heater before use.</p> <p>Never operate the heater without a temperature control device.</p> <p>Do not wrap the heater over itself</p> <p>If liquids are spilled on the heater, disconnect it from the power source; allow it to cool; and clean the liquid from the heater.</p> <p>Never operate a heater unless it is placed on a container, below the level of the contents.</p> <p>Do not operate the heater above rated temperature value of the belt, container, or contents, whichever is lowest.</p> <p>Fasten the heater to a device using approved methods only.</p> <p>Repair of damaged or faulty heaters must be made by trained professional electricians, using original spare parts and in respect with the repair manual.</p> <p>Do not crush or apply severe physical stress on the heater, mechanical connections, or electrical components.</p> <p>Disconnect the heater when not in use.</p> <p>Use the recommended heater model for a given container size. Do not use for other applications.</p>
⚠ DANGER	<p>Do not immerse heater in liquid. If used outdoors, it must be protected from dust, rain, snow, ice and liquid spillage.</p> <p>Keep volatile or combustible material away from the heater when in use.</p> <p>Use the heater only in approved locations.</p> <p>Do not use in hazardous areas. This equipment is not explosion proof</p> <p>Keep sharp metal objects away from the heater.</p>
⚠ WARNING	<p>Allow only qualified personnel to connect electrical wiring.</p> <p>Disconnect all power supplies at the source before making any power connections.</p> <p>All electrical wiring must follow local electrical codes</p>

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INSTALLATION

CHECK PRIOR TO INSTALLATION

Bulb control models (9ABM, 9ABN, 9ABX series)

1. The heater label identifies the voltage, power output and acceptable container material and capacity. Check that these comply with the application. Never use on a different voltage than specified. Never use a metal drum or pail heater on a plastic drum or pail. Label is red color on this sketch



2. Check for any visible damage to the heater. Do not use it prior to a careful inspection by professional electrician if rips or punctures on the surface are found.
3. Check that the desired placement of the heater will not damage the heater through impact shock, vibration, ambient temperature, mishandling, or by neighboring moving parts.
4. Confirm that the power rating of the heater and temperature adjustment range are appropriate for the container material and contents.
5. Confirm that the heater will not be exposed to temperatures above its maximum exposure limit. The temperature of the internal heating element may run up to 25% higher than the external surface of the heater. External surface of the heater may run as much as 40 to 60°C (70 to 110 °F) higher than the container surface temperature. Use extreme caution for applications that require a process temperature near the maximum exposure temperature rating 200°C (390°F) of the silicone heating surface.
6. Confirm that the heater's maximum exposure temperature rating is suitable for the process temperature.
7. Confirm that the heater's maximum exposure temperature rating is suitable for the heated liquid.
8. Do not connect the power source before placing the heater on a container. Failure to comply could result in personal injury or property damage. Do not connect the power until all installation steps are completed

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INSTALLATION OF HEATER

1. Verify the drum surface is clean, free from all sharp edges, weld splatter, rust flakes, and not damaged in anyway. Smooth any rough areas and clean the surface with a suitable solvent if there is any dirt or oil before use.

2. Select a suitable location for the belt on the drum.
 -Drums or containers must be in an upright position.
 -The heater must be in full contact with the drum and below **the lowest expected level** of the liquid while in operation.
 -The heater should be mounted on the bottom 1/2 of the drum for almost all applications (Green zones 1 and 2).
 -The lowest flat section of the bottom zone is recommended. (Green zone 1)
 -Do not use the heater on the top part of the container (orange zones); unless there is a specific need for the application and only if the container is full during the entire heating process.
 -Heater must not be applied over dented or ribbed areas of the container (red zones)
 -Do not use the heater if the drum is empty.
 -Do not use the heater above the level of the liquid.
 -We do not recommend the use of a belt heater on a drum or container held in a horizontal position on a cradle. Overheating may occur at the top part.
 -Do not bend the heater sharply, as this may cause internal damage to the heating element.



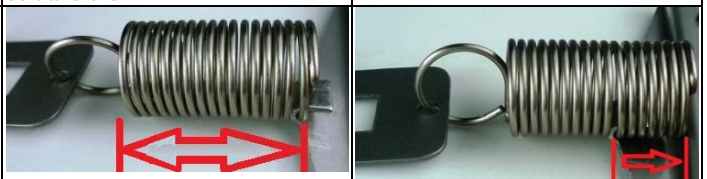
3. Wrap the heater around the drum. Pull the spring attached to the metal tab with the finger hold ring while pressing the hook end of heater against the drum. Do not use the hook plate as a handhold when extending the spring.
 4. Latch the spring loop onto the hook of the hook plate.



5. Verify that the belt heater is in full contact with the container and that there are no air gaps between the heater and the drum. A good thermal contact is essential to avoid internal damage to the heating element.



6. It is possible to adjust length and pull strength of the spring by screwing it on its hook if necessary.



⚠ DANGER	7. Open the drum or container to allow for thermal expansion when heating. Drums are containers only and not designed to be used as a pressure vessel. Failure to heed this warning can cause severe personal injury, death or substantial property damage. Bungs should be removed and clamps and gaskets left off removable drum tops.
⚠ WARNING	8. Disconnect the heater when the liquid level in the drum goes down and reaches the level of the belt heater.
	9. Protect the heater from liquid spillover or other abuse. Do not expose drum heaters to chemicals, acids, alkalis, oils, fluids or other substances (liquids or gases) that could ignite or cause damage to the heater.
⚠ WARNING	10. Do not overlap the drum heater onto itself or another heater

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CONNECTING HEATER TO POWER SUPPLY

1. The drum heater is designed to work at a specific voltage. Refer to the label located on the heater for rated voltage and wattage. (Voltage is also printed on a label on the power supply cord).	
⚠ DANGER	2. Connecting the heater to a voltage higher than specified will destroy its heating element and temperature control. This could induce heater ignition and a fire hazard.
⚠ DANGER	3. Failure to operate the heater at its rated voltage could cause damage to surface being heated, including melting the surface of plastic containers. This could induce container ignition and a fire hazard.
⚠ DANGER	4. Failure to operate the heater at its rated voltage could cause damage to the heated contents. This could induce container ignition and a fire or explosion hazard.
5. All electrical connections must be made by qualified personnel and in accordance with all local codes and regulations.	
6. 120VAC models are supplied with a 15A standard 3-prong plug. 240VAC models are not equipped with a plug. Power cord termination and plug configuration must be made to comply with the appropriate electrical power supply. The power cable consists of three color-coded conductors, black, white, and green (US) or brown, blue and yellow green (Europe). The black (brown) wire should be connected to the power Phase. The white (Blue) wire should be connected to Neutral. The green (yellow green) wire should be connected to ground. Standard cord style is AWG16, UL62, 300V, T105°C (220°F) rubber insulated, oil resistant (T120°C H05RR-F3G1.5 mm ² for Europe, rubber insulated, oil resistant). All applications of drum heaters must be grounded in accordance with local electric codes. Grounding will alleviate static charges from building up and causing fire hazards. Refer to local codes in order to comply with regulations. Follow all local electrical codes for proper electrical connections.	
7. End User Must Comply with the following: <ul style="list-style-type: none"> • Final installation and wiring must be inspected by the authority that has jurisdiction in the area where the heater is installed. • Properly sized circuit breakers must be used. • It is highly recommended that a ground fault circuit interrupter (GFCI) is used. • The end-user is responsible for providing a suitable main disconnecting device at the power supply end of the connecting cable. • The electrical receptacle, including GFCI (Ground Fault Circuit Interrupter), should be wired by a qualified electrician in accordance with the National Electrical Code (NEC) and local codes. In other countries, the local national electrical code applies. 	
8. Power supply must be shut off or disconnected when the heater is not in use.	

ADJUSTMENT OF TEMPERATURE SET-POINT

We do not recommend a temperature set point higher than 150°C (302°F) on metal containers and 60°C (140°F) on plastic containers

⚠ DANGER	Heater surface temperature is usually 40 to 60°C (70 to 110 °F) higher than container surface temperature. Do not operate the heater under conditions that result in temperatures higher than the recommended maximum since this may cause premature heater failure, liquid overheat, or damage to containers.
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Adjust the dial to the desired setting. The dial is printed in °C (European versions) or in °F (US versions).

9ABM can be set from 40°F to 100°F (°F knob).

9ABR can be set from 4 to 40°C (°C knob).

9ABN can be set from 80°F to 230°F (°F knob).

9ABT can be set from 30 to 110°C (°C knob).

9ABX (remote bulb model) can be set from 80°F to 230°F (°F knob).

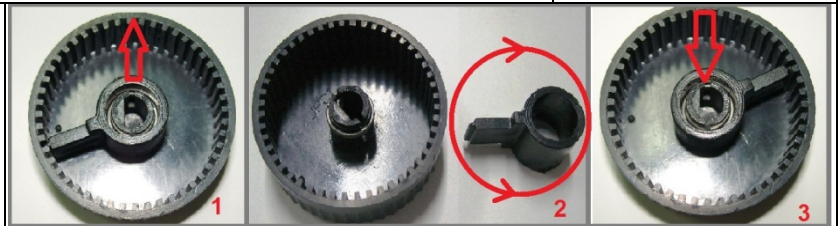
9ABY (remote bulb model) can be set from 80°F to 230°F (°C knob).

The remote bulb of the 9ABX and 9BY versions must be fully immersed in the liquid that is to be heated. The red pilot light indicates the input voltage is connected; the orange pilot light indicates the heating circuit is energized. In normal operation, the orange light will be switched on and off by the thermostat at the same time as the heating element.



Rotation cam adjustment on bulb thermostat knob

The knob is equipped with a rotation limit cam located inside the knob. If you want to reduce the available temperature setting (high or low stop), remove the knob and change the cam position to the value you want. Check the new setting by placing the knob back in its original position and swinging it through its full motion.



⚠ WARNING	1. The heating process starts immediately when it is connected to an electrical power supply, and if the temperature control set point is higher than ambient temperature. Heating is not stopped during the set point adjustment process.
⚠ DANGER	2. The belt and container surface will be overheated if the belt is used on an empty section of the container. This can result in belt destruction, container melting, and firing or explosion of overheated gas inside the container.
⚠ WARNING	3. An additional high-limit temperature cut-out sensor, controller, or thermostat is required to protect the heater if the operating temperature is within 10°C (20°F) of the maximum exposure temperature of the heater or if the temperature sensor/controller is controlling a process remote to the heater. Consult Blue Ink for additional information.
⚠ DANGER	4. The 9AB Drum heater series is not approved for and should not be used in any hazardous classified area.

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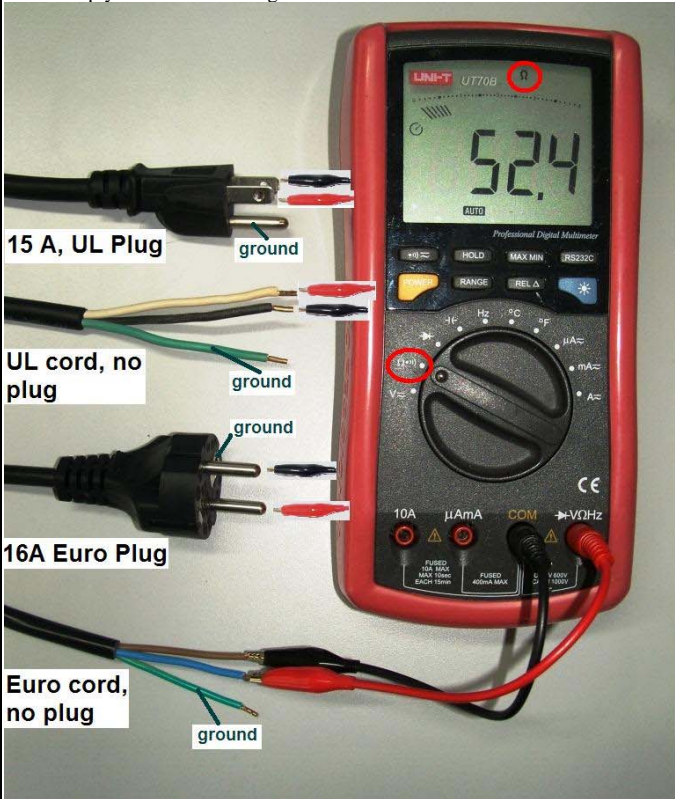



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9ABN, 9ABM, 9ABR, 9ABT, 9ABX, 9ABY (Bulb thermostat) Silicone Belt Drum Heaters Instructions and installation Manual P6

TROUBLESHOOTING GUIDE

Please read this guide prior to contacting Blue Ink Co. Ltd Manufacturing Co., Inc. This guide is designed to answer the most commonly asked questions. If you are unable to identify the problem or need additional assistance, please contact us at: infoblueink@ultimheat.com

PROBLEM	SOLUTION(S)																																																
No heat or insufficient heat	<p>Verify heater is connected (plugged) to the proper voltage. The identification label displays the heater's voltage requirement. If the voltage is correct, disconnect the power supply and check the resistance reading. Checking the resistance reading will determine if there is an open circuit in heater. This can be measured by placing the leads of the ohm meter on the source and return prongs (120Vac) or the two power prongs (240Vac) of the power cord and setting the thermostat knob fully clockwise. Measured values must comply with the following table:</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>15 A, UL Plug ground</p> <p>UL cord, no plug ground</p> <p>16A Euro Plug ground</p> <p>Euro cord, no plug ground</p> </div> <div style="text-align: center;"> <p>Heating element resistance measurement on silicone belt heaters</p> <div style="display: flex; justify-content: space-around;">    </div> <p>Bulb, max position (°F) Bulb, max position (°C) Bimetal, max position</p> <table border="1" style="margin-top: 10px; border-collapse: collapse; width: 100%;"> <thead> <tr> <th colspan="3" style="text-align: center;">Ohms Chart</th> </tr> <tr> <th style="text-align: center;">Watts</th> <th style="text-align: center;">Ohms 115V, +/-5%</th> <th style="text-align: center;">Ohms 230V, +/-5%</th> </tr> </thead> <tbody> <tr><td>200</td><td style="text-align: center;">66,1</td><td style="text-align: center;">265</td></tr> <tr><td>300</td><td style="text-align: center;">44,1</td><td style="text-align: center;">176</td></tr> <tr><td>400</td><td style="text-align: center;">33,1</td><td style="text-align: center;">132</td></tr> <tr><td>500</td><td style="text-align: center;">26,5</td><td style="text-align: center;">106</td></tr> <tr><td>600</td><td style="text-align: center;">22,0</td><td style="text-align: center;">88,2</td></tr> <tr><td>700</td><td style="text-align: center;">18,9</td><td style="text-align: center;">75,6</td></tr> <tr><td>800</td><td style="text-align: center;">16,5</td><td style="text-align: center;">66,1</td></tr> <tr><td>900</td><td style="text-align: center;">14,7</td><td style="text-align: center;">58,8</td></tr> <tr><td>1000</td><td style="text-align: center;">13,2</td><td style="text-align: center;">52,9</td></tr> <tr><td>1100</td><td style="text-align: center;">12,0</td><td style="text-align: center;">48,1</td></tr> <tr><td>1200</td><td style="text-align: center;">11,0</td><td style="text-align: center;">44,1</td></tr> <tr><td>1300</td><td style="text-align: center;">10,2</td><td style="text-align: center;">40,7</td></tr> <tr><td>1400</td><td style="text-align: center;">9,4</td><td style="text-align: center;">37,8</td></tr> <tr><td>1500</td><td style="text-align: center;">8,8</td><td style="text-align: center;">35,3</td></tr> </tbody> </table> </div> </div>	Ohms Chart			Watts	Ohms 115V, +/-5%	Ohms 230V, +/-5%	200	66,1	265	300	44,1	176	400	33,1	132	500	26,5	106	600	22,0	88,2	700	18,9	75,6	800	16,5	66,1	900	14,7	58,8	1000	13,2	52,9	1100	12,0	48,1	1200	11,0	44,1	1300	10,2	40,7	1400	9,4	37,8	1500	8,8	35,3
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Circuit breaker is tripping	Make sure the circuit breaker is capable of handling the amp requirement of the heater. The identification label displays the heater's amperage requirement. If the circuit breaker is correctly sized, examine heater and cord for any damage. If cord or heater insulation is damaged, replace it by original manufacturer spare parts.																																																
The heater does not fit the container	Confirm that the heater provided was designed to fit around your specified container.																																																
Liquids or chemicals have lightly spilled on exterior or interior of the silicone belt	Apply any general household cleaner that does not contain any silicone rubber dissolving ingredients like xylene or isopropyl alcohol using a clean cloth. Do not immerse.																																																

WARRANTY INFORMATION

Blue Ink Co. Ltd, Bangkok, (Thailand), manufacturer of this drum heater, warrants to the original purchaser for the period of eighteen (18) months from date of shipment or twelve (12) months from date of installation, whichever comes first.

This warranty is limited to the replacement of the product found defective and not misused. Contact us at infoblueink@ultimheat.com for complete details about warranty application and sales conditions

Every precaution for accuracy has been taken in the preparation of this manual. However, Blue Ink Co. Ltd neither assumes responsibility for any omissions or errors that may appear, nor assumes liability for any damage that result from the use of the products in accordance with the information contained in the manual.

Blue Ink's policy is to make running changes, not model changes, whenever an improvement is possible. That way our customers get the latest in technology and engineering.

SAFETY ALERT SYMBOLS MEANING

These symbols are used in this document to call your attention to instructions concerning your personal safety. They point out important safety precautions. Read the message that follows the symbol and be alert to the possibility of personal injury or death.

 DANGER	 WARNING	 CAUTION
<i>Immediate hazards which will result in severe personal injury or death</i>	<i>Hazards or unsafe practices which could result in severe personal injury or death</i>	<i>Hazards or unsafe practices which could result in minor personal injury or property damage.</i>

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MODEL IDENTIFICATION TABLE

The part number stamped on the drum heater identifies several important characteristics.

Using this model identification table, identify the drum heater(s) you have purchased to ensure proper application.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
9	A	B														Barrel, drums or pails silicone belt heater (Fiberglass reinforced silicone band, thickness 2.5 mm)
																Controls type
			E													0 to 150°C (32°F to 300 °F) Creep action surface mounted adjustable thermostat
			W													0 to 200°C (32°F to 390 °F) Creep action surface mounted adjustable thermostat
			M													4 to 40°C (40°F to 100°F) Bulb and capillary thermostat with plastic housing, knob printed in °F, surface sensing (200 mm heater width minimum)
			R													4 to 40°C (40°F to 100°F) Bulb and capillary thermostat with plastic housing, knob printed in °C, surface sensing (200 mm heater width minimum)
			N													30 to 110°C (80°F to 230 °F) Bulb and capillary thermostat with plastic housing, knob printed in °F , surface sensing (all width of belt heaters)
			T													30 to 110°C (80°F to 230 °F) Bulb and capillary thermostat with plastic housing, knob printed in °C , surface sensing (all width of belt heaters)
			X													30 to 110°C (80°F to 230 °F) Bulb and capillary thermostat with plastic housing, remote bulb and capillary sensing, knob printed in °F , 1.5 meter capillary (all width of belt heaters)
			Y													30 to 110°C (80°F to 230 °F) Bulb and capillary thermostat with plastic housing, remote bulb and capillary sensing, knob printed in °C, 1.5 meter capillary (all width of belt heaters)
			P													-45 to 120°C (-49°F to 248 °F), °C and °F display, remote electronic control (NTC sensor)
																Band width
				A	0											10 cm (4")
				B	0											20 cm (8")
				C	0											30 cm (12")
				D	0											40 cm (16")
																Band length
						H	7									5 gallons, length 871 mm (circumference 36-1/2 In.), dia 290 mm (11.4 to 11.5 In.)
						J	1									15-16 gallons, length 1078 mm (circumference 44 In.), dia 356 mm (14 In.)
						N	0									30 gallons, length 1404 mm (circumference 57-1/2 In.), dia 460 mm (18.1 to 18.3 In.)
						Q	5									55 gallons, length 1750 mm (circumference 71In.), dia 570 mm (22.4 to 22.6 In.)
																Voltage
								5								110V-120V AC
								8								220-240V AC
																Power
									X	X	X					XXX= power in watt. Usual values are:140, 180, 250, 300, 320, 560, 730, 990, 1000 (xxx=A00) 1250 (xxx=A25), 1500 (xxx=A50)
																Cords
												K	B	0		H05VV-F3G 1 mm ² , T90°C (194°F), PVC insulated, 2 meters long, no plug
												V	C	0		3 x AWG 16 rubber insulated, T105°C (220°F) UL cable, 3 meters long, UL62, no plug
												W	C	0		3 x AWG 16 rubber insulated, T105°C (220°F) UL cable, with 15A UL Plug, 3 meters long, UL62
												X	C	0		H05RR-F3G 1.5 mm ² , T120°C (248°F), rubber insulated cable, 3 meters long, no plug
												Y	C	0		H05RR-F3G 1.5 mm ² , T120°C (248°F), rubber insulated cable, 3 meters long, euro 16A plug
																Version
															0	Power density is suitable for metal drum and pails only (higher than 0.2W/cm ²). These products cannot be used on plastic containers. Products are color coded red
															P	Power density is suitable for plastic drums and pails (equal or lower then 0.2W/cm ²) These products can be used either on plastic or metal containers. Products are color coded black

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9ABN, 9ABM, 9ABR, 9ABT, 9ABX, 9ABY (Bulb thermostat) Silicone Belt Drum Heaters Instructions and installation Manual P8

Product identification

Stamping on the stainless steel tag located on thermostat housing

<p>ULTIMHEAT- BLUE INK BANGKOK 9ABNA0Q55A00WC00 115VAC - 1000W - 55 gal 2011-08-30 Not for plastic container Made in Thailand</p>	<p>First line: Manufacturer or importer name Second line: reference, (see model identification table) Third line: Voltage, power, capacity of drum or container (volume in US gallons : XX gal , or in liters: XXX Lit) Fourth line: manufacturing date Fifth line: “Not for plastic container” (this heater must be used on metal containers only) or “Suitable for plastic containers” (the surface power is suitable for HDPE (High density Polyethylene) or PP (polypropylene) plastics container. It can also be used on metal containers) Sixth line: country of production.</p>
Color code	
	
<p>Red knob: these products <u>cannot</u> be used on HDPE and PP plastic containers, they are designed for use on metal containers only.</p>	<p>Black knob: these products <u>can</u> be used on HDPE and PP plastic containers</p>

Plastic containers main materials

The following is informational only; specification and maximum acceptable temperature may vary depending on exact formulation. We do not recommend using silicone belt heaters on PVC, PET, and LDPE containers. If you want to use silicone belt heaters on plastic containers made with these materials or other similar plastic resins, special care must be taken to avoid reaching the plastic’s softening or melting temperature. We recommend to check our range of jacket heaters and hot air heaters, covering the full range of sizes and temperature ratings, up to the 330 Gallons (1250 Lit.) Intermediate Bulk container (IBC)

Acronym	PVC	PET (PETE)	LDPE	HDPE	PP
name	Polyvinyl Chloride	Polyethylene Terephthalate	Low Density Polyethylene	High Density Polyethylene	Polypropylene
Maximum acceptable surface temperature	70°C 158°F	70°C 160°F	80°C 176°F	120°C 248°F	135°C 275°F
Industrial uses	Excellent solvent resistance. Recommended for products containing alcohols and oils.	FDA approved for all food types.	Poor resistance to chemicals	Commonly used on IBC, totes, drums, barrels. Superior impact resistance. For water based chemicals. Not for petroleum or solvent based products.	Commonly used on IBC, totes, drums, barrels. For non-solvent based products
Domestic uses	Water bottles, salad dressing bottles, window cleaner and liquid detergent containers.	Water and soda bottles, cooking oil bottles, peanut butter jars, detergent bottles.	Food storage containers.	Detergent bottles, milk jugs, shampoo bottles, butter and yogurt	Bottle caps, some baby bottles. used for containers that come in contact with hot liquid.

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