GB

BASE DRUM HEATER

Installation & Operation

0-120°C

50-300°C

November 3rd 2025

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About this manual

This manual applies to all standard and custom versions of our base heaters for drum barrel heating, unless otherwise stated. It was originally written in English. Other language versions are available upon request or at the following URL:

kuhlmann-electroheat.com/manuals

Product warranty

This product is covered by a one-year warranty (up to 1600 hours of use) from the date of shipment, against defects in materials and workmanship. If a fault occurs within the warranty period, the manufacturer will repair or replace the product at no charge. The warranty does not cover defects, damage, or failures caused by improper use or lack of maintenance.

Warning!!

Read and understand this guide before installing and operating the product. Failure to follow instructions may result in injury, electric shock, fire, or damage to the heating blanket or heated material.

Important safety instructions

- For industrial use only. Must be operated by trained personnel familiar with heating equipment safety. It is not intended for household use or for heating living beings.

- Do not use this product near flammable liquids, materials, or in areas with explosion risk. For such environments, we recommend using our ATEX-certified products.

- Always inspect the heater for physical damage before use.
- Only use the heater for the intended size drums.
- Use only with materials or liquids that allow heat transfer.
- Keep at least 50 cm clearance around the heated container.

- Wear heat-resistant gloves when handling the heater while in operation or warm.
- Always monitor the heater while in use.
- Disconnect the heater when not in use.
- Never immerse the heater into liquids. If liquids are spilled on the heater, disconnect, clean, and dry before further use.
- Do not drive or walk on the heater.

- Do not attempt to repair or modify damaged or faulty heaters. If the heater is damaged, disconnect it and contact the manufacturer or supplier.

- The end user is responsible for providing a suitable power outlet for the heater. See the “Preparation and Electrical connection” section for detailed guidance.

Preparation and Electrical connection

Unpacking and Inspection

Unpack and inspect the base heater for transport damage. Do not use if damaged.

Standard Power Connector

Our base heaters are shipped with a Schuko combi connector as standard (120V models are shipped with a standard US connector). Other connector types are available upon request.

Changing the Power Connector

If changing the connector to a local standard, a 3-pin grounded version must be used.

The power cable includes three color-coded conductors:

- Brown (Black on US models) - Line
- Blue (White on US models) - Neutral
- Green/Yellow (Green on US models) - Ground

Do not shorten the power cable. The supplied length complies with safety regulations. All electrical wiring must be performed by trained personnel and comply with local laws and regulations.

Power Supply

The user must ensure that the correct power supply is available. The power connection must be rated to support the base heater's voltage and power. Proper disconnection and protection devices must be in place. We recommend using a ground fault circuit breaker (GFCI/RCD) for added safety.

Health and Safety

Base drum heaters become hot during use. Wear heat-resistant gloves when handling the unit if it is hot.

Disconnect the power before handling the unit if it is wet or physically damaged to avoid electrical shock.

Operating the base heater

1. Check that the base heater is intact and that there is no visible damage to the unit or to the power connection.
2. Check that the container is the size that the base heater is designed for.
3. Ensure the container, the material, and the floor can withstand the desired temperature.
4. Place the base heater on a level surface and place the container on it.
5. Make sure that the controller is not covered.
6. Connect power cable to supply and turn on the power.
7. Adjust the controller to desired temperature.
8. Check the base heater after 10 minutes to ensure it is heating as expected.
9. Do not leave the base heater unattended during use.

Handling after use

- Disconnect the power and let the base heater cool down before handling.
- Do not pull the cable when disconnecting. Pull the plug instead.
- Do not roll the cable tightly and avoid sharp bends in the cable.
- Inspect the base heater for any visible damage before storing.

Storage

- Wait for the base heater to cool down before storing.
- Store vertically on the side instead of stacking them, to avoid damaging the metal housing.
- Do not roll the cable tightly around anything as this will damage the cable.

Operating the DigiTherm controller

Indication of active heating element
A small dot in the lower right corner of the display will light up when the heating element is active.

Setpoint
Adjust to the desired temperature (setpoint) by pressing the up and down arrows. When the desired temperature is shown on the display, press the OK button.

Timer (A3)
Press the menu button, select A3 in the menu using the arrow buttons, and press OK. Set the desired runtime in hours and minutes [hh:mm]. The controller will stop activating the heating element when the selected time is reached. The remaining time will alternate on the display.

When the timer runs out, the display will show 00:00 and the heating element will remain inactive until the controller is rebooted.

Set the timer to 00:00 to disable it. Rebooting the controller will also disable any active timer and return the controller to normal untimed operation.

Ramp-up (A4)
This function gradually increases the setpoint from the starting temperature until the selected temperature is reached. The value alternates on the display.

Press the menu button, select A4 in the menu using the arrow keys, and press OK. Select the desired limit for the temperature increase in °C/min.

The controller remembers the setting after a restart, but the starting temperature is reset. Set the value to 0 to disable the function.

°C or °F (A5)
Press the menu button, select A5 in the menu using the arrow buttons, and press OK. Select the desired temperature unit and press OK to confirm.

Standby mode
Some versions of the DigiTherm controller include a standby function that can be used to disable the heating element temporarily without disconnecting it. This version can be recognised by a power symbol on the OK button.

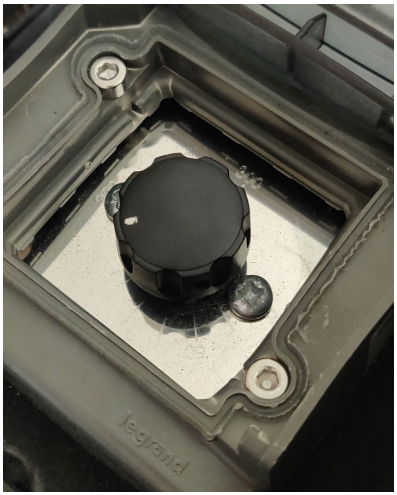
To activate or deactivate the standby function, press and hold the button marked with the power symbol for three seconds. The display will flash “OFF” while in standby mode. On this version, the timer will also enter standby mode when the timer runs out.

Hysteresis
The controller will deactivate the heating when the selected setpoint is reached and reactivate it when the temperature falls 3 °C below the setpoint. The overall hysteresis of the heating element depends on the sensor position inside the heater and other factors, and will always be greater than the controller hysteresis.

Additional information
For other controller types or further information, visit the manuals homepage via the QR code on page 2.

Operating the analog controller

Setpoint
Adjust to the desired temperature (Setpoint) by turning the knob on the controller. An auditable click can be heard when passing the current temperature, as the relay is opened or closed.



Test and Calibration

Testing without a container

Test the base heater without a container to confirm that it works, can reach the desired temperature without a container, and that it can measure and regulate the temperature of the heating element correctly.

To measure the temperature on an empty base heater, place one or more small probes directly on the heating surface, fastening them with heat resistant tape. There is a small cold zone in the middle of the base heater surface, where the internal sensor is placed, inside the base heater. At least one sensor should be placed here, to verify the internal sensor reading.

Other sensors can be placed around the heating surface or a thermo camera can be used, to verify the temperature uniformity across the heating surface.

Testing with a filled container

Test the heater with a filled container of the correct size. The content should be a liquid with low viscosity and high heat conductivity, such as water, to get the best test results. The temperature of the base heater should be set for less than the boiling point of the content.

If a container is used, sensors should be placed between the base heater and the container to monitor the heating element temperature. The temperature in the container can be monitored too, but the final temperature of the content will also depend on several other factors, such as content type, ambient temperature, insulation, draft, and similar.

Calibrating the controllers

The controllers cannot be calibrated, but a manual offset of the setpoint can then be used to compensate for any difference between setpoint and actual resulting temperature of the heated container, if desired.

We recommend using a setup as described earlier in this section and registering the difference between the chosen setpoint and the actual temperature in the desired measuring point, when the temperature has stabilized. The setpoint can then be manually adjusted to achieve the desired temperature.

The controllers do not have a recommended calibration interval as the deviations from other factors has far greater effect on the result than any normal component drift over time.

Cleaning and maintenance

- Wipe with a damp cloth.
- Inspect for physical damage to the metal housing, the power cord, and the plug.

Disposal of the product

Base heaters should be classified as electronic waste when they are discarded. Refer to local rules and regulations for detailed information about how to handle the disposal.

Product recommendations

We strongly advise pairing the base heater with an insulation jacket or heating jacket and also an insulation lid, for optimal performance, even heat distribution inside the container, and lower power consumption.

Error codes (DigiTherm controller)

Code	Description	Solution
00	Relay malfunction.	Contact the seller for repairs/ replacement.
01	Temperature inside the controller is too high.	Disconnect the unit and let it cool down. Check for damage and return to seller if damaged. Inspect the setup to determine the cause of the overheating before using it again.
11 12 14	Temperature sensor error. The controller is not able to measure the temperature correctly.	Contact the seller for repairs/ replacement.

Repairs and Service

All repairs or modifications to the product must be carried out by the manufacturer.

When contacting the supplier regarding a fault, please include pictures of any error messages and of the installation setup, together with a description of the use, setpoint, and other relevant factors.

When returning the product for repair, please follow the instructions on the Return Material Authorization Form (RMA) on the next page. This form is always in English and must be completed in English.

https://heating-manuals.com/

Return Material Authorization Form (RMA)

Please follow these steps

1. Fill out this form in English.
2. Contact us to obtain an RMA number and write it on this form and in the shipping documents. Returns without an RMA# will not be accepted.
3. Follow the cleaning and packing instructions in the manual.
4. Place the completed form inside the box with the products.
5. Ship to the provided address.

Customer information

RMA#: _____

Company: _____

Contact: _____

Address: _____

City/Zip: _____

E-mail: _____

Phone#: _____

List of returned products

Qty	Order#	Reason for return

List of substances or types of dust in contact with the equipment

We do not accept products with residue from food or hazardous chemicals for service or repair. Please contact us if you have any questions regarding this.

Name or type of substance	Associated Hazards

Return Conditions Confirmation

Responsible for the shipment	Date & Signature

Technical datasheet

Type and intended use of the product

This datasheet applies to our standard base drum heaters for 200L metal drums. The heaters are designed to heat the drum from the bottom.
For industrial use only! Must be operated by trained personnel familiar with heating equipment safety. Not intended for household use or for heating living beings.

Disposal of the product

Base heaters must be disposed of as electronic waste. Refer to local rules and regulations for proper handling and disposal.

Materials

Primary materials in the base heaters:

- Cables and wires
- Glass fiber insulation (0-120ºC)
- Stainless steel (0-120ºC)
- Electronic components (0-120ºC)
- Rock wool insulation (50-300ºC)
- Powder-coated steel (50-300ºC)

0-120ºC

Sensor / Thermostat

- Type K thermocouple (0-120ºC)
- Mechanical capillary thermostat (50–300 °C)

Environment

Permitted ambient temperature and humidity range for storage and operation:
-10ºC - 40ºC, ≤75% RH, non-condensing

50-300ºC

Safety features and information

- Powder or CO2 can be used for firefighting near active base heaters.
- Water or foam must not be used near active base heaters.
- Always wear heat-resistant gloves when handling warm heaters.
- Do not use the heater if it is wet.

Technical information

	0-120ºC	50-300ºC
Voltage	230V 50Hz or 120V 60Hz	230V 50Hz or 120V 60Hz
Power	900W	1800W
Size of container	200L metal drum	200L metal drum
Power cable length	2.7m	3m
Standard power connector	Schuko combi	Schuko
Outer metal shell	Stainless steel	Powder-coated steel
Insulation	Glass fiber	Rock wool
Weight	14kg	17kg
Item number for 120V	11-9868A	12-1170
Item number for 230V	11-9868	12-1170A

DECLARATION OF CONFORMITY

Seller	*(or use stamp above)*	
Name		
Address		
Country		
Tel		
Hereby declares that the machinery		
Name	Container Heaters	
Function	Container heaters designed for heating and maintaining the temperature of drums, IBCs, and similar containers in industrial applications. They share a common construction and are divided into two types: • Standard – with a maximum temperature of 90°C. • High Temperature – with a maximum temperature of 200°C. The container heaters are available in various sizes and power ratings. All heating blankets are thermostatically controlled, using either a digital controller, analog controller, bi-metal thermostat, or connection for an external third-party controller. The products are intended for use in non-explosive environments and are connected to standard 230V AC (or 120V AC for certain models).	
Type - model	All standard or custom models, unless otherwise defined.	
Produced - year	2016-	
Manufactured in accordance with the following EC directives		
CE	2006/42/EF - Machine Directive	
	2014/35/EU - Low Voltage Directive	
	2011/65/EU (Including 2015/863 addition) – RoHS	
	2014/30/EU - EMC	
And using the following national standards and technical specifications		
	AT Executive Order No. 693 of 10 June 2013 – Technical requirements for the design of machinery (Danish implementation of Directive 2006/42/EC)	
Name		
Title		
Place		**Signature**
Date		

U.E. CONFORMITY CERTIFICATE

We are in accordance with the n° 2004/108/CE European directive modified by 2014/30/UE regarding electromagnetic compatibility and the n° 2006/95/CE modified by 2014/35/UE directive regarding the low voltage, compulsory since January the 1st, 1997.

Electromagnetic Compatibility: The heating resistances do not produce electromagnetic disturbances (electromagnetic fields) as defined in the act n° 2 of the n° 2006-1278 decree of October the 18th, 2006.

Low Voltage: Most of our products do not fit within the framework of a specific standard. Therefore we apply the NF-EN 60335 standard regarding Safety of Domestic Electrical Apparatus and similar which is the most representative of our productions.

Most of our products included within the range of voltage from 50 to 1000 volts for alternative current and between 75 and 1500 volts for direct current, are in accordance with these directives and are CE marked.

Item 12-1170 200L Base Drum heater
Size Ø550mm x 75mm
230V 1800W
Thermostat 50-300°C

Related products

IBC heaters

Insulation jackets for barrels and IBCs

Drum heaters for food stuff

Drum heaters

Silicone drum heaters

CE