

# DRUM & CONTAINER HEATER

## Instruction manual



Introduction..... 2

Important safety instructions..... 2

Drum Heater..... 3

    Specifications..... 3

    Installation and operation..... 4

IBC Container Heater..... 6

    Specifications..... 6

    Installation and operation..... 7

Troubleshooting..... 9

Notes..... 10



**WARNING**

Read and understand this manual before installing and operating our drum heaters. Failure to understand instructions and safety precautions could result in injury or be fatal. Drum heaters should only be operated by qualified personnel.

## Introduction

The Kuhlmann drum heaters are perfect for drums where you want to keep the content at a consistent temperature, a certain viscosity or keeping the content from freezing.

Equipped with an easy to use thermostat with a heating range from 0 - 40°C, 0 - 90°C, or 0 - 200°C makes this drum heater ideal for almost any purpose.

The drum heaters are designed in a durable and long lasting high quality light-weight design and the construction together with quick release webbing straps makes the drum heater easy to attach to any standard size drum.

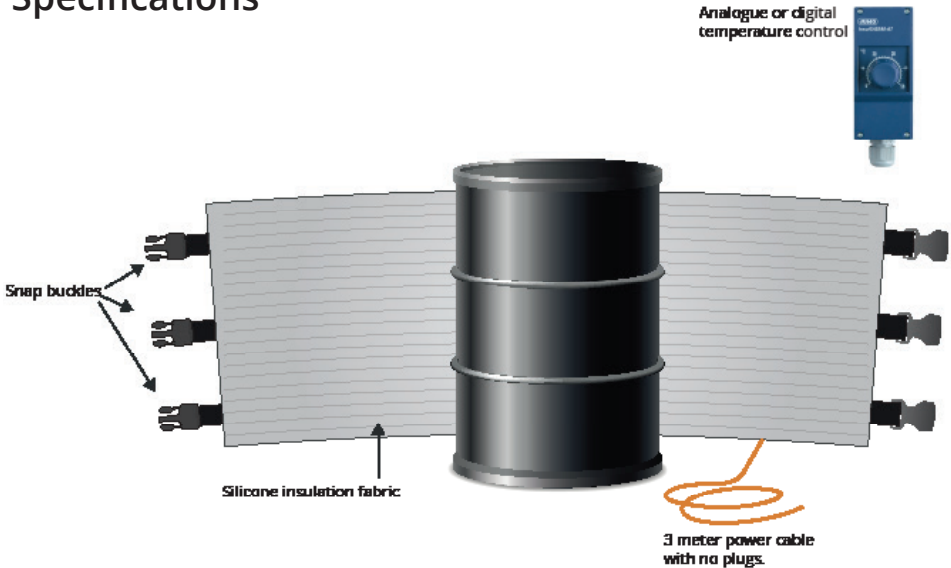
## Important safety instructions

- The heater should only be used by trained personnel, that have read and understood this manual.
- Always inspect the heater for physical damage before use.
- Electrical wiring should be done by trained personnel and must follow local laws and regulations.
- The end user is responsible for providing a suitable disconnection device and electrical protection devices. We recommend use of a ground fault circuit breaker.
- Keep the heater away from sharp objects.
- Never turn the heater on without a filled drum/container to cool it.
- Only use the heater to intended size drum/container.
- Fasten the heater properly to the drum/container before operating, following instructions in the “installation and operation” section.
- Never overlap the heater over the temperature controller.
- Never handle the drum heater while in operation. Always disconnect the heater and let it cool down before handling.
- Never immerse the heater into liquids. If liquids are spilled on the heater, disconnect, clean, and dry before further use.
- Always monitor the heater while in use.
- Disconnect the heater when not in use.



**Failure to operate by the above instructions may result in injuries and can**

# Drum Heater Specifications



Adjustable temperature controller. Analogue or digital.	Temperature range: 0-40°C (32-104°F). 0-90°C (32-194°F). 0-200°C (32-392°F). 110 or 230V models.
Power cable	3 meter (10 feet) grounded cable without plug.
Insulation	Polyester insulation. Glass insulation (0-200°C).

## Installation and operation

### **STEP 1 - Unpacking and inspection:**

Unpack the heater and place it on a clean and dry surface. Release the snap buckles so the heater lays flat and perform an inspection of the heater. Do not use if the heater is damaged or torn.

### **STEP 2 - Install plug to power cable:**

For 110V model use a standard 3-prong plug to appropriate electrical power supply.

For the 230V model use a 3-pin grounded plug.

There are two different kinds of cable for the heaters:

Brown, Blue, Green-Yellow

Black, White, Green-Yellow

The black/brown wire should be connected to Line 1. The white/blue wire should be connected to Line 2. The green-yellow wire should be connected to earth ground. The power connections must be adequately rated to electrically support the voltage and amperage of the heater. Follow all local electrical codes for proper electrical connections.

### **STEP 3 - Mounting the heater to the drum:**

Before mounting the heater make sure that the power is unplugged. Install the heater to from the base of the drum and up. Make sure that the power cable attached to the temperature controller is pointing downward. Close the snap buckles and fasten the heater firmly to the drum by pulling the nylon straps.

When tightening the heater, please verify that the overlapping layer is the cold layer. The cold layer side is located on the side where the temperature controller is. The cold side must always be on top.



**CAUTION!** Only use heater on the intended size drum. Failure to do so can be dangerous and result in injury and heater malfunction.

**STEP 4 - Power on and temperature control:**

Prior to switching on the heater please check with the drum- and content manufacturer that it is safe to heat to the desired temperature. Make sure that the container is vented to prevent internal pressure build.

Plug in the power cable when the heater has been mounted correctly to the drum.



**Analogue temperature controller:**

Adjust to the desired temperature by turning the wheel. The thermostat wheel will click when the current temperature is hit.



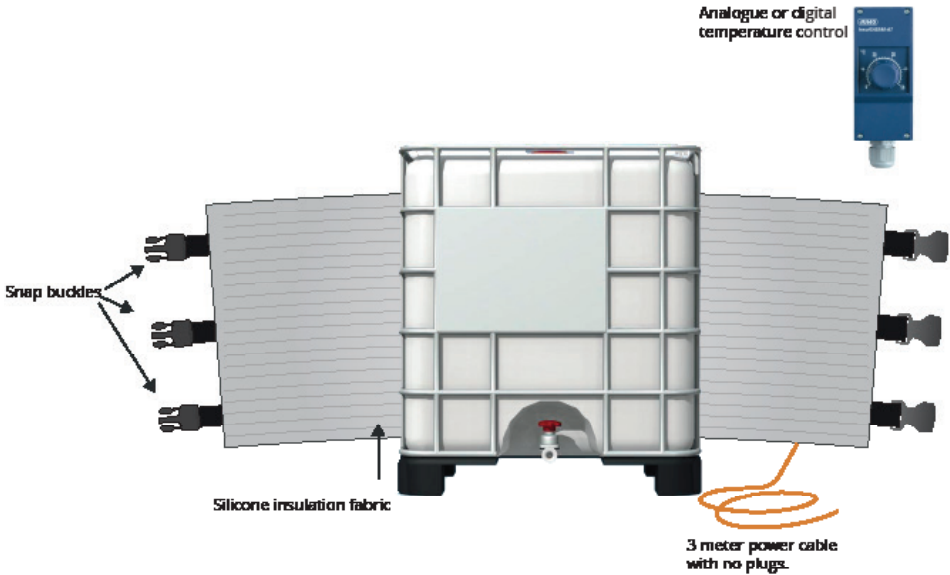
**Digital temperature controller:**

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

**STEP 5 - Power off and unmounting:**

When heating process is done, unplug the power cable and wait for the heater to cool down. When cooled down release the snap buckles and remove the heater from the drum.

# IBC Container Heater Specifications



Number of thermostats	From 1 to a maximum of 3 thermostats to be installed.
Adjustable temperature controller. Analogue or digital.	Temperature range: 0-90°C (32-194°F). 110 or 230V models.
Insulation	Polyester insulation.
Power cable	3 meter (10 feet) grounded cable without plug.

## Installation and operation

### **STEP 1 - Unpacking and inspection:**

Unpack the heater and place it on a clean and dry surface. Release the snap buckles so the heater lays flat and perform an inspection of the heater. Do not use if the heater is damaged or torn.

### **STEP 2 - Install plug to power cable:**

For 110V model use a standard 3-prong plug to appropriate electrical power supply.

For the 230V model use a 3-pin grounded plug.

There are two different kinds of cable for the heaters:

Brown, Blue, Green-Yellow

Black, White, Green-Yellow

The black/brown wire should be connected to Line 1. The white/blue wire should be connected to Line 2. The green-yellow wire should be connected to earth ground. The power connections must be adequately rated to electrically support the voltage and amperage of the heater. Follow all local electrical codes for proper electrical connections.

### **STEP 3 - Mounting the heater to the IBC container:**

Before mounting the heater make sure that the power is unplugged. Install the heater to from the base of the container and up. Make sure that the power cable attached to the temperature controllers are pointing downwards. Close the snap buckles and fasten the heater firmly to the container by pulling the nylon straps.

When tightening the heater, please verify that the overlapping layer is the cold layer. The cold layer is located on the side where the temperature controller is. The cold side must always be on top.



**CAUTION!** Only use this heater on a 1000 liter IBC container. Failure to do so can be dangerous and result in injury and heater malfunction.



**STEP 4 - Power on and temperature control:**

Prior to switching on the heater please check with the IBC container- and content manufacturer that it is safe to heat to the desired temperature. Make sure that the container is vented to prevent internal pressure build.

Plug in the power cable when the heater has been mounted correctly to the drum.



**Analogue temperature controller:**  
Adjust to the desired temperature by turning the wheel. The thermostat wheel will click when the current temperature is hit.



**Digital temperature controller:**  
Adjust to the desired temperature by pressing the up and down arrows. When desired temperature is shown on the display press OK button.

**STEP 5 - Power off and unmounting:**

When heating process is done, unplug the power cable and wait for the heater to cool down. When cooled down release the snap buckles and remove the heater from the IBC container.

## Troubleshooting

Problem	Solution
The heater does not heat	Make sure that the heater is properly connected to power outlet (and to correct voltage). Also make sure that the assembly of the power plug has been assembled correctly. Check to see if there is a resistance reading using an ohm-meter.
The digital display does not work	Make sure that the power is properly connected and to the correct voltage.
The heater does not fit the drum	The heater delivered is designed to fit a specified size. Verify that the size meets the drum's size.



