

# Kuhlmann

## ELECTRO-HEAT

# PRODUCT RANGE 2020 HEATING BLANKETS 110V



**INDUSTRIAL  
HEATING BLANKETS  
FOR CURING OF  
MATERIALS LIKE  
COMPOSITE,  
REPAIRING OF WIND  
ROTOR BLADES, AND  
PRODUCTION IN  
BOTH THE MARINE  
INDUSTRY AND  
THE AEROSPACE  
INDUSTRY.**

# HEATING BLANKETS

Heating blankets are the optimal surface heating product when it comes to safely and effectively, having to heat elements to a specific temperature.

Industrial heating blankets makes it easy to heat up material including composite, carbon, epoxy prepreg and ensure a safe and uniform temperature distribution on the surface of the material. The blanket therefore acts as a perfect heatspreader on the desired material.

Industrial heating blankets are used in many industries including production and repairs of wind turbine blades, repairs and production in both the marine industry and the aerospace industry.

## Ideal for:

- Curing processes in aerospace industry.
- Curing processes in marine industry.
- Wind turbine rotor blade repair.
- Wind turbine rotor blade production.



### Heating blanket with fixed temperature

- 7 mm insulation for minimal heat loss.
- Available with bimetal for fixed temperature range between 60-70°C (140 - 158°F) or 70-80°C (158 - 176°F).
- The blankets can be joined together and daisy chained to cover larger surfaces.
- Straps for fixed installation (optional).
- Standard sizes available from stock.
- Special sizes produced upon request.



### Heating blanket 0-90°C Adjustable temperature

- 7 mm insulation for minimal heat loss.
- Available with temperature controller ranging from 0-90°C (32 - 194°F).
- 3 meter power cord (no plug).
- Straps for fixed installation (optional).
- Standard sizes available from stock.
- Special sizes produced upon request.
- Available with attached or external digital controller.



### Heating blanket 0-120°C Adjustable high temperature

- High temperature silicone materials.
- 7 mm glass insulation for minimal heat loss.
- Available with temperature controller ranging from 0-120°C (32 - 248°F).
- 3 meter power cord (no plug).
- Straps for fixed installation (optional).
- Standard sizes available from stock.
- Special sizes produced upon request.
- Available with attached or external digital controller.

# HEATING BLANKETS

- With digital temperature controller & timer function

Heating blankets are the optimal surface heating product when it comes to safely and effectively, having to heat elements to a specific temperature.

Industrial heating blankets makes it easy to heat up material including composite, carbon, epoxy prepreg and ensure a safe and uniform temperature distribution on the surface of the material. The blanket therefore acts as a perfect heatspreader on the desired material.

Industrial heating blankets are used in many industries including production and repairs of wind turbine blades, repairs and production in both the marine industry and the aerospace industry.

## Ideal for:

- Curing processes in aerospace industry.
- Curing processes in marine industry.
- Wind turbine rotor blade repair.
- Wind turbine rotor blade production.



## Heating blanket with DigiTherm Controller

The DigiTherm temperature controller is a durable, compact and very easy to use temperature controller for precise temperature adjustment on industrial heating blankets.

### Heating Blanket features:

- 7 mm insulation for minimal heat loss.
- Straps for fixed installation (optional).
- Standard sizes available from stock.
- Special sizes and shapes produced upon request.

### Controller features:

- Digital display that shows current or selected temperature in degrees Celcius or Fahrenheit.
- Easy to use buttons that can be operated with gloves.
- Build in timer function can be set for automatic shut off.
- Rampup function with limited temperature rise per minute.
- Adjustable temperature limit, 0-90°C (32-194°F).
- Remembers last used temperature when powered on.
- 3 meter power cord and different plug options\*.

\* (Delivered without power plug as standard).



The DigiTherm controller is available both fastened to heating blankets and as external controller for connecting to heating blankets.

## 110V Heating blankets with digital controller 0-90°C

| Item #           | Dimension<br>Output   | Temperature<br>Thermostat                     | Color     | Picture   |
|------------------|---|---|-----------|---|
| <b>12-1000DT</b> | Heat Blanket<br>3000-500mm<br>118,1 in -19,7 in<br>110V 700W  | 0-90°C<br>32-194°F<br>Adj. Digital Thermostat | Dark Blue |    |
| <b>12-1137DT</b> | Heat Blanket<br>2000-500mm<br>78,7 in -19,7 in<br>110V 540W   | 0-90°C<br>32-194°F<br>Adj. Digital Thermostat | Dark Blue |    |
| <b>12-9998DT</b> | Heat Blanket<br>1000-500mm<br>39,4 in - 19,7 in<br>110V 250W  | 0-90°C<br>32-194°F<br>Adj. Digital Thermostat | Dark Blue |    |
| <b>12-9999DT</b> | Heat Blanket<br>600-600mm<br>23,6 in - 23,6 in<br>110V 200W   | 0-90°C<br>32-194°F<br>Adj. Digital Thermostat | Dark Blue |   |
| <b>12-1138DT</b> | Heat Blanket<br>1000-1000mm<br>39,4 in -39,4 in<br>110V 450W  | 0-90°C<br>32-194°F<br>Adj. Digital Thermostat | Dark Blue |  |
| <b>12-9997DT</b> | Heat Blanket<br>1300-1300mm<br>51,2 in - 51,2 in<br>110V 450W | 0-90°C<br>32-194°F<br>Adj. Digital Thermostat | Dark Blue |  |
| <b>12-1139DT</b> | Heat Blanket<br>2000-1000mm<br>78,7 in -39,4 in<br>110V 1200W | 0-90°C<br>32-194°F<br>Adj. Digital Thermostat | Dark Blue |  |
| <b>17-2131DT</b> | Heat Blanket<br>3800-290mm<br>149,6 in - 11,4 in<br>110V 400W | 0-90°C<br>32-194°F<br>Adj. Digital Thermostat | Dark Blue |  |

## All Heating Blankets can be produced with the following thermostats, sensors, or controllers:

- Fixed bi-metal thermostat 68° (+/- 5°C)  
- Digital adjustable controller 0-90°

- Fixed bi-metal thermostat 78° (+/- 5°C)

- PT100 Sensor

**Fastening options:**

**17-2246** 4 x Loops for easy fastening.



**17-2246A** 4 x Buckles for easy fastening.



**Plug options:**

Our products can be delivered with the following types of power plugs (will be delivered without plug unless otherwise ordered).

110V CE (K-9099AEU110)



120V US (K-9099US120)



# High Temperature HEATING BLANKETS

- With digital temperature controller & timer function

Heating blankets are the optimal surface heating product when it comes to safely and effectively, having to heat elements to a specific temperature.

Industrial heating blankets makes it easy to heat up material including composite, carbon, epoxy prepreg and ensure a safe and uniform temperature distribution on the surface of the material. The blanket therefore acts as a perfect heatspreader on the desired material.

Industrial heating blankets are used in many industries including production and repairs of wind turbine blades, repairs and production in both the marine industry and the aerospace industry.

## Ideal for:

- Curing processes in aerospace industry.
- Curing processes in marine industry.
- Wind turbine rotor blade repair.
- Wind turbine rotor blade production.



## Heating blanket with DigiTherm Controller

The DigiTherm temperature controller is a durable, compact and very easy to use temperature controller for precise temperature adjustment on industrial heating blankets.

### Heating Blanket features:

- High temperature silicone materials.
- 7 mm glass insulation for minimal heat loss.
- Straps for fixed installation (optional).
- Standard sizes available from stock.
- Special sizes produced upon request.

### Controller features:

- Digital display that shows current or selected temperature in degrees Celcius or Fahrenheit.
- Easy to use buttons that can be operated with gloves.
- Build in timer function can be set for automatic shut off.
- Rampup function with limited temperature rise per minute.
- Adjustable temperature limit, 0-120°C (32-248°F).
- Remembers last used temperature when powered on.
- 3 meter power cord and different plug options\*.

\* (Delivered without plug as standard).

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The DigiTherm controller is available both fastened to heating blankets and as external controller for connecting to heating blankets.

## 110V Heating blankets HT with digital controller 0-120°C

| Item #             | Dimension<br>Output   | Temperature<br>Thermostat                      | Color |   |
|--------------------|---|--|-------|---|
| <b>12-1000HTDT</b> | <b>Heat Blanket</b><br>3000-500mm<br>118,1 in -19,7 in<br>110V 1500W  | 0-120°C<br>32-248°F<br>Adj. Digital Thermostat | Grey  |    |
| <b>12-1137HTDT</b> | <b>Heat Blanket</b><br>2000-500mm<br>78,7 in -19,7 in<br>110V 1140W   | 0-120°C<br>32-248°F<br>Adj. Digital Thermostat | Grey  |    |
| <b>12-9998HTDT</b> | <b>Heat Blanket</b><br>1000-500mm<br>39,4 in - 19,7 in<br>110V 540W   | 0-120°C<br>32-248°F<br>Adj. Digital Thermostat | Grey  |    |
| <b>12-9999HTDT</b> | <b>Heat Blanket</b><br>600-600mm<br>23,6 in - 23,6 in<br>110V 430W    | 0-120°C<br>32-248°F<br>Adj. Digital Thermostat | Grey  |   |
| <b>12-1138HTDT</b> | <b>Heat Blanket</b><br>1000-1000mm<br>39,4 in -39,4 in<br>110V 1230W  | 0-120°C<br>32-248°F<br>Adj. Digital Thermostat | Grey  |  |
| <b>12-9997HTDT</b> | <b>Heat Blanket</b><br>1300-1300mm<br>51,2 in - 51,2 in<br>110V 1380W | 0-120°C<br>32-248°F<br>Adj. Digital Thermostat | Grey  |  |

## All Heating Blankets can be produced with the following thermostats, sensors, or controllers:

- Fixed bi-metal thermostat 68° (+/- 5°C)

- Fixed bi-metal thermostat 78° (+/- 5°C)

- PT100 Sensor

- Digital adjustable controller 0-90°

**Fastening options:**

**17-2246** 4 x Loops for easy fastening.



**17-2246A** 4 x Buckles for easy fastening.



**Plug options:**

Our products can be delivered with the following types of power plugs (will be delivered without plug unless otherwise ordered).

110V CE (K-9099AEU110)



120V US (K-9099US120)





# WIND TURBINE BLADE TIP HEATING BLANKETS



These blankets are specially tailored to cure wind turbine blades. They consist of two separate heating blankets with separate controllers, that are held together by velcro.

The heating blankets are controlled by one of three options:

- Fixed thermostats (Different temperature options available).
- DigiTherm digital controllers (as in the picture)
  - 0-90°C (32-194°F).
  - Timer function for automatic shut off.
  - Slow warmup function.
- External DigiTherm digital controllers
  - Same controller as DigiTherm, but not fastened to the heating blanket.

When ordering for a specific blade type for the first time we will need a cardboard template to design the heating blankets for the tip.

All heating blankets can be produced for any desired voltage and with any of the controller options. Please contact us and let us know what you need.





# DigiTherm Ramp up

- A function for slow warm up



The DigiTerm Controller is used on Heating Blankets and Drum Heaters. It has a ramp up function that can be used for slow warmup, limited by a maximum temperature rise per minute [ $\Delta T_{max}/min$ ].

The function is easily activated in the build in menu, where the speed of the warm up can be selected.

The advantage of this function is the ability to even out the heating on larger subjects where several blankets are being used and the thickness or material density varies.

The ramp up function can also be used for materials that require slow warming up.

## DigiTherm ramp up example

DigiTherm at 90°C. Measured at subject surface at blanket sensor.

