

## **BACKER**

## **EVERYDAY** · **EVERYWHERE**



## BACKER GROUP

Backer develops, produces and sells customized solutions and components for electric heating, measurement and control. The original technology was stainless steel tubular elements. However, the constant growth of the Group, both organically and through acquisitions, has enabled the integration of several new technologies. Today the Group offers a far wider product range, with a vast number of technologies for several industry sectors and a large variety of applications.

## **TECHNOLOGIES**



Tubular



R & Halogen Elements



Printed Elements



Heating Cables



Supported wire Elements



Suspended Wire Elements



Measurement & Control



Heat Pump Technology



PTC Element



Special

- 7000 employees and 40 production units on 4 continents
- 70 years of accumulated competence and experience in the industry
- International organization with local presence
- Many specialized R&D departments to bring new innovative solutions to the market
- Customized solutions fulfilling special requirements
- Strong focus on components and systems for sustainable energy solutions
- Volume and industry production in different parts of the world

## INDUSTRY SECTORS



Industrial/ Projects



Environment

Advanced technology



Commercial equipment



Home appliance



Transportation



HVAC

# **BACKER COMMERCIAL EQUIPMENT SOLUTIONS**

## RELIABILITY · ENERGY EFFICIENCY · TEMPERATURE CONTROL

Backer Commercial Equipment Solutions wants to make it easy for customers and partners to get high quality solutions for a wide spectrum of heating related Commercial Equipment applications. The solutions cover both heating components and complete intelligent systems, new energy solutions, and temperature control devices. Backer commercial Equipment Solutions is your single point of contact and inspiration in the heating related Commercial Equipment Industry.

## PRODUCT DEVELOPMENT

Pre-study

Define product and specification

Sample production

Validation

First serial delivery

Serial delivery

## PERFORMANCE TESTING

- Temperature and measurement
- Interior testing
- Thermal imaging
- Cooling room -25°C
- Noise testing
- · Humidity chamber
- Life cycle testing
- Wind tunnel tests
- Resistor power testing
- · Long term corrosion tests
- Electrial tests up to 24kV AC
- External resources for other types of tests such as shock and vibration and intermittent pulses.

## MASTERING THE DESIGN

- Pro/ Engineer 3d-CAD
- X-ray equipment
- PDM-link/ Product data management etc.
- FLO EFD
- Thermal/ flow simulations PTC MECHANICA
- Thermal and stress analysis

# QUALITY

We strive to deliver the highest quality products combined with a flexible way of working. This permeates the whole process from sales, product development, manufacturing, customer service and logistics. Backer delivers products that meet all relevant standards and tests, certifying products according to customer specifications. We also have possibilities to carry out tests in modern labs, constantly improving our product performance and energy efficiency.

## DID YOU KNOW?

The majority of all companies in the Backer Group are ISO certified and all of the companies will be by 2020.

ISO 9001 · ISO 14001



#### Innovations for the future

A partnership with Backer gives you a dedicated team of designers, project engineers and technical experts in the fields of electric heating, measurement and control, ready to provide you with the optimal solutions for your needs.

# **HEATING SOLUTIONS**



#### **Tubular heating elements**

Heating elements in steel, stainless steel and copper. Also furnace brazed elements and elements brazed on stainless steel and brass plates, heads and nipples.

Example of usage:

- · Fan heating
- · Fryers/Grills
- · Coffee machines
- · Steam generators
- · Ovens and fry tables
- · Dishwashers
- · Defrosting
- · Food cabinet chillers



**PTC** water heaters

Element in stainless steel with vulcanized connection.

Examples of usage:

- · Defrosting
- · Evaporation of condensed water



#### **PTC** air heaters

For drying process in commercial dishwashers.



# COMMERCIAL EQUIPMENT HEATING SOLUTIONS



#### Open coil heaters

For drying process in commercial dishwashers and for tumble dryers.



#### **Hot plates**

Electrical cooking hot plates for commercial cookers. Possible to equip with temperature protector.



# HEATING SOLUTIONS









### Flow through heaters & water boilers

Flow through heaters in steel, stainless steel, aluminium or thick film on stainless steel. If desired with insulation and controls. Also vacuum brazed complete boiler units.

#### Example of usage:

- · Coffee machines
- · Beverage dispensers



#### **Cartridge heaters**

For highest power in limited space.

#### Example of usage:

- · Coffee machines
- · Steam generators

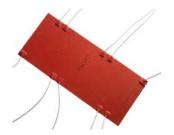




# HEATING SOLUTIONS









#### Flexible foil & thick film heaters

Flexible foil heaters in a wide range of materials such as silicone, mica, polyester, aluminium etc.

We also supply thick film on plates of stainless steel.

#### Example of usage:

- Heating for cups on coffee machines
- · Water heaters
- · Food trolleys
- · Washing machines



#### Heat pump modules

Customized complete heat pump modules with inverter technology.

#### Example of usage:

- · Commercial dishwashers
- · Commercial tumble dryers





# ELECTRONIC MOTOR CONTROL SYSTEMS

Accurate temperature sensing and temperature control are vital when considering any heating application.

We can provide a wide range of various solutions for measurement and control.

Everything from a simple standalone controller, to a large fully customized complex system.



#### Inverters

Example of usage:

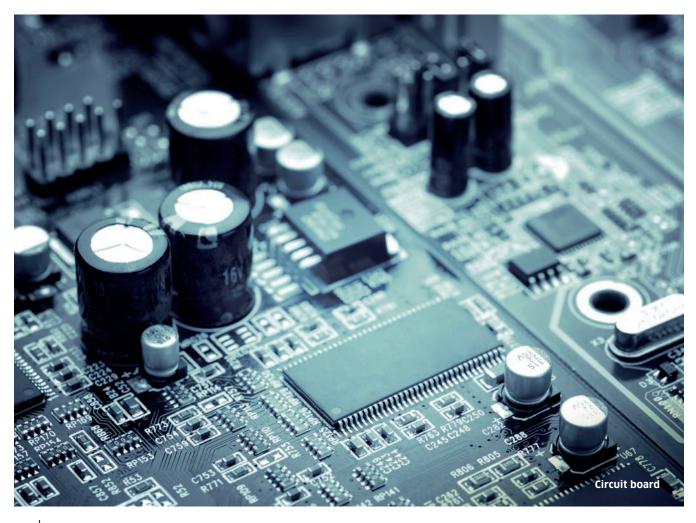
- · Water pumps for dishwashers
- $\cdot$  For controlling compressors



#### Soft starters

Example of usage:

- · Water pumps for dishwashers
- $\cdot$  For controlling compressors









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