



BACKER
HTI



AUTOMOTIVE SOLUTIONS

RELIABILITY · SUSTAINABILITY · COMFORT

BACKER HEATING TECHNOLOGIES INC.

EVERYDAY · EVERYWHERE

Our heating products together with our measurement and control devices offer our customers complete solutions. Our engineers will not only suggest solutions, they can also take part in and contribute to your product development by using our advanced technical tools and lab facilities. Our extensive experience and competence as well as our reliable quality and service guarantee your success. Our ambition is to not only be a supplier, but your preferred partner.

Together we can make it happen!

MEMBER OF 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.

PRODUCTION LOCATIONS

- Backer HTI main office located in the US
- Engineering and sales support in Sweden
- Production facilities in Sweden, China, Poland, and Vietnam.



Customized solutions

INDUSTRY SECTORS



AUTOMOTIVE



LIFE SCIENCE



RAILWAY



BATTERY



COMFORT



COMMERCIAL
EQUIPMENT



AUTOMOTIVE HEATING SOLUTIONS

RELIABILITY · SUSTAINABILITY · COMFORT

With over 30 years of experience in the industry, Backer is one of the largest suppliers of rear view mirror heaters in the automotive industry and we therefore have a vast knowledge of the demands in the transportation business. Our highest demand heater is an etched foil heater in side view mirrors used to melt ice and snow and prevent condensation. Side view mirror heaters are applied to the back of the driver and passenger side view mirrors to provide all-season visibility safety. In addition, we provide heating concepts that allow the heating of your hands when operating a snowmobile or keeping tanks from freezing on the trains. We also provide heat for batteries, steering wheels, floors, and safety vision system cameras

Typical applications

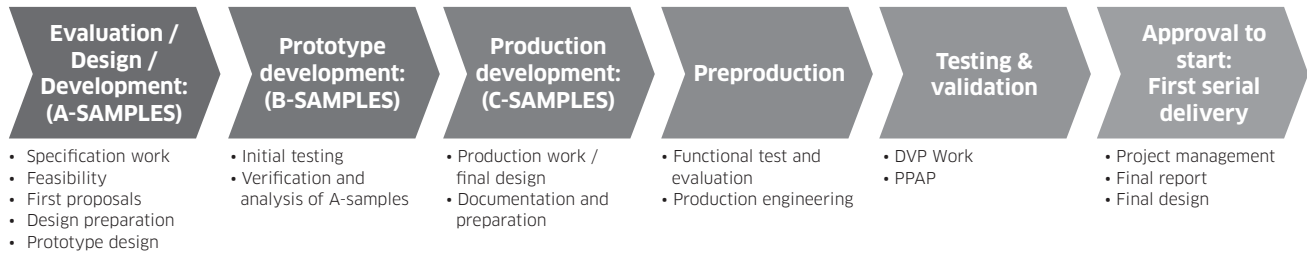
Vision systems
Fluid systems

Rear-view mirrors
Seat heaters
Floor heaters

Windshield wipers
Filters
Alco locks

PRODUCT DEVELOPMENT

We work together in a gate model to make sure we reach target in cost and production SOP



DVP PERFORMANCE TESTING

- To validate the design, we perform the test needed to fulfill specification
- Temperature profile (sensor and image)
- Resistance to climate and environment
- Electrical durability and resistance
- Specific customer requirements

QUALITY

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

CERTIFICATIONS

Backer is certified
according to ISO 9001 · ISO 14001



Our facilities in China, Poland & Vietnam
are certified according to ISO 14001,
ISO 9001 and IATF 16949

Third-party approvals:

VDE / ETL / S / UL



Innovations for the future

A partnership with Backer HTI 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.

VISION SYSTEM HEATING

Important safety feature on a modern car

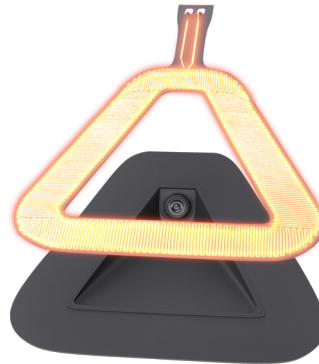
Vision systems are an important safety feature on a modern car to avoid collision when driving in the city or on the highway, during the day or at night. Backer HTI provides heat for different types of systems, for example, front-view, side-view, rear-view & parking cameras. Mist, condensation or ice reduces the functionality of the lens. All systems need heat to keep the lens free from moisture and ice to ensure a safe drive.



Front view

Patent heater

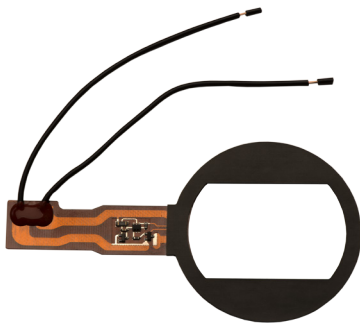
- Heats from both outside and inside
- Placed under the camera for precise heat
- Laminated on glass



Front view

Open triangle

- Smaller area
- Heats from outside to center
- Laminated directly under camera for precise heat



Night vision

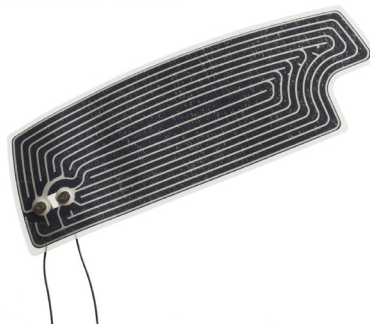
- Heats from both outside and inside
- Laminated on camera housing



Wrap-around heaters

- Heats from both outside and inside
- Laminated on camera housing

BACKER IS THE NUMBER ONE
SUPPLIER OF REAR-VIEW MIRROR
HEATERS IN THE WORLD





FLUID SYSTEM HEATING

Higher demands for cleaner engines requires heat

Euro 6 and 7 demand cleaner engines. By adding a reducing agent (Urea/ AdBlue®/Solid Ammonia) in the exhaust from a diesel engine, a chemical process will convert the engine's NOx emissions into harmless nitrogen and water. Selective catalytic reduction (SCR) has become the most popular solution. All systems need heat to perform over time and in harsh climates.

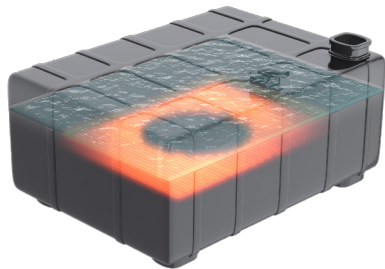
Backer provides heaters for SRC Selective Catalytic Reduction with ASDS and AdBlue® systems:

ASDS

- Wrapped around the cartridges, initiates reaction

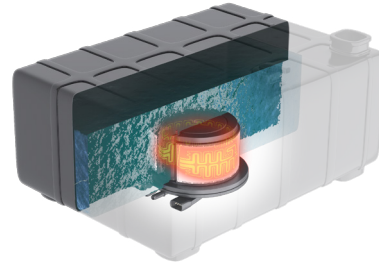
AdBlue®

- Freezes at -11°C and needs heat to pump liquid in all climates



AdBlue® Submerged surface heater "free-floating"

- Free-Floating
- Larger area (inside tank)



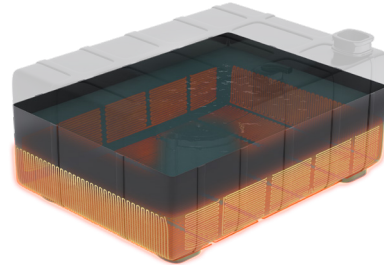
AdBlue® SEMI DRY surface heater "inside pump housing"

- Smaller area (filter area)
- Laminated to aluminum plate or plastic wall
camera for precise heat



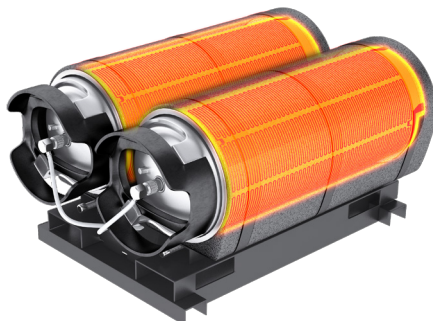
AdBlue® Submerged surface heater "outside pump housing"

- Smaller area (filter area)
- Laminated to aluminum plate or plastic wall



AdBlue® Insulated dry surface heater "wrap"

- Laminated/ vulcanized
- Aluminum plate heat transfer
- Larger area (outside tank)



ASDS Dry surface heater "wrap"

- Larger area
- Laminated to Aluminum plate to
improve heat transfer

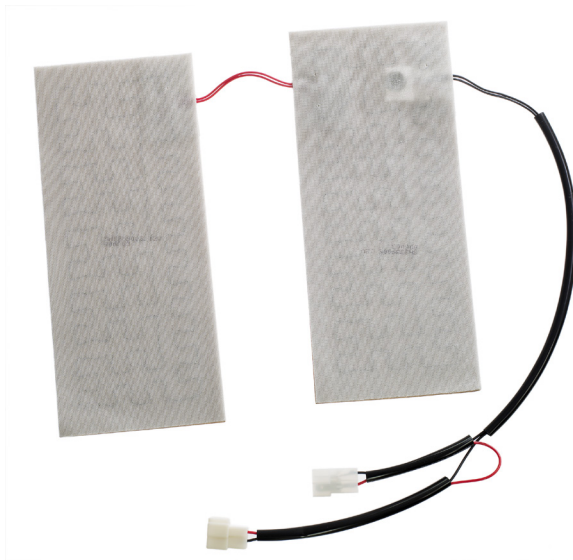


SEAT HEATING

Wide range of seat heaters

Backer HTI has internal engineering and manufacturing giving us the ability to design and to produce entire heating systems. The first deliveries of aftermarket seat heaters were in 2007. We have a wide range of seat heater productions (12V, 24V, 48V, truck, agricultural and industrial vehicles, new cars, motor bikes, golf carts). Elements can be delivered with complete systems for harness with a PCB Control unit for 12V and 24V seat heaters, with a 3-position switch, providing high, medium and low temperatures.

- We can supply to any customer design in 12V, 24V or 48V
- On-off or multi-position switches to control temperature



HEATING COMPONENTS

Flexible, lightweight and space-saving

Flexible elements, or foil elements, offer many advantages, beside the fact that the material is flexible. Examples include the ability to have multiple circuits or multiple voltages in the same element, or the ease of locating a sensor. Foil elements provide excellent thermal transfer where you need it most. They are used in thermal control design to protect components under cold-case environmental conditions or to make up for heat that is not dissipated. Foil elements are a space-saving, efficient alternative to applications where precise heat and maintaining exact temperature are important. They are supplied in various materials such as Polyimide, Polyester, Silicon, PTC and Mica.

Benefits

- Thin, flexible & lightweight
- Customized shape
- Multiple temperature zones
- Efficient heat transmission
- Simple assembly
- Wide material selection

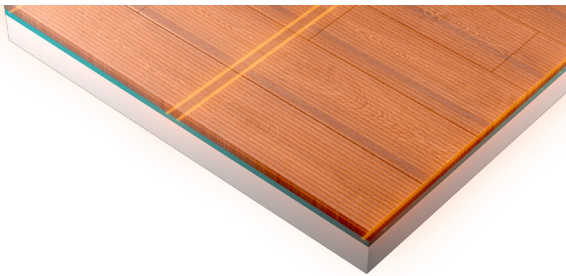
Technical specifications

We offer standard products as well as fully customized solutions

Voltage: Up to 1000V

Power density: From 0 to 5W/cm²

Max. temperature: 600°C



Floor heater

With our electric heated floor solutions, you can save space and weight by installing foil as floor heating.

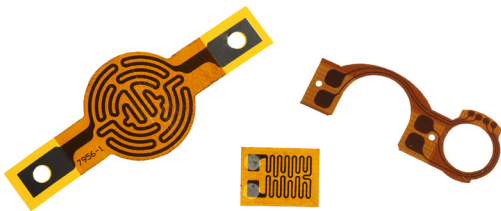
Applications

- Trains
- Trams
- Buses
- Trucks



Windshield wiper heater

A number of flexible foils assembled directly in the wiper and in the stand-by position for efficiency against icing and freezing of the wiper, which makes it a safety application.



Alco lock heater

Our heaters allow exact humidity control. With flexible foil, we can customize heaters in different shapes and very small sizes to fit your application perfectly.



Diesel filter heater

Wrap-around fit to spin filters. Used in countries that do not use winter diesel or in countries with extreme climates. Backer diesel spin filter heaters prevent the paraffin from freezing and guarantee a perfect flow.

TEMPERATURE CONTROL

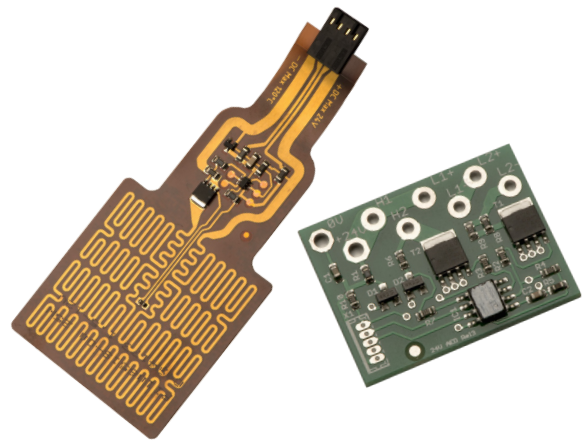
ELECTRONIC CONTROL SYSTEMS

Control and energy balance

Flexible foil heaters provide excellent thermal transfer where you need it most. Heaters are used in thermal control design to protect components under cold-case environmental conditions or to make up for heat that is not dissipated. It is usually necessary to arrange some form of control to ensure that the desired temperature is maintained; accurate temperature control is therefore needed. This can be achieved with electromechanical thermostats of bimetallic type when temperatures and surface ratings are low, while electronic thermostats are preferred when temperatures and surface loads are high. We can fit thermostats, temperature fuses and sensors of thermo element type, thermistors and resistance sensors directly to elements in accordance with customer specifications. This helps to ensure reliable control.

Integrated control/smart heater

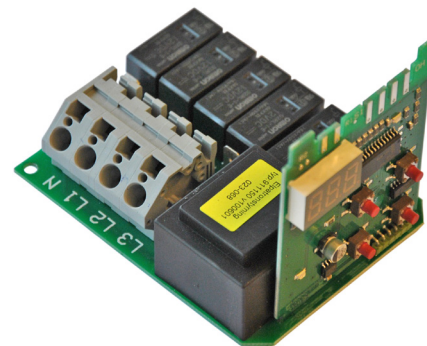
The demand for smart simple solutions creates new applications and we can offer solutions with integrated thermal controllers and sensors communicating through RS232, WiFi or Zigbee.



Motorcontroller

- Soft Starter
- Soft Starter with brake
- Compressor Soft Starter

The P-Line range of Soft Starters covers a wide spectrum from 0.1 – 110 KW motors, making them ideal for a variety of Soft start/stop applications. The units incorporate an optional High Torque Kick start feature, the initial torque is adjustable by the user and the units offer fully adjustable start and stop ramp times.



Inverters

We supply electronic control systems to meet the high demands of control and safety of the automotive heating devices. Our control systems are designed according to customer requirements and to ensure that safety and valid regulations are met.

CUSTOMIZED SOLUTIONS

Customers often come to us with an idea about a new project/solution, a need for our expertise or because they want to enter a partnership with us. We are more than happy to share our facilities, vast experience and expertise at this initial stage. The earlier we are involved in a project, the more we can control the optimization of core issues, such as the choice of materials, components and technology, temperature control, energy consumption and sustainability, cost efficiency and compliance with all applicable norms, regulations and standards.





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