

# **ELECTRONIC COOLING**

**THE PROMISE  
THE PROOF  
HEATEX**

**AIR-TO-AIR HEAT EXCHANGERS**

**HEATEX**

## **SOLUTIONS FOR A GLOBAL CONSCIENCE**

Today, there is a strong focus on minimizing the negative impact on the environment, and it is imperative for everyone to contribute. Reducing energy consumption is one way to reduce carbon footprint, whether as an individual, a company, or a large organization.

At Heatex, we want to contribute to a general and global reduction of the usage of primary energy and reduction of CO<sub>2</sub> emissions. We promise that our commitment to energy-efficient solutions makes a valuable contribution to sustainable development.

Thermal management systems built on Heatex air-to-air heat exchangers have a minimal carbon footprint with lower energy consumption and consequently reduced costs. Furthermore, they require no harmful refrigerants, which often contribute to global warming and ozone depletion.





## **THE PROMISE: FAST, FLEXIBLE & EXPERIENCED**

We are heat transfer experts with over 60 years of experience in heat exchanger development and production. Worldwide engineering support and production facilities allow us to work closely with our customers, ensuring rapid technical response and short lead times.

All sites work according to the same processes with the same methods to guarantee that our products have the same superior quality no matter where they are manufactured.

## **THE PROOF: CUSTOMIZED & RELIABLE SOLUTIONS**

As the scale and complexity of the electronic devices increases, so does the need to protect them from overheating, moisture, dust and other contaminants. Effective, reliable and environmentally friendly thermal management solutions are essential to a successful overall system design.

Heatex' plate heat exchangers form the basis of our custom thermal management solutions and our products are available in many different sizes and configurations. They have been field tested and proven in almost every environment.

We are also capable of delivering complete cooling units, customized and configured to fit specific requirements such as space limitation or flow configuration. Our experienced engineers support our customers during the whole process.

# ELECTRICAL ENCLOSURES

We have been providing larger thermal management solutions for data centers and wind turbines for many years with great success. However, we also have long experience of smaller cooling systems, which can be used for thermal management of almost all electronic equipment. Applying the correct thermal management system is critical for long service life, reduced operating costs, and minimal downtime.

For example, our heat exchangers can be used to cool DC/AC inverters used in photovoltaic power facilities or electronic equipment used in telecom base stations and outdoor advertising displays. Of course, different applications have different needs, but the core concept is the same, they all need reliable and efficient cooling.

Our heat exchangers are available in a wide variety of sizes and configurations. Heatex's experience and engineering support ensure each solution is optimized for each application. We offer customized exchangers with a variety of integration options.

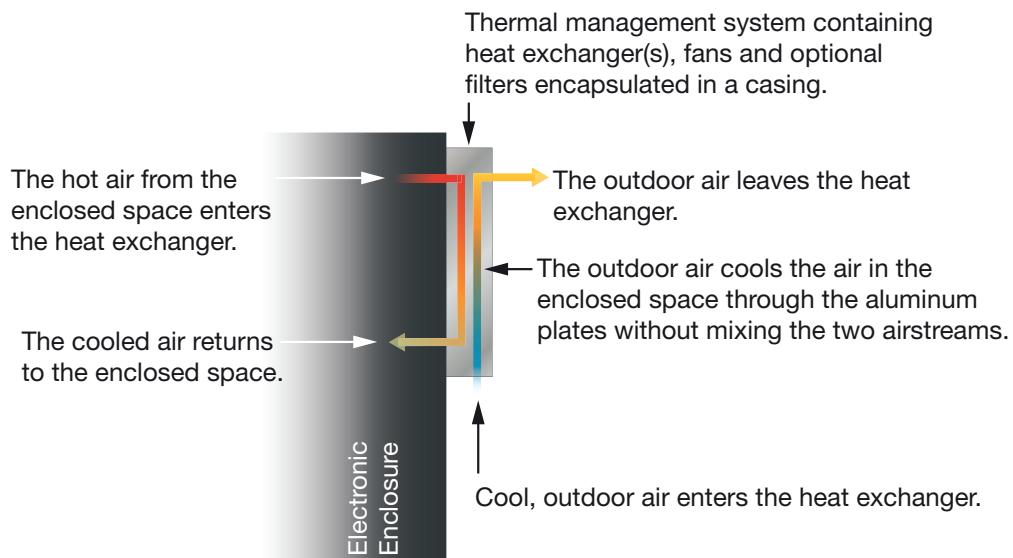
## EXAMPLES OF APPLICATION AREAS

- General electronic equipment cooling
- Telecom enclosures
- Solar power inverters
- Process thermal management
- Kiosks
- Rail
- Infrastructure/traffic
- Automation equipment



## THE CLOSED LOOP SYSTEM

With Heatex air-to-air heat exchangers, you get fully isolated flow paths to keep the cooled space safely protected from moisture, dust, or other contaminants. The simple construction with no moving parts, no refrigerants and no filters that need replacement makes the system virtually maintenance-free and very environmentally friendly.



## AIR-TO-AIR HEAT EXCHANGERS

The air-to-air heat plate exchanger consists of a core of thin aluminum plates, end plates and frames. The plates create channels for the air to pass through. The outside air passes on one side of the plate and the air in the enclosed space recirculates on the other side.

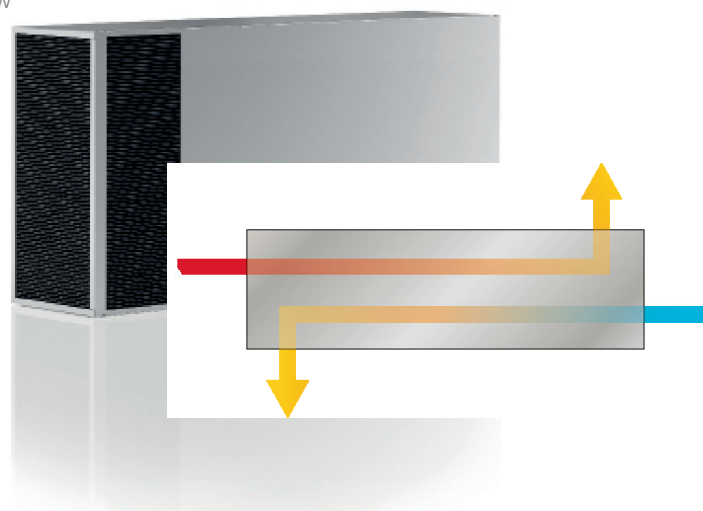
The outside air cools the air in the enclosed space through thin aluminum plates. The outside air is usually contaminated with humidity, dust and pollutants, but the two airflows never mix, providing a dry and clean space for the sensitive electronic components.

Heatex offers two types of plate heat exchangers, crossflow and counter flow. In a cross flow exchanger the cold and the warm air flow perpendicular to each other. In counter flow exchanger the two airstreams flow in opposite direction to one another. The airflow in our counter flow heat exchangers can be adjusted in several different ways. The crossflow heat exchangers can be assembled in a two-step configuration. The application determines which heat exchanger type provides the best solution.

### MODEL M

Our Model M is a perfect solution for closed loop systems. The Heatex Model M is a lightweight counter flow exchanger specifically developed for thermal management solutions. Model M offers customizable aspect ratios and multiple flow path configurations and is manufactured from aluminum with aluzinc steel casings. Epoxy coated aluminum is available for better corrosion resistance.

Visit our website or contact us for more information about Model M or our other products.



### MODEL H/H2

Our Model H and H2 are perfect solutions for medium to large closed loop systems or when the Model M simply does not fit in terms of geometry. The Heatex Model H and H2 are lightweight and versatile, cross flow exchanger used in many different industries and manufactured from aluminum with aluzinc steel end plates. Epoxy coated aluminum is available for better corrosion resistance.

Visit our website or contact us for more information about Model M or our other products.





## HIGH REDUNDANCY

**Reliability is the key to success.**

- In the event of a motor failure, the Heatex system has a high level of built in redundancy that other systems such as refrigeration commonly lack.
- Having a number of fans on both external and internal air flows keeps the system running, even if one of the motors should fail. The system will continue to operate on the remaining fans in scale with the cooling demands.



## CLOSED CIRCUIT COOLING

**Increased life span will optimize return on investment.**

- The air in the case is as clean as when the case was last closed, resulting in the extension of the operating life span of the components by up to 50%, compared to an open cooling system where polluted and humid air flows directly across the internal components.
- In tests, Heatex products have shown levels of less than 0.1% of opposing air flow leakage on nominal airflows where pressure is as high as 400 Pa.



## LOW MAINTENANCE

**System simplicity improves operation.**

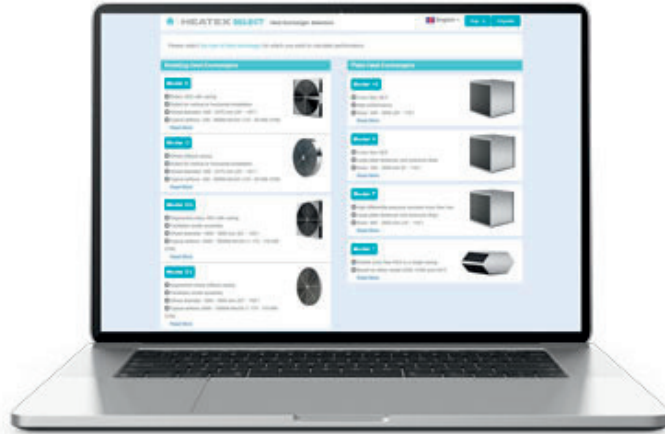
- No use of any refrigerant gases, so there is no requirement to re-gas the systems using refrigerant specialists.
- Internal closed loop, any contaminants from the ambient air flow are pushed across the open loop, through the system and back to atmosphere. No requirement for filters and hence no filters to exchange on a regular basis.



## COST EFFICIENT

**Cost benefits - From the initial outlay, throughout the life cycle of the product.**

Initial outlay with a Heatex system will be lower, the maintenance schedule will be dramatically reduced and the day to day running costs are also often lower than a refrigerant based system.



## HEATEX SELECT

All Heatex products are custom made and designed to match the customer's technical specifications. Our calculation software, Heatex Select which always is available online and for free at [heatex.com](http://heatex.com), enables accurate calculations of the performance of our products under different conditions.



### THE PROMISE:

As a leader in plate heat exchangers and thermal management solutions, Heatex is an excellent partner for the most challenging heat transfer applications.

### THE PROOF:

With a global team of sales and technical support, Heatex responds quickly to inquiries with the optimized solution for your application.

We have a well established reputation of being honest and reliable and hold several certifications covering product and operation quality worldwide.

Our products are field tested and proven to have very high efficiency and a fast ROI. Being the leader, Heatex provides the expertise and cutting edge products to make your project a success.

Heatex is a global manufacturer of air-to-air heat exchangers. The company was founded in the 60's, and incorporated into Heatex AB in 1987.

The company uses advanced algorithms to design and improve its products. These are based on scientific calculations within fluid dynamics, the fundamentals of heat transfer and fifty years of practical experience of heat transfer processes.

Heatex products are well known for providing high energy recovery and for enabling a fast return on investment. The company has a history of steady growth and has over the years established itself as the market and technology leader of air-to-air heat transfer.