



DM

DIGITAL MEDIA

THE PROMISE THE PROOF HEATEX

AIR-TO-AIR HEAT EXCHANGERS

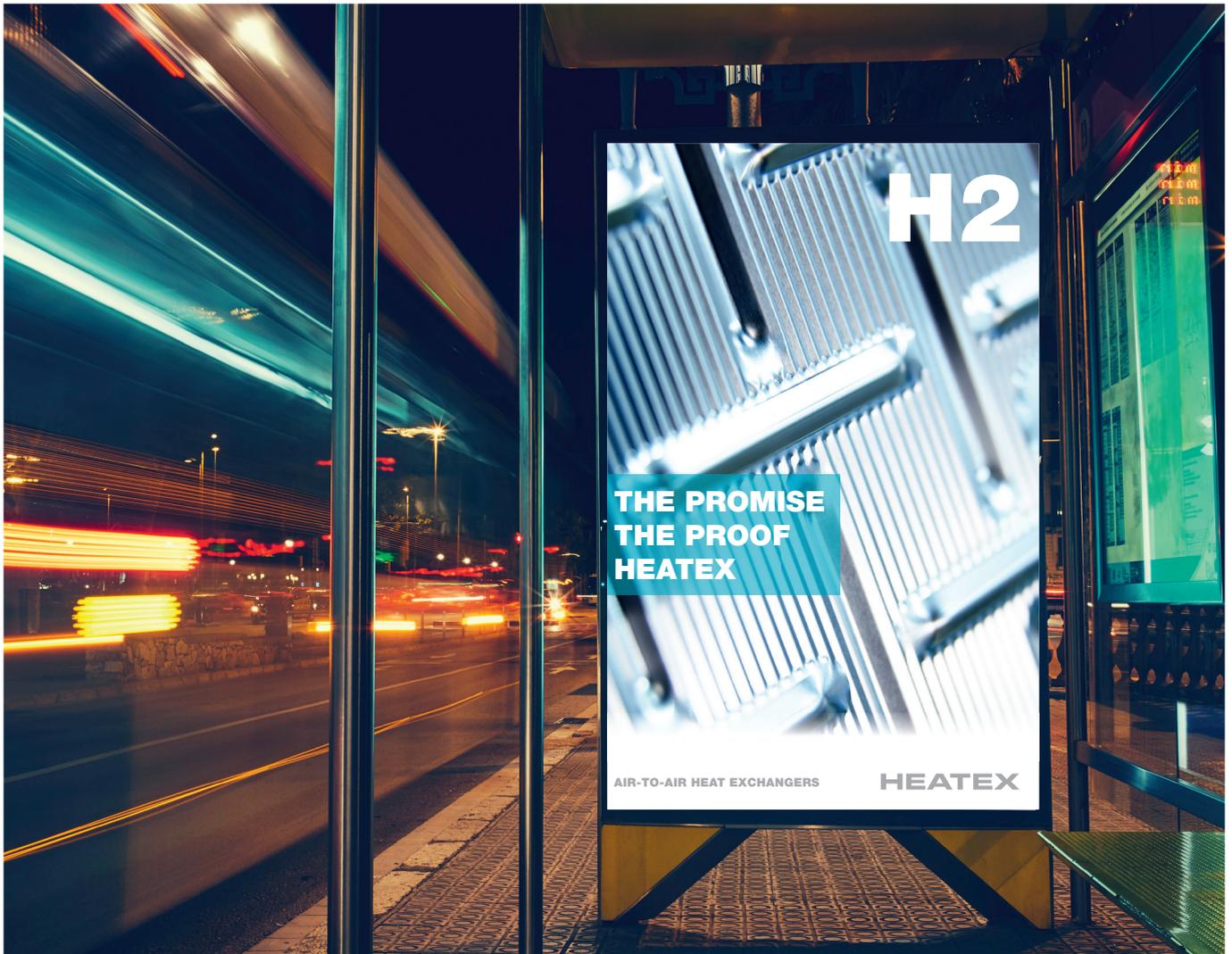
HEATEX

DYNAMIC AND EVOLVING MARKET FORCES REQUIRE INNOVATIVE SOLUTIONS

The pace and growth of modern technology places numerous challenges across several industries. Telecommunications, IT, data storage and digital signage, for example, are all pushed to the limit by growing demand, environmental restrictions and competitive markets. Protecting the sensitive equipment that drives our society is integral to providing solutions to these challenges.

COOLING SYSTEMS FOR SECURE AND RELIABLE SERVICE

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. Applying the correct cooling solution is critical for long service life, reduced operating costs, and minimal downtime.



THE PROMISE: RELIABLE AND INNOVATIVE

Right from the start the Heatex cooling system offers a high level of built in redundancy which reduces downtime and maximizes uptime. The electrical components within the system are mainly "plug and play" for the ease of maintenance. Along with a closed circuit configuration that significantly expands the operating life time of all involved components, the Heatex system keeps your message up and visible at all times.

THE PROOF: EXPERIENCED TECHNOLOGY

With over 3000 systems currently in use within Digital Out-of-Home advertising across the globe, we are proud to say that we have a zero failure rate on our manufactured components. Our expertise in heat exchangers has been gained over a period of 60 years, Heatex systems can be found in telecommunication systems, data centres, wind turbines and HVAC systems and have successfully operated for many years. Our products are suitable for both big and small cooling applications as they can be used to cool almost all electronic equipment.



HIGH REDUNDANCY

Reliability is the key to success.

Generally in demanding environments when other alternatives to our system fail, it leaves the screen and other valuable components to overheat and ultimately shutdown, this can lead to extremely costly shutdowns and penalties.

- 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 Heatex system works in a closed circuit configuration by using both internal and external air flows passed across a heat exchanger whilst maintaining zero cross contamination of opposing airflows.

- 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 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.

Maintenance can be conducted by a qualified electrician and for a fraction of the price versus refrigerant systems.

- 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.
- The electrical components are mainly "plug and play"



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.

THE HEATEX SYSTEM

Every system is unique to fit your application.

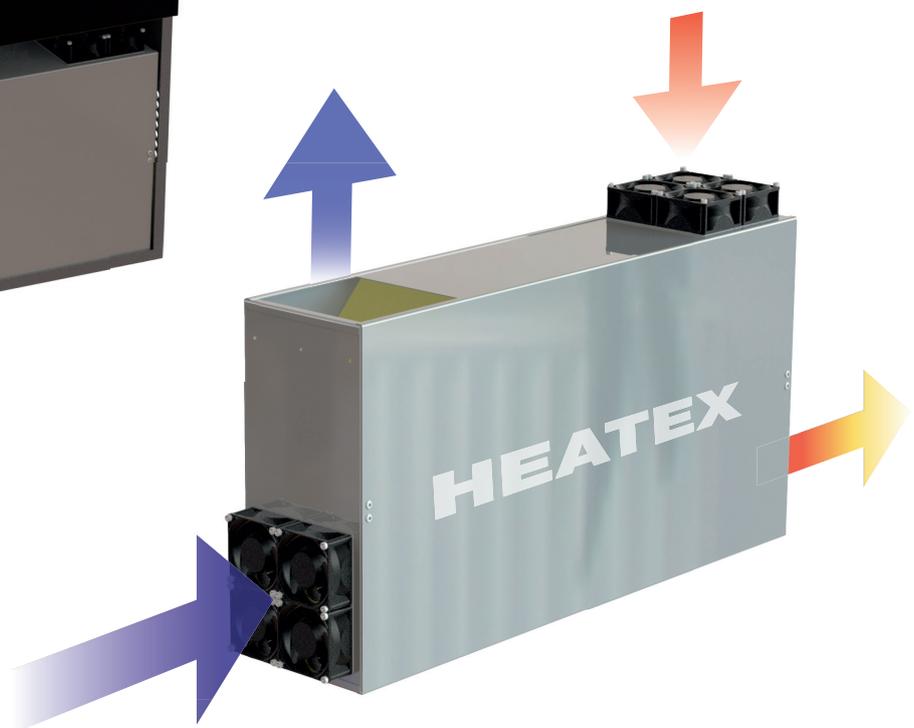


The Heatex cooling system works using two separated air circuits, one internal and one external.

The system's cooling medium, which is ambient air, is forced through the external circuit and into the heat exchanger by multiple fans.

Inside the enclosure, the internal fans push the air through the heat exchanger where the air is cooled down and at the same time the enclosure's inside circulation is improved reducing the temperature gradient.

The Heatex system is well suited to cool for example electronic equipment found in illuminated billboards, and projectors.



With the Heatex system, you as the customer set the specification level, we build our systems to fit your products and standards. Whether it be a dual sided, high NIT screen application, using the highest quality low power EC fan technology OR if it is a cost sensitive specification to secure that high volume lucrative contract, by using DC fan technology and a lower specification solution we can help to meet your requirements.

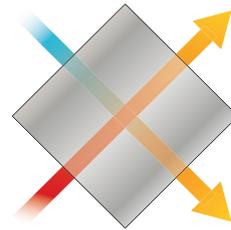
SYSTEM PRINCIPLES

This is how it works: The air-to-air heat plate exchanger consists of a core of thin aluminum plates, gables 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 the thin aluminum plates. The outside air is always contaminated with humidity, dust and pollutants, but the two airflows never mix, providing a dry and clean space for the sensitive electronic components.

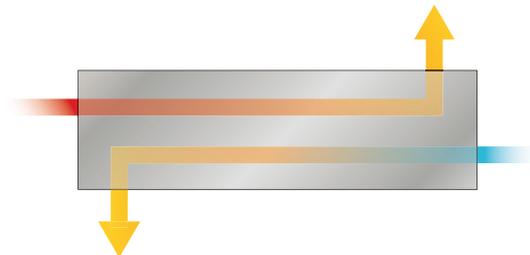
We have two types of plate heat exchangers, crossflow and counter flow. In a cross flow exchanger the cold and the warm air flow perpendicular to each other. In counter flow exchanger the two airstreams flow in opposite direction to one another. The air flow in our counter flow heat exchangers can be 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.



**EXAMPLE OF
AIR FLOW CROSSFLOW**



**EXAMPLE OF
AIR FLOW COUNTER FLOW**

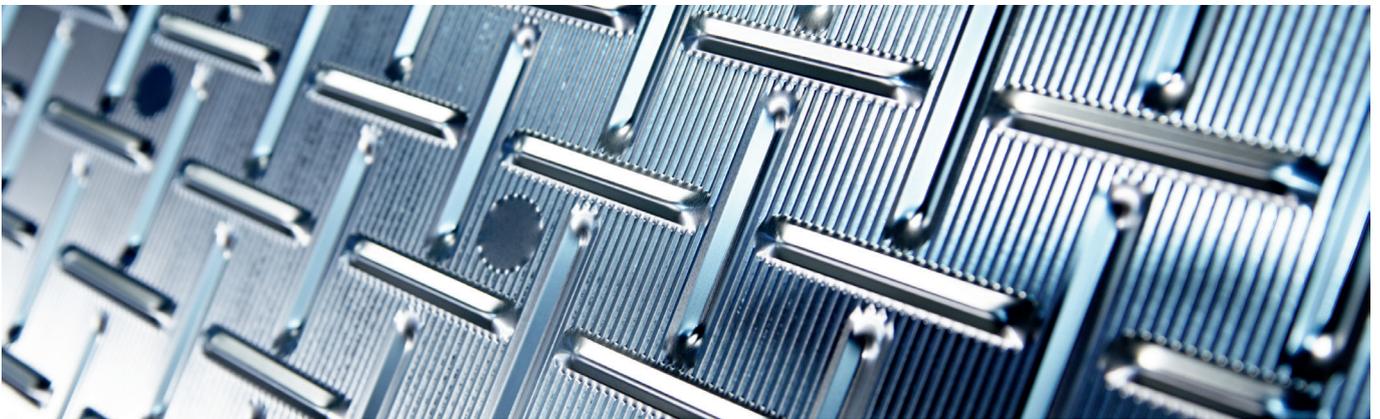


SOLUTIONS FOR THE GLOBAL CONSCIENCE

Today, there is a strong focus on minimizing the negative impact on the environment and it is imperative for everyone to contribute. Reducing energy costs 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 CO₂ emissions. We promise that our commitment to energy efficient solutions makes a valuable contribution to sustainable development.

Thermal management systems with Heatex air-to-air heat exchangers give a very small 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:

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.

All Heatex products are custom made and designed to match the customer's technical specifications. We have a well established reputation of being honest and reliable and hold several certifications covering product and operation quality worldwide, for example Eurovent, GOST, AHRI, RLT-Hygiene and ISO 9001.

Moreover, 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.