

**GEA Ecoflex GmbH**

For more than 75 years, GEA Ecoflex has been developing customer-oriented and cost-optimised plate heat exchanger solutions for the following fields of application:

- HVAC
- refrigeration
- sugar
- chemical
- paper
- food
- life science
- marine
- power

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**Plate Heat Exchangers**



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The Company  
The Products

## Assuring your success

Whether you are a major player on a regional, national or global basis – GEA Ecoflex is your competent partner for all types of plate heat exchangers. Our know-how is the assurance of your success:

- individual solutions
- highest product quality
- economic implementation
- comprehensive service.

## The GEA Group

The GEA Group incorporates over 240 operative business entities spread throughout the world. These medium-sized organisational units develop their core engineering competence in seven divisions:

- Process equipment
- Energy technology
- Air treatment
- Refrigeration
- Process engineering
- Mechanical separation
- Dairy farm systems.

## GEA Ecoflex

GEA Ecoflex is the direct successor to the company of Eduard Ahlborn that was pioneering in the invention of plate heat exchangers in 1928. Since 1995 it is the competence centre within the GEA Group for gasketed, brazed and fully-welded plate heat exchangers.

With 75 years of experience in consistently meeting the specific needs of the customer, GEA Ecoflex has achieved a leading position on the global market for plate heat exchangers.

GEA Ecoflex invests considerably in research and development, to maintain and continuously expand our competence. In doing this we give our customers a competitive edge, by our constant development of new, more efficient plate types to suit every field of application.

The GEA Group develops and produces components, systems and complete process lines. Its decentralised structure ensures high flexibility, short reaction times and a distinctive proximity to its customers.

The headquarters in Sarstedt – just outside the trade fair city of Hanover – oversee the co-ordination of this global player's activities. With its demands for the highest quality standards and continuous innovation, GEA Ecoflex is continuing to expand its market position significantly. The company successfully meets the growing demands in almost every single industrial application.



Would you wear overalls to a cocktail party? Or turn up in shorts at a board meeting? Certainly not! Your outfit should always suit the occasion.

It's no different with plate heat exchangers. This is the reason why GEA Ecoflex provides tailor-made solutions to suit a wide range of media, demands and production processes:

- gasketed plate heat exchangers are the economic all-rounders
- brazed plate heat exchangers are typified by their compact design and especially long service life
- fully welded plate heat exchangers offer highest reliability and provide large heat transfer surfaces.

## Plate heat exchangers

### Design and function of gasketed plate heat exchangers

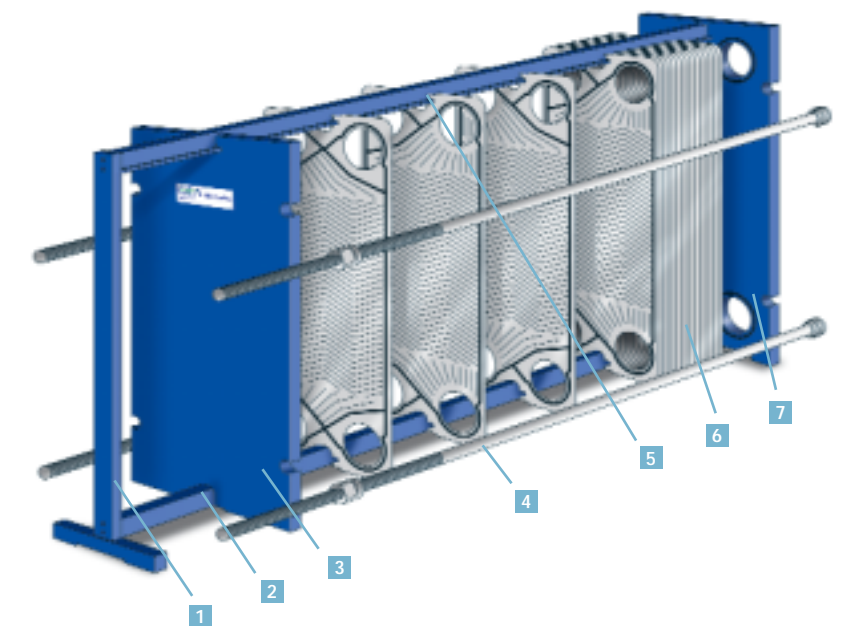
A gasketed plate heat exchanger from GEA Ecoflex is made up of the following seven major components:

- 1 Support, with certain models, that acts as a counterpart to the fixed plate and bears the plate heat exchanger on the opposite side.
- 2 Guiding bar, on which, depending on the model, the plate pack and the pressure plate stand on or are guided by.
- 3 Pressure plate closes off the plate pack.
- 4 Tightening bolts, press the fixed plate and pressure plate together with the plate pack suspended in between, thus sealing it off.
- 5 Carrying beam, on which, depending on the model, the plate pack and the pressure plate are suspended or guided.
- 6 Plate pack, made up of profiled plates with intermediate gaskets.
- 7 Fixed plate, that closes off the plate pack on the one side and at the same time forms a load-bearing component of the complete plate heat exchanger.

The shape of the gaskets between the profiled plates determines the direction of flow, the flow opening and the flow gap. Controlled in this way, the media involved in the heat exchanging process flow through the plate pack, in turn and separated from each other.

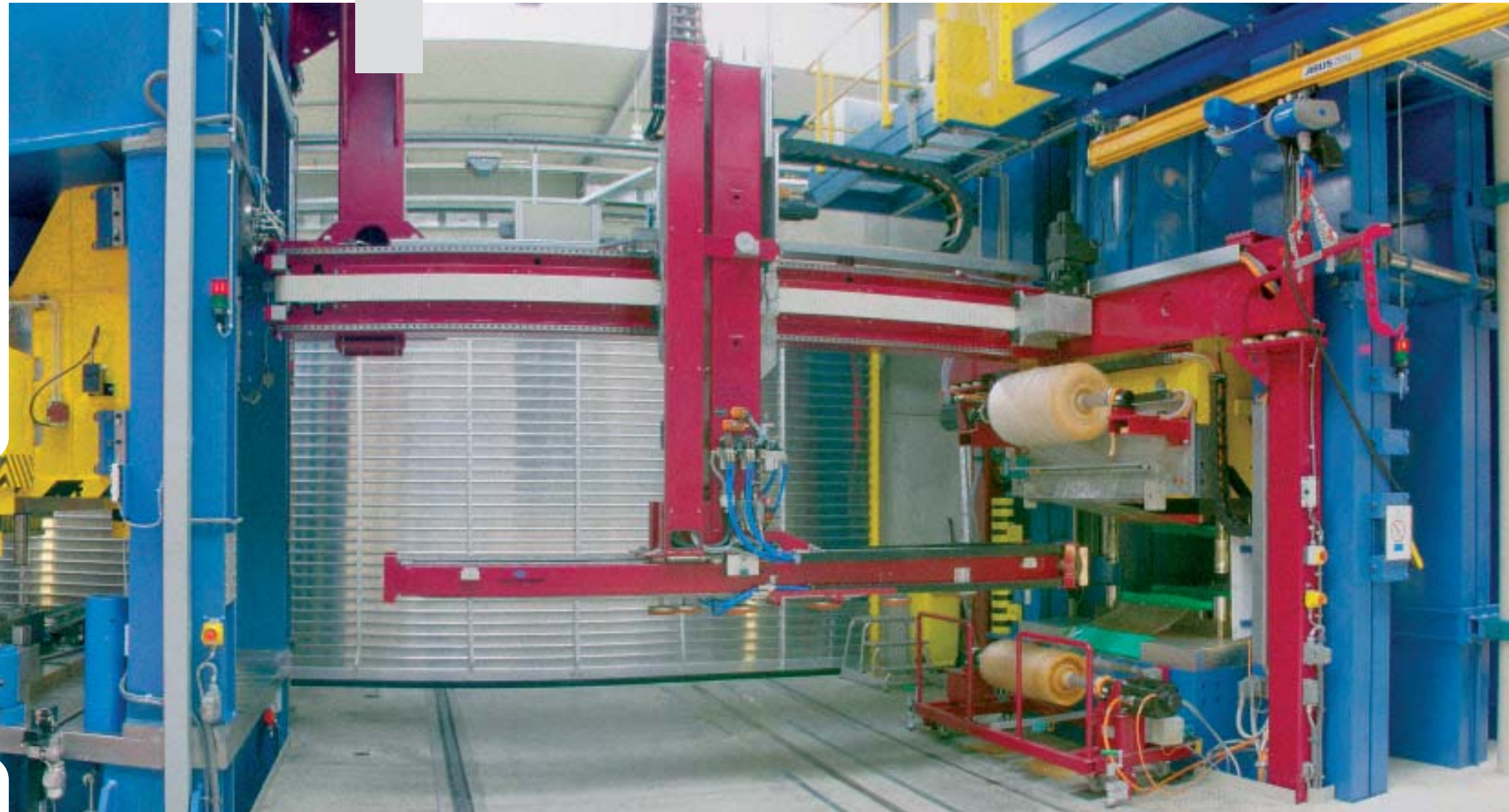
The performance of the plate heat exchanger results from the size, pressing structure and number of the plates installed in series.

The fixed plate is fitted with the inlet and outlet connections for the liquids involved in the heat exchanging process. With multiple applications (internal series connection) of the plate heat exchanger, connections are also fitted to the pressure plate.



## The new pressing line in Sarstedt

In the spring of 2003, GEA Ecoflex in Sarstedt moved into new administration and production facilities with state-of-the-art pressing lines that set the highest standards in their field in the world for productivity and automation. At the coil plant the sheets are cut to length and then fed to the pressing machine equipped with an integrated foiling unit. A fully automatic tool changing system enables a rapid changeover to different plate shapes. The downstream blanking presses give the plates their final shape. This investment expands GEA Ecoflex' capacities and its highest quality standards consolidate the company's position on the global market.



## Your advantages Cost savings

With GEA Ecoflex plate heat exchangers you save:

- investment cost and space in comparison with other technologies
- operating costs thanks to simple maintenance and high efficiency.

### High heat transfer rates

The plate shapes developed for the various applications and the wide range of materials are the basis for the extremely high heat transfer coefficients of our plate heat exchangers.

### No product mixing

The highly developed gasket design reliably prevents any mixing of the media involved in the heat exchange process. The flow opening area is provided with additional safety by double gaskets and an intermediate leakage chamber.

### Adhesive-free gaskets

Adhesive-free gaskets enable a particularly fast replacement and impressively reduce the time required until you can restart operation of your plant.

### Flexibility

Our plate heat exchangers can be adapted to changed performance requirements with a minimum of expenditure. The capacity can be increased or decreased simply by adding or reducing the number of plates.

### Reduced product content

Compared to conventional units, our plate heat exchangers have a very small volume, thus reducing the operating weight, and allowing quicker start-up and run-down of the complete system, all to the benefit of your product quality.

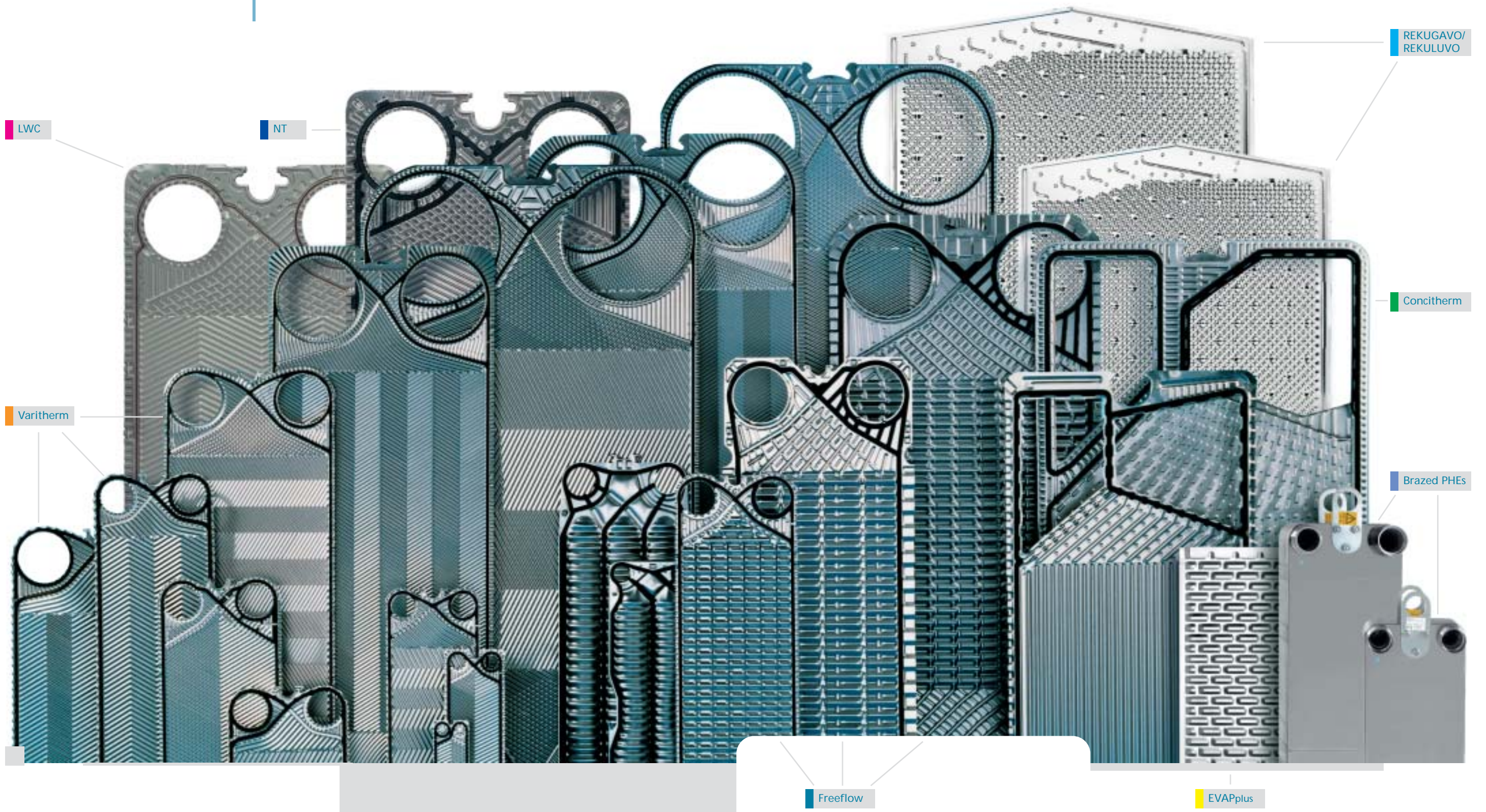
### Compact design

The higher efficiency of plate heat exchangers compared to conventional tube bundle heat exchangers permits a compact design which facilitates maintenance.

### Large selection of materials

Every single case of application places particular demands on a plate heat exchanger. We can equip our units with the widest range materials for plates, gaskets and frames to exactly suit your requirements.

# The Products



## For all applications



District heating, Wollsburg



Südzucker, Ochsenfurth



Infineon, Munich



BASF, Schwarzheide



UPM-Kymmene, Augsburg

### HVAC



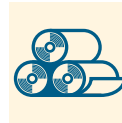
Whatever HVAC task you have to solve: the GEA Ecoflex range makes sure you never break sweat.

### Sugar



We sweeten your production: with EVAPplus high-performance plate evaporators specially optimised for your industry – as indispensable as sugar is sweet.

### Paper



We know how difficult it is to handle highly viscous fibre-loaded raw materials. Our Freeflow systems with wide flow gaps make your job easier.

### Life Science



Health is dependent on your research work and performance. GEA Ecoflex supports you in these efforts.

### Refrigeration



In contrast to your cooling units, we never leave you in the cold: economic plate heat exchangers for all your refrigeration engineering needs from GEA Ecoflex.

### Chemistry



To ensure that everything functions perfectly, we can offer certified safety even for critical processes. So that your solutions remain safely in our apparatus.

### Power



Ultimate power is our common goal. Be sure to reach it with the highly efficient plate heat exchangers from GEA Ecoflex – for reliable performance in turbine cooling or in combined heat and power units.

### Marine



Solid as a rock in heavy seas, our plate heat exchangers are used to cool ship engines and machinery, preheat fuels, air condition cabins: Your protection on stormy markets.

### Food



Your customers expect you to supply hygienically faultless and attractively priced products. We supply you with the equipment you need to satisfy these demands.

### Textiles



Fashion is your business. And trends reflect the production process: reliable, cost-effective and flexible equipment – GEA Ecoflex has the tailor-made solution.

### Full service from a single source



**Consulting and planning:** We learn from every task – to create future solutions. This philosophy has grown from our extensive competence. And this competence is used by our engineers to provide you with comprehensive advice in planning highly specialised processes.

**Commissioning:** Nobody knows our plate heat exchangers better than us. We can therefore undertake the erection on location. Because the correct installation of our equipment is an essential factor for perfect functioning.

**Servicing:** Plate heat exchangers can get dirty and gaskets can suffer from wear. A regular check by our experts is a preventative service to safeguard production. We provide you with information on necessary cleaning and repair works to give you security in your planning.

**Maintenance:** Repairs are carried out quickly to ensure that production downtime is restricted to a minimum.

**Spare parts:** There is no substitute for an original. Only original spare parts guarantee a correct fit, perfect function and a long service life. GEA Ecoflex keeps all spare parts for your equipment on hand or produces them without delay.



Vasa Power station, Cottbus



Nils Holgersson



Weko Foods, Ochten (NL)



Arla Food, Holstebro

