



## **GEA PHE Systems – Tailor-made plate heat exchanger solutions**



## Every plate heat exchanger reflects our total dedication ...

Pioneering creativity, passion and patience formed the beginnings of our company development. Commitment to research and project responsibility, precision working and profound engineering expertise by the best qualified engineers and technicians, now in the third generation, continue this tradition and justify the quality of products and services from GEA PHE Systems.

# Precision with tradition

Within the GEA Heat Exchangers Segment we utilize our focussed state-of-the-art process and project knowledge from the whole scope of heat exchanger technologies in each of our products. Produced in a worldwide network of modern manufacturing facilities our plate heat exchangers (PHEs) are individually tailored to their heat exchanging processes: the size of their heat transfer areas, the selection of the plate materials, their surface profiles and flow control properties, the wide range of gaskets and connection variants create an almost unlimited modular system for tailor-made heat exchanger solutions, offering problem-free upgrading or downsizing.

The worldwide increase in costs for energy and materials, stricter safety standards and environmental protection measures and the dynamic developments on the global competitive market determine the cornerstones of our future development work. This will be in new plate and gasket materials, in ever-thinner, but also wear-resistant plates with even more complex surface structures to optimise flow control, in even simpler to manage gaskets, and in the continued optimisation in the fields of cleaning and maintenance.

## The future-oriented alternative

Plate heat exchangers by GEA PHE Systems separate performance increases as much as technically possible from the consumption of energy, materials, surface areas and operational costs and this makes these PHEs a future-oriented alternative for customers. The development of the world's first plate heat exchangers for pasteurising milk a good 80 years ago showed us the way forward to utilize these laws of nature for sustainable heat transfer. Since that time our scientists, engineers and technicians have been improving and varying this apparently simple, but actually highly complex and demanding technology of plate heat exchangers: Liquids or gases at different temperatures flow through channels between separate, corrugated plates and transport thermal energy from the system with the higher temperature to the system with the lower temperature.

This might sound a relatively simple process, but it is used in almost every field of industry, modern building and machinery in the world and calls for the highest standards in material development, engineering, manufacture and maintenance: Our plate heat exchangers are energy-conscious and safety-sensitive process components with high performance ranges and have considerable influence on the productivity and degree of sustainability of industrial processes, building air conditioning and automotive systems. PHEs operate in part under extreme conditions in retail marketing cooling chains, in the foodstuffs and beverage industries, in power generation and in transportation and logistics systems as well as in the high-rise buildings of the world's metropolitan centres – reliable and safe for humans and the environment, compatible with climate and resources, economic for users and operators.

## Therefore GEA PHE Systems

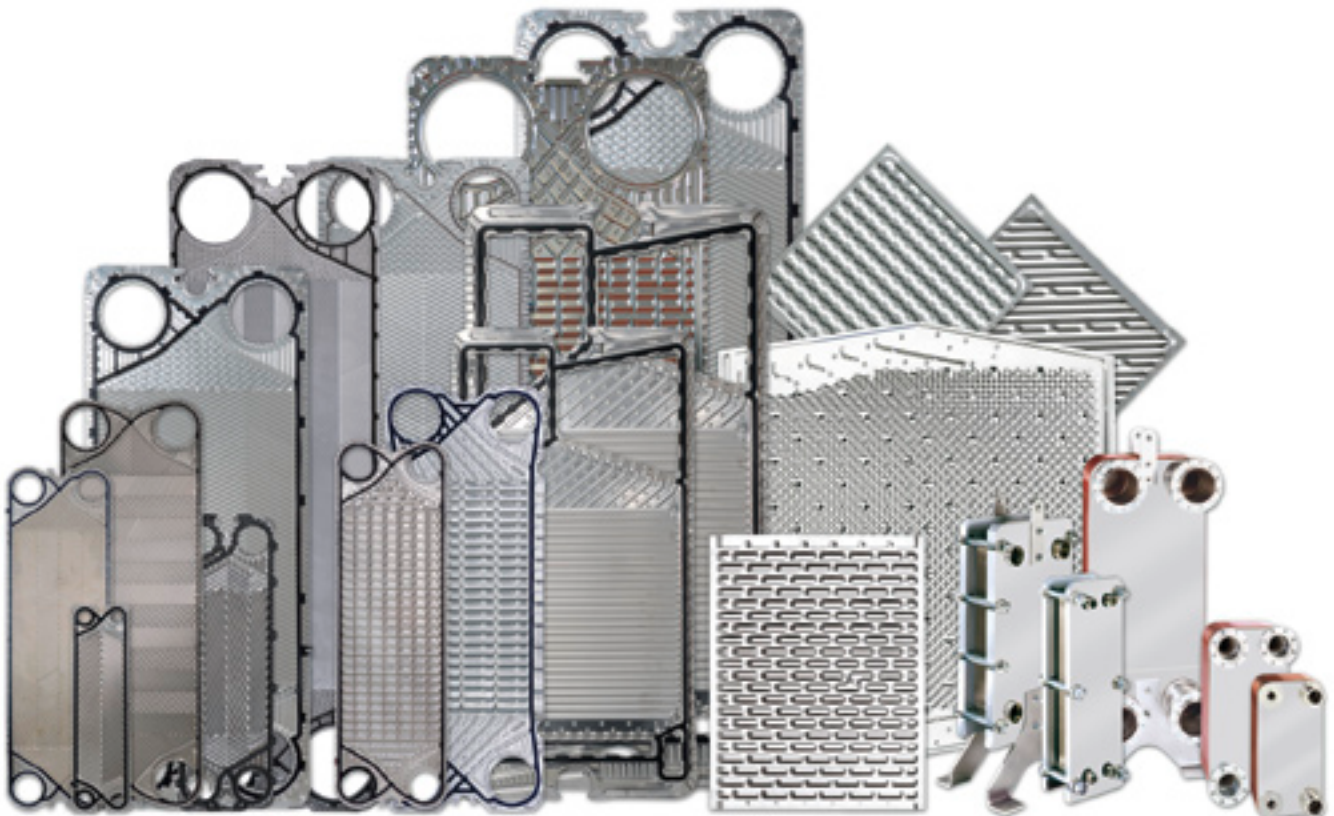
- Comprehensive engineering and production knowledge
- Know-how transfer within GEA Heat Exchangers ensures innovative technical solutions
- Special process knowledge guarantees optimum design of the plate heat exchangers
- Worldwide after-sales & service network

# Tailor-made solutions

## At home in all fields

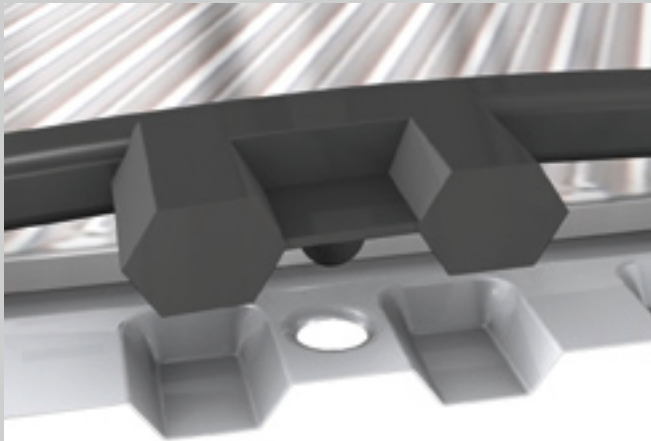
As the world's leading manufacturer and developer of plate heat exchanger technology we can offer one of the widest ranges on the market. Our product ranges include gasketed, brazed and fully welded plate heat exchangers. We also offer process-optimised model ranges, unique in their variety and diverse specialist functions. And this makes us the first choice when it comes to developing tailor-made solutions for your applications.

All of the companies within GEA PHE Systems make above-average investments in research and development. Organisation and coordination of knowledge transfer within the group plays a leading role here to ensure that the core competence is safeguarded and developed further. And this is all to the direct benefit of our customers. Without our comprehensive R&D work it would be impossible to develop ever more powerful plates for new fields of application.



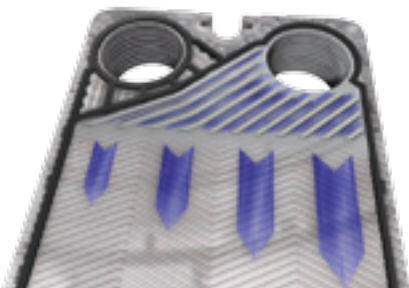
# NT Series

## Cutting-edge technology for all applications

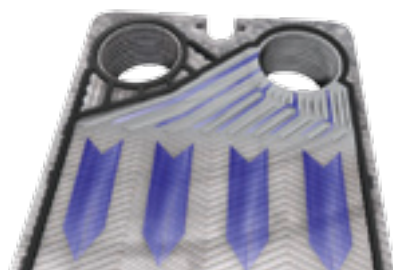


### **EcoLoc gasket system**

The innovative adhesive-free EcoLoc gaskets can be replaced quickly and easily.



### **Conventional plate design**



### **OptiWave design**

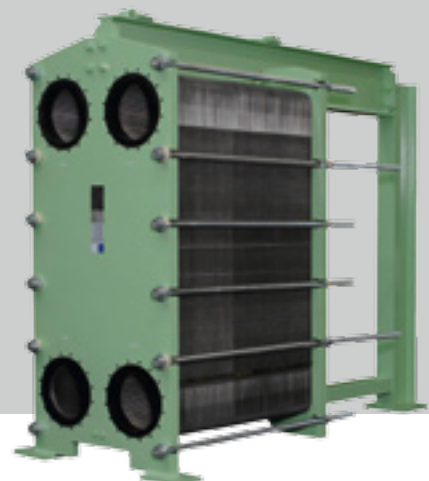
The optimised corrugation results in the highest heat transfer rates across the complete plate width.

The new NT Series offers the widest variety of applications. Thanks to plate types available in numerous lengths and profile variants the NT Series can meet every demand. It is distinguished by higher performance, more possibilities and reduced investment costs.

Thanks to the optimised plate design of the NT Series you can achieve your goals with less heat transfer surface area and therefore save on investment costs. Together with the flexible and universal plate range the NT Series can now be configured even more exactly and flexibly to your objectives and field of application.

### **Your advantages at a glance**

- Maximum heat transfer rates
- Minimum investment and maintenance costs
- Optimum media distribution
- High pressure resistance
- Simplified installation
- Fast and reliable gasket replacement
- Flexible solutions for special demands
- Special materials available



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# NX Series

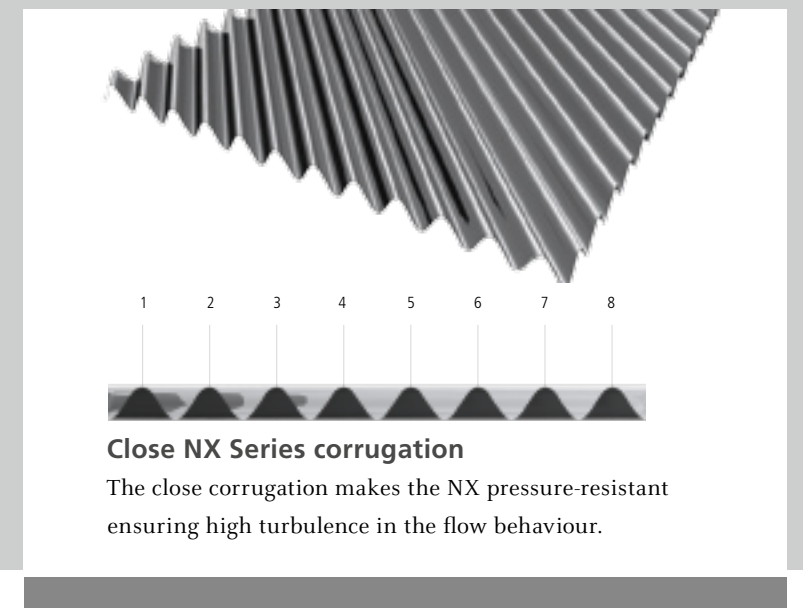
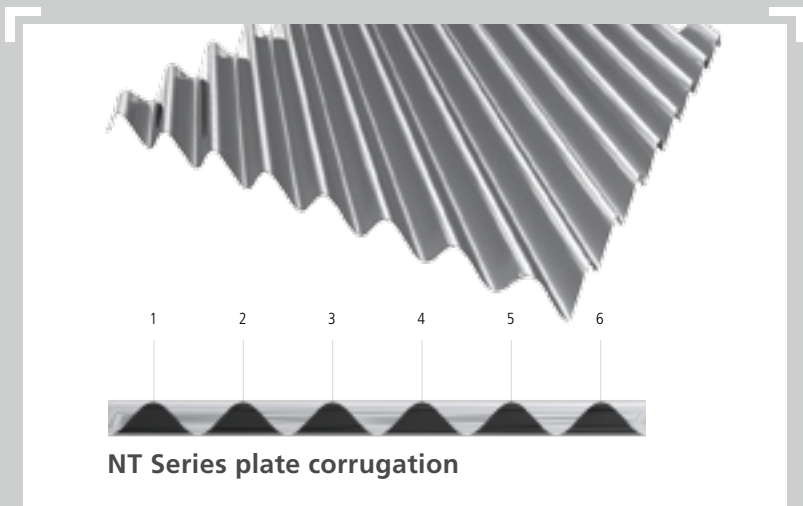
## High performance for efficient district cooling

### Advantages at a glance

- High pressure-resistance
- Excellent energy efficiency
- Maximum heat transfer rates
- Extremely small temperature differences
- Low costs for investment, operation and maintenance
- Compact, space-saving design
- OptiWave design
- PosLoc assembly
- EcoLoc gasket system

Our NX plate heat exchangers are based on the successful NT technology. They were specially developed for high-performance remote cooling systems requiring minimum temperature differences and maximum pressure-resistance.

The strengths of the NX Series come to the fore in extreme climate zones and in high-rise buildings when used as system separation for different operating pressures. Pressure resistance is up to 29 bars, equivalent to a water column of 290 metres in height. Temperature fluctuation is a maximum of 1 °C and is therefore more than a match for even the most demanding tasks.



The close corrugation makes the NX pressure-resistant ensuring high turbulence in the flow behaviour.

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# LWC Series

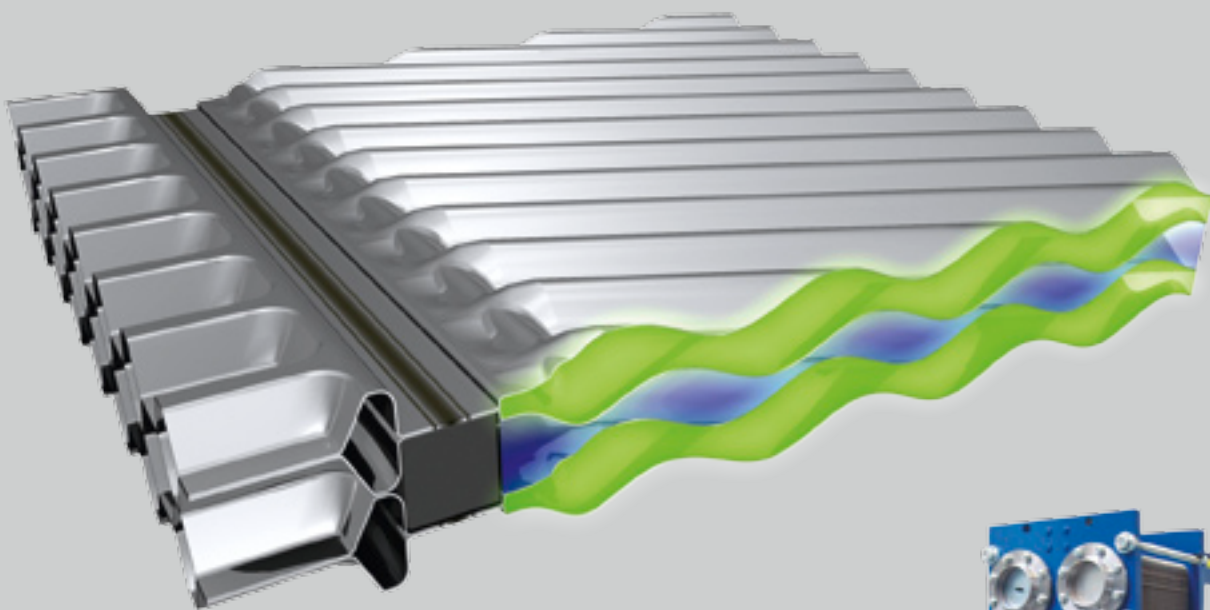
## Double NT technology for critical media

When handling critical media, conventionally gasketed plate heat exchangers quickly reach their limits. GEA PHE Systems resolve this problem using state-of-the-art technology. The laser-welded cassettes contained in the LWC plate heat exchangers ensure safe and reliable flow of aggressive products.

LWC plate heat exchangers are based on the plate technology from the NT Series and are produced using the latest methods for computation, design and manufacture. Our LWC plate heat exchangers operate using the principle of 100 % separation of the flow channels. Many industrial applications are only possible using this strict separation.

### Advantages at a glance

- Laser-welded cassettes guarantee highest process reliability even with aggressive media
- Low investment costs thanks to maximum heat transfer
- Reliable function based on tried-and-tested technology
- Simple assembly, access for cleaning on product side



### Laser-welded cassettes

The laser welds made with computer precision hermetically seal the flow environment.

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# FA Free Flow Series

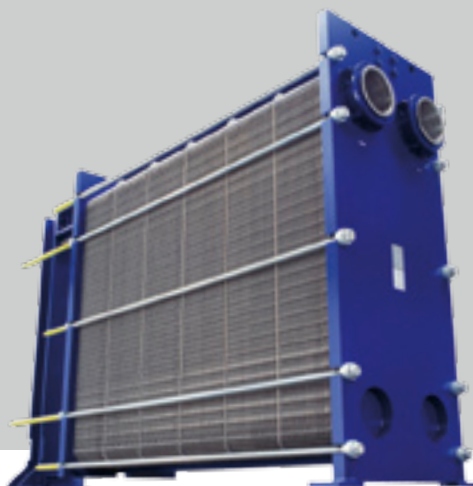
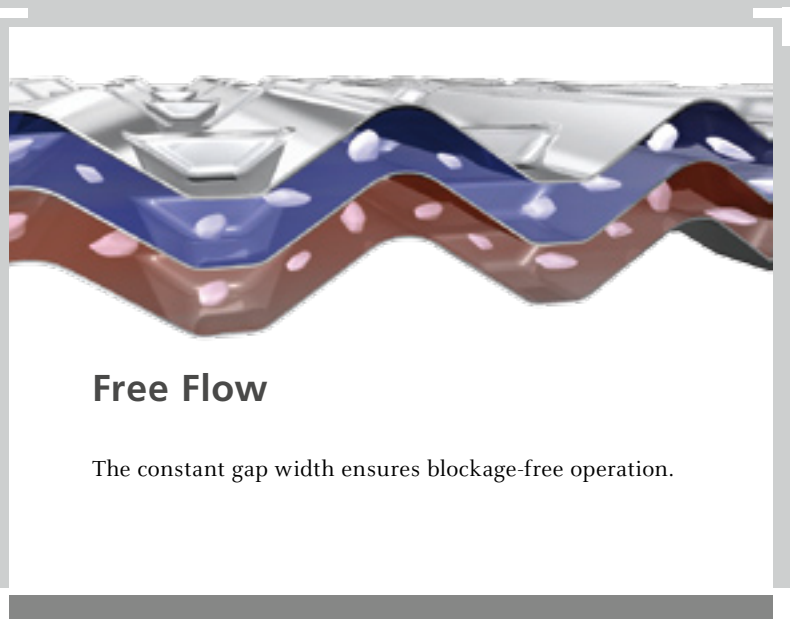
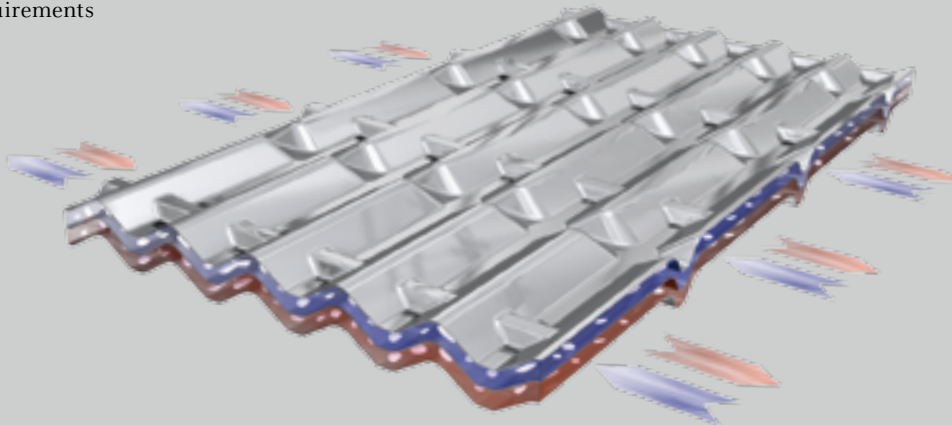
## For media containing solids and pulp

### Advantages at a glance

- Blockage-free operation with a constant gap width
- FA 159 and FA 161 with no metal supports
- Plates available in various sizes, gap widths and materials
- NBR and EPDM gasket materials
- Special gaskets, such as FPM are possible in certain models
- The alternative to shell-and-tube and spiral heat exchangers, due to lower investment and operating costs and reduced space requirements

Our Free Flow plate heat exchangers are ideally suited for media containing solids and pulp. With their low investment and operating costs these are a viable alternative to shell-and-tube and spiral heat exchangers.

The capabilities of conventional plate heat exchangers are often not sufficient particularly for media containing solids and pulp. And this is where the strengths of our Free Flow plate heat exchangers come to the fore. Their special feature is the constant flow gap width between the individual plates and the coarse corrugation of the actual plates. The gap between the plates can be up to 12 mm.



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# Concitherm

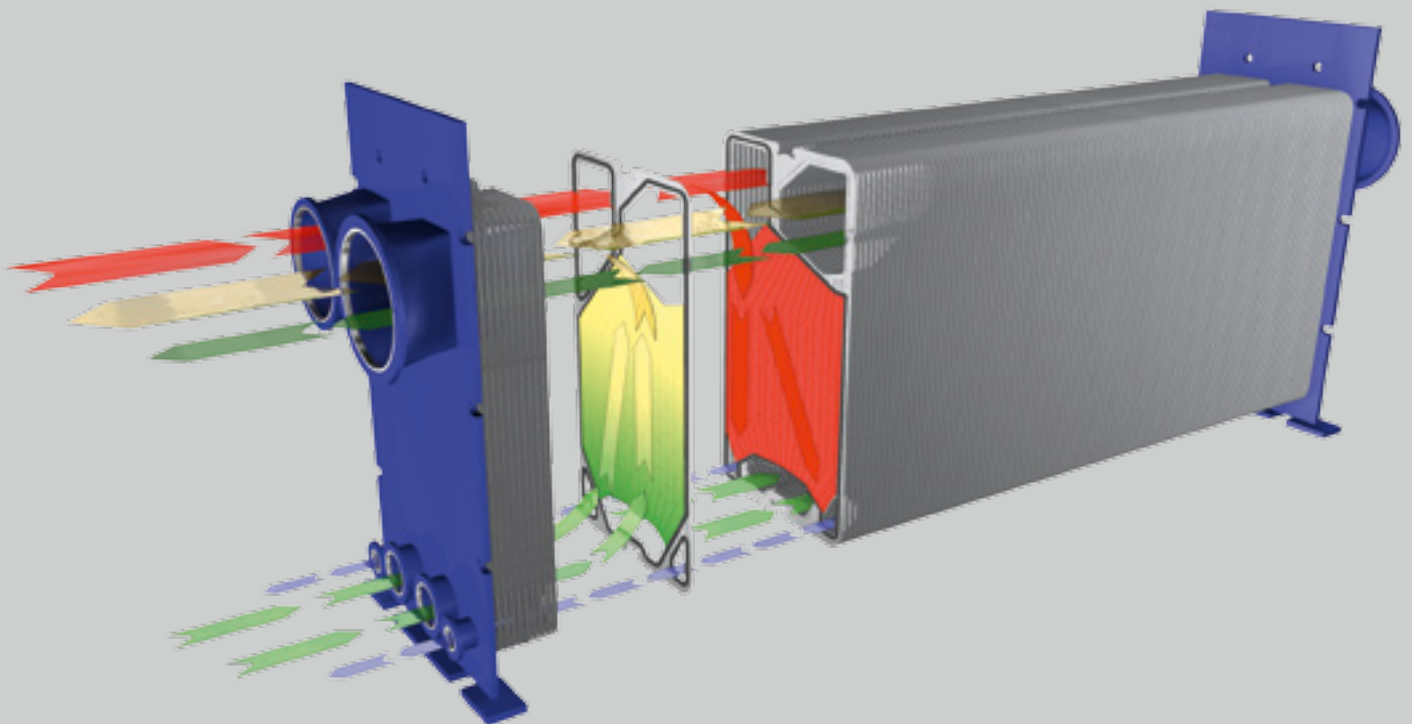
## High performance for high vapour volumes

The Concitherm Series provides particularly high performance in rising-film plate evaporators often found in the sugar processing industry. They can also be used as boosters in combination with conventional tube-type evaporators.

The optimised plate structure of the Concitherm Series makes it possible to have wide gaps with no contact points over up to 3 m<sup>2</sup> of heat transfer area. At the same time these PHEs offer a convincing 100 % higher transfer compared to conventional shell-and-tube heat exchangers.

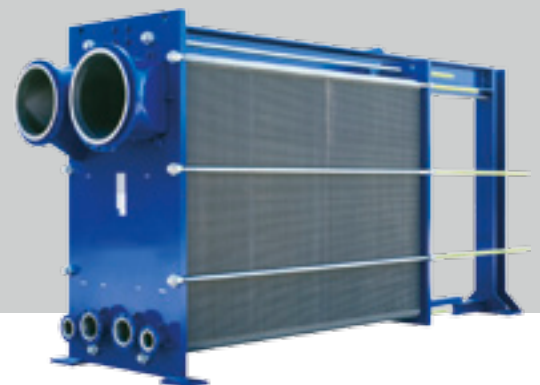
### Advantages at a glance

- 3 m<sup>2</sup> of heat exchange area per laser-welded cassette ensure high evaporation performance and compact design
- No clogging and easy cleaning reduce production costs



### Safeguards your products

Low residence times protect your product from damages.



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# Varitherm

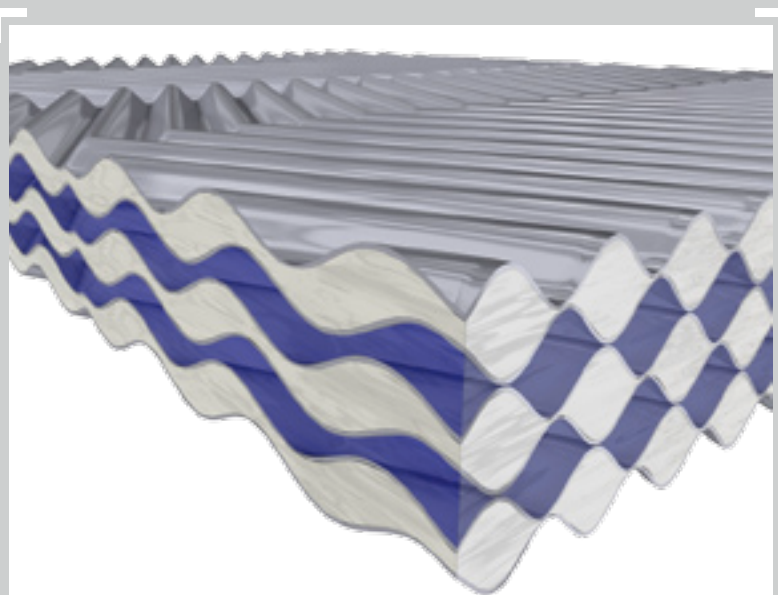
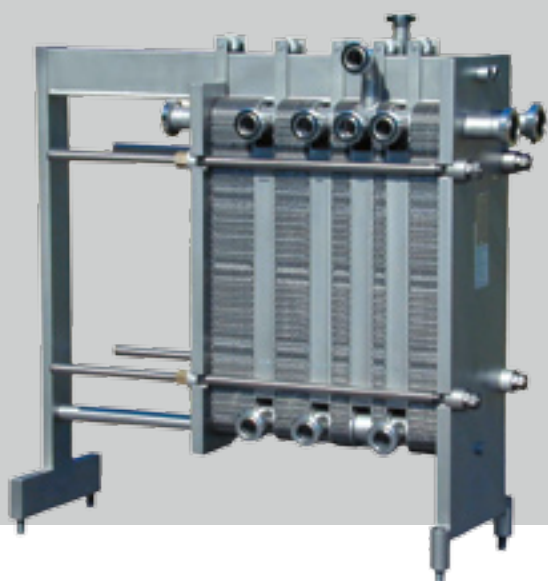
## Systematic product variety

### Advantages at a glance

- Operating pressure up to 25 bars, test pressure up to 32.5 bars
- Plates in various sizes, corrugations and materials
- Adhesive-free LocIn gasket system for model sizes VT 20 to VT 80
- NBR, EPDM and FPM gasket materials
- Special gasket materials, such as silicone, Hypalon and butyl available on request
- Lacquered frames for all model sizes
- Stainless steel frames for model sizes VT 04 to VT 80

Whether in heating or cooling of liquids containing particles of up to 2 mm in size, in condensing vapours or in gas cooling and gas dehumidifying in special cases – Varitherm plate heat exchangers offer a convincing solution with the widest range of possible applications.

The Varitherm Series has two convincing arguments in its favour. Firstly there is a wide range of materials available, including 1.40301 / AISI 304, nickel-based alloy, Incolloy, nickel, tantalum and titanium. Secondly it comes with an individual plate pack that can be easily expanded to meet your future needs. And this makes the Varitherm Series the optimum economic solution for just about every application.



### Gentle product handling

The gentle treatment of products caused by the soft corrugation makes the Varitherm the obvious choice for the foodstuffs industry.

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# GG Series

## Free of non-ferrous metals for heating drinking water

Extremely efficient and reliable plate heat exchangers are essential during the heating process to ensure that drinking water remains a safe and healthy staple. Our plate heat exchangers meet both European and international standards and operate with the reliability you expect from GEA PHE Systems as the market leader.

We view strict constraints and legal regulations as a challenge. With its GG Series GEA PHE Systems is presenting a convincing solution to the complexities involved in heating drinking water. In their quest to develop a plate heat exchanger free of non-ferrous metals our experts have found a solution which is both cost-effective and hygienically pure.

The GG Series elegantly combines the numerous advantages of our gasketed and brazed plate heat exchangers. A special gasket, combined with stainless steel plates and a revolutionary frame design form the basis for a low-cost, food-safe heat exchanger.

### Advantages at a glance

- Preferred for drinking water applications
- Corrosion-proof
- Cost-effective
- Long service life
- Materials coming into contact with the product listed by FDA
- Low weight
- Minimum space requirements for installation

### Convincing solution

With its GG Series GEA PHE Systems is presenting a convincing solution to the complexities involved in heating drinking water. It combines the many advantages of our gasketed and brazed plate heat exchangers.



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# EcoBraze

## For heating systems, as economizers, evaporators or for swimming pools

### The GBS Series

is a brazed all-rounder and can be used for applications at up to 30 bars and +200 °C.

### Copper-brazed and available in 17 sizes for versatile use in:

- Heating and service water systems
- Underfloor heating
- Subcoolers and condensers
- Economizers
- Refrigerant evaporators
- Oil coolers and many other industrial applications

### The GBH Series

is designed for high pressures of up to 45 bars and uses only the efficient and eco-friendly R410A refrigerant.

### Copper-brazed and suitable for high pressure applications such as:

- Evaporators in air conditioning systems
- Heat pumps for heating systems and hot water generation
- Process cooling
- Economizers
- Subcoolers and condensers

### The GML Series

is suitable for refrigeration and air conditioning tasks where pressures of up to 140 bars have to be handled without any problems.

### Copper-brazed and designed for the safe use of CO<sub>2</sub>:

- Resistant to extremely high pressures
- CO<sub>2</sub> is a climate-neutral refrigerant
- Compact and space-saving
- Future-oriented system is an economic and cost-effective solution

## Always a suitable solution at hand

The brazed plate heat exchangers from GEA PHE Systems offer tailor-made solutions for the widest range of applications. Thanks to the compact design and simple installation our EcoBraze Series can be supplied as individual plate packs at short notice.

Depending on the specific application we select either copper or nickel braze for the plate heat exchangers. We configure the most economically favourable model for you from the wide range of available sizes and the numerous optional features and adapt this with individually positioned connections to exactly meet your requirements.



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### **The DW Series**

stands for “Double Wall” and this feature offers hermetically sealed plates for pressures of up to 45 bars.

### **Copper-brazed to meet the widest range of challenges:**

- Double-walled safety design
- Reliable media separation
- Copper used as braze
- Revised plate design
- More pressure-resistant and powerful
- Designed for building connection stations and heat pumps

### **The GNS Series**

is nickel-brazed and considerably more stable towards corrosive media than copper-brazed plate heat exchangers.

### **Nickel-brazed and with all of the advantages of copper-brazed heat exchangers for use in:**

- Laser cooling
- Applications using deionised water
- Ammonia systems
- Demineralised water and corrosive liquids

### **The XCR Series**

is manufactured from SMO 254 stainless steel and is corrosion-proof even with the high chlorine contents commonly found in swimming pool applications.

### **Nickel or copper-brazed for use in swimming pools:**

- Long service life thanks to high-quality stainless steel
- Corrosion-proof even with high chlorine levels
- On request individual checking of chlorine/temperature ratio



# GEABloc

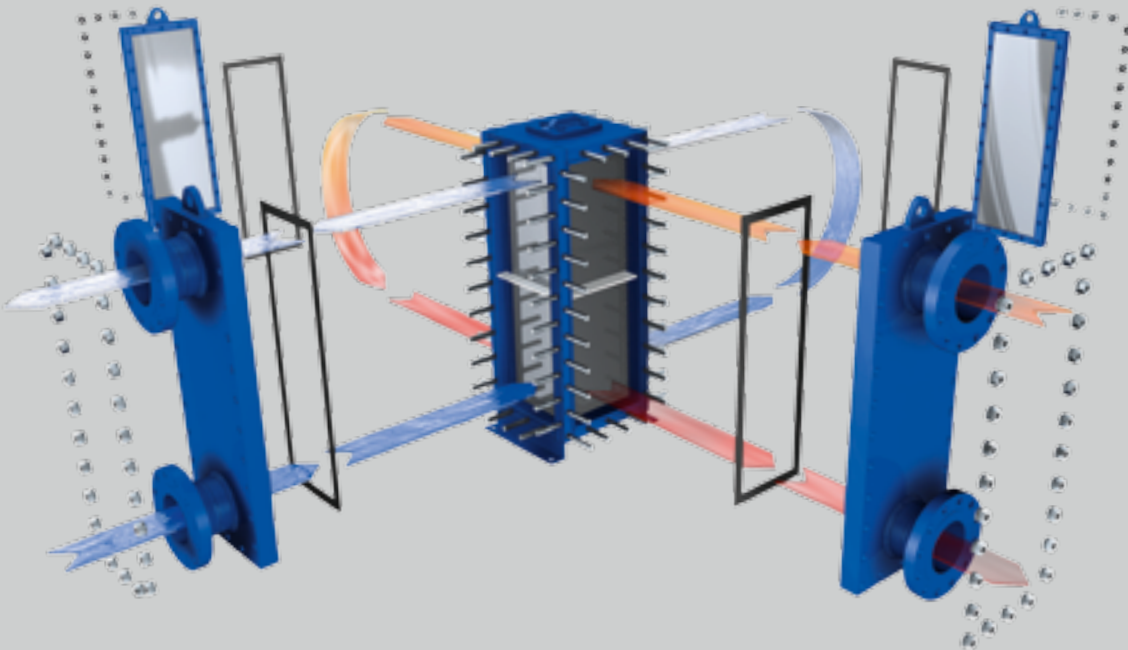
## Fully welded for oil, gas and petrochemicals

### Advantages at a glance

- Easy cleaning thanks to simple opening of the unit
- Fully welded plate pack
- Can be used at temperatures up to 350 °C and pressures up to 35 bars
- Low space requirements and easy to install
- Access from both media sides
- Chevron and dimple corrugation patterns

The GEABloc is a fully welded plate heat exchanger used predominantly in the oil and gas industry and for chemical and petrochemical applications.

The solidly bolted frame comprises four columns, top plate and bottom plate, together with four side plates. These can be removed quickly, providing free access from all sides to carry out thorough and simple cleaning of the fully welded plate pack. Two different plate corrugation patterns are available. The chevron corrugation allows effective heat transfer. The dimple corrugation is the preferred design for high-viscosity media.



### Easy to open – quick to clean

All components in contact with the media are made of high-quality alloys or materials. The bolted frame allows easy access for maintenance and cleaning works.

# GEAFlex

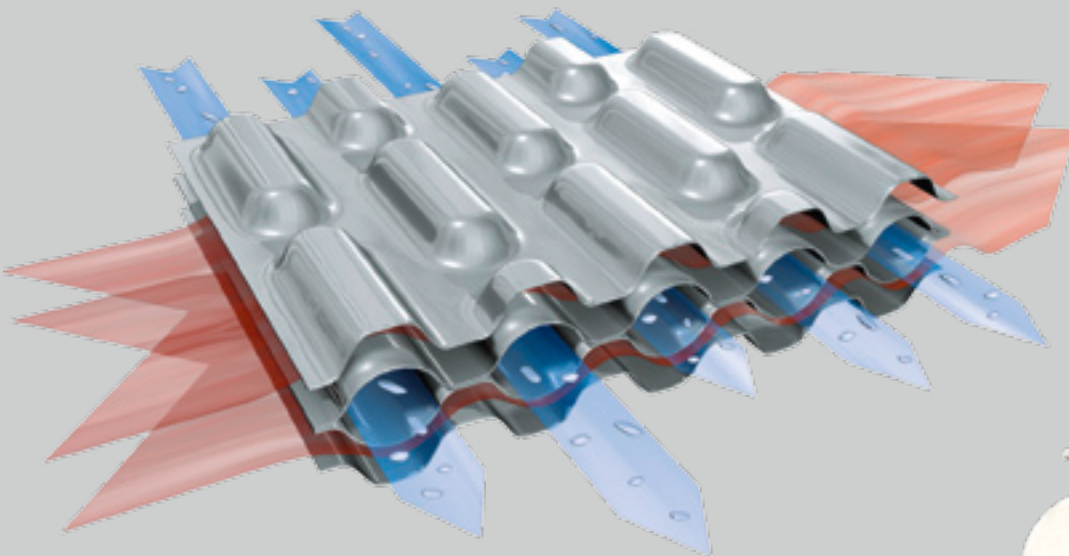
## Fully welded for multiple applications

The GEAFlex combines the advantages of both shell-and-tube and plate heat exchangers in a single unit. And this makes it the obvious choice for the widest range of applications: as condenser in power station engineering, as plate fall film evaporator in the sugar industry, as condenser, evaporator and heat exchanger for the thermal treatment of 2-phase mixtures in the chemical, petrochemical, and oil and gas industry. Due to its flexible configuration it is also successfully utilized as head condenser.

The plate structure permits high performance density Efficient turbulent heat transfer is possible even at minor temperature differences and varying flow rates. Pressure loss on the tube side is low even with large flow rates. Cleaning efforts are noticeably lower in comparison with conventional solutions.

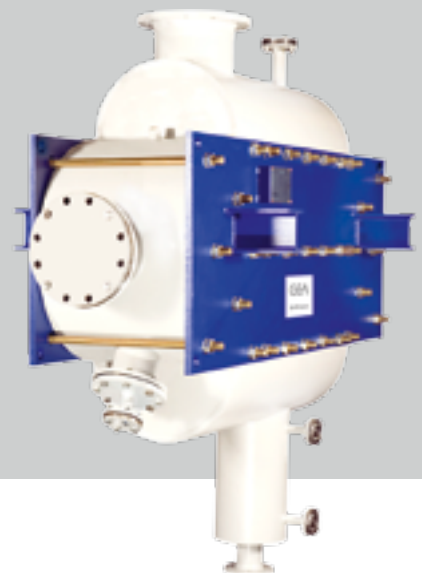
### Advantages at a glance

- On the large flow cross-section tube soiled media can be fed in
- Operation under vacuum with lowest pressure loss
- Heat transfer surface areas over 12,000 m<sup>2</sup> in one unit are possible
- High condensation capacities up to 200 MW and condensate depression in one unit
- Variable temperature differences up to 55°C
- Variable pressure differences up to 40 bar as well as high pressure difference between the media



### The best of both worlds

The GEAFlex combines the advantages of both plate and shell-and-tube heat exchangers in a single unit.



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# GEABox

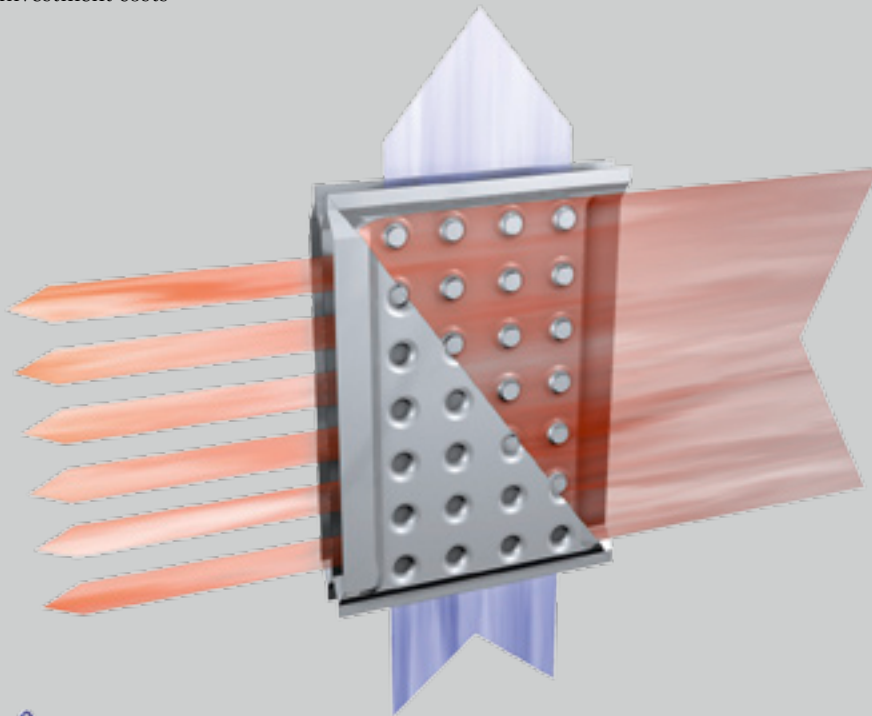
## Fully welded. To keep the media flowing

### Advantages at a glance

- Channels designed for true free flow guarantee blockage-free operation
- High efficiency in heat transfer compared to shell-and-tube heat exchangers
- Easy cleaning and maintenance, no need to dismantle pipework
- Low space requirements: saves the space normally needed to pull out the tubework from shell-and-tube units, meaning a small installation footprint
- Attractively low capital investment costs

Thanks to its wide flow gap the GEABox offers genuine free flow without any contact points, meaning that it is perfectly suited for use with liquids loaded with fibres, cellulose, solids or sludge. It can also be used as reboiler, condenser or in steam/gas applications.

The GEABox combines Free Flow technology with the advantages of both plate heat exchangers and shell-and-tube heat exchangers. This means that it covers a vast spectrum for customer-specific heat transfer solutions. Our long years of engineering know-how and competence in optimising heat transfer performance underscore our understanding of the demands inherent in our customers' processes and our ability to develop appropriate solutions.



### Free flow for all media

Thanks to genuine free flow channels perfectly suited for liquids loaded with fibres, cellulose, solids or silt.

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# REKULUVO / REKUGAVO

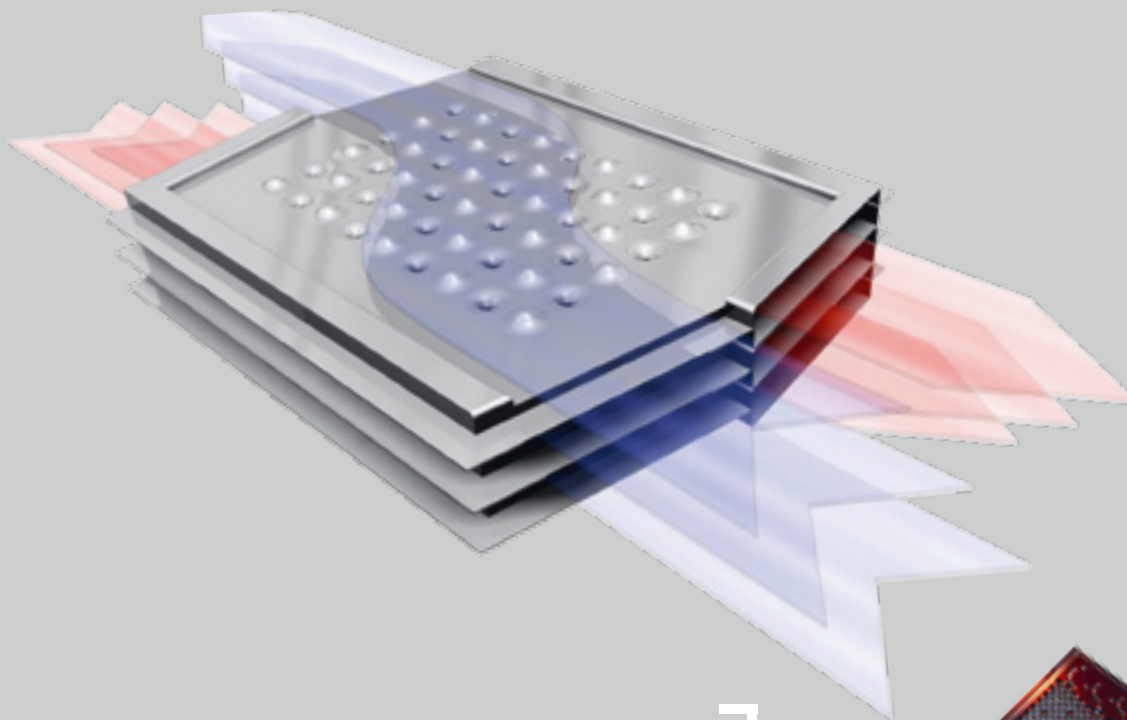
## Fully welded. Maximum performance for air and gas

Our REKULUVO and REKUGAVO flue gas heat exchangers were specially developed for applications involving noxious, gaseous media. These are used in thermal power stations, ammonia and methanol plants and in environmental engineering.

Our REKULUVO/REKUGAVO units come into their own when extremely powerful waste air and flue gas heat exchangers are called for, for example to preheat intake combustion air or heat flue gases up to catalyst reaction temperatures. Using the countercurrent principle REKULUVO /REKUGAVO heat exchangers achieve an extremely high recovery rate of up to 97 percent.

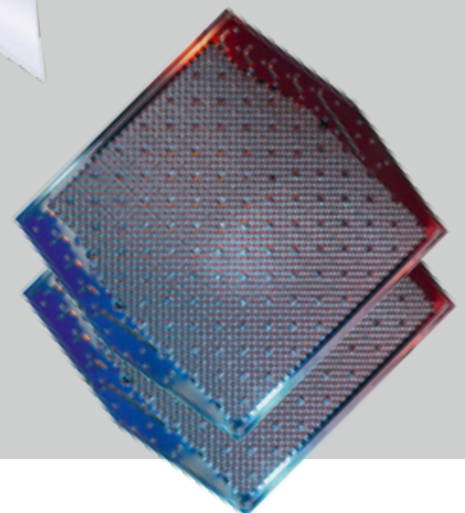
### Advantages at a glance

- Can be used for noxious materials, such as sulphur, chlorine and fluoride
- Recovery efficiency of up to 97 %
- Flow rate of between 5,000 and approx. 2,000,000 Nm<sup>3</sup>/h
- Suitable for temperatures of up to 550 °C
- Can handle pressure differences of up to around 400 mbars



### Maximum performance for air and gas

The flow rates are between 5,000 and 2,000,000 Nm<sup>3</sup>/h. Air and flue gas are circulated at these rates without any problems up to a temperature of 600 °C. With a recovery rate of up to 97 percent!

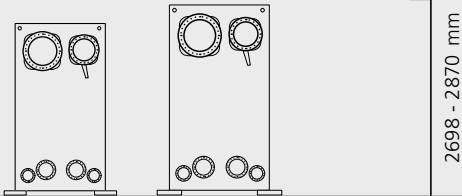
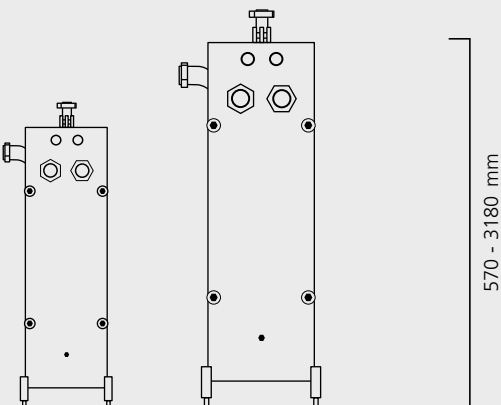



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# Gasketed plate heat exchangers


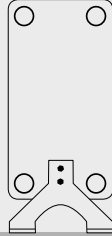

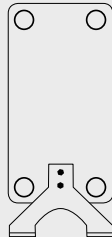

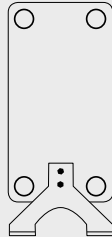
Type	Conn. size	dimensions	
		Height*	Width*
<b>NT Series 50T ... 150L</b>			
NT 50T	50	670	323
NT 50M	50	930	300
NT 50X	50	1390	323
NT 100T	100	1110	540
NT 100M	100	1516	540
NT 100X	100	1952	540
NT 150S	150	1717	640
NT 150L	150	2197	640
670 - 2197 mm			
<b>NT Series 250S ... 500X</b>			
NT 250S	250	2272	895
NT 250M	250	2569	895
NT 250L	250	2866	895
NT 350S	350	2776	1135
NT 350M	350	3113	1135
NT 350L	350	3450	1135
NT 500T	500	3257	1415
NT 500M	500	3868	1415
NT 500X	500	4479	1415
2272 - 4479 mm			
<b>NX Series 100X ... 250L</b>			
NX 100X	100	1952	540
NX 150L	150	2197	640
NX 150X	150	2377	640
NX 250L	250	2866	895
1952 - 2866 mm			
<b>LWC Series 100T ... 250L</b>			
LWC 100T	100	1110	540
LWC 100M	100	1516	540
LWC 100X	100	1952	540
LWC 150S	150	1717	640
LWC 150L	150	2197	640
LWC 250S	250	2272	895
LWC 250L	250	2866	895
1110 - 2866 mm			
<b>FA Free Flow</b>			
FA 159	50	1334	504
FA 161	80 - 100	1780	610
N 40	100 - 125	1570	710
FA 184	200	2015	910
FA 192	350	2765	1370
NF 350	350	3450	1380
1334 - 3450 mm			

# Gasketed plate heat exchangers

Type	Conn. size	dimensions	
		Height*	Width*
<b>Concitherm</b>			
CT 187	max. 350	2870	1000
CT 193	max. 600	2698	1650
			
<b>VT Series VT 04PM ... VT 2508F K</b>			
VT 04P	32	570	180
VT 10FK	50	950	290
VT 10K Safety	50	950	290
VT 20L	65 - 80	1488	620
VT 20P L	65 - 80	1488	620
VT 20K Safety	65 - 80	1488	620
VT 40L	100 - 125	1885	710
VT 40P L	100 - 125	1885	710
VT 40P K	100 - 125	1885	710
VT 40M L	100 - 125	1885	710
VT 40K Safety	100 - 125	1885	710
VT 80L	150 - 200	2137	910
VT 80P L	150 - 200	2137	910
VT 80K	150 - 200	2137	910
VT 80M L	150 - 200	2137	910
VT 2508K	500	3180	1690
VT 2508F K	500	3180	1690
			
<b>GG Series GG240H</b>			
GG 240H	25	464	100
GG 500H	32	535	140
			

\* in mm / drawings not to scale

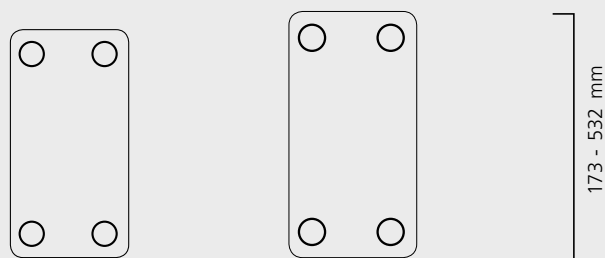
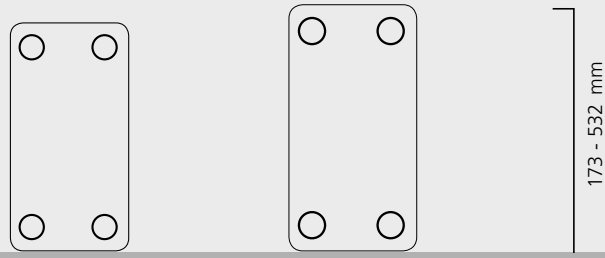
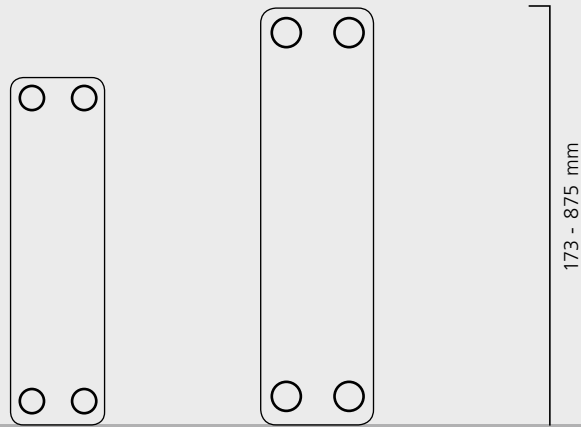
# Brazed plate heat exchangers

Type	Conn. size	dimensions	
		Height*	Width*
<b>GML Series</b>			
Dimensions upon request			
			
<b>GBH Series</b>			
GBH 100	15	204	74
GBH 200	20	231	90
GBH 220	20	328	90
GBH 240	20	464	90
GBH 300	25	173	124
GBH 400	25	335	124
GBH 500	25	532	124
GBH 700L	40	532	271
GBH 700M	40	532	271
GBH 800	65	532	271
GBH 900	65	802	271
GBH 1000	100	875	386
			
			173 - 875 mm
<b>DW Series</b>			
GBS-DW 400	25	337	127
GBH-DW 400	25	337	127
GBS-DW 500	25	534	127
GBH-DW 500	25	534	127
			
			337 - 534 mm

\* in mm / drawings not to scale

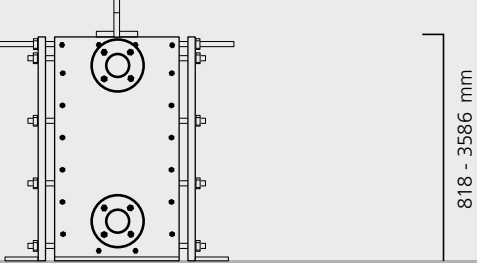
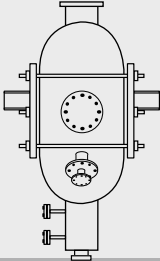
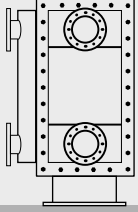
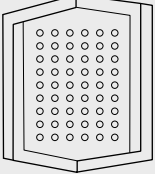
# Brazed plate heat exchangers

Type	Conn. size	dimensions	
		Height*	Width*
<b>GBS Series</b>			
GBS 100	15	204	74
GBS 200	20	231	90
GBS 220	20	328	90
GBS 240	20	464	90
GBS 300	25	173	124
GBS 400	25	335	124
GBS 418	20	282	127
GBS 420	32	282	127
GBS 500	25	532	124
GBS 525	25	525	118
GBS 700	40	532	271
GBS 757	60	543	281
GBS 760	80	519	257
GBS 800	65	532	271
GBS 900	65	802	271
GBS 910	65	783	318
GBS 1000	100	875	386
<b>GNS Series</b>			
GNS 100	15	204	74
GNS 200	20	231	90
GNS 220	20	328	90
GNS 240	20	464	90
GNS 300	25	173	124
GNS 400	25	335	124
GNS 500	25	532	124
GNS 700L	40	532	271
GNS 800	65	532	271
<b>XCR Series</b>			
WP/NP22-XCR	20	328	90
WP/NP24-XCR	20	464	90
WP/NP3-XCR	25	173	124
WP/NP4-XCR	25	335	124
WP/NP5-XCR	25	532	124
WP/NP7L-XCR	40	532	271
WP/NP7M-XCR	50	532	271



\* in mm / drawings not to scale

# Fully-welded plate heat exchangers

Type	Conn. size	dimensions	
		Height*	Width*
<b>GEABloc BT20 - BT120</b>			
BT20	150	318	318
BT30	250	397	397
BT40	300	507	507
BT50	350	615	615
BT75	600	914	914
BT120	900	1500	1500
			
<b>GEAFlex</b>			
<p>Exact dimensional data cannot be given here as process conditions and configuration influence the dimensions of the plate heat exchanger. Further details on request.</p>			
			
<b>GEABox</b>			
<p>Exact dimensional data cannot be given here as process conditions and configuration influence the dimensions of the plate heat exchanger. Further details on request.</p>			
			
<b>REKULUVO/REKUGAVO</b>			
<p>Exact dimensional data cannot be given here as process conditions and configuration influence the dimensions of the plate heat exchanger. Further details on request.</p>			
			

\* in mm / drawings not to scale

# General Industries

Keeping production running. Spraying robots, coating lines, presses, rollers, etc. GEA PHE Systems ensures the correct cooling at the right time. With maximum performance and minimum input of primary energy.



## Plate heat exchangers for the foodstuffs industry

Foodstuffs, legislation and hygiene. Products, appearance and markets. All this is GEA PHE Systems. Our PHEs heat and cool to keep everything tasty and fresh.



## Plate heat exchangers for the sugar industry

Keeping the campaign sweet and saving energy. Our PHEs have been performing this task in the sugar cane and beet processing industry. Throughout the world. For decades.



## Plate heat exchangers for the chemical industry

Facing up to the challenge in critical areas. The chemical industry is a further specialist area of GEA PHE Systems with individual solutions for high reliability and low energy consumption.



## Plate heat exchangers for renewable energy

Our future depends on this. Renewable bio-fuels ensure sustainable eco-friendly growth to replace fossil fuels in the long term. GEA PHE Systems is playing its part here.



## Plate heat exchangers for HVAC applications

Keeping a cool head with costs and functions. HVAC stands for heating, ventilation, air-conditioning and cooling and is a fine demonstration of the variety of technical possibilities offered by GEA PHE Systems. District heating, refrigeration, air conditioning, solar heating, swimming pools and surface coating.



## Plate heat exchangers for power supply companies

Keeping power generation safe. Our PHEs are used for turbine cooling in power stations and for cogeneration units. GEA PHE Systems is a popular choice with power station operators.



## Plate heat exchangers for heavy industry

Whether in steel making, mechanical engineering or the automobile industry – plate heat exchangers by GEA PHE Systems work reliably and safely in continuous operation.



## Plate heat exchangers for marine applications

Water knows no barriers. That's why shipowners and shipbuilders rely on the safety provided by GEA PHE Systems. To cool ship engines, generators, on-ship air conditioning. efficient and environmentally compatible.



## Plate heat exchangers for the paper industry

Efficiency is also essential in the energy-intensive paper and cellulose production and our PHEs prove their worth with high heat transfer rates and energy-saving processes.



## Plate heat exchangers for oil & gas

The compact GEABloc and GEAFlex models offer tailor-made solutions in both upstream and downstream sectors. Gaseous, liquid and even two-phase media are kept under control even under extreme conditions.



## Plate heat exchangers for refrigeration

If it has to be cooled, GEA PHE Systems has a suitable, low-cost solution. Our PHEs are typically used as economizers, desuperheaters, condensers, evaporators, oil coolers and subcoolers.



## Our Service close-by

Good products need good service to fully satisfy customers. With GEA EcoServe you can rely on a comprehensive service network staffed by highly trained technicians – throughout the world! You always have the full spectrum from a single source – servicing, repair, spare parts, etc. At short notice, on time and with technical expertise, even for products or components made by other manufacturers. We use only high-quality original spare parts to guarantee a perfect fit, efficient functioning and a long service life.



# After Sales & Service

## 24 hours-a-day across the globe

GEA EcoServe is the leading service specialist for plate heat exchangers of all types and makes. The range includes after sales & services from installation through servicing and spare parts supply up to preventative maintenance such as our innovative leak testing. The global network of locations ensures 24/7 service, meaning that we do our best to maintain the maximum system availability wherever and whenever you need us.

As a separate company within GEA PHE Systems GEA EcoServe is specialised in After-Sales & Services for plate heat exchangers. GEA PHE Systems is one of the world's leading manufacturers of plate heat exchangers and its competence in this field is outstanding. For decades this group of companies has played an essential role in the development of plate heat exchanger technology. The pioneering spirit is augmented as a part of the Heat Exchangers Segment of the GEA Group: Every day a wealth of knowledge and experience is at work here that is made available to all companies within the group, resulting in valuable innovations to the benefit of our customers.

This includes equipment installation. Correct assembly and installation of the units is of decisive importance for problem-free functioning. GEA EcoServe can also undertake the assembly of plate heat exchangers, when a system is delivered dismantled. Preventative maintenance is another of our services. Plate heat exchangers can suffer soiling or wear. We offer a visual inspection as a preventative measure and advise you of any necessary cleaning or maintenance works and of the expected costs. Minor soiling can also be removed mechanically immediately on location. However, the reliable alternative is mechanical or chemical treatment of the plates in the specialist workshops at GEA EcoServe.

Our central objective is to keep your equipment up and running. Trouble-free operation of your plate heat exchangers demands the use of high-quality and perfectly fitting spare parts. In addition to OEM parts we also use certified products from quality suppliers, where the attractive cost effectiveness is popular with our customers. Plates and gaskets for just about every make and model are always in stock or can be obtained at short notice.



### GEA PHE Systems

GEA PHE Systems is part of the GEA Heat Exchangers Segment of the GEA Group and comprises the following individual companies: GEA Ecoflex, GEA ViEX, GEA WTT, GEA PHE Systems Asia Pacific, GEA PHE Systems North America and GEA EcoServe. With more than 75 years of experience GEA PHE Systems is the global centre of competence and service in the field of gasketed, fully welded and brazed plate heat exchangers.

- HVAC
- Paper
- Marine
- Power
- Sugar
- Food
- Renewable Energy
- Refrigeration
- Chemicals
- Heavy industry
- Oil & Gas

At home across the world



Further information at  
[www.gea-phe.com](http://www.gea-phe.com)

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