

Plate Heat Exchangers



Food

Warmly recommended. For the dairy, brewery, drink and food industry



Food and Future

Changes in the food industry: With a rising world population and resources staying constant, the basic necessity of vital nutrition contrasts with new product trends such as health drinks, fruit juice mixes etc. Does the future of your enterprise lie in the conventional, or niche markets? Are you building up a classic range or operating with trend-orientated products?

In any case, GEA PHE Systems can assist with the high demands of your product with a wide range of different models of plate heat exchangers. With more than 75 years of experience we are one of the worldwide market leaders as regards to quality, efficiency and flexibility of our installations. We did, after all, develop from one of the pioneers of plate heat exchanger development, the company Eduard Ahlborn.

Concentrating on competence – for your benefit

Within the GEA Process Equipment Division of the international GEA Group, GEA PHE Systems is responsible for plate heat exchanger technology. Strong individual companies: GEA Ecoflex, GEA ViEX, GEA WTT, GEA Ecobrazex and GEA PHE Systems NA with production locations in Germany, Sweden, the USA, Canada and India produce gasketed, fully welded and brazed plate heat exchangers for worldwide distribution for use in almost all industrial applications.

GEA EcoServe – the GEA PHE Systems service organisation – operates customer service centres in many countries to provide a rapid and competent maintenance and spare parts service, all around the world.

Experience the change – with GEA PHE Systems.



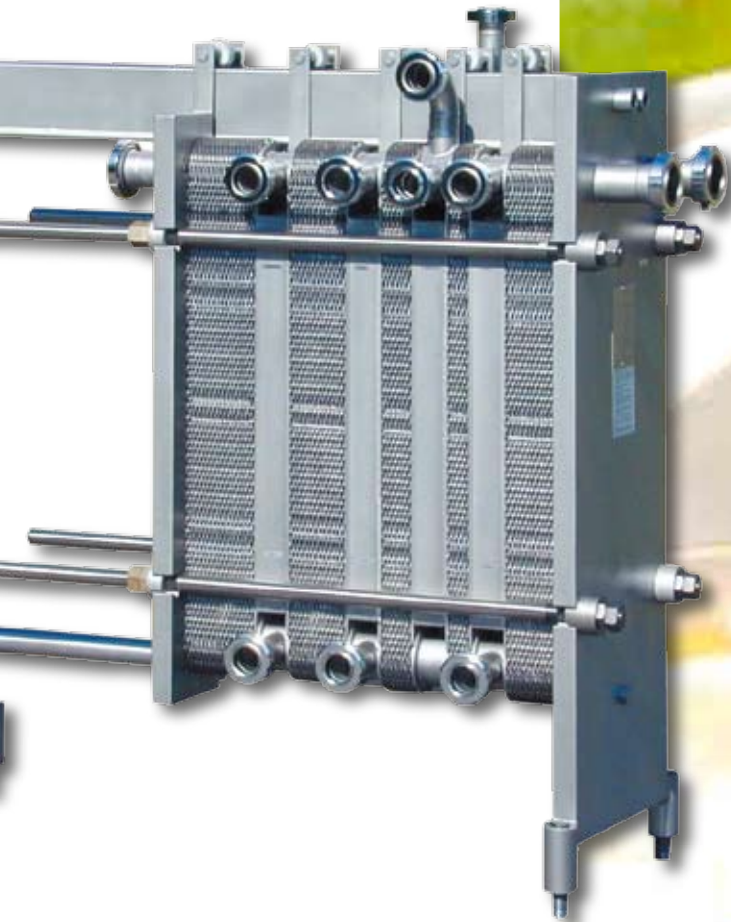
Brewery Heineken,
Sevilla (Spain)



Brewery Murphy's,
Cork (Ireland)



Yellow egg pasteuriser
Weko Food, Ochten (Netherlands)



Fruit juice heater Mosterei Binninger,
Nördlingen (Germany)

GEA PHE Systems think in processes, act in profiles

As one of the worldwide leading manufacturers of plate heat exchangers, we meet the need for the high quality required in the food industry together with innovative solutions for all applications.

As a member of the worldwide successful GEA Group, we can fall back on an all-encompassing know-how and, at the same time, concentrate on our core competence: the development and manufacture of the most advanced plate heat exchangers. This bundling together of experience and synergies leads to a company structure that has only one objective: highest quality for each and every customer.

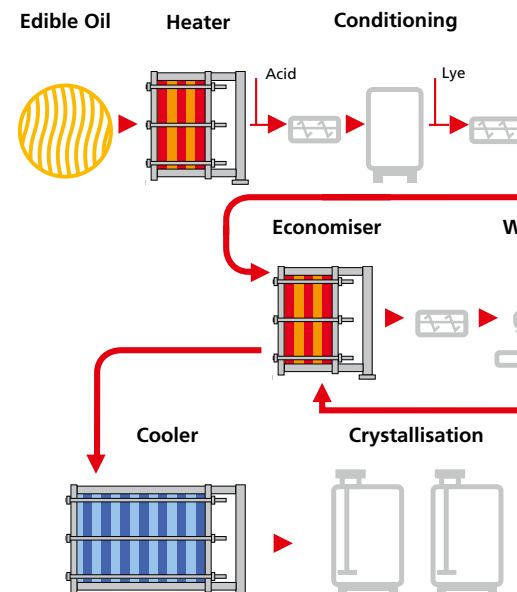
This strict commitment to the highest quality allows us to offer you more: more advice, more individual solutions and more flexibility. For that reason all our advisors in distribution are engineers, who talk to you on an expert-to-expert basis about your system component, the plate heat exchanger.

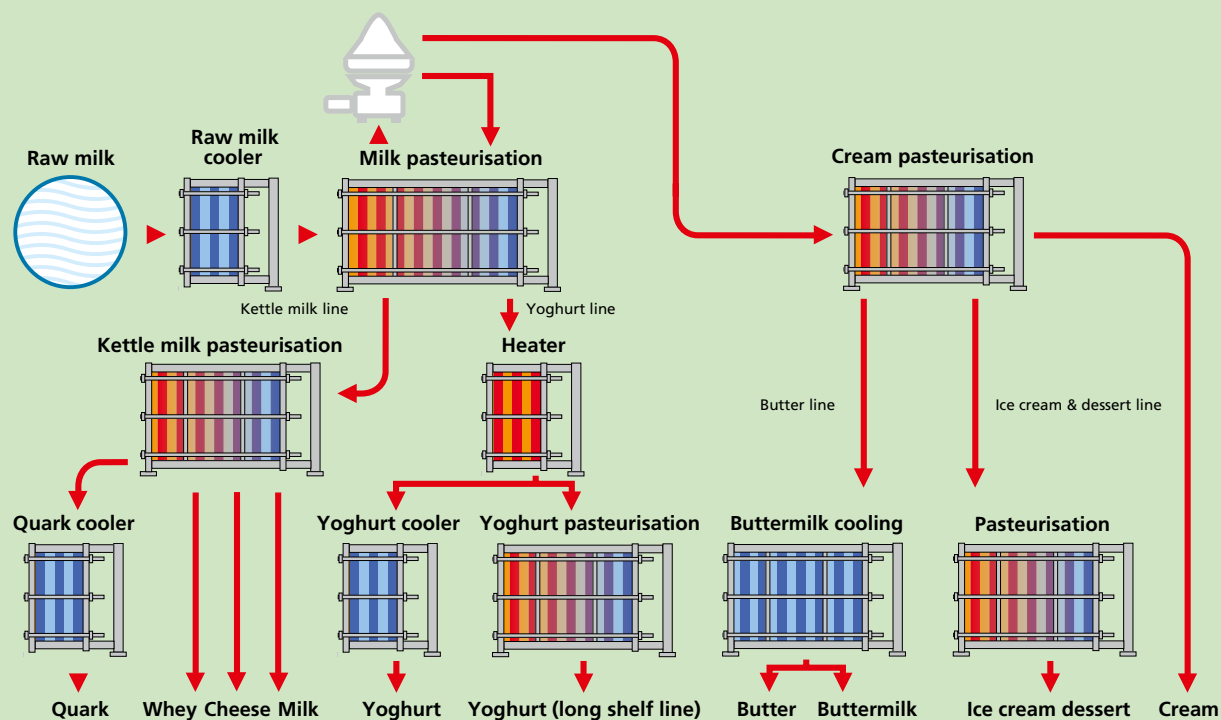
Edible oils

The application possibilities for edible oils have multiplied over the last few years, even outside the food industry. The thermal treatment of edible oil increases their taste value and preserves precious ingredients, such as vitamins.

We in GEA PHE Systems develop actively special solutions for our customers, which support the degumming, neutralisation, winterisation, bleaching and desodourisation.

Edible oil applications are best handled by gasketed plate heat exchangers of our product category EcoFlex for the low temperature range and fully welded plate heat exchangers of our product category EcoWeld for temperatures above 200 °C.



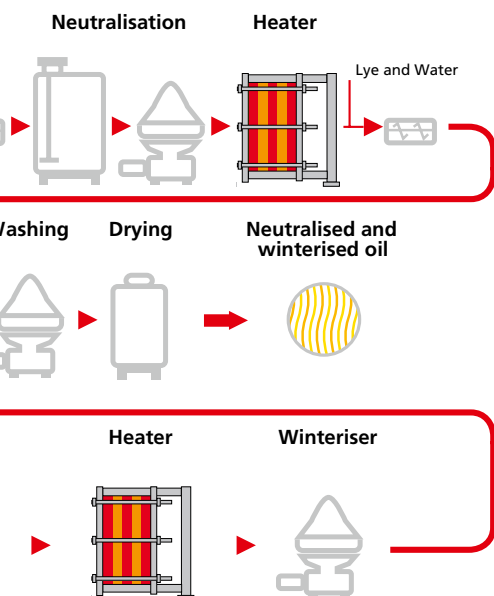


Dairy products

Milk, a classic food source, is also one of the most important physiological nutrients. For this GEA PHE Systems plate heat exchangers offer the highest quality and hygiene standards as well as the greatest flexibility for processing volume and temperature programs.

Whether milk, cream, whey, yoghurt, desserts, ice cream mix, condensed milk, buttermilk, butteroil, concentrates, retentates, permeates, baby food or other milk products need to be pasteurised, heated highly or cooled, our plate heat exchangers are eminently suitable for sensitive treatment. A high degree of efficiency is achieved through optimal thermal rating. At the same time, the compact construction of the plate heat exchanger allows for an expansion in capacity without difficulty.

For heating water and cleaning solvents we can offer not only gasketed plate heat exchangers (EcoFlex), but also brazed (EcoBraze) and fully welded (EcoWeld) units.

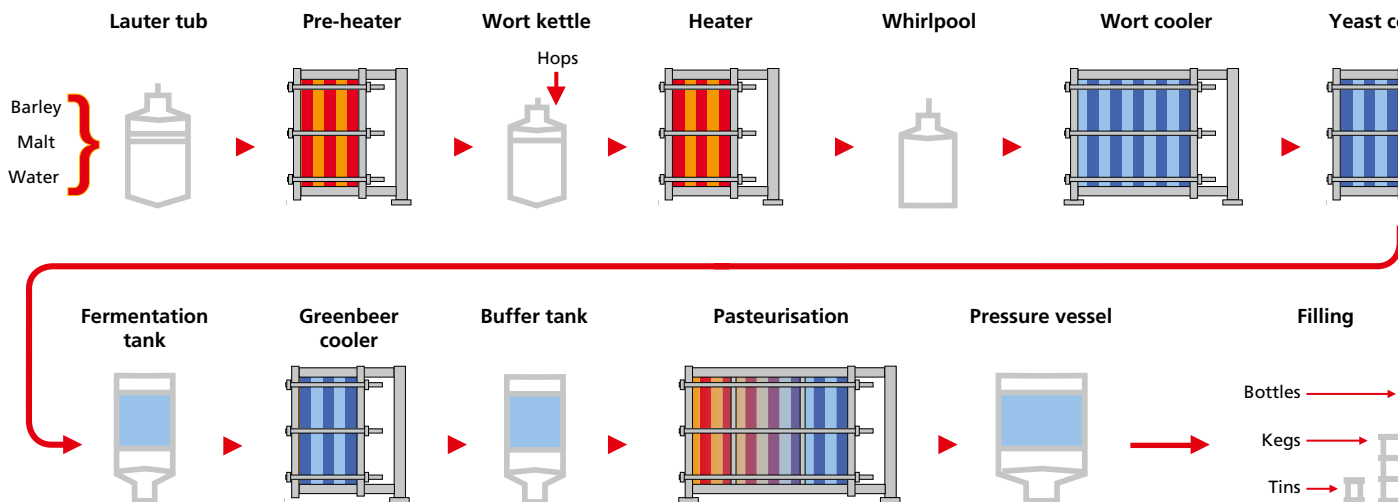
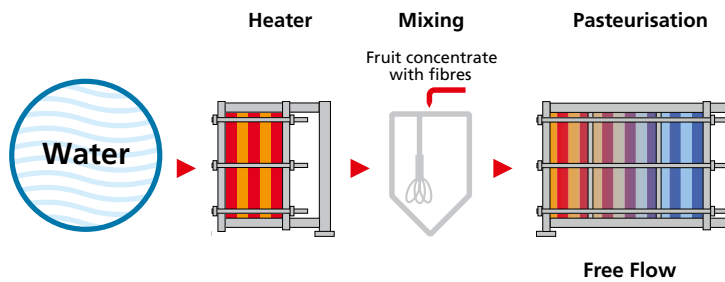
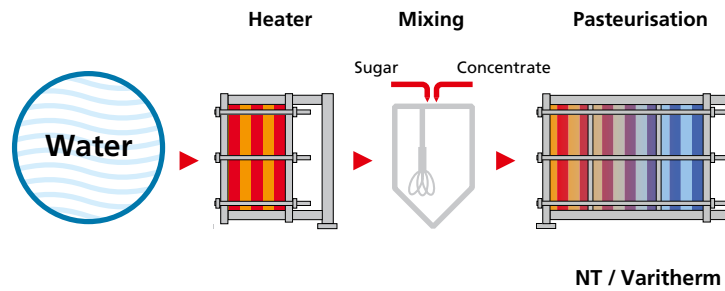


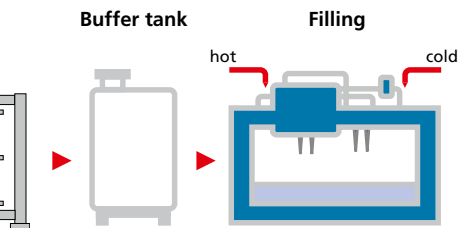
Brewery products

Plate heat exchangers from GEA PHE Systems are used in the brewery industry especially for the thermal treatment of wort, yeast and beer. The NT Series has proved its value for wort preheating and boiling. The optimised plate design results in identical efficiency with a lower heat transfer surface area, therefore reducing your investment costs.

For the gentle cooling of wort with simultaneous preheating of the brewing water, GEA PHE Systems offers you a choice between plate heat exchangers with either one or two cooling sections. In yeast cooling with Free Flow units the 5 to 12 mm wide plate gaps guarantee a particularly gentle treatment of the product. The constant-width gaps minimise blockages, thus clearly increasing the service life times. In beer and green beer cooling with Varitherm and NT plates refrigerants such as ice water, glycol or brine are used.

Beer pasteurisation normally occurs in a three-stage plate heat exchanger. Special pressure-resistant plates from the Varitherm Series in the regeneration, heating and cooling sections guarantee gentle product treatment and extremely high economic efficiency with a heat recovery rate of up to 96 %. Laser-Welded Cassettes (LWC) are used for integration into the refrigeration plants to recool ice water and glycol.



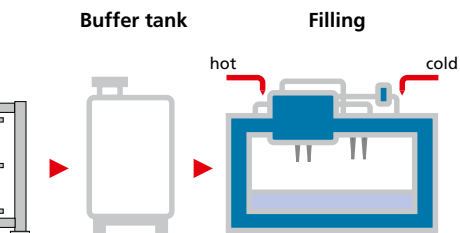


Juices and Softdrinks

Besides the trusted GEA PHE Systems basic range, we are also glad to develop reliable individual solutions for the thermal treatment and pasteurisation of your product with a choice of hot or cold filling of containers.

With our plate heat exchangers, juices with or without pulp, fruit concentrates, sugar solutions, tea, soft drinks or new products can be preserved – with high quality and efficiency.

Special plate corrugations such as the N40 and the Free Flow systems have been developed by us for this form of product treatment.



General food industry

Never mind how individual, even visionary, your requirements for our plate heat exchangers are – even with highly viscous or problematic substances like egg, honey, sauces, proteins, starches, brines and many others you will receive the optimal solution with GEA PHE Systems. Trust us as much as the numerous other companies did in our 75-year-old success story.



Brewery Heineken,
Sevilla (Spain)



Brewery Heineken,
Sevilla (Spain)



Edible oil producer Cereol,
Mannheim (Germany)

GEA EcoServe: for a long life

GEA EcoServe – the service organisation of GEA PHE Systems – offers you an extensive international service network. Whether you use products by GEA PHE Systems or by another manufacturer – at GEA EcoServe you receive complete service from a single source, whenever and wherever you need us. For maintenance and repair we use high-quality spare parts exclusively for all makes. This guarantees reliable seating, optimum function and a long service life.

Standardised quality

We are an approved manufacturer of plate heat exchangers according to the German Pressure Vessel Code (Druckgeräterichtlinie) and the National Board with U-Stamp. Manufacturing is of course also possible in compliance with the CE symbol, Module G and 3-A Sanitary Standard.

EcoFlex – gasketed plate heat exchangers

NT Series

The NT Series sets new economic standards with low investment costs, operation and maintenance. The optimised OptiWave plate design requires less heat transfer surface for the same performance. The new EcoLoc and PosLoc gasket and installation methods simplify maintenance and ensure a perfect fit of the gasket and plate packs. A wide range of possible sizes and shapes optimises a design to suit the exact operating requirements. By using special materials, the NT Series can be adapted for special process needs.

Free Flow

Wherever conventional plate heat exchangers meet their limitations is where the field of application for our unique Free Flow plate heat exchangers begins. Their special feature is the up to 12 mm wide gap cross-section between the individual plates and the coarse corrugation of the plates. As this plate type requires no support points in the flow channel, even fruit juices with a fibre length of up to 10 mm and a solids content of up to 10 % can be handled easily. At high viscosity or with product particles of up to 5 mm diameter the Free Flow System „N“ is the correct choice – for operating pressures of up to 10 bars and product volumes of up to 100,000 kg/h.





Varitherm

Our Varitherm plates are the heart of our heat exchangers for all standard applications. Based on more than 75 years of experience, this series of plates fulfils the highest demands for performance and hygiene. To meet the needs of the constantly changing demands of the drinks and food industry, this series includes another range of different sizes. Up to 6 different plate corrugations per size guarantee an ideal combination between high rates of temperature transfer, acceptable pressure losses and sensitive product handling.

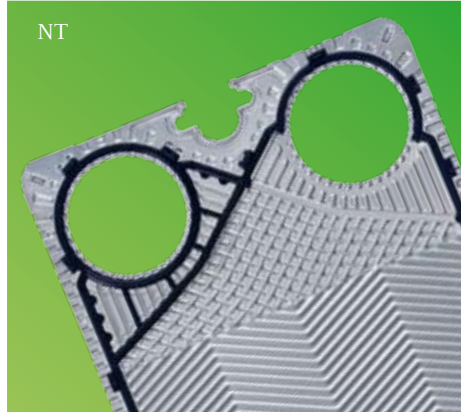
EcoWeld – fully welded plate heat exchangers

In addition to gasketed EcoFlex and brazed EcoBrazé product categories we also offer individually designed fully welded plate heat exchangers EcoWeld of various types that can be used wherever critical media or extreme operating temperatures and pressures place particularly high demands.

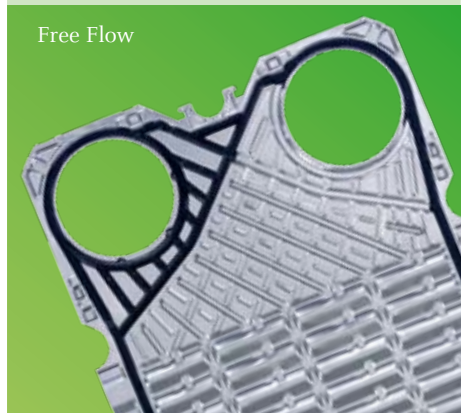
EcoBrazé – brazed plate heat exchangers

Our brazed plate heat exchangers of the product category EcoBrazé are made of stainless steel for normal and aggressive media, brazed with copper or nickel and our decades of experience have shown that they are extremely resistant to pressure and temperature. Comprehensive quality checks ensure the highest operational reliability. Compact design, low weight and an individual connection layout with a wide range of connection possibilities make assembly and operation particularly simple.

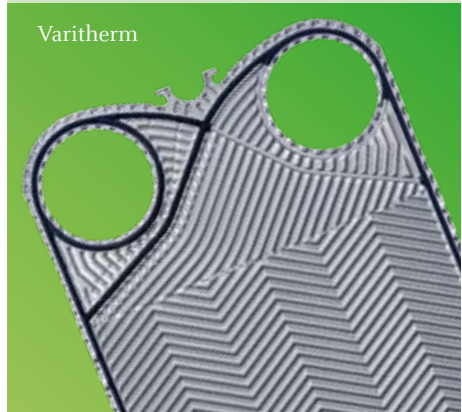
NT



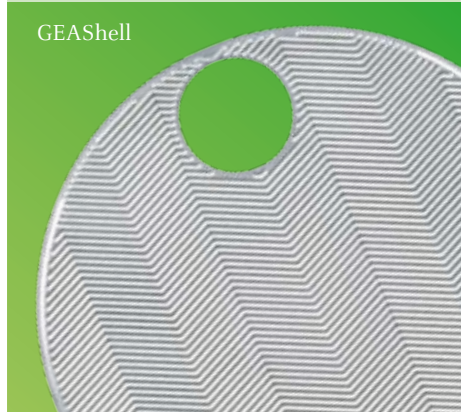
Free Flow



Varitherm



GEAShell



GEA PHE Systems Competence in Heat Transfer



With emphasis on the highest quality standards and constant innovations, GEA PHE Systems continues to expand its market position: Within the GEA Process Equipment Division, GEA Ecoflex together with GEA ViEX, GEA WTT, GEA Ecobraz, GEA PHE Systems NA and GEA EcoServe forms GEA PHE Systems, the Center of Competence and Service Center for gasketed, fully welded and brazed plate heat exchangers of GEA Group:

- HVAC
- refrigeration
- sugar
- chemical
- paper
- food
- general industry
- marine
- power
- renewable energy



Contact details at:

www.gea-phe.com

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