

GBH Series – Brazed Plate Heat Exchangers

Staying cool under high pressure

GEA PHE Systems GBH Series is new to our product range of copper brazed plate heat exchangers and is designed to operate consistently in the pressure range of up to 45 bar while offering a maximum variety of circuit possibilities. Operating with the effective non-ozone depleting refrigerant R410A the new GBH range offers an optimized corrugation pattern in the wave fields of the heat exchanger plates as well as further improvements to the inlet and outlet openings.

Our brazed plate heat exchangers are used in a variety of applications:

- heat pump heating and hot water production
- chiller evaporator and air conditioning
- process cooling systems
- refrigerant evaporators
- sub-coolers and condensers
- other refrigerant-to-liquid and high-pressure applications



Features and benefits



Safety Chamber™

Our patented Safety Chamber™ absorbs the stress from thermal shock and pressure pulsations that would damage other brazed plate heat exchangers. When overloaded, encapsulated contact points around the ports take up the forces and stretch, protecting against internal leaks and premature failure. A GEA PHE Systems exclusive safety factor.



Delta Injection™ for Advanced Evaporator - AE line

A GEA PHE Systems patented Delta Injection™ refrigerant distribution system is specially developed for evaporator applications. It provides precise metering of refrigerant to the channels, guaranteeing the highest evaporator performance. The Delta Injection™ is fully integrated into the stainless steel heat-transfer plate.



Robust Plate Design

This special plate design by GEA PHE Systems, the Rolled Edge Lock System™, guarantees a consistent braze joint at the plate overlap and makes for stronger and more leak-proof heat exchanger. The contact points, extended and larger in design, result in stronger braze joints between the plates, thus guaranteeing high heat exchanger strength.



Full-Flow System™

Originally developed for the nickel brazed plate heat exchangers (NP Series), every new plate design is now equipped with the Full-Flow System™. This unique flow system insures continuous flow around the port area to prevent freezing and also feeds the working fluid equally over the channel to guarantee maximum use of the heat transfer area. Additional protection and performance from GEA PHE Systems.

GBH Series: Technical data

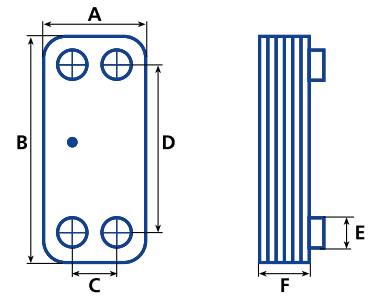
Plate material: Stainless steel AISI 316 / 1.4401

Brazing material: Copper

Performance: up to 45 bar at 150°C and 40 bar at 200°C

Third party approval: PED (CE), TÜV, other on request

Features:



| Copper brazed stainless steel | Advanced Evaporator -AE | A | B | C | D | E | F N = number of plates | Weight N = number of plates | Volume | Max. flowrate water | Max. no. plates |
|-------------------------------|-------------------------|--------------------------|-----|-----|-----|-----|---------------------------|--------------------------------|------------|---------------------|-----------------|
| Type | | Standard dimensions (mm) | | | | | | (kg) | (liter/ch) | (m3/h) | |
| GBH 100 | - | 74 | 204 | 40 | 170 | 15 | 7,7+2,30xN | 0,70+0,050xN | 0,025 | 4 | 50 |
| GBH 200 | - | 90 | 231 | 43 | 182 | 20 | 10,65+2,35xN | 1,10+0,060xN | 0,030 | 6 | 50 |
| GBH 220 | - | 90 | 328 | 43 | 279 | 20 | 10,65+2,35xN | 1,30+0,080xN | 0,046 | 6 | 50 |
| GBH 240 | - | 90 | 464 | 43 | 415 | 20 | 9,7+2,30xN | 2,04+0,140xN | 0,070 | 6 | 50 |
| GBH 300 | - | 124 | 173 | 73 | 120 | 25 | 13,0+2,35xN | 1,20+0,060xN | 0,030 | 10 | 50 |
| GBH 400 | - AE | 124 | 335 | 73 | 281 | 25 | 13,0+2,30xN | 1,60+0,130xN | 0,065 | 10 | 100 |
| GBH 500 | - AE | 124 | 532 | 73 | 478 | 25 | 9,7+2,25xN | 1,76+0,210xN | 0,100 | 10 | 100 |
| GBH 700 | - AE | 271 | 532 | 200 | 460 | 40 | 11,15+2,35xN | 9,60+0,540xN | 0,230 | 27 | 150 |
| GBH 800 | - AE | 271 | 532 | 161 | 421 | 65 | 11,15+2,35xN | 10,0+0,540xN | 0,221 | 70 | 260 |
| GBH 900 | - AE | 271 | 802 | 161 | 690 | 65 | 11,15+2,35xN | 11,5+0,800xN | 0,399 | 70 | 260 |
| GBH 1000 | - AE | 386 | 875 | 237 | 723 | 100 | 15,65+2,35xN | 39,5+1,250xN | 0,600 | 160 | 360 |

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 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
- Power
- Marine
- General Industry
- Renewable Energy

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