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 in air conditioning
- Process cooling systems
- Economizer refrigerant evaporators
- Sub-coolers and condensers

To sum it up: The GBH Series stays coll under high pressure.



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™

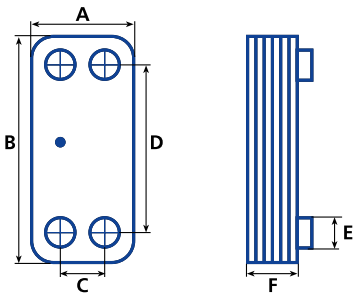
Every new plate design is now equipped with the Full-Flow System™. This unique flow system insures continuous flow around the port area to prevent freezing and also feeds the working fluid equally over the channel to guarantee maximum use of the heat transfer area. Additional protection and performance from GEA PHE Systems.

GBH Series: Technical data

Plate material: Stainles 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	Mass N = Number of plates	Volume	Max. flowrate water	Max. number of plates
Type		Standard dimensions (mm)						(kg)	(liter/ch)	(m3/h)	
GBH 100	–	74	204	40	170	15	8.0+2.23xN	0.70+0.050xN	0.025	4	50
GBH 200	–	90	231	43	182	20	10.0+2.24xN	1.10+0.060xN	0.030	6	50
GBH 220	–	90	328	43	279	20	10.0+2.22xN	1.30+0.080xN	0.046	6	50
GBH 240	–	90	464	43	415	20	10.0+2.20xN	2.04+0.140xN	0.070	6	50
GBH 300	–	124	173	73	120	25	12.3+2.22xN	1.20+0.060xN	0.030	10	50
GBH 400	AE	124	335	73	281	25	11.8+2.24xN	1.60+0.130xN	0.065	10	100
GBH 500	AE	124	532	73	478	25	9.5+2.23xN	1.76+0.210xN	0.100	10	100
GBH 700L	-	271	532	200	460	40	11.0+2.29xN	9.60+0.540xN	0.230	27	150
GBH 700M	AE	271	532	200	460	40	11.0+2.25xN	9.60+0.540xN	0.230	27	150
GBH 800	AE	271	532	161	421	65	13.8+2.34xN	10.0+0.540xN	0.221	70	260
GBH 900	AE	271	802	161	690	65	11.3+2.31xN	11.5+0.800xN	0.399	70	260
GBH 1000	AE	386	875	237	723	100	20.3+2.31xN	39.5+1.250xN	0.600	160	360

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