GNS Series – Brazed Plate Heat Exchangers

The ideal alternative when copper is not enough

Compared to copper-brazed models the GNS Series of nickel-brazed plate heat exchangers from GEA PHE Systems offers better stability towards corrosive media, such as ammonia, sulphides and sulphates. In contrast to copper-brazed plate heat exchangers the nickel-brazed versions have a silver-coloured surface and offer all of the advantages expected from brazed plate heat exchangers. But not every nickel brazing is identical: Only around 75% is pure nickel, the remaining 25% is our secret – and your benefit.

GEA PHE Systems GNS Series brazed plate heat exchangers offer all the advantages of copper brazed heat exchangers and are optimally suited for:

- Laser cooling
- Ammonia systems
- Applications using deionized water
- Desalinated water and corrosive liquids

The GNS Series: When copper is simply not enough.



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.

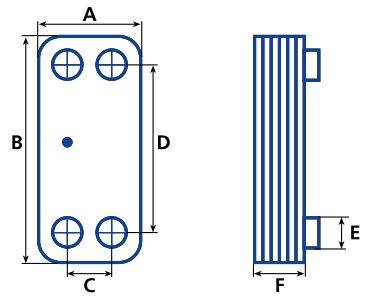
Full-Flow System™

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.

GNS Series: Technical data

Plate material: Stainles steel AISI 316 / 1.4401
Brazing material: Nickel alloy
Performance: Up to 16 bar, 195°C
Third party approval: PED (CE), TÜV, ASME, UL, CSA, KHK, other on request

Features:



Option:

Extended Corrosion Resistance – XCR line

GEA PHE Systems' XCR models feature increased resistance to corrosion using higher quality stainless steel plate material. Well suited for harsh environments, chlorine-loaded media such as swimming pool, spa heaters and ground source heat pumps.

Nickel 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)	
GNS 100	–	74	204	40	170	15	10.23+2.23xN	0.70+0.050xN	0.025	4	50
GNS 200	–	90	231	43	182	20	12.24+2.24xN	1.10+0.060xN	0.030	6	50
GNS 220	–	90	328	43	279	20	12.20+2.22xN	1.30+0.080xN	0.046	6	50
GNS 240	–	90	464	43	415	20	12.20+2.20xN	2.04+0.140xN	0.070	6	50
GNS 300	–	124	173	73	120	25	12.30+2.22xN	1.20+0.060xN	0.030	10	50
GNS 400	AE	124	335	73	281	25	11.80+2.24xN	1.60+0.130xN	0.065	10	100
GNS 500	AE	124	532	73	478	25	11.80+2.28xN	2.00+0.240xN	0.100	10	100
GNS 700L	–	271	532	200	460	40	13.30+2.34xN	9.60+0.540xN	0.230	27	150
GNS 700M	AE	271	532	200	460	40	13.30+2.30xN	9.60+0.540xN	0.230	27	150
GNS 800	AE	271	532	161	421	65	13.8+2.34xN	10.0+0.540xN	0.221	70	150

Technical modification reserved · PB_GNS_EN_16022010 · dieverbestrategen

The specifications contained in this printing unit are intended only to serve the non-binding description of our products and services and are not subject to guarantee. Binding specifications, especially pertaining to performance data and suitability for specific operating purposes, are dependent upon the individual circumstances at the operation location and can, therefore, only be made in terms of precise requests.

Your contact:

GEA Heat Exchangers

GEA Ecoflex GmbH
Karl-Schiller-Straße 1-3 · 31157 Sarstedt · Germany
Phone +49 5066 601-0 · Fax +49 5066 601-104
info@gea-ecoflex.com · www.gea-phe.com

GEA WTT GmbH
Remsaer Straße 2a · 04603 Nobitz-Wilchwitz · Germany
Phone +49 3447 5539-0 · Fax +49 3447 5539-30
sales@geawtt.com · www.gea-phe.com

GEA PHE Systems NA, Inc.
100 GEA Drive · York, PA 17406 · USA
Phone +1 717 268-6200 · Fax +1 717 268-6163
info@geaphena.com · www.gea-phe.com