

FlatPlate® 2C Series – Brazed Plate Heat Exchanger

Simpler. Better. Two Refrigerant Circuits in a single unit.

FlatPlate 2C Series Brazed Plate Heat Exchangers have two separate refrigerant circuits to allow the use of two independent compressor systems for fluid chillers, condensers and heat pump applications, from 1/2 to 80 tons.

Your benefits include:

- **Greater operating efficiency.** Two separate refrigerant circuits allow the use of smaller, less expensive compressors.
- **Improved part load capacity.** Our patented technology allows 100% contact between the fluid and both refrigeration circuits, even when only one compressor is operating.
- **Improved system reliability.** The system can be designed to operate with only one compressor running, allowing the use of the other circuit as a backup.
- **Optional higher operating pressure.** As the industry changes over to R410a, higher operating pressures are required. The XP option provides an operating pressure of 650 psig, for trouble-free operation.



Features and benefits



XP High Pressure Option

Special construction enables the 2C-XP to handle the higher operating pressures associated with R410a applications. Thicker front and back cover plates extend the pressure range up to an operating pressure of 650 psig (45 barg). Result? Reach for the 2C-XP when designing for R410a.



Expansion Metering Distributor™

GEA PHE Systems provides a well proven direct Expansion Metering Distributor™ essential for evaporator, heat pump and subcooler applications. The distributor provides precise metering of refrigerant to the channel plates over a wide range of operating conditions while assuring complete evaporation and optimum oil return. Our solutions are factory integrated into the stainless steel heat-transfer plate pack for superior performance..



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 results in a stronger and more leak-proof heat exchanger. The contact points, extended and larger in design, provide stronger braze joints between the plates, thus guaranteeing high heat exchanger strength.

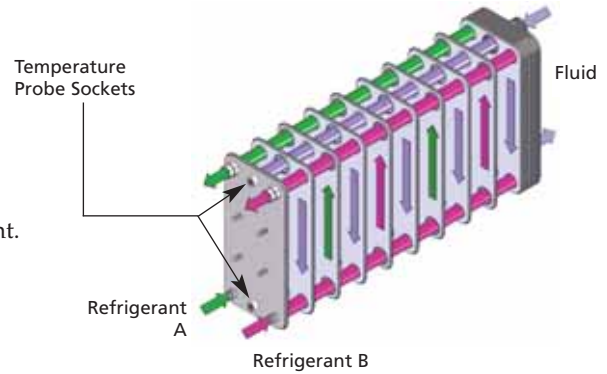


Full-Flow System™

Originally developed by GEA PHE Systems, 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.

How does the 2C work?

- The 2C has two independent refrigerant circuits, one on the left front side (shown in green) and one on the right front side of the unit (shown in purple).
- The fluid side (shown in blue) connections are on the reverse side, for easier access.
- Temperature probe sockets (1/2" FPT) are built in on the front, for convenient and accurate temperature measurement.
- Operation is based on the principle of having the two refrigerants "interlaced" between the fluid circuits, thus allowing full 100% refrigerant contact with the fluid side
- So when only one compressor operates, 100% of the fluid is being chilled (evaporator mode) or heated (condenser mode).



FlatPlate® 2C Series: Technical Data

Materials and Construction

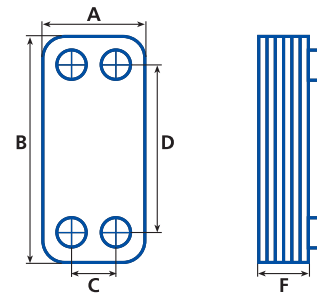
- Plate Material: 316L Stainless Steel
- Brazing Material: Copper (Nickel-chrome optional)

Performance

- Refrigerant Side:
 - 2c: Up to 450 psig (31 barg) at 350°F (176°C)
 - 2C-XP: Up to 650 psig (45 barg) at 350°F (176°C)
- Liquid Side: 350 psig (24 barg) at 350°F (176°C)

Third Party Approvals

- UL-listed and CRN-registered as standard
- Optional: ASME, CSA, PED(CE)



Standard Dimensions

Model and Nominal Size	A		B		C		D		F	
	In	mm	In	mm	In	mm	In	mm	In	mm
2C 10" x 20"	9.8"	249	20.3"	516	6.48"	165	17.0"	432	0.56 + (0.090 x N)	14.2 + (2.29 x N)
2C-XP 10" x 20"	9.8"	249	20.3"	516	6.48"	165	17.0"	432	0.475 + (0.090 x N)	12.1 + (2.29 x N)

Technical Data

Model and Nominal Size	Net Weight		Volume		Flow Rate		Max Plates
	Pounds	Kilograms	gal/ch	l/ch	gpm	m ³ /h	
2C 10" x 20"	36.8 + (1.05 x N)	16.7 + (0.48 x N)	0.061	0.23	200	50	218
2C-XP 10" x 20"	64.76 + (1.02 x N)	29.4 + (0.46 x N)	0.061	0.23	200	50	218

Notes:

- N = Number of Plates
- ch = channel
- Mass flow rate is based on water at 16 ft/s (5 m/s)

For a custom selection for your specific application, contact us or go to www.flatplateselect.com to use our free, easy-to-use selection software.



Technical modification reserved. 2C - 01/10 - Caskey

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.

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