

## FlatPlate® CH Series – Brazed Plate Heat Exchangers

### The Full Range of Liquid Chiller Performance

FlatPlate CH Series Liquid Chiller Brazed Plate Heat Exchangers are designed specifically for DX water chilling and special fluid cooling from 1/2 to 80 tons.

The CH Series now includes the XP option, for R410a and its higher operating pressure requirements. Your benefits include:

#### Top Performance Under Variable Conditions.

- As the industry changes over to R410a, higher operating pressures are required. The CH-XP has an operating pressure of 650psig, for trouble-free operation.
- Every CH Series model is designed to chill water from 54°F to 44°F at 35°F Et, at 2.4 gpm/ton, and every model can be applied to a wide range of design conditions, including low temperature Glycol blends, all the way down to leaving temperatures of -40°F.

#### Durability.

- Top sealing plate to prevent moisture build-up and potential frost from damaging the unit.



### Features and benefits



#### XP High Pressure Option

Special construction enables the CH-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) with UL listing. Result? Use the CH-XP with confidence 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.

# FlatPlate CH Series: Technical data

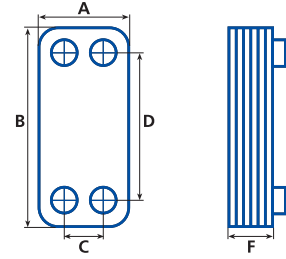
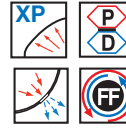
Plate material: Stainless steel AISI 316 / 1.4401

Brazing material: Copper

Performance: Design pressure up to 650 psig at 350°F (45 bar at 176°C)

Third party approval: UL listed  
optional ASME, CRN, CSA, PED (CE)

### Features:



Standard Dimensions											
Model and Nominal Size	A		B		C		D		F		
	In	mm	In	mm	In	mm	In	mm	In	mm	
	5" x 12"	4.9"	124	12.2"	310	2.7"	69	10.0"	253	0.36 + (0.093 x N)	9.1 + (2.36 x N)
CH	5" x 20"	5.0"	127	20.3"	516	2.8"	72	18.1"	460	0.36 + (0.093 x N)	9.1 + (2.36 x N)
	10" x 20"	9.8"	249	20.3"	516	6.5"	165	17.0"	432	0.36 + (0.093 x N)	9.1 + (2.36 x N)
CH-XP	5" x 12"	4.9"	124	12.2"	310	2.7"	69	9.9"	251	0.475 + (0.090 x N)	12.1 + (2.29 x N)
	5" x 20"	5.0"	127	20.3"	516	2.8"	71	18.1"	460	0.475 + (0.090 x N)	12.1 + (2.29 x N)
	10" x 20"	9.8"	249	20.3"	516	6.5"	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	m³/h		
	5" x 12"	2.62 + (0.32 x N)	1.19 + (0.15 x N)	0.017	0.065	70	20	120
CH	5" x 20"	4.18 + (0.56 x N)	1.90 + (0.25 x N)	0.026	0.10	70	20	120
	10" x 20"	11.60 + (1.02 x N)	5.26 + (0.46 x N)	0.061	0.23	200	50	200
	5" x 12"	13.88 + (0.32 x N)	6.30 + (0.15 x N)	0.017	0.065	70	20	120
CH-XP	5" x 20"	22.72 + (0.56 x N)	10.31 + (0.25 x N)	0.026	0.10	70	20	120
	10" x 20"	56.28 + (1.02 x N)	25.53 + (0.46 x N)	0.061	0.23	200	50	200

### Notes:

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

## Want more information? It's Easy!

At our Web Site:  
[www.gea-phe.com/usa](http://www.gea-phe.com/usa)

Our free easy-to-use online selection software, FlatPlateSelect.  
[www.flatplateselect.com](http://www.flatplateselect.com)

Contact us directly.



Technical modification reserved. CH-01/10 - Caskey

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Your contact:



**GEA PHE Systems North America**  
100 GEA Drive  
York, PA 17406  
Toll Free: 1-800-774-0474  
Phone: 1-717-268-6200  
Fax: 1-717-268-6163  
[www.gea-phe.com/usa](http://www.gea-phe.com/usa)  
E-mail: [info.geaphena@geagroup.com](mailto:info.geaphena@geagroup.com)