

Data Sheet

Micro Plate Heat Exchanger

Type **C17L-EZ** and **H17L-CZ**

For more efficient Cooling & Heating systems



The C17L-EZ is an evaporator optimized for small chillers with compact size required in installation. It's also designed for extension to economizer and condenser for various refrigerants.

The Z-pattern channel plate technology pushes the performance of heat exchangers to the limits by fully mixing the liquid and gas refrigerant through a "zigzag" flow, which increases the heat transfer coefficient. At the same time, inheriting from the dimple plate pattern of the previous generation of MPHE, C17L-EZ reduces the water side pressure drop and the amount of material used. The correspondent condenser model, H17L-CZ has outstanding performance working as condenser in semi plug-in systems and also as suction gas to liquid heat exchanger in heat pump operating with large glide refrigerants.

To meet demands for higher seasonal efficiency, the C17L-EZ and H17L-CZ are designed to work efficiently and increase comfort in modern life without increasing the carbon footprint. Helping chillers and heat pumps perform more efficiently, it reduces both energy costs and environmental impact. The low hold-up volume reduces the system refrigerant charge and offers valuable savings.

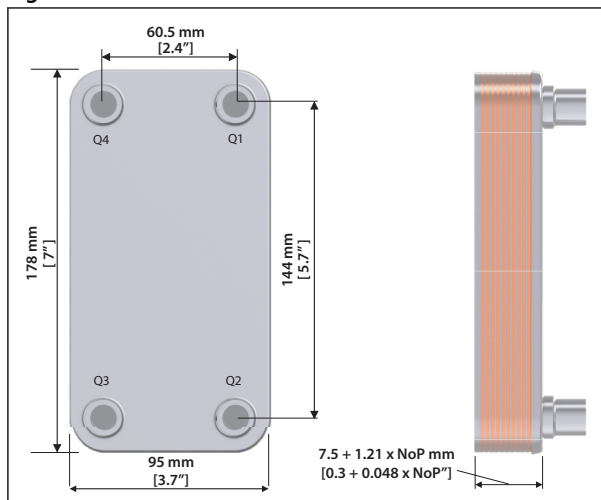
Features

- Improved heat transfer - equals higher efficiency chillers
- Reduced water side pressure drop – equals higher efficiency chillers
- Minimal hold-up volume - equals less refrigerant charge and reduced CO₂ footprint
- Smaller footprint - enables more compact chillers for easy installation
- Less material utilization – less weight and environment friendly

Product specification

Dimensions

Figure 1: Dimensions



Operating conditions

Preconditions:

Max number of plates: 100

Pressure and temperature data*:

Min. working temperature: -196 °C (-320 °F)

Max. working temperature: 200 °C (390 °F)

Max. working pressure: 49 bar (710psi) both refrigerant and water side

*For details, refer to the "Third party Approvals" chapter

Weight*

C17L-EZ, H17L-CZ: $0.44 + 0.032 \times N$ [kg] / $0.97 + 0.07 \times N$ [lb]

N: Number of Plate

*Excluding connections and accessories

Material specification

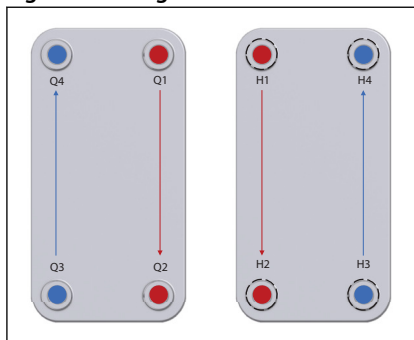
Table 1: Material specification

Item	Material	Specification
Cover plates	Stainless steel	AISI 304L
Plates	Stainless steel	AISI 316L
Connections	Stainless steel	AISI 304L
Brazing filler	Pure copper	Cu

Other material combinations are available on request. Please contact your Danfoss sales representative for more information.

Configuration flow

Figure 2: Configuration flow



Parallel flow:

Q1 - Q2 [H1 - H2]: brine/secondary side

Q3 - Q4 [H3 - H4]: refrigerant/primary side

Hold up volume

Q1 - Q2 (l): $0.017 \times N/2$

Q3 - Q4 (l): $0.013 \times (N-2)/2$

N: Number of Plate

Ordering

Global or local standard code numbers can be accessed via Store.Danfoss.com on local subsites, with full set of technical data as well as relevant assets such as documentation and drawings.

Configuring and calculating products

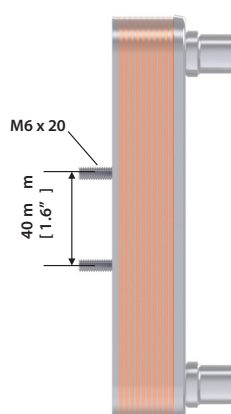
C17L-EZ can be easily customized based on the application needs; model size can be evaluated using Hexact software. For details, product configuration and code creation please contact your Danfoss Sales representative.

Mechanical connections

Table 2: Mechanical connections

Circuits	Connection type options	Connection size option (in.)
Q1 - Q2 (water-brine side)	BSP male	3/8, 1/2, 5/8, 3/4, 7/8
	BSP female	1/4, 3/8, 1/2, 5/8
	DIN R male	3/8, 1/2, 5/8, 3/4, 7/8
	NPT	3/8, 1/2, 5/8, 3/4, 7/8
	Victaulic	3/4
Q3 - Q4 (Refrigerant side)	Soldering	3/8, 1/2, 5/8, 3/4, 7/8

Accessories and spare parts



MPHE products are not serviceable, i.e. cannot be taken apart and repaired, and there are no spare parts program.

As for accessories, stud bolts, feet and hooks on front and/or back cover plates for mounting support and handling are available upon request. Contact your Danfoss sales representative for further information.

Table 3: Stud bolts:

Stud bolt position	Bolt sizes
40 mm, middle	M6x20

Certificates, declarations, and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

Third party approvals

All MPHE and BPHE are certified to European Pressure Equipment Directive (PED) and are approved by Underwriters Laboratories (UL).

Other certifications are available upon request: Kraia, EAC, UA, AS; for others and more details please contact your local Danfoss representative.

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