Data sheet



Micro Plate heat exchanger

MPHE C17L-EZ / H17L-CZ

For more efficient Cooling & Heating systems

Description

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 & benefits

- 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 CO_2 footprint
- Smaller footprint - enables more compact chillers for easy installation
- Less material utilization – less weight and environment friendly

Ordering

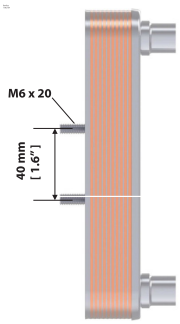
Product code numbers

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.

Accessories code numbers

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: Stud bolts

Stud bolt position	Bolt sizes
40 mm, middle	M6x20

Functions

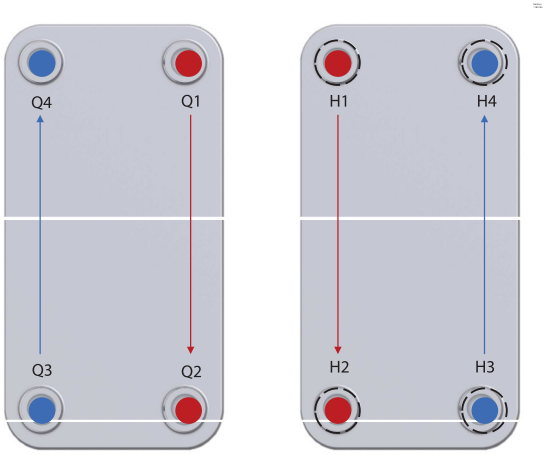
Operation

Preconditions:
Max number of plates: 100

Product details

General data

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 x N/2
Q3 – Q4 (l): 0.013 x (N-2)/2
N: Number of Plate

Materials

Table: 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

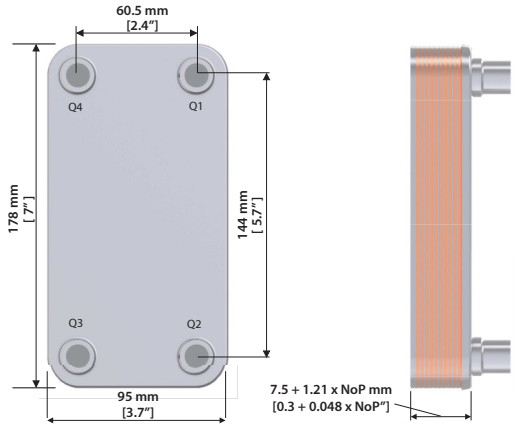
Other material combinations are available on request. Please contact your Danfoss sales representative for more information.

Pressure and temperature data

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

Dimensions



Weight*
C17L-EZ, H17L-CZ: 0.44 + 0.032 x N[kg] / 0.97 + 0.07 x N[lb]
N: Number of Plate

*Excluding connections and accessories

Connections

Mechanical connections

Circuits	Connection type options	Connection size option (inch)
Q1 – Q2 (water-brine side)	BSP male	⅜, ½, ⅝, ¾, ⅞
	BSP female	¼, ⅜, ½, ⅝
	DIN R male	⅜, ½, ⅝, ¾, ⅞
	NPT	⅜, ½, ⅝, ¾, ⅞
	Victaulic	¾
Q3 – Q4 (Refrigerant side)	Soldering	⅜, ½, ⅝, ¾, ⅞

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.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
Pressure Safety Certificate	NSW PDPRE7001747-24	NSW - New South Wales Government	Pressure
Manufacturer's Declaration	Danfoss MD EU-RoHS-DoC-202309-01.01	Danfoss	EU RoHS
UA Declaration	Danfoss UA 2023-01-10 Heat Exchangers PL24 PL31	Danfoss	Pressure, PED
Manufacturer's Declaration	Danfoss MD BPHE-RoHS-DOC-201601	Danfoss	China RoHS
Mechanical Safety Certificate	UL SA13363	UL - Underwriters Laboratories inc.	
Export Control Declaration	Micro Plate Heat Exchangers - Not dual use	Danfoss	
Manufacturer's Declaration	Danfoss MD UK-ROHS-MOD-202304-02.01	Danfoss	UK RoHS
Pressure Safety Certificate	LLC CDC EURO TYSK UA.TR.089.0330.04.23	LLC CDC EURO TYSK - Ukraine	Pressure, PED

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.

Contact details

Online support

Danfoss offers a wide range of support along with our products, including digital information, software, mobile apps and expert guidance. See the possibilities below.



The Danfoss Design center

Discover the Design Center, our advanced digital platform that streamlines product selection. With integrated tools and enhanced type pages, it's simpler than ever to access product information and documentation, and to select the right products. Check the availability of Danfoss products at partner locations and enjoy seamless transitions from selection to purchase with our basket-to-basket functionality. Whether you're buying from our distributors or directly from the Product Store, the Design Center simplifies your experience. Learn more at: designcenter.danfoss.com.



The Danfoss product store

The Danfoss Product Store is a one-stop shop available 24/7 for our customers, no matter where you are in the world or what area of industry you work in. Browse our catalog, check product details and documentation, view your prices and product availability, and quickly finalize your purchase. Start browsing at: store.danfoss.com.



Danfoss Partner Portal/Product Data tool

Designed to support you with easy access to product data extracts, essential resources, tools, and information. The Partner Portal provides a centralized hub for product documentation, training materials, marketing assets, and technical support, ensuring you have everything you need to succeed and grow your business with Danfoss. The Partner Portal is available 24/7 at: partner.danfoss.com and is ready to support your business.



Find technical documentation

Find technical documentation you need to get your project up running. Get direct access to our official collection of data sheets, certificates and declarations, manuals and guides, 3D models and drawings, case stories, brochures, and much more. Start searching now at: documentation.danfoss.com.



Danfoss Learning

Danfoss Learning is a free online learning platform. It features courses and materials specifically designed to help engineers, installers, service technicians, and wholesalers better understand the products, applications industry topics, and trends that will help you do your job better. Find your local Danfoss website here: learning.danfoss.com.



Get local information and support

Local Danfoss websites are the main sources for help and information about our company and products. Find product availability, get the latest reginal news, or connect with a nearby expert - all in your own language. Find your local Danfoss website here: danfoss.com.

Danfoss A/S

Climate Solutions . danfoss.com . +45 7488 2222

Any information, including, but not limited to information on selection of product, its application or use, product design, weight, dimensions, capacity or any other technical data in product manuals, catalogues description, advertisements, etc. and whether made available in writing, orally, electronically, online or via download, shall be considered informative, and is only binding if and to the extent, explicit reference is made in a quotation or order confirmation. Danfoss cannot accept any responsibility for possible errors in catalogues, brochures, videos and other material. Danfoss reserves the right to alter its products without notice. This also applies to products ordered but not delivered provided that such alterations can be made without changes to form, fit or function of the products. All trademarks in this material are property of Danfoss A/S or Danfoss group companies. Danfoss and the Danfoss logo are trademarks of Danfoss A/S. All rights reserved.