ENGINEERING TOMORROW

Data Sheet

Micro Plate Heat Exchanger Type **C62L-EZ-J/K**

For more efficient Chillers

21% lower hold-up volume enables significant reduction in refrigerant charge.

The C62L-EZ-J/K are evaporators optimized for high density refrigerants like the R410A and its replacement R454B and R32 for use in high-efficiency chillers with capacities of 20-90 kW.

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 features, C62L-EZ-J/K reduces the water side pressure drop and the amount of material used. In the reversible mode of the chiller as a condenser, C62L-EZ-J/K also has outstanding performance. To meet demands for higher seasonal efficiency, the C62L-EZ-J/K is designed to work efficiently and increase comfort in modern buildings without increasing the carbon footprint. Helping chillers 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 chiller
- Reduced water side pressure drop – equals higher efficiency chillers
- Minimal hold-up volume - equals less refrigerant charge
- Smaller footprint - enables more compact chillers
- High heat transfer and minimal refrigerant charge - equals a reduced CO_2 footprint

Portfolio overview

C62L-EZ-J: Evaporator optimized for R410A, R452B and R454B
C62L-EZ-K: Evaporator optimized for R410A, R452B and R454B, adapt to low refrigerant pressure drop.

Application

The C62L-EZ-J/K models are single circuit evaporators specifically designed for highly efficient chiller systems dedicated to comfort applications, cooling-industrial process, data centers. The evaporators are design to operate also in reversable systems in condenser mode, in co or counter current flow configuration. The models are characterized by different distributor systems that make the evaporator optimized for the high-density refrigerants.

Figure 1: Designation

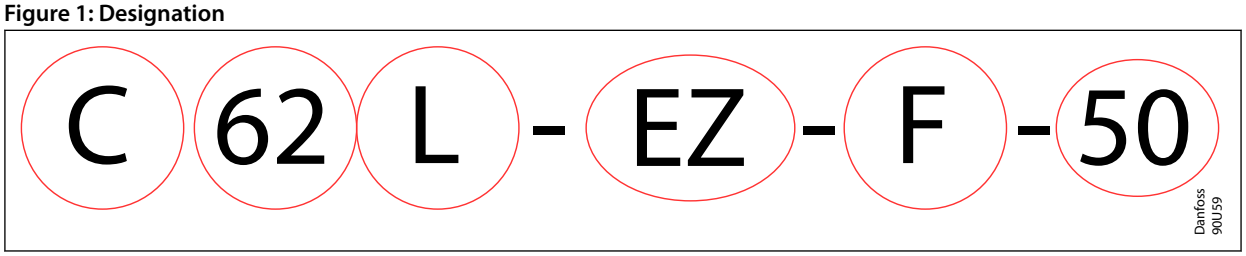


Table 1: Designation

a	d	e
Applications **C:** chiller **D:** universal **H:** heat pump **HDW:** heat pump double wall	**Specific duty** **E=** evaporator **C=** condenser **Plate design** Omit **L:** L-type **M:** M -type **H:** H-type **W:** W-type **X:** Asymmetric **Z:** Z flow **Configuration** Omit: single **D:** Dual circuit **U:** Mixing chamber	**Distributor version** Omit **J** **K** **Plate stacking sequence** Omit: a-b-a... **R:** b-a-b...
b **Platform*** 22,30,55,62,118... *heat exchanging surface per plate 1/1000 m^2		
c **Pressure Service** Omit: 30bar **L:** 45/49bar		**f** **Number of plates**** **Rule: -Single: even number -Dual: even number not multiple of 4

Media

Refrigerants

R410A, R452B, R454B
For other refrigerants please contact your Danfoss Sales representative.

Product specification

Operating conditions

Preconditions:
N = number of plates
Max number of plates: 150
Pressure and temperature data :
(1)

Min. working temperature: -196 °C (-320 °F)
Max. working temperature: 200 °C (390 °F)
Max. working pressure: 49 bar (711psi) refrigerant side(1) / 30 bar (435psi) water side

Weight

C62L-EZ-J/K: 1.98 + 0.15 x N [kg] // 4.37 + 0.33 x N [lb]
N:Number of Plate

Material specification

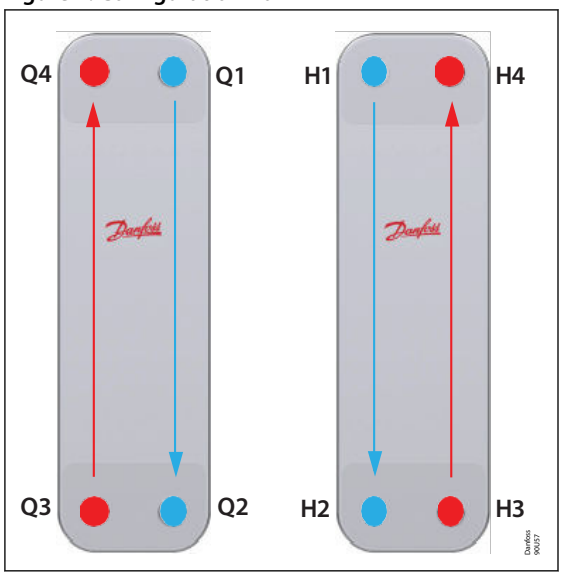
Table 2: Standard materials

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

1 For details, refer to the topic Third party approvals

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. Since the portfolio may contain different types depending on country, this document contains only a summarized list of standard code numbers with a few data relevant for the product selection.

Configuring and calculating products

The C62L-EZ-J/K can be easily customized based on the application needs; model size can be evaluated using HEXSelector software.

For details, product configuration and code creation please contact your Danfoss Sales representative.

Mechanical connections

Table 3: Mechanical connections

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

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 on front and/or back cover plates for mounting support and handling are available upon request.

Table 4: Stud bolts

Stud bolt position	Bolt sizes
327 mm, middle 140 x 100 mm, middle	M8x20mm M8x25mm M8x30mm

Contact your Danfoss sales representative for further information.

Certificates, declarations and approvals

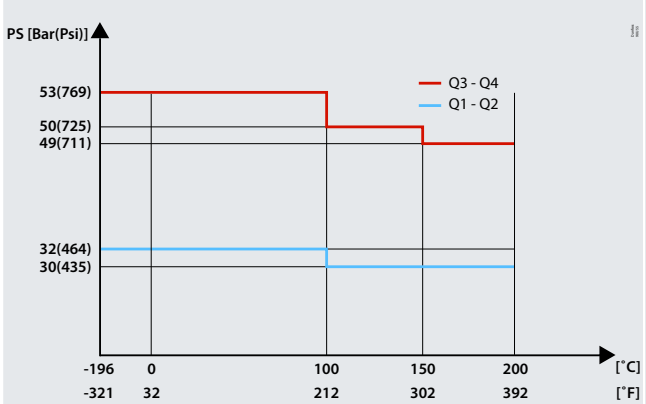
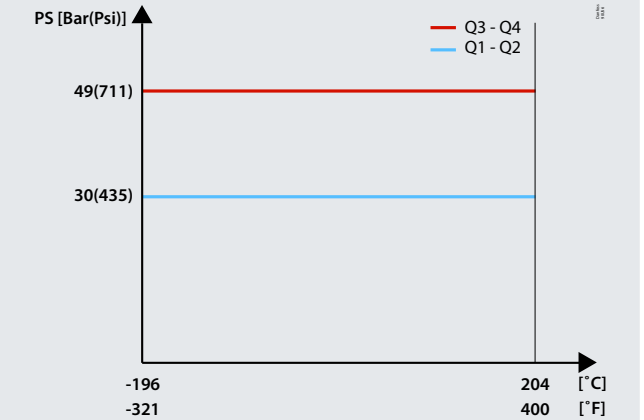
The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

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).

Table 5: Third party approvals

Pressure Equipment Directive (PED)	Underwriters Laboratory Inc (UL)
	

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

ENGINEERING
TOMORROW

Online support

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

The Danfoss Product Store

The Danfoss Product Store is your one-stop shop for everything product related—no matter where you are in the world or what area of the cooling industry you work in. Get quick access to essential information like product specs, code numbers, technical documentation, certifications, accessories, and more.
Start browsing at store.danfoss.com.

Find technical documentation

Find the technical documentation you need to get your project up and 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 www.danfoss.com/en/service-and-support/documentation.

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.

Create your Danfoss Learning account for free at www.danfoss.com/en/service-and-support/learning.

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 regional news, or connect with a nearby expert—all in your own language.

Find your local Danfoss website here: www.danfoss.com/en/choose-region.

Hexselector for heat exchangers

Hexselector for heat exchangers helps you identify the best heat exchanger for your chiller, heat pump, or other application based on operating conditions. Works for innovative MPHE and traditional BPHE brazed heat exchangers.

Download Hexselector for free at http:hexselector.com

Danfoss A/S
Climate Solutions • danfoss.com • +45 7488 2222