Data sheet



Micro Plate heat exchanger

MPHE C62L-EZ

For more efficient Chillers

Description

21% lower hold-up volume enables significant reduction in refrigerant charge.
The C62L-EZ are evaporators optimized for high density refrigerants like the R410A and its replacement R454B and R32 for use in highefficiency 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-EZreduces the water side pressure drop and the amount of material used.

In the reversible mode of the chiller as a condenser, C62L-EZ also has outstanding performance.To meet demands for higher seasonal efficiency, the C62L-EZ 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 & benefits

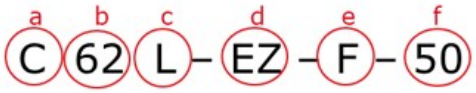
- Improved heat transfer - equals higher efficiency chiller
- Minimal hold-up volume - equals less refrigerant charge
- Smaller footprint - enables more compact chillers
- Reduced water side pressure drop – equals higher efficiency chillers
- High heat transfer and minimal refrigerant charge - equals a reduced CO_2 footprint

Applications

The C62L-EZ models are single circuit evaporators specifically designed for highly efficient chiller systems dedicated to comfort applications, cooling-industrial process, data centers. The evaporators are designed to operate also in reversible 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.

Even if equipped with distributor device, the C62L-EZ models can run properly in condenser mode.

Table: Designation



a)
Applications
C: chiller
D: universal
H: heat pump
HDW: heat pump double wall

b)
Platform*22,30,55,62,118…

*heat exchanging surface per plate 1/1000 m²

c)
Pressure Service
Omit: 30 bar
L: 45/49 bar

d)
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

e)
Distributor version
Omit
B
F

Plate stacking sequence
Omit: a-b-a…
R: b-a-b…

f)
Number of plates**

**Rule:
-Single: even number
-Dual: even number not multiple of 4

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. 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 C62(L)-EZ(-B)(-F) 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 on front and/or back cover plates for mounting support and handling are available upon request.

Table: Stud bolts

Stud bolt position	Bolt sizes
327 mm, middle 140 x 100 mm, middle	M8 x 20 mm M8 x 25 mm M8 x 30 mm

Contact your Danfoss sales representative for further information.

Overview

Product portfolio

C62L-EZ (-B): Evaporator optimized for R410A, R452B and R454B
C62L-EZ-F: Evaporator optimized for R32
C62-EZ (-B): Evaporator for low/medium density refrigerants PS: 30bar
A corresponding Micro Plate heat exchanger for condenser duties (C62L-CX) is also available.

Functions

Operation

Operating conditions
Preconditions:
N = number of plates
Max number of plates: 140

Media

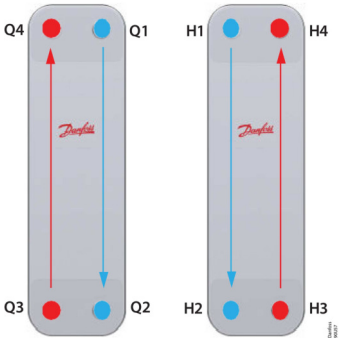
Refrigerants

R410A, R32, R452B, R454B
For other refrigerants please contact your Danfoss Sales representative.

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): 0.098 x N/2
Q3 - Q4 (l): 0.078 x (N-2)/2
N: Number of Plate

Materials

Table: 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

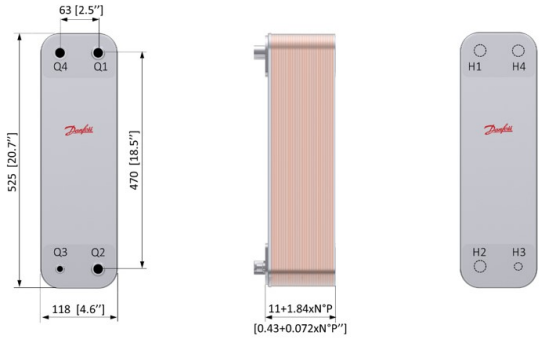
Other material combinations are available on request. Please contact your Danfoss sales representative for more information.

Pressure and temperature data

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

*For details, refer to the topic Third party approvals
**A lower pressure version (30bar) also available

Dimensions



Weight
C62L-EZ (-B)(-F): 2.92 + 0.15 x N [kg] // 6.43 + 0.33 x N [lb]
C62-EZ (-B): 2.45 + 0.15 x N [kg] // 5.40 + 0.33 x N [lb]
N: Number of Plate

Connections

Mechanical connections

Circuits	Connection type options	Connection size option [in]
Q1 – Q2 (water-brine side)	BSP Gas male	½, ¾, 1, 1 ¼, 1 ½
	BSP Gas female	½, ¾, 1
	DIN R male	1, 1 ¼, 1 ½
	NPT	¾, 1, 1 ¼
	Victaulic	1 ½
Q3 (Refrigerant inlet)	Soldering	⅜, ½, ⅝
Q4 (Refrigerant outlet)	Soldering	⅝, ¾, ⅞, 1 ⅛, 1 ⅜

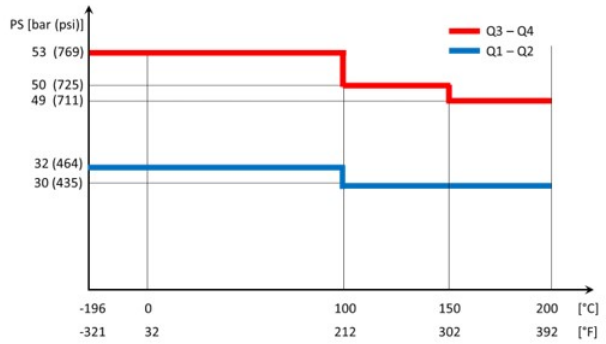
Certificates, declarations and approvals

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	BV CE-0062-PED-H-DAF 001-24-DNK	BV - Bureau Veritas	PED, Pressure
Pressure Safety Certificate	LLC CDC EURO TYSK UA.TR.089.0330.04.23	LLC CDC EURO TYSK - Ukraine	PED, Pressure
Manufacturer's Declaration	Danfoss UK-ROHS-MOD-202304-01.01	Danfoss	UK RoHS
Pressure Safety Certificate	BV CE-0062-PED-H-DMC 001-23-CHN-Rev.C	BV - Bureau Veritas	PED, Pressure
UA Declaration	Danfoss UA 2023-01-10 Heat Exchangers PL24 PL31	Danfoss	PED, Pressure
Manufacturer's Declaration	Danfoss MD UK-ROHS-MOD-202304-02.01	Danfoss	UK RoHS
Export Control Declaration	Micro Plate Heat Exchangers - Not dual use	Danfoss	
EU Declaration	Danfoss EU BF202604en-0002.02	Danfoss	PED, Pressure
Manufacturer's Declaration	Danfoss MD EU-ROHS-MD-202404-01.01	Danfoss	EU RoHS
Mechanical Safety Certificate	UL SA13363	UL - Underwriters Laboratories inc.	
Manufacturer's Declaration	Danfoss MD EU-RoHS-DoC-202309-01.01	Danfoss	EU RoHS
EU Declaration	Danfoss EU BF202407en-0001.01	Danfoss	PED, Pressure
Manufacturer's Declaration	Danfoss MD BPHE-RoHS-DOC-201601	Danfoss	China RoHS

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

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.

Contact details

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