

Data Sheet

Micro Plate Heat Exchanger Type **C62L-EZ**

For more efficient Chillers

**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 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 reduces 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:

- 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 footprint

Portfolio overview

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.

Application

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 design 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 1: Designation

|  | | |
|---|--|--|
| a Applications C: chiller D: universal H: heat pump HDW: heat pump double wall | 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... |
| b Platform* 22,30,55,62,118... *heat exchanging surface per plate 1/1000 m ² | | f Number of plates** **Rule: -Single: even number -Dual: even number not multiple of 4 |
| c Pressure Service Omit: 30bar L: 45/49bar | | |

Media

Refrigerants

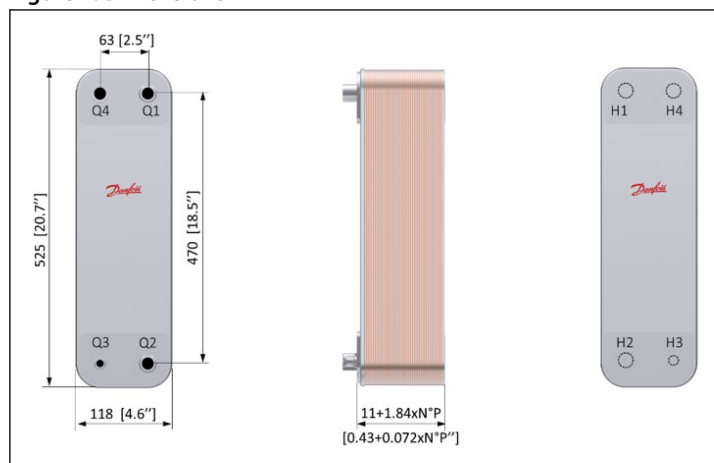
R410A, R32, R452B, R454B

For other refrigerants please contact your Danfoss Sales representative.

Product specification

Dimensions

Figure 1: Dimensions



Operating conditions

Preconditions:

N = number of plates

Max number of plates: 140

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 (435psi) water side

*For details, refer to the topic [Third party approvals](#)

**A lower pressure version (30bar) also available

Weight

C62L-EZ (-B)(-F): $2.92 + 0.15 \times N$ [kg] // $6.43 + 0.33 \times N$ [lb]

C62-EZ (-B): $2.45 + 0.15 \times N$ [kg] // $5.40 + 0.33 \times N$ [lb]

N: Number of Plate

Material specification

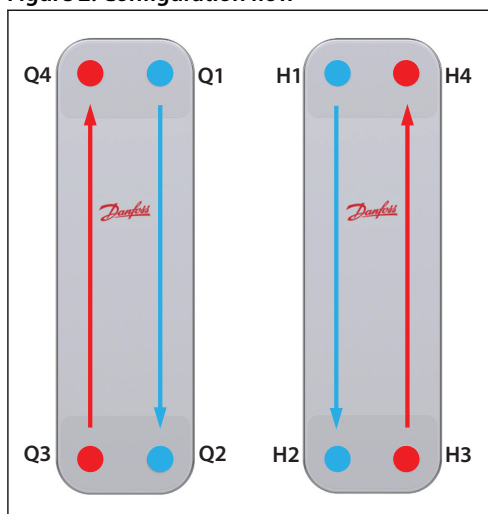
Table 2: Standard materials

| 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

Hold up volume

Q1 - Q2 (l): $0.098 \times N/2$

Q3 - Q4 (l): $0.078 \times (N-2)/2$

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. 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.

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 |
| 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.

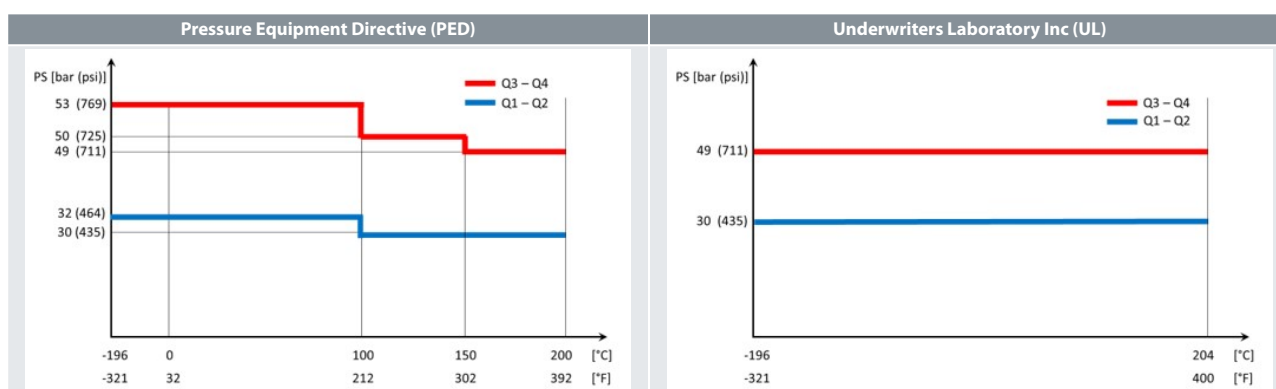
Certificates, declarations, and approvals

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).



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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