

## Data Sheet

# Micro Plate Heat Exchanger Type **H62L-EZU**

For more efficient Heat Pumps

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

The H62L-EZU is an evaporator optimized for R410A for use in high-efficiency heat pumps with capacities of 5-40 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 dimple plate pattern of the previous generation of MPHE, H62L-EZU reduces the water side pressure drop and the amount of material used. In the reversible mode of the heat pump as a condenser, H62L-EZU also has outstanding performance.

To meet demands for higher seasonal efficiency, the H62L-EZU is designed to work efficiently and increase comfort in modern residential and commercial buildings without increasing the carbon footprint. Helping 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.

Thanks to the mixing chamber, the innovative refrigerant distribution device, the H62(L)-EZ is applicable with all refrigerant types.

## Features

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

## Portfolio overview

H62L-EZU: Evaporator optimized for R410A, R32, R452B and R454B

H62-EZU: Evaporator for low/medium density refrigerants PS: 30bar

## Application

The H62(L)-EZU is single circuit evaporators specifically designed for highly efficient heat pump systems. The evaporator is design to operate also in reversable systems in condenser mode, in co or counter current flow configuration.

Thanks to the mixing chamber, the innovative refrigerant distribution device, the H62(L)-EZ is applicable with all refrigerants types.

Table 1: Designation

<div> <div>a b c d e f</div> <div>C 212 L-EZD-F-150</div> </div> <div> <div>a b d f</div> <div>H 62-EZU-50</div> </div>		
<b>a</b> <b>Applications</b> <b>C:</b> chiller <b>D:</b> universal <b>H:</b> heat pump <b>HDW:</b> heat pump double wall	<b>d</b> Specific duty <b>E=</b> evaporator <b>C=</b> condenser <b>Plate design</b> Omit <b>L:</b> L-type <b>M:</b> M-type <b>H:</b> H-type <b>W:</b> W-type <b>X:</b> Asymmetric <b>Z:</b> Z flow <b>Configuration</b> Omit: single <b>D:</b> Dual circuit <b>U:</b> Mixing chamber	<b>e</b> <b>Distributor version</b> Omit <b>B</b> <b>F</b> <b>Plate stacking sequence</b> Omit: a-b-a... <b>R:</b> b-a-b...
<b>b</b> <b>Platform*</b> 22,30,55,62,118... *heat exchanging surface per plate 1/1000 m <sup>2</sup>		
<b>c</b> <b>Pressure Service</b> Omit: 30bar <b>L:</b> 45/49bar		<b>f</b> <b>Number of plates**</b> <b>**Rule:</b> -Single: even number -Dual: even number not multiple of 4

## Media

## Refrigerants

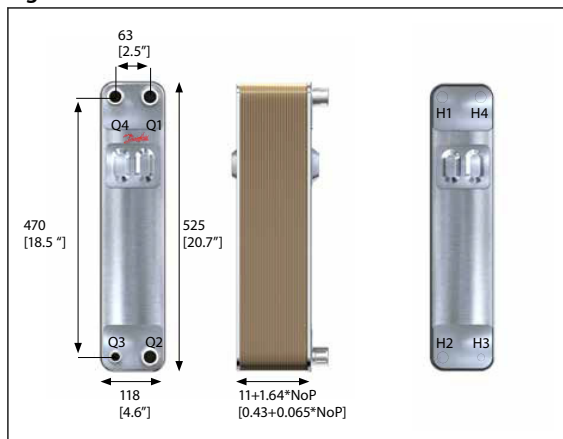
R410A, R32, R452B, R454B, R454C, R134a, R290

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: 120

#### Pressure and temperature data\*:

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

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

Max. working pressure: 45 bar (635psi) refrigerant side\*\* / 30 bar (435psi) water side

\*For details, refer to the topic. **Third party approvals**

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

### Weight

H62L-EZU:  $3.2 + 0.145 \times N$  [kg] //  $7.05 + 0.32 \times N$  [lb]

H62-EZU:  $2.7 + 0.145 \times N$  [kg] //  $5.95 + 0.32 \times N$  [lb]

N: Number of Plate

### Material specification

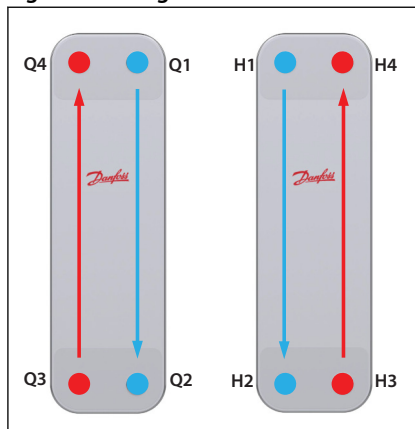
Table 2: Standard materials

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):  $0.089 \times N/2$

Q3 - Q4 (l):  $0.062 \times (N-2)/2$

N: Number of Plate

## Ordering

Global or local standard code numbers can be accessed via [Store.Danfoss.com](https://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.

Table 3: Ordering

Model	Connections			Stud bolt	Pack format	Code
	Q1&Q2 [in.]	Q3 (ref,in)[in.]	Q4 (ref,out)[in.]			
H62L-EZU-20	ISO G1 1/4 - 1 1/8	3/8	7/8	YES	Single -1pcs	111B2112
H62L-EZU-26	ISO G1 1/4 - 1 1/8	3/8	7/8	YES	Single -1pcs	111B2113
H62L-EZU-30	ISO G1 1/4 - 1 1/8	3/8	7/8	YES	Single -1pcs	111B2114
H62L-EZU-36	ISO G1 1/4 - 1 1/8	3/8	7/8	YES	Single -1pcs	111B2115
H62L-EZU-40	ISO G1 1/4 - 1 1/8	3/8	7/8	YES	Single -1pcs	111B2116
H62L-EZU-46	ISO G1 1/4 - 1 1/8	1/2	7/8	YES	Single -1pcs	111B2117
H62L-EZU-50	ISO G1 1/4 - 1 1/8	1/2	1 1/8	YES	Single -1pcs	111B2118
H62L-EZU-60	ISO G1 1/4 - 1 1/8	1/2	1 1/8	YES	Single -1pcs	111B2119
H62L-EZU-70	ISO G1 1/4 - 1 1/8	1/2	1 1/8	YES	Single -1pcs	111B2120
H62L-EZU-80	ISO G1 1/4 - 1 1/8	1/2	1 1/8	YES	Single -1pcs	111B2121
H62L-EZU-90	ISO G1 1/4 - 1 1/8	5/8	1 3/8	YES	Single -1pcs	111B2122
H62L-EZU-100	ISO G1 1/4 - 1 1/8	5/8	1 3/8	YES	Single -1pcs	111B2123
H62L-EZU-110	ISO G1 1/4 - 1 1/8	5/8	1 3/8	YES	Single -1pcs	111B2124
H62L-EZU-120	ISO G1 1/4 - 1 1/8	5/8	1 3/8	YES	Single -1pcs	111B2125

## Configuring and calculating products

The H62(L)-EZU 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 4: 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	¾, ½, 5/8
Q4 (Refrigerant outlet)	Soldering	5/8, ¾, 7/8, 1 ½, 1 ¾

## 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 5: Stud bolts:

Stud bolt position	Bolt sizes
80 mm, middle	M8x20mm M8x25mm M8x30mm

Contact your Danfoss sales representative for further information.

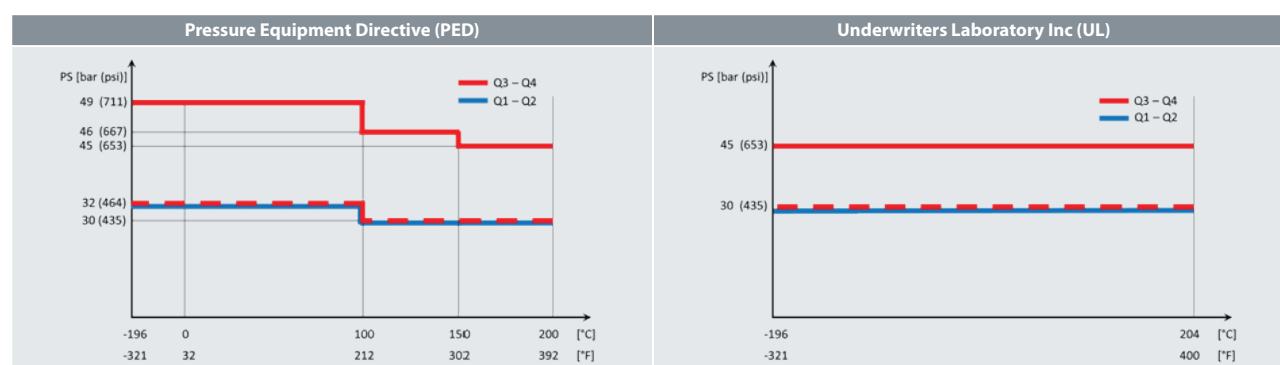
## Certificates, declarations, and approvals

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](http://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).



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