

Data Sheet

Micro Plate Heat Exchanger Type **HDW44-C**

For more efficient Chillers & Heat Pumps



HDW44-C is double wall heat exchanger designed for application as condenser or desuperheater where the flow mediums are not allowed to mix.

The double wall heat exchanger prevents primary media to be mixed with the secondary media if there is an internal leak in the unit.

40% charge compared with a traditional BPHE. The ideal solution to meet the world's climate and energy spirations.

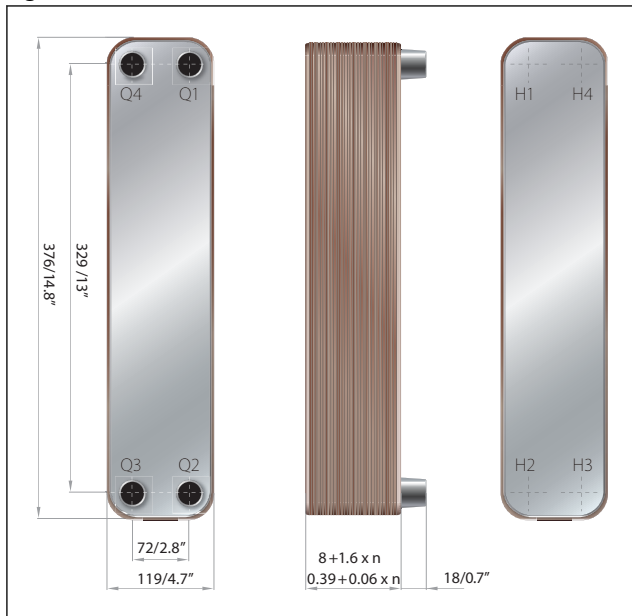
Features:

- Minimal hold up volume: Less refrigerant charge
- High heat transfer: For a more efficient system where heat exchanger is implemented
- Reduced CO₂ footprint: Environmentally friendly with high heat transfer and minimal refrigerant charge

Product specification

Dimensions

Figure 1: Dimensions



Operating conditions

Preconditions:

Max number of plates: 60

Pressure and temperature data*:

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

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

Max. working pressure: 35 bar (508psi) refrigerant side / 16 bar (232psi) water side

Particle size and strainer:

Max allowed particle size: 0.4mm (0.017")

Mesh size recommended: ≥ 40

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

Weight*

HDW44-C: $0.95 + 0.176 * \text{NoP}$ (2.11lb + 0.388 * NoP)

N: Number of Plate

*Excluding connections and accessories

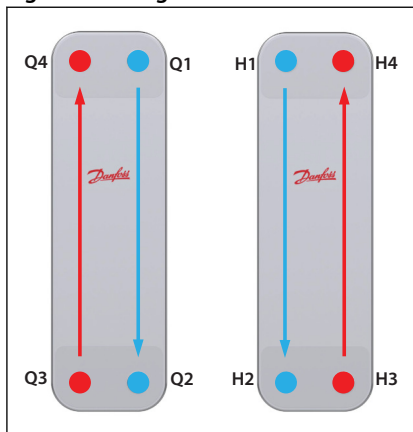
Material specification

Table 1: Standard materials

| Item | Material | Specification |
|----------------|-----------------|-----------------------------------|
| Cover plates | Stainless steel | AISI 304L |
| Plates | Stainless steel | AISI 316Ti |
| Connections | Stainless steel | AISI 304L, AISI 316L (water side) |
| Brazing filler | Pure copper | Cu |

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): $0.032 \times N/2$

Q3 - Q4 (l): $0.032 \times (N-2)/2$

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.

Configuring and calculating products

HDW44-C 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 2: Mechanical connections

| Circuits | Connection type options | Connection size option [in.] |
|---------------------------|-------------------------|------------------------------|
| Q1-Q2 (water-brine side) | BSP male | 3/4, 1 |
| Q3-Q4 (Refrigerant inlet) | NPT | 1/2 |
| | Soldering | 3/8, 1/2, 5/8, 3/4 |

Accessories and spare parts

Stud bolts on front and/or back plates for mounting support are available upon request. Please 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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