Alfa Laval AC1000DQ / ACH1000DQ / ACK1000DQ

Brazed plate heat exchanger for air conditioning and refrigeration

Introduction

Alfa Laval AC brazed plate heat exchangers provide efficient heat transfer with a small footprint. They are specifically designed to work in air conditioning and refrigeration applications as evaporators and condensers in chillers and heat pumps.

Applications

- Evaporator
- Condenser

Benefits

- Compact
- Easy to install
- Self-cleaning
- Low level of service and maintenance is required
- All units are pressure and leak tested
- Gasket free

Design

The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

Different pressure ratings are available for different needs.

The True dual-circuit design provides a higher freezing resistance compared to back-to-back solutions.

Asymmetric channels provide optimal efficiency in the most compact design. This results in low refrigerant charge or lower pressure drop on the water or brine side, reducing the CO_2 footprint.

The asymmetry guarantees the best performance in both full- and partial-load conditions.

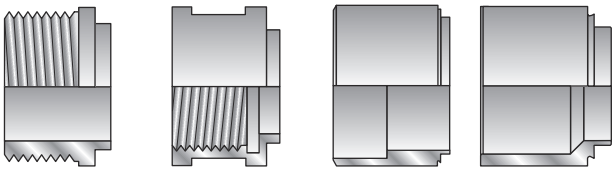
Designed for high-efficiency applications, such as those applications with high evaporation temperature and low water/brine pressure drop. This results in reduced environmental impact and lower costs.

The integrated distribution system ensures an even distribution of the refrigerant throughout the plate package.

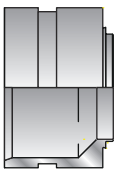
Innovative plate design and optional large plate package enable very high capacities of up to 1200 kW with R410A.

Based on standard components and a modular concept, each unit is custom-built to meet the specific requirements of each individual installation.

Examples of connections



External thread | Internal thread | Soldering | Welding



Grooved connection

Technical Data

Standard materials	
Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight [1]	
A measure (mm)	18 + (2.41 * n)
A measure (inches)	0.71 + (0.09 * n)
Weight (kg) [2]	31.5 + (1.36 * n)
Weight (lb) [2]	69.44 + (3.00 * n)

[1] n = number of plates

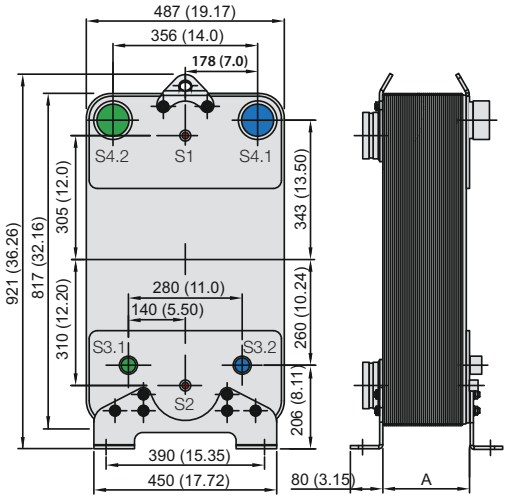
[2] Excluding connections

Standard data	
Volume per channel, litres (gal)	(S1-S2): 0.74 (0.1955) (S3-S4): 0.61 (0.1611)
Max. particle size, mm (inch)	1.1 (0.043)
Max. flowrate [1] m^3/h (gpm)	200) (880.6)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	342

[1] Water at 5 m/s (16.4 ft/s) (connection velocity)

Dimensional drawing

Measurements in mm (inches)



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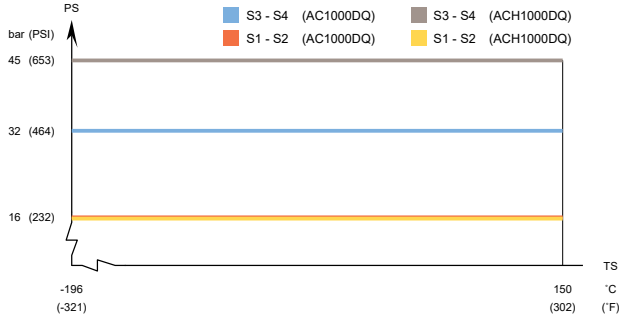
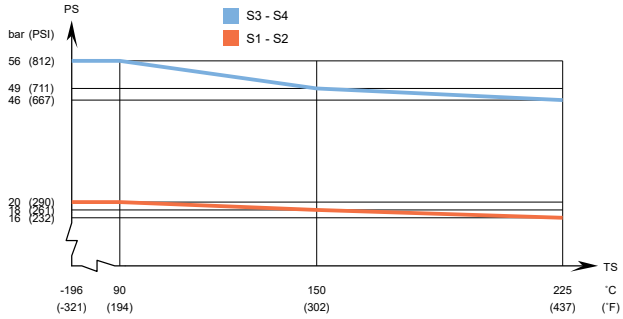
Design pressure and temperature

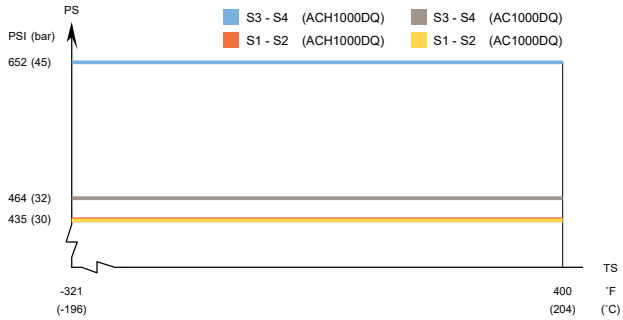
AC1000DQ/ACH1000DQ – PED approval pressure/temperature graph



ACK1000DQ – PED approval pressure/temperature graph



AC1000DQ/ACH1000DQ – UL approval pressure/temperature graph



Designed for full vacuum.

Alfa Laval plate heat exchangers are available with a wide range of pressure vessel approvals. Please contact your Alfa Laval representative for more information.

NOTE: Values above are to be used as an indication. For exact values, please use the drawing generated by the Alfa Laval configurator or contact your local Alfa Laval representative.