

Technical specification

Brazed plate heat exchanger



Project ref. Darment Oy 8003
 Model AC-30EQ-40H-F
 No. of units 1
 Item number 3288101018

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 Date 24.4.2025

Process data

	Hot Side S4 -> S3	Cold Side S2 -> S1
Capacity	15,0 kW	
Fluid	R407C	35.0% Eth.glycol
Duty type	Condensing	Liquid heating
Volume flow rate		0,650 dm³/s
Mass flow rate	0,0748 kg/s	
Inlet temperature	65,0 °C	32,0 °C
Condensing temperature (dew)	45,0 °C	
Outlet temperature	37,6 °C	38,0 °C
Outlet temperature gas	40,0 °C	
Condensing pressure	17,54 bara	
Outlet quality	0	
Tot. pr. drop calc. (allowed)	2,53 (50,0) kPa	50,0 (50,0) kPa
Connection velocity (in/out)	3,43 / 0,10 m/s	1,56 / 1,57 m/s
Margin calculated (specified)	28 (15) %	

Heat exchanger specification

Heat transfer area	0,9 m²
Relative directions of fluids	Countercurrent
Number of plates	40
Number of passes	1
Channel arrangement	1*19H
Channel volume	0,53 dm³
No of circuits	1
Design pressure at (-196 °C)	35 bar
Design pressure at (225 °C)	30 bar
Design temperature (min./max.)	-196 / 225 °C
Pressure vessel code	PED
Material channel plates/sealing	ALLOY 316 / Cu
Connection S4 (Hot-In)	Soldering 7/8" (22.3 mm) ALLOY 304
Connection S3 (Hot-Out)	Soldering 1/2" ALLOY 304
Connection S2 (Cold-In)	Threaded (External) ISO 228/1-G 1" ALLOY 304
Connection S1 (Cold-Out)	Threaded (External) ISO 228/1-G 1" ALLOY 304
Unit dimension (length x width x height)	94 x 94 x 323 mm
Net weight, empty/operating	4,62 / 5,36 kg
Packed length x width x height	250,0 x 110,0 x 343,0 mm
Packed weight	4,98 kg

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Fluid properties	Hot Side		Cold Side	
	Liquid	Vapour	Liquid	Vapour
Density (in/out)	914,38 / 1 067,15 kg/m ³	67,35 / 75,08 kg/m ³	1 046,60 / 1 043,99 kg/m ³	
Specific heat capacity	1,92 kJ/(kg·K)	1,17 / 1,40 kJ/(kg·K)	3,68 kJ/(kg·K)	
Thermal conductivity	0,071 W/(m·K)	0,018 / 0,017 W/(m·K)	0,471 W/(m·K)	
Viscosity (in/out)	0,086 / 0,127 cP	0,014 / 0,014 cP	1,8197 / 1,564 cP	
Bubble point		40,0 °C		

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