

v.1.5.6

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SWEP SSP CBE

HEAT EXCHANGER: V80x50H/1P

EVAPORATOR - Performance

Customer:
 Reference:

Date: 12/11/2009
 Our Ref.:

DUTY REQUIREMENTS

		SIDE 1	SIDE 2
Fluid Side 1	R22		
Fluid Side 2	Water		
Inlet temperature	°C	: 2.00	12.00
Evaporation temperature (dew)	°C	: 2.00	
Outlet temperature	°C	: 7.00	7.00
Flow rate	kg/s	: .1685	1.669
- inlet vapor	kg/s	: -.001078	
Fluid vaporized	kg/s	: .1696	
Max. pressure drop		:	
Operating pressure – outlet	bar(a)	: 5.30	

PHYSICAL PROPERTIES

Reference temperature	°C	: 2.50	9.46
Liquid	Dynamic viscosity	cP	: .211
	Density	kg/m ³	: 1272
	Specific heat capacity	kJ/kg, °C	: 1.185
	Thermal conductivity	W/m, °C	: .09421
Vapor	Dynamic viscosity	cP	: .0117
	Density	kg/m ³	: 22.38
	Specific heat capacity	kJ/kg, °C	: .7165
	Thermal conductivity	W/m, °C	: .009254

PLATE HEAT EXCHANGER

Heat load	kW	:	35.00
Total heat transfer area	m ²	:	2.88
Heat flux	kW/m ²	:	12.15
Mean temperature difference	K	:	7.62
Overall H.T.C. (available/required)	W/m ² , °C	:	1660/1590
Pressure drop - total	kPa	:	14.3
- in ports	kPa	:	1.08
Port diameter	mm	:	33.0
Number of channels		:	24
Number of plates		:	50
Oversurfacing	%	:	4
Fouling factor	m ² , °C/kW	:	.025

Note: 1. Thermosyphon option used.

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