Technical specification

Project ref: Integración de Soluciones Sustentables S.A. de C.V. 38001
Line ref:
Model: ACH220EQ-140AM-F
Item Id: 3287155313 Page: 1(2)
No of units: 1 Date: 2021-06-15

		Hot side S1 -> S2	Cold Side S3 -> S4
Process data			
Capacity:	TR	50.0	
Fluid:		Water	R410A
Mass flow rate:	lb/h	66 388	8 032
Volume flow rate:	GPM	133	
Inlet temperature:	°F	53,6	35,5
Outlet temperature:	°F	44,6	44,6
Evaporating temperature (dew):	°F		35,6
Evaporating pressure:	psia		123
Super heating:	°F		9.0
Inlet quality:			0,2436
Total pressure drop calculated (allowed)	psi	5,5 (7,25)	21,1 (58,02)
Connection velocity in/out:	ft/s	14,56/14,54	49,93/58,52
Specified fouling resistance*10000:	ft²·h·°F/Btu	8,9	

Heat exchanger specification			
Heat transfer area:	ft²	166	
Relative directions of fluids:		Countercurrent	
Number of plates:		140	
Number of passes:		1	1
Channel arrangement:		1*70AML	1*69AMH
Channel volume:	ft³	0,49	0,39
Number of circuits:		1	1
Design pressure at -321 °F	psi	522	653,0
Design pressure at 302 °F	psi	522	653
Design temperature (min/max):	°F	-321 / 302	
Pressure vessel code:		UL/CRN	
Material Channel plates / Sealing:		ALLOY 316 / Cu	
Connection S1 (Hot-In):		Soldering 2 1/8"	
Connection S2 (Hot-Out):		Soldering 2 1/8"	
Connection S3 (Cold-In):		Soldering 1 1/8"	
Connection S4 (Cold-Out):		Soldering 2 1/8"	
Unit dimensions (length x width x height):	in	14,4 x 7,5 x 24,3	
Net weight, empty / operating:	lb	122,9 / 154,95	
Packed length x width x height:	in	22,60 x 30,7 x 10,63	
Packed weight:	lb	146,05	

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Fluid properties		Hot side		Cold Side	
		Liquid	Vapor	Liquid	Vapor
Density (in/out):	lb/ft³	62,397/62,468		72,564/71,316	1,977/1,869
Specific heat capacity:	Btu/(lb·°F)	1,00		0,36	0,28/0,26
Thermal conductivity:	Btu/(ft·h·°F)	0,339		0,058	0,007/0,007
Viscosity (in/out):	cP	1.2402/1.4297		0.1574/0.1485	0,0123/0,0125