

Technical specification



Project ref: Integración de Soluciones Sustentables S.A. de C.V. 38001
 Line ref: 60 TR
 Model: ACH232DQ-170H-F
 Item Id: 3075019827
 No of units: 1

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 Date: 2021-06-15

		Hot side T1 -> T2	Cold Side S3.1,S3.2 -> S4.2,S4.1
Process data			
Capacity:	kBtu/h	720.0	
Fluid:		Water	R410A
Mass flow rate:	lb/h	79 666	9 644
Volume flow rate:	GPM	159	
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	6,1 (7,25)	21,9 (58,02)
Connection velocity in/out:	ft/s	15,05/15,03	40,31/35,24
Specified fouling resistance*10000:	ft ² ·h·°F/Btu	8,7	

Heat exchanger specification			
Heat transfer area:	ft ²	196	
Relative directions of fluids:		Countercurrent	
Number of plates:		170	
Number of passes:		1	1
Channel arrangement:		1*84HR	1*85HB
Channel volume:	ft ³	0,47	0,30/0,30
Number of circuits:		1	2
Design pressure at -321 °F	psi	653	653,0
Design pressure at 302 °F	psi	653	653
Design temperature (min/max):	°F	-321 / 302	
Pressure vessel code:		UL/CRN	
Material Channel plates / Sealing:		ALLOY 316 / Cu	
Additional connections:			
Connection T1 (Hot-In):		Victualic (Clamp) 2"1/2(73)	
Connection T2 (Hot-Out):		Victualic (Clamp) 2"1/2(73)	
Connection S3.1 (Cold-In):		Soldering 1 1/8"	
Connection S4.2 (Cold-Out):		Soldering 2 1/8"	
Connection S4.1 (Cold-Out):		Soldering 2 1/8"	
Connection S3.2 (Cold-In):		Soldering 1 1/8"	
Unit dimensions (length x width x height):	in	18,1 x 9,8 x 19,3	
Net weight, empty / operating:	lb	161,9 / 192,87	
Packed length x width x height:	in	19,69 x 21,7 x 12,60	
Packed weight:	lb	161,9	

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Fluid properties	Hot side		Cold Side	
	Liquid	Vapor	Liquid	Vapor
Density (in/out): lb/ft ³	62,397/62,468		72,543/71,316	1,976/1,869
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		0.1573/0.1485	0,0123/0,0125

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