

REVIEWED

Reviewed only as to the general conformity with the design concept. The Engineer does not warrant or represent that the information contained on this drawing is either accurate or complete. Sole responsibility for correct design, details and dimensions shall remain with the contractor submitting the drawing. The review of this shop drawing shall not, in any way, relieve the contractor from complying with all requirements of the contract.



By: stephen.sadler
Date: 10/31/2018

POLARIS P.H.E. Design Calculation

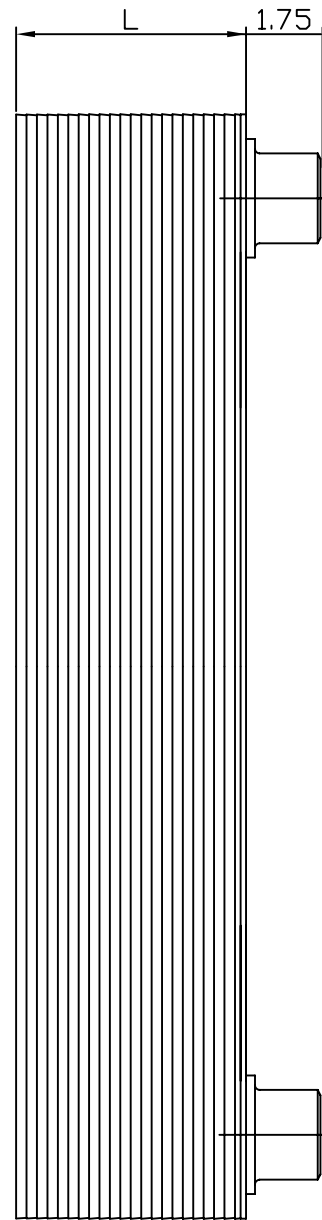
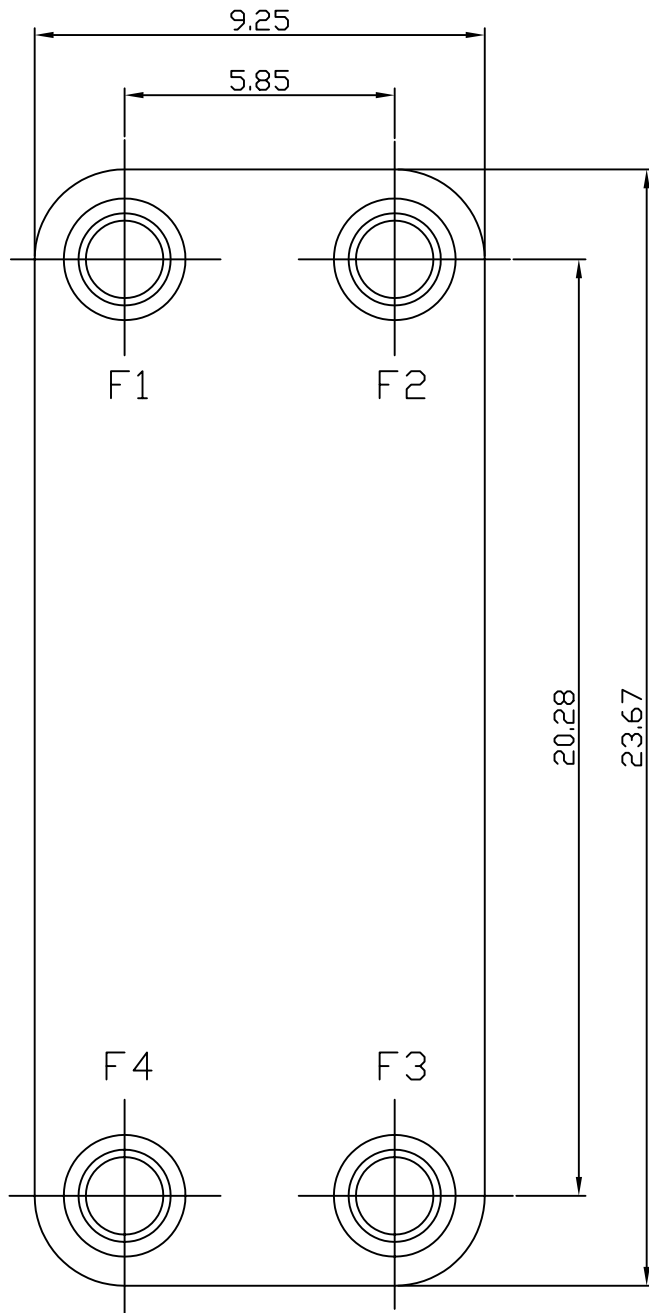
V1042A

MODEL	SL140-BR25-60-TL-DW	Hot Side	Cold Side
Flow Rate	(g.p.m.)	95.20	81.30
Inlet Temperature	(°F)	160.00	110.00
Outlet Temperature	(°F)	130.00	144.99
Pressure Drop	(PSI)	4.50	3.54
Heat Exchanged	(Btu/h)	1402956	
Fluid Properties		Water	Water
Density	(Lb/Ft ³)	61.28	61.57
Specific Heat	(Btu/Lb*F)	1.00	1.00
Thermal Conductivity	(Btu/h*Ft*F)	0.38	0.37
Mean Viscosity	(cP)	0.47	0.54
Wall Viscosity	(cP)	0.54	0.47
Inlet Locations		F1	F3
Outlet Locations		F4	F2
Materials / Dimensions			
Plate Arrangement (Passes*Channels)		1 × 30 + 0 × 0	
Plate Arrangement (Passes*Channels)		1 × 29 + 0 × 0	
Number of Plates		60	
Heat Transfer Area	(Ft ²)	91.77	
Overall K-value Duty/Clean	(Btu/Ft ² *h*F)	879 / 1181	
Plate Material		2 x 0.0079 inch AISI 316 (I)	
Gasket Material / Max. Temp.		COPPER/BRAZED	
Max. Design Temperature	(°F)	365	
Max. Working/Test Pressure	(PSI)	300.0 / 390.0	
Frame Type		BR	Length Code: 7
Connections HOT Side		2.5 inch. Thread NPT	
Connections COLD Side		2.5 inch. Thread NPT	
Total Hold-Up Volume	(Ft ³)	0.67	
Frame Length	(Ft)	0.60	
Empty Weight	(Lb)	109	
DATE		9/26/2018	
CUSTOMER		INTERMOUNTAIN HYDRONIC SPECIALITIES	
ADDRESS		SALT LAKE CITY, UT	
CUSTOMER REFERENCE		HX PRICING	
QUOTE#		A-1404	
ITEM#		HX-1 DOUBLE WALL	

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CONNECTION PROPERTIES

OPTIONS

LOCATION	DESIGNATION	SIZE	TYPE	MATERIAL
F1	SIDE 1 INLET	2.5"	NPT	AISI-316
F2	SIDE 2 OUTLET	2.5"	NPT	AISI-316
F3	SIDE 2 INLET	2.5"	NPT	AISI-316
F4	SIDE 1 OUTLET	2.5"	NPT	AISI-316
B1	NOT USED			
B2	NOT USED			
B3	NOT USED			
B4	NOT USED			

	POLARIS MODEL		SL140-BR25	POLARIS REF.#	
	CUSTOMER				
	JOB NAME			CUST. REF.#	
	DATE		DWG NO.		REV
28 MAY STREET EDISON, NJ 08837		732-225-3100 732-225-9155 - FAX			