



Plate & Frame Performance Specification

Customer:	Jacobs Engineering Group	Date:	3/5/2005
	Judy Stone	Proposal No.:	SC401028 R08
Address:	5995 Rogerdale Road	Item No.:	2
	HOUSTON, TX 77072	Technician:	TEC
Cust. Reference:	58-CF62-60-R11-0003 Rev. A	Run No.:	157819
Model:	UXP-060-M-6-UP-106	Units Required:	1

PERFORMANCE		Hot Side	Cold Side	
Flow Rate (Total)	lb/h	426300.00	506030.00	lb/h
Flow Rate (Unit)	lb/h	426300.00	506030.00	lb/h
Inlet Temperature	°F	148.00	85.00	°F
Outlet Temperature	°F	125.00	103.54	°F
Pressure Drop	psi	7.91	9.93	psi
Operating Pressure	psi'g	100.00	60.00	psi'g
Total Heat Exchanged	Btu/h		9372014	
U-Value	Btu/(h·ft ² ·°F)		350	
Total Heat Transfer Area	ft ²		634.71	
LMTD	°F		42.19	
Surface Margin	%		171	

FLUID DATA		Hot Side	Cold Side
Fluid Name		30.00% Prop Gly	Cooling Water
Density	lb/ft ³	62.02	62.06 lb/ft ³
Specific Heat	Btu/(lb·°F)	0.96	1.00 Btu/(lb·°F)
Thermal Conductivity	Btu/(h·ft·°F)	0.30	0.36 Btu/(h·ft·°F)
Viscosity (avg.)	cP	1.13	0.72 cP

CONSTRUCTION		Hot Side	Cold Side
Plate Material/Thickness		SA-240-316 Stainless Steel	0.6 mm.
Gasket Material (Hot/Cold)		EPDM	EPDM
Connection Material		SA-312TP-304LSS	SA-312TP-304LSS
Connection Size (Hot/Cold Inlet)		8" 150# RFWN	8" 150# RFWN
Connection Size (Hot/Cold outlet)		8" 150# RFWN	8" 150# RFWN
Frame/Finish		SA-516-70 Carbon Steel	Painted Per Specification
Guide Bar (plate Guides)/Finish		SA-240-304 Stainless Steel	Mill Finish
Tightening Bolts/Finish		SA-193-B7 Carbon Steel	Zinc Plated
Tightening Nuts/Finish		SA-194-2H Carbon Steel	Zinc Plated

DESIGN		Hot Side	Cold Side
Design/Test Pressure	psi'g	150.00 / 195.00	
Design Temperature	°F	350 / -20	
ASME Stamp / CE Stamp		Yes	-
Total Weight Empty/Flooded	lb	4272	4859
No. Plates / Frame Capacity		106	171
Pass Arrangement (Hot/Cold)		1	1
Plate Mix (Hot/Cold)		38H+14M	38H+15M
Flow Direction		Countercurrent	

PROJECT NO. 011-0007	DATE 3/2/05	REVISION 5-0
		REVISION 6-22-04
JACOBS ENGINEERING GROUP - CENTRAL REGION		
NO COMMENTS - REVISE RESUBMIT. PROCEED WITH FABRICATION		
COMMENTS NOTED - DO NOT PROCEED WITH FABRICATION		
UNACCEPTABLE - DO NOT PROCEED WITH FABRICATION		
FOR INFORMATION ONLY		

Review of this drawing by Jacobs Engineering Group does not relieve the supplier of his responsibility to supply the materials in accordance with the procurement documents.

REMARKS:
Line 2 Reactor Jacket Cooler - Item No. E-2223 & E-2224 (Alternate design with 634 sq. ft. of heat transfer area)

The performance guarantee is based on the accuracy of the data presented above, and the customers ability to supply product and operating conditions in conformance with the above.

Tranter PHE, Inc.  P.O. Box 2289  Wichita Falls, TX 76307
Phn: (940) 723-7125  Fax: (940) 723-5131

<http://www.tranterphe.com> Tag #E2223 and E2224 / Serial E SK762 & SK763

