Plate Heat Exchanger

Technical Specification

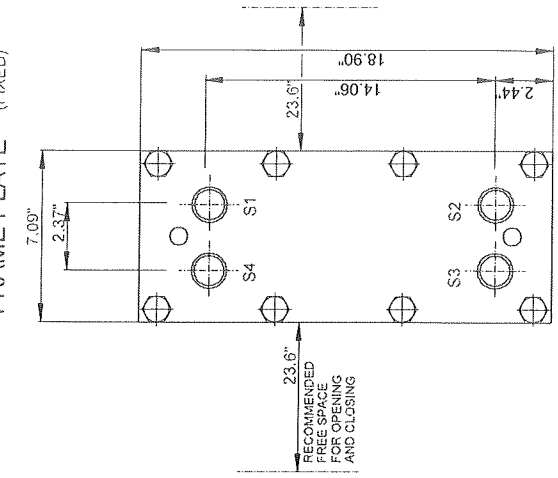
Customer : DDCE
Model : **M3-FG**
Project: : DDCE Pt2
Item : **5001-W01 Case 1 M3** Date: 7/1/2009

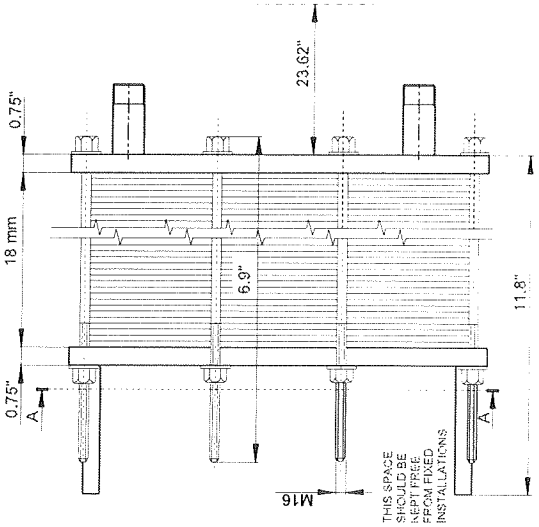
		Hot Side	Cold side
Fluid		Steam	Water
Density	lb/ft³	0.1306	62.35
Specific heat capacity	Btu/lb,°F	0.55	1.00
Thermal conductivity	Btu/ft,h,°F	0.0163	0.344
Viscosity inlet	cP	0.0139	1.14
Viscosity outlet	cP	0.0139	0.465
Mass flow rate	lb/h	14.58	165.0
Inlet temperature	°F	291.0	59.0
Outlet temperature	°F	291.0	140.0
Pressure drop	psi	0.00168	0.0204
Heat Exchanged	kBtu/h	13.35	
L.M.T.D.	°F	188.6	
O.H.T.C clean conditions	Btu/ft²,h,°F	344.0	
O.H.T.C service	Btu/ft²,h,°F	51.19	
Heat transfer area	ft²	1.4	
Relative directions of fluids		Countercurrent	
Number of plates		6	
effective plates		4	
Number of passes		1	1
Extension capacity		20	
Plate material / thickness		ALLOY 316 / 0.60 mm	
Sealing material		HNBR CLIP-ON	HNBR CLIP-ON
Connection material		Stainless steel	Stainless steel
Connection diameter		See drawing	See drawing
Nozzle orientation		S4 -> S3	S1 <- S2
Pressure vessel code		ASME	
Flange rating			
Design pressure	psi	150.0	150.0
Test pressure	psi	195.0	195.0
Design temperature	°F	300.0	300.0
Overall length x width x height	in	15 x 7 x 19	
Liquid volume	ft³	0.0	0.0
Net weight, empty / operating	lb	56.4 / 56.8	

Performance is conditioned on the accuracy of customers data and customers ability to supply equipment

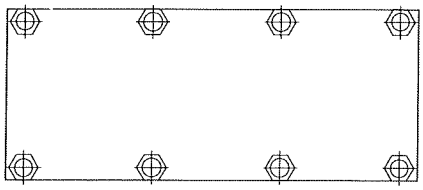
Designed constructed and stamped in accordance with 2007 ASME Code and Addendum 2009.

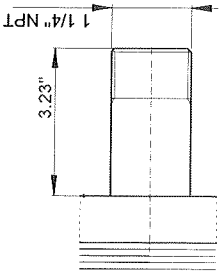
This is a general drawing. Additional parts. if required. like protection sheets. inspection covers. etc. are not displayed.





PRESSURE PLATE
(MOVABLE)
SECTION A-A





SS
PIPE
S1,S2,S3,S4

REMARKS:	SIDE1	SIDE2
DESIGN PRESSURE	150 psi	150 psi
TEST PRESSURE	195 psi	195 psi
MAX TEMPERATURE	300 °F	300 °F
MIN TEMPERATURE	32 °F	32 °F
MAWP	150 psi	150 psi
MDMT		

GASKET	HNBR CLIP-ON
PLATE MATERIAL	ALLOY 316
PLATE THICKNESS	0.60 mm
HEATING SURFACE	1.4 ft²
PLATE GROUPING	1*3L/1*2L
WEIGHT WITH WATER	57 lb
NETWEIGHT	56 lb

TOTAL LENGTH 15"
TOTAL WIDTH 7.1"
TOTAL HEIGHT 18.9"

ALL DIMENSIONS IN INCHES

SIDE	MEDIA	INLET	TEMP.	OUTLET	TEMP.	FLOW RATE	PRESSURE DROP	LIQUID VOL.
1	Steam	S4	291.0 °F	S3	291.0 °F	14.58 lb/h	0.001680 psi	0.01801 ft³
2	Water	S2	59.0 °F	S1	140.0 °F	165.0 lb/h	0.02037 psi	0.01483 ft³

SUPPLIER	REF.	ITEM NO. 5001-W01 Case 1 M3
AGENT / REF.		
CUSTOMER NAME / REF. NO.		
SIGN.		RISKCATEGORY N/A

PLATE HEAT EXCHANGER

M3-FG

ASME

QUOTATION DDCE Pt2

DATE 07/01/2009

REV NO. 0