

#109065

E3300-2

Plate Heat Exchanger



Technical Specification

Customer : DDCE
 Model : M3-FG
 Project: : DDCE Pt2
 Item : 3101-W03 Case 1 M3

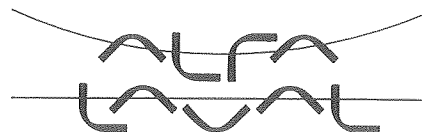
Date: 7/1/2009

		Hot Side	Cold side
Fluid		Water	Water
Density	lb/ft ³	62.18	62.49
Specific heat capacity	Btu/lb, °F	1.00	1.01
Thermal conductivity	Btu/ft, h, °F	0.353	0.335
Viscosity inlet	cP	0.895	1.52
Viscosity outlet	cP	0.905	1.47
Batch mass	lb	767.0	
Start temperature	°F	95.0	
End temperature	°F	86.0	
Batch time	min	5.000	
Mass flow rate	lb/h	4488	2207
Inlet temperature	°F	77.0	41.0
Outlet temperature	°F	76.1	42.8
Pressure drop	psi	3.63	2.30
Heat Exchanged	kBtu/h	4.039	
L.M.T.D.	°F	34.6	
O.H.T.C clean conditions	Btu/ft ² , h, °F	737.0	
O.H.T.C service	Btu/ft ² , h, °F	84.67	
Heat transfer area	ft ²	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	ft ³	0.0	0.0
Net weight, empty / operating	lb	56.4 / 57.4	

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

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Plate Heat Exchanger



Technical Specification

Customer : DDCE
 Model : M3-FG
 Project : DDCE Pt2
 Item : 3101-W03 Case 2 M3

Date: 7/1/2009

		Hot Side	Cold side
Fluid		Water	Water
Density	lb/ft ³	62.42	62.49
Specific heat capacity	Btu/lb, °F	1.00	1.01
Thermal conductivity	Btu/ft, h, °F	0.340	0.335
Viscosity inlet	cP	1.29	1.52
Viscosity outlet	cP	1.31	1.48
Batch mass	lb	767.0	
Start temperature	°F	95.0	
End temperature	°F	86.0	
Batch time	min	5.000	
Mass flow rate	lb/h	4506	3509
Inlet temperature	°F	51.3	41.0
Outlet temperature	°F	50.0	42.6
Pressure drop	psi	3.93	5.29
Heat Exchanged	kBtu/h	5.805	
L.M.T.D.	°F	8.8	
O.H.T.C clean conditions	Btu/ft ² , h, °F	795.3	
O.H.T.C service	Btu/ft ² , h, °F	479.0	
Heat transfer area	ft ²	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	ft ³	0.0	0.0
Net weight, empty / operating	lb	56.4 / 57.4	

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E3300-2

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.

REMARKS:

DESIGN PRESSURE

TEST PRESSURE

MAX TEMPERATURE

MIN TEMPERATURE

MAWP

MDMT

SIDE1

150 psi

195 psi

300 °F

32 °F

150 psi

SIDE2

150 psi

195 psi

300 °F

32 °F

150 psi

GASKET

PLATE MATERIAL

PLATE THICKNESS

HEATING SURFACE

PLATE GROUPING

WEIGHT WITH WATER

NETWEIGHT

HNBR CLIP-ON

ALLOY 316

0.60 mm

1.4 ft²

1*3L/1*2L

57 lb

56 lb

FRAME PLATE (FIXED)

PRESSURE PLATE (MOVABLE)

SECTION A-A

SS PIPE

S1, S2, S3, S4

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	Water	S4	77.0 °F	S3	76.1 °F	4488 lb/h	3.628 psi	0.01801 ft³
2	Water	S2	41.0 °F	S1	42.8 °F	2207 lb/h	2.298 psi	0.01483 ft³

SUPPLIER

REF.

ITEM NO.

AGENT / REF.

CUSTOMER NAME / REF. NO.

SIGN.

3101-W03 Case 1 M3

RISKCATEGORY N/A

PLATE HEAT EXCHANGER

M3-FG

ASME

QUOTATION

DDCE P12

DATE

07/01/2009

REV NO.

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