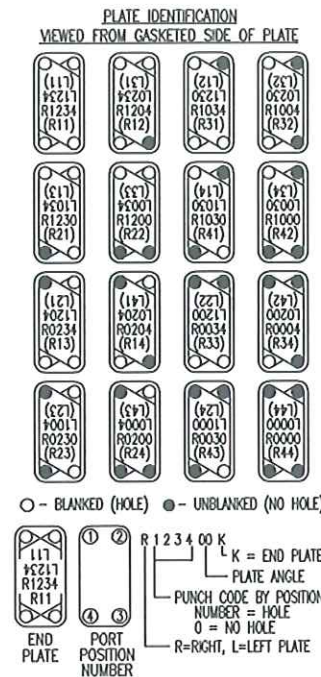
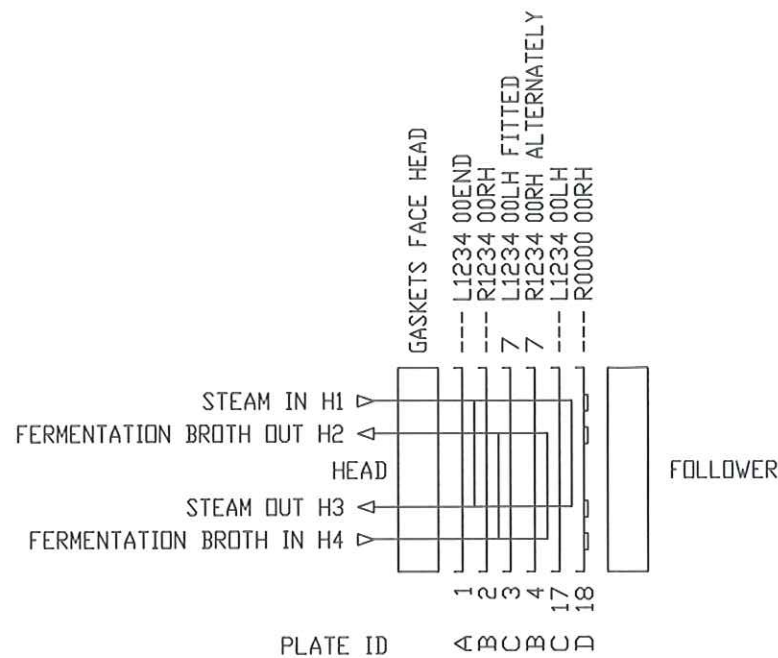


MATERIALS OF CONSTRUCTION		
ITEM NO.	DESCRIPTION	MATERIAL
1	HEAD	SA516 GR70
2	FOLLOWER	SA516 GR70
3	END SUPPORT	A36
4	TOP BAR	304 STAINLESS STEEL
5	BOTTOM BAR	304 STAINLESS STEEL
6	M16 DIA. TIE BAR	SA193 GRB7 ZINC PLATED
7	TIE BAR HEX NUTS	SA194 GR2H ZINC PLATED
8	HEAT TRANSFER PLATES	SA240 TYP316
9	STUDS	SA193 GRB7 ZINC PLATED
10	LINERS	SA240 316L STAINLESS STEEL



DESIGN SPECIFICATIONS	
DESIGN CODE	ASME SECTION VIII DIV 1 2007 Edition, 2008 Addenda
MAX. ALLOWABLE WORKING PRESSURE	145 PSIG.
MINIMUM DESIGN METAL TEMPERATURE	-20 °F. @ 145 PSIG.
HYDROTEST PRESSURE	200 PSIG.
MINIMUM OPERATING TEMPERATURE	-20°F.
MAXIMUM OPERATING TEMPERATURE	302° F.
SERIAL NUMBER	G2009000433
HEAT TRANSFER AREA	47.4 SQ. FT.
FRAME SIZE	NO. 1
MAXIMUM FRAME CAPACITY	74 PLATES
DRY WEIGHT	528 LBS.
FLOODED (OPERATING) WEIGHT	566 LBS.
TOTAL LIQUID VOLUME	4.6 GALS.
FINISH	APV STANDARD PAINT 3196
ACCESSORIES SUPPLIED	304 SS SHROUD

OPERATING CONDITIONS				
LIQUID	FLOW RATE	TEMP. °F.	ΔT(PSIG)	
DUTY 1				
STEAM	1626 lb/hr	291° → 291°	0.6	
FERMENTATION BROTH	34696 lb/hr	175° → 221°	4.4	
DUTY 2				
STEAM	2703 lb/hr	291° → 291°	3.0	
FERMENTATION BROTH	17348 lb/hr	68° → 221°	1.4	

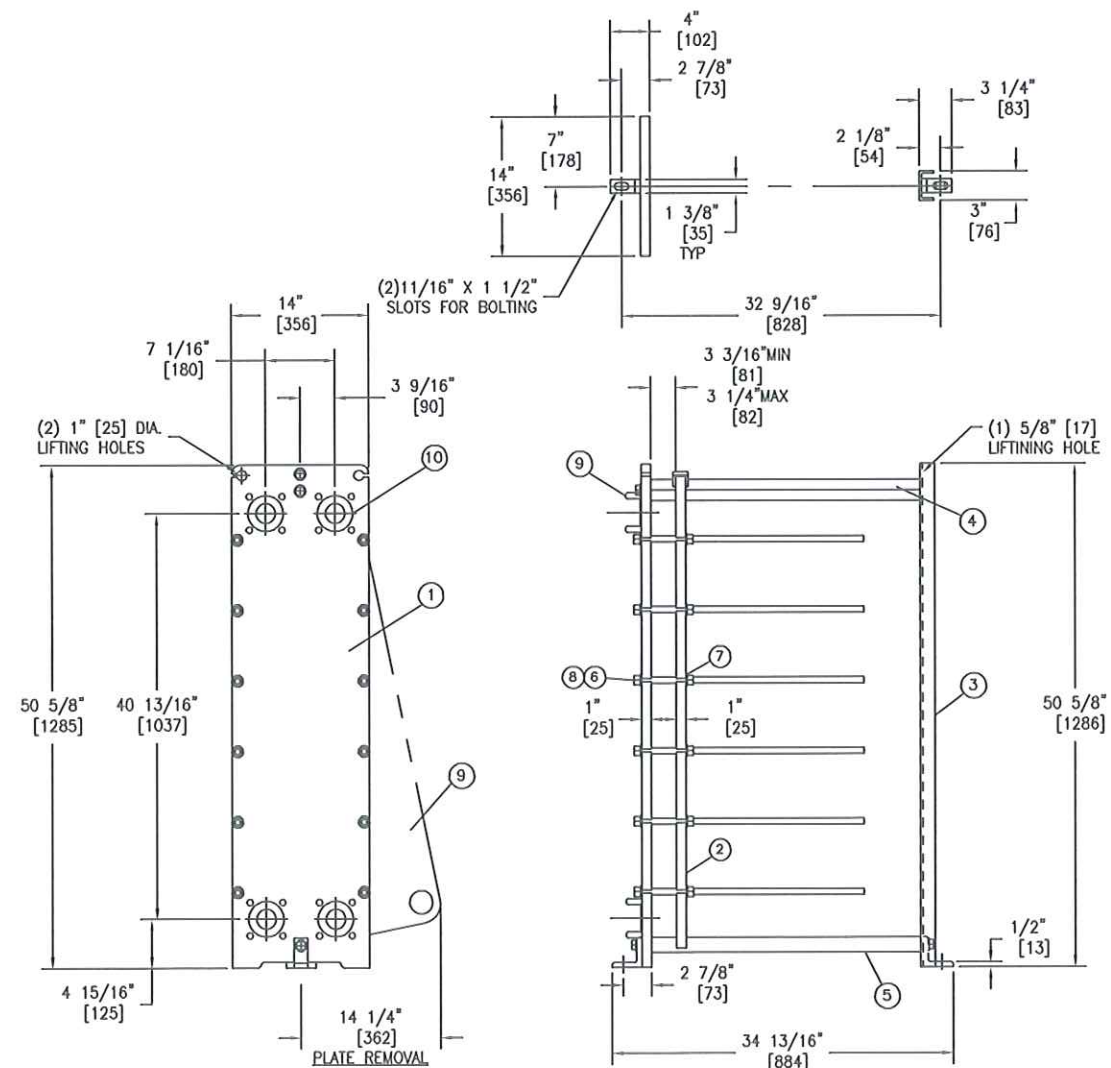
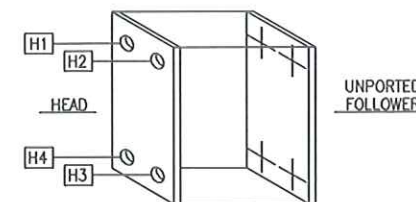
Plates (Total: 18)	
ID Qty Part Number	Description
A 1 GVS21K4XAX6CZZXB	P&G ASY V028 (LH) END 316 0.6 PCL EPDM FDA (1 GREY)
B 8 GVS29F4XAX6EZZXB	P&G ASY V028 (RH) FLOW 316 0.6 PCL EPDM FDA (1 GREY)
C 8 GVS21F4XAX6CZZXB	P&G ASY V028 (LH) FLOW 316 0.6 PCL EPDM FDA (1 GREY)
D 1 GVS29F0XAX6EZZXB	P&G ASY V028 (RH) FLOW 316 0.6 PCL EPDM FDA (1 GREY)

Frame	
Qty Part Number	Description
1 GVO28XXY10XXX11A	VEGA028 M-10 (C:SS, T:ZP) FS1 73 PLATES MAX
1 G3900212G1G1G1G1	HEAD
1 G3900213AXAXAXAX	FOLLOWER

Fitting		
Qty Part Number	Position	Description
4 G020HCDPA25A	H1,H2,H3,H4	NPS 2 Studed SS 316L CL150

Qty Part Number Accessory Description		
1 GASME U STAMP		ASME INSPECTION AND U STAMP
1 GB508734		304 SS SHROUD

- THE INSTALLATION, OPERATION AND MAINTENANCE OF THIS HEAT EXCHANGER SHALL BE IN ACCORDANCE WITH THE APV PARAFLOW PLATE HEAT EXCHANGER INSTRUCTION MANUAL.
- THIS MODEL HEAT EXCHANGER IS TIGHTENED USING A WRENCH ON THE TIE BAR HEX NUTS AT THE HEAD AND FOLLOWER ENDS. CLEAN AND LUBRICATE THE THREADS BEFORE OPENING OR CLOSING USING A LUBRICANT COMPATIBLE WITH CARBON STEEL. APV RECOMMENDS NEVER-SEEZ REGULAR GRADE. DO NOT USE COMMON GREASE. THE PLATE PACK IS TO BE TIGHTENED IN ACCORDANCE WITH THE INSTRUCTION MANUAL SUPPLIED. DO NOT TIGHTEN BELOW THE MINIMUM DIMENSION SHOWN.
- THE CUSTOMER IS RESPONSIBLE FOR PROVIDING:
 - ANCHOR BOLTS PER ASTM A36 MINIMUM WITH A RECOMMENDED DIAMETER OF 3/4".
 - PROTECTION AGAINST START UP OR OPERATING PRESSURES EXCEEDING THE MAXIMUM ALLOWABLE WORKING PRESSURE.
 - PIPING TO THE FOLLOWER OR CONNECTOR GRIDS THAT ALLOWS FOR FREE MOVEMENT WHEN THE UNIT IS OPENED FOR SERVICE AND PROVIDES FLEXIBILITY FOR THE VARIATION OF THE COMPRESSED PLATAGE DIMENSIONS.
- LINED STUDDED PORTS ARE PROVIDED WITH A SMOOTH RAISED FACE FINISH, DESIGNED TO MATE WITH ANSI B16.5 CL150 FLANGES.
- BOLT HOLES STRADDLE CENTERLINES SHOWN.
- DIMENSIONS ARE SHOWN IN INCHES. DIMENSIONS IN BRACKETS [] ARE IN MILLIMETERS.
- STANDARD TOLERANCES:
 - FRAME AND FOUNDATION BOLT LOCATIONS: ±1/4 INCH [±6mm]
 - NOZZLE CENTERLINE AND FACE DIMENSIONS: ±1/8 INCH [±3mm]



108999
DuPont Danisco Cellulosic Ethanol LLC
Vonore, TN
E3600-2, Steam Heater

G2009000433	
P.O.NO: DDCE11-0089	
APV Products 1200 W. Ash Street Goldsboro, NC 27530 Tel: (919) 735-4570 Fax: (919) 681-1134	
Description: VEGA028 M-10 PLATE HEAT EXCHANGER	
Checked: Date: _____	Supersedes: _____
Approved: Date: _____	Drawn: Date: 7-15-09
Scale: N.T.S. Sheet: 1 OF 1	
Drawing No: 0900433 Rev. 00	

REV.	BY / DATE	CHK. BY / DATE	DESCRIPTION AND LOCATION
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