Echangeur à Plaques

Spécification Technique

Client : **JPO FROID**
Modèle : **M10-BWFDR**
Project: : **FRSPAJR-346/12RCAJR346**
Item : **Date** : **20/11/2012**

Fluide		**35.0% Eth.glycol**	**Ammoniac**
Débit masse	kg/h	84650	1239
Fluid Condensed/Vaporised	kg/h	0.000	929.5
Température d'entrée	℃	**-4.0**	**-13.0**
Température de sortie(vapour/liquid)	℃	**-8.0**	**-13.0**
Operating pressure (entrée/Sortie)	bara	/	2.59/2.54
Perte de charge (Perm/Calculate)	kPa	100/81.2	5.50/4.41
Velocity connection (entrée/Sortie)	m/s	2.82/2.82	0.0671/16.0
Puissance	kW	336.0	
Surface d'échange	m²	16.3	
O.H.T.C propre	W/(m²*K)	3250	
O.H.T.C en service	W/(m²*K)	3089	
Fouling Resistance * 10000	m²*K/W	0.0	
Excès de surface	%	5	
L.M.T.D.	K	6.7	
Sens des fluides		Co-courant	
Nbr de plaques		70	
Nbr de plaques effectives		68	
Nombre de passes		1	1
Capacité d'extension		70	
Matériaux des plaques / Thickness		ALLOY 304 / 0.50 mm	
Matériaux de joints		NBRP	Soudé
Joint annulaire		CR	
Matériau des connexions		Inox	Inox
Connection standard		DN100	DN100
Orientation des connexions		S2 -> S1	S3 -> S4
Code de construction		PED , Category 3	
Fluid danger group	No Danger	Dangerous	
Has risky vapour pressure		x	x
Normes des tubulures		DIN PN25	
Pression de service	bar	10.0	16.0
Pression d'epreuve	bar	14.3	22.9
Température de service	℃	50.0/-10.0	50.0/-15.0
Longueur x Largeur x Hauteur hors tout	mm	1910 x 470 x 981	
Volume de liquide	dm³	21.4	22.0
Poids net, à vide / en fonctionnement Flooded	kg	469 / 493 / 506	
Packed weight (SKID BASE)	kg	499	
Volume interne	m³	1.2	
Longueur x Largeur x Hauteur	mm	1100 x 600 x 1890	

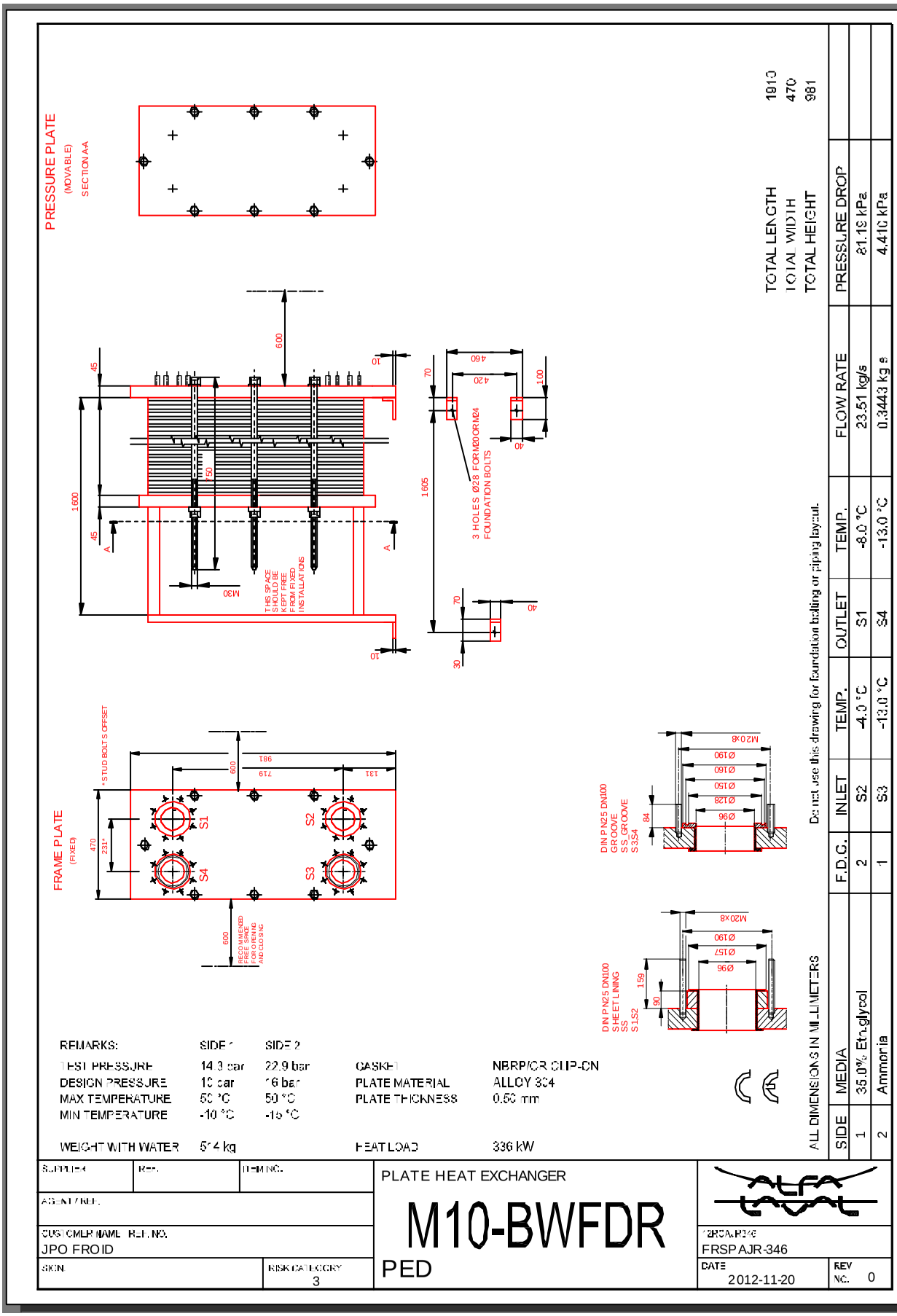
Performance is conditioned on the accuracy of customer's data and customer's ability to supply equipment.

Composition du fluide

Coté chaud		**Côté froid**	
Eth.glycol		**Ammoniac**	
Liquid Cooling		Vapourizing	
Eth.glycol	**= 84650 kg/h**	**Ammonia**	**= 1239 kg/h**
inlet v/l	0.000/84650	inlet v/l	0.000/1239
outlet v/l	0.000/84650	outlet v/l	929.5/309.8

Physical Properties

(inlet/outlet)	**Coté chaud Liquide**	**Vapeur / Buée**	**Côté froid Liquide**	**Vapeur / Buée**
Dens	1060/1062		652.9/652.8	2.093/2.058
Surchauffe	3.578/3.567		4.539/4.539	2.505/2.500
Visc	5.90/6.96		0.196/0.196	0.0088/0.0088
Th.Cond	0.465/0.464		0.547/0.547	0.0207/0.0207
Bub. p.				/-13.0
Dew p.				/-13.0
Mol.W.				17.03/17.03
Cr.pr.				113.33/113.33
Cr.Temp.				132.3/132.3
Lat.heat				1301.4/1301.2



SIDE	MEDIA	F.D.C.	INLET	TEMP.	OUTLET	TEMP.	FLOW RATE	PRESSURE DROP
1	35.0% Ethylglycol	2	S2	-4.0 °C	S1	-8.0 °C	23.51 kg/s	81.18 kPa
2	Ammonia	1	S3	-13.0 °C	S4	-13.0 °C	0.3443 kg/s	4.410 kPa

REMARKS:	SIDE 1	SIDE 2		
TEST PRESSURE	14.3 bar	22.9 bar	GASKET	NBR/CR CLIP-ON
DESIGN PRESSURE	10 bar	16 bar	PLATE MATERIAL	ALLOY 304
MAX TEMPERATURE	50 °C	50 °C	PLATE THICKNESS	0.50 mm
MIN TEMPERATURE	-10 °C	-15 °C		
WEIGHT WITH WATER	574 kg		HEAT LOAD	336 kW

SUPPLIER	REF.	ITEM NO.
AGENT/REF.		
CUSTOMER NAME, REF. NO.	JPO FROID	
SIGN	RISK CATEGORY 3	

PLATE HEAT EXCHANGER

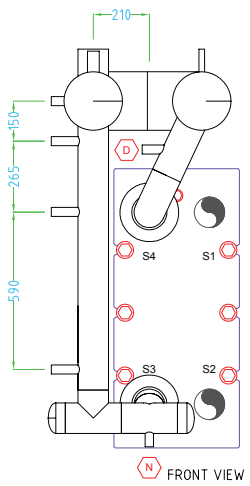
M10-BWFDR

PED

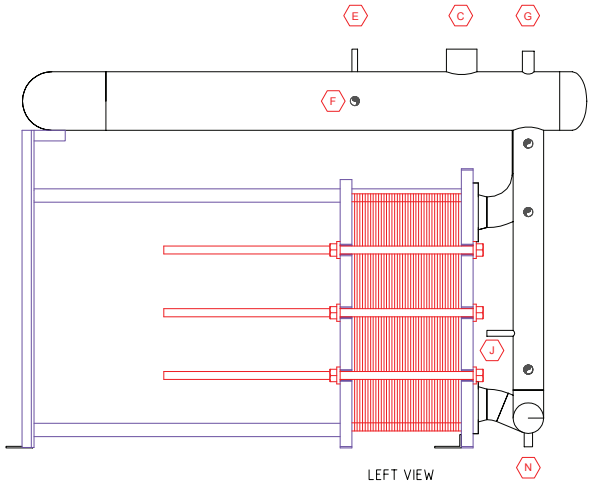
ORDER NO. FRSPAJR-346

DATE 2012-11-20

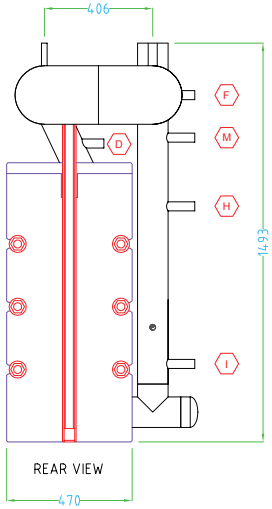
REV NO. 0



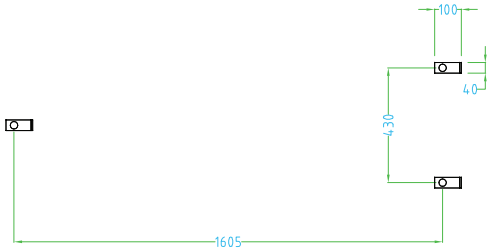
FRONT VIEW

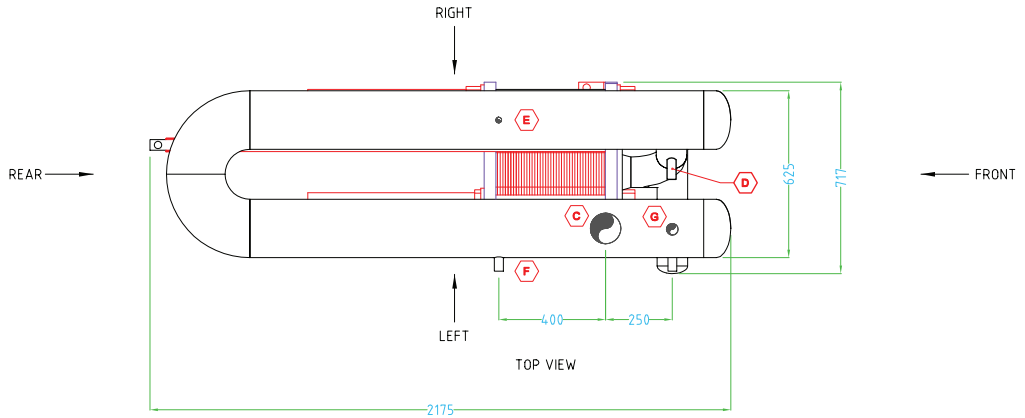


LEFT VIEW



REAR VIEW





TOP VIEW

THIS PLATE HEAT EXCHANGER IS MANUFACTURED BY ALFA LAVAL LUND AB, SWEDEN

DESIGN DATA		PRIMARY SIDE	SECONDARY SIDE
MEDIA		R717	
FLOWRATE	kg/h		
CONNECTION			
PRESSURE DROP	kPa		
DESIGN PRESSURE	barg		
TEST PRESSURE	barg		
WORKING TEMPERATURE	barg		
DESIGN TEMPERATURE	°C		
PLATAGE GROUPING			
VOLUME	ltr		
HEAT TRANSFER AREA	m^2		
CORROSION ALLOWANCE	0		
DESIGN CODE	X		
REGULATIONS	PED, CATEGORY X		

LIQUID SEPARATOR DATA		
VOLUME	ltr	651
OIL POT USEFUL VOLUME	ltr	3,50
EXPOSED SURFACE	m^2	3,30
MATERIAL	AISI 304	

LIQUID SEPARATOR NOZZLES

POS	FUNCTION	CONNECTION	DIM
N	OIL DRAIN 2	BUTTWELD	ø33,7
M	LIQUID HIGH LEVEL TRIP OUT	BUTTWELD	ø33,7
L	VACANT		
K	VACANT		
J	OIL DRAIN 1	BUTTWELD	ø21,3
I	LIQUID LEVEL 2	BUTTWELD	ø33,7
H	LIQUID LEVEL 1	BUTTWELD	ø33,7
G	LEVEL TRANSMITTER	CPL. FEMALE THREAD	G1"
F	SAFETY VALVE	BUTTWELD	ø33,7
E	PRESSURE GAUGE	BUTTWELD	ø21,3
D	LIQUID FEED	BUTTWELD	ø33,7
C	DRY SUCTION	BUTTWELD	ø114,3

Rev.	Date	Description

CUSTOMER X
END CUSTOMER X
PROJECT X
P.O. No. X
SUPPLIER ALFA LAVAL LUND AB, SWEDEN
ORDER No. X
ALFA LAVAL REP. X
P.O. No. X
SERIAL No. X
ITEM No. X

UL/1600/A/1/M10/PED
DESIGN AND ARRANGEMENT DRAWING

SCALE	DATE/DEPT	DRAWN	CHECK.	APPR.	DRAWING NO.	REV.
-	X OM-SPS	BS	XX	XX	X	0