

**ENERFLEX**

**P&ID's**



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PROJECT DESCRIPTION

40 MMSCFD REFRIGERATION PLANT  
FOR: PEYTO EXPLORATION & DEVELOPMENT  
LOCATION NAME: STOCK  
LSD: STOCK

FABRICATED BY:

ENERFLEX LTD.  
CALGARY, ALBERTA, CANADA

SYSTEM CONSUMABLES

PROPANE: 3800 KGS  
50% OIL COOLING GLYCOL: 0.080 M CU.  
COMPRESSOR LUBE OIL: S1-150 0.76 M CU.  
80/20 GLYCOL INJECTION SYSTEM: 5.00 MCU.  
HEAT MEDIUM FLUID CAPACITY: 0.84 MCU.

DESIGN CRITERIA & APPLICABLE CODES

SITE ELEVATION: 1036M ABOVE MEAN SEA LEVEL  
BAROMETRIC PRESSURE: 90 KPAA  
AMBIENT TEMPERATURE: MAXIMUM 40°C  
MINIMUM -40°C  
WIND SPEED: MAXIMUM 145 KMPH  
SEISMIC ZONE A  
PROCESS CONDITION: MAXIMUM PRESSURE 4600 KPAG  
INSTRUMENT AIR: MINIMUM PRESSURE 600 KPAG  
MAXIMUM PRESSURE 1034 KPAG  
CARBON STEEL PIPE FOR INSTRUMENT AIR HEADER (PIPE CLASS L11/C11)  
APPLICABLE CODE: CODE PIPING B31.3 - 2014  
NON-CODE PIPING EFX C01, 1mm CA;  
VESSEL ASME SECTION VIII  
EXCHANGER ASME SECTION VIII  
STRUCTURAL CWB  
ELECTRICAL CSA  
REGISTRATION: VESSEL AB  
MISCELLANEOUS: GASKETS CG TYPE, FLEXITALLIC FLEXICARB, SPIRAL WOUND, 316 SS  
BOLTING STUDS - SA-193-B7M, NUTS - SA-194-2HM  
PROCESS PIPE CARBON STEEL  
UTILITY PIPE CARBON STEEL  
FLANGES RAISED FACE (UNLESS OTHERWISE NOTED)  
ELECTRICAL: RIGID ALUMINUM CONDUIT  
SUITABLE FOR USE IN: CLASS 1, ZONE 2, GROUP IIA, T3

POWER REQUIREMENTS

KD-649/651 (2) C3 COMPRESSOR MOTOR: 447.5 KW (600HP)  
E-434/436 (2) OIL SEPARATOR HEATER: 3 KW (4HP)  
PD-511/513 (2) GLYCOL CIRCULATION PUMP MOTOR: 3.7 KW (3HP)  
PD-514/515 (2) GLYCOL INJECTION PUMP MOTOR: 5.6 KW (7.5HP)  
ED-438/439 (2) CONDENSER FAN MOTOR: 29.8 KW (50HP)  
(4) EXHAUST FAN MOTOR: 0.373 KW (0.5HP)  
CP-685 CONTROL PANEL: 24VDC  
BH-8112/8113 (2) SKID B BUILDING HEATERS: 0.373 KW (0.5HP)  
PD-510/512 (2) PRE LUBE OIL PUMP MOTORS: 1.5KW (2HP)  
BH-6512/6513 (2) SKID C BUILDING HEATERS: 0.373 KW (0.5HP)  
BH-1401 (1) SKID A BUILDING HEATER: 0.373 KW (0.5HP)  
460VAC/3PH/60HZ  
460VAC/3PH/60HZ  
460VAC/3PH/60HZ  
460VAC/3PH/60HZ  
230VAC/1PH/60HZ  
AMPS: NOM: 4.0, MAX:10  
115VAC/1PH/60HZ  
460VAC/3PH/60HZ  
115VAC/1PH/60HZ  
115VAC/1PH/60HZ

DESIGN SPECIFICATION:

ENERFLEX LTD. (EFX) SCOPE OF SUPPLY ON THIS PROJECT CONSISTS OF:  
  
-ONE SKIDED HC-DEW POINT PACKAGE INCLUDING; TOWER, GAS/GAS & GAS/LIQUIDS EXCHANGERS, CHILLER, LTS, GLYCOL REGEN., VESSELS, TANKS, PUMPS AND PIPING.  
  
- ONE SKIDED REFRIGERATION PACKAGE INCLUDING TWO PROPANE COMPRESSOR (FRICK SGC-2317 AND BALDOR MOTOR 600HP), SUCTION SCRUBBER, ECONOMIZER, OIL SEPARATOR, CONDENSER, TANKS, COOLERS, PUMPS AND PIPING.

PRIMER: -SEE PAINT TRAVELER  
PAINT: -SEE PAINT TRAVELER  
PROCESS PIPING: -SEE JQR & SPOOL ISOMETRICS  
VESSELS: -SEE JQR & VESSEL FABRICATION DRAWINGS



FINAL  
AS BUILT  
NAME T.TRAWLYCK DATE MAY 31/16

DATE DEC 01/15		SCALE NTS		PEYTO EXPLORATION AND DEVELOPMENT		ENERFLEX		P & I DIAGRAM	
DRAWN BY T.WELSH		CHECKED BY E.TOOSI		APPROVED BY M.GRAHAM		Calgary, Alberta,		PROJECT DESCRIPTION	
PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI		40 MMSCFD		Canada		& OVERVIEW	
CUST PO STOCK 007									
APEGA PERMIT No: P8651		OPER. CODE 490 511 591		WORK ORDER E002133-01		DWG NO E002133-099		SHT 1	
REV		DESCRIPTION		DATE		BY		REV 1	
1		AS BUILT		MAY 31/16		TR			
0		ISSUED FOR CONSTRUCTION		FEB 11/16		TW			

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SMALL BORE NPT & SW PIPING & FITTINGS

PROCESS & SCREW PIPING SPECIFICATIONS

SWEET SERVICE (-20-650°F,1/16"CA)									
EFX PIPE SPECIFICATION		PIPING				FITTINGS			
		NPT		SW		NPT & THREDOLET		SW & SOCKOLET	
C11	150#	1/2"	160	1/2"-2"	XS	1/2"-2" 3000#			
		3/4"-2"	XS						
C31	300#	1/2"-1 1/4"	160	1/2"-2"	XS	1/2"-2" 3000#			
		1 1/2"-2"	XS						
C61	600#	1/2"-2"	160	1/2"-2"	XS	1/2"-2" 3000#			
C151	1500#	1/2"-2"	XXS	1/2"-2"	160	1/2"-2" 6000#	1/2"-2" 6000#		
MATERIALS		SA-106-B				SA-105			

LOW TEMPERATURE SWEET SERVICE (-50-650°F,1/16"CA)							
EFX PIPE SPECIFICATION		PIPING			FITTINGS		
		NPT		SW	NPT & THREDOLET		SW & SOCKOLET
L11	150#	1/2"	160	1/2"-2"	XS	1/2"-2" 3000#	
		3/4"-2"	XS				
L31	300#	1/2"-1 1/4"	160	1/2"-2"	XS	1/2"-2" 3000#	
		1 1/2"-2"	XS				
L61	600#	1/2"-2"	160	1/2"-2"	XS	1/2"-2" 3000#	
MATERIALS		SA-333-6			SA-350-LF2-CL1		

TUBING SPECIFICATIONS

PROCESS TUBING		UTILITY TUBING	
TUBING SPECIFICATION	EFX	TUBING SPECIFICATION	EFX
TUBING MATERIAL	316SS	TUBING MATERIAL	316SS
FITTING MATERIAL	316SS C/W SS FRONT AND BACK FERRULE	FITTING MATERIAL	316SS C/W SS FRONT AND BACK FERRULE
OUTSIDE DIAMETER	MINIMUM WALL THICKNESS *	OUTSIDE DIAMETER	MINIMUM WALL THICKNESS *
1/4"	0.035"	1/4"	0.035"
3/8"	0.035"	3/8"	0.035"
1/2"	0.049"	1/2"	0.049"
3/4"	0.065"	3/4"	0.065"
1"	0.083"	1"	0.083"

\* NOTE: TUBING MINIMUM WALL THICKNESS SHALL BE VALIDATED AGAINST PROJECT SPECIFIC UTILIZATION MAWP.

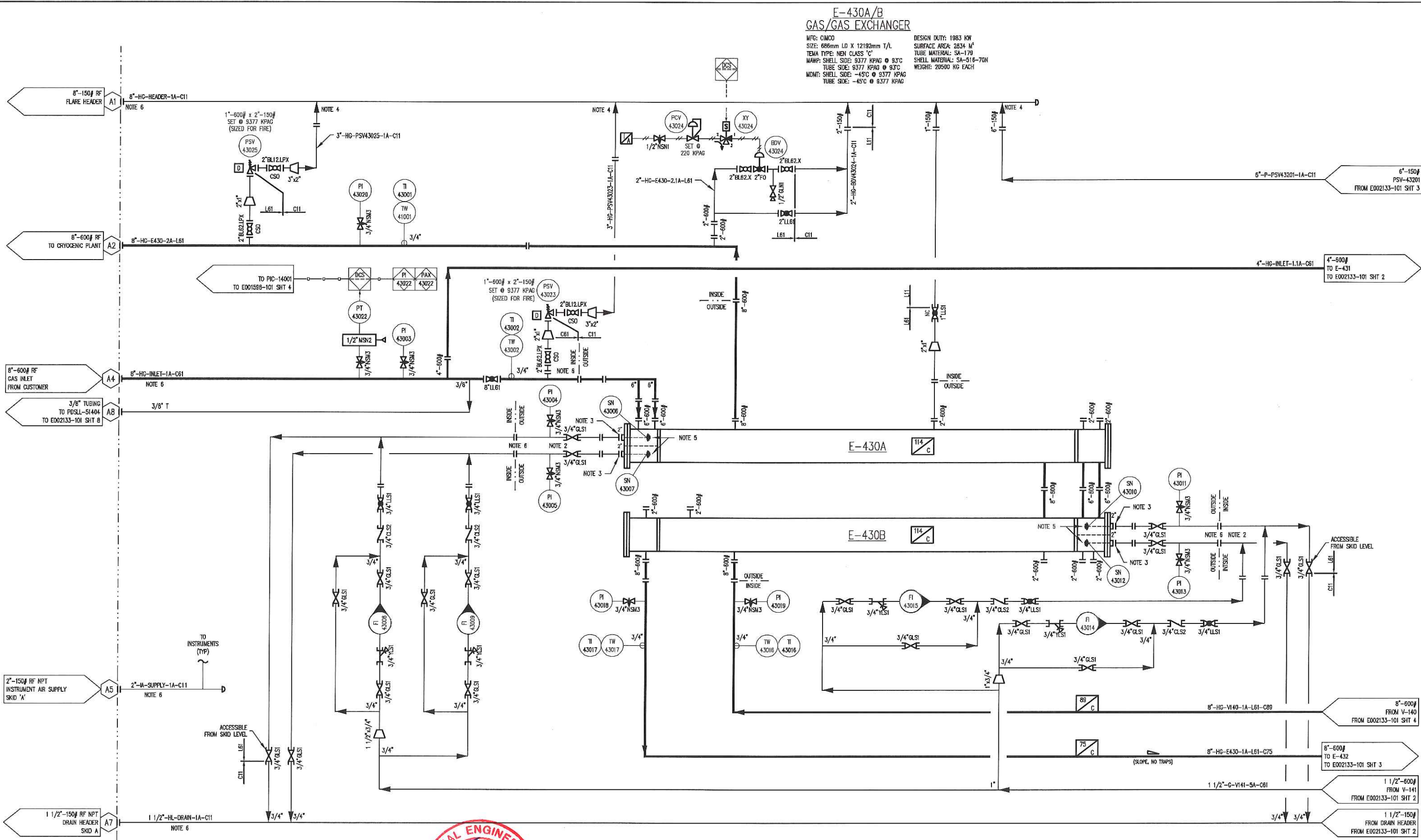


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AS BUILT  
NAME T.RAMLYCK DATE MAY 31/16

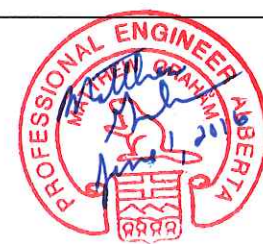
				DATE DEC 01/15		SCALE NTS		PEYTO EXPLORATION AND DEVELOPMENT REFRIGERATION PLANT 40 MMSCFD STOCK		<b>ENERFLEX</b> Calgary, Alberta, Canada		P & I DIAGRAM PROJECT DESCRIPTION & OVERVIEW							
				DRAWN BY T.WELSH		CHECKED BY E.TOOSI									APPROVED BY M.GRAHAM				
				PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI													
				CUST PO STOCK 007															
1	AS BUILT			MAY 31/16	TR	MG													
0	ISSUED FOR CONSTRUCTION			FEB 11/16	TW	ET													
REV	DESCRIPTION			DATE	BY	APR	APEGA PERMIT No: P8651		OPER. CODE 490 511 591		WORK ORDER E002133-01		DWG NO	E002133-099		SHT	2	REV	1



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- NOTES:
- 1. COLD INSULATION TO BE FOAMGLASS. HOT/PERSONAL PROTECTION INSULATION TO BE MINERAL WOOL.
  - 2. PI AND GATE VALVE LOCAL TO SPRAY NOZZLE FOR START-UP AND TROUBLE SHOOTING.
  - 3. REFER TO NOZZLE DETAIL DRAWING.
  - 4. TOP OF PIPE CONNECTION, DO NOT TRAP.
  - 5. SPRAY NOZZLE PIN IS FRAGILE. USE CARE DURING INSTALLATION AND REMOVAL.
  - 6. ALL PIPING PROJECTING OUT OF BUILDING TO UTILIZE LOW TEMPERATURE MATERIALS BACK TO FIRST JOINT INSIDE BUILDING.



1	AS BUILT	MAY 31/16	TR	MG
0	ISSUED FOR CONSTRUCTION	FEB 11/16	TW	ET
REV	DESCRIPTION	DATE	BY	APR

DATE	DEC 01/15	SCALE	NTS
DRAWN BY	T.WELSH	CHECKED BY	E.TOOSI
PROJECT MANAGER	K.ROBERTSON	APPROVED BY	M.GRAHAM
		PROJECT ENGINEER	E.TOOSI
CUST PO	STOCK 007		
AFEGA PERMIT No:	P8651	OPER CODE	490 511 591

PEYTO EXPLORATION AND DEVELOPMENT  
REFRIGERATION PLANT  
40 MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

P & I DIAGRAM  
PROCESS FLOW  
SKID 'A'

DWG NO	E002133-101	SHT	1	REV	1
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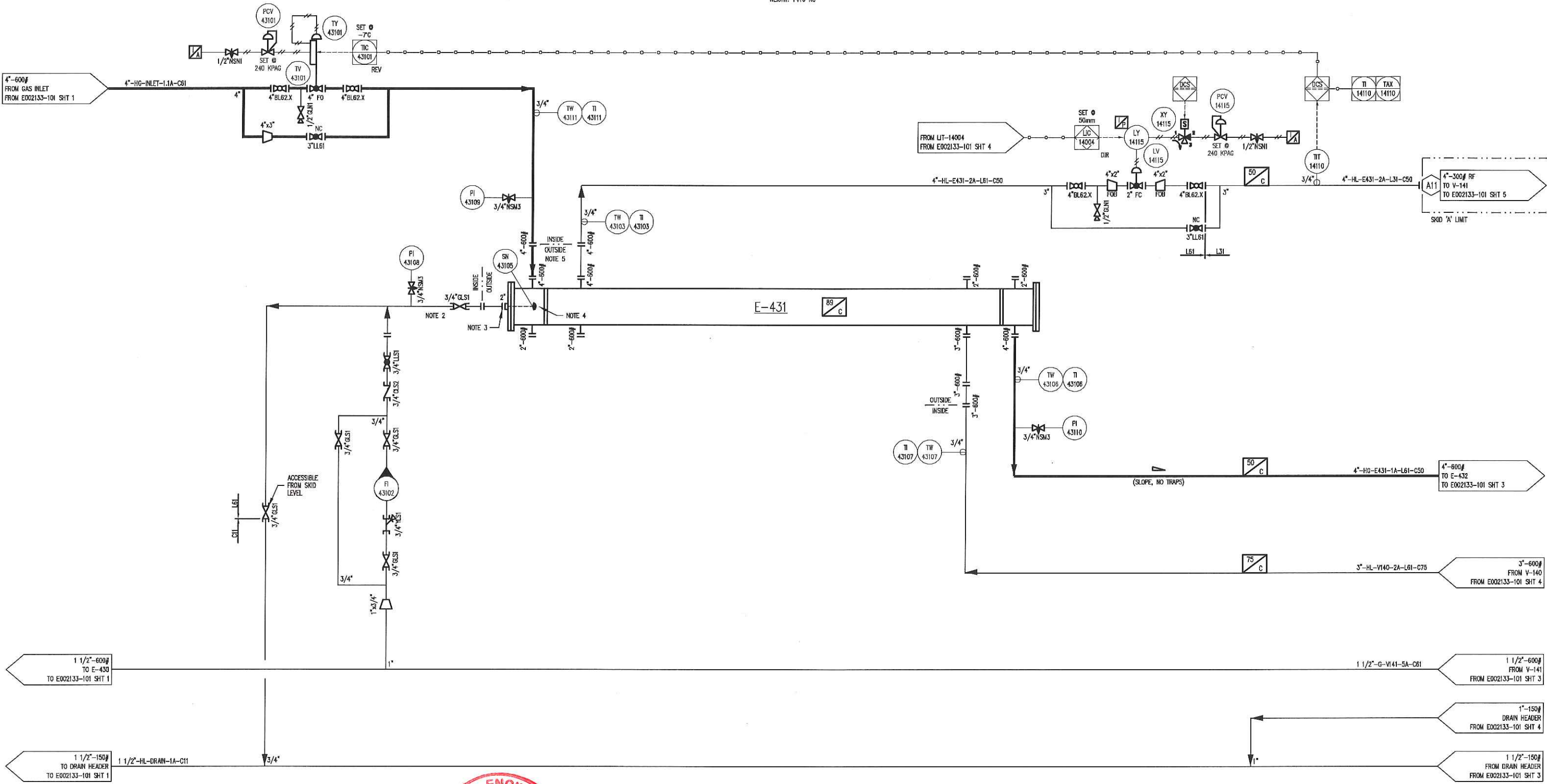
**FINAL  
AS BUILT**  
NAME T.RAMLYCK DATE MAY 31/16

FILE NAME: P:\LSP\Ref\Canada Projects\E002133 Peyto - 40MMSCFD HOSP\A - 40MMSCFD HOSP\A.dwg

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E-431  
GAS/LIQUIDS EXCHANGER

MFG: CIMCO  
SIZE: 219mm OD X 7315mm T/L  
TEMA TYPE: HEN CLASS 'C'  
MAWP: SHELL SIDE: 9377 KPAG @ 93°C  
TUBE SIDE: 9377 KPAG @ 93°C  
NDMT: TUBE SIDE: -45°C @ 9377 KPAG  
SHELL SIDE: -45°C @ 9377 KPAG  
DESIGN DUTY: 293 KW  
SURFACE AREA: 13.9 M<sup>2</sup>  
TUBE MATERIAL: SA-179  
SHELL MATERIAL: SA-516-70N  
WEIGHT: 1410 KG



- NOTES:
1. COLD INSULATION TO BE FOAMGLASS, HOT/PERSONAL PROTECTION INSULATION TO BE MINERAL WOOL.
  2. PI AND GATE VALVE LOCAL TO SPRAY NOZZLE FOR START-UP AND TROUBLE SHOOTING.
  3. REFER TO NOZZLE DETAIL DRAWING.
  4. SPRAY NOZZLE PIN IS FRAGILE, USE CARE DURING INSTALLATION AND REMOVAL.
  5. ALL PIPING PROJECTING OUT OF BUILDING TO UTILIZE LOW TEMPERATURE MATERIALS BACK TO FIRST JOINT INSIDE BUILDING.



1	AS BUILT	MAY 31/16	TR	MC
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PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
CUST PO	STOCK 007	OPER CODE	490 511 591
APRGA PERMIT No:	P8651	WORK ORDER	E002133-01

PEYTO EXPLORATION AND DEVELOPMENT  
REFRIGERATION PLANT  
40 MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

P & I DIAGRAM  
PROCESS FLOW  
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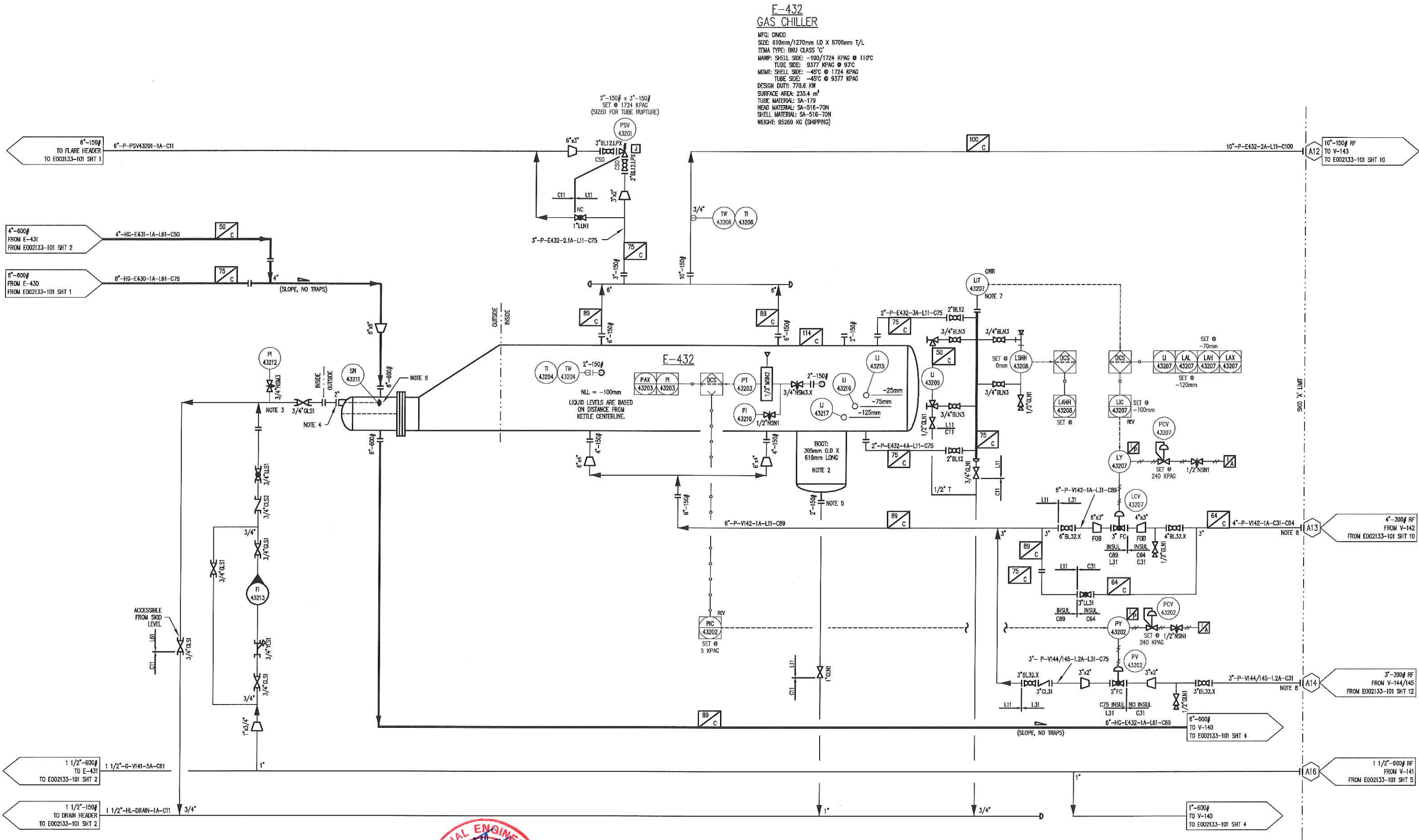
DWG NO E002133-101 SHT 2 REV 1

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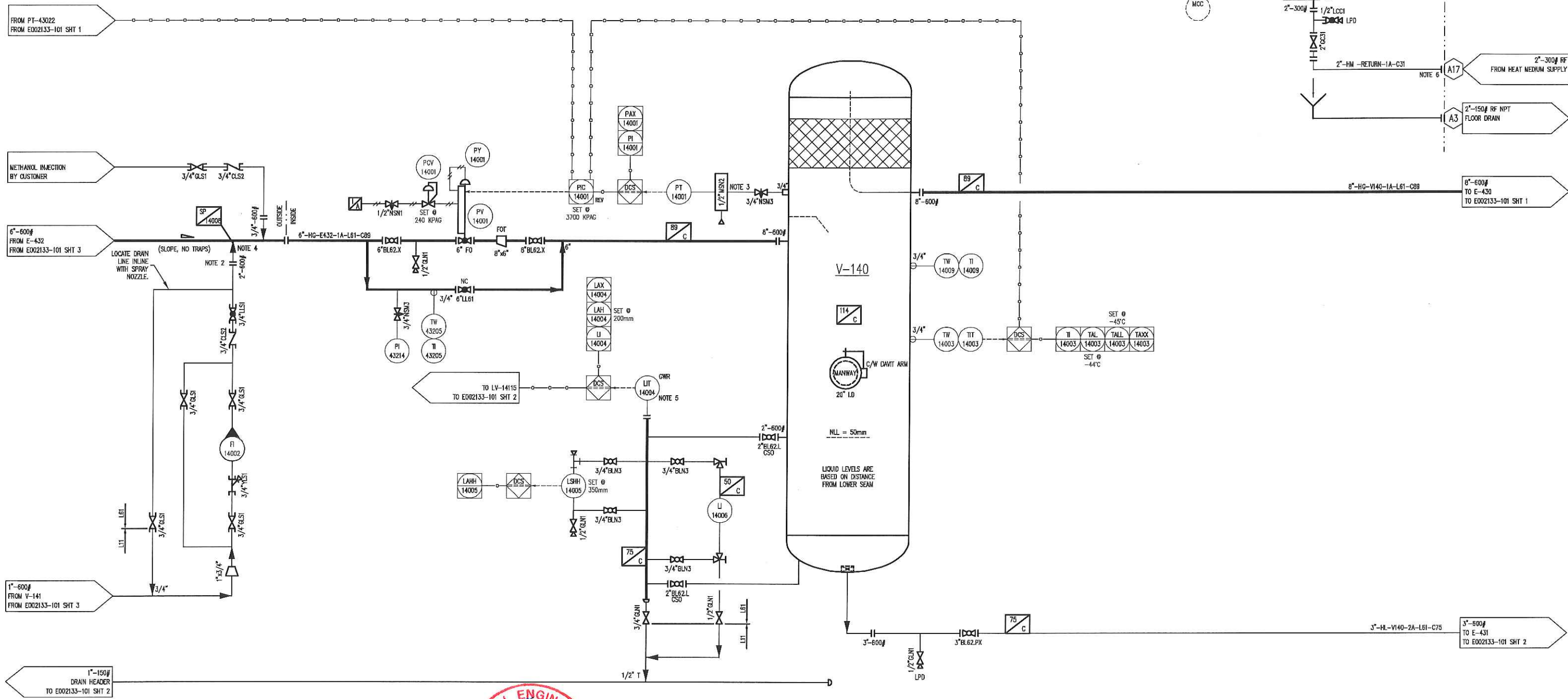


- NOTES:
1. COLD INSULATION TO BE FOAMGLASS. HOT/PERSONAL PROTECTION INSULATION TO BE MINERAL WOOL.
  2. LEAVE BOTTOM 10" OF BOOT UN-INSULATED.
  3. PI AND GATE VALVE LOCAL TO SPRAY NOZZLE FOR START-UP AND TROUBLE SHOOTING.
  4. REFER TO NOZZLE DETAIL DRAWING.
  5. 2" REDUCING FLANGE.
  6. SPRAY NOZZLE PIN IS FRAGILE. USE CARE DURING INSTALLATION AND REMOVAL.
  7. REMOTE MOUNTED DISPLAY INSTALLED.
  8. ALL PIPING PROJECTING OUT OF BUILDING TO UTILIZE LOW TEMPERATURE MATERIALS BACK TO FIRST JOINT INSIDE BUILDING.



				DATE DEC 01/15		SCALE NTS		PEYTO EXPLORATION AND DEVELOPMENT REFRIGERATION PLANT 40 MMSCFD STOCK				<b>ENERFLEX</b> Calgary, Alberta, Canada		P & I DIAGRAM PROCESS FLOW SKID 'A'					
				DRAWN BY T.WELSH		CHECKED BY E.TOOSI												APPROVED BY M.GRAHAM	
				PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI													
				CUST PO STOCK 007															
1	AS BUILT			MAY 31/16	TR	MG													
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REV	DESCRIPTION			DATE	BY	APR	APEGA PERMIT No: P8651		OPER CODE: 490 511 591		WORK ORDER E002133-01		DWG NO	E002133-101		SHT	3	REV	1

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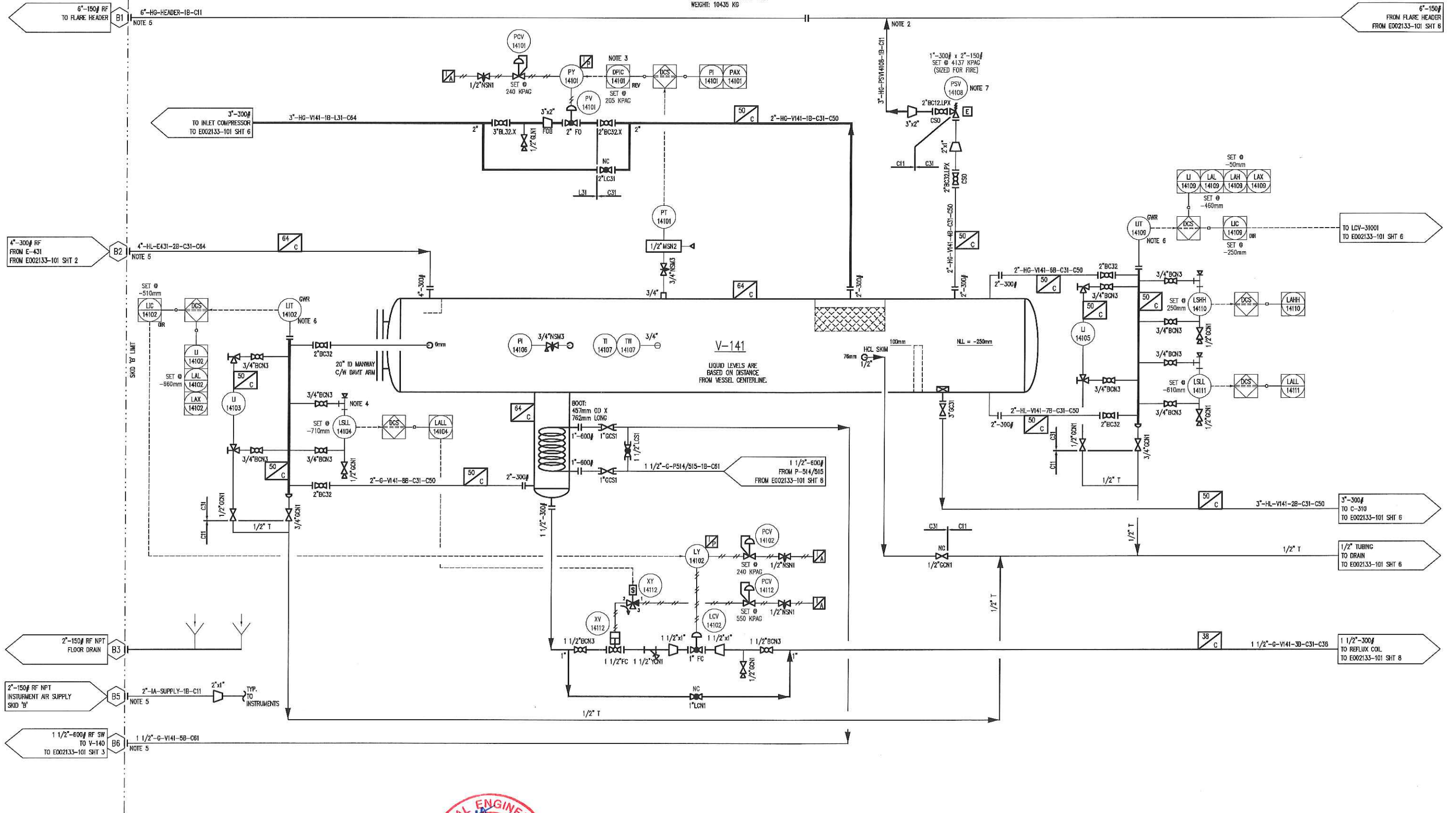


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V-141  
DE-ETHANIZER FLASH DRUM  
SIZE: 1824mm LD X 6096mm S/S  
WAMP: 4137 KPAG @ 121°C  
MOMT: -29°C @ 4137 KPAG  
C/A: 1.6mm  
SHELL MATERIAL: SA-516-70N  
HEAD MATERIAL: SA-516-70N  
WEIGHT: 10435 KG



- NOTES:
1. COLD INSULATION TO BE FOAMGLASS, HOT/PERSONAL INSULATION TO BE MINERAL WOOL.
  2. TOP OF PIPE CONNECTION, DO NOT TRAP.
  3. DPC-14101 = PT-14001 MINUS PT-14101
  4. 4\"/>



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PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
CUST PO	STOCK 007	OPER. CODE	490 511 591
APCA PERMIT No:	P8651	WORK ORDER	E002133-01

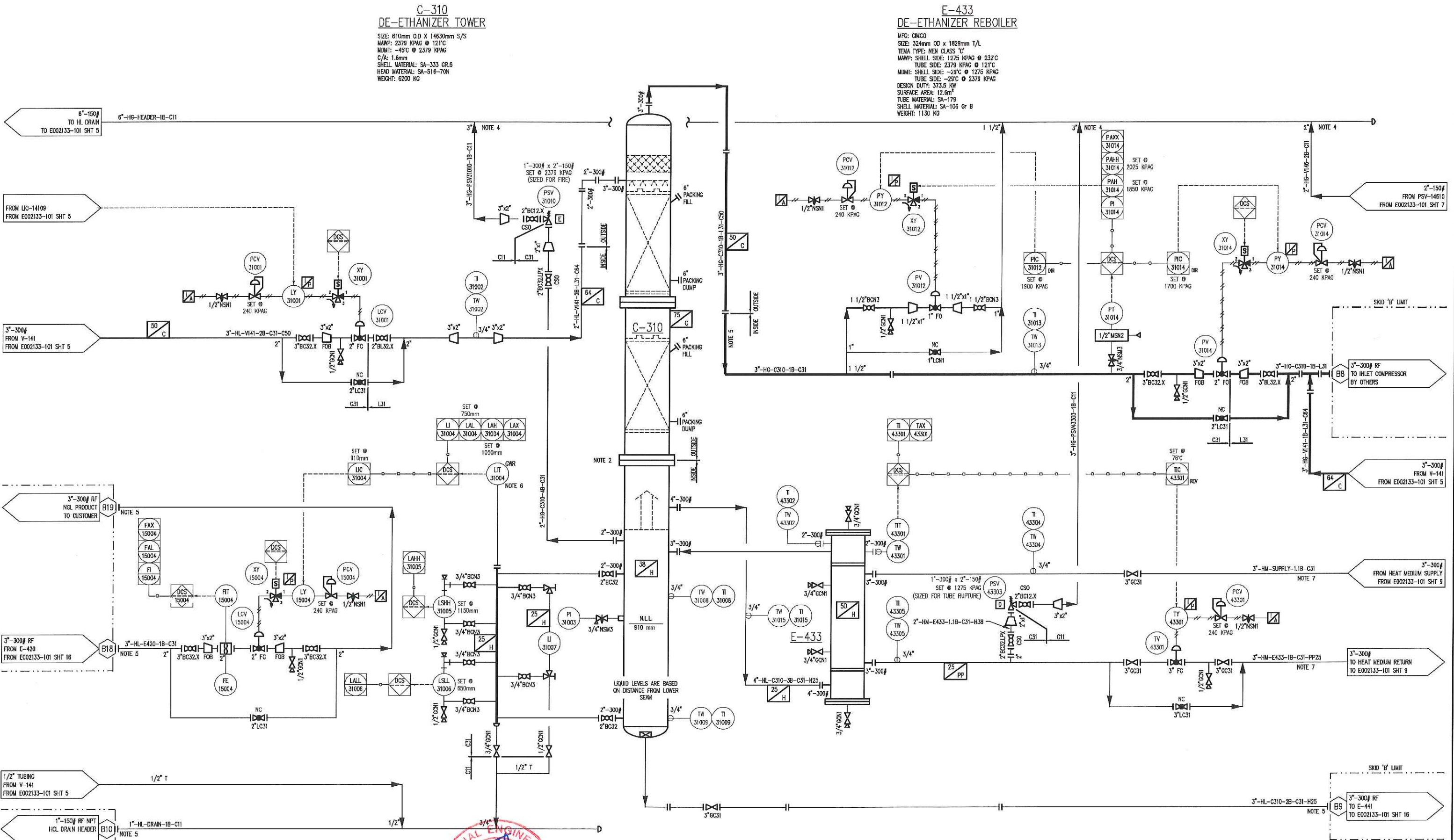
PEYTO EXPLORATION AND DEVELOPMENT  
REFRIGERATION PLANT  
40 MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

P & I DIAGRAM  
PROCESS FLOW  
SKID 'B'  
DWG NO E002133-101  
SHT 5  
REV 1



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**FINAL  
AS BUILT**

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						PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI																
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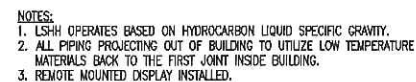


SIZE: 762mm O.D X 2438 mm S/S  
MAWP: 1034 KPAG @ 149°C  
MDMT: -29°C @ 1034 KPAG  
C/A: 1.6mm  
SHELL MATERIAL: SA-516-70N  
HEAD MATERIAL: SA-516-70N  
WEIGHT: 1225 KG

MAKE: FILTER SOLUTIONS  
MODEL: FS-180-SE-C/S-2"  
SIZE: 219mm O.D X 1016mm TL  
MAMP: 1034 KPAG @ 149°C  
MDMT: -23°C @ 1034 KPAG  
C/A: 1.6mm  
MATERIAL: CARBON STEEL  
ELEMENT: (1) 5 MICRON NOMINAL RATED 3M FILTER BAG  
WEIGHT: 55KG

MAKE: FILTER SOLUTIONS  
MODEL: FS-2-1144-C/S-2"  
SIZE: 610mm O.D X 1524mm TL  
MAWP: 1034 KPAG @ 204°C  
MONT: -29°C @ 1034 KPAG  
C/k: 1.6mm  
MATERIAL: SA 516-70  
ELEMENT: (4) 1122 CARBON CANISTER  
WEIGHT: 590 KG

MFG: RUFFNECK  
MODEL: AH-24A-A3A1-A1-2A  
AIR FLOW: 1.74 SCMS  
POWER DRAW: 115V/1PH/60HZ  
WEIGHT: 112 KG (SHIPPING)



PEYTO EXPLORATION AND DEVELOPMENT  
REFRIGERATION PLANT  
40 MMSCFD  
STOCK

P & I DIAGRAM  
PROCESS FLOW  
SKID 'B'

SHT	7	REV	1
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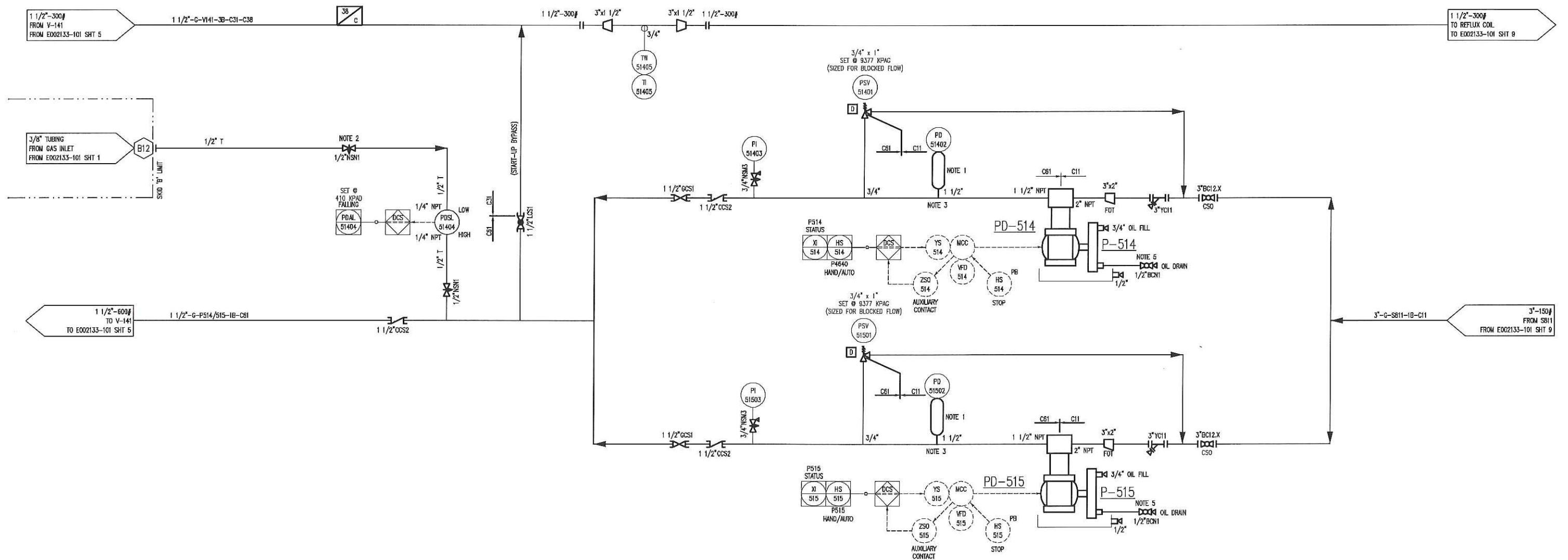
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P-514/515  
GLYCOL INJECTION PUMP  
MFG: FMC TRIPLEX PLUNG  
MODEL: M0608  
RATED FLOW: 9.4 LPM @ 170 RPM  
FLUID: EG  
POWER DRAW: 2.3 KW  
WEIGHT: 400 KG

PD-514/515  
GLYCOL INJECTION PUMP MOTOR  
MFG: TECO  
MODEL: ASH8B  
POWER: 5.6 KW @ 1200 RPM  
460 VAC/3PH/60HZ  
INVERTER DUTY  
ENCLOSURE: TEFC  
FRAME: 254T



- NOTES:
1. INSTALL PULSATION DAMPENER AS CLOSE AS POSSIBLE TO DISCHARGE PUMP.
  2. MOUNT NEAR PDSL-51404.
  3. REMOVE PULSATION DAMPENER FOR PRESSURE TESTING.
  4. ALL PIPING PROJECTING FROM OUT OF BUILDING TO UTILIZE LOW TEMPERATURE MATERIALS BACK TO THE FIRST JOINT INSIDE BUILDING.



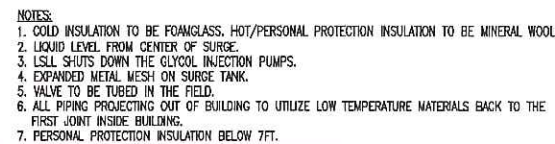
						DATE	DEC 01/15	SCALE	NTS	PEYTO EXPLORATION AND DEVELOPMENT REFRIGERATION PLANT 40 MMSCFD STOCK	<b>ENERFLEX</b> Calgary, Alberta, Canada	P & I DIAGRAM PROCESS FLOW SKID 'B'					
						DRAWN BY	T.WELSH	CHECKED BY	E.TOOSI				APPROVED BY	M.GRAHAM			
						PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	E.TOOSI								
						CUST PO	STOCK 007										
1	AS BUILT		MAY 31/16	TR	MG												
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REV	DESCRIPTION		DATE	BY	APR	APEGA PERMIT No:	P8651	OPER CODE	490 511 591	WORK ORDER	E002133-01	DWG NO	E002133-101	SHT	8	REV	1

FILE NAME: P:\SAP C&P Canada Projects\E002133 Peyto - 40MMSCFD HADP V. Drafting\PMO\E002133-01 SHT 8.dwg



REGEN SHELL: 762mm O.D X 6096mm LG  
 SURGE SHELL: 610mm O.D X 6096mm LG  
 SHELL MATERIAL: SA-53B  
 HEAD MATERIAL: G40.2144W  
 WEIGHT: 2400 KG/1500 KG (SHIPPING)

MFG: CIMCO  
SIZE: 219mm O.D x 6096mm T/L  
TEMA TYPE: B\_U CLASS 'C'  
MAWP TUBE SIDE: 1275 KPAG @ 232°C  
MDMT TUBE SIDE: -45°C @ 1275 KPAG  
DESIGN DUTY: 208 KW  
SURFACE AREA: 7.3m<sup>2</sup>  
TUBE MATERIAL: SA-179  
WEIGHT: 460 KG



1	AS BUILT	MAY 31/16	TR	MC
0	ISSUED FOR CONSTRUCTION	FEB 11/16	TW	ET
REV	DESCRIPTION	DATE	BY	APP

DATE	DEC 01/15		SCALE	NTS	
DRAWN BY	T.WELSH		CHECKED BY	E.TOOSI	
PROJECT MANAGER			APPROVED BY		
K.ROBERTSON			M.GRAHAM		
PROJECT ENGINEER			E.TOOSI		
CUST PO			STOCK 007		
APEGA PERMIT No: P8651				OPER. CODE 490	

**ENERFLEX**  
Calgary, Alberta,  
Canada

P & I DIAGRAM  
PROCESS FLOW  
SKID 'B'

SHT	9	REV	1
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**FINAL  
AS BUILT**  
NAME T.RAWLYCK DATE MAY 31/16



PLOT 31 May, 2016-4:16pm, trowick THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

### K-649 PROPANE REFRIGERATION COMPRESSOR

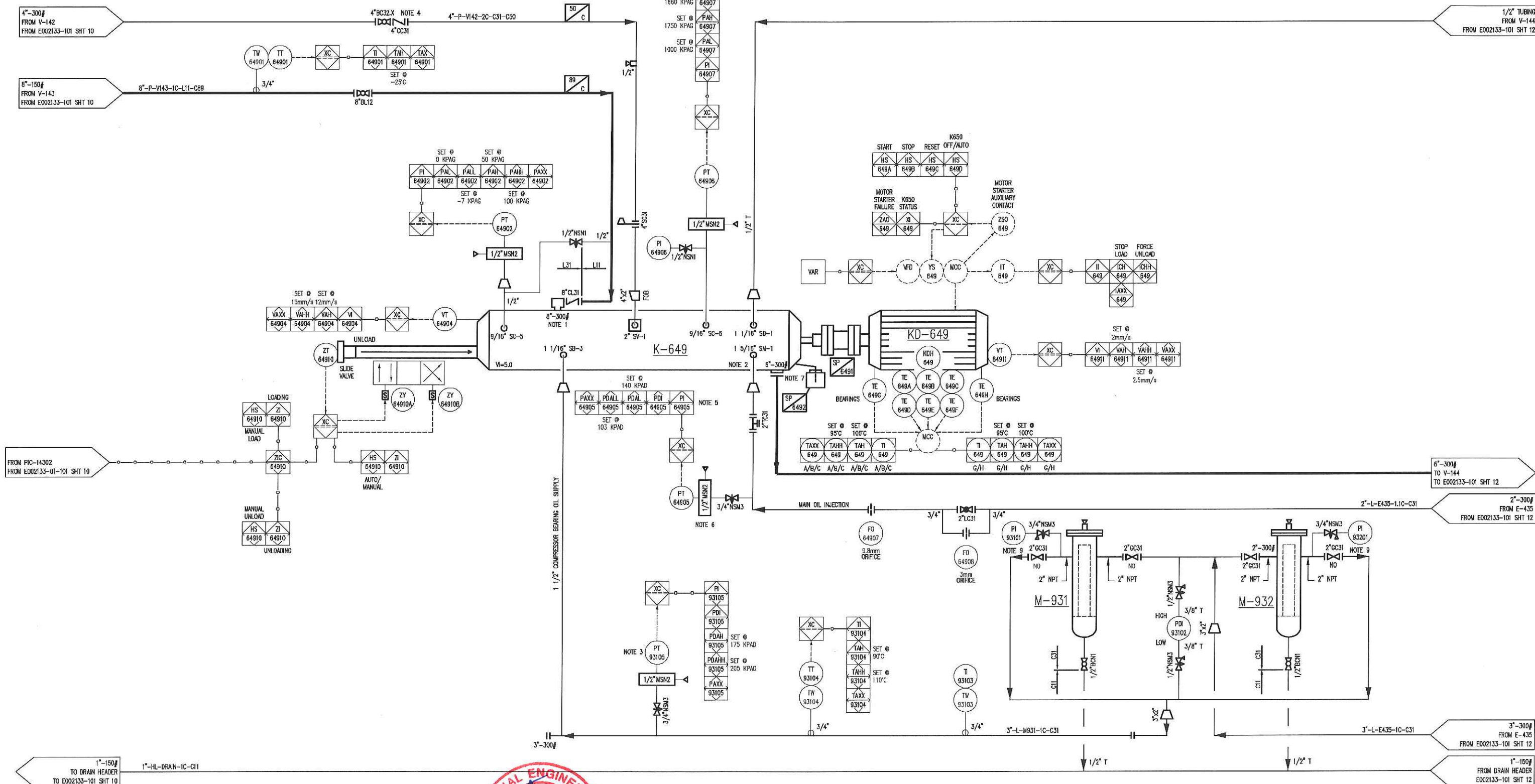
MFG: FRICK  
MODEL: SGC 2317  
OPERATING SPEED: 3550 RPM  
SUCTION PRESSURE: 12.4 KPAG @ -37°C  
DISCHARGE PRESSURE: 1590 KPAG @ 83°C  
VIBRATION MECHANICALLY @ 5.0  
OIL PRESSURE: 1487 KPAG  
OIL TEMPERATURE: 71°C  
POWER DRAW: 366.4 KW  
CAPACITY: 121.3 KG/min (DESIGN)  
WEIGHT: 1340 KG  
OIL FLOW BEARINGS: 103.7 LPM  
MAIN OIL INJECTION FLOW: 51.5 LPM  
TOTAL OIL FLOW: 155.2 LPM  
OIL TYPE: S1-150

### KD-649 PROPANE REFRIGERATION COMPRESSOR MOTOR

MFG: TECO  
MODEL: ABHE  
447.4 KW @ 3580 RPM  
3/60/480VAC  
SERVICE FACTOR: 1.15  
INVERTER DUTY  
CLASS "F" INSULATION, CLASS "B" RISE  
EFF @ 100/75/50% : 95.4/95.0/94.0  
PF @ 100/75/50% : 90.5/88.5/75.0  
POWER FACTOR @ START:  
FULL LOAD AMPS: 650.7 AMPS  
LOCKED ROTOR CURRENT: 4730 AMPS  
SAFE STALL TIME: 1950C HOT/2550C COLD  
ENCLOSURE: TEFC  
FRAME SIZE: 5810A  
WEIGHT: 2720 KG

### M-931/932 LUBE OIL FILTERS

MFG: PARKER  
MODEL: 800N205QEPGN324  
MAMP: 6900 KPAG @ 107°C  
MDMT: -40°C @ 6900 KPAG  
SHELL MATERIAL: ALUMINUM  
HEAD MATERIAL: ALUMINUM  
ELEMENTS: ECOGLASS III, 5 MICRON  
WEIGHT: 6.9 KG



- NOTES:
1. INTEGRAL STRAINER SUPPLIED WITH FRICK COMPRESSOR
  2. REMOVE & DISCARD ORIFICE PLATE SUPPLIED WITH COMPRESSOR
  3. LOCATE PT-91305 AS CLOSE AS POSSIBLE TO THE OIL HEADER ROOT VALVE.
  4. LOCATE CHECK VALVE AS CLOSE AS POSSIBLE TO COMPRESSOR CONNECTION.
  5. PDI-64905 = PT-91305 MINUS PT-64905
  6. PDI-91305 = PT-64906 MINUS PT-91305
  7. COMPRESSOR OUTLET FLANGE IS ONE-HOLED, ONE HOLE FLANGE ON OIL SEPARATOR TO MATCH.
  8. ALL PIPING PROJECTING OUT OF BUILDING TO UTILIZE LOW TEMPERATURE MATERIALS BACK TO FIRST JOINT INSIDE BUILDING.
  9. BOTH OUTLET ISOLATION VALVES ARE TO REMAIN OPEN AND ARE ONLY TO BE CLOSED WHEN ISOLATING THE FILTER FOR SERVICING.



DATE DEC 01/15				SCALE NTS		PEYTO EXPLORATION AND DEVELOPMENT REFRIGERATION PLANT 40 MMSCFD STOCK		<b>ENERFLEX</b> Calgary, Alberta, Canada		P & I DIAGRAM PROCESS FLOW SKID 'C'	
DRAWN BY T. WELSH		CHECKED BY E. TOOSI		APPROVED BY M. GRAHAM		PROJECT MANAGER K. ROBERTSON		PROJECT ENGINEER E. TOOSI		DWG NO E002133-101	
CUST PO STOCK 007		APEGA PERMIT No: P8651		OPER CODE 490 511 591		WORK ORDER E002133-01		SHT 11		REV 1	
1 AS BUILT		MAY 31/16		TR MC							
0 ISSUED FOR CONSTRUCTION		FEB 11/16		TW ET							
REV DESCRIPTION		DATE		BY		APR					



MFG: ENERFLEX  
ENCLOSURE: NEMA 4  
INTERFACE: ALLEN BRADLEY PANEL VIEW + 1000, 10"  
PLC: ALLEN BRADLEY COMPACT LOGIX

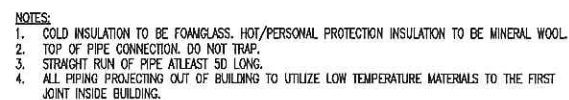
MFG: CALORITECH  
MODEL: CXFT3033F332X-026  
3KW, 3/60/460VAC

MFG: TUTHILL  
MODEL: 4105V-C-7  
RATED FLOW: 18.9 LPM  
FLUID: S1-150  
MOTOR: 1.5KW @ 1720 RPM  
460VAC/3PH/60HZ  
ENCLOSURE: TEFC  
FRAME: 145TC  
WEIGHT: 18 KG

SIZE: 914mm I.D X 3658mm S/S  
MAWP: 2068 KPAG @ 149°C  
MDMT: -29°C @ 2068 KPAG  
C/A: 1.6mm  
SHELL MATERIAL: SA-516-70N  
HEAD MATERIAL: SA-516-70N  
ELEMENTS (8): JOS-5000-V  
WEIGHT: 3225 KG

MFG: GEA EXCHANGERS  
 MODEL: FPA10X20-130/10474-UM  
 MAWP: 2758 KPAG @ 177°C  
 MDMT: -29°C @ 2758 KPAG  
 DESIGN DUTY: 138.8 KW  
 SURFACE AREA: 15.6M<sup>2</sup>  
 WEIGHT: 70 KG

MFG: DEAN INLINE CENTRIFUGAL  
MODEL: CNY206 22 1X1.5X4.75  
RATED FLOW: 164.7 LPM  
FLUID: 50% WT EG.  
POWER DRAW: 1.5 KW  
MOTOR: 3.7 KW @ 3500 RPM  
460VAC/3PH/60HZ  
ENCLOSURE: TEFC  
FRAME: 182/4JM  
WEIGHT: 91 KG (SHIPPING)



1	AS BUILT	MAY 31/16	TR	MG
0	ISSUED FOR CONSTRUCTION	FEB 11/16	TW	ET
REV	DESCRIPTION	DATE	BY	APR

DATE	DEC 01/15	SCALE	NTS
DRAWN BY	T. WELSH	CHECKED BY	E. TOOSI
		APPROVED BY	M. GRAHAM
PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
CUST PO	STOCK 007		
APEGA PERMIT No:	P8651	OPER CODE	490 51

PEYTO EXPLORATION AND DEVELOPMENT  
REFRIGERATION PLANT  
40 MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

P & I DIAGRAM  
PROCESS FLOW  
SKID 'C'

DWG  
NO E002133-101

SHT	12	REV	1
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FILE NAME: P:\\_SAP C&P Carrada Projects\E002133 Peyto - 40MMSCFD HCBP\4. Drafting\Pad\E002133-101 SHT 12.dwg



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### K-651 PROPANE REFRIGERATION COMPRESSOR

MFG: FRICK  
MODEL: SOC 2317  
OPERATING SPEED: 3550 RPM  
SUCTION PRESSURE: 12.4 KPAG @ -37°C  
DISCHARGE PRESSURE: 1550 KPAG @ 83°C  
VE-FIXED MECHANICALLY @ 5.0  
OIL PRESSURE: 1487 KG  
OIL TEMPERATURE: 71°C

POWER DRAW: 356.4 KW  
CAPACITY: 121.3 KG/min (DESIGN)  
WEIGHT: 1340 KG  
OIL FLOW BEARINGS: 103.7 LPM  
MAIL OIL INJECTION FLOW: 51.5 LPM  
TOTAL OIL FLOW: 155.2 LPM  
OIL TYPE: S1-150

### KD-651 PROPANE REFRIGERATION COMPRESSOR MOTOR

MFG: TECO  
MODEL: ACHE  
447.4 KW @ 3580 RPM  
3/60/460VAC  
SERVICE FACTOR: 1.15  
INVERTER DUTY  
CLASS "F" INSULATION, CLASS "B" RISE  
EFF @ 100/75/50% : 95.4/95.0/94.0  
PF @ 100/75/50% : 90.5/88.5/75.0  
POWER FACTOR @ START:  
FULL LOAD AMPS: 650.7 AMPS  
LOCKED ROTOR CURRENT: 4730 AMPS

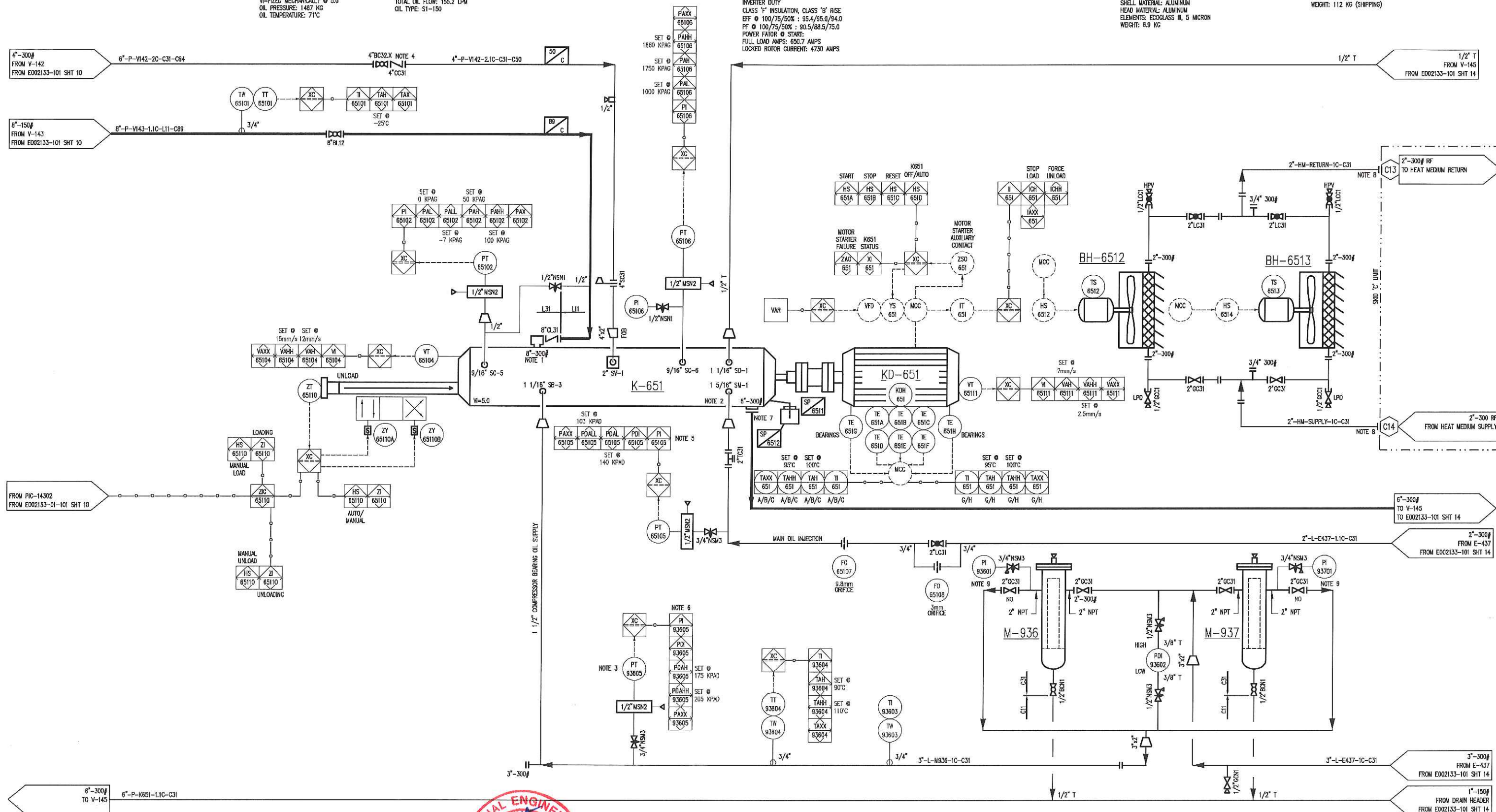
SAFE STALL TIME: 19500 H0T/25500 C0LD  
ENCLOSURE: TEFC  
FRAME SIZE: 5610A  
WEIGHT: 2720 KG

### M-936/937 LUBE OIL FILTERS

MFG: PARKER  
MODEL: 80CN2050EPGN324  
MAWP: 6900 KPAG @ 107°C  
DMPT: -40°C @ 6900 KPAG  
SHELL MATERIAL: ALUMINUM  
ELEMENTS: ECOGLASS III, 5 MICRON  
WEIGHT: 6.9 KG

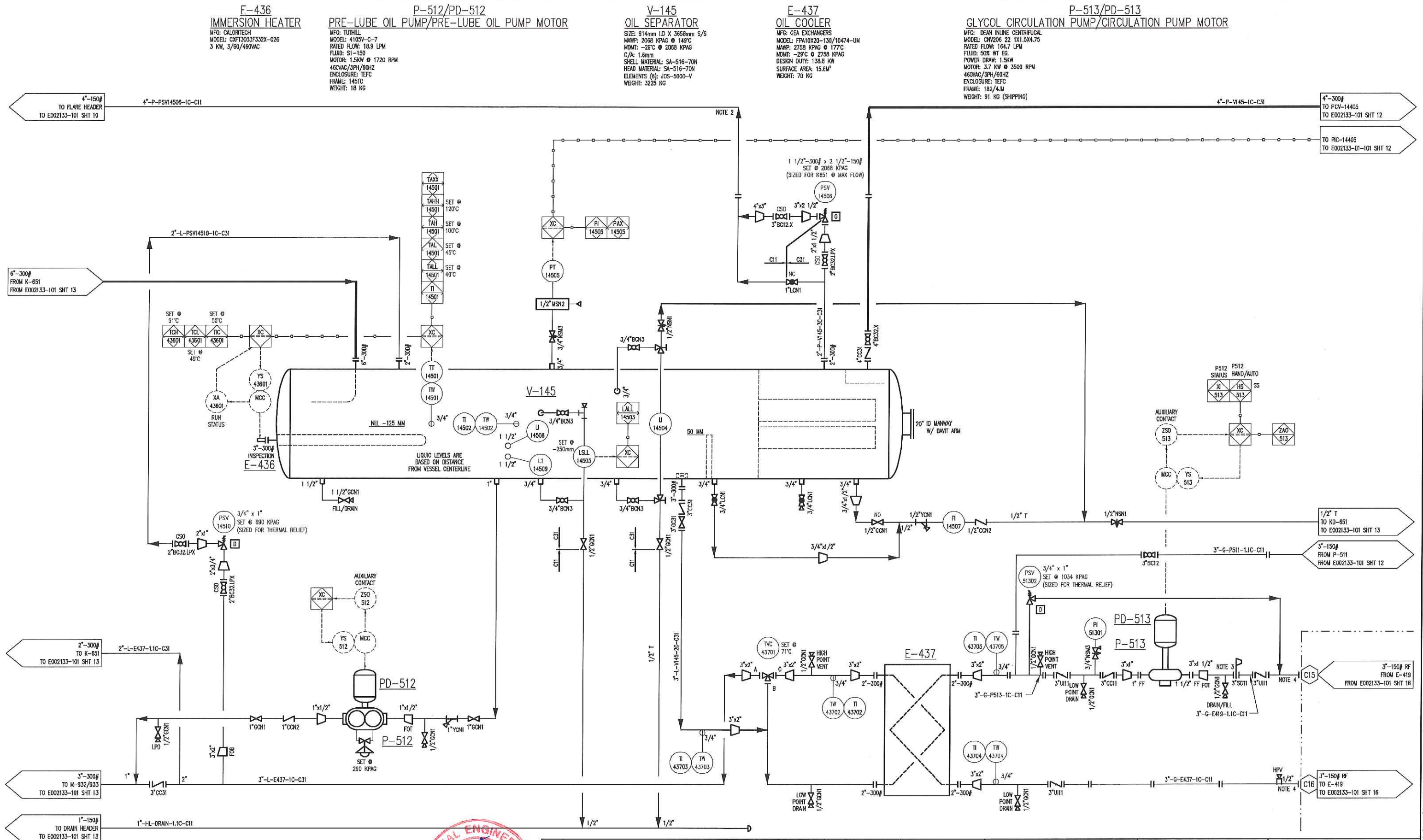
### BH-6512/6513 BUILDING HEATERS

MFG: RUFFNECK  
MODEL: AH-24A-A301-A1-2A  
AIR FLOW: 1.74 SCMS  
POWER DRAW: 115V/1PH/60HZ  
WEIGHT: 112 KG (SHIPPING)





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**FINAL  
AS BUILT**

NAME: T.RAWYCK DATE: MAY 31/16



REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 31/16	TR	MG
0	ISSUED FOR CONSTRUCTION	FEB 11/16	TW	ET

DATE	DEC 01/15	SCALE	NTS
DRAWN BY	T.WELSH	CHECKED BY	E.TOOSI
PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	E.TOOSI
CUST PO	STOCK 007	OPER CODE	490 511 591
WORLD ORDER	E002133-01	WORK ORDER	

PEYTO EXPLORATION AND DEVELOPMENT  
REFRIGERATION PLANT  
40 MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

P & I DIAGRAM  
PROCESS FLOW  
SKID 'C'

DWG NO	E002133-101	SHT	14	REV	1
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FILE NAME: P:\SAP Cap Canada Projects\E002133 Peyto - 40MMSCFD Ref V. Drafting\PAID\E002133-101 SHT 14.dwg

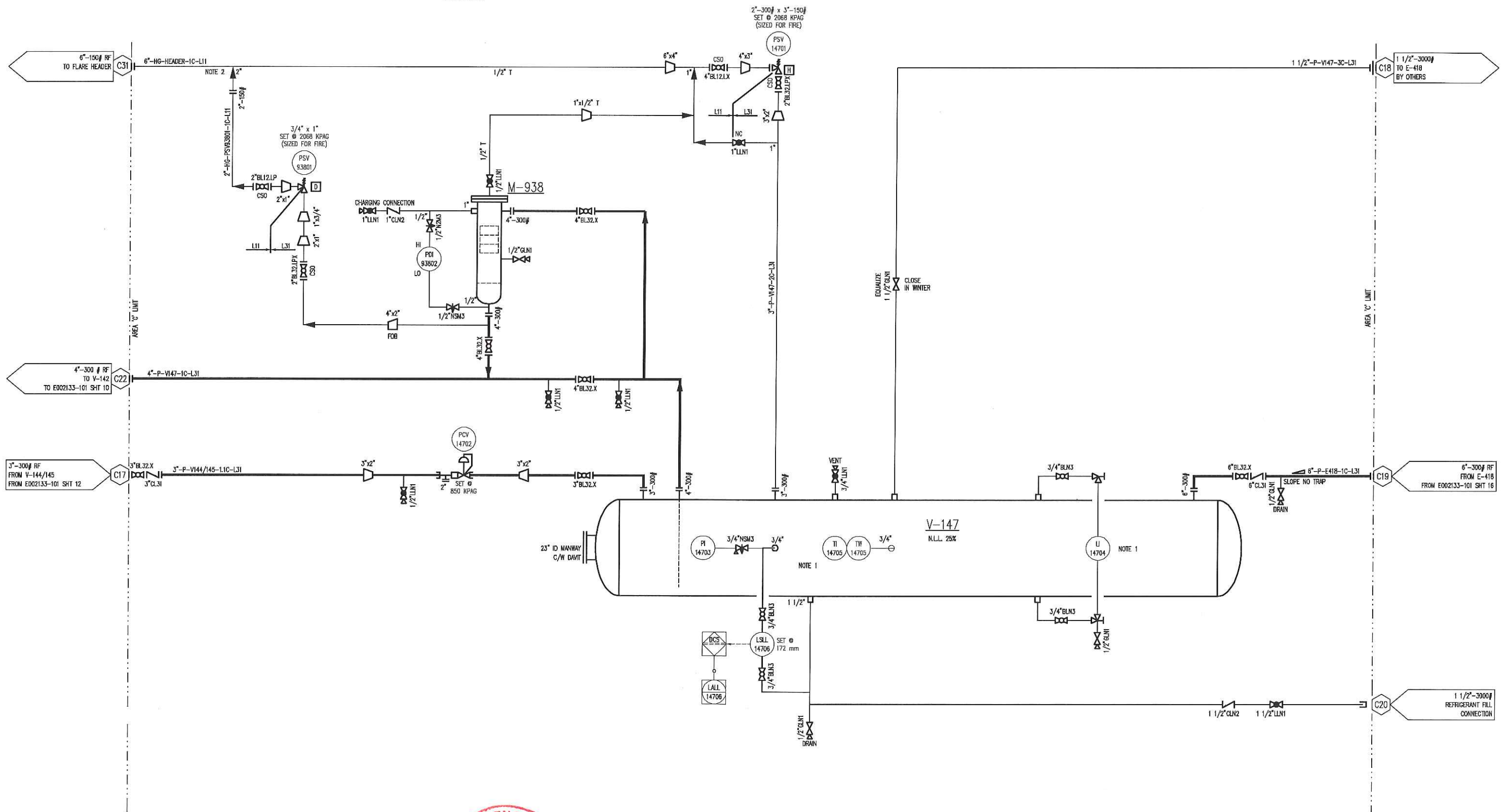
PLOT 31 May, 2016-4:17pm, final.dwg THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

### M-938 FILTER/DRYER

SIZE: 337mm ID X 760mm S/F  
MAWP: PV/2100 KPAG @ 121°C  
MDMT: -45.5°C @ 2100 KPAG  
C/A: 1.6mm  
SHELL MATERIAL: SA-333GR6  
HEAD MATERIAL: SA-420-WPL6  
ELEMENTS: (12) RC-10095  
WEIGHT: 400 KG

### V-147 REFRIGERANT ACCUMULATOR

SIZE: 1372mm I.D X 6096mm S/S  
MAWP: PV/2068 KPAG @ 149°C  
MDMT: -45°C @ 2068 KPAG  
C/A: 1.6mm  
HEAD MATERIAL: SA-516-70N  
SHELL MATERIAL: SA-506-70N  
WEIGHT: 5440 KG



- NOTES:  
1. PI, TI, & UI TO BE MOUNTED CLOSE TO EACH OTHER.  
2. TOP OF PIPE CONNECTION, DO NOT TRAP.



						DATE	DEC 01/15	SCALE	NTS	PEYTO EXPLORATION AND DEVELOPMENT REFRIGERATION PLANT 40 MMSCFD STOCK	<b>ENERFLEX</b> Calgary, Alberta, Canada	P & I DIAGRAM PROCESS FLOW AREA 'C' LIMIT				
						DRAWN BY	T. WELSH	CHECKED BY	E. TOOSI				APPROVED BY	M. GRAHAM		
						PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI							
						CUST PO	STOCK 007									
1	AS BUILT	MAY 31/16	TR	MG												
0	ISSUED FOR CONSTRUCTION	FEB 11/16	TW	ET												
REV	DESCRIPTION	DATE	BY	APR	APEGA PERMIT No:	P8651	OPER. CODE	490 511 591	WORK ORDER	E002133-01	DWG NO	E002133-101	SHT	15	REV	1



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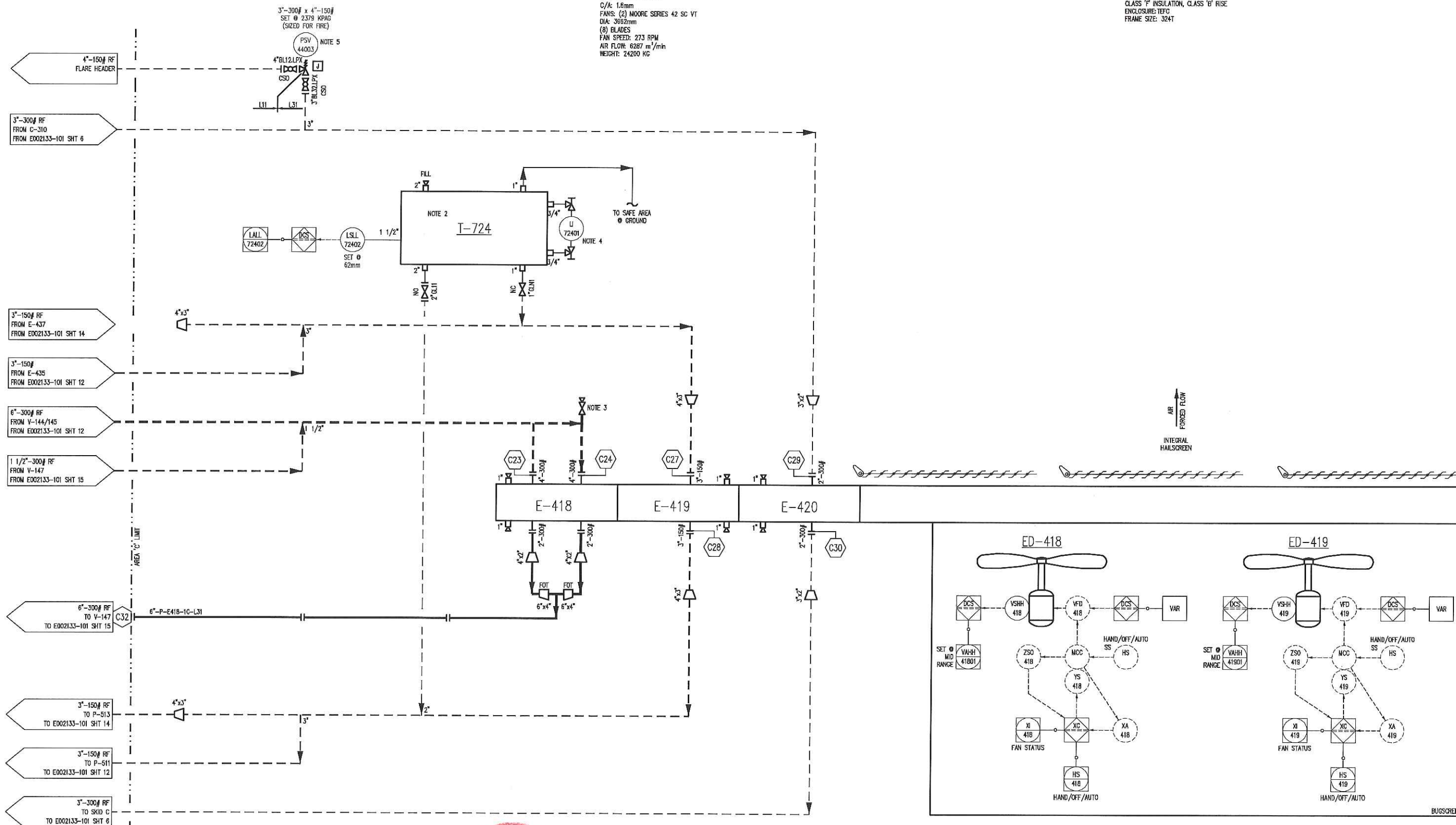
T-724  
GLYCOL SURGE TANK  
MFG: EFX  
CAPACITY: 122 L  
MATERIAL: C40.21350W

E-418  
REFRIGERANT CONDENSER  
MFG: CHART  
MODEL: 1-HF156-2-48  
MAMP: 2068 KPAG @ 149°C  
NDMT: -45°C @ 2068 KPAG  
HEADER BOX MATERIAL: SA-516-70N  
TUBE MATERIAL: SA-214  
DESIGN DUTY: 1484 KW  
C/A: 1.6mm  
FANS: (2) MOORE SERIES 42 SC VT  
DIA: 3652mm  
(8) BLADES  
FAN SPEED: 273 RPM  
AIR FLOW: 6267 m<sup>3</sup>/min  
HEIGHT: 24260 KG

E-419  
GLYCOL COOLER  
MAMP: 1034 KPAG @ 93°C  
NDMT: -45°C @ 1034 KPAG  
DESIGN DUTY: 278 KW

E-420  
HC LIQUIDS COOLER  
MAMP: 2379 KPAG @ 93°C  
NDMT: -45°C @ 2379 KPAG  
DESIGN DUTY: 77 KW

ED-418/419  
FAN MOTOR  
MFG: BALDOR  
MODEL: M00CEXR4018324T  
29.8 KW @ 1750 RPM  
460VAC/3PH/60HZ  
SERVICE FACTOR: 1.15  
INVERTER DUTY  
CLASS "F" INSULATION, CLASS "B" RISE  
ENCLOSURE: TEF  
FRAME SIZE: 324T



- NOTES:
1. HEADERS WALKWAY IS 30" WIDE SERRATED BAR GRATING C/W (1) LADDER TO GRADE WITH SELF CLOSING SAFETY GATE.
  2. SURGE TANK SHIPPED LOOSE, TO BE INSTALLED BY OTHERS AT HIGHEST POINT IN SYSTEM.
  3. HIGH POINT VENT PROVIDED BY OTHERS.
  4. VISIBLE FROM HEADER WALKWAY.
  5. PSV-42001 AND ISOLATION VALVES SHIPPED LOOSE FOR INSTALLATION BY OTHERS.



REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 31/16	TR	MG
0	ISSUED FOR CONSTRUCTION	FEB 11/16	TW	ET

DATE	DEC 01/15	SCALE	NTS
DRAWN BY	T. WELSH	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
CUST PO	STOCK 007		
APRGA PERMIT No:	P8651	OPER. 490 511 591	WORK ORDER

PEYTO EXPLORATION AND DEVELOPMENT  
REFRIGERATION PLANT  
40 MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

P & I DIAGRAM  
PROCESS FLOW  
REFRIGERANT COOLER

DWG NO E002133-101 SHT 16 REV 1

**FINAL  
AS BUILT**  
NAME T. RAWLYCK DATE MAY 31/16

FILE NAME: P:\SAP CAP Canada Projects\E002133-101 - 40MMSCFD Refr. Plant\Drawings\9401\E002133-101 SHT 16.dwg



LINE IDENTIFICATION

A-B-CD-EF-GHIJ-KL,M-N

A : NOMINAL LINE SIZE IN INCHES

B : FLUID /SERVICE

A

AMMONIA

AM

AMINE

C

CARBON DIOXIDE

CO

CARBON MONOXIDE

CW

COOLING WATER

F

FREON

FG

FUEL GAS

G

GLYCOL

H

HYDROGEN

HE

HELIUM

HG

HYDROCARBON GAS

HL

HYDROCARBON LIQUID

IA

INSTRUMENT AIR

IG

INSTRUMENT GAS

L

LUBE OIL

N

NITROGEN

NG

NATURAL GAS

O

OXYGEN

P

PROPANE

PG

PURGE GAS

R

REFRIGERANT

S

STEAM

SG

SYNGAS

V

PRODUCED WATER

W

WATER

C : EQUIPMENT TYPE / MODIFIER (IF REQUIRED)

B

BLOWER OR FAN

BH

BUILDING HEATER

C

COMPRESSOR

CPL

CONTROL PANEL

D

DRIVER (MOTOR/ENGINE)

E

EXCHANGER

F

FILTER

FS

FLARE STACK

H

HEATER

JB

JUNCTION BOX

P

PUMP

T

TOWER OR TANK

UH

UNIT HEATER

V

PRESSURE VESSEL

D : EQUIPMENT NUMBER

101 TO 999 SEQUENTIAL NUMBERS

CD : LINES TO/FROM SKID CALLED UP AS

INLET, OUTLET, HEADER, DRAIN, SUPPLY, ETC.

EF : LINE NUMBER:

E : 1 TO 9 SEQUENTIAL NUMBERS FROM EQUIPMENT

1.1 FOR 1ST BRANCH CONNECTION FROM 1ST LINE

1.2 FOR 2ND BRANCH CONNECTION FROM 1ST LINE

F : SKID/AREA REFERENCE LETTER (A, B, C...)

(‘X’ SIGNIFIES OFF SKID/INTERCONNECTING PIPE)

GHIJKL: PIPING SPECIFICATION

G : MATERIAL

C

CARBON STEEL (CS)

L

LOW-TEMP CARBON STEEL (CS)

S

STAINLESS STEEL (SS)

H : ASME CLASS

1

CL. 150

6

CL. 600

15

CL. 1500

3

CL. 300

9

CL. 900

25

CL. 2500

I : CORROSION ALLOWANCE

0

0" [0 mm]

1

1/16" [1.6 mm]

2

1/8" [3.2 mm]

J : APPLICATION

R

RECIPROCATING

CS

ROTARY & PROCESS

SS

ALL APPLICATIONS

K : (OPTIONAL) NON-STANDARD MODIFIERS

d

DE-RATED MAWP

g

GALVANIZED (CL. 150 NPT ONLY)

i

CGI GASKETS

j

RTJ FLANGES

x

SPECIAL

o4

304/L SS (DUAL RATED)

b4

304H SS

o6

316/L SS (DUAL RATED)

b6

316H SS

NC

NON-CODE

L : (OPTIONAL) BOLTING/NUT MATERIAL-STD NOT TO BE INDICATED

1

A-193-B7/A-194 GR. 2H

2

A-193-B7M/A-194 GR. 2HM

3

A-320-L7/A-194 GR. 7L

4

A-320-B8 CL. 2/A-194 GR. 8

5

A-320-B8M CL. 2/A-194 GR. 8MA

6

A-193-B8 CL. 2/A-194 GR. 8

7

A-193-B8M CL. 2/A-194 GR. 8MA

8

A-193-B5/A-194 GR. 8

9

A-193-B8T CL. 1/A-194 GR. 8

MN,O: INSULATION (IF REQUIRED)

M : INSULATION TYPE

C

COLD

H

HOT

HC

HOT/COLD

HT

HEAT TRACING

PP

PERSONAL PROTECTION

N : INSULATION THICKNESS IN MILLIMETERS OR INCHES (")

O : TRACING (IF REQUIRED)

ET

ELECTRICAL TRACING

GT

GLYCOL TRACING

ST

STEAM TRACING

P : PED PIPE IDENTIFICATION SUFFIX (IF REQUIRED)

SEP

SOUND ENGINEERING PRACTICE LINE

CATI

CATEGORY I LINE

CATII

CATEGORY II LINE

CATIII

CATEGORY III LINE

EXAMPLE: 3"-HG-V101-1A-C31di-HT1.0",ET-CATII

3"

- NOMINAL LINE SIZE

HG

- HYDROCARBON GAS

V101

- PRESSURE VESSEL TAG NUMBER

C31di

- C CARBON STEEL LINE

3

CL. 300

1

1/16" CORROSION ALLOWANCE

ROTARY & PROCESS

d

DE-RATED MAWP

i

CGI GASKETS

HT1.0"

HEAT TRACING (1.0" THICKNESS)

ET

ELECTRICAL TRACING

CATII

CATEGORY II LINE

CATII - PED CATEGORY II LINE

VALVE IDENTIFICATION

A"BCDE.F

A : NOMINAL VALVE SIZE IN INCHES

B : TYPE

A

ANGLE GLOBE

B

BALL

C

CHECK

G

GATE

L

GLOBE

M

MANIFOLD

N

NEEDLE

P

PLUG

S

START-UP STRAINER

T

TEE STRAINER

U

BUTTERFLY

Y

Y PATTERN STRAINER

C : BODY MATERIAL

B

BRONZE

C

CARBON STEEL

I

CAST IRON

L

LOW TEMP. CARBON STEEL

S

STAINLESS STEEL

D : END CONNECTIONS

1

FLANGED 150#

3

FLANGED 300#

6

FLANGED 600#

9

FLANGED 900#

15

FLANGED 1500#

25

FLANGED 2500#

B

BUTT WELD

C

SW BY NPT

F

NPT BY FLANGE (MANIFOLD)

M

NPT MALE BY NPT FEMALE

N

NPT (THREADED)

S

SW (SOCKETWELD)

T

TUBE (IE: SWAGelok)

E : UNIQUE DESCRIPTION

REFER TO EPX VALVE CODE NUMBER LISTING

F : MODIFIER

C

CHAIN OPERATOR

D

DBB VALVE

E

EXTENDED BONNET

G

GEAR OPERATOR

L

LOCKING DEVICE

N

NACE TRIM

O

OXYGEN SERVICE/CLEANING

P

FULL PORT DESIGN

R

RTJ FLANGED

S

SPRING HANDLE (CLOSE)

X

SPECIAL SPECIFICATIONS

EXAMPLE: 6"GC11.C

6"

VALVE SIZE

G

GATE

C

CARBON STEEL

1

150#

1

API-600

C

CHAIN OPERATOR

LINE CODE

PRIMARY PROCESS LINE  
CAGES & BRIDLES

AUXILIARY PROCESS LINE

THREADED PIPE

ELECTRIC SIGNAL

FILLED CAPILLARY TUBE

TUBING - PNEUMATIC/  
INSTRUMENT/IMPULSE LINE

MECHANICAL LINK

INSTRUMENT DATA LINK

SKID LIMIT

FUTURE/BY OTHERS

SONIC OR ELECTRO-MAGNETIC  
SIGNAL (GUIDED)

SONIC OR ELECTRO-MAGNETIC  
SIGNAL (UN-GUIDED)

VALVE CONNECTIONS

(COMBINATIONS MAY BE USED)

THREADED

SOCKET WELDED

BUTT WELDED

FLANGED

MISCELLANEOUS

INLINE FLANGE SET

SW FLANGE

SPECTACLE BLIND  
(LINE OPEN)

SPECTACLE BLIND  
(LINE CLOSED)

UNION (NPT)

ORIFICE PLATE  
W/ SPACER

PADDLE BLIND

BLEED RING

BASKET STRAINER

CONE STRAINER

ECCENTRIC REDUCER

EXPANSION JOINT

FLEXIBLE HOSE

FLEXIBLE COUPLING

TEE STRAINER

Y-PATTERN STRAINER

MAGNETIC METER

VENTURI

SIGHT GLASS

SONIC FLOW METER

POSITIVE DISPLACEMENT  
METER

TURBINE OR PROPELLOR  
METER

VORTEX METER

V-CONE METER

CORIOLIS METER

BALL CHECK VALVE

THROTTLE BLOCK

STUDOLET  
(FOR VESSELS)

PIG LAUNCHER  
/ RECEIVER

METER RUN

FLOW GAUGE

CONTINUOUS  
LIQUID DRAINER  
OR STEAM TRAP

SPEC BREAK

OPEN DRAIN

INSULATION TYPE

INSULATION BLOCK  
W/ ELECTRIC  
HEAT TRACE

INSULATION BLOCK  
W/ GLYCOL OR STEAM  
HEAT TRACE

SPECIALTY ITEM

PIPE SLOPE DIRECTION

DIAPHRAGM SEAL

RUPTURE DISC  
FOR PRESSURE RELIEF

RUPTURE DISC  
FOR VACUUM RELIEF

EYE WASH

SAFETY SHOWER

CUSTOMER TIE-POINTS

INSTRUMENT AIR

INSTRUMENT GAS

VENT HEADER

CURRENT/PRESSURE  
TRANSDUCER

SPRAY NOZZLE

VENT CAP

BEVELED PIPE END

END CAP

PLUG

LINE BREAK

SIZE -RATING / TYPE  
PROCESS DESCRIPTION  
TO/FROM DRAWING/SHEET

CONTINUATION ARROW

SIZE -RATING / TYPE  
PROCESS DESCRIPTION  
TO/FROM DRAWING/SHEET

CONTINUATION ARROW  
DUAL DIRECTION

INSTRUMENT IDENTIFICATION GENERAL REFERENCE (ANSI/ISA-5.1-2009)

FIRST LETTER(S)

SUCCESSING LETTER(S)

MEASURED/  
INITIATING VARIABLE

VARIABLE  
MODIFIER

READOUT/  
PASSIVE FUNCTION

OUTPUT/  
ACTIVE FUNCTION

FUNCTION  
MODIFIER

A

ANALYSIS

B

BURNER, COMBUSTION

C

CONDUCTIVITY

D

DENSITY

E

VOLTAGE

F

FLOW, FLOW RATE

G

USER'S CHOICE

H

HAND

I

CURRENT

J

POWER

K

TIME

L

LEVEL

M

MOISTURE, HUMIDITY

N

USER'S CHOICE

O

USER'S CHOICE

P

PRESSURE

Q

QUANTITY

R

RADIATION

S

SPEED, FREQUENCY

T

TEMPERATURE

U

SOLENOID

V

VIBRATION

W

WEIGHT, FORCE

X

LOGICAL CONTROLLER\*

Y

EVENT, STATE, PRESENCE

Z

POSITION, DIMENSION

D

DIFFERENCE, DIFFERENTIAL

F

RATIO

K

TIME RATE OF CHANGE

Q

INTEGRATE, TOTALIZE

S

SAFETY

X

X-AXIS

Y

Y-AXIS

Z

Z-AXIS, SAFETY INSTRUMENTED SYSTEM

BLANK IF UNUSED

A

ALARM

B

USER'S CHOICE

E

SENSOR, PRIMARY ELEMENT

G

GLASS, GAUGE, VIEWING DEVICE

I

INDICATE

J

SCAN

L

LIGHT

N

USER'S CHOICE

O

ORIFICE, RESTRICTION

P

POINT (TEST CONNECTION)

Q

INTEGRATE, TOTALIZE

R

RECORD

U

MULTIFUNCTION

W

WELL, PROBE

X

ACCESSORY DEVICES, UNCLASSIFIED

BLANK IF UNUSED

B

USER'S CHOICE

C

CONTROL

K

CONTROL STATION

N

USER'S CHOICE

S

SWITCH

T

TRANSMIT

U

MULTIFUNCTION

V

VALVE, DAMPER, LOUVER

X

UNCLASSIFIED

Y

AUXILIARY DEVICES

Z

DRIVER, ACTUATOR, UNCLASSIFIED

BLANK IF UNUSED

B

USER'S CHOICE

C

CLOSE

D

DEVIATION

H

HIGH

L

LOW

M

MIDDLE, INTERMEDIATE

N

USER'S CHOICE

O

OPEN

R

RUN

S

STOP

X

UNCLASSIFIED

BLANK IF UNUSED

INSTRUMENTS

LOCAL MOUNTED

MAIN PANEL MOUNTED  
(ON OR NEAR PANEL)

RACK MOUNTED

BY OTHERS

CONTROL SYSTEM BY OTHERS

ENERFLEX CONTROL SYSTEM

ENGINE CONTROL

INTERLOCK

ELECTRICAL INTERLOCK  
(HARDWARE)

THERMOWELL  
(THREADED)

THERMOWELL  
(SOCKET WELDED)

THERMOWELL  
(FLANGED)

PILOT LIGHT  
\* COLOUR  
(A) AMBER (B) BLUE  
(G) GREEN (O) ORANGE  
(R) RED (W) WHITE

INSIDE LINE DRAWN  
TO INDICATE LOCATION  
OF MOUNTING

FOR  
REFERENCE  
ONLY

NAME T.RAWLYCK DATE JUNE 06/16

DATE DEC 09/15

SCALE NTS

DRAWN BY A.TRAN

CHECKED BY E.TOOSI

APPROVED BY M.GRAHAM

PROJECT MANAGER K.ROBERTSON

PROJECT ENGINEER E.TOOSI

CUST PO STOCK 007

APEGA PERMIT No: P8651

OPER. CODE 490 511 591

WORK ORDER E002133-01

PEYTO EXPLORATION AND DEVELOPMENT  
REFRIGERATION PLANT  
40 MMSCFD  
STOCK

ENERFLEX

Calgary, Alberta,  
Canada

ENERFLEX  
P & I DIAGRAM  
LEGENDS & SYMBOLS

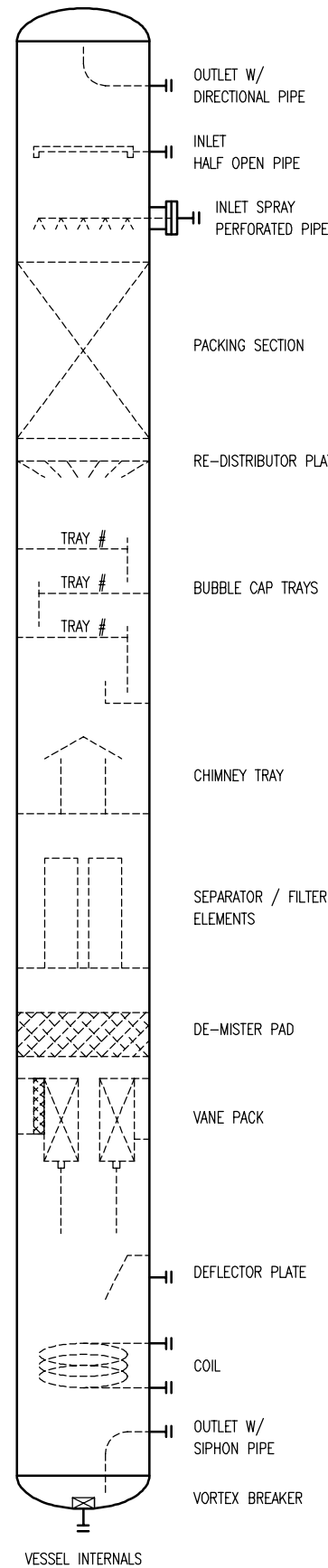
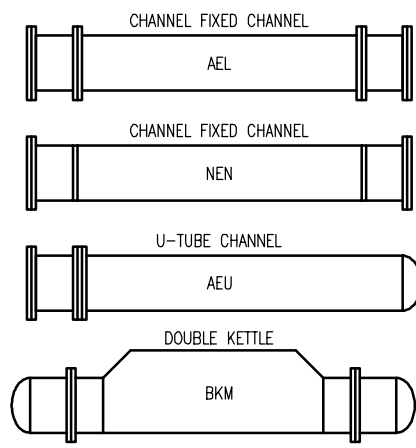
DWG No E002133-199

SHT 1

REV B

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ABBREVIATIONS			
AMB	AMBIENT	M2	SQUARE METERS
ATM	ATMOSPHERE	M3	CUBIC METERS
BDV	BLOWDOWN VALVE	MAX	MAXIMUM
BW	BUTT WELD	MAWP	MAXIMUM ALLOWABLE WORKING PRESSURE
BOP	BOTTOM OF PIPE	MCC	MOTOR CONTROL CENTER
CA	CORROSION ALLOWANCE	MDMT	MINIMUM DESIGN METAL TEMPERATURE
CC	CORROSION COUPON	MIN	MINIMUM
CS	CARBON STEEL	MM	MILLIMETER
CSC	CAR SEAL CLOSED	NB	NATIONAL BOARD
CSO	CAR SEAL OPEN	NC	NORMALLY CLOSED
CUST	CUSTOMER	NLL	NORMAL LIQUID LEVEL
DB	DEADBAND	NO	NORMALLY OPEN
△	DELTA (DIFFERENTIAL)	NPT	NATIONAL PIPE THREAD
DBB	DOUBLE BLOCK & BLEED	OAL	OVERALL LENGTH
DEG.C	DEGREES CELSIUS	OD	OUTSIDE DIAMETER
DEG.F	DEGREES FARENHEIT	PB	PUSH BUTTON
DIR	DIRECT ACTING	PL	PILOT LIGHT
EFX	ENERFLEX	PLC	PROGRAMMABLE LOGIC CONTROLLER
EL	ELEVATION	PPD	PINTS PER DAY
ESD	EMERGENCY SHUTDOWN	PSIA	POUNDS / SQUARE INCH ABSOLUTE
ESDV	EMERGENCY SHUTDOWN VALVE	PSID	POUNDS / SQUARE INCH DIFFERENTIAL
FC	FAIL CLOSED	PSIG	POUNDS / SQUARE INCH GAUGE
FF	FLAT FACED	REV	REVERSE ACTING
FL	FAIL LAST	RF	RAISED FACE
FLG	FLANGED	RFLX	REFLEX GAUGE
FO	FAIL OPEN	RO	RESTRICTION ORIFICE
FOB	FLAT ON BOTTOM	RTD	RESISTANCE TEMPERATURE DEVICE
FOT	FLAT ON TOP	RTJ	RING TYPE JOINT
FT2	SQUARE FEET	SCFM	STANDARD CUBIC FEET PER MINUTE
FT3	CUBIC FEET	SCR	SILICON CONTROLLED RECTIFIER
FV	FULL VACUUM	S/F	SEAM TO FACE OF FLANGE
FVCP	FIXED VOLUME CLEARANCE POCKET	SO	SLIP ON
FX	FROST EXTENSION	SP	SETPOINT
HI	HIGH	SPC	CALCULATED SETPOINT
HLL	HIGH LIQUID LEVEL	SS	SELECTOR SWITCH
HP	HIGH POINT	S/S	SEAM TO SEAM
HPV	HIGH POINT VENT	SVU	SUCTION VALVE UNLOADER
HTR	HEATER	SW	SOCKET WELD
ID	INSIDE DIAMETER	T	TUBING
KGS	KILOGRAMS	TC/K	THERMOCOUPLE / (TYPE)
KPA	KILOPASCAL ABSOLUTE	T/L	TUBE LENGTH
KPAD	KILOPASCAL DIFFERENTIAL	TS/TS	TUBESHEET TO TUBESHEET
KPAG	KILOPASCAL GAUGE	VB	VORTEX BREAKER
KW	KILOWATTS	V/H	VENT HEADER
LBS	POUNDS	VTA	VENT TO ATMOSPHERE
LC	LOCKED CLOSED	VTH	VENT TO HEADER
LLL	LOW LIQUID LEVEL	VCP	VARIABLE VOLUME CLEARANCE POCKET
LO	LOCKED OPEN	W/	WITH
LP	LOW POINT	W/O	WITHOUT
LPD	LOW POINT DRAIN		



						DATE DEC 03/15	SCALE NTS	PEYTO EXPLORATION AND DEVELOPMENT REFRIGERATION PLANT 40 MMSCFD STOCK	<b>ENERFLEX</b> Calgary, Alberta, Canada	ENERFLEX P & I DIAGRAM LEGENDS & SYMBOLS		
					DRAWN BY A. TRAN	CHECKED BY E. TOOSI	APPROVED BY M. GRAHAM					
					PROJECT MANAGER K. ROBERTSON	PROJECT ENGINEER E. TOOSI						
B	REVISED PER NEW STANDARD DWG.	JUN 06/16	TR	ET	CUST PO STOCK 007							
A	ISSUED FOR REFERENCE	DEC 01/15	TW	ET								
REV	DESCRIPTION	DATE	BY	APR	APEGA PERMIT No: P8651		OPER. CODE 490 511 591					

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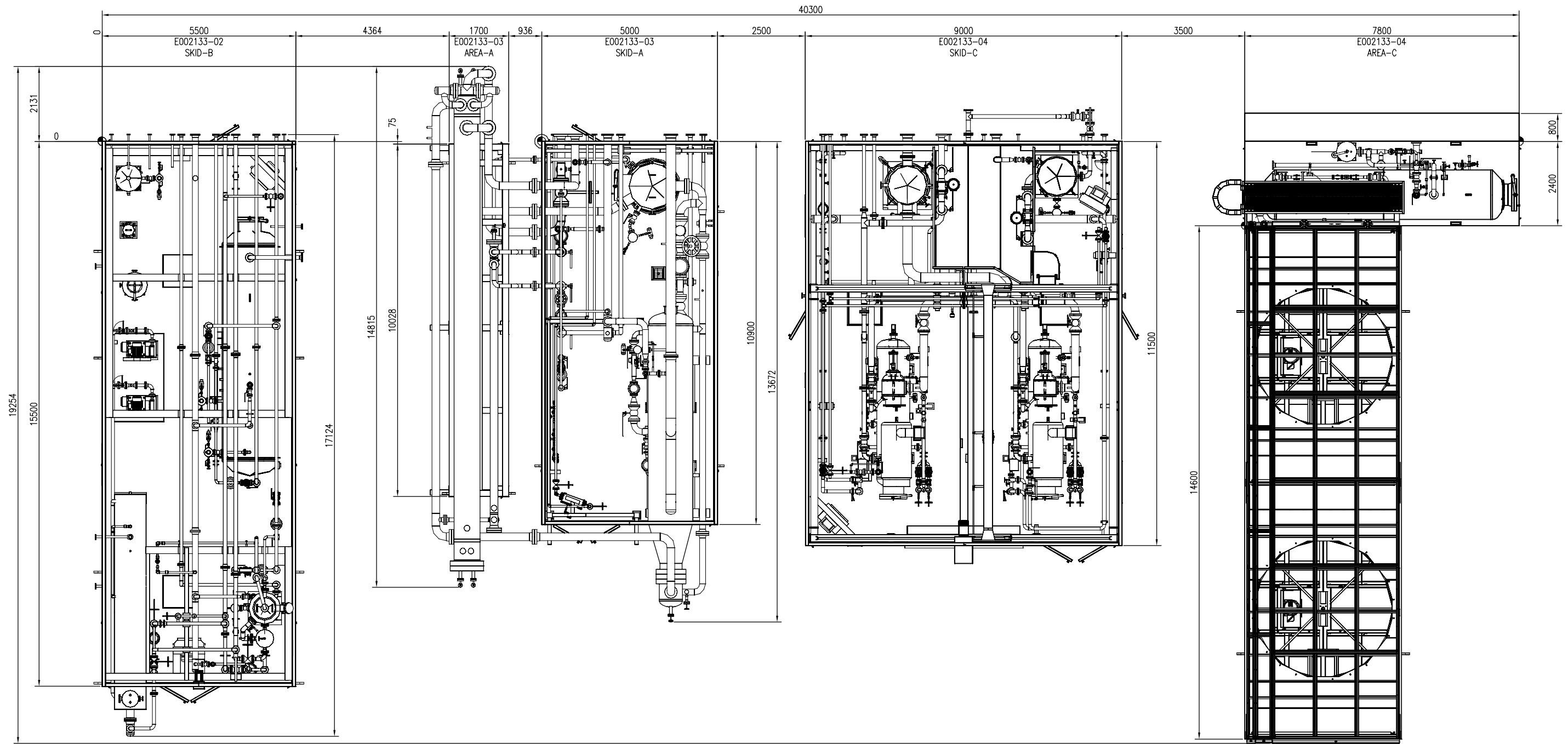
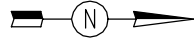


**ENERFLEX**

## **General Arrangements**







PLAN VIEW

- NOTES:
- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
  - EQUIPMENT LOCATION AND INTER-CONNECTING PIPING ARE FOR REFERENCE ONLY.

FINAL AS BUILT		NAME TONY SONG		DATE MAY 11/16	
1	AS BUILT	MAY 11/16	TS	ET	
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET	
REV	DESCRIPTION	DATE	BY	APR	

DATE	DEC 11/15	SCALE	1 : 60
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
CUST PO			
APEGA PERMIT No:	P8651	STEP CODE	

PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	WORK ORDER	E002133
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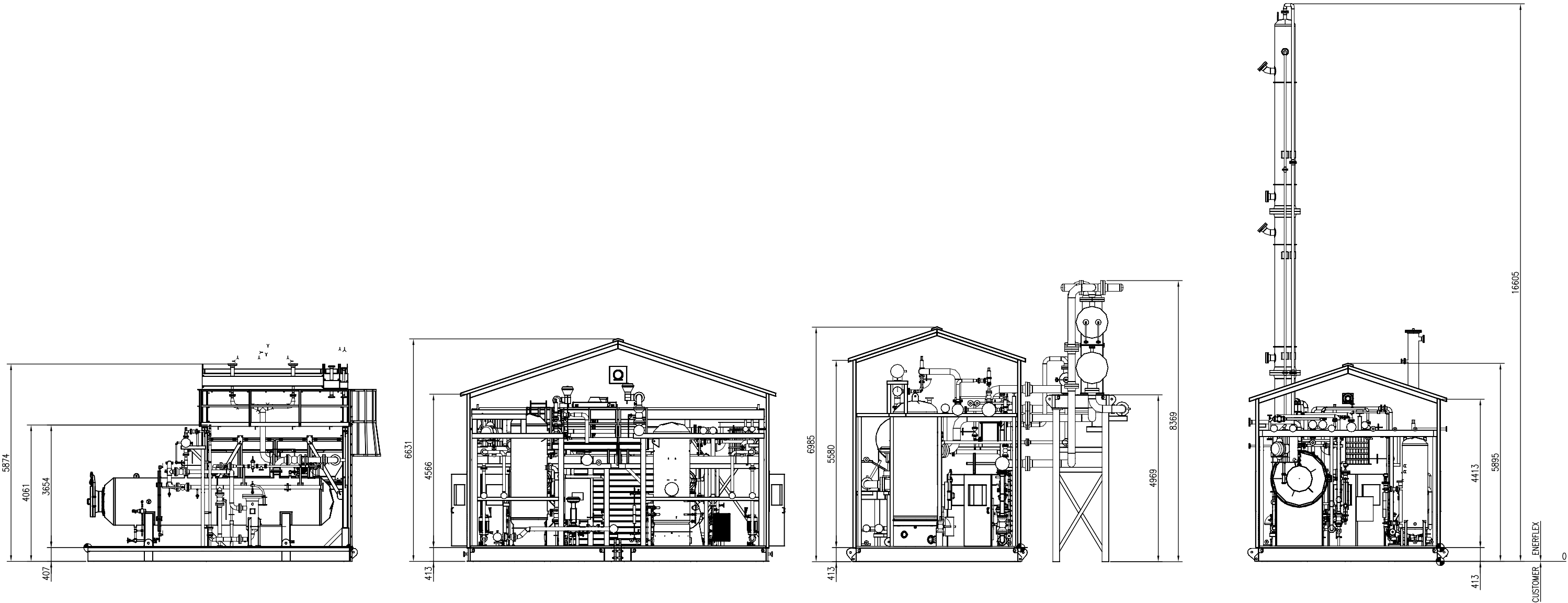
<b>ENERFLEX</b> Calgary, Alberta, Canada		PLANT LAYOUT	
DWG NO	E002133-200	SHT	1
REV	1		

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PLOT DATE: May 11, 2016, tsong



PLAN VIEW – LOOKING SOUTH

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 11/16

1	AS BUILT	MAY 11/16	TS	ET	
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET	
REV	DESCRIPTION	DATE	BY	APR	

DATE	DEC 11/15	SCALE	1 : 60
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	APPROVED BY	M. GRAHAM
		PROJECT ENGINEER	E. TOOSI
CUST PO			

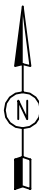
PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	WORK ORDER	E002133
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<b>ENERFLEX</b> Calgary, Alberta, Canada	PLANT LAYOUT
DWG NO	E002133-200
SHT	2
REV	0

FILE NAME: F:\\_SAP C&P Canada Projects\ED02133 Peyto - 40MMSCFD HCDP V. Drafting\ED02133-200.dwg



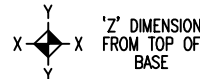
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GENERAL NOTES:

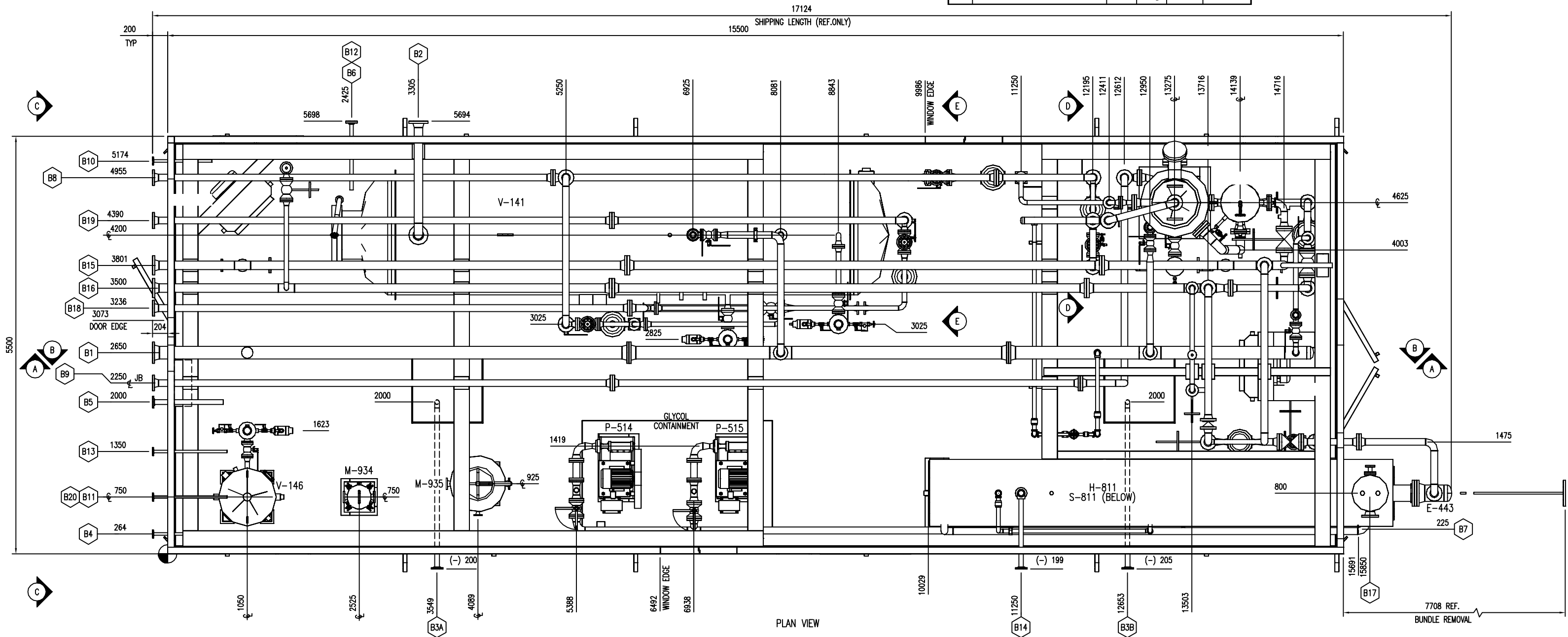
1. ALL TAIL DIMENSIONS FROM REFERENCE POINT.
2. SHIPPING LENGTH: 17124 MM  
SHIPPING WIDTH: 5970 MM  
SHIPPING HEIGHT: 5895 MM
3. SHIPPING WEIGHT: 57800 KGS
4. OPERATING WEIGHT: 79400 KGS
5. OVERALL SKID DEPTH: 413 MM

6. NOZZLE ELEVATIONS ARE FROM CENTERLINE OF PIPE TO TOP OF BASE (REFERENCE POINT).
7. (\*) DENOTES ELEVATION FROM FACE OF FLANGE TO TOP OF BASE (REFERENCE POINT).
8. CENTER OF GRAVITY:  
'X' FROM REFERENCE POINT: 7504 MM  
'Y' FROM REFERENCE POINT: 2712 MM  
'Z' FROM REFERENCE POINT: 1581 MM



NOZZLE SCHEDULE					
MARK	SERVICE	SIZE	RATING	TYPE	℄ ELEVATION
B1	FLARE HEADER	6"	150#	RFWN	3590
B2	FROM E-431 (GAS/LIQUIDS)	4"	300#	RFWN	3737
B3A	FLOOR DRAIN	2"	150#	RFNPT	-200
B3B	FLOOR DRAIN	2"	150#	RFNPT	-196
B4	DIRTY GLYCOL DRAIN HEADER	1"	150#	RFNPT	169
B5	INSTRUMENT AIR SUPPLY	2"	150#	RFNPT	3530
B6	TO V-140 (GLYCOL INJEC)	1 1/2"	600#	RFSW	3021
B7	CLEAN GLYCOL DRAIN HEADER	1"	150#	RFNPT	169
B8	TO INLET COMPRESSOR	3"	300#	RFWN	3545
B9	TO E-441 (HL COOLER)	3"	300#	RFWN	3648
B10	TO H.C. DRAIN HEADER	1"	150#	RFNPT	169

NOZZLE SCHEDULE					
MARK	SERVICE	SIZE	RATING	TYPE	℄ ELEVATION
B11	FUEL GAS SUPPLY	1"	150#	RFNPT	3517
B12	PRESS. SENSING FROM GAS INLET	1/2"	-	TUBING	-
B13	FLASH TANK VENT	1"	150#	RFNPT	3517
B14	VENT (REGEN)	2"	150#	RFNPT	3525
B15	HEAT MEDIUM SUPPLY	4"	300#	RFWN	3659
B16	HEAT MEDIUM RETURN	4"	300#	RFWN	3662
B17	TO CONDENSING TANK	4"	150#	RFWN	6211
B18	FROM E441 (HL COOLER)	3"	300#	RFWN	3543
B19	NGL PRODUCT TO CUSTOMER	3"	300#	RFWN	3543
B20	TO H.C.L. DRAIN HEADER	1"	150#	RFNPT	169



**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 5/16

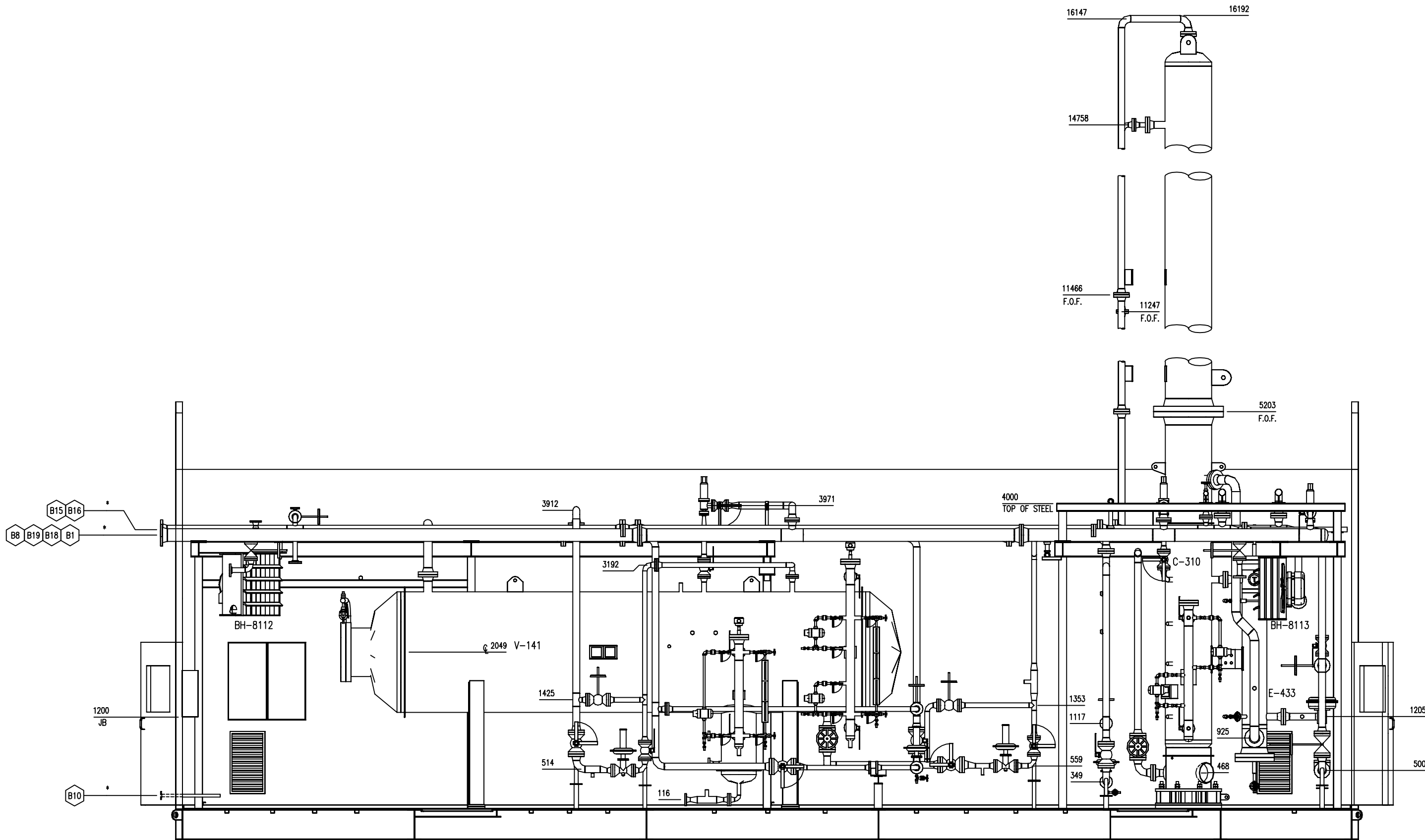
REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 5/16	TS	ET
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET

DATE	DEC 11/15	SCALE	1:25
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
CUST PO			

PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD
APEGA PERMIT No: P8651
STEP CODE 400
WORK ORDER E002133-02

<b>ENERFLEX</b> Calgary, Alberta, Canada	GENERAL ARRANGEMENT SKID B
DWG NO E002133-02-201	SHT 1
	REV 1

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SECTION A-A

\* SEE NOZZLE SCHEDULE.

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 5/16

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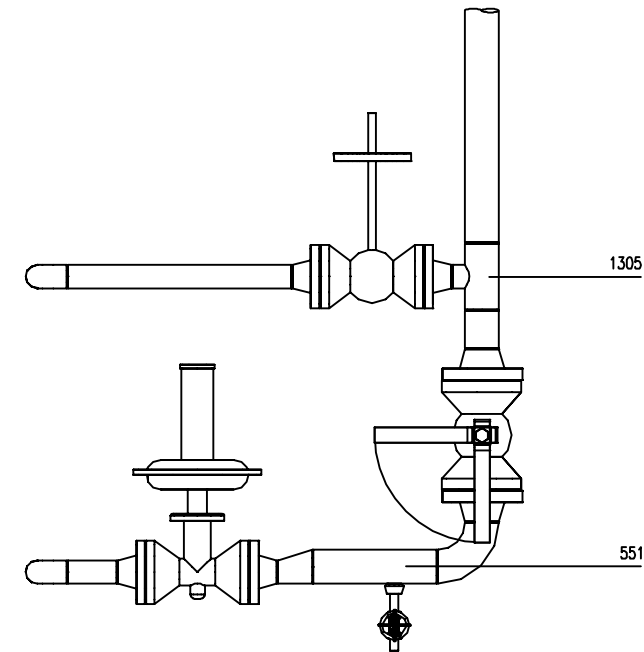
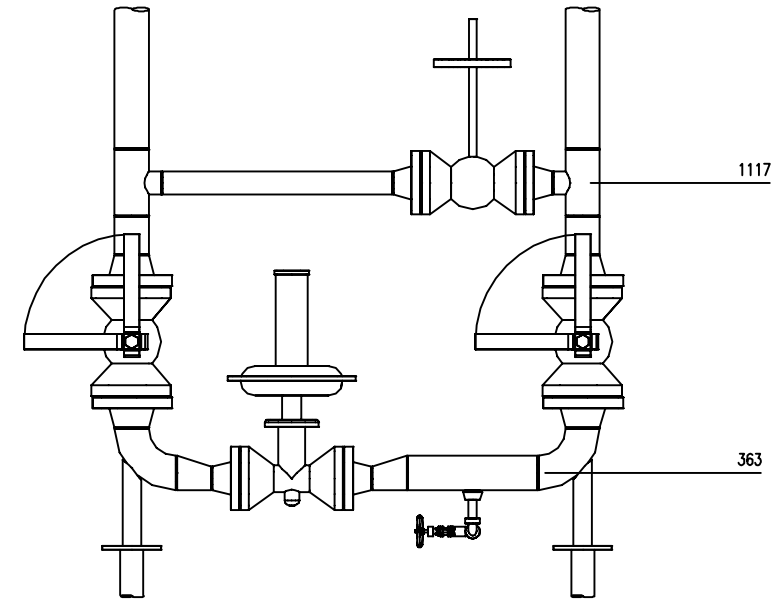
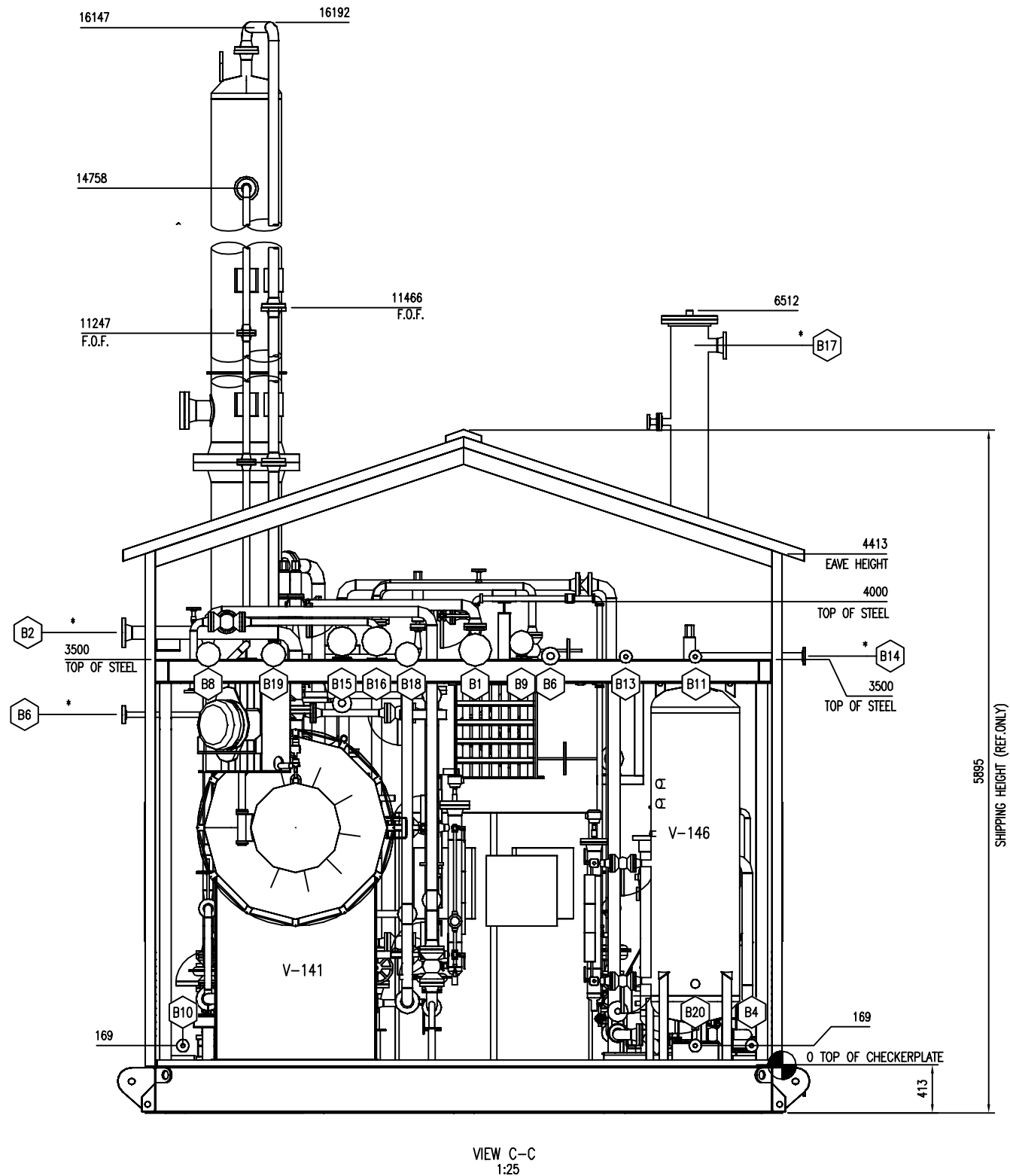
SECTION B-B

\* SEE NOZZLE SCHEDULE.

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 5/16

							DATE	DEC 11/15	SCALE	1:25	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	<b>ENERFLEX</b> Calgary, Alberta, Canada	GENERAL ARRANGEMENT SKID B					
							DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI				APPROVED BY	M. GRAHAM			
							PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI								
	1	AS BUILT		MAY 5/16	TS	ET	CUST PO											
	0	ISSUED FOR CONSTRUCTION		DEC 11/15	TS	ET												
	REV	DESCRIPTION		DATE	BY	APR	APEGA PERMIT No:	P8651	STEP CODE	400	WORK ORDER	E002133-02	DWG NO	E002133-02-201	SHT	3	REV	1

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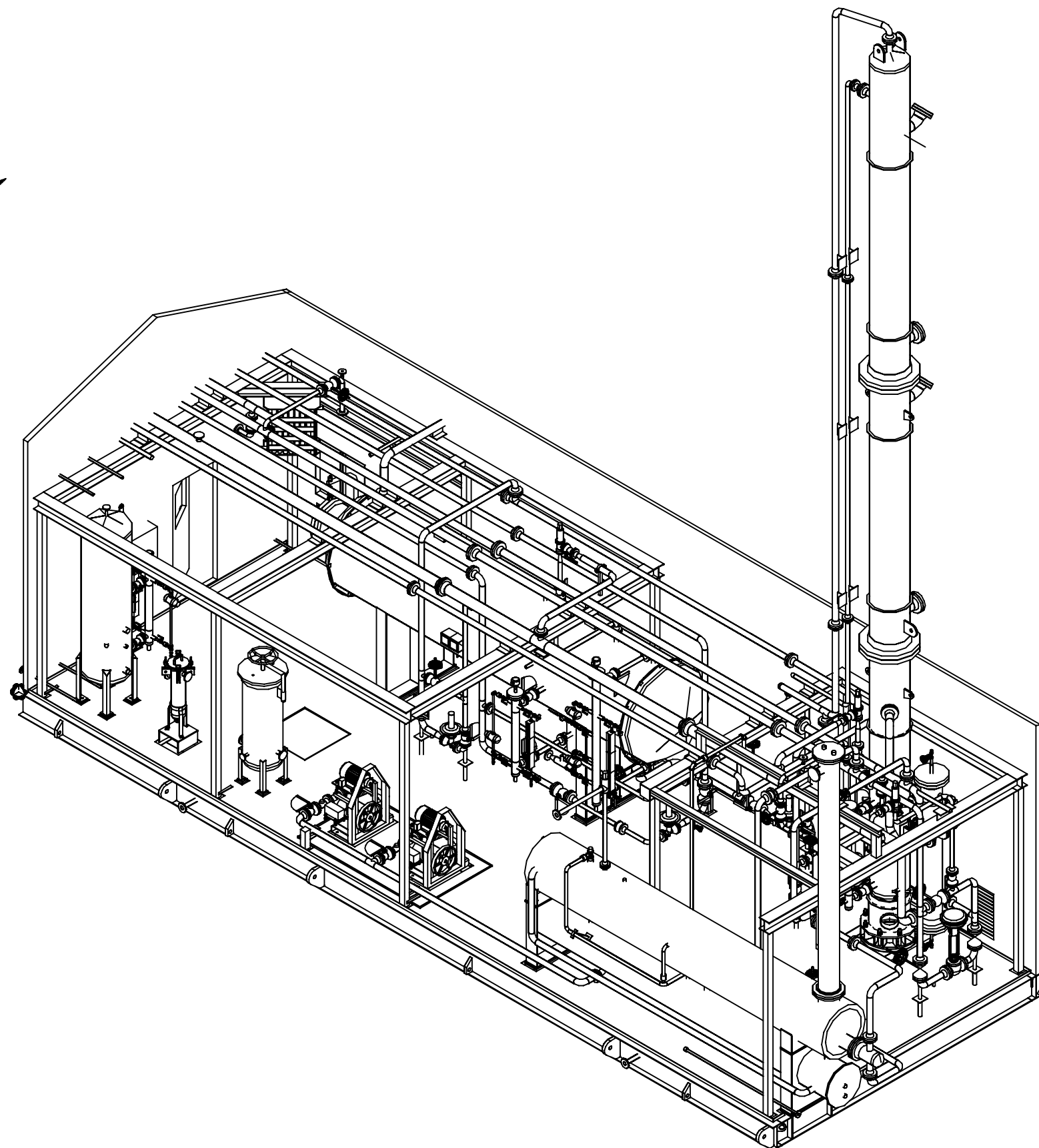


\* SEE NOZZLE SCHEDULE.

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 5/16

				DATE	DEC 11/15	SCALE	1:25	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD		<b>ENERFLEX</b> Calgary, Alberta, Canada	GENERAL ARRANGEMENT SKID B	
				DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI					
				PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI					
				CUST PO								
1	AS BUILT	MAY 5/16	TS	ET	APEGA PERMIT No: P8651		STEP CODE 400	WORK ORDER E002133-02	DWG NO	E002133-02-201	SHT 4	REV 1
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET								
REV	DESCRIPTION	DATE	BY	APR								





## FINAL AS BUILT

NAME TONY SONG DATE MAY 05/16

1	AS BUILT	MAY 05/16	TS	ET
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET
REV	DESCRIPTION	DATE	BY	APP

DATE DEC 11/15		SCALE NTS	
DRAWN BY TONY SONG		CHECKED BY E. TOOSI	
PROJECT MANAGER K. ROBERTSON		APPROVED BY M. GRAHAM	
PROJECT ENGINEER E. TOOSI		CUST PO	
APEGA PERMIT No: P8651		STEP CODE 400	

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

**ENERFLEX**  
Calgary, Alberta,  
Canada

GENERAL ARRANGEMENT  
SKID B

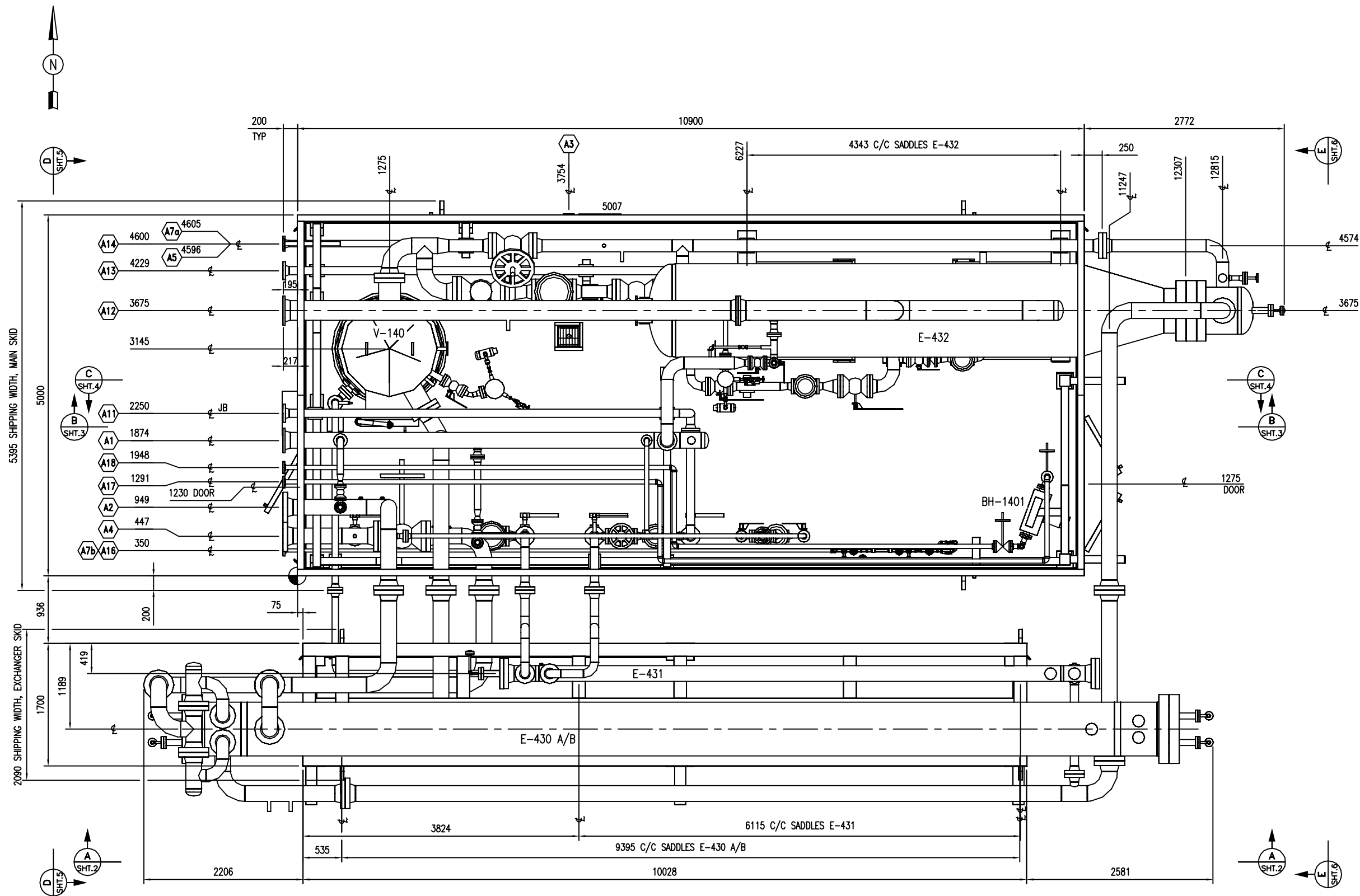
DWG NO	E002133-02-201
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SHT	5
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REV
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PLOT DATE: May 30, 2016, tsong

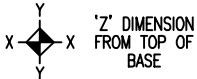


PLAN VIEW  
(1 : 30)

NOZZLE SCHEDULE					
MARK	SERVICE	SIZE	RATING	TYPE	℄ ELEVATION
A1	FLARE HEADER	8"	150#	RFWN	0000
A2	TO CRYOGENIC PLANT	8"	600#	RFWN	0000
A3	FLOOR DRAIN	2"	150#	RFWN	0000
A4	GAS INLET	8"	600#	RFWN	0000
A5	INSTRUMENT AIR SUPPLY	2"	150#	RFNPT	0000
A7a/b	DRAIN HEADER	1 1/2"	150#	RFNPT	0000
A8	PRESS. SENSING TO PDSLL-51404	1/2"	-	TUBING	0000
A11	TO V-141 (DE-C2 FLASH DRUM)	4"	300#	RFWN	0000
A12	TO V-143 (PROPANE SUCT. SCRUBBER)	10"	150#	RFWN	0000
A13	FROM V-142 (ECONOMIZER)	4"	300#	RFWN	0000
A14	FROM V-144/V-145 (SEPARATORS)	3"	300#	RFWN	0000
A16	FROM V-141 (DE-C2 FLASH DRUM)	1 1/2"	600#	RFSW	0000
A17	HEAT MEDIUM SUPPLY	2"	300#	RFSW	0000
A18	HEAT MEDIUM RETURN	2"	300#	RFSW	0000

GENERAL NOTES:

- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- SHIPPING LENGTH: 13872 MM      MAIN SKID      EXCHANGER SKID  
SHIPPING WIDTH: 5395 MM      14815 MM  
SHIPPING HEIGHT: 6985 MM      2090 MM      3807 MM
- SHIPPING WEIGHT: 50500 KGS      46600 KGS
- OPERATING WEIGHT: 114400 KGS (TOTAL)
- OVERALL SKID DEPTH: 413 MM      407 MM
- NOZZLE ELEVATIONS ARE FROM CENTERLINE OF PIPE TO TOP OF BASE (REFERENCE POINT).
- CENTER OF GRAVITY: MAIN SKID      EXCHANGER SKID  
'X' FROM REFERENCE POINT: 5184 MM      5116 MM  
'Y' FROM REFERENCE POINT: 2906 MM      562 MM  
'Z' FROM REFERENCE POINT: 2100 MM      1363 MM



FINAL  
AS BUILT

NAME TONY SONG      DATE MAY 9/16

1 AS BUILT      MAY 9/16      TS      ET

0 ISSUED FOR CONSTRUCTION      DEC 11/15      TS      ET

REV      DESCRIPTION      DATE      BY      APR

DATE DEC 11/15      SCALE 1:30

DRAWN BY TONY SONG      CHECKED BY E. TOOSI      APPROVED BY M. GRAHAM

PROJECT MANAGER K. ROBERTSON      PROJECT ENGINEER E. TOOSI

CUST PO

APEGA PERMIT No: P8651      STEP CODE      WORK ORDER E002133-03

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

**ENERFLEX**  
Calgary, Alberta,  
Canada

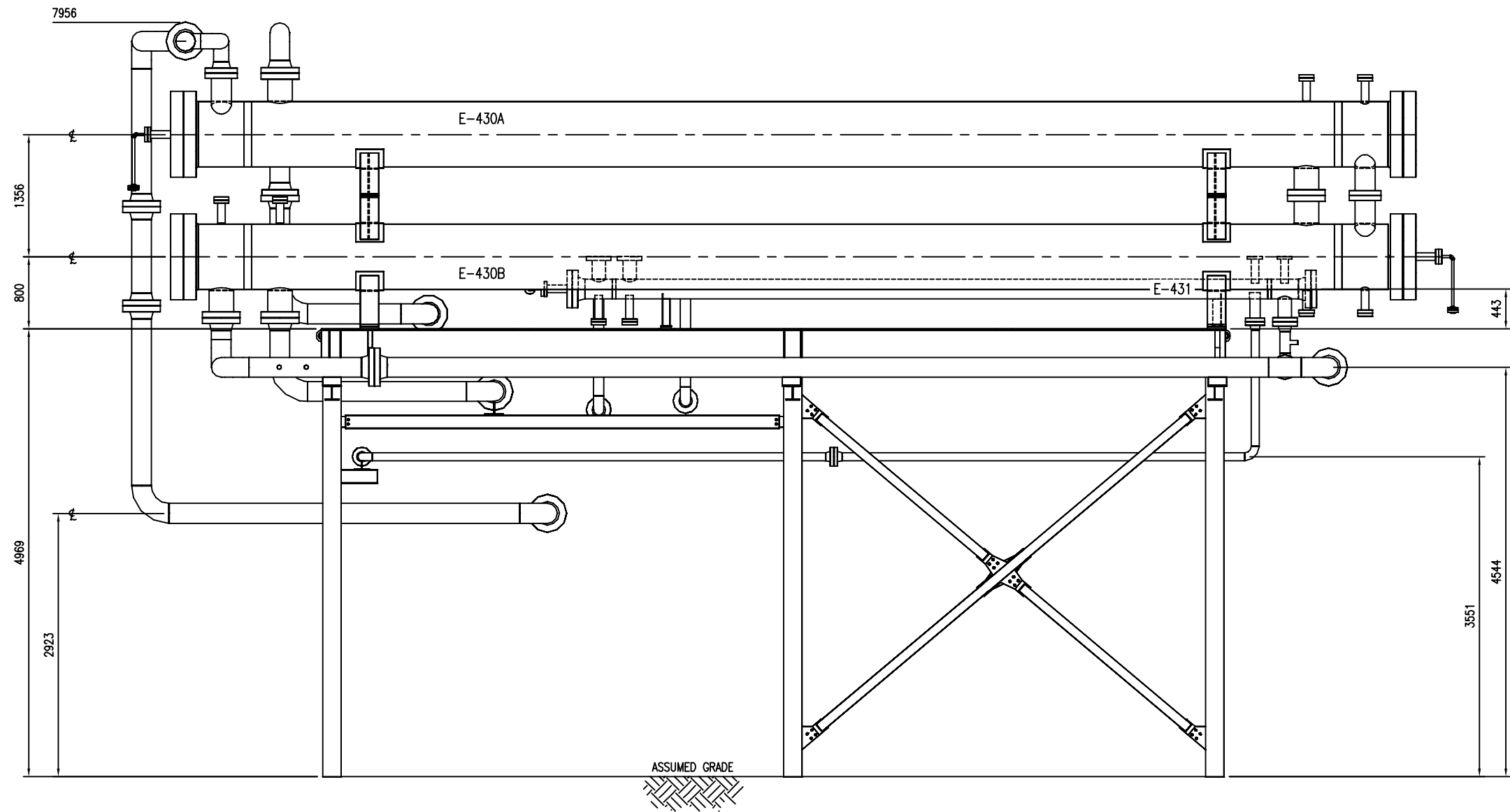
DWG NO E002133-03-201      SHT 1      REV 1

GENERAL ARRANGEMENT  
AREA A



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PLOT DATE: May 30, 2016, tsong

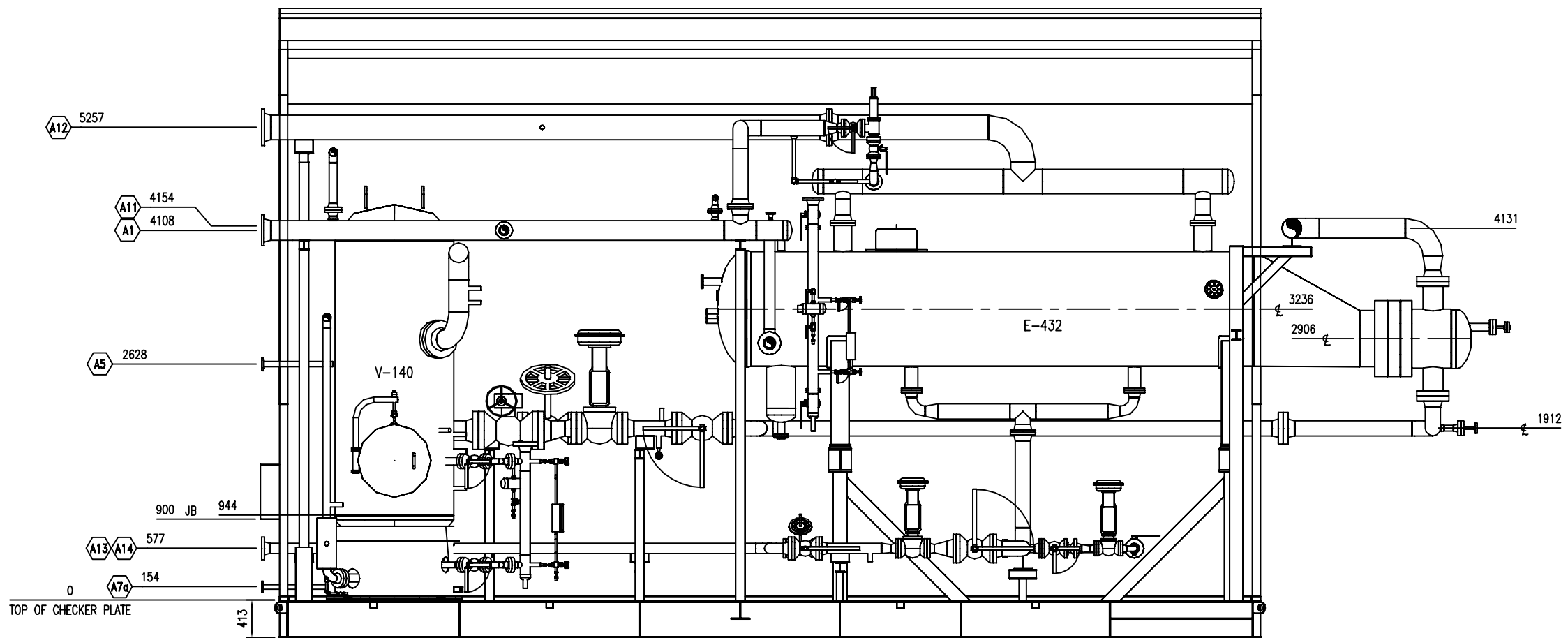


ELEVATION 'A-A'  
(1 : 30)

<div>FINAL AS BUILT</div> <div>NAME TONY SONG     DATE MAY 9/16</div>						DATE DEC 11/15	SCALE 1:30	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	ENERFLEX Calgary, Alberta, Canada	GENERAL ARRANGEMENT AREA A			
						DRAWN BY TONY SONG	CHECKED BY E. TOOSI						APPROVED BY M. GRAHAM
						PROJECT MANAGER K. ROBERTSON	PROJECT ENGINEER E. TOOSI						
						CUST PO							
	1	AS BUILT	MAY 9/16	TS	ET	APEGA PERMIT No: P8651			STEP CODE	WORK ORDER E002133-03	DWG NO E002133-03-201	SHT 2	REV 1
	0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET								
REV	DESCRIPTION	DATE	BY	APR									

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PLOT DATE: May 30, 2016, tsong



SECTION 'B-B'  
(1 : 30)

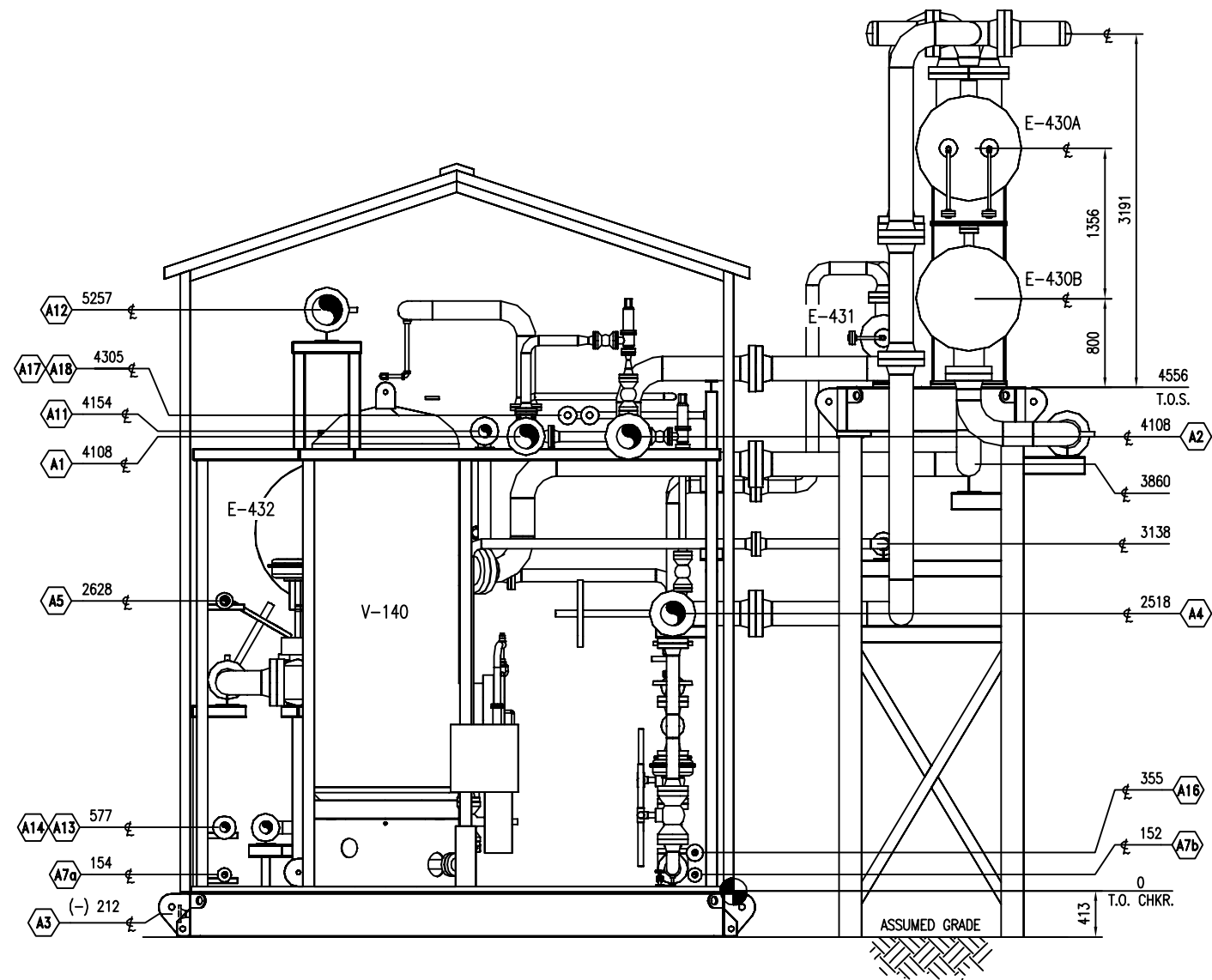
<div>FINAL AS BUILT</div> <div>NAME TONY SONG    DATE MAY 9/16</div>						DATE DEC 11/15	SCALE 1:30	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	<b>ENERFLEX</b> Calgary, Alberta, Canada	GENERAL ARRANGEMENT AREA A		
						DRAWN BY TONY SONG	CHECKED BY E. TOOSI				APPROVED BY M. GRAHAM	
						PROJECT MANAGER K. ROBERTSON	PROJECT ENGINEER E. TOOSI					
						CUST PO						
	1	AS BUILT		MAY 9/16	TS	ET						
	0	ISSUED FOR CONSTRUCTION		DEC 11/15	TS	ET						
REV	DESCRIPTION		DATE	BY	APR	APEGA PERMIT No: P8651		STEP CODE	WORK ORDER E002133-03	DWG NO E002133-03-201	SHT 3	REV 1

GENERAL ARRANGEMENT AREA A		
201	SHT 4	REV 1

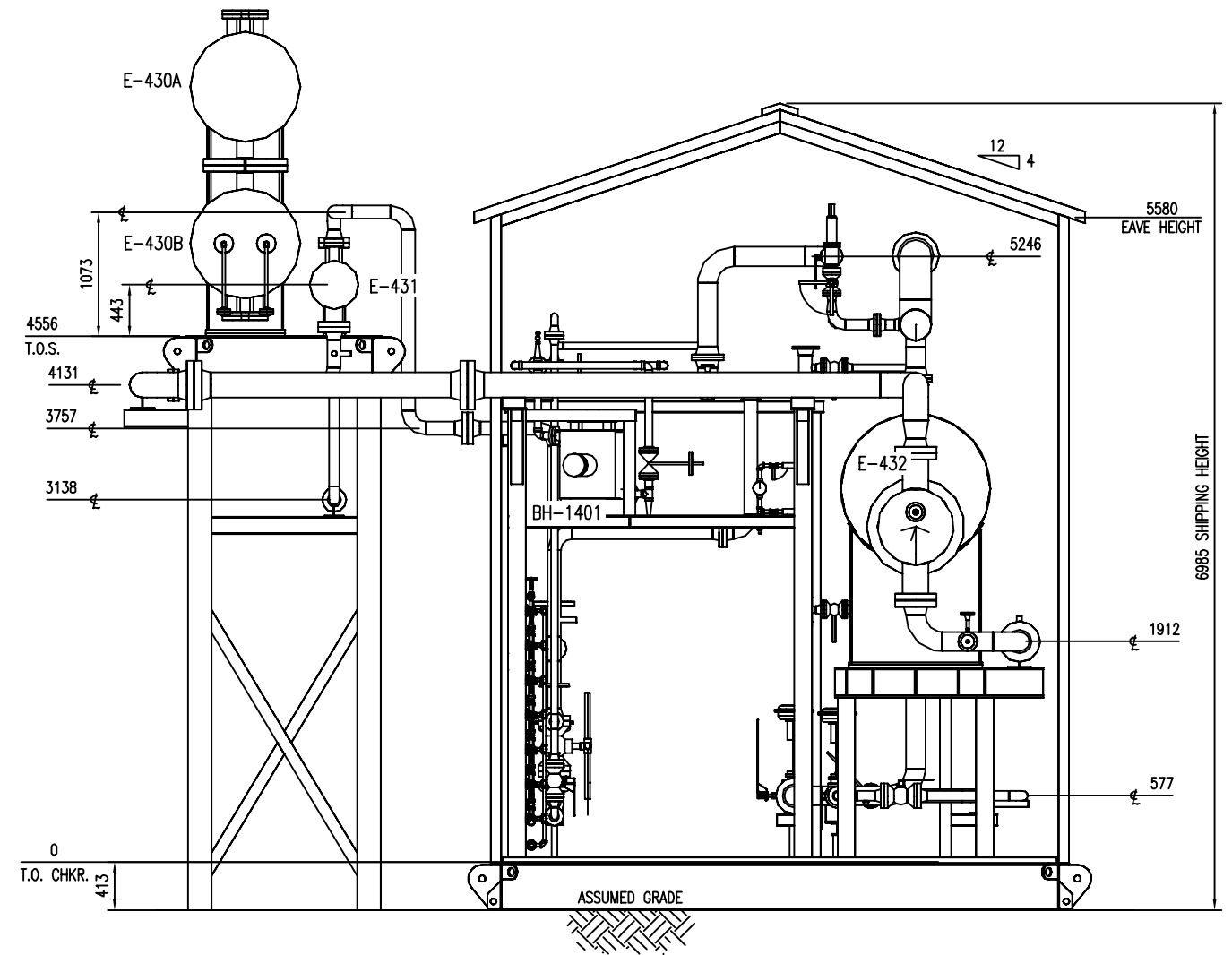


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PLOT DATE: May 30, 2016, tsong



END VIEW 'D-D'  
(1 : 30)



END VIEW 'E-E'  
(1 : 30)

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 9/16

						DATE DEC 11/15	SCALE 1:30
						DRAWN BY TONY SONG	CHECKED BY E. TOOSI
						PROJECT MANAGER K. ROBERTSON	PROJECT ENGINEER E. TOOSI
						CUST PO	
1	AS BUILT	MAY 9/16	TS	ET			
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET			
REV	DESCRIPTION	DATE	BY	APR		APEGA PERMIT No: P8651	STEP CODE

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

**ENERFLEX**  
Calgary, Alberta,  
Canada

GENERAL ARRANGEMENT  
AREA A

DWG NO E002133-03-201

SHT 5

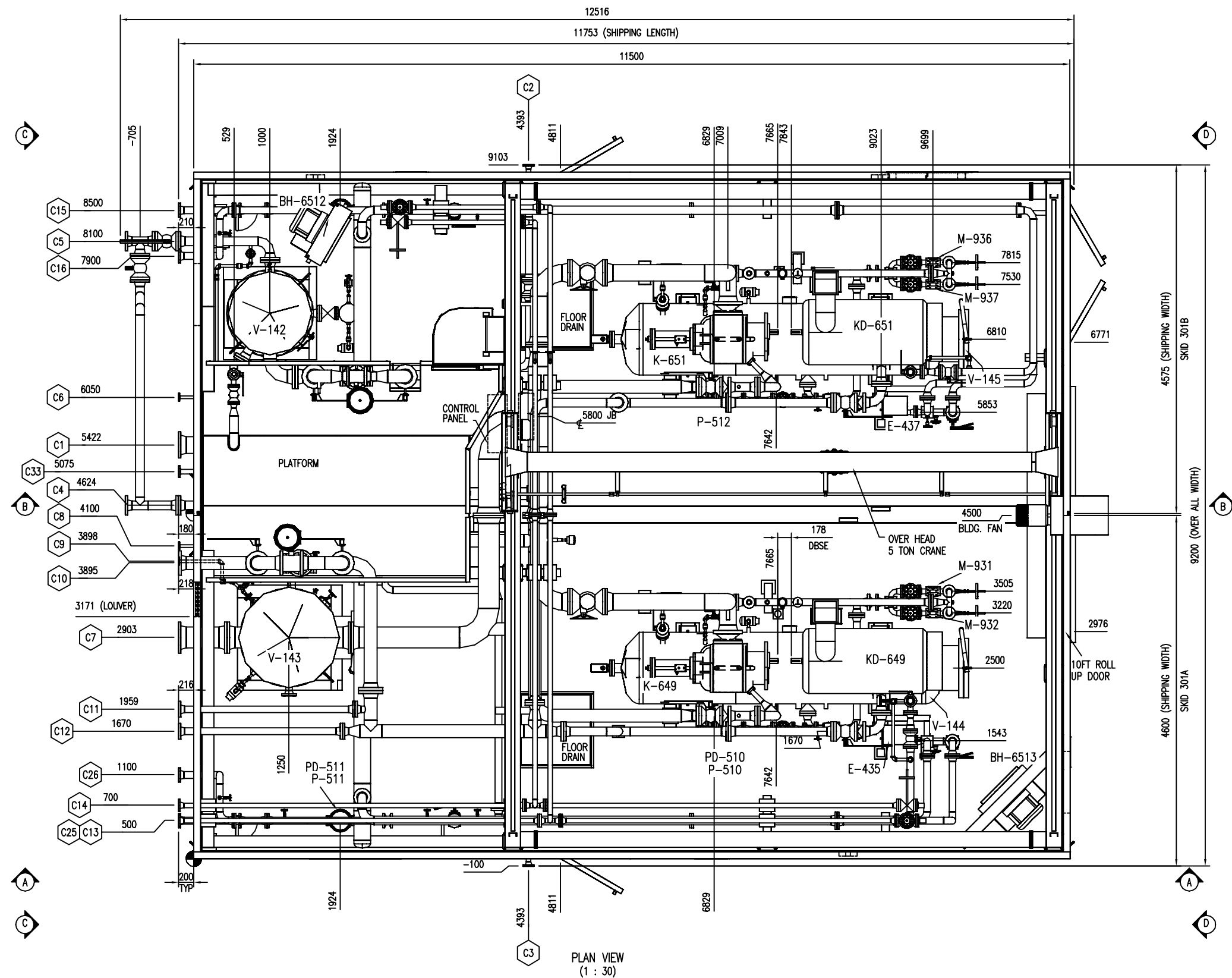
REV 1



NAME TONY SONG DATE MAY 9/16

								DATE DEC 11/15	SCALE NTS	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	<b>ENERFLEX</b> Calgary, Alberta, Canada	GENERAL ARRANGEMENT AREA A		
							DRAWN BY TONY SONG	CHECKED BY E. TOOSI	APPROVED BY M. GRAHAM					
							PROJECT MANAGER K. ROBERTSON	PROJECT ENGINEER E. TOOSI						
1	AS BUILT		MAY 9/16	TS	ET		CUST PO							
0	ISSUED FOR CONSTRUCTION		DEC 11/15	TS	ET									
REV	DESCRIPTION		DATE	BY	APR	APEGA PERMIT No: P8651		STEP CODE	WORK ORDER E002133-03	DWG NO E002133-03-201	SHT 6	REV 1		

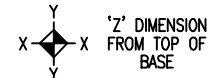
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NOZZLE SCHEDULE				
MARK	SERVICE	SIZE	RATING	TYPE
C1	FLARE HEADER	8"	150#	RFWN
C2	FLOOR DRAIN	2"	150#	RFWN
C3	FLOOR DRAIN	2"	150#	RFWN
C4	FROM V-147 (REFRIG. ACCUMULATOR)	4"	300#	RFWN
C5	TO E-432 (GAS CHILLER)	4"	300#	RFWN
C6	DRAIN HEADER	1"	150#	RFNPT
C7	FROM E-432 (GAS CHILLER)	10"	150#	RFWN
C8	HOT OIL SUPPLY	1"	150#	RFSW
C9	HOT OIL RETURN	1"	150#	RFSW
C10	TO E-438 (REFRIG. COND.)	6"	300#	RFWN
C11	TO E-432 (GAS CHILLER)	3"	300#	RFWN
C12	TO V-147 (REFRIG. ACCUMULATOR)	3"	300#	RFWN
C13	HEAT MEDIUM RETURN	2"	300#	RFWN
C14	HEAT MEDIUM SUPPLY	2"	300#	RFWN
C15	FROM E-439 (GLYCOL COOLER)	3"	150#	RFWN
C16	TO E-439 (GLYCOL COOLER)	3"	150#	RFWN
C25	FROM E-439 (GLYCOL COOLER)	3"	150#	RFWN
C26	TO E-439 (GLYCOL COOLER)	3"	150#	RFWN
C33	INSTRUMENT AIR SUPPLY	2"	150#	RFNPT

GENERAL NOTES:

- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- SHIPPING LENGTH: 11753 MM  
SHIPPING WIDTH: 4600 MM  
SHIPPING HEIGHT: 5305 MM
- SHIPPING WEIGHT: 29200 KGS  
OPERATING WEIGHT: 77500 KGS (TOTAL)
- OVERALL SKID DEPTH: 413 MM
- NOZZLE ELEVATIONS ARE FROM CENTERLINE OF PIPE TO TOP OF BASE (REFERENCE POINT).
- (\*) DENOTES ELEVATION FROM FACE OF FLANGE TO TOP OF BASE (REFERENCE POINT).
- CENTER OF GRAVITY:  
"X" FROM REFERENCE POINT: 5804 MM  
"Y" FROM REFERENCE POINT: 2417 MM  
"Z" FROM REFERENCE POINT: 1217 MM



**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 10/16

DATE	DEC 11/15	SCALE	1 : 30
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	APPROVED BY	M. GRAHAM
PROJECT ENGINEER	E. TOOSI		
CUST PO			
APEGA PERMIT No:	P8651	STEP CODE	
WORK ORDER	E002133-04		

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

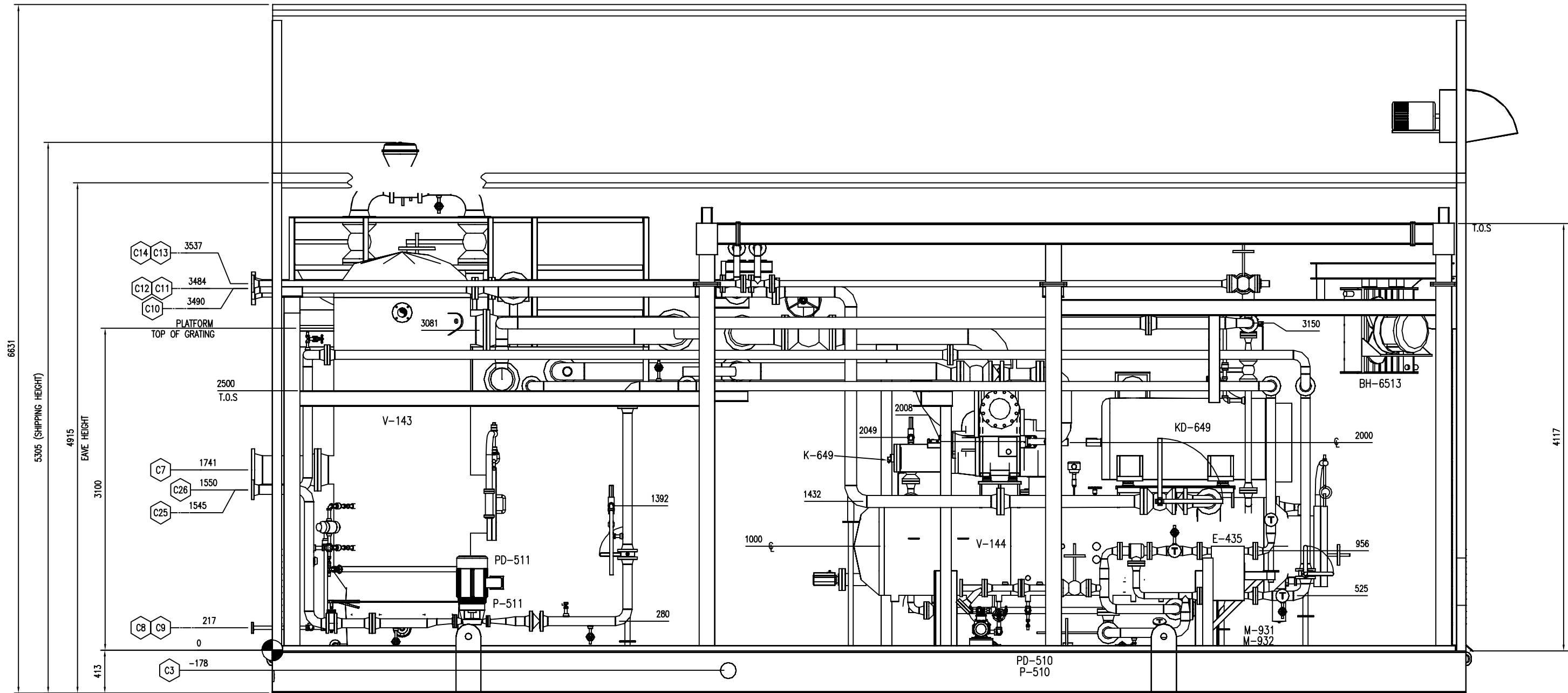
**ENERFLEX**  
Calgary, Alberta,  
Canada

GENERAL ARRANGEMENT  
SKID C

DWG NO	E002133-04-201	SHT	1	REV	1
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VIEW 'A-A'  
(1 : 20)

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 10/16

REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 10/16	TS	ET
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET

DATE	DEC 11/15	SCALE	1 : 20
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	APPROVED BY	M. GRAHAM
		PROJECT ENGINEER	E. TOOSI
CUST PO			

APEGA PERMIT No: P8651

STEP CODE

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

WORK ORDER E002133-04

**ENERFLEX**  
Calgary, Alberta,  
Canada

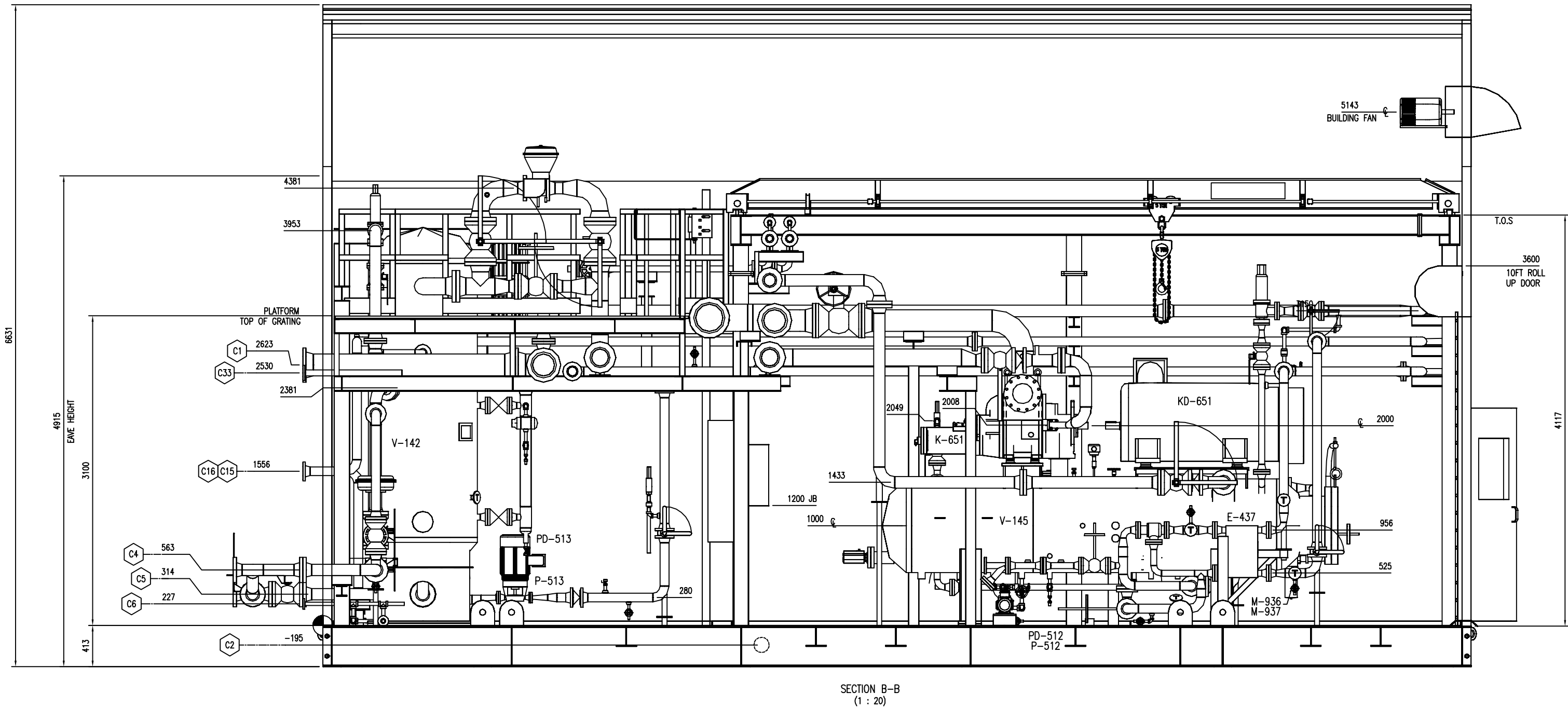
DWG NO E002133-04-201

GENERAL ARRANGEMENT  
SKID C

SHT 2

REV 1

PLOT DATE: May 30, 2016, Isong THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD., AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 10/16

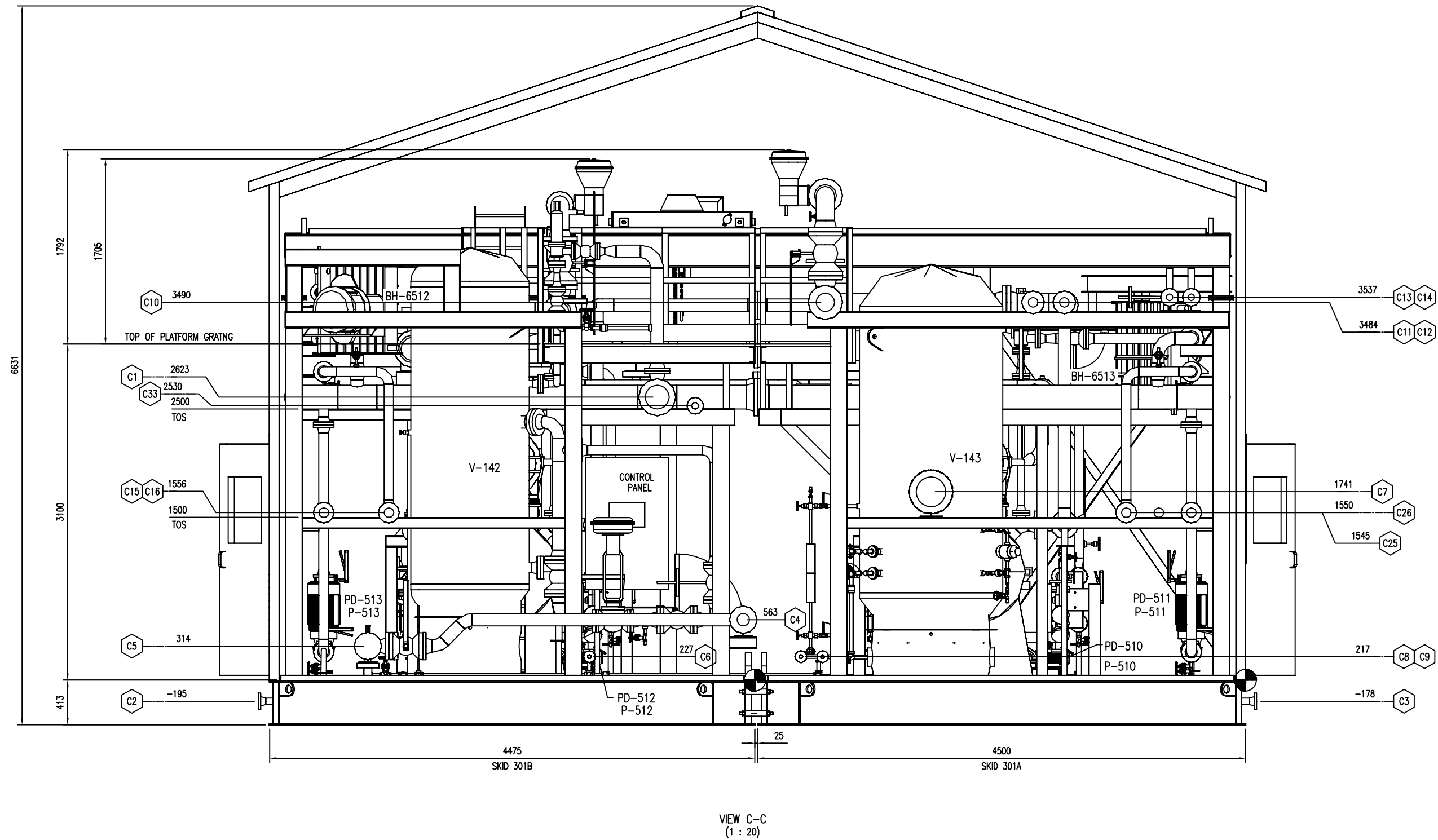
REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 10/16	TS	ET
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET

DATE	DEC 11/15	SCALE	1 : 20
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	APPROVED BY	M. GRAHAM
CUST PO		PROJECT ENGINEER	E. TOOSI

PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	
WORK ORDER	E002133-04

<b>ENERFLEX</b> Calgary, Alberta, Canada		GENERAL ARRANGEMENT SKID C		
DWG NO	E002133-04-201	SHT	3	REV 1

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**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 10/16

REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 10/16	TS	ET
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET

DATE	DEC 11/15	SCALE	1 : 20
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	APPROVED BY	M. GRAHAM
CUST PO		PROJECT ENGINEER	E. TOOSI

APEGA PERMIT No: P8651

STEP CODE

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

WORK ORDER E002133-04

**ENERFLEX**  
Calgary, Alberta,  
Canada

DWG NO E002133-04-201

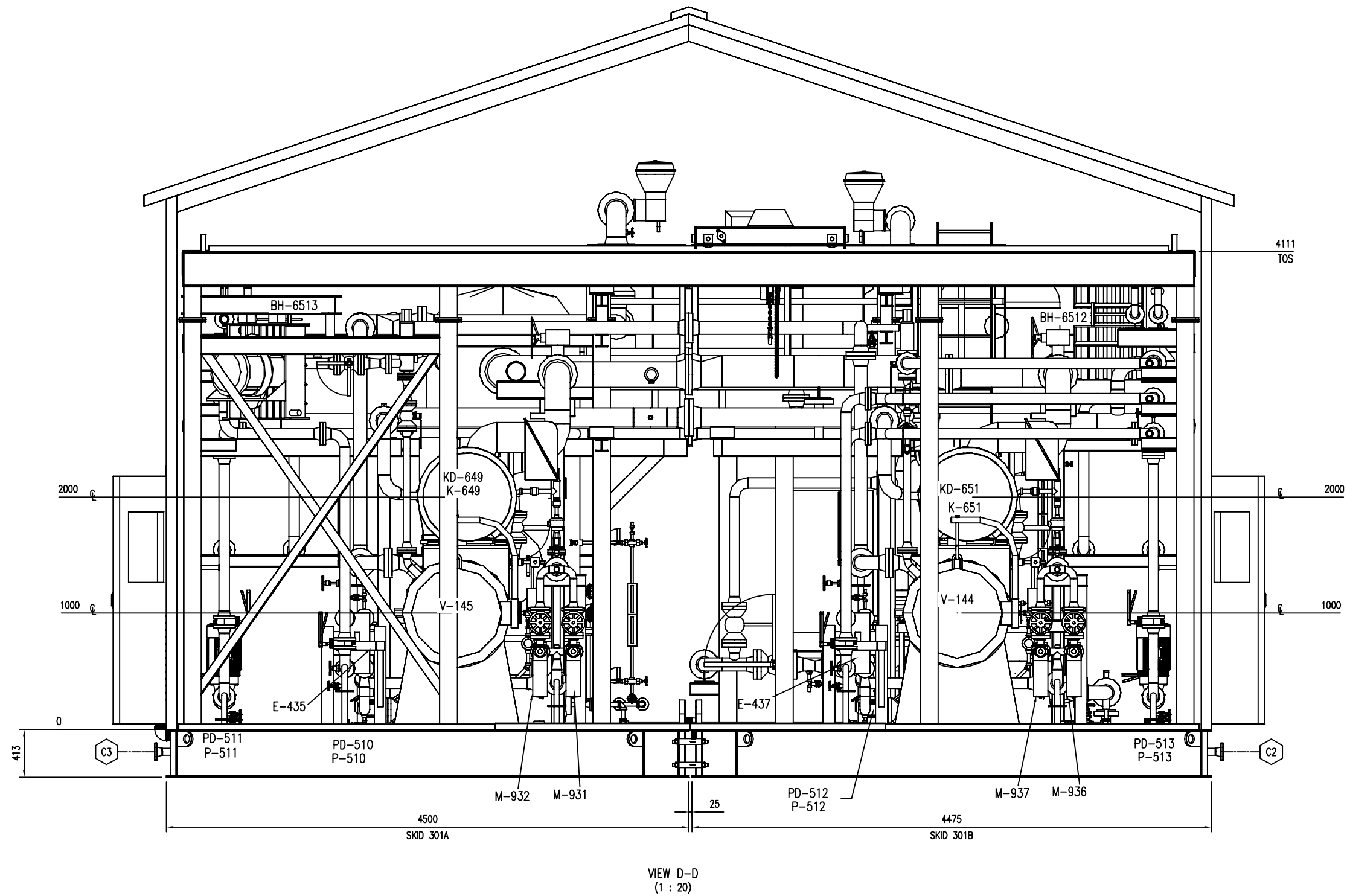
GENERAL ARRANGEMENT  
SKID C

SHT 4

REV 1



PLOT DATE: May 30, 2016, tsong THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD., AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 10/16

REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 10/16	TS	ET
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET

DATE	DEC 11/15	SCALE	1 : 20
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	APPROVED BY	M. GRAHAM
		PROJECT ENGINEER	E. TOOSI
CUST PO			

APEGA PERMIT No: P8651

STEP CODE

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

WORK ORDER E002133-04

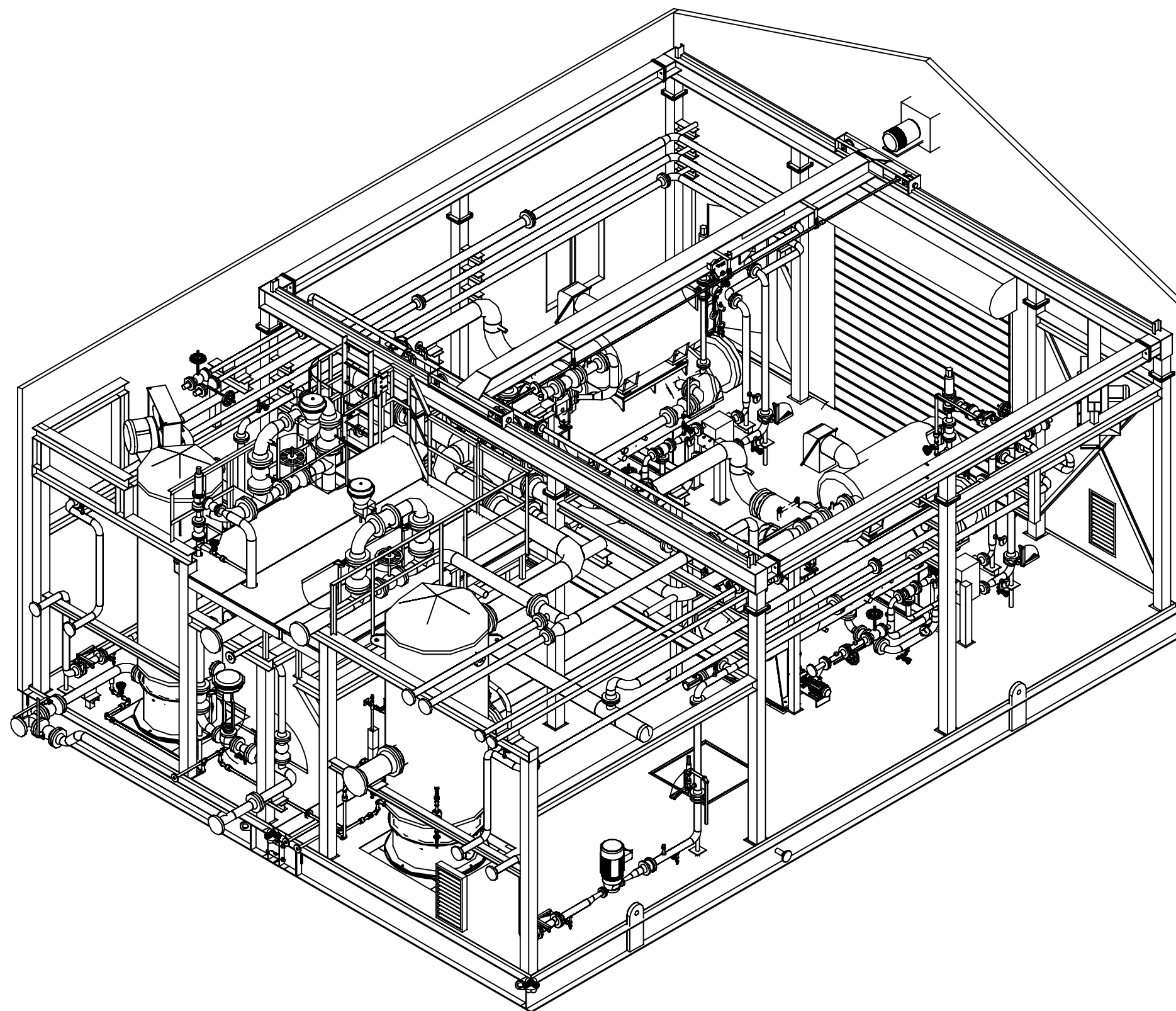
**ENERFLEX**  
Calgary, Alberta,  
Canada

DWG NO E002133-04-201

GENERAL ARRANGEMENT  
SKID C

SHT 5

REV 1



**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 10/16

						DATE	DEC 11/15	SCALE	NTS	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	<b>ENERFLEX</b> Calgary, Alberta, Canada	GENERAL ARRANGEMENT SKID C						
						DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI				APPROVED BY	M. GRAHAM				
						PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI									
	1	AS BUILT		MAY 10/16	TS	ET	CUST PO											
	0	ISSUED FOR CONSTRUCTION		DEC 11/15	TS	ET												
	REV	DESCRIPTION		DATE	BY	APR	AEPA PERMIT No:	P8651	STEP	CODE	WORK ORDER	E002133-04	DWG NO	E002133-04-201	SHT	6	REV	1

## FINAL AS BUILT

NAME TONY SONG DATE MAY 10/16

1	AS BUILT	MAY 10/16	TS	ET
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET
REV	DESCRIPTION	DATE	BY	APP

DATE	DEC 11/15	SCALE	NTS
DRAWN BY	TONY SONG	CHECKED BY	APPROVED BY
	E. TOOSI		M. GRAHAM
PROJECT MANAGER		PROJECT ENGINEER	
K. ROBERTSON		E. TOOSI	
CUST PO			

APEGA PERMIT No: P8651

STEP	CODE
------	------

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

WORK ORDER E002133-04

**ENERFLEX**  
Calgary, Alberta,  
Canada

DWG NO	E002133-04-201
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GENERAL ARRANGEMENT  
SKID C

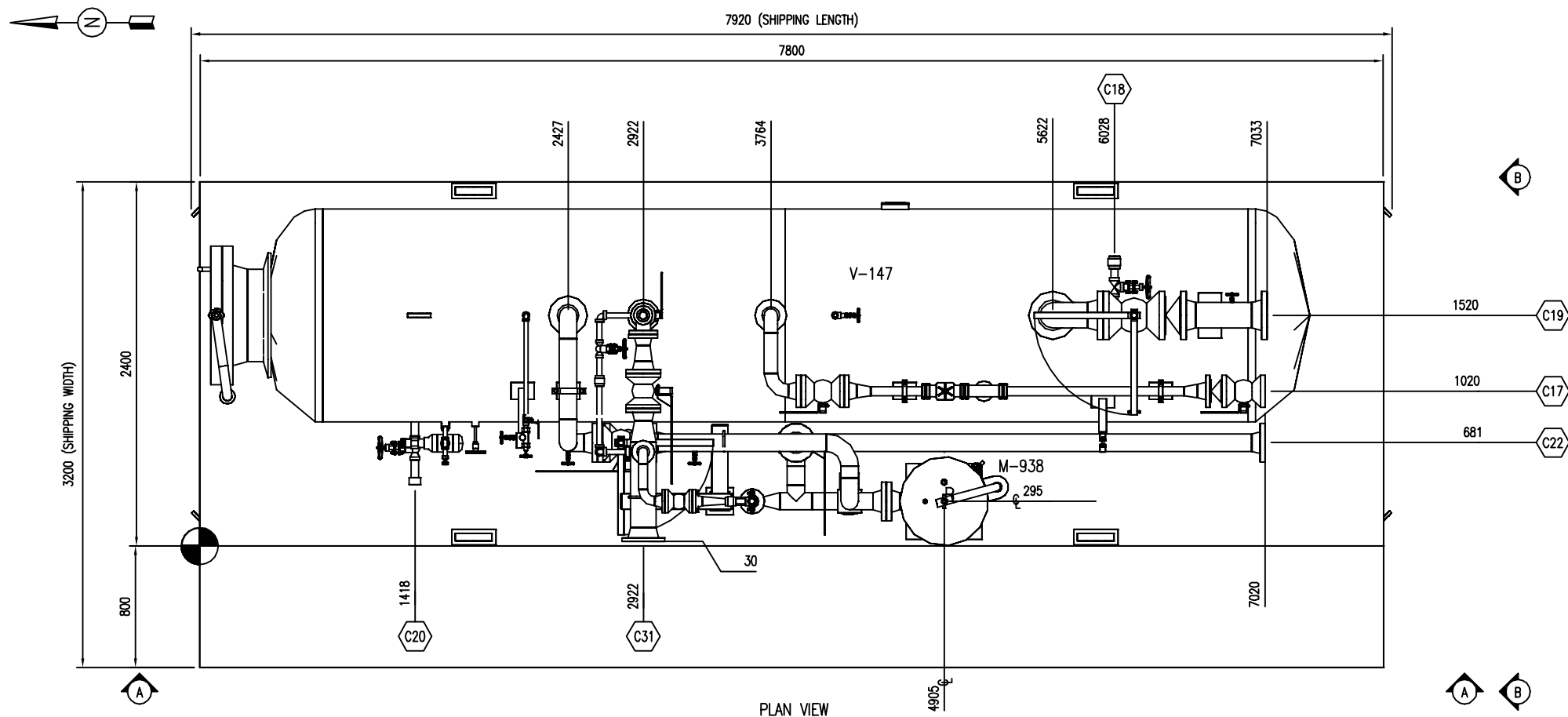
SHT	7
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REV	
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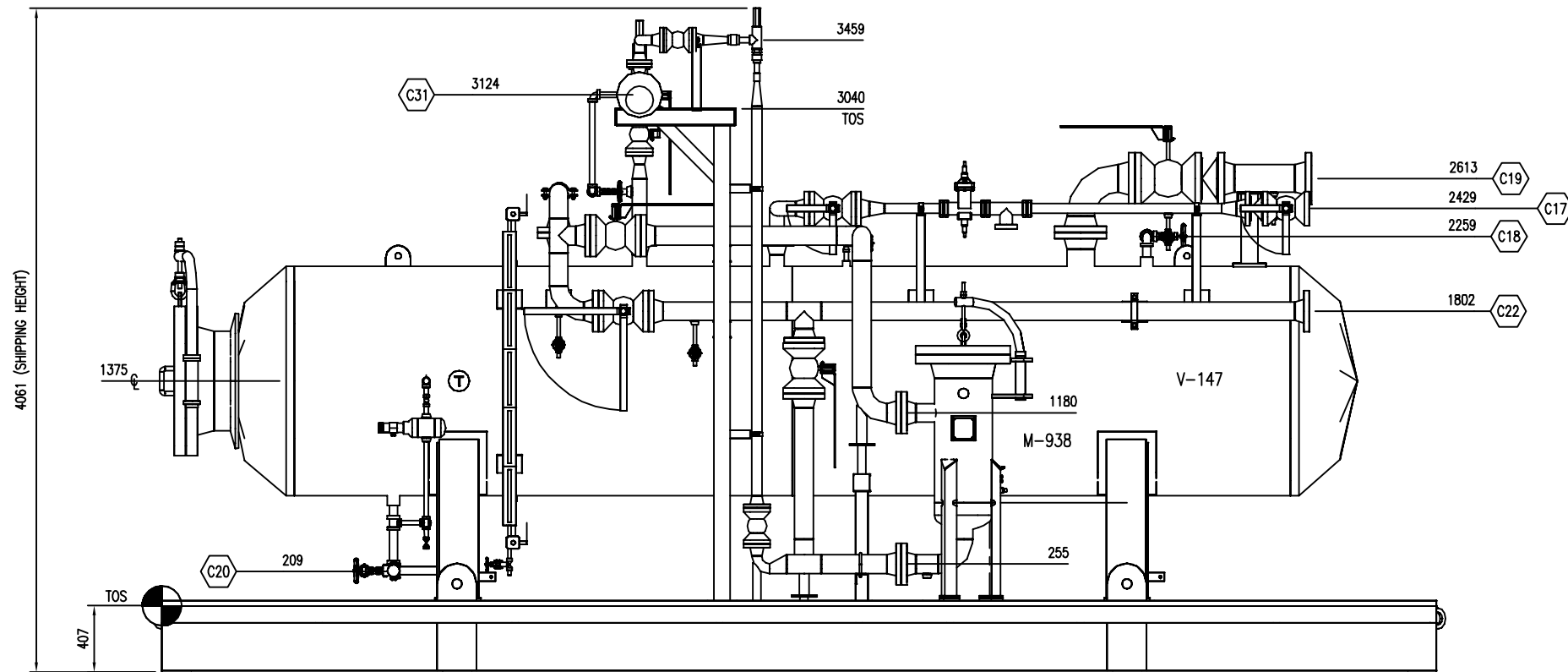


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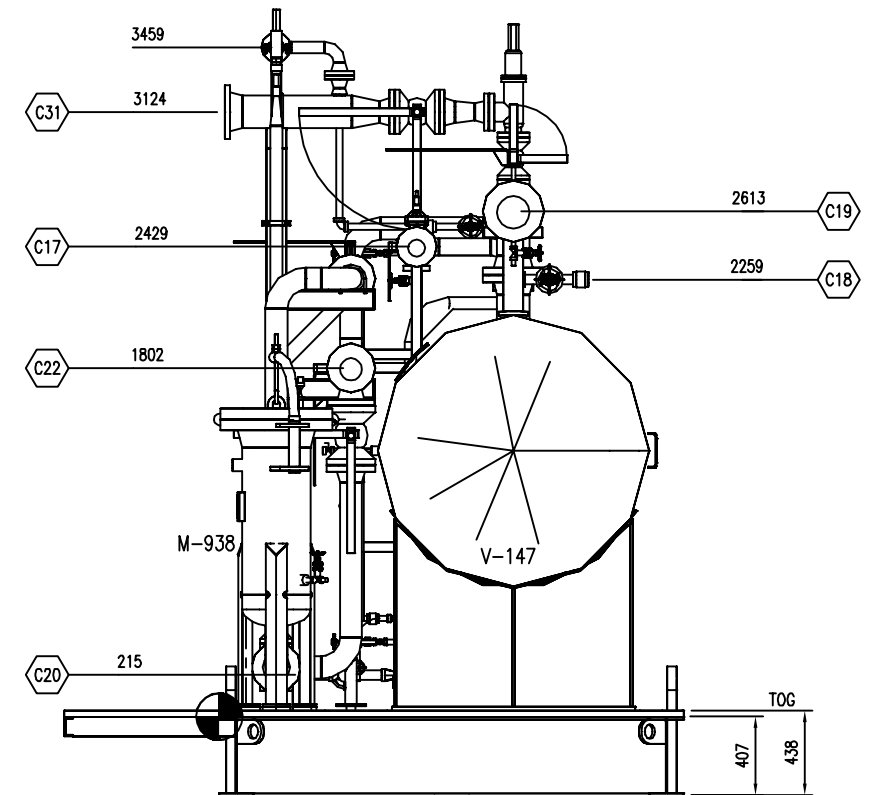
PLOT DATE: May 11, 2016, tsong



PLAN VIEW



VIEW A-A

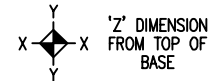


VIEW B-B

NOZZLE SCHEDULE				
MARK	SERVICE	SIZE	RATING	TYPE
C17	FROM OIL SEPARATORS	3"	300#	RFWN
C18	TO E-438 REFRIGERANT CONDENSER	1 1/2"	3000#	NPT
C19	FROM E-438 REFRIGERANT CONDENSER	6"	300#	RFWN
C20	REFRIGERANT FILL CONNECTION	1 1/2"	3000#	NPT
C22	TO V-142 ECONOMIZER	4"	300#	RFWN
C31	TO FLARE HEADER	6"	150#	RFWN

GENERAL NOTES:

- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- SHIPPING LENGTH: 7920 MM  
SHIPPING WIDTH: 3200 MM  
SHIPPING HEIGHT: 4061 MM
- SHIPPING WEIGHT: 12600 KGS
- OPERATING WEIGHT: 14800 KGS
- OVERALL SKID DEPTH: 407 MM
- NOZZLE ELEVATIONS ARE FROM CENTERLINE OF PIPE TO TOP OF BASE (REFERENCE POINT).
- (\*) DENOTES ELEVATION FROM FACE OF FLANGE TO TOP OF BASE (REFERENCE POINT).
- CENTER OF GRAVITY:  
'X' FROM REFERENCE POINT: 3871 MM  
'Y' FROM REFERENCE POINT: 1153 MM  
'Z' FROM REFERENCE POINT: 924 MM



**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 11/16

REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 11/16	TS	ET
0	ISSUED FOR CONSTRUCTION	DEC 11/15	TS	ET

DATE	DEC 11/15	SCALE	1:20
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
CUST PO			

APEGA PERMIT No: P8651

STEP  
CODE

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

WORK  
ORDER

E002133-04

**ENERFLEX**  
Calgary, Alberta,  
Canada

DWG  
NO

E002133-04-202

GENERAL ARRANGEMENT  
ACCUMULATOR SKID

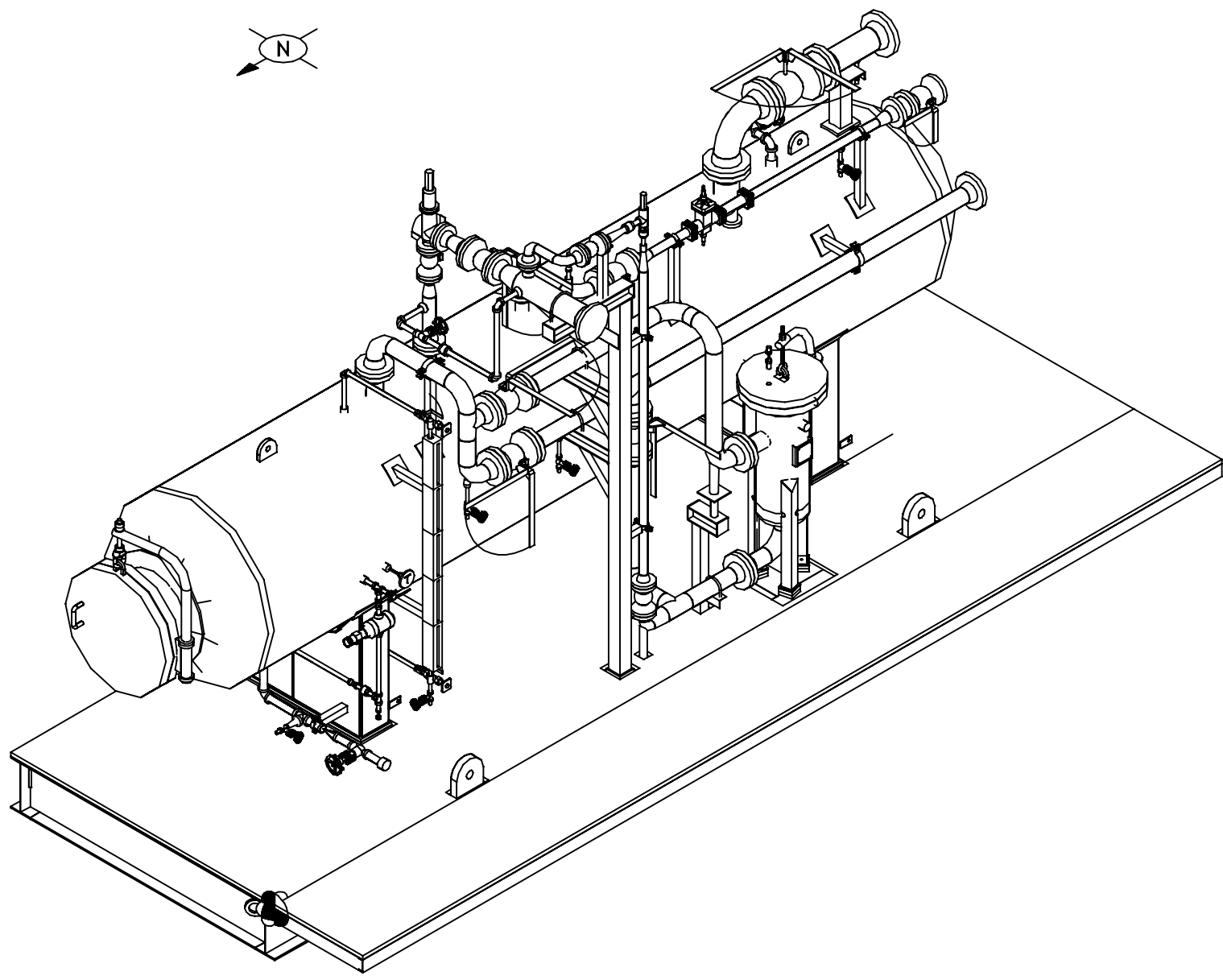
SHT

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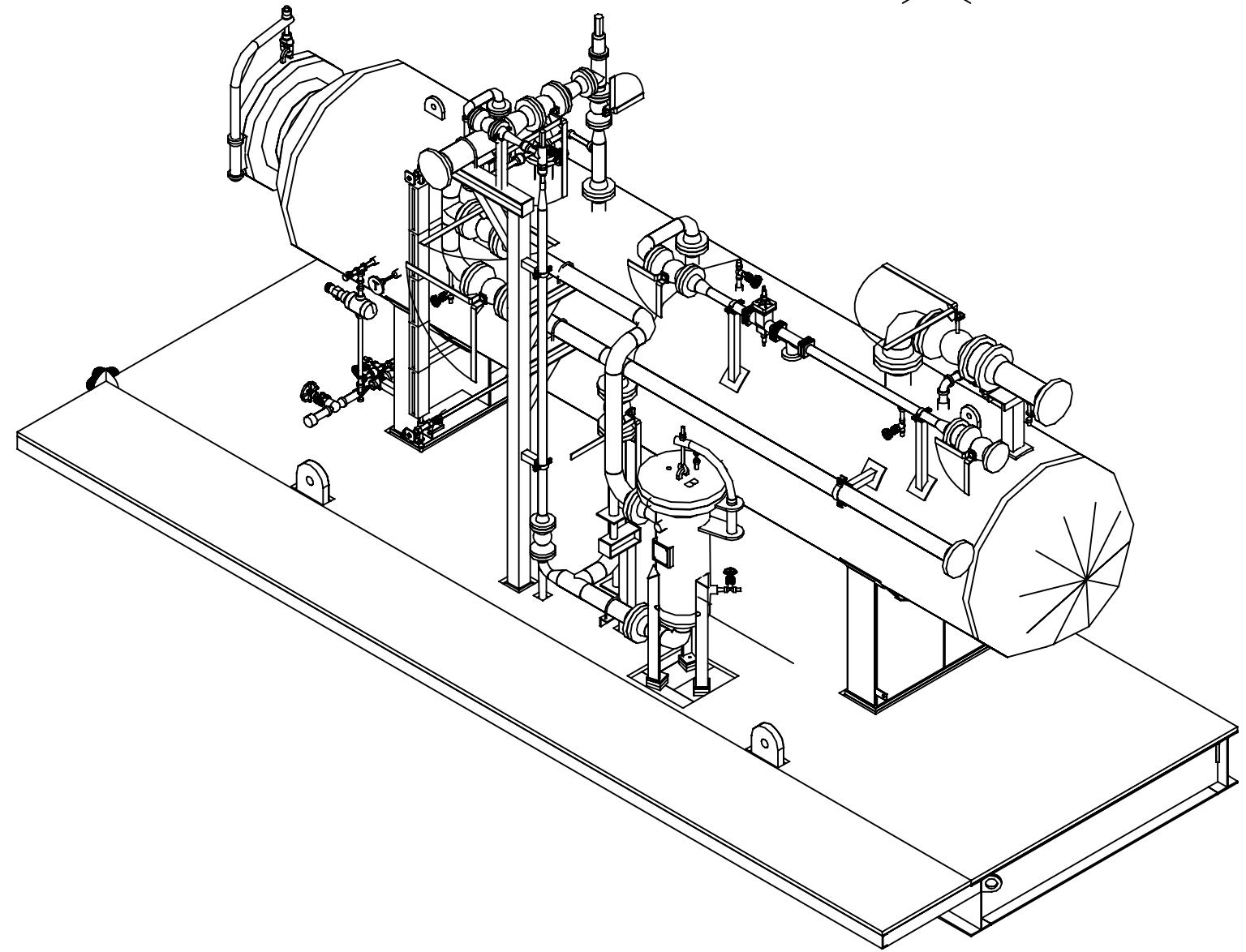
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1

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ISOMETRIC VIEW

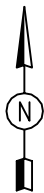


ISOMETRIC VIEW

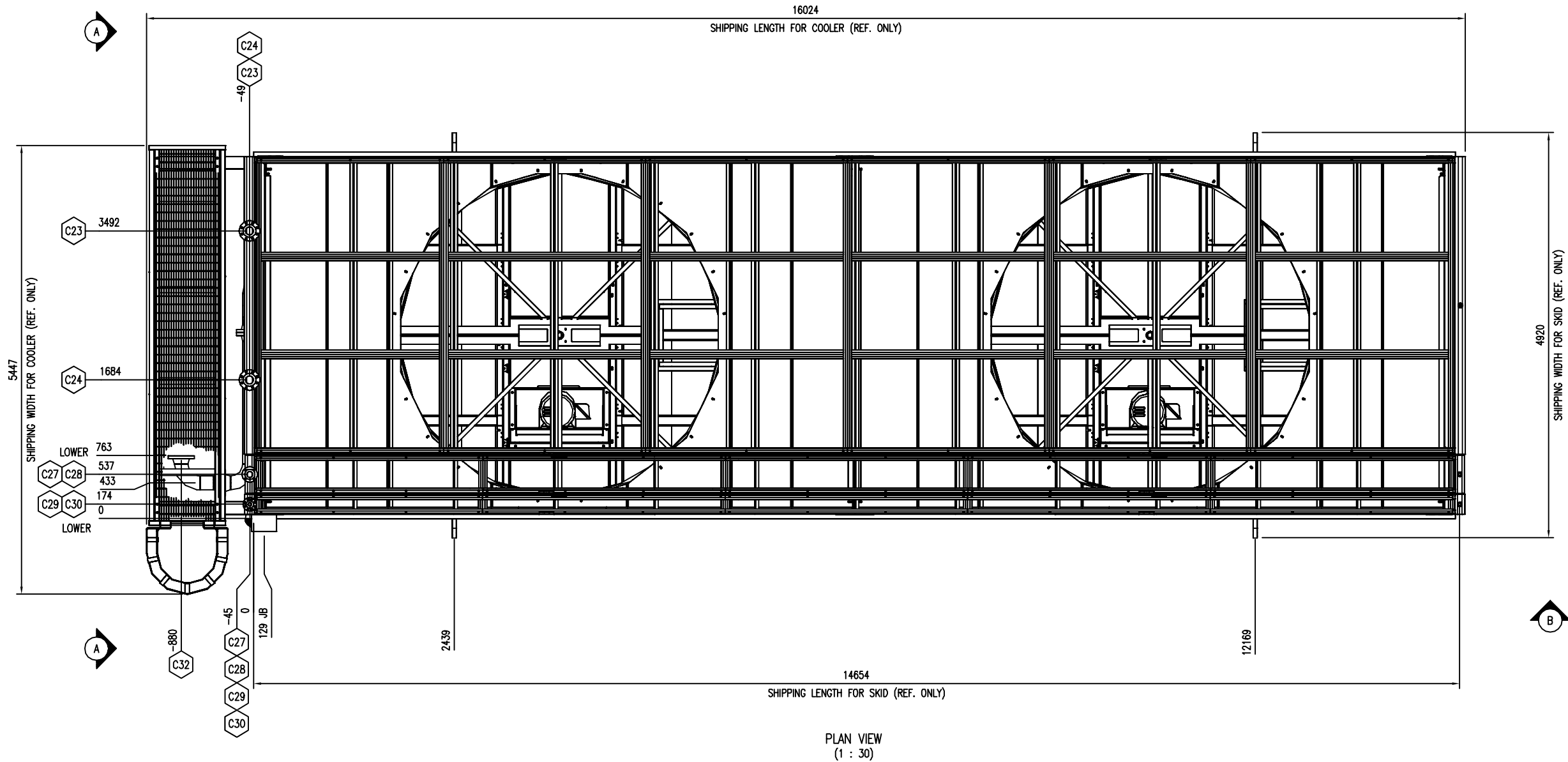
**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 11/16

							DATE DEC 11/15	SCALE NTS	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	<b>ENERFLEX</b> Calgary, Alberta, Canada	GENERAL ARRANGEMENT ACCUMULATOR SKID		
						DRAWN BY TONY SONG	CHECKED BY E. TOOSI	APPROVED BY M. GRAHAM					
						PROJECT MANAGER K. ROBERTSON	PROJECT ENGINEER E. TOOSI						
						CUST PO							
	1	AS BUILT		MAY 11/16	TS	ET							
0	ISSUED FOR CONSTRUCTION		DEC 11/15	TS	ET								
REV	DESCRIPTION		DATE	BY	APR		APEGA PERMIT No: P8651	STEP CODE	WORK ORDER E002133-04	DWG NO E002133-04-202	SHT 2	REV 1	

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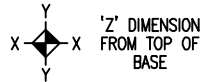


NOZZLE SCHEDULE				
MARK	SERVICE	SIZE	RATING	TYPE
C23	PROPANE INLET	4"	300#	RFWN
C24	PROPANE INLET	4"	300#	RFWN
C27	GLYCOL INLET	3"	150#	RFWN
C28	GLYCOL OUTLET	3"	150#	RFWN
C29	HC LIQUIDS INLET	2"	300#	RFWN
C30	HC LIQUIDS OUTLET	2"	300#	RFWN
C32	PROPANE OUTLET	6"	300#	RFWN



GENERAL NOTES:

- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- FOR COOLER:  
SHIPPING LENGTH: 16024 MM  
SHIPPING WIDTH: 5447 MM  
SHIPPING HEIGHT: 4874 MM  
FOR SUPPORT SKID  
SHIPPING LENGTH: 14654 MM  
SHIPPING WIDTH: 4920 MM  
SHIPPING HEIGHT: 1000 MM
- FOR COOLER:  
SHIPPING WEIGHT: 24200 KGS  
FOR SUPPORT SKID  
SHIPPING WEIGHT: 4900 KGS
- OPERATING WEIGHT: 31600 KGS
- OVERALL SKID DEPTH: 407 MM
- NOZZLE ELEVATIONS ARE FROM CENTERLINE OF PIPE TO TOP OF BASE (REFERENCE POINT).
- (\*) DENOTES ELEVATION FROM FACE OF FLANGE TO TOP OF BASE (REFERENCE POINT).
- CENTER OF GRAVITY:  
FOR COOLER:  
'X' FROM REFERENCE POINT: 7300 MM  
'Y' FROM REFERENCE POINT: 2225 MM  
'Z' FROM REFERENCE POINT: 5500 MM  
FOR SUPPORT SKID  
'X' FROM REFERENCE POINT: 7301 MM  
'Y' FROM REFERENCE POINT: 2225 MM  
'Z' FROM REFERENCE POINT: -159 MM

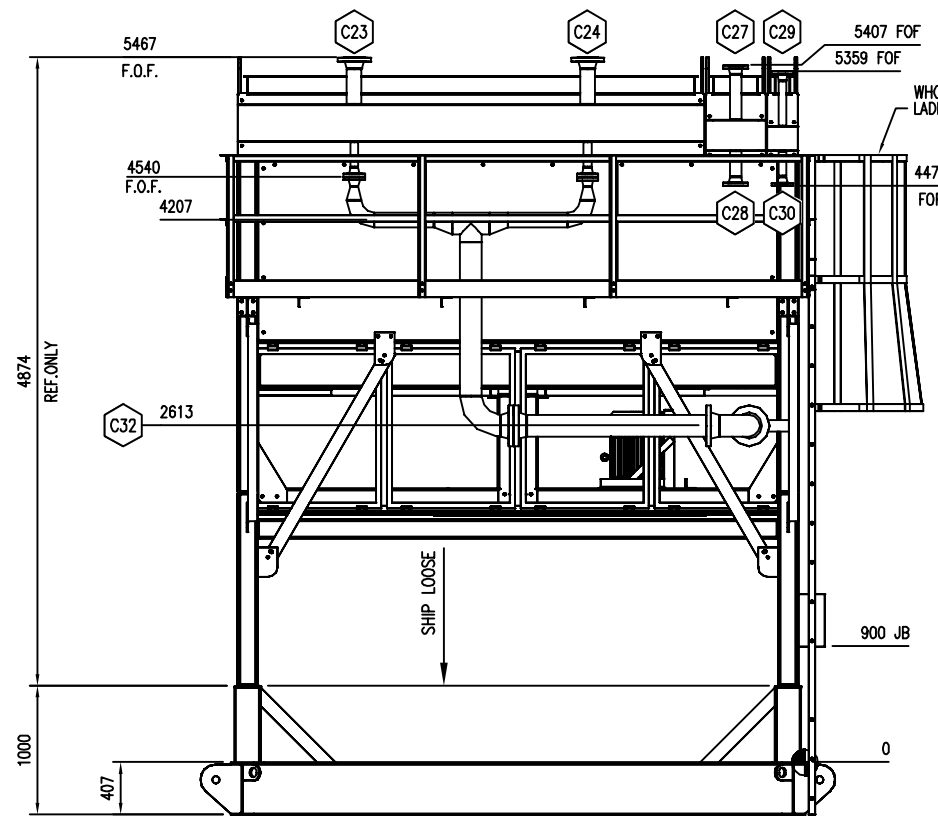


**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 11/16

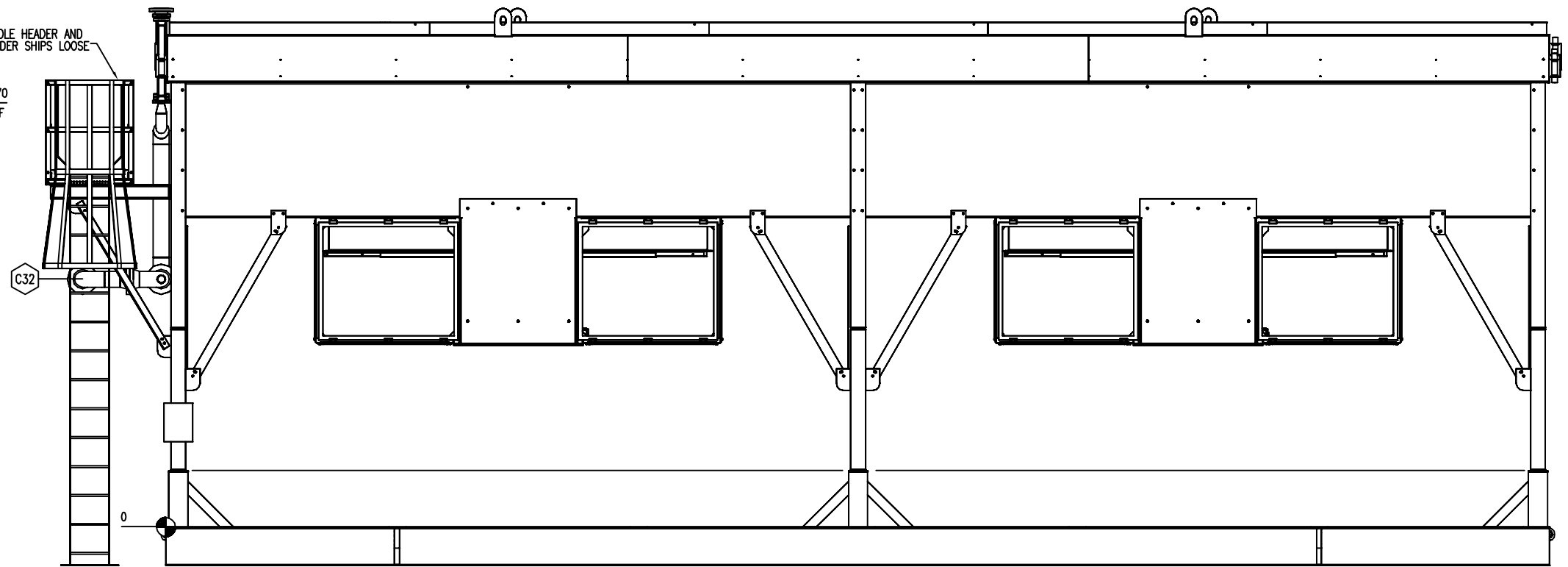
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						DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI				APPROVED BY	M. GRAHAM			
						PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI								
						CUST PO											
1	AS BUILT		MAY 11/16	TS	ET												
0	ISSUED FOR CONSTRUCTION		DEC 11/15	TS	ET												
REV	DESCRIPTION		DATE	BY	APR	APEGA PERMIT No: P8651		STEP CODE		WORK ORDER	E002133-04	DWG NO	E002133-04-203	SHT	1	REV	1

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PLOT DATE: May 30, 2016, tsong



SECTION VIEW A-A  
(1 : 30)



SECTION VIEW B-B  
(1 : 30)

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 11/16

									DATE DEC 11/15	SCALE 1:30	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	<b>ENERFLEX</b> Calgary, Alberta, Canada	GENERAL ARRANGEMENT COOLER SKID		
								DRAWN BY TONY SONG	CHECKED BY E. TOOSI	APPROVED BY M. GRAHAM					
								PROJECT MANAGER K. ROBERTSON	PROJECT ENGINEER E. TOOSI						
								CUST PO							
								APEGA PERMIT No: P8651	STEP CODE	WORK ORDER E002133-04					
	1	AS BUILT		MAY 11/16	TS	ET						DWG NO E002133-04-203	SHT 2	REV 1	
	0	ISSUED FOR CONSTRUCTION		DEC 11/15	TS	ET									
	REV	DESCRIPTION		DATE	BY	APR									

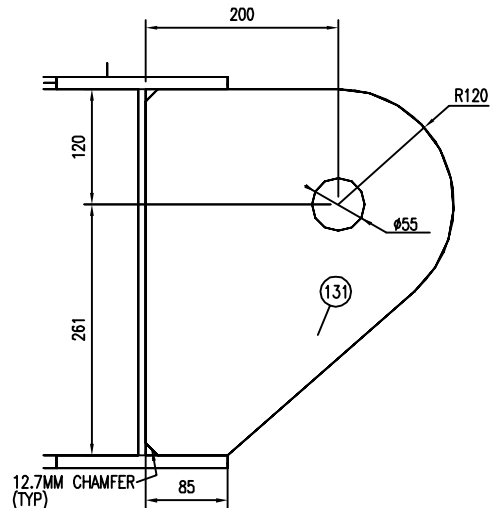




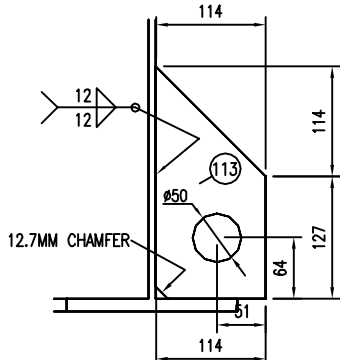
**ENERFLEX**

**Steel Drawings**

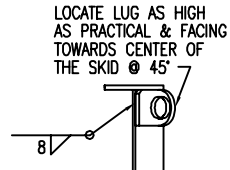




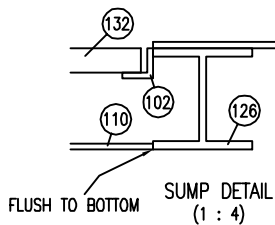
ITEM 131 DETAIL  
SCALE (1 : 4)  
(8 REQUIRED)  
(LUG RATING: 25 TON)



ITEM 113 DETAIL  
SCALE (1 : 4)  
(8 REQUIRED)



(114) HOLDDOWN LUG DETAIL  
(NTS)  
(4) REQUIRED




FLUSH TO / BOTTOM SUMP DETAIL  
(1 : 4)

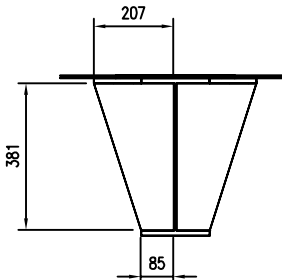
BILL OF MATERIAL				
ITEM	QTY	LONG ANNOTATION	MATERIAL	LENGTH
101	4	ANGLE,1-1/4" X 1-1/4",1/4" THK	G40.2144W	919
102	4	ANGLE,1-1/4" X 1-1/4",1/4" THK	G40.2144W	940
103	3	PLATE,1/2",SMOOTH X 1122.3270 X 122.3270	G40.2144W	1122
104	2	PLATE,1/2",SMOOTH X 1183.4905 X 100.0000	G40.2144W	1183
105	4	PLATE,1/2",SMOOTH X 1183.4905 X 122.3270	G40.2144W	1183
106	13	PLATE,1/2",SMOOTH X 381.0000 X 84.9630	G40.2144W	381
107	1	PLATE,1/2",SMOOTH X 640.0000 X 247.8540	G40.2144W	640
108	1	PLATE,1/2",SMOOTH X 833.4905 X 239.2453	G40.2144W	833
109	1	PLATE,1/2",SMOOTH X 833.4905 X 240.4088	G40.2144W	833
110	2	PLATE,1/4",SMOOTH X 1024 X 1024	G40.2144W	1025
111	2	PLATE,1/4",SMOOTH X 1183.4905 X 287.6730	G40.2144W	1183
112	8	PLATE,1/4",SMOOTH X 150.0000 X 50.0000	G40.2144W	150
113	8	PLATE,1/2",SMOOTH X 241 X 114 (SEE DETAIL)	G40.2144W	241
114	4	PLATE,3/4",SMOOTH X 177 X 127 (SEE DETAIL)	G40.2144W	178
115	28	TUBING,2"X2",1/4" THK	G40.21350W	1292
116	21	TUBING,2"X2",1/4" THK	G40.21350W	1353
117	6	WIDE FLANGE,16" X 40#	G40.2150W	250
118	1	WIDE FLANGE,16" X 40#	G40.2150W	827
119	1	WIDE FLANGE,16" X 40#	G40.2150W	1003
120	4	WIDE FLANGE,16" X 40#	G40.2150W	1292
121	15	WIDE FLANGE,16" X 40#	G40.2150W	1353
122	12	WIDE FLANGE,16" X 40#	G40.2150W	3032
123	3	WIDE FLANGE,16" X 40#	G40.2150W	3155
124	6	WIDE FLANGE,16" X 40#	G40.2150W	5315
125	2	WIDE FLANGE,16" X 40#	G40.2150W	15500
126	2	WIDE FLANGE,4" X 13#	G40.2150W	1292
127	1	WIDE FLANGE,6" X 15#	G40.2150W	652
128	2	WIDE FLANGE,6" X 15#	G40.2150W	810

BILL OF MATERIAL				
ITEM	QTY	LONG ANNOTATION	MATERIAL	LENGTH
129	3	WIDE FLANGE,6" X 15#	G40.2150W	1292
130	2	WIDE FLANGE,6" X 15#	G40.2150W	1353
131	8	PLATE,2",SMOOTH X 381 X 264 (SEE DETAIL)	G40.2144W	381
132	2	GRATING,BLACK,1"X3/16"(19-4) X 914 X 914	G40.2144W	914
133	2	PLATE,1/4",SMOOTH X 1072.7690 X 105.6640	G40.2144W	1072
134	1	PLATE,1/2",SMOOTH X 860.0905 X 122.3270	G40.2144W	860
135	1	PLATE,1/4",SMOOTH X 393 X 50	G40.2144W	393
136	1	PLATE,1/4",SMOOTH X 649 X 50	G40.2144W	649
137	1	PLATE,1/2",SMOOTH X 1022 X 125	G40.2144W	1183
138	14	PLATE,1/2",SMOOTH X 381 X 207, SEE DETAIL	G40.2144W	381
139	1	FLAT BAR,2" X 1/4" THK	G40.2144W	330

BILL OF MATERIAL			
MARK	QTY	DESCRIPTION	LENGTH
150	1	PIPE,2",S/40(STD),SMLS,SA-106-B	4226
151	2	ELBOW,2",S/40(STD),90D,LR,BW,SA-234-WPB	
152	2	FLANGE,2",150#,RFNPT,SA-105N	

GENERAL NOTES:

1.  ALL TAIL DIMENSIONS FROM REFERENCE POINT.
2. WEIGHT OF SKID STEEL BASE: 9524 KGS  
NOTE: MILL TOLERANCE AND SAFETY FACTORS NOT APPLIED
3. COPE FLANGES WHERE REQUIRED.
4. ALL WELDS TO BE 1/4" (6 MM) FILLETS ALL AROUND, UNLESS OTHERWISE NOTED
5. ALL CUT LENGTHS ARE EXACT TOL  $+0.07/-0.125$ " (+0 MM/-3 MM)
6. SURFACE PREP: SEE PAINT TRAVELER
7. ALL PLATE TO BE FLUSH WITH TOP OF STEEL, UNLESS OTHERWISE NOTED.
8. PERIMETER AND ALL PANEL JOINTS OF CHECKER PLATE ARE TO BE SEAL WELDED. SKID MEMBERS TO UNDERSIDE OF CHECKER PLATE TO BE STITCH WELDED AT 2"(50 MM) OF FILLET ON 16"(406 MM) CENTERS.



ITEM 138 DETAIL  
1 : 10  
14 REQUIRED

1	AS BUILT	MAY 4/16	TS	MG	
0	ISSUED FOR CONSTRUCTION	DEC 14/15	IV	ET	
REV	DESCRIPTION	DATE	BY	APR	

DATE DEC 14/15		SCALE 1:25	
DRAWN BY TONY SONG		CHECKED BY H. ZHANG	
PROJECT MANAGER K. ROBERTSON		APPROVED BY H. ZHANG	
		PROJECT ENGINEER E. TOOSI	
CUST PO			
APEGA PERMIT No: P8651			STEP CODE 400

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

---

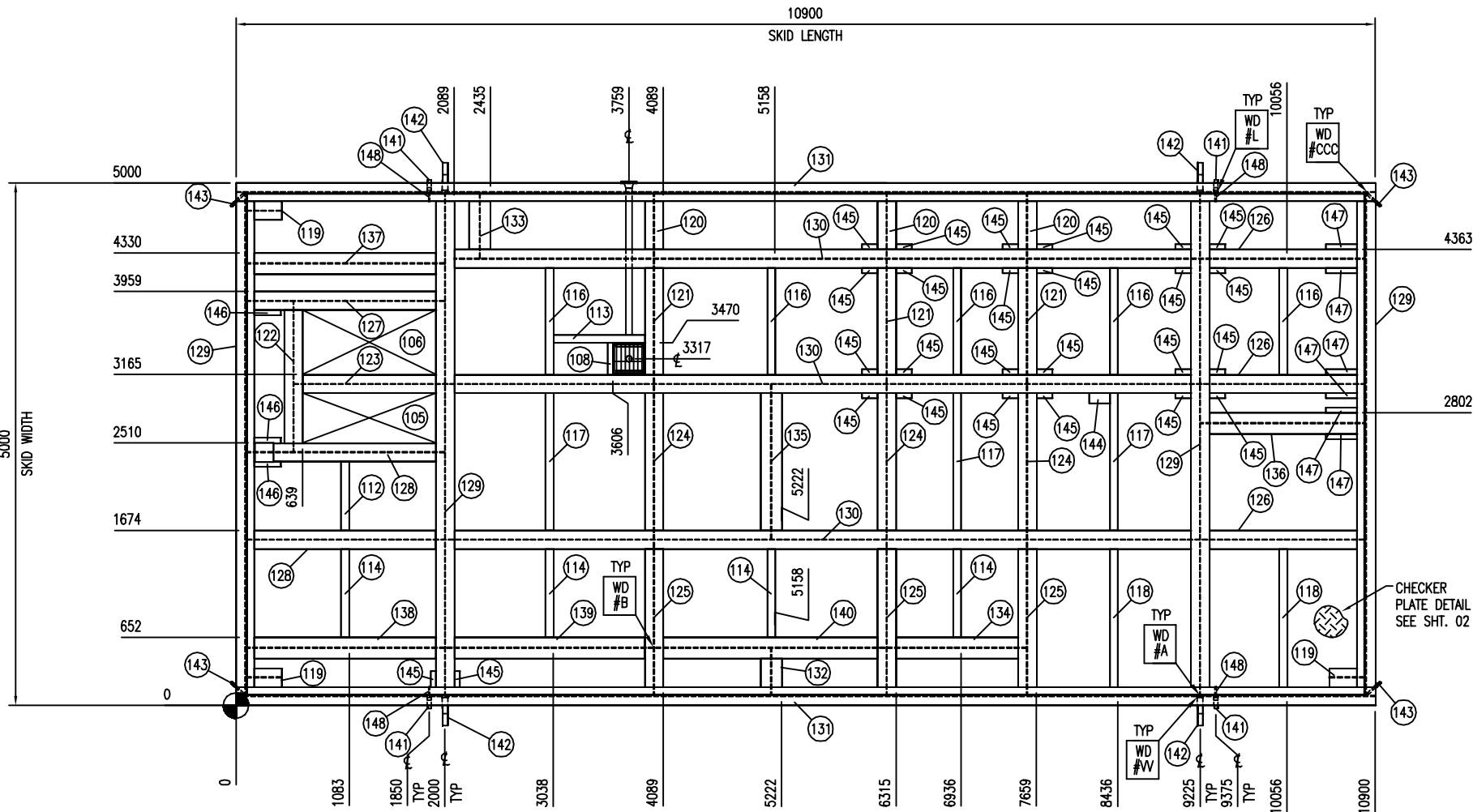
WORK  
ORDER E002133-02

<b>ENERFLEX</b> <b>Calgary, Alberta,</b> <b>Canada</b>		STRUCTURAL STEEL SKID B	
DWG NO	E002133-02-301	SHT 1	REV 1

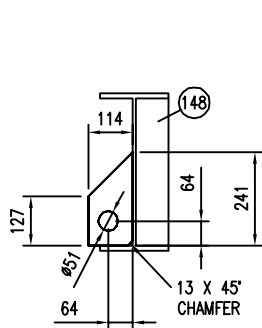


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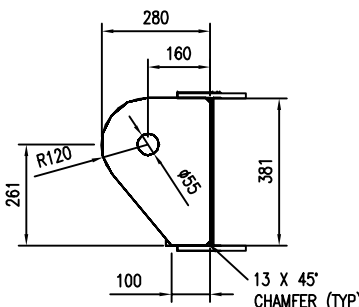
PLOT DATE: May 05, 2016, tsong



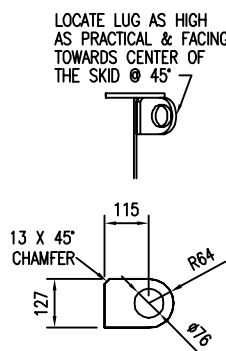
PLAN VIEW  
(1 : 30)



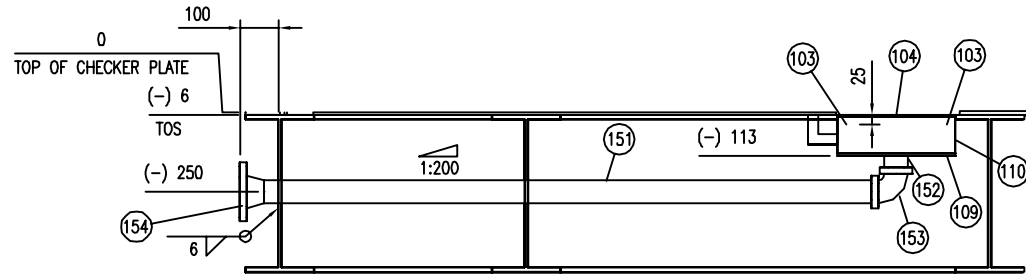
(141) JACKING LUG DETAIL  
(1 : 10)  
(4) REQUIRED



(142) LIFTING LUG DETAIL  
(1 : 10)  
(4) REQUIRED



(143) HOLDDOWN LUG DETAIL  
(1 : 10)  
(4) REQUIRED



SKID DRAIN DETAIL (TYP)  
(1 : 10)

GENERAL NOTES:

1. ALL TAIL DIMENSIONS FROM REFERENCE POINT.
2. WEIGHT OF SKID STEEL BASE: 6416 KGS  
NOTE: MILL TOLERANCE AND SAFETY FACTORS NOT APPLIED
3. FOR ALL WELDS & COPING DETAILS, REFER TO DWG. E002133-399.
4. ALL WELDS TO BE 1/4" (6mm) FILLETS ALL AROUND, UNLESS OTHERWISE NOTED.
5. ALL SKID MEMBERS ARE FLUSHED WITH TOP OF STEEL, UNLESS OTHERWISE NOTED.

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 4/16

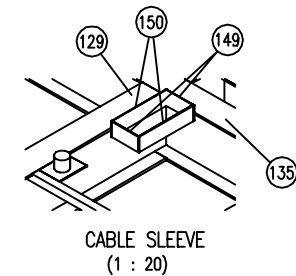
						DATE	DEC 14/15	SCALE	AS SHOWN
						DRAWN BY	TONY SONG	CHECKED BY	H. ZHANG
						APPROVED BY	H. ZHANG		
						PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
1	AS BUILT	MAY 4/16	TS	MG		CUST PO			
0	ISSUED FOR CONSTRUCTION	DEC 14/15	IV	ET					
REV	DESCRIPTION	DATE	BY	APR		APEGA PERMIT No:	P8651	STEP CODE	400

PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD
WORK ORDER E002133-03

<b>ENERFLEX</b> Calgary, Alberta, Canada	STRUCTURAL STEEL MAIN SKID, AREA A	
	DWG NO E002133-03-301	SHT 1 REV 1

BILL OF MATERIAL				
ITEM	QTY	LONG ANNOTATION	MATERIAL	LENGTH
101	-	-	-	-
102	-	-	-	-
103	2	ANGLE,1-1/4" X 1-1/4",1/4" THK	G40.2144W	250
104	1	GRATING,BLACK,1"x3/16"(19-4) X 292 X 292	G40.2144W	292
105	1	PLATE,1/2",SMOOTH X 1272.3 X 477.4	G40.2144W	1272
106	1	PLATE,1/2",SMOOTH X 1272.3 X 616.3	G40.2144W	1272
108	1	PLATE,1/4",SMOOTH X 305 X 50	G40.2144W	292
109	1	PLATE,1/4",SMOOTH X 305 X 305	G40.2144W	305
110	1	TUBING,12"x12",1/4" THK	G40.21350W	100
112	1	TUBING,3"x3",1/8" THK	G40.21350W	828
113	1	TUBING,3"x3",1/8" THK	G40.21350W	958
114	4	TUBING,3"x3",1/8" THK	G40.21350W	1028
116	5	TUBING,3"x3",1/8" THK	G40.21350W	1190
117	3	TUBING,3"x3",1/8" THK	G40.21350W	1483
118	2	TUBING,3"x3",1/8" THK	G40.21350W	1488
119	3	WIDE FLANGE,16" X 40#	G40.2150W	346
120	3	WIDE FLANGE,16" X 40#	G40.2150W	629
121	3	WIDE FLANGE,16" X 40#	G40.2150W	1190
122	1	WIDE FLANGE,16" X 40#	G40.2150W	1441
123	1	WIDE FLANGE,16" X 40#	G40.2150W	1442
124	3	WIDE FLANGE,16" X 40#	G40.2150W	1483
125	3	WIDE FLANGE,16" X 40#	G40.2150W	1488
126	3	WIDE FLANGE,16" X 40#	G40.2150W	1578
127	1	WIDE FLANGE,16" X 40#	G40.2150W	1903
128	2	WIDE FLANGE,16" X 40#	G40.2150W	1907
129	4	WIDE FLANGE,16" X 40#	G40.2150W	4815
130	3	WIDE FLANGE,16" X 40#	G40.2150W	7217
131	2	WIDE FLANGE,16" X 40#	G40.2150W	10900
132	1	WIDE FLANGE,8" X 31#	G40.2150W	454
133	1	WIDE FLANGE,8" X 31#	G40.2150W	629
134	1	WIDE FLANGE,8" X 31#	G40.2150W	1336
135	1	WIDE FLANGE,8" X 31#	G40.2150W	1483
136	1	WIDE FLANGE,8" X 31#	G40.2150W	1578
137	1	WIDE FLANGE,8" X 31#	G40.2150W	1903
138	1	WIDE FLANGE,8" X 31#	G40.2150W	1907
139	1	WIDE FLANGE,8" X 31#	G40.2150W	1992
140	1	WIDE FLANGE,8" X 31#	G40.2150W	2219
141	4	PLATE,1-1/2",SMOOTH X 241 X 114	G40.2144W	241
142	4	PLATE,2",SMOOTH X 381 X 320	G40.2144W	381
143	4	PLATE,3/4",SMOOTH X 177.8 X 127	G40.2144W	178
144	1	PLATE,1/2",SMOOTH X 200 X 100	G40.2144W	200
145	26	PLATE,1/4",SMOOTH X 150 X 50	G40.2144W	150
146	3	PLATE,1/4",SMOOTH X 250 X 50	G40.2144W	250
147	6	PLATE,1/4",SMOOTH X 300 X 50	G40.2144W	300
148	4	PLATE,1/2",SMOOTH X 381 X 85	G40.2144W	381

PIPING BOM			
MARK	QTY	DESCRIPTION	LENGTH
151	1	PIPE,2",S/80,SMLS,SA-106-B TOE	1534
152	1	PIPE,2",S/80,SMLS,SA-106-B TOE	98
153	1	ELBOW,2",3000#,90D,NPT,SA-105N	
154	1	FLANGE, RFWN, 2",150# S/80,SA-105N	



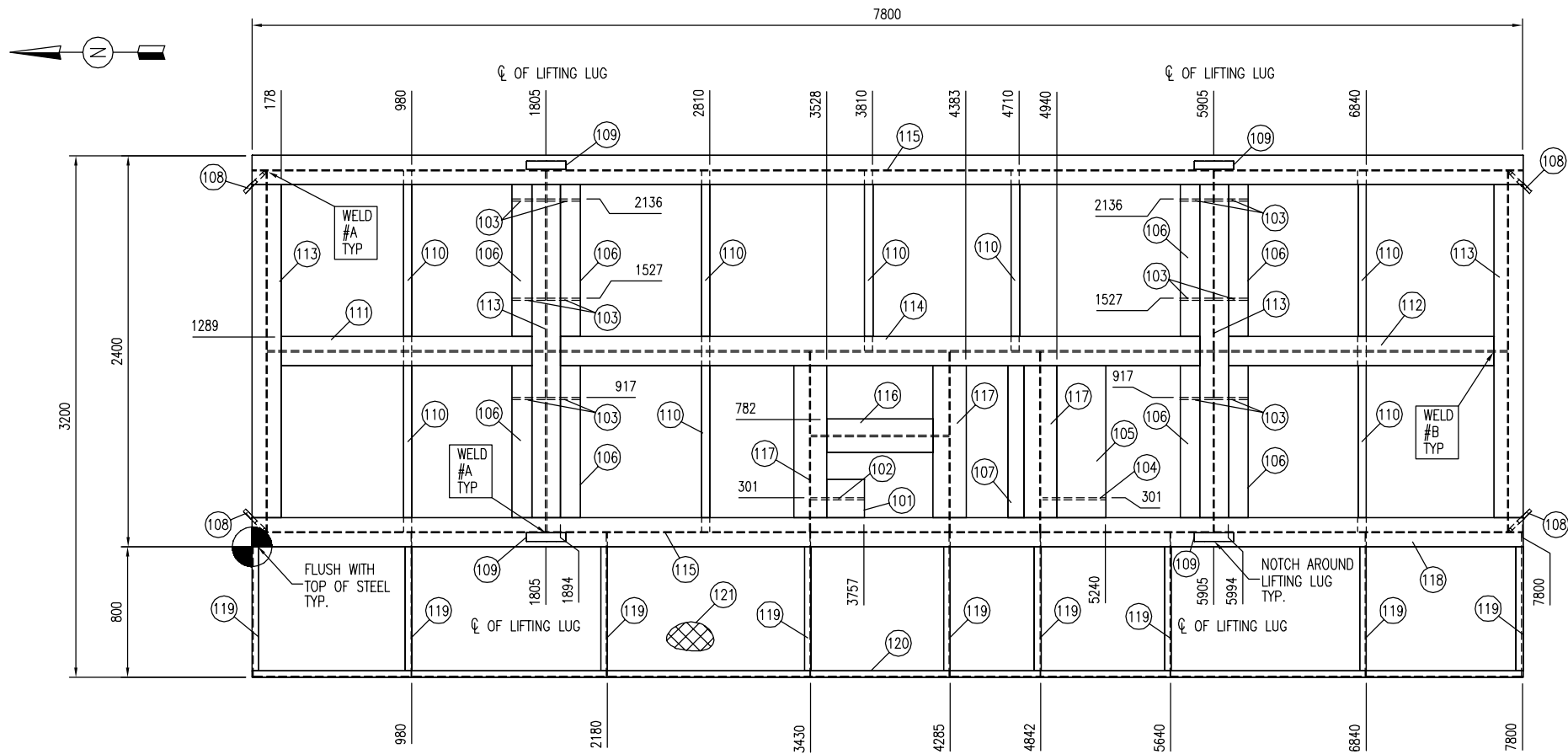
PIPING BILL OF MATERIAL			
MARK	QTY	DESCRIPTION	LENGTH
151	1	PIPE,2",S/40(STD),SMLS,SA-106-B	1379
152	1	PIPE,3",S/40(STD),SMLS,SA-106-B	80
153	1	ELBOW,2",S/40(STD),90D,L,R,BW,SA-234-WPB	
154	1	FLANGE,2",150#,RF,WN,S/40(STD),SA-105N	
155	4	STUD,1" x 305 LG,UNC,SA-193-B7M	305
156	8	NUT,1",UNC,SA-194-2HM	
157	4	PIPE,1 1/2",S/160,SMLS,SA-106-B	195

- |     |                         |      |           |     |    |                  |              |                  |          |  |  |                            |                 |     |             |           |   |
|-----|-------------------------|------|-----------|-----|----|------------------|--------------|------------------|----------|--|--|----------------------------|-----------------|-----|-------------|-----------|---|
|     |                         |      |           |     |    | DATE             | DEC 14/15    | SCALE            | 1:20     | PEYTO C/O ONSTREAM<br>REFRIGERATION PLANT<br>40 MMSCFD | <b>ENERFLEX</b><br>Calgary, Alberta,<br>Canada | STRUCTURAL STEEL<br>SKID-C |                 |     |             |           |   |
|     |                         |      |           |     |    | DRAWN BY         | TONY SONG    | CHECKED BY       | H. ZHANG |  |  |                            |                 |     | APPROVED BY | M. GRAHAM |   |
|     |                         |      |           |     |    | PROJECT MANAGER  | K. ROBERTSON | PROJECT ENGINEER | E. TOOSI |  |  |                            |                 |     |             |           |   |
|     |                         |      |           |     |    | CUST PO          |              |                  |          |  |  |                            |                 |     |             |           |   |
| 1   | AS BUILT                |      | MAY 4/16  | TS  | MG |                  |              |                  |          |  |  |                            |                 |     |             |           |   |
| 0   | ISSUED FOR CONSTRUCTION |      | DEC 14/15 | IV  | ET |                  |              |                  |          |  |  |                            |                 |     |             |           |   |
| REV | DESCRIPTION             | DATE | BY        | APR |    | APEGA PERMIT No: | P8651        | STEP CODE        | 400      | WORK ORDER   | E002133-04                                     | DWG NO                     | E002133-04-301A | SHT | 1           | REV       | 1 |

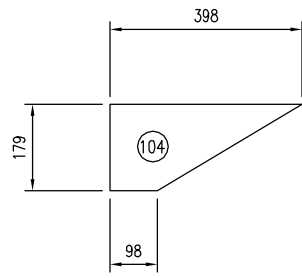
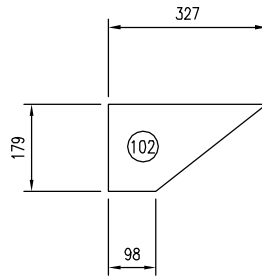
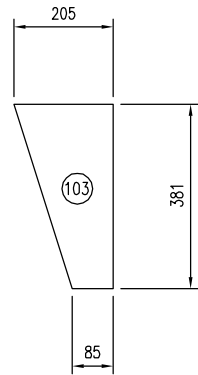
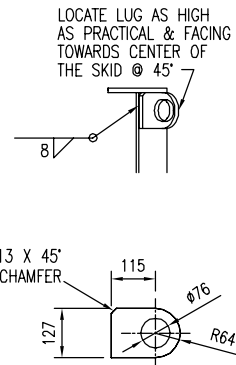
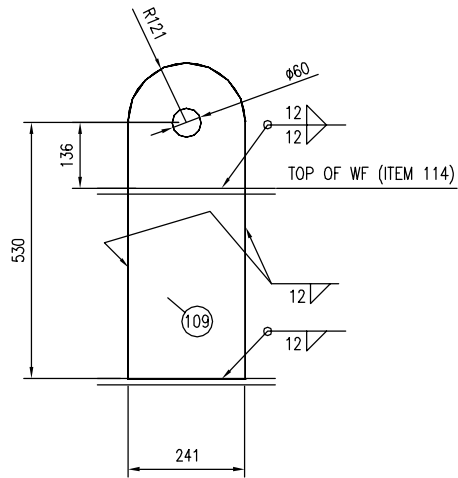


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PLOT DATE: May 04, 2016, tsong



PLAN VIEW  
(1 : 20)



GENERAL NOTES:

- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- WEIGHT OF SKID STEEL BASE: 3710 KGS  
NOTE: MILL TOLERANCE AND SAFETY FACTORS NOT APPLIED
- COPE FLANGES WHERE REQUIRED.
- ALL WELDS TO BE 1/4" (6 MM) FILLETS ALL AROUND, UNLESS OTHERWISE NOTED.
- ALL CUT LENGTHS ARE EXACT TOL +0.0"/-0.125" (+0 MM/-3 MM)
- SEE DWG. E002133-399 FOR COPE AND WELD DETAILS.
- CONSTRUCT STRUCTURE FLUSH TO TOP UNLESS OTHERWISE NOTED.
- GRATING TO BE SET ON TOP OF MAIN STEEL.

BILL OF MATERIAL				
ITEM	QTY	LONG ANNOTATION	MATERIAL	LENGTH
101	1	PLATE,1/2",SMOOTH X 235 X 230	G40.2144W	235
102	1	PLATE,1/2",SMOOTH X 327 X 179 (SEE DETAIL)	G40.2144W	327
103	12	PLATE,1/2",SMOOTH X 381 X 205 (SEE DETAIL)	G40.2144W	381
104	1	PLATE,1/2",SMOOTH X 385 X 381 (SEE DETAIL)	G40.2144W	385
105	1	PLATE,1/2",SMOOTH X 934 X 300	G40.2144W	934
106	8	PLATE,1/2",SMOOTH X 934 X 120	G40.2144W	934
107	1	PLATE,1/4",SMOOTH X 934 X 100	G40.2144W	934
108	4	PLATE,3/4",SMOOTH X 178 X 127 (SEE DETAIL)	G40.2144W	178
109	4	PLATE,2",SMOOTH X 654 X 241 (SEE DETAIL)	G40.2144W	654
110	8	TUBING,2"x2",1/4" THK	G40.21350W	1103
111	1	WIDE FLANGE,16" X 40#	G40.2150W	1708
112	1	WIDE FLANGE,16" X 40#	G40.2150W	1798
113	4	WIDE FLANGE,16" X 40#	G40.2150W	2215
114	1	WIDE FLANGE,16" X 40#	G40.2150W	4092
115	2	WIDE FLANGE,16" X 40#	G40.2150W	7800
116	1	WIDE FLANGE,8" X 31#	G40.2150W	848
117	3	WIDE FLANGE,8" X 31#	G40.2150W	1103
118	1	GRATING,SERRATED,1-1/4"x3/16"(19-4)BLACK X 7800 X 2400 (CTS)	G40.2144W	7800
119	9	CHANNEL,4" X 5.4#	G40.2144W	880
120	1	CHANNEL,4" X 5.4#	G40.2144W	7800
121	1	GRATING,SERRATED,1-1/4"x3/16"(19-4)BLACK X 7800.0000 X 800.0000	G40.2144W	7800

**FINAL  
AS BUILT**  
NAME TONY SONG DATE MAY 4/16


REV	DESCRIPTION	DATE	BY	APR
1	AS BUILT	MAY 4/16	TS	MG
0	ISSUED FOR CONSTRUCTION	DEC 14/15	IV	ET
DATE	DEC 14/15	SCALE	1:20	
DRAWN BY	TONY SONG	CHECKED BY	H. ZHANG	APPROVED BY
PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI	
CUST PO				
APEGA PERMIT No:	P8651	STEP CODE	400	WORK ORDER

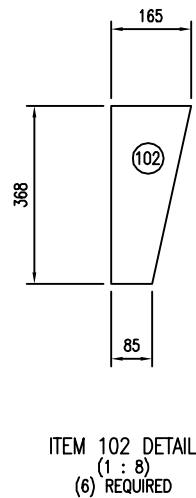
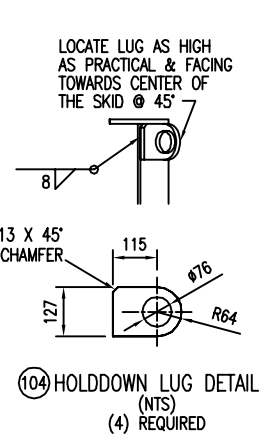
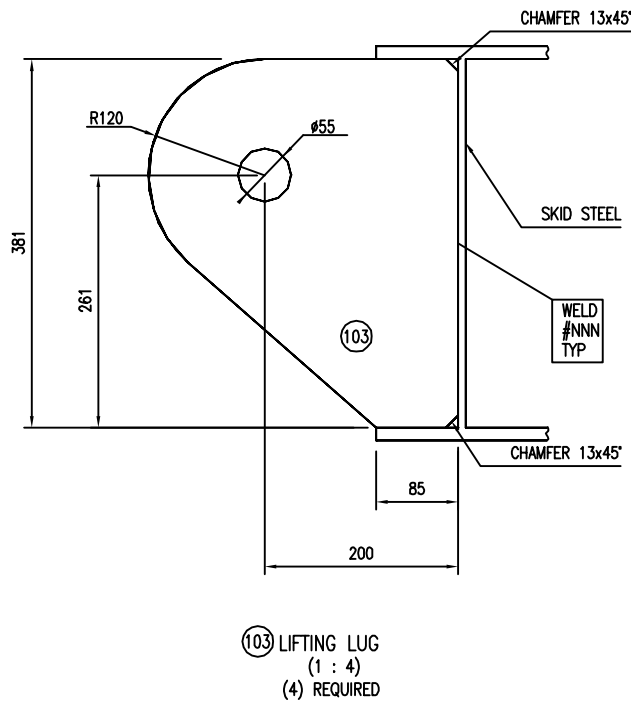
PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD		<b>ENERFLEX</b> Calgary, Alberta, Canada		STRUCTURAL STEEL ACCUMULATOR SKID	
WORK ORDER E002133-04		DWG NO E002133-04-302		SHT 1	REV 1



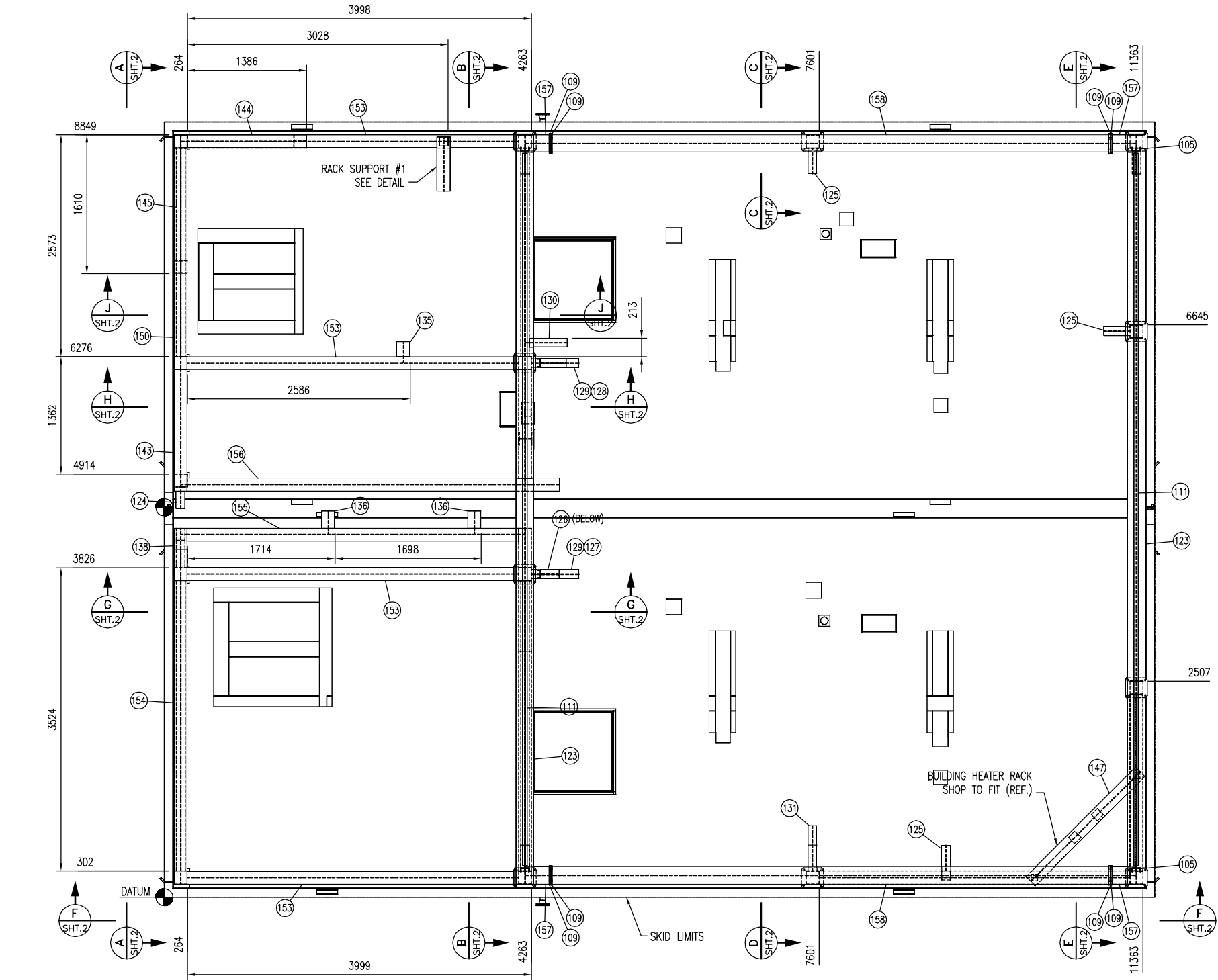


GENERAL NOTES:

1.  ALL TAIL DIMENSIONS FROM REFERENCE POINT.
2. WEIGHT OF SKID STEEL BASE: 3693 KGS  
NOTE: MILL TOLERANCE AND SAFETY FACTORS NOT APPLIED
3. COPE FLANGES WHERE REQUIRED.
4. ALL WELDS TO BE 1/4" (6MM) FILLETS ALL AROUND, UNLESS OTHERWISE NOTED.
5. ALL CUT LENGTHS ARE EXACT TOL +0.0"/-0.125" (+0 MM/-3 MM)
6. ALL PLATE TO BE FLUSH WITH TOP OF STEEL, UNLESS OTHERWISE NOTED.
7. SEE DWG. E002133-399 FOR COPE AND WELD DETAILS.

[illegible]

PLOT DATE: Dec 15, 2015, vergara THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



PLAN VIEW  
(1 : 30)

NOTE:  
ALL COLUMNS ARE WELDED TO AND  
DIMENSIONED FROM TOP OF SKID,  
SEE CHECKER PLATE DETAIL  
E002133-04-301 SHT. 2.

NOTE:  
ALL TAIL DIMENSIONS ARE TAKEN  
FROM REFERENCE POINT

ISSUED FOR  
CONSTRUCTION  
NAME ISABEL VERGARA DATE DEC 14/15

0	ISSUED FOR CONSTRUCTION	DEC 14/15	IV	ET	
REV	DESCRIPTION	DATE	BY	APR	

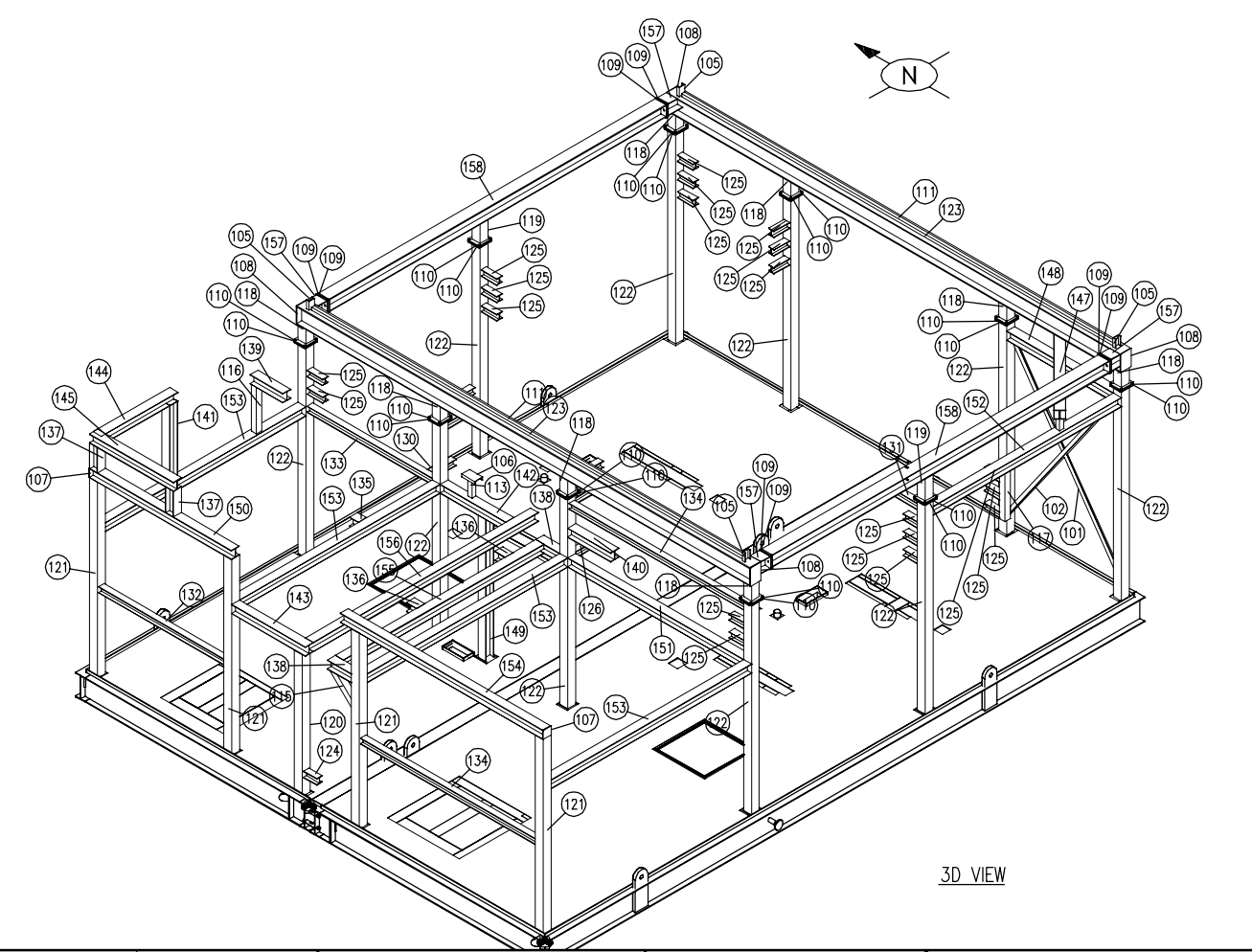
DATE	DEC 14/15	SCALE	AS SHOWN
DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
CUST PO			

PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD
--

<b>ENERFLEX</b> Calgary, Alberta, Canada	CRANE RAIL AND SUPPORT
DWG NO E002133-04-331	SHT 1
REV 0	

BILL OF MATERIAL				
ITEM	QTY	LONG ANNOTATION	MATERIAL	LENGTH
101	1	ANGLE,3" X 3",1/4" THK	G40.2144W	3575
102	1	ANGLE,3" X 3",1/4" THK	G40.2144W	3576
103	1	CHANNEL,4" X 5.4#	G40.2144W	319
104	1	CHANNEL,4" X 5.4#	G40.2144W	346
105	4	CHANNEL,4" X 7.25#	G40.2144W	150
106	1	CHANNEL,6" X 8.2#	G40.2144W	250
107	2	PLATE,1/4",SMOOTH X 152.1460 X 152.1460	G40.2144W	152
108	4	PLATE,1/4",SMOOTH X 303.2760 X 203.3270	G40.2144W	303
109	8	PLATE,3/4",SMOOTH X 225.0000 X 225.0000	G40.2144W	225
110	20	PLATE,3/4",SMOOTH X 254.0000 X 228.0000	G40.2144W	254
111	2	SQUARE BAR: 2	G40.2144W	8268
112	1	TUBING,3"x3",1/4" THK	G40.21350W	200
113	1	TUBING,3"x3",1/4" THK	G40.21350W	340
114	2	TUBING,4"x4",1/4" THK	G40.21350W	76
115	1	TUBING,4"x4",1/4" THK	G40.21350W	649
116	1	TUBING,4"x4",1/4" THK	G40.21350W	791
117	1	TUBING,4"x4",1/4" THK	G40.21350W	841
118	8	TUBING,6"x6",1/4" THK	G40.21350W	264
119	2	TUBING,6"x6",1/4" THK	G40.21350W	364
120	1	TUBING,6"x6",1/4" THK	G40.21350W	2354
121	4	TUBING,6"x6",1/4" THK	G40.21350W	3254
122	10	TUBING,6"x6",1/4" THK	G40.21350W	3512
123	2	WIDE FLANGE,12" X 40#	G40.2150W	8700
124	1	WIDE FLANGE,4" X 13#	G40.2150W	250
125	19	WIDE FLANGE,4" X 13#	G40.2150W	300
126	1	WIDE FLANGE,4" X 13#	G40.2150W	320
127	1	WIDE FLANGE,4" X 13#	G40.2150W	329
128	1	WIDE FLANGE,4" X 13#	G40.2150W	404
129	2	WIDE FLANGE,4" X 13#	G40.2150W	446
130	1	WIDE FLANGE,4" X 13#	G40.2150W	488

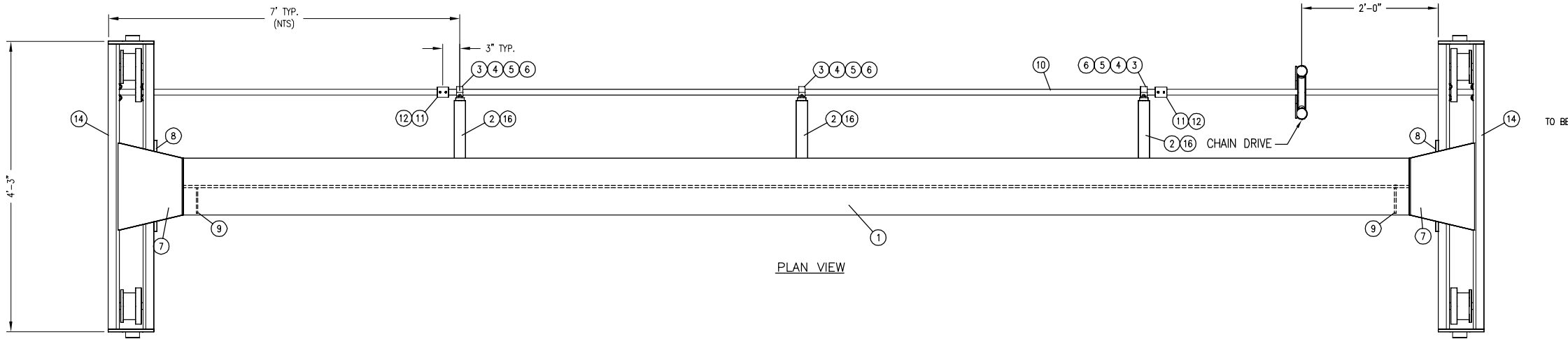
BILL OF MATERIAL				
ITEM	QTY	LONG ANNOTATION	MATERIAL	LENGTH
131	1	WIDE FLANGE,4" X 13#	G40.2150W	525
132	1	WIDE FLANGE,4" X 13#	G40.2150W	2420
133	1	WIDE FLANGE,4" X 13#	G40.2150W	2421
134	2	WIDE FLANGE,6" X 13#	G40.2150W	3371
135	1	WIDE FLANGE,6" X 15#	G40.2150W	243
136	2	WIDE FLANGE,6" X 15#	G40.2150W	272
137	2	WIDE FLANGE,6" X 15#	G40.2150W	421
138	2	WIDE FLANGE,6" X 15#	G40.2150W	459
139	1	WIDE FLANGE,6" X 15#	G40.2150W	632
140	1	WIDE FLANGE,6" X 15#	G40.2150W	823
141	1	WIDE FLANGE,6" X 15#	G40.2150W	1321
142	1	WIDE FLANGE,6" X 15#	G40.2150W	1333
143	1	WIDE FLANGE,6" X 15#	G40.2150W	1412
144	1	WIDE FLANGE,6" X 15#	G40.2150W	1462
145	1	WIDE FLANGE,6" X 15#	G40.2150W	1609
147	1	WIDE FLANGE,6" X 15#	G40.2150W	1797
148	1	WIDE FLANGE,6" X 15#	G40.2150W	2052
149	1	WIDE FLANGE,6" X 15#	G40.2150W	2354
150	1	WIDE FLANGE,6" X 15#	G40.2150W	2724
151	1	WIDE FLANGE,6" X 15#	G40.2150W	3371
152	1	WIDE FLANGE,6" X 15#	G40.2150W	3609
153	4	WIDE FLANGE,6" X 15#	G40.2150W	3846
154	1	WIDE FLANGE,6" X 15#	G40.2150W	3889
155	1	WIDE FLANGE,6" X 15#	G40.2150W	3993
156	1	WIDE FLANGE,6" X 15#	G40.2150W	4395
157	4	WIDE FLANGE,8" X 31#	G40.2150W	277
158	2	WIDE FLANGE,8" X 31#	G40.2150W	6462
159	40	BOLT, 5/8" UNC x 3" LG w/ NUT & WASHER	ASTM A325	-
160	8	BOLT, 3/4" UNC x 3" LG w/ NUT & WASHER	ASTM A325	-



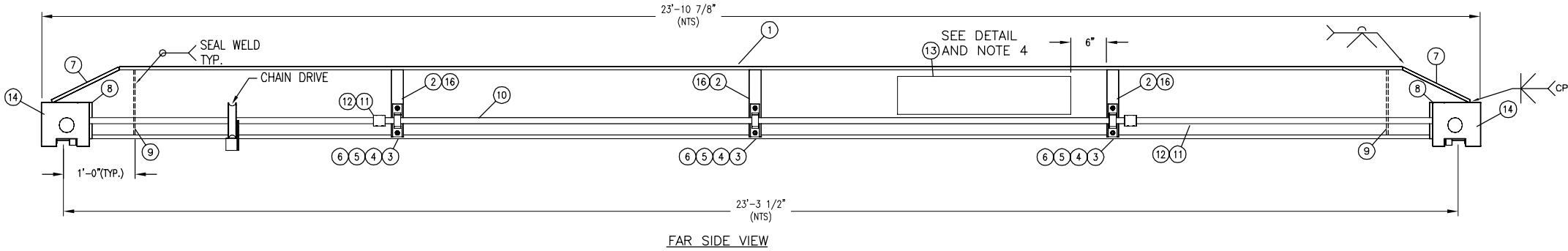
3D VIEW



PLOT DATE: Dec 14, 2015, vergara THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION. NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

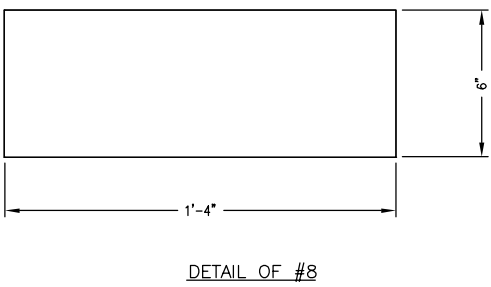
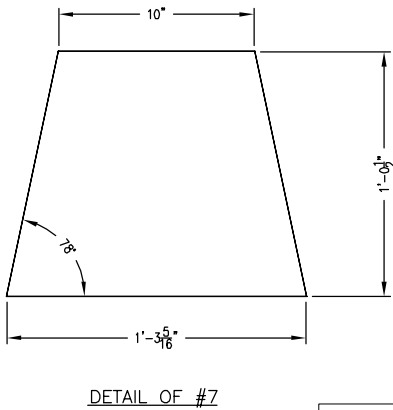
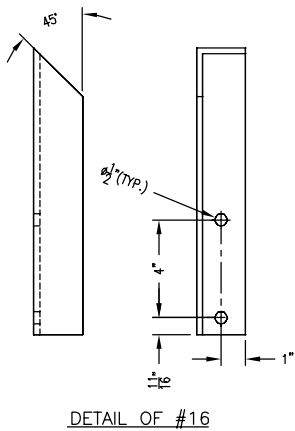
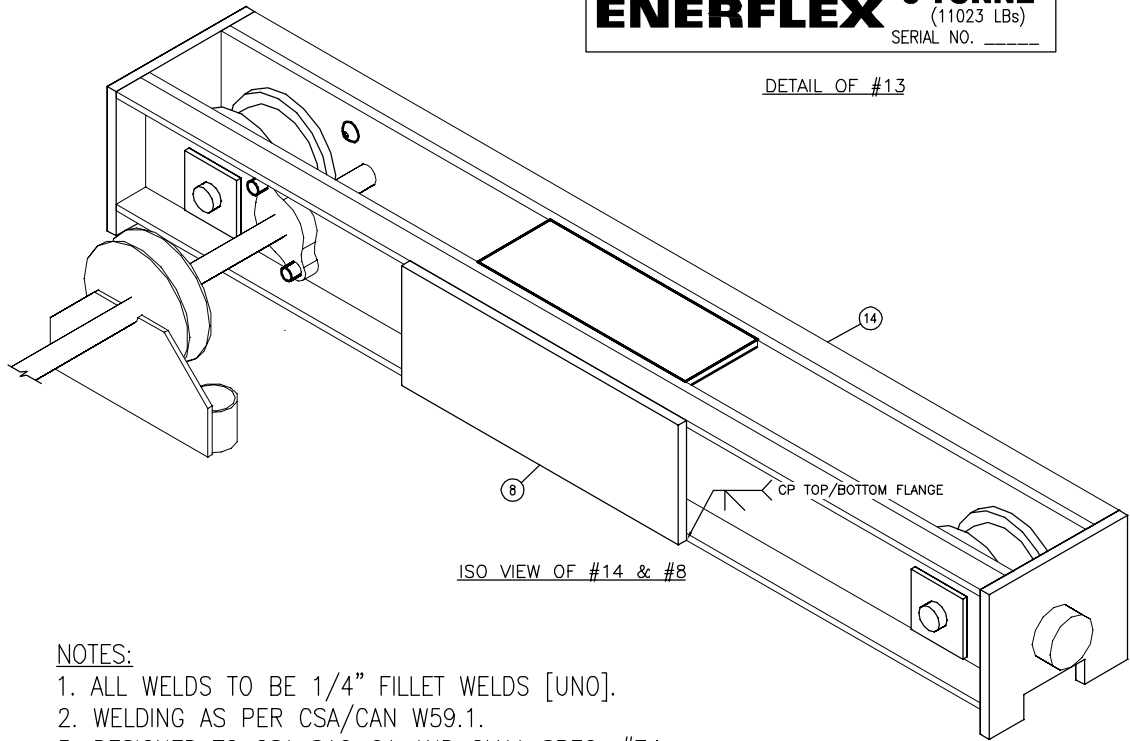
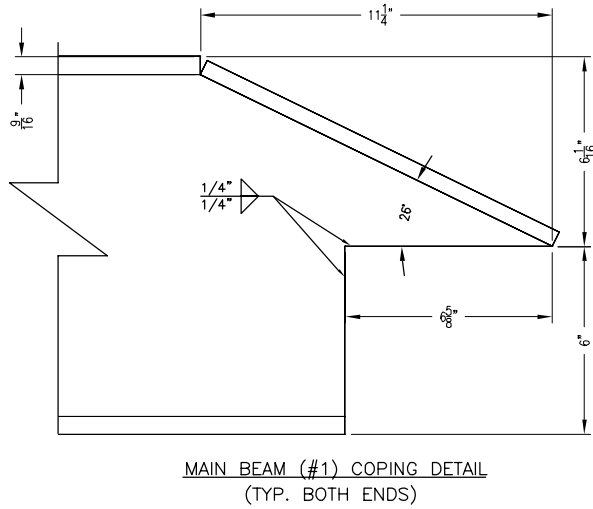
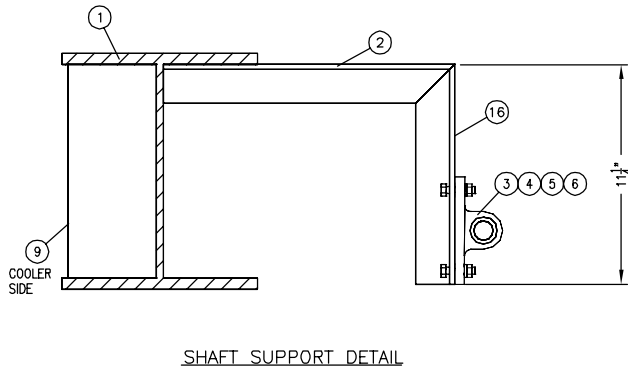
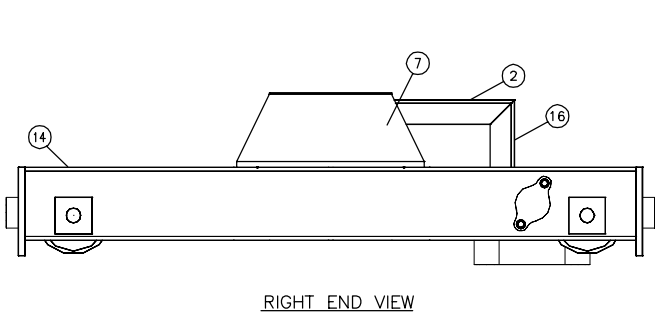


BILL OF MATERIAL					
MARK	PART NUMBER	QTY	LONG ANNOTATION	MATERIAL	LENGTH
1	034-HE-1200-0530	1	WIDE FLANGE, 12" X 53#	G40.2150W	23'-7 1/16"
2	005-HD-0200-0200-0025	3	ANGLE, 2" X 2", 1/4" THK	G40.2144W	1'-2 7/8"
3	MPB-0100M311-D00G	3	PILLOW BLOCK, DODGE	-	
4	402-LCGC-0037	6	LOCK WASHER, 3/8" STD. PLTD.	-	
5	CONSUMABLE	6	3/8" NUT, HEX HEAD, NC, GR. 8	-	
6	CONSUMABLE	6	3/8" BOLT, NC GR.8	-	1 1/2"
7	040-HD-0050	2	PLATE, 1/2", SMOOTH X 1'-3 5/16" X 1'-0 1/2"	G40.2144W	1'-3 5/16"
8	040-HD-0050	2	PLATE, 1/2", SMOOTH X 1'-4" X 6"	G40.2144W	1'-4"
9	010-HD-0450-0025	2	FLAT BAR, 4-1/2" X 1/4" THK	G40.2144W	10 7/8"
10	012-ML-0100	1	ROUND BAR, 1"	C101B	21'-2"
11	121-HRB-0075	2	3/4"- 3000# SCR'D COUPLING (DRILLED OUT TO 1")	SA-105-N	-
12	CONSUMABLE	4	SPRING PIN- SLOTTED, 1/4" DIA	-	1 1/4"
13	CONSUMABLE	2	ENERFLEX 5-TONNE/21-3/4 X 6, 300LR CRANE (1 PER SIDE)	-	
14	HYDR-ENDTRUCKS 5 TONNE	1	ENDTRUCKS, SET OF 2, 5 TONNE RATED, TOP RUNNING	-	
15	Consumable	1	PAINT - NEW CAT YELLOW	-	4 LITERS
16	005-HD-0200-0200-0025	3	ANGLE, 2" X 2", 1/4" THK	G40.2144W	11 1/4"
17	HYDR-HGTST-26 5 TONNE	1	TROLLEY, CHAIN DRIVE, 13' DROP, 5 TONNE RATED	-	
18	HYDR-NBST-12 5 TONNE	1	HOIST, CHAIN, 12 DROP, 5 TONNE RATED	-	



MANUFACTURED BY  
**ENERFLEX**  
CAPACITY  
**5 TONNE**  
(11023 LBS)  
SERIAL NO. \_\_\_\_\_

DETAIL OF #13



- NOTES:
1. ALL WELDS TO BE 1/4" FILLET WELDS [UNO].
  2. WELDING AS PER CSA/CAN W59.1.
  3. DESIGNED TO CSA S16-01 AND CMAA SPEC. #74.
  4. PAINT DEPARTMENT TO AFFIX LABEL CONTAINING SERIAL NO. (PROJECT NO.) ON DECAL.
  5. SKID SHOP TO STENCIL SERIAL NO. (PROJECT NO.) ON ITEM #7 (ONE END ONLY).

REFERENCE ENERFLEX STANDARD DRAWING:  
NNNN-BRIDGE CRANE, SHEET 1, REV.G

<div>ISSUED FOR CONSTRUCTION</div> <div>NAME ISABEL VERGARA    DATE DEC 14/15</div>					DATE DEC 14/15		SCALE AS SHOWN		PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD		<b>ENERFLEX</b> Calgary, Alberta, Canada		5-TON BRIDGE CRANE SKID-C									
					DRAWN BY TONY SONG		CHECKED BY H. ZHANG									APPROVED BY K. ROBERTSON						
					PROJECT MANAGER K. ROBERTSON		PROJECT ENGINEER E. TOOSI															
					CUST PO																	
0		ISSUED FOR CONSTRUCTION			DEC 14/15		IV		ET													
REV		DESCRIPTION			DATE		BY		APR		APEGA PERMIT No: P8651		STEP CODE 414		WORK ORDER E002133-04		DWG NO E002133-04-341		SHT 1		REV 0	



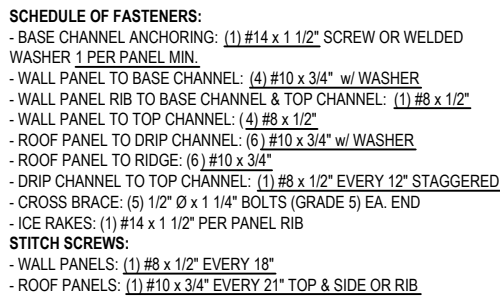
**ENERFLEX**

**Building Drawing(s)**



1. EXTERIOR WALLS: 22GA GALVALUME
2. EXTERIOR ROOF: 22GA GALVALUME
3. EXTERIOR TRIM: 22GA GALVALUME
4. MAN DOOR(S) COLOUR: GREY
5. INTERIOR LINER: 20GA 33% PERFORATED WHITE ALUMINUM OVER 3',  
24GA WHITE ALUMINUM BELOW
6. WALL INSULATION: R-12 FIBERGLASS BATT
7. ROOF INSULATION: R-20 FIBERGLASS BATT (2 - LAYERS 3')
8. VAPOUR BARRIER: HEAVY
9. SURFACE AREA: 3015 SQR/FT
10. APPROX. SHIP WEIGHT: 12,800 LBS BUILDING ONLY

- 4 - 18" x 32" MANUALLY OPERABLE LOUVERS c/w BIRD SCREENS
- 1 - 20" XP. WALL MOUNTED EXHAUST FAN 115/230v, 1ph, 60hz (12ACPH) CLASS1, DIV1, GROUP C&D c/w DAMPER & STORM HOOD



DOOR LEGEND	
DS = DOUBLE GLAZED	CC = CHECK CHAIN
IWG = INDUSTRIAL WIRE GLASS	WS = WEATHERSTRIPPING
RH = RIGHT HAND SWING	DC = HYDRAULIC CLOSURE
LH = LEFT HAND SWING	SG = INTERIOR SLIDE GATE
PH = PANIC HARDWARE	GA = GAUGE
LC= LOCK CYLINDER	INS = INSULATED
R-12 = CORE INSULATION (R-12)	LS= LOCK SET

EDSON AB.  
1/50 SNOW = 2.1 kPa  
1/50 WIND = 0.46 kPa  
CEILING COLLATERAL LOAD (MECHANICAL, ELECTRICAL, ETC.) = 0.15 kPa  
BUILDING IS DESIGNED TO COMPLY WITH THE A.B.C 2006 AS PER THE WIND AND  
SNOW LOAD SPECIFIED ON THE DRAWING. OWNER SHALL CONTACT WARWICK  
INDUSTRIES IF ACTUAL BUILDING LOCATION DIFFERS FROM THOSE SHOWN, IN  
ORDER TO VALIDATE THE SUITABILITY OF DESIGN FOR THE INTENDED LOCATION

ENERFLEX

[illegible]

1. ALL WALL PANELS ARE TO BE TYPICAL B/S (BIG/SMAALL) PANELS UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE IN IMPERIAL FOR SHOP USE, METRIC DIMENSIONS ARE REFERENCE ONLY.
3. ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO ROUGH OPENINGS
4. DO NOT SCALE DRAWING
5. CONFIRM LOCATIONS OF ANY FANS AND LOUVERS PRIOR TO INSTALLATION
6. CENTRE BUILDING ON SKID
7. BUILDING INSTALLATION AND ASSEMBLY SHALL BE AS PER WARWICK STRUCTURES GROUP LTD SELF-FRAME
8. DRAWING MANUAL AND DETAILS WHERE THERE ARE CONFLICTS INFORMATION ON DRAWINGS SHALL BE TAKEN AS CORRECT
9. "POST CONSTRUCTION DRAWINGS" ARE GENERATED FROM CONSTRUCTION CHANGE INFORMATION FORWARDED TO WARWICK STRUCTURES GROUP LTD BY THE OWNERS FIELD SUPERVISORS AND OR HIRED CONTRACTORS. ANY CHANGES NOT DOCUMENTED WILL NOT APPEAR ON THE DRAWINGS AND THEREFORE THE DRAWING MAY NOT BE AN ACCURATE REPRESENTATION OF THE CONSTRUCTED FACILITY.
10. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND OR EXCAVATION IT SHALL BE THE RESPONSIBILITY OF THE OWNERS REPRESENTATIVE TO VERIFY THE LOCATION AND STATUS OF ANY PIPING, ELECTRICAL, EQUIPMENT OR BUILDINGS
11. ANY REVISIONS MADE TO EXISTING EQUIPMENT, ELECTRICAL OR INSTRUMENTATION ON A FACILITY NOT OWNED BY WARWICK STRUCTURES GROUP LTD. IS ONLY SHOWN AS REPRESENTATION OF WHAT EXISTS AND MUST BE VERIFIED BY THE OWNER.



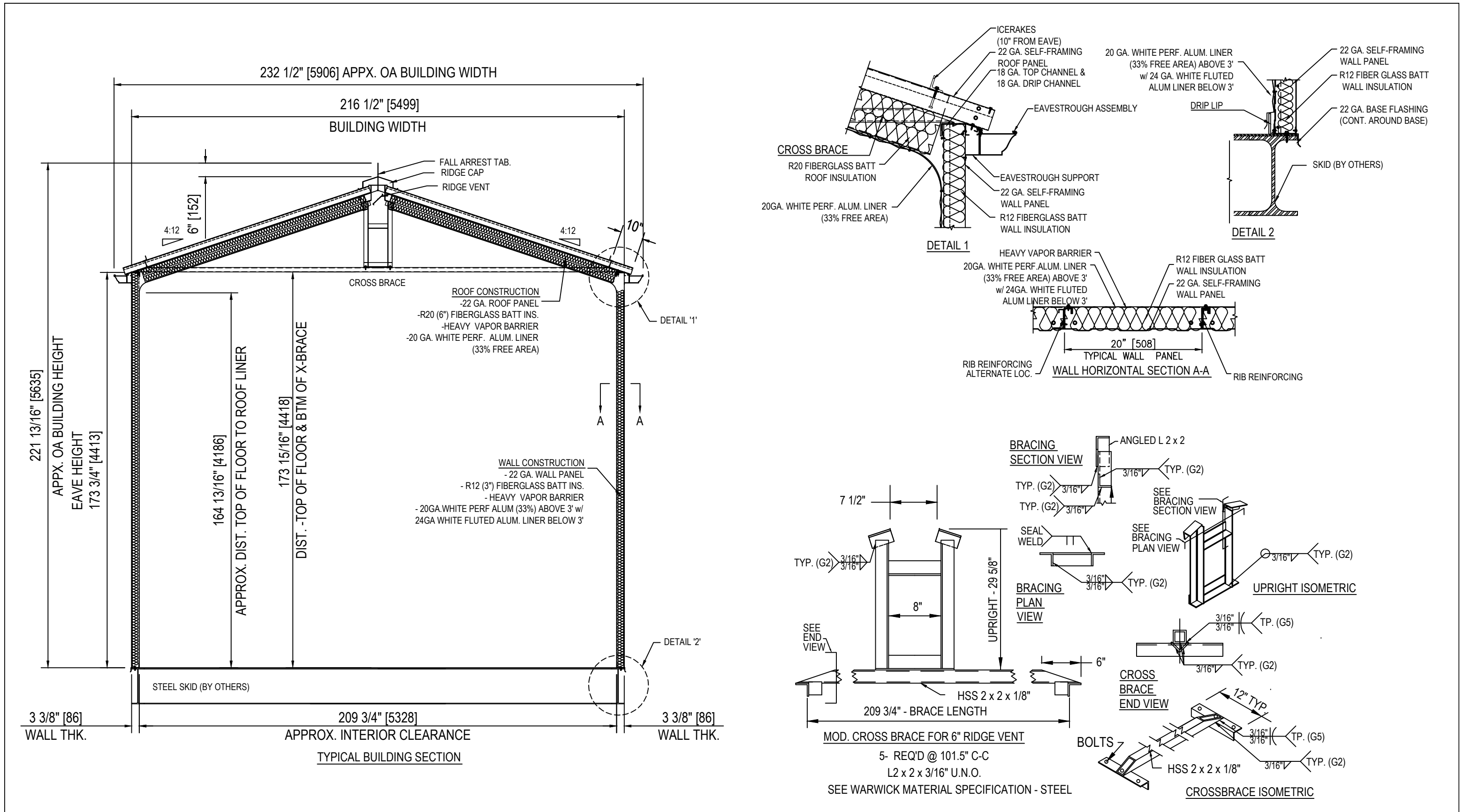
**WARWICK**  
STRUCTURES GROUP  
A PTW COMPANY


ENGINEERING RECORD		
	BY	DATE
DRAWN	AD	28/01/2016
CHECKED	AD	28/01/2016
DESIGNED	EW	28/01/2016
REVIEWED	AD	28/01/2016
CONTRACT No.	P0: 4500266826	
PROJECT No.	W35401	

E002133-02 PEYTO REFRIG.

## PANEL LAYOUT

DRAWING NUMBER	REV
W35401-01	A



NO.		DATE	REVISION	DRN	CHK	ENG	APR	GENERAL NOTES		www.warwicksg.com		ENGINEERING RECORD			ENERFLEX				
-		28/01/16	COPY OF W33346 [E001519-02]	AD	AD	EW	AD	<div>1. ALL WALL PANELS ARE TO BE TYPICAL B/S (BIG/SMALL) PANELS UNLESS NOTED OTHERWISE.</div> <div>2. ALL DIMENSIONS ARE IN IMPERIAL FOR SHOP USE, METRIC DIMENSIONS ARE REFERENCE ONLY</div> <div>3. ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO ROUGH OPENINGS</div> <div>4. DO NOT SCALE DRAWING</div> <div>5. CONFIRM LOCATIONS OF ANY FANS AND LOUVERS PRIOR TO INSTALLATION</div> <div>6. CENTRE BUILDING ON SKID</div> <div>7. BUILDING INSTALLATION AND ASSEMBLY SHALL BE AS PER WARWICK STRUCTURES GROUP LTD SELF-FRAME INSTALLATION MANUAL AND DETAILS. WHERE THERE ARE CONFLICTS INFORMATION ON DRAWINGS SHALL BE TAKEN AS CORRECT</div> <div>8. "POST CONSTRUCTION DRAWINGS" ARE GENERATED FROM CONSTRUCTION CHANGE INFORMATION FORWARDED TO WARWICK STRUCTURES GROUP LTD. BY THE OWNERS FIELD SUPERVISORS AND OR HIRED CONTRACTORS. ANY CHANGES NOT DOCUMENTED WILL NOT APPEAR ON THE DRAWINGS AND THEREFORE THE DRAWING MAY NOT BE AN ACCURATE REPRESENTATION OF THE CONSTRUCTED FACILITY.</div> <div>9. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND OR EXCAVATION IT SHALL BE THE RESPONSIBILITY OF THE OWNERS REPRESENTATIVE TO VERIFY THE LOCATION AND STATUS OF ANY PIPING, ELECTRICAL, EQUIPMENT OR BUILDINGS</div> <div>10. ANY REVISIONS MADE TO EXISTING EQUIPMENT, ELECTRICAL OR INSTRUMENTATION ON A FACILITY NOT DESIGNED BY WARWICK STRUCTURES GROUP LTD. IS ONLY SHOWN AS REPRESENTATION OF WHAT EXISTS AND MUST BE VERIFIED BY THE OWNER.</div>		<div></div> <div><b>WARWICK</b></div> <div>STRUCTURES GROUP</div> <div>A PTW COMPANY</div>		<div></div>		E002133-02 PEYTO REFRIG.		SECTION			
A		2/02/16	FOR REVIEW AND APPROVAL	AD	AD	EW	AD					DRAWN						AD	28/01/2016
												CHECKED						AD	28/01/2016
												DESIGNED						EW	28/01/2016
												REVIEWED						AD	28/01/2016

BUILDING NOTES:

1. EXTERIOR WALLS: 22GA GALVALUME

2. EXTERIOR ROOF: 22GA GALVALUME

3. EXTERIOR TRIM: 22GA GALVALUME

4. MAN DOOR(S) COLOUR: GREY

5. INTERIOR LINER: 20GA 33% PERFORATED WHITE ALUM.OVER 3', 24GA WHITE ALUM. BELOW

6. WALL INSULATION: R-12 FIBERGLASS BATT

7. ROOF INSULATION: R-20 FIBERGLASS BATT (2-LAYERS 3")

8. VAPOUR BARRIER: HEAVY

9. SURFACE AREA: 2572 SQR/FT

10. APPROX. SHIP WEIGHT: 10,800 LBS BUILDING ONLY
11. 1 – DOUBLE DOOR CANOPY (SHIP LOOSE)

12. 1 – SINGLE DOOR CANOPY (SHIP LOOSE)

13. CLIMASEAL FASTENERS THROUGHOUT

14. P.ENG. STAMPED DWG. REQ'D. (ALBERTA REGISTERED)

HVAC SUPPLIED:

- 2 – 18"x 32" MANUALLY OPERABLE LOUVERS

c/w BIRD SCREENS

1 – 16" XP. WALL MOUNTED EXHAUST FAN

115/230v,1ph, 60hz (12ACPH) CLASS1, DIV1,

GROUP C&D c/w DAMPER & STORM HOOD

IN THIS PROJECT WE USED:  
3"WP WITH 18GA R FOR WALLS  
3"RP-9 FOR ROOF

SCHEDULE OF FASTENERS:

- BASE CHANNEL ANCHORING: (1) #14 x 1 1/2" SCREW OR WELDED WASHER 1 PER PANEL MIN.

- WALL PANEL TO BASE CHANNEL: (4) #10 x 3/4" w/ WASHER

- WALL PANEL RIB TO BASE CHANNEL & TOP CHANNEL: (1) #8 x 1/2"

- WALL PANEL TO TOP CHANNEL: (4) #8 x 1/2"

- ROOF PANEL TO DRIP CHANNEL: (6) #10 x 3/4" w/ WASHER

- ROOF PANEL TO RIDGE: (6) #10 x 3/4"

- DRIP CHANNEL TO TOP CHANNEL: (1) #8 x 1/2" EVERY 12" STAGGERED

- CROSS BRACE: (4) 1/2" Ø x 1 1/4" BOLTS (GRADE 5) EA. END

- ICE RAKES: (1) #14 x 1 1/2" PER PANEL RIB

STITCH SCREWS:

- WALL PANELS: (1) #8 x 1/2" EVERY 17"

- ROOF PANELS: (1) #10 x 3/4" EVERY 20" TOP & SIDE OR RIB

DOOR LEGEND	
DS = DOUBLE GLAZED	CC = CHECK CHAIN
IWG = INDUSTRIAL WIRE GLASS	WS = WEATHERSTRIPPING
RH = RIGHT HAND SWING	DC = HYDRAULIC CLOSURE
LH = LEFT HAND SWING	SG = INTERIOR SLIDE GATE
PH = PANIC HARDWARE	GA = GAUGE
LC= LOCK CYLINDER	INS = INSULATED
R-12 = CORE INSULATION (R-12)	LS= LOCK SET

SITE LOADS FOR AB P.ENG STAMP:

EDSON AB.  
1/50 SNOW = 2.1 kPa  
1/50 WIND = 0.46 kPa  
CEILING COLLATERAL LOAD (MECHANICAL, ELECTRICAL, ETC.) = 0.15 kPa  
BUILDING IS DESIGNED TO COMPLY WITH THE A.B.C 2006 AS PER THE WIND AND SNOW LOAD SPECIFIED ON THE DRAWING. OWNER SHALL CONTACT WARWICK INDUSTRIES IF ACTUAL BUILDING LOCATION DIFFERS FROM THOSE SHOWN, IN ORDER TO VALIDATE THE SUITABILITY OF DESIGN FOR THE INTENDED LOCATION.

NO.	DATE	REVISION	DRN	CHK	ENG	APR
–	28/01/16	COPY OF W33760 [E001519-03]	AD	AD	EW	AD
A	2/02/16	FOR REVIEW & APPROVAL	AD	AD	EW	AD

GENERAL NOTES	
1. ALL WALL PANELS ARE TO BE TYPICAL B/S (BIG/SMALL) PANELS UNLESS NOTED OTHERWISE.	
2. ALL DIMENSIONS ARE IN IMPERIAL FOR SHOP USE. METRIC DIMENSIONS ARE REFERENCE ONLY	
3. ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO ROUGH OPENINGS	
4. DO NOT SCALE DRAWING	
5. CONFIRM LOCATIONS OF ANY FANS AND LOUVERS PRIOR TO INSTALLATION	
6. CENTRE BUILDING ON SKID	
7. BUILDING INSTALLATION AND ASSEMBLY SHALL BE AS PER WARWICK STRUCTURES GROUP LTD SELF-FRAME INSTALLATION MANUAL AND DETAILS. WHERE THERE ARE CONFLICTS INFORMATION ON DRAWINGS SHALL BE TAKEN AS CORRECT	
8. "POST CONSTRUCTION DRAWINGS" ARE GENERATED FROM CONSTRUCTION CHANGE INFORMATION FORWARDED TO WARWICK STRUCTURES GROUP LTD. BY THE OWNERS FIELD SUPERVISORS AND OR HIRED CONTRACTORS. ANY CHANGES NOT DOCUMENTED WILL NOT APPEAR ON THE DRAWINGS AND THEREFORE THE DRAWING MAY NOT BE AN ACCURATE REPRESENTATION OF THE CONSTRUCTED FACILITY.	
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**WARWICK**  
STRUCTURES GROUP  
A PTW COMPANY

ENGINEERING RECORD		
	BY	DATE
DRAWN	AD	28/01/2016
CHECKED	AD	28/01/2016
DESIGNED	EW	28/01/2016
REVIEWED	AD	28/01/2016
CONTRACT No.	PO: 4500266843	
PROJECT No.	W35402	

ENERFLEX	
E002133-03 PEYTO	
–	
PANEL LAYOUT	
DRAWING NUMBER	REV
W35402-01	A





BUILDING NOTES:

1. EXTERIOR WALLS: 22GA GALVALUME
2. EXTERIOR ROOF: 22GA GALVALUME
3. EXTERIOR TRIM: 22GA GALVALUME
4. MAN DOOR(S) COLOUR: WARWICK GREY
5. ROLL-UP DOOR(S) COLOUR: FACTORY WHITE
6. INTERIOR LINER: 20GA 33% PERFORATED WHITE ALUMINUM OVER 3', 24GA WHITE ALUMINUM BELOW
7. WALL INSULATION: R-12 FIBERGLASS BATT
8. ROOF INSULATION: R-20 FIBERGLASS BATT [2-LAYERS 3"]
9. VAPOUR BARRIER: HEAVY
10. SURFACE AREA: 3358 SQR/FT
11. APPROX. SHIP WEIGHT: 14,165 LBS BUILDING ONLY
12. 1 - 22GA DOUBLE DOOR CANOPY
13. 2 - 22GA SINGLE DOOR CANOPIES
14. CLIMASEAL FASTENERS THROUGHOUT
15. P.ENG. STAMPED DWG. REQ'D. (ALBERTA REGISTERED)

IN THIS PROJECT WE USED:  
3"WP 22GA R FOR WALLS  
3"RP-9 FOR ROOF.

SCHEDULE OF FASTENERS:

- BASE CHANNEL ANCHORING: (1) #14 x 1 1/2" SCREW OR WELDED WASHER 1 PER PANEL MIN.
- WALL PANEL TO BASE CHANNEL: (4) #10 x 3/4" w/ WASHER
- WALL PANEL RIB TO BASE CHANNEL & TOP CHANNEL: (1) #8 x 1/2"
- WALL PANEL TO TOP CHANNEL: (4) #8 x 1/2"
- ROOF PANEL TO DRIP CHANNEL: (13) #10 x 3/4" w/ WASHER
- ROOF PANEL TO RIDGE: (13) #10 x 3/4"
- DRIP CHANNEL TO TOP CHANNEL: (1) #8 x 1/2" EVERY 12" STAGGERED
- CROSS BRACE: (6) 1/2" Ø x 1 1/4" BOLTS (GRADE 5) EA. END
- ICE RAKES: (1) #14 x 1 1/2" PER PANEL RIB

STITCH SCREWS:

- WALL PANELS: (1) #8 x 1/2" EVERY 36"
- ROOF PANELS: (1) #10 x 3/4" EVERY 36" TOP & SIDE OF RIB

DOOR LEGEND

DS = DOUBLE GLAZED	CC = CHECK CHAIN
IWG = INDUSTRIAL WIRE GLASS	WS = WEATHERSTRIPPING
RH = RIGHT HAND SWING	DC = HYDRAULIC CLOSURE
LH = LEFT HAND SWING	SG = INTERIOR SLIDE GATE
PH = PANIC HARDWARE	GA = GAUGE
LC = LOCK CYLINDER	INS = INSULATED
R-12 = CORE INSULATION (R-12)	LS = LOCK SET

SITE LOADS FOR AB P.ENG STAMP:

EDSON AB.  
1/50 SNOW = 2.1 kPa  
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CEILING COLLATERAL LOAD (MECHANICAL, ELECTRICAL, ETC.) = 0.15 kPa  
BUILDING IS DESIGNED TO COMPLY WITH THE A.B.C 2006 AS PER THE WIND AND SNOW LOAD SPECIFIED ON THE DRAWING. OWNER SHALL CONTACT WARWICK INDUSTRIES IF ACTUAL BUILDING LOCATION DIFFERS FROM THOSE SHOWN, IN ORDER TO VALIDATE THE SUITABILITY OF DESIGN FOR THE INTENDED LOCATION.

NO.	DATE	REVISION	DRN	CHK	ENG	APR
-	28/01/16	COPY OF W33347 [E001519-04]	AD	AD	EW	AD
A	2/02/16	FOR REVIEW & APPROVAL	AD	AD	EW	AD

GENERAL NOTES

1. ALL WALL PANELS ARE TO BE TYPICAL B/S (BIG/SMALL) PANELS UNLESS NOTED OTHERWISE.
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**WARWICK**  
STRUCTURES GROUP  
A PTW COMPANY

ENGINEERING RECORD

	BY	DATE
DRAWN	AD	28/01/2016
CHECKED	AD	28/01/2016
DESIGNED	EW	28/01/2016
REVIEWED	AD	28/01/2016

CONTRACT No.	PO: 4500266845
PROJECT No.	W35403

ENERFLEX

E002133-04 PEYTO REFRIG.

BUILDING LAYOUT

DRAWING NUMBER

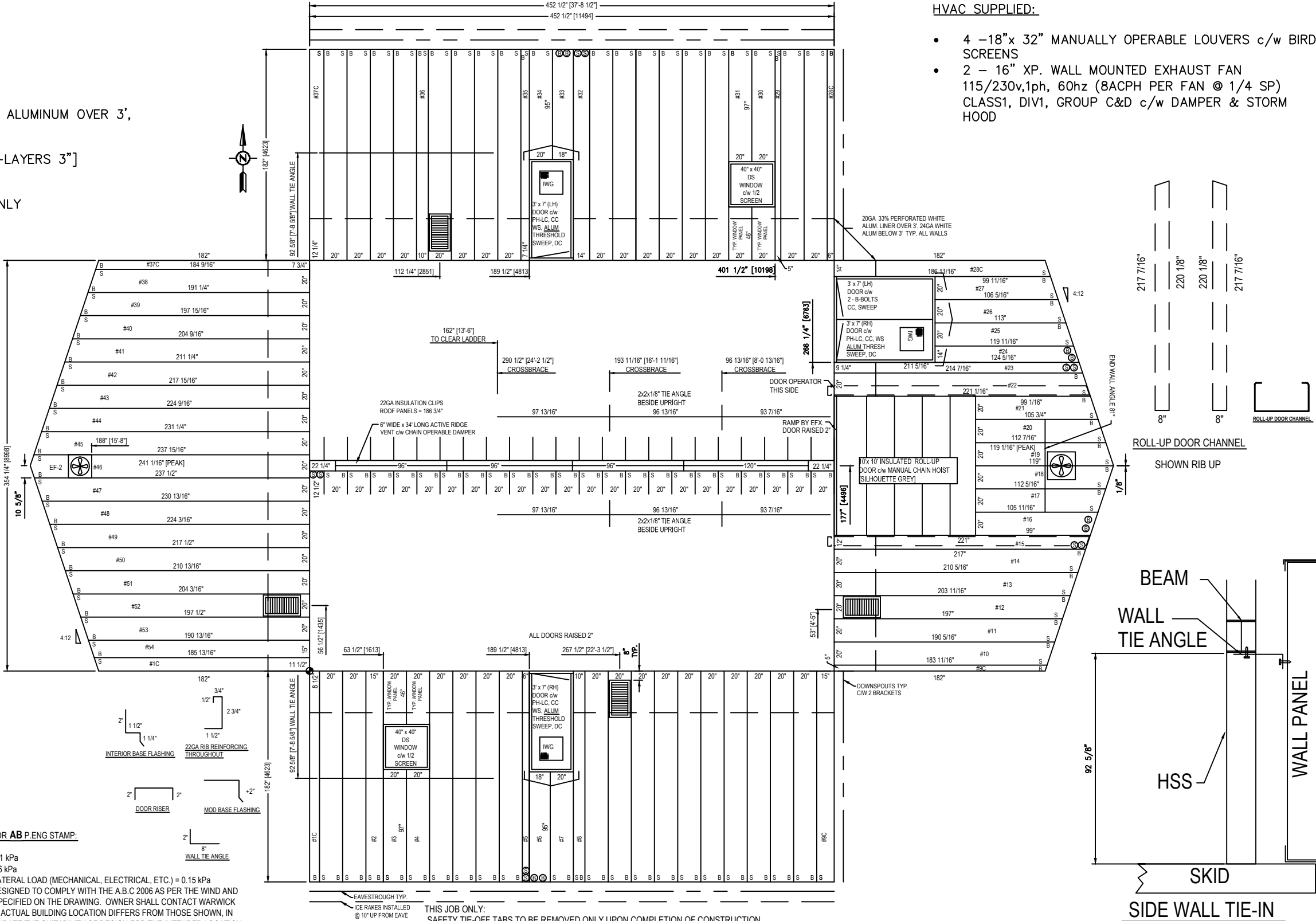
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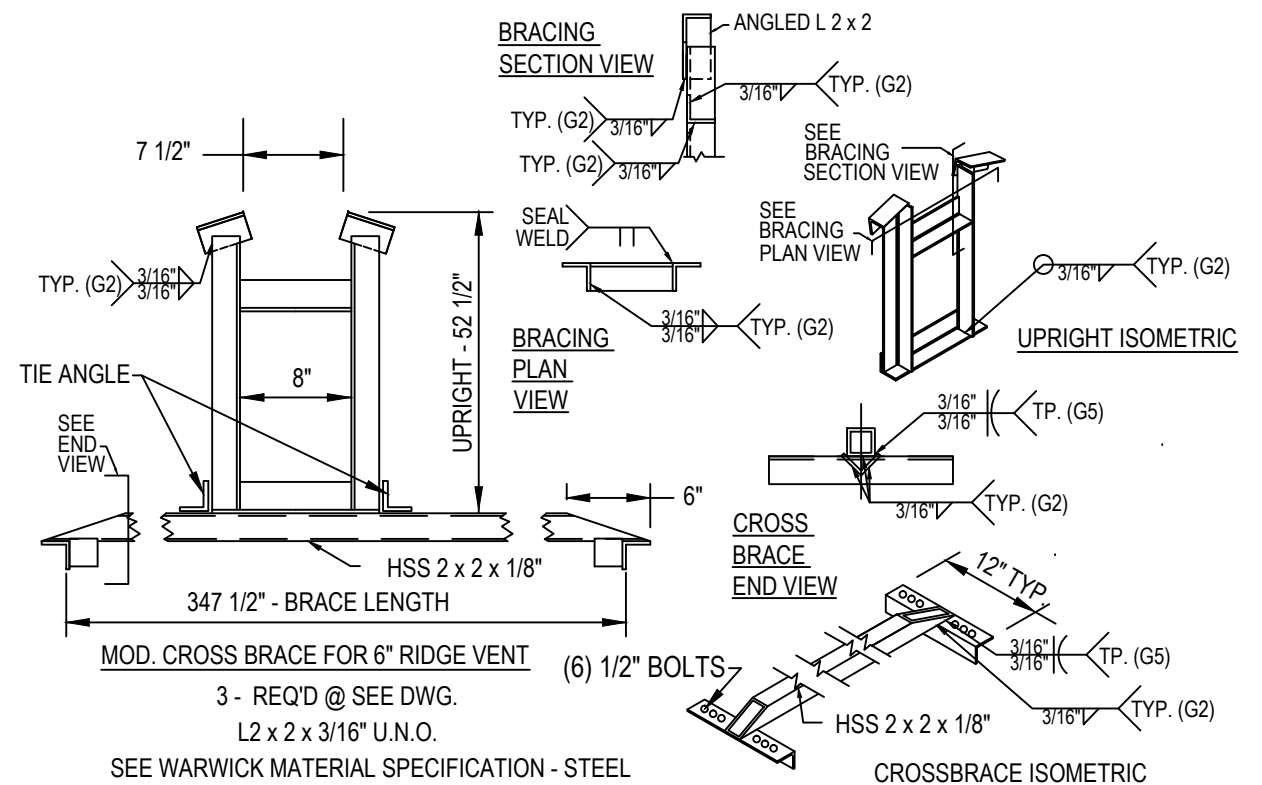
REV

A

HVAC SUPPLIED:

- 4 - 18"x 32" MANUALLY OPERABLE LOUVERS c/w BIRD SCREENS
- 2 - 16" XP. WALL MOUNTED EXHAUST FAN 115/230v,1ph, 60hz (8ACPH PER FAN @ 1/4 SP) CLASS1, DIV1, GROUP C&D c/w DAMPER & STORM HOOD



[illegible]

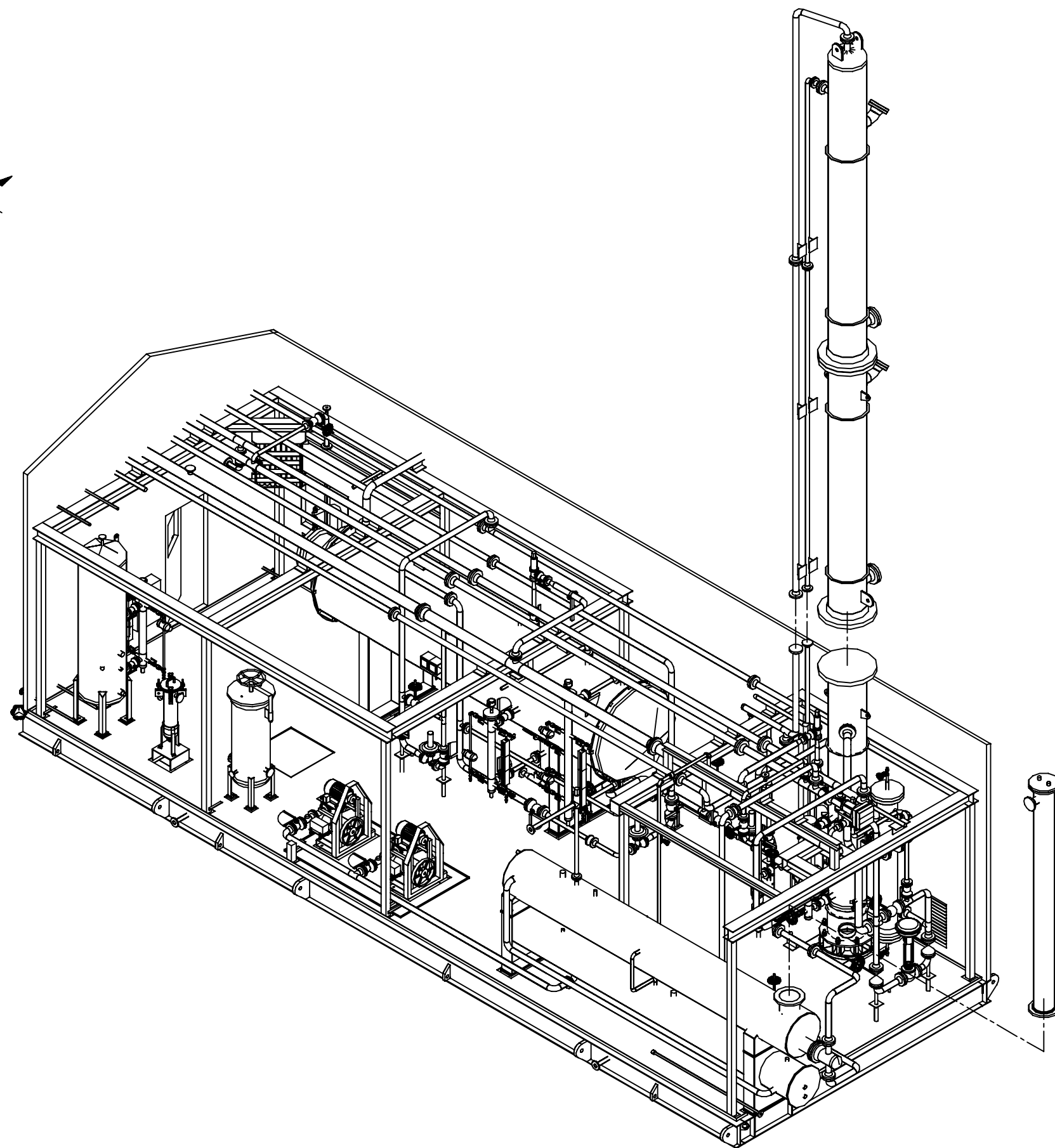
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**ENERFLEX**

**Ikea Drawings**







0	ISSUED FOR CONSTRUCTION	DEC 16/15	IV	ET	
REV	DESCRIPTION	DATE	BY	APR	

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

**ENERFLEX**  
Calgary, Alberta,  
Canada

IKEA DRAWING OF  
PROCESS BUILDING

DWG NO	E002133-02-251
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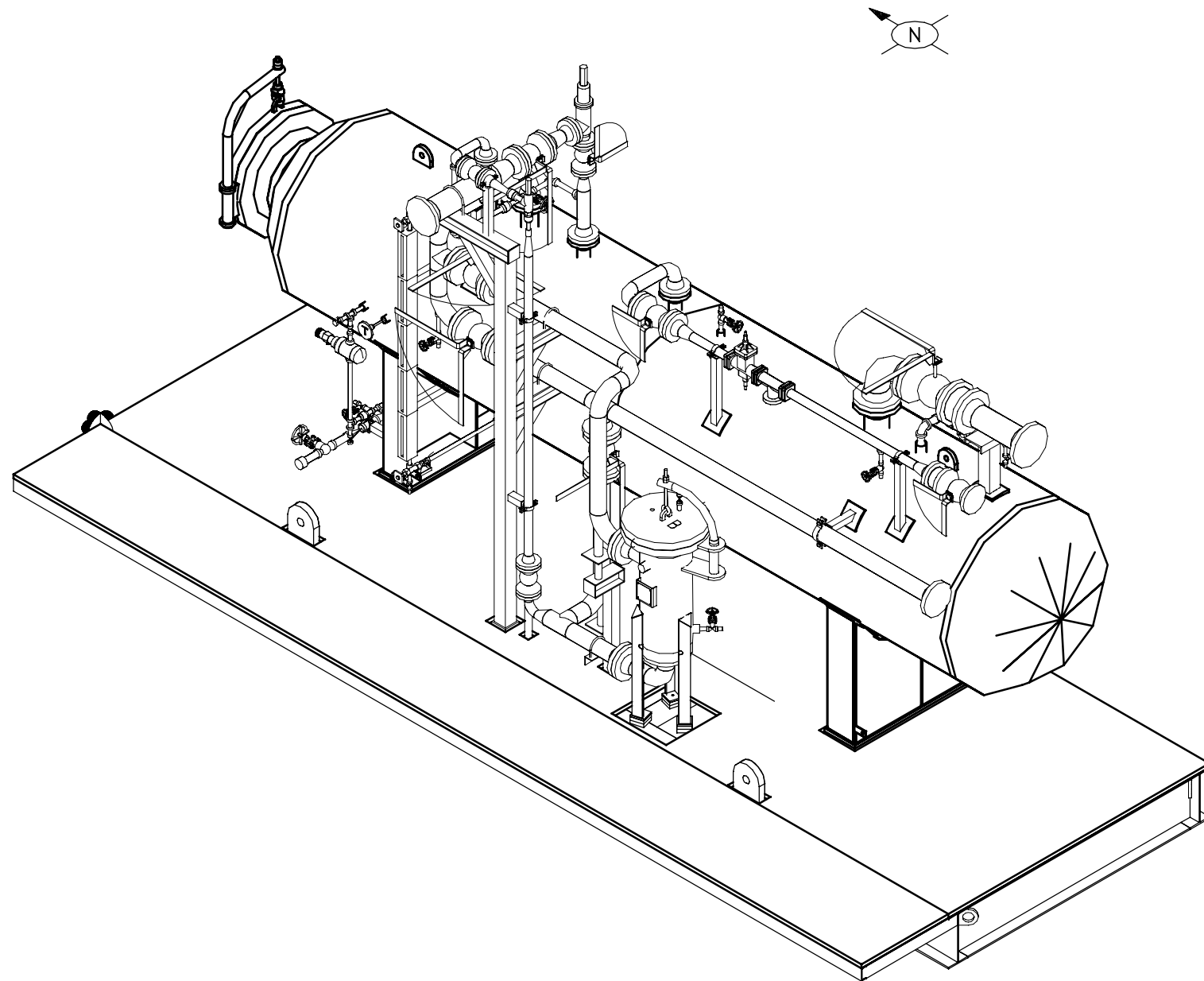
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REV	C
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NAME ISABEL VERGARA DATE DEC 17/2015

						DATE DEC 11/15	SCALE NTS	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40 MMSCFD	<b>ENERFLEX</b> Calgary, Alberta, Canada	IKEA DRAWING REFRIGERATION BUILDING			
						DRAWN BY TONY SONG	CHECKED BY E. TOOSI				APPROVED BY M. GRAHAM		
						PROJECT MANAGER K. ROBERTSON	PROJECT ENGINEER E. TOOSI						
						CUST PO							
	0	ISSUED FOR CONSTRUCTION			DEC 17/15	IV	ET						
REV	DESCRIPTION			DATE	BY	APR	APEGA PERMIT No: P8651		STEP CODE	WORK ORDER E002133-04	DWG NO E002133-04-251	SHT 1	REV 0



ISOMETRIC VIEW

**ISSUED FOR  
CONSTRUCTION**

NAME ISABEL VERGARA DATE DEC 17/15

[illegible]

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

**ENERFLEX**  
Calgary, Alberta,  
Canada

IKEA DRAWING  
ACCUMULATOR SKID

DWG NO E002133-04-252

SHT	1
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REV 0



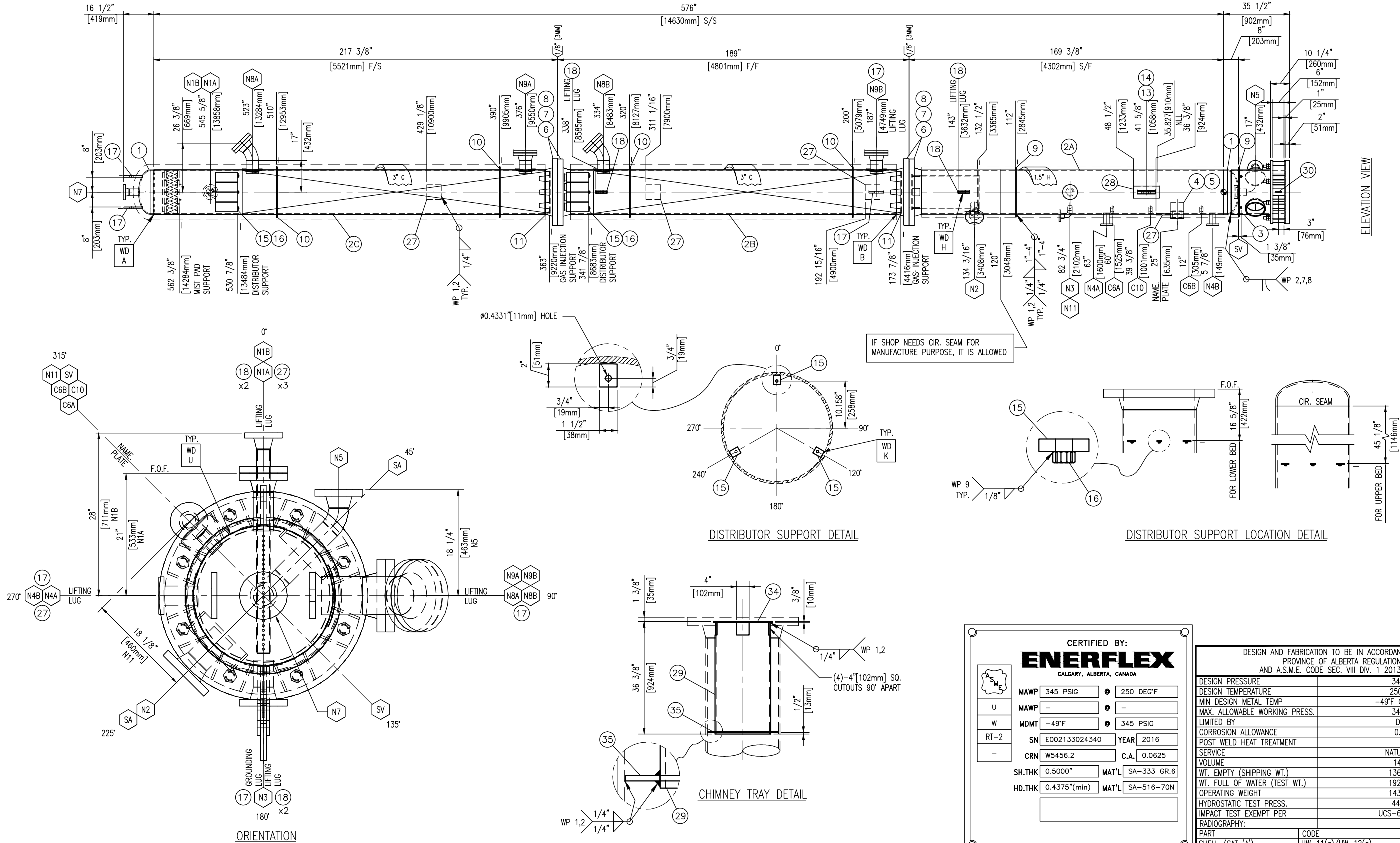


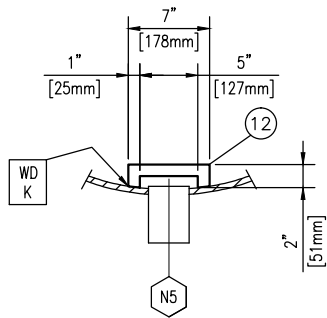
**ENERFLEX**

## **Vessel Drawings**

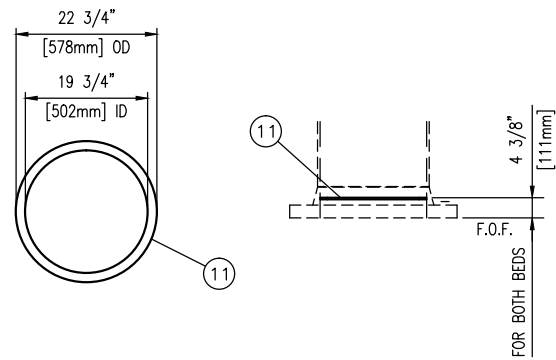


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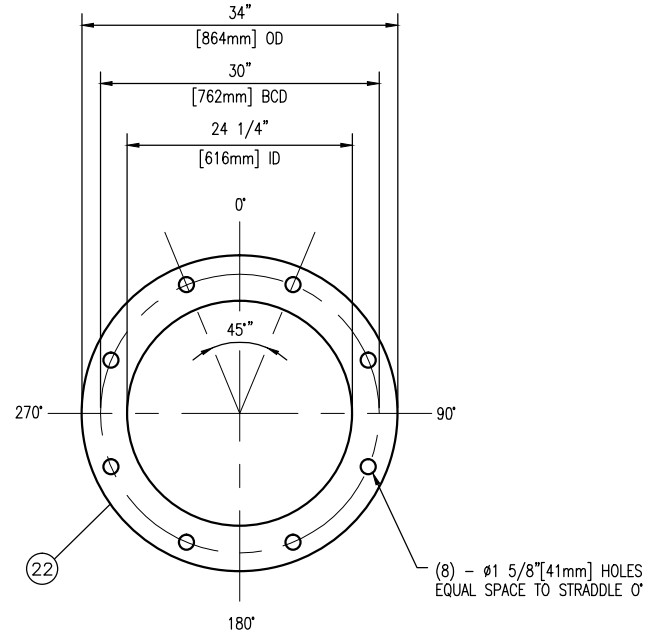




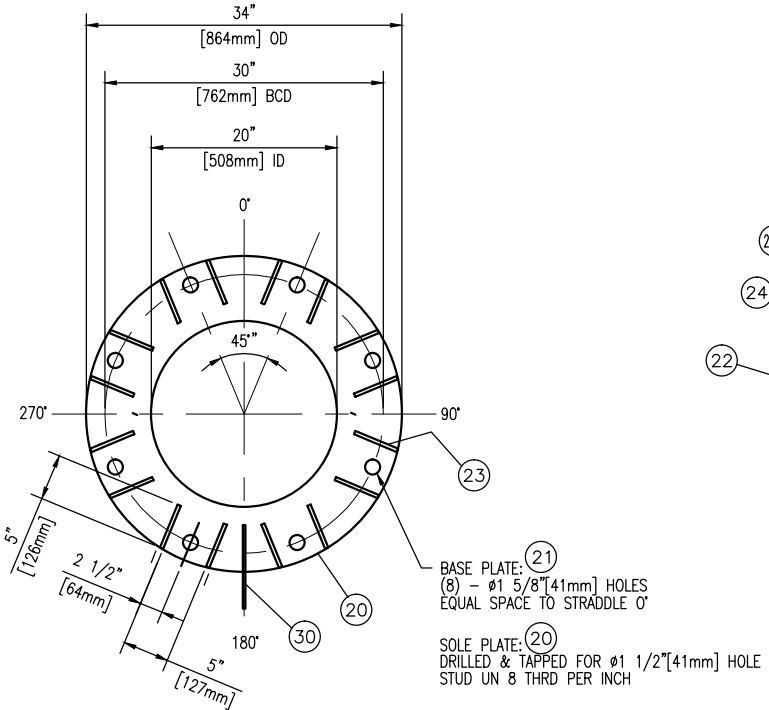
### VORTEX BREAKER DETAIL



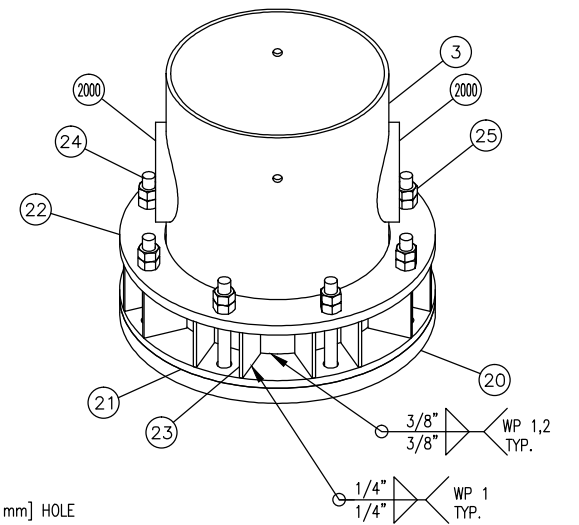
### GAS INJECTION SUPPORT RING DETAIL



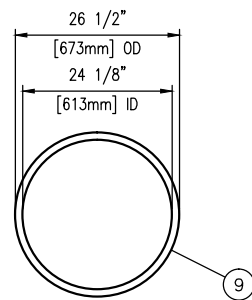
### COMPRESSION RING DETAIL



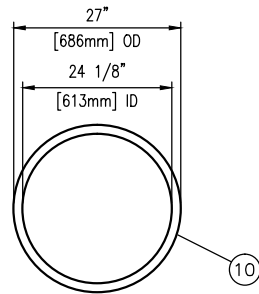
BASE/SOLE PLATE DETAIL



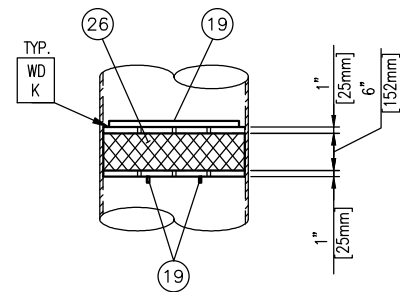
VESSEL BASE/SOLE PLATE ISO VIEW



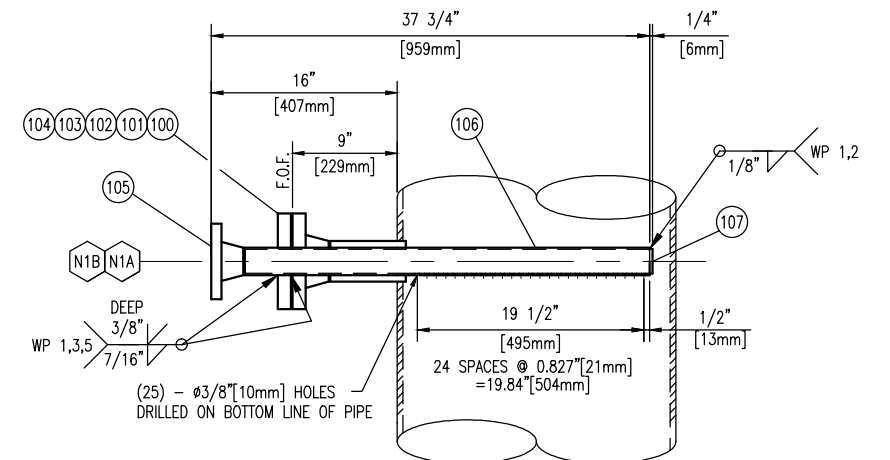
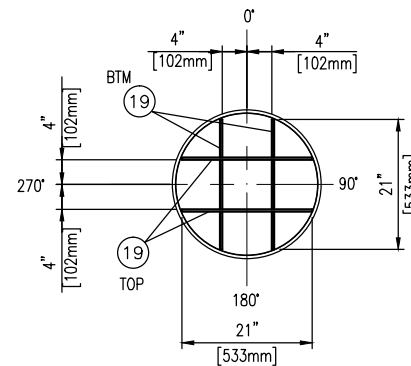
1.5" INSUL. RING DETAIL



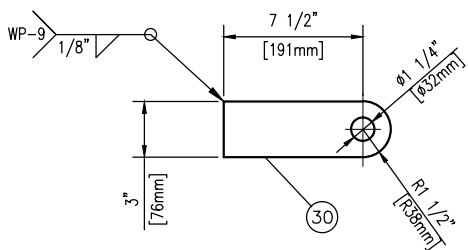
3" INSUL. RING DETAIL



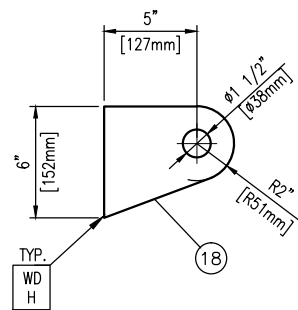
### MIST PAD SUPPORT DETAIL



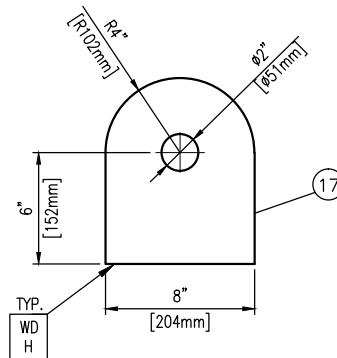
(N1) INLET PIPE DETAIL



GROUNDING LUG DETAIL



LIFTING LUG DETAIL




LIFTING LUG DETAIL

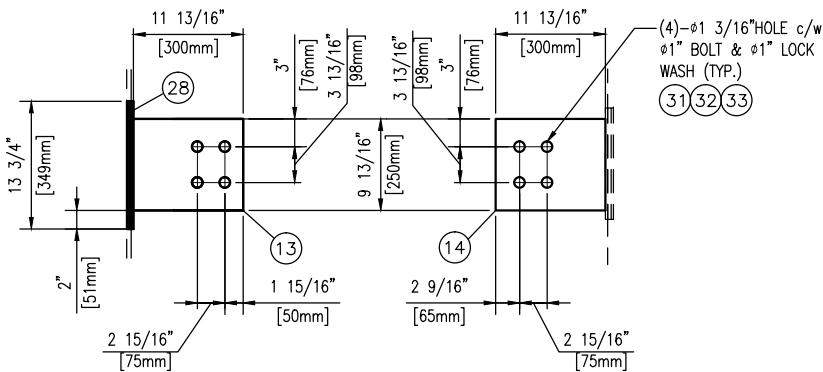
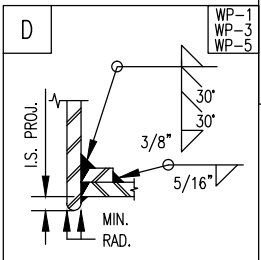
DATE DEC 01/15		SCALE NTS		PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK		<b>ENERFLEX</b> Calgary, Alberta, Canada		C-310 DE-ETHANIZER TOWER 24" OD X 576" S/S			
DRAWN BY E.CHUNG		CHECKED BY J.AHMED								APPROVED BY H.WEI <i>Hw</i>	
PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI									
CUST PO STOCK 007											
APEGA PERMIT No: P8651		OPER. CODE		WORK ORDER E002133-02		DWG NO E002133-02-4340		SHT 2 OF 3		REV 0	

BILL OF MATERIALS									
MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER
	1		2	HEAD, 24"OD, 1/2" NOM, (0.4375") MIN, 2:1 ELLIP, 2" SF,SA-516-70N					
	2A		1	PIPE, NPS 24",XS,SMLS,SA-333 GR. 6	162 1/2"				
	2B		1	PIPE, NPS 24",XS,SMLS,SA-333 GR. 6	175 1/2"				
	2C		1	PIPE, NPS 24",XS,SMLS,SA-333 GR. 6	210 5/8"				
	3		1	PIPE, NPS 24",XS,SMLS,30" LG,SA-106B	CTS				
	4		1	SPECIFICATION PLATE, SS,					
	5		1	NAME PLATE BRACKET, 1/4" THK,SA-516-70 (T STYLE)					
	6		4	FLANGE, NPS 24",300#,RF,WN,XS,CL1,SA-350-LF2					
	7		4	GASKET,24",300#,CG,316 SS,GRAFOIL FILLED,CS(OR),					(2) FOR HYDRO TEST
	8		2	(24) STUD,1 1/2" x 9 1/2 LG,UN8,SA-193-B7M c/w 2 NUTS, 1 1/2", SA-194-2HM,					
	9		2	PLATE 3/8",SMOOTH,26 1/2"OD X 24 1/8"ID,SA-516-70N, SEE DETAIL	CTS				
	10		4	PLATE 3/8",SMOOTH,27"OD X 24 1/8"ID,SA-516-70N, SEE DETAIL	CTS				
	11		2	PLATE 3/8",SMOOTH,22 3/4"OD X 19 3/4" ID,SA-516-70N, SEE DETAIL	CTS				
	12		1	PLATE,3/8",SMOOTH X 7" X 2",SA-516-70N, SEE DETAIL	CTS				
	13		2	PLATE,1/2",SMOOTH X 11.81" X 9.84",SA-516-70N					
	14		1	PLATE,1",SMOOTH X 11.81" X 9.84",SA-516-70N					
	15		6	PLATE,3/8",SMOOTH X 2" X 1 1/2",SA-516-70N,SEE DETAIL					
	16		6	NUT-HEAVY HEX, 3/8",SA-194 GR 8,					
	17		3	PLATE,1",SMOOTH X 10"X 8",SA-516-70N, SEE DETAIL	CTS				
	18		4	PLATE 1" SMOOTH,7" X 6",SA-516-70N, SEE DETAIL	CTS				
	19		4	PLATE,3/8",SMOOTH X 21" X 1",SA-516-70N					
	20		1	PLATE,2",SMOOTH X 34" OD X 20" ID,G40.2144W, SEE DETAIL	CTS				
	21		1	PLATE,1",SMOOTH X 34" OD x 20" ID,G40.2144W, SEE DETAIL	CTS				
	22		1	PLATE 1 1/4" SMOOTH,34"OD X 24 1/4" ID,G40.21-44W, SEE DETAIL	CTS				
	23		16	PLATE,3/8",SMOOTH, 6" X 5",G40.2144W					
	24		8	STUD,1 1/2 X 14"LG,UN8,SA-193-B7M					
	25		16	NUT-HEAVY HEX, 1 1/2",SA-194-2HM					
	26		1	MISTEX: 23"OD,6" THK,c/w 1" TOP & BTM GRID,MODEL NO. DM OPL23X6 316L RWB 316L (KOCH-GLITSCH)					
	27		4	WELDPAD,7.88"x7.88"x3/8"THK,1"R ALL CORNERS,ROLL TO 24.00" ID,SA-516-70N					
	28		1	WELDPAD,13.75"x6.50"x1/4"THK,1"R ALL CORNERS,ROLL TO 24.00" ID, ROLLED ON SHORT DIM.,SA-516-70N					
	29		1	PIPE NPS 18",STD,SA-106-B,SEE DETAIL	36"				
	30		1	PLATE,1/4",SMOOTH, 9" X 3",316SS, SEE DETAIL	CTS				
	31		1	(4) BOLT,1" x 4 1/2" LG,UNC,SAE-GR.8					
	32		1	(4) 1",UNC, SAE-GR.8					
	33		1	(4) 1", LOCK WASHER,SAE-GR.8					
	34		1	PLATE,3/8",SMOOTH,19" OD,SA-516-70N	CTS				
	35		1	PLATE,3/8",SMOOTH,22 7/8" OD X 18 1/8" ID,SA-516-70N	CTS				
N1A	100	INLET	1	FLANGE, NPS 3",300#,RF,WN,S/160 CL1,SA-350-LF2			9"		
	101		1	PIPE,NPS 3",S/160,SMLS,SA-333 GR. 6	6 5/8"	C		MIN.	
	102		1	FLANGE, NPS 3",300#,RF-HUB TYPE, w/2 7/16" HOLE, SA-350-LF2 CL1					
	103		1	GASKET, NPS 3",300#,CG,316 SS,GRAFOIL FILLED,CS(OR),					
	104		1	(8) STUD,3/4" x 4 1/2 LG,UNC,SA-193-B7M c/w 2 NUTS, 3/4",SA-194-2HM					
N1B	105		1	FLANGE, NPS 2",300#,RF,WN,S/160 CL1,SA-350-LF2			AS SHOWN	AS SHOWN	
	106		1	PIPE, NPS 2",S/160,SMLS,SA-333 GR. 6	35"	SEE DETAIL			
	107		1	PLATE 1/4",SMOOTH,2 1/8"OD,SA-516-70N	CTS				
N2	200	TO REBOILER	1	FLANGE, NPS 4",300#,RF,WN,S/160 CL1,SA-350-LF2			8"		
	201		1	PIPE, NPS 4",S/160,SMLS,SA-333 GR. 6	6 1/4"	W		GROUND FLUSH	
N3	300	FROM REBOILER	1	FLANGE,NPS 3",300#,RF,WN,S/160 CL1,SA-350-LF2			7"		
	301		1	PIPE, NPS 3",S/160,SMLS,SA-333 GR. 6	4 5/8"	C		MIN.	
N4A/B	400	BRIDLE	2	FLANGE, NPS 2",300#,RF,LWN CL1,SA-350-LF2	7 3/4"	C	7"	MIN.	
N5	500	HCL OUTLET	1	FLANGE, NPS 3",300#,RF,WN,S/160 CL1,SA-350-LF2			AS SHOWN		
	501		1	PIPE, NPS 3",S/160,SMLS,SA-333 GR. 6	11 5/8"	C		WELD FLUSH	
	502		1	PIPE, NPS 3",S/160,SMLS,SA-333 GR. 6	4 7/8"				
	503		1	ELBOW, NPS 3",S/160,90D,LR,BW,SA-420-WPL6					
	504		1	ELBOW,3",S/160,45D,LR,BW,SA-420-WPL6					

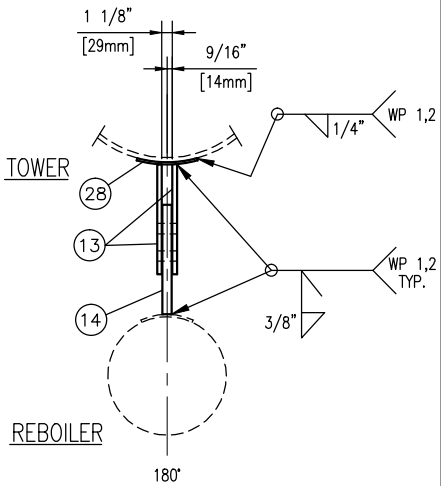
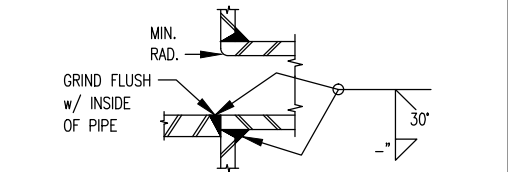
BILL OF MATERIALS									
C6A	600	TI	1	COUPLING, NPS 3/4",6000#,NPT,CL1,SA-350-LF2	4"	C		MIN.	
C6B	601	TI	1	COUPLING, NPS 3/4",6000#,NPT,CL1,SA-350-LF2	4"	C		MIN.	
N7	700	GAS OUTLET	1	FLANGE, NPS 3",300#,RF,WN,S/160 CL1,SA-350-LF2			AS SHOWN		
	701		1	PIPE, NPS 3",S/160,SMLS,SA-333 GR. 6	5 3/4"	C		MIN.	
N8A/B	800	PACKING FILL	2	FLANGE, NPS 6",300#,RF,WN,XS CL1,SA-350-LF2			AS SHOWN		
	801		2	PIPE, NPS 6",XS,SMLS,SA-333 GR. 6	7"	D		1/2"	
	802		2	ELBOW, NPS 6",XS,45D,LR,BW,SA-420-WPL6					
	803		2	REPAD,10.63" OD,6.88" ID,3/8"THK,FORMED TO 24.00" OD SHELL,SA-516-70N					
	804		2	FLANGE, NPS 6",300#,RF,BLIND CL1,SA-350-LF2					
	805		2	GASKET, NPS 6",300#,CG,316 SS,GRAFOIL FILLED,CS(OR),					
	806		2	(12) STUD,3/4" x 5 LG,UNC,SA-193-B7M c/w 2 NUTS, 3/4" SA-194-2HM					
N9A/B	900	PACKING DUMP	2	FLANGE, NPS 6",300#,RF,WN,XS CL1,SA-350-LF2			9"		
	901		2	PIPE, NPS 6",XS,SMLS,SA-333 GR. 6	7"	D		1/2"	
	902		2	REPAD,10.63" OD,6.88" ID,3/8"THK,FORMED TO 24.00" OD SHELL,SA-516-70N					
	903		2	FLANGE, NPS 6",300#,RF,BLIND CL1,SA-350-LF2					
	904		2	GASKET,6",300#,CG,316 SS,GRAFOIL FILLED,CS(OR),					
	905		2	12) STUD,3/4" x 5 LG,UNC,SA-193-B7M c/w 2 NUTS, 3/4" SA-194-2HM					
C10	1000	PI	1	COUPLING, NPS 3/4",6000#,NPT,CL1,SA-350-LF2	4"	C		MIN.	
N11	1100	PSV	1	FLANGE, NPS 2",300#,RF,WN,160 CL1,SA-350-LF2			AS SHOWN		
	1101		1	ELBOW, NPS 2",S/160,90D,LR,BW,SA-420-WPL6					
	1102		1	PIPE, NPS 2",S/160,SMLS,SA-333 GR. 6	3 3/4"	C		MIN.	
SA	2000	SKIRT ACCESS	2	PIPE, NPS 10",STD,SMLS,SA-333 GR. 6	4"	C		2"	
SV		VENT	2	ø1" HOLE					

GENERAL NOTES:

1.  ALL TAIL DIMENSIONS FROM REFERENCE POINT.
2. WELDING PROCEDURE REGISTRATION NO. WP 496.2
3. FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
4. ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
5. EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
6. ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
7. PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL.
8. ALL DIMENSIONS TO BE HELD TO  $\pm 1/8"$  (3.2mm) UNLESS OTHERWISE SHOWN.
9. ALL TACK WELDS TO BE PER WP 1 & 2.
10. SURFACE PREPARATION:  
SEE PAINT TRAVELLER  
SEE PAINT TRAVELLER
11. PRIMER: SEE PAINT TRAVELLER
12. FINISH: SEE PAINT TRAVELLER
13. INSULATION: 1.5"H BOTTOM, 3"C MIDDLE & TOP SECTION.
14. ALL REPAD AND POISON PAD SHALL HAVE A 1/4" THREADED WEEP HOLE
15. ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-105N FOR SA-105  
SA-516-70N FOR SA-516-70  
SA-193-B7M/SA-194-2HM FOR SA-193-B7/SA-194-2H  
SEAMLESS FOR WELDED PIPE
16. TAPERED TRANSITION PER UW-9(c) IF REQUIRED.
17. EXPOSED INSIDE EDGES SHALL BE CHAMFERED OR ROUNDED AS PER UW-76(c).
18. 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR INTERNAL/EXTERNAL UNLESS OTHER WISE NOTED.
19. WHEN USING ONE PIECE REPAD IS NOT PRACTICAL, THE FOLLOWING SHALL BE PERFORMED:  
A. ON SHELL: THE SPLIT WELD SHALL BE ORIENTED AT LEAST 45 DEGREE FROM THE LONGITUDINAL AXIS OF THE VESSEL.  
B. ON HEAD: THE SPLIT WELD SHALL BE 100% RT OR UT.  
C. USE WELD DETAIL "A" FOR SPLIT REPAD.
20. MINIMUM HYDRO VESSEL TEMP SHALL BE 30°F ABOVE MDMT BUT NOT LOWER THAN 35°F
21. VESSEL INTERNALS TO BE OILED AFTER HYDRO TESTING.
22. INTERNAL / EXTERNAL PAINT OR COATING PRIOR TO THE HYDRO-TEST UNLESS PERMITTED BY THE USER OR HIS DESIGNATED AGENT.
23. WELDING CONSUMABLE RATED @ -49°F OR COLDER.
24. VESSEL CRN CAN BE TAKEN FROM E001020-02-4340 REB



ELEVATION VIEW



PLAN VIEW

CLIPS DETAIL ON TOWER &amp; REBOILER

DATE DEC 01/15		SCALE NTS	
DRAWN BY E.CHUNG		CHECKED BY J.AHMED	
		APPROVED BY H.WEI	
PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI	
CUST PO STOCK 007			
APEGA PERMIT No: P8651		OPER. CODE	

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

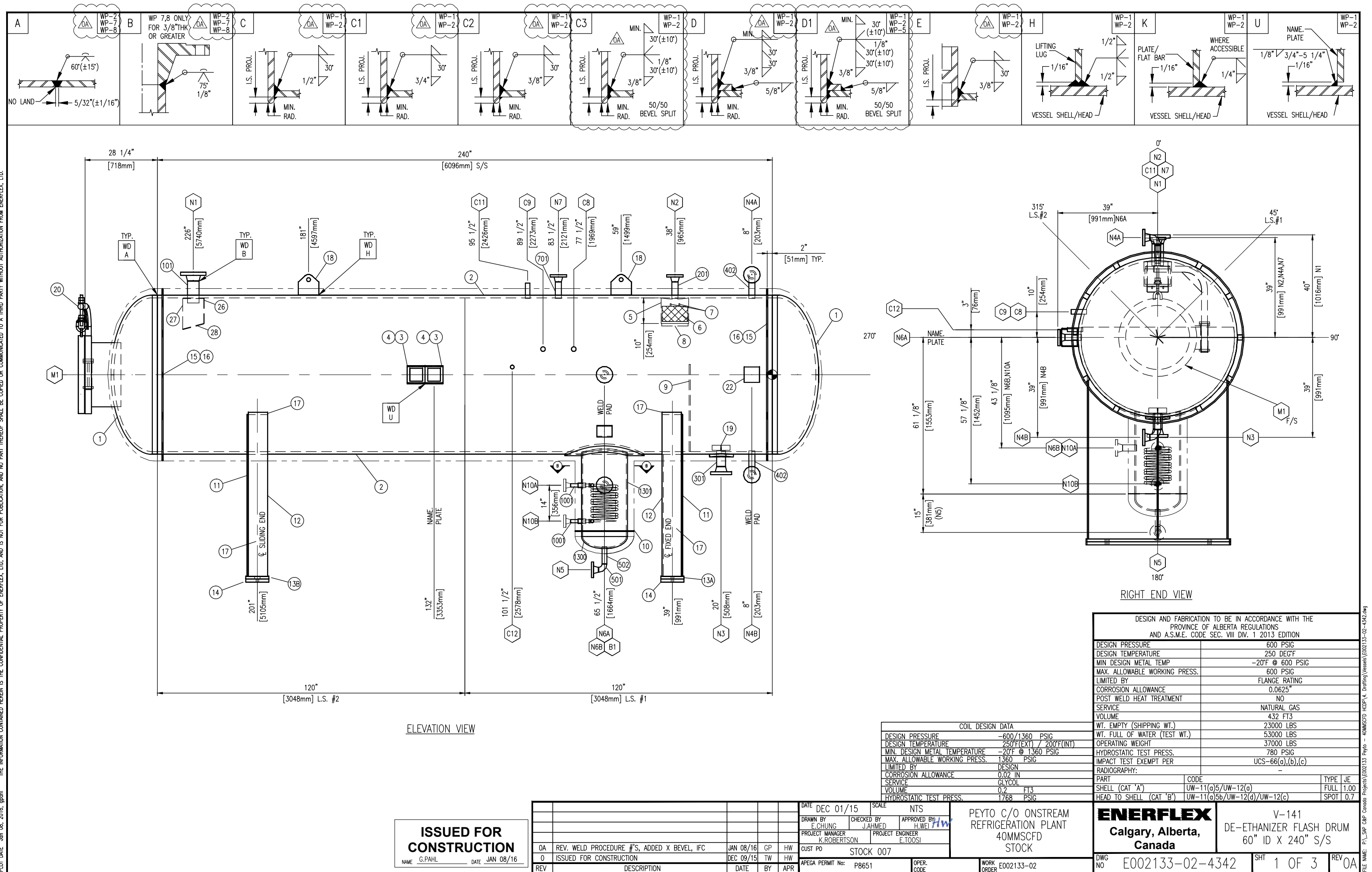
C-310  
DE-ETHANIZER TOWER  
24" OD X 576" S/S

DWG NO E002133-02-4340

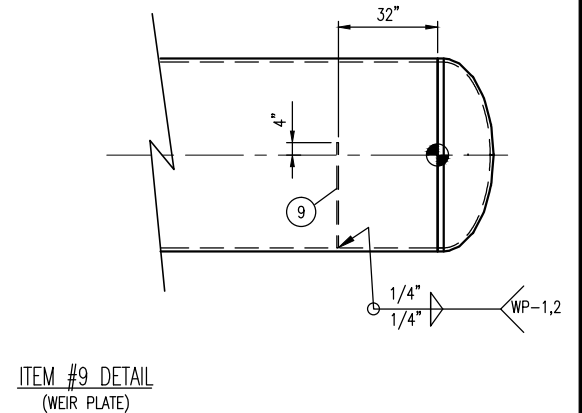
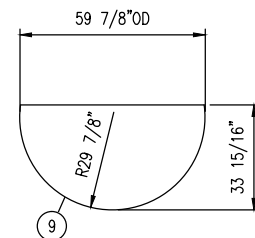
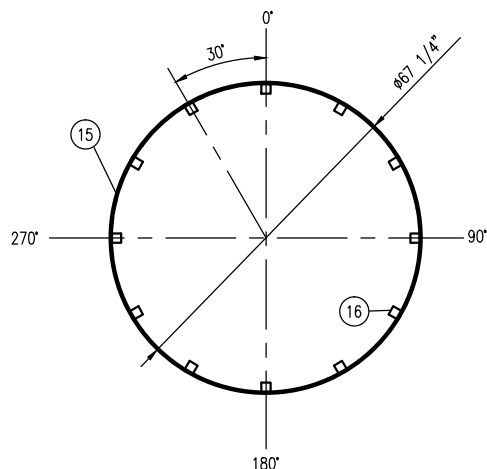
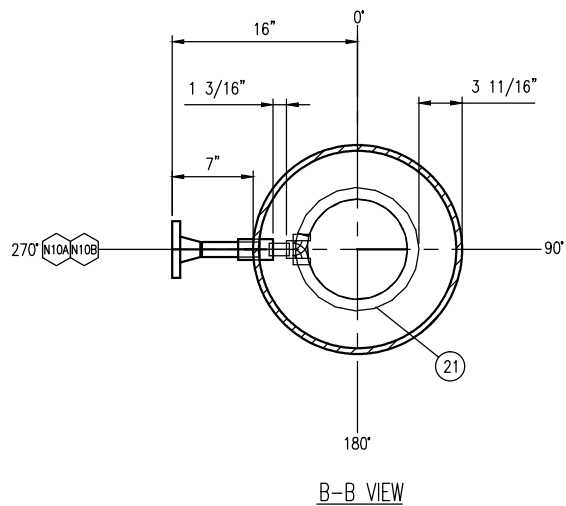
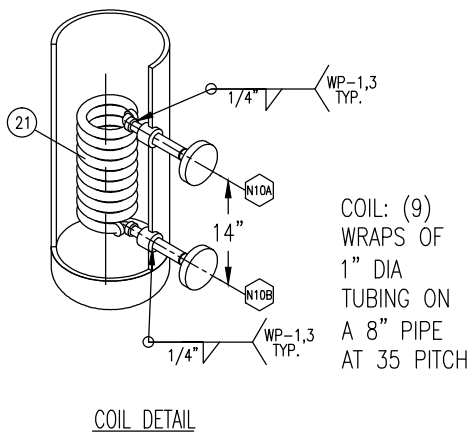
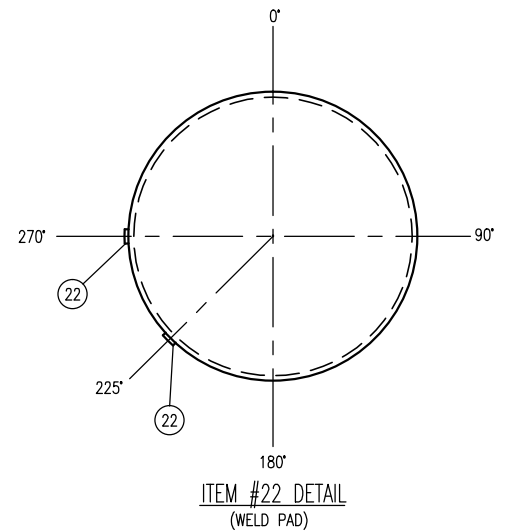
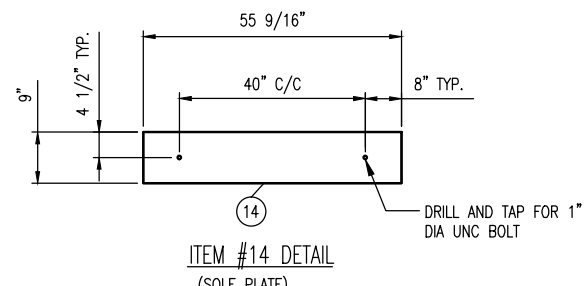
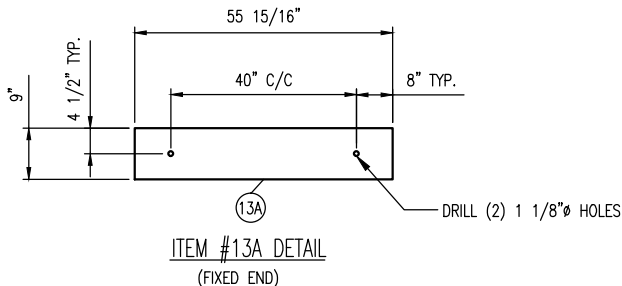
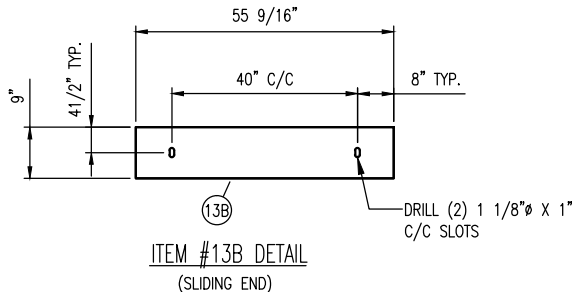
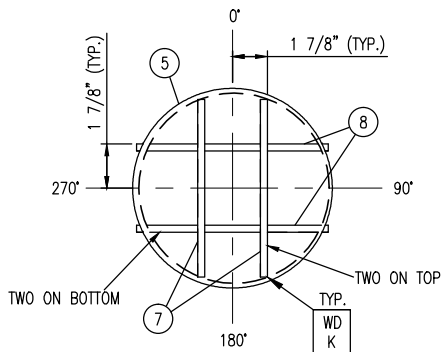
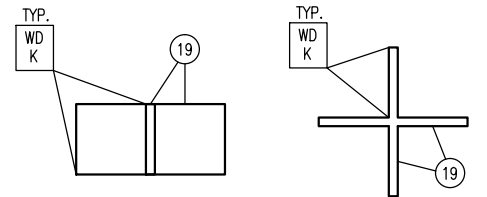
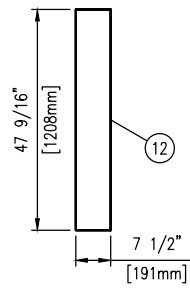
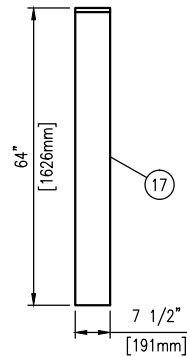
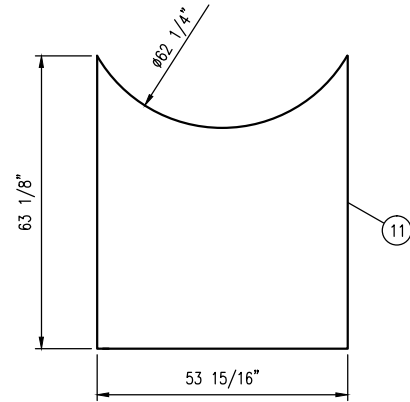
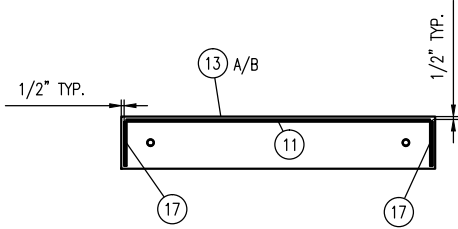
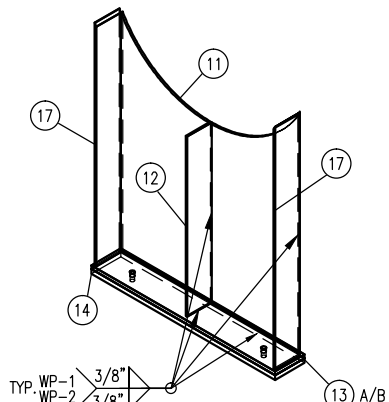
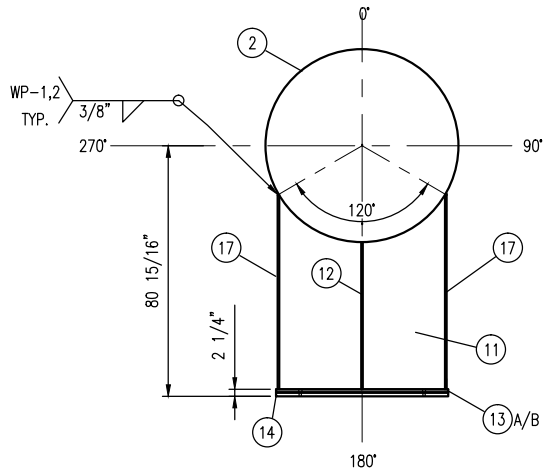
SHT 3 OF 3

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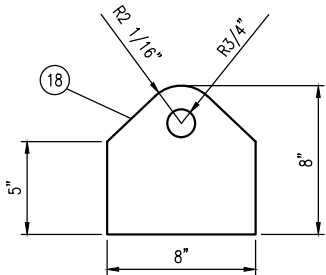
DATE DEC 01/15	SCALE NTS	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK	<b>ENERFLEX</b> Calgary, Alberta, Canada	V-141 DE-ETHANIZER FLASH DRUM 60" ID X 240" S/S	
DRAWN BY E.CHUNG	CHECKED BY J.AHMED				
PROJECT MANAGER K.ROBERTSON	PROJECT ENGINEER E.TOOSI				
CUST PO STOCK 007					
APEGA PERMIT No: P8651	OPER. CODE	WORK ORDER E002133-02	DWG NO E002133-02-4342	SHT 2 OF 3	REV 0A

FILE NAME: P:\\_SAP\_C&P\_Canada Projects\002133 Peyto - 40MMSCFD HODP\4. Drafting\Vessels\002133-02-4342.dwg

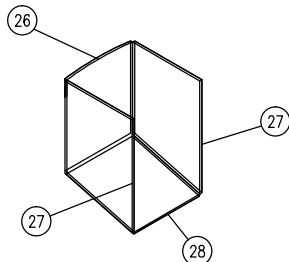
THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION. NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

PLOT DATE Jan 08, 2016, gphl

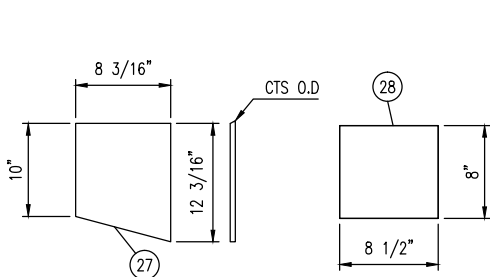
BILL OF MATERIALS									
MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER
	1		2	HEAD, 60"ID, 1 1/8" NOM, (1.0625") MIN, 2:1 ELLIP, 2" SF,SA-516-70N					
	2		2	SHELL, PLATE,60"ID, 1 1/8" THK, 120" LG,SA-516-70N	120"				
	3		2	SPECIFICATION PLATE, SS,					
	4		2	NAME PLATE BRACKET, 1/4" THK,SA-516-70N, T-STYLE.					
	5		1	PIPE,10",S/STD,SMLS,SA-106-B	10"				
	6		1	MESH PAD, 6" THK,.9# DENSITY, 10" OD, 316LSS (c/w CARBON STEEL SUPPORT GRIDS TOP & BOTTOM),					
	7		2	PLATE,3/8",SMOOTH X 9.5625 X 1.00,G40.2144W					
	8		2	PLATE,3/8",SMOOTH X 10.3125 X 1.00,G40.2144W					
	9		1	PLATE,1/2",SMOOTH X 59.8750 X 33.9375,G40.2144W,SEE DETAIL					
	10		1	PLATE,1/4",SMOOTH X 23.00" OD X 18.25" ID,G40.2144W					
	11		2	PLATE,1/2",SMOOTH X 63.125 X 53.9375,G40.2144W,SEE DETAIL,					
	12		2	PLATE,3/8",SMOOTH X 47.5625 X 7.50,G40.2144W					
	13A/B		2	BASE PLATE,1",SMOOTH X 55.9375 X 9.00,G40.2144W,SEE DETAIL					
	14		2	SOLE PLATE,1-1/4",SMOOTH X 55.9375 X 9.00,G40.2144W,SEE DETAIL					
	15		2	ROUND BAR,1/2",G40.2144W	209 11/16"				
	16		24	PLATE,1/4",SMOOTH X 2.00 X 2.00,G40.2144W					
	17		4	PLATE,1/2",SMOOTH X 64.00 X 7.50,G40.2144W,SEE DETAIL,					
	18		2	PLATE,1",SMOOTH X 8.00 X 8.00,SA-516-70N, SEE DETAIL					
	19		2	PLATE,1/4",SMOOTH X 7 1/16 X 2,SA-516-70N					
	20		1	20"-300# DAVIT ARM, SEE DWG. STDDVT-902,					
	21		1	COIL, 1" TUBING, 11BWG (BEND AND CUT TO SUIT), SMLS,SA-179, SEE DETAIL,	250"				
	22		2	WELDPAD,6.00"x6.00"x3/8"THK,1"R ALL CORNERS,ROLL TO 62.25" ID,SA-516-70N					
	23		1	PLATE,3/8",SMOOTH X 1 X 1,G40.2144W					
	24		2	PLATE,3/8",SMOOTH X 1 X 1,G40.2144W					
	25		1	PLATE,3/8",SMOOTH X 1 X 1,G40.2144W					
	26		1	PLATE,1/4",SMOOTH X 10.00 X 8.00,G40.2144W, SEE DETAIL					
	27		2	PLATE,1/4",SMOOTH X 12.1875 X 8.1875,G40.2144W, SEE DETAIL					
	28		1	PLATE,1/4",SMOOTH X 8.50X 8.00,G40.2144W, SEE DETAIL					
M1	90	MANWAY	1	FLANGE,20",300#,RF,HBN,14" LG,SA-105N	14"		10 1/8"	3/4"	
	91		2	GASKET,20",300#,CG,316 SS,GRAFOIL FILLED,CS(OR),					
	92		24	STUD,1 1/4" X 8 1/2 LG,UNC,SA-193-B7M					
	93		48	NUT, 1 1/4",UNC, SA-194-2HM					
	94		1	FLANGE,20",300#,RF,BLIND,SA-105N					
N1	100	INLET	1	FLANGE,4",300#,RF,WN,S/XXS,SA-105N			8 7/8"		
	101		1	PIPE,4",S/XXS,SMLS,SA-106-B	8 1/2"	C1		1 1/4"	
N2	200	OUTLET	1	FLANGE,2",300#,RF,WN,S/160,SA-105N			7 7/8"		
	201		1	PIPE,2",S/160,SMLS,SA-106-B	6 3/8"	C2		MIN	
N3	300	DRAIN/HL OUTLET	1	FLANGE,3",300#,RF,WN,S/160,SA-105N			7 7/8"		
	301		1	PIPE,3",S/160,SMLS,SA-106-B	6"	D		WELD FLUSH	
	302		1	REPAD,9.50" OD,3.75" ID,1"THK,FORMED TO 62.25" OD SHELL,SA-516-70N, (FROM B1 REPAD CUTOUT)					
N4A/B	400	LIT	2	FLANGE,2",300#,RF,WN,S/160,SA-105N			AS SHOWN		
			2	ELBOW,2",S/160,90D,LR,BW,SA-234-WPB					
	402		2	PIPE,2",S/160,SMLS,SA-106-B	6 1/8"	C2		MIN	
N5	500	GLYCOL OUTLET	1	FLANGE,1 1/2",300#,RF,WN,S/160,SA-105N			AS SHOWN		
	501		1	ELBOW,1 1/2",S/160,90D,LR,BW,SA-234-WPB					
	502		1	PIPE,1 1/2",S/160,SMLS,SA-106-B	6 5/8"	C2		GRIND FLUSH	
N6A	600	LIT	1	FLANGE,2",300#,RF,WN,S/160,SA-105N			7 7/8"		
	601		1	PIPE,2",S/160,SMLS,SA-106-B	6 3/8"	C2		MIN	
N6B	602		1	FLANGE,2",300#,RF,WN,S/160,SA-105N			7 1/2"		
	603		1	PIPE,2",S/160,SMLS,SA-106-B	5 3/8"	C2		MIN	
N7	700	PSV	1	FLANGE,2",300#,RF,WN,S/160,SA-105N			7 7/8"		
	701		1	PIPE,2",S/160,SMLS,SA-106-B	6 3/8"	C2		MIN	
C8	800	PI	1	COUPLING,3/4",6000#,NPT,6"LG,SA-105N	6"	E		MIN	
C9	900	TI	1	COUPLING,3/4",6000#,NPT,6"LG,SA-105N	6"	E		MIN	
N10A/B	1000	COIL	2	FLANGE,1",600#,RF,WN,S/160,SA-105N			7"		
	1001		2	PIPE,1",S/160,SMLS,SA-106-B	4 3/4"	DET		MIN	
	1002		2	COUPLING,1" X 3/4",6000#,SW,RED,3"LG,SA-105N					
	1003		1	PIPE,3/4",S/160,SMLS,SA-106-B,CTS	3"				
	1004		2	ELBOW,3/4",6000#,90D,SW,SA-105N					
C11	1100	PT	1	COUPLING,3/4",6000#,NPT,6"LG,SA-105N	6"	E		MIN	
C12	1200	HCL	1	COUPLING,1/2",6000#,NPT,6"LG,SA-105N	6"	E		MIN	
B1	1300	BOOT	1	HEAD, 18"OD, 1/2" NOM, (0.4375") MIN, 2:1 ELLIP, 2" SF,SA-516-70N					
	1301		1	BOOT,PIPE, 18",S/XS,SMLS,36"LG,SA-106-B	36"		AS SHOWN	CONTOUR	
	1302		1	REPAD,32.00" OD,18.25" ID,1"THK,FORMED TO 62.25" OD SHELL,SA-516-70N (CUT OUT USED FOR N3)					



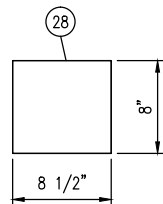
LIFTING LUG DETAIL



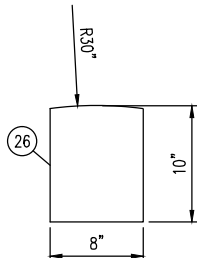
(N1) INLET DIVERTER



ITEM #27 DETAIL



ITEM #28 DETAIL



ITEM #26 DETAIL

GENERAL NOTES:

- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- WELDING PROCEDURE REGISTRATION No. WP 496.2
- FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
- ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
- EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
- ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
- PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL.
- ALL DIMENSIONS TO BE HELD TO ±1/8" (3.2mm) UNLESS OTHERWISE SHOWN.
- ALL TACK WELDS TO BE PER WP 1 & 2.
- SURFACE PREPARATION: PAINT TRAVELLER.
- PRIMER: PAINT TRAVELLER
- FINISH: PAINT TRAVELLER
- INSULATION: 2.5" C
- ALL REPAID AND POISON PAD SHALL HAVE A 1/4" THREADED WEEP HOLE
- ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-105N FOR SA-105  
SA-516-70N FOR SA-516-70  
SEAMLESS FOR WELDED PIPE
- TAPERED TRANSITION PER UW-9(c) IF REQUIRED.
- EXPOSED INSIDE EDGES SHALL BE CHAMFERED OR ROUNDED AS PER UG-76(c).
- 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR INTERNAL/EXTERNAL UNLESS OTHER WISE NOTED.
- WHEN USING ONE PIECE REPAID IS NOT PRACTICAL, THE FOLLOWING SHALL BE PERFORMED:  
A. ON SHELL: THE SPLIT WELD SHALL BE ORIENTED AT LEAST 45 DEGREE FROM THE LONGITUDINAL AXIS OF THE VESSEL.  
B. ON HEAD: THE SPLIT WELD SHALL BE 100% RT OR UT.  
C. USE WELD DETAIL "A" FOR SPLIT REPAID.
- MINIMUM HYDRO VESSEL TEMP SHALL BE 30°F ABOVE MDMT BUT NOT LOWER THAN 35°F
- VESSEL INTERNALS TO BE OILED AFTER HYDRO TESTING.
- INTERNAL / EXTERNAL PAINT OR COATING PRIOR TO THE HYDRO-TEST UNLESS PERMITTED BY THE USER OR HIS DESIGNATED AGENT.
- VESSEL REGISTERED UNDER E001020-02-4342 REV.0B IN ABSA.

CERTIFIED BY:		CERTIFIED BY:	
<b>ENERFLEX</b>		<b>ENERFLEX</b>	
CALGARY, ALBERTA, CANADA		CALGARY, ALBERTA, CANADA	
	MAWP 1360 PSIG @ 200°F		MAWP 600 PSIG @ 250°F
U	MAWP -600 @ 250°F	U	MAWP - @ -
W	MDMT -20°F @ 1360 PSIG	W	MDMT -20°F @ 600 PSIG
-	SN E002133024342 YEAR 2016	RT-2	SN E002133024342 YEAR 2016
-	CRN W5397.2 C.A. 0.02 IN	-	CRN W5397.2 C.A. 0.0625
SH.THK 0.12 IN MAT'L SA-179		SH.THK 1.125 IN MAT'L SA-516-70N	
HD.THK MAT'L		HD.THK 1.0625 IN MAT'L SA-516-70N	
COIL			

DATE DEC 01/15	SCALE NTS
DRAWN BY E.CHUNG	CHECKED BY J.AHMED
PROJECT MANAGER K.ROBERTSON	PROJECT ENGINEER E.TOOSI
CUST PO STOCK 007	
APEGA PERMIT No: P8651	OPER. CODE
WORK ORDER E002133-02	

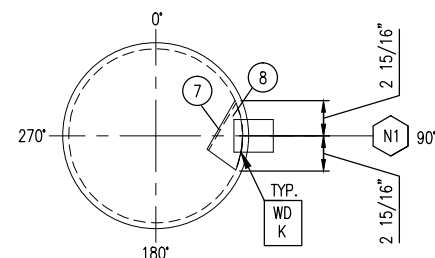
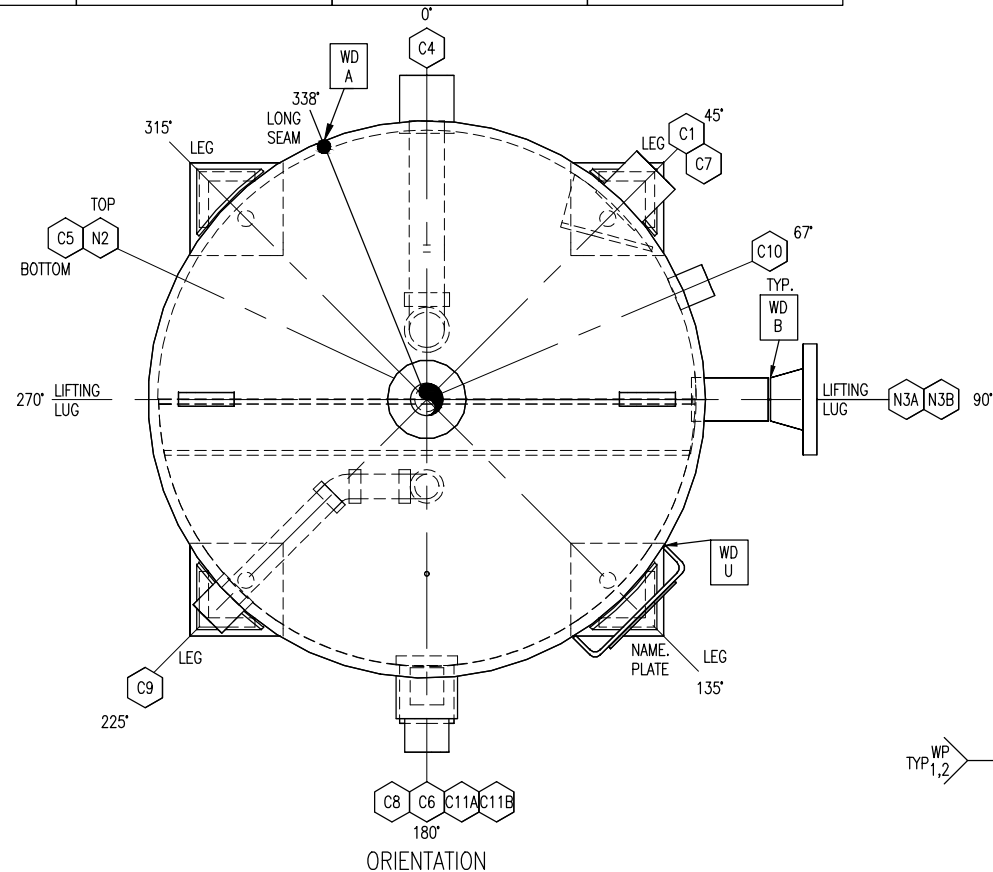
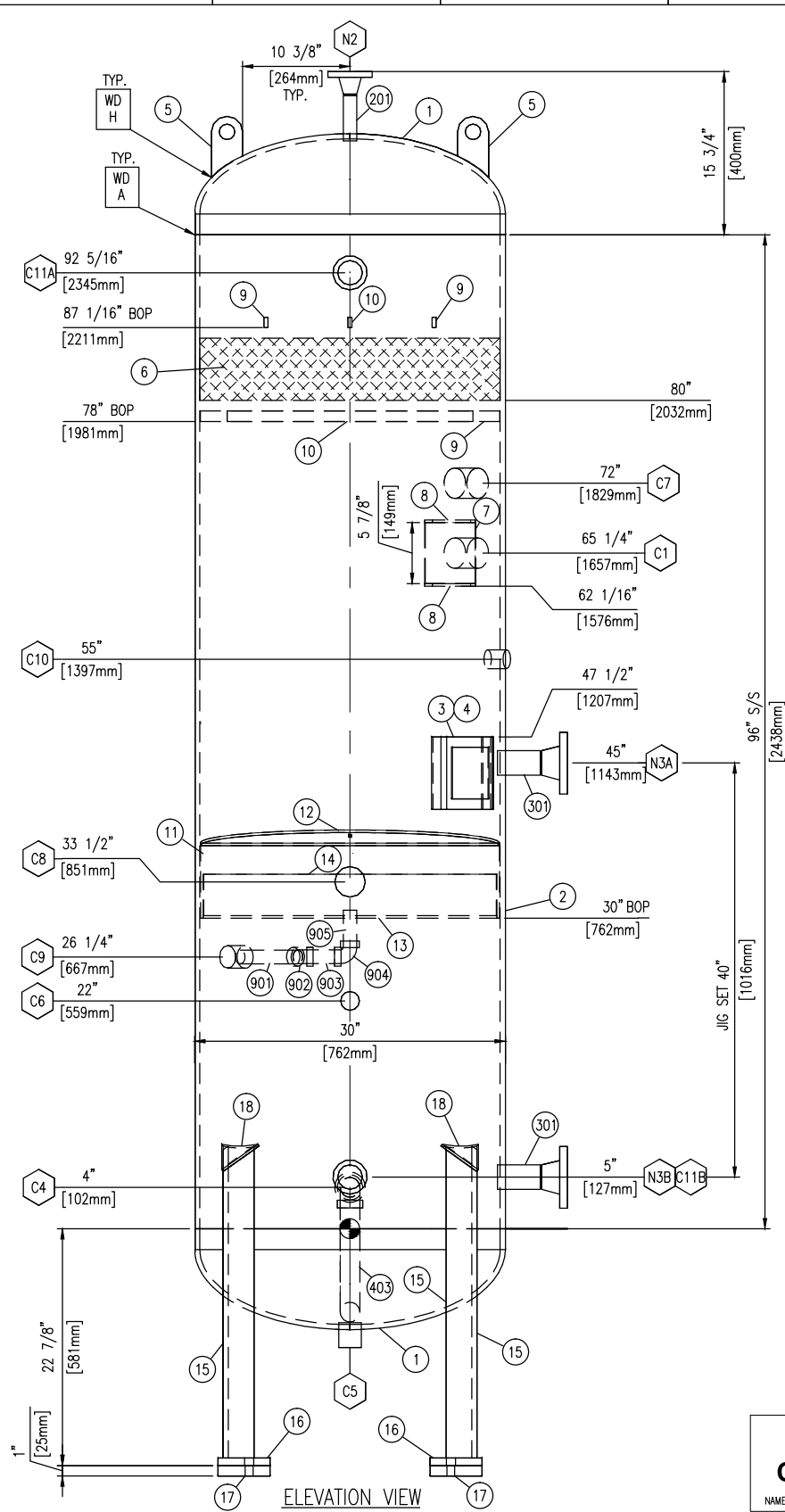
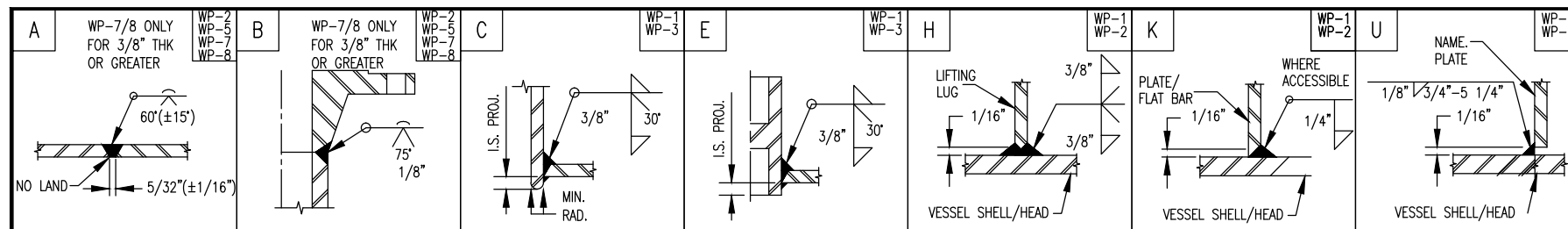
PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

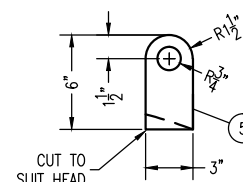
V-141  
DE-ETHANIZER FLASH DRUM  
60" ID X 240" S/S

DWG NO E002133-02-4342	SHT 3 OF 3	REV 0A
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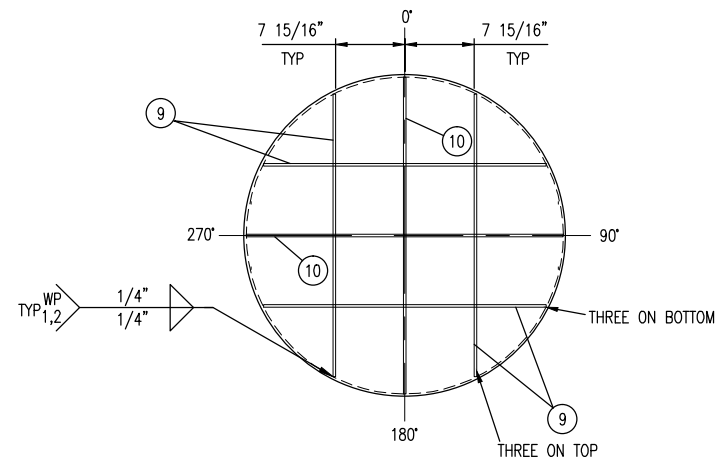
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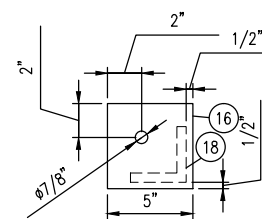
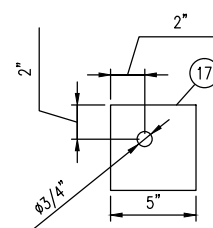
N1 DIVERTER PLATE



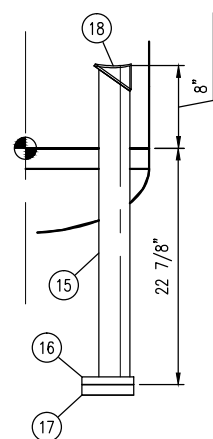
LIFT LUG DETAIL



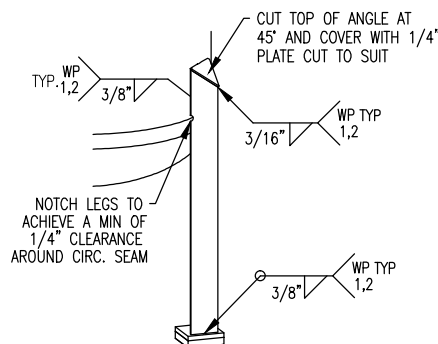
MESH SUPPORT ITEM #9 AND #10 DETAIL



## BASE DETAILS



LEG WELD DETAIL



**ISSUED FOR  
CONSTRUCTION**

NAME T.WELSH DATE DEC 09/15

										DATE	DEC 01/15	SCALE	NTS
										DRAWN BY	E.CHUNG	CHECKED BY	J.AHMED
										APPROVED BY	H.WEI		H
										PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	E.TOOSE
										CUST PO	STOCK	007	
0	ISSUED FOR CONSTRUCTION			DEC 09/15	TW	HW							
REV	DESCRIPTION			DATE	BY	APR				APEGA PERMIT No:	P8651		OPER. CODE.

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

CERTIFIED BY:

**ENERFLEX**

CALGARY, ALBERTA, CANADA

ASME

U

W

RT-2

—

MAWP

150 PSIG

③

300 DEG°F

MAWP

—

③

—

MDMT

-20 DEG°F

③

150 PSIG

SN

E002133024344

YEAR

2016

CRN

W5366.2

C.A.

0.0625"

SH.THK

0.5"

MAT'L

SA-516-70N

HD.THK

0.4375"(MIN)

MAT'L

SA-516-70N

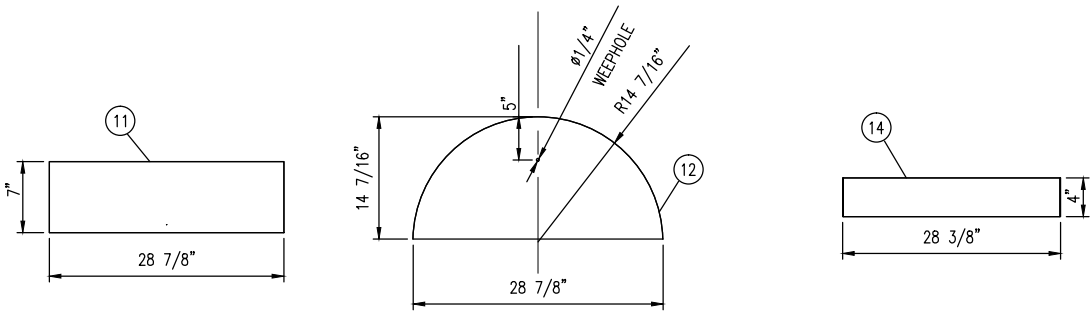
DESIGN AND FABRICATION TO BE IN ACCORDANCE WITH THE PROVINCE OF ALBERTA REGULATIONS AND A.S.M.E. CODE SEC. VIII DIV. 1 2013 EDITION			
DESIGN PRESSURE		150 PSIG	
DESIGN TEMPERATURE		300 DEG F	
MIN DESIGN METAL TEMP		-20F@150 PSIG	
MAX. ALLOWABLE WORKING PRESS.		150 PSIG	
LIMITED BY		FLANGE RATING	
CORROSION ALLOWANCE		0.0625"	
POST WELD HEAT TREATMENT		NO	
SERVICE		NATURAL GAS	
VOLUME		42 FT3	
WT. EMPTY (SHIPPING WT.)		2700 LBS	
WT. FULL OF WATER (TEST WT.)		5200 LBS	
OPERATING WEIGHT		3400 LBS	
HYDROSTATIC TEST PRESS.		195 PSIG	
IMPACT TEST EXEMPT PER		UG-20(f)	
RADIOGRAPHY:		RT-2	
PART	CODE		TYPE JE
SHELL (CAT 'A')	UW-11(a)5/UW-12(c)		FULL 1.00
HEAD TO SHELL (CAT 'B')	UW-11(c)5b/UW-12(d)/UW-12(c)		SPOT 0.7

**ENERFLEX**  
Calgary, Alberta,  
Canada

V-146  
GLYCOL FLASH TANK  
30" OD X 96" S/S

DWG NO	E002133-02-4344	SHT	1 OF 2	REV	0
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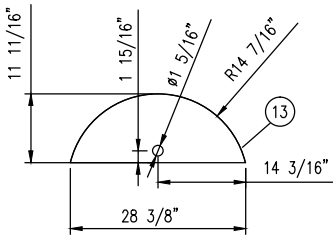




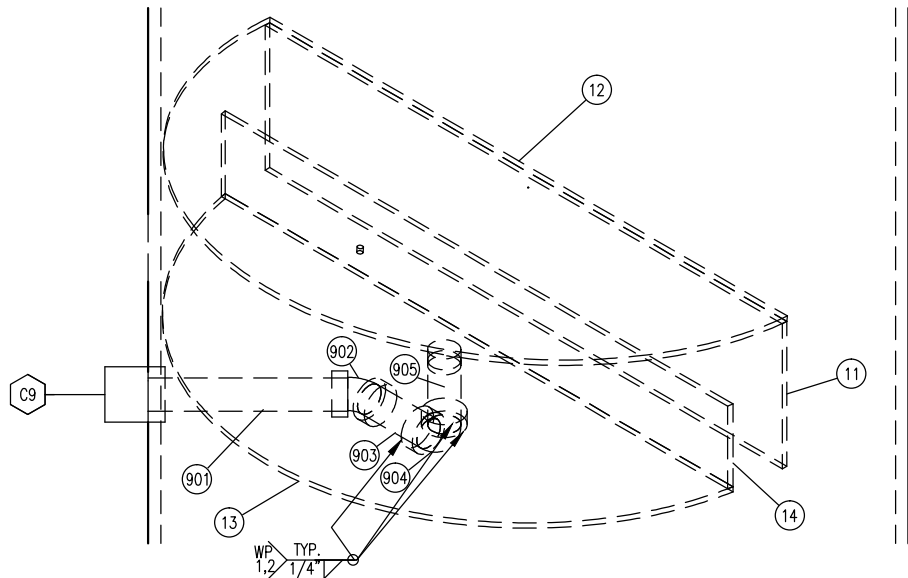
DETAIL ITEM #11

DETAIL ITEM #12

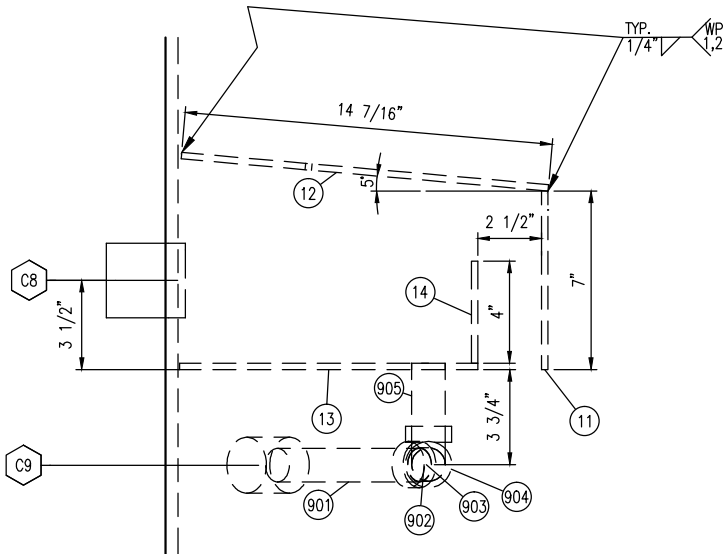
DETAIL ITEM #14



DETAIL ITEM #13



C8, C9 NOZZLE DETAIL



GENERAL NOTES:

- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- WELDING PROCEDURE REGISTRATION No. WP 496.2
- FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
- ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
- EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
- ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
- PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL. UNLESS OTHERWISE SHOWN.
- ALL TACK WELDS TO BE PER WP 1 & 2.
- SURFACE PREPARATION: PAINT TRAVELLER.
- PRIMER: PAINT TRAVELLER
- FINISH: PAINT TRAVELLER
- INSULATION: NONE
- ALL REPAD AND POISON PAD SHALL HAVE A 1/4" THREADED WEEP HOLE
- ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-105N FOR SA-105  
SA-516-70N FOR SA-516-70  
SEAMLESS FOR WELDED PIPE
- TAPERED TRANSITION PER UW-9(c) IF REQUIRED.
- EXPOSED INSIDE EDGES SHALL BE CHAMFERED OR ROUNDED AS PER UG-76(c).
- 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR INTERNAL/EXTERNAL UNLESS OTHER WISE NOTED.
- WHEN USING ONE PIECE REPAD IS NOT PRACTICAL, THE FOLLOWING SHALL BE PERFORMED:  
A. ON SHELL: THE SPLIT WELD SHALL BE ORIENTED AT LEAST 45 DEGREE FROM THE LONGITUDINAL AXIS OF THE VESSEL.  
B. ON HEAD: THE SPLIT WELD SHALL BE 100% RT OR UT.  
C. USE WELD DETAIL "A" FOR SPLIT REPAD.
- MINIMUM HYDRO VESSEL TEMP SHALL BE 30°F ABOVE MDMT BUT NOT LOWER THAN 35°F
- VESSEL INTERNALS TO BE OILED AFTER HYDRO TESTING.
- INTERNAL / EXTERNAL PAINT OR COATING PRIOR TO THE HYDRO-TEST UNLESS PERMITTED BY THE USER OR HIS DESIGNATED AGENT.
- VESSEL REGISTERED UNDER E001020-02-4344 REV.0A IN ABSA.

BILL OF MATERIALS

MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER
	1		2	HEAD, 30"OD, 1/2" NOM, (0.4375") MIN, 2:1 ELLIP, 2" SF,SA-516-70N					
	2		1	SHELL, 30"OD, 1/2" THK, 96" LG,SA-516-70N	96"				
	3		1	SPECIFICATION PLATE, SS,					
	4		1	NAME PLATE BRACKET, 1/4" THK,SA-516-70N					
	5		2	PLATE,3/4" THK X 3" X6",SA-516-70N,CTS	6"				
	6		1	MESH PAD, 6" THK.,9# DENSITY, 29" OD., 316LSS (c/w CARBON STEEL SUPPORT GRIDS TOP & BOTTOM),					
	7		1	PLATE,1/4",SMOOTH X 5.875 X 5.0625,SA-516-70N					
	8		2	PLATE,1/4",SMOOTH X 5.0625 X 2.9375,SA-516-70N,CTS	CTS				
	9		4	PLATE,3/8",SMOOTH X 23.75 X 1.00,SA-516-70N					
	10		2	PLATE,3/8",SMOOTH X 28.9375 X 1.00,SA-516-70N					
	11		1	PLATE,1/4",SMOOTH X 28.875 X 7.00,G40.2144W					
	12		1	PLATE,1/4",SMOOTH X 28.875 X 14.4375,G40.2144W,CTS					
	13		1	PLATE,1/4",SMOOTH X 28.375 X 11.6875,G40.2144W,CTS					
	14		1	PLATE,1/4",SMOOTH X 28.375 X 4.00,G40.2144W					
	15		4	ANGLE,3" X 3",1/2" THK,G40.2144W	30 1/8"				
	16		4	PLATE,3/4",THK X 5.00 X 5.00,G40.21-44W,CTS					
	17		4	PLATE,1",THK X 5.00 X 5.00,G40.21-44W,CTS					
	18		4	PLATE,1/4" THK X 4.90 X 3.48,G40.21-44W,CTS					
C1	100	INLET	1	COUPLING,1 1/2",6000#,NPT,FULL,SA-105N		E		STR	
N2	200	GAS OUTLET	1	FLANGE,1",150#,RF,WN,S/160,SA-105N			AS SHOWN		
	201		1	PIPE,1",S/160,SMLS,SA-106-B	4 3/8"	C		STR	
N3A/B	300	BRIDLE	2	FLANGE,2",150#,RF,WN,S/160,SA-105N			6"		
	301		2	PIPE,2",S/160,SMLS,SA-106-B	4 1/8"	C		STR	
C4	400	LIQ. OUTLET	1	COUPLING,1 1/2",6000#,NPT,FULL,SA-105N		E		STR	
	401		1	PIPE,1 1/2",S/80(XS),SMLS,SA-106-B	10"				
	402		1	ELBOW,1 1/2",3000#,90D,SW,SA-105N					
	403		1	PIPE,1 1/2",S/80(XS),SMLS,SA-106-B	11 3/4"				
C5	500	DRAIN	1	COUPLING,1",6000#,NPT,FULL,SA-105N		E		WELD/ FLUSH	
C6	600	TI	1	COUPLING,3/4",6000#,NPT,FULL,SA-105N		E		STR	
C7	700	FUEL GAS SUPPLY	1	COUPLING,1 1/2",6000#,NPT,FULL,SA-105N		E		STR	
C8	800	LI	1	COUPLING,1 1/2",6000#,NPT,FULL,SA-105N		E		STR	
C9	900	HC SKIM	1	COUPLING,1",6000#,NPT,FULL,SA-105N		E		STR	
	901		1	PIPE,1",S/80,SMLS,SA-106-B	7 7/8"				
	902		1	ELBOW,1",3000#,45D,SW,SA-105N					
	903		1	PIPE,1",S/80(XS),SMLS,SA-106-B	3 5/16"				
	904		1	ELBOW,1",3000#,90D,SW,SA-105N					
	905		1	PIPE,1",S/80(XS),SMLS,SA-106-B	3 5/8"			WELD FLUSH	
C10	1000	PI	1	COUPLING,3/4",6000#,NPT,FULL,SA-105N		E		STR	
C11A/B	1100	INSP.	2	COUPLING,2",6000#,NPT,FULL,SA-105N		E		STR	
	1101		2	PLUG,2",6000#,NPT,HEX,SA-105N					

DATE	DEC 01/15	SCALE	NTS
DRAWN BY	E.CHUNG	CHECKED BY	J.AHMED
PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	H.WEI Hw
CUST PO	STOCK 007		

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

V-146  
GLYCOL FLASH TANK  
30" OD X 96" S/S

APEGA PERMIT No: P8651

OPER. CODE

WORK ORDER E002133-02

DWG NO E002133-02-4344

SHT 2 OF 2

REV 0



NOZZLE SCHEDULE									
MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER
N1	1	HEATER BUNDLE	2	GASKET,8",150#,CG,316 SS,GRAFOIL FILLED,CS(OR)					
	2		8	(8) STUD,3/4" X 6 1/2 LG,UNC,SA-193-B7M					
	3		16	NUTS: 3/4" DIA. UNC. SA-194-2HM					
	4		1	FLANGE,8",150#,RF,WN,S/40(STD),SA-105N			AS SHOWN		
	5		1	PIPE,8",S/40(STD),SMLS,SA-106-B	11 9/16"	C			
N2	1	STEAM OUTLET	1	FLANGE: 4"-150#, RF,WN, S/40(STD), SA-105N			6 1/8"		
	2		1	PIPE: 4" NOM S/40/(STD), SMLS, SA-106-B	7"	C		MIN	
N3	1	STILL COLUMN	1	FLANGE,12",150#,RF,SO,SA-105N			8 1/2"		
	2		1	PIPE: 12", S/STD, SMLS, SA-106-B	10"	C		MIN	
N4	1	STILL COLUMN ACCESS	1	FLANGE,12",150#,RF,BLIND,SA-105N, (SEE DETAIL)			AS SHOWN		
	2		2	GASKET,12",150#,CG,316 SS,GRAFOIL FILLED,CS(OR)					
	3		12	(12) STUD,7/8" X 5 LG,UNC,SA-193-B7M, W/NUTS, SA-194-2HM					
	4		1	FLANGE,12",150#,RF,SO,SA-105N					
N5	1	GLYCOL OUTLET (SURGE)	1	FLANGE: 3"-150#, RF,WN, S/40(STD), SA-105N			5 7/8"		
	2		1	ELBOW,3",S/40(STD),90D,LR,BW,SA-234-WPB		C			
N6	1	STILL COLUMN INLET	1	FLANGE,1 1/2",150#,RF,SO, SA-350-LF2 CL1			AS SHOWN		
	2		1	PIPE: 1 1/2", S/80(XS), SMLS, SA-333-GR.6	15 3/16"	DETAIL			
	3		1	FLANGE,2",150#,RF,BLIND,SA-105N					
	4		1	GASKET,2",150#,CG,316 SS,GRAFOIL FILLED,CS(OR)					
	5		4	(4) STUD,5/8" X 4 LG,UNC,SA-193-B7M, W/ NUTS, SA-194-2HM					
	6		1	FLANGE,2",150#,RF,SO,SA-105N			4 1/4"		
	7		1	PIPE,2",S/80(XS),SMLS,SA-106-B	4 1/8"			GROUND FLUSH	
N7	700	RELIEF (REGEN)	1	FLANGE: 2"-150#, RF,WN, S/80(XS), SA-105N			5 9/16"		
	701		1	PIPE,2",S/80(XS),SMLS,SA-106-B	7 1/8"	C		MIN	
C1A	1	FILL (REGEN)/BALANCE	1	PLUG,2",6000#,NPT,HEX,SA-105N					
	2		1	TEE,2",3000#,NPT,1 1/2",NPT,RED,SA-105N					
	3		1	PIPE,2",S/80(XS),SMLS,SA-106-B					
	4		1	COUPLING,2",3000#,NPT,4"LG,SA-105N		E		MIN	
C1B	1	FILL (SURGE)	1	PLUG,2",3000#,NPT,HEX,SA-105N					
	2		1	COUPLING,2",3000#,NPT,FULL,SA-105N		E		MIN	
C2A/B	1	LI (REGEN)	2	COUPLING,3/4",3000#,NPT,4"LG,SA-105N		E		MIN	
C3A	1	LI (SURGE)	1	COUPLING,3/4",3000#,NPT,FULL,SA-105N		E		MIN	
C3B	1	LI (SURGE) /DRAIN	1	COUPLING,1",3000#,NPT,FULL,SA-105N		E		WELD FLUSH	
C4	1	TI (REGEN)	1	COUPLING,3/4",3000#,NPT,4"LG,SA-105N		E		MIN	
C5	1	TI (SURGE)	1	COUPLING,3/4",3000#,NPT,FULL,SA-105N		E		MIN	
C6	1	TIT (REGEN)	1	COUPLING,3/4",3000#,NPT,4"LG,SA-105N		E		MIN	
C7	1	RICH GLYCOL INLET (SURGE)	1	COUPLING,1",3000#,NPT,3/4",SW,RED,SA-350-LF2 CL1		E		MIN	
C8	1	RICH GLYCOL OUTLET (SURGE)	1	COUPLING,1",3000#,NPT,3/4",SW,RED,SA-350-LF2 CL1		E		MIN	
C9	1	DRAIN (REGEN)	1	COUPLING,1",3000#,NPT,4"LG,SA-105N		E		WELD FLUSH	
C10	1	DRAIN (SURGE)	1	COUPLING,1",3000#,NPT,FULL,SA-105N		E		WELD FLUSH	
C12	1	VENT (SURGE)	1	PLUG,1"3000#,NPT,HEX,SA-105N					
	2		1	COUPLING,1",3000#,NPT,FULL,SA-105N		E		MIN	
C13A	1	SURGE SKIMMER (REGEN)	1	COUPLING: 1"-3000#, NPT, 4"LG, SA-105N		E		MIN	
C13B	1	SURGE SKIMMER (SURGE)	1	COUPLING: 1"-3000#, NPT, FULL, SA-105N		E		MIN	
C14A/B	1	STILL COLUMN COIL	2	COUPLING,1",6000#,NPT,3/4",SW,RED, 4"LG, SA-350-LF2 CL1		E		MIN	
C15	1	LSLL(SURGE)	1	COUPLING,1 1/2",3000#,NPT,HALF,SA-105N		E		MIN	
C16	1	SKIMMER(REGEN)	1	COUPLING,1",3000#,NPT,4" LG,SA-105N		E		MIN	
C17	1	SKIMMER(REGEN)	1	COUPLING,1",3000#,NPT,4" LG,SA-105N		E		MIN	
C18	1	SKIMMER(SURGE)	1	COUPLING,1",3000#,NPT,4" LG,SA-105N		E		MIN	
C19	1	SKIMMER(SURGE)	1	COUPLING,1",3000#,NPT,FULL,SA-105N		E		MIN	

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FILE NAME: P:\\_SAP\_C&P\_Canada\_Proyectos E002133-02-4346.dwg

ITEM	MATERIAL DESCRIPTION	QTY	LENGTH	HEAT NUMBER
101	SHELL(PIPE): 30", S/STD, SMLS	SA-106-B	1	6096
102	SHELL(PIPE): 24", S/STD, SMLS	SA-106-B	1	6096
103	END COVER: 1/2" THK X 745 O.D., (SEE DETAIL)	G40.2144W	1	745
104	CHANNEL: 3" x 4.1#/FT CTS	G40.2144W	1	737
105	PLATE: 1/2" THK X 229 (SEE DETAIL)	G40.2144W	4	844
106	PLATE: 1" THK X 229 (SEE DETAIL)	G40.2144W	2	844
107	PLATE: 1/2" THK X 229 (SEE DETAIL)	G40.2144W	2	844
108	FLAT BAR: 1/4" THK X 50	G40.2144W	6	3572
109	PLATE: 1/2" THK X 800 (SEE DETAIL)	G40.2144W	1	888
110	PLATE: 1/2" THK X 800 (SEE DETAIL)	G40.2144W	1	320
111	PLATE: 3/8" THK X 50 CTS	G40.2144W	3	6080
112	PLATE: 1/4" THK X 588 DIA. (SEE DETAIL)	G40.2144W	1	-
113	PLATE FLANGE: 1/2" THK X 710 OD X 616 ID (SEE DETAIL)	G40.2144W	1	-
114	PLATE: 1/2" THK X 710 DIA. (SEE DETAIL)	G40.2144W	1	-
115	GASKET: 2mm THK X 710 O.D. X 616 I.D. (SEE DET'L)	GARLOCK	1	-
116	BOLTS: 1/2" DIA. UNC w/ WASHER & NUT	SAE-GR.8	16	51
117	ELBOW: 1 1/2" NOM 90° LR BW XS WT	SA-234-WPB	5	-
118	PIPE: 1 1/2" NOM XS WT (CTS)	SA-106-B	1	116
119	PIPE: 1 1/2" NOM XS WT	SA-106-B	1	450
120	PIPE: 1 1/2" NOM XS WT	SA-106-B	1	379
121	PIPE: 1 1/2" NOM XS WT (CTS)	SA-106-B	1	96
122	ELBOW: 3" NOM 90° LR BW STD WT	SA-234-WPB	3	-
123	PIPE: 3" NOM STD WT (CTS)	SA-106-B	1	71
124	PIPE: 3" NOM STD WT	SA-106-B	1	972
125	PIPE: 3" NOM STD WT	SA-106-B	1	5333
126	PIPE: 3" NOM STD WT	SA-106-B	1	151
127	TUBING (COIL): 1" DIA. 11 BWG, SMLS, (BEND & CUT TO SUIT)	SA-179	1	116125
128	CHANNEL: 3 X 4.1 (CTS)	G40.2144W	3	548
129	ANGLE: 3" X 2" X 1/4" THK	G40.2144W	2	5735
131	PLATE: 1/2" THK X 79	G40.2144W	4	200
132	BOLT: 3/8" DIA. UNC w/ NUT & WASHER	SAE-GR.8	135	57
133	FLAT EXP. METAL MESH: 1/2"-18F X 1115 (ROLL HARD WAY TO 710 I.D.)	CS	1	6096
134	ANGLE: 2" X 2" X 1/4" THK	G40.2144W	1	180
135	U-BOLT: FOR 3" NOM PIPE	G40.2144W	2	-
136	PLATE: 1/2" THK X 200	G40.2144W	2	1060
137	PLATE: 1/2" THK X 200	G40.2144W	2	281
138	PLATE: 1/2" THK X 200	G40.2144W	2	1060
139	PLATE: 1/2" THK X 200	G40.2144W	2	281
140	PLATE: 1/2" THK X 800 (SEE DETAIL)	G40.2144W	1	1060
141	PLATE: 1/2" THK X 800 (SEE DETAIL)	G40.2144W	1	1060
142	PLATE: 1/4" THK X 51 (SEE DETAIL)	G40.2144W	1	178
143	BOLT: 3/4" DIA. UNC w/ NUT & WASHER	SAE-GR.8	4	75
144	PIPE: 3/4" NOM XS WT	SA-333-6	1	148
145	PIPE: 3/4" NOM XS WT	SA-333-6	1	83
146	PIPE: 3/4" NOM XS WT	SA-333-6	1	76
147	PIPE: 3/4" NOM XS WT	SA-333-6	1	384
148	ELBOW: 3/4" NOM 6000# 90° SW	SA-350-LF2 CL1	8	-
149	ELBOW: 3/4" NOM 6000# 45° SW	SA-350-LF2 CL1	1	-
150	COUPLING: 3/4" NOM FULL 6000# SW	SA-350-LF2 CL1	5	-
151	PIPE: 1 1/2" NOM XS WT	SA-106-B	1	1879
152	PIPE: 1 1/2" NOM XS WT	SA-106-B	1	971
153	PIPE: 1 1/2" NOM XS WT	SA-106-B	1	274
154	PIPE: 1 1/2" NOM XS WT	SA-106-B	1	76
155	UNION: 1 1/2" NOM 3000# NPT	SA-105N	1	-
156	COUPLING: 1 1/2" NOM 3000# SW X NPT FULL	SA-105N	1	-
157	PLUG: 1 1/2" NOM 6000# NPT HEX	SA-105N	1	-
158	RAISER CLAMP: 1 1/2"	G40.2144W	1	-
159	TUBING: HSS 1 1/2" X 1 1/2", 1/8" THK	G40.2135OW	1	325

2

GENERAL NOTES:

1. ALL TAIL DIMENSIONS FROM REFERENCE POINT.

2. WELDING PROCEDURE REGISTRATION No. WP 496.2

3. FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.

4. ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.

5. EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.

6. ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.

7. PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL.

8. ALL TACK WELDS TO BE PER WP 1.2.

9. SURFACE PREPARATION: SEE PAINT TRAVELLER

10. PRIMER: SEE PAINT TRAVELLER

11. FINISH: SEE PAINT TRAVELLER
12. INSULATION: 2.5H (TOP BARREL) & 1.5H (STILL COLUMN) 2.5H ON SURGE DRUM - EXTERIOR PP (EXPANDED METAL) ON SURGE DRUM - INTERIOR

13. ALLOWABLE MATERIALS SUBSTITUTION: SA-106-6 FOR SA-53-B; SA-350-LF2-CL1 FOR SA-105; SA-420-WPL6 FOR SA-234-WPB. SA-516-70N FOR G40.2144W

14. VESSEL TOLERANCE FOLLOWS ENG\_PRO\_003\_VES.

15. IF SHELL PIPE COMES WITH WELD SEAM, DO NOT CUT ANY OPENING ON THE SEAM.

16. LEAK TEST FOR ASSEMBLY @ 3 PSIG

17. 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR ALL INTERNALS AND EXTERNALS WITH WP 1 & 2 UNLESS OTHERWISE NOTED.

18. GLYCOL AS HYDROTEST MEDIUM FOR COIL ONLY.

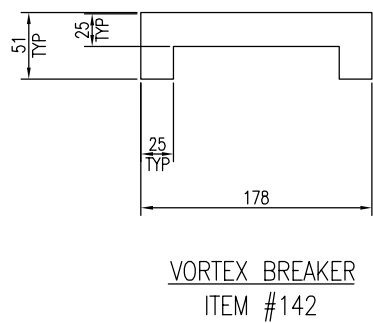
COLUMN AND SURGE COIL DESIGN PER B31.3, 2012 ED.

DESIGN PRESSURE	4137 KPAG
DESIGN TEMPERATURE	149°C
MIN. DESIGN METAL TEMPERATURE	-45°C @ 4137 KPAG
CORROSION ALLOWANCE	0.0 MM
HYDROSTATIC TEST PRESS.	6206 KPAG

					DATE	DEC 01/15	SCALE	NTS
					DRAWN BY	E.CHUNG	CHECKED BY	JAHMED
					PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	H.WEI
2	REV. BALANCE LINE PIPING TO FILL NOZZLE	APR 20/16	SD	HW				
1	REV. BALANCE LINE PIPING TO TOP OF VESSEL	APR 14/16	GP	HW				
0	ISSUED FOR CONSTRUCTION	DEC 16/15	TW	HW				
REV	DESCRIPTION	DATE	BY	APR	APEGA PERMIT No:	P8651	OPER. CODE	

DATA FOR VESSEL ONLY			
SERVICE	GLYCOL		
VOLUME (GLYCOL REGENERATOR WITH TOWER)	1.93	M3	
VOLUME (SURGE TANK)	2.6	M3	
WEIGHT EMPTY (GLYCOL REGENERATOR WITH TOWER)	2400	KG	
WEIGHT EMPTY (SURGE TANK)	1500	KG	

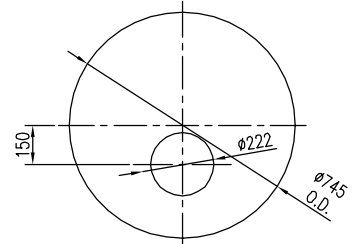
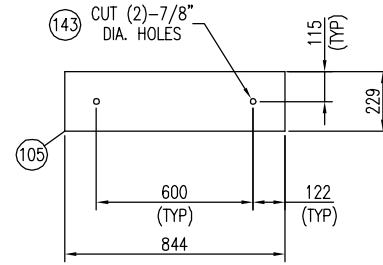
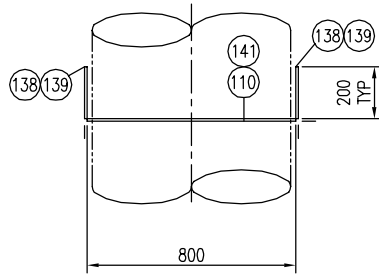
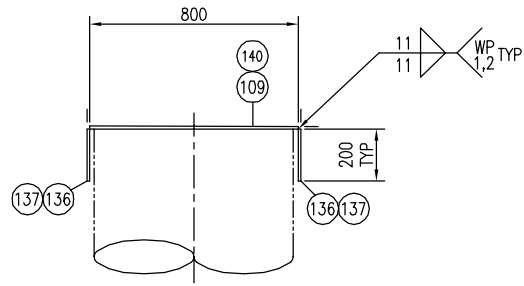
PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK		<b>ENERFLEX</b> Calgary, Alberta, Canada		H811/S811 GLYCOL REGEN./SURGE TANK 30" OD X 240" LG 24" OD X 240" LG	
DWG NO	E002133-02-4346	SHT	1 OF 4	REV	2



**NOTE: LEAK TEST ALL JOINTS WHICH ARE BUILT PER REV.2 @ 7PSIG**

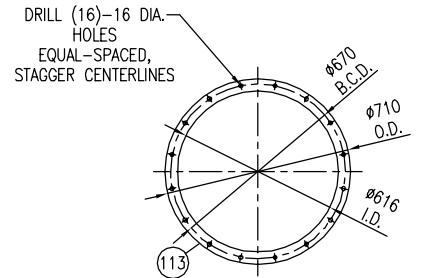
DWG NO	E002133-02-4346	SHT 2 OF 4	REV 2
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FILE NAME: P:\\_SAP C&P Canada Projects\E002133 Refrig - 40MMSCFD HCDP\4. Drafting\Issued E002133-02-4346.dwg  
PLU1 DATE: Apr 20, 2016, 5:00PM  
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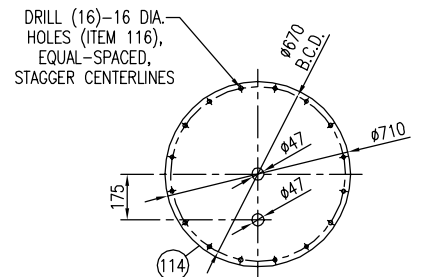


ITEM 103 DETAIL  
(1) REQUIRED

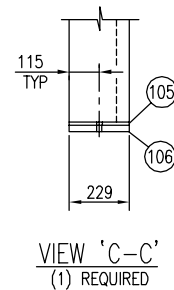
ITEM #105 DETAIL  
(4) REQUIRED



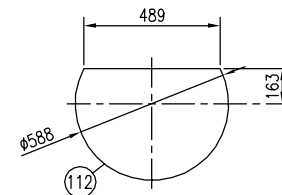
ITEM 113 DETAIL  
(1) REQUIRED



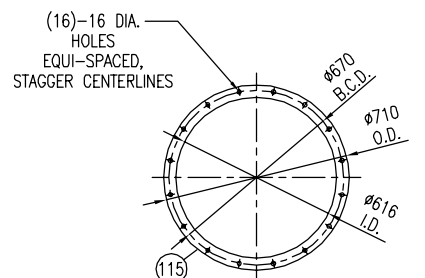
ITEM 114 DETAIL  
(1) REQUIRED



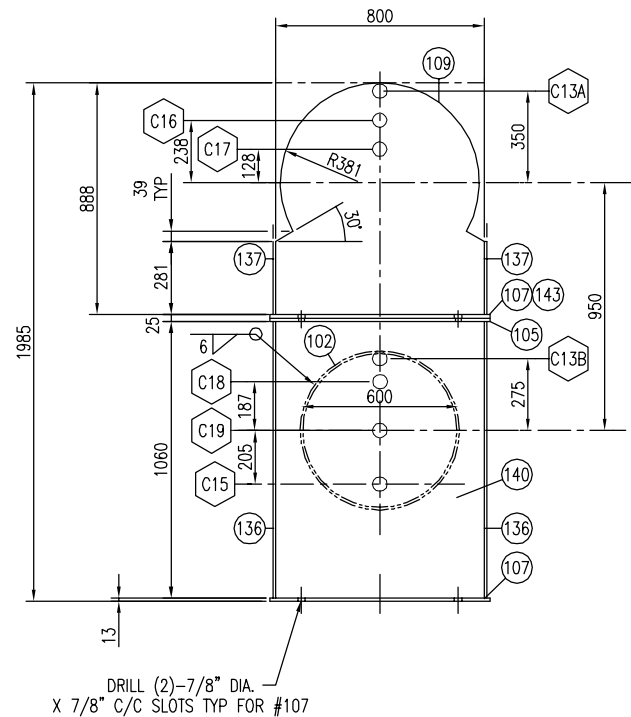
VIEW 'C-C'  
(1) REQUIRED



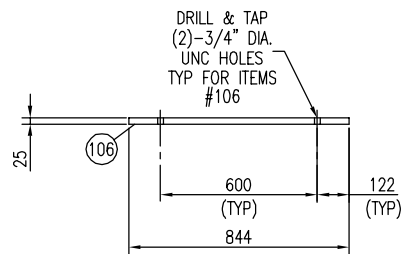
ITEM 112 DETAIL  
(1) REQUIRED



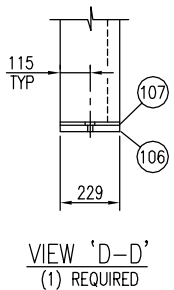
ITEM 115 DETAIL  
(1) REQUIRED



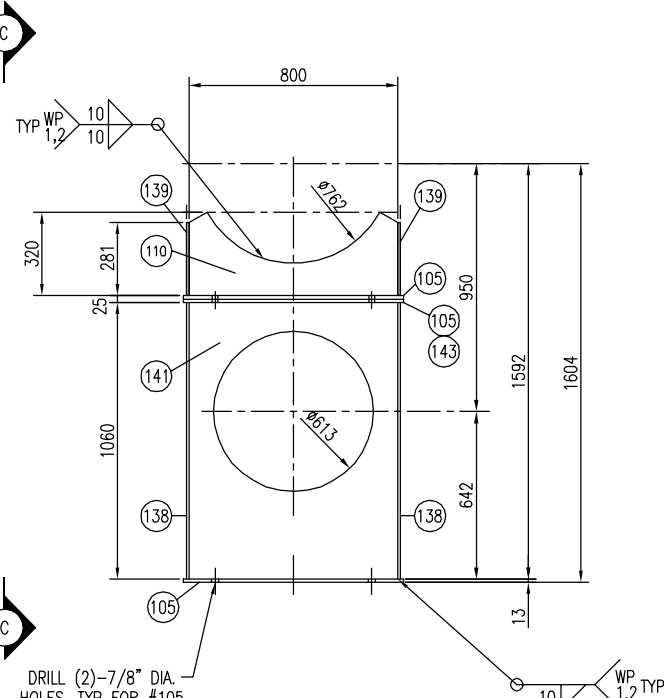
DRILL (2)-7/8" DIA.  
X 7/8" C/C SLOTS TYP FOR #107



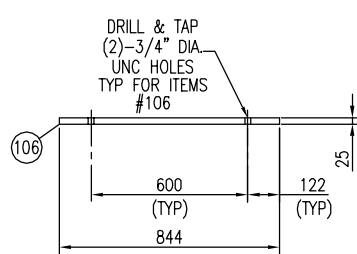
SLIDING SADDLE  
(1) REQUIRED



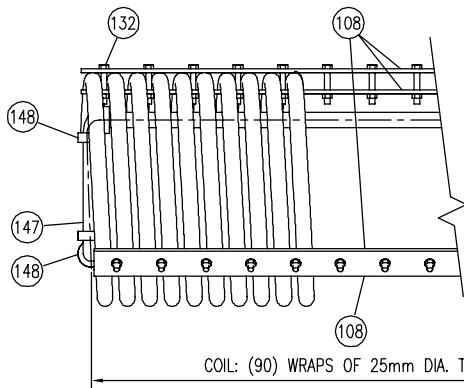
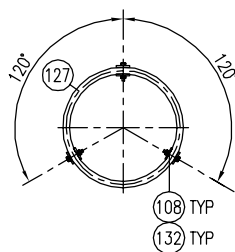
VIEW 'D-D'  
(1) REQUIRED



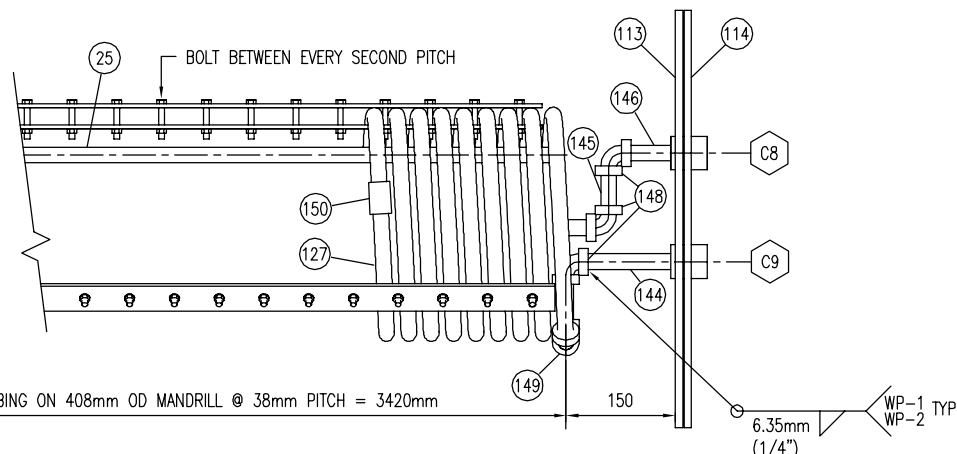
DRILL (2)-7/8" DIA.  
HOLES. TYP FOR #105



FIXED SADDLE  
(1) REQUIRED



COIL SUPPORT DETAIL  
(1) REQUIRED



DATE	DEC 01/15	SCALE	NTS
DRAWN BY	E.CHUNG	CHECKED BY	JAHMED
PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	E.TOOSE
CUST PO	STOCK 007		
APEGA PERMIT No:	P8651	OPER. CODE	WORK ORDER

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

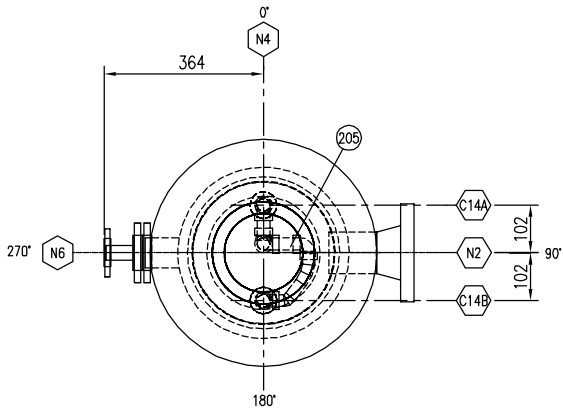
**ENERFLEX**  
Calgary, Alberta,  
Canada

H811/S811  
GLYCOL REGEN./SURGE TANK  
30" OD X 240" LG  
24" OD X 240" LG

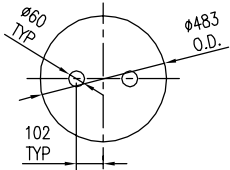
DWG NO	E002133-02-4346	SHT	3 OF 4	REV	2
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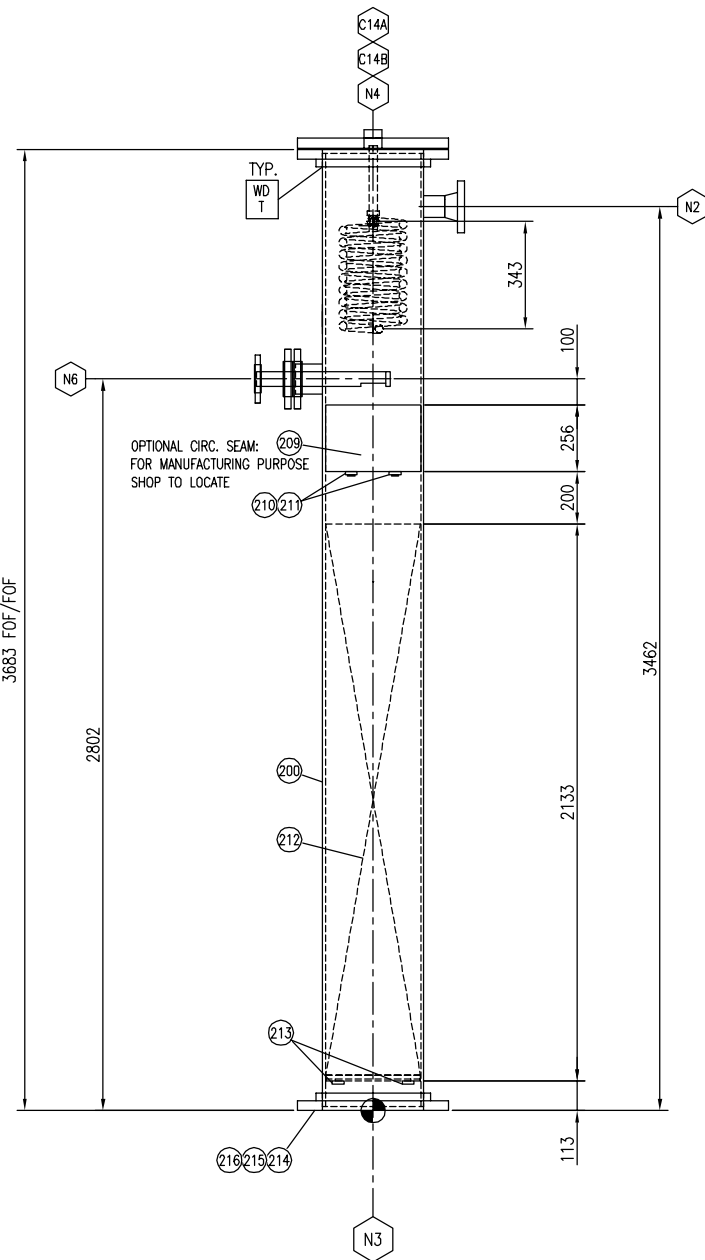
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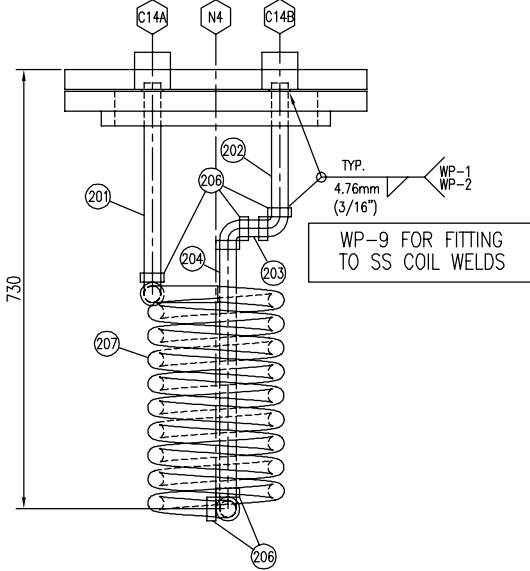
ORIENTATION



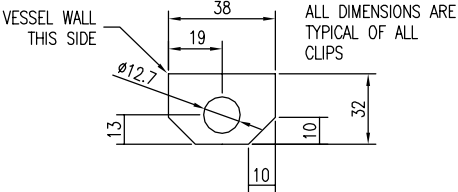
N4 BLIND FLANGE DETAIL  
(1) REQUIRED



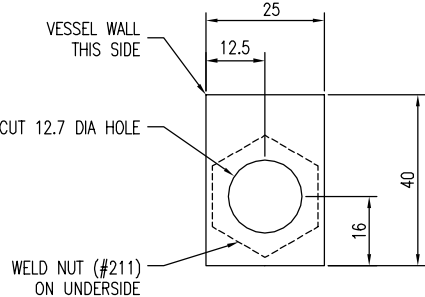
ELEVATION VIEW



N6 DETAIL

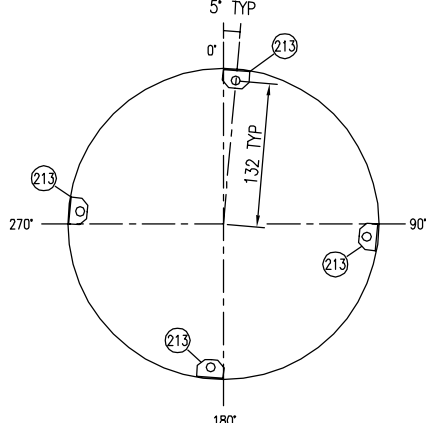


ITEM #213 DETAIL

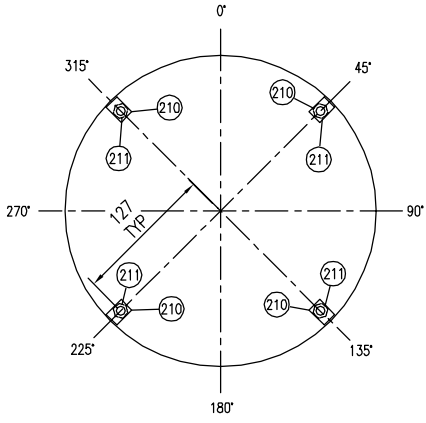


ITEM #210 DETAIL

INSTALLATION NOTES:  
THESE BOLT CLIPS (#210/211) ARE TO BE INSTALLED  
AFTER THE DISTRIBUTOR IS IN THE TOWER



PACKING SUPPORT CLIP DETAILS



DECK DISTRIBUTOR CLIP DETAIL

ITEM	STILL COLUMN MATERIAL DESCRIPTION	QTY	LENGTH	HEAT NUMBER
200	SHELL,PIPE,12",STD,SMLS SA-106-B	1	3657	
201	PIPE, 3/4"NPS, S/80, SMLS SA-333-6	1	368	
202	PIPE, 3/4"NPS, S/80, SMLS SA-333-6	1	127	
203	PIPE, 3/4"NPS, S/80, SMLS SA-333-6	1	44	
204	PIPE, 3/4"NPS, S/80, SMLS SA-333-6	1	562	
205	PIPE, 3/4"NPS, S/80, SMLS SA-333-6	1	59	
206	ELBOW, 3/4"NPS, 6000#, 90D, SW SA-350-LF2 CL1	5	-	
207	COIL, (9) WRAPS OF 1" DIA, TUBING 14 BWG ON 168mm [6 5/8"] OD, MANDRILL AT 31mm PITCH, (TUBE LENGTH - 216") SA-213-304SS	1	5486	
208	PLATE,3/8",SMOOTH X 1 7/8" X 1 7/8" SA-516-70N	1	-	
209	ORIFICE DECK DISTRIBUTOR			
210	PLATE,3/8",SMOOTH X 1 9/16" X 1" SA-516-70N	4	-	
211	NUTS, HEX, 3/8" THK, SA-194-2HM	4	-	
212	PACKING INTALOX ULTRA T RANDOM			
213	PLATE,3/8",SMOOTH X 1 1/2" X 1 1/8" SA-516-70N	4	-	
214	FLANGE, 12"-150#, RF, SO, S/STD SA-105N	1	-	
215	GASKET,12",150#,CG,GRAFOIL FILLED,CS(OR) 316SS	1	-	
216	STUD,7/8" X 5 LG,UNC W/NUTS SA-193-B7M/SA-194-2HM	12	-	
217				
218				

DATE DEC 01/15

SCALE NTS

DRAWN BY E.CHUNG

CHECKED BY JAHMED

APPROVED H.WEI

PROJECT MANAGER K.ROBERTSON

PROJECT ENGINEER E.TOOSI

CUST PO STOCK 007

APEGA PERMIT No: P8651

OPER. CODE

WORK ORDER E002133-02

PEYTO C/O ONSTREAM REFRIGERATION PLANT  
40MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

H811/S811  
GLYCOL REGEN./SURGE TANK  
30" OD X 240" LG  
24" OD X 240" LG

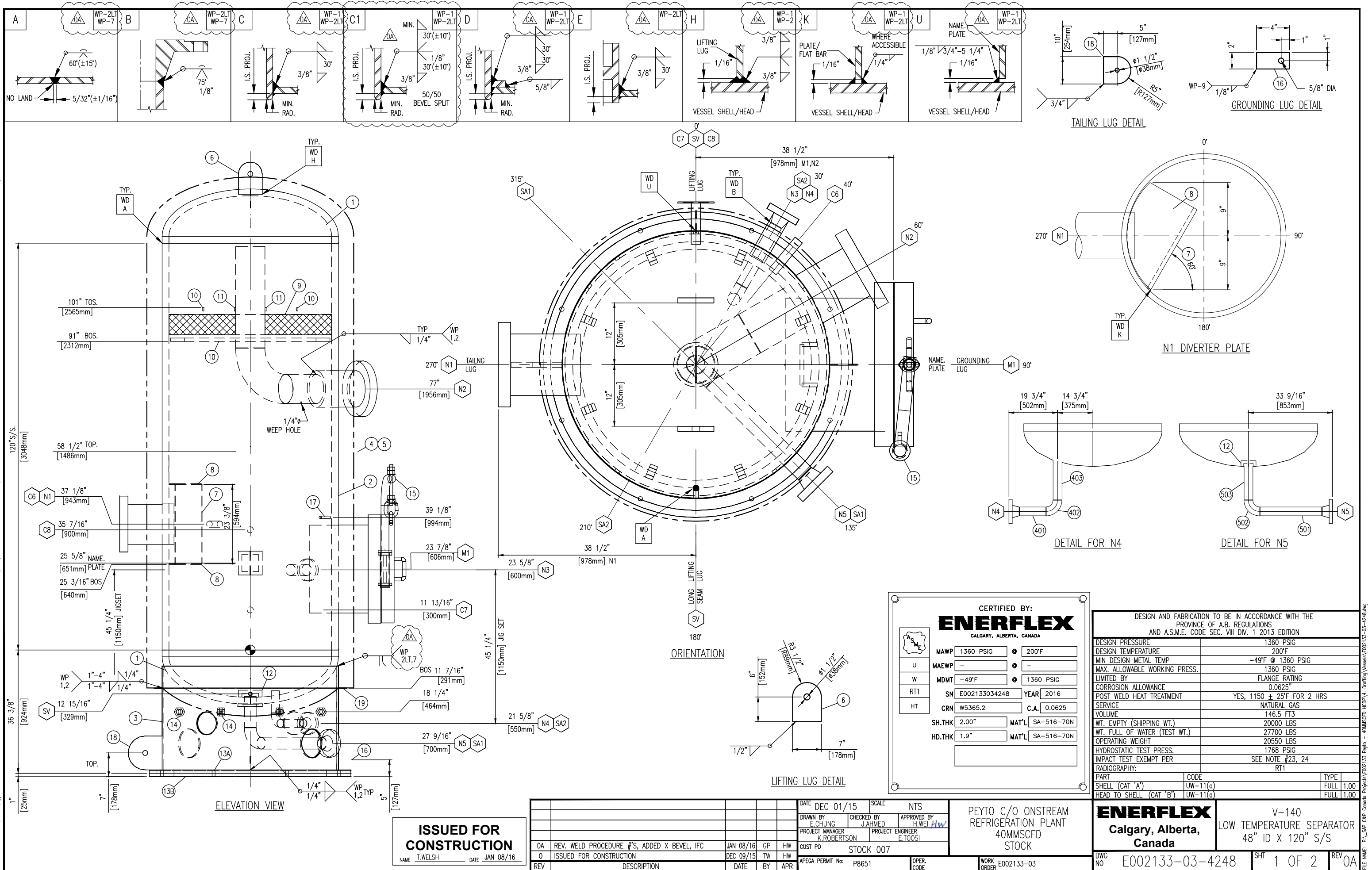
DWG NO E002133-02-4346

SHT 4 OF 4

REV 2

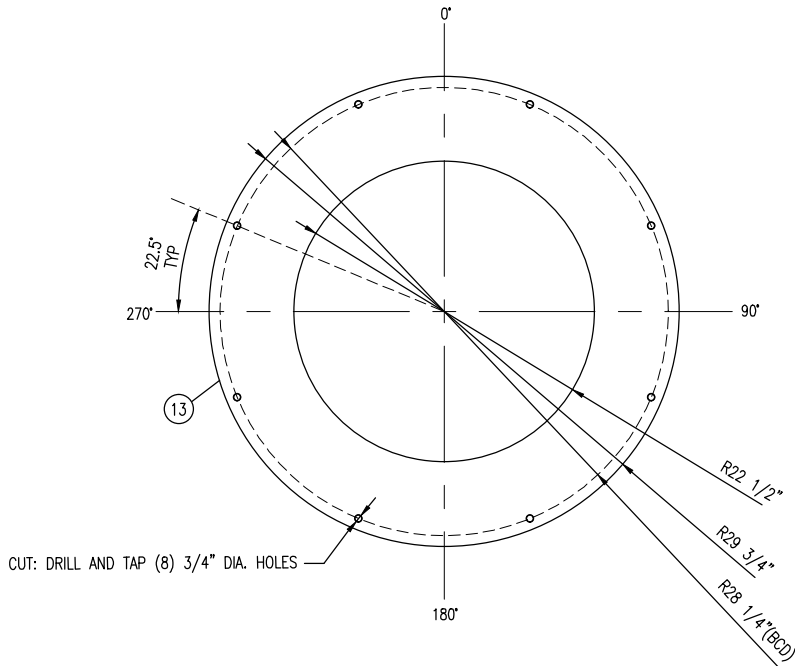


PLOT DATE Jan 08, 2016, gph01 THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

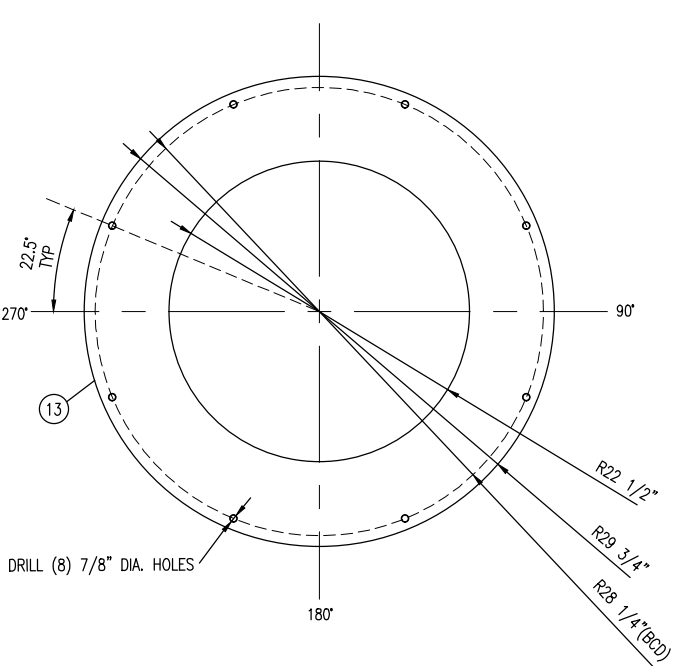




PLOT DATE Jan 08, 2016, gphl THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



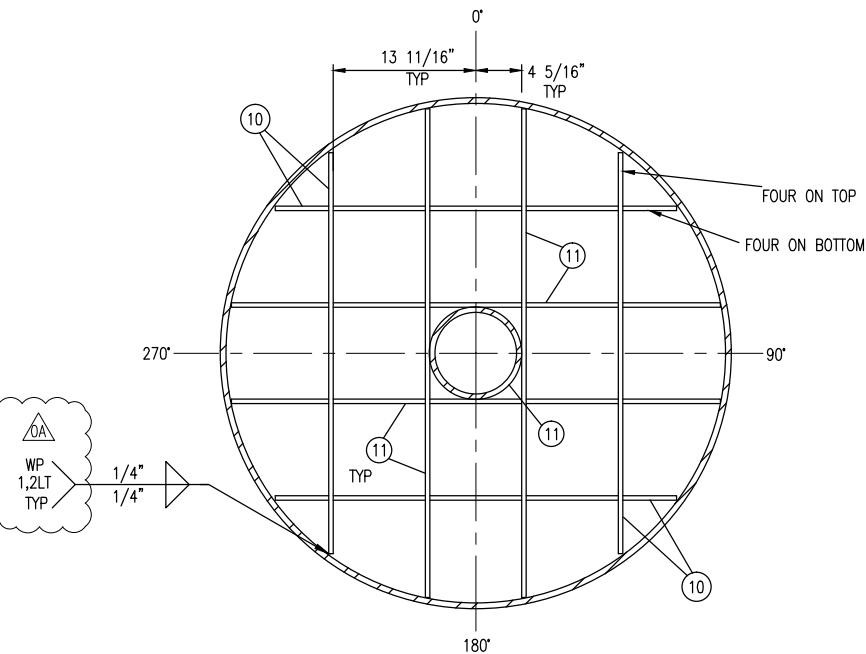
SOLE PLATE DETAIL #13A



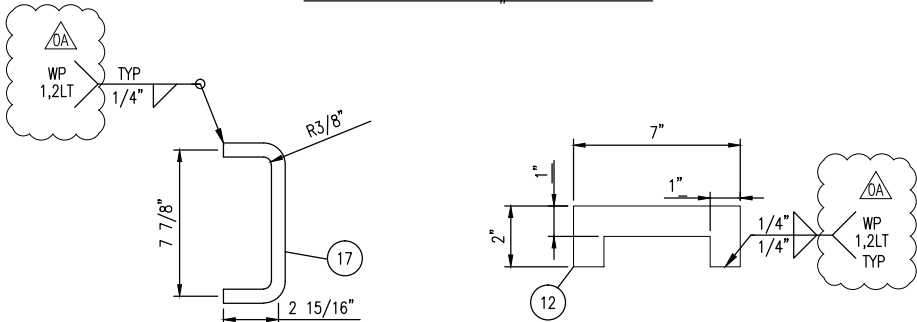
BASE PLATE DETAIL #13B

GENERAL NOTES:

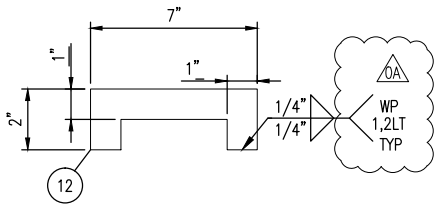
- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- WELDING PROCEDURE REGISTRATION No. WP 496.2
- FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
- ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
- EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
- ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
- PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL.
- ALL DIMENSIONS TO BE HELD TO ±1/8" (3.2mm) UNLESS OTHERWISE SHOWN.
- ALL TACK WELDS TO BE PER WP 1 & 2.
- SURFACE PREPARATION: PAINT TRAVELLER.
- PRIMER: PAINT TRAVELLER
- FINISH: PAINT TRAVELLER
- INSULATION: 4.5"
- ALL REPAD AND POISON PAD SHALL HAVE A 1/4" THREADED WEEP HOLE
- ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-105N FOR SA-105  
SA-516-70N FOR SA-516-70  
SEAMLESS FOR WELDED PIPE
- TAPERED TRANSITION PER UW-9(c) IF REQUIRED.
- EXPOSED INSIDE EDGES SHALL BE CHAMFERED OR ROUNDED AS PER UG-76(c).
- 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR INTERNAL/EXTERNAL UNLESS OTHER WISE NOTED.
- WHEN USING ONE PIECE REPAD IS NOT PRACTICAL, THE FOLLOWING SHALL BE PERFORMED:  
A. ON SHELL: THE SPLIT WELD SHALL BE ORIENTED AT LEAST 45 DEGREE FROM THE LONGITUDINAL AXIS OF THE VESSEL.  
B. ON HEAD: THE SPLIT WELD SHALL BE 100% RT OR UT.  
C. USE WELD DETAIL "A" FOR SPLIT REPAD.
- MINIMUM HYDRO VESSEL TEMP SHALL BE 30°F ABOVE MDMT BUT NOT LOWER THAN 35°F
- VESSEL INTERNALS TO BE OILED AFTER HYDRO TESTING.
- INTERNAL / EXTERNAL PAINT OR COATING PRIOR TO THE HYDRO-TEST UNLESS PERMITTED BY THE USER OR HIS DESIGNATED AGENT.
- IMPACT TEST:  
- SHELLS/HEADS, M1, N1, N2 FLANGE ARE IMPACT TESTED PER UG-84(i).  
- FOR OTHER PIPE, FITTINGS, FLANGES, IMPACT TEST EXEMPT PER UCS-66(a),(b),(g) AND UCS 68(c).  
- STUDS/NUTS IMPACT TEST EXEMPTED PER FIG. UCS-66M, NOTE (c).  
- VESSEL PRODUCTION IMPACT TEST SHALL FOLLOW UG-84(i):  
- MIN. FOR ONE SPECIMEN: 12 FT-LB  
- AVERAGE OF THREE SPECIMENS: 15 FT-LB
- VESSEL CRN TAKEN FROM E001020-03-4248 REV.1



MESH SUPPORT ITEM #10 & 11 DETAIL



LADDER RUNG DETAIL



VORTEX BREAKER DETAIL

BILL OF MATERIALS

MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER
	1		2	HEAD, 48"ID, 2" NOM, (1.91") MIN, 2:1 ELLIP, 2" SF,SA-516-70N					
	2		1	SHELL, 48"ID, 2" THK, 120" LG,SA-516-70N	120"				
	3		1	SHELL, 52"OD, 1/2" THK, SA-516-70N, 30 5/8" LG,SA-516-70N	CTS				
	4		1	SPECIFICATION PLATE, SS,					
	5		1	NAME PLATE BRACKET, 1/4" THK,SA-516-70(T-STYLE)					
	6		2	PLATE,1",SMOOTH X 9.5" X 7",SA-516-70N,SEE DETAIL					
	7		1	PLATE,1/4",SMOOTH X 15.5625 X 23.375,SA-516-70N					
	8		2	PLATE,1/4",SMOOTH X 15.5625 X 9.,SA-516-70N,(CTS)					
	9		1	MESH PAD, 6" THK.,9# DENSITY, 48" OD, 316LSS (c/w CARBON STEEL SUPPORT GRIDS TOP & BOTTOM),					
	10		4	PLATE,3/8",SMOOTH X 38.75 X 1,SA-516-70N					
	11		4	PLATE,3/8",SMOOTH X 46.9375 X 1.00,SA-516-70N					
	12		1	PLATE,1/4",SMOOTH X 7.00 X 2.00,SA-516-70N,(CTS)					
	13A		1	PLATE,1",SMOOTH X 59.50 DIA,G40.2144W,SEE DETAIL					
	13B		1	PLATE,1",SMOOTH X 59.50 DIA.,G40.2144W,SEE DETAIL					
	14		8	NUT, 1/2", UNC,SA-194-2HM					
	15		1	20"-600# DAVIT ARM, SEE DWG. STDDVT-902					
	16		1	PLATE,1/4",THK X 4.00" X 2.00",SA-240-316SS,SEE DETAIL					
	17		1	ROUND BAR,3/4",G40.2144W	13 7/8"				
	18		1	PLATE,1",SMOOTH X 10" X 10",SA-516-70N,SEE DETAIL					
	19		1	PLATE,1/4",SMOOTH X 56.50"OD X 52.25"ID,G40.2144W					
M1	90	MANWAY	1	FLANGE,20",600#,RF,BLIND,SA-350-LF2,CL1					
	91		2	GASKET,20",600#,CG,316 SS,GRAFOIL FILLED,CS(OR),					
	92		1	(24) STUD,1 5/8" x 11 1/2 LG,UNC,SA-193-B7M,W/ (2) A-194-2HM NUTS,					
	93		1	FLANGE,20",600#,RF,HBN,21 LG,SA-350-LF2,CL1	21"	C / C1	AS SHOWN	1 3/4"	
N1	100	INLET	1	FLANGE,8",600#,RF,HBN,16 LG,SA-350-LF2,CL1	16"	C / C1	AS SHOWN	STR	
N2	200	OUTLET	1	FLANGE,8",600#,RF,HBN,16 LG,SA-350-LF2,CL1	16"	C / C1	AS SHOWN	STR	
	201		1	PIPE,8",S/40(STD),SMLS,SA-106-B	29 7/8"				
	202		1	ELBOW,8",S/40(STD),90D,LR,BW,SA-234-WPB					
	203		1	PIPE,8",S/40(STD),SMLS,SA-106-B	10 3/8"				
N3	300	BRIDLE	1	FLANGE,2",600#,RF,LWN,10 3/4 LG,SA-350-LF2,CL1	10 3/4"	C	8 1/2"	STR	
N4	400	BRIDLE	1	FLANGE,2",600#,RF,WN,S/160,SA-350-LF2,CL1			AS SHOWN		
	401		1	PIPE,2",S/160,SMLS,SA-333 GR. 6	13 3/8"				
	402		1	ELBOW,2",S/160,90D,LR,BW,SA-420-WPL6					
	403		1	PIPE,2",S/160,SMLS,SA-333 GR. 6	8"	C		STR	
N5	500	LIQ. OUTLET	1	FLANGE,3",600#,RF,WN,S/160,SA-350-LF2,CL1					
	501		1	PIPE,3",S/160,SMLS,SA-333 GR. 6	25 5/16"				
	502		1	ELBOW,3",S/160,90D,LR,BW,SA-420-WPL6					
	503		1	PIPE,3",S/160,SMLS,SA-333 GR. 6	9 1/8"	D	AS SHOWN	WELD/ FLUSH	
	504		1	REPAD,7.50" OD,3.75" ID,3/4"THK,FORMED TO 52.00" OD,2"THK,2:1 ELLIP. HEAD,SA-516-70N					
C6	600	TIT	1	COUPLING,3/4",6000#,NPT,8"LG,SA-350-LF2,CL1	8"	E	5"	STR	
C7	700	TI	1	COUPLING,3/4",6000#,NPT,8"LG,SA-350-LF2,CL1	8"	E	5"	STR	
C8	800	PT	1	COUPLING,3/4",6000#,NPT,8"LG,SA-350-LF2,CL1	8"	E	5"	STR	
SA1		ACCESS	2	ø 8 1/2" HOLES					
SA2		ACCESS	2	ø 6 3/4" HOLES					
SV		VENT	2	ø1" HOLES					

DATE	DEC 01/15	SCALE	NTS
DRAWN BY	E.CHUNG	CHECKED BY	J.AHMED
PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	E.TOOSI
CUST PO	STOCK 007	OPER. CODE	
APEGA PERMIT No:	P8651	WORK ORDER	E002133-03

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

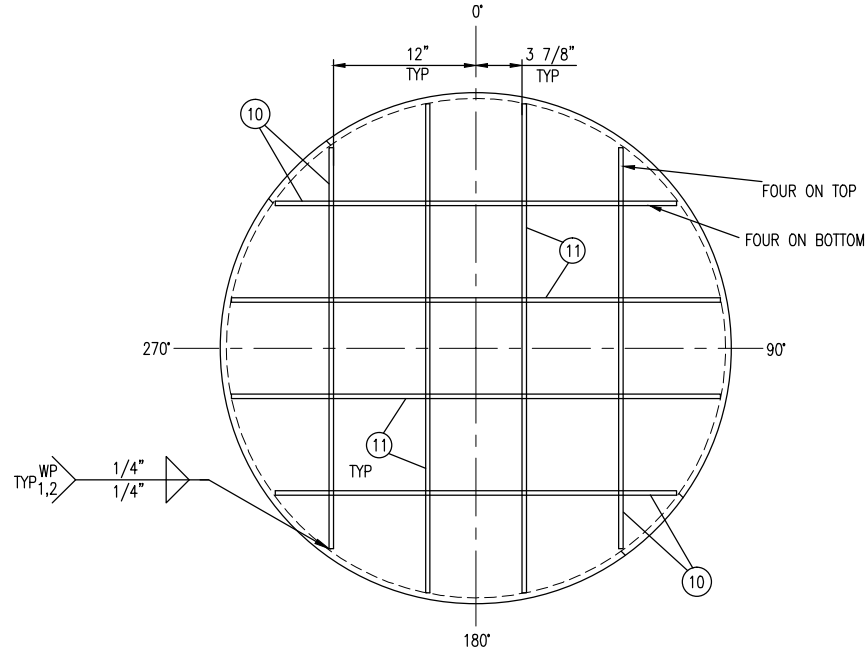
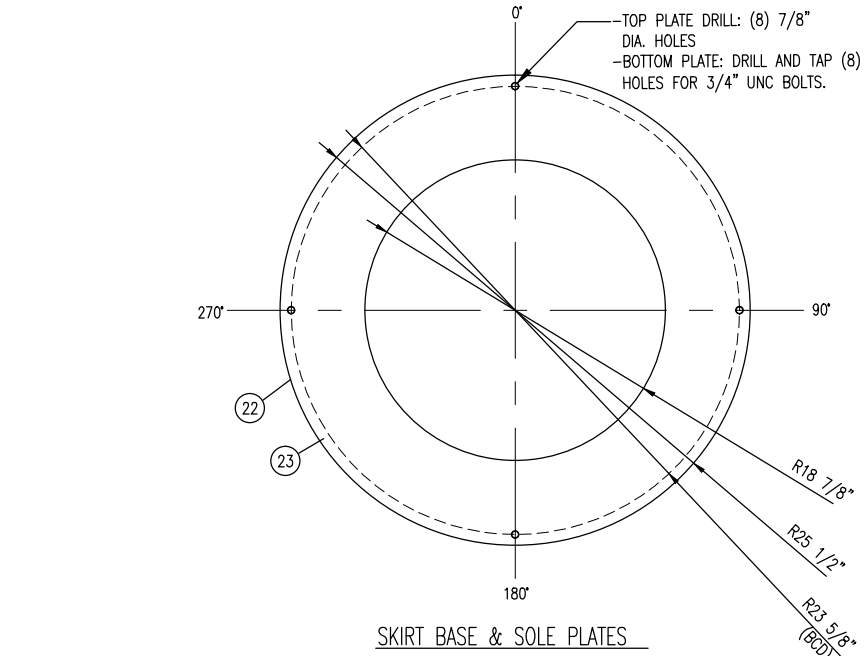
**ENERFLEX**  
Calgary, Alberta,  
Canada

V-140  
LOW TEMPERATURE SEPARATOR  
48" ID X 120" S/S

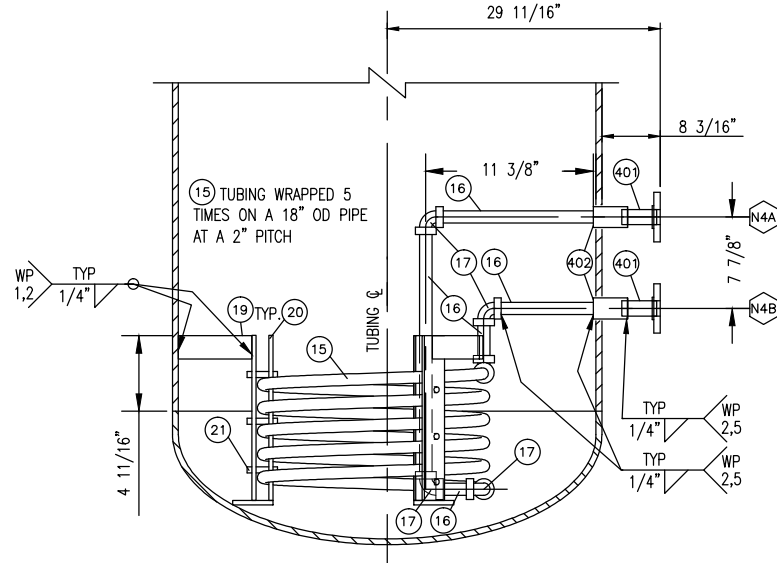
DWG NO	E002133-03-4248	SHT	2 OF 2	REV	0A
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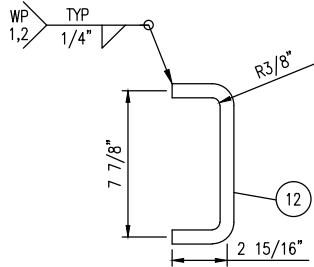
MESH SUPPORT ITEM #10 & 11 DETAIL



### COIL & SUPPORT DETAIL

GENERAL NOTES:

1.  ALL TAIL DIMENSIONS FROM REFERENCE POINT.
2. WELDING PROCEDURE REGISTRATION No. WP 496.2
3. FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
4. ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
5. EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
6. ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
7. PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL.
8. ALL DIMENSIONS TO BE HELD TO  $\pm 1/8"$  (3.2mm) UNLESS OTHERWISE SHOWN.
9. ALL TACK WELDS TO BE PER WP 1 & 2.
10. SURFACE PREPARATION:  
PAINT TRAVELLER.
11. PRIMER: PAINT TRAVELLER
12. FINISH: PAINT TRAVELLER
13. INSULATION: 4.5"
14. ALL REPAD AND POISON PAD SHALL HAVE A 1/4" THREADED WEEP HOLE
15. ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-105N FOR SA-105  
SA-516-70N FOR SA-516-70  
SEAMLESS FOR WELDED PIPE
16. TAPERED TRANSITION PER UW-9(c) IF REQUIRED.
17. EXPOSED INSIDE EDGES SHALL BE CHAMFERED OR ROUNDED AS PER UW-76(c).
18. 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR INTERNAL/EXTERNAL UNLESS OTHER WISE NOTED.
19. WHEN USING ONE PIECE REPAD IS NOT PRACTICAL, THE FOLLOWING SHALL BE PERFORMED:
  - A. ON SHELL: THE SPLIT WELD SHALL BE ORIENTED AT LEAST 45 DEGREE FROM THE LONGITUDINAL AXIS OF THE VESSEL.
  - B. ON HEAD: THE SPLIT WELD SHALL BE 100% RT OR UT.
  - C. USE WELD DETAIL "A" FOR SPLIT REPAD.
20. MINIMUM HYDRO VESSEL TEMP SHALL BE 30°F ABOVE MDMT BUT NOT LOWER THAN 35°F
21. VESSEL INTERNALS TO BE OILED AFTER HYDRO TESTING.
22. INTERNAL / EXTERNAL PAINT OR COATING PRIOR TO THE HYDRO-TEST UNLESS PERMITTED BY THE USER OR HIS DESIGNATED AGENT.
23. WELDING CONSUMABLES MDMT TO BE RATED -49°F OR COLDER
24. VESSEL CRN TAKEN FROM 001020-04-4211 REV.0A

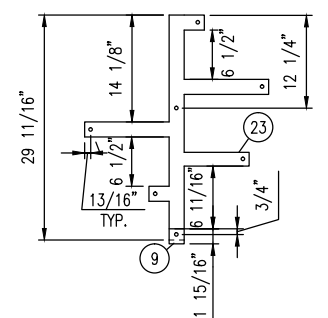
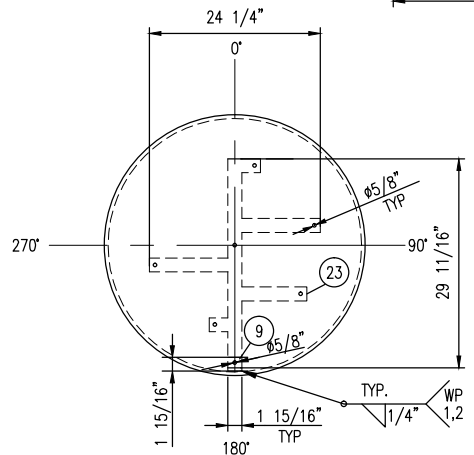


### LADDER RUNG DETAIL

BILL OF MATERIALS										
MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER	
	1		2	HEAD, 42"ID, 1/2" NOM, (0.4375") MIN, 2:1 ELLIP, 2" SF,SA-516-70N						
	2		1	SHELL, 42"ID, 1/2" THK, 102" LG,SA-516-70N	102"					
	3		1	SKIRT, 42"ID, 1/2" THK, SA-516-70N, 25 5/8" LG,SA-516-70N	CTS					
	4		1	SPECIFICATION PLATE, SS,						
	5		1	NAME PLATE BRACKET, 1/4" THK,SA-516-70N, (T-STYLE BRACKET)						
	6		2	PLATE,3/4",SMOOTH X 10.8125 X 9.8125,SA-516-70N, SEE DETAIL						
	7		1	PLATE,1/4",SMOOTH X 21 1/2 X 18 5/8,SA-516-70N (CTS)	21 1/2"					
	8		2	PLATE,1/4",SMOOTH X 18 5/8 X 10 3/4,SA-516-70N (CTS)	CTS					
	9		1	MESH PAD, 6" THK.,9# DENSITY, 42" OD, 316LSS (c/w CARBON STEEL SUPPORT GRIDS TOP & BOTTOM),						
	10		4	PLATE,3/8",SMOOTH X 33 3/4 X 1,SA-516-70N						
	11		4	PLATE,3/8",SMOOTH X 41 1/8 X 1,SA-516-70N						
	12		2	ROUND BAR,3/4",G40.2144W	13 7/8"					
	13		2	PIPE,6",S/40(STD),SMLS,SA-106-B	4"					
	14		1	PLATE,1/4",SMOOTH X 47.5"OD X 43 1/2"ID,G40.2144W (CTS)						
	15		1	TUBING(COIL): 1"DIA.,11BWG,SMLS,SA-179	298"					
	16		1	PIPE,3/4",S/80(XS),SMLS,SA-106-B	11 3/16"					
	16		1	PIPE,3/4",S/80(XS),SMLS,SA-106-B	16 3/16"					
	16		1	PIPE,3/4",S/80(XS),SMLS,SA-106-B	3 13/16"					
	16		1	PIPE,3/4",S/80(XS),SMLS,SA-106-B	21 11/16"					
	16		1	PIPE,3/4",S/80(XS),SMLS,SA-106-B	3 1/4"					
	17		5	ELBOW,3/4",6000#,90D,SW,SA-105N						
	18		1	20"-150# DAVIT ARM, SEE DWG. STDDVT-902						
	19		3	PLATE,3/8",SMOOTH X10.5" X 2.00",SA-516-70N,(CTS)	10 1/2"					
	20		6	PLATE, 3/8"THK X 2",G40.2144W,(CTS)						
	21		9	BOLT: 3/8" DIA. UNC C/W NUT & WASHER,S,S	2 1/2"					
	22		1	PLATE,3/4",SMOOTH X 51.00#,G40.2144W,(CTS)						
	23		1	PLATE,1",SMOOTH X 51.00#,G40.2144W,(CTS)						
	24		8	NUT, 1/2", UNC,SA-194-2HM						
	25		1	PLATE,3/8",SMOOTH X 9.875 X 1.00,SA-516-70N,(CTS)						
M1	90	MANWAY	1	FLANGE,20",150#,RF,BLIND CL1,SA-350-LF2-CL1						
	91		2	GASKET,20",150#,CG,316 SS,GRAFOIL FILLED,CS(OR)						
	92		20	STUD,1 1/8" x 6 1/2 LG,8UN,SA-193-B7M						
	93		40	NUT, 1 1/8" DIA,8UN,SA-194-2HM						
	94		1	FLANGE,20",150#,RF,LWN,17LG,SA-350-LF2-CL1	17"	C	12 3/8"	1/2"		
N1	100	INLET	1	FLANGE,10",150#,RF,WN,S/80,SA-350-LF2-CL1			10 1/2"			
	101		1	PIPE,10",S/80,SMLS,SA-333 GR. 6	7 3/4"	D		MIN		
	102		1	REPAD,14.75" OD,11.00" ID,1/2"THK,FORMED TO 43.00" OD SHELL,SA-516-70N						
N2	200	OUTLET	1	FLANGE,10",150#,RF,WN,S/80,SA-350-LF2-CL1			10 1/2"			
	201		1	PIPE,10",S/80,SMLS,SA-333 GR. 6	17 3/4"	D		MIN		
			1	ELBOW,10",S/80,90D,SR,BW,SA-420-WPL6						
	202		1	REPAD,14.75" OD,11.00" ID,1/2"THK,FORMED TO 43.00" OD SHELL,SA-516-70N						
N3	300	INSP	1	FLANGE,3",150#,RF,WN,S/160,SA-350-LF2,CL1			8 1/2"			
	301		1	PIPE,3",S/160,SMLS,SA-333 GR. 6	6 3/8"	C		MIN		
N4A/B	400	COIL IN/OUT	2	FLANGE,1",150#,RF,SW,S/160,SA-350-LF2 CL1						
	401		2	PIPE,1",S/160,SMLS,SA-333 GR. 6	3"	DET		STR		
	402		2	COUPLING,RED,1",6000#,SW X 3/4" SW,6"LG,SA-350-LF2-CL1						
N5	500	DRAIN	1	FLANGE,1",150#,RF,WN,S/160,SA-350-LF2-CL1			AS SHOWN			
	501		1	PIPE,1",S/160,SMLS,SA-333 GR. 6	26 1/16"					
	502		1	ELBOW,1",S/160,90D,LR,BW,SA-420-WPL6						
	503		1	PIPE,1",S/160,SMLS,SA-333 GR. 6	9 1/2"	C		WELD FLUSH		
C6A/B	600	LSHH	2	COUPLING,3/4",6000#,NPT,6"LG,SA-350-LF2-CL1	6"	E		MIN		
C7	700	TI	1	COUPLING,3/4",6000#,NPT,6"LG,SA-350-LF2-CL1		E		MIN		
C8	800	LI	1	COUPLING,3/4",6000#,NPT,6"LG,SA-350-LF2-CL1		E		MIN		
C9	900	PI	1	COUPLING,3/4",6000#,NPT,6"LG,SA-350-LF2-CL1		E		MIN		
SA		ACCESS	2	Ø 6 7/8" HOLES						
SV		VENT	2	Ø1" HOLES						

DATE DEC 01/15		SCALE NTS		PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK		<b>ENERFLEX</b> Calgary, Alberta, Canada		V-143 PROPANE SUCTION SCRUBBER 42" ID X 102" S/S					
DRAWN BY E.CHUNG		CHECKED BY J.AHMED										APPROVED BY H.WEI	
PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI											
CUST PO STOCK 007													
APEGA PERMIT No: P8651		OPER. CODE		WORK ORDER E002133-04		DWG NO E002133-04-4211		SHT 2 OF 2		REV 0			



[illegible]

CERTIFIED BY:

# ENERFLEX

CALGARY, ALBERTA, CANADA

ASME

MAWP	300 PSIG	①	300 DEG°F
U	MAWP	②	300 DEG°F
W	MDMT	③	300 PSIG
RT-2	SN	SEE CHART	YEAR 2016
—	CRN	W5581.2	C.A. 0.0625
SH.THK 0.500"		MAT'L	SA-516-70N
HD.THK 0.4375"(MIN)		MAT'L	SA-516-70N

DESIGN AND FABRICATION TO BE IN ACCORDANCE WITH THE PROVINCE OF ALBERTA REGULATIONS AND A.S.M.E. CODE SEC. VIII DIV. 1 2013 EDITION			
DESIGN PRESSURE		-15/300 PSIG	
DESIGN TEMPERATURE		300 DEG°F	
MIN DESIGN METAL TEMP		-20°F/300 PSIG	
MAX. ALLOWABLE WORKING PRESS.		300 PSIG	
LIMITED BY		BY DESIGN	
CORROSION ALLOWANCE		0.0625	
POST WELD HEAT TREATMENT		NO	
SERVICE		PROPANE	
VOLUME		94.2 FT3	
WT. EMPTY (SHIPPING WT.)		7109 LBS	
WT. FULL OF WATER (TEST WT.)		12983 LBS	
OPERATING WEIGHT		10525 LBS	
HYDROSTATIC TEST PRESS.		390 PSIG	
IMPACT TEST EXEMPT PER		UG-20(f)&UCS-66(c)	
RADIOGRAPHY:		RT-2	
PART	CODE		TYPE JE
SHELL (CAT 'A')	UW-11(a)5/UW-12(a)		FULL 1.00
HEAD TO SHELL (CAT 'B')	UW-11(a)5b/UW-12(d)/UW-12(c)		SPOT 0.7

**ISSUED FOR  
CONSTRUCTION**

NAME T.WELSH DATE DEC 09/15

						DATE	DEC 01/15	SCALE	NTS	
						DRAWN BY	E.CHUNG	CHECKED BY	J.AHMED	APPROVED BY
									H.WEI	Hv
						PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	E.TOOSI	
						CUST PO	STOCK 007			
0	ISSUED FOR CONSTRUCTION				DEC 09/15	TW	HW			
REV	DESCRIPTION				DATE	BY	APR	APEGA PERMIT No: P8651		OPER. CODE.

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

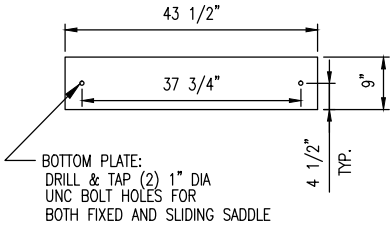
**ENERFLEX**  
Calgary, Alberta,  
Canada

SEE CHART  
OIL SEPARATOR  
36" ID X 144" S/S

DWG NO	E002133-04-4236	SHT	1 OF 4	REV	0
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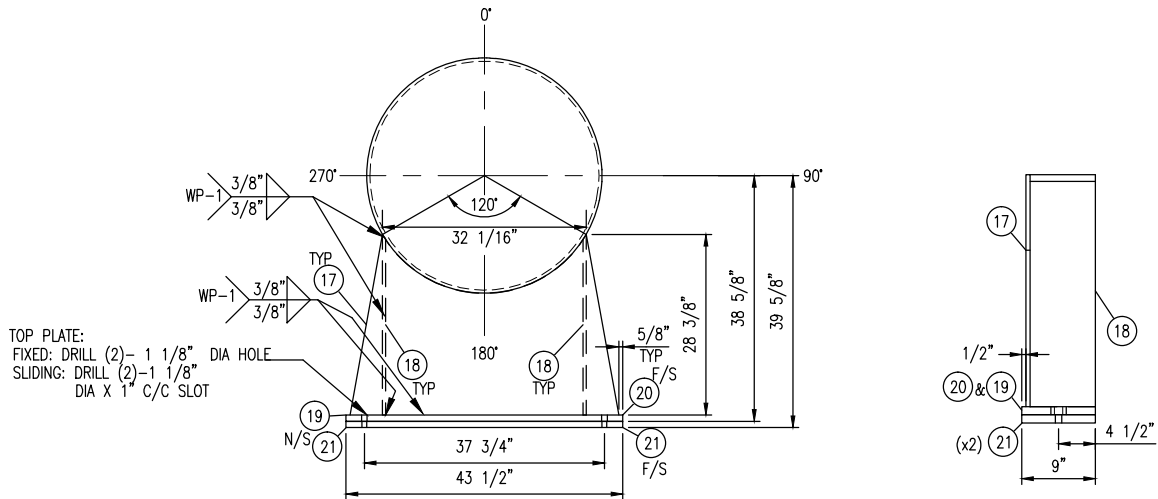
BILL OF MATERIALS									
MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER
	2A		1	SHELL, 36"ID, 1/2" THK, 96" LG,SA-516-70N	96"				
	2B		1	SHELL, 36"ID, 1/2" THK, 48" LG,SA-516-70N	48"				
	1		2	HEAD, 36"ID, 1/2" NOM, (0.4375") MIN, 2:1 ELLIP, 2" SF,SA-516-70N					
	3		1	SPECIFICATION PLATE, SS,					
	4		1	PLATE,1/4"THK,6" X 6",SA-516-70N,T STYLE REQ.					
	5		1	PLATE,1/4"THK,6" X 3",SA-516-70N,T STYLE REQ.					
	6		4	SM20 VIBRACON MACHINE SUPPORT					
	7		1	PIPE,8",S/40(STD),SMLS,SA-106-B,CUT IN HALF	8 5/8"				
	8		1	PLATE,1/4",SMOOTH X 8.562 X 4.3125,G40.2144W,CTS					
	9		1	PLATE,3/8",SMOOTH X 1.9375 X 2.625,SA-516-70N,CTS/SEE DETAIL					
	10		1	PLATE,1/2",SMOOTH X 35.8125X 19.875,G40.2144W,CTS					
	11		3	PLATE,3/4",SMOOTH X 29.0625 X 17.0625,G40.2144W,CTS					
	12		2	PLATE,1/2",SMOOTH X 44.125 X 2.00,G40.2144W,CTS					
	13		1	PLATE,1",SMOOTH X 45.125 X 29.0625,G40.2144W,CTS					
	14		3	PLATE,3/4",SMOOTH X 22.75 X 9,G40.2144W,CTS					
	15		1	PLATE,1",SMOOTH X 24.625 X 16.125,G40.2144W,CTS					
	16		2	CHANNEL,4" X 5.4#,G40.2144W	35 7/16"				
	17		2	PLATE,1/2",SMOOTH X 42.25 X 28.375,G40.2144W,CTS					
	18		4	PLATE,1/2",SMOOTH X 28.375 X 8.00,G40.2144W,CTS					
	19		1	PLATE,1",SMOOTH X 43.50 X 9.00,G40.2144W,CTS					
	20		1	PLATE,1",SMOOTH X 43.500 X 9.00,G40.2144W,CTS					
	21		2	PLATE,1",SMOOTH X 43.500 X 9.00,G40.2144W,SEE DETAIL					
	22		1	PLATE,1/4",SMOOTH X 35.875,SA-516-70N,CTS					
	23		1	PLATE,3/8",SMOOTH X 24.25 X 29.6875,SA-516-70N,CTS/SEE DETAIL					
	27		6	OIL FILTER SUPPORT ASSEMBLY PIVOTING DESIGN,SEE DWG OFSAP-JOS5000-V					
	28		6	OIL FILTER ELEMENTS,JOS 5000-D-V					
	29		1	20"-300# DAVIT ARM,SEE DWG STDDVT-902,					
	30		2	PLATE,1/4",SMOOTH X 7 1/16 X 2,SA-516-70N,CTS					
	31		4	SM16 VIBRACON MACHINE SUPPORT					
	32		1	PIPE,6",S/40(STD),SMLS,SA-106-B	4 3/4"				
	33		1	PLATE,1/2",SMOOTH X 9.875 X 9.875,G40.2144W,CTS					
	34		8	PLATE,1/4",SMOOTH X 2.125 X 1.625,G40.2144W,CTS					
	35		2	PLATE,1/2",SMOOTH X 9.875 X 9.875,G40.2144W,CTS					
	36		2	PLATE,3/4",SMOOTH X 20.875 X 3.5625,G40.2144W,CTS					
	37		1	PLATE,1/4",SMOOTH X 10.00 X 10.00,G40.2144W,CTS					
M1	90	MANWAY	1	FLANGE,20",300#,RF,BLUND,SA-105N					
	91		2	GASKET,20",300#,CG,316 SS,GRAFOIL FILLED,CS(OR)					
	92		24	STUD,1 1/4" X 8 1/2 LG,UNC,SA-193-B7M					
	93		48	1 1/4"NUTS,SA-194-2HM					
	94		1	FLANGE,20",300#,RF,LWN,15"LG,SA-105N	15"	C1	AS SHOWN	1"	
N1	100	INLET	1	FLANGE,6",300#,RF,SO,SA-105N					
	101		1	PIPE,6",S/160,SMLS,SA-106-B	12 1/2"	C	CTS	AS SHOWN	
	102		1	ELBOW,6",S/40(STD),90D,L,R,BW,SA-234-WPB					
	103		2	REDUCER,10",S/40(STD),6",S/40(STD),BW,ECC,SA-234-WPB					
	104		1	PIPE,10",S/40(STD),SMLS,SA-106-B,(CUT 1/4" HOLE)	16 5/8"				
	105		1	ELBOW,6",S/40(STD),45D,L,R,BW,SA-234-WPB					
	106		1	PIPE,6",S/40(STD),SMLS,SA-106-B	10 7/8"				
N2	200	OUTLET	1	FLANGE,4",300#,RF,WN,160,SA-105N			AS SHOWN		
	201		1	ELBOW,4",S/160,45D,L,R,BW,SA-234-WPB					
	202		1	PIPE,4",S/160,SMLS,SA-106-B	3 7/8"	C		MIN	
N3	300	HEATER/INSP	1	FLANGE,3",300#,RF,LWN,9 LG,SA-105N	9"	Y	AS SHOWN	MIN	
C4A/B	400	LSLL	2	COUPLING,3/4",6000#,NPT,3"LG,SA-105N	3"	E		MIN	
N5	500	OIL OUTLET	1	FLANGE,3",300#,RF,WN,S/160,SA-105N			6 3/8		
	501		1	PIPE,3",S/160,SMLS,SA-106-B	3 7/8"	C		WELD FLUSH	
C6	600	TI	1	COUPLING,3/4",6000#,NPT,4"LG,SA-105N	4"	E		STR	
N7	700	PSV	1	FLANGE,2",300#,RF,WN,S/160,SA-105N					
	701		1	ELBOW,2",S/160,45D,L,R,BW,SA-234-WPB					
	702		1	PIPE,2",S/160,SMLS,SA-106-B	4 7/8"	C	AS SHOWN	MIN	
C8A/B	800	LI	2	COUPLING,3/4",6000#,NPT,3"LG,SA-105N	3"	E		MIN	
C9	900	FILL/DRAIN	1	COUPLING,1 1/2",6000#,NPT,FULL,SA-105N	3 1/8"	E		WELD FLUSH	
C10	1000	PRELUBE	1	COUPLING,1",6000#,NPT,3"LG,SA-105N	3"	E		MIN	
C11	1100	WEIR DRAIN	1	COUPLING,3/4",6000#,NPT,3"LG,SA-105N	3"	E		WELD FLUSH	
C12	1200	FILTER DRAIN	1	COUPLING,3/4",6000#,NPT,3"LG,SA-105N	3"	E		WELD FLUSH	
C13	1300	SEC. OIL RETURN	1	COUPLING,3/4",6000#,NPT,3"LG,SA-105N	3"	E		MIN	
C14A	1400	LI	1	COUPLING,1 1/2",6000#,NPT,FULL,SA-105N		E		MIN	
C14B	1401	LI	1	COUPLING,1 1/2",6000#,NPT,4"LG,SA-105N	4"	E		STR	
C15	1500	TT	1	COUPLING,3/4",6000#,NPT,3"LG,SA-105N	3"	E		MIN	
N16	1600	OIL PSV RETURN	1	FLANGE,2",300#,RF,WN,S/160,SA-105N			6		
	1601		1	PIPE,2",S/160,SMLS,SA-106-B	3 7/8"	C		MIN	
C17	1700	PT	1	COUPLING,3/4",6000#,NPT,3"LG,SA-105N	3"	E		MIN	



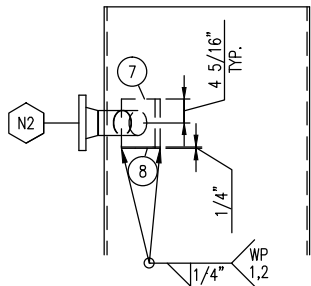
ITEM #21 DETAIL  
(2 REQ)

GENERAL NOTES:

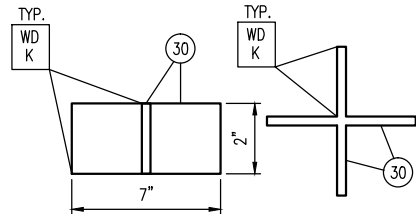
- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- WELDING PROCEDURE REGISTRATION No. WP 496.2
- FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
- ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
- EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
- ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
- PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL.
- ALL DIMENSIONS TO BE HELD TO  $\pm 1/8"$  (3.2mm) UNLESS OTHERWISE SHOWN.
- ALL TACK WELDS TO BE PER WP 1 & 2.
- SURFACE PREPARATION: PAINT TRAVELLER.
- PRIMER: PAINT TRAVELLER
- FINISH: PAINT TRAVELLER
- INSULATION: NONE
- ALL REPAD AND POISON PAD SHALL HAVE A 1/4" THREADED WEEP HOLE
- ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-105N FOR SA-105  
SA-516-70N FOR SA-516-70  
SEAMLESS FOR WELDED PIPE
- TAPERED TRANSITION PER UW-9(c) IF REQUIRED.
- EXPOSED INSIDE EDGES SHALL BE CHAMFERED OR ROUNDED AS PER UG-76(c).
- 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR INTERNAL/EXTERNAL UNLESS OTHER WISE NOTED.
- WHEN USING ONE PIECE REPAD IS NOT PRACTICAL, THE FOLLOWING SHALL BE PERFORMED:  
A. ON SHELL: THE SPLIT WELD SHALL BE ORIENTED AT LEAST 45 DEGREE FROM THE LONGITUDINAL AXIS OF THE VESSEL.  
B. ON HEAD: THE SPLIT WELD SHALL BE 100% RT OR UT.  
C. USE WELD DETAIL "A" FOR SPLIT REPAD.
- MINIMUM HYDRO VESSEL TEMP SHALL BE 30°F ABOVE MDMT BUT NOT LOWER THAN 35°F
- VESSEL INTERNALS TO BE OILED AFTER HYDRO TESTING.
- VESSEL CRN TAKEN FROM E001020-04-4236



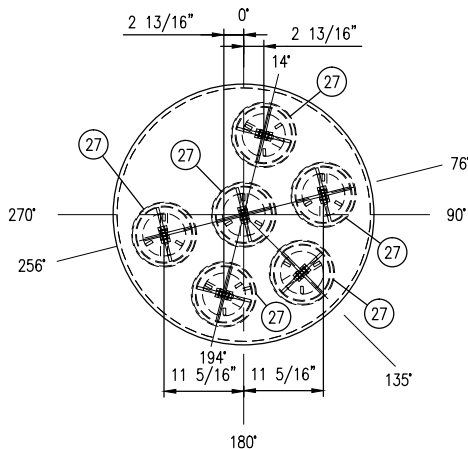
SADDLE DETAIL



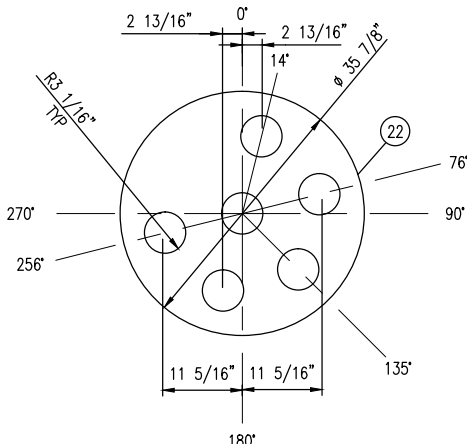
OUTLET DIVERTER DETAIL



VORTEX BREAKER DETAIL



ITEM #27 FILTER ORIENTATION



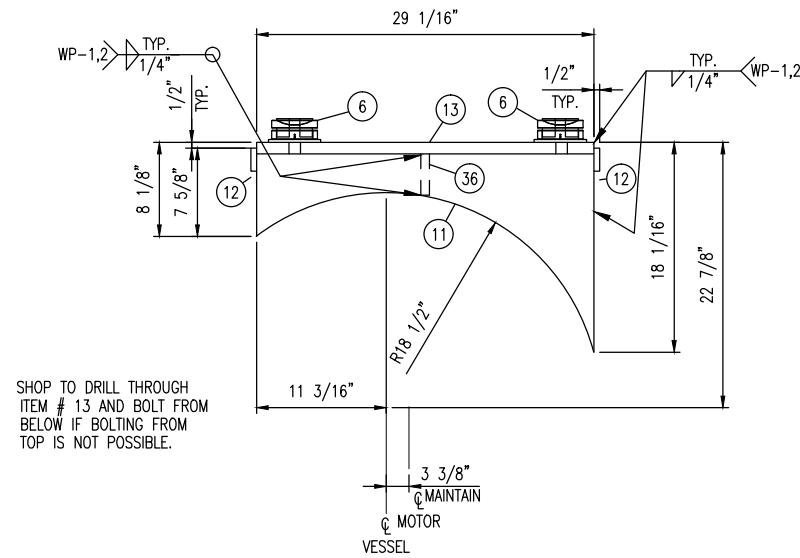
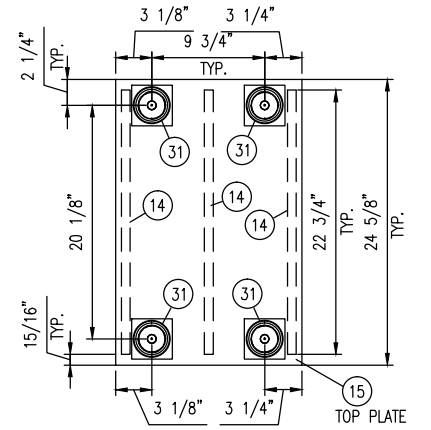
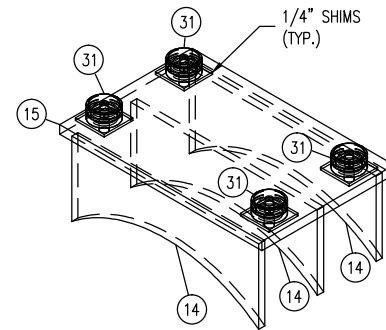
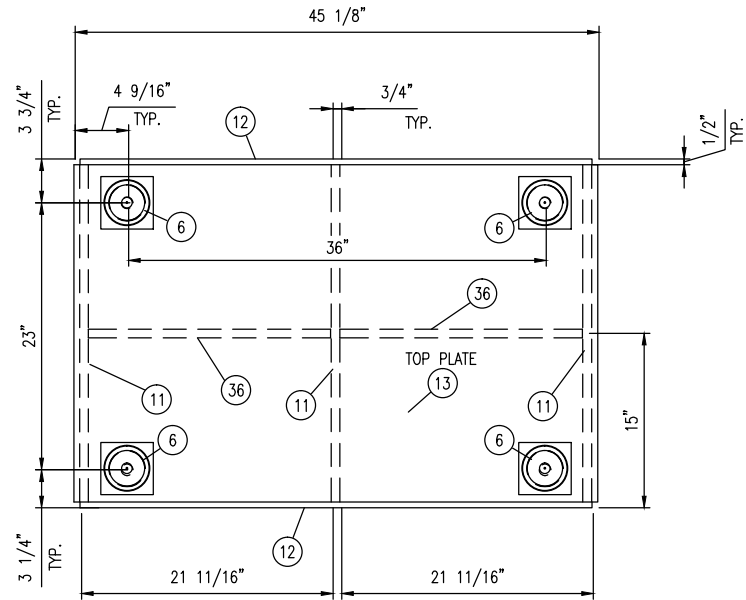
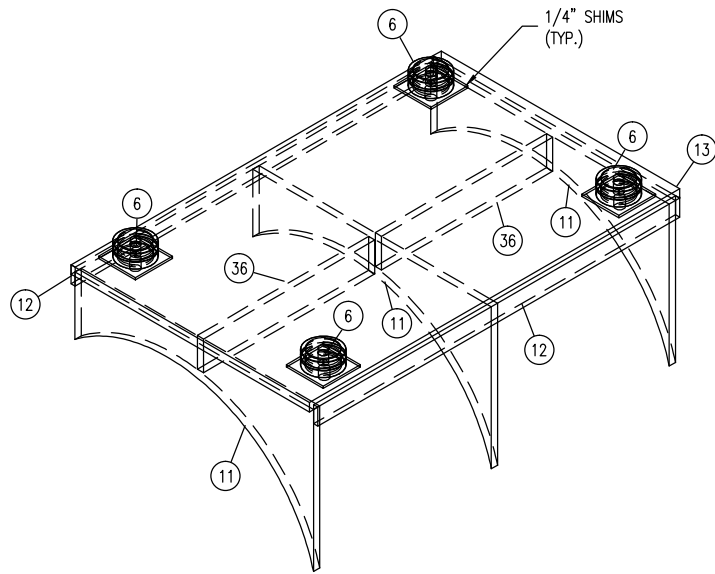
DETAIL ITEM #22

DATE DEC 01/15	SCALE NTS	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK	<b>ENERFLEX</b> Calgary, Alberta, Canada	SEE CHART OIL SEPARATOR 36" ID X 144" S/S	
DRAWN BY E.CHUNG	CHECKED BY J.AHMED				
PROJECT MANAGER K.ROBERTSON	PROJECT ENGINEER E.TOOSI				
CUST PO STOCK 007					
APEGA PERMIT No: P8651	OPER. CODE	WORK ORDER E002133-04	DWG NO E002133-04-4236	SHT 2 OF 4	REV 0

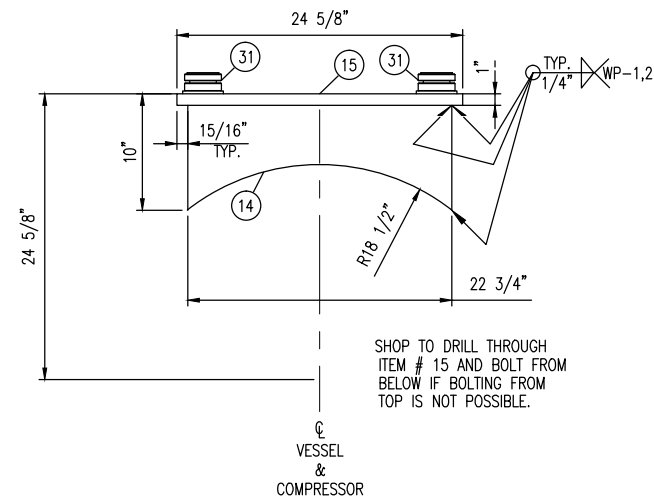
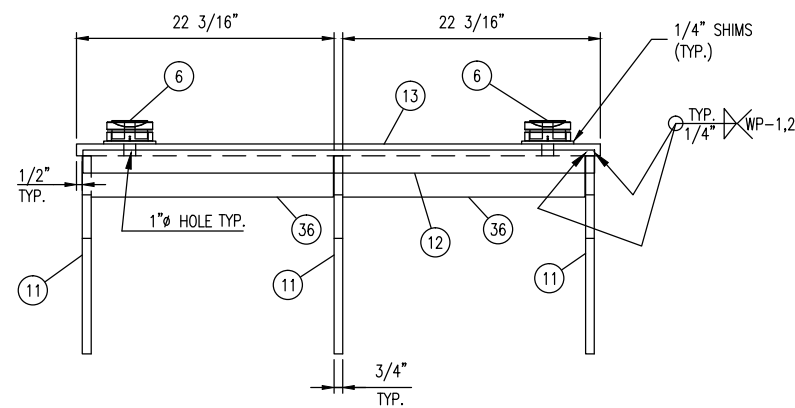
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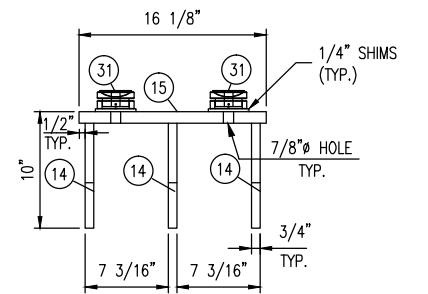
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MOTOR BASE DETAIL  
SCALE 1:8



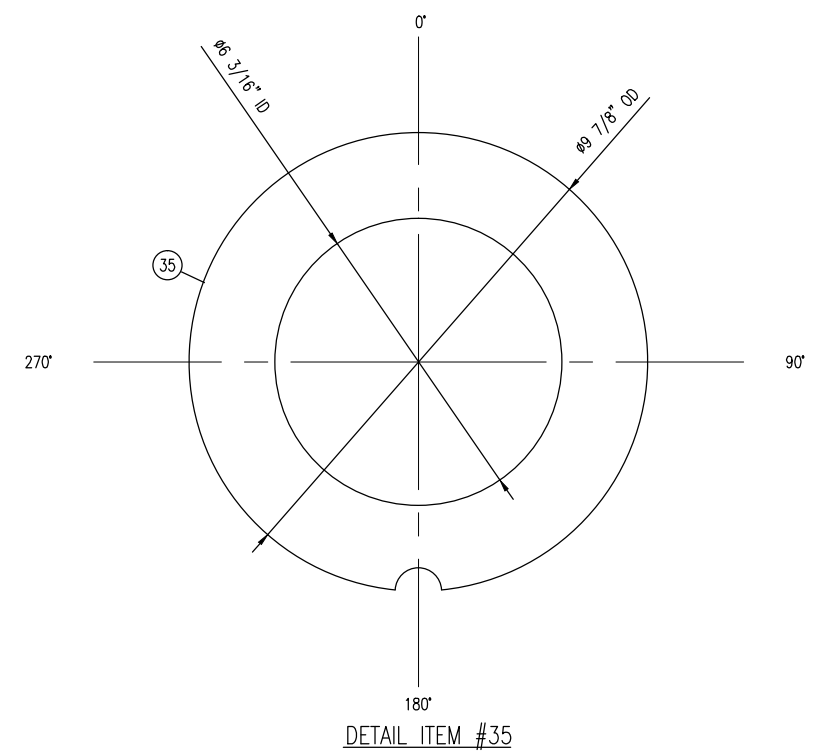
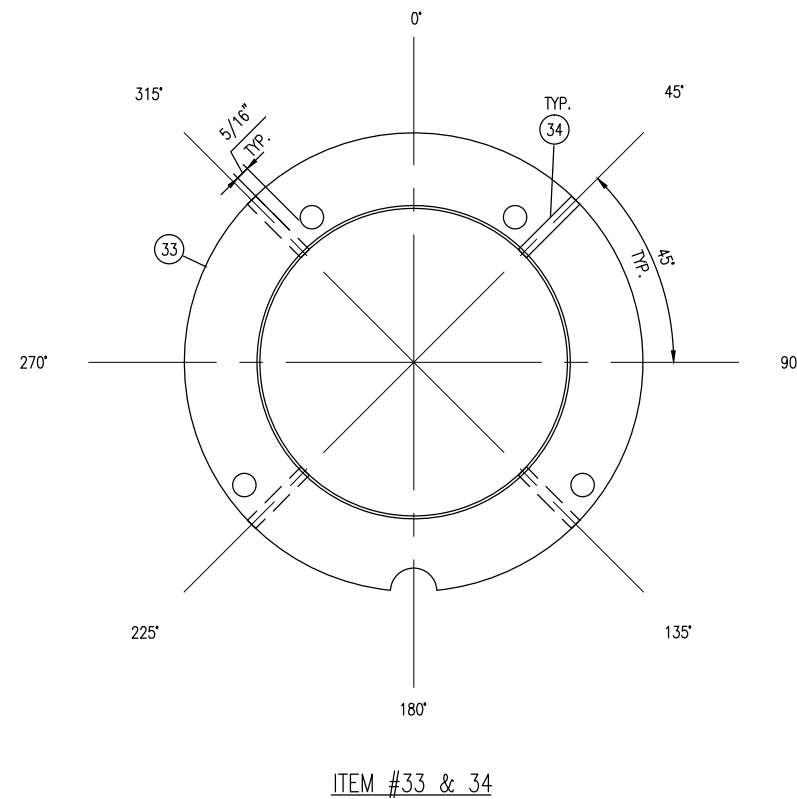
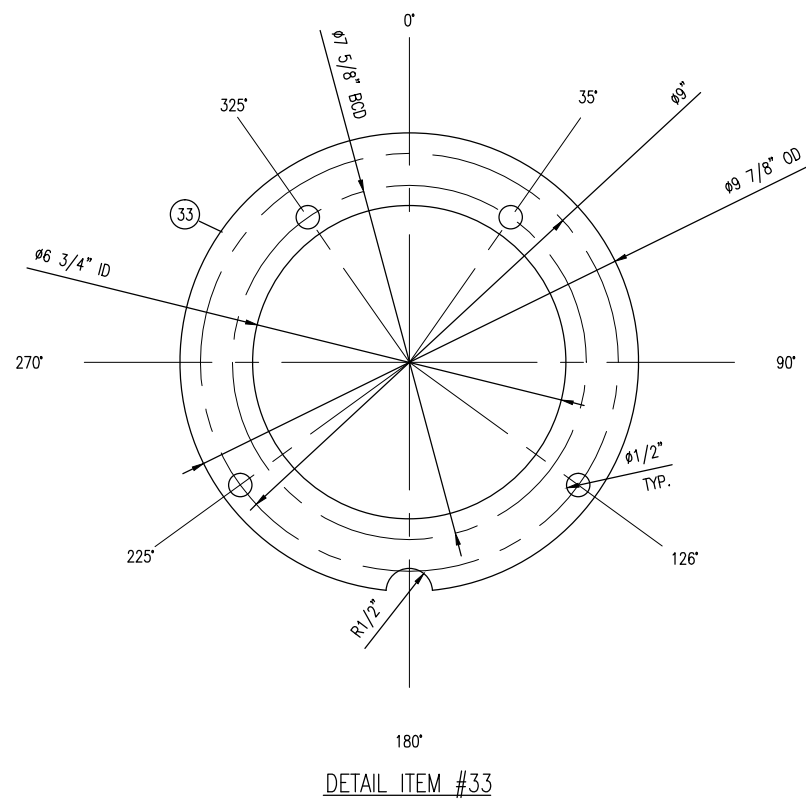
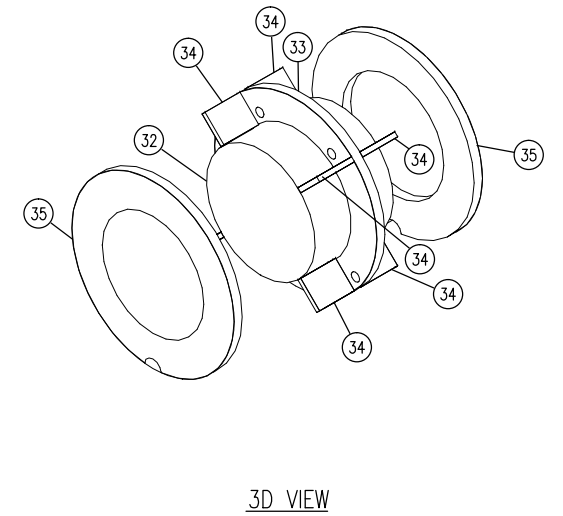
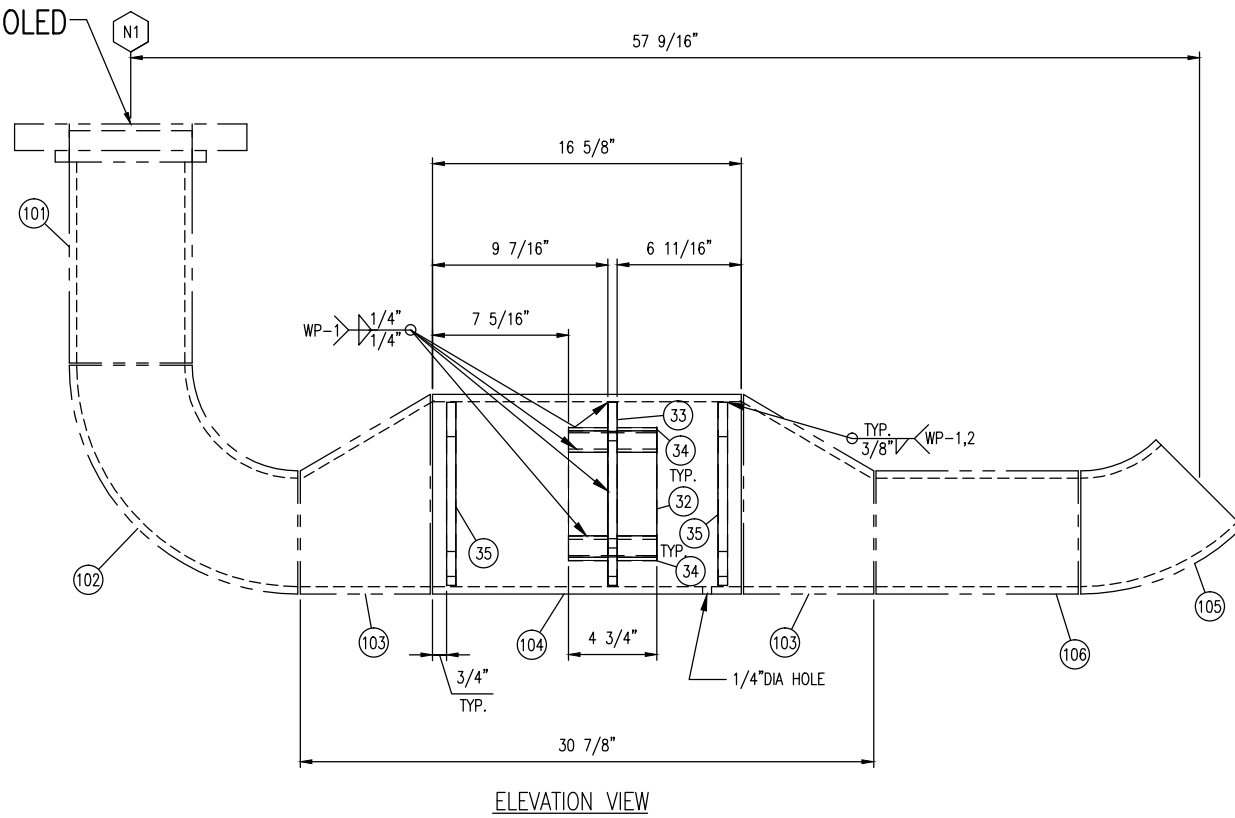
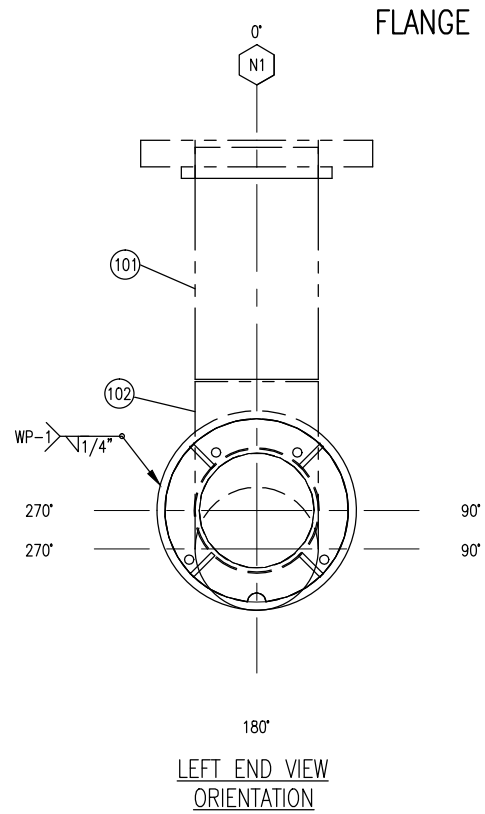
COMPRESSOR BASE DETAIL  
SCALE 1:8



DATE DEC 01/15		SCALE NTS		PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK		<b>ENERFLEX</b> Calgary, Alberta, Canada		SEE CHART OIL SEPARATOR 36" ID X 144" S/S				
DRAWN BY E.CHUNG		CHECKED BY J.AHMED									APPROVED BY H.WEI <i>HW</i>	
PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI										
CUST PO STOCK 007												
APEGA PERMIT No: P8651		OPER. CODE		WORK ORDER E002133-04		DWG NO E002133-04-4236		SHT 3 OF 4		REV 0		

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DATE DEC 01/15		SCALE NTS		PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK		<b>ENERFLEX</b> Calgary, Alberta, Canada		SEE CHART OIL SEPARATOR 36" ID X 144" S/S		
DRAWN BY E.CHUNG		CHECKED BY J.AHMED								
APPROVED BY H.WEI										
PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI								
CUST PO STOCK 007										
APEGA PERMIT No: P8651		OPER. CODE		WORK ORDER E002133-04		DWG NO E002133-04-4236		SHT 4 OF 4		REV 0

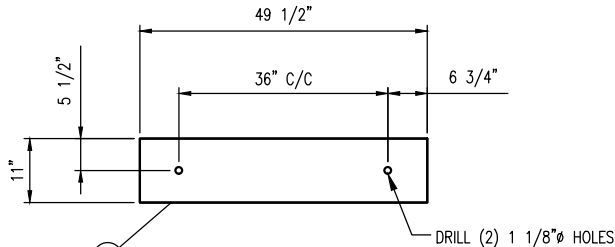
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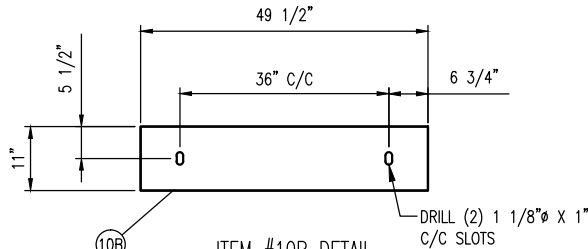
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GENERAL NOTES:

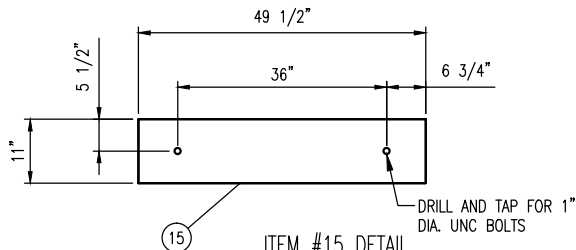
- ALL TAIL DIMENSIONS FROM REFERENCE POINT.
- WELDING PROCEDURE REGISTRATION No. WP 496.2
- FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
- ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
- EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
- ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
- PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL.
- ALL DIMENSIONS TO BE HELD TO  $\pm 1/8"$  (3.2mm) UNLESS OTHERWISE SHOWN.
- ALL TACK WELDS TO BE PER WP 1 & 2.
- SURFACE PREPARATION: PAINT TRAVELLER
- PRIMER: PAINT TRAVELLER
- FINISH: PAINT TRAVELLER
- INSULATION: NONE
- ALL REPAD AND POISON PAD SHALL HAVE A 1/4" THREADED WEEP HOLE
- ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-105N FOR SA-105  
SA-516-70N FOR SA-516-70  
SEAMLESS FOR WELDED PIPE
- TAPERED TRANSITION PER UW-9(c) IF REQUIRED.
- EXPOSED INSIDE EDGES SHALL BE CHAMFERED OR ROUNDED AS PER UG-76(c).
- 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR INTERNAL/EXTERNAL UNLESS OTHER WISE NOTED.
- WHEN USING ONE PIECE REPAD IS NOT PRACTICAL, THE FOLLOWING SHALL BE PERFORMED:  
A. ON SHELL: THE SPLIT WELD SHALL BE ORIENTED AT LEAST 45 DEGREE FROM THE LONGITUDINAL AXIS OF THE VESSEL.  
B. ON HEAD: THE SPLIT WELD SHALL BE 100% RT OR UT.  
C. USE WELD DETAIL "A" FOR SPLIT REPAD.
- MINIMUM HYDRO VESSEL TEMP SHALL BE 30°F ABOVE MDMT BUT NOT LOWER THAN 35°F
- VESSEL INTERNALS TO BE OILED AFTER HYDRO TESTING.
- WELD CONSUMABLES MDMT RATE  $\ominus$  -49°F OR COLDER.
- VESSEL CRN TAKEN FROM E001020-04-4301 REV.0



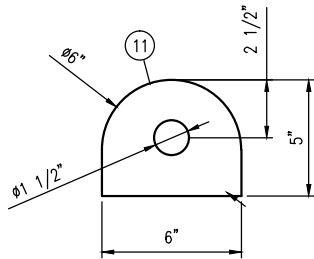
ITEM #10A DETAIL  
(FIXED END)



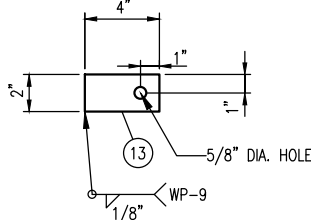
ITEM #10B DETAIL  
(SLIDING END)



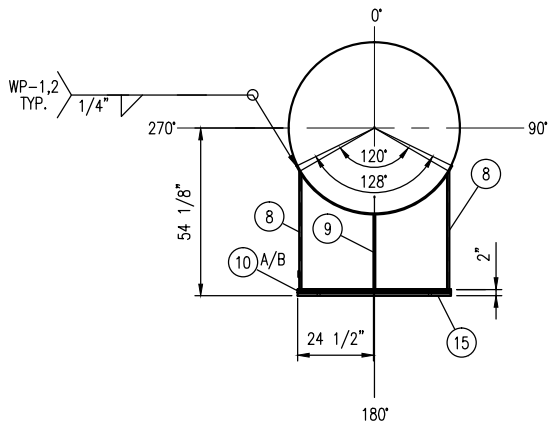
ITEM #15 DETAIL  
(SOLE PLATE)



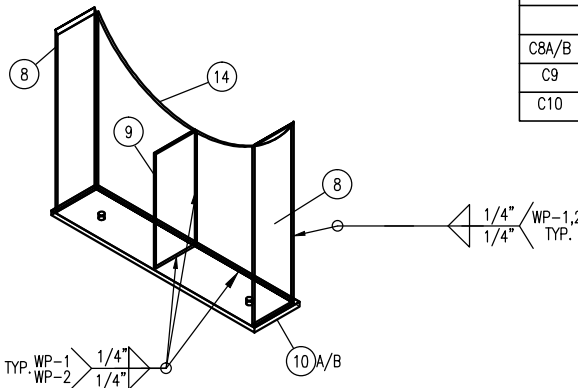
LIFTING LUG DETAIL



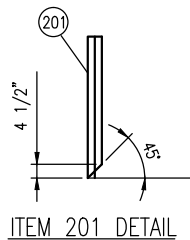
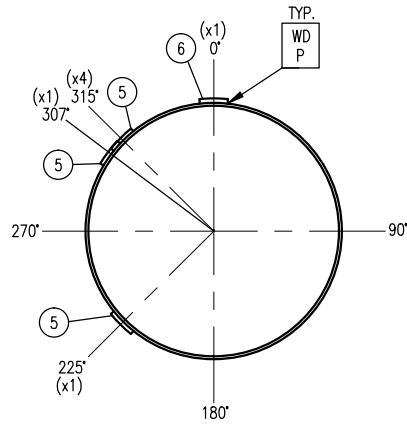
GROUNDING LUG DETAIL  
(ITEM #13)



SADDLE SUPPORT DETAIL



WELD PAD DETAIL  
(ITEMS #5 & 6)



ITEM 201 DETAIL

BILL OF MATERIALS

MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER
	1		2	HEAD, 54"ID, 5/8" NOM, (0.5625") MIN, 2:1 ELLIP, 2" SF,SA-516-70N					
	2		2	PLATE,SHELL, 54"ID, 5/8" THK, 120"LG,SA-516-70N					
	3		1	SPECIFICATION PLATE, SS					
	4		1	NAME PLATE BRACKET, 1/4" THK,SA-516-70N					
	5		6	WELDPAD,6.00"x6.00"x3/8"THK,1"R ALL CORNERS,ROLL TO 55.25" ID,SA-516-70N					
	6		1	WELDPAD,8.00"x6.00"x3/8"THK,1"R ALL CORNERS,ROLL TO 55.25" ID, ROLLED ON SHORT DIM.					
	7		2	WELDPAD,14.00"x61.75"x3/8"THK,1"R ALL CORNERS,ROLL TO 55.25" ID, ROLLED ON LONG DIM.,SA-516-70N					
	8		4	PLATE 1/2" SMOOTH 38.125 X 9.50,G40.2144W					
	9		2	PLATE,1/2",SMOOTH X 24.125 X 10.00,G40.2144W					
	10A/B		2	PLATE,1",SMOOTH X 49.50 X 11.00,G40.2144W					
	11		2	PLATE,1",SMOOTH X 6.00 X 5.00,SA-516-70N					
	12		1	24"-300# DAVIT ARM, SEE DWG. STDDVT-902					
	13		2	PLATE,1/4",SMOOTH X 4.00 X 2.00,316SS					
	14		2	PLATE 1/2" SMOOTH X 37.3125 X 47.50,G40.2144W					
	15		2	PLATE,1",SMOOTH X 49.50 X 11.00,G40.2144W					
M1	90	MANWAY	1	FLANGE,24",300#,RF,WN,S/XS,SA-350-LF2 CL1			10"		
	91		1	PIPE,24",S/XS,SMLS,SA-333 GR. 6	6 7/8"	D		1.00"	
	92		1	REPAD,33.00" OD,24.25" ID,3/4"THK,FORMED TO 55.25" OD,5/8"THK,2:1 ELLIP. HEAD, SA-516-70N					
	93		2	GASKET,24",300#,CG,316 SS,GRAFOL FILLED,CS(OR),					
	94		24	STUD,1 1/2" X 9 1/2 LG,UNC,SA-193-B7M					
	95		48	NUT,1 1/2", UNC,SA-194-2HM					
	96		1	FLANGE,24",300#,RF,BLIND,SA-350-LF2-CL1					
N1	100	INLET	1	FLANGE,6",300#,RF,WN,S/XXS,SA-350-LF2-CL1			8"		
	101		1	PIPE,6",S/XXS,SMLS,SA-333 GR. 6	5"	C		MIN	
N2	200	OUTLET	1	FLANGE,4",300#,RF,WN,S/XXS,SA-350-LF2-CL1			8"		
	201		1	PIPE,4",S/XXS,SMLS,SA-333 GR. 6	58 7/8"	C		53 3/4"	
N3	300	PCV	1	FLANGE,3",300#,RF,WN,S/XXS,SA-350-LF2-CL1			6"		
	301		1	PIPE,3",S/XXS,SMLS,SA-333 GR. 6	3 5/8"	C		MIN	
C4	400	EQUALIZE	1	COUPLING,1 1/2",6000#,NPT,FULL,SA-350-LF2-CL1		E		MIN	
C5	500	FILL/DRAIN/LSLL	1	COUPLING,1 1/2",6000#,NPT,FULL,SA-350-LF2-CL1		E		MIN	
C6	600	PI/LSLL	1	COUPLING,3/4",6000#,NPT,FULL,SA-350-LF2-CL1		E		MIN	
N7	700	PSV	1	FLANGE,3",300#,RF,WN,S/XXS,SA-350-LF2-CL1			6"		
	701		1	PIPE,3",S/XXS,SMLS,SA-333 GR. 6	3 5/8"	C		MIN	
C8A/B	800	LI	2	COUPLING,3/4",6000#,NPT,FULL,SA-350-LF2-CL1		E		MIN	
C9	900	VENT	1	COUPLING,3/4",6000#,NPT,FULL,SA-350-LF2-CL1		E		MIN	
C10	1000	TI	1	COUPLING,3/4",6000#,NPT,FULL,SA-350-LF2-CL1		E		MIN	

DATE	DEC 01/15	SCALE	NTS
DRAWN BY	E.CHUNG	CHECKED BY	J.AHMED
PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	E.TOOSE
CUST PO	STOCK 007		
APEGA PERMIT No:	P8651	OPER. CODE	
		WORK ORDER	E002133-04

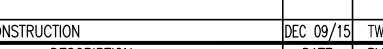
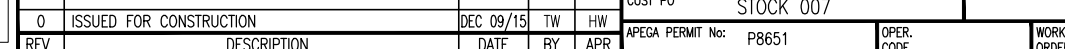
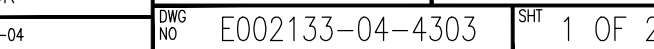
PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

**ENERFLEX**  
Calgary, Alberta,  
Canada

V-147  
REFRIGERANT ACCUMULATOR  
54" ID X 240" S/S

DWG NO	E002133-04-4301	SHT	2 OF 2	REV	0
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OPER. CODE	WORK ORDER	E002133-04
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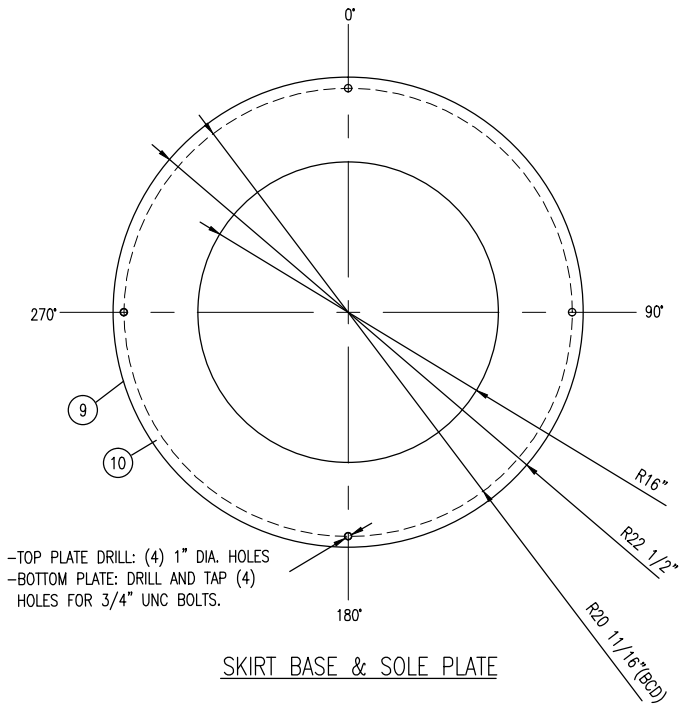
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[illegible]





GENERAL NOTES:

1. ALL TAIL DIMENSIONS FROM REFERENCE POINT.
2. WELDING PROCEDURE REGISTRATION No. WP 496.2
3. FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
4. ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
5. EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
6. ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
7. PROJECT NAME PLATE 1" (25 mm) FROM SHELL/INSUL. UNLESS OTHERWISE SHOWN.
8. ALL DIMENSIONS TO BE HELD TO ±1/8" (3.2mm)
9. ALL TACK WELDS TO BE PER WP 1 & 2.
10. SURFACE PREPARATION:  
PAINT TRAVELLER.
11. PRIMER: PAINT TRAVELLER
12. FINISH: PAINT TRAVELLER
13. INSULATION: 3"
14. ALL REPAD AND POISON PAD SHALL HAVE A 1/4" THREADED WEEP HOLE
15. ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-105N FOR SA-105  
SA-516-70N FOR SA-516-70  
SEAMLESS FOR WELDED PIPE
16. TAPERED TRANSITION PER UW-9(c) IF REQUIRED.
17. EXPOSED INSIDE EDGES SHALL BE CHAMFERED OR ROUNDED AS PER UG-76(c).
18. 1/4" CONTINUOUS FILLET WELD ALL CONTACTING PLATE EDGES FOR INTERNAL/EXTERNAL UNLESS OTHER WISE NOTED.
19. WHEN USING ONE PIECE REPAD IS NOT PRACTICAL, THE FOLLOWING SHALL BE PERFORMED:  
A. ON SHELL: THE SPLIT WELD SHALL BE ORIENTED AT LEASE 45 DEGREE FROM THE LONGITUDINAL AXIS OF THE VESSEL.  
B. ON HEAD: THE SPLIT WELD SHALL BE 100% RT OR UT.  
C. USE WELD DETAIL "A" FOR SPLIT REPAD.
20. MINIMUM HYDRO VESSEL TEMP SHALL BE 30°F ABOVE MDMT BUT NOT LOWER THAN 35°F
21. VESSEL INTERNALS TO BE OILED AFTER HYDRO TESTING.
22. INTERNAL / EXTERNAL PAINT OR COATING PRIOR TO THE HYDRO-TEST UNLESS PERMITTED BY THE USER OR HIS DESIGNATED AGENT.
23. VESSEL CRN TAKEN FROM E001020-04-4303 REV.1

BILL OF MATERIALS

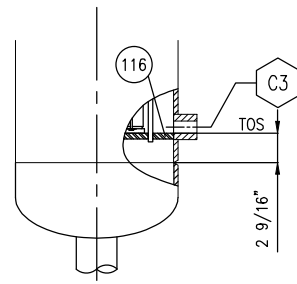
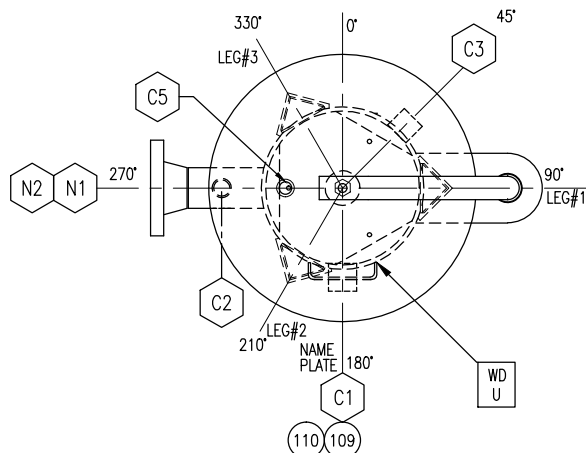
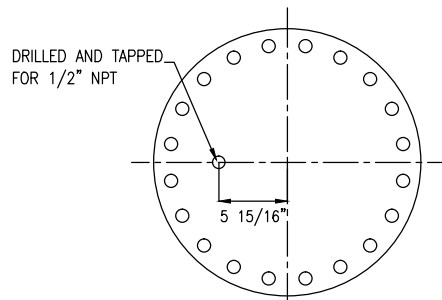
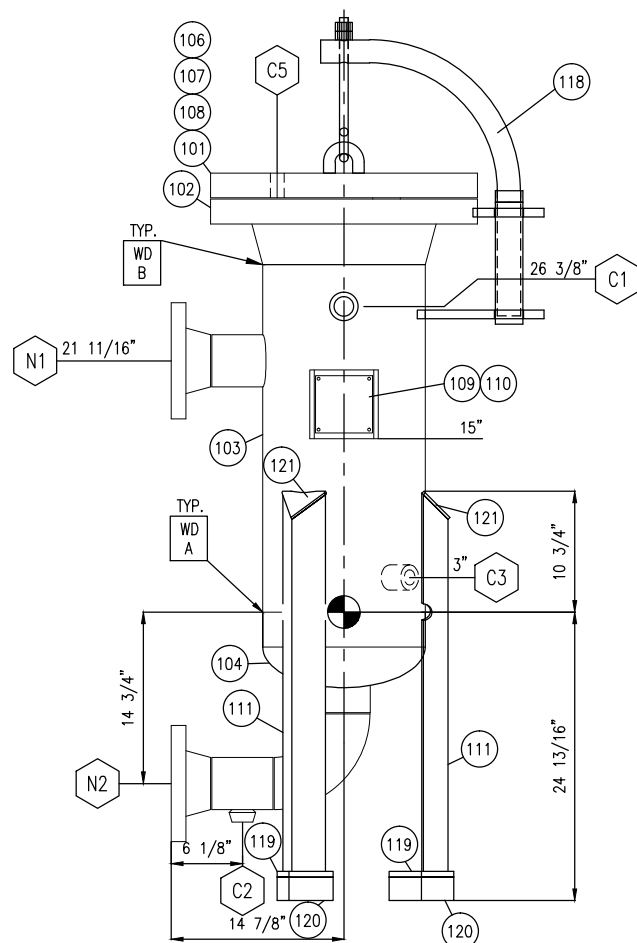
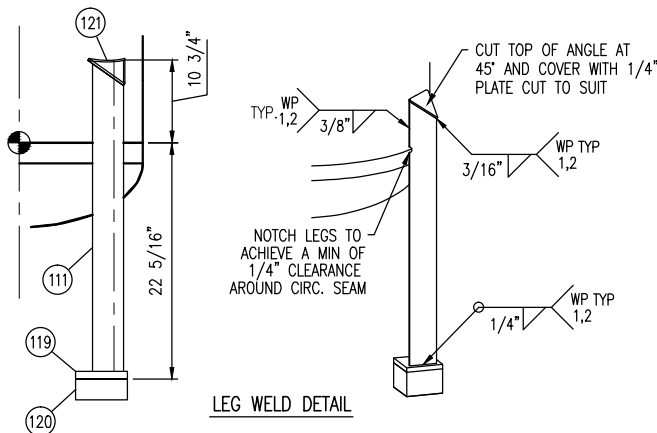
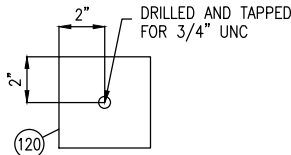
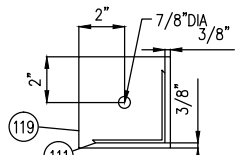
MARK	TAG	SERVICE	QTY	DESCRIPTION	LENGTH (INCHES)	WELD DETAIL	OS PROJ (INCHES)	IS PROJ (INCHES)	HEAT NUMBER
	1		2	HEAD, 36"ID, 1/2" NOM, (0.4375") MIN, 2:1 ELLIP, 2" SF,SA-516-70N					
	2		1	SHELL, 36"ID, 1/2" THK, 108" LG,SA-516-70N	108"				
	3		1	SKIRT, 36"ID, 1/2" THK, SA-516-70N, 25 3/4" LG,SA-516-70N	CTS				
	4		1	SPECIFICATION PLATE, SS,					
	5		1	PLATE,1/4",SMOOTH X 7.00" X 7.00",SA516-70N (T STYLE)					
	6		2	PLATE,3/4",SMOOTH X 10.8125" X 9.8125",SA-516-70N (CTS)					
	7		1	PLATE,1/4",SMOOTH X 9.00" X 7.8125",SA516-70N					
	8		2	"PLATE,1/4",SMOOTH X 7.8125"X 4.50"SA-516-70N (CTS)	CTS				
	9		1	PLATE,3/4",SMOOTH X 45"OD x 32"ID,G40.2144W (CTS)					
	10		1	PLATE,1",SMOOTH X 45"OD x 32"ID,G40.2144W (CTS)					
	11		8	NUT, 1/2", UNC,SA-194-2HM					
	13		2	PLATE,1/4",SMOOTH X 8.00" X 4.00",SA-516-70N (CTS)					
	14		1	PLATE,1/4",SMOOTH X 37.25" ID x 40" OD,G40.2144W (CTS)					
	15		1	PLATE,1/4",SMOOTH X 5.5625" X 7.00",SA516-70N					
N1	100	INLET	1	FLANGE,4",300#,RF,WN,S/160,SA-105N			9"		
	101		1	PIPE,4",S/160,SMLS,SA-106-B	6 3/8"	C		MIN	
N2	200	GAS OUTLET	1	FLANGE,6",300#,RF,WN,S/160,SA-105N			AS SHOWN		
	201			ELBOW,6",S/160,90D,LR,BW,SA-234-WPB					
	202		1	PIPE,6",S/160,SMLS,SA-106-B	6"	C		MIN	
N3A/B	300	INSP	2	FLANGE,3",300#,RF,BLIND,SA-105N					
	301		4	GASKET,3",300#,CG,316 SS,GRAFOIL FILLED,CS(OR)					
	302		16	STUD,3/4" X 4 1/2 LG,UNC,SA-193-B7M					
	303		32	NUTS,3/4",HVVY HEX, LG,UNC,SA-194-2HM					
	304		2	FLANGE,3",300#,RF,WN,S/160,SA-105N			7"		
	305		2	PIPE,3",S/160,SMLS,SA-106-B	4 1/2"	C		MIN	
C4	400	PI	1	COUPLING,3/4",6000#,NPT,4.5"LG,SA-105N	4 1/2"	E		MIN	
N5	500	LIQ. OUTLET	1	FLANGE,4",300#,RF,WN,S/160,SA-105N			AS SHOWN		
	501		1	PIPE,4",S/160,SMLS,SA-106-B	17 7/8"				
	502		1	ELBOW,4",S/160,90D,LR,BW,SA-234-WPB					
	503		1	PIPE,4",S/160,SMLS,SA-106-B	5 1/2"	C		WELD/ FLUSH	
C6	600	TI	1	COUPLING,3/4",6000#,NPT,4.5"LG,SA-105N	4 1/2"	E		MIN	
N7	700	PSV	1	FLANGE,2",300#,RF,WN,S/160,SA-105N			7"		
	701		1	PIPE,2",S/160,SMLS,SA-106-B	4 7/8"			MIN	
N8A/B	800	LIT	2	FLANGE,2",300#,RF,WN,S/160,SA-105N			7"		
	801		2	PIPE,2",S/160,SMLS,SA-106-B	4 7/8"			MIN	
C9	900	PT	1	COUPLING,3/4",6000#,NPT,4.5"LG,SA-105N	4 1/2"	E		MIN	
SA		ACCESS	2	ø 10 1/4" HOLES					
SV		VENT	2	ø1" HOLES					

DATE DEC 01/15			SCALE NTS			PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK	<b>ENERFLEX</b> Calgary, Alberta, Canada	V-142 ECONOMIZER 36" ID X 108" S/S		
DRAWN BY E.CHUNG		CHECKED BY J.AHMED		APPROVED BY H.WEL						
PROJECT MANAGER K.ROBERTSON		PROJECT ENGINEER E.TOOSI								
CUST PO STOCK 007										
APEGA PERMIT No: P8651			OPER. CODE		WORK ORDER E002133-04		DWG NO E002133-04-4303	SHT 2 OF 2	REV 0	

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PLOT DATE: Dec 16, 2015, gwhd

ITEM	DESCRIPTION		QTY	LENGTH	HEAT NUMBER
101	FLANGE: 14",300#,RF,BLIND (SEE DETAIL)	SA-350-LF2 CL1	1		
102	FLANGE: 14",300#,RF,WN,S/30(STD)	SA-350-LF2 CL1	1		
103	PIPE: 14",S/30(STD)	SMLS,SA-333 GR. 6	1	30"	
104	CAP: 14",S/30(STD),BW	SA-420-WPL6	1		
105	PIPE: 1-1/2",S/80(XS)	SMLS,SA-333 GR. 6	3	1"	
106	STUD: 1 1/8" x 7" LG,8UN	SA-193-B7M	20	7"	
107	NUTS: 1 1/8" DIA, 8UN	SA-194-2HM	40		
108	GASKET: 14",300#,CG,GRAFOIL FILLED	316 SS	1		
109	NAME PLATE: ENERFLEX	SS	1		
110	NAME PLATE BRACKET: 1/4" THK	SA-516-70N	1		
111	ANGLE: 3" X 3" X 1/4" THK	G40.2144W	3	32 9/16"	
112	FILTER DRIER CORE: TYPE RC-10098		12	6 1/2"	
113	CAGE PART: #6242, 6260-1, X-6273, 6260-2X3, 6230, 6243-1X3		3		
114	ROUND BAR: 3/8" DIA (TBE) SEE DETAIL	G40.2144W	3	32 7/8"	
115	NUTS: 3/8" DIA UNC HEX HEAD	SA-194-2HM	6		
116	PLATE: 1/2" X 13" DIA (SEE CUTOUT DETAIL)	SA-516-70N	1		
117	PLATE: 1/2" X 13" DIA (SEE CUTOUT DETAIL)	SA-516-70N	1		
118	DAVIT ASSEMBLY: 14" (SEE STDDVT-901.DWG)	-	1		
119	PLATE: 1/2" X 4"	G40.2144W	3	4"	
120	PLATE: 2" X 4"	G40.2144W	3	4"	
121	PLATE: 1/4" X 5" X 3 1/2" (CTS)	G40.2144W	3		



#### GENERAL NOTES:

- ALL RUNNING DIMENSIONS FROM REFERENCE POINT.
- WELDING PROCEDURE REGISTRATION No. WP 496.2
- FLANGE BOLT HOLES TO STRADDLE MAJOR CENTERLINES OF VESSEL, UNLESS OTHERWISE NOTED.
- ALL FLANGES TO BE ANSI 16.5, ALL FORGED THD & SW FITTINGS PER ANSI B16.11, UNLESS OTHERWISE NOTED.
- EXTERIOR & INTERIOR OF VESSEL TO BE FREE OF WELD SLAG, SPATTER, GREASE, MOISTURE, ETC.
- ALL CUT LENGTHS ARE FINISHED LENGTHS, PIPING CUT LENGTHS ARE BASED ON 1/8" (3 mm) WELD GAP.
- ALL TACK WELDS TO BE PER WP 1.
- SURFACE PREPARATION: SANDBLAST TO SSPC-SP6.
- PRIMER: FIN 3A
- FINISH: FIN 3A
- INSULATION: NONE
- ALLOWABLE MATERIALS SUBSTITUTION:  
SA-333-6 FOR SA-106-B;  
SA-350-LF2-CL1 FOR SA-105N;  
SA-420-WPL6 FOR SA-234-WPB.  
SA-516 70N FOR SA-516 70  
SA-105N FOR SA-105
- VESSEL TOLERANCE FOLLOWS ENG\_PRO\_003\_VES.
- MINIMUM VESSEL HYDRO TEST TEMPERATURE SHALL BE 30 DEG.F (17 DEG.C) ABOVE MDMT, BUT NOT LOWER THAN 35 DEG.F (2 DEG.C).
- WELDING CONSUMABLE MDMT RATED TO -45°C. FOR CATA. A AND CATA. B WELDS.
- VESSEL REGISTERED UNDER 12601-408 ROA

A	WP-2 WP-5 WP-8	B	WP-2 WP-5 WP-8	C	WP-1 WP-3 WP-5	E	WP-1 WP-3 WP-5
F	WP-1 WP-2 WP-8	U	WP-1 WP-2	W	WP-1 WP-3		
VESSEL SHELL/HEAD		NAME PLATE		MIN. RAD.		COUPLING	
				GRIND FLUSH w/ INSIDE OF PIPE			

**ISSUED FOR CONSTRUCTION**  
NAME T.WELSH DATE DEC 16/15

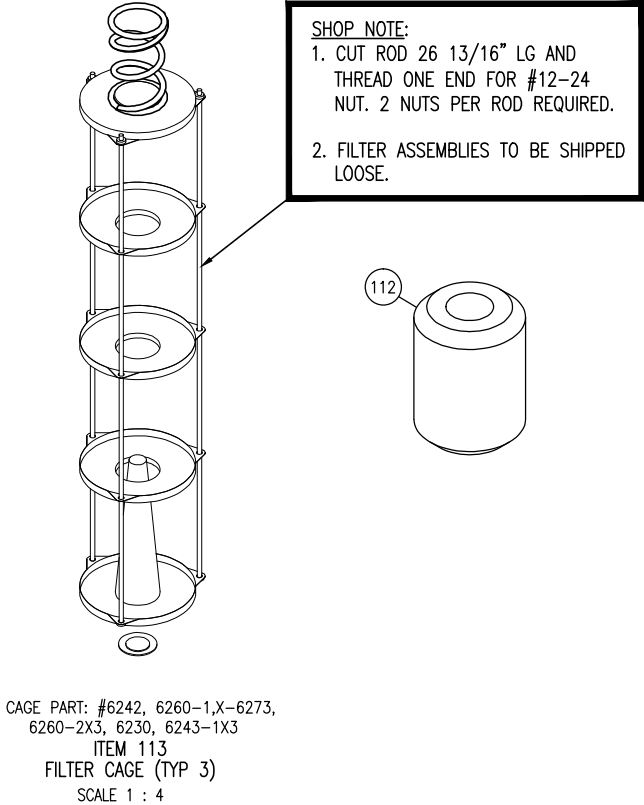
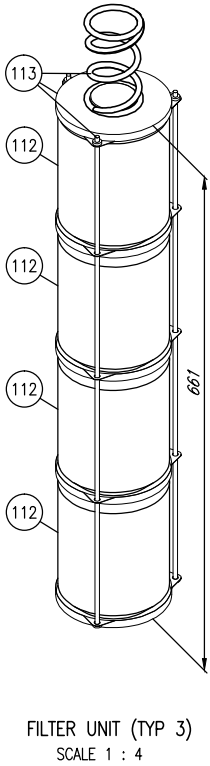
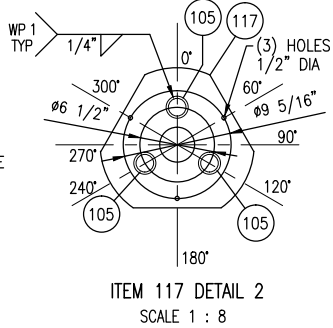
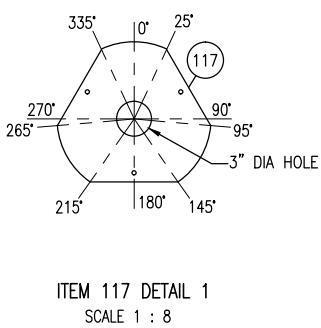
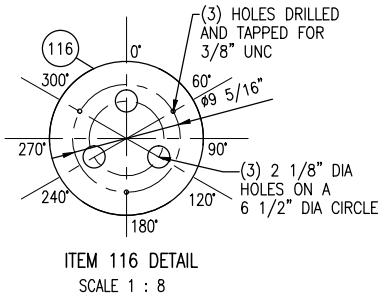
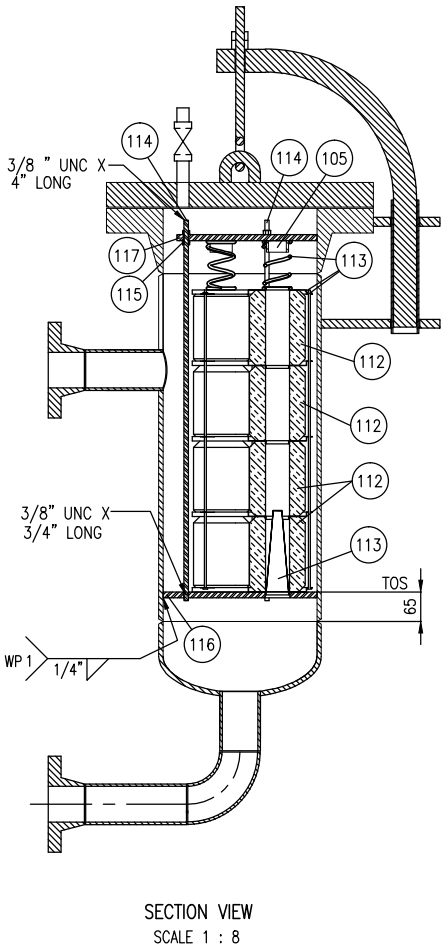
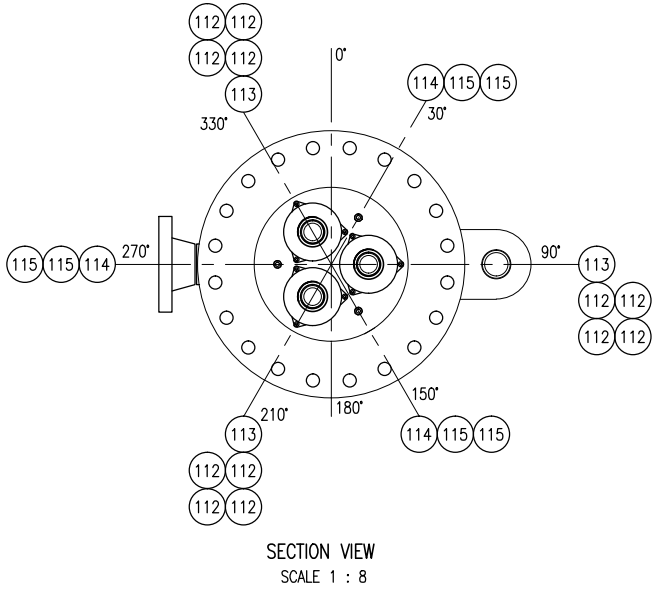
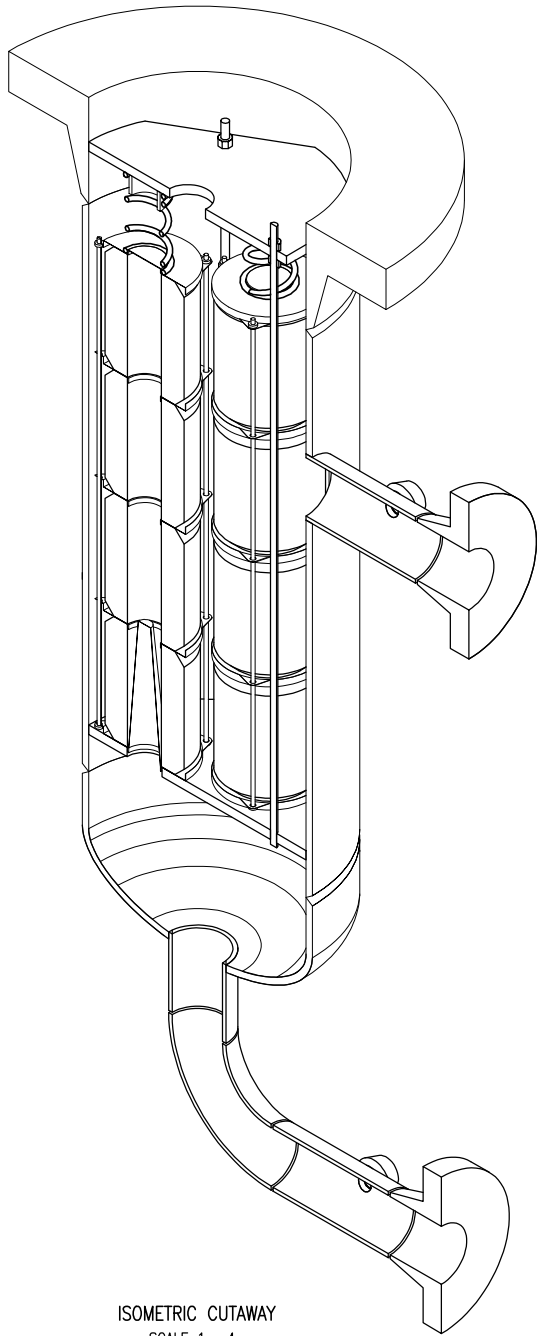
CERTIFIED BY:	
<b>ENERFLEX</b>	
CALGARY, ALBERTA, CANADA	
MAWP	305 PSIG @ 250 °F
U	MAWP -15 PSIG @ 250 °F
W	MDMT -50°F @ 305 PSIG
RT-2	SN E002133044380 YEAR 2016
-	CRN V8996.2 C.A. 0.0625
SH.THK	0.375 IN MAT'L SA-333-6
HD.THK	0.3125 IN MAT'L SA-420-WPL6

DATE	DEC 01/15	SCALE	NTS
DRAWN BY	E CHUNG	CHECKED BY	J AHMED
PROJECT MANAGER	K.ROBERTSON	PROJECT ENGINEER	E.TOOSI
CUST PO	STOCK 007		
APEGA PERMIT No:	P8651	OPER. CODE	
WORK ORDER	E002133-04		

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40MMSCFD  
STOCK

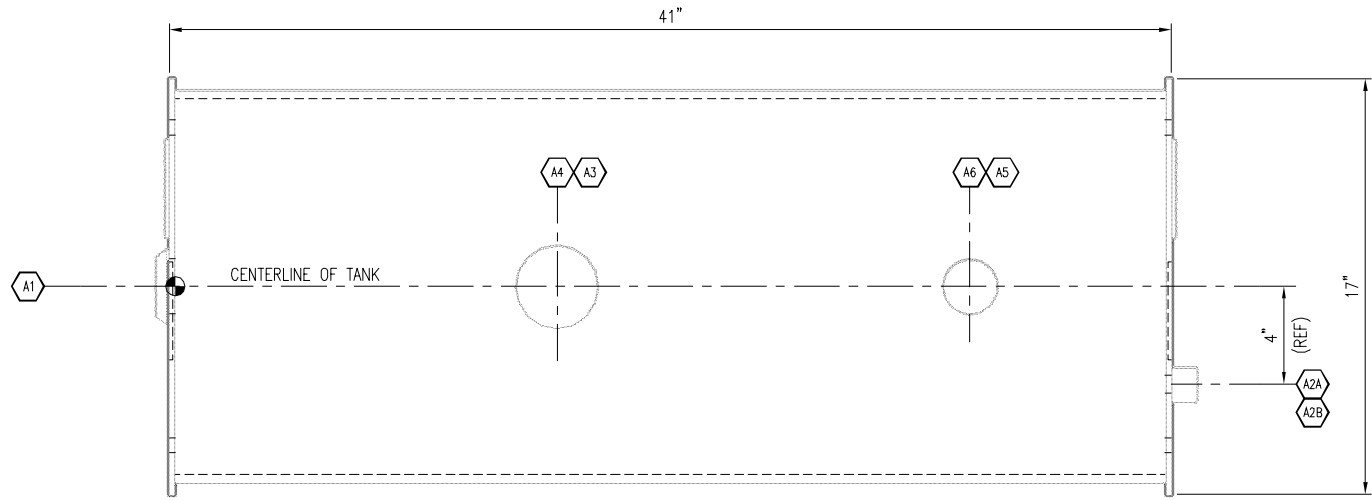
DESIGN AND FABRICATION TO BE IN ACCORDANCE WITH THE PROVINCE OF ALBERTA REGULATIONS AND A.S.M.E. CODE SEC. VIII DIV. 1 2013 EDITION			
DESIGN PRESSURE	-15/305 PSIG		
DESIGN TEMPERATURE	250 DEG°F		
MIN DESIGN METAL TEMP	-50°F @ 305 PSIG		
MAX. ALLOWABLE WORKING PRESS.	305 PSIG		
LIMITED BY	FLANGE RATING		
CORROSION ALLOWANCE	0.0625"		
POST WELD HEAT TREATMENT	NO		
SERVICE	PROPANE		
VOLUME	3.18 FT3		
WT. EMPTY (SHIPPING WT.)	882 LBS		
WT. FULL OF WATER (TEST WT.)	1103 LBS		
OPERATING WEIGHT	937 LBS		
HYDROSTATIC TEST PRESS.	397 PSIG		
IMPACT TEST EXEMPT PER	UCS-66(b)&(g)		
RADIOGRAPHY:	RT-2		
PART	CODE	TYPE	
SHELL (CAT 'A')	UW-12(d)	NONE	1.00
HEAD TO SHELL (CAT 'B')	UW-11(d)5b/UW-12(d)/UW-12(c)	SPOT	0.7
<b>ENERFLEX</b> Calgary, Alberta, Canada		M938 FILTER DRIER 14" OD X 30" S/F	
DWG NO	E002133-04-4380	SHT	1 OF 2
REV		REV	0

FILE NAME: C:\Users\lgan@l\AppData\Local\Temp\AcPublish\_8044\E002133-04-4380.dwg

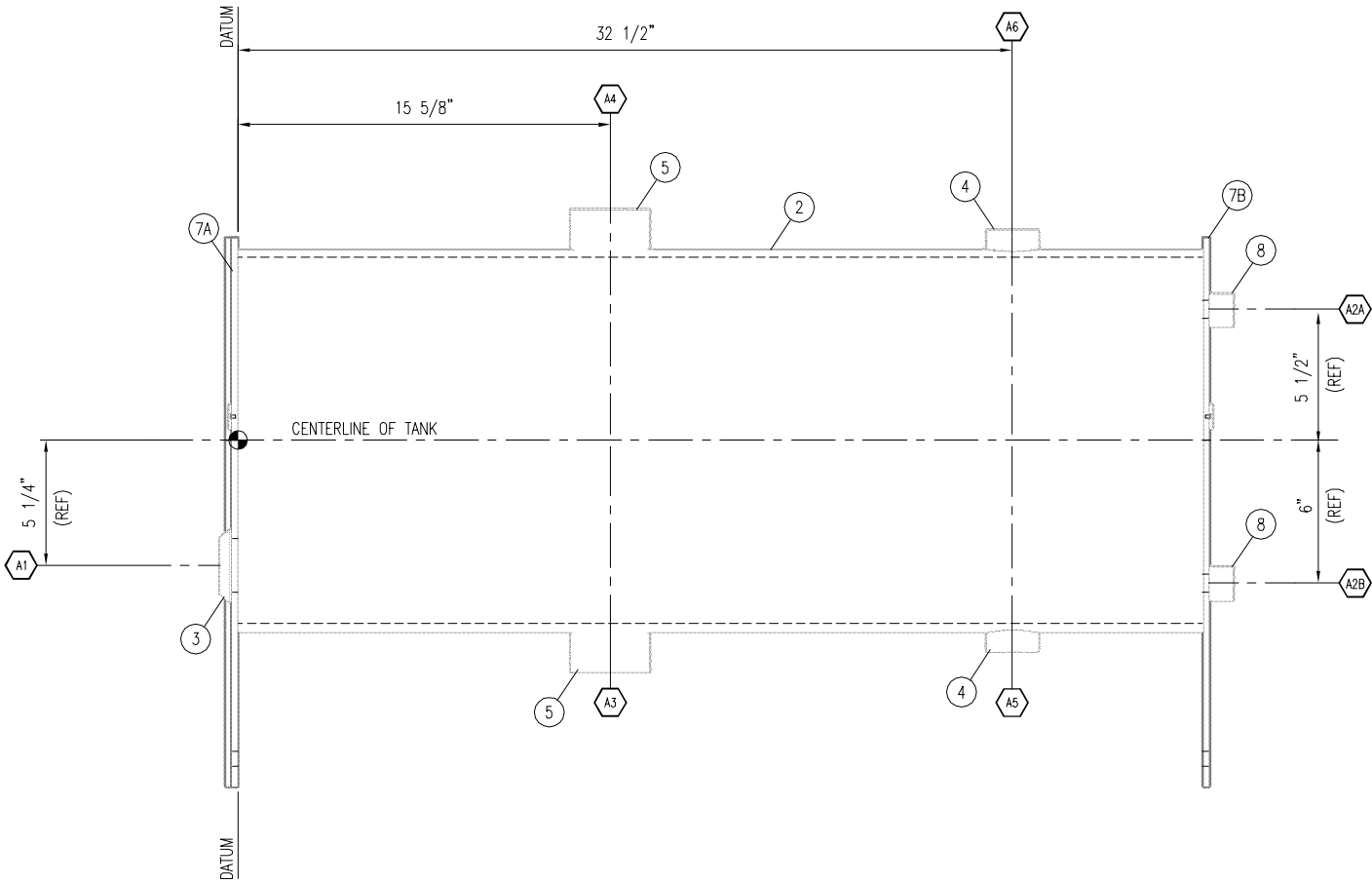


DATE DEC 01/15	SCALE NTS	PEYTO C/O ONSTREAM REFRIGERATION PLANT 40MMSCFD STOCK	<b>ENERFLEX</b> Calgary, Alberta, Canada	M938 FILTER DRIER 14" OD X 30" S/F
DRAWN BY E.CHUNG	CHECKED BY J.AHMED	APPROVED BY H.WE		
PROJECT MANAGER K.ROBERTSON	PROJECT ENGINEER E.TOOSI			
CUST PO STOCK 007				
APEGA PERMIT No: P8651	OPER. CODE	WORK ORDER E002133-04	DWG NO E002133-04-4380	SHT 2 OF 2
				REV 0

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PLAN VIEW  
SCALE: 1 1/2" = 1'-0"



FRONT ELEVATION VIEW  
SCALE: 1 1/2" = 1'-0"

MAX CAPACITY = 32 1/4 GALLONS (US)  
VOLUME REQUIRED FOR FILL LEVEL = 19 GALLONS (US)

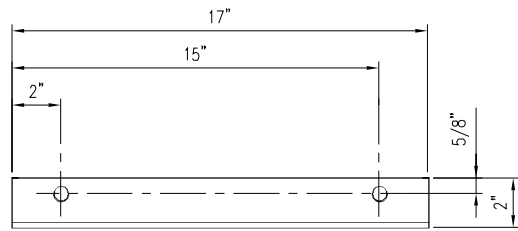
NOTES

- ALL WELDS TO BE 1/4" FILLETS ALL AROUND, UNLESS OTHERWISE NOTED.
- GRIND ALL ROUGH EDGES & WELD SPLATTER.
- INTERNAL SANDBLASTING NOT REQUIRED.  
PERFORM VISUAL INSPECTION PRIOR TO CLOSING.  
INTERNAL SURFACE DEBRIS CONCERNS ARE TO BE FORWARDED TO PROJECT ENGINEER FOR CONSIDERATION.
- AIR PRESSURE TEST TANK TO 15 PSI. & HOLD FOR 15 MINUTES MINIMUM.
- ALLOWABLE MATERIAL SUBSTITUTION: SA-105N FOR SA-105
- WEIGHT OF ASSEMBLED TANK (EMPTY) = 250 lbs.  
WEIGHT OF ASSEMBLED TANK (LIQUID AT FILL LEVEL) = 410 lbs.
- ⚙️ DIMENSIONAL DATUM FOR CONSTRUCTION REFERENCE.

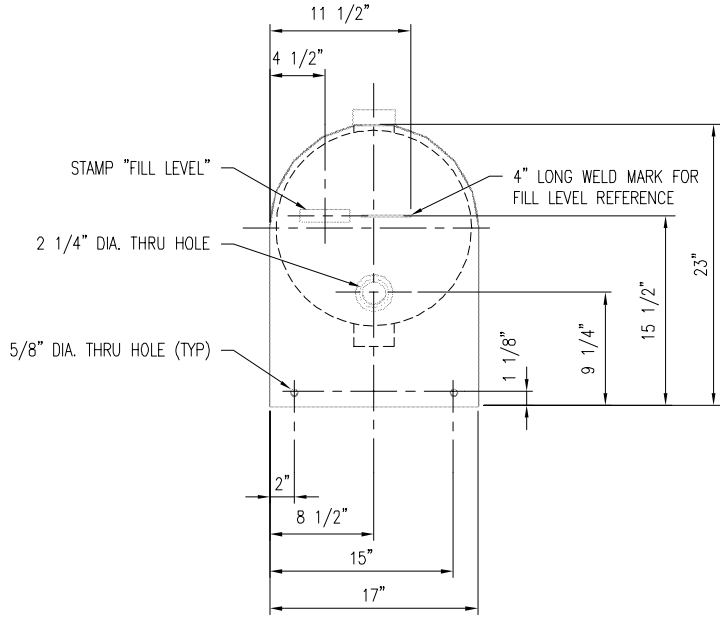
ISSUED FOR  
CONSTRUCTION

NAME ISABEL VERGARA DATE DEC 14/15

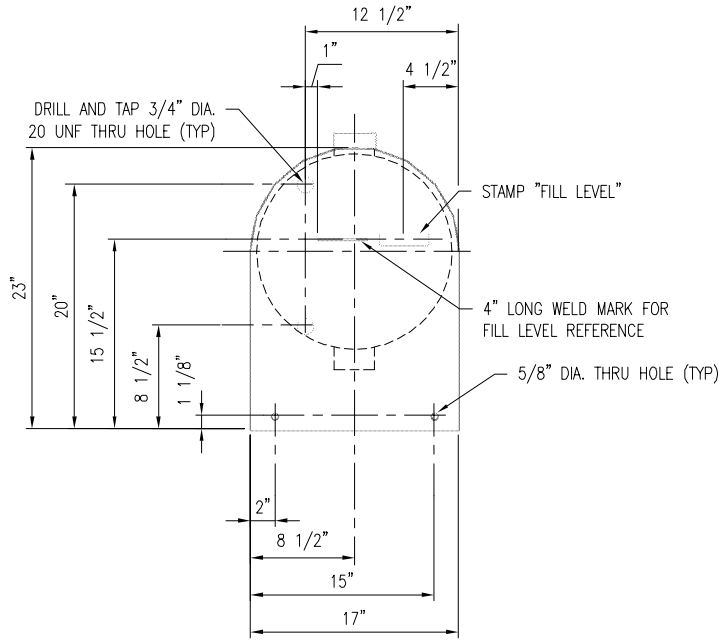
						DATE	DEC 14/15	SCALE	AS SHOWN
						DRAWN BY	TONY SONG	CHECKED BY	E. TOOSI
						APPROVED BY	K. ROBERTSON		
						PROJECT MANAGER	K. ROBERTSON	PROJECT ENGINEER	E. TOOSI
						CUST PO			
0	ISSUED FOR CONSTRUCTION	DEC 14/15	IV	ET		APR			
REV	DESCRIPTION	DATE	BY	APR					



ITEM 6 DETAIL  
SCALE: 3" = 1'-0"



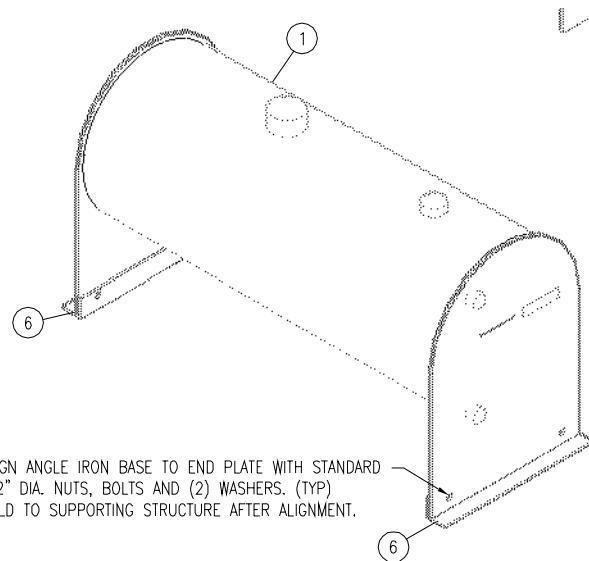
ITEM 7A DETAIL  
SCALE: 1 1/2" = 1'-0"



ITEM 7B DETAIL  
SCALE: 1 1/2" = 1'-0"

BILL OF MATERIAL					
LEVEL	ITEM	QTY	DESCRIPTION	MATERIAL	LENGTH
1	1	1	EXPANSION TANK, 16" PIPE (KT-ET-JW15-AW5)		
2	2	1	PIPE, 16", S/30(STD), ERW, SA-53-B		40 1/2
2	3	1	FLANGE, WELD-IN TANK, 1 1/2", NPT		
2	4	2	COUPLING, 1", 3000#, NPT, HALF, SA-105		
2	5	2	COUPLING, 2", 3000#, NPT, HALF, SA-105		
2	6	2	ANGLE, 2" X 2", 1/4" THK	G40.2144W	17
2	7	2	PLATE, 1/4", SMOOTH X 23 X 17	G40.2144W	23
2	8	2	COUPLING, 3/4", 3000#, NPT, HALF, SA-105		

SCHEDULE OF OPENINGS	
ITEM	DESCRIPTION
A1	LEVEL SWITCH
A2A	LEVEL GAUGE
A2B	LEVEL GAUGE
A3	LIQUID OUTLET
A4	FILL
A5	VENT INLET
A6	VENT



ALIGN ANGLE IRON BASE TO END PLATE WITH STANDARD 1/2" DIA. NUTS, BOLTS AND (2) WASHERS. (TYP)  
WELD TO SUPPORTING STRUCTURE AFTER ALIGNMENT.

ISOMETRIC VIEW  
SCALE: NTS

PEYTO C/O ONSTREAM  
REFRIGERATION PLANT  
40 MMSCFD

**ENERFLEX**  
Calgary, Alberta,  
Canada

GLYCOL SURGE TANK  
T-724

DWG NO E002133-04-371

SHT 1

REV 0

FILE NAME: F:\\_SAP C&P Canada Projects\E002133 Peyto - 40MMSCFD HODP.V. Drafting\E002133-04-371.dwg

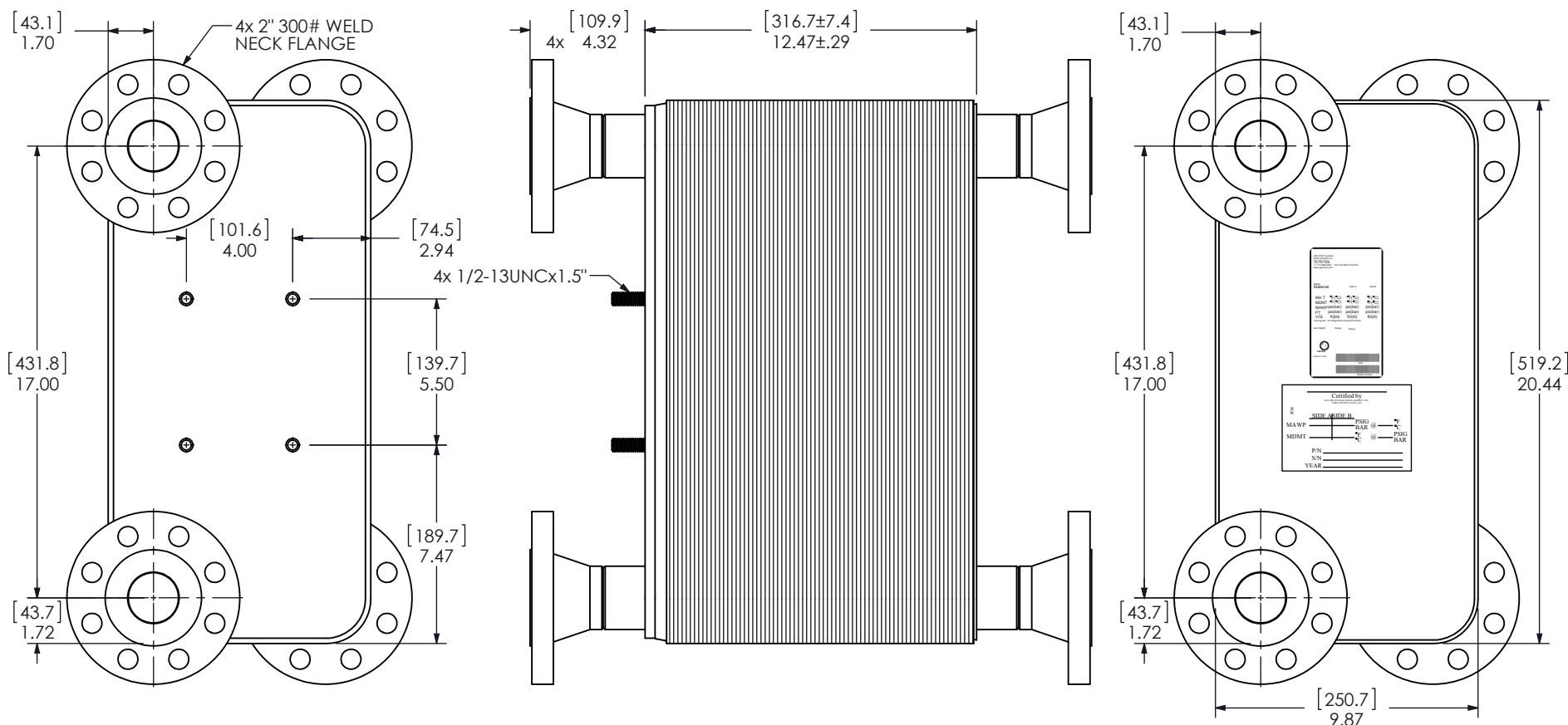
**ENERFLEX**

**GEA Cooler**





REVISIONS			
REV.	DATE	DESCRIPTION	DRN
0	12/11/13	NEW DRAWING	MAL



## Customer Approval Drawing

**Model Nomenclature:** FPA10X20-130/10474-UM  
Material #:

Customer: GEA PHE Systems  
Customer Item #:  
Customer Approval: \_\_\_\_\_  
Approval Date:

### Pressure, Temperature and Codes:

Maximum Allowable Working Pressure: 400 psig (28 bar)  
Maximum Allowable Working Temperature: 350°F (177°C)  
Code Approvals: CRN, ASME Section VIII, Division I (UM-Stamp)  
Plate Material: 316L Stainless Steel  
Connection Material: 304 Stainless Steel  
Flange Material: 304 Stainless Steel  
Brazing Alloy: Nickel  
Manufactured 100% in the U.S.A. by GEA PHE Systems, York, PA

### Dimensional Notes:

Dimensions are in inches (mm), for reference only.  
Tolerances are  $\pm 0.06$  (1.5) unless otherwise noted.

GEA PHE Systems proprietary information.  
All rights reserved. This drawing may not be  
copied, and no information or data  
contained within the drawing may be  
disclosed without the express written release  
by GEA PHE Systems.

**GEA**

3RD ANGLE  
PROJECTION

Drawing No.  
CUS3728

Date  
12/11/13

Shop Dwg No.  
10474

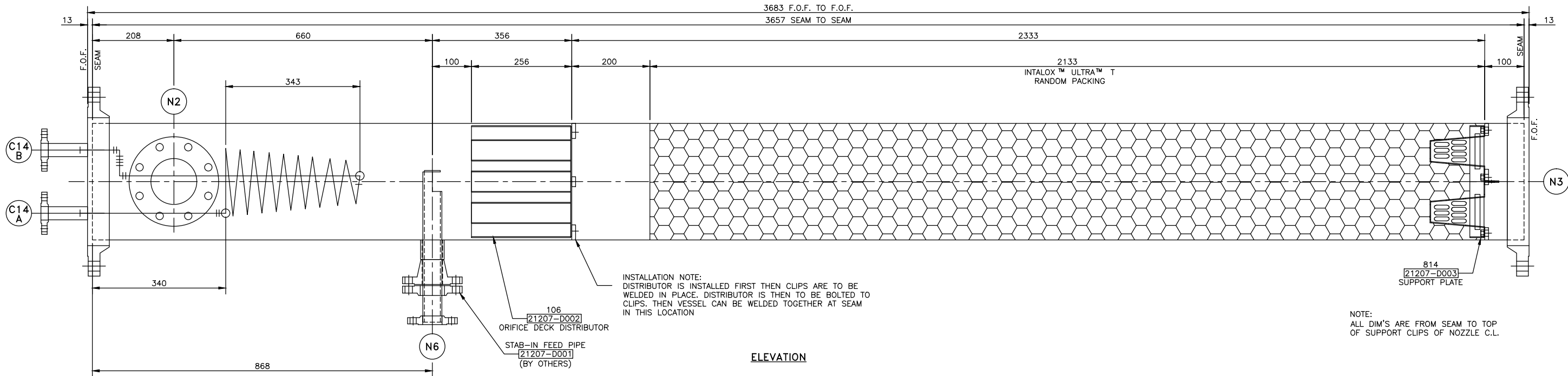
Drn: MAL

Appr: PM

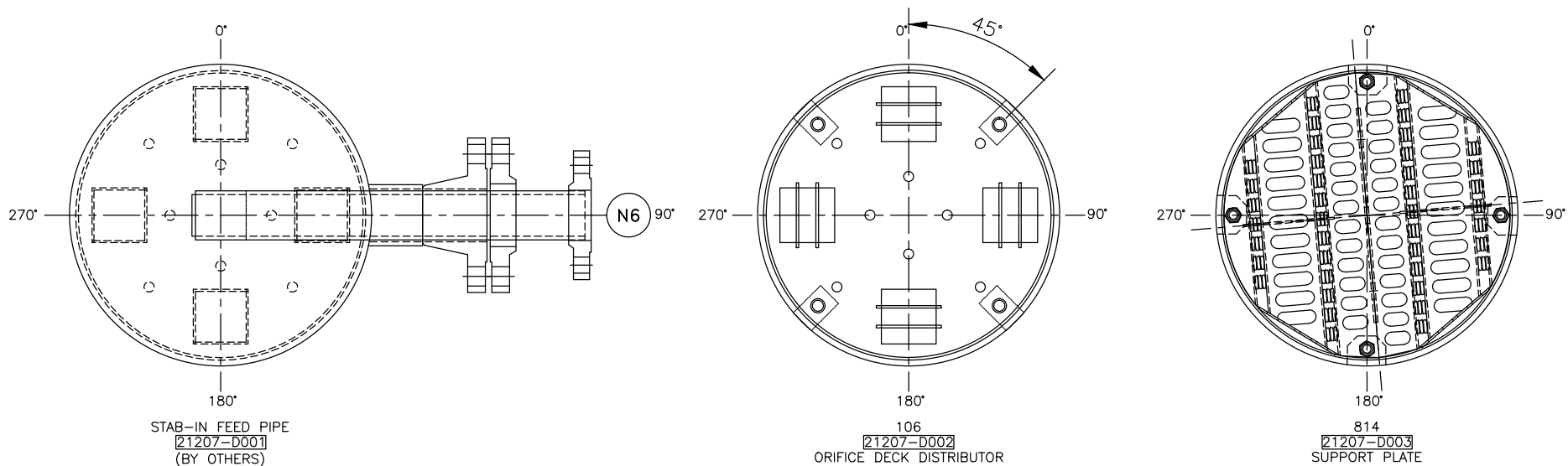
**ENERFLEX**

## **Koch Glitch Drawings**

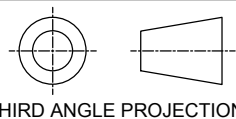




ELEVATION



EQUIPMENT ORIENTATION

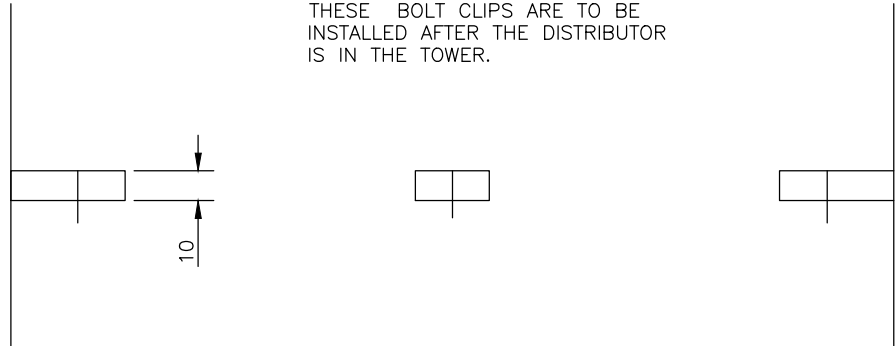
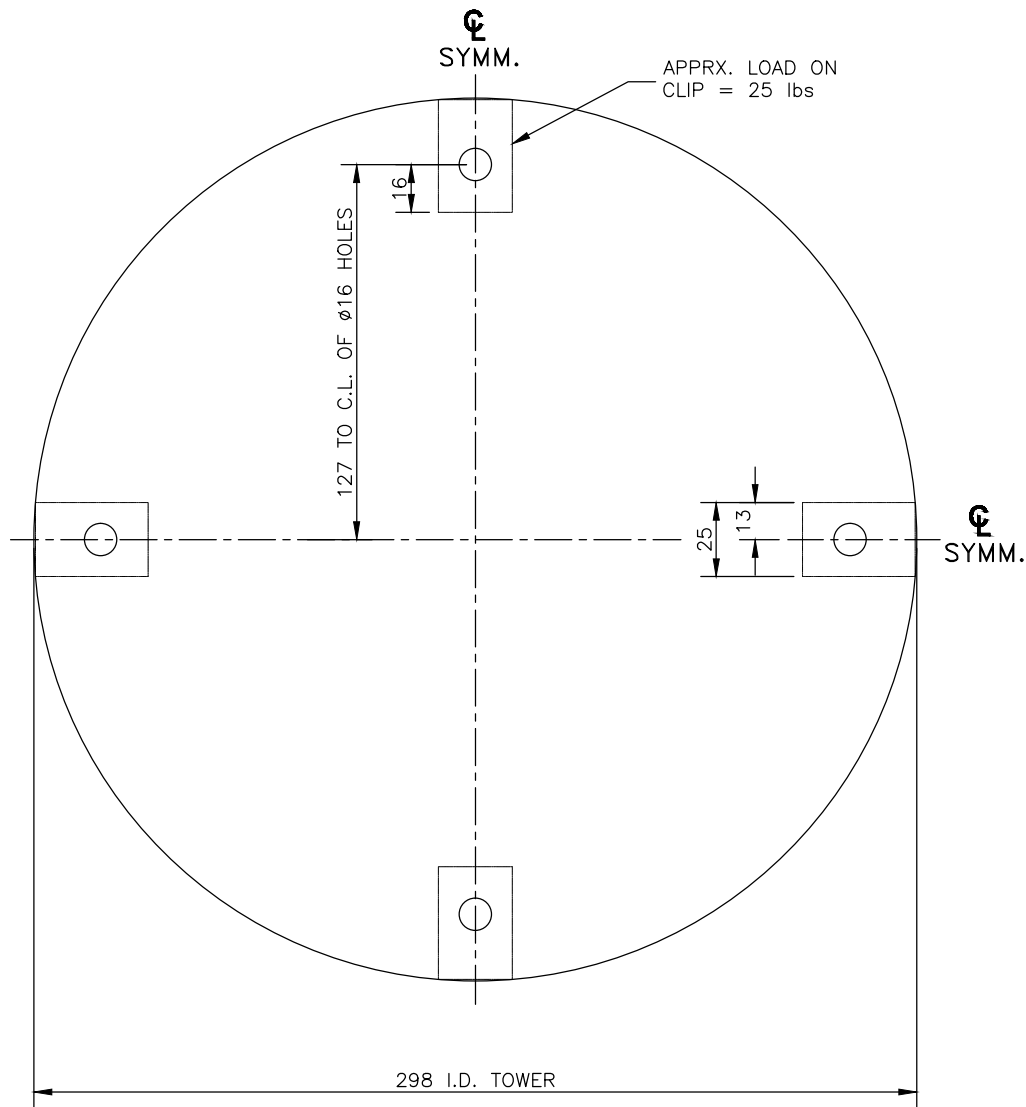


THIRD ANGLE PROJECTION

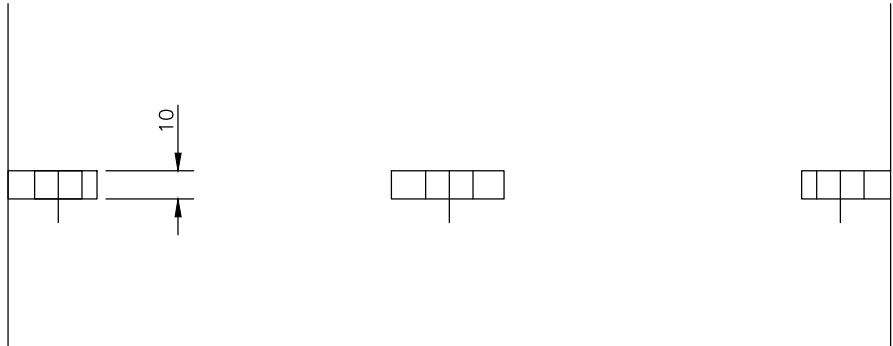
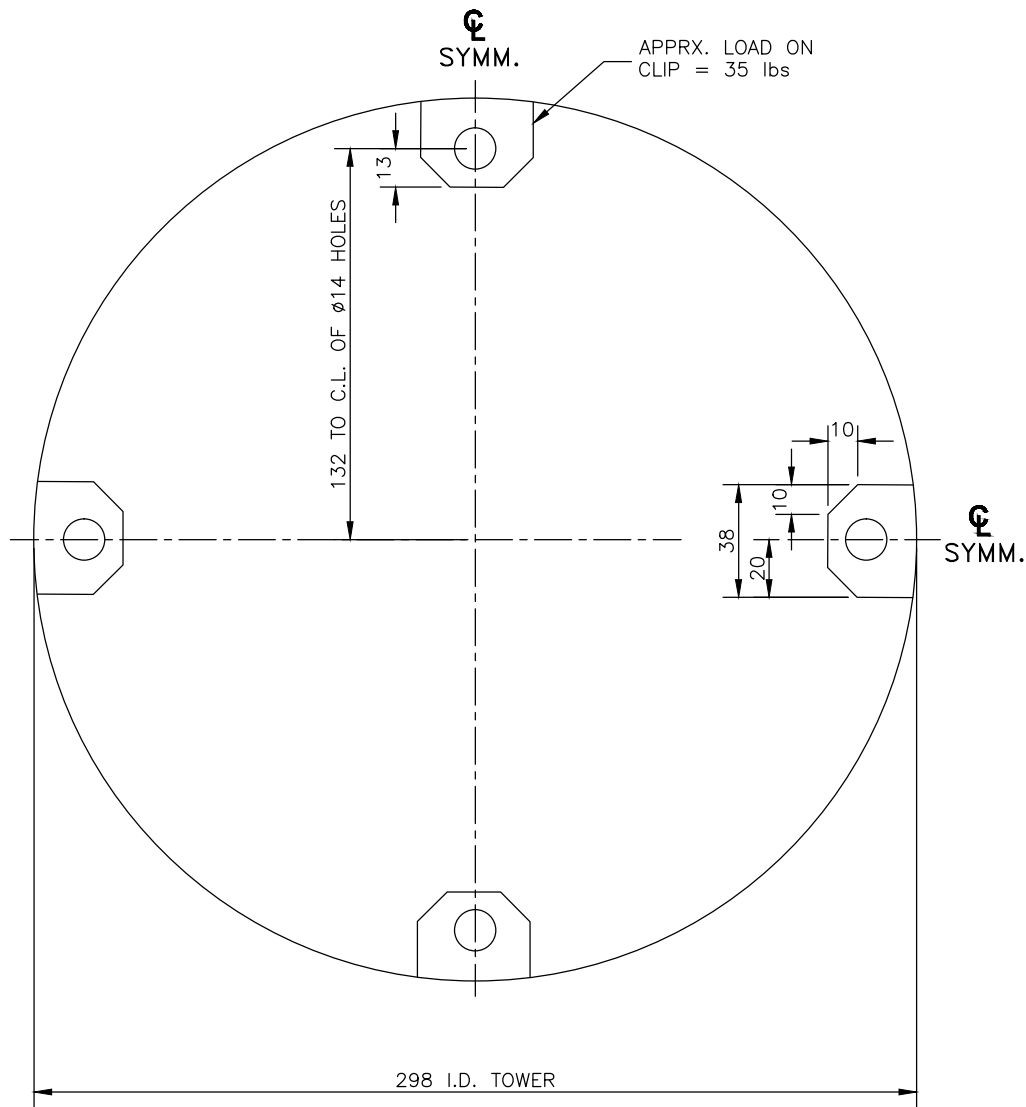
NOZZLE DESCRIPTIONS			
NOZZLE	SIZE	SERVICE	
N6	2"	1 1/2" STAB-IN FEED	
GENERAL NOTES			
KOCH-GLITSCH PROVIDES THIS DRAWING SOLELY FOR BUYER'S CONVENIENCE IN DESIGNING AND FABRICATING PARTS TO MATCH EQUIPMENT FURNISHED BY KOCH-GLITSCH. BUYER IS SOLELY RESPONSIBLE FOR PROVIDING CORROSION AND OTHER ALLOWANCES THAT MAY BE REQUIRED FOR SPECIFIC PROCESS OR MECHANICAL CONSIDERATIONS WHETHER OR NOT SUCH PROCESSES OR CONSIDERATIONS HAVE BEEN COMMUNICATED TO KOCH-GLITSCH.			
ELEVATION AND ORIENTATION PICTURES ARE SCHEMATIC REPRESENTATIONS OF EQUIPMENT AND DO NOT INDICATE THE ACTUAL DESIGNS. SEE EQUIPMENT DRAWINGS FOR ACTUAL DESIGNS.			
NO.	DESCRIPTION OF REVISION	CHG.BY/DATE	APPRD
1			
CUSTOMER'S IDENTIFICATION			
PURCHASED BY: ENERFLEX LTD.			
P.O. NO.: 4500209070			
USER: MODERN RESOURCES INC.		PLANT SITE: CUTBANK, AB	
SPEC. NO: KOCH-GLITSCH STD.		REFERENCE: 20377-D000	
TOWER SERVICE: GLYCOL REGENERATOR		PLANT SECTION:	
<b>K. KOCH-GLITSCH</b>		KOCH-GLITSCH CANADA LP	
MASS TRANSFER TECHNOLOGY		UXBRIDGE, ON, CANADA	
© 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED		MODEL: ELV	
DRAWN BY: ERIC H		VESSEL ARRANGEMENT	
CHECK BY: EH		SALES ORDER NO.: 21207	
PROCESS: SUNNY		PART NO.: DWG-ARR	
DATE: 8 JUL 15		WORK ORDER NO.: 67658	
DATE: 8 JUL 15			
DATE: 9 JUL 15			
DRAWING ISSUE		TOWER I.D.	TOWER NO.
APPROVED FOR FABRICATION:		298	H-803
BY: ERIC H		DWG. NO.: 21207-D000	
DATE: 10 JUL 15		SHT. 1 OF 2	
CERTIFIED FINAL		REV.	
BY: -			
DATE: -			

INSTALLATION DRAWING



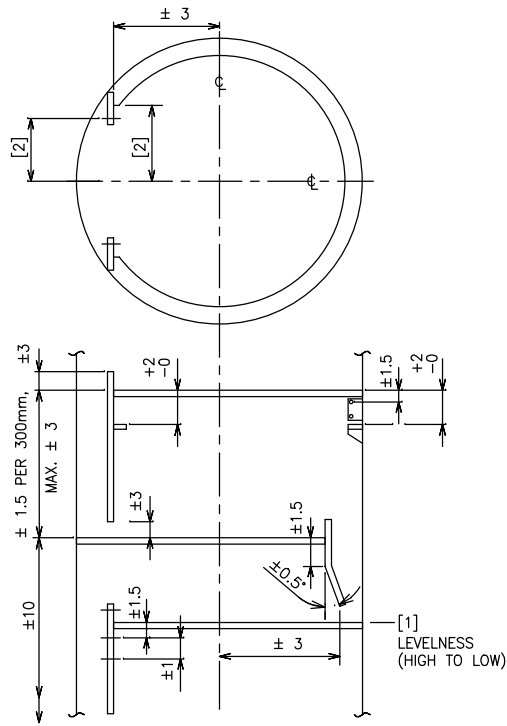


ONE ASSEMBLY REQUIRED AS SHOWN & NOTED  
FOR DECK DISTRIBUTOR



ONE ASSEMBLY REQUIRED AS SHOWN & NOTED  
FOR SUPPORT PLATE

NOTE:  
ALL PARTS SHOWN ON THIS  
SHEET ARE SUPPLIED BY OTHERS



TOWER INSIDE DIAMETER				
NO.	0 TO 2500	OVER 2500 TO 5500	OVER 5500 TO 8500	OVER 8500
[1]	2	4	6	8
[2]	±6	±13	±19	±25

- OTHER TOLERANCES: \* UNLESS OTHERWISE SPECIFIED
- TILT OF TRAY SUPPT RING OVER ITS WIDTH SHALL NOT EXCEED ±1°
  - RING FLATNESS DEFECTS OVER ANY 300mm CHORD 1.5mm
  - ORIENTATION MAXIMUM OFFSET FROM TRUE SHELL CENTERLINE 6mm
  - OUT OF ROUNDNESS AS PER ASME CODE

#### NOTES

1. TOWER MANHOLE I.D. ACTUAL; 298 VESSEL I.D.
2. TOWER ATTACHMENTS ARE EXISTING OR SUPPLIED BY OTHERS UNLESS IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301]. WHICH ARE SUPPLIED BY KOCH-GLITSCH.
3. DIMENSIONS ARE GIVEN IN: MILLIMETERS
4. ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ANY APPLICABLE WARRANTIES.
5. ALL WARRANTIES AND VOIDANCES THERETO, ARE PER THE SELLER'S STANDARD TERMS AND CONDITIONS OR THE NEGOTIATED TERMS SELLER HAS ACCEPTED.
6. WELD CORROSION ALLOWANCE "CA" TO BE APPLIED TO THE THROAT DIMENSION.
7. THE TOWER ATTACHMENTS HAVE TO BE SECURELY WELDED TO THE VESSEL STRUCTURE AND THE CUSTOMER IS RESPONSIBLE FOR THE SELECTION OF THE METHOD OF THE ATTACHMENT, THE WPS, AND THE EVALUATION OF ALL SHELL APPLICABLE STRESSES.

#### LIST OF MATERIAL

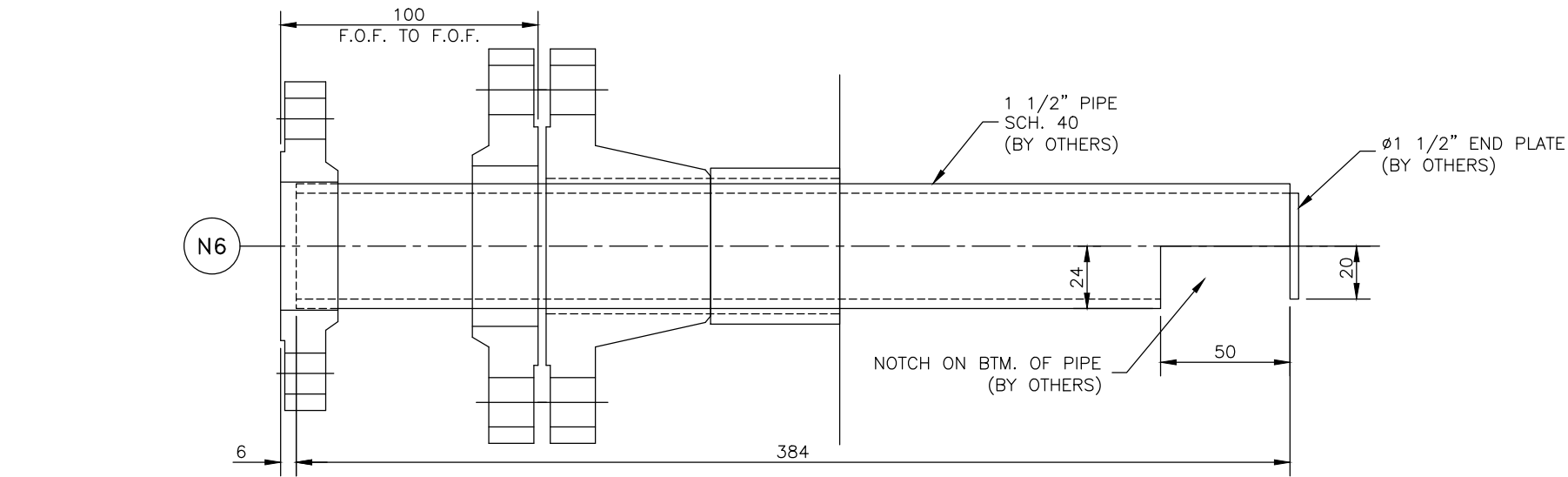
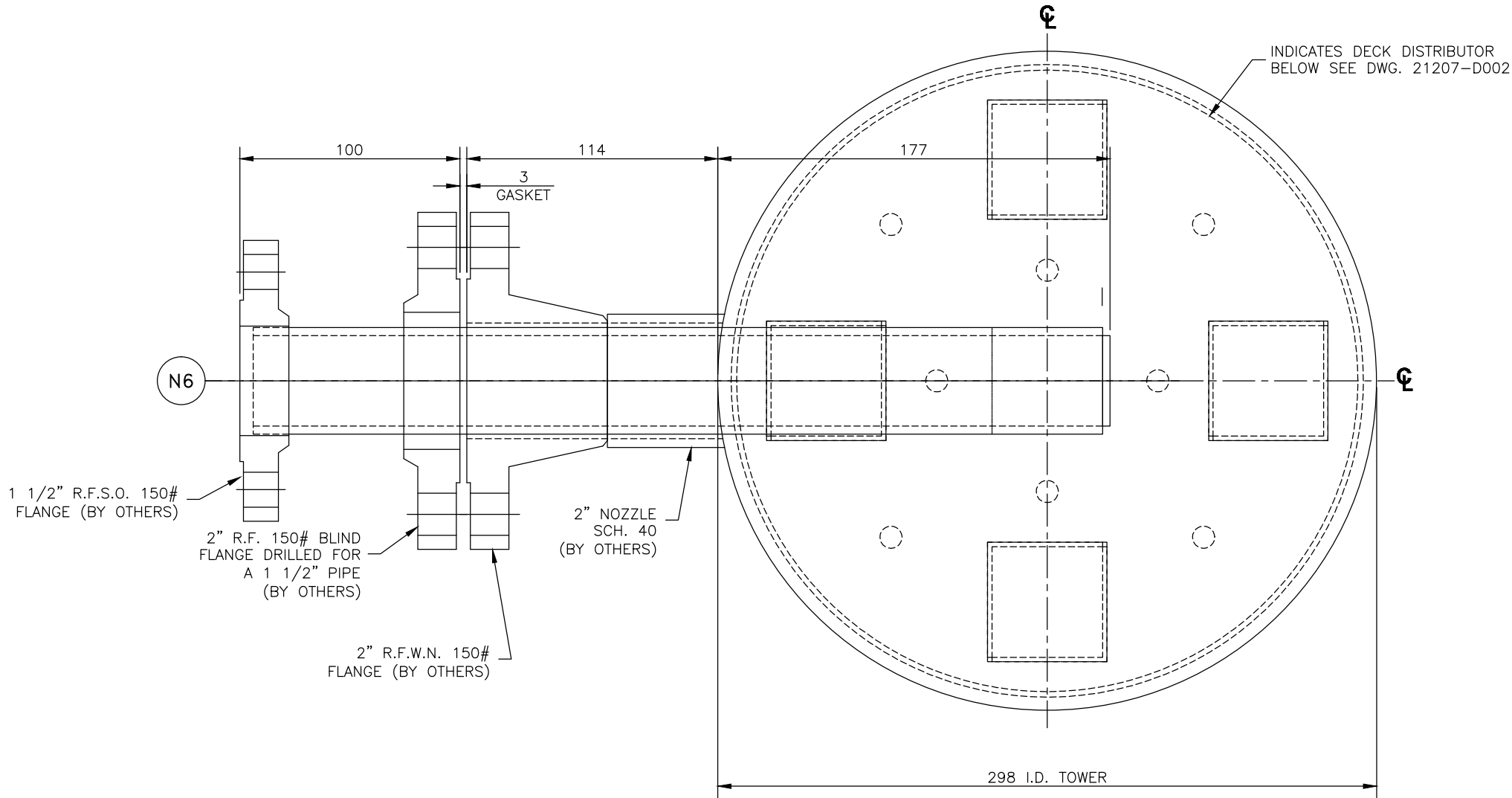
DESCRIPTION	TYPE & THICKNESS
SUPPORT CLIPS	BY OTHERS - 3/8"
NUTS	BY OTHERS - 3/8"
-	-
-	-

NO.	DESCRIPTION OF REVISION	CHG.BY/DATE	APPRD
1	-	-	-

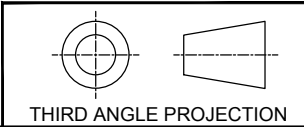
#### CUSTOMER'S IDENTIFICATION

PURCHASED BY: ENERFLEX LTD.	
P.O. NO.: 4500209070	
USER: MODERN RESOURCES INC.	PLANT SITE: CUTBANK, AB
SPEC. NO: KOCH-GLITSCH STD.	REFERENCE: 20377-D000
TOWER SERVICE: GLYCOL REGENERATOR PLANT SECTION:	

<b>KOCH-GLITSCH</b> MASS TRANSFER TECHNOLOGY © 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED		KOCH-GLITSCH CANADA LP UXBRIDGE, ON, CANADA	
DRAWN BY: ERIC H DATE: 8 JUL 15		MODEL: ELV TOWER ATTACHMENTS	
CHECK BY: EH DATE: 8 JUL 15		SALES ORDER NO.: 21207	
PROCESS: SUNNY DATE: 9 JUL 15		PART NO.: DWG-ARR	
DRAWING ISSUE		WORK ORDER NO.: 67658	
APPROVED FOR FABRICATION:		TOWER I.D. 298	TOWER NO. H-803
BY: ERIC H DATE: 10 JUL 15		DWG. NO.: 21207-D000	
CERTIFIED FINAL		SHT. 2 OF 2	
BY: - DATE: -		REV.	



PLAN & SECTION VIEW FOR STAB-IN FEED PIPE  
(DESIGN ONLY)



- NOTES
1. TOWER MANHOLE I.D. ACTUAL: 298 VESSEL I.D.
  2. PARTS SUPPLIED BY KOCH-GLITSCH ARE IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301].
  3. BOLTING ASSEMBLIES ARE ENCLOSED THUS:  
QUANTITY PER TRAY: 101 / 1010R ASSEMBLY NUMBER
  4. DIMENSIONS ARE GIVEN IN: MILLIMETERS
  5. ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ANY APPLICABLE WARRANTIES.
  6. ALL WARRANTIES AND VOIDANCES THERETO, ARE PER THE SELLER'S STANDARD TERMS AND CONDITIONS OR THE NEGOTIATED TERMS SELLER HAS ACCEPTED.

REFERENCE DRAWINGS

DRAWING 21207-D000 FOR VESSEL ARRANGEMENT.

DRAWING N/A FOR EQUIPMENT LOCATED ABOVE.

DRAWING 21207-D002 FOR EQUIPMENT LOCATED BELOW.

LIST OF MATERIAL		
DESCRIPTION		TYPE & THICKNESS
PIPE	BY OTHERS	C.S. - SCH. 40
FLANGE	BY OTHERS	C.S. - NOTED
END PLATE	BY OTHERS	C.S. - 1/8"
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
BOLT	BY OTHERS	-
NUT	BY OTHERS	-
FLANGE GASKET	BY OTHERS	-
-	-	-
TOWER ATTACHMENTS	SEE DWG. 21207-D000	-

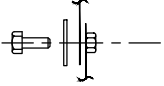
EQUIPMENT DESCRIPTION			
QUAN	ITEM	DESCRIPTION	REMARKS
1	-	STAB-IN FEED PIPE (DESIGN ONLY)	AS SHOWN & NOTED
-	-	-	-

NO.	DESCRIPTION OF REVISION	CHG. BY/DATE	APPV'D
-	-	-	-

CUSTOMER'S IDENTIFICATION	
PURCHASED BY: ENERFLEX LTD.	
P.O. NO.: 4500209070	
USER: MODERN RESOURCES INC.	PLANT SITE: CUTBANK, AB
SPEC. NO: KOCH-GLITSCH STD.	REFERENCE: 20377-D001
TOWER SERVICE: GLYCOL REGENERATOR	PLANT SECTION:

<b>KOCH-GLITSCH</b> MASS TRANSFER TECHNOLOGY © 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED		Koch-GLITSCH CANADA LP UXBRIDGE, ON, CANADA	
DRAWN BY: ERIC H DATE: 8 JUL 15		MODEL: STAB-IN FEED PIPE	
CHECK BY: EH DATE: 8 JUL 15		SALES ORDER NO.: 21207	
PROCESS: SUNNY DATE: 9 JUL 15		PART NO.: 2120701	
		WORK ORDER NO.: 67659	

DRAWING ISSUE		TOWER I.D.	TOWER NO.
APPROVED FOR FABRICATION:		298	H-803
BY: ERIC H DATE: 10 JUL 15		DWG. NO.: 21207-D001	
CERTIFIED FINAL		SHT. 1 OF 1 REV.	

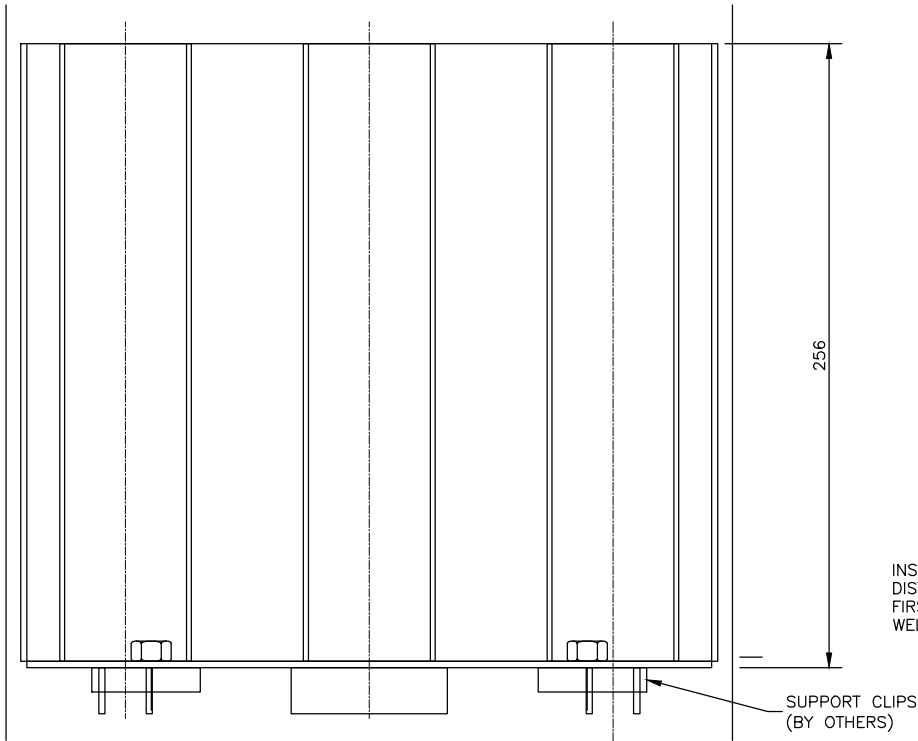
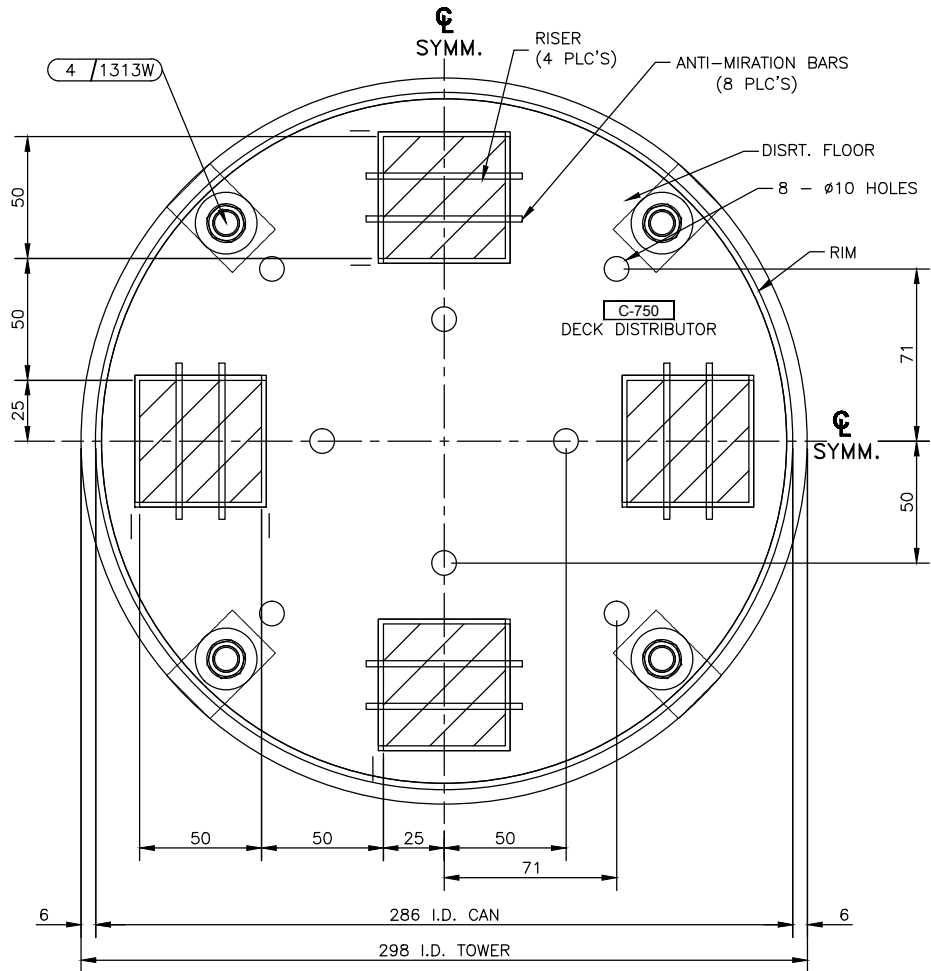


ASSEMBLY 1313W

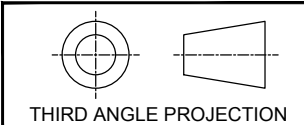
1 3/8 WELDED NUT 891-361F01

1 WASHER 1" OD. 800-361G010801

1 3/8 X 2" BOLT 896-361F1108



INSTALLATION NOTE:  
DISTRIBUTOR IS TO BE INSTALLED INTO THE TOWER  
FIRST & THE THE SUPPORT CLIPS ARE TO BE  
WELDED IN PLACE



THIRD ANGLE PROJECTION

- NOTES
1. TOWER MANHOLE I.D. ACTUAL: 298 VESSEL I.D.

2. PARTS SUPPLIED BY KOCH-GLITSCH ARE IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301].

3. BOLTING ASSEMBLIES ARE ENCLOSED THUS:  
QUANTITY PER TRAY, 101 /1010R ASSEMBLY NUMBER

4. DIMENSIONS ARE GIVEN IN: MILLIMETERS

5. ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ANY APPLICABLE WARRANTIES.

6. ALL WARRANTIES AND VOIDANCES THERETO, ARE PER THE SELLER'S STANDARD TERMS AND CONDITIONS OR THE NEGOTIATED TERMS SELLER HAS ACCEPTED.

- REFERENCE DRAWINGS
- DRAWING 21207-D000 FOR VESSEL ARRANGEMENT.

DRAWING 21207-D001 FOR EQUIPMENT LOCATED ABOVE.

DRAWING 21207-D003 FOR EQUIPMENT LOCATED BELOW.

LIST OF MATERIAL	
DESCRIPTION	TYPE & THICKNESS
DECK FLOOR	316L - 12GA
RIM	316L - 12GA
RISER WALL	316L - 12GA
-	- - -
-	- - -
-	- - -
-	- - -
-	- - -
-	- - -
BOLT	316L - 3/8"
NUT	316L - 3/8"
HARDWARE	316L - 14GA
-	- - -
TOWER ATTACHMENTS	SEE DWG. 21207-D000
-	-

EQUIPMENT DESCRIPTION			
QUAN	ITEM	DESCRIPTION	REMARKS
1	C	ORIFICE DECK DISTRIBUTOR	AS SHOWN & NOTED
-	-	-	-

NO.	DESCRIPTION OF REVISION	CHG.BY/DATE	APPRD
-	-	-	-

CUSTOMER'S IDENTIFICATION	
PURCHASED BY: ENERFLEX LTD.	
P.O. NO.: 4500209070	
USER: MODERN RESOURES INC.	PLANT SITE: CUTBANK, AB
SPEC. NO: KOCH-GLITSCH STD.	REFERENCE: 21207-D002
TOWER SERVICE: GLYCOL REGENERATOR	PLANT SECTION:

<b>K. KOCH-GLITSCH</b> MASS TRANSFER TECHNOLOGY © 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED		KOCH-GLITSCH CANADA LP UXBRIDGE, ON, CANADA	
DRAWN BY: ERIC H		MODEL: 106 DECK DISTRIBUTOR	
CHECK BY: EH		SALES ORDER NO. : 21207	
PROCESS: SUNNY		PART NO. : 2120702	
DATE: 10 JUL 15		WORK ORDER NO. : 67660	

DRAWING ISSUE		TOWER I.D.	TOWER NO.
APPROVED FOR FABRICATION:		298	H-803
BY: ERIC H		DWG. NO.: 21207-D002	
DATE: 10 JUL 15		SHT. 1 OF 1	REV.

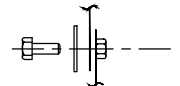
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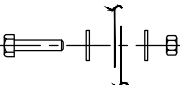
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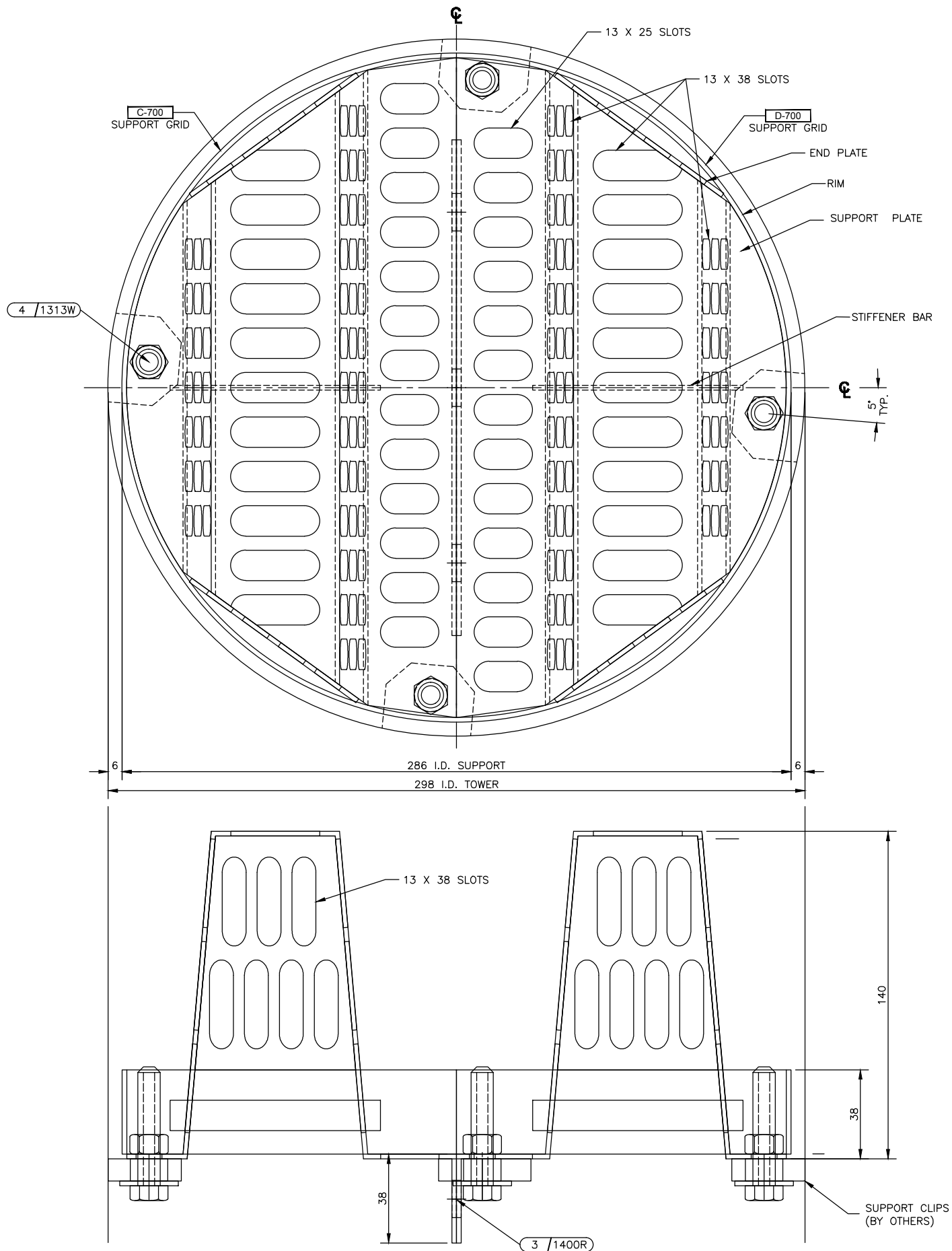
ENERFLEX LTD.

67660

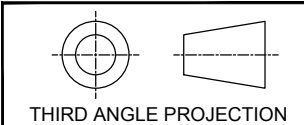
21207-D002

	
ASSEMBLY 1313W	
1	3/8 WELDED NUT 891-361F01
1	WASHER 1" OD. 800-361G010801
1	3/8 X 2" BOLT 896-361F1108

	
ASSEMBLY 1400R	
1	3/8 HEX NUT 891-361F01
2	WASHER 1" OD. 800-361G010801
1	3/8 X 1" BOLT 896-361F1104



PLAN & SECTION VIEW FOR SUPPORT PLATE



THIRD ANGLE PROJECTION

- NOTES
1. TOWER MANHOLE I.D. ACTUAL: 298 VESSEL FLANGE
  2. PARTS SUPPLIED BY KOCH-GLITSCH ARE IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301].
  3. BOLTING ASSEMBLIES ARE ENCLOSED THUS:  
QUANTITY PER TRAY: 101 /1010R ASSEMBLY NUMBER
  4. DIMENSIONS ARE GIVEN IN: MILLIMETERS
  5. ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ANY APPLICABLE WARRANTIES.
  6. ALL WARRANTIES AND VOIDANCES THERETO, ARE PER THE SELLER'S STANDARD TERMS AND CONDITIONS OR THE NEGOTIATED TERMS SELLER HAS ACCEPTED.


- REFERENCE DRAWINGS
- DRAWING 21207-D000 FOR VESSEL ARRANGEMENT.
- DRAWING 21207-D002 FOR EQUIPMENT LOCATED ABOVE.
- DRAWING N/A FOR EQUIPMENT LOCATED BELOW.

LIST OF MATERIAL	
DESCRIPTION	TYPE & THICKNESS
SUPPORT PLATE	316L - 14GA.
STIFFENER	316L - 14GA.
END PLATE	316L - 14GA.
RIM	316L - 14GA.
-	- - -
-	- - -
-	- - -
-	- - -
-	- - -
-	- - -
BOLT	316L - 3/8"
NUT	316L - 3/8"
HARDWARE	316L - 14GA.
-	- - -
TOWER ATTACHMENTS	SEE DWG.21207-D000
-	-

EQUIPMENT DESCRIPTION			
QUAN	ITEM	DESCRIPTION	REMARKS
1	D	SUPPORT PLATE	AS SHOWN & NOTED
-	-	-	-

NO.	DESCRIPTION OF REVISION	CHG.BY/DATE	APPRD
-	-	-	-

CUSTOMER'S IDENTIFICATION	
PURCHASED BY: ENERFLEX LTD.	
P.O. NO.: 4500209070	
USER: MODERN RESOURCES INC.	PLANT SITE: CUTBANK, AB
SPEC. NO: KOCH-GLITSCH STD.	REFERENCE: 20377-D003
TOWER SERVICE: GLYCOL REGENERATOR	PLANT SECTION:

<b>KOCH-GLITSCH</b> MASS TRANSFER TECHNOLOGY © 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED		KOCH-GLITSCH CANADA LP UXBRIDGE, ON, CANADA	
DRAWN BY: ERIC H DATE: 8 JUL 15		MODEL: 814 SUPPORT PLATE	
CHECK BY: EH DATE: 8 JUL 15		SALES ORDER NO.: 21207	
PROCESS: SUNNY DATE: 9 JUL 15		PART NO.: 2120703	
DRAWING ISSUE		WORK ORDER NO.: 67661	
APPROVED FOR FABRICATION:		TOWER I.D. 298	
BY: ERIC H		TOWER NO. H-803	
DATE: 10 JUL 15		DWG. NO.: 21207-D003	
CERTIFIED FINAL AS FABRICATED:		SHT. 1 OF 1	
BY: -		REV. 	
DATE: -			

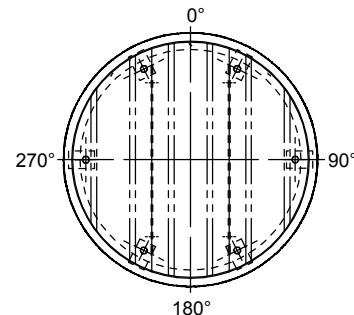
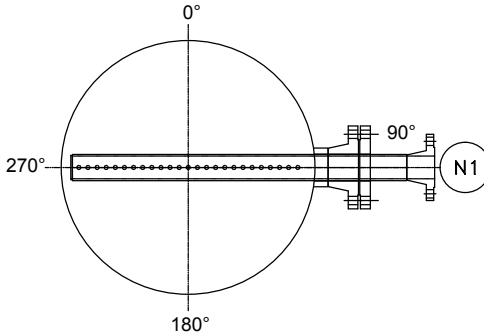
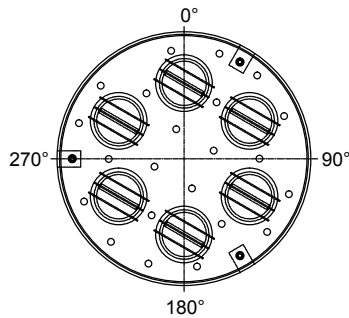
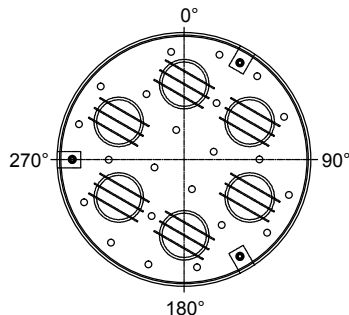
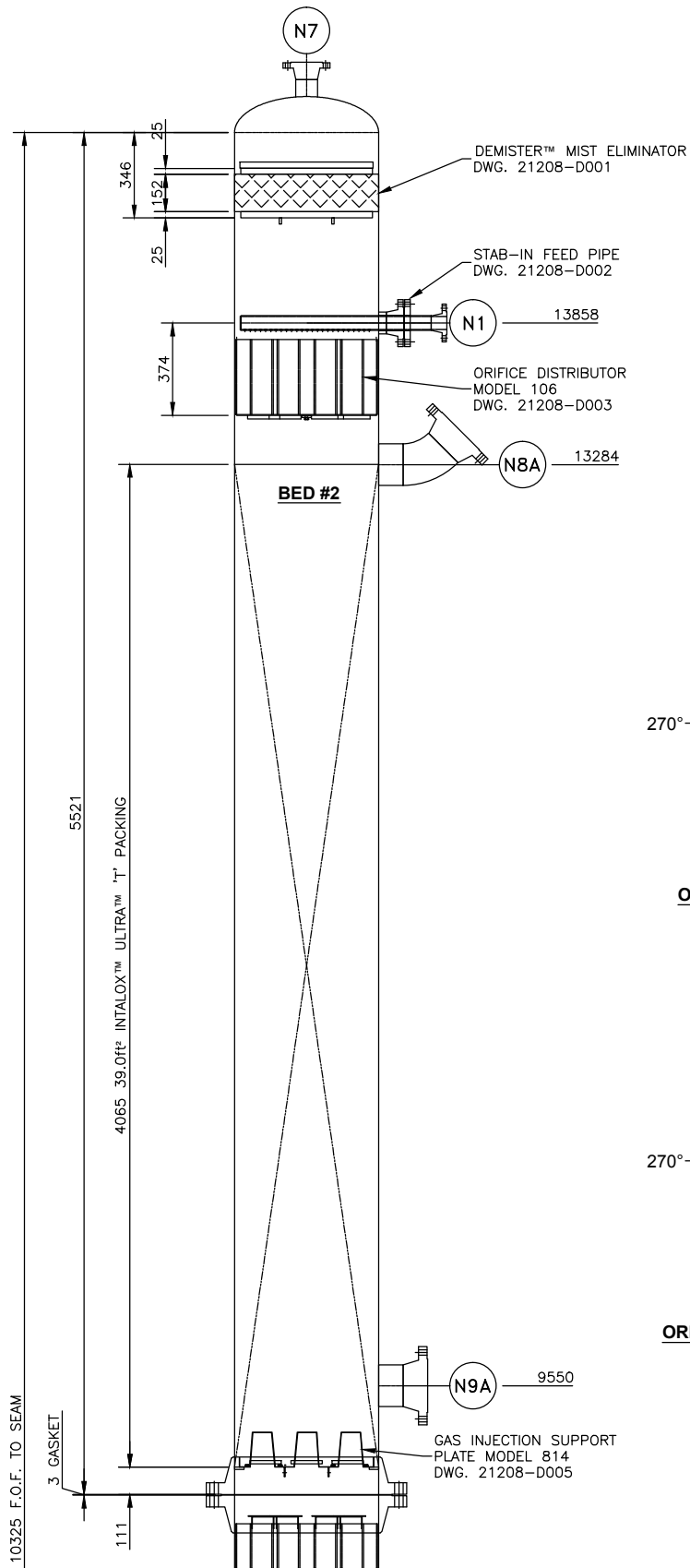
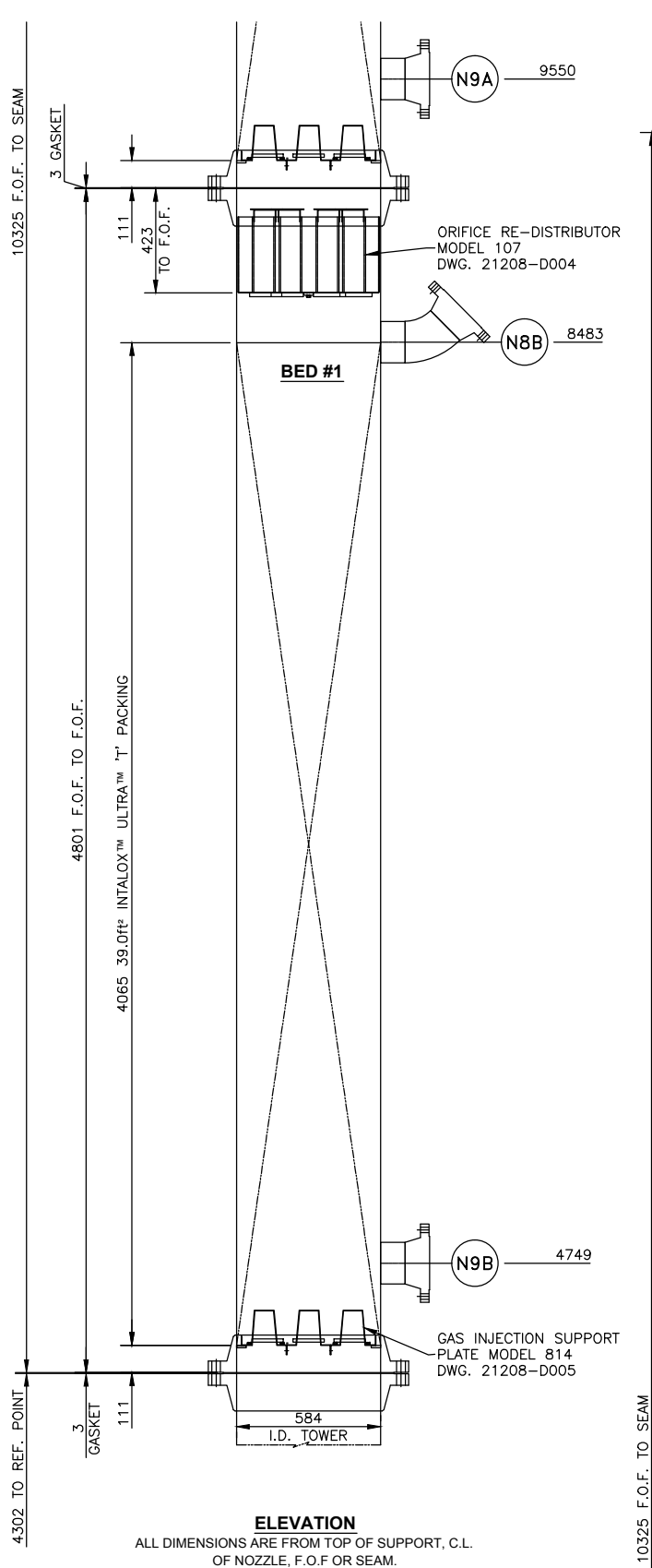
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INSTALLATION DRAWING

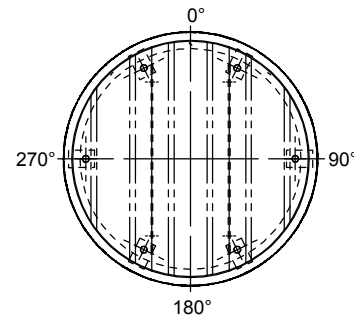
ENERFLEX LTD.

67661

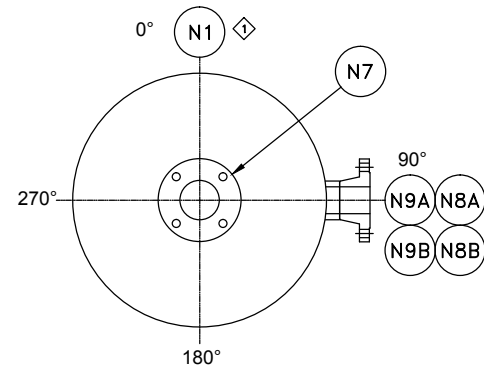
21207-D003



BED #2



BED #1



NOZZLE DESCRIPTIONS		
NOZZLE	SIZE	SERVICE
N1	3"-2"	INLET
N7	3"	GAS OUTLET
N8A	6"	PACKING FILL
N9A	6"	PACKING DUMP

#### GENERAL NOTES

KOCH-GLITSCH PROVIDES THIS DRAWING SOLELY FOR BUYER'S CONVENIENCE IN DESIGNING AND FABRICATING PARTS TO MATCH EQUIPMENT FURNISHED BY KOCH-GLITSCH. BUYER IS SOLELY RESPONSIBLE FOR PROVIDING CORROSION AND OTHER ALLOWANCES THAT MAY BE REQUIRED FOR SPECIFIC PROCESS OR MECHANICAL CONSIDERATIONS WHETHER OR NOT SUCH PROCESSES OR CONSIDERATIONS HAVE BEEN COMMUNICATED TO KOCH-GLITSCH.

ELEVATION AND ORIENTATION PICTURES ARE SCHEMATIC REPRESENTATIONS OF EQUIPMENT AND DO NOT INDICATE THE ACTUAL DESIGNS. SEE EQUIPMENT DRAWINGS FOR ACTUAL DESIGNS.

DESIGN TEMPERATURE- 93° C  
CORROSION ALLOWANCE - 1.5mm PER WETTED SURFACE 3mm TOTAL

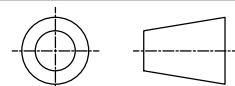
NO.	DESCRIPTION OF REVISION	CHG.BY/DATE	APPRD
-		-	-

#### CUSTOMER'S IDENTIFICATION

PURCHASED BY: ENERFLEX LTD.  
P.O. NO.: 4500209070  
USER: MODERN RESOURCES INC. PLANT SITE: CUTBANK, AB  
SPEC. NO: KOCH-GLITSCH STD. REFERENCE: 20378-D000  
TOWER SERVICE: DEETHANIZER PLANT SECTION:

<b>KOCH-GLITSCH</b> MASS TRANSFER TECHNOLOGY © 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED		KOCH-GLITSCH CANADA LP UXBRIDGE, ON, CANADA	
DRAWN BY: ERIC H DATE: 8 JUL 15 CHECK BY: EH DATE: 8 JUL 15 PROCESS: SUNNY DATE: 9 JUL 15		MODEL: ELV TOWER ELEVATION SALES ORDER NO.: 21208 PART NO.: ARR-DWG WORK ORDER NO.: 67663	

DRAWING ISSUE		TOWER I.D.	TOWER NO.
APPROVED FOR FABRICATION: BY: ERIC H DATE: 10 JUL 15		584	C-310
CERTIFIED FINAL AS FABRICATED: BY: DATE:		DWG. NO.: 21208-D000 SHT. 1 OF 4 REV.	



THIRD ANGLE PROJECTION

INSTALLATION DRAWING

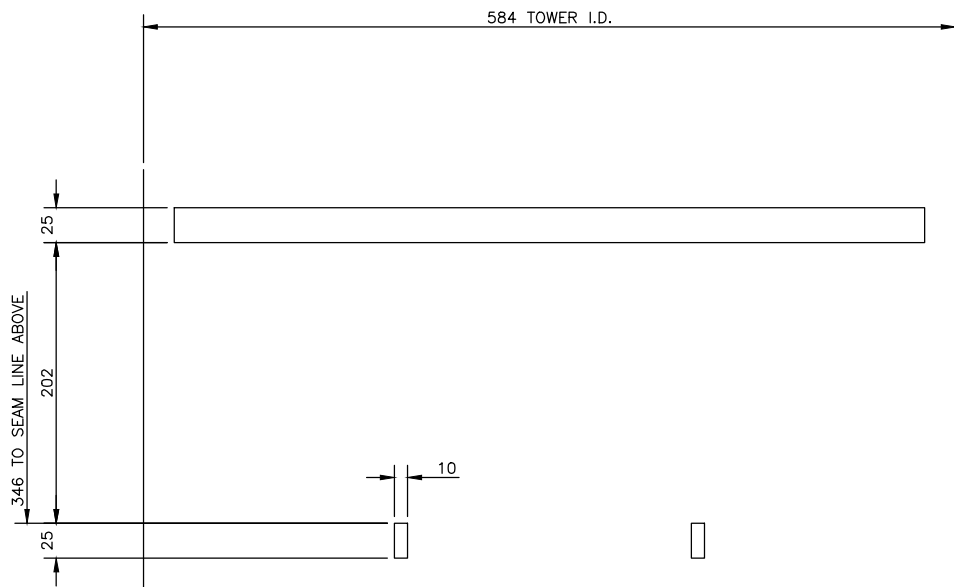
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ENERFLEX LTD.


67663

21208-D000







NOTE:  
ALL PARTS SHOWN ON THIS SHEET  
ARE SUPPLIED BY OTHERS

LIST OF MATERIAL		CHECK BY: EH	DATE: 8 JUL 15	PART NO.: ARR-DWG	
		PROCESS: SUNNY	DATE: 9 JUL 15	WORK ORDER NO.: 67663	
DESCRIPTION	TYPE & THICKNESS	DRAWING ISSUE		TOWER I.D.	TOWER NO.
SUPPORT BARS	SA-516-70N 3/8"	APPROVED FOR FABRICATION:		584	C-310
-	-	BY: ERIC H		DWG. NO.: 21208-D000	
-	-	DATE: 10 JUL 15		SHT. 2 OF 4	
-	-			REV. 	

[illegible]

CUSTOMER'S IDENTIFICATION			
PURCHASED BY: ENERFLEX LTD.			
P.O. NO.: 4500209070			
USER: MODERN RESOURCES INC.		PLANT SITE: CUTBANK, AB	
SPEC. NO: KOCH-GLITSCH STD.		REFERENCE: 20378-D000	
TOWER SERVICE: DEETHANIZER		PLANT SECTION:	
 <b>MASS TRANSFER TECHNOLOGY</b> <small>© 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED</small>		KOCH-GLITSCH CANADA LP UXBRIDGE, ON, CANADA	
DRAWN BY: ERIC H      DATE: 8 JUL 15 CHECK BY: EH      DATE: 8 JUL 15 PROCESS: SUNNY      DATE: 9 JUL 15		MODEL: ELV TOWER ATTACHMENT SALES ORDER NO. : 21208 PART NO. : ARR-DWG WORK ORDER NO. : 67663	
DRAWING ISSUE		TOWER I.D.      TOWER NO.	
APPROVED FOR FABRICATION:		584      C-310	
BY: ERIC H		DWG. NO.: 21208-D000	
DATE: 10 JUL 15		SHT. 2 OF 4	
BY:		REV. 	
DATE:			

## INSTALLATION DRAWING

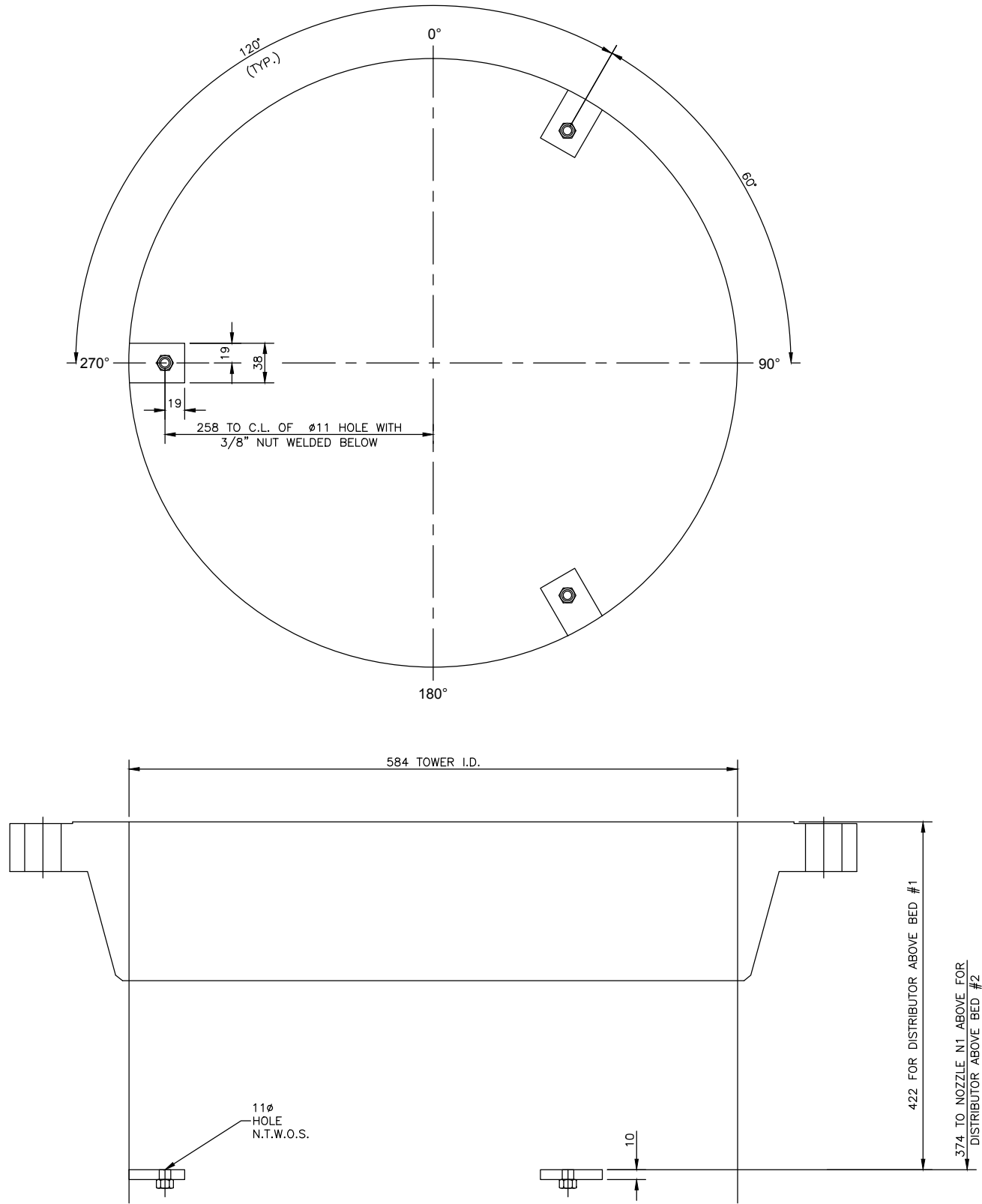
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21208-D000

67663

MENT (INCLUDING ANY COPIES) WILL BE IMMEDIATELY RETURNED TO KOCH-GUTSCH AT ITS REQUEST.

# TENIBFLEX LTD.



2-ASSEMBLY REQUIRED AS SHOWN FOR ORIFICE  
DECK DISTRIBUTORS ABOVE BED #1 & #2

NOTE:  
ALL PARTS SHOWN ON THIS SHEET  
ARE SUPPLIED BY OTHERS

LIST OF MATERIAL	
DESCRIPTION	TYPE & THICKNESS
SUPPORT CLIPS	SA-516-70N 3/8"
-	-
NUTS	A193-2HM
-	-

NOTES

1. TOWER MANHOLE I.D. ACTUAL: 584

2. TOWER ATTACHMENTS ARE EXISTING OR SUPPLIED BY OTHERS UNLESS IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301]. WHICH ARE SUPPLIED BY KOCH-GLITSCH.

3. DIMENSIONS ARE GIVEN IN: MILLIMETERS/INCHES/INCHES(MILLIMETERS)

4. ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ANY APPLICABLE WARRANTIES.

5. ALL WARRANTIES AND VOIDANCES THERETO, ARE PER THE SELLER'S STANDARD TERMS AND CONDITIONS OR THE NEGOTIATED TERMS SELLER HAS ACCEPTED.

6. WELD CORROSION ALLOWANCE "CA" TO BE APPLIED TO THE THROAT DIMENSION.

7. THE TOWER ATTACHMENTS HAVE TO BE SECURELY WELDED TO THE VESSEL STRUCTURE AND THE CUSTOMER IS RESPONSIBLE FOR THE SELECTION OF THE METHOD OF THE ATTACHMENT, THE WPS, AND THE EVALUATION OF ALL SHELL APPLICABLE STRESSES.

8. DESIGN TEMPERATURE- 93° C

9. CORROSION ALLOWANCE - 1.5mm PER WETTED SURFACE 3mm TOTAL

NO.	DESCRIPTION OF REVISION	CHG.BY/DATE	APPVD
1	-	-	-

CUSTOMER'S IDENTIFICATION

PURCHASED BY: ENERFLEX LTD.

P.O. NO.: 4500209070

USER: MODERN RESOURCES INC.

SPEC. NO: KOCH-GLITSCH STD.

TOWER SERVICE: DEETHANIZER

PLANT SITE: CUTBANK, AB

REFERENCE: 20378-D000

PLANT SECTION:

KKOCH-GLITSCH

MASS TRANSFER TECHNOLOGY

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COCH-GLITSCH CANADA LP

UXBRIDGE, ON, CANADA

MODEL: ELV

TOWER ATTACHMENT

DRAWN BY: ERIC H

CHECK BY: EH

PROCESS: SUNNY

DATE: 8 JUL 15

DATE: 8 JUL 15

DATE: 9 JUL 15

SALES ORDER NO. : 21208

PART NO. : ARR-DWG

WORK ORDER NO. : 67663

TOWER I.D. 584

TOWER NO. C-310

DWG. NO.: 21208-D000

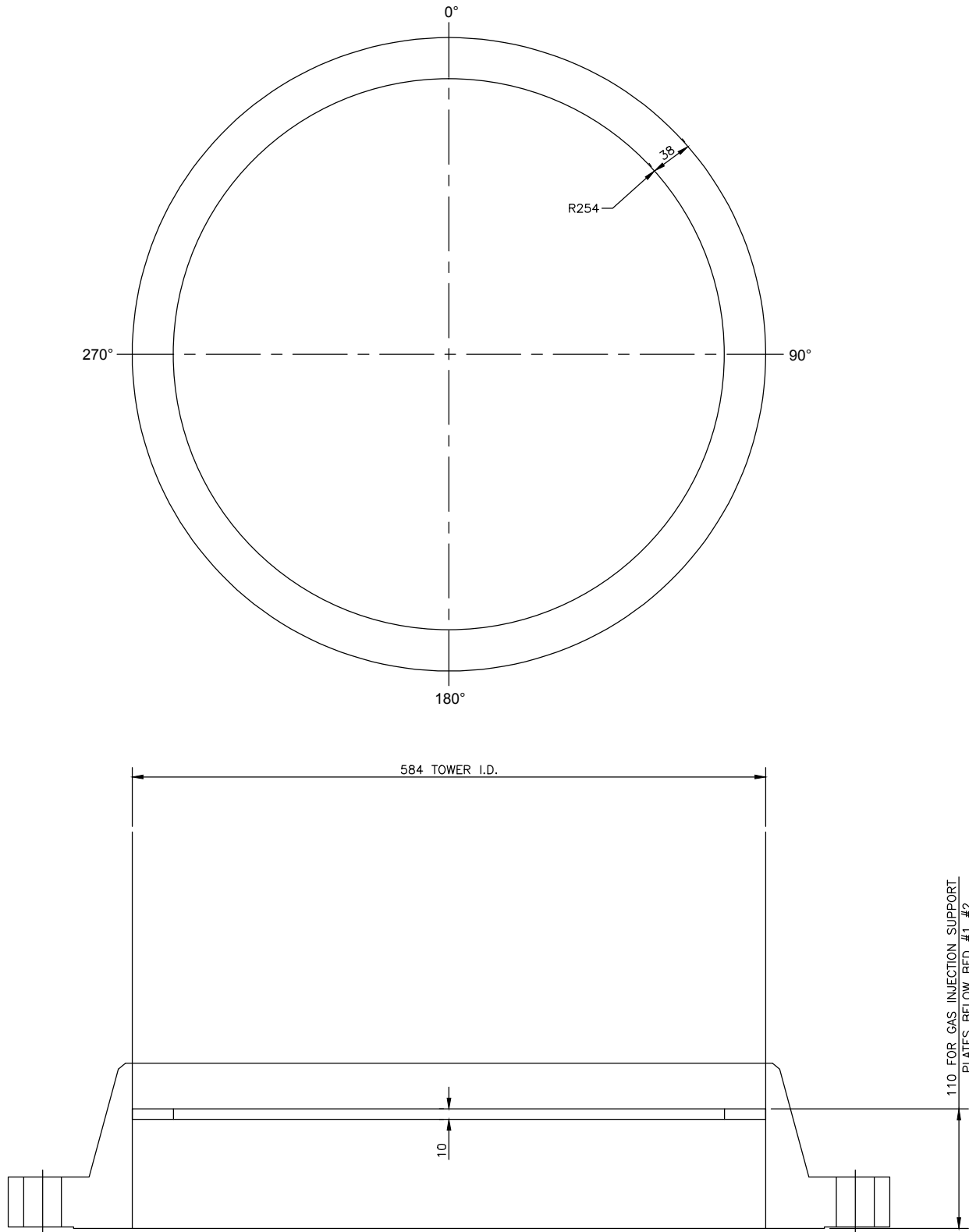
SHT. 3 OF 4

REV.

INSTALLATION DRAWING

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21208-D000 67663 ENERFLEX LTD.



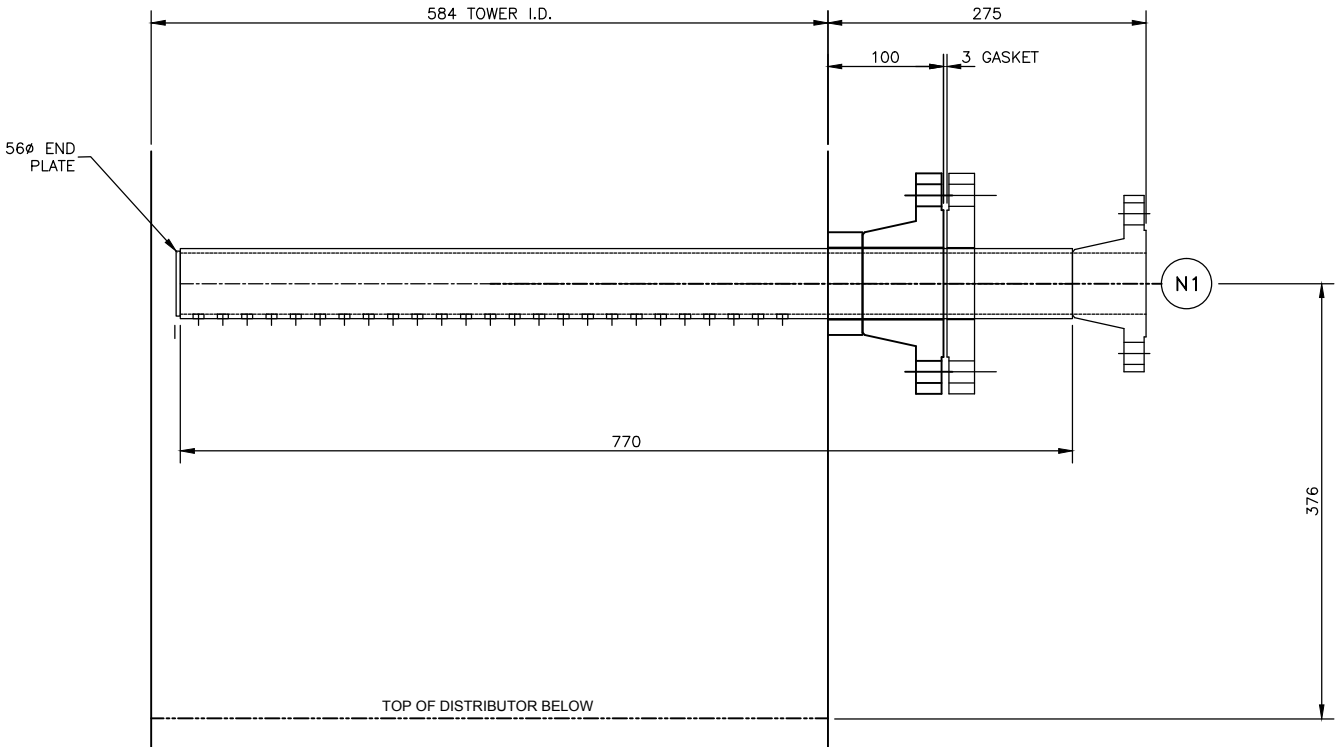
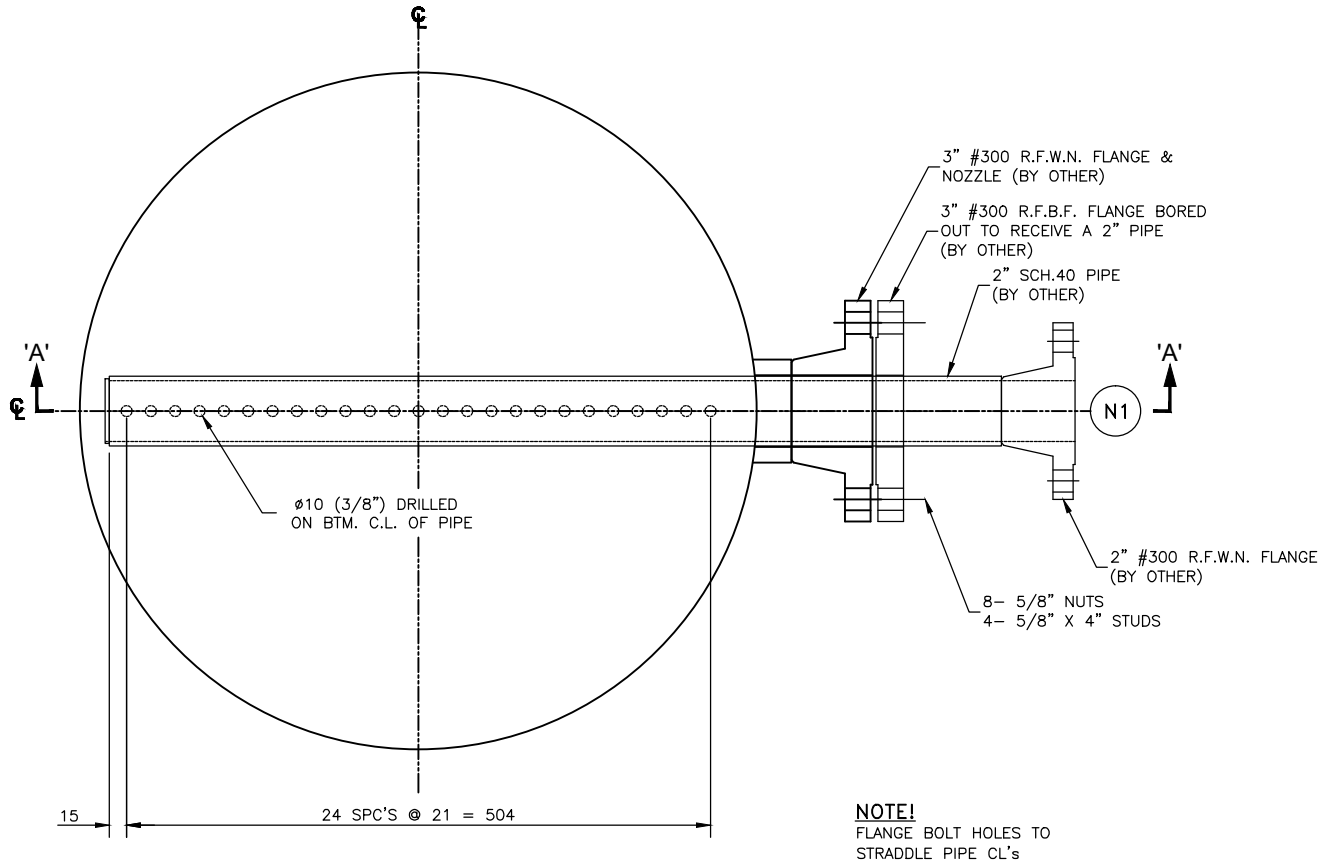
2-ASSEMBLY REQUIRED AS SHOWN FOR  
GAS INJECTION SUPPORT PLATES BELOW BEDS #1 & #2

NOTE:  
ALL PARTS SHOWN ON THIS SHEET  
ARE SUPPLIED BY OTHERS

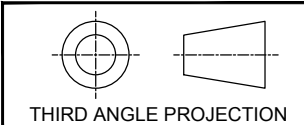
LIST OF MATERIAL	
DESCRIPTION	TYPE & THICKNESS
SUPPORT RING	SA-516-70N 3/8"
-	-
-	-
-	-

NOTES			
1. TOWER MANHOLE I.D. ACTUAL: 584			
2. TOWER ATTACHMENTS ARE EXISTING OR SUPPLIED BY OTHERS UNLESS IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301]. WHICH ARE SUPPLIED BY KOCH-GLITSCH.			
3. DIMENSIONS ARE GIVEN IN: MILLIMETERS/INCHES/INCHES(MILLIMETERS)			
4. ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ANY APPLICABLE WARRANTIES.			
5. ALL WARRANTIES AND VOIDANCES THERETO, ARE PER THE SELLER'S STANDARD TERMS AND CONDITIONS OR THE NEGOTIATED TERMS SELLER HAS ACCEPTED.			
6. WELD CORROSION ALLOWANCE "CA" TO BE APPLIED TO THE THROAT DIMENSION.			
7. THE TOWER ATTACHMENTS HAVE TO BE SECURELY WELDED TO THE VESSEL STRUCTURE AND THE CUSTOMER IS RESPONSIBLE FOR THE SELECTION OF THE METHOD OF THE ATTACHMENT, THE WPS, AND THE EVALUATION OF ALL SHELL APPLICABLE STRESSES.			
8. DESIGN TEMPERATURE- 93° C			
9. CORROSION ALLOWANCE - 1.5mm PER WETTED SURFACE 3mm TOTAL			
NO.	DESCRIPTION OF REVISION	CHG.BY/DATE	APPVD
-	-	-	-
CUSTOMER'S IDENTIFICATION			
PURCHASED BY: ENERFLEX LTD.			
P.O. NO.: 4500209070			
USER: MODERN RESOURCES INC.		PLANT SITE: CUTBANK, AB	
SPEC. NO: KOCH-GLITSCH STD.		REFERENCE: 20378-D000	
TOWER SERVICE: DEETHANIZER		PLANT SECTION:	
KOCH-GLITSCH		KOCH-GLITSCH CANADA LP	
MASS TRANSFER TECHNOLOGY		UXBRIDGE, ON, CANADA	
© 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED		MODEL: ELV	
DRAWN BY: ERIC H		DATE: 8 JUL 15	
CHECK BY: EH		DATE: 8 JUL 15	
PROCESS: SUNNY		DATE: 9 JUL 15	
DRAWING ISSUE		TOWER I.D. 584	
APPROVED FOR FABRICATION:		CERTIFIED FINAL AS FABRICATED:	
BY: ERIC H		BY:	
DATE: 10 JUL 15		DATE:	
DWG. NO.: 21208-D000		SHT. 4 OF 4	
REV.		REV.	

INSTALLATION DRAWING



PLAN & SECTION VIEW 'A'-A' THROUGH  
STAB-IN FEED PIPE @ NOZZLE N1  
(DESIGN ONLY)



DESIGN ONLY

NOTES

- TOWER MANHOLE I.D. ACTUAL: 584
- PARTS SUPPLIED BY KOCH-GLITSCH ARE IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301].
- BOLTING ASSEMBLIES ARE ENCLOSED THUS:  
QUANTITY PER TRAY: 101 / 1010R ASSEMBLY NUMBER
- DIMENSIONS ARE GIVEN IN: MILLIMETERS
- ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ANY APPLICABLE WARRANTIES.
- ALL WARRANTIES AND VOIDANCES THERETO, ARE PER THE SELLER'S STANDARD TERMS AND CONDITIONS OR THE NEGOTIATED TERMS SELLER HAS ACCEPTED.

REFERENCE DRAWINGS

- DRAWING 21208-D000 FOR VESSEL ARRANGEMENT.  
DRAWING 21208-D001 FOR EQUIPMENT LOCATED ABOVE.  
DRAWING 21208-D003 FOR EQUIPMENT LOCATED BELOW.

LIST OF MATERIAL

DESCRIPTION	TYPE & THICKNESS
PIPE	A333 - SCH.40
FITTINGS	- - -
FLANGES	350LF2 - #300
GASKET	BY OTHERS - 1/8"
END PLATES	SA-516-70N - 1/4"
SPRAY NOZZLE	- - -
-	- - -
-	- - -
-	- - -
STUD	A-193-B7M - 5/8"
NUT	A-194-2HM - 5/8"
HARDWARE	- -
-	- - -
TOWER ATTACHMENTS	SEE DWG. 21208-D000
-	-

EQUIPMENT DESCRIPTION

QUAN	ITEM	DESCRIPTION	REMARKS
1	-	STAB-IN FEED PIPE @ NOZZLE N1	AS SHOWN & NOTED
-	-	-	-

NO.	DESCRIPTION OF REVISION	CHG.BY/DATE	APPRD
-	-	-	-

CUSTOMER'S IDENTIFICATION

PURCHASED BY: ENERFLEX LTD.	
P.O. NO.: 4500209070	
USER: MODERN RESOURCES INC.	PLANT SITE: CUTBANK, AB
SPEC. NO: KOCH-GLITSCH STD.	REFERENCE: 20378-D002
TOWER SERVICE: DEETHANIZER	PLANT SECTION:

<b>KOCH-GLITSCH</b> MASS TRANSFER TECHNOLOGY © 2015 KOCH-GLITSCH, LP. ALL RIGHTS RESERVED		KOCH-GLITSCH CANADA LP UXBRIDGE, ON, CANADA	
DRAWN BY: ERIC H DATE: 8 JUL 15		MODEL: STAD-IN FEED PIPE @ NOZZLE N1	
CHECK BY: EH DATE: 8 JUL 15		SALES ORDER NO. : 21208	
PROCESS: SUNNY DATE: 9 JUL 15		PART NO. : 2120802	
		WORK ORDER NO. : 67665	

DRAWING ISSUE		TOWER I.D.	TOWER NO.
APPROVED FOR FABRICATION:		584	C-310
BY: ERIC H DATE: 10 JUL 15		DWG. NO.: 21208-D002	
CERTIFIED FINAL		SHT. 1 OF 1	REV.

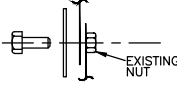
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INSTALLATION DRAWING

ENERFLEX LTD.

67665

21208-D002

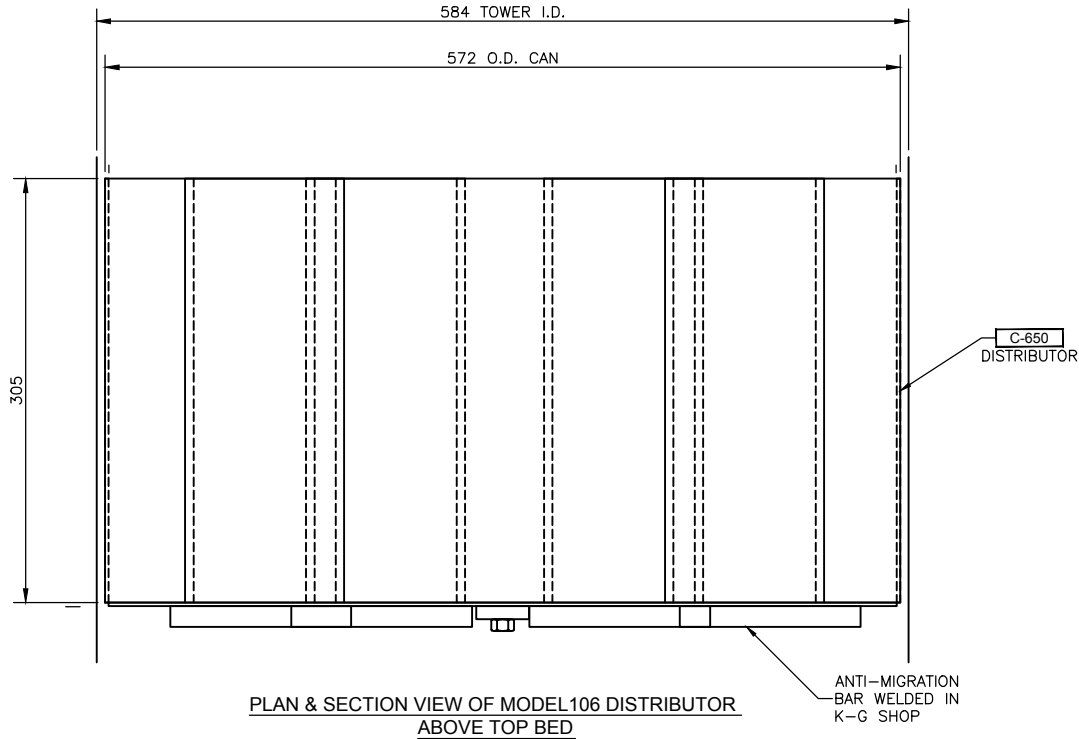
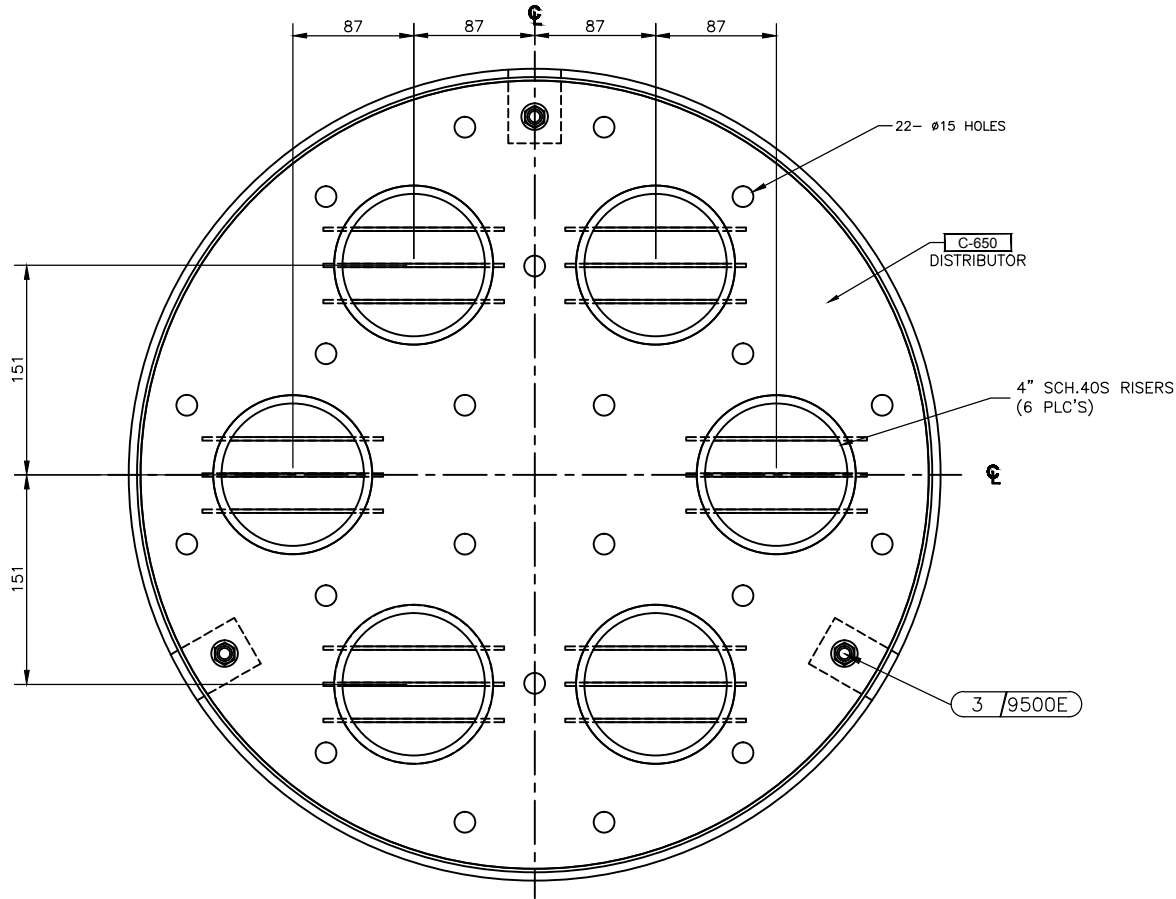


ASSEMBLY 9500E

1 3/8" EXISTING WELDED NUT

1 WASHER 1.5" OD. 800-361G030101

1 3/8" X 1" BOLT 896-361F1104



- NOTES
1. TOWER MANHOLE I.D. ACTUAL: 584

2. PARTS SUPPLIED BY KOCH-GLITSCH ARE IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301] .

3. BOLTING ASSEMBLIES ARE ENCLOSED THUS:  
QUANTITY PER TRAY: 101 /1010R ASSEMBLY NUMBER

4. DIMENSIONS ARE GIVEN IN: MILLIMETERS

5. ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ALL EXPRESSED AND IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE.
- REFERENCE DRAWINGS
- DRAWING 21208-D000 FOR VESSEL ARRANGEMENT.


DRAWING 21208-D002 FOR EQUIPMENT LOCATED ABOVE.

DRAWING 21208-D004 FOR EQUIPMENT LOCATED BELOW.

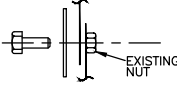
LIST OF MATERIAL	
DESCRIPTION	TYPE & THICKNESS
DISTRIBUTOR	316L - 12GA
-	- - -
-	- - -
PIPE	316L - SCH40S
HAT & HAT SUPPORT	316L - 12GA
-	- - -
-	- - -
-	- - -
-	- - -
BOLT	316L - 3/8"
NUT	- - -
HARDWARE	316L - -
-	- - -
TOWER ATTACHMENTS	21208-D000
-	-

EQUIPMENT DESCRIPTION			
QUAN	ITEM	DESCRIPTION	REMARKS
1	C	106 DISTRIBUTOR	ABOVE TOP BED
-	-	-	-
NO.	DESCRIPTION OF REVISION		CHG.BY/DATE
-			-

CUSTOMER'S IDENTIFICATION			
PURCHASED BY: ENERFLEX LTD.			
P.O. NO.: 4500209070			
USER: MODERN RESOURCES INC.		PLANT SITE: CUTBANK, AB	
SPEC. NO: KOCH-GLITSCH STD.		REFERENCE: 20378-D003	
TOWER SERVICE: DEETHANIZER		PLANT SECTION:	

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DRAWN BY: ERIC H		MODEL: 106 DISTRIBUTOR	
CHECK BY: EH		SALES ORDER NO. : 21208	
PROCESS: SUNNY		PART NO. : 2120803	
DATE: 10 JUL 15		WORK ORDER NO. : 67666	
APPROVED FOR FABRICATION:		TOWER I.D. 584	
BY: ERIC H		TOWER NO. C-310	
DATE: 10 JUL 15		DWG. NO.: 21208-D003	
CERTIFIED FINAL AS FABRICATED:		SHT. 1 OF 1	
BY: -		REV. 	
DATE: -			



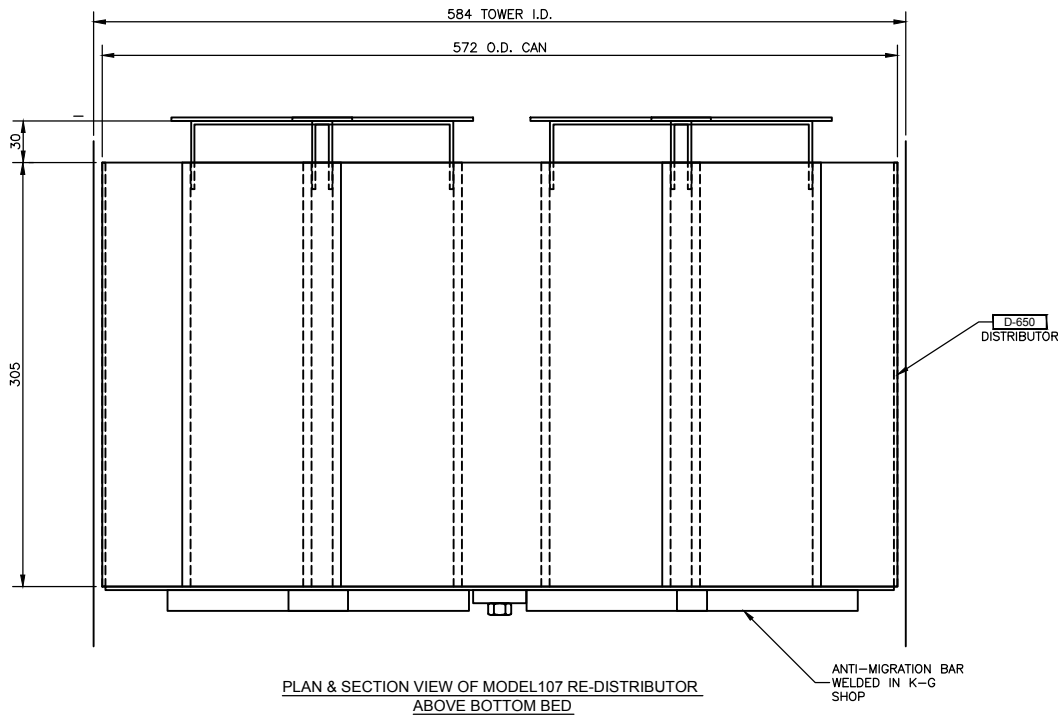
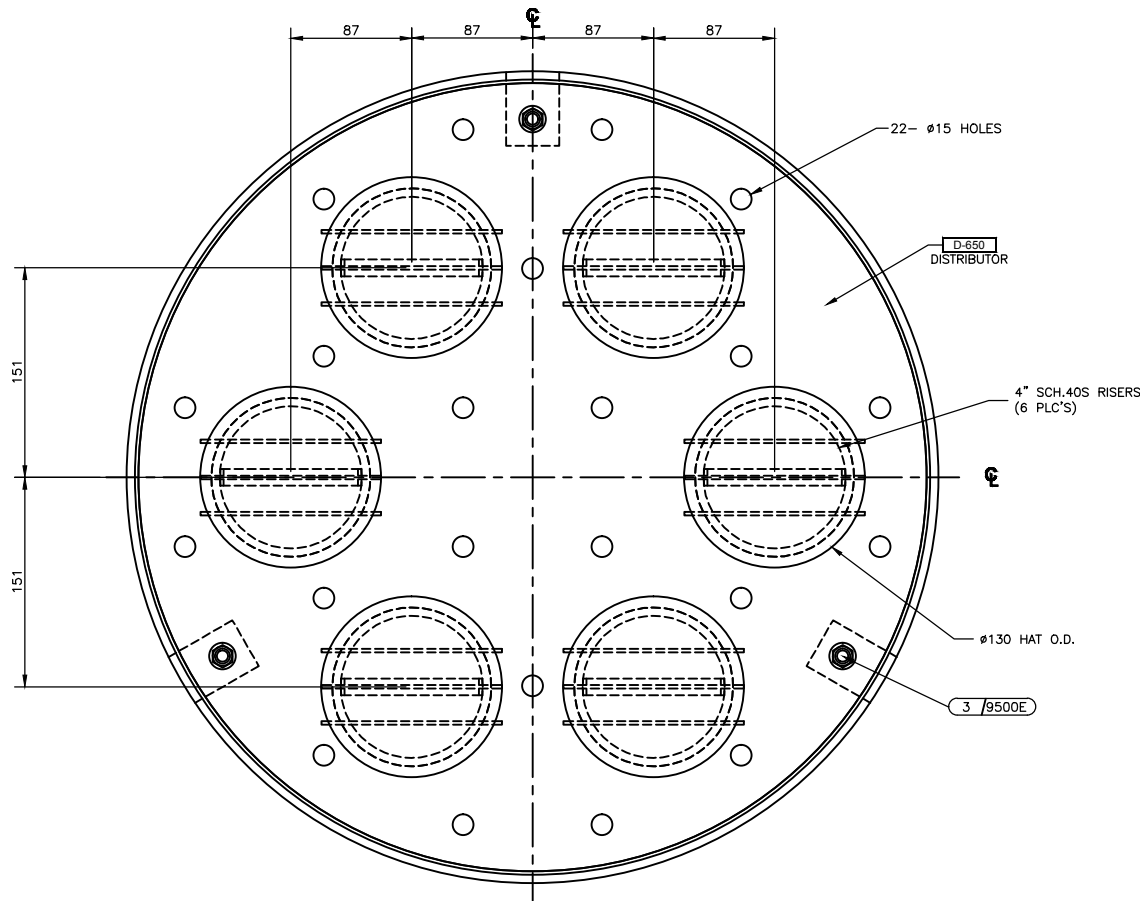


ASSEMBLY 9500E

1 3/8" EXISTING WELDED NUT

1 WASHER 1.5" O.D. 800-361G030101

1 3/8" X 1" BOLT 896-361F1104



- NOTES
1. TOWER MANHOLE I.D. ACTUAL: 584

2. PARTS SUPPLIED BY KOCH-GLITSCH ARE IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301].

3. BOLTING ASSEMBLIES ARE ENCLOSED THUS:  
QUANTITY PER TRAY: 101 / 1010R ASSEMBLY NUMBER

4. DIMENSIONS ARE GIVEN IN: MILLIMETERS

5. ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ALL EXPRESSED AND IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE.

REFERENCE DRAWINGS

DRAWING 21208-D000 FOR VESSEL ARRANGEMENT.

DRAWING 21208-D005 FOR EQUIPMENT LOCATED ABOVE.

DRAWING 21208-D005 FOR EQUIPMENT LOCATED BELOW.

LIST OF MATERIAL	
DESCRIPTION	TYPE & THICKNESS
DISTRIBUTOR	316L - 12GA
-	- - -
-	- - -
PIPE	316L - SCH40S
HAT & HAT SUPPORT	316L - 12GA
-	- - -
-	- - -
-	- - -
-	- - -
BOLT	316L - 3/8"
NUT	- - -
HARDWARE	316L - -
-	- - -
TOWER ATTACHMENTS	21208-D000
-	-

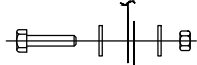
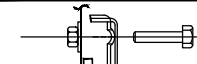
EQUIPMENT DESCRIPTION			
QUAN	ITEM	DESCRIPTION	REMARKS
1	D	107 RE-DISTRIBUTOR	ABOVE BOTTOM BED
-	-	-	-
NO.	DESCRIPTION OF REVISION		CHG.BY/DATE
-			-

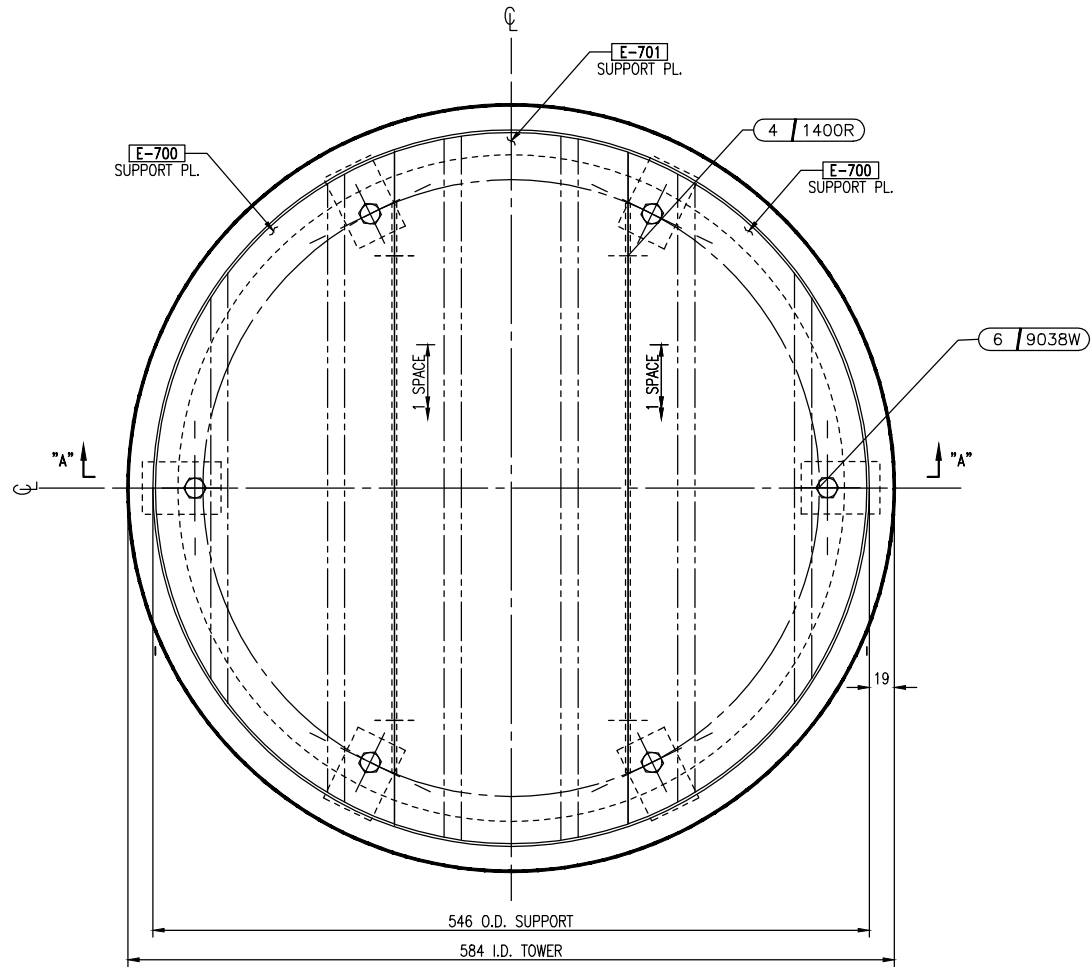
CUSTOMER'S IDENTIFICATION	
PURCHASED BY: ENERFLEX LTD.	
P.O. NO.: 4500209070	
USER: MODERN RESOURCES INC.	PLANT SITE: CUTBANK, AB
SPEC. NO: KOCH-GLITSCH STD.	REFERENCE: 20378-D004
TOWER SERVICE: DEETHANIZER	PLANT SECTION:

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DRAWN BY: ERIC H    DATE: 8 JUL 15		MODEL: RE-DISTRIBUTOR	
CHECK BY: EH    DATE: 8 JUL 15		SALES ORDER NO. : 21208	
PROCESS: SUNNY    DATE: 9 JUL 15		PART NO. : 2120804	
DRAWING ISSUE		WORK ORDER NO. : 67667	
APPROVED FOR FABRICATION:		TOWER I.D. 584	TOWER NO. C-310
BY: ERIC H		DWG. NO.: 21208-D004	
DATE: 10 JUL 15		SHT. 1 OF 1	REV.

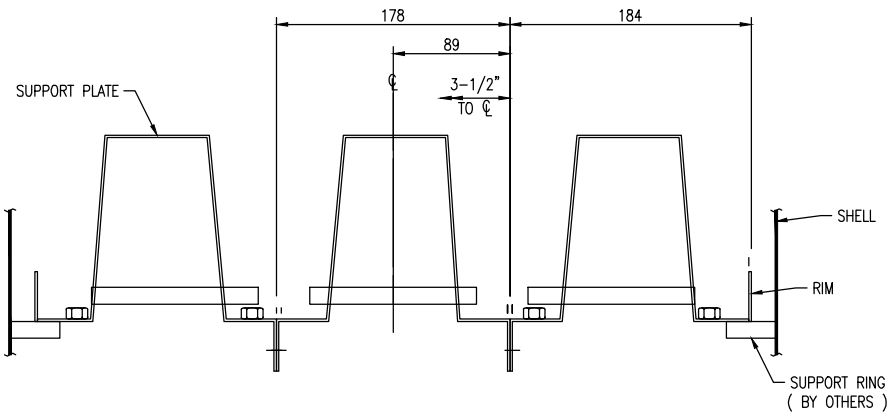
INSTALLATION DRAWING

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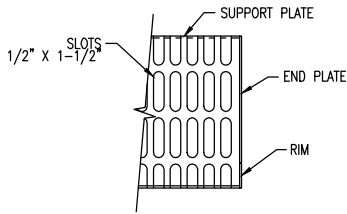
	
ASSEMBLY 1400R	
1 3/8 HEX NUT	891-361F01
2 WASHER 1" OD.	800-361G010801
1 3/8 X 1" BOLT	896-361F1104
	
ASSEMBLY 9038W	
1 3/8 WELDED NUT	891-361F01
1 1.5" WELDED WASHER	800-361G020101
1 BTC "Y"	902-361G02
1 3/8 X 2" BOLT	896-361F1108



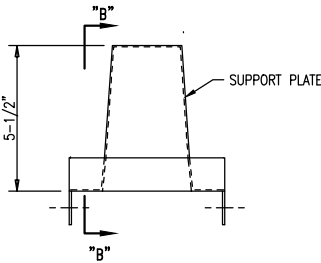
PLAN OF GAS INJECTION PACKING SUPPORT  
2 SUPPORT PLATES REQ'D.



SECTION "A-A"



SECTION "B-B"  
( TYPICAL MODULE )



END PLATE DETAIL

#### NOTES

- TOWER MANHOLE I.D. ACTUAL: 584 BODY FLG.
- PARTS SUPPLIED BY KOCH-GLITSCH ARE IDENTIFIED BY MARK # (E.G. A-301) ENCLOSED AS SHOWN [A-301].
- BOLTING ASSEMBLIES ARE ENCLOSED THUS:  
QUANTITY PER TRAY: 101 / 1010R ASSEMBLY NUMBER
- DIMENSIONS ARE GIVEN IN: INCHES
- ANY MODIFICATIONS BY CUSTOMER OR ANY THIRD PARTY TO THE EQUIPMENT SHOWN ON THIS DRAWING WITHOUT THE PRIOR WRITTEN APPROVAL OF KOCH-GLITSCH WILL VOID ANY APPLICABLE WARRANTIES.
- ALL WARRANTIES AND VOIDANCES THERETO, ARE PER THE SELLER'S STANDARD TERMS AND CONDITIONS OR THE NEGOTIATED TERMS SELLER HAS ACCEPTED.


#### REFERENCE DRAWINGS

- DRAWING 21208-D000 FOR VESSEL ARRANGEMENT.  
DRAWING 21208-D004/D003 FOR DECK DISTRIBUTOR ABOVE.  
DRAWING 21208-D005 FOR EQUIPMENT BELOW.

LIST OF MATERIAL	
DESCRIPTION	TYPE & THICKNESS
SUPPORT PL.	316L - 14 GA.
RIM	316L - 14 GA.
END PLATE	316L - 14 GA.
BOLTS	316L - 3/8"
NUTS	316L - 3/8"
WASHERS	316L - 14GA
CLAMPS	316L - 12GA
TOWER ATTACHMENTS	SEE 21208-D000

EQUIPMENT DESCRIPTION			
QUAN	ITEM	DESCRIPTION	REMARKS
2	E	GAS INJECTION PACKING SUPPORT	AS SHOWN & NOTED
NO.	DESCRIPTION OF REVISION		CHG.BY/DATE
-	-		-

CUSTOMER'S IDENTIFICATION			
PURCHASED BY: ENERFLEX LTD.			
P.O. NO.: 4500209070			
USER: MODERN RESOURCES INC.		PLANT SITE: CUTBANK, AB	
SPEC. NO: KOCH-GLITSCH STD.		REFERENCE: 20378-D005	
TOWER SERVICE: DEETHANIZER		PLANT SECTION:	

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DRAWN BY: ERIC H DATE: 8 JUL 15		MODEL: 814 SUPPORT PLATE	
CHECK BY: EH DATE: 8 JUL 15		SALES ORDER NO.: 21208	
PROCESS: SUNNY DATE: 9 JUL 15		PART NO.: 2120805	
TOWER I.D. 584		TOWER NO. C-130	
APPROVED FOR FABRICATION: BY: ERIC H DATE: 10 JUL 15		DWG. NO.: 21208-D005	
CERTIFIED FINAL AS FABRICATED: BY: - DATE: -		SHT. 1 OF 1 REV. 	

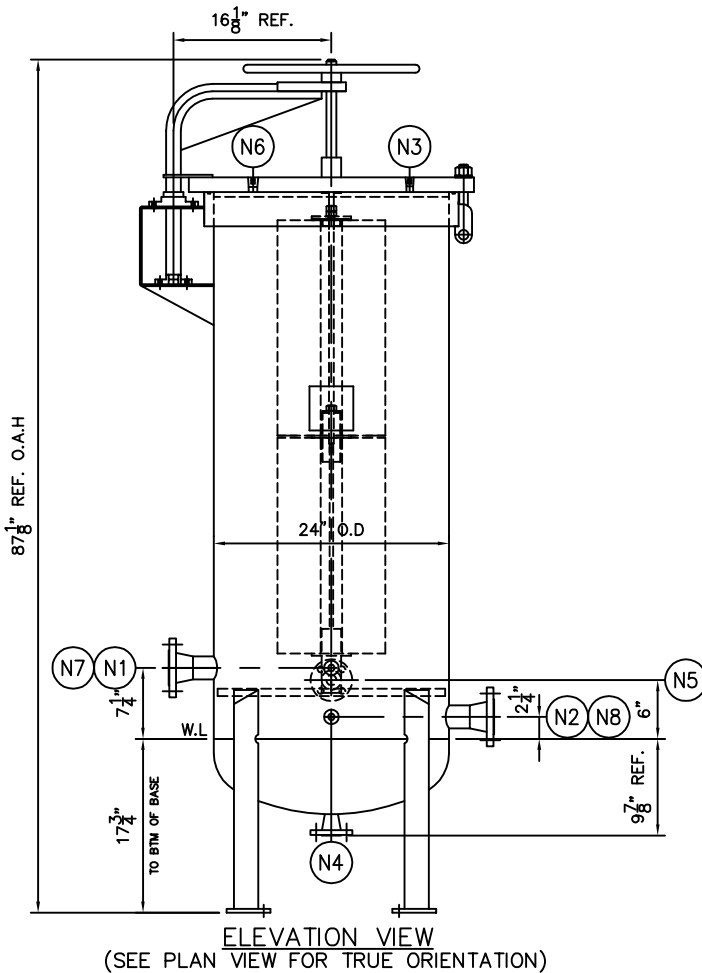
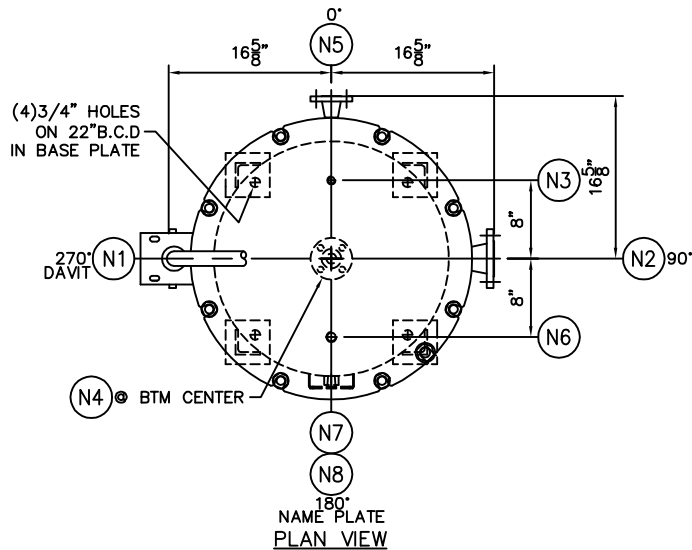
INSTALLATION DRAWING

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**ENERFLEX**

## **Filter Solution Filters Drawings**





## DESIGN DATA

DESIGN PRESSURE	150 PSIG
MIN./MAX DESIGN TEMP.	-20/400°F
CODE	ASME SECT. VIII DIV.1
CODE STAMP	U
CRN	REQ'D FOR AB/BC
CORROSION ALLOWANCE	1/16"
RADIOGRAPHY	NONE
PWHT	NONE

## VESSEL OPENING SCHEDULE

MK.NO.	SIZE	RATING	FITTING	REMARKS
N1	2"	150#	RFWN	SERVICE INLET
N2	2"	150#	RFWN	SERVICE OUTLET
N3	1 1/2"	---	NPT HOLE	VENT
N4	1"	150#	RFWN	CLEAN DRAIN
N5	1"	150#	RFWN	DIRTY DRAIN
N6	3/4"	---	NPT HOLE	PSV
N7	1 1/2"	6000#	THR'D H.C	DP
N8	1 1/2"	6000#	THR'D H.C	DP

## NOTE:

- FLANGE BOLT HOLES SHALL STRADDLE NORMAL
- REMOVE ALL SHARP EDGES
- SURFACE PREP.  
INTERNAL: AS WELDED  
EXTERNAL: SSPC-SP6  
COATING:  
INTERNAL: NONE  
EXTERNAL: STD BLUE ENAMEL
- ESTIMATE EMPTY WEIGHT: 1300 LBS
- MATERIAL  
-SHELL: SA 516 70  
-HEAD: SA 516 70  
-CLOSURE: SA 516 70  
-FLANGE/CPLG: SA 105  
-NOZZLE PIPE: SA 106B  
-BOLT/NUT MATERIAL: SA 193 B7/SA 194 2H (ZINC PLATED)  
-INTERNAL ATTACHMENT: CS  
-EXTERNAL ATTACHMENT: CS  
-O-RING: EPDM
- HOUSING WILL ACCOMMODATE (4) 11" O.D x 22" LG. CARBON CANISTERS STACKED TWO HIGH IN TWO ROWS
- HYDROTEST FOR 30 MINUTES USING CITY WATER

**△TAG# F-910**

CUSTOMER: ESG FILTRATION
CUSTOMER P.O: SHERRY
QUANTITY: 1 REQ'D
WORK ORDER NO.: 17377A
MATERIAL OF CONSTRUCTION: SEE NOTE#5
APPROVED FOR FABRICATION:

TOLERANCES (EXCEPT AS NOTED)	REVISIONS		
	NO.	DATE	BY
DECIMAL ± 0.125"	1	AUG-20-15	BA
	2		
FRACTIONAL ± 3/8"	3		
	4		
ANGULAR ± 1°	5		
	6		

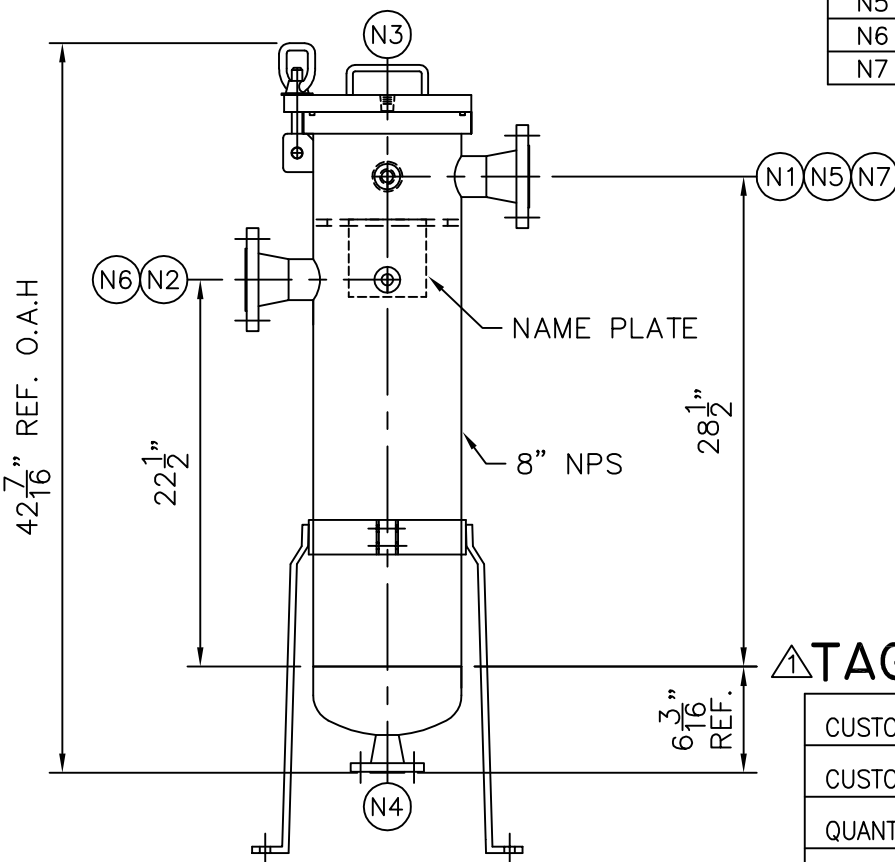
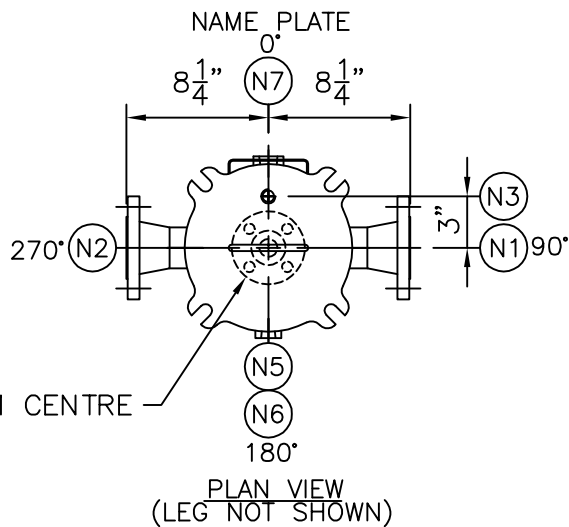
# FILTER SOLUTIONS INC.

BURLINGTON , ONTARIO , CANADA

TITLE  
FS-2-1144-C/S-2"FL CARBON CANISTER FILTER HOUSING G.A

DRW: BA	DATE: JULY-27-2015	DRAWING NO.	REV
CHECK'D: CD	DATE: JULY-27-2015	WO17377A	1
APPR'D: PB	SCALE: NTS		





(3) 5/8"  $\phi$  HOLES IN  
ADJUSTABLE LEG

ELEVATION VIEW

(SEE PLAN VIEW FOR TRUE ORIENTATION)

#### DESIGN DATA

DESIGN PRESSURE	150 PSIG
MIN./MAX. DESIGN TEMPERATURE	-20/300 °F
CODE	ASME SECT. VIII DIV.1
CODE STAMP	UM
CRN	REQ'D AB/BC
CORROSION ALLOWANCE	1/16"
RADIOGRAPHY	NONE
PWHT	NONE

#### VESSEL OPENING SCHEDULE

MK.NO.	SIZE	RATING	FITTING	REMARKS
N1	2"	150#	RFWN	SERVICE INLET
N2	2"	150#	RFWN	SERVICE OUTLET
N3	1/2"	---	NPT HOLE	VENT
N4	1"	150#	RFWN	DRAIN
N5	1/2"	6000#	THR'D H.C	DP
N6	1/2"	6000#	THR'D H.C	DP
N7	3/4"	6000#	THR'D H.C	PSV

#### NOTE:

- FLANGE BOLT HOLES SHALL STRADDLE NORMAL
- REMOVE ALL SHARP EDGES
- SURFACE PREPARATION:  
INTERNAL: AS WELDED  
EXTERNAL: SSPC-SP6  
COATING:  
INTERNAL: NONE  
EXTERNAL: STD BLUE ENAMEL
- ESTIMATED EMPTY WEIGHT: 120 LBS.
- MATERIAL  
-SHELL: SA 106B  
-BTM HEAD: SA 234 WPB  
-CLOSURE: SA 516 70  
-FLANGE/CPLG: SA 105  
-NOZZLE PIPE: SA 106B  
-BOLT/NUT MATERIAL: SA 193 B7/SA 194 2H (ZINC PLATED)  
-INTERNAL ATTACHMENT: CS  
-EXTERNAL ATTACHMENT: CS  
-LEG: CS  
-ORING: EPDM
- HYDROTEST FOR 30 MIN USING CITY WATER
- HOUSING WILL ACCOMMODATE (1) #2 BAG BASKET 1/8"  $\phi$  ON 3/16" STAGGERED CENTRES PERF. PLATE, 40% OPEN AREA, 316SS

**△ TAG# F-909**

CUSTOMER: ESG FILTRATION

CUSTOMER P.O: SHERRY

QUANTITY: 1 REQ'D

FSI WORK ORDER NO.: 17377B

MATERIAL OF CONSTRUCTION: SEE NOTE#5

APPROVED FOR FABRICATION:

TOLERANCES  
(EXCEPT AS NOTED)

#### REVISIONS

NO.	DATE	BY
1	AUG-20-15	BA
2		
3		
4		
5		
6		

DECIMAL  
 $\pm 0.125"$

FRACTIONAL  
 $\pm 3/8"$

ANGULAR  
 $\pm 1^\circ$

# FILTER SOLUTIONS INC.

BURLINGTON , ONTARIO , CANADA

TITLE

FS-180-SE-C/S-2"FL-STYLE#2 GENERAL ARRANGEMENT

DRW: BA

DATE: JULY-27-2015

DRAWING NO.

REV

CHECK'D: CD

DATE: JULY-27-2015

WO17377B

1

APPR'D: PB

SCALE: NTS

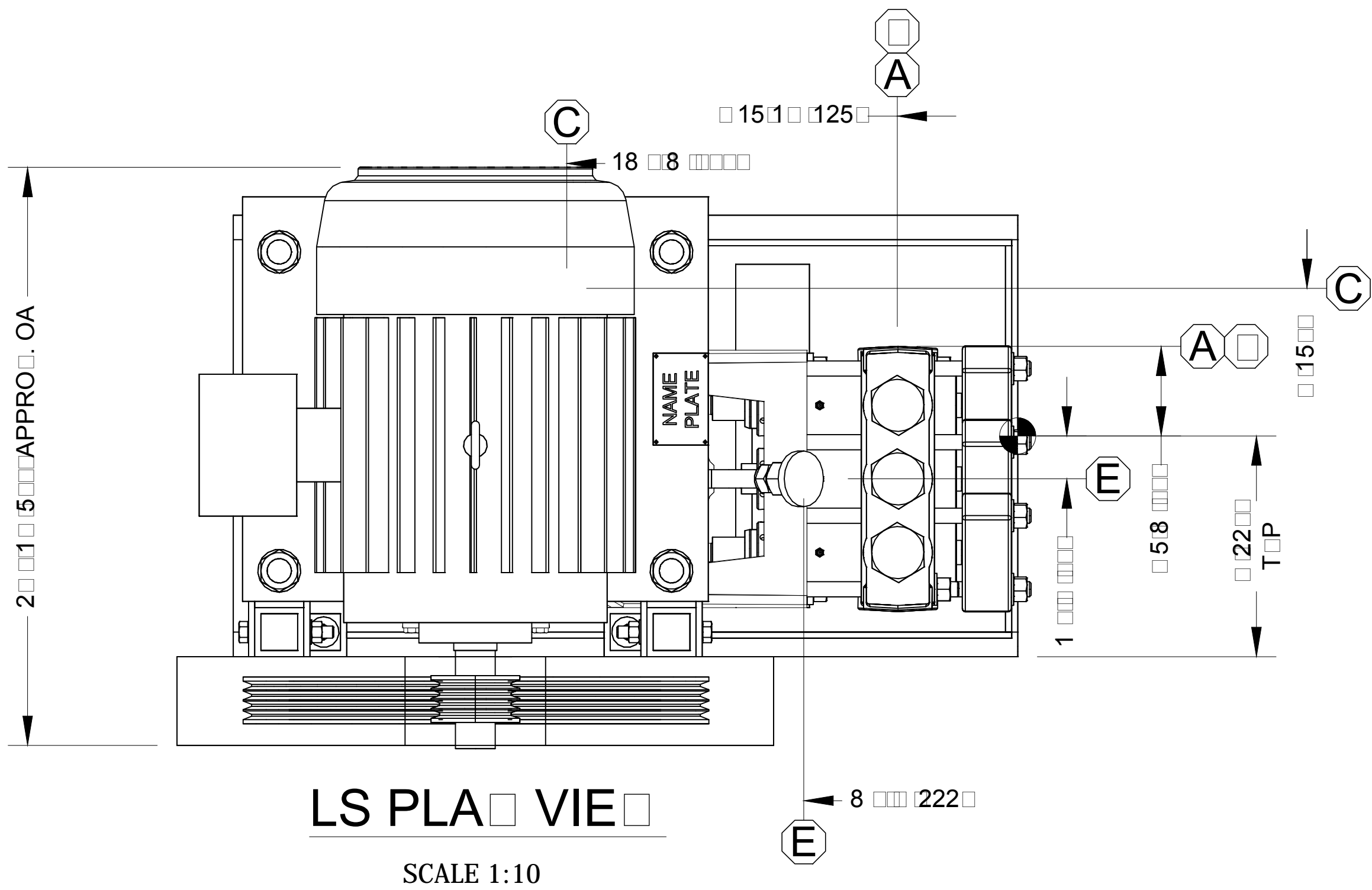
SHT.NO: 1

OF 1

**ENERFLEX**

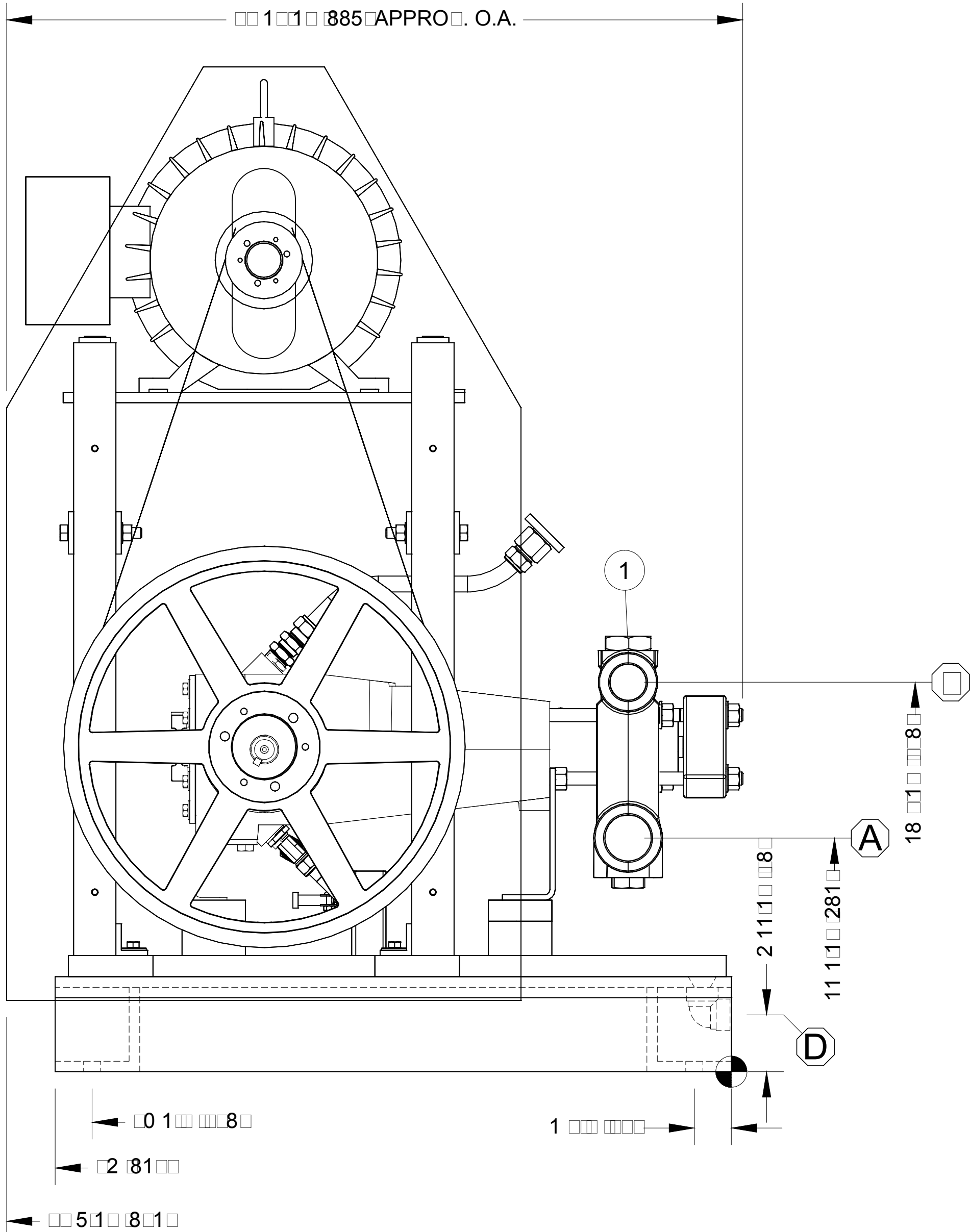
## **Vendor Drawings**





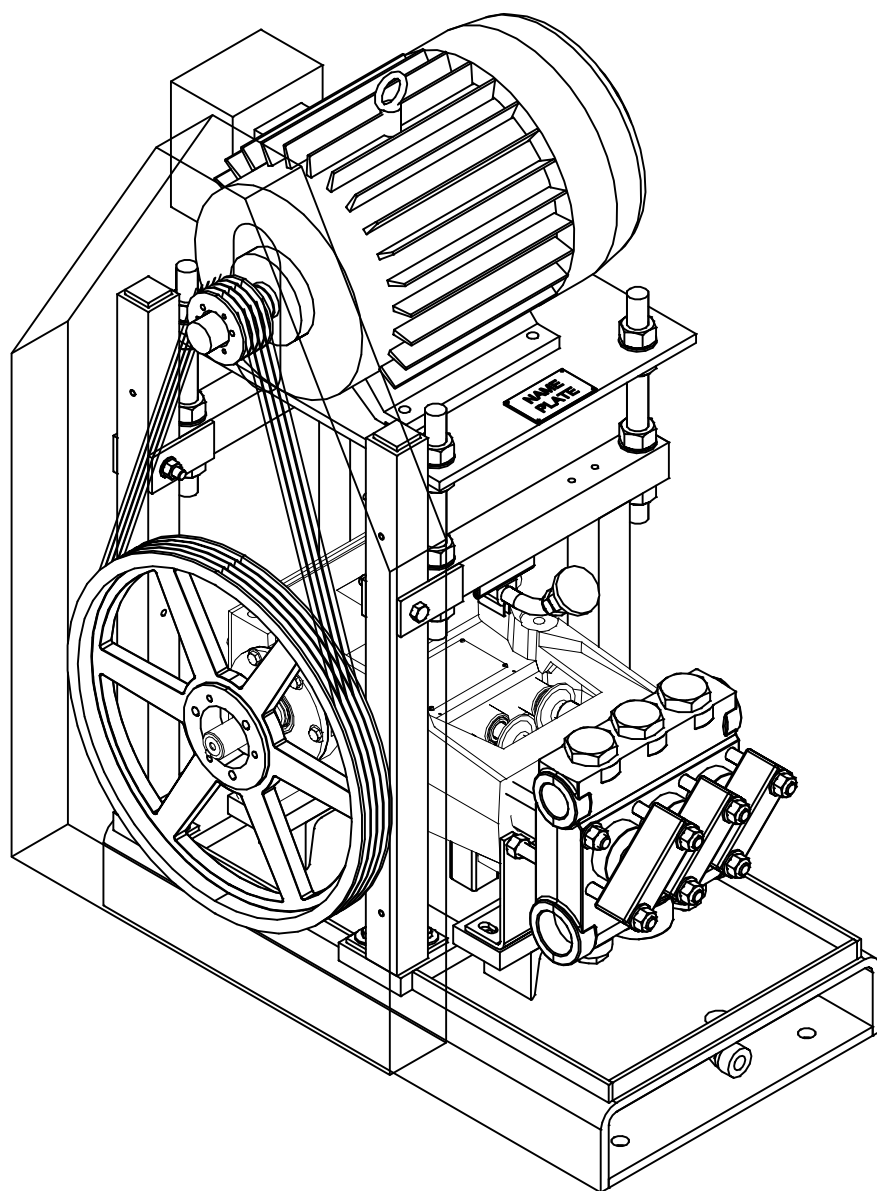
LS PLAN VIEW

SCALE 1:10



LS ELEVATION VIEW

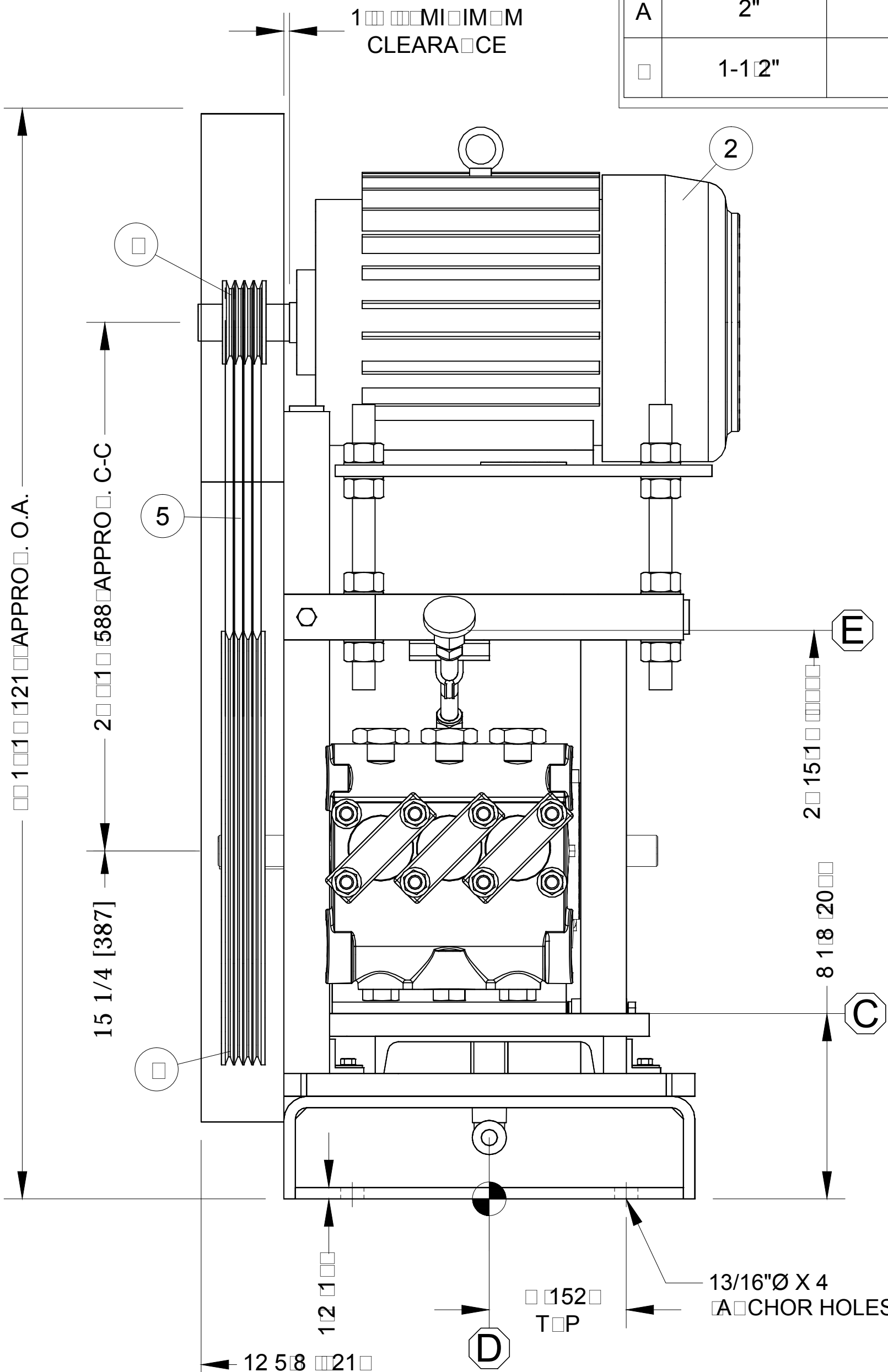
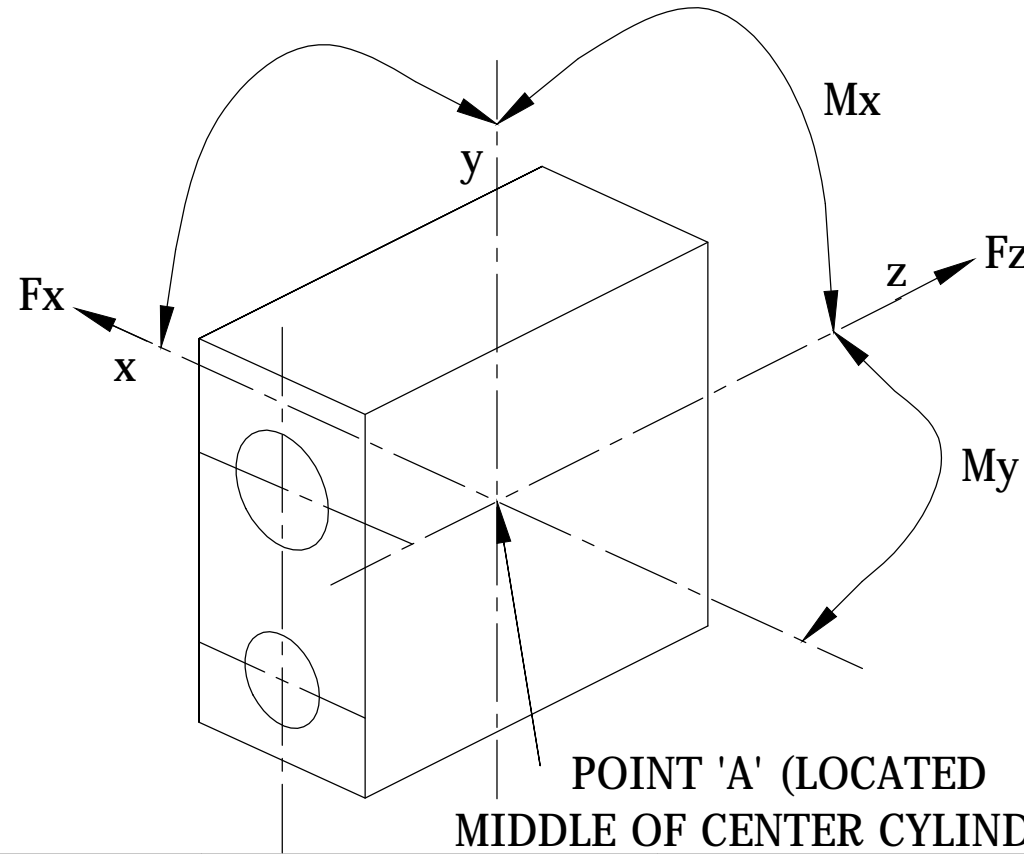
SCALE 1:10



ISOMETRIC VIEW

COORDINATE	SIZE	FORCE LBS	MOMENTS FT. LBS
A	2"	100	210
	1-1/2"	108	105

COORDINATE	SIZE	DESCRIPTION
A	2" NPT	PUMP SECTION
	1-1/2" NPT	PUMP DISCHARGE
C	1/2" NPT	PUMP DRAIN
D	1/2" NPT	BASE DRAIN
E	1/2" NPT	PUMP OIL FILL



FRONT ELEVATION VIEW

SCALE 1:10

MASTER BILL OF MATERIAL

ITEM	QTY	DESCRIPTION
1	1	FMC PUMP ASSEMBLY; M0614 API CS, DBL EXT, - LIQUID END ASSEMBLY & COMPONENTS: - FLUID CYLINDER GROUP; M06 HV DI, W/2" NPT X 1-1/2" NPT FLUID END, AR VALVE ASSEMBLIES, METAL SEATED P/N: P527724 - STUFFING BOX, 2.375" PACKING BORE, 2-1/2"-12 UN-2B THREAD, 3.13" LONG, TWO 1/2" NPT PORTS, CARBON STEEL, TRACEABLE P/N: P530315 - PACKING, 214 GFOKEV BRAIDED RING, 1.750" I.D. X 2.375" O.D. X 1.06" WORKING LENGTH P/N: P530332 - PLUNGER, 7.25" LONG, STD. TUNGSTEN, 303 SST BASE MATERIAL P/N: 3269062
2	1	TECO TEFC MOTOR, 7.5 HP @ 1200 RPM, Ph3/60Hz/460 VAC, 254T FRAME MOTOR, PREMIUM EFFICIENCY
	1	PUMP DRIVE SHEAVE, 3V19.0-3 C/W SF 1-3/8" BUSHING
	1	MOTOR DRIVE SHEAVE, 3V4.12-3 C/W SH 1-5/8" BUSHING
5		3VX850 BELT

APPLICATION REQUIREMENTS

DISCHARGE PRESSURE	SUCTION PRESSURE	CAPACITY	DUTY CYCLE
10 PSI	18.0 PSI	11.0 GPM	NOT PROVIDED

FLUID PROPERTIES

NAME	TEMPERATURE	VISCOSITY	ABRASIVE POTENTIAL	SG
ETHYLENE GLYCOL	153°F	2.0 CP	-	1.05

PUMP SPECIFICATIONS

MODEL	SUCTION CONNECTION	DISCHARGE CONNECTION	RATED PRESSURE	PUMP SPEED
M0614	2" NPT	1-1/2" NPT	-	-

OVERALL DIMENSIONS

APPROXIMATE WEIGHTS

PACKAGE LENGTH	PUMP WEIGHT	MOTOR WEIGHT	SKID MISC WEIGHT	TOTAL PACKAGE WEIGHT
21" L x 18" W x 18" H	215 LBS	288 LBS	100 LBS	603 LBS

PAINT SPECS

GENERAL PAINT SPEC

ONE COAT SHOP PRIMER ONE COAT MACHINE EPOXY PAINT, COLOR GRAY

PROJECT COORDINATION DETAIL

CUSTOMER ORDER	PHONE NUMBER	EMAIL
-	-	-
CUSTOMER PROJECT MANAGER	PHONE NUMBER	EMAIL
-	-	-
PIPE PROJECT MANAGER	PHONE NUMBER	EMAIL
-	-	-

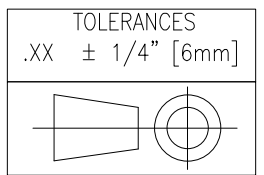
CUSTOMER APPROVAL SIGNATURE REQUIRED

NOTE: - ALL DIMENSIONS TO BE SHOWN AND PROVIDED BY OTHERS

- ALL DIMENSIONS ARE IN INCHES

- FOR CLARITY: - SOME DETAILS MAY BE SHOWN AS WELD LINE - SOME HIDDEN LINES MAY NOT BE SHOWN - PIPING TIGHTENING DETAILS FOR OPTIONAL COMPONENTS NOT SHOWN - PIPING CONNECTIONS WITH PIPE SCOPE OR SUPPLIER MAY VARY

0.0, 0.0 DATUM



PROJECT NAME

CUSTOMER: ENTERLE LTD

LOCATION

TAG

SLS: 8

NOTE: CG 201 0.0

PO: 5001012

DWN BY: DHT

DATE: MAR 05 11

DWG#:

CHK BY: AM

DATE: MAR 21 11

8-200

APP BY: AM

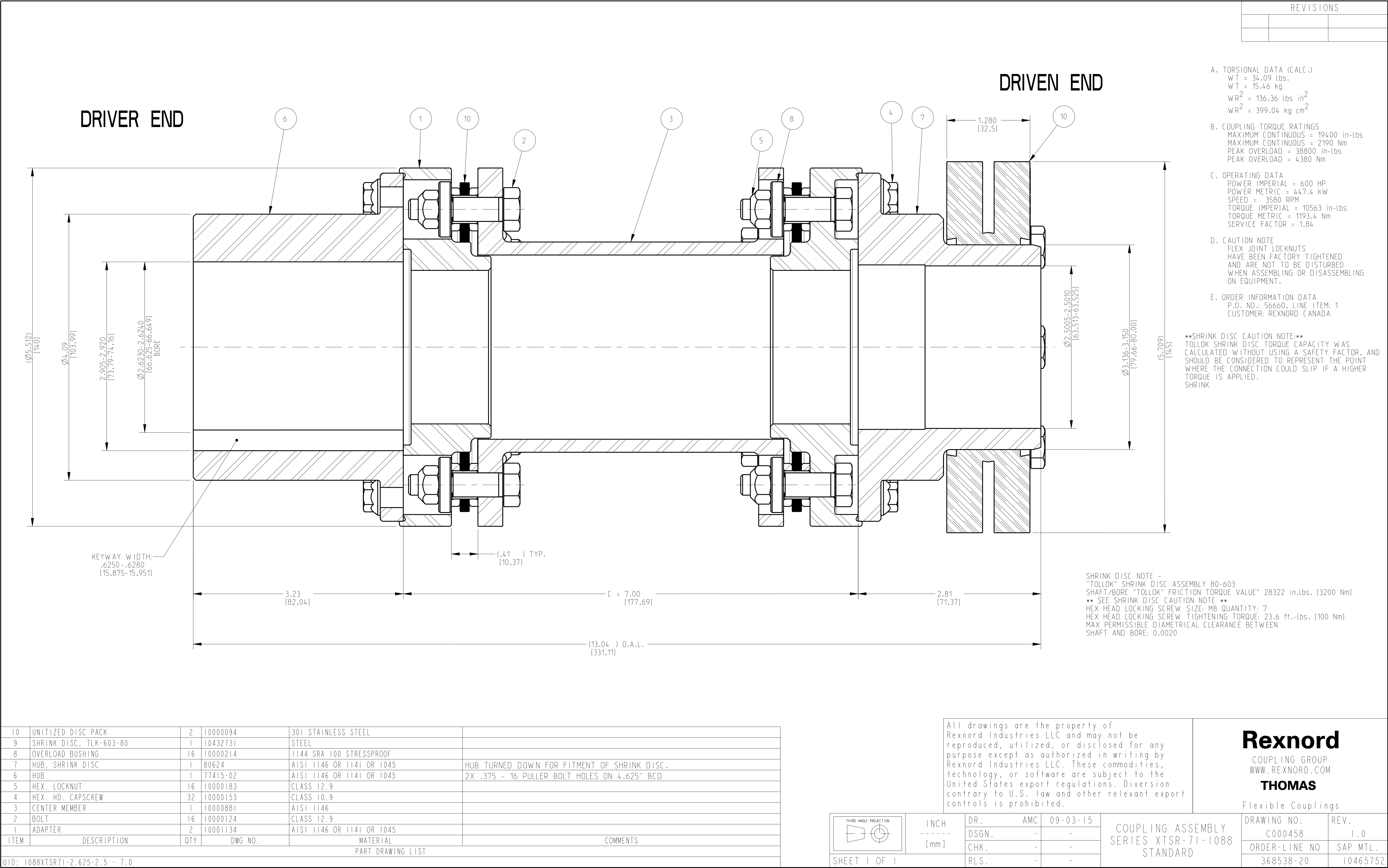
DATE: MAR 21 11

SCALE: SCALED

CAD: CAD10.5

REV: 0

GENERAL ARRANGEMENT  
FMC M06 (LH)



**ENERFLEX**

## **Hoist & Trolley Certificates**





## *Certificate of Inspection and Test*

*This is to certify that the nominated size and quality of the following NOVA product has been inspected and subjected to the tests as required in ANSI B30.16 or B30.21 (as applicable).*

*Description:* CHAIN BLOCK

*WLL:* 5t *Test Load:* 7.5t

*Serial Number:* 15080264

*Manufactured and tested for and on behalf of*

**VULCAN HOIST CO. LTD**

*Date:* 22.06.2015

*Signed by:*

*U.SATO*

*Testing Officer*

*EOU 2133-04*

## *Certificate of Inspection and Test*

*This is to certify that the nominated size and quality of the following NOVA product has been inspected and subjected to the tests as required in ANSI B30.16 or B30.21 (as applicable).*

*Description:*      GEARED TROLLEY

*WLL:*      5t      *Test Load:*      6.25t

*Serial Number:*      15051012

*Manufactured and tested for and on behalf of*

*VULCAN HOIST CO. LTD*

*Date:*    25 .05. 2015    *Signed by:*    U.SATO  
*Testing Officer*

EOU2133-04