

ITEM	QTY	RATING	DESCRIPTION
U2	1	4" 300# RF	RECYCLE TAIL GAS INLET
U3	1	4" 150# RF	RECYCLE TAIL GAS OUTLET
U4	1	4" 150# RF	COOLING WATER INLET
U5	1	4" 150# RF	COOLING WATER OUTLET
U6	1	1 1/2" 150# RF	INSTRUMENT AIR
U7	1	1 1/2" FNPT	NITROGEN PURGE
U8	1	1" 300# RF	SKID FLOOR DRAIN
			K.O. POT MAIN DRAIN

MAIN COMPONENT LIST			
ITEM#	TAG#	DESCRIPTION	DATA / INFORMATION
1	PKM-592	HYUNDAI INDUCTION MOTOR	250 HP AT 892 RPM / 460V, 8P, 60Hz
2	PK-592	ARIEL JGJ-2 COMPRESSOR FRAME	3.5" STROKE, 1.50" OD RODS
3	C1	CYLINDER 1: THROW #2	9.75" ID x 3.5" STROKE / 635 PSIG MAWP
4	PK-592-V1A	SUCTION BOTTLE-(CYL.1) THROW #2	18" OD X 30" S/S / MAWP: 400 PSIG @ 350°F
5	PK-592-V2A	DISCHARGE BOTTLE-(CYL.1) THROW #2	18" OD X 48" S/S / MAWP: 500 PSIG @ 350°F
6	C2	CYLINDER 2: THROW #1	9.75" ID x 3.5" STROKE / 635 PSIG MAWP
7	PK-592-V1B	SUCTION BOTTLE-(CYL.2) THROW #1	18" OD X 30" S/S / MAWP: 400 PSIG @ 350°F
8	PK-592-V2B	DISCHARGE BOTTLE-(CYL.2) THROW #1	18" OD X 48" S/S / MAWP: 500 PSIG @ 350°F
9	PK-592-V3	SUCTION SCRUBBER	20" OD X 48" S/S MAWP: 400 PSIG @ 350°F
10	PK-592-E1	RECYCLE COOLER	10.75" OD X 108" SHELL - MAWP: 150 PSIG @ 200°F
11	PK-592-V3A	DISTANCE PIECE K.O. POT	MDMT: -20°F @ 400 PSIG
12	PK-592-V3B	PACKING CASE K.O. POT	TUBE - MAWP: 450 PSIG @ 250°F
13	PK-592-P1A	MAIN OIL PUMP FRAME DRIVEN	10 GPM @ 60 PSI
14	PK-592-H1	CRANKCASE HEATER	750W, 120V-1P-60H
15	PK-592-PM1B	AUX. PUMP MOTOR	2 HP ELECTRIC, 1750 RPM, 460V-3P-60H
16	PK-592-P1B	AUX. OIL PUMP	MMO D3EBCS-143JD: 12.4 GPM @ 75 PSI
17	PK-592-E2	LUBE OIL HEAT EXCHANGER	300 PSIG @ -20F/300F - OIL FLOW, 12 GPM MBTU/MIN
18	PNL-0749B	UNIT CONTROL PANEL	NEMA 4X, CLASS 1, GROUP C/D, DIV. 2
MISC. COMPONENTS			
19		LIFTING LUGS	
20		ANCHOR BOLTS	
21		FLYWHEEL MAJOR O.D. 21.43" x 4.43" WIDE	ARIEL NO. JTM-306
22		COUPLING CMR: SIZE 450; 18.38" ADP; HD BOLTS	REX-THOMAS FLEXIBLE DISC COUPLING
23		PVC 0162 NPS 2 ET 66T; SIZE 40 DVC6200 SS	FISHER CONTROL VALVE: 2"-300# RF CONNECTIONS
24		GATE VALVE RECYCLE COOLER: GAS INBOARD	4"-300# RF CONNECTIONS
25		GATE VALVE RECYCLE COOLER: GAS OUTBOARD	2"-300# RF CONNECTIONS
26		FILTER AUX. LUBE OIL FILTERS	DUPLEX OIL FILTERS #D-7507
27		FILTER MAIN COMP. OIL FILTER	ARIEL CORP. #A-661 SPIN-ON FILTER
28		OIL LEVEL CONTROLLER	KENCO #KLC-9
29		PRESSURE RELIEF VALVE - AUX. LUBE OIL	FULFLO #V-SERIES
30		THERMOSTAT / AUX. LUBE OIL	FPE #S110-170
31		DAY TANK - OIL	20 GALLON CAPACITY
32		PUMP for DAY TANK - OIL	120 PSI / 8.3 BAR ARO 1" DIAPHRAGM PUMP #66100-362-C

SCHEDULE OF OPENINGS			
ITEM#	QTY	RATING	DESCRIPTION
PK-592-V3 SUCTION SCRUBBER BOTTLE			
S1	1	4" 300# RF	TAIL / RECYCLE GAS INLET CONN.
S2	1	4" 300# RF	TAIL / RECYCLE GAS OUTLET CONN. to THROW 2
S3	1	4" 300# RF	TAIL / RECYCLE GAS OUTLET CONN. to THROW 1
S4	1	4" 300# RF	RECYCLE GAS INLET CONN. from COOLER
S5	2	4" 300# RF	INSPECTION OPENING / BLIND FLANGE
S6	1	2" 300# RF	VENT
S7	1	1" 300# RF BLIND	DRAIN
S8	2	1" 300# CPLN	SKIRT VENT
S9	1	2" 300# CPLN	LEVEL SWITCH CONNECTION
S10	1	18" INCH	LEVEL GAGE
P-K-592-V1A SUCTION BOTTLE/CYLINDER 1/THROW TWO			
A1	1	4" 300# RF	TAIL / RECYCLE GAS INLET CONN.
A2	1	1 1/2" 300# RF	VENT CONN.
A3	1	4" 300# RF	INSPECTION PORTAL / BLIND FLANGE
P-K-592-V2A DISCHARGE BOTTLE/CYLINDER 1/THROW TWO			
B1	1	3" 300# RF	TAIL / RECYCLE GAS OUTLET CONN.
B2	1	1 1/2" 300# RF	TI CONN.
B3	1	1 1/2" 300# RF	TE CONN.
B4	1	4" 300# RF	INSPECTION PORTAL / BLIND FLANGE
B5	1	1" 300# RF	DRAIN CONN.
P-K-592-V1B SUCTION BOTTLE/CYLINDER 2/THROW ONE			
C1	1	4" 300# RF	TAIL / RECYCLE GAS INLET CONN.
C2	1	1 1/2" 300# RF	VENT CONN.
C3	1	4" 300# RF	INSPECTION PORTAL / BLIND FLANGE
P-K-592-V2B DISCHARGE BOTTLE/CYLINDER 2/THROW ONE			
D1	1	3" 300# RF	TAIL / RECYCLE GAS OUTLET CONN.
D2	1	1 1/2" 300# RF	TI CONN.
D3	1	1 1/2" 300# RF	TE CONN.
D4	1	4" 300# RF	INSPECTION PORTAL / BLIND FLANGE
D5	1	1" 300# RF	DRAIN CONN.
PK-592-V3A KNOCK-OUT POT/DISTANCE PIECE			
KD1	1	1" NPT	K.O. DRAIN CONNECTION
KV1	1	1" 300# RF	K.O. VENT CONNECTION
LD1	2	3/4" 300# CPLN	LIQUID DRAINER INLET CONNECTION
PK-592-V3B KNOCK-OUT POTS/PACKING CASE			
KD2	1	1" NPT	K.O. DRAIN CONNECTION
KV2	1	1" 300# RF	K.O. VENT CONNECTION
LD2	1	3/4" 300# CPLN	LIQUID DRAINER INLET CONNECTION
PK-592-E1 RECYCLE COOLER / HEAT EXCHANGER			
W1	1	4" 150# RF	COOLING WATER: SHELL SIDE INLET
W2	1	4" 150# RF	COOLING WATER: SHELL SIDE OUTLET
G1	1	4" 300# RF	RECYCLE GAS: TUBE SIDE INLET
G2	1	4" 300# RF	RECYCLE GAS: TUBE SIDE OUTLET
V1	1	3/4" NPT	SHELL SIDE VENT
V2	1	3/4" NPT	SHELL SIDE DRAIN
V3	1	3/4" NPT	TUBE SIDE VENT
V4	1	3/4" NPT	TUBE SIDE DRAIN
LUBE OIL CONNECTIONS CRANKCASE / FRAME			
OF	1	3/4" NPTF	CRANKCASE OIL FILL
OD	1	1/2" NPTF	CRANKCASE DRAIN
OL	1	1" NPTF	L.O. PUMP DISCHARGE PORT
OP	1	1/4" NPTF	CRANKCASE PRIME
OI	1	3/4" NPTF	FILTER INLET
OT	1	1" 150# RF BLIND	DAY TANK LUBE OIL INLET


ONE (1) SKID REQUIRED

NOTES:
 1. UNTIL FABRICATION IS COMPLETE ALL COORDINATES ARE ESTIMATED AND SHOULD BE ASSUMED +/- 2"
 2. CHAIR THRU HOLES "C" ARE Ø1 3/8"
 3. JACK BOLT THRU HOLES "A" ARE Ø1 1/8"
 4. ANCHOR BOLTS ARE Ø1-8 AND 13" PROJECTION ABOVE CONCRETE.
 5. ⊕ = CENTER OF GRAVITY, X=41.62 Y=101.12 Z=29.87
 6. ALL FLANGES IN DIRECT CONTACT WITH HYDROGEN SHALL HAVE 125 RMS FLANGE FACING.
 7. COMPRESSOR/MOTOR SPEED AT FULL LOAD: 892 RPM
 8. SEE DWG# 1423-01-3 FOR LOCATIONS OF CUSTOMER CONNECTIONS

MATERIAL WEIGHTS:		FLYWHEEL:	362 LBS
COMPRESSOR FRAME:	1975 LBS	PIPING & FLANGES: 1", 2", 3" & 4" PIPE	1200 LBS
THROW ONE CYLL LEFT:	1480 LBS	MISC. COMPONENTS:	1000 LBS
THROW TWO CYLL RIGHT:	1480 LBS	RECYCLE COOLER WET:	1574 LBS DRY: 1110 LBS
DRIVE MOTOR:	6019 LBS	SCRUBBER OP-2:	1638 LBS / EMPTY: 1016 LBS
MOTOR COUPLING:	200 LBS	SKID MATERIALS:	9,660 LBS
PULSATION BOTTLES: (IN LBS.)	450 LBS	L.O. SYSTEM & INSTRUMENTATION	450 LBS
OPERATING EMPTY:	250 LBS	PLC PANEL:	250 LBS
THROW #1 SUCTION:	739 LBS	CONCRETE: (1.15 CU. YDS.)	4,080 LBS
THROW #1 DISCHARGE:	927 LBS	GROUT: (4.84 CU. FT.)	650 LBS
THROW #2 SUCTION:	740 LBS	APPROX. TOTAL WEIGHT:	35,351 LBS
THROW #2 DISCHARGE:	927 LBS	EMPTY: 32,674 LBS	
		OPERATING@:	35,351 LBS

CUSTOMER:
 VENTECH XTL OKLAHOMA CITY, OK. LLC
 CUSTOMER PO#: 4777010-14-02793
 CUSTOMER REQ: 4777-010-1222-002-0
 LOCATION: OKLAHOMA CITY
 ITEM NO.: PK-592
 SERVICE: GTL
 TAILGAS RECYCLE COMPRESSOR

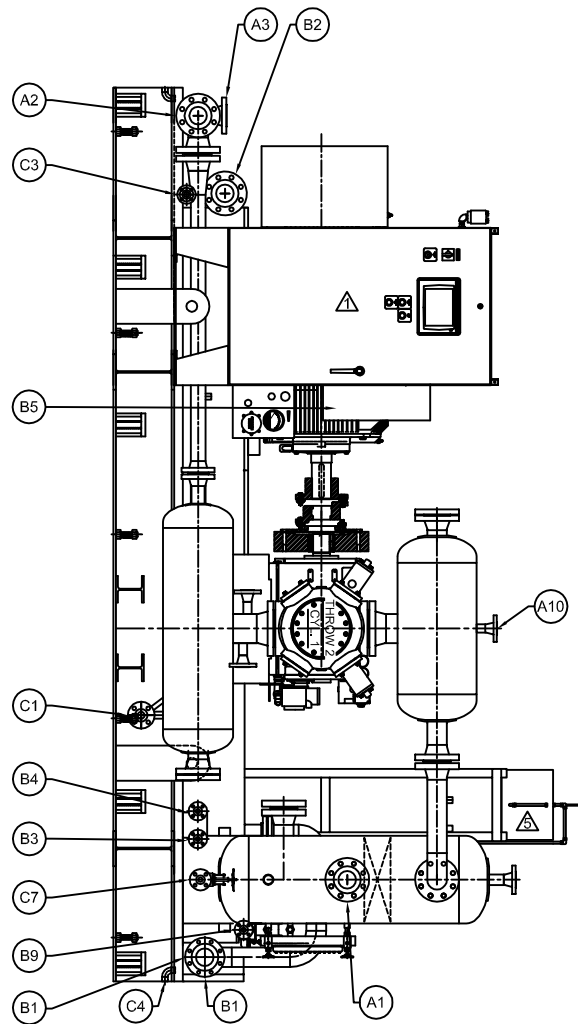
NO.	REVISION	DATE	BY
05	CORRECTED CYLINDER DESIGNATION; ADDED REVISION SYMBOLS	3/22/16	DLW
04	ADDED DAY TANK, PUMP AND MISC. ITEMS	2/8/16	DLW
03	CORRECTION OF GA DWG AS PER TRANSMITTAL 0436: 3/10/15	3/10/15	DLW
02	CORRECTION OF GA DWG AS PER TRANSMITTAL 0331: 2/17/15	2/17/15	DLW
01	CORRECTION OF GA DWG AS PER TRANSMITTAL 0209: 1/30/15	1/30/15	DLW
0	FOR APPROVAL	1/14/15	DLW



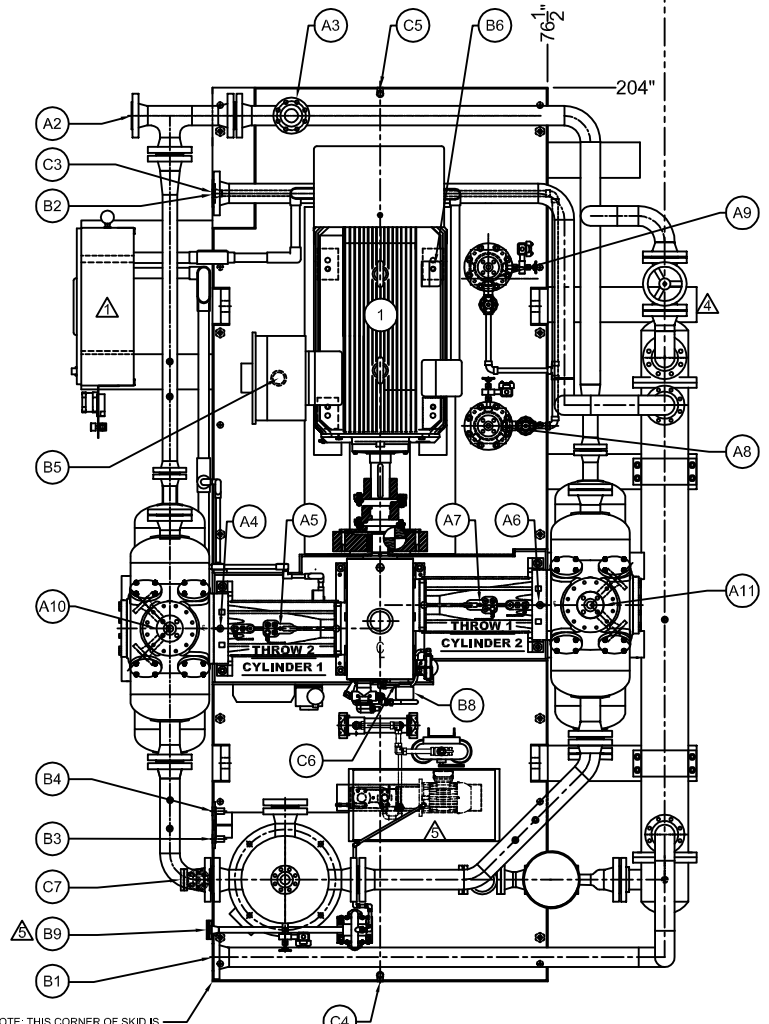
TURBINE, PUMP & COMPRESSOR, LLC
ENGINEERED PRODUCTS
 3203 LILAC, PASADENA, TX 77505

TITLE		GENERAL ARRANGEMENT FOR PK-592	
		RECYCLE TAIL GAS, ARIEL JGJ-2	
		VENTECH XTL OKLAHOMA CITY, LLC, Δ	
DATE	10/21/14	JOB NO.	1423
SCALE: (APPROXIMATE)	IF 11x17 SHEET THEN 1:57	REVISION	05
	IF 22" x 34" SHEET THEN 1:28.5	DWN.	NKF/DLW
CHECKED BY	N. FEASTER	PAGE	1 OF 1
DWG. NO.		DATE	1423-01

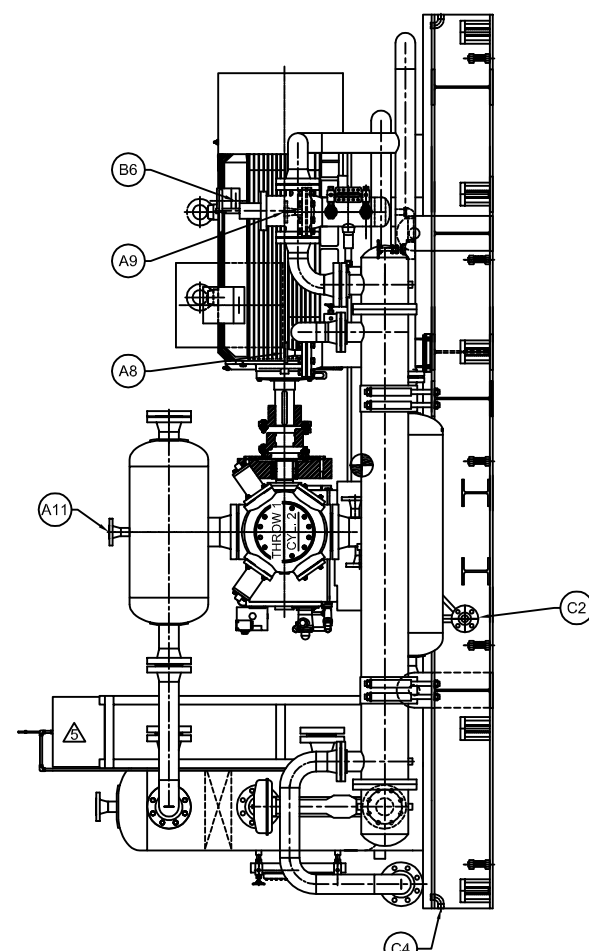
110" INCH MIN DIST. FOR COOLER BUNDLE REMOVAL



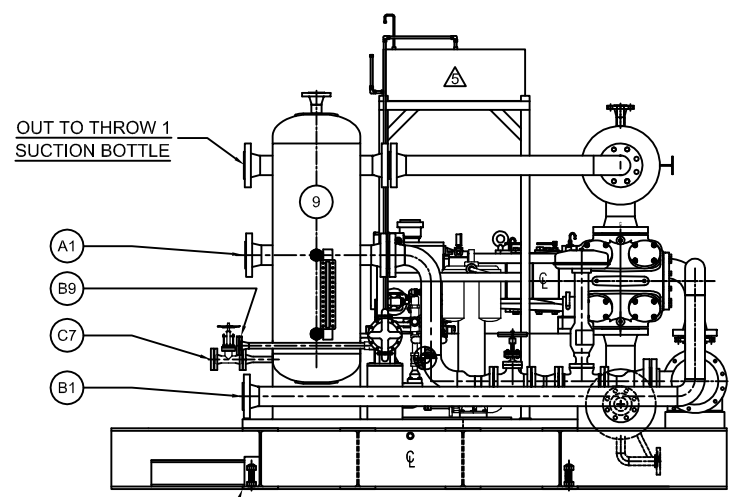
LEFT SIDE



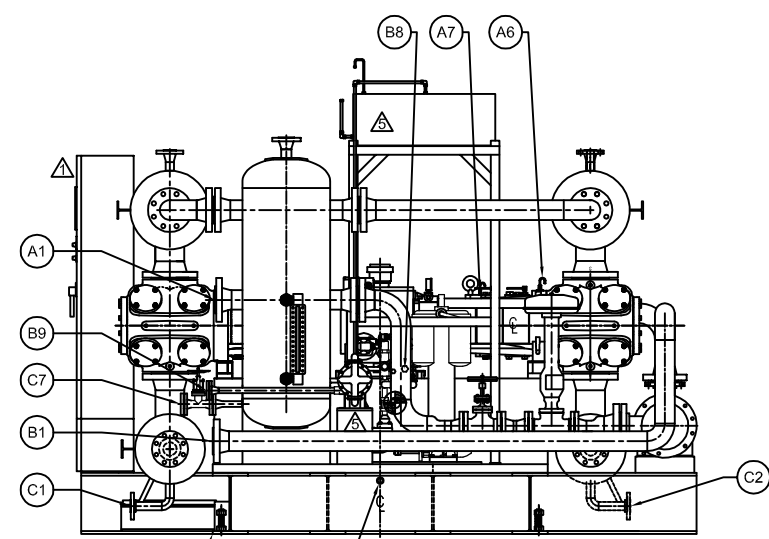
TOP VIEW



RIGHT SIDE



FRONT VIEW



FRONT VIEW

CUSTOMER CONNECTIONS

ITEM	QTY	RATING	DESCRIPTION	COORDINATES / INCHES		
				X	Y	Z
PROCESS GAS CONNECTIONS						
A1	1	4" 300# RF	PROCESS GAS INLET	0.00	23.18	53.44
A2	1	4" 300# RF	PROCESS GAS OUTLET	-18.44	197.44	19.37
A3	1	3" 300# RF	DISCHARGE PRV	18.00	197.44	26.00
A4	1	1/4" FNPT	THROW 2 OUTB. ATMOSPHERIC DIST. PC VENT	1.75	80.50	55.37
A5	1	1/4" FNPT	THROW 2 INB. ATMOSPHERIC DIST. PC VENT	15.44	80.50	54.50
A6	1	1/4" FNPT	THROW 1 OUTB. ATMOSPHERIC DIST. PC VENT	74.75	85.88	55.62
A7	1	1/4" FNPT	THROW 1 INB. ATMOSPHERIC DIST. PC VENT	61.06	85.88	54.50
A8	1	1" 300# RF	DIST. PC K.O. POT VENT TO FLARE	63.00	127.00	47.56
A9	1	1" 300# RF	PRESS. PACKING K.O. POT VENT	63.00	159.56	47.56
A10	1	1 1/2" 300# RF	THROW 2 SUCTION BOTTLE VENT	-9.68	80.50	87.62
A11	1	1 1/2" 300# RF	THROW 1 SUCTION BOTTLE VENT	86.31	85.88	87.62
UTILITY CONNECTIONS						
B1	1	4" 150# RF	COOLING WATER INLET	0.00	5.50	20.94
B2	1	4" 150# RF	COOLING WATER OUTLET	0.00	179.56	31.37
B3	1	1" 150# RF	INSTRUMENT AIR	0.00	32.5	19.50
B4	1	1" 150# RF	NITROGEN PURGE	0.00	38.88	19.50
B5	1	3 1/2" HOLE	MOTOR ELECTRICAL LEADS	15.06	137.68	47.87
B6	1	3/4" MNPT	HEATER BOX / MOTOR	50.25	162.56	58.62
B7			TAG 'B7' NOT USED AT THIS TIME			
B8	1	1" FNPT	FRAME HEATER CONNECTION	43.88	67.25	37.62
B9	1	1" 150# RF	DAY TANK OIL INLET CONNECTION	0.00	11.68	29.62
DRAIN CONNECTIONS						
C1	1	1" 150# RF	THROW 2 DISCHARGE BOTTLE	-9.68	60.75	6.37
C2	1	1" 150# RF	THROW 1 DISCHARGE BOTTLE	86.94	66.12	6.37
C3	1	1" 300# RF	K.O. POT DRAIN	00.00	179.56	16.75
C4	1	1 1/2" FNPT	SKID DRAIN : Compressor End	38.25	0.00	12.18
C5	1	1 1/2" FNPT	SKID DRAIN : Motor End	38.25	204.00	12.18
C6	1	1/2" FNPT	FRAME OIL DRAIN	41.25	68.25	37.18
C7	1	1" 300# RF	SCRUBBER BOTTLE DRAIN	-6.50	23.18	19.94
CENTER OF GRAVITY				41.62	101.12	29.87

COMMENTS: 'B8' IS THE CONNECTION WHERE THE WIRING WILL RUN THROUGH WHEN CONNECTING THE CHROMALOX IMMERSION HEATER FOR THE FRAME OIL. THIS CONNECTION IS ON THE 'TYPE E2' ENCLOSURE ON HEATER.

- NOTES:**
- UNTIL FABRICATION IS COMPLETE ALL COORDINATES ARE ESTIMATED AND SHOULD BE ASSUMED +/- 2"
 - X, Y, Z ZERO DATUM POINT IS THE BOTTOM LEFT CORNER OF SKID FACING THE 'FRONT END'.
 - T.P.C. TO PROVIDE AND INSTALL BLIND FLANGES ON B9 & C7

CUSTOMER: VENTECH XTL OKLAHOMA CITY, OK. LLC
 CUSTOMER PO#: 4777010-14-02793
 CUSTOMER REQ: 4777-010-1222-002-0
 LOCATION: OKLAHOMA CITY
 ITEM NO.: PK-592
 SERVICE: GTL
 TAILGAS RECYCLE COMPRESSOR

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NO.	REVISION	DATE	BY
07	CORRECTED CYLINDER DESIGNATION; ADDED REVISION SYMBOLS; REMOVED BY CONNECTION FROM TABLE	DLW	3/22/16
06	CORRECTED FLANGE RATING B9 & C7; ADDED NOTE	DLW	3/11/16
05	CORRECTION OF SA DWG AS PER TRANSMITTAL 0408-327115 AND ADDED DAY TANK, PUMP AND MISC. ITEMS	DLW	1/15/16
04	MOVED OUTRIGGER BEAMS AS PER STUDY; ADDED ITEM B8 & CORRECTED NOTE C1 AND C7	DLW	3/10/15
03	ADDED 2ND FRONT VIEW FOR CLARITY	DLW	2/17/15
02	CHANGED 'C3' TO 1"-300# RF CONNECTION	DLW	2/10/15
01	ADDED CONTROL PANEL	DLW	2/2/15

ONE (1) SKID REQUIRED

TURBINE, PUMP & COMPRESSOR, LLC
ENGINEERED PRODUCTS
3203 LILAC, PASADENA, TX 77505

LOCATION of CUSTOMER CONNECTIONS
RECYCLE TAIL GAS, ARIEL JGJ-2
VENTECH XTC OKLAHOMA CITY, LLC.

DATE: 12/04/14 JOB NO.: 1423 SCALE: NTS REVISION: 07
 DWN: DLW CHECKED BY: N. FEASTER PAGE: 1 OF 1 DWG NO.: 1423-01-3