

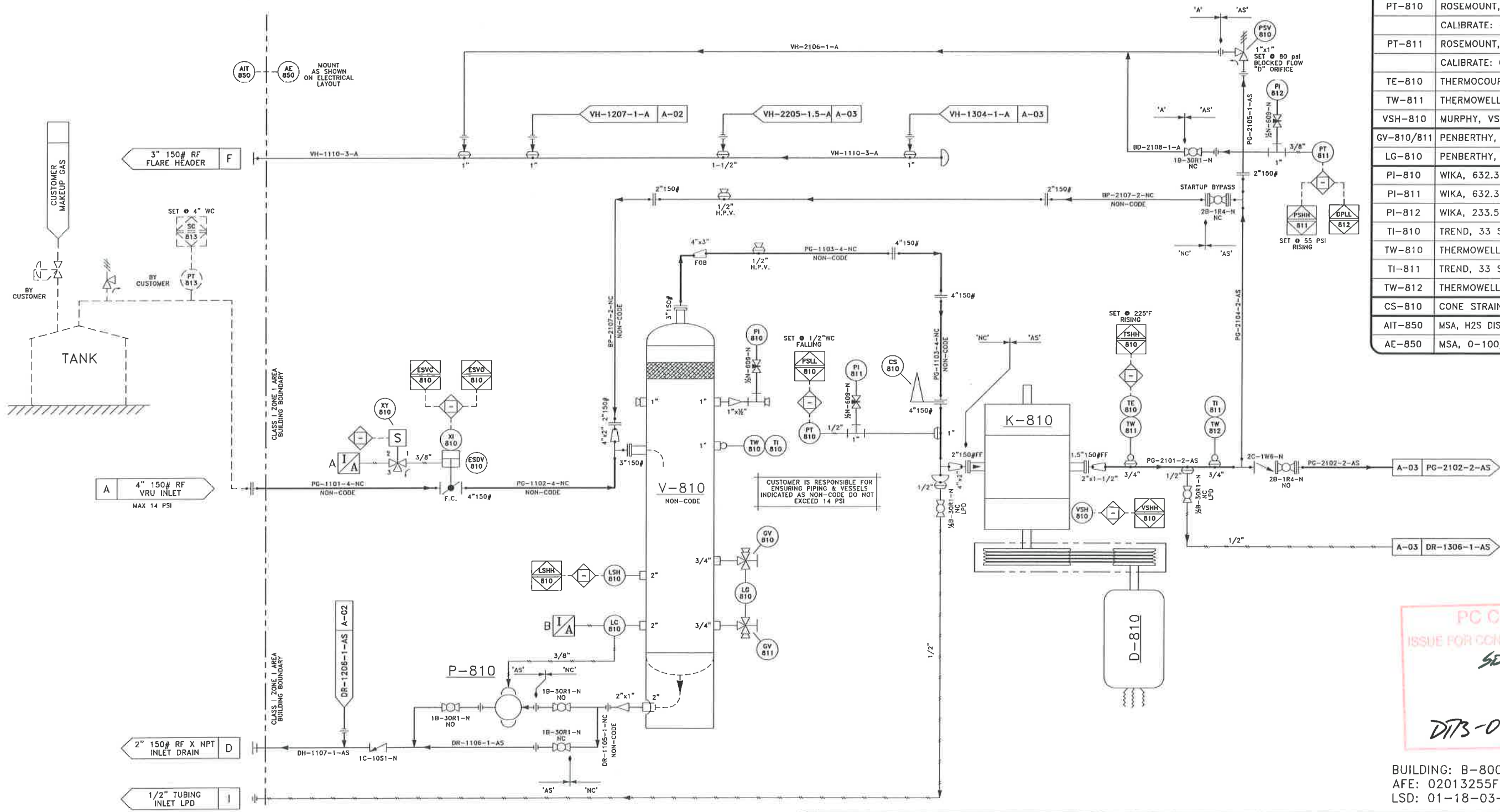
E:\Work\PC-512 RF-13018 SCC w20hp 5CC w30hp Tundra Oil and Gas\A-PID-RF13018 Rev 1.dwg, 10/07/13 3:32:52 PM, scottccc, Property of PC Compression Inc. Duplication or transmittal without written consent is prohibited.

**V-810**  
**VRU SUCTION SCRUBBER**  
 Manufacturer: FOUR STAR RESOURCES  
 Size: 12.75" x 5' S/S  
 MAWP: 14 psig @ 300°F  
 MDMT: -20°F @ 14 psig  
 NO RADIOGRAPHY  
 NON-CODE

**P-810**  
**VRU LIQUID DISPOSAL PUMP**  
 Manufacturer: SANDPIPER  
 Model: S1FB1SGTANS700  
 Flow Rate: 5usgpm @ 50psi  
 7 SCFM @ 60psi AIR  
 316SS c/w PTFE Diaphragms  
 AIR ONLY  
 Serial No:

**K-810**  
**VRU COMPRESSOR**  
 Manufacturer: RO-FLO  
 Model: 5CC  
 CYL MAWP: 80 psig @ 350°F  
 OP MAWP: 50 psig @ 350°F  
 Speed: 865 - 1765 RPM  
 Serial No:

**D-810**  
**VRU DRIVE MOTOR**  
 Manufacturer: TECO-WESTINGHOUSE  
 Model: XH0204  
 Rating: 575VAC/3Ph/60Hz  
 20HP @ 1765RPM  
 TEXP, NEMA 'B' DESIGN  
 CSA CLASS I ZONE I INVERTER DUTY  
 VFD RATED 10:1 CT  
 Serial No:



CUSTOMER IS RESPONSIBLE FOR ENSURING PIPING & VESSELS INDICATED AS NON-CODE DO NOT EXCEED 14 PSI

**BILL of MATERIAL**

ITEM TAG	DESCRIPTION
PSV-810	TAYLOR, 82D234, 1"x1"NPT, 'D' ORIFICE, SET @ 80PSI
ESDV-810	EL-O-MATIC ES0350, SPRING RETURN, F.C., 80PSI c/w FISHER 8580 CONTROL DISC, 4"150#, NACE
XI-810	TOPWORX, DXP-L21GNEB C/W (2) SPDT GO SWITCHES
XY-810	ASCO, EF8320G202, 24VDC, 1/4" NPT, 115 PSI
LC-810	WELLMARK, W1200DVO-SS, 2"NPT, 30 to 70 PSI, NACE
LSH-810	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
PT-810	ROSEMOUNT, 2051CG2A72A1A-K6M5, 250"WC, 4-20mA CALIBRATE: -30 to 60" WC
PT-811	ROSEMOUNT, 2088G2S22A1-C6M5, 150PSI, 4-20mA CALIBRATE: 0 to 100 PSI
TE-810	THERMOCOUPLE, TYPE K, 6" PROBE, 72" LEAD
TW-811	THERMOWELL, 3/4"NPT X 2.5" LONG, 316SS
VSH-810	MURPHY, VS2EX
GV-810/811	PENBERTHY, 330J-N, 3/4"x1/2" NPT, NACE
LG-810	PENBERTHY, 1RM-9, 1/2" NPT, NACE
PI-810	WIKA, 632.34, 60"WC, 1/2" NPT, 316SS
PI-811	WIKA, 632.34, 60"WC, 1/2" NPT, 316SS
PI-812	WIKA, 233.54, 100 PSI, 1/2" NPT, 316SS
TI-810	TREND, 33 SERIES, 1/2" NPT, 6" STEM, -40°F to 160°F
TW-810	THERMOWELL, 1"NPT X 6" LONG, 316SS
TI-811	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, 50°F to 500°F
TW-812	THERMOWELL, 3/4"NPT X 2.5" LONG, 316SS
CS-810	CONE STRAINER, 4"150#, CS, 300%, #20 SCREEN
AIT-850	MSA, H2S DISPLAY, ULTIMAX-XP-E17C1D00000100, 4-20mA
AE-850	MSA, 0-100ppm, REMOTE H2S SENSOR

**MASTER COPY**

**PC COMPRESSION**  
 ISSUE FOR CONSTRUCTION  
 SDC  
 DATE: 08/10/2013  
 DEPT: PROD  
 DTS-0236

BUILDING: B-800  
 AFE: 02013255FC  
 LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
1	REVISION TO UPDATE ITEM TAGS	SDC	10-07-13		
0	ISSUED FOR CONSTRUCTION	SDC	09-10-13	SDC	GDB
8	REVISED PER CUSTOMER COMMENTS, ISSUED FOR APPROVAL	GDB	07-30-13	SDC	GDB
A	ISSUED FOR APPROVAL	GDB	07-10-13	SDC	GDB



2308-8th Street  
 Nisku Alberta  
 T9E 7Z2  
 Office: 780.955.4292  
 Fax: 780.955.4294  
 Toll Free: 866.955.4292

Drawn by: GDB	<b>20HP VRU &amp; 30HP BOOSTER PACKAGE</b>			
Date: JUL 06-13	RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP			
Checked by: SDC	SOUR NAUTRAL GAS SERVICE			
Approved by: GDB	Company: TUNDRA OIL & GAS PARTNERSHIP			
Scale: N.T.S.	Quote/Rev. No.: Q-13019 R1	JOB NO.: PC-512	Unit NO.: RF-13018	Drawing NO.: PID-RF13018-A-01

E:\Work\PC-512 RF-13018 SCC w20hp w30hp Tundra Oil and Gas\A-PID-RF13018 Rev 1.dwg, 10/07/13 3:33:00 PM, scofpcpc, Property of PC Compression Inc. Duplication or transmittal without written consent is prohibited.

**V-820 BOOSTER SUCTION SCRUBBER**

Manufacturer: FOUR STAR RESOURCES  
 Size: 12.75" ø x 5' S/S  
 MAWP: 230 psig @ 300°F  
 MDMT: -20°F @ 230 psig  
 Corrosion Allowance: 0.125"  
 CRN: AB + MB  
 100% RADIOGRAPHY  
 Serial No:  
 (A)

**K-820 BOOSTER COMPRESSOR**

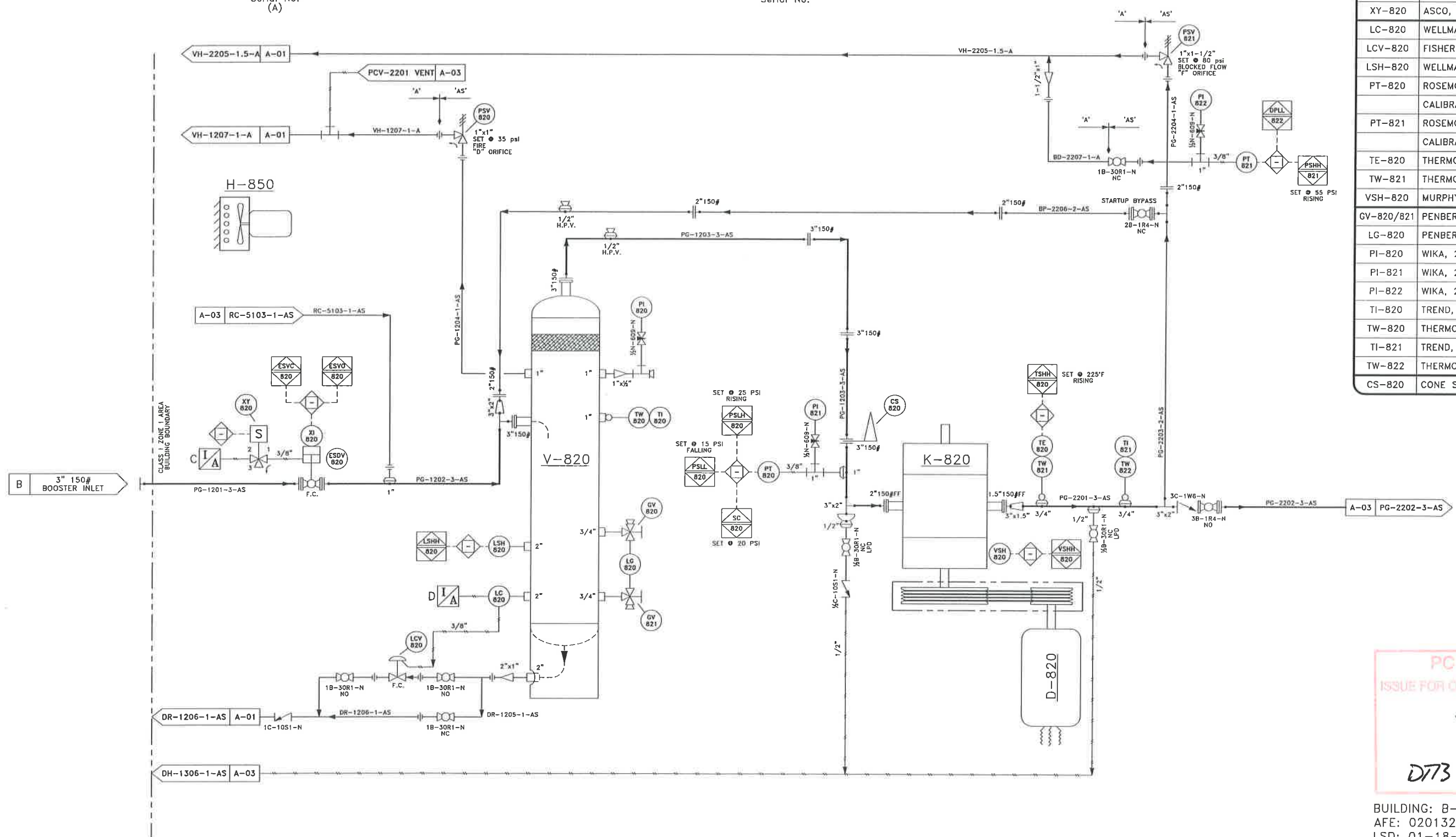
Manufacturer: RO-FLO  
 Model: 5CC  
 CYL MAWP: 80 psig @ 350°F  
 OP MAWP: 50 psig @ 350°F  
 Speed: 865 - 2200 RPM  
 Serial No:

**D-820 BOOSTER DRIVE MOTOR**

Manufacturer: TECO-WESTINGHOUSE  
 Model: XH0304  
 Rating: 575VAC/3Ph/60Hz  
 30HP @ 1765RPM  
 TEMP, NEMA 'B' DESIGN  
 CSA CLASS I ZONE I INVERTER DUTY  
 VFD RATED 10:1 CT  
 Serial No:

**H-850 BUILDING HEATER**

Manufacturer: HAZLOC  
 Model: XEU1-100-600360-BTA  
 Rated: 10 kW/hr  
 575VAC/3Ph/60Hz  
 c/w Thermostat  
 Serial No:



BILL of MATERIAL	
ITEM TAG	DESCRIPTION
PSV-820	TAYLOR, 82D134, 1"x1"NPT, 'D' ORIFICE, SET @ 35PSI
PSV-821	TAYLOR, 82F366, 1"x1.5"NPT, 'F' ORIFICE, SET @ 80PSI
ESDV-820	EL-O-MATIC ES0350, SPRING RETURN, F.C., 80PSI c/w 'KF' BALL VALVE, 3"150#, FP, NACE
XI-820	TOPWORX, DXP-L21GNEB C/W (2) SPDT GO SWITCHES
XY-820	ASCO, EFB320G202, 24VDC, 1/4" NPT, 115 PSI
LC-820	WELLMARK, W1200DVO-SS, 2"NPT, 30 to 70 PSI, NACE
LCV-820	FISHER, D2-X1, 1" NPT, 35 PSI, F.C.
LSH-820	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
PT-820	ROSEMOUNT, 2088G2S22A1-C6M5, 150PSI, 4-20mA CALIBRATE: 0 to 50 PSI
PT-821	ROSEMOUNT, 2088G2S22A1-C6M5, 150PSI, 4-20mA CALIBRATE: 0 to 100 PSI
TE-820	THERMOCOUPLE, TYPE K, 6" PROBE, 72" LEAD
TW-821	THERMOWELL, 3/4"NPT X 4" LONG, 316SS
VSH-820	MURPHY, VS2EX
GV-820/821	PENBERTHY, 330J-N, 3/4"x1/2" NPT, NACE
LG-820	PENBERTHY, 1RM-9, 1/2" NPT, NACE
PI-820	WIKA, 233.54, 60 PSI, 1/2" NPT, 316SS
PI-821	WIKA, 233.54, 60 PSI, 1/2" NPT, 316SS
PI-822	WIKA, 233.54, 100 PSI, 1/2" NPT, 316SS
TI-820	TREND, 33 SERIES, 1/2" NPT, 6" STEM, -40°F to 160°F
TW-820	THERMOWELL, 1"NPT X 6" LONG, 316SS
TI-821	TREND, 33 SERIES, 1/2" NPT, 4" STEM, 50°F to 500°F
TW-822	THERMOWELL, 3/4"NPT X 4" LONG, 316SS
CS-820	CONE STRAINER, 3"150#, CS, 150%, #20 SCREEN

**MASTER COPY**

**PC COMPRESSION**  
 ISSUE FOR CONSTRUCTION

REV # 1  
 DATE 08/10/2013  
 DEPT. PROD

SDC  
 D773-0236

BUILDING: B-800  
 AFE: 02013255FC  
 LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
1	REVISION TO UPDATE ITEM TAGS	SDC	10-07-13		
0	ISSUED FOR CONSTRUCTION	SDC	09-10-13	SDC	GDB
B	REVISED PER CUSTOMER COMMENTS, ISSUED FOR APPROVAL	GDB	07-30-13	SDC	GDB
A	ISSUED FOR APPROVAL	GDB	07-10-13	SDC	GDB

2308-8th Street  
Nisku Alberta  
T9E 7Z2

Office: 780.955.4292  
 Fax: 780.955.4294  
 Toll Free: 866.955.4292

Drawn by: GDB  
 Date: JUL 06-13  
 Checked by: SDC  
 Approved by: GDB  
 Scale: N.T.S.

Quota/Ref. NO.:	JOB NO.:	Unit NO.:	Drawing NO.:
Q-13019 R1	PC-512	RF-13018	PID-RF13018-A-02

20HP VRU & 30HP BOOSTER PACKAGE  
 RO-FLO 5CC w/ 20HP & RO-FLO 5CC w/ 30HP  
 SOUR NAUTRAL GAS SERVICE

Company: TUNDRA OIL & GAS PARTNERSHIP

E:\Work\PC-512 RF-13018 5CC w20hp SCC w30hp Tundra Oil and Gas\A-PID-RF13018 Rev 1.dwg, 10/07/13 11:27:13 AM, scallepc, Property of PC Compression Inc. Duplication or transmittal without written consent is prohibited.

**V-830  
DISCHARGE SCRUBBER**  
 Manufacturer: FOUR STAR RESOURCES  
 Size: 12.75' ø x 5' S/S  
 MAWP: 230 psig @ 300°F  
 MDMT: -20°F @ 230 psig  
 Corrosion Allowance: 0.125"  
 CRN: AB + MB  
 100% RADIOGRAPHY  
 Serial No:  
 (A)

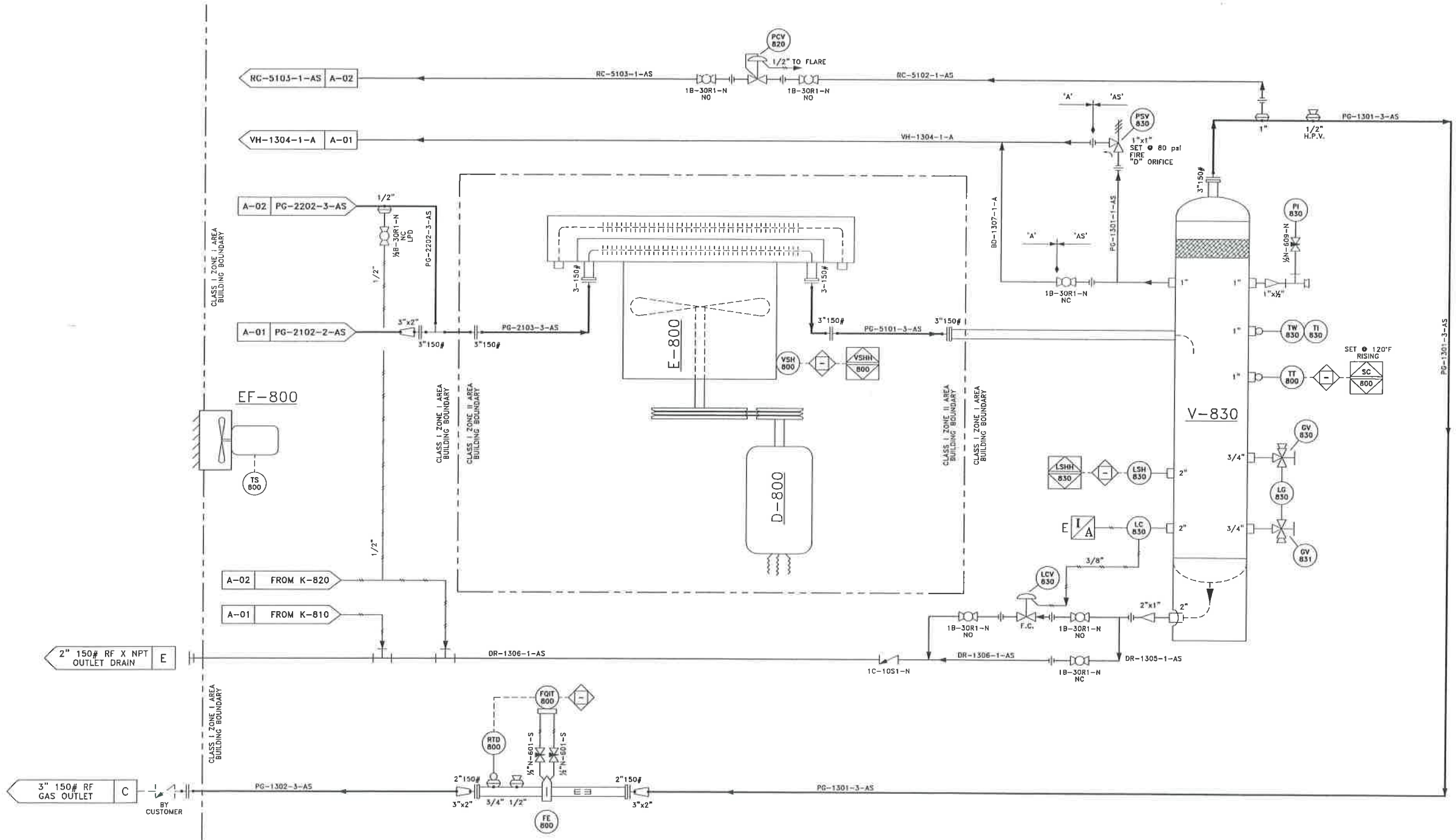
**EF-800  
EXHAUST FAN**  
 Manufacturer: ENERTECH  
 Model: ET12-1  
 Rating: 120 VAC/1Ph/60Hz

**E800  
AIR COOLED EXCHANGER**  
 Manufacturer: AIR-X  
 Model: 36ZF  
 A/C MAWP: 215psi @ 350°F  
 A/C MDMT: -20°F @ 215psi  
 A/C CORROSION: 0.125"  
 100% UT & 100% X-RAY (BW)  
 A/C Serial No:  
 A/C CRN: AB+MB  
 JW MAWP: 14psig @ 250°F  
 JW Serial No:  
 c/w 36" ø 5 BLADE MOORE 1k-S16  
 FAN SPEED: 870 RPM  
 BUG SCREEN

**D-800  
EXCHANGER FAN DRIVE MOTOR**  
 Manufacturer: TECO-WESTINGHOUSE  
 Model: TBA  
 Rating: 575VAC/3Ph/60Hz  
 5HP @ 1800RPM  
 TEXP, NEMA 'B' DESIGN  
 CSA CLASS I ZONE I INVERTER DUTY  
 VFD RATED 10:1 CT  
 Serial No:

BILL of MATERIAL	
ITEM TAG	DESCRIPTION
PSV-830	TAYLOR, 82D234, 1"x1"NPT, 'D' ORIFICE, SET @ 80PSI
FE-800	CAMERON, JUNIOR METER RUN, 2"150# X 49"LG, AGA2000
	FLOW CONDITIONER, 1/2" & 3/4" NPT TAPS
FQIT-800	NUFLO SCANNER 2000, c/w MVT ADAPTER, 1/4"NPT
	300PSIA MAWP, 200"WC D.P., NACE
RTD-800	RTD, 5' CABLE, 2.5" PROBE c/w FT-5101
TT-800	ROSEMOUNT, 644HAK6-J6M5F6 c/w 2.5" RTD
	CALIBRATE: -50 to 350°F
LC-830	WELLMARK, W1200DVO-SS, 2"NPT, 30 to 70 PSI, NACE
LCV-830	FISHER, D2-X1, 1" NPT, 35 PSI, F.C.
LSH-830	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
PCV-820	FISHER, 627, 1"NPT, 1/2" ORIFICE, 5-20 PSI, SOUR
VSH-800	MURPHY, VS2EX
GV-830/831	PENBERTHY, 330J-N, 3/4"x1/2" NPT, NACE
LG-830	PENBERTHY, 1RM-9, 1/2" NPT, NACE
PI-830	WIKA, 233.54, 100 PSI, 1/2" NPT, 316SS
TI-830	TREND, 33 SERIES, 1/2" NPT, 6" STEM, -40°F to 160°F
TW-830	THERMOWELL, 1"NPT X 6" LONG, 316SS
TS-800	RUFFNECK, XT-312, 120VAC/1PH/60Hz

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PC COMPRESSION  
 ISSUE FOR CONSTRUCTION  
 SDC  
 DATE: 02/10/2013  
 DEPT: PROD  
 DTS-0236

BUILDING: B-800  
 AFE: 02013255FC  
 LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
1	REVISION TO UPDATE ITEM TAGS	SDC	10-07-13		
0	ISSUED FOR CONSTRUCTION	SDC	09-10-13	SDC	GDB
B	REVISED PER CUSTOMER COMMENTS, ISSUED FOR APPROVAL	GDB	07-30-13	SDC	GDB
A	ISSUED FOR APPROVAL	GDB	07-10-13	SDC	GDB



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 Office: 780.955.4292  
 Fax: 780.955.4294  
 Toll Free: 866.955.4292

Drawn by: GDB	20HP VRU & 30HP BOOSTER PACKAGE			
Date: JUL 06-13	RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP			
Checked by: SDC	SOUR NAUTRAL GAS SERVICE			
Approved by: GDB	Company: TUNDRA OIL & GAS PARTNERSHIP			
Scale: N.T.S.	Quote/Ref. NO.: Q-13019 RI	JOB NO.: PC-512	Unit NO.: RF-13018	Drawing NO.: PID-RF13018-A-03

E:\Work\PC-512 RF-13018 SCC w20hp 5CC w30hp Tundra Oil and Gas\A-PID-RF13018 Rev 1.dwg, 10/07/13 3:33:18 PM, scdtcpc. Property of PC Compression Inc. Duplication or Transmittal without written consent is prohibited.

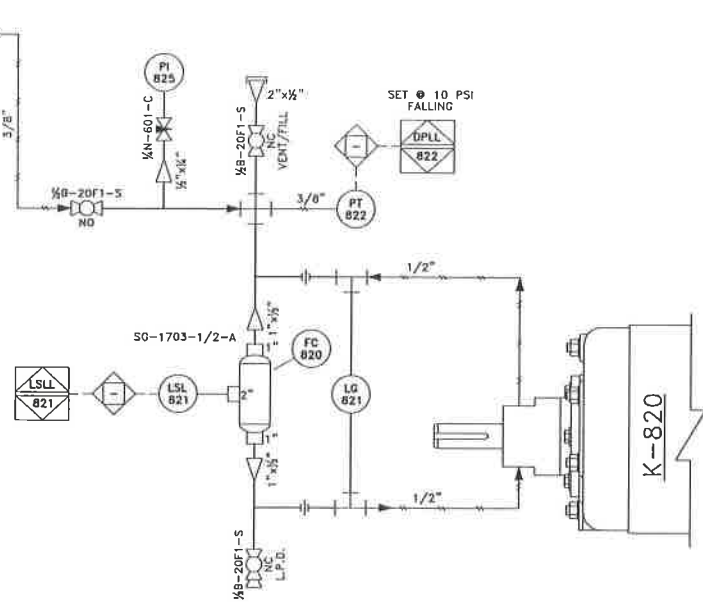
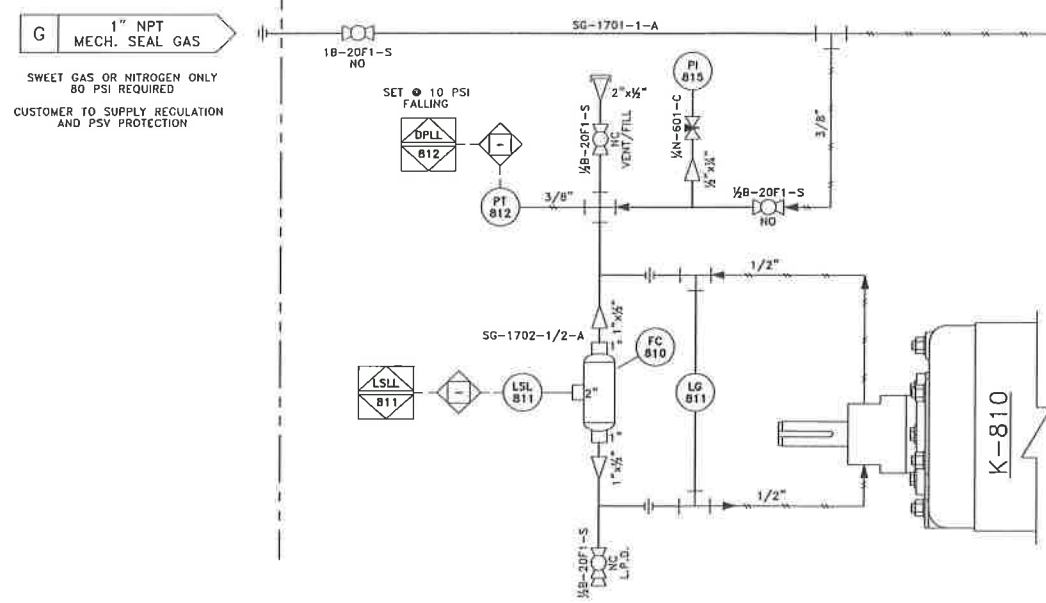
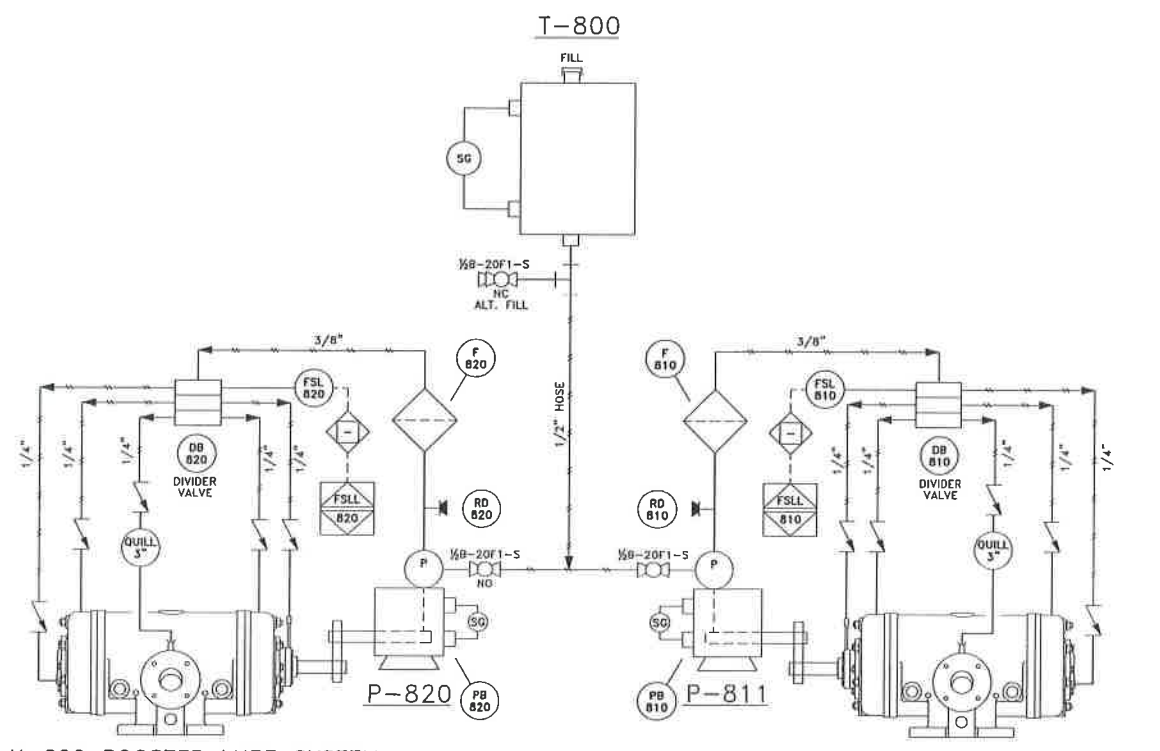
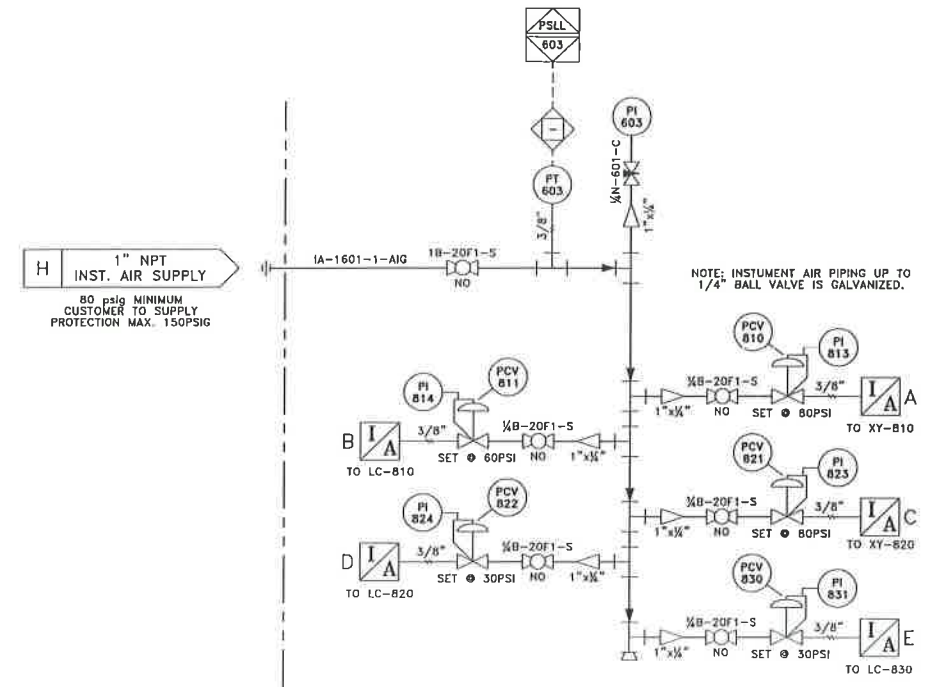
**P-811**  
VRU LUBRICATOR PUMP  
Manufacturer: PREMIER  
MODEL: 91211  
3/8" PLUNGER

**P-820**  
BOOSTER LUBRICATOR PUMP  
Manufacturer: PREMIER  
MODEL: 91211  
3/8" PLUNGER

**T-800**  
OIL DAY TANK  
Manufacturer: KENCO ENGINEERING  
Part No: 30G  
Volume: 30 usgal

**BILL of MATERIAL**

ITEM TAG	DESCRIPTION
PT-603	ROSEMOUNT, 2088G3S22A1-C6M5, 800PSI, 4-20mA
	CALIBRATE: 0 to 200 PSI
PT-812	AST, 4600 SERIES, 0-100 PSI, 1/4" NPT
PT-822	AST, 4600 SERIES, 0-100 PSI, 1/4" NPT
LSL-811	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
LSL-821	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
FC-810	MURPHY, FLOAT CHAMBER, 2" NPT
FC-820	MURPHY, FLOAT CHAMBER, 2" NPT
LG-811	PENBERTHY, 1TM-4, 1/2" NPT, NACE
LG-821	PENBERTHY, 1TM-4, 1/2" NPT, NACE
PCV-810	FISHER, 67CFR-601SPEC, 0 to 125PSI, 1/4" NPT
PCV-811	FISHER, 67CFR-601SPEC, 0 to 125PSI, 1/4" NPT
PCV-821	FISHER, 67CFR-601SPEC, 0 to 125PSI, 1/4" NPT
PCV-822	FISHER, 67CFR-362SPEC, 0 to 35PSI, 1/4" NPT
PCV-830	FISHER, 67CFR-362SPEC, 0 to 35PSI, 1/4" NPT
FSL-810	WHITLOK, DNFT-PS-LED, 3-MIN NO-FLOW
FSL-820	WHITLOK, DNFT-PS-LED, 3-MIN NO-FLOW
PB-810	PREMIER, 802300, 60:1GR, 1/2" SHAFT
PB-820	PREMIER, 802300, 60:1GR, 1/2" SHAFT
RD-810	BURST PLATE, BLACK, 509-230-060
RD-820	BURST PLATE, BLACK, 509-230-060
F-810	LUBE FILTER, 1/4" NPT, 2183
F-820	LUBE FILTER, 1/4" NPT, 2183
DB-810	MH-3 DIVIDER BLOCK c/w (2) 12T & (1) 6S VALVES
DB-820	MH-3 DIVIDER BLOCK c/w (2) 12T & (1) 6S VALVES
PI-813	WIKA, 233.53, 160 PSI, 1/4" NPT, 316SS
PI-814	WIKA, 233.53, 160 PSI, 1/4" NPT, 316SS
PI-823	WIKA, 233.53, 160 PSI, 1/4" NPT, 316SS
PI-824	WIKA, 233.53, 60 PSI, 1/4" NPT, 316SS
PI-831	WIKA, 233.53, 60 PSI, 1/4" NPT, 316SS
PI-603	WIKA, 233.53, 160 PSI, 1/4" NPT, 316SS
PI-815	WIKA, 233.53, 100 PSI, 1/4" NPT, 316SS
PI-825	WIKA, 233.53, 100 PSI, 1/4" NPT, 316SS



**VRU DOUBLE BELLOWS MECHANICAL SEAL SYSTEM**

**BOOSTER DOUBLE BELLOWS MECHANICAL SEAL SYSTEM**

**MASTER COPY**

**PC COMPRESSION**  
ISSUE FOR CONSTRUCTION  
REV # 1  
DATE 08/10/2013  
DEPT. PROD  
SDC  
DTB-0236

BUILDING: B-800  
AFE: 02013255FC  
LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
1	REVISION TO UPDATE ITEM TAGS	SDC	10-07-13		
0	ISSUED FOR CONSTRUCTION	SDC	09-10-13	SDC	GDB
B	REVISED PER CUSTOMER COMMENTS, ISSUED FOR APPROVAL	GDB	07-30-13	SDC	GDB
A	ISSUED FOR APPROVAL	GDB	07-10-13	SDC	GDB



2308-8th Street  
Nisku Alberta T9C 7Z2  
Office: 780.955.4292  
Fax: 780.955.4294  
Toll Free: 866.955.4292

Drawn by: GDB  
Date: JUL 06-13  
Checked by: SDC  
Approved by: GDB  
Scale: N.T.S.  
Company: TUNDRA OIL & GAS PARTNERSHIP  
20HP VRU & 30HP BOOSTER PACKAGE  
RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP  
SOUR NAUTRAL GAS SERVICE  
Quote/Ref. NO.: Q-13019 R1  
JOB NO.: PC-512  
Unit NO.: RF-13018  
Drawing NO.: PID-RF13018-A-04

E:\Work\PC-512 RF-13018 SCC w20hp Tundra Oil and Gas\A-PID-RF13018 Rev 1.dwg, 10/07/13 3:33:26 PM, scalepc, Property of PC Compression Inc. Duplication or Transmittal without written consent is prohibited.

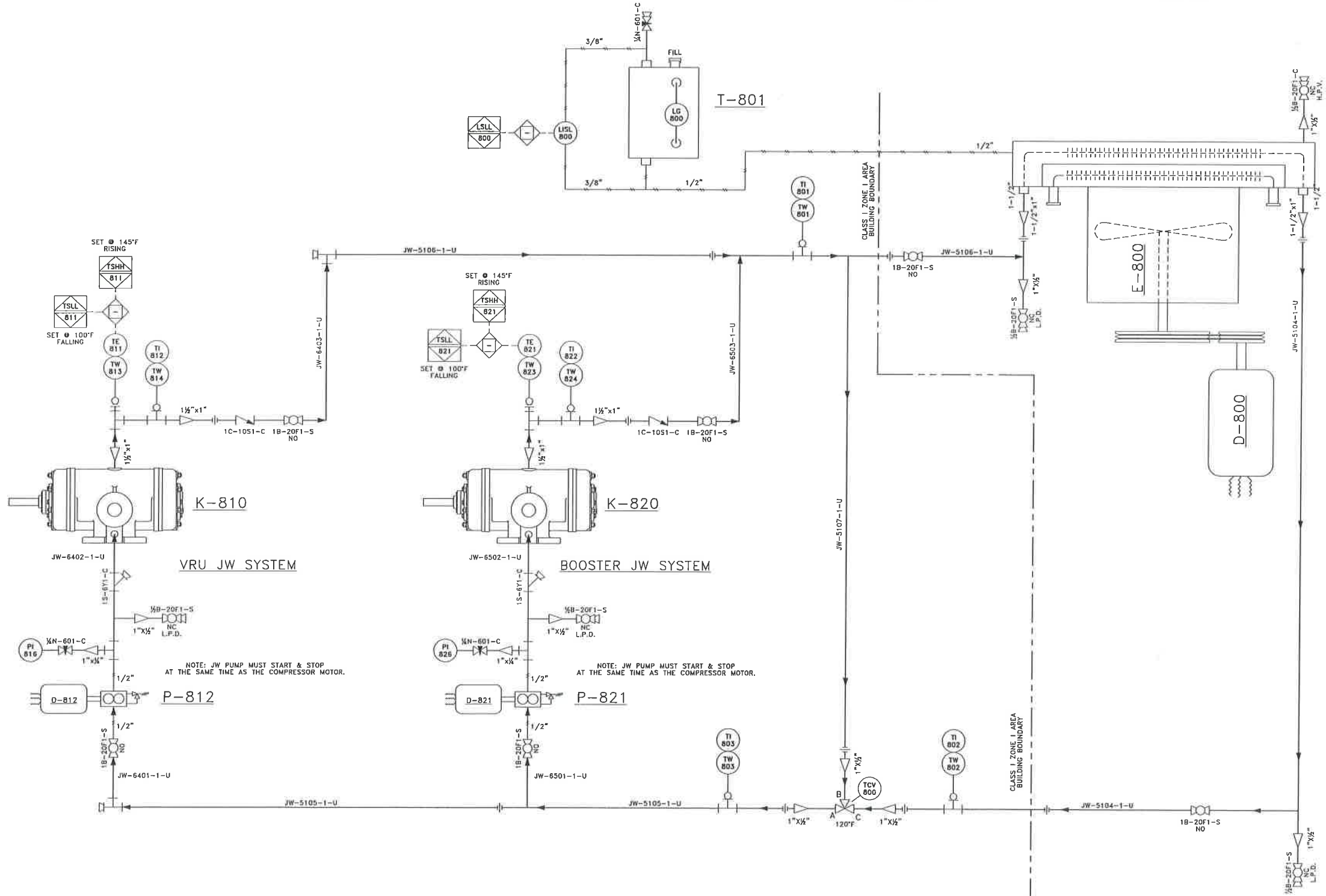
**P-812**  
**VRU JW PUMP**  
 Manufacturer: TUTHILL  
 Model: OLEV-C-7  
 Flow Rate: 1.6GPM @ 1750RPM  
 CAST IRON  
 C/W INTERNAL RELIEF @ 50PSI  
 Serial No:

**D-812**  
**VRU JW PUMP MOTOR**  
 Manufacturer: BALDOR  
 Model:  
 Rating: 575VAC/3PH/60HZ  
 1/2HP @ 1725RPM  
 TEXP, CSA CLASS 1 ZONE 1  
 Serial No:

**T-801**  
**EXPANSION TANK**  
 Manufacturer: PC COMPRESSION  
 VOLUME: 5 usgal  
 8"x8"x24"LG

**P-821**  
**BOOSTER JW PUMP**  
 Manufacturer: TUTHILL  
 Model: 1LEV-C-7  
 Flow Rate: 2.7GPM @ 1750RPM  
 CAST IRON  
 C/W INTERNAL RELIEF @ 50PSI  
 Serial No:

**D-821**  
**BOOSTER PUMP MOTOR**  
 Manufacturer: BALDOR  
 Model:  
 Rating: 575VAC/3PH/60HZ  
 1/2HP @ 1725RPM  
 TEXP, CSA CLASS 1 ZONE 1  
 Serial No:



BILL of MATERIAL	
ITEM TAG	DESCRIPTION
TCV-800	FPE, A1210-120, 1/2" NPT, 120°F, CAST IRON
TE-811	THERMOCOUPLE, TYPE K, 6" PROBE, 72" LEAD
TW-813	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TE-821	THERMOCOUPLE, TYPE K, 6" PROBE, 72" LEAD
TW-823	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
LISL-800	MURPHY, EL150-EX
LG-800	KENCO, 4400 SERIES, 6" REDLINE GAUGE
PI-816	WIKA, 233.53, 60 PSI, 1/4" NPT, 316SS
PI-826	WIKA, 233.53, 60 PSI, 1/4" NPT, 316SS
TI-812	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-814	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TI-822	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-824	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TI-801	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-801	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TI-802	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-802	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TI-803	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-803	THERMOWELL, 1"NPT X 2.5" LONG, 316SS

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**PC COMPRESSION**  
 ISSUE FOR CONSTRUCTION  
 SDC  
 D773-0236

REV.#	1
DATE	08/10/2013
DEPT.	PROD

BUILDING: B-800  
 AFE: 02013255FC  
 LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
1	REVISION TO UPDATE ITEM TAGS	SDC	10-07-13		
0	ISSUED FOR CONSTRUCTION	SDC	09-10-13	SDC	GDB
B	REVISED PER CUSTOMER COMMENTS, ISSUED FOR APPROVAL	GDB	07-30-13	SDC	GDB
A	ISSUED FOR APPROVAL	GDB	07-10-13	SDC	GDB

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Drawn by: GDB	20HP VRU & 30HP BOOSTER PACKAGE		
Date: JUL 06-13	RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP		
Checked by: SDC	SOUR NAUTRAL GAS SERVICE		
Approved by: GDB	Company: TUNDRA OIL & GAS PARTNERSHIP		
Scale: N.T.S.	Quota/Ref. NO.: Q-13019 R1	JOB NO.: PC-512	Unit NO.: RF-13018
	Drawing NO.: PID-RF13018-A-05		Rev.: 1

**A-GENERAL NOTES:**

1. REFERENCE DRAWINGS:  
 ISO-RF13018-C-03  
 GA-RF13018-B-01 ISO-RF13018-C-05  
 GA-RF13018-B-02 ISO-RF13018-C-06  
 GA-RF13018-B-03 ISO-RF13018-C-04  
 GA-RF13018-B-04 ISO-RF13018-D-01  
 ISO-RF13018-C-01 BLD-RF13018-H-01  
 ISO-RF13018-C-02

**B-DESIGN & MATERIAL NOTES:**

1. PROCESS PIPING CONSTRUCTED TO ASME B31.3-2012, NORMAL SERVICE  
 2. SPEC 'U' UTILITY PIPING (NON-CODE):  
 DESIGN: MAWP: 50psig @ 350°F (345kPag @ 177°C)  
 MDMT: -20°F @ 50psig (-29°C @ 345kPag)  
 LEAK TEST: 75psig @ AMBIENT TEMPERATURE (>40°F)  
 w/ HYDRO  
 CORROSION ALLOWANCE: 0.0625", UNLESS NOTED OTHERWISE  
 PIPE/NIPPLES: NPT: 1/4" TO 3/8", A-106-B, SCH.80 @ 1/2"C.A.  
 NPT: 1/2" TO 2", A-106-B, SCH.80  
 FITTINGS: NPT: 1/4" TO 2", cl.3000, A-105N  
 BUSHINGS: ALLOWED ALL SIZES.  
 TUBE: 1/4" TO 3/8", @ 0.035" WALL, 316SS  
 1/2" @ 0.049" WALL, 316SS  
 TUBE FITTINGS: 1/4" TO 1/2", 316SS, SWAGelok
3. SPEC 'AS' PIPING: - SOUR GAS  
 DESIGN: MAWP: 150psig @ 350°F (1034kPag @ 177°C)  
 MDMT: -20°F @ 150psig (-29°C @ 1034kPag)  
 LEAK TEST: 225psig @ AMBIENT TEMPERATURE (>40°F)  
 w/ HYDRO  
 CORROSION ALLOWANCE: 0.125", UNLESS NOTED OTHERWISE  
 PIPE/NIPPLES: NPT: 1/4" TO 3/8", 316SS ONLY  
 NPT: 1/2", A-106-B, SCH.XXS  
 NPT: 3/4" TO 2", A-106-B, SCH.160  
 BW: 1 1/2" TO 2", A-106-B, SCH.80  
 BW: 3", A-106-B, SCH.40  
 FITTINGS: NPT: 1/4" TO 2", cl.3000, A-105N  
 BW: 1 1/2" TO 2", A-234-WPB, SCH.80  
 BW: 3", A-234-WPB, SCH.40  
 FLANGES: BW: 1 1/2" TO 3", A-105N, ASME cl.150 RF, BORED TO SUIT  
 BW: 1 1/2" TO 2", A-105N, ASME cl.150 FF,  
 BORED TO SUIT (K-210 & K-220 ONLY)  
 'O'-LETS: TOL: 1/2", cl.6000, A-105N  
 TOL: 3/4" TO 1 1/2" cl.3000, A-105N  
 BUSHINGS: BUSHINGS ALLOWED IF 2 PIPE SIZES SMALLER.  
 STUDS: ALL SIZES, A-193-B7M  
 NUTS: ALL SIZES, A-194-2HM, HEAVEY HEX HEAD  
 GASKETS: 316SS SPIRAL WOUND, FLEXICARB (GRAPHITE) FILLER  
 TUBE: 1/4" TO 3/8", @ 0.035" WALL, 316SS  
 1/2" @ 0.049" WALL, 316SS  
 TUBE FITTINGS: 1/4" TO 1/2", 316SS, SWAGelok
4. SPEC 'A' PIPING: - FLARE, SWEET GAS  
 DESIGN: MAWP: 150psig @ 350°F (1034kPag @ 177°C)  
 MDMT: -20°F @ 150psig (-29°C @ 1034kPag)  
 LEAK TEST: 225psig @ AMBIENT TEMPERATURE (>40°F)  
 w/ HYDRO  
 CORROSION ALLOWANCE: 0.0625", UNLESS NOTED OTHERWISE  
 PIPE/NIPPLES: NPT: 1/4" TO 3/8" A-106-B, SCH.80 @ 1/2"C.A.  
 NPT: 1/2" TO 2", A-106-B, SCH.80  
 BW: 1 1/2" TO 2", A-106-B, SCH.80  
 BW: 3", A-106-B, SCH.40  
 FITTINGS: NPT: 1/4" TO 2", cl.3000, A-105N  
 BW: 1 1/2" TO 2", A-234-WPB, SCH.80  
 BW: 3", A-234-WPB, SCH.40  
 FLANGES: BW: 1 1/2" TO 3", A-105N, ASME cl.150 RF, BORED TO SUIT  
 'O'-LETS: TOL: 1/2" TO 1 1/2", cl.3000, A-105N  
 BUSHINGS: BUSHINGS ALLOWED IF 2 PIPE SIZES SMALLER.  
 STUDS: ALL SIZES, A-193-B7M  
 NUTS: ALL SIZES, A-194-2HM, HEAVEY HEX HEAD  
 GASKETS: 316SS SPIRAL WOUND, FLEXICARB (GRAPHITE) FILLER  
 TUBE: 1/4" TO 3/8", @ 0.035" WALL, 316SS  
 1/2" @ 0.049" WALL, 316SS  
 TUBE FITTINGS: 1/4" TO 1/2", 316SS, SWAGelok

5. SPEC 'NC' PIPING: - NON-CODE  
 DESIGN: MAWP: 14psig @ 350°F (97kPag @ 177°C)  
 MDMT: -20°F @ 14psig (-29°C @ 97kPag)  
 LEAK TEST: 75psig @ AMBIENT TEMPERATURE (>40°F)  
 w/ HYDRO  
 CORROSION ALLOWANCE: 0.125", UNLESS NOTED OTHERWISE  
 PIPE/NIPPLES: NPT: 1/4" TO 3/8", 316SS ONLY  
 NPT: 1/2", A-106-B, SCH.XXS  
 NPT: 3/4" TO 2", A-106-B, SCH.160  
 BW: 2", A-106-B, SCH.80  
 BW: 4", A-106-B, SCH.40  
 FITTINGS: NPT: 1/4" TO 2", cl.3000, A-105N  
 BW: 2", A-234-WPB, SCH.80  
 BW: 3" TO 4", A-234-WPB, SCH.40  
 FLANGES: BW: 3" TO 4", A-105N, ASME cl.150 RF, BORED TO SUIT  
 BW: 2", A-105N, ASME cl.150 FF,  
 BORED TO SUIT (K-210 & K-220 ONLY)  
 'O'-LETS: TOL: 1/2", cl.6000, A-105N  
 TOL: 3/4" TO 1 1/2" cl.3000, A-105N  
 BUSHINGS: BUSHINGS ALLOWED IF 2 PIPE SIZES SMALLER.  
 STUDS: ALL SIZES, A-193-B7M  
 NUTS: ALL SIZES, A-194-2HM, HEAVEY HEX HEAD  
 GASKETS: 316SS SPIRAL WOUND, FLEXICARB (GRAPHITE) FILLER  
 TUBE: 1/4" TO 3/8", @ 0.035" WALL, 316SS  
 1/2" @ 0.049" WALL, 316SS  
 TUBE FITTINGS: 1/4" TO 1/2", 316SS, SWAGelok
6. SPEC 'AIG' PIPING: - INSTRUMENT AIR  
 DESIGN: MAWP: 150psig @ 350°F (1034kPag @ 177°C)  
 MDMT: -20°F @ 150psig (-29°C @ 1034kPag)  
 LEAK TEST: 225psig @ AMBIENT TEMPERATURE (>40°F)  
 w/ HYDRO  
 CORROSION ALLOWANCE: 0.0625", UNLESS NOTED OTHERWISE  
 PIPE/NIPPLES: NPT: 1/4" TO 3/8" A-106-B, SCH.80 @ 1/2"C.A., GALVANIZED  
 NPT: 1/2" TO 2", A-106-B, SCH.80, GALVANIZED  
 FITTINGS: NPT: 1/4" TO 2", cl.3000, A-105N, GALVANIZED  
 BUSHINGS: NOT ALLOWED.  
 TUBE: 1/4" TO 3/8", @ 0.035" WALL, 316SS  
 1/2" @ 0.049" WALL, 316SS  
 TUBE FITTINGS: 1/4" TO 1/2", 316SS, SWAGelok

**C-MISCELLANEOUS NOTES:**

1. PACKAGE FOR USE WITH SOUR NATURAL GAS ONLY, MAX 3% H2S.  
 2. EXTERIOR FINISH: COMMERCIAL SANDBLAST TO SSPC-SP6 (NACE#3)  
 FINISH ONE (1) COAT OF CLOVERDALE 835 DTM ENAMEL  
 SKID COLOUR: BLACK (ROLLED AFTER COMPLETION)  
 PIPE COLOUR: WARM GRAY  
 BANDING: GAS - YELLOW  
 DRAINS - GREEN  
 FLARE - YELLOW  
 GLYCOL - BLUE  
 3. BUILDING: SELF FRAMING GABLE, R12 ROOF, R12 WALLS,  
 6mil VAPOUR BARRIER  
 EXTERIOR COLOUR: 22GA. PRE-PAINTED SURF WHITE (QC8316)  
 TRIM & DOORS COLOUR: SLATE BLUE (QC8260)  
 INTERIOR COLOUR: 24GA. WHITE ALUMINUM  
 4. SKID INSULATION: 3" (R-20), FIRE RETARDANT, SPRAY URETHANE FOAM  
 5. SHOP RUN TEST: NO

**D-ELECTRICAL NOTES:**

1. BUILDING AREA: CLASS I ZONE I  
 2. CSA/QPS EQUIVALENCY INSPECTION: NO  
 3. FES STUDY: PROVIDED BY END USER  
 4. LOCAL PERMIT & INSPECTION: N/A  
 5. CUSTOMER SUPPLIED POWER REQUIRED: 575VAC/3Ph/60Hz;  
 120VAC/1Ph/60Hz  
 24VDC  
 6. WIRING OF END DEVICES, POWER, MOTOR & CONTROL WIRING BY OTHERS

**E-INSPECTION AND TESTING NOTES:**

1. RADIOGRAPHY: 100% OF BUTTWELDS, SPEC AS  
 10% BUTTWELDS, SPEC NC & A  
 2. MAGNETIC PARTICLE: 100% OF FILLETS, SPEC AS  
 3. PWHT: NONE  
 4. HARDNESS TESTING: NONE  
 5. LEAK TEST TO PRESSURES INDICATED ABOVE  
 6. CUSTOMER HOLD POINTS:  
 a) SKID WELDING: NO  
 b) B-PRESSURE: NO  
 c) VESSELS: NO  
 d) LEAK TESTS: NO  
 e) RUN TEST: NO  
 f) FINAL INSPECTION: NO

**F-VRU OPERATING CONDITIONS:**

1. SUCTION PRESSURE: TANK <8oz  
 2. DISCHARGE PRESSURE: 50psig (345kPag)  
 3. COMPRESSOR OPERATING RANGE: 865 TO 1765 rpm  
 4. FLUID SPECIFIC GRAVITY: 1.42 SOUR NATURAL GAS, 2.75% H2S  
 5. COMPRESSOR MOTOR OPERATING RANGE: 865 TO 1765 rpm  
 (CONSULT WITH PC COMPRESSION INC. FOR OPERATION OUTSIDE THESE CONDITIONS.)

**G-BOOSTER OPERATING CONDITIONS:**

1. SUCTION PRESSURE: 20psig (138kPag)  
 2. DISCHARGE PRESSURE: 50psig (345kPag)  
 3. COMPRESSOR OPERATING RANGE: 865 TO 2175 rpm  
 4. FLUID SPECIFIC GRAVITY: 1.1 SOUR NATURAL GAS, 0.5% H2S  
 5. COMPRESSOR MOTOR OPERATING RANGE: 700 TO 1765 rpm  
 (CONSULT WITH PC COMPRESSION INC. FOR OPERATION OUTSIDE THESE CONDITIONS.)

**H-VALVES:**

1. 1/4B-20F1-S, = MAS G-2 2000#, 1/4"NPT, FULL PORT, STAINLESS STEEL, BALL VALVE  
 2. 1/2B-20F1-S, = MAS G-2 2000#, 1/2"NPT, FULL PORT, STAINLESS STEEL, BALL VALVE  
 3. 1B-20F1-S, = MAS G-2 2000#, 1"NPT, FULL PORT, STAINLESS STEEL, BALL VALVE  
 4. 1/2B-30R1-N = 'KF' 1/2"3000# NPT, REG PORT, BALL VALVE, NACE  
 5. 1B-30R1-N = 'KF' 1"3000# NPT, REG PORT, BALL VALVE, NACE  
 6. 2B-1R4-N, = 'KF' 2"150# RF, REG PORT, BALL VALVE, NACE  
 7. 3B-1R4-N, = 'KF' 3"150# RF, REG PORT, BALL VALVE, NACE  
 8. 1C-10S1-N, = WHEATLEY, 822-013100-766, 1000psi, 1" NPT, SWING CHECK VALVE, NACE  
 9. 2C-1W6-N, = WHEATLEY, 973-030027-169, 2" 150#, WAFER CHECK VALVE, NACE  
 10. 3C-1W6-N, = WHEATLEY, 973-040027-169, 3" 150#, WAFER CHECK VALVE, NACE  
 11. 1/4N-601-C, = AGCO H7VIC-2, 1/4" FxF CARBON STEEL, 6000psi NEEDLE VALVE  
 12. 1/2N-609-N, = AGCO H7VIS-44Q-SG, 1/2" MxF STAINLESS, 6000psi NEEDLE VALVE, NACE  
 13. 1/4N-601-N, = AGCO H7VIS-40-SG, 1/4" FxF STAINLESS, 6000psi NEEDLE VALVE, NACE  
 14. 1S-6Y1-C, = COLTON Y660TST, 'Y' STRAINER, ASME 600, 1" NPT, c/w #40 SCREEN.

**I-VRU LUBRICATION & COOLANT:**

1. BREAK-IN PERIOD: (300 HOURS) 6.5 PPD @ MAX SPEED  
 2. NORMAL OPERATION: 3.25 PPD @ MAX SPEED  
 3. OIL TYPE: MOBIL DELVAC 1300 SAE 40WT  
 4. COOLANT: 50% ETHYLENE GLYCOL


**J-BOOSTER LUBRICATION & COOLANT:**

1. BREAK-IN PERIOD: (300 HOURS) 7.8 PPD @ MAX SPEED  
 2. NORMAL OPERATION: 3.9 PPD @ MAX SPEED  
 3. OIL TYPE: MOBIL DELVAC 1300 SAE 40WT  
 4. COOLANT: 50% ETHYLENE GLYCOL

MASTER COPY

PC COMPRESSION	
ISSUE FOR CONSTRUCTION	REV. # 1
SDC	DATE 08/10/2013
D73-0236	DEPT. PROD

BUILDING: B-800  
 AFE: 02013255FC  
 LSD: 01-18-03-28 W1M

					Drawn by: GDB Date: JUL 06-13 Checked by: SDC Approved by: GDB	20HP VRU & 30HP BOOSTER PACKAGE RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP SOUR NAUTRAL GAS SERVICE
2308-8th Street Nisku Alberta T9E 7Z2 Office: 780.955.4292 Fax: 780.955.4294 Toll Free: 866.955.4292					Company: TUNDRA OIL & GAS PARTNERSHIP	Drawing NO.: Q-13019 R1 Job NO.: PC-512 Unit NO.: RF-13018 Drawing NO.: PID-RF13018-A-06
REVISION TO UPDATE ITEM TAGS SDC 10-07-13 ISSUED FOR CONSTRUCTION SDC 09-10-13 SDC GDB REVISED PER CUSTOMER COMMENTS, ISSUED FOR APPROVAL GDB 07-30-13 SDC GDB ISSUED FOR APPROVAL GDB 07-10-13 SDC GDB		REV. BY DATE CHKD APPD				