

## **24" OD x 7'-6" x 1440psi 3 Phase Separator Package (Dressed 2 Phase)**

- **24" OD x 7'6" S/S 1440 psi Three (3) Phase Vertical**
- **Dressed 2 phase.**
- **Methanol injection system c/w additional injection line to Inlet of separator tubed off skid.**
- **2" 600# Inlet/ 2" 600# Outlet/ 2" Liquid lines flanged at vessel connection and NPT from isolation valves and downstream. (2" future tie in for liquids on gas outlet)**
- **2" 600# RF Globe Valve for Back pressure control**
- **2" 600# Daniel Junior Meter run AGA 2000 c/w (2) 2" 600# RF Block valves and 1" NPT bypass/fuel gas take off line. 1/2" tubing to scrubber/scrubber drain.**
- **2-pen Chart recorder c/w (2) 1/2" NPT FP Ball valves**
- **2" NPT Water and Vessel drain lines to combine and run off skid. 2" Plug can be removed on drain line for LPD.**
- **Heater Supplied by fuel gas from fuel gas scrubber**
- **(1) 10,000 BTU Heater c/w heater hood**
- **Knowledge box mounted on door**
- **Sight glass drain lines**
- **Instrument tree to have (1) spare connection plugged for future.**
- **All venting instruments to be vented off skid.**
- **2" polyurethane spray foam on underside of skid.**

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## **VESSEL**

<b>Tag #</b>	<b>Qty</b>	<b>Description</b>
V-100	1	24" OD X 7'6" S/S x 1440 Psig MAWP Vertical (NACE) Manufactured in 2013/14, Constructed with Alberta 3 Phase Design Inlet deflector plate, 6" Thk. 9lb/ft3 mistex 100°F design temperature, MDMT -20°F @ 1440 Psig A – Stamped Radiography: RT-1, PWHT C.A. 1/8"

## **VESSEL CONNECTIONS**

N1	Gas Inlet	1 - 3" NPS	600# RF
N2	Gas Outlet	1 - 3" NPS	600# RF
C1	Drain	1 - 2" NPS	600# RF
C2	Condensate LLC	1 - 2" NPT	3000# TOL
C3	Water LLC	1 - 2" NPT	3000# TOL
C4	Condensate Outlet	1 - 2" NPS	600# RF
C5	Water Outlet	1 - 2" NPS	600# RF
C6 a/b	LG - Condensate	2 - 3/4" NPT	3000# TOL
C7 a/b	LG – Water	2 - 3/4" NPT	3000# TOL
C8	PI	1 - 1/2" NPT	3000# TOL
C9	TI	1 - 3/4" NPT	3000# TOL
C10	PSV	1 - 2" NPT	3000# TOL
C11	HLSD	1 - 2" NPT	3000# TOL
C12	Inspection	2 - 2" NPT	3000# TOL

## **INSTRUMENTATION**

LC-100	1	FISHER L2 LIQUID LEVEL CONTROLLER 2" NPT process connection Snap acting control, Direct acting instrument signal NACE Compliant
LCV-100	1	NORRISEAL 2220 LIQUID CONTROL VALVE Part#PN: 390222B087 2" FNPT end connections 3 to 15 Psig input signal trim size 1" Air to Open/Fail Closed
BPCV-100	1	2" 600RF DHV Globe Valve WCB Nace trim
FE-110	1	DANIEL JUNIOR METER RUN 2"-600# Sch. 80 Flanged outer ends Pinned Flow conditioner Built to AGA 2000 NACE. Process, 100% X-Ray, PWHT One (1) - 1" 3000# TOL and One (1) 3/4" 3000# TOL downstream

**INSTRUMENTS (cont'd):**

<b>Tag #</b>	<b>Qty</b>	<b>Description</b>
FRC-100 (Reconditioned)	1	ITT BARTON MODEL 202E, 2 PEN FLOW RECORDER 0 to 100" W.C. differential pressure range 0 to 1500 Psig static element Sour Process pressure boundary parts 24-hr./7 day, battery operated chart drive Disposable pens. Charts. 5-valve S.S. manifold.
PI-100	1	ELITE PRESSURE GAUGE 4" dia. face x 1/2" NPT bottom mount end connection 0 to 1500 Psig, dual scale, Liquid filled Sour Service 316 SST
PSV-110	1	MERCER PRESSURE RELIEF VALVE Model 9100 D Orifice 2" NPT inlet/outlet Set @ 1440 Psig Sour Service
PSV-100	1	MERCER PRESSURE RELIEF VALVE 1" NPT inlet/outlet Model 9100 Set @ 250 Psig Sour Service Mounted on fuel gas scrubber
TI-100	1	MASTER TEMP TEMPERATURE INDICATOR 1/2" NPT back connection, 3" dial, 2" stem -40 to 160°F range, dual scale 1/2" FNPT x 3/4" MNPT x 6" "U" dimension length 316T thermowell
PCV-1121	1	FISHER 627 HIGH PRESSURE REGULATOR 1" NPT, WCB Steel body SST trim, Aluminum spring case 3/32" orifice, 70 to 150 psi spring range Max inlet pressure 2000psi
PRV 100 / 110	2	FISHER 67CFR INSTRUMENT GAS REGULATOR 1/4" NPT Tapped-Bonnet 0 to 35 psi, Adjustable Spring Range, Vented bonnet, Sour service
LG-110	1	QUALITY LEVEL GAUGE One (1) 2500 Psig QISR20 Reflex Mounted on liquid/gas interface Quality gauge valves, NACE compliant
PI-100	1	ELITE PRESSURE GAUGE Liquid fill 2 1/2" dia. face x 1/4" NPT S.S. end connection 0 to 200 Psig range, dual Scale Mounted on fuel gas header

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**INSTRUMENTS (cont'd):**

<b>Tag #</b>	<b>Qty</b>	<b>Description</b>
P-300	1	BRUIN CHEMICAL INJECTION PUMP BR5103LP-1111 16.8 gallons/day maximum @ 0-1500 psig Ductile iron fluid end assembly (SST plunger and trim) Buna Packing & o-rings, sour supply gas trim Oilless version, micro switch operating valve 3000 Psig maximum discharge pressure 10 to 35 Psig supply pressure 3/8" diameter plunger 1/4" NPT suction, discharge and instrument supply
PSV-300	1	SWAGELOK INSTRUMENT RELIEF VALVE SS4R-3A5 SERIES, 316 SST Body 1/4" MNPT Inlet x 1/44" FNPT Outlet Set @ 1400 psig
LG-300	1	PLAINSMAN METERING RATE GLASS Model 5700, 1/2" NPT Connection 4'-0" Long

**FUEL GAS SYSTEM**

FGS-100	1	6" x 30" x 250 psig c/w Internal Pesco SST HLSD 1" NPT Inlet, 1" NPT Drain 1/2" piping to instrument regulators 1/8" C.A.
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**SKID AND BUILDING SPECIFICATIONS**

SK-100	1	SKID BASE, 7'10" W x 12'0" L Main skid members - 6" WF 15#/ft. 3/16" checker plate floor (4) Lifting lugs. c/w 3" sch 80 roll ends for bed loading 1/2" base plate under vessel
B-100	1	FOAM PANEL BUILDING 8'0" W x 12'0" L with 8'3" Low eave height x 8'9" High eave height Shed style roof Exterior: 28 GA. ASTM A792 Gr.33 steel to 1.5" polyurethane foam injected panel (R12) Galvalume exterior/white interior One (1) 3'0" x 7'0" door c/w IWG window, check chains, panic-lock, and weather-stripping One (1) 36" x 36" double glazed sliding window Two (2) 12" x 12" Adjustable Louvers

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**SKID AND BUILDING SPECIFICATIONS (cont'd):**

Tag #	Qty	Description
H-1150	1	CATADYNE 10,000 BTU/HR BUILDING HEATER Fuel supply is natural gas (12"x24") WX Series 12 VDC starting element with 30' cables c/w regulators, grill guard, mertik combination gas control valve, maxitrol safety shutoff, hood vent.

**MANUAL VALVE SPECIFICATIONS**

Qty	Description
2	2" 600# RF DHV. R.P. Ball Valve (nace compliant)
3	2" NPT 2000# 1 Pc. RP DHV Ball Valves (nace compliant)
2	1" NPT 2000# 1 Pc. RP DHV Ball Valves (nace compliant)
7	1/4" NPT 2000# 1 Pc.RP DHV Ball Valves (nace compliant)
4	1/2" NPT 2000# 1 Pc.RP DHV Ball Valves (nace compliant)
2	1/2" NPT 3000# 1 .FP DHV Ball Valves (nace compliant)
2	3/4" NPT 2000# 1 Pc.RP DHV Ball Valves(nace compliant)
1	1/2" NPT 3000# Plainsman inline check valve S.S.
1	1/4" NPT 3000# Plainsman inline check valve S.S.

**MATERIAL SPECIFICATIONS**

## Pressure Vessels

Heads	SA-516-70-N
Shell	SA-516-70-N
Skirt	SA-36
Pipe	SA-106-Gr.B SMLS
Flanges	SA-105-N
Weld Fittings	SA-234-WPB

## Threaded Piping

Pipe	SA-106-B, Sch. XXS/160 SMLS
Threaded Fittings	SA-105-N, 3000#

## Welded Piping

Pipe	SA-106-B, Sch. 80/160 SMLS
Flanges	SA-105-N
Weld Fittings	SA-234-WPB
Threadolets and couplings	SA-105-N
Gaskets	1/8", 316 S.S. Flex.
Bolting	SA-193-B7M, SA-194-2HM

## Instrument Tubing

Tubing	3/8", 1/2" 316 sst
Fittings	316 Stainless Steel, Swagelok

## **TESTING/PWHT SPECIFICATIONS**

Hydro Testing		
	vessels	Will be hydro-tested to 1.3 times maximum allowable working pressure as per ASME Section VIII
	Piping	Will be hydrotested to 1.5 times maximum allowable working pressure As per ASME B31.3
Radiography		
	Vessels	RT-1
	Piping	100%
PWHT		
	Vessels	Yes
	Piping	Yes
Ultrasonic & Hardness Testing		None Included

## **PAINT AND COATING SPECIFICATIONS**

External Surface Preparation	SSPC-SP#3 Hand tool Clean
External Primer	One (1) Shop Coat of Cloverdale Fast Dry. 5 mils
Vessel External Finish Paint	One (1) Shop Coat of Cloverdale Grey Enamel
Skid and Piping External Finish Paint	One (1) Shop Coat of Cloverdale Grey Enamel
Internal Surface Preparation	None Included
Internal Coating	None Included