

H & H TECHNICAL LLC.
1949 SUGERLAND DRIVE, SUITE 134
SHERIDAN, WY. 82801
(307) 672-0743

PUMP DATA SHEET

JOB NUMBER **965** DATE **9/18/13**

TAG **P-180, P-190** PURPOSE **DE-ETH. TOWER REFLUX PUMP**

VENDOR
 MANUFACTURE
 MODEL

FLUID DATA

Mole Fraction		%
Nitrogen		0.05
Carbon Dioxide		6.12
Methane		
Ethane		53.16
Propane		26.44
i-Butane		0.07
n-Butane		0.01
i-Pentane		0.00
n-Pentane		0.00
n-Hexane		0.00
n-Heptane		0.00
n-Octane		0.00
n-Nonane		0.00
Water		0.00
Ethylene Glycol		0.00
Therminol 55		0.00
Oxygen		0.00
Property	Units	
Temperature	°F	-20.63
Pressure	psia	342.73
Mole Fraction Vapor	%	0.00
Mole Fraction Light Liquid	%	100.00
Mole Fraction Heavy Liquid	%	0.00
Molecular Weight	lb/lbmol	32.67
Mass Density	lb/ft^3	30.85
Molar Flow	lbmol/h	388.12
Mass Flow	lb/h	12679.40
Vapor Volumetric Flow	ft^3/h	411.01
Liquid Volumetric Flow	gpm	51.24
Std Vapor Volumetric Flow	MMSCFD	3.53
Std Liquid Volumetric Flow	sgpm	61.16
Compressibility		0.08
Specific Gravity		0.49
API Gravity		239.60
Enthalpy	Btu/h	-20495081.02
Mass Cp	Btu/(lb*°F)	0.69
Ideal Gas CpCv Ratio		1.21
Dynamic Viscosity	cP	0.10
Kinematic Viscosity	cSt	0.20
Thermal Conductivity	Btu/(h*ft*°F)	0.07
Surface Tension	lbf/ft	0.00
Net Ideal Gas Heating Value	Btu/ft^3	1603.98
Net Liquid Heating Value	Btu/lb	18494.63
Gross Ideal Gas Heating Value	Btu/ft^3	1751.71
Gross Liquid Heating Value	Btu/lb	20210.71

PHYSICAL DATA

SUCTION PIPING SIZE	3"
DISCHARGE PIPING SIZE	2"
CLASS	300#
MAWP	450 PSIG
TEMPERATURE RATING	-30/150°F
PUMP MATERIAL	
IMPELLER MATERIAL	
IMPELLER SIZE	
PLUNGER SIZE	NA
PLUNGER MATERIAL	NA
PLUNGER STROKE	NA
PLUNGER SPM	NA

SUCTION HEAD	8FT
DISCHARGE HEAD	80FT

ELECTRICAL DATA

MOTOR HP	
MOTOR TYPE	TEFC
RPM	
VOLTAGE	380
HZ	50
PHASE	3

COMMENTS

FLUID IS AT "BUBBLE POINT". ANY PRESSURE DROP OR TEMP. INCREASE WILL CAUSE VAPOR TO FORM, THERE FOR PUMP MUST BE ABLE TO HANDLE A SMALL AMOUNT OF VAPORS. ONE
 PUMP RUNNING, ONE PUMP 100% STANDBY