Vilter

Vilter ScrewPro
Single Screw Compressor Report
NORMAL OPERATING CONDITIONS

Vilter SELECT INDUSTRIAL

Customer		Date / Time	2/13/2019 9:59:44 AM
Project Name		Refrigerant	R717
Program Version	2.9.9	Registered To	Jessica Madriaga
Description			

Evaporating Temperature	-40 °F	Condensing Temperature	95 °F
Evaporating Pressure	-4.3 psiG	Condensing Pressure	181.2 psiG
Suction Line Pressure Loss	0.5 psi	Discharge Line Press Loss	2 psi
Suction Pressure	-4.8 psiG	Discharge Pressure	183.2 psiG
Suction Superheat	0 °F	Subcooling	75 °F

VSSC-2101 w/Std Flow Slide @ 100.0% Capacity - 3550 rpm

Capacity	175.8 Tons	Compression Ratio	20	Coeff of Perf.(COP)	1.502
Power	552.1 BHP	Volume Ratio	7		
Heat Rejection	3514.5 MBH	Volumetric Efficiency	82.3 %		
Torque	816.8 ft-lb	Isentropic Efficiency	58.9 %		
Speed	3550 RPM	Power/Capacity Ratio	3.141		

	Temperature	Mass Flow	Volume Flow
Suction	-40 °F	3958.9 lbm / hour	1719.2 ACFM
Discharge	188.4 °F	3958.9 lbm / hour	126.3 ACFM

10% min flow for SRV Calc. is 395.89 lbm / hour of R717 **Compressor Type: Unit**

Oil Cooling Data **Full Time Oil Pump Not Required**

Oil Cooling Type Plate (Medium : Refrigerant) VPN 3465N 140H Oil Type 717

Oil Cooling Load 90.4 Tons 1085.1 MBH

Oil Flow Rate 92.4 gpm

Oil Injection Temperature 135 °F

Sizing Data (Larger Separator may be required for pulldown)

Oil Separator Diameter 36 in @ 75.0 °F Cond

Relief Valve Size 74.99 lb of air/min Pressure Rating 250 psig Relief Valve Vendor Name Hansen

Suction Line - Std	8 in.	0.1 psi		
Suction Line - Optional	10 in.	0 psi	Disch Line	3 in. Based on 2 psi max
Suction Line - Optional	12 in.	0 psi	Std Disch Check	2-1/2 in. pressure drop
			KDC Disch Check	KDC 80 – 3

1200

Note: The information contained in this program is subject to change without notice. Vilter reserves the right to final performance verification. The minimum full load driver power should be 110% of the program predicted power.

EMERSON