



# Ariel Performance



Company: NGCS

Customer:

Quote:

Inquiry:

7.6.2.0 Case 1:

Project:

**Compressor Data:**

Elevation,ft:	50.00	Barmtr,psia:	14.669	Ambient,°F:	100.00
Frame:	JGH/4	Stroke, in:	4.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	48000	Max RL Tens, lbf:	24000	Max RL Comp, lbf:	30000
Rated RPM:	1200	Rated BHP:	1360.0	Rated PS FPM:	900.0
Calc RPM:	1200.0	BHP:	874	Calc PS FPM:	900.0

**Driver Data:**

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	3516 LE
BHP:	1150
Avail:	1075 (75)

**Services****Service 1****Stage Data:****1****2****3**

Flow Req'd, MMSCFD	4.000	---	4.000	4.000
Flow Calc, MMSCFD	4.506	---	4.448	4.396
Cyl BHP per Stage	368.7	---	269.8	221.5
Specific Gravity	0.8113	---	0.8138	0.8161
Ratio of Sp Ht (N)	1.2152	---	1.2172	1.2279
Comp Suct (Zs)	0.9937	---	0.9814	0.9541
Comp Disch (Zd)	0.9896	---	0.9738	0.9410
Pres Suct Line, psig	10.00	---	N/A	N/A
Pres Suct Flg, psig	10.00	---	68.86	193.07
Pres Disch Flg, psig	70.83	---	198.07	459.29
Pres Disch Line, psig	N/A	---	N/A	450.00
Pres Ratio F/F	3.466	---	2.547	2.281
Temp Suct, °F	95.00	---	120.00	120.00
Temp Clr Disch, °F	120.00	---	120.00	120.00

**Cylinder Data:****Throw 2****Throw 4****Throw 3****Throw 1**

Cyl Model	17-1/4ET	17-1/4ET	13-1/2ET	8-3/8ET
Cyl Bore, in	17.250	17.250	13.000	8.000
Cyl RDP (API), psig	205.0	205.0	272.7	727.3
Cyl MAWP, psig	230.0	230.0	300.0	800.0
Cyl Action	DBL	DBL	DBL	DBL
Cyl Disp, CFM	1450.8	1450.8	819.8	304.3
Pres Suct Intl, psig	7.56	7.56	63.17	183.32
Temp Suct Intl, °F	104	104	126	124
Suct Zsph	0.9940	0.9940	0.9820	0.9551
Pres Disch Intl, psig	77.85	77.85	211.42	484.54
Temp Disch Intl, °F	266	266	249	233
HE Suct Gas Vel, FPM	9332	9332	7872	6554
HE Disch Gas Vel, FPM	8030	8030	6902	6298
HE Spcrs Used/Max	0/3	0/3	0/2	0/2
HE Vol Pkt Avail, %	1.11+46.67	1.11+46.67	1.10+48.88	0.92+47.68
Vol Pkt Used, %	0.00 (V)	0.00 (V)	0.00 (V)	0.00 (V)
HE Min Clr, %	12.64	12.64	16.73	17.09
HE Total Clr, %	13.75	13.75	17.83	18.00
CE Suct Gas Vel, FPM	9206	9206	7686	6144
CE Disch Gas Vel, FPM	7922	7922	6738	5904
CE Spcrs Used/Max	0/3	0/3	0/2	0/2
CE Min Clr, %	12.79	12.79	17.26	18.63
CE Total Clr, %	12.79	12.79	17.26	18.63
Suct Vol Eff HE/CE, %	68.5/70.2	68.5/70.2	73.1/73.7	76.4/75.8
Disch Event HE/CE, ms	7.8/9.0	7.8/9.0	9.3/10.6	10.1/11.4
Suct Pseudo-Q HE/CE	7.7/7.5	7.7/7.5	5.5/5.2	5.1/4.5
Gas Rod Ld Comp, lbf	16462 C	16462 C	19899 C	15767 C
Gas Rod Ld Tens, lbf	16167 T	16167 T	18990 T	13575 T
Gas Rod Ld Total, lbf	32629	32629	38889	29342
Xhd Pin Deg/%RvrsI lbf	178/90.9	178/90.9	176/89.0	170/92.8
Flow Calc, MMSCFD	2.253	2.253	4.448	4.396
Cyl BHP	184.3	184.3	269.8	221.5