



Ariel Performance



Company: Ariel Corporation

Customer:

Quote:

Inquiry:

7.5.6

Case 1:

Project:

Compressor Data:

Elevation, ft:	50.0	Barmtr, psia:	14.669	Ambient, °F:	100.00
Frame:	JGD/6	Stroke, in:	5.50	Rod Dia, in:	2.500
Max RL Tot, lbf:	114000	Max RL Tens, lbf:	57000	Max RL Comp, lbf:	60000
Rated RPM:	1200	Rated BHP:	6210.0	Rated PS FPM:	1100.0
Calc RPM:	1000.0	Calc BHP:	2843	Calc PS FPM:	916.7

Driver Data:

Type:	Unselected
Mfg:	
Model:	
BHP:	3300 (3201)
Avail:	3201 (0)

Discharge

Services

Stage Data:

	#1		#2		#3	
Flow Req'd, MMSCFD	14.000	---	14.000	---	14.000	---
Flow Calc, MMSCFD	14.224	---	14.224	---	14.186	---
Cyl BHP per Stage	975.7	---	1102.3	---	717.1	---
Specific Gravity	0.65	---	0.65	---	0.65	---
Ratio of Sp Ht (N)	1.2544	---	1.2574	---	1.2732	---
Comp Suct (Zs)	0.9771	---	0.9451	---	0.8417	---
Comp Disch (Zd)	0.9698	---	0.9462	---	0.9218	---
Pres Suct Line, psig	100.00	---	N/A	---	N/A	---
Pres Suct Flg, psig	100.00	---	344.89	---	1208.37	---
Pres Disch Flg, psig	351.71	---	1218.51	---	<u>3030.15</u>	---
Pres Disch Line, psig	N/A	---	N/A	---	3000.00	---
Pres Ratio F/F	3.195	---	3.430	---	2.490	---
Temp Suct, °F	80.00	---	120.00	---	120.00	---
Temp Clr Disch, °F	120.00	---	120.00	---	120.00	---

Cylinder Data:

	Throw 1	Throw 3	Throw 2	Throw 4	Throw 5	Throw 6
Cyl Model	14-1/8D	14-1/8D	8-3/8D	8-3/8D	5-3/8D-VS-H2S	5-3/8D-VS-H2S
Cyl Bore, in	14.125	14.125	8.375	8.375	5.000	5.000
Cyl RDP (API), psig	740.9	740.9	2181.8	2181.8	3272.7	3272.7
Cyl MAWP, psig	815.0	815.0	2400.0	2400.0	3600.0	3600.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	981.9	981.9	335.1	335.1	109.4	109.4
Pres Suct Intl, psig	94.40	94.40	325.47	325.47	1171.76	1171.76
Temp Suct Intl, °F	88	88	127	127	124	124
Suct Zsph	0.9782	0.9782	0.9474	0.9474	0.8460	0.8460
Pres Disch Intl, psig	366.71	366.71	1286.38	1286.38	3123.06	3123.06
Temp Disch Intl, °F	246	246	313	313	260	260
HE Suct Gas Vel, FPM	7230	7230	7964	7964	6039	6039
HE Disch Gas Vel, FPM	6240	6240	7692	7692	5906	5906
HE Spcrs Used/Max	0/4	0/4	0/4	0/4	0/0	0/0
HE Vol Pkt Avail, %	0.81+46.13	0.81+46.13	No Pkt	No Pkt	0.68+44.55	0.68+44.55
Vol Pkt Used, %	0.00 (V)	0.00 (V)	No Pkt	No Pkt	31.00 (V)	34.00 (V)
HE Min Clr, %	16.57	16.57	16.13	16.13	33.94	33.94
HE Total Clr, %	17.38	17.38	16.13	16.13	48.42	49.76
CE Suct Gas Vel, FPM	7004	7004	7254	7254	4529	4529
CE Disch Gas Vel, FPM	6045	6045	7006	7006	4430	4430
CE Spcrs Used/Max	0/4	0/4	0/4	0/4	0/0	0/0
CE Min Clr, %	17.59	17.59	18.67	18.67	49.53	49.53
CE Total Clr, %	17.59	17.59	18.67	18.67	49.53	49.53
Suct Vol Eff HE/CE, %	66.6/66.3	66.6/66.3	66.4/62.3	66.4/62.3	52.2/51.2	51.0/51.2
Disch Event HE/CE, ms	9.7/11.0	9.7/11.0	9.3/10.3	9.3/10.3	9.5/10.7	9.3/10.7
Suct Pseudo-Q HE/CE	4.5/4.2	4.5/4.2	6.4/5.3	6.4/5.3	3.7/2.1	3.7/2.1
Gas Rod Ld Comp, lbf	43181 C	43181 C	54782 C	54782 C	44419 C	44419 C
Gas Rod Ld Tens, lbf	40828 T	40828 T	46410 T	46410 T	22806 T	22806 T
Gas Rod Ld Total, lbf	84009	84009	101192	101192	67225	67225
Xhd Pin Deg/%RvrsI lbf	165/86.0	165/86.0	173/73.2	173/73.2	139/33.0	137/33.5
Flow Calc, MMSCFD	7.112	7.112	7.112	7.112	7.138	7.048
Cyl BHP	487.9	487.9	551.1	551.1	360.8	356.2