



Company: NGC
Quote:

Ariel Performance

Customer:
Inquiry:
Project: 6734



7.6.1.1 Case 1: 120-1000

Compressor Data:

Elevation,ft:	3674.00	Barmtr,psia:	12.826	Ambient,°F:	95.00
Frame:	JGK/4	Stroke, in:	5.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	74000	Max RL Tens, lbf:	37000	Max RL Comp, lbf:	40000
Rated RPM:	1200	Rated BHP:	2540.0	Rated PS FPM:	1100.0
Calc RPM:	1200.0	BHP:	1420	Calc PS FPM:	1100.0

Driver Data:

Type:	Nat. Gas
Mfg:	Waukesha
Model:	L7042GSI
BHP:	1480
Avail:	1420 (60)

SOUR GAS-1

Services

Service 1

Stage Data:

	1	---	2	3
Flow Req'd, MMSCFD	10.000	---	10.000	10.000
Flow Calc, MMSCFD	10.408	---	10.408	10.408
Cyl BHP per Stage	492.8	---	536.4	366.8
Specific Gravity	0.6422	---	0.6422	0.6422
Ratio of Sp Ht (N)	1.2750	---	1.2661	1.2836
Comp Suct (Zs)	0.9713	---	0.9597	0.9159
Comp Disch (Zd)	0.9655	---	0.9553	0.9168
Pres Suct Line, psig	120.00	---	N/A	N/A
Pres Suct Flg, psig	120.00	---	259.06	580.51
Pres Disch Flg, psig	264.29	---	590.51	1010.13
Pres Disch Line, psig	N/A	---	N/A	1000.00
Pres Ratio F/F	2.086	---	2.219	1.724
Temp Suct, °F	60.00	---	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	15-7/8K	15-7/8K	11K	7-1/4K
Cyl Bore, in	15.875	15.875	11.000	6.750
Cyl RDP (API), psig	577.3	577.3	768.2	1727.3
Cyl MAWP, psig	635.0	635.0	845.0	1900.0
Cyl Action	<u>HE(CEVR)</u>	<u>HE(CEVR)</u>	DBL	DBL
Cyl Disp, CFM	756.0	756.0	713.9	261.4
Pres Suct Intl, psig	109.65	109.65	241.03	542.95
Temp Suct Intl, °F	71	71	125	123
Suct Zsph	0.9731	0.9731	0.9610	0.9176
Pres Disch Intl, psig	285.44	285.44	627.00	1082.77
Temp Disch Intl, °F	183	183	251	217
HE Suct Gas Vel, FPM	8876	8876	8688	8506
HE Disch Gas Vel, FPM	8033	8033	7605	8099
HE Spcrs Used/Max	6/6	6/6	0/4	0/4
HE Vol Pkt Avail, %	0.85+48.77	0.85+48.77	0.75+43.43	0.69+49.49
Vol Pkt Used, %	36.27 (V)	36.27 (V)	100.00 (V)	100.00 (V)
HE Min Clr, %	16.97	16.97	18.13	18.36
HE Total Clr, %	53.53	53.53	62.31	68.54
CE Suct Gas Vel, FPM	N/A	N/A	8401	7759
CE Disch Gas Vel, FPM	N/A	N/A	7353	7388
CE Spcrs Used/Max	N/A	N/A	0/4	0/4
CE Min Clr, %	N/A	N/A	16.83	21.57
CE Total Clr, %	N/A	N/A	16.83	21.57
Suct Vol Eff HE/CE, %	52.6/N/A	52.6/N/A	39.8/79.3	59.0/83.2
Disch Event HE/CE, ms	8.5/N/A	8.5/N/A	7.1/12.1	9.9/14.0
Suct Pseudo-Q HE/CE	6.9/N/A	6.9/N/A	6.2/6.1	8.2/6.8
Gas Rod Ld Comp, %	83.4 C	83.4 C	93.7 C	52.9 C
Gas Rod Ld Tens, %	5.4 T	5.4 T	93.7 T	42.8 T
Gas Rod Ld Total, %	47.7	47.7	97.5	50.0
Xhd Pin Deg/%Rvrs lbf	111/46.7	113/51.9	153/81.3	161/85.7
Flow Calc, MMSCFD	5.204	5.204	10.408	10.408
Cyl BHP	246.4	246.4	536.4	366.8



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7.6.1.1 Case 2: 100-1000

Compressor Data:

Elevation,ft:	3674.00	Barmtr,psia:	12.826	Ambient,°F:	95.00
Frame:	JGK/4	Stroke, in:	5.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	74000	Max RL Tens, lbf:	37000	Max RL Comp, lbf:	40000
Rated RPM:	1200	Rated BHP:	2540.0	Rated PS FPM:	1100.0
Calc RPM:	1200.0	BHP:	1420	Calc PS FPM:	1100.0

Driver Data:

Type:	Nat. Gas
Mfg:	Waukesha
Model:	L7042GSI
BHP:	1480
Avail:	1420 (60)

SOUR GAS-1

Services

Service 1

Stage Data:

	1	---	2	3
Flow Req'd, MMSCFD	0.000	---	0.000	0.000
Flow Calc, MMSCFD	9.731	---	9.731	9.731
Cyl BHP per Stage	522.6	---	510.8	362.6
Specific Gravity	0.6422	---	0.6422	0.6422
Ratio of Sp Ht (N)	1.2720	---	1.2652	1.2824
Comp Suct (Zs)	0.9756	---	0.9615	0.9185
Comp Disch (Zd)	0.9697	---	0.9571	0.9193
Pres Suct Line, psig	100.00	---	N/A	N/A
Pres Suct Flg, psig	100.00	---	245.92	560.01
Pres Disch Flg, psig	250.92	---	569.76	1010.13
Pres Disch Line, psig	N/A	---	N/A	1000.00
Pres Ratio F/F	2.338	---	2.252	1.786
Temp Suct, °F	60.00	---	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	15-7/8K	15-7/8K	11K	7-1/4K
Cyl Bore, in	15.875	15.875	11.000	6.750
Cyl RDP (API), psig	577.3	577.3	768.2	1727.3
Cyl MAWP, psig	635.0	635.0	845.0	1900.0
Cyl Action	<u>HE(CEVR)</u>	<u>HE(CEVR)</u>	DBL	DBL
Cyl Disp, CFM	756.0	756.0	713.9	261.4
Pres Suct Intl, psig	91.25	91.25	228.80	523.87
Temp Suct Intl, °F	71	71	126	123
Suct Zsph	0.9772	0.9772	0.9628	0.9203
Pres Disch Intl, psig	270.51	270.51	604.84	1082.04
Temp Disch Intl, °F	198	198	253	222
HE Suct Gas Vel, FPM	8876	8876	8688	8506
HE Disch Gas Vel, FPM	8033	8033	7605	8099
HE Spcrs Used/Max	6/6	6/6	0/4	0/4
HE Vol Pkt Avail, %	0.85+48.77	0.85+48.77	0.75+43.43	0.69+49.49
Vol Pkt Used, %	4.17 (V)	4.17 (V)	100.00 (V)	100.00 (V)
HE Min Clr, %	16.97	16.97	18.13	18.36
HE Total Clr, %	37.87	37.87	62.31	68.54
CE Suct Gas Vel, FPM	N/A	N/A	8401	7759
CE Disch Gas Vel, FPM	N/A	N/A	7353	7388
CE Spcrs Used/Max	N/A	N/A	0/4	0/4
CE Min Clr, %	N/A	N/A	16.83	21.57
CE Total Clr, %	N/A	N/A	16.83	21.57
Suct Vol Eff HE/CE, %	58.1/N/A	58.1/N/A	38.4/78.9	56.0/82.2
Disch Event HE/CE, ms	8.5/N/A	8.5/N/A	6.8/11.9	9.4/13.6
Suct Pseudo-Q HE/CE	6.9/N/A	6.9/N/A	6.1/6.0	8.2/6.8
Gas Rod Ld Comp, %	85.6 C	85.6 C	91.3 C	54.3 C
Gas Rod Ld Tens, %	4.6 T	4.6 T	91.3 T	44.6 T
Gas Rod Ld Total, %	48.6	48.6	95.0	51.7
Xhd Pin Deg/%Rvrs lbf	114/48.8	116/52.8	163/77.8	161/84.6
Flow Calc, MMSCFD	4.865	4.865	9.731	9.731
Cyl BHP	261.3	261.3	510.8	362.6



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7.6.1.1 Case 3: 80-1000

Compressor Data:

Elevation,ft:	3674.00	Barmtr,psia:	12.826	Ambient,°F:	95.00
Frame:	JGK/4	Stroke, in:	5.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	74000	Max RL Tens, lbf:	37000	Max RL Comp, lbf:	40000
Rated RPM:	1200	Rated BHP:	2540.0	Rated PS FPM:	1100.0
Calc RPM:	1200.0	BHP:	1420	Calc PS FPM:	1100.0

Driver Data:

Type:	Nat. Gas
Mfg:	Waukesha
Model:	L7042GSI
BHP:	1480
Avail:	1420 (60)

SOUR GAS-1

Services

Service 1

Stage Data:

	1	---	2	3
Flow Req'd, MMSCFD	0.000	---	0.000	0.000
Flow Calc, MMSCFD	8.891	---	8.891	8.891
Cyl BHP per Stage	418.8	---	540.5	436.7
Specific Gravity	0.6422	---	0.6422	0.6422
Ratio of Sp Ht (N)	1.2716	---	1.2596	1.2760
Comp Suct (Zs)	0.9799	---	0.9718	0.9319
Comp Disch (Zd)	0.9755	---	0.9671	0.9319
Pres Suct Line, psig	80.00	---	N/A	N/A
Pres Suct Flg, psig	80.00	---	175.48	458.43
Pres Disch Flg, psig	180.48	---	467.56	1010.13
Pres Disch Line, psig	N/A	---	N/A	1000.00
Pres Ratio F/F	2.082	---	2.551	2.171
Temp Suct, °F	60.00	---	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	15-7/8K	15-7/8K	11K	7-1/4K
Cyl Bore, in	15.875	15.875	11.000	6.750
Cyl RDP (API), psig	577.3	577.3	768.2	1727.3
Cyl MAWP, psig	635.0	635.0	845.0	1900.0
Cyl Action	<u>HE(CEVR)</u>	<u>HE(CEVR)</u>	DBL	DBL
Cyl Disp, CFM	756.0	756.0	713.9	261.4
Pres Suct Intl, psig	72.81	72.81	163.16	429.17
Temp Suct Intl, °F	70	70	126	124
Suct Zsph	0.9810	0.9810	0.9728	0.9337
Pres Disch Intl, psig	195.15	195.15	495.54	1078.28
Temp Disch Intl, °F	180	180	269	251
HE Suct Gas Vel, FPM	8876	8876	8688	8506
HE Disch Gas Vel, FPM	8033	8033	7605	8099
HE Spcrrs Used/Max	6/6	6/6	0/4	0/4
HE Vol Pkt Avail, %	0.85+48.77	0.85+48.77	0.75+43.43	0.69+49.49
Vol Pkt Used, %	4.53 (V)	4.53 (V)	0.00 (V)	0.00 (V)
HE Min Clr, %	16.97	16.97	18.13	18.36
HE Total Clr, %	38.05	38.05	18.88	19.05
CE Suct Gas Vel, FPM	N/A	N/A	8401	7759
CE Disch Gas Vel, FPM	N/A	N/A	7353	7388
CE Spcrrs Used/Max	N/A	N/A	0/4	0/4
CE Min Clr, %	N/A	N/A	16.83	21.57
CE Total Clr, %	N/A	N/A	16.83	21.57
Suct Vol Eff HE/CE, %	64.6/N/A	64.6/N/A	73.0/75.2	78.3/76.3
Disch Event HE/CE, ms	9.6/N/A	9.6/N/A	9.3/11.0	10.6/11.9
Suct Pseudo-Q HE/CE	6.8/N/A	6.8/N/A	6.4/6.0	8.1/6.7
Gas Rod Ld Comp, %	58.0 C	58.0 C	80.4 C	61.8 C
Gas Rod Ld Tens, %	3.8 T	3.8 T	81.0 T	53.3 T
Gas Rod Ld Total, %	33.2	33.2	84.0	60.1
Xhd Pin Deg/%Rvrrs lbf	131/77.5	132/81.4	177/85.7	164/90.7
Flow Calc, MMSCFD	4.446	4.446	8.891	8.891
Cyl BHP	209.4	209.4	540.5	436.7



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7.6.1.1 Case 4: 60-1000

Compressor Data:

Elevation,ft:	3674.00	Barmtr,psia:	12.826	Ambient,°F:	95.00
Frame:	JGK/4	Stroke, in:	5.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	74000	Max RL Tens, lbf:	37000	Max RL Comp, lbf:	40000
Rated RPM:	1200	Rated BHP:	2540.0	Rated PS FPM:	1100.0
Calc RPM:	1200.0	BHP:	1414	Calc PS FPM:	1100.0

Driver Data:

Type:	Nat. Gas
Mfg:	Waukesha
Model:	L7042GSI
BHP:	1480
Avail:	1420 (60)

SOUR GAS-1

Services

Service 1

Stage Data:

	1	---	2	3
Flow Req'd, MMSCFD	0.000	---	0.000	0.000
Flow Calc, MMSCFD	8.108	---	8.108	8.108
Cyl BHP per Stage	456.9	---	503.6	429.3
Specific Gravity	0.6422	---	0.6422	0.6422
Ratio of Sp Ht (N)	1.2678	---	1.2585	1.2741
Comp Suct (Zs)	0.9842	---	0.9739	0.9357
Comp Disch (Zd)	0.9798	---	0.9693	0.9355
Pres Suct Line, psig	60.00	---	N/A	N/A
Pres Suct Flg, psig	60.00	---	160.79	430.26
Pres Disch Flg, psig	165.79	---	438.68	1010.13
Pres Disch Line, psig	N/A	---	N/A	1000.00
Pres Ratio F/F	2.453	---	2.601	2.309
Temp Suct, °F	60.00	---	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	15-7/8K	15-7/8K	11K	7-1/4K
Cyl Bore, in	15.875	15.875	11.000	6.750
Cyl RDP (API), psig	577.3	577.3	768.2	1727.3
Cyl MAWP, psig	635.0	635.0	845.0	1900.0
Cyl Action	<u>HE(CEVR)</u>	<u>HE(CEVR)</u>	DBL	DBL
Cyl Disp, CFM	756.0	756.0	713.9	261.4
Pres Suct Intl, psig	54.39	54.39	149.47	402.87
Temp Suct Intl, °F	70	70	126	125
Suct Zsph	0.9852	0.9852	0.9749	0.9376
Pres Disch Intl, psig	178.85	178.85	464.83	1077.19
Temp Disch Intl, °F	202	202	272	259
HE Suct Gas Vel, FPM	8876	8876	8688	8506
HE Disch Gas Vel, FPM	8033	8033	7605	8099
HE Spcrs Used/Max	0/6	0/6	0/4	0/4
HE Vol Pkt Avail, %	0.85+48.77	0.85+48.77	0.75+43.43	0.69+49.49
Vol Pkt Used, %	0.00 (V)	0.00 (V)	0.00 (V)	0.00 (V)
HE Min Clr, %	16.97	16.97	18.13	18.36
HE Total Clr, %	17.82	17.82	18.88	19.05
CE Suct Gas Vel, FPM	N/A	N/A	8401	7759
CE Disch Gas Vel, FPM	N/A	N/A	7353	7388
CE Spcrs Used/Max	N/A	N/A	0/4	0/4
CE Min Clr, %	N/A	N/A	16.83	21.57
CE Total Clr, %	N/A	N/A	16.83	21.57
Suct Vol Eff HE/CE, %	75.5/N/A	75.5/N/A	72.3/74.6	76.4/74.1
Disch Event HE/CE, ms	9.7/N/A	9.7/N/A	9.2/10.8	10.1/11.4
Suct Pseudo-Q HE/CE	6.8/N/A	6.8/N/A	6.4/6.0	8.0/6.7
Gas Rod Ld Comp, %	59.6 C	59.6 C	76.2 C	63.8 C
Gas Rod Ld Tens, %	3.0 T	3.0 T	76.9 T	55.8 T
Gas Rod Ld Total, %	33.7	33.7	79.7	62.4
Xhd Pin Deg/%Rvrsl lbf	129/84.3	130/86.5	180/88.8	165/91.4
Flow Calc, MMSCFD	4.054	4.054	8.108	8.108
Cyl BHP	228.4	228.4	503.6	429.3



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7.6.1.1 Case 5: 40-1000

Compressor Data:

Elevation,ft:	3674.00	Barmtr,psia:	12.826	Ambient,°F:	95.00
Frame:	JGK/4	Stroke, in:	5.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	74000	Max RL Tens, lbf:	37000	Max RL Comp, lbf:	40000
Rated RPM:	1200	Rated BHP:	2540.0	Rated PS FPM:	1100.0
Calc RPM:	1200.0	BHP:	1420	Calc PS FPM:	1100.0

Driver Data:

Type:	Nat. Gas
Mfg:	Waukesha
Model:	L7042GSI
BHP:	1480
Avail:	1420 (60)

SOUR GAS-1

Services

Service 1

Stage Data:

	1	---	2	3
Flow Req'd, MMSCFD	0.000	---	0.000	0.000
Flow Calc, MMSCFD	7.378	---	7.378	7.378
Cyl BHP per Stage	508.3	---	468.5	419.5
Specific Gravity	0.6422	---	0.6422	0.6422
Ratio of Sp Ht (N)	1.2631	---	1.2574	1.2721
Comp Suct (Zs)	0.9885	---	0.9760	0.9394
Comp Disch (Zd)	0.9844	---	0.9714	0.9389
Pres Suct Line, psig	40.00	---	N/A	N/A
Pres Suct Flg, psig	40.00	---	146.99	403.71
Pres Disch Flg, psig	151.24	---	411.28	1010.13
Pres Disch Line, psig	N/A	---	N/A	1000.00
Pres Ratio F/F	3.106	---	2.654	2.456
Temp Suct, °F	60.00	---	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	15-7/8K	15-7/8K	11K	7-1/4K
Cyl Bore, in	15.875	15.875	11.000	6.750
Cyl RDP (API), psig	577.3	577.3	768.2	1727.3
Cyl MAWP, psig	635.0	635.0	845.0	1900.0
Cyl Action	DBL	DBL	DBL	DBL
Cyl Disp, CFM	1500.0	1500.0	713.9	261.4
Pres Suct Intl, psig	36.00	36.00	136.59	378.08
Temp Suct Intl, °F	69	69	126	125
Suct Zsph	0.9891	0.9891	0.9769	0.9412
Pres Disch Intl, psig	162.50	162.50	435.70	1076.12
Temp Disch Intl, °F	230	230	274	268
HE Suct Gas Vel, FPM	8876	8876	8688	8506
HE Disch Gas Vel, FPM	8033	8033	7605	8099
HE Spcrs Used/Max	4/6	4/6	0/4	0/4
HE Vol Pkt Avail, %	0.85+48.77	0.85+48.77	0.75+43.43	0.69+49.49
Vol Pkt Used, %	0.81 (V)	0.81 (V)	0.00 (V)	0.00 (V)
HE Min Clr, %	16.97	16.97	18.13	18.36
HE Total Clr, %	30.23	30.23	18.88	19.05
CE Suct Gas Vel, FPM	8735	8735	8401	7759
CE Disch Gas Vel, FPM	7906	7906	7353	7388
CE Spcrs Used/Max	5/6	5/6	0/4	0/4
CE Min Clr, %	17.60	17.60	16.83	21.57
CE Total Clr, %	32.86	32.86	16.83	21.57
Suct Vol Eff HE/CE, %	49.7/45.9	49.7/45.9	71.6/73.9	74.5/71.9
Disch Event HE/CE, ms	6.8/7.8	6.8/7.8	9.0/10.7	9.6/11.0
Suct Pseudo-Q HE/CE	6.8/6.6	6.8/6.6	6.4/5.9	8.0/6.7
Gas Rod Ld Comp, %	62.9 C	62.9 C	72.2 C	65.8 C
Gas Rod Ld Tens, %	66.2 T	66.2 T	73.0 T	58.1 T
Gas Rod Ld Total, %	67.1	67.1	75.6	64.6
Xhd Pin Deg/%Rvrsl lbf	166/79.8	152/77.0	177/92.6	167/92.6
Flow Calc, MMSCFD	3.689	3.689	7.378	7.378
Cyl BHP	254.2	254.2	468.5	419.5



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7.6.1.1 Case 6: Loaded to HP @ 1000

Compressor Data:

Elevation,ft:	3674.00	Barmtr,psia:	12.826	Ambient,°F:	95.00
Frame:	JGK/4	Stroke, in:	5.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	74000	Max RL Tens, lbf:	37000	Max RL Comp, lbf:	40000
Rated RPM:	1200	Rated BHP:	2540.0	Rated PS FPM:	1100.0
Calc RPM:	1200.0	BHP:	1372	Calc PS FPM:	1100.0

Driver Data:

Type:	Nat. Gas
Mfg:	Waukesha
Model:	L7042GSI
BHP:	1480
Avail:	1420 (60)

SOUR GAS-1

Services

Service 1

Stage Data:

	1	---	2	3
Flow Req'd, MMSCFD	0.000	---	0.000	0.000
Flow Calc, MMSCFD	6.383	---	6.384	6.384
Cyl BHP per Stage	527.4	---	419.9	400.9
Specific Gravity	0.6422	---	0.6422	0.6422
Ratio of Sp Ht (N)	1.2588	---	1.2558	1.2693
Comp Suct (Zs)	0.9919	---	0.9788	0.9444
Comp Disch (Zd)	0.9882	---	0.9744	0.9437
Pres Suct Line, psig	24.60	---	N/A	N/A
Pres Suct Flg, psig	24.60	---	128.11	367.07
Pres Disch Flg, psig	131.48	---	373.82	1010.13
Pres Disch Line, psig	N/A	---	N/A	1000.00
Pres Ratio F/F	3.856	---	2.743	2.693
Temp Suct, °F	60.00	---	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	15-7/8K	15-7/8K	11K	7-1/4K
Cyl Bore, in	15.875	15.875	11.000	6.750
Cyl RDP (API), psig	577.3	577.3	768.2	1727.3
Cyl MAWP, psig	635.0	635.0	845.0	1900.0
Cyl Action	DBL	DBL	DBL	DBL
Cyl Disp, CFM	1500.0	1500.0	713.9	261.4
Pres Suct Intl, psig	21.79	21.79	118.96	343.84
Temp Suct Intl, °F	70	70	127	125
Suct Zsph	0.9924	0.9924	0.9796	0.9462
Pres Disch Intl, psig	140.93	140.93	395.89	1074.61
Temp Disch Intl, °F	261	261	279	282
HE Suct Gas Vel, FPM	8876	8876	8688	8506
HE Disch Gas Vel, FPM	8033	8033	7605	8099
HE Spcrs Used/Max	0/6	0/6	0/4	0/4
HE Vol Pkt Avail, %	0.85+48.77	0.85+48.77	0.75+43.43	0.69+49.49
Vol Pkt Used, %	0.00 (V)	0.00 (V)	0.00 (V)	0.00 (V)
HE Min Clr, %	16.97	16.97	18.13	18.36
HE Total Clr, %	17.82	17.82	18.88	19.05
CE Suct Gas Vel, FPM	8735	8735	8401	7759
CE Disch Gas Vel, FPM	7906	7906	7353	7388
CE Spcrs Used/Max	0/6	0/6	0/4	0/4
CE Min Clr, %	17.60	17.60	16.83	21.57
CE Total Clr, %	17.60	17.60	16.83	21.57
Suct Vol Eff HE/CE, %	58.5/59.0	58.5/59.0	70.3/72.9	71.3/68.4
Disch Event HE/CE, ms	6.8/8.1	6.8/8.1	8.8/10.4	9.0/10.3
Suct Pseudo-Q HE/CE	6.7/6.5	6.7/6.5	6.3/5.9	8.0/6.6
Gas Rod Ld Comp, %	59.2 C	59.2 C	66.8 C	68.4 C
Gas Rod Ld Tens, %	62.5 T	62.5 T	67.7 T	61.2 T
Gas Rod Ld Total, %	63.2	63.2	70.0	67.6
Xhd Pin Deg/%Rvrs lbf	152/83.1	152/81.1	174/98.8	169/94.5
Flow Calc, MMSCFD	3.192	3.192	6.384	6.384
Cyl BHP	263.7	263.7	419.9	400.9



Company: NGC
Quote:

Ariel Performance

Customer:
Inquiry:
Project: 6734



7.6.1.1 Case 7: 20-1000

Compressor Data:

Elevation,ft:	3674.00	Barmtr,psia:	12.826	Ambient,°F:	95.00
Frame:	JGK/4	Stroke, in:	5.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	74000	Max RL Tens, lbf:	37000	Max RL Comp, lbf:	40000
Rated RPM:	1200	Rated BHP:	2540.0	Rated PS FPM:	1100.0
Calc RPM:	1200.0	BHP:	1244	Calc PS FPM:	1100.0

Driver Data:

Type:	Nat. Gas
Mfg:	Waukesha
Model:	L7042GSI
BHP:	1480
Avail:	1420 (60)

SOUR GAS-1

Services

Service 1

Stage Data:

	1	---	2	3
Flow Req'd, MMSCFD	0.000	---	0.000	0.000
Flow Calc, MMSCFD	5.544	---	5.544	5.544
Cyl BHP per Stage	462.4	---	378.0	379.8
Specific Gravity	0.6422	---	0.6422	0.6422
Ratio of Sp Ht (N)	1.2582	---	1.2543	1.2668
Comp Suct (Zs)	0.9929	---	0.9811	0.9488
Comp Disch (Zd)	0.9896	---	0.9769	0.9480
Pres Suct Line, psig	20.00	---	N/A	N/A
Pres Suct Flg, psig	20.00	---	112.09	335.68
Pres Disch Flg, psig	115.17	---	342.14	1010.13
Pres Disch Line, psig	N/A	---	N/A	1000.00
Pres Ratio F/F	3.899	---	2.842	2.935
Temp Suct, °F	60.00	---	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	15-7/8K	15-7/8K	11K	7-1/4K
Cyl Bore, in	15.875	15.875	11.000	6.750
Cyl RDP (API), psig	577.3	577.3	768.2	1727.3
Cyl MAWP, psig	635.0	635.0	845.0	1900.0
Cyl Action	DBL	DBL	DBL	DBL
Cyl Disp, CFM	1500.0	1500.0	713.9	261.4
Pres Suct Intl, psig	17.53	17.53	104.00	314.48
Temp Suct Intl, °F	70	70	127	126
Suct Zsph	0.9933	0.9933	0.9819	0.9506
Pres Disch Intl, psig	123.53	123.53	362.22	1073.25
Temp Disch Intl, °F	262	262	283	294
HE Suct Gas Vel, FPM	8876	8876	8688	8506
HE Disch Gas Vel, FPM	8033	8033	7605	8099
HE Spcrs Used/Max	0/6	0/6	0/4	0/4
HE Vol Pkt Avail, %	0.85+48.77	0.85+48.77	0.75+43.43	0.69+49.49
Vol Pkt Used, %	0.00 (V)	0.00 (V)	0.00 (V)	0.00 (V)
HE Min Clr, %	16.97	16.97	18.13	18.36
HE Total Clr, %	17.82	17.82	18.88	19.05
CE Suct Gas Vel, FPM	8735	8735	8401	7759
CE Disch Gas Vel, FPM	7906	7906	7353	7388
CE Spcrs Used/Max	0/6	0/6	0/4	0/4
CE Min Clr, %	17.60	17.60	16.83	21.57
CE Total Clr, %	17.60	17.60	16.83	21.57
Suct Vol Eff HE/CE, %	58.0/58.4	58.0/58.4	69.0/71.7	68.1/64.8
Disch Event HE/CE, ms	6.7/8.1	6.7/8.1	8.5/10.3	8.3/9.6
Suct Pseudo-Q HE/CE	6.7/6.5	6.7/6.5	6.3/5.9	7.9/6.6
Gas Rod Ld Comp, %	52.6 C	52.6 C	62.3 C	70.7 C
Gas Rod Ld Tens, %	55.6 T	55.6 T	63.2 T	64.0 T
Gas Rod Ld Total, %	56.3	56.3	65.2	70.2
Xhd Pin Deg/%Rvrs lbf	154/79.0	155/77.3	171/95.7	171/96.2
Flow Calc, MMSCFD	2.772	2.772	5.544	5.544
Cyl BHP	231.2	231.2	378.0	379.8



Company: NGC
Quote:

Ariel Performance

Customer:
Inquiry:
Project: 6734



7.6.1.1 Case 8: 10-1000

Compressor Data:

Elevation,ft:	3674.00	Barmtr,psia:	12.826	Ambient,°F:	95.00
Frame:	JGK/4	Stroke, in:	5.50	Rod Dia, in:	2.000
Max RL Tot, lbf:	74000	Max RL Tens, lbf:	37000	Max RL Comp, lbf:	40000
Rated RPM:	1200	Rated BHP:	2540.0	Rated PS FPM:	1100.0
Calc RPM:	1200.0	BHP:	904	Calc PS FPM:	1100.0

Driver Data:

Type:	Nat. Gas
Mfg:	Waukesha
Model:	L7042GSI
BHP:	1480
Avail:	1420 (60)

SOUR GAS-1

Services

Service 1

Stage Data:

	1	---	2	3
Flow Req'd, MMSCFD	0.000	---	0.000	0.000
Flow Calc, MMSCFD	3.603	---	3.603	3.603
Cyl BHP per Stage	319.2	---	302.0	259.3
Specific Gravity	0.6422	---	0.6422	0.6422
Ratio of Sp Ht (N)	1.2562	---	1.2494	1.2652
Comp Suct (Zs)	0.9950	---	0.9858	0.9514
Comp Disch (Zd)	0.9926	---	0.9818	0.9505
Pres Suct Line, psig	10.00	---	N/A	N/A
Pres Suct Flg, psig	10.00	---	80.96	316.81
Pres Disch Flg, psig	83.38	---	322.53	1010.13
Pres Disch Line, psig	N/A	---	N/A	1000.00
Pres Ratio F/F	4.215	---	3.576	3.103
Temp Suct, °F	60.00	---	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	15-7/8K	15-7/8K	11K	7-1/4K
Cyl Bore, in	15.875	15.875	11.000	6.750
Cyl RDP (API), psig	577.3	577.3	768.2	1727.3
Cyl MAWP, psig	635.0	635.0	845.0	1900.0
Cyl Action	DBL	DBL	DBL	DBL
Cyl Disp, CFM	1500.0	1500.0	713.9	261.4
Pres Suct Intl, psig	8.29	8.29	74.93	296.83
Temp Suct Intl, °F	71	71	128	126
Suct Zsph	0.9954	0.9954	0.9865	0.9532
Pres Disch Intl, psig	89.55	89.55	340.60	1072.41
Temp Disch Intl, °F	273	273	317	302
HE Suct Gas Vel, FPM	8876	8876	8688	8506
HE Disch Gas Vel, FPM	8033	8033	7605	8099
HE Spcrs Used/Max	0/6	0/6	0/4	0/4
HE Vol Pkt Avail, %	0.85+48.77	0.85+48.77	0.75+43.43	0.69+49.49
Vol Pkt Used, %	0.00 (V)	0.00 (V)	0.00 (V)	50.00 (V)
HE Min Clr, %	16.97	16.97	18.13	18.36
HE Total Clr, %	17.82	17.82	18.88	43.79
CE Suct Gas Vel, FPM	8735	8735	8401	7759
CE Disch Gas Vel, FPM	7906	7906	7353	7388
CE Spcrs Used/Max	0/6	0/6	0/4	0/4
CE Min Clr, %	17.60	17.60	16.83	21.57
CE Total Clr, %	17.60	17.60	16.83	21.57
Suct Vol Eff HE/CE, %	54.4/54.8	54.4/54.8	59.5/63.1	30.8/62.4
Disch Event HE/CE, ms	6.3/7.5	6.3/7.5	7.1/8.6	5.3/9.2
Suct Pseudo-Q HE/CE	6.7/6.5	6.7/6.5	6.3/5.9	7.0/6.6
Gas Rod Ld Comp, %	40.3 C	40.3 C	63.8 C	72.1 C
Gas Rod Ld Tens, %	42.7 T	42.7 T	65.2 T	65.6 T
Gas Rod Ld Total, %	43.1	43.1	67.1	71.7
Xhd Pin Deg/%Rvrs lbf	156/71.4	156/70.4	173/89.7	178/80.0
Flow Calc, MMSCFD	1.801	1.801	3.603	3.603
Cyl BHP	159.6	159.6	302.0	259.3