



## Ariel Rotary Performance



Company: Ariel Corporation

Customer:

Quote:

Inquiry:

**7.5.7.0**

Case 1:

Project:

### Compressor Data:

Elevation,ft:	50.0	Barmtr,psia:	14.669	Ambient,°F:	100.00
Model:	<u>AR208</u>	Installed Vi:	Optimum	Gear Ratio:	N/A
Oil Pump:	<u>P30Sx1.50</u>				
Rated RPM:	4591	Rated BHP:	820.0	Rated MRS:	4591
Oper RPM:	1300.0	Calc BHP:	81	Calc MRS:	1300

### Oil Pump Flow

### Services

#### Stage Data:

Flow Req'd, MMSCFD	0.500
Flow Calc, MMSCFD	0.505
BHP per Stage	80.4
Specific Gravity	0.75
Ratio of Sp Ht (N)	1.2196
Comp Suct (Zs)	0.9954
Comp Disch (Zd)	0.9913
Pres Suct Line, psig	5.00
Pres Suct Flg, psig	5.00
Pres Disch Flg, psig	129.19
Pres Disch Line, psig	125.00
Pres Ratio F/F	7.314
Temp Suct, °F	80.00
Temp Clr Disch, °F	120.00

### Compressor Data:

Model	<u>AR208</u>
Male Rotor Dia, mm	208
RDP (API), psig	329.1
MAWP, psig	362.0
Capacity, %	100.0
Volume Ratio	4.80
Adiabatic Eff, %	69.5
Volumetric Eff, %	90.9
Temp Disch, °F	205.00
Male Rotor Tip Spd, m/s	14.16
Male Rotor Torque, ft-lbs	324.9
Clr Gas Heat, BTU/h	48853

### Oil Data:

Oil Pump	<u>P30Sx1.50</u>
Brg & Seal Flow, GPM	15.3
Req'd Pump Flow, GPM	23.0
Pump Flow, GPM	<u>11.9</u>
Rotor Inj Flow, GPM	2.1
Total Oil Flow, GPM	14.0
Oil Temp, °F	160.0
Oil Density, lb/gal	7.270
Oil Sp Ht, Btu/lb·°F	0.4850
Oil Heat, BTU/h	132959
Bypass Oil to Separator	No

### Driver Data:

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