

## Model: AJA7461YXA

### Product Description

|                     |                            |
|---------------------|----------------------------|
| Type:               | Reciprocating Compressors  |
| Application:        | MBP – Medium Back Pressure |
| ProductDescription: | R-134a/R-513A              |
| Voltage/Frequency:  | 115V ~ 60Hz 100V ~ 50Hz    |
| Version:            | N/A                        |



### Product Specifications

#### Performance

|              |              | Refrigeration Capacity |               |          | Input Power | (E) Efficiency |                |      | EVAP<br>TEMP  | Condition    | AMBIENT<br>TEMP | RETURN<br>GAS | LIQUID<br>TEMP |
|--------------|--------------|------------------------|---------------|----------|-------------|----------------|----------------|------|---------------|--------------|-----------------|---------------|----------------|
| Condition    | Test Voltage | (R)<br>Btu/h           | (R)<br>kcal/h | (R)<br>W | (I) W       | (E)<br>Btu/Wh  | (E)<br>kcal/Wh | W/W  |               |              |                 |               |                |
| ARI (R-513A) | 115V ~ 60HZ  | 6120                   | 1543          | 1794     | 1131        | 5.41           | 1.36           | 1.59 | -6.7°C (20°F) | 49°C (120°F) | 35°C (95°F)     | 4.4°C (40°F)  | 49°C (120°F)   |
| ARI (R-134a) | 115V ~ 60HZ  | 6000                   | 1512          | 1758     | 1030        | 5.83           | 1.47           | 1.71 | -6.7°C (20°F) | 49°C (120°F) | 35°C (95°F)     | 4.4°C (40°F)  | 49°C (120°F)   |

#### General

|                          |                                   |
|--------------------------|-----------------------------------|
| Evaporating Temp. Range: | -23.3°C to -1.1°C (-10°F to 30°F) |
| Motor Torque:            | High Start Torque (HST)           |
| Compressor Cooling:      | Fan                               |

#### Mechanical

|                         |             |
|-------------------------|-------------|
| Weight:                 | 54          |
| Weight Unit of Measure: | LB          |
| Displacement (cc):      | 32.678      |
| Oil Type:               | Polyolester |
| Viscosity (cSt):        | 32          |
| Oil Charge (cc):        | 782         |

#### Electrical

|                                        |         |
|----------------------------------------|---------|
| Voltage Range (50 Hz):                 | 90-110  |
| Voltage Range (60 Hz):                 | 103-127 |
| Locked Rotor Amps (LRA):               | 68      |
| Rated Load Amps (RLA 50 Hz):           | 0       |
| Rated Load Amps (RLA 60 Hz):           | 10.1    |
| Max. Continuous Current (MCC in Amps): | 14.6    |

Motor Resistance (Ohm) - Main: .48  
Motor Resistance (Ohm) - Start: 3.06  
MotorType: CSR  
Overload Type:  
Relay Type:

Agency Approval

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cURus Recognized

## AJA7461YXA

### General

|            |                         |                   |             |
|------------|-------------------------|-------------------|-------------|
| Model      | AJA7461YXA              | Unit of Measure   | Fahrenheit  |
| Condition  | ARI (R-134a)            | Voltage/Frequency | 115V ~ 60HZ |
| RETURN GAS | 4.4°C (40°F) RETURN GAS | Motor Type        | CSR         |

### Performance Information

| EVAP TEMP (°F) | Condensing Temperature (°F) |      |      |      |      |      |
|----------------|-----------------------------|------|------|------|------|------|
|                |                             | 100  | 110  | 120  | 130  | 140  |
| -10            | Btu/h                       | 2550 | 1960 | 1280 |      |      |
|                | Watts                       | 558  | 504  | 428  |      |      |
|                | Amps                        | 6.06 | 5.73 | 5.15 |      |      |
|                | Lb/h                        | 38.1 | 31.1 | 21.7 |      |      |
| -5             | Btu/h                       | 3320 | 2710 | 2000 | 1360 |      |
|                | Watts                       | 645  | 608  | 547  | 483  |      |
|                | Amps                        | 6.79 | 6.55 | 6.06 | 5.53 |      |
|                | Lb/h                        | 50.2 | 43.3 | 33.9 | 24.8 |      |
| 0              | Btu/h                       | 4110 | 3470 | 2730 | 2050 | 1590 |
|                | Watts                       | 722  | 703  | 656  | 604  | 569  |
|                | Amps                        | 7.45 | 7.32 | 6.92 | 6.47 | 6.19 |
|                | Lb/h                        | 62.3 | 55.7 | 46.4 | 37.2 | 31.2 |
| 5              | Btu/h                       | 4920 | 4260 | 3480 | 2750 | 2250 |
|                | Watts                       | 791  | 789  | 757  | 717  | 692  |
|                | Amps                        | 8.07 | 8.04 | 7.74 | 7.39 | 7.19 |
|                | Lb/h                        | 74.9 | 68.5 | 59.3 | 50.3 | 44.1 |
| 10             | Btu/h                       | 5770 | 5080 | 4270 | 3500 | 2930 |
|                | Watts                       | 855  | 870  | 852  | 824  | 808  |
|                | Amps                        | 8.64 | 8.73 | 8.54 | 8.29 | 8.19 |
|                | Lb/h                        | 88.0 | 82.0 | 73.1 | 64.1 | 57.9 |
| 15             | Btu/h                       | 6660 | 5950 | 5100 | 4290 | 3670 |
|                | Watts                       | 915  | 946  | 942  | 926  | 919  |
|                | Amps                        | 9.19 | 9.40 | 9.33 | 9.18 | 9.18 |
|                | Lb/h                        | 102  | 96.4 | 87.8 | 79.0 | 72.8 |
| 20             | Btu/h                       | 7600 | 6880 | 6000 | 5140 | 4470 |
|                | Watts                       | 973  | 1020 | 1030 | 1020 | 1030 |
|                | Amps                        | 9.71 | 10.1 | 10.1 | 10.1 | 10.2 |
|                | Lb/h                        | 117  | 112  | 104  | 95.2 | 89.1 |
| 25             | Btu/h                       | 8620 | 7880 | 6970 | 6060 | 5340 |
|                | Watts                       | 1030 | 1090 | 1120 | 1120 | 1130 |
|                | Amps                        | 10.2 | 10.7 | 10.9 | 11.0 | 11.2 |
|                | Lb/h                        | 133  | 129  | 121  | 113  | 107  |
| 30             | Btu/h                       | 9720 | 8960 | 8020 | 7070 | 6290 |
|                | Watts                       | 1090 | 1170 | 1210 | 1220 | 1240 |
|                | Amps                        | 10.7 | 11.3 | 11.7 | 11.9 | 12.2 |

|  |      |     |     |     |     |     |
|--|------|-----|-----|-----|-----|-----|
|  | Lb/h | 151 | 147 | 140 | 132 | 127 |
|--|------|-----|-----|-----|-----|-----|

  

| COEFFICIENTS | CAPACITY      | POWER         | CURRENT       | MASS FLOW     |
|--------------|---------------|---------------|---------------|---------------|
| C1           | -3.269235E+04 | -5.508051E+03 | -5.188104E+01 | -6.381337E+02 |
| C2           | 8.224185E+01  | -4.603648E+01 | -1.662552E-01 | 3.488889E-01  |
| C3           | 1.071641E+03  | 1.614976E+02  | 1.531844E+00  | 1.917274E+01  |
| C4           | 3.341961E-01  | -1.016849E-01 | -2.449336E-03 | -9.129789E-03 |
| C5           | 1.889709E+00  | 8.481354E-01  | 3.713205E-03  | 3.555859E-02  |
| C6           | -9.862852E+00 | -1.363214E+00 | -1.290071E-02 | -1.688788E-01 |
| C7           | 1.609957E-02  | 2.489827E-03  | 1.195031E-05  | 3.072745E-04  |
| C8           | 1.069784E-03  | -5.125546E-04 | 1.454291E-05  | 1.630421E-04  |
| C9           | -1.118724E-02 | -2.415221E-03 | -7.705472E-06 | -1.441778E-04 |
| C10          | 2.826876E-02  | 3.712248E-03  | 3.515547E-05  | 4.719974E-04  |

Value = C1 + C2 \* Te + C4 \* Te^2 + C7 \* Te^3 + (C3 + C5 \* Te + C8 \* Te^2) \* Tc + (C6 + C9 \* Te) \* Tc^2 + C10 \* Tc^3

Te = Evaporator Temperature  
Tc = Condensing Temperature



# Performance Data Sheet

AJA7461YXA

## General

|            |                         |                   |             |
|------------|-------------------------|-------------------|-------------|
| Model      | AJA7461YXA              | Unit of Measure   | Fahrenheit  |
| Condition  | ARI (R-513A)            | Voltage/Frequency | 115V ~ 60HZ |
| RETURN GAS | 4.4°C (40°F) RETURN GAS | Motor Type        | CSR         |

## Performance Information

| EVAP TEMP (°F) | Condensing Temperature (°F) |      |      |      |      |      |
|----------------|-----------------------------|------|------|------|------|------|
|                |                             | 100  | 110  | 120  | 130  | 140  |
| -10            | Btu/h                       | 2350 | 1970 | 1590 |      |      |
|                | Watts                       | 596  | 553  | 505  |      |      |
|                | Amps                        | 6.44 | 6.13 | 5.78 |      |      |
|                | Lb/h                        | 42.1 | 36.0 | 29.6 |      |      |
| -5             | Btu/h                       | 3000 | 2590 | 2180 | 1750 |      |
|                | Watts                       | 671  | 643  | 611  | 575  |      |
|                | Amps                        | 6.99 | 6.80 | 6.58 | 6.32 |      |
|                | Lb/h                        | 52.4 | 46.7 | 40.6 | 34.3 |      |
| 0              | Btu/h                       | 3730 | 3280 | 2830 | 2370 | 1900 |
|                | Watts                       | 746  | 733  | 716  | 696  | 671  |
|                | Amps                        | 7.58 | 7.52 | 7.43 | 7.30 | 7.13 |
|                | Lb/h                        | 64.7 | 59.4 | 53.7 | 47.8 | 41.4 |
| 5              | Btu/h                       | 4520 | 4040 | 3560 | 3060 | 2550 |
|                | Watts                       | 820  | 823  | 822  | 817  | 807  |
|                | Amps                        | 8.20 | 8.28 | 8.32 | 8.32 | 8.29 |
|                | Lb/h                        | 78.9 | 74.0 | 68.8 | 63.2 | 57.3 |
| 10             | Btu/h                       | 5370 | 4860 | 4350 | 3820 | 3280 |
|                | Watts                       | 893  | 911  | 926  | 937  | 942  |
|                | Amps                        | 8.85 | 9.06 | 9.23 | 9.38 | 9.48 |
|                | Lb/h                        | 94.9 | 90.5 | 85.7 | 80.6 | 75.1 |
| 15             | Btu/h                       | 6290 | 5750 | 5200 | 4640 | 4070 |
|                | Watts                       | 965  | 999  | 1030 | 1060 | 1080 |
|                | Amps                        | 9.50 | 9.85 | 10.2 | 10.4 | 10.7 |
|                | Lb/h                        | 112  | 109  | 104  | 99.8 | 94.8 |
| 20             | Btu/h                       | 7280 | 6700 | 6120 | 5530 | 4920 |
|                | Watts                       | 1040 | 1090 | 1130 | 1170 | 1210 |
|                | Amps                        | 10.1 | 10.6 | 11.1 | 11.5 | 11.9 |
|                | Lb/h                        | 132  | 128  | 125  | 121  | 116  |
| 25             | Btu/h                       | 8320 | 7720 | 7100 | 6480 | 5840 |
|                | Watts                       | 1100 | 1170 | 1230 | 1290 | 1340 |
|                | Amps                        | 10.8 | 11.4 | 12.0 | 12.6 | 13.1 |
|                | Lb/h                        | 152  | 149  | 146  | 143  | 139  |
| 30             | Btu/h                       | 9430 | 8790 | 8140 | 7490 | 6820 |
|                | Watts                       | 1170 | 1250 | 1330 | 1400 | 1470 |
|                | Amps                        | 11.4 | 12.2 | 12.9 | 13.7 | 14.3 |

|  |      |     |     |     |     |     |
|--|------|-----|-----|-----|-----|-----|
|  | Lb/h | 174 | 172 | 169 | 166 | 163 |
|--|------|-----|-----|-----|-----|-----|

  

| COEFFICIENTS | CAPACITY      | POWER         | CURRENT       | MASS FLOW     |
|--------------|---------------|---------------|---------------|---------------|
| C1           | 7.980089E+03  | 7.968074E+02  | 7.494603E+00  | 1.111963E+02  |
| C2           | 2.181595E+02  | -1.593818E+01 | -1.467874E-01 | 1.743486E+00  |
| C3           | -4.314871E+01 | -7.872671E-01 | -1.018901E-03 | -4.835842E-01 |
| C4           | 1.244688E+00  | -2.848239E-02 | -1.837626E-04 | 2.939464E-02  |
| C5           | -6.582232E-01 | 3.081632E-01  | 2.740895E-03  | 9.725158E-03  |
| C6           | 2.669585E-02  | 1.173112E-02  | 9.407476E-05  | 9.364836E-04  |
| C7           | -1.902988E-03 | -5.563354E-04 | -1.710577E-05 | -1.617700E-04 |
| C8           | 9.316662E-04  | 1.867947E-04  | 8.269092E-06  | 8.122807E-05  |
| C9           | -7.774635E-05 | 3.055294E-06  | -5.448892E-07 | -6.151644E-06 |
| C10          | -2.056705E-04 | -8.962032E-05 | -7.517650E-07 | -7.466821E-06 |

Value = C1 + C2 \* Te + C4 \* Te^2 + C7 \* Te^3 + (C3 + C5 \* Te + C8 \* Te^2) \* Tc + (C6 + C9 \* Te) \* Tc^2 + C10 \* Tc^3

Te = Evaporator Temperature  
Tc = Condensing Temperature