

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NJ 7231F |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 144EA11 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-22 | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Air Conditioning | | |
| 4.1 Evaporating temperature range | 0°C to 15°C | (32°F to 59°F) | |
| 5 Motor type | PSC | | |
| 6 Starting torque | HST - High starting torque | | |
| 7 Expansion device | Capillary tube or Expansion valve | | |
| 8 Compressor cooling | Operating voltage range | | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32°C Ambient temperature) | - | - | - |
| 8.2 LBP (43°C Ambient temperature) | - | - | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing pressures/temperature | | | |
| 9.1 Operating (gauge) | 21.7 | [kgf/cm ²] (309 psig) | / °C - °F |
| 9.2 Peak (gauge) | 24.2 | [kgf/cm ²] (344 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|-----------------|--|
| 1 Commercial designation | | [hp] |
| 2 Displacement | 26.11 | [cm ³] (1.593 cu.in) |
| 2.1 Bore [mm] | 41.770 | |
| 2.2 Stroke [mm] | 19.066 | |
| 3 Lubricant charge | 750 | [ml] (25.36 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO32 | |
| 4 Weight (with oil charge) | 20.3 | [kg] (44.75 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

C - ELECTRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PSC | |
| 2.1 Starting device | | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 25(440) | [µF(VAC minimum)] |
| 5 Motor protection | CST00AKN - 3031 | |
| 6 Start winding resistance | 7.76 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 1.78 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|------|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAEHBP46 Fan | | Evaporating temperature (Condensing temperature | | 7.2°C (44.96°F) 54.4°C (129.92°F) | |
| Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 12303 | 3100 | 3605 | 1460 | 6.77 | 75.98 | 8.43 | 2.12 | 2.47 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-----------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 35°C (+95°F)) | | | | |
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 0 (+32) | 12992 | 3274 | 3807 | 1096 | 5.36 | 0.00 | 11.85 | 2.99 | 3.47 |
| +5 (+41) | 15529 | 3913 | 4550 | 1125 | 5.58 | 0.00 | 13.80 | 3.48 | 4.05 |
| +10 (+50) | 18491 | 4660 | 5418 | 1146 | 5.71 | 0.00 | 16.14 | 4.07 | 4.73 |
| +15 (+59) | 21877 | 5513 | 6411 | 1159 | 5.76 | 0.00 | 18.87 | 4.76 | 5.53 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-----------------|-----------------------------|---|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 45°C (+113°F)) | | | | |
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 0 (+32) | 11196 | 2821 | 3281 | 1210 | 5.82 | 0.00 | 9.26 | 2.33 | 2.71 |
| +5 (+41) | 13478 | 3397 | 3949 | 1272 | 6.10 | 0.00 | 10.59 | 2.67 | 3.10 |
| +10 (+50) | 16093 | 4056 | 4716 | 1318 | 6.30 | 0.00 | 12.20 | 3.08 | 3.58 |
| +15 (+59) | 19041 | 4798 | 5579 | 1350 | 6.42 | 0.00 | 14.11 | 3.56 | 4.13 |

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|-------------------------------|----------------------------|----------|-----------------|-----------------------------|---|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 55°C (+131°F)) | | | | |
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 0 (+32) | 9326 | 2350 | 2733 | 1330 | 6.30 | 0.00 | 7.01 | 1.77 | 2.05 |
| +5 (+41) | 11340 | 2858 | 3323 | 1425 | 6.64 | 0.00 | 7.96 | 2.01 | 2.33 |
| +10 (+50) | 13594 | 3426 | 3983 | 1498 | 6.91 | 0.00 | 9.08 | 2.29 | 2.66 |
| +15 (+59) | 16088 | 4054 | 4714 | 1549 | 7.11 | 0.00 | 10.38 | 2.62 | 3.04 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | American Standard | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 9.6 +0.07/+0.00 | [mm] | (0.378" +0.003"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Vertical | | |
| 3.2 DISCHARGE | 8 +0.07/+0.00 | [mm] | (0.315" +0.003"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted J | | |
| 3.3 PROCESS | 6.42 +0.08/+0.00 | [mm] | (0.253" +0.003"/+0.000") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Vertical | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |