

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Y3115Z |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 711PA72 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Low-Medium Back Pressure (Light Commercial) | | |
| 4.1 Evaporating temperature range | -35°C to 0°C | (-31°F to 32°F) | |
| 5 Motor type | RSCR | | |
| 6 Starting torque | LST - Low Starting Torque | | |
| 7 Expansion device | Capillary tube | | |
| 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) | 16.2 | [kgf/cm ²] (230 psig) | / °C - °F |
| 9.2 Peak (gauge) | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 1/6 | [hp] |
| 2 Displacement | 6.09 | [cm ³] (0.372 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 17.600 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 7.6 | [kg] (16.75 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | V230 | |
| 3 Start capacitor | - | [μF(VAC minimum)] |
| 4 Run capacitor | 5(350) | [μF(VAC minimum)] |
| 5 Motor protection | AE19BU8 | |
| 6 Start winding resistance | 16.25 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 17.60 | [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 | | | ASHRAELBP32 Static | | Evaporating temperature (Condensing temperature | -23.3°C (-9.94°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] |
| 550 | 139 | 161 | 117 | 0.90 | 3.13 | 4.70 | 1.18 | 1.38 |

| | | | | | | | | |
|--------------------------------------|----------|-----|----------------------------------|-------------------------------|--|--|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAELBP32 Fan | | Evaporating temperature (Condensing temperature | -23.3°C (-9.94°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] |
| 584 | 147 | 171 | 113 | 0.59 | 3.32 | 5.17 | 1.30 | 1.51 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|--------------------------------------|----------------------------|----------|-------------------------------|-----------------------------|---|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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] |
| -35 (-31) | 343 | 86 | 100 | 79 | 0.47 | 1.94 | 4.33 | 1.09 | 1.27 |
| -30 (-22) | 459 | 116 | 135 | 91 | 0.51 | 2.60 | 5.08 | 1.28 | 1.49 |
| -25 (-13) | 616 | 155 | 181 | 102 | 0.55 | 3.50 | 6.04 | 1.52 | 1.77 |
| -20 (- 4) | 815 | 205 | 239 | 113 | 0.59 | 4.64 | 7.18 | 1.81 | 2.10 |
| -15 (+ 5) | 1054 | 266 | 309 | 125 | 0.64 | 6.02 | 8.45 | 2.13 | 2.48 |
| -10 (+14) | 1334 | 336 | 391 | 136 | 0.68 | 7.64 | 9.82 | 2.47 | 2.88 |
| -5 (+23) | 1656 | 417 | 485 | 148 | 0.73 | 9.53 | 11.24 | 2.83 | 3.29 |
| 0 (+32) | 2019 | 509 | 592 | 159 | 0.77 | 11.67 | 12.69 | 3.20 | 3.72 |

| | | | | | | | | | |
|--------------------------------------|----------------------------|----------|-------------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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] |
| -35 (-31) | 314 | 79 | 92 | 81 | 0.47 | 1.78 | 3.91 | 0.99 | 1.15 |
| -30 (-22) | 421 | 106 | 123 | 93 | 0.51 | 2.39 | 4.56 | 1.15 | 1.34 |
| -25 (-13) | 570 | 144 | 167 | 106 | 0.56 | 3.24 | 5.39 | 1.36 | 1.58 |
| -20 (- 4) | 761 | 192 | 223 | 119 | 0.61 | 4.33 | 6.36 | 1.60 | 1.86 |
| -15 (+ 5) | 994 | 251 | 291 | 133 | 0.67 | 5.67 | 7.44 | 1.88 | 2.18 |
| -10 (+14) | 1269 | 320 | 372 | 147 | 0.73 | 7.27 | 8.60 | 2.17 | 2.52 |
| -5 (+23) | 1586 | 400 | 465 | 162 | 0.79 | 9.13 | 9.78 | 2.46 | 2.87 |
| 0 (+32) | 1945 | 490 | 570 | 178 | 0.85 | 11.25 | 10.96 | 2.76 | 3.21 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32 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] |
| -35 | (-31) | 276 | 70 | 81 | 80 | 0.46 | 1.56 | 3.44 | 0.87 | 1.01 |
| -30 | (-22) | 372 | 94 | 109 | 93 | 0.51 | 2.11 | 4.02 | 1.01 | 1.18 |
| -25 | (-13) | 511 | 129 | 150 | 108 | 0.57 | 2.90 | 4.77 | 1.20 | 1.40 |
| -20 | (- 4) | 692 | 174 | 203 | 123 | 0.63 | 3.94 | 5.63 | 1.42 | 1.65 |
| -15 | (+ 5) | 917 | 231 | 269 | 139 | 0.69 | 5.23 | 6.57 | 1.66 | 1.93 |
| -10 | (+14) | 1184 | 298 | 347 | 157 | 0.76 | 6.78 | 7.56 | 1.91 | 2.22 |
| -5 | (+23) | 1495 | 377 | 438 | 175 | 0.84 | 8.60 | 8.55 | 2.15 | 2.51 |
| 0 | (+32) | 1849 | 466 | 542 | 194 | 0.92 | 10.69 | 9.51 | 2.40 | 2.79 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 42° | | |
| 3.2 DISCHARGE | 4.94 +0.08/-0.08 | [mm] | (0.194" +0.003"/-0.003") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Straight | | |
| 3.3 PROCESS | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted 46° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |