

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2Z60HLT |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513304010 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 115-127 / 60 | [V / Hz] | |
| 4 Application type | Low Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -10°C | (-31°F to 14°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) | Static | - | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | - | 98 to 140 V |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 14.2 | [kgf/cm ²] (202 psig) | / °C - °F |
| 9.2 Peak | 15.9 | [kgf/cm ²] (226 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/5 | [hp] |
| 2 Displacement | 5.54 | [cm ³] (0.338 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 16.000 | |
| 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) | 8.36 | [kg] (18.43 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

C - ELETRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 115-127 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 8EA14C3/QPS2-A4R7MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 15(180)/12(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM319NFBYY-53 | |
| 6 Start winding resistance | 5.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.25 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 10.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.60 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - NOM - UKCA - UL | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @115V60Hz | | | 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] |
| 675 | 170 | 198 | 117 | 1.00 | 3.84 | 5.78 | 1.46 | 1.69 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|---------------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | ASHRAE32 Static | | (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) | 391 | 98 | 115 | 71 | 0.64 | 2.21 | 5.48 | 1.38 | 1.61 |
| -30 (-22) | 499 | 126 | 146 | 85 | 0.72 | 2.83 | 5.98 | 1.51 | 1.75 |
| -25 (-13) | 662 | 167 | 194 | 98 | 0.82 | 3.76 | 6.78 | 1.71 | 1.99 |
| -20 (- 4) | 876 | 221 | 257 | 112 | 0.93 | 4.99 | 7.80 | 1.97 | 2.29 |
| -15 (+ 5) | 1138 | 287 | 334 | 126 | 1.06 | 6.50 | 8.98 | 2.26 | 2.63 |
| -10 (+14) | 1445 | 364 | 423 | 141 | 1.20 | 8.28 | 10.22 | 2.58 | 3.00 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | ASHRAE32 Static | | (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) | 364 | 92 | 107 | 73 | 0.68 | 2.06 | 5.00 | 1.26 | 1.46 |
| -30 (-22) | 472 | 119 | 138 | 88 | 0.78 | 2.68 | 5.43 | 1.37 | 1.59 |
| -25 (-13) | 630 | 159 | 185 | 103 | 0.89 | 3.58 | 6.13 | 1.55 | 1.80 |
| -20 (- 4) | 834 | 210 | 244 | 118 | 1.02 | 4.75 | 7.04 | 1.77 | 2.06 |
| -15 (+ 5) | 1081 | 272 | 317 | 134 | 1.16 | 6.17 | 8.06 | 2.03 | 2.36 |
| -10 (+14) | 1368 | 345 | 401 | 150 | 1.31 | 7.84 | 9.12 | 2.30 | 2.67 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | ASHRAE32 Static | | (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) | 338 | 85 | 99 | 76 | 0.71 | 1.91 | 4.45 | 1.12 | 1.30 |
| -30 (-22) | 445 | 112 | 130 | 92 | 0.82 | 2.52 | 4.83 | 1.22 | 1.42 |
| -25 (-13) | 597 | 150 | 175 | 109 | 0.95 | 3.39 | 5.46 | 1.38 | 1.60 |
| -20 (- 4) | 790 | 199 | 232 | 126 | 1.09 | 4.50 | 6.26 | 1.58 | 1.84 |
| -15 (+ 5) | 1022 | 257 | 299 | 143 | 1.25 | 5.83 | 7.15 | 1.80 | 2.10 |
| -10 (+14) | 1289 | 325 | 378 | 161 | 1.42 | 7.38 | 8.05 | 2.03 | 2.36 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @115V60Hz | | ASHRAE32 Static | | | (Condensing temperature 65°C (+149°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) | 311 | 78 | 91 | 81 | 0.73 | 1.76 | 3.86 | 0.97 | 1.13 |
| -30 | (-22) | 417 | 105 | 122 | 99 | 0.85 | 2.36 | 4.22 | 1.06 | 1.24 |
| -25 | (-13) | 563 | 142 | 165 | 117 | 0.99 | 3.20 | 4.80 | 1.21 | 1.41 |
| -20 | (- 4) | 745 | 188 | 218 | 135 | 1.15 | 4.24 | 5.51 | 1.39 | 1.61 |
| -15 | (+ 5) | 961 | 242 | 282 | 154 | 1.32 | 5.49 | 6.28 | 1.58 | 1.84 |
| -10 | (+14) | 1207 | 304 | 354 | 173 | 1.50 | 6.92 | 7.03 | 1.77 | 2.06 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate | Universal EUEM | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Straight | | |
| 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 | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |