

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Y70HER |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513308553 |

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-Medium Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -5°C | (-31°F to 23°F) | |
| 5 Motor type | RSIR-CSIR | | |
| 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 | 5.72 | [cm ³] (0.349 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 14.400 | |
| 3 Lubricant charge | 190 | [ml] (6.42 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 8.3 | [kg] (18.30 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 | Current Relay | |
| 2.1 Starting device | 213514083/213515007 | |
| 3 Start capacitor | 270-324(150) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM762MFBZZ-53 | |
| 6 Start winding resistance | 8.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.10 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 26.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 2.70 | [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 - TUV - 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] |
| 680 | 171 | 199 | 142 | 1.94 | 3.86 | 4.80 | 1.21 | 1.41 |

E - PERFORMANCE - CURVES

| 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) | 378 | 95 | 111 | 97 | 1.75 | 2.14 | 3.90 | 0.98 | 1.14 |
| -30 | (-22) | 512 | 129 | 150 | 113 | 1.80 | 2.90 | 4.53 | 1.14 | 1.33 |
| -25 | (-13) | 681 | 172 | 200 | 131 | 1.88 | 3.87 | 5.19 | 1.31 | 1.52 |
| -20 | (- 4) | 887 | 223 | 260 | 151 | 1.99 | 5.05 | 5.88 | 1.48 | 1.72 |
| -15 | (+ 5) | 1130 | 285 | 331 | 172 | 2.12 | 6.45 | 6.60 | 1.66 | 1.93 |
| -10 | (+14) | 1414 | 356 | 414 | 193 | 2.25 | 8.10 | 7.33 | 1.85 | 2.15 |
| -5 | (+23) | 1738 | 438 | 509 | 215 | 2.40 | 10.00 | 8.08 | 2.04 | 2.37 |

| 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) | 318 | 80 | 93 | 97 | 1.75 | 1.80 | 3.31 | 0.83 | 0.97 |
| -30 | (-22) | 445 | 112 | 130 | 114 | 1.81 | 2.52 | 3.91 | 0.99 | 1.15 |
| -25 | (-13) | 610 | 154 | 179 | 134 | 1.90 | 3.46 | 4.54 | 1.15 | 1.33 |
| -20 | (- 4) | 815 | 205 | 239 | 157 | 2.03 | 4.64 | 5.19 | 1.31 | 1.52 |
| -15 | (+ 5) | 1062 | 268 | 311 | 181 | 2.18 | 6.06 | 5.86 | 1.48 | 1.72 |
| -10 | (+14) | 1352 | 341 | 396 | 206 | 2.35 | 7.74 | 6.54 | 1.65 | 1.92 |
| -5 | (+23) | 1686 | 425 | 494 | 233 | 2.54 | 9.70 | 7.24 | 1.82 | 2.12 |

| 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) | 266 | 67 | 78 | 90 | 1.72 | 1.51 | 2.92 | 0.74 | 0.86 |
| -30 | (-22) | 381 | 96 | 112 | 110 | 1.79 | 2.16 | 3.47 | 0.87 | 1.02 |
| -25 | (-13) | 538 | 136 | 158 | 134 | 1.89 | 3.05 | 4.04 | 1.02 | 1.18 |
| -20 | (- 4) | 738 | 186 | 216 | 160 | 2.04 | 4.20 | 4.61 | 1.16 | 1.35 |
| -15 | (+ 5) | 983 | 248 | 288 | 189 | 2.23 | 5.61 | 5.20 | 1.31 | 1.52 |
| -10 | (+14) | 1274 | 321 | 373 | 220 | 2.44 | 7.30 | 5.80 | 1.46 | 1.70 |
| -5 | (+23) | 1612 | 406 | 472 | 252 | 2.68 | 9.27 | 6.40 | 1.61 | 1.88 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 8.2 +0.12/-0.08 | [mm] | (0.323" +0.005"/-0.003") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted parallel B.Plane 30° | | |
| 3.2 DISCHARGE | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-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 | Slanted parallel to Base Plate | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |