

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Y50HLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513300263 |

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 | 4.15 | [cm ³] (0.253 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 12.000 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO7 | |
| 4 Weight (with oil charge) | 7.4 | [kg] (16.31 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

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 | 7M4R7MD3/8EA21C3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(170) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM276NFBYY-53 | |
| 6 Start winding resistance | | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | | [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 | CCC - 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] |
| 477 | 120 | 140 | 88 | 0.84 | 2.71 | 5.45 | 1.37 | 1.60 |

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) | 262 | 66 | 77 | 60 | 0.62 | 1.48 | 4.32 | 1.09 | 1.27 |
| -30 (-22) | 357 | 90 | 105 | 70 | 0.71 | 2.02 | 5.09 | 1.28 | 1.49 |
| -25 (-13) | 477 | 120 | 140 | 81 | 0.80 | 2.71 | 5.89 | 1.48 | 1.73 |
| -20 (- 4) | 625 | 158 | 183 | 93 | 0.90 | 3.56 | 6.73 | 1.70 | 1.97 |
| -15 (+ 5) | 806 | 203 | 236 | 105 | 1.01 | 4.60 | 7.63 | 1.92 | 2.24 |
| -10 (+14) | 1022 | 258 | 300 | 118 | 1.13 | 5.86 | 8.62 | 2.17 | 2.53 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 223 | 56 | 65 | 62 | 0.61 | 1.26 | 3.63 | 0.91 | 1.06 |
| -30 (-22) | 320 | 81 | 94 | 72 | 0.71 | 1.81 | 4.43 | 1.12 | 1.30 |
| -25 (-13) | 437 | 110 | 128 | 84 | 0.82 | 2.48 | 5.19 | 1.31 | 1.52 |
| -20 (- 4) | 578 | 146 | 169 | 97 | 0.94 | 3.29 | 5.93 | 1.49 | 1.74 |
| -15 (+ 5) | 747 | 188 | 219 | 112 | 1.07 | 4.27 | 6.68 | 1.68 | 1.96 |
| -10 (+14) | 948 | 239 | 278 | 127 | 1.21 | 5.43 | 7.46 | 1.88 | 2.19 |

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|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 192 | 48 | 56 | 58 | 0.60 | 1.08 | 3.33 | 0.84 | 0.98 |
| -30 (-22) | 290 | 73 | 85 | 69 | 0.69 | 1.65 | 4.15 | 1.04 | 1.22 |
| -25 (-13) | 405 | 102 | 119 | 83 | 0.81 | 2.30 | 4.87 | 1.23 | 1.43 |
| -20 (- 4) | 540 | 136 | 158 | 98 | 0.94 | 3.07 | 5.52 | 1.39 | 1.62 |
| -15 (+ 5) | 698 | 176 | 205 | 114 | 1.08 | 3.98 | 6.11 | 1.54 | 1.79 |
| -10 (+14) | 884 | 223 | 259 | 133 | 1.24 | 5.06 | 6.68 | 1.68 | 1.96 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 2 Tray holder | Yes | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.2 +0.05/+0.05 | [mm] | (0.244" +0.002"/+0.002") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 40° up + 45° to Back | | |
| 3.2 DISCHARGE | 4.9 +0.10/-0.05 | [mm] | (0.193" +0.004"/-0.002") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted 0° up + 24° to Back | | |
| 3.3 PROCESS | 6.2 +0.05/+0.05 | [mm] | (0.244" +0.002"/+0.002") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted 40° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |