

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 65HNR |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513307052 |

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) | Fan | - | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Fan | - | 103 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 | 1/6+ | [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 | 160 | [ml] (5.41 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 7.62 | [kg] (16.80 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 | 213514121/213515293 | |
| 3 Start capacitor | 189-227(130) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 5TM762NFBZZ-53 | |
| 6 Start winding resistance | 8.40 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 2.90 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 26.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 3.60 | [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 - TUV - UKCA - UL | |

D - PERFORMANCE - CHECK POINT DATA

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|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @115V60Hz | | | 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] |
| 650 | 164 | 190 | 168 | 2.65 | 3.69 | 3.88 | 0.98 | 1.14 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-----------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | 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) | 521 | 131 | 153 | 154 | 2.48 | 2.95 | 3.40 | 0.86 | 1.00 |
| -30 (-22) | 574 | 145 | 168 | 159 | 2.49 | 3.25 | 3.62 | 0.91 | 1.06 |
| -25 (-13) | 685 | 173 | 201 | 169 | 2.54 | 3.89 | 4.05 | 1.02 | 1.19 |
| -20 (- 4) | 850 | 214 | 249 | 182 | 2.61 | 4.84 | 4.65 | 1.17 | 1.36 |
| -15 (+ 5) | 1063 | 268 | 312 | 199 | 2.70 | 6.07 | 5.35 | 1.35 | 1.57 |
| -10 (+14) | 1320 | 333 | 387 | 218 | 2.80 | 7.56 | 6.08 | 1.53 | 1.78 |
| -5 (+23) | 1615 | 407 | 473 | 237 | 2.91 | 9.29 | 6.81 | 1.72 | 2.00 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-----------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | 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) | 481 | 121 | 141 | 151 | 2.46 | 2.72 | 3.19 | 0.80 | 0.94 |
| -30 (-22) | 527 | 133 | 154 | 157 | 2.48 | 2.98 | 3.36 | 0.85 | 0.99 |
| -25 (-13) | 632 | 159 | 185 | 169 | 2.53 | 3.59 | 3.73 | 0.94 | 1.09 |
| -20 (- 4) | 792 | 200 | 232 | 186 | 2.62 | 4.51 | 4.24 | 1.07 | 1.24 |
| -15 (+ 5) | 1002 | 253 | 294 | 207 | 2.73 | 5.72 | 4.83 | 1.22 | 1.42 |
| -10 (+14) | 1257 | 317 | 368 | 231 | 2.87 | 7.20 | 5.45 | 1.37 | 1.60 |
| -5 (+23) | 1551 | 391 | 454 | 257 | 3.01 | 8.92 | 6.03 | 1.52 | 1.77 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-----------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | ASHRAE32 Fan | | (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) | 436 | 110 | 128 | 151 | 2.45 | 2.47 | 2.89 | 0.73 | 0.85 |
| -30 (-22) | 476 | 120 | 140 | 157 | 2.47 | 2.70 | 3.06 | 0.77 | 0.90 |
| -25 (-13) | 578 | 146 | 169 | 170 | 2.53 | 3.28 | 3.41 | 0.86 | 1.00 |
| -20 (- 4) | 736 | 185 | 216 | 189 | 2.63 | 4.19 | 3.89 | 0.98 | 1.14 |
| -15 (+ 5) | 944 | 238 | 277 | 213 | 2.76 | 5.39 | 4.43 | 1.12 | 1.30 |
| -10 (+14) | 1199 | 302 | 351 | 241 | 2.93 | 6.87 | 4.98 | 1.26 | 1.46 |
| -5 (+23) | 1494 | 376 | 438 | 272 | 3.11 | 8.59 | 5.48 | 1.38 | 1.61 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 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 | Slanted | | |
| 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 | | |