

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 65HNR |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513307310 |

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 / ISO10 | |
| 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 | CP4TMF231N61 | |
| 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 - UKCA - UL - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| 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 | 166 | 2.65 | 3.69 | 3.93 | 0.99 | 1.15 |

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 | 152 | 2.48 | 2.95 | 3.44 | 0.87 | 1.01 |
| -30 (-22) | 574 | 145 | 168 | 157 | 2.49 | 3.25 | 3.66 | 0.92 | 1.07 |
| -25 (-13) | 685 | 173 | 201 | 167 | 2.54 | 3.89 | 4.10 | 1.03 | 1.20 |
| -20 (- 4) | 850 | 214 | 249 | 180 | 2.61 | 4.84 | 4.70 | 1.18 | 1.38 |
| -15 (+ 5) | 1063 | 268 | 312 | 197 | 2.70 | 6.07 | 5.40 | 1.36 | 1.58 |
| -10 (+14) | 1320 | 333 | 387 | 216 | 2.80 | 7.56 | 6.14 | 1.55 | 1.80 |
| -5 (+23) | 1615 | 407 | 473 | 235 | 2.91 | 9.29 | 6.87 | 1.73 | 2.01 |

| | | | | | | | | | |
|-------------------------------|----------------------------|-----------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| 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 | 149 | 2.46 | 2.72 | 3.23 | 0.82 | 0.95 |
| -30 (-22) | 527 | 133 | 154 | 155 | 2.48 | 2.98 | 3.40 | 0.86 | 1.00 |
| -25 (-13) | 632 | 159 | 185 | 167 | 2.53 | 3.59 | 3.77 | 0.95 | 1.11 |
| -20 (- 4) | 792 | 200 | 232 | 184 | 2.62 | 4.51 | 4.28 | 1.08 | 1.26 |
| -15 (+ 5) | 1002 | 253 | 294 | 205 | 2.73 | 5.72 | 4.88 | 1.23 | 1.43 |
| -10 (+14) | 1257 | 317 | 368 | 229 | 2.87 | 7.20 | 5.50 | 1.38 | 1.61 |
| -5 (+23) | 1551 | 391 | 454 | 255 | 3.01 | 8.92 | 6.08 | 1.53 | 1.78 |

| | | | | | | | | | |
|-------------------------------|----------------------------|-----------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| 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 | 149 | 2.45 | 2.47 | 2.93 | 0.74 | 0.86 |
| -30 (-22) | 476 | 120 | 140 | 155 | 2.47 | 2.70 | 3.10 | 0.78 | 0.91 |
| -25 (-13) | 578 | 146 | 169 | 168 | 2.53 | 3.28 | 3.45 | 0.87 | 1.01 |
| -20 (- 4) | 736 | 185 | 216 | 187 | 2.63 | 4.19 | 3.93 | 0.99 | 1.15 |
| -15 (+ 5) | 944 | 238 | 277 | 211 | 2.76 | 5.39 | 4.47 | 1.13 | 1.31 |
| -10 (+14) | 1199 | 302 | 351 | 239 | 2.93 | 6.87 | 5.02 | 1.27 | 1.47 |
| -5 (+23) | 1494 | 376 | 438 | 270 | 3.11 | 8.59 | 5.52 | 1.39 | 1.62 |

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 | 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 | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |