

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2C32CLT |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513304600 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [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 | 198 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 255 V | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|--|
| 1 Commercial designation | 1/7 | [hp] |
| 2 Displacement | 5.96 | [cm ³] (0.364 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 15.000 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO5 | |
| 4 Weight (with oil charge) | 7.68 | [kg] (16.93 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 | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | MI2021 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 2(350)/3(350)/2.5(350) | [µF(VAC minimum)] |
| 5 Motor protection | AE23AHNX | |
| 6 Start winding resistance | 31.70 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 34.50 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 2.60 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.40 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - UKCA - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE LBP-NOFAN 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] |
| 333 | 84 | 98 | 57 | 0.26 | 1.05 | 5.89 | 1.48 | 1.73 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|---------------------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN 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) | 202 | 51 | 59 | 40 | 0.18 | 0.63 | 5.00 | 1.26 | 1.47 |
| -30 (-22) | 266 | 67 | 78 | 45 | 0.20 | 0.83 | 5.89 | 1.48 | 1.72 |
| -25 (-13) | 348 | 88 | 102 | 51 | 0.23 | 1.09 | 6.92 | 1.74 | 2.03 |
| -20 (- 4) | 449 | 113 | 132 | 56 | 0.26 | 1.41 | 8.09 | 2.04 | 2.37 |
| -15 (+ 5) | 571 | 144 | 167 | 61 | 0.28 | 1.80 | 9.42 | 2.37 | 2.76 |
| -10 (+14) | 716 | 180 | 210 | 66 | 0.30 | 2.26 | 10.90 | 2.75 | 3.19 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN 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) | 180 | 45 | 53 | 40 | 0.19 | 0.56 | 4.50 | 1.13 | 1.32 |
| -30 (-22) | 245 | 62 | 72 | 46 | 0.21 | 0.77 | 5.31 | 1.34 | 1.56 |
| -25 (-13) | 326 | 82 | 96 | 52 | 0.24 | 1.02 | 6.21 | 1.57 | 1.82 |
| -20 (- 4) | 426 | 107 | 125 | 59 | 0.27 | 1.34 | 7.20 | 1.82 | 2.11 |
| -15 (+ 5) | 547 | 138 | 160 | 66 | 0.30 | 1.72 | 8.29 | 2.09 | 2.43 |
| -10 (+14) | 690 | 174 | 202 | 73 | 0.33 | 2.18 | 9.47 | 2.39 | 2.78 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN 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) | 157 | 40 | 46 | 40 | 0.19 | 0.49 | 3.95 | 1.00 | 1.16 |
| -30 (-22) | 221 | 56 | 65 | 47 | 0.22 | 0.69 | 4.75 | 1.20 | 1.39 |
| -25 (-13) | 301 | 76 | 88 | 54 | 0.25 | 0.95 | 5.58 | 1.41 | 1.63 |
| -20 (- 4) | 400 | 101 | 117 | 62 | 0.28 | 1.26 | 6.45 | 1.62 | 1.89 |
| -15 (+ 5) | 518 | 131 | 152 | 70 | 0.32 | 1.63 | 7.36 | 1.85 | 2.16 |
| -10 (+14) | 658 | 166 | 193 | 79 | 0.36 | 2.08 | 8.30 | 2.09 | 2.43 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN 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) | 132 | 33 | 39 | 39 | 0.19 | 0.41 | 3.33 | 0.84 | 0.98 |
| -30 | (-22) | 195 | 49 | 57 | 47 | 0.22 | 0.61 | 4.18 | 1.05 | 1.22 |
| -25 | (-13) | 273 | 69 | 80 | 55 | 0.25 | 0.86 | 5.00 | 1.26 | 1.47 |
| -20 | (- 4) | 369 | 93 | 108 | 64 | 0.29 | 1.16 | 5.81 | 1.47 | 1.70 |
| -15 | (+ 5) | 484 | 122 | 142 | 74 | 0.34 | 1.52 | 6.60 | 1.66 | 1.94 |
| -10 | (+14) | 621 | 156 | 182 | 84 | 0.39 | 1.96 | 7.38 | 1.86 | 2.16 |

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 | Slanted 42° up + 45° to Back | | |
| 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 parallel BP+24°to Back | | |
| 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 45° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |