

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2C40CLT |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513304607 |

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 | | [hp] |
| 2 Displacement | 7.23 | [cm ³] (0.441 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 16.000 | |
| 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 | - | [kgf/cm ²] |

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 | V230 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 2(300)/2.5(300)/3(300) | [µF(VAC minimum)] |
| 5 Motor protection | T0224/07 | |
| 6 Start winding resistance | 26.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 26.00 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 3.60 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.55 | [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] |
| 416 | 105 | 122 | 70 | 0.30 | | 5.93 | 1.49 | 1.74 |

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) | 233 | 59 | 68 | 45 | 0.21 | 0.73 | 5.12 | 1.29 | 1.50 |
| -30 | (-22) | 319 | 80 | 93 | 53 | 0.23 | 1.00 | 5.98 | 1.51 | 1.75 |
| -25 | (-13) | 428 | 108 | 125 | 61 | 0.26 | 1.34 | 6.98 | 1.76 | 2.05 |
| -20 | (- 4) | 560 | 141 | 164 | 69 | 0.29 | 1.76 | 8.11 | 2.04 | 2.38 |
| -15 | (+ 5) | 713 | 180 | 209 | 77 | 0.33 | 2.24 | 9.34 | 2.35 | 2.74 |
| -10 | (+14) | 887 | 224 | 260 | 84 | 0.37 | 2.80 | 10.64 | 2.68 | 3.12 |

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|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|---|-------------------------|---------------------------|-----------|-------|
| 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) | 214 | 54 | 63 | 48 | 0.21 | 0.67 | 4.50 | 1.13 | 1.32 |
| -30 | (-22) | 296 | 75 | 87 | 56 | 0.24 | 0.93 | 5.30 | 1.33 | 1.55 |
| -25 | (-13) | 402 | 101 | 118 | 65 | 0.27 | 1.26 | 6.20 | 1.56 | 1.82 |
| -20 | (- 4) | 531 | 134 | 156 | 74 | 0.31 | 1.67 | 7.19 | 1.81 | 2.11 |
| -15 | (+ 5) | 682 | 172 | 200 | 83 | 0.36 | 2.15 | 8.25 | 2.08 | 2.42 |
| -10 | (+14) | 854 | 215 | 250 | 91 | 0.40 | 2.70 | 9.35 | 2.36 | 2.74 |

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|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|---|-------------------------|---------------------------|-----------|-------|
| 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) | 196 | 49 | 58 | 49 | 0.21 | 0.61 | 4.05 | 1.02 | 1.19 |
| -30 | (-22) | 273 | 69 | 80 | 57 | 0.24 | 0.86 | 4.78 | 1.20 | 1.40 |
| -25 | (-13) | 375 | 94 | 110 | 67 | 0.28 | 1.18 | 5.59 | 1.41 | 1.64 |
| -20 | (- 4) | 500 | 126 | 146 | 77 | 0.33 | 1.57 | 6.45 | 1.63 | 1.89 |
| -15 | (+ 5) | 647 | 163 | 190 | 88 | 0.38 | 2.04 | 7.35 | 1.85 | 2.15 |
| -10 | (+14) | 816 | 206 | 239 | 99 | 0.44 | 2.58 | 8.26 | 2.08 | 2.42 |

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) | 181 | 46 | 53 | 49 | 0.22 | 0.57 | 3.71 | 0.93 | 1.09 |
| -30 | (-22) | 252 | 63 | 74 | 58 | 0.26 | 0.79 | 4.39 | 1.11 | 1.29 |
| -25 | (-13) | 347 | 87 | 102 | 68 | 0.30 | 1.09 | 5.11 | 1.29 | 1.50 |
| -20 | (- 4) | 466 | 118 | 137 | 80 | 0.35 | 1.47 | 5.85 | 1.48 | 1.72 |
| -15 | (+ 5) | 609 | 153 | 178 | 92 | 0.41 | 1.92 | 6.60 | 1.66 | 1.93 |
| -10 | (+14) | 774 | 195 | 227 | 106 | 0.47 | 2.44 | 7.33 | 1.85 | 2.15 |

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 | | |