

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2C66CLT |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513304506 |

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 | 1/5 | [hp] |
| 2 Displacement | 10.61 | [cm ³] (0.647 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 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) | 8.36 | [kg] (18.43 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 | 7M220MD3/8EA17C3/QPS2-A22MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(310)/4(310) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM189NFBYY-53 | |
| 6 Start winding resistance | 13.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 18.50 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 5.10 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.77 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | | |

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] |
| 611 | 154 | 179 | 99 | 0.49 | 1.92 | 6.15 | 1.55 | 1.80 |

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) | 345 | 87 | 101 | 63 | 0.33 | 1.08 | 5.43 | 1.37 | 1.59 | |
| -30 (-22) | 472 | 119 | 138 | 75 | 0.38 | 1.48 | 6.27 | 1.58 | 1.84 | |
| -25 (-13) | 621 | 156 | 182 | 87 | 0.43 | 1.95 | 7.19 | 1.81 | 2.11 | |
| -20 (- 4) | 798 | 201 | 234 | 98 | 0.48 | 2.51 | 8.17 | 2.06 | 2.39 | |
| -15 (+ 5) | 1009 | 254 | 296 | 110 | 0.53 | 3.17 | 9.20 | 2.32 | 2.70 | |
| -10 (+14) | 1258 | 317 | 369 | 122 | 0.59 | 3.97 | 10.29 | 2.59 | 3.01 | |

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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) | 320 | 81 | 94 | 65 | 0.34 | 1.00 | 4.93 | 1.24 | 1.45 | |
| -30 (-22) | 445 | 112 | 130 | 78 | 0.40 | 1.39 | 5.70 | 1.44 | 1.67 | |
| -25 (-13) | 592 | 149 | 173 | 91 | 0.45 | 1.86 | 6.53 | 1.64 | 1.91 | |
| -20 (- 4) | 766 | 193 | 224 | 104 | 0.51 | 2.41 | 7.39 | 1.86 | 2.17 | |
| -15 (+ 5) | 972 | 245 | 285 | 117 | 0.57 | 3.06 | 8.30 | 2.09 | 2.43 | |
| -10 (+14) | 1217 | 307 | 356 | 131 | 0.63 | 3.84 | 9.24 | 2.33 | 2.71 | |

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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) | 289 | 73 | 85 | 66 | 0.34 | 0.91 | 4.41 | 1.11 | 1.29 | |
| -30 (-22) | 411 | 104 | 121 | 80 | 0.40 | 1.29 | 5.12 | 1.29 | 1.50 | |
| -25 (-13) | 554 | 140 | 162 | 94 | 0.47 | 1.74 | 5.86 | 1.48 | 1.72 | |
| -20 (- 4) | 723 | 182 | 212 | 109 | 0.53 | 2.27 | 6.63 | 1.67 | 1.94 | |
| -15 (+ 5) | 923 | 233 | 270 | 124 | 0.60 | 2.91 | 7.42 | 1.87 | 2.17 | |
| -10 (+14) | 1160 | 292 | 340 | 141 | 0.68 | 3.66 | 8.23 | 2.07 | 2.41 | |

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) | 254 | 64 | 74 | 66 | 0.33 | 0.80 | 3.86 | 0.97 | 1.13 |
| -30 | (-22) | 371 | 93 | 109 | 82 | 0.41 | 1.16 | 4.51 | 1.14 | 1.32 |
| -25 | (-13) | 507 | 128 | 149 | 98 | 0.48 | 1.59 | 5.18 | 1.31 | 1.52 |
| -20 | (- 4) | 669 | 168 | 196 | 114 | 0.55 | 2.10 | 5.87 | 1.48 | 1.72 |
| -15 | (+ 5) | 861 | 217 | 252 | 131 | 0.63 | 2.71 | 6.56 | 1.65 | 1.92 |
| -10 | (+14) | 1089 | 274 | 319 | 150 | 0.72 | 3.44 | 7.26 | 1.83 | 2.13 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 2 Tray holder | Yes | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 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 | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 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 | | |