

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T2117GK |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513306262 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Low Back Pressure R404A | | |
| 4.1 Evaporating temperature range | -40°C to -10°C | (-40°F to 14°F) | |
| 5 Motor type | CSIR | | |
| 6 Starting torque | HST - Hight starting torque | | |
| 7 Expansion device | Capillary tube or Expansion valve | | |
| 8 Compressor cooling | Operating voltage range | | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32°C Ambient temperature) | - | - | - |
| 8.2 LBP (43°C Ambient temperature) | - | - | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 25.2 | [kgf/cm ²] (358 psig) | / °C - °F |
| 9.2 Peak | 28.3 | [kgf/cm ²] (402 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/4 | [hp] |
| 2 Displacement | 4.50 | [cm ³] (0.275 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 13.000 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 7.76 | [kg] (17.11 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 | Current Relay | |
| 2.1 Starting device | MTRP-0015/QL2-3.76 ** | |
| 3 Start capacitor | 43-53(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0040/G6 | |
| 6 Start winding resistance | 21.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 14.40 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 7.70 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [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 | | | ASHRAELBP32 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] |
| 834 | 210 | 244 | 181 | 1.15 | 5.65 | 4.61 | 1.16 | 1.35 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|---------------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32 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] |
| -40 | (-40) | 416 | 105 | 122 | 113 | 0.99 | 2.80 | 3.67 | 0.93 | 1.08 |
| -35 | (-31) | 546 | 138 | 160 | 127 | 1.02 | 3.68 | 4.30 | 1.08 | 1.26 |
| -30 | (-22) | 702 | 177 | 206 | 142 | 1.06 | 4.75 | 4.97 | 1.25 | 1.46 |
| -25 | (-13) | 892 | 225 | 261 | 157 | 1.11 | 6.06 | 5.70 | 1.44 | 1.67 |
| -20 | (- 4) | 1123 | 283 | 329 | 172 | 1.16 | 7.67 | 6.52 | 1.64 | 1.91 |
| -15 | (+ 5) | 1401 | 353 | 410 | 188 | 1.21 | 9.63 | 7.44 | 1.88 | 2.18 |
| -10 | (+14) | 1733 | 437 | 508 | 204 | 1.26 | 11.99 | 8.51 | 2.14 | 2.49 |

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|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32 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] |
| -40 | (-40) | 361 | 91 | 106 | 114 | 0.99 | 2.42 | 3.17 | 0.80 | 0.93 |
| -35 | (-31) | 497 | 125 | 146 | 131 | 1.03 | 3.34 | 3.78 | 0.95 | 1.11 |
| -30 | (-22) | 653 | 165 | 191 | 149 | 1.08 | 4.41 | 4.39 | 1.11 | 1.29 |
| -25 | (-13) | 837 | 211 | 245 | 167 | 1.14 | 5.67 | 5.02 | 1.26 | 1.47 |
| -20 | (- 4) | 1055 | 266 | 309 | 186 | 1.20 | 7.19 | 5.68 | 1.43 | 1.67 |
| -15 | (+ 5) | 1314 | 331 | 385 | 205 | 1.27 | 9.01 | 6.42 | 1.62 | 1.88 |
| -10 | (+14) | 1622 | 409 | 475 | 224 | 1.33 | 11.20 | 7.25 | 1.83 | 2.12 |

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|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32 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] |
| -40 | (-40) | 277 | 70 | 81 | 109 | 0.99 | 1.85 | 2.57 | 0.65 | 0.75 |
| -35 | (-31) | 423 | 107 | 124 | 131 | 1.03 | 2.84 | 3.21 | 0.81 | 0.94 |
| -30 | (-22) | 584 | 147 | 171 | 153 | 1.09 | 3.93 | 3.80 | 0.96 | 1.11 |
| -25 | (-13) | 766 | 193 | 224 | 176 | 1.16 | 5.18 | 4.37 | 1.10 | 1.28 |
| -20 | (- 4) | 977 | 246 | 286 | 199 | 1.24 | 6.64 | 4.92 | 1.24 | 1.44 |
| -15 | (+ 5) | 1223 | 308 | 358 | 222 | 1.32 | 8.37 | 5.51 | 1.39 | 1.61 |
| -10 | (+14) | 1512 | 381 | 443 | 246 | 1.40 | 10.42 | 6.14 | 1.55 | 1.80 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 2 Tray holder | No | | |
| 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 | | |