

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T2130GK |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513306211 |

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 | 1/2- | [hp] |
| 2 Displacement | 6.76 | [cm ³] (0.413 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 17.000 | |
| 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) | 8 | [kg] (17.64 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 | MTRPH-0025-65/QL2-5.15 ** | |
| 3 Start capacitor | 72-88(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0971/G6 | |
| 6 Start winding resistance | 16.95 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 10.10 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 12.40 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 2.80 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | 3.05 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CCC - CE - UKCA - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| 1332 | 336 | 390 | 292 | 1.80 | 9.03 | 4.56 | 1.15 | 1.34 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Fan | | (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) | 658 | 166 | 193 | 180 | 1.50 | 4.42 | 3.66 | 0.92 | 1.07 |
| -35 | (-31) | 860 | 217 | 252 | 203 | 1.55 | 5.80 | 4.24 | 1.07 | 1.24 |
| -30 | (-22) | 1099 | 277 | 322 | 227 | 1.62 | 7.44 | 4.84 | 1.22 | 1.42 |
| -25 | (-13) | 1381 | 348 | 405 | 253 | 1.71 | 9.38 | 5.45 | 1.37 | 1.60 |
| -20 | (- 4) | 1711 | 431 | 502 | 281 | 1.80 | 11.69 | 6.09 | 1.54 | 1.79 |
| -15 | (+ 5) | 2096 | 528 | 614 | 310 | 1.90 | 14.40 | 6.76 | 1.70 | 1.98 |
| -10 | (+14) | 2541 | 640 | 745 | 340 | 2.00 | 17.58 | 7.47 | 1.88 | 2.19 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| -40 | (-40) | 594 | 150 | 174 | 184 | 1.50 | 3.98 | 3.24 | 0.82 | 0.95 |
| -35 | (-31) | 790 | 199 | 231 | 209 | 1.56 | 5.32 | 3.77 | 0.95 | 1.11 |
| -30 | (-22) | 1021 | 257 | 299 | 237 | 1.64 | 6.90 | 4.30 | 1.08 | 1.26 |
| -25 | (-13) | 1294 | 326 | 379 | 268 | 1.74 | 8.77 | 4.82 | 1.22 | 1.41 |
| -20 | (- 4) | 1613 | 406 | 473 | 301 | 1.86 | 10.99 | 5.35 | 1.35 | 1.57 |
| -15 | (+ 5) | 1985 | 500 | 582 | 337 | 1.98 | 13.61 | 5.89 | 1.48 | 1.73 |
| -10 | (+14) | 2415 | 608 | 708 | 375 | 2.11 | 16.67 | 6.45 | 1.63 | 1.89 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| -40 | (-40) | 525 | 132 | 154 | 185 | 1.50 | 3.51 | 2.83 | 0.71 | 0.83 |
| -35 | (-31) | 712 | 179 | 209 | 214 | 1.56 | 4.79 | 3.33 | 0.84 | 0.98 |
| -30 | (-22) | 933 | 235 | 273 | 246 | 1.66 | 6.29 | 3.80 | 0.96 | 1.11 |
| -25 | (-13) | 1193 | 301 | 350 | 281 | 1.78 | 8.07 | 4.24 | 1.07 | 1.24 |
| -20 | (- 4) | 1498 | 378 | 439 | 321 | 1.92 | 10.19 | 4.68 | 1.18 | 1.37 |
| -15 | (+ 5) | 1854 | 467 | 543 | 364 | 2.08 | 12.69 | 5.10 | 1.28 | 1.49 |
| -10 | (+14) | 2266 | 571 | 664 | 410 | 2.25 | 15.62 | 5.52 | 1.39 | 1.62 |

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 | | |