

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T6160Z |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 194QA67 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|--|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | High Back Pressure (Commercial Compressors R134a, R22) | | |
| 4.1 Evaporating temperature range | -15°C to 10°C | (5°F to 50°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 pressures/temperature | | | |
| 9.1 Operating (gauge) | 16.2 | [kgf/cm ²] (230 psig) | / °C - °F |
| 9.2 Peak (gauge) | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/4 | [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) | 7.8 | [kg] (17.20 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-36 | |
| 3 Start capacitor | 53-64(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0571/G6 | |
| 6 Start winding resistance | [Ω at 25°C (77°F)] +/- 8% | |
| 7 Run winding resistance | [Ω at 25°C (77°F)] +/- 8% | |
| 8 LRA - Locked rotor amperage (50 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [A] |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] |
| 11 Approval boards certification | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAEHBP46 Fan | | Evaporating temperature (Condensing temperature | | 7.2°C (44.96°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] |
| 2458 | 619 | 720 | 300 | 1.74 | 15.94 | 8.19 | 2.06 | 2.40 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 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] |
| -15 | (+5) | 1265 | 319 | 371 | 172 | 1.35 | 6.84 | 7.35 | 1.85 | 2.15 |
| -10 | (+14) | 1584 | 399 | 464 | 188 | 1.40 | 8.60 | 8.44 | 2.13 | 2.47 |
| -5 | (+23) | 1959 | 494 | 574 | 205 | 1.45 | 10.67 | 9.55 | 2.41 | 2.80 |
| 0 | (+32) | 2391 | 602 | 700 | 224 | 1.50 | 13.08 | 10.66 | 2.69 | 3.12 |
| +5 | (+41) | 2878 | 725 | 843 | 245 | 1.57 | 15.83 | 11.75 | 2.96 | 3.44 |
| +10 | (+50) | 3422 | 862 | 1003 | 268 | 1.65 | 18.95 | 12.78 | 3.22 | 3.74 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 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] |
| -15 | (+5) | 1111 | 280 | 325 | 183 | 1.38 | 6.49 | 6.06 | 1.53 | 1.78 |
| -10 | (+14) | 1405 | 354 | 412 | 202 | 1.43 | 8.24 | 6.96 | 1.75 | 2.04 |
| -5 | (+23) | 1751 | 441 | 513 | 222 | 1.49 | 10.31 | 7.90 | 1.99 | 2.31 |
| 0 | (+32) | 2150 | 542 | 630 | 243 | 1.56 | 12.72 | 8.85 | 2.23 | 2.59 |
| +5 | (+41) | 2602 | 656 | 762 | 266 | 1.64 | 15.48 | 9.79 | 2.47 | 2.87 |
| +10 | (+50) | 3106 | 783 | 910 | 290 | 1.73 | 18.61 | 10.70 | 2.70 | 3.13 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 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] |
| -15 | (+5) | 967 | 244 | 283 | 192 | 1.41 | 6.16 | 5.05 | 1.27 | 1.48 |
| -10 | (+14) | 1223 | 308 | 358 | 214 | 1.47 | 7.82 | 5.70 | 1.44 | 1.67 |
| -5 | (+23) | 1527 | 385 | 448 | 238 | 1.55 | 9.81 | 6.41 | 1.62 | 1.88 |
| 0 | (+32) | 1881 | 474 | 551 | 263 | 1.63 | 12.15 | 7.15 | 1.80 | 2.10 |
| +5 | (+41) | 2283 | 575 | 669 | 289 | 1.72 | 14.84 | 7.90 | 1.99 | 2.32 |
| +10 | (+50) | 2735 | 689 | 801 | 317 | 1.82 | 17.91 | 8.63 | 2.17 | 2.53 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 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° | | |
| 3.2 DISCHARGE | 4.86 +0.07/+0.00 | [mm] | (0.191" +0.003"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Straight | | |
| 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 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |