

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T6170Z |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513306291 |

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) | | |
| 4.1 Evaporating temperature range | -15°C to 10°C | (5°F to 50°F) | |
| 5 Motor type | CSIR | | |
| 6 Starting torque | HST - High 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 | 14.2 | [kgf/cm ²] (202 psig) | / °C - °F |
| 9.2 Peak | 15.9 | [kgf/cm ²] (226 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/3- | [hp] |
| 2 Displacement | 7.69 | [cm ³] (0.469 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 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) | 7.7 | [kg] (16.98 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

C - ELECTRICAL 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-38/QL2-4.8 ** | |
| 3 Start capacitor | 53-64(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | DRB190N61AXF | |
| 6 Start winding resistance | 18.80 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 10.90 | [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] - 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 | | | EN12900HBP_HH Fan | | Evaporating temperature (Condensing temperature | | 5°C (41°F) 50°C (122°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] |
| 2492 | 628 | 730 | 334 | 1.95 | 17.04 | 7.46 | 1.88 | 2.19 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | EN12900HH 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) | 1318 | 332 | 386 | 203 | 1.55 | 7.71 | 6.50 | 1.64 | 1.90 |
| -10 | (+14) | 1647 | 415 | 483 | 224 | 1.60 | 9.67 | 7.37 | 1.86 | 2.16 |
| -5 | (+23) | 2031 | 512 | 595 | 247 | 1.66 | 11.97 | 8.23 | 2.07 | 2.41 |
| 0 | (+32) | 2470 | 622 | 724 | 273 | 1.74 | 14.63 | 9.05 | 2.28 | 2.65 |
| +5 | (+41) | 2964 | 747 | 869 | 302 | 1.84 | 17.67 | 9.81 | 2.47 | 2.88 |
| +10 | (+50) | 3513 | 885 | 1029 | 334 | 1.96 | 21.09 | 10.52 | 2.65 | 3.08 |

| TEST CONDITIONS: @220V50Hz | | EN12900HH 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) | 1137 | 286 | 333 | 214 | 1.58 | 7.25 | 5.30 | 1.34 | 1.55 |
| -10 | (+14) | 1444 | 364 | 423 | 238 | 1.64 | 9.25 | 6.07 | 1.53 | 1.78 |
| -5 | (+23) | 1801 | 454 | 528 | 264 | 1.71 | 11.58 | 6.83 | 1.72 | 2.00 |
| 0 | (+32) | 2207 | 556 | 647 | 292 | 1.80 | 14.27 | 7.56 | 1.90 | 2.21 |
| +5 | (+41) | 2662 | 671 | 780 | 323 | 1.91 | 17.33 | 8.24 | 2.08 | 2.41 |
| +10 | (+50) | 3165 | 798 | 927 | 357 | 2.04 | 20.76 | 8.87 | 2.23 | 2.60 |

| TEST CONDITIONS: @220V50Hz | | EN12900HH 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) | 973 | 245 | 285 | 222 | 1.60 | 6.85 | 4.39 | 1.11 | 1.29 |
| -10 | (+14) | 1242 | 313 | 364 | 248 | 1.68 | 8.78 | 5.00 | 1.26 | 1.47 |
| -5 | (+23) | 1554 | 392 | 455 | 277 | 1.77 | 11.03 | 5.61 | 1.41 | 1.64 |
| 0 | (+32) | 1908 | 481 | 559 | 308 | 1.87 | 13.64 | 6.19 | 1.56 | 1.81 |
| +5 | (+41) | 2305 | 581 | 675 | 342 | 2.00 | 16.59 | 6.74 | 1.70 | 1.98 |
| +10 | (+50) | 2744 | 692 | 804 | 379 | 2.14 | 19.92 | 7.24 | 1.82 | 2.12 |

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 | | |