

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T6170Z |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 194RA67 |

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 - Hight starting torque | | |
| 7 Expantion 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/cm²] (202 psig) | / °C - °F |
| 9.2 Peak | 15.9 | [kgf/cm²] (226 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|---------------------|
| 1 Commercial designation | 1/3- | [hp] |
| 2 Displacement | 7.69 | [cm³] (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) | 7.8 | [kg] (17.20 lb.) |
| 5 Nitrogen charge | - | [kgf/cm²] |

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-38 | | |
| 3 Start capacitor | 53-64(330) | [μF(VAC minimum)] | |
| 4 Run capacitor | - | [μF(VAC minimum)] | |
| 5 Motor protection | T0318/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) | 10.40 | [A] - Measured according to UL 984 | |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 1.93 | [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] |
| 2750 | 693 | 806 | 356 | 2.03 | 17.83 | 7.72 | 1.95 | 2.26 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: | | ASHRAE46 | | | | (Condensing temperature 35°C (+95°F)) | | | | |
|-------------------------|-------|------------------|----------|------|-------------------|----------------------------------------|---------------|-----------------|-----------|-------|
| @220V50Hz | | Fan | | | | | | | | |
| Evaporating temperature | | Cooling capacity | | | Power consumption | Current consumption | Gas flow rate | EFFICIENCY RATE | | |
| | | +/- 5% | | | +/- 5% | +/- 5% | +/- 5% | +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -15 | (+ 5) | 1413 | 356 | 414 | 203 | 1.55 | 7.64 | 6.96 | 1.75 | 2.04 |
| -10 | (+14) | 1765 | 445 | 517 | 223 | 1.60 | 9.58 | 7.90 | 1.99 | 2.32 |
| -5 | (+23) | 2176 | 548 | 638 | 247 | 1.66 | 11.85 | 8.82 | 2.22 | 2.58 |
| 0 | (+32) | 2646 | 667 | 775 | 273 | 1.74 | 14.48 | 9.69 | 2.44 | 2.84 |
| +5 | (+41) | 3175 | 800 | 930 | 302 | 1.84 | 17.47 | 10.51 | 2.65 | 3.08 |
| +10 | (+50) | 3764 | 948 | 1103 | 334 | 1.96 | 20.84 | 11.27 | 2.84 | 3.30 |

| 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) | 1227 | 309 | 360 | 214 | 1.58 | 7.17 | 5.73 | 1.44 | 1.68 |
| -10 | (+14) | 1561 | 393 | 457 | 238 | 1.64 | 9.15 | 6.57 | 1.66 | 1.93 |
| -5 | (+23) | 1947 | 491 | 571 | 264 | 1.71 | 11.47 | 7.39 | 1.86 | 2.16 |
| 0 | (+32) | 2387 | 601 | 699 | 292 | 1.80 | 14.12 | 8.17 | 2.06 | 2.39 |
| +5 | (+41) | 2879 | 725 | 844 | 323 | 1.91 | 17.13 | 8.90 | 2.24 | 2.61 |
| +10 | (+50) | 3424 | 863 | 1003 | 357 | 2.04 | 20.51 | 9.59 | 2.42 | 2.81 |

| TEST CONDITIONS: @220V50Hz | | ASHRAE46 Fan | | | | (Condensing temperature 55°C (+131°F)) | | | | |
|-------------------------------|-------|------------------|----------|-----|-------------------|-----------------------------------------|---------------|-----------------|-----------|-------|
| Evaporating temperature | | Cooling capacity | | | Power consumption | Current consumption | Gas flow rate | EFFICIENCY RATE | | |
| | | +/- 5% | | | +/- 5% | +/- 5% | +/- 5% | +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -15 | (+ 5) | 1063 | 268 | 312 | 222 | 1.60 | 6.77 | 4.79 | 1.21 | 1.40 |
| -10 | (+14) | 1358 | 342 | 398 | 248 | 1.68 | 8.69 | 5.47 | 1.38 | 1.60 |
| -5 | (+23) | 1700 | 428 | 498 | 277 | 1.77 | 10.92 | 6.13 | 1.55 | 1.80 |
| 0 | (+32) | 2087 | 526 | 612 | 308 | 1.87 | 13.48 | 6.77 | 1.71 | 1.98 |
| +5 | (+41) | 2522 | 635 | 739 | 342 | 2.00 | 16.39 | 7.37 | 1.86 | 2.16 |
| +10 | (+50) | 3003 | 757 | 880 | 379 | 2.14 | 19.66 | 7.92 | 2.00 | 2.32 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 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° | | |
| 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 | | |