

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T50HDP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 194MA67 |

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 | RSIR | | |
| 6 Starting torque | LST - Low Starting Torque | | |
| 7 Expansion device | Capillary tube | | |
| 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 | | [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) | 7.7 | [kg] (16.98 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | V230 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0521/26 | |
| 6 Start winding resistance | 33.60 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 18.70 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 6.40 | [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 | | | EN12900HBP_HH Static | | 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] |
| 1466 | 369 | 430 | 166 | 1.01 | 10.02 | 8.82 | 2.22 | 2.58 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|---------------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | EN12900HH 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] |
| -15 | (+5) | 758 | 191 | 222 | 102 | 0.78 | 4.43 | 7.42 | 1.87 | 2.17 |
| -10 | (+14) | 963 | 243 | 282 | 111 | 0.81 | 5.66 | 8.69 | 2.19 | 2.55 |
| -5 | (+23) | 1207 | 304 | 354 | 120 | 0.85 | 7.11 | 10.09 | 2.54 | 2.96 |
| 0 | (+32) | 1488 | 375 | 436 | 128 | 0.88 | 8.82 | 11.59 | 2.92 | 3.40 |
| +5 | (+41) | 1806 | 455 | 529 | 137 | 0.91 | 10.76 | 13.19 | 3.32 | 3.87 |
| +10 | (+50) | 2160 | 544 | 633 | 145 | 0.94 | 12.96 | 14.89 | 3.75 | 4.36 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | EN12900HH 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] |
| -15 | (+5) | 643 | 162 | 188 | 109 | 0.80 | 4.10 | 5.91 | 1.49 | 1.73 |
| -10 | (+14) | 825 | 208 | 242 | 121 | 0.84 | 5.28 | 6.82 | 1.72 | 2.00 |
| -5 | (+23) | 1043 | 263 | 306 | 133 | 0.89 | 6.71 | 7.83 | 1.97 | 2.29 |
| 0 | (+32) | 1294 | 326 | 379 | 145 | 0.93 | 8.37 | 8.93 | 2.25 | 2.62 |
| +5 | (+41) | 1579 | 398 | 463 | 156 | 0.98 | 10.28 | 10.10 | 2.55 | 2.96 |
| +10 | (+50) | 1895 | 478 | 555 | 167 | 1.03 | 12.43 | 11.35 | 2.86 | 3.33 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | EN12900HH 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] |
| -15 | (+5) | 550 | 139 | 161 | 116 | 0.83 | 3.87 | 4.73 | 1.19 | 1.39 |
| -10 | (+14) | 705 | 178 | 206 | 131 | 0.87 | 4.98 | 5.37 | 1.35 | 1.57 |
| -5 | (+23) | 890 | 224 | 261 | 147 | 0.93 | 6.32 | 6.07 | 1.53 | 1.78 |
| 0 | (+32) | 1106 | 279 | 324 | 162 | 0.98 | 7.91 | 6.85 | 1.72 | 2.01 |
| +5 | (+41) | 1352 | 341 | 396 | 176 | 1.05 | 9.73 | 7.68 | 1.93 | 2.25 |
| +10 | (+50) | 1626 | 410 | 476 | 190 | 1.12 | 11.81 | 8.56 | 2.16 | 2.51 |

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 | | |