

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T45CDP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 896DA57 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 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) | 7.7 | [kgf/cm ²] (109 psig) | / °C - °F |
| 9.2 Peak (gauge) | 9.8 | [kgf/cm ²] (139 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation | | [hp] |
| 2 Displacement | 6.78 | [cm ³] (0.414 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 15.000 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 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 | T0357/07 | |
| 6 Start winding resistance | 27.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 17.90 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 5.80 | [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] |
| 1218 | 307 | 357 | 135 | 0.88 | | 9.00 | 2.27 | 2.64 |

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) | 630 | 159 | 185 | 87 | 0.75 | 2.03 | 7.26 | 1.83 | 2.13 |
| -10 | (+14) | 792 | 200 | 232 | 95 | 0.76 | 2.56 | 8.37 | 2.11 | 2.45 |
| -5 | (+23) | 982 | 247 | 288 | 102 | 0.78 | 3.18 | 9.61 | 2.42 | 2.82 |
| 0 | (+32) | 1202 | 303 | 352 | 109 | 0.80 | 3.91 | 10.99 | 2.77 | 3.22 |
| +5 | (+41) | 1455 | 367 | 426 | 116 | 0.82 | 4.75 | 12.54 | 3.16 | 3.68 |
| +10 | (+50) | 1744 | 439 | 511 | 122 | 0.84 | 5.71 | 14.28 | 3.60 | 4.18 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 554 | 139 | 162 | 92 | 0.76 | 1.94 | 6.00 | 1.51 | 1.76 |
| -10 | (+14) | 698 | 176 | 205 | 101 | 0.78 | 2.45 | 6.89 | 1.74 | 2.02 |
| -5 | (+23) | 870 | 219 | 255 | 111 | 0.80 | 3.06 | 7.85 | 1.98 | 2.30 |
| 0 | (+32) | 1069 | 269 | 313 | 120 | 0.83 | 3.77 | 8.91 | 2.25 | 2.61 |
| +5 | (+41) | 1300 | 328 | 381 | 129 | 0.86 | 4.61 | 10.09 | 2.54 | 2.96 |
| +10 | (+50) | 1565 | 394 | 459 | 137 | 0.89 | 5.57 | 11.41 | 2.88 | 3.34 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 477 | 120 | 140 | 98 | 0.77 | 1.83 | 4.85 | 1.22 | 1.42 |
| -10 | (+14) | 602 | 152 | 176 | 108 | 0.80 | 2.31 | 5.56 | 1.40 | 1.63 |
| -5 | (+23) | 752 | 189 | 220 | 119 | 0.83 | 2.90 | 6.31 | 1.59 | 1.85 |
| 0 | (+32) | 928 | 234 | 272 | 131 | 0.86 | 3.59 | 7.10 | 1.79 | 2.08 |
| +5 | (+41) | 1134 | 286 | 332 | 142 | 0.90 | 4.41 | 7.97 | 2.01 | 2.34 |
| +10 | (+50) | 1371 | 346 | 402 | 153 | 0.94 | 5.35 | 8.93 | 2.25 | 2.62 |

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 | 4.94 +0.08/-0.08 | [mm] | (0.194" +0.003"/-0.003") |
| 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 | | |