

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T30CDP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513306209 |

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 | | | |
| 7 Expansion device | | | |
| 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 | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|-----------------|----------------------------------|
| 1 Commercial designation | 1/10 | [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 | ALQUILB / ISO22 | |
| 4 Weight (with oil charge) | 7.2 | [kg] (15.87 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 | T0224/07 | |
| 6 Start winding resistance | 32.00 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 31.50 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 3.40 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.59 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 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] |
| 816 | 206 | 239 | 91 | 0.61 | | 8.95 | 2.26 | 2.62 |

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) | 419 | 106 | 123 | 61 | 0.52 | 1.35 | 6.84 | 1.72 | 2.01 |
| -10 | (+14) | 530 | 134 | 155 | 66 | 0.53 | 1.71 | 8.02 | 2.02 | 2.35 |
| -5 | (+23) | 658 | 166 | 193 | 70 | 0.54 | 2.13 | 9.39 | 2.37 | 2.75 |
| 0 | (+32) | 805 | 203 | 236 | 73 | 0.55 | 2.62 | 11.00 | 2.77 | 3.22 |
| +5 | (+41) | 971 | 245 | 284 | 76 | 0.56 | 3.17 | 12.87 | 3.24 | 3.77 |
| +10 | (+50) | 1156 | 291 | 339 | 77 | 0.57 | 3.79 | 15.03 | 3.79 | 4.40 |

| 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) | 364 | 92 | 107 | 65 | 0.53 | 1.27 | 5.65 | 1.42 | 1.66 |
| -10 | (+14) | 464 | 117 | 136 | 71 | 0.55 | 1.63 | 6.56 | 1.65 | 1.92 |
| -5 | (+23) | 580 | 146 | 170 | 76 | 0.56 | 2.04 | 7.58 | 1.91 | 2.22 |
| 0 | (+32) | 714 | 180 | 209 | 81 | 0.58 | 2.52 | 8.75 | 2.21 | 2.56 |
| +5 | (+41) | 866 | 218 | 254 | 86 | 0.59 | 3.07 | 10.10 | 2.55 | 2.96 |
| +10 | (+50) | 1037 | 261 | 304 | 89 | 0.60 | 3.69 | 11.66 | 2.94 | 3.42 |

| 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) | 316 | 80 | 93 | 68 | 0.54 | 1.21 | 4.60 | 1.16 | 1.35 |
| -10 | (+14) | 405 | 102 | 119 | 76 | 0.56 | 1.56 | 5.35 | 1.35 | 1.57 |
| -5 | (+23) | 510 | 129 | 150 | 83 | 0.58 | 1.97 | 6.14 | 1.55 | 1.80 |
| 0 | (+32) | 632 | 159 | 185 | 90 | 0.60 | 2.44 | 7.00 | 1.76 | 2.05 |
| +5 | (+41) | 771 | 194 | 226 | 97 | 0.62 | 2.99 | 7.94 | 2.00 | 2.33 |
| +10 | (+50) | 928 | 234 | 272 | 103 | 0.65 | 3.62 | 9.01 | 2.27 | 2.64 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 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° 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 +0.08/-0.08 | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material | Copper(OD) | | |
| 3.3.2 Shape | Slanted 43° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |