

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM T46CLP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 891EA73 |

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 | Low-Medium Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -5°C | (-31°F to 23°F) | |
| 5 Motor type | RSCR | | |
| 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) | Static | 198 to 254 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 254 V | - |
| 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 | 7.96 | [cm ³] (0.486 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 17.600 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO7 | |
| 4 Weight (with oil charge) | 7.4 | [kg] (16.31 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 | MSDA3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 2.5(450) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM189NFBYY-153 | |
| 6 Start winding resistance | 30.80 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 25.00 | [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] |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] |
| 11 Approval boards certification | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS: @220V50Hz | | | CECOMAFLBP Static | | Evaporating temperature (Condensing temperature | | -25°C (-13°F) 55°C (131°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] |
| 348 | 88 | 102 | 94 | 0.54 | 1.33 | 3.69 | 0.93 | 1.08 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | CECOMAF 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] |
| -35 | (-31) | 270 | 68 | 79 | 71 | 0.48 | 0.86 | 3.81 | 0.96 | 1.12 |
| -30 | (-22) | 357 | 90 | 105 | 79 | 0.50 | 1.15 | 4.56 | 1.15 | 1.33 |
| -25 | (-13) | 464 | 117 | 136 | 87 | 0.52 | 1.49 | 5.36 | 1.35 | 1.57 |
| -20 | (- 4) | 592 | 149 | 174 | 95 | 0.54 | 1.90 | 6.23 | 1.57 | 1.83 |
| -15 | (+ 5) | 744 | 187 | 218 | 104 | 0.57 | 2.39 | 7.15 | 1.80 | 2.10 |
| -10 | (+14) | 922 | 232 | 270 | 113 | 0.60 | 2.97 | 8.13 | 2.05 | 2.38 |
| -5 | (+23) | 1129 | 285 | 331 | 123 | 0.64 | 3.65 | 9.16 | 2.31 | 2.68 |

| TEST CONDITIONS: @220V50Hz | | CECOMAF 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] |
| -35 | (-31) | 232 | 58 | 68 | 72 | 0.49 | 0.81 | 3.21 | 0.81 | 0.94 |
| -30 | (-22) | 312 | 79 | 91 | 81 | 0.51 | 1.08 | 3.82 | 0.96 | 1.12 |
| -25 | (-13) | 407 | 103 | 119 | 91 | 0.54 | 1.42 | 4.48 | 1.13 | 1.31 |
| -20 | (- 4) | 522 | 132 | 153 | 101 | 0.57 | 1.82 | 5.17 | 1.30 | 1.52 |
| -15 | (+ 5) | 658 | 166 | 193 | 111 | 0.60 | 2.30 | 5.90 | 1.49 | 1.73 |
| -10 | (+14) | 817 | 206 | 239 | 123 | 0.64 | 2.86 | 6.66 | 1.68 | 1.95 |
| -5 | (+23) | 1003 | 253 | 294 | 135 | 0.68 | 3.52 | 7.45 | 1.88 | 2.18 |

| TEST CONDITIONS: @220V50Hz | | CECOMAF 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] |
| -35 | (-31) | 190 | 48 | 56 | 73 | 0.49 | 0.72 | 2.62 | 0.66 | 0.77 |
| -30 | (-22) | 262 | 66 | 77 | 83 | 0.52 | 1.00 | 3.14 | 0.79 | 0.92 |
| -25 | (-13) | 347 | 87 | 102 | 94 | 0.55 | 1.32 | 3.68 | 0.93 | 1.08 |
| -20 | (- 4) | 448 | 113 | 131 | 106 | 0.58 | 1.71 | 4.24 | 1.07 | 1.24 |
| -15 | (+ 5) | 568 | 143 | 166 | 118 | 0.62 | 2.18 | 4.81 | 1.21 | 1.41 |
| -10 | (+14) | 709 | 179 | 208 | 132 | 0.67 | 2.72 | 5.38 | 1.36 | 1.58 |
| -5 | (+23) | 874 | 220 | 256 | 146 | 0.73 | 3.36 | 5.97 | 1.50 | 1.75 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | CECOMAF Static | | | (Condensing temperature 65°C (+149°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] |
| -35 | (-31) | 150 | 38 | 44 | 72 | 0.48 | 0.63 | 2.07 | 0.52 | 0.61 |
| -30 | (-22) | 213 | 54 | 62 | 84 | 0.51 | 0.90 | 2.53 | 0.64 | 0.74 |
| -25 | (-13) | 288 | 73 | 84 | 96 | 0.55 | 1.22 | 2.99 | 0.75 | 0.88 |
| -20 | (- 4) | 376 | 95 | 110 | 110 | 0.59 | 1.59 | 3.44 | 0.87 | 1.01 |
| -15 | (+ 5) | 480 | 121 | 141 | 124 | 0.64 | 2.04 | 3.89 | 0.98 | 1.14 |
| -10 | (+14) | 603 | 152 | 177 | 140 | 0.70 | 2.57 | 4.32 | 1.09 | 1.27 |
| -5 | (+23) | 747 | 188 | 219 | 157 | 0.77 | 3.19 | 4.74 | 1.19 | 1.39 |

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 | 4.95 +0.05/+0.05 | [mm] | (0.195" +0.002"/+0.002") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Vertical | | |
| 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 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |