

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM Z32CLC       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513309027       |

### 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 Back Pressure                 |                                   |           |
| 4.1 Evaporating temperature range          | -35°C to -10°C                    | (-31°F to 14°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                            | 187 to 255 V                      | -         |
| 8.2 LBP (43°C Ambient temperature)         | Static                            | 187 to 255 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 <sup>2</sup> ] (109 psig) | / °C - °F |
| 9.2 Peak (gauge)                           | 9.8                               | [kgf/cm <sup>2</sup> ] (139 psig) | / °C - °F |
| 10 Maximum winding temperature             | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |                |                                  |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation      | 1/11           | [hp]                             |
| 2 Displacement                | 5.96           | [cm <sup>3</sup> ] (0.364 cu.in) |
| 2.1 Bore [mm]                 | 22.500         |                                  |
| 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)    | 7.91           | [kg] (17.44 lb.)                 |
| 5 Nitrogen charge             | -              | [kgf/cm <sup>2</sup> ]           |

### 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                              | 2.5(380)/2(380)                    | [µF(VAC minimum)]                  |
| 5 Motor protection                           | T0223/07                           |                                    |
| 6 Start winding resistance                   | 34.75                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 37.70                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 2.60                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.40                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CCC - VDE                          |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                             |                               |  |                           |                               |       |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|-------------------------------|-------|
| TEST CONDITIONS:<br>@220V50Hz |          |     | <b>CECOMAFLBP</b><br>Static |                               | Evaporating temperature<br>(Condensing temperature |                           | -25°C (-13°F)<br>55°C (131°F) |       |
| Cooling capacity<br>+/- 5%    |          |     | Power consumption<br>+/- 5% | Current consumption<br>+/- 5% | Gas flow rate<br>+/- 5%                            | EFFICIENCY RATE<br>+/- 7% |                               |       |
| [Btu/h]                       | [kcal/h] | [W] | [W]                         | [A]                           | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                     | [W/W] |
| 251                           | 63       | 74  | 56                          | 0.27                          | 0.96   | 4.47                      | 1.13                          | 1.31  |

### E - PERFORMANCE - CURVES

|                               |                            |          |                          |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            |          | <b>CECOMAF</b><br>Static |                             | (Condensing temperature 45°C (+113°F)) |                         |                           |           |       |
| Evaporating temperature       | Cooling capacity<br>+/- 5% |          |                          | Power consumption<br>+/- 5% | Current consumption<br>+/- 5%          | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C (°F)                       | [Btu/h]                    | [kcal/h] | [W]                      | [W]                         | [A]                                    | [kg/h]                  | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -35 (-31)                     | 185                        | 47       | 54                       | 41                          | 0.20                                   | 0.64                    | 4.54                      | 1.14      | 1.33  |
| -30 (-22)                     | 239                        | 60       | 70                       | 47                          | 0.23                                   | 0.83                    | 5.09                      | 1.28      | 1.49  |
| -25 (-13)                     | 309                        | 78       | 91                       | 54                          | 0.26                                   | 1.08                    | 5.77                      | 1.45      | 1.69  |
| -20 (- 4)                     | 398                        | 100      | 117                      | 60                          | 0.29                                   | 1.39                    | 6.58                      | 1.66      | 1.93  |
| -15 (+ 5)                     | 510                        | 128      | 149                      | 67                          | 0.32                                   | 1.78                    | 7.52                      | 1.90      | 2.20  |
| -10 (+14)                     | 646                        | 163      | 189                      | 75                          | 0.35                                   | 2.26                    | 8.60                      | 2.17      | 2.52  |

|                               |                            |          |                          |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            |          | <b>CECOMAF</b><br>Static |                             | (Condensing temperature 55°C (+131°F)) |                         |                           |           |       |
| Evaporating temperature       | Cooling capacity<br>+/- 5% |          |                          | Power consumption<br>+/- 5% | Current consumption<br>+/- 5%          | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C (°F)                       | [Btu/h]                    | [kcal/h] | [W]                      | [W]                         | [A]                                    | [kg/h]                  | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -35 (-31)                     | 129                        | 33       | 38                       | 40                          | 0.20                                   | 0.49                    | 3.23                      | 0.81      | 0.95  |
| -30 (-22)                     | 185                        | 47       | 54                       | 48                          | 0.24                                   | 0.71                    | 3.83                      | 0.97      | 1.12  |
| -25 (-13)                     | 251                        | 63       | 74                       | 56                          | 0.27                                   | 0.96                    | 4.48                      | 1.13      | 1.31  |
| -20 (- 4)                     | 331                        | 83       | 97                       | 64                          | 0.31                                   | 1.27                    | 5.18                      | 1.30      | 1.52  |
| -15 (+ 5)                     | 427                        | 108      | 125                      | 72                          | 0.35                                   | 1.64                    | 5.92                      | 1.49      | 1.73  |
| -10 (+14)                     | 542                        | 137      | 159                      | 81                          | 0.39                                   | 2.08                    | 6.71                      | 1.69      | 1.97  |

|                               |                            |          |                          |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            |          | <b>CECOMAF</b><br>Static |                             | (Condensing temperature 65°C (+149°F)) |                         |                           |           |       |
| Evaporating temperature       | Cooling capacity<br>+/- 5% |          |                          | Power consumption<br>+/- 5% | Current consumption<br>+/- 5%          | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C (°F)                       | [Btu/h]                    | [kcal/h] | [W]                      | [W]                         | [A]                                    | [kg/h]                  | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -35 (-31)                     | 78                         | 20       | 23                       | 35                          | 0.18                                   | 0.33                    | 2.23                      | 0.56      | 0.65  |
| -30 (-22)                     | 139                        | 35       | 41                       | 46                          | 0.23                                   | 0.58                    | 2.90                      | 0.73      | 0.85  |
| -25 (-13)                     | 204                        | 51       | 60                       | 57                          | 0.28                                   | 0.86                    | 3.54                      | 0.89      | 1.04  |
| -20 (- 4)                     | 278                        | 70       | 81                       | 67                          | 0.32                                   | 1.18                    | 4.14                      | 1.04      | 1.21  |
| -15 (+ 5)                     | 362                        | 91       | 106                      | 78                          | 0.37                                   | 1.54                    | 4.71                      | 1.19      | 1.38  |
| -10 (+14)                     | 460                        | 116      | 135                      | 88                          | 0.42                                   | 1.96                    | 5.24                      | 1.32      | 1.54  |

### 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           | 5.1 +0.10/+0.00                | [mm] | (0.201" +0.004"/+0.000") |
| 3.2.1 Material          | Copper                         |      |                          |
| 3.2.2 Shape             | Slanted parallel BP+24°to Back |      |                          |
| 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 45° up + 45° to Back   |      |                          |
| 3.4 Oil cooler (Copper) | No                             | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                   |      |                          |