

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM Y40CLC       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513306537       |

### 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                               | 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)         | 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      |                | [hp]                             |
| 2 Displacement                | 7.23           | [cm <sup>3</sup> ] (0.441 cu.in) |
| 2.1 Bore [mm]                 | 24.000         |                                  |
| 2.2 Stroke [mm]               | 16.000         |                                  |
| 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)    | 7.65           | [kg] (16.87 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                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | T0225/07                           |                                    |
| 6 Start winding resistance                   | 25.40                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 24.60                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 4.40                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.49                               | [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:<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] |
| 310                           | 78       | 91  | 75                          | 0.50                          | 1.18   | 4.12                      | 1.04                          | 1.21  |

### 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)                     | 196                        | 49       | 57                       | 52                          | 0.44                                   | 0.68                    | 3.77                      | 0.95      | 1.10  |
| -30 (-22)                     | 272                        | 68       | 80                       | 62                          | 0.46                                   | 0.95                    | 4.38                      | 1.10      | 1.28  |
| -25 (-13)                     | 361                        | 91       | 106                      | 72                          | 0.48                                   | 1.26                    | 5.01                      | 1.26      | 1.47  |
| -20 (- 4)                     | 466                        | 118      | 137                      | 82                          | 0.51                                   | 1.63                    | 5.68                      | 1.43      | 1.66  |
| -15 (+ 5)                     | 591                        | 149      | 173                      | 92                          | 0.54                                   | 2.06                    | 6.41                      | 1.62      | 1.88  |
| -10 (+14)                     | 738                        | 186      | 216                      | 102                         | 0.57                                   | 2.58                    | 7.22                      | 1.82      | 2.12  |

|                               |                            |          |                          |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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)                     | 159                        | 40       | 47                       | 52                          | 0.44                                   | 0.60                    | 3.05                      | 0.77      | 0.89  |
| -30 (-22)                     | 229                        | 58       | 67                       | 64                          | 0.47                                   | 0.87                    | 3.58                      | 0.90      | 1.05  |
| -25 (-13)                     | 310                        | 78       | 91                       | 75                          | 0.50                                   | 1.18                    | 4.11                      | 1.04      | 1.21  |
| -20 (- 4)                     | 405                        | 102      | 119                      | 87                          | 0.53                                   | 1.55                    | 4.66                      | 1.17      | 1.37  |
| -15 (+ 5)                     | 518                        | 131      | 152                      | 99                          | 0.57                                   | 1.98                    | 5.24                      | 1.32      | 1.54  |
| -10 (+14)                     | 651                        | 164      | 191                      | 111                         | 0.61                                   | 2.50                    | 5.87                      | 1.48      | 1.72  |

|                               |                            |          |                          |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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)                     | 130                        | 33       | 38                       | 52                          | 0.44                                   | 0.55                    | 2.48                      | 0.63      | 0.73  |
| -30 (-22)                     | 191                        | 48       | 56                       | 65                          | 0.47                                   | 0.81                    | 2.94                      | 0.74      | 0.86  |
| -25 (-13)                     | 262                        | 66       | 77                       | 78                          | 0.51                                   | 1.11                    | 3.37                      | 0.85      | 0.99  |
| -20 (- 4)                     | 345                        | 87       | 101                      | 91                          | 0.55                                   | 1.46                    | 3.80                      | 0.96      | 1.11  |
| -15 (+ 5)                     | 444                        | 112      | 130                      | 105                         | 0.59                                   | 1.89                    | 4.22                      | 1.06      | 1.24  |
| -10 (+14)                     | 560                        | 141      | 164                      | 120                         | 0.64                                   | 2.39                    | 4.68                      | 1.18      | 1.37  |

### F - EXTERNAL CHARACTERISTICS

|                         |                                |      |                          |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate            | European Standard EUEM         |      |                          |
| 2 Tray holder           | No                             |      |                          |
| 3 Connectors            |                                |      |                          |
| 3.1 SUCTION             | 8.1 +0.10/+0.00                | [mm] | (0.319" +0.004"/+0.000") |
| 3.1.1 Material          | Copper(OD)                     |      |                          |
| 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 +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                   |      |                          |