

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM T46CLP       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 891EA57         |

### 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                               | 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                            | 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 <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                | 7.96           | [cm <sup>3</sup> ] (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              | [kg] (15.43 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                          | 2019                               |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | AD64FS10                           |                                    |
| 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)        | 4.40                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.72                               | [A]                                |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A]                                |
| 11 Approval boards certification             | VDE                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS:<br>@220V50Hz |          |     | CECOMAFLBP<br>Static           |                                  | Evaporating temperature<br>(Condensing temperature |                           | -25°C (-13°F)<br>55°C (131°F) |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|-------------------------------|-------|
| Cooling capacity<br>+/- 5%    |          |     | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5%                         | EFFICIENCY RATE<br>+/- 7% |                               |       |
| [Btu/h]                       | [kcal/h] | [W] | [W]                            | [A]                              | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                     | [W/W] |
| 348                           | 88       | 102 | 100                            | 0.71                             | 1.33   | 3.48                      | 0.88                          | 1.02  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF<br>Static          |          |     |                                | (Condensing temperature 35°C (+95°F)) |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---------------------------------------|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |          |     | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5%      | Gas flow<br>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) | 270                        | 68       | 79  | 73                             | 0.66                                  | 0.86                       | 3.68                      | 0.93      | 1.08  |
| -30                           | (-22) | 357                        | 90       | 105 | 82                             | 0.67                                  | 1.15                       | 4.38                      | 1.10      | 1.28  |
| -25                           | (-13) | 464                        | 117      | 136 | 91                             | 0.69                                  | 1.49                       | 5.15                      | 1.30      | 1.51  |
| -20                           | (- 4) | 592                        | 149      | 174 | 99                             | 0.71                                  | 1.90                       | 5.99                      | 1.51      | 1.76  |
| -15                           | (+ 5) | 744                        | 187      | 218 | 108                            | 0.74                                  | 2.39                       | 6.88                      | 1.73      | 2.02  |
| -10                           | (+14) | 922                        | 232      | 270 | 118                            | 0.77                                  | 2.97                       | 7.82                      | 1.97      | 2.29  |
| -5                            | (+23) | 1129                       | 285      | 331 | 128                            | 0.80                                  | 3.65                       | 8.79                      | 2.21      | 2.58  |

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF<br>Static          |          |     |                                | (Condensing temperature 45°C (+113°F)) |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |          |     | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5%       | Gas flow<br>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) | 232                        | 58       | 68  | 76                             | 0.66                                   | 0.81                       | 3.07                      | 0.77      | 0.90  |
| -30                           | (-22) | 312                        | 79       | 91  | 86                             | 0.68                                   | 1.08                       | 3.64                      | 0.92      | 1.07  |
| -25                           | (-13) | 407                        | 103      | 119 | 95                             | 0.70                                   | 1.42                       | 4.27                      | 1.08      | 1.25  |
| -20                           | (- 4) | 522                        | 132      | 153 | 105                            | 0.73                                   | 1.82                       | 4.94                      | 1.24      | 1.45  |
| -15                           | (+ 5) | 658                        | 166      | 193 | 116                            | 0.76                                   | 2.30                       | 5.64                      | 1.42      | 1.65  |
| -10                           | (+14) | 817                        | 206      | 239 | 128                            | 0.80                                   | 2.86                       | 6.37                      | 1.61      | 1.87  |
| -5                            | (+23) | 1003                       | 253      | 294 | 141                            | 0.84                                   | 3.52                       | 7.12                      | 1.79      | 2.09  |

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF<br>Static          |          |     |                                | (Condensing temperature 55°C (+131°F)) |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |          |     | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5%       | Gas flow<br>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) | 190                        | 48       | 56  | 77                             | 0.66                                   | 0.72                       | 2.49                      | 0.63      | 0.73  |
| -30                           | (-22) | 262                        | 66       | 77  | 88                             | 0.68                                   | 1.00                       | 2.97                      | 0.75      | 0.87  |
| -25                           | (-13) | 347                        | 87       | 102 | 99                             | 0.71                                   | 1.32                       | 3.48                      | 0.88      | 1.02  |
| -20                           | (- 4) | 448                        | 113      | 131 | 111                            | 0.74                                   | 1.71                       | 4.02                      | 1.01      | 1.18  |
| -15                           | (+ 5) | 568                        | 143      | 166 | 124                            | 0.78                                   | 2.18                       | 4.57                      | 1.15      | 1.34  |
| -10                           | (+14) | 709                        | 179      | 208 | 138                            | 0.83                                   | 2.72                       | 5.13                      | 1.29      | 1.50  |
| -5                            | (+23) | 874                        | 220      | 256 | 154                            | 0.88                                   | 3.36                       | 5.68                      | 1.43      | 1.66  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF<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) | 150                        | 38       | 44  | 76                                      | 0.66                          | 0.63                    | 1.98                      | 0.50      | 0.58  |
| -30                           | (-22) | 213                        | 54       | 62  | 88                                      | 0.69                          | 0.90                    | 2.40                      | 0.60      | 0.70  |
| -25                           | (-13) | 288                        | 73       | 84  | 101                                     | 0.72                          | 1.22                    | 2.83                      | 0.71      | 0.83  |
| -20                           | (- 4) | 376                        | 95       | 110 | 115                                     | 0.76                          | 1.59                    | 3.27                      | 0.82      | 0.96  |
| -15                           | (+ 5) | 480                        | 121      | 141 | 130                                     | 0.80                          | 2.04                    | 3.70                      | 0.93      | 1.08  |
| -10                           | (+14) | 603                        | 152      | 177 | 147                                     | 0.85                          | 2.57                    | 4.12                      | 1.04      | 1.21  |
| -5                            | (+23) | 747                        | 188      | 219 | 166                                     | 0.90                          | 3.19                    | 4.51                      | 1.14      | 1.32  |

### 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      |      |                          |