

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM 2C32CLT      |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513304569       |

### 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                            | 198 to 255 V                      | -         |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 198 to 255 V                      | -         |
| 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 <sup>2</sup> ] (98 psig)  | / °C - °F |
| 9.2 Peak                           | 7.8                               | [kgf/cm <sup>2</sup> ] (111 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |                |                                  |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation      | 1/7            | [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            | 150            | [ml] (5.07 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | MINERAL / ISO5 |                                  |
| 4 Weight (with oil charge)    | 7.68           | [kg] (16.93 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                          | MI2021                             |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 2(350)/3(350)/2.5(350)             | [µF(VAC minimum)]                  |
| 5 Motor protection                           | AE23AHNX                           |                                    |
| 6 Start winding resistance                   | 31.70                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 34.50                              | [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             | CE - UKCA - VDE                    |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                                |                                  |  |                           |  |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@220V50Hz |          |     | ASHRAE LBP-NOFAN<br>Static     |                                  | Evaporating temperature<br>(Condensing temperature |                           | -23.3°C (-9.94°F)<br>54.4°C (129.92°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] |
| 333                           | 84       | 98  | 57                             | 0.26                             | 1.05   | 5.89                      | 1.48                                   | 1.73  |

### E - PERFORMANCE - CURVES

|                               |                            |                          |     |                                |                                  |                                       |                           |           |       |
|-------------------------------|----------------------------|--------------------------|-----|--------------------------------|----------------------------------|---------------------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            | ASHRAE32-NOFAN<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)                     | 202                        | 51                       | 59  | 40                             | 0.18                             | 0.63                                  | 5.00                      | 1.26      | 1.47  |
| -30 (-22)                     | 266                        | 67                       | 78  | 45                             | 0.20                             | 0.83                                  | 5.89                      | 1.48      | 1.72  |
| -25 (-13)                     | 348                        | 88                       | 102 | 51                             | 0.23                             | 1.09                                  | 6.92                      | 1.74      | 2.03  |
| -20 (- 4)                     | 449                        | 113                      | 132 | 56                             | 0.26                             | 1.41                                  | 8.09                      | 2.04      | 2.37  |
| -15 (+ 5)                     | 571                        | 144                      | 167 | 61                             | 0.28                             | 1.80                                  | 9.42                      | 2.37      | 2.76  |
| -10 (+14)                     | 716                        | 180                      | 210 | 66                             | 0.30                             | 2.26                                  | 10.90                     | 2.75      | 3.19  |

|                               |                            |                          |     |                                |                                  |  |                           |           |       |
|-------------------------------|----------------------------|--------------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            | ASHRAE32-NOFAN<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)                     | 180                        | 45                       | 53  | 40                             | 0.19                             | 0.56                                   | 4.50                      | 1.13      | 1.32  |
| -30 (-22)                     | 245                        | 62                       | 72  | 46                             | 0.21                             | 0.77                                   | 5.31                      | 1.34      | 1.56  |
| -25 (-13)                     | 326                        | 82                       | 96  | 52                             | 0.24                             | 1.02                                   | 6.21                      | 1.57      | 1.82  |
| -20 (- 4)                     | 426                        | 107                      | 125 | 59                             | 0.27                             | 1.34                                   | 7.20                      | 1.82      | 2.11  |
| -15 (+ 5)                     | 547                        | 138                      | 160 | 66                             | 0.30                             | 1.72                                   | 8.29                      | 2.09      | 2.43  |
| -10 (+14)                     | 690                        | 174                      | 202 | 73                             | 0.33                             | 2.18                                   | 9.47                      | 2.39      | 2.78  |

|                               |                            |                          |     |                                |                                  |  |                           |           |       |
|-------------------------------|----------------------------|--------------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            | ASHRAE32-NOFAN<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)                     | 157                        | 40                       | 46  | 40                             | 0.19                             | 0.49                                   | 3.95                      | 1.00      | 1.16  |
| -30 (-22)                     | 221                        | 56                       | 65  | 47                             | 0.22                             | 0.69                                   | 4.75                      | 1.20      | 1.39  |
| -25 (-13)                     | 301                        | 76                       | 88  | 54                             | 0.25                             | 0.95                                   | 5.58                      | 1.41      | 1.63  |
| -20 (- 4)                     | 400                        | 101                      | 117 | 62                             | 0.28                             | 1.26                                   | 6.45                      | 1.62      | 1.89  |
| -15 (+ 5)                     | 518                        | 131                      | 152 | 70                             | 0.32                             | 1.63                                   | 7.36                      | 1.85      | 2.16  |
| -10 (+14)                     | 658                        | 166                      | 193 | 79                             | 0.36                             | 2.08                                   | 8.30                      | 2.09      | 2.43  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | ASHRAE32-NOFAN<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) | 132                        | 33       | 39  | 39                                      | 0.19                          | 0.41                    | 3.33                      | 0.84      | 0.98  |
| -30                           | (-22) | 195                        | 49       | 57  | 47                                      | 0.22                          | 0.61                    | 4.18                      | 1.05      | 1.22  |
| -25                           | (-13) | 273                        | 69       | 80  | 55                                      | 0.25                          | 0.86                    | 5.00                      | 1.26      | 1.47  |
| -20                           | (- 4) | 369                        | 93       | 108 | 64                                      | 0.29                          | 1.16                    | 5.81                      | 1.47      | 1.70  |
| -15                           | (+ 5) | 484                        | 122      | 142 | 74                                      | 0.34                          | 1.52                    | 6.60                      | 1.66      | 1.94  |
| -10                           | (+14) | 621                        | 156      | 182 | 84                                      | 0.39                          | 1.96                    | 7.38                      | 1.86      | 2.16  |

### F - EXTERNAL CHARACTERISTICS

|                         |                                |      |                          |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate            | European Standard EUEM         |      |                          |
| 2 Tray holder           | No                             |      |                          |
| 3 Connectors            |                                |      |                          |
| 3.1 SUCTION             | 6.5 +0.12/-0.08                | [mm] | (0.256" +0.005"/-0.003") |
| 3.1.1 Material          | Copper plated steel            |      |                          |
| 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             | 6.35 +0.08/-0.08               | [mm] | (0.250" +0.003"/-0.003") |
| 3.3.1 Material          | Copper(OD)                     |      |                          |
| 3.3.2 Shape             | Slanted 45° up + 45° to Back   |      |                          |
| 3.4 Oil cooler (Copper) | No                             | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                   |      |                          |