

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM X32CLC       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 700GA77         |

### 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 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 | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 7.3            | [kg] (16.09 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                       | TSD                                |                                    |
| 2.1 Starting device                          | MI.E-START ES1B                    |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 2.5(300)/2(300)/4(300)             | [µF(VAC minimum)]                  |
| 5 Motor protection                           | AX24BNXX                           |                                    |
| 6 Start winding resistance                   | 23.90                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 42.50                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 3.30                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.55                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | 0.68                               | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | 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] |
| 315                           | 79       | 92  | 54                             | 0.28                             | 0.99   | 5.88                      | 1.48                                   | 1.72  |

### 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] |
| -35                           | (-31)                      | 221                      | 56      | 65                             | 33                               | 0.20                                   | 0.69                      | 6.63   | 1.67     | 1.94      |
| -30                           | (-22)                      | 289                      | 73      | 85                             | 42                               | 0.23                                   | 0.90                      | 6.93   | 1.75     | 2.03      |
| -25                           | (-13)                      | 368                      | 93      | 108                            | 49                               | 0.25                                   | 1.15                      | 7.64   | 1.92     | 2.24      |
| -20                           | (- 4)                      | 464                      | 117     | 136                            | 54                               | 0.28                                   | 1.46                      | 8.67   | 2.18     | 2.54      |
| -15                           | (+ 5)                      | 581                      | 146     | 170                            | 58                               | 0.30                                   | 1.83                      | 9.93   | 2.50     | 2.91      |
| -10                           | (+14)                      | 723                      | 182     | 212                            | 63                               | 0.32                                   | 2.28                      | 11.34  | 2.86     | 3.32      |

| 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] |
| -35                           | (-31)                      | 172                      | 43      | 50                             | 33                               | 0.19                                    | 0.54                      | 5.25   | 1.32     | 1.54      |
| -30                           | (-22)                      | 244                      | 61      | 71                             | 43                               | 0.23                                    | 0.76                      | 5.67   | 1.43     | 1.66      |
| -25                           | (-13)                      | 325                      | 82      | 95                             | 51                               | 0.26                                    | 1.02                      | 6.40   | 1.61     | 1.87      |
| -20                           | (- 4)                      | 422                      | 106     | 124                            | 57                               | 0.29                                    | 1.32                      | 7.36   | 1.85     | 2.16      |
| -15                           | (+ 5)                      | 537                      | 135     | 157                            | 63                               | 0.32                                    | 1.69                      | 8.46   | 2.13     | 2.48      |
| -10                           | (+14)                      | 676                      | 170     | 198                            | 70                               | 0.35                                    | 2.13                      | 9.62   | 2.43     | 2.82      |

| 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] |
| -35                           | (-31)                      | 131                      | 33      | 39                             | 32                               | 0.19                                    | 0.41                      | 4.20   | 1.06     | 1.23      |
| -30                           | (-22)                      | 205                      | 52      | 60                             | 43                               | 0.23                                    | 0.64                      | 4.75   | 1.20     | 1.39      |
| -25                           | (-13)                      | 286                      | 72      | 84                             | 51                               | 0.26                                    | 0.90                      | 5.52   | 1.39     | 1.62      |
| -20                           | (- 4)                      | 381                      | 96      | 112                            | 59                               | 0.30                                    | 1.20                      | 6.43   | 1.62     | 1.88      |
| -15                           | (+ 5)                      | 493                      | 124     | 144                            | 67                               | 0.34                                    | 1.55                      | 7.39   | 1.86     | 2.17      |
| -10                           | (+14)                      | 627                      | 158     | 184                            | 75                               | 0.38                                    | 1.98                      | 8.32   | 2.10     | 2.44      |

### 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) | 101                        | 26       | 30  | 29                                      | 0.18                          | 0.32                    | 3.47                      | 0.87      | 1.02  |
| -30                           | (-22) | 174                        | 44       | 51  | 41                                      | 0.22                          | 0.55                    | 4.16                      | 1.05      | 1.22  |
| -25                           | (-13) | 254                        | 64       | 74  | 50                                      | 0.26                          | 0.80                    | 4.99                      | 1.26      | 1.46  |
| -20                           | (- 4) | 344                        | 87       | 101 | 59                                      | 0.30                          | 1.08                    | 5.87                      | 1.48      | 1.72  |
| -15                           | (+ 5) | 451                        | 114      | 132 | 68                                      | 0.34                          | 1.42                    | 6.71                      | 1.69      | 1.97  |
| -10                           | (+14) | 579                        | 146      | 170 | 79                                      | 0.39                          | 1.83                    | 7.42                      | 1.87      | 2.17  |

### F - EXTERNAL CHARACTERISTICS

|                         |                              |      |                          |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate            | European Standard            |      |                          |
| 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           | 4.94 +0.08/-0.08             | [mm] | (0.194" +0.003"/-0.003") |
| 3.2.1 Material          | Copper                       |      |                          |
| 3.2.2 Shape             | Slanted 0° up + 45° 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                 |      |                          |