

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM X55CLC       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 711UA97         |

### 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      |                | [hp]                             |
| 2 Displacement                | 9.04           | [cm <sup>3</sup> ] (0.552 cu.in) |
| 2.1 Bore [mm]                 | 24.000         |                                  |
| 2.2 Stroke [mm]               | 20.000         |                                  |
| 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)    | 7.65           | [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                       | TSD                                |                                    |
| 2.1 Starting device                          | TSD-220V/TSD2-220V1.2/TSD2-D-220V  |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 5(350)/4(350)                      | [µF(VAC minimum)]                  |
| 5 Motor protection                           | CP4TMC212N61A5                     |                                    |
| 6 Start winding resistance                   | 16.55                              | [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)        | -                                  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | -                                  | [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 |          |     | 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] |
| 532                           | 134      | 156 | 90                             | 0.42                             | 1.67   | 5.94                      | 1.50                                   | 1.74  |

### 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)                     | 305                        | 77                       | 89  | 62                             | 0.30                             | 0.95                                   | 4.86                      | 1.22      | 1.42  |
| -30 (-22)                     | 401                        | 101                      | 118 | 72                             | 0.34                             | 1.26                                   | 5.59                      | 1.41      | 1.64  |
| -25 (-13)                     | 523                        | 132                      | 153 | 81                             | 0.38                             | 1.64                                   | 6.47                      | 1.63      | 1.89  |
| -20 (- 4)                     | 671                        | 169                      | 197 | 90                             | 0.42                             | 2.11                                   | 7.47                      | 1.88      | 2.19  |
| -15 (+ 5)                     | 846                        | 213                      | 248 | 99                             | 0.47                             | 2.66                                   | 8.60                      | 2.17      | 2.52  |
| -10 (+14)                     | 1049                       | 264                      | 307 | 107                            | 0.51                             | 3.31                                   | 9.85                      | 2.48      | 2.89  |

|                               |                            |                          |     |                                |                                  |   |                           |           |       |
|-------------------------------|----------------------------|--------------------------|-----|--------------------------------|----------------------------------|---|---------------------------|-----------|-------|
| 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)                     | 286                        | 72                       | 84  | 61                             | 0.30                             | 0.90                                    | 4.72                      | 1.19      | 1.38  |
| -30 (-22)                     | 386                        | 97                       | 113 | 72                             | 0.35                             | 1.21                                    | 5.38                      | 1.36      | 1.58  |
| -25 (-13)                     | 511                        | 129                      | 150 | 83                             | 0.40                             | 1.60                                    | 6.15                      | 1.55      | 1.80  |
| -20 (- 4)                     | 663                        | 167                      | 194 | 94                             | 0.45                             | 2.08                                    | 7.01                      | 1.77      | 2.05  |
| -15 (+ 5)                     | 842                        | 212                      | 247 | 106                            | 0.50                             | 2.65                                    | 7.95                      | 2.00      | 2.33  |
| -10 (+14)                     | 1049                       | 264                      | 307 | 117                            | 0.56                             | 3.31                                    | 8.97                      | 2.26      | 2.63  |

|                               |                            |                          |     |                                |                                  |   |                           |           |       |
|-------------------------------|----------------------------|--------------------------|-----|--------------------------------|----------------------------------|---|---------------------------|-----------|-------|
| 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)                     | 266                        | 67                       | 78  | 61                             | 0.31                             | 0.83                                    | 4.39                      | 1.11      | 1.29  |
| -30 (-22)                     | 363                        | 91                       | 106 | 72                             | 0.36                             | 1.14                                    | 5.02                      | 1.27      | 1.47  |
| -25 (-13)                     | 487                        | 123                      | 143 | 85                             | 0.41                             | 1.53                                    | 5.71                      | 1.44      | 1.67  |
| -20 (- 4)                     | 637                        | 161                      | 187 | 98                             | 0.47                             | 2.00                                    | 6.45                      | 1.63      | 1.89  |
| -15 (+ 5)                     | 816                        | 206                      | 239 | 112                            | 0.53                             | 2.57                                    | 7.24                      | 1.82      | 2.12  |
| -10 (+14)                     | 1023                       | 258                      | 300 | 127                            | 0.60                             | 3.23                                    | 8.07                      | 2.03      | 2.37  |

### 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) | 242                        | 61       | 71  | 61                                      | 0.31                          | 0.76                    | 3.96                      | 1.00      | 1.16  |
| -30                           | (-22) | 333                        | 84       | 97  | 73                                      | 0.36                          | 1.04                    | 4.58                      | 1.16      | 1.34  |
| -25                           | (-13) | 450                        | 113      | 132 | 86                                      | 0.42                          | 1.41                    | 5.23                      | 1.32      | 1.53  |
| -20                           | (- 4) | 594                        | 150      | 174 | 101                                     | 0.48                          | 1.87                    | 5.89                      | 1.48      | 1.72  |
| -15                           | (+ 5) | 767                        | 193      | 225 | 117                                     | 0.56                          | 2.41                    | 6.55                      | 1.65      | 1.92  |
| -10                           | (+14) | 968                        | 244      | 284 | 134                                     | 0.63                          | 3.06                    | 7.22                      | 1.82      | 2.12  |

### 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           | 5.1 +0.10/+0.00              | [mm] | (0.201" +0.004"/+0.000") |
| 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                 |      |                          |