

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>EM Y40CLC</b>       |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>897DA83</b>         |

### 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                            | 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 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                | 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                           | T0881/07                           |                                    |
| 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]                                |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A]                                |
| 11 Approval boards certification             | VDE                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                             |                               |  |                           |  |       |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@220V50Hz |          |     | ASHRAELBP32<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 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] |
| 406                           | 102      | 119 | 78                          | 0.51                          | 1.27   | 5.22                      | 1.32                                   | 1.53  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                    |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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) | 207                        | 52                 | 61  | 51                                     | 0.44                          | 0.65                    | 4.06                      | 1.02      | 1.19  |
| -30                           | (-22) | 292                        | 74                 | 86  | 61                                     | 0.46                          | 0.92                    | 4.78                      | 1.21      | 1.40  |
| -25                           | (-13) | 391                        | 99                 | 115 | 71                                     | 0.49                          | 1.23                    | 5.52                      | 1.39      | 1.62  |
| -20                           | (- 4) | 508                        | 128                | 149 | 81                                     | 0.51                          | 1.60                    | 6.28                      | 1.58      | 1.84  |
| -15                           | (+ 5) | 646                        | 163                | 189 | 91                                     | 0.54                          | 2.03                    | 7.09                      | 1.79      | 2.08  |
| -10                           | (+14) | 808                        | 204                | 237 | 101                                    | 0.57                          | 2.55                    | 7.99                      | 2.01      | 2.34  |

|                               |       |                            |                    |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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) | 182                        | 46                 | 53  | 51                                     | 0.44                          | 0.57                    | 3.56                      | 0.90      | 1.04  |
| -30                           | (-22) | 268                        | 68                 | 79  | 63                                     | 0.47                          | 0.84                    | 4.26                      | 1.07      | 1.25  |
| -25                           | (-13) | 367                        | 93                 | 108 | 74                                     | 0.50                          | 1.15                    | 4.94                      | 1.25      | 1.45  |
| -20                           | (- 4) | 483                        | 122                | 142 | 86                                     | 0.53                          | 1.52                    | 5.63                      | 1.42      | 1.65  |
| -15                           | (+ 5) | 620                        | 156                | 182 | 98                                     | 0.57                          | 1.95                    | 6.34                      | 1.60      | 1.86  |
| -10                           | (+14) | 781                        | 197                | 229 | 110                                    | 0.61                          | 2.46                    | 7.11                      | 1.79      | 2.08  |

|                               |       |                            |                    |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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) | 164                        | 41                 | 48  | 51                                     | 0.44                          | 0.51                    | 3.19                      | 0.80      | 0.94  |
| -30                           | (-22) | 247                        | 62                 | 72  | 64                                     | 0.47                          | 0.77                    | 3.85                      | 0.97      | 1.13  |
| -25                           | (-13) | 342                        | 86                 | 100 | 77                                     | 0.51                          | 1.08                    | 4.46                      | 1.12      | 1.31  |
| -20                           | (- 4) | 455                        | 115                | 133 | 90                                     | 0.55                          | 1.43                    | 5.05                      | 1.27      | 1.48  |
| -15                           | (+ 5) | 588                        | 148                | 172 | 104                                    | 0.59                          | 1.85                    | 5.64                      | 1.42      | 1.65  |
| -10                           | (+14) | 745                        | 188                | 218 | 119                                    | 0.64                          | 2.35                    | 6.27                      | 1.58      | 1.84  |

### 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°       |      |                          |
| 3.2 DISCHARGE           | 4.95 +0.05/+0.05  | [mm] | (0.195" +0.002"/+0.002") |
| 3.2.1 Material          | Copper            |      |                          |
| 3.2.2 Shape             | Vertical          |      |                          |
| 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 42°       |      |                          |
| 3.4 Oil cooler (Copper) | No                | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs      |      |                          |