

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM Y32CLC       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 894IA73         |

### 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                               | 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 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                | 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            | 180            | [ml] (6.09 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | MINERAL / ISO7 |                                  |
| 4 Weight (with oil charge)    | 7.7            | [kg] (16.98 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                           |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 2.5(450)                           | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM110NFBYY-53                     |                                    |
| 6 Start winding resistance                   | 32.90                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 43.30                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 2.20                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.27                               | [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<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] |
| 330                           | 83       | 97  | 62                             | 0.29                             | 1.04   | 5.32                      | 1.34                                   | 1.56  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                    |     |                                       |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|---------------------------------------|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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) | 200                        | 50                 | 59  | 44                                    | 0.20                             | 0.63                       | 4.52                      | 1.14      | 1.32  |
| -30                           | (-22) | 266                        | 67                 | 78  | 49                                    | 0.22                             | 0.83                       | 5.40                      | 1.36      | 1.58  |
| -25                           | (-13) | 346                        | 87                 | 101 | 55                                    | 0.24                             | 1.09                       | 6.31                      | 1.59      | 1.85  |
| -20                           | (- 4) | 442                        | 111                | 130 | 61                                    | 0.27                             | 1.39                       | 7.27                      | 1.83      | 2.13  |
| -15                           | (+ 5) | 556                        | 140                | 163 | 67                                    | 0.30                             | 1.75                       | 8.28                      | 2.09      | 2.43  |
| -10                           | (+14) | 689                        | 174                | 202 | 74                                    | 0.32                             | 2.17                       | 9.38                      | 2.36      | 2.75  |
| -5                            | (+23) | 843                        | 212                | 247 | 80                                    | 0.35                             | 2.66                       | 10.57                     | 2.66      | 3.10  |

|                               |       |                            |                    |     |  |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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  | 46                                     | 0.20                             | 0.56                       | 3.95                      | 1.00      | 1.16  |
| -30                           | (-22) | 247                        | 62                 | 72  | 52                                     | 0.23                             | 0.77                       | 4.79                      | 1.21      | 1.40  |
| -25                           | (-13) | 328                        | 83                 | 96  | 58                                     | 0.26                             | 1.03                       | 5.62                      | 1.42      | 1.65  |
| -20                           | (- 4) | 425                        | 107                | 124 | 66                                     | 0.29                             | 1.33                       | 6.47                      | 1.63      | 1.90  |
| -15                           | (+ 5) | 538                        | 136                | 158 | 73                                     | 0.32                             | 1.69                       | 7.35                      | 1.85      | 2.15  |
| -10                           | (+14) | 670                        | 169                | 196 | 81                                     | 0.36                             | 2.11                       | 8.28                      | 2.09      | 2.43  |
| -5                            | (+23) | 822                        | 207                | 241 | 89                                     | 0.39                             | 2.60                       | 9.28                      | 2.34      | 2.72  |

|                               |       |                            |                    |     |  |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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) | 156                        | 39                 | 46  | 45                                     | 0.20                             | 0.49                       | 3.46                      | 0.87      | 1.01  |
| -30                           | (-22) | 223                        | 56                 | 65  | 52                                     | 0.23                             | 0.70                       | 4.26                      | 1.07      | 1.25  |
| -25                           | (-13) | 303                        | 76                 | 89  | 60                                     | 0.27                             | 0.95                       | 5.02                      | 1.26      | 1.47  |
| -20                           | (- 4) | 397                        | 100                | 116 | 69                                     | 0.31                             | 1.25                       | 5.76                      | 1.45      | 1.69  |
| -15                           | (+ 5) | 508                        | 128                | 149 | 78                                     | 0.34                             | 1.60                       | 6.50                      | 1.64      | 1.91  |
| -10                           | (+14) | 637                        | 161                | 187 | 88                                     | 0.39                             | 2.01                       | 7.27                      | 1.83      | 2.13  |
| -5                            | (+23) | 786                        | 198                | 230 | 98                                     | 0.43                             | 2.49                       | 8.06                      | 2.03      | 2.36  |

### E - PERFORMANCE - CURVES

| 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) | 129                        | 33       | 38  | 43                                      | 0.19                          | 0.41                    | 3.02                      | 0.76      | 0.89  |
| -30                           | (-22) | 193                        | 49       | 57  | 51                                      | 0.23                          | 0.61                    | 3.77                      | 0.95      | 1.10  |
| -25                           | (-13) | 270                        | 68       | 79  | 61                                      | 0.27                          | 0.85                    | 4.45                      | 1.12      | 1.30  |
| -20                           | (- 4) | 360                        | 91       | 106 | 71                                      | 0.31                          | 1.13                    | 5.09                      | 1.28      | 1.49  |
| -15                           | (+ 5) | 467                        | 118      | 137 | 82                                      | 0.36                          | 1.47                    | 5.70                      | 1.44      | 1.67  |
| -10                           | (+14) | 591                        | 149      | 173 | 94                                      | 0.40                          | 1.86                    | 6.29                      | 1.59      | 1.84  |
| -5                            | (+23) | 734                        | 185      | 215 | 106                                     | 0.45                          | 2.32                    | 6.89                      | 1.74      | 2.02  |

### 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           | 5.02 +0.02/-0.02  | [mm] | (0.198" +0.001"/-0.001") |
| 3.2.1 Material          | Copper            |      |                          |
| 3.2.2 Shape             | Straight          |      |                          |
| 3.3 PROCESS             | 4.95 +0.05/+0.05  | [mm] | (0.195" +0.002"/+0.002") |
| 3.3.1 Material          | Copper            |      |                          |
| 3.3.2 Shape             | Vertical          |      |                          |
| 3.4 Oil cooler (Copper) | No                | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs      |      |                          |