

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM Y3134U       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513300823       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |           |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |           |
| 2 Refrigerant                      | R-290                             |                                   |           |
| 3 Nominal voltage and frequency    | 220-240 / 50                      | [ V / Hz ]                        |           |
| 4 Application type                 | Low-Medium (Plus) Back Pressure   |                                   |           |
| 4.1 Evaporating temperature range  | -35°C to 5°C                      | (-31°F to 41°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) | -                                 | -                                 | -         |
| 8.2 LBP (43°C Ambient temperature) | -                                 | -                                 | -         |
| 8.3 HBP (32°C Ambient temperature) | -                                 | -                                 | -         |
| 8.4 HBP (43°C Ambient temperature) | -                                 | -                                 | -         |
| 9 Maximum condensing temperature   |                                   |                                   |           |
| 9.1 Operating                      | 18.4                              | [kgf/cm <sup>2</sup> ] (262 psig) | / °C - °F |
| 9.2 Peak                           | 20.6                              | [kgf/cm <sup>2</sup> ] (293 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |                 |                                  |
|-------------------------------|-----------------|----------------------------------|
| 1 Commercial designation      |                 | [hp]                             |
| 2 Displacement                | 7.95            | [cm <sup>3</sup> ] (0.485 cu.in) |
| 2.1 Bore [mm]                 | 22.500          |                                  |
| 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 / ISO22 |                                  |
| 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                          | 8EA17C3/QPS2-A22MD3                |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 5(450)                             | [µF(VAC minimum)]                  |
| 5 Motor protection                           | DRB35K61A2                         |                                    |
| 6 Start winding resistance                   |                                    | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     |                                    | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 10.50                              | [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             | CCC                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                                |                                  |  |                           |  |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@220V50Hz |          |     | ASHRAELBP32<br>Fan             |                                  | 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] |
| 1327                          | 334      | 389 | 249                            | 1.58                             | 3.95   | 5.33                      | 1.34                                   | 1.56  |

### E - PERFORMANCE - CURVES

|                               |       |                            |          |      |                                |                                       |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|------|--------------------------------|---------------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       | ASHRAE32<br>Fan            |          |      |                                | (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) | 831                        | 209      | 243  | 197                            | 1.44                                  | 2.46                       | 4.21                      | 1.06      | 1.23  |
| -30                           | (-22) | 1061                       | 267      | 311  | 215                            | 1.49                                  | 3.15                       | 4.92                      | 1.24      | 1.44  |
| -25                           | (-13) | 1343                       | 339      | 394  | 232                            | 1.54                                  | 4.00                       | 5.78                      | 1.46      | 1.69  |
| -20                           | (- 4) | 1681                       | 424      | 493  | 248                            | 1.59                                  | 5.02                       | 6.79                      | 1.71      | 1.99  |
| -15                           | (+ 5) | 2077                       | 523      | 608  | 262                            | 1.64                                  | 6.22                       | 7.98                      | 2.01      | 2.34  |
| -10                           | (+14) | 2532                       | 638      | 742  | 274                            | 1.68                                  | 7.62                       | 9.37                      | 2.36      | 2.74  |
| -5                            | (+23) | 3050                       | 769      | 894  | 282                            | 1.71                                  | 9.23                       | 10.96                     | 2.76      | 3.21  |
| 0                             | (+32) | 3634                       | 916      | 1065 | 285                            | 1.73                                  | 11.06                      | 12.78                     | 3.22      | 3.75  |
| +5                            | (+41) | 4285                       | 1080     | 1256 | 284                            | 1.72                                  | 13.13                      | 14.85                     | 3.74      | 4.35  |

|                               |       |                            |          |      |                                |  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       | ASHRAE32<br>Fan            |          |      |                                | (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) | 765                        | 193      | 224  | 203                            | 1.46                                   | 2.26                       | 3.82                      | 0.96      | 1.12  |
| -30                           | (-22) | 985                        | 248      | 289  | 225                            | 1.51                                   | 2.92                       | 4.38                      | 1.10      | 1.28  |
| -25                           | (-13) | 1256                       | 316      | 368  | 247                            | 1.58                                   | 3.74                       | 5.03                      | 1.27      | 1.47  |
| -20                           | (- 4) | 1580                       | 398      | 463  | 270                            | 1.66                                   | 4.71                       | 5.78                      | 1.46      | 1.69  |
| -15                           | (+ 5) | 1959                       | 494      | 574  | 291                            | 1.73                                   | 5.87                       | 6.65                      | 1.68      | 1.95  |
| -10                           | (+14) | 2397                       | 604      | 702  | 311                            | 1.81                                   | 7.21                       | 7.66                      | 1.93      | 2.24  |
| -5                            | (+23) | 2895                       | 730      | 848  | 329                            | 1.88                                   | 8.76                       | 8.81                      | 2.22      | 2.58  |
| 0                             | (+32) | 3456                       | 871      | 1013 | 344                            | 1.94                                   | 10.52                      | 10.14                     | 2.55      | 2.97  |
| +5                            | (+41) | 4083                       | 1029     | 1197 | 355                            | 1.99                                   | 12.51                      | 11.65                     | 2.93      | 3.41  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | ASHRAE32<br>Fan            |          |      | (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) | 734                        | 185      | 215  | 193                                     | 1.43                          | 2.17                    | 3.88                      | 0.98      | 1.14  |
| -30                           | (-22) | 946                        | 238      | 277  | 218                                     | 1.50                          | 2.81                    | 4.39                      | 1.11      | 1.29  |
| -25                           | (-13) | 1206                       | 304      | 353  | 246                                     | 1.59                          | 3.59                    | 4.92                      | 1.24      | 1.44  |
| -20                           | (- 4) | 1517                       | 382      | 445  | 275                                     | 1.68                          | 4.53                    | 5.50                      | 1.39      | 1.61  |
| -15                           | (+ 5) | 1882                       | 474      | 552  | 305                                     | 1.79                          | 5.63                    | 6.13                      | 1.55      | 1.80  |
| -10                           | (+14) | 2303                       | 580      | 675  | 334                                     | 1.90                          | 6.93                    | 6.85                      | 1.73      | 2.01  |
| -5                            | (+23) | 2782                       | 701      | 815  | 362                                     | 2.01                          | 8.41                    | 7.65                      | 1.93      | 2.24  |
| 0                             | (+32) | 3323                       | 837      | 974  | 388                                     | 2.12                          | 10.11                   | 8.57                      | 2.16      | 2.51  |
| +5                            | (+41) | 3927                       | 990      | 1151 | 411                                     | 2.22                          | 12.03                   | 9.62                      | 2.42      | 2.82  |

| TEST CONDITIONS:<br>@220V50Hz |       | ASHRAE32<br>Fan            |          |      | (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) | 674                        | 170      | 197  | 184                                     | 1.41                          | 1.99                    | 3.59                      | 0.90      | 1.05  |
| -30                           | (-22) | 879                        | 221      | 257  | 214                                     | 1.49                          | 2.61                    | 4.12                      | 1.04      | 1.21  |
| -25                           | (-13) | 1130                       | 285      | 331  | 247                                     | 1.59                          | 3.36                    | 4.63                      | 1.17      | 1.36  |
| -20                           | (- 4) | 1429                       | 360      | 419  | 283                                     | 1.71                          | 4.26                    | 5.12                      | 1.29      | 1.50  |
| -15                           | (+ 5) | 1781                       | 449      | 522  | 320                                     | 1.85                          | 5.33                    | 5.61                      | 1.41      | 1.64  |
| -10                           | (+14) | 2186                       | 551      | 641  | 358                                     | 1.99                          | 6.57                    | 6.12                      | 1.54      | 1.79  |
| -5                            | (+23) | 2648                       | 667      | 776  | 396                                     | 2.15                          | 8.01                    | 6.67                      | 1.68      | 1.95  |
| 0                             | (+32) | 3169                       | 799      | 929  | 434                                     | 2.30                          | 9.64                    | 7.27                      | 1.83      | 2.13  |
| +5                            | (+41) | 3752                       | 945      | 1099 | 470                                     | 2.46                          | 11.49                   | 7.94                      | 2.00      | 2.33  |

### F - EXTERNAL CHARACTERISTICS

|                         |                              |      |                          |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate            | European Standard EUEM       |      |                          |
| 2 Tray holder           | Yes                          |      |                          |
| 3 Connectors            |                              |      |                          |
| 3.1 SUCTION             | 6.5 +0.12/-0.08              | [mm] | (0.256" +0.005"/-0.003") |
| 3.1.1 Material          | Copper                       |      |                          |
| 3.1.2 Shape             | Slanted 40° up + 45° to Back |      |                          |
| 3.2 DISCHARGE           | 4.9 +0.10/-0.05              | [mm] | (0.193" +0.004"/-0.002") |
| 3.2.1 Material          | Copper                       |      |                          |
| 3.2.2 Shape             | Slanted 0° up + 24° to Back  |      |                          |
| 3.3 PROCESS             | 6.5 +0.12/-0.08              | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material          | Copper                       |      |                          |
| 3.3.2 Shape             | Slanted 40° up + 45° to Back |      |                          |
| 3.4 Oil cooler (Copper) | No                           | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                 |      |                          |