

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG Z70HLP       |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513700135       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|  |                                   |                                   |              |
|--|-----------------------------------|-----------------------------------|--------------|
| 1 Type                                     | Hermetic reciprocating compressor |                                   |              |
| 2 Refrigerant                              | R-134a                            |                                   |              |
| 3 Nominal voltage and frequency            | 115-127 / 60                      | [ 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                            | -                                 | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature)         | Static                            | -                                 | 103 to 140 V |
| 8.3 HBP (32°C Ambient temperature)         | -                                 | -                                 | -            |
| 8.4 HBP (43°C Ambient temperature)         | -                                 | -                                 | -            |
| 9 Maximum condensing pressures/temperature |                                   |                                   |              |
| 9.1 Operating (gauge)                      | 16.2                              | [kgf/cm <sup>2</sup> ] (230 psig) | / °C - °F    |
| 9.2 Peak (gauge)                           | 20.6                              | [kgf/cm <sup>2</sup> ] (293 psig) | / °C - °F    |
| 10 Maximum winding temperature             | 130                               | [ °C ]                            |              |

### B - MECHANICAL DATA

|                               |              |  |
|-------------------------------|--------------|--|
| 1 Commercial designation      | 1/4          | [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            | 280          | [ml] (9.47 fl.oz.)                         |
| 3.1 Lubricants approved       |              |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO7 |  |
| 4 Weight (with oil charge)    | 11.53        | [kg] (25.42 lb.)                           |
| 5 Nitrogen charge             | 0.2 to 0.3   | [kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig) |

### C - ELETRICAL DATA

|  |                                      |                                    |
|--|--------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 115-127 V 60 Hz 1 ~ (Single phase)   |                                    |
| 2 Starting device type                       | PTC                                  |                                    |
| 2.1 Starting device                          | 8EA14C1/8EA1B1/8EA21C1/8EA3B1/8EA4B1 |                                    |
| 3 Start capacitor                            | -                                    | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                    | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM319RFBYY-53                       |                                    |
| 6 Start winding resistance                   | 6.25                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 4.40                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 10.00                                | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 1.80                                 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz)      | -                                    | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | UL                                   |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                                |                                  |  |                           |  |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@115V60Hz |          |     | 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] |
| 724                           | 182      | 212 | 130                            | 1.57                             | 4.11   | 5.56                      | 1.40                                   | 1.63  |

### E - PERFORMANCE - CURVES

|                               |       |                            |          |     |                                |  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       | 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) | 427                        | 107      | 125 | 85                             | 1.01                                   | 2.41                       | 4.98                      | 1.25      | 1.46  |
| -30                           | (-22) | 584                        | 147      | 171 | 103                            | 1.16                                   | 3.31                       | 5.73                      | 1.44      | 1.68  |
| -25                           | (-13) | 772                        | 195      | 226 | 118                            | 1.31                                   | 4.38                       | 6.61                      | 1.67      | 1.94  |
| -20                           | (- 4) | 996                        | 251      | 292 | 132                            | 1.47                                   | 5.67                       | 7.60                      | 1.91      | 2.23  |
| -15                           | (+ 5) | 1261                       | 318      | 369 | 145                            | 1.63                                   | 7.20                       | 8.69                      | 2.19      | 2.55  |
| -10                           | (+14) | 1572                       | 396      | 461 | 158                            | 1.81                                   | 9.01                       | 9.86                      | 2.49      | 2.89  |

|                               |       |                            |          |     |                                |   |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       | 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) | 361                        | 91       | 106 | 82                             | 1.05                                    | 2.05                       | 4.38                      | 1.10      | 1.28  |
| -30                           | (-22) | 523                        | 132      | 153 | 101                            | 1.24                                    | 2.97                       | 5.18                      | 1.30      | 1.52  |
| -25                           | (-13) | 713                        | 180      | 209 | 119                            | 1.43                                    | 4.05                       | 6.03                      | 1.52      | 1.77  |
| -20                           | (- 4) | 937                        | 236      | 275 | 135                            | 1.64                                    | 5.33                       | 6.92                      | 1.74      | 2.03  |
| -15                           | (+ 5) | 1199                       | 302      | 351 | 152                            | 1.85                                    | 6.85                       | 7.84                      | 1.98      | 2.30  |
| -10                           | (+14) | 1505                       | 379      | 441 | 171                            | 2.09                                    | 8.62                       | 8.77                      | 2.21      | 2.57  |

|                               |       |                            |          |     |                                |   |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       | 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) | 264                        | 67       | 77  | 76                             | 0.97                                    | 1.49                       | 3.48                      | 0.88      | 1.02  |
| -30                           | (-22) | 431                        | 109      | 126 | 99                             | 1.20                                    | 2.44                       | 4.35                      | 1.10      | 1.27  |
| -25                           | (-13) | 624                        | 157      | 183 | 120                            | 1.44                                    | 3.54                       | 5.19                      | 1.31      | 1.52  |
| -20                           | (- 4) | 849                        | 214      | 249 | 141                            | 1.71                                    | 4.83                       | 6.01                      | 1.51      | 1.76  |
| -15                           | (+ 5) | 1109                       | 279      | 325 | 164                            | 2.00                                    | 6.33                       | 6.77                      | 1.71      | 1.98  |
| -10                           | (+14) | 1411                       | 356      | 413 | 189                            | 2.31                                    | 8.08                       | 7.48                      | 1.88      | 2.19  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@115V60Hz |       | 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) | 169                        | 43       | 49  | 62                                      | 0.80                          | 0.95                    | 2.75                      | 0.69      | 0.80  |
| -30                           | (-22) | 342                        | 86       | 100 | 89                                      | 1.10                          | 1.94                    | 3.70                      | 0.93      | 1.08  |
| -25                           | (-13) | 538                        | 136      | 158 | 116                                     | 1.41                          | 3.06                    | 4.56                      | 1.15      | 1.34  |
| -20                           | (- 4) | 764                        | 193      | 224 | 144                                     | 1.75                          | 4.35                    | 5.32                      | 1.34      | 1.56  |
| -15                           | (+ 5) | 1024                       | 258      | 300 | 174                                     | 2.12                          | 5.84                    | 5.95                      | 1.50      | 1.74  |
| -10                           | (+14) | 1322                       | 333      | 387 | 207                                     | 2.53                          | 7.58                    | 6.45                      | 1.62      | 1.89  |

### F - EXTERNAL CHARACTERISTICS

|                         |                               |      |                          |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate            | Universal EG/F/AMEM version 2 |      |                          |
| 2 Tray holder           | No                            |      |                          |
| 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             | Straight                      |      |                          |
| 3.2 DISCHARGE           | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-0.003") |
| 3.2.1 Material          | Copper                        |      |                          |
| 3.2.2 Shape             | Straight                      |      |                          |
| 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             | Straight                      |      |                          |
| 3.4 Oil cooler (Copper) | No                            | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                  |      |                          |