

### COMPRESSOR DEFINITION

|                           |                    |
|---------------------------|--------------------|
| Designation               | EG AS70HLR         |
| Nominal Voltage/Frequency | 220-240 V 50-60 Hz |
| Engineering Number        | 513701102          |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |              |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |              |
| 2 Refrigerant                      | R-134a                            |                                   |              |
| 3 Nominal voltage and frequency    | 220-240 / 50-60                   | [ 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-CSIR                         |                                   |              |
| 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 255 V                      | 198 to 255 V |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 198 to 255 V                      | 198 to 255 V |
| 8.3 HBP (32°C Ambient temperature) | -                                 | -                                 | -            |
| 8.4 HBP (43°C Ambient temperature) | -                                 | -                                 | -            |
| 9 Maximum condensing temperature   |                                   |                                   |              |
| 9.1 Operating                      | 14.2                              | [kgf/cm <sup>2</sup> ] (202 psig) | / °C - °F    |
| 9.2 Peak                           | 15.9                              | [kgf/cm <sup>2</sup> ] (226 psig) | / °C - °F    |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |              |

### B - MECHANICAL DATA

|                               |               |  |
|-------------------------------|---------------|--|
| 1 Commercial designation      | 1/5+          | [hp]                                       |
| 2 Displacement                | 5.56          | [cm <sup>3</sup> ] (0.339 cu.in)           |
| 2.1 Bore [mm]                 | 22.500        |  |
| 2.2 Stroke [mm]               | 14.000        |  |
| 3 Lubricant charge            | 230           | [ml] (7.78 fl.oz.)                         |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 |  |
| 4 Weight (with oil charge)    | 10.34         | [kg] (22.80 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 | 220-240 V 50-60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Current Relay                         |                                    |
| 2.1 Starting device                          | 213516256/213516493                   |                                    |
| 3 Start capacitor                            | 88-108(180)                           | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                     | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM739KFBYY-53                        |                                    |
| 6 Start winding resistance                   | 30.50                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 12.35                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | 14.40/13.40                           | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz)  | 1.55/1.40                             | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz)   | 1.85/1.65                             | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - IRAM - TUV - UKCA - 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] |
| 552                           | 139      | 162 | 113                            | 0.96                             | 3.14   | 4.91                      | 1.24                                   | 1.44  |

| TEST CONDITIONS:<br>@220V60Hz |          |     | 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] |
| 675                           | 170      | 198 | 126                            | 0.88                             | 3.84   | 5.35                      | 1.35                                   | 1.57  |

### E - PERFORMANCE - CURVES

| 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) | 270                        | 68       | 79  | 58                                     | 0.51                             | 1.53                       | 4.66                      | 1.17      | 1.36  |
| -30                           | (-22) | 400                        | 101      | 117 | 78                                     | 0.68                             | 2.27                       | 5.13                      | 1.29      | 1.50  |
| -25                           | (-13) | 563                        | 142      | 165 | 99                                     | 0.85                             | 3.20                       | 5.69                      | 1.43      | 1.67  |
| -20                           | (- 4) | 756                        | 190      | 221 | 120                                    | 1.03                             | 4.30                       | 6.33                      | 1.60      | 1.86  |
| -15                           | (+ 5) | 972                        | 245      | 285 | 139                                    | 1.19                             | 5.55                       | 7.06                      | 1.78      | 2.07  |
| -10                           | (+14) | 1209                       | 305      | 354 | 154                                    | 1.33                             | 6.93                       | 7.88                      | 1.99      | 2.31  |

| 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) | 230                        | 58       | 67  | 64                                     | 0.56                             | 1.30                       | 3.64                      | 0.92      | 1.07  |
| -30                           | (-22) | 343                        | 86       | 101 | 82                                     | 0.72                             | 1.94                       | 4.18                      | 1.05      | 1.22  |
| -25                           | (-13) | 496                        | 125      | 145 | 104                                    | 0.89                             | 2.81                       | 4.76                      | 1.20      | 1.39  |
| -20                           | (- 4) | 683                        | 172      | 200 | 126                                    | 1.08                             | 3.89                       | 5.38                      | 1.36      | 1.58  |
| -15                           | (+ 5) | 901                        | 227      | 264 | 148                                    | 1.28                             | 5.14                       | 6.05                      | 1.53      | 1.77  |
| -10                           | (+14) | 1146                       | 289      | 336 | 169                                    | 1.47                             | 6.56                       | 6.77                      | 1.71      | 1.98  |

### 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)                     | 181                        | 46                 | 53       | 72                          | 0.61                                   | 1.02                    | 2.53                      | 0.64     | 0.74      |       |
| -30 (-22)                     | 274                        | 69                 | 80       | 87                          | 0.75                                   | 1.55                    | 3.20                      | 0.81     | 0.94      |       |
| -25 (-13)                     | 412                        | 104                | 121      | 107                         | 0.92                                   | 2.34                    | 3.87                      | 0.98     | 1.14      |       |
| -20 (- 4)                     | 592                        | 149                | 173      | 130                         | 1.12                                   | 3.37                    | 4.55                      | 1.15     | 1.33      |       |
| -15 (+ 5)                     | 808                        | 204                | 237      | 154                         | 1.33                                   | 4.62                    | 5.22                      | 1.32     | 1.53      |       |
| -10 (+14)                     | 1058                       | 266                | 310      | 179                         | 1.56                                   | 6.06                    | 5.90                      | 1.49     | 1.73      |       |

| TEST CONDITIONS:<br>@220V60Hz |                            | 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)                     | 335                        | 85                 | 98       | 67                          | 0.47                                   | 1.90                    | 4.99                      | 1.26     | 1.46      |       |
| -30 (-22)                     | 497                        | 125                | 146      | 90                          | 0.62                                   | 2.82                    | 5.51                      | 1.39     | 1.61      |       |
| -25 (-13)                     | 700                        | 176                | 205      | 115                         | 0.78                                   | 3.97                    | 6.11                      | 1.54     | 1.79      |       |
| -20 (- 4)                     | 938                        | 236                | 275      | 139                         | 0.94                                   | 5.34                    | 6.80                      | 1.71     | 1.99      |       |
| -15 (+ 5)                     | 1207                       | 304                | 354      | 160                         | 1.09                                   | 6.89                    | 7.58                      | 1.91     | 2.22      |       |
| -10 (+14)                     | 1501                       | 378                | 440      | 178                         | 1.22                                   | 8.60                    | 8.45                      | 2.13     | 2.48      |       |

| TEST CONDITIONS:<br>@220V60Hz |                            | 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)                     | 286                        | 72                 | 84       | 73                          | 0.51                                   | 1.62                    | 3.91                      | 0.98     | 1.14      |       |
| -30 (-22)                     | 426                        | 107                | 125      | 95                          | 0.65                                   | 2.42                    | 4.49                      | 1.13     | 1.32      |       |
| -25 (-13)                     | 616                        | 155                | 180      | 120                         | 0.81                                   | 3.50                    | 5.12                      | 1.29     | 1.50      |       |
| -20 (- 4)                     | 848                        | 214                | 249      | 146                         | 0.99                                   | 4.83                    | 5.79                      | 1.46     | 1.70      |       |
| -15 (+ 5)                     | 1119                       | 282                | 328      | 171                         | 1.17                                   | 6.39                    | 6.50                      | 1.64     | 1.90      |       |
| -10 (+14)                     | 1422                       | 358                | 417      | 196                         | 1.34                                   | 8.15                    | 7.27                      | 1.83     | 2.13      |       |

| TEST CONDITIONS:<br>@220V60Hz |                            | 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)                     | 224                        | 56                 | 66       | 83                          | 0.56                                   | 1.27                    | 2.72                      | 0.68     | 0.80      |       |
| -30 (-22)                     | 340                        | 86                 | 100      | 101                         | 0.68                                   | 1.93                    | 3.44                      | 0.87     | 1.01      |       |
| -25 (-13)                     | 512                        | 129                | 150      | 124                         | 0.84                                   | 2.91                    | 4.16                      | 1.05     | 1.22      |       |
| -20 (- 4)                     | 735                        | 185                | 215      | 150                         | 1.02                                   | 4.18                    | 4.88                      | 1.23     | 1.43      |       |
| -15 (+ 5)                     | 1004                       | 253                | 294      | 178                         | 1.22                                   | 5.73                    | 5.60                      | 1.41     | 1.64      |       |
| -10 (+14)                     | 1313                       | 331                | 385      | 207                         | 1.43                                   | 7.52                    | 6.33                      | 1.59     | 1.85      |       |

### F - EXTERNAL CHARACTERISTICS

|                         |                                       |      |                          |
|-------------------------|---------------------------------------|------|--------------------------|
| 1 Base plate            | European Standard EG/F/AMEM Version 2 |      |                          |
| 2 Tray holder           | No                                    |      |                          |
| 3 Connectors            |                                       |      |                          |
| 3.1 SUCTION             | 8.2 +0.12/-0.08                       | [mm] | (0.323" +0.005"/-0.003") |
| 3.1.1 Material          | Copper                                |      |                          |
| 3.1.2 Shape             | Slanted                               |      |                          |
| 3.2 DISCHARGE           | 4.94 +0.08/-0.08                      | [mm] | (0.194" +0.003"/-0.003") |
| 3.2.1 Material          | Copper                                |      |                          |
| 3.2.2 Shape             | Slanted                               |      |                          |
| 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                          |      |                          |