

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG YS90CLP      |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513701280       |

### 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 255 V                      | -         |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 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                      | 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      | 1/4+           | [hp]                             |
| 2 Displacement                | 12.21          | [cm <sup>3</sup> ] (0.745 cu.in) |
| 2.1 Bore [mm]                 | 26.000         |                                  |
| 2.2 Stroke [mm]               | 23.000         |                                  |
| 3 Lubricant charge            | 280            | [ml] (9.47 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 10.97          | [kg] (24.18 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                          | 8EA17E63/QPS2-C22MD3J8             |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM319KFBYY-53                     |                                    |
| 6 Start winding resistance                   | 23.31                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 11.64                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | -                                  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz)  | -                                  | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz)   | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - IRAM - 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] |
| 734                           | 185      | 215 | 127                            | 0.94                             | 2.30   | 5.78                      | 1.46                                   | 1.69  |

### 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)                     | 443                        | 112                | 130 | 86                             | 0.84                             | 1.39                                  | 5.15                      | 1.30      | 1.51  |
| -30 (-22)                     | 578                        | 146                | 169 | 97                             | 0.87                             | 1.81                                  | 5.95                      | 1.50      | 1.74  |
| -25 (-13)                     | 749                        | 189                | 219 | 110                            | 0.90                             | 2.35                                  | 6.84                      | 1.72      | 2.00  |
| -20 (- 4)                     | 959                        | 242                | 281 | 123                            | 0.94                             | 3.01                                  | 7.77                      | 1.96      | 2.28  |
| -15 (+ 5)                     | 1212                       | 305                | 355 | 139                            | 0.98                             | 3.81                                  | 8.72                      | 2.20      | 2.56  |
| -10 (+14)                     | 1513                       | 381                | 443 | 157                            | 1.02                             | 4.77                                  | 9.66                      | 2.43      | 2.83  |

|                               |                            |                    |     |                                |                                  |  |                           |           |       |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| 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)                     | 420                        | 106                | 123 | 92                             | 0.85                             | 1.32                                   | 4.57                      | 1.15      | 1.34  |
| -30 (-22)                     | 548                        | 138                | 161 | 104                            | 0.88                             | 1.72                                   | 5.30                      | 1.34      | 1.55  |
| -25 (-13)                     | 710                        | 179                | 208 | 116                            | 0.91                             | 2.23                                   | 6.13                      | 1.55      | 1.80  |
| -20 (- 4)                     | 911                        | 230                | 267 | 130                            | 0.96                             | 2.86                                   | 7.03                      | 1.77      | 2.06  |
| -15 (+ 5)                     | 1156                       | 291                | 339 | 145                            | 1.01                             | 3.64                                   | 7.96                      | 2.01      | 2.33  |
| -10 (+14)                     | 1448                       | 365                | 424 | 162                            | 1.07                             | 4.57                                   | 8.90                      | 2.24      | 2.61  |

|                               |                            |                    |     |                                |                                  |  |                           |           |       |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| 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)                     | 402                        | 101                | 118 | 96                             | 0.86                             | 1.26                                   | 4.19                      | 1.06      | 1.23  |
| -30 (-22)                     | 521                        | 131                | 153 | 109                            | 0.89                             | 1.63                                   | 4.79                      | 1.21      | 1.40  |
| -25 (-13)                     | 675                        | 170                | 198 | 123                            | 0.93                             | 2.12                                   | 5.50                      | 1.39      | 1.61  |
| -20 (- 4)                     | 868                        | 219                | 254 | 138                            | 0.98                             | 2.73                                   | 6.30                      | 1.59      | 1.85  |
| -15 (+ 5)                     | 1103                       | 278                | 323 | 155                            | 1.04                             | 3.47                                   | 7.15                      | 1.80      | 2.09  |
| -10 (+14)                     | 1386                       | 349                | 406 | 173                            | 1.11                             | 4.37                                   | 8.02                      | 2.02      | 2.35  |

### 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) | 388                        | 98       | 114 | 96                                      | 0.86                          | 1.22                    | 4.05                      | 1.02      | 1.19  |
| -30                           | (-22) | 499                        | 126      | 146 | 112                                     | 0.89                          | 1.57                    | 4.45                      | 1.12      | 1.30  |
| -25                           | (-13) | 645                        | 163      | 189 | 129                                     | 0.94                          | 2.02                    | 4.98                      | 1.26      | 1.46  |
| -20                           | (- 4) | 829                        | 209      | 243 | 148                                     | 1.00                          | 2.61                    | 5.61                      | 1.41      | 1.64  |
| -15                           | (+ 5) | 1056                       | 266      | 309 | 167                                     | 1.07                          | 3.33                    | 6.31                      | 1.59      | 1.85  |
| -10                           | (+14) | 1329                       | 335      | 390 | 189                                     | 1.15                          | 4.20                    | 7.05                      | 1.78      | 2.07  |

### 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                          |      |                          |