

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>F FU100HAKW</b>     |
| Nominal Voltage/Frequency | <b>115-127 V 60 Hz</b> |
| Engineering Number        | <b>513200575</b>       |

### 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-Medium Back Pressure          |                                   |             |
| 4.1 Evaporating temperature range  | -35°C to -5°C                     | (-31°F to 23°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/Fan                        | -                                 | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan                        | -                                 | 98 to 140 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      | 1/3           | [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            | 280           | [ml] (9.47 fl.oz.)                         |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 |  |
| 4 Weight (with oil charge)    | 11.47         | [kg] (25.29 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                       | Current Relay                      |                                    |
| 2.1 Starting device                          | 213516264                          |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM795KFBZZ-53                     |                                    |
| 6 Start winding resistance                   | 7.20                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 1.90                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 32.50                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 4.10                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - TUV - UKCA - 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] |
| 985                           | 248      | 289 | 197                            | 2.66                             | 5.60   | 5.00                      | 1.26                                   | 1.47  |

### E - PERFORMANCE - CURVES

| 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) | 539                        | 136                | 158 | 126                                    | 2.35                             | 3.05                       | 4.27                      | 1.08      | 1.25  |
| -30                           | (-22) | 748                        | 188                | 219 | 163                                    | 2.48                             | 4.24                       | 4.61                      | 1.16      | 1.35  |
| -25                           | (-13) | 993                        | 250                | 291 | 192                                    | 2.61                             | 5.64                       | 5.19                      | 1.31      | 1.52  |
| -20                           | (- 4) | 1283                       | 323                | 376 | 216                                    | 2.75                             | 7.30                       | 5.95                      | 1.50      | 1.74  |
| -15                           | (+ 5) | 1630                       | 411                | 478 | 238                                    | 2.91                             | 9.31                       | 6.83                      | 1.72      | 2.00  |
| -10                           | (+14) | 2044                       | 515                | 599 | 262                                    | 3.07                             | 11.71                      | 7.77                      | 1.96      | 2.28  |
| -5                            | (+23) | 2535                       | 639                | 743 | 291                                    | 3.25                             | 14.58                      | 8.70                      | 2.19      | 2.55  |

| 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) | 476                        | 120                | 140 | 130                                    | 2.36                             | 2.69                       | 3.67                      | 0.93      | 1.08  |
| -30                           | (-22) | 678                        | 171                | 199 | 166                                    | 2.49                             | 3.84                       | 4.07                      | 1.03      | 1.19  |
| -25                           | (-13) | 915                        | 231                | 268 | 195                                    | 2.63                             | 5.20                       | 4.68                      | 1.18      | 1.37  |
| -20                           | (- 4) | 1199                       | 302                | 351 | 220                                    | 2.78                             | 6.82                       | 5.44                      | 1.37      | 1.59  |
| -15                           | (+ 5) | 1540                       | 388                | 451 | 245                                    | 2.94                             | 8.79                       | 6.29                      | 1.58      | 1.84  |
| -10                           | (+14) | 1948                       | 491                | 571 | 272                                    | 3.11                             | 11.16                      | 7.16                      | 1.80      | 2.10  |
| -5                            | (+23) | 2434                       | 613                | 713 | 305                                    | 3.30                             | 14.00                      | 7.99                      | 2.01      | 2.34  |

| TEST CONDITIONS:<br>@115V60Hz |       |                            | ASHRAE32<br>Static |     | (Condensing temperature 65°C (+149°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) | 410                        | 103                | 120 | 129                                    | 2.36                             | 2.32                       | 3.17                      | 0.80      | 0.93  |
| -30                           | (-22) | 602                        | 152                | 176 | 166                                    | 2.50                             | 3.41                       | 3.61                      | 0.91      | 1.06  |
| -25                           | (-13) | 831                        | 209                | 244 | 196                                    | 2.65                             | 4.72                       | 4.24                      | 1.07      | 1.24  |
| -20                           | (- 4) | 1107                       | 279                | 324 | 223                                    | 2.81                             | 6.30                       | 4.98                      | 1.25      | 1.46  |
| -15                           | (+ 5) | 1441                       | 363                | 422 | 250                                    | 2.98                             | 8.22                       | 5.78                      | 1.46      | 1.69  |
| -10                           | (+14) | 1842                       | 464                | 540 | 281                                    | 3.17                             | 10.55                      | 6.57                      | 1.65      | 1.92  |
| -5                            | (+23) | 2321                       | 585                | 680 | 318                                    | 3.37                             | 13.35                      | 7.29                      | 1.84      | 2.14  |

### F - EXTERNAL CHARACTERISTICS

|                         |                               |      |                          |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate            | Universal 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 plated steel           |      |                          |
| 3.1.2 Shape             | Slanted                       |      |                          |
| 3.2 DISCHARGE           | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-0.003") |
| 3.2.1 Material          | Copper plated steel           |      |                          |
| 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 plated steel           |      |                          |
| 3.3.2 Shape             | Slanted                       |      |                          |
| 3.4 Oil cooler (Copper) | 6.5 +0.09/-0.09               | [mm] | (0.256" +0.004"/-0.004") |
| 3.5 Connector sealing   | Rubber Plugs                  |      |                          |