

### COMPRESSOR DEFINITION

|                           |             |
|---------------------------|-------------|
| Designation               | F FI7,5HAK  |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number        | 513205570   |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |             |
|------------------------------------|-----------------------------------|-----------------------------------|-------------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |             |
| 2 Refrigerant                      | R-134a                            |                                   |             |
| 3 Nominal voltage and frequency    | 115 / 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-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/Fan                        | -                                 | 98 to 135 V |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan                        | -                                 | 98 to 135 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      | 1/4           | [hp]                                       |
| 2 Displacement                | 6.76          | [cm <sup>3</sup> ] (0.413 cu.in)           |
| 2.1 Bore [mm]                 | 22.500        |  |
| 2.2 Stroke [mm]               | 17.000        |  |
| 3 Lubricant charge            | 350           | [ml] (11.84 fl.oz.)                        |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 |  |
| 4 Weight (with oil charge)    | 10.65         | [kg] (23.48 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 V 60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Current Relay                  |                                    |
| 2.1 Starting device                          | 213516060/213516124            |                                    |
| 3 Start capacitor                            | 189-227(100)                   | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                              | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM762PFBZZ-53                 |                                    |
| 6 Start winding resistance                   | 11.95                          | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 2.65                           | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 23.00                          | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 2.95                           | [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] |
| 765                           | 193      | 224 | 166                            | 2.21                             | 4.35   | 4.60                      | 1.16                                   | 1.35  |

### 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)                     | 395                        | 100      | 116                | 114                            | 1.96                                   | 2.24                       | 3.45                      | 0.87      | 1.01  |
| -30 (-22)                     | 566                        | 143      | 166                | 133                            | 2.04                                   | 3.21                       | 4.23                      | 1.07      | 1.24  |
| -25 (-13)                     | 762                        | 192      | 223                | 155                            | 2.16                                   | 4.33                       | 4.92                      | 1.24      | 1.44  |
| -20 (- 4)                     | 1000                       | 252      | 293                | 180                            | 2.31                                   | 5.69                       | 5.58                      | 1.41      | 1.63  |
| -15 (+ 5)                     | 1293                       | 326      | 379                | 205                            | 2.48                                   | 7.38                       | 6.29                      | 1.59      | 1.84  |
| -10 (+14)                     | 1656                       | 417      | 485                | 232                            | 2.67                                   | 9.49                       | 7.13                      | 1.80      | 2.09  |
| -5 (+23)                      | 2102                       | 530      | 616                | 257                            | 2.85                                   | 12.09                      | 8.17                      | 2.06      | 2.39  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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)                     | 329                        | 83       | 96                 | 112                            | 1.94                                   | 1.86                       | 2.93                      | 0.74      | 0.86  |
| -30 (-22)                     | 493                        | 124      | 145                | 132                            | 2.03                                   | 2.80                       | 3.71                      | 0.94      | 1.09  |
| -25 (-13)                     | 682                        | 172      | 200                | 156                            | 2.16                                   | 3.87                       | 4.36                      | 1.10      | 1.28  |
| -20 (- 4)                     | 911                        | 229      | 267                | 184                            | 2.33                                   | 5.18                       | 4.96                      | 1.25      | 1.45  |
| -15 (+ 5)                     | 1193                       | 301      | 349                | 214                            | 2.54                                   | 6.81                       | 5.57                      | 1.40      | 1.63  |
| -10 (+14)                     | 1542                       | 389      | 452                | 246                            | 2.77                                   | 8.84                       | 6.26                      | 1.58      | 1.84  |
| -5 (+23)                      | 1974                       | 497      | 578                | 277                            | 3.02                                   | 11.36                      | 7.12                      | 1.79      | 2.09  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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)                     | 242                        | 61       | 71                 | 105                            | 1.92                                   | 1.37                       | 2.30                      | 0.58      | 0.67  |
| -30 (-22)                     | 399                        | 101      | 117                | 126                            | 2.00                                   | 2.26                       | 3.13                      | 0.79      | 0.92  |
| -25 (-13)                     | 579                        | 146      | 170                | 153                            | 2.14                                   | 3.29                       | 3.79                      | 0.96      | 1.11  |
| -20 (- 4)                     | 797                        | 201      | 234                | 183                            | 2.33                                   | 4.54                       | 4.36                      | 1.10      | 1.28  |
| -15 (+ 5)                     | 1067                       | 269      | 313                | 218                            | 2.57                                   | 6.09                       | 4.90                      | 1.24      | 1.44  |
| -10 (+14)                     | 1403                       | 354      | 411                | 254                            | 2.84                                   | 8.04                       | 5.50                      | 1.39      | 1.61  |
| -5 (+23)                      | 1820                       | 459      | 533                | 292                            | 3.13                                   | 10.47                      | 6.22                      | 1.57      | 1.82  |

### F - EXTERNAL CHARACTERISTICS

|                         |                  |      |                          |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate            | Universal        |      |                          |
| 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           | 4.94 +0.08/-0.08 | [mm] | (0.194" +0.003"/-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     |      |                          |