

COMPRESSOR DEFINITION

| | |
|---------------------------|--------------------|
| Designation | EG U70HLC |
| Nominal Voltage/Frequency | 220-240 V 50-60 Hz |
| Engineering Number | 513700226 |

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 | RSCR | | |
| 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 242 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 255 V | 198 to 242 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 ²] (230 psig) | / °C - °F |
| 9.2 Peak (gauge) | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/4 | [hp] |
| 2 Displacement | 6.36 | [cm ³] (0.388 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 16.000 | |
| 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) | 11.11 | [kg] (24.49 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (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 | Combo | |
| 2.1 Starting device | 3ARR52U7L/3ARR56U7L | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(350) | [µF(VAC minimum)] |
| 5 Motor protection | 3ARR52/56U7L | |
| 6 Start winding resistance | 12.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 14.10 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | 7.50/6.20 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | 1.20/1.10 | [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 | OFT - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAELBP32 Static | | Evaporating temperature (Condensing temperature | | -23.3°C (-9.94°F) 54.4°C (129.92°F) | |
| Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 600 | 151 | 176 | 112 | 0.56 | 3.41 | 5.36 | 1.35 | 1.57 |

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V60Hz | | | ASHRAELBP32 Static | | Evaporating temperature (Condensing temperature | | -23.3°C (-9.94°F) 54.4°C (129.92°F) | |
| Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 700 | 176 | 205 | 127 | 0.60 | 3.98 | 5.50 | 1.39 | 1.61 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Static | | (Condensing temperature 45°C (+113°F)) | | | | | |
| Evaporating temperature | | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 322 | 81 | 94 | 77 | 0.42 | 1.82 | 4.18 | 1.05 | 1.23 |
| -30 | (-22) | 436 | 110 | 128 | 89 | 0.47 | 2.47 | 4.96 | 1.25 | 1.45 |
| -25 | (-13) | 607 | 153 | 178 | 103 | 0.53 | 3.45 | 5.88 | 1.48 | 1.72 |
| -20 | (- 4) | 823 | 207 | 241 | 119 | 0.59 | 4.68 | 6.89 | 1.74 | 2.02 |
| -15 | (+ 5) | 1069 | 269 | 313 | 135 | 0.66 | 6.10 | 7.92 | 2.00 | 2.32 |
| -10 | (+14) | 1332 | 336 | 390 | 150 | 0.72 | 7.63 | 8.92 | 2.25 | 2.61 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Static | | (Condensing temperature 55°C (+131°F)) | | | | | |
| Evaporating temperature | | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 262 | 66 | 77 | 76 | 0.40 | 1.48 | 3.43 | 0.86 | 1.00 |
| -30 | (-22) | 368 | 93 | 108 | 89 | 0.46 | 2.08 | 4.19 | 1.05 | 1.23 |
| -25 | (-13) | 533 | 134 | 156 | 106 | 0.53 | 3.03 | 5.05 | 1.27 | 1.48 |
| -20 | (- 4) | 745 | 188 | 218 | 125 | 0.61 | 4.24 | 5.97 | 1.50 | 1.75 |
| -15 | (+ 5) | 989 | 249 | 290 | 144 | 0.69 | 5.65 | 6.88 | 1.73 | 2.02 |
| -10 | (+14) | 1252 | 315 | 367 | 163 | 0.77 | 7.17 | 7.73 | 1.95 | 2.26 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32 Static | | | (Condensing temperature 65°C (+149°F)) | | | | | |
|-------------------------------|----------------------------|--------------------|----------|-----------------------------|--|-------------------------|---------------------------|----------|-----------|-------|
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | | |
| | °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 (-31) | 183 | 46 | 54 | 69 | 0.38 | 1.03 | 2.67 | 0.67 | 0.78 | |
| -30 (-22) | 290 | 73 | 85 | 85 | 0.45 | 1.64 | 3.49 | 0.88 | 1.02 | |
| -25 (-13) | 459 | 116 | 135 | 105 | 0.53 | 2.61 | 4.38 | 1.10 | 1.28 | |
| -20 (- 4) | 676 | 170 | 198 | 127 | 0.63 | 3.85 | 5.29 | 1.33 | 1.55 | |
| -15 (+ 5) | 928 | 234 | 272 | 150 | 0.73 | 5.30 | 6.16 | 1.55 | 1.80 | |
| -10 (+14) | 1200 | 302 | 352 | 174 | 0.83 | 6.87 | 6.92 | 1.74 | 2.03 | |

| TEST CONDITIONS: @220V60Hz | | ASHRAE32 Static | | | (Condensing temperature 45°C (+113°F)) | | | | | |
|-------------------------------|----------------------------|--------------------|----------|-----------------------------|--|-------------------------|---------------------------|----------|-----------|-------|
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | | |
| | °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 (-31) | 366 | 92 | 107 | 84 | 0.42 | 2.07 | 4.39 | 1.11 | 1.29 | |
| -30 (-22) | 530 | 133 | 155 | 100 | 0.48 | 3.00 | 5.32 | 1.34 | 1.56 | |
| -25 (-13) | 722 | 182 | 212 | 118 | 0.56 | 4.10 | 6.13 | 1.54 | 1.80 | |
| -20 (- 4) | 954 | 240 | 280 | 138 | 0.64 | 5.43 | 6.91 | 1.74 | 2.03 | |
| -15 (+ 5) | 1238 | 312 | 363 | 159 | 0.73 | 7.07 | 7.77 | 1.96 | 2.28 | |
| -10 (+14) | 1585 | 399 | 464 | 179 | 0.83 | 9.08 | 8.80 | 2.22 | 2.58 | |

| TEST CONDITIONS: @220V60Hz | | ASHRAE32 Static | | | (Condensing temperature 55°C (+131°F)) | | | | | |
|-------------------------------|----------------------------|--------------------|----------|-----------------------------|--|-------------------------|---------------------------|----------|-----------|-------|
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | | |
| | °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 (-31) | 286 | 72 | 84 | 84 | 0.43 | 1.62 | 3.41 | 0.86 | 1.00 | |
| -30 (-22) | 446 | 112 | 131 | 101 | 0.50 | 2.53 | 4.40 | 1.11 | 1.29 | |
| -25 (-13) | 628 | 158 | 184 | 122 | 0.58 | 3.56 | 5.20 | 1.31 | 1.52 | |
| -20 (- 4) | 844 | 213 | 247 | 144 | 0.67 | 4.80 | 5.89 | 1.49 | 1.73 | |
| -15 (+ 5) | 1105 | 279 | 324 | 168 | 0.77 | 6.31 | 6.59 | 1.66 | 1.93 | |
| -10 (+14) | 1424 | 359 | 417 | 192 | 0.88 | 8.16 | 7.38 | 1.86 | 2.16 | |

| TEST CONDITIONS: @220V60Hz | | ASHRAE32 Static | | | (Condensing temperature 65°C (+149°F)) | | | | | |
|-------------------------------|----------------------------|--------------------|----------|-----------------------------|--|-------------------------|---------------------------|----------|-----------|-------|
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | | |
| | °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 (-31) | 185 | 47 | 54 | 77 | 0.41 | 1.05 | 2.38 | 0.60 | 0.70 | |
| -30 (-22) | 349 | 88 | 102 | 97 | 0.48 | 1.98 | 3.53 | 0.89 | 1.03 | |
| -25 (-13) | 529 | 133 | 155 | 119 | 0.58 | 3.01 | 4.41 | 1.11 | 1.29 | |
| -20 (- 4) | 738 | 186 | 216 | 145 | 0.68 | 4.20 | 5.11 | 1.29 | 1.50 | |
| -15 (+ 5) | 987 | 249 | 289 | 173 | 0.81 | 5.63 | 5.74 | 1.45 | 1.68 | |
| -10 (+14) | 1287 | 324 | 377 | 201 | 0.94 | 7.37 | 6.39 | 1.61 | 1.87 | |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------------------------|------|--------------------------|
| 1 Base plate | European Standard EG/F/AMEM Version 2 | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted | | |
| 3.2 DISCHARGE | 5.1 +0.10/+0.00 | [mm] | (0.201" +0.004"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted | | |
| 3.3 PROCESS | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |