

COMPRESSOR DEFINITION

| | |
|---------------------------|--------------------|
| Designation | EG U110HLC |
| Nominal Voltage/Frequency | 220-240 V 50-60 Hz |
| Engineering Number | 513700125 |

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) | Fan | 198 to 255 V | 198 to 242 V |
| 8.2 LBP (43°C Ambient temperature) | Fan | 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 temperature | | | |
| 9.1 Operating | 14.2 | [kgf/cm ²] (202 psig) | / °C - °F |
| 9.2 Peak | 15.9 | [kgf/cm ²] (226 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/3 | [hp] |
| 2 Displacement | 9.50 | [cm ³] (0.580 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 21.000 | |
| 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) | 11.14 | [kg] (24.56 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 | 5SP05X283N/5SP17X283N | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(350) | [µF(VAC minimum)] |
| 5 Motor protection | 5SP05X283NFX | |
| 6 Start winding resistance | 13.50 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 10.00 | [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 | | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAELBP32 Fan | | 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] |
| 935 | 236 | 274 | 172 | 0.95 | 5.31 | 5.44 | 1.37 | 1.59 |

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V60Hz | | | ASHRAELBP32 Fan | | 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] |
| 1110 | 280 | 325 | 200 | 0.96 | 6.31 | 5.54 | 1.40 | 1.62 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-----------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Fan | | (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) | 495 | 125 | 145 | 115 | 0.72 | 2.80 | 4.31 | 1.09 | 1.26 |
| -30 (-22) | 699 | 176 | 205 | 138 | 0.82 | 3.96 | 5.05 | 1.27 | 1.48 |
| -25 (-13) | 931 | 235 | 273 | 161 | 0.92 | 5.28 | 5.79 | 1.46 | 1.70 |
| -20 (- 4) | 1205 | 304 | 353 | 183 | 1.01 | 6.86 | 6.58 | 1.66 | 1.93 |
| -15 (+ 5) | 1540 | 388 | 451 | 206 | 1.09 | 8.79 | 7.46 | 1.88 | 2.19 |
| -10 (+14) | 1952 | 492 | 572 | 230 | 1.19 | 11.19 | 8.46 | 2.13 | 2.48 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-----------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Fan | | (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) | 409 | 103 | 120 | 110 | 0.70 | 2.31 | 3.71 | 0.93 | 1.09 |
| -30 (-22) | 614 | 155 | 180 | 138 | 0.82 | 3.48 | 4.44 | 1.12 | 1.30 |
| -25 (-13) | 844 | 213 | 247 | 164 | 0.93 | 4.79 | 5.14 | 1.30 | 1.51 |
| -20 (- 4) | 1116 | 281 | 327 | 191 | 1.04 | 6.35 | 5.85 | 1.47 | 1.71 |
| -15 (+ 5) | 1447 | 365 | 424 | 219 | 1.15 | 8.26 | 6.62 | 1.67 | 1.94 |
| -10 (+14) | 1853 | 467 | 543 | 247 | 1.27 | 10.62 | 7.47 | 1.88 | 2.19 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32 Fan | | | (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) | 309 | 78 | 91 | 100 | 0.67 | 1.75 | 3.10 | 0.78 | 0.91 | |
| -30 (-22) | 516 | 130 | 151 | 132 | 0.80 | 2.92 | 3.85 | 0.97 | 1.13 | |
| -25 (-13) | 747 | 188 | 219 | 163 | 0.92 | 4.24 | 4.55 | 1.15 | 1.33 | |
| -20 (- 4) | 1018 | 257 | 298 | 195 | 1.05 | 5.79 | 5.23 | 1.32 | 1.53 | |
| -15 (+ 5) | 1348 | 340 | 395 | 228 | 1.18 | 7.69 | 5.92 | 1.49 | 1.74 | |
| -10 (+14) | 1751 | 441 | 513 | 262 | 1.33 | 10.03 | 6.67 | 1.68 | 1.96 | |

| TEST CONDITIONS: @220V60Hz | | ASHRAE32 Fan | | | (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) | 567 | 143 | 166 | 128 | 0.61 | 3.20 | 4.43 | 1.12 | 1.30 | |
| -30 (-22) | 820 | 207 | 240 | 158 | 0.77 | 4.65 | 5.17 | 1.30 | 1.52 | |
| -25 (-13) | 1111 | 280 | 325 | 188 | 0.92 | 6.31 | 5.90 | 1.49 | 1.73 | |
| -20 (- 4) | 1455 | 367 | 426 | 219 | 1.06 | 8.28 | 6.65 | 1.68 | 1.95 | |
| -15 (+ 5) | 1869 | 471 | 548 | 250 | 1.20 | 10.67 | 7.46 | 1.88 | 2.19 | |
| -10 (+14) | 2370 | 597 | 694 | 282 | 1.34 | 13.58 | 8.37 | 2.11 | 2.45 | |

| TEST CONDITIONS: @220V60Hz | | ASHRAE32 Fan | | | (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) | 466 | 117 | 137 | 121 | 0.59 | 2.64 | 3.86 | 0.97 | 1.13 | |
| -30 (-22) | 710 | 179 | 208 | 155 | 0.76 | 4.03 | 4.58 | 1.15 | 1.34 | |
| -25 (-13) | 992 | 250 | 291 | 189 | 0.92 | 5.63 | 5.25 | 1.32 | 1.54 | |
| -20 (- 4) | 1328 | 335 | 389 | 225 | 1.08 | 7.56 | 5.91 | 1.49 | 1.73 | |
| -15 (+ 5) | 1736 | 437 | 509 | 262 | 1.25 | 9.91 | 6.60 | 1.66 | 1.93 | |
| -10 (+14) | 2232 | 562 | 654 | 302 | 1.44 | 12.79 | 7.36 | 1.85 | 2.16 | |

| TEST CONDITIONS: @220V60Hz | | ASHRAE32 Fan | | | (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) | 366 | 92 | 107 | 109 | 0.53 | 2.07 | 3.33 | 0.84 | 0.98 | |
| -30 (-22) | 593 | 149 | 174 | 145 | 0.71 | 3.36 | 4.04 | 1.02 | 1.18 | |
| -25 (-13) | 859 | 217 | 252 | 184 | 0.89 | 4.88 | 4.67 | 1.18 | 1.37 | |
| -20 (- 4) | 1181 | 298 | 346 | 226 | 1.08 | 6.72 | 5.26 | 1.33 | 1.54 | |
| -15 (+ 5) | 1575 | 397 | 462 | 270 | 1.28 | 8.99 | 5.85 | 1.48 | 1.72 | |
| -10 (+14) | 2059 | 519 | 603 | 317 | 1.50 | 11.80 | 6.48 | 1.63 | 1.90 | |

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 | | |
| 3.1.2 Shape | Straight | | |
| 3.2 DISCHARGE | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-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 | | |