

COMPRESSOR DEFINITION

| | |
|---------------------------|--------------------|
| Designation | EG ZS80HLC |
| Nominal Voltage/Frequency | 220-240 V 50-60 Hz |
| Engineering Number | 513701241 |

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/Fan | 198 to 255 V | 198 to 255 V |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan | 198 to 255 V | 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 | 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 | 1/4 | [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 | 230 | [ml] (7.78 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 10.78 | [kg] (23.77 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 | PTC | |
| 2.1 Starting device | 8EA17C3/8EA17E61/8EA17E62/8EA17E63/QPS2-A22MD3/QPS3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(350)/5(350) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM283KFBYY-53 | |
| 6 Start winding resistance | 22.90 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 13.00 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 7.60/6.80 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 1.15/1.10 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | 1.50 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - IMTRO - IRAM - NOM - TUV - UKCA - 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] |
| 651 | 164 | 191 | 112 | 0.59 | 3.70 | 5.80 | 1.46 | 1.70 |

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| 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] |
| 800 | 202 | 234 | 133 | 0.62 | 4.55 | 6.00 | 1.51 | 1.76 |

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) | 324 | 82 | 95 | 74 | 0.38 | 1.83 | 4.41 | 1.11 | 1.29 |
| -30 (-22) | 488 | 123 | 143 | 90 | 0.45 | 2.77 | 5.39 | 1.36 | 1.58 |
| -25 (-13) | 667 | 168 | 195 | 106 | 0.54 | 3.79 | 6.29 | 1.59 | 1.84 |
| -20 (- 4) | 871 | 219 | 255 | 122 | 0.62 | 4.96 | 7.17 | 1.81 | 2.10 |
| -15 (+ 5) | 1107 | 279 | 324 | 137 | 0.69 | 6.32 | 8.10 | 2.04 | 2.37 |
| -10 (+14) | 1386 | 349 | 406 | 152 | 0.77 | 7.94 | 9.13 | 2.30 | 2.68 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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 | 66 | 0.34 | 1.48 | 3.99 | 1.01 | 1.17 |
| -30 (-22) | 419 | 106 | 123 | 85 | 0.44 | 2.38 | 4.88 | 1.23 | 1.43 |
| -25 (-13) | 596 | 150 | 175 | 105 | 0.54 | 3.38 | 5.67 | 1.43 | 1.66 |
| -20 (- 4) | 801 | 202 | 235 | 125 | 0.64 | 4.56 | 6.40 | 1.61 | 1.88 |
| -15 (+ 5) | 1044 | 263 | 306 | 146 | 0.74 | 5.96 | 7.16 | 1.81 | 2.10 |
| -10 (+14) | 1332 | 336 | 390 | 166 | 0.85 | 7.63 | 8.01 | 2.02 | 2.35 |

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) | 201 | 51 | 59 | 60 | 0.31 | 1.14 | 3.36 | 0.85 | 0.99 | |
| -30 (-22) | 345 | 87 | 101 | 81 | 0.42 | 1.96 | 4.25 | 1.07 | 1.24 | |
| -25 (-13) | 513 | 129 | 150 | 103 | 0.53 | 2.91 | 4.99 | 1.26 | 1.46 | |
| -20 (- 4) | 714 | 180 | 209 | 126 | 0.64 | 4.06 | 5.67 | 1.43 | 1.66 | |
| -15 (+ 5) | 957 | 241 | 280 | 150 | 0.76 | 5.46 | 6.35 | 1.60 | 1.86 | |
| -10 (+14) | 1250 | 315 | 366 | 176 | 0.88 | 7.16 | 7.09 | 1.79 | 2.08 | |

| 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) | 401 | 101 | 117 | 88 | 0.41 | 2.27 | 4.56 | 1.15 | 1.34 | |
| -30 (-22) | 602 | 152 | 176 | 107 | 0.49 | 3.41 | 5.57 | 1.40 | 1.63 | |
| -25 (-13) | 823 | 207 | 241 | 127 | 0.58 | 4.67 | 6.50 | 1.64 | 1.90 | |
| -20 (- 4) | 1074 | 271 | 315 | 146 | 0.67 | 6.11 | 7.40 | 1.87 | 2.17 | |
| -15 (+ 5) | 1366 | 344 | 400 | 164 | 0.76 | 7.80 | 8.36 | 2.11 | 2.45 | |
| -10 (+14) | 1710 | 431 | 501 | 181 | 0.84 | 9.80 | 9.43 | 2.38 | 2.76 | |

| 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) | 324 | 82 | 95 | 78 | 0.37 | 1.83 | 4.13 | 1.04 | 1.21 | |
| -30 (-22) | 517 | 130 | 151 | 101 | 0.48 | 2.93 | 5.04 | 1.27 | 1.48 | |
| -25 (-13) | 734 | 185 | 215 | 125 | 0.59 | 4.17 | 5.85 | 1.47 | 1.71 | |
| -20 (- 4) | 988 | 249 | 289 | 149 | 0.70 | 5.62 | 6.61 | 1.67 | 1.94 | |
| -15 (+ 5) | 1287 | 324 | 377 | 174 | 0.81 | 7.35 | 7.39 | 1.86 | 2.17 | |
| -10 (+14) | 1644 | 414 | 482 | 198 | 0.92 | 9.42 | 8.27 | 2.08 | 2.42 | |

| 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) | 248 | 63 | 73 | 72 | 0.33 | 1.41 | 3.47 | 0.88 | 1.02 | |
| -30 (-22) | 426 | 107 | 125 | 97 | 0.45 | 2.41 | 4.38 | 1.10 | 1.28 | |
| -25 (-13) | 633 | 159 | 185 | 123 | 0.57 | 3.59 | 5.15 | 1.30 | 1.51 | |
| -20 (- 4) | 881 | 222 | 258 | 151 | 0.70 | 5.01 | 5.86 | 1.48 | 1.72 | |
| -15 (+ 5) | 1181 | 298 | 346 | 180 | 0.83 | 6.74 | 6.56 | 1.65 | 1.92 | |
| -10 (+14) | 1542 | 389 | 452 | 210 | 0.96 | 8.84 | 7.32 | 1.85 | 2.15 | |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------------------------|------|--------------------------|
| 1 Base plate | European Standard EG/F/AMEM Version 2 | | |
| 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 | 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 | Slanted | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |