

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | ES C55CBT |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 518102623 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 115-127 / 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 | - | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | - | 103 to 140 V |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation | 1/5 | [hp] |
| 2 Displacement | 7.87 | [cm ³] (0.480 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 19.800 | |
| 3 Lubricant charge | 115 | [ml] (3.89 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 5.2 | [kg] (11.46 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 115-127 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 8EA14C83 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM319KFBYY-53 | |
| 6 Start winding resistance | 7.36 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 7.28 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 7.80 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 0.94 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 1.20 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | | |

D - PERFORMANCE - CHECK POINT DATA

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|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|---------------------------------------|-------|
| TEST CONDITIONS: @115V60Hz | | | GEALBP Static | | Evaporating temperature (Condensing temperature | | -23.3°C (-9.94°F) 40.5°C (104.9°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] |
| 614 | 155 | 180 | 86 | 0.78 | 1.93 | 7.14 | 1.80 | 2.09 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | GEA Static | | | (Condensing temperature 35°C (+95°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) | 337 | 85 | 99 | 64 | 0.56 | 0.00 | 5.27 | 1.33 | 1.54 |
| -30 | (-22) | 449 | 113 | 131 | 72 | 0.64 | 0.00 | 6.22 | 1.57 | 1.82 |
| -25 | (-13) | 585 | 147 | 171 | 81 | 0.72 | 0.00 | 7.22 | 1.82 | 2.12 |
| -20 | (- 4) | 747 | 188 | 219 | 90 | 0.81 | 0.00 | 8.29 | 2.09 | 2.43 |
| -15 | (+ 5) | 937 | 236 | 275 | 100 | 0.89 | 0.00 | 9.43 | 2.38 | 2.76 |
| -10 | (+14) | 1158 | 292 | 339 | 109 | 0.97 | 0.00 | 10.68 | 2.69 | 3.13 |

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|-------------------------------|-------|----------------------------|----------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | GEA 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) | 306 | 77 | 90 | 65 | 0.57 | 0.00 | 4.76 | 1.20 | 1.39 |
| -30 | (-22) | 415 | 105 | 122 | 74 | 0.65 | 0.00 | 5.60 | 1.41 | 1.64 |
| -25 | (-13) | 549 | 138 | 161 | 85 | 0.75 | 0.00 | 6.46 | 1.63 | 1.89 |
| -20 | (- 4) | 710 | 179 | 208 | 96 | 0.86 | 0.00 | 7.36 | 1.85 | 2.16 |
| -15 | (+ 5) | 901 | 227 | 264 | 108 | 0.97 | 0.00 | 8.30 | 2.09 | 2.43 |
| -10 | (+14) | 1122 | 283 | 329 | 120 | 1.09 | 0.00 | 9.31 | 2.35 | 2.73 |

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|-------------------------------|-------|----------------------------|----------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | GEA 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) | 279 | 70 | 82 | 64 | 0.56 | 0.00 | 4.35 | 1.10 | 1.27 |
| -30 | (-22) | 382 | 96 | 112 | 75 | 0.65 | 0.00 | 5.09 | 1.28 | 1.49 |
| -25 | (-13) | 512 | 129 | 150 | 88 | 0.76 | 0.00 | 5.82 | 1.47 | 1.71 |
| -20 | (- 4) | 670 | 169 | 196 | 102 | 0.89 | 0.00 | 6.55 | 1.65 | 1.92 |
| -15 | (+ 5) | 857 | 216 | 251 | 117 | 1.03 | 0.00 | 7.31 | 1.84 | 2.14 |
| -10 | (+14) | 1076 | 271 | 315 | 133 | 1.18 | 0.00 | 8.09 | 2.04 | 2.37 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------|------|--------------------------|
| 1 Base plate | European Standard ES/FMS | | |
| 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 45° up | | |
| 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 45° up | | |
| 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 45° up | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |