

COMPRESSOR DEFINITION

| | |
|---------------------------|-------------------------------|
| Designation | ES X36CBC |
| Nominal Voltage/Frequency | 115-127 V 60 Hz / 110 V 50 Hz |
| Engineering Number | 518100013 |

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 | 98 to 127 V | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 98 to 127 V | 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 | 5.68 | [cm ³] (0.347 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 16.400 | |
| 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) | 5.3 | [kg] (11.68 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|--|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 115-127 V 60Hz / 110 V 50 Hz 1~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 5SP14X 115V | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 8(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM276KFBYY | |
| 6 Start winding resistance | 10.93 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 10.52 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | 5.35/5.35 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | 0.83/0.83 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz) | 0.96/0.96 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | UL | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|---|-------|
| 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] |
| 430 | 108 | 126 | 63 | 0.56 | 1.35 | 6.88 | 1.73 | 2.02 |

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) | 174 | 44 | 51 | 44 | 0.42 | 0.00 | 4.54 | 1.14 | 1.33 |
| -30 | (-22) | 242 | 61 | 71 | 51 | 0.47 | 0.00 | 5.26 | 1.32 | 1.54 |
| -25 | (-13) | 367 | 92 | 107 | 58 | 0.53 | 0.00 | 6.51 | 1.64 | 1.91 |
| -20 | (- 4) | 528 | 133 | 155 | 64 | 0.59 | 0.00 | 8.06 | 2.03 | 2.36 |
| -15 | (+ 5) | 708 | 178 | 208 | 71 | 0.65 | 0.00 | 9.67 | 2.44 | 2.83 |
| -10 | (+14) | 887 | 223 | 260 | 79 | 0.71 | 0.00 | 11.11 | 2.80 | 3.26 |

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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) | 338 | 85 | 99 | 46 | 0.43 | 0.00 | 6.19 | 1.56 | 1.81 |
| -30 | (-22) | 359 | 90 | 105 | 53 | 0.50 | 0.00 | 6.20 | 1.56 | 1.82 |
| -25 | (-13) | 428 | 108 | 125 | 61 | 0.57 | 0.00 | 6.65 | 1.68 | 1.95 |
| -20 | (- 4) | 525 | 132 | 154 | 70 | 0.64 | 0.00 | 7.32 | 1.85 | 2.15 |
| -15 | (+ 5) | 632 | 159 | 185 | 78 | 0.72 | 0.00 | 7.97 | 2.01 | 2.33 |
| -10 | (+14) | 729 | 184 | 214 | 87 | 0.80 | 0.00 | 8.35 | 2.10 | 2.45 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 196 | 49 | 58 | 44 | 0.41 | 0.00 | 5.01 | 1.26 | 1.47 |
| -30 | (-22) | 227 | 57 | 66 | 54 | 0.49 | 0.00 | 4.98 | 1.25 | 1.46 |
| -25 | (-13) | 296 | 75 | 87 | 64 | 0.58 | 0.00 | 5.31 | 1.34 | 1.56 |
| -20 | (- 4) | 385 | 97 | 113 | 74 | 0.67 | 0.00 | 5.77 | 1.45 | 1.69 |
| -15 | (+ 5) | 475 | 120 | 139 | 85 | 0.77 | 0.00 | 6.12 | 1.54 | 1.79 |
| -10 | (+14) | 547 | 138 | 160 | 95 | 0.87 | 0.00 | 6.13 | 1.54 | 1.80 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @115V60Hz | | GEA 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) | 124 | 31 | 36 | 38 | 0.37 | 0.00 | 3.48 | 0.88 | 1.02 |
| -30 | (-22) | 220 | 55 | 64 | 51 | 0.47 | 0.00 | 4.08 | 1.03 | 1.20 |
| -25 | (-13) | 345 | 87 | 101 | 64 | 0.58 | 0.00 | 4.96 | 1.25 | 1.45 |
| -20 | (- 4) | 482 | 122 | 141 | 77 | 0.70 | 0.00 | 5.88 | 1.48 | 1.72 |
| -15 | (+ 5) | 612 | 154 | 179 | 90 | 0.82 | 0.00 | 6.61 | 1.67 | 1.94 |
| -10 | (+14) | 714 | 180 | 209 | 103 | 0.94 | 0.00 | 6.90 | 1.74 | 2.02 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard ES/FMS | | |
| 2 Tray holder | Yes | | |
| 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 | 6.35 +0.08/-0.08 | [mm] | (0.250" +0.003"/-0.003") |
| 3.3.1 Material | Copper(OD) | | |
| 3.3.2 Shape | Slanted 45° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |