

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM U32CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 893BA57 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Low-Medium Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -5°C | (-31°F to 23°F) | |
| 5 Motor type | RSIR | | |
| 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 254 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 254 V | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing pressures/temperature | | | |
| 9.1 Operating (gauge) | 7.7 | [kgf/cm ²] (109 psig) | / °C - °F |
| 9.2 Peak (gauge) | 9.8 | [kgf/cm ²] (139 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation | | [hp] |
| 2 Displacement | 5.96 | [cm ³] (0.364 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 15.000 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO7 | |
| 4 Weight (with oil charge) | 7.1 | [kg] (15.65 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | V230 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0224/07 | |
| 6 Start winding resistance | 28.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 38.90 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 2.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.44 | [A] |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] |
| 11 Approval boards certification | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS: @220V50Hz | | | CECOMAFLBP Static | | Evaporating temperature (Condensing temperature | | -25°C (-13°F) 55°C (131°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] |
| 248 | 62 | 73 | 67 | 0.43 | 0.95 | 3.68 | 0.93 | 1.08 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | CECOMAF 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) | 195 | 49 | 57 | 50 | 0.38 | 0.62 | 3.84 | 0.97 | 1.12 |
| -30 | (-22) | 260 | 65 | 76 | 56 | 0.40 | 0.83 | 4.62 | 1.16 | 1.35 |
| -25 | (-13) | 339 | 85 | 99 | 62 | 0.41 | 1.09 | 5.44 | 1.37 | 1.59 |
| -20 | (- 4) | 433 | 109 | 127 | 69 | 0.43 | 1.39 | 6.31 | 1.59 | 1.85 |
| -15 | (+ 5) | 545 | 137 | 160 | 76 | 0.45 | 1.75 | 7.24 | 1.82 | 2.12 |
| -10 | (+14) | 675 | 170 | 198 | 82 | 0.47 | 2.18 | 8.23 | 2.07 | 2.41 |
| -5 | (+23) | 825 | 208 | 242 | 88 | 0.50 | 2.67 | 9.29 | 2.34 | 2.72 |

| TEST CONDITIONS: @220V50Hz | | CECOMAF 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) | 163 | 41 | 48 | 51 | 0.38 | 0.57 | 3.19 | 0.80 | 0.93 |
| -30 | (-22) | 224 | 56 | 66 | 58 | 0.40 | 0.78 | 3.85 | 0.97 | 1.13 |
| -25 | (-13) | 297 | 75 | 87 | 65 | 0.42 | 1.03 | 4.52 | 1.14 | 1.32 |
| -20 | (- 4) | 383 | 97 | 112 | 73 | 0.44 | 1.34 | 5.20 | 1.31 | 1.53 |
| -15 | (+ 5) | 485 | 122 | 142 | 82 | 0.47 | 1.70 | 5.92 | 1.49 | 1.73 |
| -10 | (+14) | 604 | 152 | 177 | 91 | 0.50 | 2.11 | 6.67 | 1.68 | 1.95 |
| -5 | (+23) | 741 | 187 | 217 | 100 | 0.54 | 2.60 | 7.46 | 1.88 | 2.19 |

| TEST CONDITIONS: @220V50Hz | | CECOMAF 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) | 129 | 33 | 38 | 51 | 0.38 | 0.49 | 2.56 | 0.65 | 0.75 |
| -30 | (-22) | 184 | 46 | 54 | 58 | 0.40 | 0.70 | 3.14 | 0.79 | 0.92 |
| -25 | (-13) | 249 | 63 | 73 | 67 | 0.43 | 0.95 | 3.70 | 0.93 | 1.08 |
| -20 | (- 4) | 326 | 82 | 96 | 77 | 0.46 | 1.25 | 4.24 | 1.07 | 1.24 |
| -15 | (+ 5) | 417 | 105 | 122 | 87 | 0.49 | 1.60 | 4.78 | 1.20 | 1.40 |
| -10 | (+14) | 523 | 132 | 153 | 98 | 0.53 | 2.01 | 5.32 | 1.34 | 1.56 |
| -5 | (+23) | 646 | 163 | 189 | 110 | 0.58 | 2.48 | 5.88 | 1.48 | 1.72 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | CECOMAF 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) | 97 | 24 | 28 | 49 | 0.37 | 0.41 | 1.97 | 0.50 | 0.58 |
| -30 | (-22) | 144 | 36 | 42 | 57 | 0.40 | 0.61 | 2.50 | 0.63 | 0.73 |
| -25 | (-13) | 201 | 51 | 59 | 67 | 0.43 | 0.85 | 2.98 | 0.75 | 0.87 |
| -20 | (- 4) | 267 | 67 | 78 | 79 | 0.47 | 1.13 | 3.42 | 0.86 | 1.00 |
| -15 | (+ 5) | 346 | 87 | 101 | 91 | 0.51 | 1.47 | 3.82 | 0.96 | 1.12 |
| -10 | (+14) | 438 | 110 | 128 | 105 | 0.56 | 1.87 | 4.20 | 1.06 | 1.23 |
| -5 | (+23) | 544 | 137 | 159 | 119 | 0.62 | 2.33 | 4.56 | 1.15 | 1.34 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 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 42° | | |
| 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 | Straight | | |
| 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 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |