

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM U55CLR |
| Nominal Voltage/Frequency | 200-240 V 50 Hz |
| Engineering Number | 513300574 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 200-240 / 50 | [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 | CSIR | | |
| 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 | 150 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 150 to 255 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 | | [hp] |
| 2 Displacement | 9.04 | [cm ³] (0.552 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 7.5 | [kg] (16.53 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 200-240 V 50 Hz ~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | QL2-3.7 | |
| 3 Start capacitor | 88-108(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM232NFBYY-53 | |
| 6 Start winding resistance | [Ω at 25°C (77°F)] +/- 8% | |
| 7 Run winding resistance | [Ω at 25°C (77°F)] +/- 8% | |
| 8 LRA - Locked rotor amperage (50 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CCC | |

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] |
| 535 | 135 | 157 | 104 | 0.90 | 1.68 | 5.14 | 1.30 | 1.51 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|---------------------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32 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) | 324 | 82 | 95 | 70 | 0.82 | 1.01 | 4.60 | 1.16 | 1.35 |
| -30 (-22) | 419 | 106 | 123 | 80 | 0.84 | 1.31 | 5.29 | 1.33 | 1.55 |
| -25 (-13) | 541 | 136 | 158 | 89 | 0.85 | 1.70 | 6.08 | 1.53 | 1.78 |
| -20 (- 4) | 692 | 174 | 203 | 99 | 0.87 | 2.17 | 6.98 | 1.76 | 2.05 |
| -15 (+ 5) | 875 | 221 | 256 | 110 | 0.90 | 2.75 | 7.98 | 2.01 | 2.34 |
| -10 (+14) | 1095 | 276 | 321 | 120 | 0.93 | 3.45 | 9.09 | 2.29 | 2.66 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| 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) | 291 | 73 | 85 | 71 | 0.82 | 0.91 | 4.10 | 1.03 | 1.20 |
| -30 (-22) | 390 | 98 | 114 | 82 | 0.84 | 1.22 | 4.76 | 1.20 | 1.39 |
| -25 (-13) | 513 | 129 | 150 | 93 | 0.86 | 1.61 | 5.49 | 1.38 | 1.61 |
| -20 (- 4) | 663 | 167 | 194 | 105 | 0.88 | 2.08 | 6.29 | 1.59 | 1.84 |
| -15 (+ 5) | 843 | 213 | 247 | 118 | 0.91 | 2.65 | 7.16 | 1.80 | 2.10 |
| -10 (+14) | 1058 | 267 | 310 | 131 | 0.95 | 3.34 | 8.09 | 2.04 | 2.37 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| 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) | 260 | 65 | 76 | 71 | 0.82 | 0.81 | 3.66 | 0.92 | 1.07 |
| -30 (-22) | 361 | 91 | 106 | 83 | 0.84 | 1.13 | 4.32 | 1.09 | 1.27 |
| -25 (-13) | 484 | 122 | 142 | 96 | 0.87 | 1.52 | 5.01 | 1.26 | 1.47 |
| -20 (- 4) | 631 | 159 | 185 | 110 | 0.90 | 1.98 | 5.73 | 1.44 | 1.68 |
| -15 (+ 5) | 808 | 204 | 237 | 125 | 0.93 | 2.54 | 6.48 | 1.63 | 1.90 |
| -10 (+14) | 1017 | 256 | 298 | 140 | 0.98 | 3.21 | 7.26 | 1.83 | 2.13 |

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) | 219 | 55 | 64 | 70 | 0.82 | 0.69 | 3.14 | 0.79 | 0.92 |
| -30 | (-22) | 321 | 81 | 94 | 84 | 0.84 | 1.01 | 3.81 | 0.96 | 1.12 |
| -25 | (-13) | 443 | 112 | 130 | 99 | 0.87 | 1.39 | 4.47 | 1.13 | 1.31 |
| -20 | (- 4) | 587 | 148 | 172 | 115 | 0.91 | 1.85 | 5.13 | 1.29 | 1.50 |
| -15 | (+ 5) | 759 | 191 | 222 | 132 | 0.95 | 2.39 | 5.78 | 1.46 | 1.69 |
| -10 | (+14) | 960 | 242 | 281 | 150 | 1.01 | 3.03 | 6.43 | 1.62 | 1.88 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.2 +0.05/+0.05 | [mm] | (0.244" +0.002"/+0.002") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 40° up + 45° to Back | | |
| 3.2 DISCHARGE | 4.9 +0.10/-0.05 | [mm] | (0.193" +0.004"/-0.002") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted 0° up + 24° to Back | | |
| 3.3 PROCESS | 6.2 +0.05/+0.05 | [mm] | (0.244" +0.002"/+0.002") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted 40° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |