

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | ER U40CLP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513300835 |

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 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 | 187 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | - | - | - |
| 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 | 1/6 | [hp] |
| 2 Displacement | 7.23 | [cm ³] (0.441 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 16.000 | |
| 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) | 7.2 | [kg] (15.87 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 | 8EA17B3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(350)/2.5(300) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM134NFBYY-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 - EAC | |

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] |
| 426 | 107 | 125 | 78 | | 1.34 | 5.49 | 1.38 | 1.61 |

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) | 247 | 62 | 72 | 52 | 0.25 | 0.77 | 4.76 | 1.20 | 1.39 |
| -30 | (-22) | 330 | 83 | 97 | 59 | 0.29 | 1.04 | 5.59 | 1.41 | 1.64 |
| -25 | (-13) | 432 | 109 | 127 | 67 | 0.32 | 1.36 | 6.49 | 1.63 | 1.90 |
| -20 | (- 4) | 554 | 140 | 162 | 75 | 0.35 | 1.74 | 7.46 | 1.88 | 2.19 |
| -15 | (+ 5) | 698 | 176 | 204 | 82 | 0.38 | 2.20 | 8.53 | 2.15 | 2.50 |
| -10 | (+14) | 865 | 218 | 254 | 89 | 0.41 | 2.73 | 9.72 | 2.45 | 2.85 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| 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) | 219 | 55 | 64 | 51 | 0.24 | 0.69 | 4.27 | 1.07 | 1.25 |
| -30 | (-22) | 303 | 76 | 89 | 60 | 0.28 | 0.95 | 5.03 | 1.27 | 1.47 |
| -25 | (-13) | 406 | 102 | 119 | 69 | 0.32 | 1.27 | 5.83 | 1.47 | 1.71 |
| -20 | (- 4) | 528 | 133 | 155 | 79 | 0.37 | 1.66 | 6.67 | 1.68 | 1.95 |
| -15 | (+ 5) | 672 | 169 | 197 | 89 | 0.41 | 2.12 | 7.58 | 1.91 | 2.22 |
| -10 | (+14) | 841 | 212 | 246 | 98 | 0.45 | 2.65 | 8.56 | 2.16 | 2.51 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| 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) | 190 | 48 | 56 | 52 | 0.24 | 0.59 | 3.69 | 0.93 | 1.08 |
| -30 | (-22) | 272 | 68 | 80 | 61 | 0.29 | 0.85 | 4.41 | 1.11 | 1.29 |
| -25 | (-13) | 371 | 94 | 109 | 72 | 0.33 | 1.17 | 5.12 | 1.29 | 1.50 |
| -20 | (- 4) | 491 | 124 | 144 | 83 | 0.38 | 1.54 | 5.85 | 1.47 | 1.71 |
| -15 | (+ 5) | 633 | 159 | 185 | 95 | 0.44 | 1.99 | 6.61 | 1.66 | 1.94 |
| -10 | (+14) | 798 | 201 | 234 | 107 | 0.49 | 2.52 | 7.41 | 1.87 | 2.17 |

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) | 168 | 42 | 49 | 51 | 0.25 | 0.53 | 3.28 | 0.83 | 0.96 |
| -30 | (-22) | 245 | 62 | 72 | 62 | 0.29 | 0.77 | 3.97 | 1.00 | 1.16 |
| -25 | (-13) | 339 | 85 | 99 | 74 | 0.34 | 1.06 | 4.62 | 1.16 | 1.35 |
| -20 | (- 4) | 453 | 114 | 133 | 87 | 0.40 | 1.42 | 5.25 | 1.32 | 1.54 |
| -15 | (+ 5) | 588 | 148 | 172 | 100 | 0.46 | 1.85 | 5.88 | 1.48 | 1.72 |
| -10 | (+14) | 748 | 188 | 219 | 115 | 0.52 | 2.36 | 6.52 | 1.64 | 1.91 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 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 | | |