

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | NB U1118Y. |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 815DA45 |

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 | 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 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 | 14.28 | [cm ³] (0.871 cu.in) |
| 2.1 Bore [mm] | 30.157 | |
| 2.2 Stroke [mm] | 20.000 | |
| 3 Lubricant charge | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO7 | |
| 4 Weight (with oil charge) | 10.75 | [kg] (23.70 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 | 4(450) | [µF(VAC minimum)] |
| 5 Motor protection | MRP378LZ-3261 | |
| 6 Start winding resistance | 22.90 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 15.68 | [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 | 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] |
| 603 | 152 | 177 | 135 | 0.63 | 2.30 | 4.47 | 1.13 | 1.31 |

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) | 495 | 125 | 145 | 92 | 0.46 | 1.59 | 5.39 | 1.36 | 1.58 |
| -30 | (-22) | 610 | 154 | 179 | 105 | 0.51 | 1.96 | 5.89 | 1.48 | 1.73 |
| -25 | (-13) | 772 | 194 | 226 | 118 | 0.56 | 2.48 | 6.59 | 1.66 | 1.93 |
| -20 | (- 4) | 987 | 249 | 289 | 132 | 0.62 | 3.17 | 7.47 | 1.88 | 2.19 |
| -15 | (+ 5) | 1260 | 318 | 369 | 147 | 0.69 | 4.05 | 8.51 | 2.14 | 2.49 |
| -10 | (+14) | 1598 | 403 | 468 | 164 | 0.76 | 5.15 | 9.70 | 2.44 | 2.84 |

| 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) | 439 | 111 | 129 | 97 | 0.47 | 1.52 | 4.52 | 1.14 | 1.32 |
| -30 | (-22) | 546 | 138 | 160 | 111 | 0.53 | 1.90 | 4.93 | 1.24 | 1.44 |
| -25 | (-13) | 691 | 174 | 202 | 127 | 0.60 | 2.41 | 5.48 | 1.38 | 1.60 |
| -20 | (- 4) | 879 | 222 | 258 | 143 | 0.66 | 3.07 | 6.15 | 1.55 | 1.80 |
| -15 | (+ 5) | 1116 | 281 | 327 | 161 | 0.74 | 3.90 | 6.94 | 1.75 | 2.03 |
| -10 | (+14) | 1408 | 355 | 413 | 180 | 0.83 | 4.93 | 7.82 | 1.97 | 2.29 |

| 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) | 367 | 92 | 107 | 100 | 0.48 | 1.39 | 3.67 | 0.92 | 1.08 |
| -30 | (-22) | 472 | 119 | 138 | 116 | 0.55 | 1.80 | 4.04 | 1.02 | 1.18 |
| -25 | (-13) | 606 | 153 | 177 | 134 | 0.63 | 2.31 | 4.50 | 1.13 | 1.32 |
| -20 | (- 4) | 773 | 195 | 227 | 153 | 0.71 | 2.96 | 5.04 | 1.27 | 1.48 |
| -15 | (+ 5) | 980 | 247 | 287 | 174 | 0.80 | 3.76 | 5.63 | 1.42 | 1.65 |
| -10 | (+14) | 1232 | 311 | 361 | 197 | 0.90 | 4.73 | 6.26 | 1.58 | 1.84 |

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) | 280 | 71 | 82 | 100 | 0.48 | 1.19 | 2.84 | 0.71 | 0.83 |
| -30 | (-22) | 390 | 98 | 114 | 119 | 0.56 | 1.64 | 3.23 | 0.81 | 0.95 |
| -25 | (-13) | 519 | 131 | 152 | 140 | 0.65 | 2.19 | 3.67 | 0.92 | 1.07 |
| -20 | (- 4) | 672 | 169 | 197 | 163 | 0.75 | 2.84 | 4.12 | 1.04 | 1.21 |
| -15 | (+ 5) | 855 | 215 | 250 | 188 | 0.86 | 3.63 | 4.58 | 1.15 | 1.34 |
| -10 | (+14) | 1073 | 270 | 314 | 215 | 0.98 | 4.58 | 5.03 | 1.27 | 1.47 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | Universal | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.45 +0.10/+0.00 | [mm] | (0.254" +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 | Slanted parallel to Base Plate | | |
| 3.3 PROCESS | 6.45 +0.10/+0.00 | [mm] | (0.254" +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 | | |