

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NB U1112Y |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 853AA07 |

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 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 | 8.77 | [cm ³] (0.535 cu.in) |
| 2.1 Bore [mm] | 26.497 | |
| 2.2 Stroke [mm] | 15.920 | |
| 3 Lubricant charge | 350 | [ml] (11.84 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 10.19 | [kg] (22.46 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 | T0133/07 | |
| 6 Start winding resistance | 19.70 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 19.60 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 4.40 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.39 | [A] |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] |
| 11 Approval boards certification | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|-------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | CECOMAF 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] |
| 375 | 95 | 110 | 86 | 0.40 | 1.43 | 4.37 | 1.10 | 1.28 |

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) | 297 | 75 | 87 | 64 | 0.30 | 0.95 | 4.66 | 1.18 | 1.37 | |
| -30 (-22) | 390 | 98 | 114 | 71 | 0.33 | 1.25 | 5.48 | 1.38 | 1.61 | |
| -25 (-13) | 508 | 128 | 149 | 80 | 0.37 | 1.63 | 6.38 | 1.61 | 1.87 | |
| -20 (- 4) | 650 | 164 | 191 | 88 | 0.40 | 2.09 | 7.37 | 1.86 | 2.16 | |
| -15 (+ 5) | 818 | 206 | 240 | 97 | 0.44 | 2.63 | 8.44 | 2.13 | 2.47 | |
| -10 (+14) | 1012 | 255 | 297 | 105 | 0.48 | 3.27 | 9.62 | 2.42 | 2.82 | |

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|--|
| 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) | 249 | 63 | 73 | 65 | 0.31 | 0.86 | 3.85 | 0.97 | 1.13 | |
| -30 (-22) | 335 | 84 | 98 | 74 | 0.35 | 1.16 | 4.53 | 1.14 | 1.33 | |
| -25 (-13) | 443 | 112 | 130 | 84 | 0.39 | 1.54 | 5.26 | 1.32 | 1.54 | |
| -20 (- 4) | 574 | 145 | 168 | 95 | 0.44 | 2.00 | 6.03 | 1.52 | 1.77 | |
| -15 (+ 5) | 728 | 184 | 213 | 106 | 0.48 | 2.54 | 6.86 | 1.73 | 2.01 | |
| -10 (+14) | 906 | 228 | 265 | 117 | 0.53 | 3.17 | 7.74 | 1.95 | 2.27 | |

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|--|
| 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) | 198 | 50 | 58 | 64 | 0.30 | 0.75 | 3.13 | 0.79 | 0.92 | |
| -30 (-22) | 277 | 70 | 81 | 74 | 0.35 | 1.05 | 3.73 | 0.94 | 1.09 | |
| -25 (-13) | 375 | 95 | 110 | 86 | 0.40 | 1.43 | 4.34 | 1.09 | 1.27 | |
| -20 (- 4) | 494 | 125 | 145 | 99 | 0.45 | 1.89 | 4.96 | 1.25 | 1.45 | |
| -15 (+ 5) | 634 | 160 | 186 | 113 | 0.51 | 2.43 | 5.60 | 1.41 | 1.64 | |
| -10 (+14) | 795 | 200 | 233 | 127 | 0.57 | 3.05 | 6.25 | 1.58 | 1.83 | |

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) | 145 | 37 | 43 | 62 | 0.29 | 0.61 | 2.34 | 0.59 | 0.69 |
| -30 | (-22) | 216 | 54 | 63 | 74 | 0.34 | 0.91 | 2.92 | 0.74 | 0.86 |
| -25 | (-13) | 304 | 77 | 89 | 88 | 0.40 | 1.29 | 3.47 | 0.87 | 1.02 |
| -20 | (- 4) | 410 | 103 | 120 | 103 | 0.47 | 1.74 | 3.99 | 1.01 | 1.17 |
| -15 | (+ 5) | 535 | 135 | 157 | 119 | 0.54 | 2.27 | 4.50 | 1.13 | 1.32 |
| -10 | (+14) | 678 | 171 | 199 | 136 | 0.61 | 2.89 | 4.98 | 1.26 | 1.46 |

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 | | |