

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NB Y1118Y |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 816BA87 |

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 | 1/4 | [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 | ALQUILB / ISO5 | |
| 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 | 2019 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(450) | [µF(VAC minimum)] |
| 5 Motor protection | AD18BQ10 | |
| 6 Start winding resistance | 23.20 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 15.20 | [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] |
| 625 | 158 | 183 | 133 | 0.63 | 2.38 | 4.70 | 1.18 | 1.38 |

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) | 462 | 116 | 135 | 90 | 0.44 | 1.48 | 5.15 | 1.30 | 1.51 |
| -30 | (-22) | 591 | 149 | 173 | 102 | 0.49 | 1.90 | 5.84 | 1.47 | 1.71 |
| -25 | (-13) | 772 | 195 | 226 | 115 | 0.55 | 2.48 | 6.75 | 1.70 | 1.98 |
| -20 | (- 4) | 1007 | 254 | 295 | 128 | 0.61 | 3.23 | 7.84 | 1.98 | 2.30 |
| -15 | (+ 5) | 1295 | 326 | 380 | 143 | 0.67 | 4.17 | 9.06 | 2.28 | 2.65 |
| -10 | (+14) | 1640 | 413 | 481 | 158 | 0.74 | 5.29 | 10.35 | 2.61 | 3.03 |

| 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) | 426 | 107 | 125 | 98 | 0.46 | 1.48 | 4.36 | 1.10 | 1.28 |
| -30 | (-22) | 543 | 137 | 159 | 111 | 0.52 | 1.89 | 4.90 | 1.23 | 1.44 |
| -25 | (-13) | 702 | 177 | 206 | 125 | 0.59 | 2.45 | 5.61 | 1.41 | 1.64 |
| -20 | (- 4) | 907 | 229 | 266 | 140 | 0.66 | 3.16 | 6.45 | 1.63 | 1.89 |
| -15 | (+ 5) | 1158 | 292 | 339 | 157 | 0.73 | 4.05 | 7.37 | 1.86 | 2.16 |
| -10 | (+14) | 1457 | 367 | 427 | 175 | 0.82 | 5.10 | 8.32 | 2.10 | 2.44 |

| 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) | 361 | 91 | 106 | 100 | 0.48 | 1.38 | 3.63 | 0.91 | 1.06 |
| -30 | (-22) | 472 | 119 | 138 | 115 | 0.55 | 1.80 | 4.08 | 1.03 | 1.19 |
| -25 | (-13) | 617 | 156 | 181 | 132 | 0.62 | 2.35 | 4.66 | 1.17 | 1.36 |
| -20 | (- 4) | 800 | 202 | 234 | 150 | 0.70 | 3.05 | 5.32 | 1.34 | 1.56 |
| -15 | (+ 5) | 1021 | 257 | 299 | 170 | 0.79 | 3.91 | 6.01 | 1.51 | 1.76 |
| -10 | (+14) | 1281 | 323 | 375 | 192 | 0.89 | 4.92 | 6.69 | 1.69 | 1.96 |

F - EXTERNAL CHARACTERISTICS

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