

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NB U1112Y |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 813AA62 |

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 | | | 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] |
| 498 | 125 | 146 | 90 | 0.42 | 1.56 | 5.54 | 1.40 | 1.62 |

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) | 304 | 77 | 89 | 64 | 0.00 | 0.95 | 4.75 | 1.20 | 1.39 |
| -30 | (-22) | 397 | 100 | 116 | 71 | 0.00 | 1.24 | 5.59 | 1.41 | 1.64 |
| -25 | (-13) | 517 | 130 | 151 | 79 | 0.00 | 1.62 | 6.51 | 1.64 | 1.91 |
| -20 | (- 4) | 664 | 167 | 194 | 88 | 0.00 | 2.08 | 7.52 | 1.90 | 2.20 |
| -15 | (+ 5) | 837 | 211 | 245 | 97 | 0.00 | 2.63 | 8.62 | 2.17 | 2.53 |
| -10 | (+14) | 1036 | 261 | 303 | 106 | 0.00 | 3.27 | 9.82 | 2.47 | 2.88 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|---|----------------------------------|----------------------------|---------------------------|-----------|-------|
| 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) | 269 | 68 | 79 | 64 | 0.00 | 0.84 | 4.21 | 1.06 | 1.23 |
| -30 | (-22) | 363 | 92 | 106 | 73 | 0.00 | 1.14 | 5.00 | 1.26 | 1.46 |
| -25 | (-13) | 484 | 122 | 142 | 83 | 0.00 | 1.52 | 5.82 | 1.47 | 1.71 |
| -20 | (- 4) | 632 | 159 | 185 | 94 | 0.00 | 1.99 | 6.70 | 1.69 | 1.96 |
| -15 | (+ 5) | 805 | 203 | 236 | 105 | 0.00 | 2.53 | 7.62 | 1.92 | 2.23 |
| -10 | (+14) | 1004 | 253 | 294 | 117 | 0.00 | 3.17 | 8.61 | 2.17 | 2.52 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|---|----------------------------------|----------------------------|---------------------------|-----------|-------|
| 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) | 234 | 59 | 69 | 64 | 0.00 | 0.73 | 3.69 | 0.93 | 1.08 |
| -30 | (-22) | 328 | 83 | 96 | 74 | 0.00 | 1.03 | 4.46 | 1.12 | 1.31 |
| -25 | (-13) | 449 | 113 | 131 | 86 | 0.00 | 1.41 | 5.22 | 1.32 | 1.53 |
| -20 | (- 4) | 595 | 150 | 174 | 99 | 0.00 | 1.87 | 6.00 | 1.51 | 1.76 |
| -15 | (+ 5) | 767 | 193 | 225 | 113 | 0.00 | 2.42 | 6.78 | 1.71 | 1.99 |
| -10 | (+14) | 965 | 243 | 283 | 127 | 0.00 | 3.04 | 7.59 | 1.91 | 2.22 |

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) | 196 | 49 | 58 | 62 | 0.00 | 0.62 | 3.15 | 0.79 | 0.92 |
| -30 | (-22) | 289 | 73 | 85 | 74 | 0.00 | 0.91 | 3.93 | 0.99 | 1.15 |
| -25 | (-13) | 408 | 103 | 119 | 87 | 0.00 | 1.28 | 4.67 | 1.18 | 1.37 |
| -20 | (- 4) | 552 | 139 | 162 | 103 | 0.00 | 1.74 | 5.38 | 1.35 | 1.58 |
| -15 | (+ 5) | 722 | 182 | 211 | 119 | 0.00 | 2.27 | 6.06 | 1.53 | 1.78 |
| -10 | (+14) | 916 | 231 | 268 | 137 | 0.00 | 2.89 | 6.72 | 1.69 | 1.97 |

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 | 5.1 +0.10/+0.00 | [mm] | (0.201" +0.004"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted parallel to Base Plate | | |
| 3.3 PROCESS | 6 +0.08/-0.08 | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material | Copper(OD) | | |
| 3.3.2 Shape | Slanted 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |