

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | NB T1116Y |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 815EA47 |

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 | RSIR-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 | 12.11 | [cm ³] (0.739 cu.in) |
| 2.1 Bore [mm] | 27.775 | |
| 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) | 10.73 | [kg] (23.66 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 | T0521/07 | |
| 6 Start winding resistance | 20.90 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 17.80 | [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 | | | 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] |
| 696 | 175 | 204 | 126 | 0.62 | 2.19 | 5.51 | 1.39 | 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) | 415 | 104 | 121 | 84 | 0.42 | 1.30 | 4.93 | 1.24 | 1.44 |
| -30 | (-22) | 538 | 136 | 158 | 97 | 0.47 | 1.69 | 5.57 | 1.40 | 1.63 |
| -25 | (-13) | 699 | 176 | 205 | 109 | 0.53 | 2.19 | 6.41 | 1.62 | 1.88 |
| -20 | (- 4) | 898 | 226 | 263 | 121 | 0.60 | 2.82 | 7.44 | 1.87 | 2.18 |
| -15 | (+ 5) | 1138 | 287 | 334 | 132 | 0.67 | 3.58 | 8.61 | 2.17 | 2.52 |
| -10 | (+14) | 1421 | 358 | 416 | 143 | 0.73 | 4.48 | 9.93 | 2.50 | 2.91 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| 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) | 397 | 100 | 116 | 87 | 0.41 | 1.24 | 4.60 | 1.16 | 1.35 |
| -30 | (-22) | 516 | 130 | 151 | 101 | 0.48 | 1.62 | 5.12 | 1.29 | 1.50 |
| -25 | (-13) | 669 | 169 | 196 | 115 | 0.56 | 2.10 | 5.79 | 1.46 | 1.70 |
| -20 | (- 4) | 860 | 217 | 252 | 130 | 0.65 | 2.70 | 6.59 | 1.66 | 1.93 |
| -15 | (+ 5) | 1090 | 275 | 319 | 145 | 0.73 | 3.43 | 7.50 | 1.89 | 2.20 |
| -10 | (+14) | 1361 | 343 | 399 | 160 | 0.80 | 4.29 | 8.51 | 2.14 | 2.49 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| 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) | 368 | 93 | 108 | 89 | 0.43 | 1.15 | 4.17 | 1.05 | 1.22 |
| -30 | (-22) | 483 | 122 | 142 | 105 | 0.52 | 1.51 | 4.63 | 1.17 | 1.36 |
| -25 | (-13) | 632 | 159 | 185 | 121 | 0.60 | 1.98 | 5.21 | 1.31 | 1.53 |
| -20 | (- 4) | 816 | 206 | 239 | 139 | 0.69 | 2.56 | 5.86 | 1.48 | 1.72 |
| -15 | (+ 5) | 1037 | 261 | 304 | 157 | 0.77 | 3.27 | 6.58 | 1.66 | 1.93 |
| -10 | (+14) | 1298 | 327 | 380 | 177 | 0.84 | 4.09 | 7.34 | 1.85 | 2.15 |

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) | 321 | 81 | 94 | 89 | 0.44 | 1.00 | 3.60 | 0.91 | 1.05 |
| -30 | (-22) | 434 | 109 | 127 | 106 | 0.53 | 1.36 | 4.09 | 1.03 | 1.20 |
| -25 | (-13) | 579 | 146 | 170 | 125 | 0.62 | 1.82 | 4.63 | 1.17 | 1.36 |
| -20 | (- 4) | 758 | 191 | 222 | 146 | 0.71 | 2.38 | 5.21 | 1.31 | 1.53 |
| -15 | (+ 5) | 973 | 245 | 285 | 168 | 0.78 | 3.06 | 5.80 | 1.46 | 1.70 |
| -10 | (+14) | 1225 | 309 | 359 | 192 | 0.83 | 3.87 | 6.39 | 1.61 | 1.87 |

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 | Slanted parallel to Base Plate | | |
| 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 | | |