

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NB T1116Y |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 815EA62 |

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 | | |
| 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) | - | - | - |
| 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) | 10.75 | [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 | - | [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 | 130 | 0.82 | 2.19 | 5.35 | 1.35 | 1.57 |

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 | 0.66 | 1.30 | 4.89 | 1.23 | 1.43 |
| -30 | (-22) | 538 | 136 | 158 | 99 | 0.70 | 1.69 | 5.45 | 1.37 | 1.60 |
| -25 | (-13) | 699 | 176 | 205 | 114 | 0.74 | 2.19 | 6.17 | 1.55 | 1.81 |
| -20 | (- 4) | 898 | 226 | 263 | 128 | 0.79 | 2.82 | 7.05 | 1.78 | 2.06 |
| -15 | (+ 5) | 1138 | 287 | 334 | 141 | 0.83 | 3.58 | 8.07 | 2.03 | 2.37 |
| -10 | (+14) | 1421 | 358 | 416 | 154 | 0.88 | 4.48 | 9.24 | 2.33 | 2.71 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| 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 | 88 | 0.67 | 1.24 | 4.51 | 1.14 | 1.32 |
| -30 | (-22) | 516 | 130 | 151 | 104 | 0.71 | 1.62 | 4.96 | 1.25 | 1.45 |
| -25 | (-13) | 669 | 169 | 196 | 121 | 0.76 | 2.10 | 5.54 | 1.40 | 1.62 |
| -20 | (- 4) | 860 | 217 | 252 | 137 | 0.82 | 2.70 | 6.24 | 1.57 | 1.83 |
| -15 | (+ 5) | 1090 | 275 | 319 | 155 | 0.88 | 3.43 | 7.03 | 1.77 | 2.06 |
| -10 | (+14) | 1361 | 343 | 399 | 172 | 0.95 | 4.29 | 7.92 | 2.00 | 2.32 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| 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 | 91 | 0.68 | 1.15 | 4.05 | 1.02 | 1.19 |
| -30 | (-22) | 483 | 122 | 142 | 108 | 0.72 | 1.51 | 4.48 | 1.13 | 1.31 |
| -25 | (-13) | 632 | 159 | 185 | 127 | 0.78 | 1.98 | 4.98 | 1.26 | 1.46 |
| -20 | (- 4) | 816 | 206 | 239 | 147 | 0.85 | 2.56 | 5.55 | 1.40 | 1.63 |
| -15 | (+ 5) | 1037 | 261 | 304 | 168 | 0.93 | 3.27 | 6.18 | 1.56 | 1.81 |
| -10 | (+14) | 1298 | 327 | 380 | 189 | 1.02 | 4.09 | 6.86 | 1.73 | 2.01 |

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 | 93 | 0.68 | 1.00 | 3.44 | 0.87 | 1.01 |
| -30 | (-22) | 434 | 109 | 127 | 111 | 0.73 | 1.36 | 3.89 | 0.98 | 1.14 |
| -25 | (-13) | 579 | 146 | 170 | 132 | 0.80 | 1.82 | 4.39 | 1.11 | 1.29 |
| -20 | (- 4) | 758 | 191 | 222 | 155 | 0.89 | 2.38 | 4.90 | 1.24 | 1.44 |
| -15 | (+ 5) | 973 | 245 | 285 | 180 | 0.98 | 3.06 | 5.43 | 1.37 | 1.59 |
| -10 | (+14) | 1225 | 309 | 359 | 206 | 1.09 | 3.87 | 5.96 | 1.50 | 1.75 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 2 Tray holder | Yes | | |
| 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 | | |