

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | NE U2168GK |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 959MA51 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Low Back Pressure R404A | | |
| 4.1 Evaporating temperature range | -40°C to -10°C | (-40°F to 14°F) | |
| 5 Motor type | CSIR | | |
| 6 Starting torque | HST - High starting torque | | |
| 7 Expansion device | Capillary tube or Expansion valve | | |
| 8 Compressor cooling | Operating voltage range | | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32°C Ambient temperature) | - | - | - |
| 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) | 25.7 | [kgf/cm ²] (365 psig) | / °C - °F |
| 9.2 Peak (gauge) | 28.7 | [kgf/cm ²] (408 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 3/4 | [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 | 350 | [ml] (11.84 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 11.6 | [kg] (25.57 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 | Current Relay | |
| 2.1 Starting device | MTRPH-0055-65 | |
| 3 Start capacitor | 88-108(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | MRT26ALK-3261 | |
| 6 Start winding resistance | 14.26 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.25 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 22.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 4.38 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | IMQ | |

D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS: @220V50Hz | | | ASHRAELBP32 Fan | | 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] |
| 2539 | 640 | 744 | 584 | 3.37 | 17.21 | 4.35 | 1.10 | 1.27 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32 Fan | | | (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] |
| -40 | (-40) | 1179 | 297 | 346 | 321 | 2.50 | 7.93 | 3.66 | 0.92 | 1.07 |
| -35 | (-31) | 1571 | 396 | 460 | 374 | 2.64 | 10.59 | 4.21 | 1.06 | 1.23 |
| -30 | (-22) | 2065 | 520 | 605 | 429 | 2.80 | 13.97 | 4.82 | 1.21 | 1.41 |
| -25 | (-13) | 2661 | 671 | 780 | 486 | 2.99 | 18.08 | 5.47 | 1.38 | 1.60 |
| -20 | (- 4) | 3359 | 847 | 984 | 545 | 3.21 | 22.94 | 6.16 | 1.55 | 1.80 |
| -15 | (+ 5) | 4160 | 1048 | 1219 | 606 | 3.45 | 28.58 | 6.86 | 1.73 | 2.01 |
| -10 | (+14) | 5063 | 1276 | 1484 | 669 | 3.71 | 35.02 | 7.56 | 1.91 | 2.22 |

| TEST CONDITIONS: @220V50Hz | | ASHRAE32 Fan | | | (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] |
| -40 | (-40) | 1075 | 271 | 315 | 329 | 2.52 | 7.21 | 3.28 | 0.83 | 0.96 |
| -35 | (-31) | 1455 | 367 | 426 | 388 | 2.68 | 9.80 | 3.76 | 0.95 | 1.10 |
| -30 | (-22) | 1931 | 487 | 566 | 452 | 2.88 | 13.04 | 4.27 | 1.08 | 1.25 |
| -25 | (-13) | 2503 | 631 | 733 | 519 | 3.11 | 16.97 | 4.81 | 1.21 | 1.41 |
| -20 | (- 4) | 3170 | 799 | 929 | 591 | 3.39 | 21.60 | 5.35 | 1.35 | 1.57 |
| -15 | (+ 5) | 3932 | 991 | 1152 | 667 | 3.69 | 26.96 | 5.90 | 1.49 | 1.73 |
| -10 | (+14) | 4790 | 1207 | 1404 | 747 | 4.03 | 33.07 | 6.42 | 1.62 | 1.88 |

| TEST CONDITIONS: @220V50Hz | | ASHRAE32 Fan | | | (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] |
| -40 | (-40) | 965 | 243 | 283 | 329 | 2.52 | 6.46 | 2.93 | 0.74 | 0.86 |
| -35 | (-31) | 1330 | 335 | 390 | 397 | 2.70 | 8.94 | 3.35 | 0.84 | 0.98 |
| -30 | (-22) | 1784 | 450 | 523 | 470 | 2.94 | 12.02 | 3.79 | 0.95 | 1.11 |
| -25 | (-13) | 2326 | 586 | 682 | 550 | 3.23 | 15.74 | 4.23 | 1.07 | 1.24 |
| -20 | (- 4) | 2957 | 745 | 867 | 636 | 3.57 | 20.11 | 4.66 | 1.17 | 1.36 |
| -15 | (+ 5) | 3677 | 927 | 1077 | 729 | 3.95 | 25.16 | 5.06 | 1.27 | 1.48 |
| -10 | (+14) | 4485 | 1130 | 1314 | 827 | 4.38 | 30.90 | 5.42 | 1.36 | 1.59 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 8.1 +0.10/+0.00 | [mm] | (0.319" +0.004"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 42° | | |
| 3.2 DISCHARGE | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 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 | | |