

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | NE U2155GK |
| Nominal Voltage/Frequency | 208-230 V 60 Hz |
| Engineering Number | 959QD92 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 208-230 / 60 | [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 temperature | | | |
| 9.1 Operating | 25.2 | [kgf/cm ²] (358 psig) | / °C - °F |
| 9.2 Peak | 28.3 | [kgf/cm ²] (402 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 3/4 | [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 | 350 | [ml] (11.84 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 11.2 | [kg] (24.69 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

C - ELETRICAL DATA

| | | |
|--|-----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 208-230 V 60 Hz 1~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | MTRPH-52-31 | |
| 3 Start capacitor | 72-88(79) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0918/J5 | |
| 6 Start winding resistance | 8.96 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.67 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 23.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | UL | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @208V60Hz | | | 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] |
| 2631 | 663 | 771 | 598 | 3.73 | 17.84 | 4.40 | 1.11 | 1.29 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|---------------------------------------|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @208V60Hz | | | 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) | 1198 | 302 | 351 | 340 | 2.92 | 8.05 | 3.52 | 0.89 | 1.03 |
| -35 | (-31) | 1595 | 402 | 467 | 392 | 3.07 | 10.76 | 4.08 | 1.03 | 1.19 |
| -30 | (-22) | 2097 | 528 | 614 | 447 | 3.23 | 14.19 | 4.69 | 1.18 | 1.37 |
| -25 | (-13) | 2703 | 681 | 792 | 505 | 3.42 | 18.37 | 5.35 | 1.35 | 1.57 |
| -20 | (- 4) | 3415 | 860 | 1001 | 566 | 3.64 | 23.32 | 6.03 | 1.52 | 1.77 |
| -15 | (+ 5) | 4231 | 1066 | 1240 | 629 | 3.88 | 29.07 | 6.73 | 1.69 | 1.97 |
| -10 | (+14) | 5154 | 1299 | 1510 | 696 | 4.15 | 35.65 | 7.41 | 1.87 | 2.17 |

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|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @208V60Hz | | | 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) | 1081 | 272 | 317 | 341 | 2.90 | 7.25 | 3.17 | 0.80 | 0.93 |
| -35 | (-31) | 1467 | 370 | 430 | 402 | 3.07 | 9.87 | 3.65 | 0.92 | 1.07 |
| -30 | (-22) | 1955 | 493 | 573 | 467 | 3.27 | 13.20 | 4.19 | 1.05 | 1.23 |
| -25 | (-13) | 2545 | 641 | 746 | 535 | 3.51 | 17.25 | 4.75 | 1.20 | 1.39 |
| -20 | (- 4) | 3237 | 816 | 949 | 606 | 3.78 | 22.06 | 5.34 | 1.35 | 1.56 |
| -15 | (+ 5) | 4032 | 1016 | 1182 | 681 | 4.08 | 27.65 | 5.93 | 1.49 | 1.74 |
| -10 | (+14) | 4931 | 1243 | 1445 | 759 | 4.42 | 34.04 | 6.50 | 1.64 | 1.90 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @208V60Hz | | | 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) | 932 | 235 | 273 | 330 | 2.87 | 6.24 | 2.82 | 0.71 | 0.83 |
| -35 | (-31) | 1302 | 328 | 382 | 403 | 3.07 | 8.75 | 3.24 | 0.82 | 0.95 |
| -30 | (-22) | 1772 | 447 | 519 | 479 | 3.31 | 11.94 | 3.70 | 0.93 | 1.08 |
| -25 | (-13) | 2342 | 590 | 686 | 559 | 3.59 | 15.84 | 4.18 | 1.05 | 1.23 |
| -20 | (- 4) | 3011 | 759 | 882 | 644 | 3.92 | 20.48 | 4.68 | 1.18 | 1.37 |
| -15 | (+ 5) | 3780 | 953 | 1108 | 732 | 4.28 | 25.87 | 5.17 | 1.30 | 1.52 |
| -10 | (+14) | 4650 | 1172 | 1363 | 824 | 4.69 | 32.04 | 5.64 | 1.42 | 1.65 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate | Universal | | |
| 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 | 6.45 +0.10/+0.00 | [mm] | (0.254" +0.004"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Straight | | |
| 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 | | |