

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NE U2155U |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 862KE78 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-290 | | |
| 3 Nominal voltage and frequency | 115-127 / 60 | [V / Hz] | |
| 4 Application type | Low Back Pressure R290 | | |
| 4.1 Evaporating temperature range | -40°C to -10°C | (-40°F to 14°F) | |
| 5 Motor type | CSIR | | |
| 6 Starting torque | HST - Hight 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 | 18.4 | [kgf/cm ²] (262 psig) | / °C - °F |
| 9.2 Peak | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 1/2 | [hp] |
| 2 Displacement | 13.54 | [cm ³] (0.826 cu.in) |
| 2.1 Bore [mm] | 29.362 | |
| 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 | [kg] (24.25 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 115-127 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | MTRPH-65-31 | |
| 3 Start capacitor | 189-227(250) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | MST00AFK-3265 | |
| 6 Start winding resistance | 5.99 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 1.10 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 40.00 | [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: @127V60Hz | | | ARILBP Fan | | Evaporating temperature (Condensing temperature | | -23.3°C (-9.94°F) 48.9°C (120.02°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] |
| 2049 | 516 | 600 | 526 | 6.39 | 8.32 | 3.89 | 0.98 | 1.14 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @127V60Hz | | | ARI4 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) | 1077 | 271 | 316 | 344 | 5.81 | 3.73 | 3.13 | 0.79 | 0.92 |
| -35 | (-31) | 1421 | 358 | 416 | 386 | 5.92 | 4.95 | 3.68 | 0.93 | 1.08 |
| -30 | (-22) | 1841 | 464 | 539 | 428 | 6.06 | 6.43 | 4.29 | 1.08 | 1.26 |
| -25 | (-13) | 2336 | 589 | 685 | 472 | 6.23 | 8.20 | 4.95 | 1.25 | 1.45 |
| -20 | (- 4) | 2908 | 733 | 852 | 517 | 6.42 | 10.27 | 5.64 | 1.42 | 1.65 |
| -15 | (+ 5) | 3557 | 896 | 1042 | 562 | 6.64 | 12.65 | 6.33 | 1.60 | 1.86 |
| -10 | (+14) | 4281 | 1079 | 1254 | 609 | 6.88 | 15.35 | 7.02 | 1.77 | 2.06 |

| TEST CONDITIONS: @127V60Hz | | | ARI4 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) | 890 | 224 | 261 | 349 | 5.80 | 3.41 | 2.57 | 0.65 | 0.75 |
| -35 | (-31) | 1183 | 298 | 347 | 396 | 5.91 | 4.55 | 3.00 | 0.76 | 0.88 |
| -30 | (-22) | 1553 | 391 | 455 | 445 | 6.07 | 5.99 | 3.49 | 0.88 | 1.02 |
| -25 | (-13) | 1998 | 503 | 585 | 496 | 6.27 | 7.75 | 4.02 | 1.01 | 1.18 |
| -20 | (- 4) | 2519 | 635 | 738 | 549 | 6.52 | 9.83 | 4.58 | 1.15 | 1.34 |
| -15 | (+ 5) | 3117 | 786 | 913 | 604 | 6.81 | 12.27 | 5.16 | 1.30 | 1.51 |
| -10 | (+14) | 3791 | 955 | 1111 | 662 | 7.15 | 15.06 | 5.73 | 1.44 | 1.68 |

| TEST CONDITIONS: @127V60Hz | | | ARI4 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) | 748 | 188 | 219 | 355 | 5.80 | 3.21 | 2.09 | 0.53 | 0.61 |
| -35 | (-31) | 974 | 245 | 285 | 406 | 5.91 | 4.20 | 2.40 | 0.61 | 0.70 |
| -30 | (-22) | 1276 | 321 | 374 | 460 | 6.09 | 5.53 | 2.78 | 0.70 | 0.81 |
| -25 | (-13) | 1654 | 417 | 485 | 518 | 6.33 | 7.22 | 3.19 | 0.80 | 0.94 |
| -20 | (- 4) | 2108 | 531 | 618 | 579 | 6.64 | 9.27 | 3.64 | 0.92 | 1.07 |
| -15 | (+ 5) | 2639 | 665 | 773 | 644 | 7.02 | 11.70 | 4.10 | 1.03 | 1.20 |
| -10 | (+14) | 3246 | 818 | 951 | 712 | 7.46 | 14.52 | 4.56 | 1.15 | 1.34 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate | Universal | | |
| 2 Tray holder | Yes | | |
| 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 | | |