

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NE X4170UA |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513308301 |

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-Medium Back Pressure (Light Commercial - Curves until T.Evap - | | |
| 4.1 Evaporating temperature range | -40°C to 0°C | (-40°F to 32°F) | |
| 5 Motor type | CSCR | | |
| 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 | 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 | 16.80 | [cm ³] (1.025 cu.in) |
| 2.1 Bore [mm] | 31.190 | |
| 2.2 Stroke [mm] | 22.000 | |
| 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 | 115-127 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Voltage Relay | |
| 2.1 Starting device | RVAH7AA3C-571 | |
| 3 Start capacitor | 340-408(165) | [µF(VAC minimum)] |
| 4 Run capacitor | 30(400) | [µF(VAC minimum)] |
| 5 Motor protection | USP-577-83 | |
| 6 Start winding resistance | 3.81 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 0.96 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 49.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 9.00 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CCC - CE - EAC - UKCA - UL | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @115V60Hz | | | 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] |
| 2694 | 679 | 789 | 589 | 5.40 | 10.94 | 4.57 | 1.15 | 1.34 |

| | | | | | | | | |
|-------------------------------|----------|------|-----------------------------|-------------------------------|--|---------------------------|---------------------------------------|-------|
| TEST CONDITIONS: @115V60Hz | | | ARIMBP Fan | | Evaporating temperature (Condensing temperature | | -6.7°C (19.94°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] |
| 5327 | 1342 | 1561 | 835 | 7.60 | 22.26 | 6.38 | 1.61 | 1.87 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-------------|-----------------------------|---------------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | 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) | 1444 | 364 | 423 | 354 | 3.52 | 4.99 | 4.06 | 1.02 | 1.19 |
| -35 (-31) | 1883 | 474 | 552 | 413 | 4.00 | 6.56 | 4.58 | 1.15 | 1.34 |
| -30 (-22) | 2439 | 615 | 715 | 471 | 4.48 | 8.54 | 5.20 | 1.31 | 1.52 |
| -25 (-13) | 3112 | 784 | 912 | 528 | 4.98 | 10.93 | 5.90 | 1.49 | 1.73 |
| -20 (- 4) | 3903 | 984 | 1144 | 585 | 5.48 | 13.78 | 6.68 | 1.68 | 1.96 |
| -15 (+ 5) | 4812 | 1213 | 1410 | 641 | 5.97 | 17.11 | 7.51 | 1.89 | 2.20 |
| -10 (+14) | 5839 | 1471 | 1711 | 696 | 6.46 | 20.93 | 8.39 | 2.11 | 2.46 |
| -5 (+23) | 6984 | 1760 | 2046 | 752 | 6.94 | 25.28 | 9.29 | 2.34 | 2.72 |
| 0 (+32) | 8248 | 2078 | 2417 | 806 | 7.40 | 30.17 | 10.22 | 2.57 | 2.99 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | 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) | 1217 | 307 | 357 | 358 | 3.58 | 4.66 | 3.39 | 0.85 | 0.99 |
| -35 (-31) | 1597 | 402 | 468 | 423 | 4.09 | 6.15 | 3.78 | 0.95 | 1.11 |
| -30 (-22) | 2082 | 525 | 610 | 489 | 4.63 | 8.04 | 4.25 | 1.07 | 1.25 |
| -25 (-13) | 2671 | 673 | 783 | 555 | 5.18 | 10.36 | 4.79 | 1.21 | 1.40 |
| -20 (- 4) | 3364 | 848 | 986 | 622 | 5.76 | 13.13 | 5.39 | 1.36 | 1.58 |
| -15 (+ 5) | 4163 | 1049 | 1220 | 689 | 6.34 | 16.37 | 6.03 | 1.52 | 1.77 |
| -10 (+14) | 5068 | 1277 | 1485 | 757 | 6.93 | 20.12 | 6.70 | 1.69 | 1.96 |
| -5 (+23) | 6077 | 1532 | 1781 | 825 | 7.53 | 24.39 | 7.38 | 1.86 | 2.16 |
| 0 (+32) | 7193 | 1813 | 2108 | 894 | 8.12 | 29.21 | 8.06 | 2.03 | 2.36 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @115V60Hz | | 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) | 966 | 243 | 283 | 361 | 2.65 | 4.15 | 2.68 | 0.67 | 0.78 |
| -35 | (-31) | 1286 | 324 | 377 | 433 | 3.00 | 5.56 | 2.98 | 0.75 | 0.87 |
| -30 | (-22) | 1699 | 428 | 498 | 506 | 3.39 | 7.36 | 3.36 | 0.85 | 0.98 |
| -25 | (-13) | 2203 | 555 | 646 | 580 | 3.81 | 9.60 | 3.79 | 0.95 | 1.11 |
| -20 | (- 4) | 2800 | 706 | 820 | 657 | 4.26 | 12.29 | 4.26 | 1.07 | 1.25 |
| -15 | (+ 5) | 3489 | 879 | 1022 | 734 | 4.74 | 15.46 | 4.75 | 1.20 | 1.39 |
| -10 | (+14) | 4271 | 1076 | 1251 | 814 | 5.23 | 19.13 | 5.26 | 1.33 | 1.54 |
| -5 | (+23) | 5145 | 1297 | 1508 | 895 | 5.74 | 23.32 | 5.76 | 1.45 | 1.69 |
| 0 | (+32) | 6113 | 1540 | 1791 | 977 | 6.26 | 28.07 | 6.25 | 1.57 | 1.83 |

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 | | |