

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------------------------|
| Designation | NE K6210Z |
| Nominal Voltage/Frequency | 200-230 V 50 Hz / 208-230 V 60 Hz |
| Engineering Number | 269EB51 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 200-230 / 50 | [V / Hz] | |
| 4 Application type | High Back Pressure (Commercial Compressors) | | |
| 4.1 Evaporating temperature range | -15°C to 10°C | (5°F to 50°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) | 16.2 | [kgf/cm ²] (230 psig) | / °C - °F |
| 9.2 Peak (gauge) | 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 | 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) | 11.6 | [kg] (25.57 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

C - ELECTRICAL DATA

| | | |
|--|--|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 200-230 V 50 Hz / 208-230 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | MTRP-0012 | |
| 3 Start capacitor | 64-77(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0883/G6 | |
| 6 Start winding resistance | 15.50 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.20 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | UL - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|------|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS: @200V50Hz | | | ASHRAEHBP46 Fan | | Evaporating temperature (Condensing temperature | | 7.2°C (44.96°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] |
| 3770 | 950 | 1105 | 518 | 3.83 | 24.44 | 7.28 | 1.83 | 2.13 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @200V50Hz | | | ASHRAE46 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] |
| -15 | (+5) | 2072 | 522 | 607 | 313 | 3.20 | 11.22 | 6.60 | 1.66 | 1.94 |
| -10 | (+14) | 2273 | 573 | 666 | 327 | 3.25 | 12.34 | 6.97 | 1.76 | 2.04 |
| -5 | (+23) | 2722 | 686 | 798 | 349 | 3.31 | 14.82 | 7.82 | 1.97 | 2.29 |
| 0 | (+32) | 3420 | 862 | 1002 | 378 | 3.39 | 18.71 | 9.04 | 2.28 | 2.65 |
| +5 | (+41) | 4368 | 1101 | 1280 | 416 | 3.50 | 24.03 | 10.49 | 2.64 | 3.07 |
| +10 | (+50) | 5564 | 1402 | 1630 | 461 | 3.64 | 30.81 | 12.08 | 3.04 | 3.54 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @200V50Hz | | | ASHRAE46 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] |
| -15 | (+5) | 1746 | 440 | 512 | 332 | 3.24 | 10.19 | 5.27 | 1.33 | 1.54 |
| -10 | (+14) | 1953 | 492 | 572 | 349 | 3.29 | 11.46 | 5.59 | 1.41 | 1.64 |
| -5 | (+23) | 2374 | 598 | 696 | 376 | 3.36 | 13.98 | 6.31 | 1.59 | 1.85 |
| 0 | (+32) | 3007 | 758 | 881 | 410 | 3.47 | 17.80 | 7.32 | 1.84 | 2.14 |
| +5 | (+41) | 3854 | 971 | 1129 | 454 | 3.61 | 22.94 | 8.48 | 2.14 | 2.49 |
| +10 | (+50) | 4914 | 1238 | 1440 | 507 | 3.81 | 29.44 | 9.70 | 2.45 | 2.84 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @200V50Hz | | | ASHRAE46 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] |
| -15 | (+5) | 1523 | 384 | 446 | 345 | 3.28 | 9.70 | 4.42 | 1.12 | 1.30 |
| -10 | (+14) | 1724 | 434 | 505 | 367 | 3.32 | 11.03 | 4.68 | 1.18 | 1.37 |
| -5 | (+23) | 2101 | 529 | 616 | 399 | 3.41 | 13.50 | 5.26 | 1.33 | 1.54 |
| 0 | (+32) | 2656 | 669 | 778 | 440 | 3.54 | 17.15 | 6.04 | 1.52 | 1.77 |
| +5 | (+41) | 3388 | 854 | 993 | 492 | 3.72 | 22.03 | 6.91 | 1.74 | 2.03 |
| +10 | (+50) | 4298 | 1083 | 1259 | 554 | 3.97 | 28.15 | 7.75 | 1.95 | 2.27 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @200V60Hz | | ASHRAE46 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] |
| -15 (+5) | 2300 | 580 | 674 | 330 | 2.59 | 12.44 | 6.97 | 1.76 | 2.04 | |
| -10 (+14) | 2552 | 643 | 748 | 347 | 2.64 | 13.85 | 7.37 | 1.86 | 2.16 | |
| -5 (+23) | 3076 | 775 | 901 | 379 | 2.76 | 16.76 | 8.11 | 2.04 | 2.38 | |
| 0 (+32) | 3874 | 976 | 1135 | 426 | 2.95 | 21.19 | 9.07 | 2.29 | 2.66 | |
| +5 (+41) | 4942 | 1245 | 1448 | 488 | 3.22 | 27.19 | 10.12 | 2.55 | 2.97 | |
| +10 (+50) | 6282 | 1583 | 1841 | 565 | 3.56 | 34.78 | 11.12 | 2.80 | 3.26 | |

| TEST CONDITIONS: @200V60Hz | | ASHRAE46 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] |
| -15 (+5) | 2016 | 508 | 591 | 352 | 2.67 | 11.78 | 5.72 | 1.44 | 1.68 | |
| -10 (+14) | 2223 | 560 | 651 | 373 | 2.74 | 13.04 | 5.97 | 1.50 | 1.75 | |
| -5 (+23) | 2683 | 676 | 786 | 408 | 2.87 | 15.79 | 6.57 | 1.66 | 1.93 | |
| 0 (+32) | 3397 | 856 | 995 | 459 | 3.09 | 20.09 | 7.40 | 1.86 | 2.17 | |
| +5 (+41) | 4363 | 1100 | 1279 | 526 | 3.38 | 25.97 | 8.31 | 2.09 | 2.43 | |
| +10 (+50) | 5581 | 1406 | 1635 | 607 | 3.75 | 33.45 | 9.18 | 2.31 | 2.69 | |

| TEST CONDITIONS: @200V60Hz | | ASHRAE46 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] |
| -15 (+5) | 1737 | 438 | 509 | 366 | 2.72 | 11.06 | 4.76 | 1.20 | 1.40 | |
| -10 (+14) | 1911 | 482 | 560 | 393 | 2.82 | 12.23 | 4.86 | 1.22 | 1.42 | |
| -5 (+23) | 2320 | 585 | 680 | 436 | 2.99 | 14.91 | 5.31 | 1.34 | 1.56 | |
| 0 (+32) | 2964 | 747 | 868 | 494 | 3.24 | 19.14 | 6.00 | 1.51 | 1.76 | |
| +5 (+41) | 3840 | 968 | 1125 | 568 | 3.58 | 24.97 | 6.78 | 1.71 | 1.99 | |
| +10 (+50) | 4949 | 1247 | 1450 | 658 | 4.00 | 32.41 | 7.52 | 1.90 | 2.20 | |

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 | 8.1 +0.10/+0.00 | [mm] | (0.319" +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 | | |