

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NE K6210U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 862CA51 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-290 | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Medium Back Pressure (Commercial Compressors) | | |
| 4.1 Evaporating temperature range | -20°C to 10°C | (-4°F to 50°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 | 8.77 | [cm ³] (0.535 cu.in) |
| 2.1 Bore [mm] | 26.497 | |
| 2.2 Stroke [mm] | 15.920 | |
| 3 Lubricant charge | 350 | [ml] (11.84 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | AB / ISO32 | |
| 4 Weight (with oil charge) | 10.5 | [kg] (23.15 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELECTRICAL 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 | MTRP-0029 | |
| 3 Start capacitor | 53-64(330) | [μF(VAC minimum)] |
| 4 Run capacitor | - | [μF(VAC minimum)] |
| 5 Motor protection | T0964/G6 | |
| 6 Start winding resistance | 31.70 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 5.18 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 16.10 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|---------------------------------|----------|------|----------------------------|----------------------------|--|--------------------------------|--------------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAEHBP46 Fan | | Evaporating temperature (Condensing temperature | | 7.2°C (44.96°F) 54.4°C (129.92°F) | |
| Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 3988 | 1005 | 1169 | 459 | 2.75 | 13.65 | 8.69 | 2.19 | 2.55 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|---------------------------------|-----------------|------|---------------------------------------|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 35°C (+95°F)) | | | | | |
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 1878 | 473 | 550 | 270 | 2.06 | 5.30 | 6.94 | 1.75 | 2.03 |
| -15 | (+ 5) | 2243 | 565 | 657 | 290 | 2.12 | 6.36 | 7.75 | 1.95 | 2.27 |
| -10 | (+14) | 2708 | 682 | 794 | 306 | 2.18 | 7.70 | 8.85 | 2.23 | 2.59 |
| -5 | (+23) | 3274 | 825 | 959 | 320 | 2.23 | 9.36 | 10.24 | 2.58 | 3.00 |
| 0 | (+32) | 3940 | 993 | 1154 | 331 | 2.27 | 11.32 | 11.91 | 3.00 | 3.49 |
| +5 | (+41) | 4706 | 1186 | 1379 | 340 | 2.31 | 13.61 | 13.87 | 3.50 | 4.06 |
| +10 | (+50) | 5573 | 1404 | 1633 | 345 | 2.35 | 16.24 | 16.11 | 4.06 | 4.72 |

| | | | | | | | | | | |
|-------------------------------|-------|---------------------------------|-----------------|------|--|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 45°C (+113°F)) | | | | | |
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 1619 | 408 | 474 | 287 | 2.09 | 4.94 | 5.67 | 1.43 | 1.66 |
| -15 | (+ 5) | 1960 | 494 | 574 | 315 | 2.19 | 6.00 | 6.23 | 1.57 | 1.83 |
| -10 | (+14) | 2387 | 601 | 699 | 340 | 2.28 | 7.34 | 7.00 | 1.76 | 2.05 |
| -5 | (+23) | 2899 | 730 | 849 | 362 | 2.36 | 8.97 | 7.98 | 2.01 | 2.34 |
| 0 | (+32) | 3496 | 881 | 1025 | 381 | 2.43 | 10.88 | 9.16 | 2.31 | 2.68 |
| +5 | (+41) | 4180 | 1053 | 1225 | 397 | 2.50 | 13.10 | 10.53 | 2.65 | 3.09 |
| +10 | (+50) | 4949 | 1247 | 1450 | 410 | 2.56 | 15.63 | 12.10 | 3.05 | 3.55 |

| | | | | | | | | | | |
|-------------------------------|-------|---------------------------------|-----------------|------|--|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 55°C (+131°F)) | | | | | |
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 1365 | 344 | 400 | 296 | 2.11 | 4.55 | 4.59 | 1.16 | 1.35 |
| -15 | (+ 5) | 1690 | 426 | 495 | 333 | 2.25 | 5.66 | 5.08 | 1.28 | 1.49 |
| -10 | (+14) | 2085 | 525 | 611 | 367 | 2.38 | 7.01 | 5.69 | 1.43 | 1.67 |
| -5 | (+23) | 2551 | 643 | 747 | 398 | 2.49 | 8.62 | 6.42 | 1.62 | 1.88 |
| 0 | (+32) | 3087 | 778 | 905 | 425 | 2.60 | 10.51 | 7.27 | 1.83 | 2.13 |
| +5 | (+41) | 3694 | 931 | 1083 | 449 | 2.70 | 12.67 | 8.23 | 2.07 | 2.41 |
| +10 | (+50) | 4372 | 1102 | 1281 | 470 | 2.79 | 15.13 | 9.30 | 2.34 | 2.72 |

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 | | |