

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NE K2125U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 861CA51 |

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 | 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 - 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) | 19.1 | [kgf/cm ²] (272 psig) | / °C - °F |
| 9.2 Peak (gauge) | 21.2 | [kgf/cm ²] (301 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 1/3 | [hp] |
| 2 Displacement | 7.28 | [cm ³] (0.444 cu.in) |
| 2.1 Bore [mm] | 26.497 | |
| 2.2 Stroke [mm] | 13.200 | |
| 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) | 10.4 | [kg] (22.93 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 | T0525/G6 | |
| 6 Start winding resistance | 28.90 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 6.80 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 12.40 | [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 | | | 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] |
| 1081 | 272 | 317 | 242 | 1.71 | 3.22 | 4.47 | 1.13 | 1.31 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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) | 651 | 164 | 191 | 157 | 1.44 | 1.92 | 4.14 | 1.04 | 1.21 |
| -35 | (-31) | 758 | 191 | 222 | 178 | 1.51 | 2.24 | 4.27 | 1.08 | 1.25 |
| -30 | (-22) | 923 | 233 | 270 | 197 | 1.57 | 2.74 | 4.69 | 1.18 | 1.37 |
| -25 | (-13) | 1146 | 289 | 336 | 214 | 1.63 | 3.41 | 5.34 | 1.35 | 1.56 |
| -20 | (- 4) | 1428 | 360 | 418 | 231 | 1.68 | 4.26 | 6.19 | 1.56 | 1.81 |
| -15 | (+ 5) | 1769 | 446 | 518 | 246 | 1.72 | 5.30 | 7.20 | 1.81 | 2.11 |
| -10 | (+14) | 2169 | 547 | 636 | 260 | 1.77 | 6.53 | 8.33 | 2.10 | 2.44 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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) | 586 | 148 | 172 | 158 | 1.46 | 1.73 | 3.71 | 0.93 | 1.09 |
| -35 | (-31) | 692 | 174 | 203 | 181 | 1.53 | 2.05 | 3.84 | 0.97 | 1.12 |
| -30 | (-22) | 854 | 215 | 250 | 203 | 1.59 | 2.53 | 4.20 | 1.06 | 1.23 |
| -25 | (-13) | 1071 | 270 | 314 | 224 | 1.65 | 3.18 | 4.77 | 1.20 | 1.40 |
| -20 | (- 4) | 1344 | 339 | 394 | 244 | 1.72 | 4.01 | 5.50 | 1.39 | 1.61 |
| -15 | (+ 5) | 1673 | 422 | 490 | 264 | 1.78 | 5.01 | 6.35 | 1.60 | 1.86 |
| -10 | (+14) | 2058 | 519 | 603 | 283 | 1.85 | 6.19 | 7.28 | 1.83 | 2.13 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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) | 521 | 131 | 153 | 159 | 1.48 | 1.54 | 3.27 | 0.82 | 0.96 |
| -35 | (-31) | 627 | 158 | 184 | 184 | 1.54 | 1.86 | 3.41 | 0.86 | 1.00 |
| -30 | (-22) | 785 | 198 | 230 | 209 | 1.61 | 2.33 | 3.76 | 0.95 | 1.10 |
| -25 | (-13) | 996 | 251 | 292 | 233 | 1.68 | 2.96 | 4.26 | 1.07 | 1.25 |
| -20 | (- 4) | 1260 | 317 | 369 | 258 | 1.76 | 3.76 | 4.89 | 1.23 | 1.43 |
| -15 | (+ 5) | 1577 | 397 | 462 | 282 | 1.84 | 4.72 | 5.60 | 1.41 | 1.64 |
| -10 | (+14) | 1947 | 491 | 571 | 306 | 1.93 | 5.86 | 6.35 | 1.60 | 1.86 |

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 | | |