

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | NE K2150U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 863AA51 |

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 Pressuure 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 Expantion 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 (gauge) | 18.4 | [kgf/cm ²] (262 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 | 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) | 11.6 | [kg] (25.57 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL 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 | 64-77(330) | [μF(VAC minimum)] |
| 4 Run capacitor | - | [μF(VAC minimum)] |
| 5 Motor protection | T0347/G6 | |
| 6 Start winding resistance | 30.40 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.20 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 19.50 | [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 | CCC - 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] |
| 1985 | 500 | 582 | 444 | 2.98 | 5.91 | 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) | 951 | 240 | 279 | 273 | 2.45 | 2.81 | 3.49 | 0.88 | 1.02 |
| -35 | (-31) | 1253 | 316 | 367 | 311 | 2.55 | 3.71 | 4.04 | 1.02 | 1.18 |
| -30 | (-22) | 1638 | 413 | 480 | 348 | 2.66 | 4.86 | 4.70 | 1.18 | 1.38 |
| -25 | (-13) | 2103 | 530 | 616 | 386 | 2.78 | 6.25 | 5.45 | 1.37 | 1.60 |
| -20 | (- 4) | 2646 | 667 | 775 | 423 | 2.90 | 7.90 | 6.26 | 1.58 | 1.84 |
| -15 | (+ 5) | 3265 | 823 | 957 | 459 | 3.03 | 9.78 | 7.12 | 1.79 | 2.09 |
| -10 | (+14) | 3958 | 997 | 1160 | 495 | 3.17 | 11.91 | 7.98 | 2.01 | 2.34 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|----------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 904 | 228 | 265 | 279 | 2.47 | 2.67 | 3.24 | 0.82 | 0.95 |
| -35 | (-31) | 1175 | 296 | 344 | 320 | 2.58 | 3.48 | 3.68 | 0.93 | 1.08 |
| -30 | (-22) | 1529 | 385 | 448 | 363 | 2.71 | 4.53 | 4.21 | 1.06 | 1.23 |
| -25 | (-13) | 1964 | 495 | 575 | 406 | 2.85 | 5.84 | 4.82 | 1.22 | 1.41 |
| -20 | (- 4) | 2477 | 624 | 726 | 451 | 3.00 | 7.39 | 5.49 | 1.38 | 1.61 |
| -15 | (+ 5) | 3067 | 773 | 899 | 497 | 3.18 | 9.19 | 6.18 | 1.56 | 1.81 |
| -10 | (+14) | 3731 | 940 | 1093 | 544 | 3.36 | 11.22 | 6.86 | 1.73 | 2.01 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|----------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 854 | 215 | 250 | 285 | 2.49 | 2.52 | 2.98 | 0.75 | 0.87 |
| -35 | (-31) | 1097 | 276 | 321 | 330 | 2.61 | 3.24 | 3.34 | 0.84 | 0.98 |
| -30 | (-22) | 1423 | 359 | 417 | 377 | 2.75 | 4.22 | 3.78 | 0.95 | 1.11 |
| -25 | (-13) | 1830 | 461 | 536 | 427 | 2.92 | 5.44 | 4.29 | 1.08 | 1.26 |
| -20 | (- 4) | 2316 | 584 | 679 | 479 | 3.10 | 6.91 | 4.83 | 1.22 | 1.42 |
| -15 | (+ 5) | 2880 | 726 | 844 | 535 | 3.32 | 8.62 | 5.39 | 1.36 | 1.58 |
| -10 | (+14) | 3518 | 886 | 1031 | 593 | 3.55 | 10.58 | 5.93 | 1.50 | 1.74 |

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 | | |