

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NE K2150U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 863NA51 |

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 - 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 | 3/4 | [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 | AB / ISO32 | |
| 4 Weight (with oil charge) | 11.6 | [kg] (25.57 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 | 64-77(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | MSP30APK-3259 | |
| 6 Start winding resistance | 19.29 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 5.98 | [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 (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] |
| 1984 | 500 | 581 | 452 | 2.84 | 5.91 | 4.39 | 1.11 | 1.29 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|---------------------------------|-----------------|-----|---------------------------------------|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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] |
| -40 | (-40) | 937 | 236 | 275 | 268 | 2.39 | 2.77 | 3.49 | 0.88 | 1.02 |
| -35 | (-31) | 1249 | 315 | 366 | 305 | 2.47 | 3.70 | 4.09 | 1.03 | 1.20 |
| -30 | (-22) | 1640 | 413 | 481 | 341 | 2.55 | 4.87 | 4.78 | 1.21 | 1.40 |
| -25 | (-13) | 2075 | 523 | 608 | 377 | 2.65 | 6.17 | 5.49 | 1.38 | 1.61 |
| -20 | (- 4) | 2521 | 635 | 739 | 413 | 2.76 | 7.52 | 6.12 | 1.54 | 1.79 |
| -15 | (+ 5) | 2941 | 741 | 862 | 448 | 2.87 | 8.81 | 6.60 | 1.66 | 1.93 |
| -10 | (+14) | 3300 | 832 | 967 | 482 | 2.99 | 9.93 | 6.83 | 1.72 | 2.00 |

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|-------------------------------|-------|---------------------------------|-----------------|------|--|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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] |
| -40 | (-40) | 875 | 221 | 257 | 278 | 2.41 | 2.58 | 3.21 | 0.81 | 0.94 |
| -35 | (-31) | 1147 | 289 | 336 | 317 | 2.49 | 3.39 | 3.67 | 0.93 | 1.08 |
| -30 | (-22) | 1541 | 388 | 452 | 358 | 2.59 | 4.57 | 4.30 | 1.08 | 1.26 |
| -25 | (-13) | 2023 | 510 | 593 | 401 | 2.71 | 6.02 | 5.01 | 1.26 | 1.47 |
| -20 | (- 4) | 2558 | 645 | 750 | 446 | 2.85 | 7.63 | 5.71 | 1.44 | 1.67 |
| -15 | (+ 5) | 3111 | 784 | 912 | 492 | 3.01 | 9.32 | 6.32 | 1.59 | 1.85 |
| -10 | (+14) | 3647 | 919 | 1069 | 540 | 3.18 | 10.97 | 6.75 | 1.70 | 1.98 |

| | | | | | | | | | | |
|-------------------------------|-------|---------------------------------|-----------------|------|--|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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] |
| -40 | (-40) | 915 | 231 | 268 | 287 | 2.43 | 2.71 | 3.06 | 0.77 | 0.90 |
| -35 | (-31) | 1050 | 265 | 308 | 329 | 2.52 | 3.11 | 3.24 | 0.82 | 0.95 |
| -30 | (-22) | 1352 | 341 | 396 | 375 | 2.63 | 4.00 | 3.66 | 0.92 | 1.07 |
| -25 | (-13) | 1784 | 450 | 523 | 424 | 2.78 | 5.30 | 4.21 | 1.06 | 1.23 |
| -20 | (- 4) | 2313 | 583 | 678 | 478 | 2.96 | 6.90 | 4.83 | 1.22 | 1.42 |
| -15 | (+ 5) | 2903 | 732 | 851 | 535 | 3.16 | 8.70 | 5.43 | 1.37 | 1.59 |
| -10 | (+14) | 3520 | 887 | 1031 | 596 | 3.39 | 10.59 | 5.91 | 1.49 | 1.73 |

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 | | |