

COMPRESSOR DEFINITION

| | |
|---------------------------|--|
| Designation | NE U6181GK |
| Nominal Voltage/Frequency | 200-230 V 50 Hz / 208-230 V 60 Hz |
| Engineering Number | 958NB92 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 200-230 / 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 - 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 temperature | | | |
| 9.1 Operating | 25.2 | [kgf/cm ²] (358 psig) | / °C - °F |
| 9.2 Peak | 28.3 | [kgf/cm ²] (402 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 1/3+ | [hp] |
| 2 Displacement | 6.20 | [cm ³] (0.378 cu.in) |
| 2.1 Bore [mm] | 20.873 | |
| 2.2 Stroke [mm] | 18.120 | |
| 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) | 10.66 | [kg] (23.50 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

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-49 | |
| 3 Start capacitor | 64-77(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | MST36APK-3166 | |
| 6 Start winding resistance | 27.64 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 5.04 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | 18.00 | [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] |
| 3509 | 884 | 1028 | 456 | 2.88 | 28.89 | 7.70 | 1.94 | 2.26 |

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] |
| -20 | (- 4) | 1605 | 404 | 470 | 247 | 2.05 | 10.18 | 6.49 | 1.64 | 1.90 |
| -15 | (+ 5) | 1994 | 503 | 584 | 269 | 2.13 | 12.74 | 7.42 | 1.87 | 2.18 |
| -10 | (+14) | 2469 | 622 | 723 | 289 | 2.20 | 15.86 | 8.54 | 2.15 | 2.50 |
| -5 | (+23) | 3028 | 763 | 887 | 308 | 2.27 | 19.59 | 9.83 | 2.48 | 2.88 |
| 0 | (+32) | 3673 | 926 | 1076 | 326 | 2.33 | 23.97 | 11.28 | 2.84 | 3.30 |
| +5 | (+41) | 4403 | 1110 | 1290 | 342 | 2.39 | 29.04 | 12.87 | 3.24 | 3.77 |
| +10 | (+50) | 5218 | 1315 | 1529 | 357 | 2.45 | 34.83 | 14.61 | 3.68 | 4.28 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| 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] |
| -20 | (- 4) | 1384 | 349 | 406 | 266 | 2.12 | 9.69 | 5.21 | 1.31 | 1.53 |
| -15 | (+ 5) | 1727 | 435 | 506 | 293 | 2.21 | 12.17 | 5.90 | 1.49 | 1.73 |
| -10 | (+14) | 2142 | 540 | 628 | 318 | 2.30 | 15.20 | 6.72 | 1.69 | 1.97 |
| -5 | (+23) | 2631 | 663 | 771 | 343 | 2.39 | 18.82 | 7.66 | 1.93 | 2.25 |
| 0 | (+32) | 3193 | 805 | 936 | 366 | 2.47 | 23.06 | 8.71 | 2.20 | 2.55 |
| +5 | (+41) | 3828 | 965 | 1122 | 388 | 2.56 | 27.97 | 9.87 | 2.49 | 2.89 |
| +10 | (+50) | 4536 | 1143 | 1329 | 409 | 2.65 | 33.58 | 11.11 | 2.80 | 3.25 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| 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] |
| -20 | (- 4) | 1153 | 291 | 338 | 282 | 2.17 | 9.07 | 4.09 | 1.03 | 1.20 |
| -15 | (+ 5) | 1452 | 366 | 425 | 315 | 2.28 | 11.50 | 4.62 | 1.16 | 1.35 |
| -10 | (+14) | 1811 | 456 | 531 | 347 | 2.40 | 14.45 | 5.23 | 1.32 | 1.53 |
| -5 | (+23) | 2231 | 562 | 654 | 378 | 2.52 | 17.96 | 5.91 | 1.49 | 1.73 |
| 0 | (+32) | 2713 | 684 | 795 | 408 | 2.64 | 22.08 | 6.66 | 1.68 | 1.95 |
| +5 | (+41) | 3255 | 820 | 954 | 437 | 2.77 | 26.85 | 7.45 | 1.88 | 2.18 |
| +10 | (+50) | 3858 | 972 | 1131 | 465 | 2.90 | 32.29 | 8.29 | 2.09 | 2.43 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate | Universal | | |
| 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 | 6.45 +0.10/+0.00 | [mm] | (0.254" +0.004"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Straight | | |
| 3.3 PROCESS | 6.45 +0.10/+0.00 | [mm] | (0.254" +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 | | |