

COMPRESSOR DEFINITION

| | |
|---------------------------|-------------------|
| Designation | NE K2125GK |
| Nominal Voltage/Frequency | 100 V 50 Hz 60 Hz |
| Engineering Number | 959CQ71 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 100 / 50 | [V / Hz] | |
| 4 Application type | Low Back Pressure R404A | | |
| 4.1 Evaporating temperature range | -40°C to -10°C | (-40°F to 14°F) | |
| 5 Motor type | CSCR | | |
| 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) | 25.7 | [kgf/cm ²] (365 psig) | / °C - °F |
| 9.2 Peak (gauge) | 28.7 | [kgf/cm ²] (408 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) | 11.2 | [kg] (24.69 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

C - ELETRICAL DATA

| | | |
|--|-----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 100 V 50/60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Voltage Relay | |
| 2.1 Starting device | RVA7AC3C-115 | |
| 3 Start capacitor | 189-227(165) | [µF(VAC minimum)] |
| 4 Run capacitor | 20(400) | [µF(VAC minimum)] |
| 5 Motor protection | T0485/G9 | |
| 6 Start winding resistance | 3.82 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 0.94 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | 32.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | 4.79 | [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 | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS: @100V50Hz | | | 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] |
| 1155 | 291 | 338 | 273 | 4.21 | 7.83 | 4.23 | 1.07 | 1.24 |

| TEST CONDITIONS: @100V60Hz | | | 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] |
| 1382 | 348 | 405 | 297 | 3.50 | 9.37 | 4.65 | 1.17 | 1.36 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @100V50Hz | | 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) | 552 | 139 | 162 | 186 | 3.88 | 3.71 | 2.96 | 0.75 | 0.87 |
| -35 | (-31) | 722 | 182 | 212 | 206 | 3.96 | 4.87 | 3.52 | 0.89 | 1.03 |
| -30 | (-22) | 941 | 237 | 276 | 225 | 4.04 | 6.37 | 4.18 | 1.05 | 1.23 |
| -25 | (-13) | 1208 | 305 | 354 | 244 | 4.14 | 8.21 | 4.95 | 1.25 | 1.45 |
| -20 | (- 4) | 1524 | 384 | 447 | 263 | 4.24 | 10.41 | 5.80 | 1.46 | 1.70 |
| -15 | (+ 5) | 1888 | 476 | 553 | 281 | 4.35 | 12.97 | 6.72 | 1.69 | 1.97 |
| -10 | (+14) | 2301 | 580 | 674 | 299 | 4.47 | 15.92 | 7.69 | 1.94 | 2.25 |

| TEST CONDITIONS: @100V50Hz | | 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) | 495 | 125 | 145 | 186 | 3.87 | 3.32 | 2.66 | 0.67 | 0.78 |
| -35 | (-31) | 665 | 168 | 195 | 209 | 3.96 | 4.48 | 3.19 | 0.80 | 0.94 |
| -30 | (-22) | 881 | 222 | 258 | 232 | 4.06 | 5.95 | 3.80 | 0.96 | 1.11 |
| -25 | (-13) | 1144 | 288 | 335 | 255 | 4.18 | 7.76 | 4.48 | 1.13 | 1.31 |
| -20 | (- 4) | 1453 | 366 | 426 | 279 | 4.31 | 9.91 | 5.20 | 1.31 | 1.52 |
| -15 | (+ 5) | 1809 | 456 | 530 | 303 | 4.45 | 12.40 | 5.97 | 1.50 | 1.75 |
| -10 | (+14) | 2210 | 557 | 648 | 327 | 4.62 | 15.26 | 6.76 | 1.70 | 1.98 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @100V50Hz | | 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) | 424 | 107 | 124 | 186 | 3.89 | 2.84 | 2.27 | 0.57 | 0.67 |
| -35 | (-31) | 591 | 149 | 173 | 211 | 3.99 | 3.97 | 2.81 | 0.71 | 0.82 |
| -30 | (-22) | 802 | 202 | 235 | 236 | 4.09 | 5.41 | 3.39 | 0.86 | 0.99 |
| -25 | (-13) | 1058 | 267 | 310 | 264 | 4.22 | 7.16 | 4.01 | 1.01 | 1.18 |
| -20 | (- 4) | 1358 | 342 | 398 | 292 | 4.36 | 9.23 | 4.65 | 1.17 | 1.36 |
| -15 | (+ 5) | 1701 | 429 | 498 | 321 | 4.53 | 11.64 | 5.30 | 1.34 | 1.55 |
| -10 | (+14) | 2089 | 526 | 612 | 351 | 4.72 | 14.39 | 5.95 | 1.50 | 1.74 |

| TEST CONDITIONS: @100V60Hz | | 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) | 650 | 164 | 190 | 184 | 2.52 | 4.37 | 3.53 | 0.89 | 1.03 |
| -35 | (-31) | 860 | 217 | 252 | 211 | 2.73 | 5.80 | 4.08 | 1.03 | 1.20 |
| -30 | (-22) | 1124 | 283 | 329 | 237 | 2.95 | 7.60 | 4.74 | 1.19 | 1.39 |
| -25 | (-13) | 1441 | 363 | 422 | 263 | 3.18 | 9.79 | 5.48 | 1.38 | 1.60 |
| -20 | (- 4) | 1813 | 457 | 531 | 289 | 3.41 | 12.38 | 6.28 | 1.58 | 1.84 |
| -15 | (+ 5) | 2238 | 564 | 656 | 314 | 3.65 | 15.38 | 7.12 | 1.79 | 2.09 |
| -10 | (+14) | 2716 | 685 | 796 | 340 | 3.90 | 18.79 | 7.99 | 2.01 | 2.34 |

| TEST CONDITIONS: @100V60Hz | | 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) | 591 | 149 | 173 | 185 | 2.53 | 3.97 | 3.19 | 0.80 | 0.94 |
| -35 | (-31) | 795 | 200 | 233 | 215 | 2.77 | 5.35 | 3.70 | 0.93 | 1.09 |
| -30 | (-22) | 1051 | 265 | 308 | 245 | 3.03 | 7.10 | 4.29 | 1.08 | 1.26 |
| -25 | (-13) | 1360 | 343 | 398 | 275 | 3.29 | 9.22 | 4.94 | 1.24 | 1.45 |
| -20 | (- 4) | 1721 | 434 | 504 | 306 | 3.58 | 11.73 | 5.62 | 1.42 | 1.65 |
| -15 | (+ 5) | 2134 | 538 | 625 | 337 | 3.87 | 14.64 | 6.33 | 1.60 | 1.85 |
| -10 | (+14) | 2600 | 655 | 762 | 370 | 4.18 | 17.95 | 7.04 | 1.77 | 2.06 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @100V60Hz | | 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) | 525 | 132 | 154 | 186 | 2.54 | 3.51 | 2.82 | 0.71 | 0.83 |
| -35 | (-31) | 721 | 182 | 211 | 218 | 2.80 | 4.85 | 3.31 | 0.83 | 0.97 |
| -30 | (-22) | 969 | 244 | 284 | 251 | 3.08 | 6.53 | 3.85 | 0.97 | 1.13 |
| -25 | (-13) | 1267 | 319 | 371 | 286 | 3.39 | 8.58 | 4.44 | 1.12 | 1.30 |
| -20 | (- 4) | 1617 | 408 | 474 | 321 | 3.72 | 11.00 | 5.04 | 1.27 | 1.48 |
| -15 | (+ 5) | 2018 | 509 | 591 | 358 | 4.08 | 13.81 | 5.63 | 1.42 | 1.65 |
| -10 | (+14) | 2470 | 622 | 724 | 397 | 4.45 | 17.02 | 6.21 | 1.57 | 1.82 |

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 | | |