

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | NE U2155GK |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 959QA51 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 220-240 / 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 | 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 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 | 3/4 | [hp] |
| 2 Displacement | 12,11 | [cm ³] (0.739 cu.in) |
| 2.1 Bore [mm] | 27,775 | |
| 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) | 11,1 | [kg] (24.47 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 | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | MTRP-49-65 | |
| 3 Start capacitor | 64-77(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0964/G6 | |
| 6 Start winding resistance | 27.95 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 5.11 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 18.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 3.79 | [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] |
| 2247 | 566 | 658 | 500 | 3,06 | 15,23 | 4,49 | 1,13 | 1,32 |

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|-------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | EN12900LBP_HH Fan | | Evaporating temperature (Condensing temperature | | -35°C (-31°F) 40°C (104°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] |
| 1255 | 316 | 368 | 340 | 2,62 | 9,24 | 3,69 | 0,93 | 1,08 |

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) | 1069 | 269 | 313 | 290 | 2,51 | 7,18 | 3,67 | 0,93 | 1,08 |
| -35 (-31) | 1397 | 352 | 409 | 333 | 2,59 | 9,42 | 4,21 | 1,06 | 1,23 |
| -30 (-22) | 1818 | 458 | 533 | 377 | 2,69 | 12,30 | 4,83 | 1,22 | 1,42 |
| -25 (-13) | 2333 | 588 | 684 | 423 | 2,82 | 15,85 | 5,52 | 1,39 | 1,62 |
| -20 (- 4) | 2941 | 741 | 862 | 470 | 2,97 | 20,09 | 6,25 | 1,58 | 1,83 |
| -15 (+ 5) | 3643 | 918 | 1067 | 519 | 3,13 | 25,03 | 7,02 | 1,77 | 2,06 |
| -10 (+14) | 4438 | 1118 | 1300 | 569 | 3,32 | 30,70 | 7,80 | 1,97 | 2,29 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|-----------------|--------------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 969 | 244 | 284 | 296 | 2,52 | 6,50 | 3,28 | 0,83 | 0,96 |
| -35 (-31) | 1293 | 326 | 379 | 345 | 2,62 | 8,70 | 3,76 | 0,95 | 1,10 |
| -30 (-22) | 1704 | 429 | 499 | 397 | 2,75 | 11,50 | 4,29 | 1,08 | 1,26 |
| -25 (-13) | 2202 | 555 | 645 | 451 | 2,90 | 14,93 | 4,87 | 1,23 | 1,43 |
| -20 (- 4) | 2789 | 703 | 817 | 509 | 3,09 | 19,01 | 5,48 | 1,38 | 1,60 |
| -15 (+ 5) | 3463 | 873 | 1015 | 569 | 3,30 | 23,75 | 6,09 | 1,53 | 1,78 |
| -10 (+14) | 4225 | 1065 | 1238 | 632 | 3,54 | 29,17 | 6,69 | 1,69 | 1,96 |

E - PERFORMANCE - CURVES

| 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 | 295 | 2,52 | 5,72 | 2,89 | 0,73 | 0,85 |
| -35 | (-31) | 1171 | 295 | 343 | 352 | 2,64 | 7,87 | 3,33 | 0,84 | 0,97 |
| -30 | (-22) | 1569 | 395 | 460 | 413 | 2,79 | 10,58 | 3,80 | 0,96 | 1,11 |
| -25 | (-13) | 2050 | 517 | 601 | 478 | 2,99 | 13,87 | 4,29 | 1,08 | 1,26 |
| -20 | (- 4) | 2612 | 658 | 765 | 547 | 3,22 | 17,77 | 4,78 | 1,20 | 1,40 |
| -15 | (+ 5) | 3257 | 821 | 954 | 620 | 3,49 | 22,29 | 5,26 | 1,33 | 1,54 |
| -10 | (+14) | 3984 | 1004 | 1167 | 697 | 3,79 | 27,45 | 5,71 | 1,44 | 1,67 |

| TEST CONDITIONS: @220V50Hz | | EN12900HH 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) | 1038 | 261 | 304 | 292 | 2,54 | 7,19 | 3,54 | 0,89 | 1,04 |
| -35 | (-31) | 1359 | 342 | 398 | 335 | 2,62 | 9,46 | 4,07 | 1,03 | 1,19 |
| -30 | (-22) | 1772 | 446 | 519 | 379 | 2,72 | 12,37 | 4,68 | 1,18 | 1,37 |
| -25 | (-13) | 2276 | 574 | 667 | 425 | 2,84 | 15,96 | 5,36 | 1,35 | 1,57 |
| -20 | (- 4) | 2872 | 724 | 842 | 472 | 2,98 | 20,24 | 6,08 | 1,53 | 1,78 |
| -15 | (+ 5) | 3560 | 897 | 1043 | 520 | 3,14 | 25,25 | 6,85 | 1,73 | 2,01 |
| -10 | (+14) | 4340 | 1094 | 1272 | 569 | 3,32 | 31,01 | 7,63 | 1,92 | 2,24 |

| TEST CONDITIONS: @220V50Hz | | EN12900HH 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) | 840 | 212 | 246 | 299 | 2,54 | 6,54 | 2,82 | 0,71 | 0,83 |
| -35 | (-31) | 1119 | 282 | 328 | 347 | 2,63 | 8,75 | 3,23 | 0,81 | 0,95 |
| -30 | (-22) | 1473 | 371 | 432 | 399 | 2,76 | 11,56 | 3,69 | 0,93 | 1,08 |
| -25 | (-13) | 1902 | 479 | 557 | 453 | 2,91 | 15,00 | 4,19 | 1,06 | 1,23 |
| -20 | (- 4) | 2406 | 606 | 705 | 510 | 3,09 | 19,09 | 4,71 | 1,19 | 1,38 |
| -15 | (+ 5) | 2986 | 752 | 875 | 570 | 3,30 | 23,86 | 5,24 | 1,32 | 1,54 |
| -10 | (+14) | 3641 | 918 | 1067 | 633 | 3,54 | 29,32 | 5,76 | 1,45 | 1,69 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | EN12900HH 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) | 640 | 161 | 188 | 298 | 2,57 | 5,77 | 2,15 | 0,54 | 0,63 |
| -35 | (-31) | 882 | 222 | 258 | 353 | 2,67 | 7,97 | 2,49 | 0,63 | 0,73 |
| -30 | (-22) | 1182 | 298 | 346 | 413 | 2,81 | 10,73 | 2,86 | 0,72 | 0,84 |
| -25 | (-13) | 1541 | 388 | 451 | 477 | 2,99 | 14,07 | 3,23 | 0,81 | 0,95 |
| -20 | (- 4) | 1958 | 493 | 574 | 546 | 3,22 | 18,01 | 3,60 | 0,91 | 1,05 |
| -15 | (+ 5) | 2434 | 613 | 713 | 619 | 3,48 | 22,57 | 3,94 | 0,99 | 1,16 |
| -10 | (+14) | 2969 | 748 | 870 | 696 | 3,79 | 27,78 | 4,25 | 1,07 | 1,25 |

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 | | |