

COMPRESSOR DEFINITION

| | |
|---------------------------|--------------------------------------|
| Designation | NE 2130Z |
| Nominal Voltage/Frequency | 200-220 V 50 Hz / 230 V 60 Hz |
| Engineering Number | 263DK50 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 200-220 / 50 | [V / Hz] | |
| 4 Application type | Low Back Pressure R134a | | |
| 4.1 Evaporating temperature range | -30°C to -5°C | (-22°F to 23°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 pressures/temperature | | | |
| 9.1 Operating (gauge) | 16.2 | [kgf/cm ²] (230 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 | 1/3 | [hp] |
| 2 Displacement | 12.11 | [cm ³] (0.739 cu.in) |
| 2.1 Bore | 27.775 | |
| 2.2 Stroke | 10.000 | |
| 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) | 11.65 | [kg] (25.68 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 | 200-220 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | | |
| 3 Start capacitor | 43-53(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection (external) | 4TM758NFBZZ-153 | |
| 6 Start winding resistance | 18.58 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.10 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 17.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 2.48 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | IMQ | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @200V50Hz | | | 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] |
| 1070 | 270 | 314 | 258 | 2.46 | 6.08 | 4.15 | 1.05 | 1.22 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|---------------------------------------|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @200V50Hz | | | 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] |
| -30 | (-22) | 852 | 215 | 250 | 210 | 2.34 | 4.83 | 4.05 | 1.02 | 1.19 |
| -25 | (-13) | 1077 | 271 | 315 | 235 | 2.39 | 6.11 | 4.60 | 1.16 | 1.35 |
| -20 | (- 4) | 1372 | 346 | 402 | 262 | 2.47 | 7.81 | 5.23 | 1.32 | 1.53 |
| -15 | (+ 5) | 1739 | 438 | 510 | 293 | 2.57 | 9.93 | 5.92 | 1.49 | 1.74 |
| -10 | (+14) | 2177 | 549 | 638 | 328 | 2.70 | 12.47 | 6.64 | 1.67 | 1.94 |
| -5 | (+23) | 2687 | 677 | 787 | 366 | 2.85 | 15.46 | 7.35 | 1.85 | 2.15 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @200V50Hz | | | 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] |
| -26 | (-23) | 1082 | 296 | 298 | 242 | 2.34 | 5.80 | 3.08 | 0.93 | 1.08 |
| -20 | (- 4) | 1326 | 334 | 389 | 273 | 2.51 | 7.55 | 4.86 | 1.22 | 1.42 |
| -15 | (+ 5) | 1692 | 426 | 496 | 308 | 2.62 | 9.66 | 5.50 | 1.39 | 1.61 |
| -10 | (+14) | 2121 | 534 | 621 | 346 | 2.76 | 12.15 | 6.13 | 1.55 | 1.80 |
| -5 | (+23) | 2612 | 658 | 765 | 388 | 2.92 | 15.02 | 6.73 | 1.70 | 1.97 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @200V50Hz | | | 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] |
| -30 | (-22) | 710 | 179 | 208 | 214 | 2.34 | 4.02 | 3.33 | 0.84 | 0.98 |
| -25 | (-13) | 969 | 244 | 284 | 247 | 2.43 | 5.50 | 3.91 | 0.99 | 1.15 |
| -20 | (- 4) | 1282 | 323 | 376 | 283 | 2.54 | 7.30 | 4.52 | 1.14 | 1.33 |
| -15 | (+ 5) | 1648 | 415 | 483 | 322 | 2.67 | 9.41 | 5.12 | 1.29 | 1.50 |
| -10 | (+14) | 2067 | 521 | 606 | 364 | 2.82 | 11.84 | 5.69 | 1.43 | 1.67 |
| -5 | (+23) | 2539 | 640 | 744 | 410 | 2.99 | 14.60 | 6.19 | 1.56 | 1.81 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @200V60Hz | | 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] |
| -30 (-22) | 997 | 251 | 292 | 244 | 2.02 | 5.65 | 4.08 | 1.03 | 1.20 | |
| -25 (-13) | 1260 | 317 | 369 | 272 | 2.06 | 7.15 | 4.64 | 1.17 | 1.36 | |
| -20 (- 4) | 1606 | 405 | 471 | 304 | 2.13 | 9.14 | 5.28 | 1.33 | 1.55 | |
| -15 (+ 5) | 2035 | 513 | 596 | 340 | 2.22 | 11.62 | 5.98 | 1.51 | 1.75 | |
| -10 (+14) | 2548 | 642 | 747 | 380 | 2.33 | 14.60 | 6.69 | 1.69 | 1.96 | |
| -5 (+23) | 3143 | 792 | 921 | 425 | 2.46 | 18.08 | 7.40 | 1.87 | 2.17 | |

| TEST CONDITIONS: @200V60Hz | | 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] |
| -30 (-22) | 1998 | 200 | 260 | 240 | 2.08 | 6.70 | 3.28 | 0.98 | 1.00 | |
| -20 (- 4) | 1552 | 391 | 455 | 316 | 2.16 | 8.83 | 4.91 | 1.24 | 1.44 | |
| -15 (+ 5) | 1981 | 499 | 580 | 357 | 2.26 | 11.31 | 5.55 | 1.40 | 1.63 | |
| -10 (+14) | 2482 | 625 | 727 | 401 | 2.38 | 14.22 | 6.19 | 1.56 | 1.81 | |
| -5 (+23) | 3055 | 770 | 895 | 450 | 2.52 | 17.58 | 6.79 | 1.71 | 1.99 | |

| TEST CONDITIONS: @200V60Hz | | 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] |
| -30 (-22) | 830 | 209 | 243 | 247 | 2.02 | 4.70 | 3.36 | 0.85 | 0.98 | |
| -25 (-13) | 1134 | 286 | 332 | 286 | 2.10 | 6.44 | 3.95 | 1.00 | 1.16 | |
| -20 (- 4) | 1500 | 378 | 440 | 328 | 2.19 | 8.54 | 4.56 | 1.15 | 1.34 | |
| -15 (+ 5) | 1928 | 486 | 565 | 374 | 2.30 | 11.01 | 5.17 | 1.30 | 1.51 | |
| -10 (+14) | 2419 | 610 | 709 | 423 | 2.43 | 13.86 | 5.73 | 1.45 | 1.68 | |
| -5 (+23) | 2971 | 749 | 871 | 476 | 2.58 | 17.09 | 6.24 | 1.57 | 1.83 | |

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 | | |