

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NE K6170Y |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 861LA51 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | High Back Pressure (Commercial Compressors) | | |
| 4.1 Evaporating temperature range | -15°C to 10°C | (5°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 | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 1/4+ | [hp] |
| 2 Displacement | 14.28 | [cm ³] (0.871 cu.in) |
| 2.1 Bore [mm] | 30.157 | |
| 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) | 10 | [kg] (22.05 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 | 43-53(330) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | T0186/G6 | |
| 6 Start winding resistance | 28.90 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 6.80 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | - | [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 | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| 2760 | 696 | 809 | 327 | 2.06 | 9.72 | 8.44 | 2.13 | 2.47 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| -15 | (+5) | 1379 | 348 | 404 | 196 | 1.62 | 4.12 | 7.02 | 1.77 | 2.06 |
| -10 | (+14) | 1720 | 434 | 504 | 213 | 1.67 | 5.16 | 8.08 | 2.04 | 2.37 |
| -5 | (+23) | 2128 | 536 | 624 | 229 | 1.72 | 6.39 | 9.30 | 2.34 | 2.73 |
| 0 | (+32) | 2603 | 656 | 763 | 244 | 1.77 | 7.84 | 10.67 | 2.69 | 3.13 |
| +5 | (+41) | 3144 | 792 | 921 | 258 | 1.82 | 9.49 | 12.19 | 3.07 | 3.57 |
| +10 | (+50) | 3751 | 945 | 1099 | 271 | 1.87 | 11.37 | 13.83 | 3.49 | 4.05 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|---|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| -15 | (+5) | 1212 | 305 | 355 | 206 | 1.64 | 3.90 | 5.90 | 1.49 | 1.73 |
| -10 | (+14) | 1528 | 385 | 448 | 227 | 1.71 | 4.93 | 6.73 | 1.70 | 1.97 |
| -5 | (+23) | 1905 | 480 | 558 | 248 | 1.78 | 6.16 | 7.67 | 1.93 | 2.25 |
| 0 | (+32) | 2342 | 590 | 686 | 268 | 1.85 | 7.59 | 8.72 | 2.20 | 2.55 |
| +5 | (+41) | 2839 | 715 | 832 | 288 | 1.92 | 9.23 | 9.86 | 2.48 | 2.89 |
| +10 | (+50) | 3395 | 856 | 995 | 307 | 1.99 | 11.09 | 11.08 | 2.79 | 3.25 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|-----|---|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| -15 | (+5) | 1058 | 267 | 310 | 216 | 1.67 | 3.70 | 4.89 | 1.23 | 1.43 |
| -10 | (+14) | 1349 | 340 | 395 | 241 | 1.75 | 4.72 | 5.59 | 1.41 | 1.64 |
| -5 | (+23) | 1694 | 427 | 496 | 267 | 1.84 | 5.94 | 6.36 | 1.60 | 1.86 |
| 0 | (+32) | 2091 | 527 | 613 | 292 | 1.93 | 7.36 | 7.18 | 1.81 | 2.10 |
| +5 | (+41) | 2543 | 641 | 745 | 316 | 2.02 | 8.98 | 8.04 | 2.03 | 2.36 |
| +10 | (+50) | 3047 | 768 | 893 | 340 | 2.12 | 10.81 | 8.95 | 2.26 | 2.62 |

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 | | |