

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NT 6230U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 843EA08 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-290 | | |
| 3 Nominal voltage and frequency | 220-240 / 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 | CSCR | | |
| 6 Starting torque | HST - Hight 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 | 18.4 | [kgf/cm ²] (262 psig) | / °C - °F |
| 9.2 Peak | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|------------|----------------------------------|
| 1 Commercial designation | 1 1/4 | [hp] |
| 2 Displacement | 27.80 | [cm ³] (1.696 cu.in) |
| 2.1 Bore [mm] | 38.100 | |
| 2.2 Stroke [mm] | 24.400 | |
| 3 Lubricant charge | 450 | [ml] (15.22 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | AB / ISO32 | |
| 4 Weight (with oil charge) | 17.4 | [kg] (38.36 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 | Voltage Relay | |
| 2.1 Starting device | RVA403C-123 | |
| 3 Start capacitor | 130-156(330) | [µF(VAC minimum)] |
| 4 Run capacitor | 20(400) | [µF(VAC minimum)] |
| 5 Motor protection | USP-553-84 | |
| 6 Start winding resistance | 7.56 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 2.22 | [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 (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 12358 | 3114 | 3621 | 1379 | 6.61 | 42.30 | 8.96 | 2.26 | 2.63 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|---------------------------------|-----------------|------|---------------------------------------|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 35°C (+95°F)) | | | | | |
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 5598 | 1411 | 1640 | 797 | 4.00 | 15.80 | 7.03 | 1.77 | 2.06 |
| -15 | (+ 5) | 6804 | 1715 | 1994 | 838 | 4.22 | 19.27 | 8.17 | 2.06 | 2.40 |
| -10 | (+14) | 8446 | 2128 | 2475 | 896 | 4.48 | 24.02 | 9.45 | 2.38 | 2.77 |
| -5 | (+23) | 10524 | 2652 | 3084 | 970 | 4.78 | 30.08 | 10.82 | 2.73 | 3.17 |
| 0 | (+32) | 13037 | 3285 | 3820 | 1061 | 5.13 | 37.47 | 12.23 | 3.08 | 3.58 |
| +5 | (+41) | 15986 | 4028 | 4684 | 1169 | 5.52 | 46.25 | 13.64 | 3.44 | 4.00 |
| +10 | (+50) | 19370 | 4881 | 5676 | 1293 | 5.97 | 56.44 | 15.02 | 3.79 | 4.40 |

| | | | | | | | | | | |
|-------------------------------|-------|---------------------------------|-----------------|------|--|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 45°C (+113°F)) | | | | | |
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 4928 | 1242 | 1444 | 844 | 4.24 | 15.01 | 5.76 | 1.45 | 1.69 |
| -15 | (+ 5) | 5964 | 1503 | 1748 | 906 | 4.52 | 18.27 | 6.57 | 1.66 | 1.93 |
| -10 | (+14) | 7310 | 1842 | 2142 | 976 | 4.83 | 22.51 | 7.51 | 1.89 | 2.20 |
| -5 | (+23) | 8966 | 2259 | 2627 | 1056 | 5.15 | 27.75 | 8.53 | 2.15 | 2.50 |
| 0 | (+32) | 10933 | 2755 | 3204 | 1143 | 5.51 | 34.03 | 9.60 | 2.42 | 2.81 |
| +5 | (+41) | 13209 | 3329 | 3871 | 1240 | 5.89 | 41.39 | 10.67 | 2.69 | 3.13 |
| +10 | (+50) | 15796 | 3981 | 4629 | 1345 | 6.30 | 49.85 | 11.70 | 2.95 | 3.43 |

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|-------------------------------|-------|---------------------------------|-----------------|------|--|----------------------------|--------------------------|--------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE46 Fan | | (Condensing temperature 55°C (+131°F)) | | | | | |
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 4063 | 1024 | 1191 | 898 | 4.45 | 13.57 | 4.59 | 1.16 | 1.35 |
| -15 | (+ 5) | 5153 | 1299 | 1510 | 989 | 4.86 | 17.25 | 5.18 | 1.31 | 1.52 |
| -10 | (+14) | 6427 | 1620 | 1883 | 1081 | 5.27 | 21.59 | 5.90 | 1.49 | 1.73 |
| -5 | (+23) | 7887 | 1987 | 2311 | 1172 | 5.69 | 26.63 | 6.71 | 1.69 | 1.96 |
| 0 | (+32) | 9530 | 2402 | 2793 | 1265 | 6.11 | 32.41 | 7.55 | 1.90 | 2.21 |
| +5 | (+41) | 11359 | 2862 | 3328 | 1359 | 6.54 | 38.96 | 8.39 | 2.11 | 2.46 |
| +10 | (+50) | 13372 | 3370 | 3918 | 1453 | 6.98 | 46.32 | 9.19 | 2.32 | 2.69 |

F - EXTERNAL CHARACTERISTICS

| | |
|-------------------------|--|
| 1 Base plate | Universal |
| 2 Tray holder | No |
| 3 Connectors | |
| 3.1 SUCTION | 12.7 +0.25/-0.25 [mm] (0.500" +0.010"/-0.010") |
| 3.1.1 Material | Steel |
| 3.1.2 Shape | ROTOLOCK(Ex. thr. 1"-14UNS-2A) |
| 3.2 DISCHARGE | 6.42 +0.08/+0.00 [mm] (0.253" +0.003"/+0.000") |
| 3.2.1 Material | Copper |
| 3.2.2 Shape | Vertical |
| 3.3 PROCESS | 6.42 +0.08/+0.00 [mm] (0.253" +0.003"/+0.000") |
| 3.3.1 Material | Copper |
| 3.3.2 Shape | Vertical |
| 3.4 Oil cooler (Copper) | No [mm] |
| 3.5 Connector sealing | Rubber Plugs |