

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | T 6220E |
| Nominal Voltage/Frequency | 208-230 V 60 Hz |
| Engineering Number | 116SD70 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-22 | | |
| 3 Nominal voltage and frequency | 208-230 / 60 | [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 | 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) | 21.7 | [kgf/cm ²] (309 psig) | / °C - °F |
| 9.2 Peak (gauge) | 24.2 | [kgf/cm ²] (344 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|-----------------|--|
| 1 Commercial designation | 1- | [hp] |
| 2 Displacement | 17.39 | [cm ³] (1.061 cu.in) |
| 2.1 Bore [mm] | 34.120 | |
| 2.2 Stroke [mm] | 19.030 | |
| 3 Lubricant charge | 550 | [ml] (18.60 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO46 | |
| 4 Weight (with oil charge) | 15.46 | [kg] (34.08 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 | 208-230 V 60 Hz 1~ (Single phase) | |
| 2 Starting device type | Voltage Relay | |
| 2.1 Starting device | 3ARR3B6V3 | |
| 3 Start capacitor | 43-53(330) | [μF(VAC minimum)] |
| 4 Run capacitor | 15(450) | [μF(VAC minimum)] |
| 5 Motor protection | T0748/C9 | |
| 6 Start winding resistance | 6.00 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 2.15 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 30.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 5.90 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | UL | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|--------------------------------------|----------|------|----------------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @208V60Hz | | | 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] |
| 9068 | 2285 | 2657 | 1173 | 5.64 | 56.00 | 7.73 | 1.95 | 2.27 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|--------------------------------------|-------|----------------------------|-------------------------------|------|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @208V50Hz | | | 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) | 3271 | 824 | 958 | 524 | 2.85 | 17.16 | 6.26 | 1.58 | 1.83 |
| -10 | (+14) | 4560 | 1149 | 1336 | 609 | 3.35 | 24.05 | 7.47 | 1.88 | 2.19 |
| -5 | (+23) | 5887 | 1484 | 1725 | 688 | 3.80 | 31.20 | 8.55 | 2.15 | 2.50 |
| 0 | (+32) | 7253 | 1828 | 2125 | 763 | 4.21 | 38.65 | 9.52 | 2.40 | 2.79 |
| +5 | (+41) | 8658 | 2182 | 2537 | 833 | 4.58 | 46.43 | 10.41 | 2.62 | 3.05 |
| +10 | (+50) | 10101 | 2545 | 2960 | 898 | 4.90 | 54.57 | 11.24 | 2.83 | 3.29 |

| | | | | | | | | | | |
|--------------------------------------|-------|----------------------------|-------------------------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @208V50Hz | | | 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) | 3031 | 764 | 888 | 559 | 3.12 | 17.02 | 5.42 | 1.37 | 1.59 |
| -10 | (+14) | 4118 | 1038 | 1207 | 652 | 3.63 | 23.20 | 6.31 | 1.59 | 1.85 |
| -5 | (+23) | 5277 | 1330 | 1546 | 740 | 4.10 | 29.86 | 7.14 | 1.80 | 2.09 |
| 0 | (+32) | 6508 | 1640 | 1907 | 823 | 4.54 | 37.05 | 7.92 | 2.00 | 2.32 |
| +5 | (+41) | 7810 | 1968 | 2289 | 899 | 4.95 | 44.80 | 8.68 | 2.19 | 2.54 |
| +10 | (+50) | 9185 | 2315 | 2691 | 970 | 5.32 | 53.13 | 9.46 | 2.39 | 2.77 |

| | | | | | | | | | | |
|--------------------------------------|-------|----------------------------|-------------------------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @208V50Hz | | | 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) | 2791 | 703 | 818 | 595 | 3.40 | 16.84 | 4.68 | 1.18 | 1.37 |
| -10 | (+14) | 3676 | 926 | 1077 | 698 | 3.92 | 22.29 | 5.28 | 1.33 | 1.55 |
| -5 | (+23) | 4667 | 1176 | 1367 | 795 | 4.42 | 28.45 | 5.88 | 1.48 | 1.72 |
| 0 | (+32) | 5762 | 1452 | 1688 | 885 | 4.89 | 35.36 | 6.50 | 1.64 | 1.90 |
| +5 | (+41) | 6962 | 1755 | 2040 | 968 | 5.34 | 43.05 | 7.17 | 1.81 | 2.10 |
| +10 | (+50) | 8268 | 2084 | 2423 | 1045 | 5.76 | 51.56 | 7.93 | 2.00 | 2.32 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: | | ASHRAE46 | | | (Condensing temperature 35°C (+95°F)) | | | | | |
|-------------------------|-------|------------------|----------|------|---------------------------------------|---------------------|---------------|-----------------|-----------|-------|
| @208V60Hz | | Fan | | | | | | | | |
| Evaporating temperature | | Cooling capacity | | | Power consumption | Current consumption | Gas flow rate | EFFICIENCY RATE | | |
| | | +/- 5% | | | +/- 5% | +/- 5% | +/- 5% | +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -15 | (+ 5) | 3827 | 964 | 1121 | 633 | 2.91 | 20.08 | 6.06 | 1.53 | 1.78 |
| -10 | (+14) | 5335 | 1344 | 1563 | 727 | 3.42 | 28.14 | 7.32 | 1.84 | 2.14 |
| -5 | (+23) | 6888 | 1736 | 2018 | 815 | 3.88 | 36.50 | 8.44 | 2.13 | 2.47 |
| 0 | (+32) | 8487 | 2139 | 2487 | 898 | 4.30 | 45.22 | 9.46 | 2.38 | 2.77 |
| +5 | (+41) | 10130 | 2553 | 2968 | 975 | 4.67 | 54.32 | 10.40 | 2.62 | 3.05 |
| +10 | (+50) | 11818 | 2978 | 3463 | 1048 | 5.00 | 63.85 | 11.27 | 2.84 | 3.30 |

| TEST CONDITIONS: | | ASHRAE46 | | | (Condensing temperature 45°C (+113°F)) | | | | | |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @208V60Hz | | Fan | | | | | | | | |
| Evaporating temperature | | Cooling capacity | | | Power consumption | Current consumption | Gas flow rate | EFFICIENCY RATE | | |
| | | +/- 5% | | | +/- 5% | +/- 5% | +/- 5% | +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -15 | (+ 5) | 3546 | 894 | 1039 | 676 | 3.18 | 19.91 | 5.24 | 1.32 | 1.54 |
| -10 | (+14) | 4818 | 1214 | 1412 | 779 | 3.70 | 27.14 | 6.18 | 1.56 | 1.81 |
| -5 | (+23) | 6174 | 1556 | 1809 | 877 | 4.19 | 34.94 | 7.05 | 1.78 | 2.07 |
| 0 | (+32) | 7614 | 1919 | 2231 | 968 | 4.64 | 43.35 | 7.87 | 1.98 | 2.31 |
| +5 | (+41) | 9138 | 2303 | 2678 | 1053 | 5.05 | 52.41 | 8.68 | 2.19 | 2.54 |
| +10 | (+50) | 10746 | 2708 | 3149 | 1132 | 5.43 | 62.16 | 9.49 | 2.39 | 2.78 |

| TEST CONDITIONS: | | ASHRAE46 | | | (Condensing temperature 55°C (+131°F)) | | | | | |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @208V60Hz | | Fan | | | | | | | | |
| Evaporating temperature | | Cooling capacity | | | Power consumption | Current consumption | Gas flow rate | EFFICIENCY RATE | | |
| | | +/- 5% | | | +/- 5% | +/- 5% | +/- 5% | +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -15 | (+ 5) | 3265 | 823 | 957 | 721 | 3.47 | 19.70 | 4.52 | 1.14 | 1.33 |
| -10 | (+14) | 4301 | 1084 | 1260 | 834 | 4.00 | 26.08 | 5.17 | 1.30 | 1.51 |
| -5 | (+23) | 5460 | 1376 | 1600 | 941 | 4.51 | 33.29 | 5.81 | 1.46 | 1.70 |
| 0 | (+32) | 6741 | 1699 | 1975 | 1041 | 4.99 | 41.37 | 6.47 | 1.63 | 1.89 |
| +5 | (+41) | 8146 | 2053 | 2387 | 1134 | 5.45 | 50.37 | 7.17 | 1.81 | 2.10 |
| +10 | (+50) | 9674 | 2438 | 2835 | 1220 | 5.88 | 60.32 | 7.94 | 2.00 | 2.33 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate | Universal | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 9.6 +0.07/+0.00 | [mm] | (0.378" +0.003"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Vertical | | |
| 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 | 9.6 +0.07/+0.00 | [mm] | (0.378" +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 | | |