

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | VES F7C |
| Nominal Voltage/Frequency | 230 V 32-150 Hz |
| Engineering Number | 513907388 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|---|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 230 / 32-150 | [V / Hz] | |
| 4 Application type | Low-Medium Back Pressure (Fullmotion Compressors) | | |
| 4.1 Evaporating temperature range | -35°C to 0°C | (-31°F to 32°F) | |
| 5 Motor type | BPM | | |
| 6 Starting torque | LST - Low Starting Torque | | |
| 7 Expansion device | Capillary tube | | |
| 8 Compressor cooling | Operating voltage range | | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32°C Ambient temperature) | Static | 160 to 264 V | 160 to 264 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 160 to 264 V | 160 to 264 V |
| 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 | 1/5 | [hp] |
| 2 Displacement | 7.23 | [cm ³] (0.441 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 16.000 | |
| 3 Lubricant charge | 205 | [ml] (6.93 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 6.57 | [kg] (14.48 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 230 V 31.7-150 Hz 3~ (Three phase) | |
| 2 Starting device type | Inverter | |
| 2.1 Starting device | VESF 2456 XXX X | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | INVERTER VES 2456X | |
| 6 Start winding resistance | 9.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 9.30 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (32/150 Hz) | 2.10 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (32/150 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (32/150 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CCC - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | | |
|--|----------|-----|-------------------------------------|-------------------------------|---|---------------------------|--|-------|--|
| TEST CONDITIONS: @220V950RPM | | | ASHRAELBP32 Static | | 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] | |
| 119 | 30 | 35 | 19 | 0.19 | 0.37 | 6.20 | 1.56 | 1.82 | |

| | | | | | | | | | |
|---|----------|-----|-------------------------------------|-------------------------------|---|---------------------------|--|-------|--|
| TEST CONDITIONS: @220V1300RPM | | | ASHRAELBP32 Static | | 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] | |
| 171 | 43 | 50 | 27 | 0.24 | 0.54 | 6.45 | 1.63 | 1.89 | |

| | | | | | | | | | |
|---|----------|-----|-------------------------------------|-------------------------------|---|---------------------------|--|-------|--|
| TEST CONDITIONS: @220V2000RPM | | | ASHRAELBP32 Static | | 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] | |
| 270 | 68 | 79 | 41 | 0.34 | 0.85 | 6.57 | 1.66 | 1.93 | |

| | | | | | | | | | |
|---|----------|-----|-------------------------------------|-------------------------------|---|---------------------------|--|-------|--|
| TEST CONDITIONS: @220V4000RPM | | | ASHRAELBP32 Static | | 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] | |
| 536 | 135 | 157 | 84 | 0.65 | 1.68 | 6.35 | 1.60 | 1.86 | |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|--|----------------------------|----------------------------------|---------|-----------------------------|-------------------------------|-------------------------|---|--------|----------|-----------|
| TEST CONDITIONS: @220V950RPM | | ASHRAE32 Static | | | | | (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] |
| -35 | (-31) | 68 | 17 | 20 | 12 | 0.16 | 0.21 | 5.60 | 1.41 | 1.64 |
| -30 | (-22) | 99 | 25 | 29 | 14 | 0.17 | 0.31 | 6.90 | 1.74 | 2.02 |
| -25 | (-13) | 136 | 34 | 40 | 17 | 0.18 | 0.43 | 8.21 | 2.07 | 2.41 |
| -20 | (- 4) | 178 | 45 | 52 | 19 | 0.19 | 0.56 | 9.57 | 2.41 | 2.81 |
| -15 | (+ 5) | 227 | 57 | 66 | 21 | 0.21 | 0.71 | 11.04 | 2.78 | 3.24 |
| -10 | (+14) | 283 | 71 | 83 | 22 | 0.22 | 0.89 | 12.67 | 3.19 | 3.71 |
| -5 | (+23) | 347 | 87 | 102 | 24 | 0.23 | 1.10 | 14.49 | 3.65 | 4.25 |
| 0 | (+32) | 420 | 106 | 123 | 25 | 0.24 | 1.33 | 16.56 | 4.17 | 4.85 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V950RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 59 | 15 | 17 | 12 | 0.15 | 0.19 | 4.97 | 1.25 | 1.46 |
| -30 | (-22) | 88 | 22 | 26 | 15 | 0.16 | 0.28 | 6.02 | 1.52 | 1.76 |
| -25 | (-13) | 122 | 31 | 36 | 17 | 0.18 | 0.38 | 7.05 | 1.78 | 2.06 |
| -20 | (- 4) | 163 | 41 | 48 | 20 | 0.20 | 0.51 | 8.11 | 2.04 | 2.37 |
| -15 | (+ 5) | 211 | 53 | 62 | 23 | 0.22 | 0.66 | 9.24 | 2.33 | 2.71 |
| -10 | (+14) | 267 | 67 | 78 | 25 | 0.24 | 0.84 | 10.50 | 2.65 | 3.08 |
| -5 | (+23) | 332 | 84 | 97 | 28 | 0.26 | 1.05 | 11.94 | 3.01 | 3.50 |
| 0 | (+32) | 407 | 103 | 119 | 30 | 0.27 | 1.29 | 13.60 | 3.43 | 3.99 |

| TEST CONDITIONS: @220V950RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 50 | 13 | 15 | 11 | 0.15 | 0.16 | 4.43 | 1.12 | 1.30 |
| -30 | (-22) | 76 | 19 | 22 | 15 | 0.17 | 0.24 | 5.30 | 1.34 | 1.55 |
| -25 | (-13) | 109 | 27 | 32 | 18 | 0.19 | 0.34 | 6.13 | 1.55 | 1.80 |
| -20 | (- 4) | 149 | 37 | 44 | 21 | 0.21 | 0.47 | 6.96 | 1.75 | 2.04 |
| -15 | (+ 5) | 196 | 49 | 58 | 25 | 0.24 | 0.62 | 7.85 | 1.98 | 2.30 |
| -10 | (+14) | 253 | 64 | 74 | 28 | 0.27 | 0.80 | 8.83 | 2.23 | 2.59 |
| -5 | (+23) | 319 | 80 | 93 | 32 | 0.29 | 1.01 | 9.96 | 2.51 | 2.92 |
| 0 | (+32) | 395 | 100 | 116 | 35 | 0.31 | 1.25 | 11.29 | 2.84 | 3.31 |

| TEST CONDITIONS: @220V1300RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 102 | 26 | 30 | 16 | 0.18 | 0.32 | 6.19 | 1.56 | 1.81 |
| -30 | (-22) | 144 | 36 | 42 | 19 | 0.20 | 0.45 | 7.33 | 1.85 | 2.15 |
| -25 | (-13) | 191 | 48 | 56 | 23 | 0.22 | 0.60 | 8.47 | 2.13 | 2.48 |
| -20 | (- 4) | 247 | 62 | 72 | 25 | 0.24 | 0.77 | 9.71 | 2.45 | 2.85 |
| -15 | (+ 5) | 313 | 79 | 92 | 28 | 0.27 | 0.99 | 11.13 | 2.81 | 3.26 |
| -10 | (+14) | 394 | 99 | 115 | 31 | 0.29 | 1.24 | 12.82 | 3.23 | 3.76 |
| -5 | (+23) | 491 | 124 | 144 | 33 | 0.30 | 1.55 | 14.85 | 3.74 | 4.35 |
| 0 | (+32) | 608 | 153 | 178 | 35 | 0.31 | 1.93 | 17.31 | 4.36 | 5.07 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V1300RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 84 | 21 | 24 | 17 | 0.18 | 0.26 | 5.06 | 1.28 | 1.48 |
| -30 | (-22) | 124 | 31 | 36 | 20 | 0.20 | 0.39 | 6.10 | 1.54 | 1.79 |
| -25 | (-13) | 170 | 43 | 50 | 24 | 0.22 | 0.53 | 7.10 | 1.79 | 2.08 |
| -20 | (- 4) | 225 | 57 | 66 | 28 | 0.25 | 0.71 | 8.14 | 2.05 | 2.39 |
| -15 | (+ 5) | 291 | 73 | 85 | 31 | 0.28 | 0.92 | 9.31 | 2.35 | 2.73 |
| -10 | (+14) | 372 | 94 | 109 | 35 | 0.31 | 1.17 | 10.70 | 2.70 | 3.14 |
| -5 | (+23) | 469 | 118 | 137 | 38 | 0.33 | 1.48 | 12.39 | 3.12 | 3.63 |
| 0 | (+32) | 586 | 148 | 172 | 41 | 0.34 | 1.86 | 14.46 | 3.64 | 4.24 |

| TEST CONDITIONS: @220V1300RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 67 | 17 | 20 | 15 | 0.17 | 0.21 | 4.34 | 1.09 | 1.27 |
| -30 | (-22) | 104 | 26 | 30 | 20 | 0.20 | 0.33 | 5.27 | 1.33 | 1.54 |
| -25 | (-13) | 147 | 37 | 43 | 24 | 0.23 | 0.46 | 6.10 | 1.54 | 1.79 |
| -20 | (- 4) | 199 | 50 | 58 | 29 | 0.26 | 0.62 | 6.94 | 1.75 | 2.03 |
| -15 | (+ 5) | 262 | 66 | 77 | 33 | 0.29 | 0.83 | 7.85 | 1.98 | 2.30 |
| -10 | (+14) | 340 | 86 | 100 | 38 | 0.32 | 1.07 | 8.93 | 2.25 | 2.62 |
| -5 | (+23) | 435 | 110 | 128 | 42 | 0.35 | 1.38 | 10.26 | 2.59 | 3.01 |
| 0 | (+32) | 550 | 139 | 161 | 47 | 0.37 | 1.75 | 11.93 | 3.01 | 3.49 |

| TEST CONDITIONS: @220V1600RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 126 | 32 | 37 | 21 | 0.21 | 0.39 | 6.03 | 1.52 | 1.77 |
| -30 | (-22) | 174 | 44 | 51 | 24 | 0.24 | 0.55 | 7.15 | 1.80 | 2.09 |
| -25 | (-13) | 232 | 59 | 68 | 28 | 0.26 | 0.73 | 8.32 | 2.10 | 2.44 |
| -20 | (- 4) | 301 | 76 | 88 | 32 | 0.28 | 0.95 | 9.58 | 2.41 | 2.81 |
| -15 | (+ 5) | 383 | 97 | 112 | 35 | 0.30 | 1.21 | 10.96 | 2.76 | 3.21 |
| -10 | (+14) | 478 | 120 | 140 | 38 | 0.32 | 1.51 | 12.52 | 3.16 | 3.67 |
| -5 | (+23) | 587 | 148 | 172 | 41 | 0.34 | 1.86 | 14.29 | 3.60 | 4.19 |
| 0 | (+32) | 712 | 179 | 209 | 43 | 0.36 | 2.26 | 16.31 | 4.11 | 4.78 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V1600RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 102 | 26 | 30 | 21 | 0.21 | 0.32 | 4.98 | 1.25 | 1.46 |
| -30 | (-22) | 152 | 38 | 45 | 25 | 0.24 | 0.48 | 6.08 | 1.53 | 1.78 |
| -25 | (-13) | 212 | 53 | 62 | 29 | 0.27 | 0.67 | 7.17 | 1.81 | 2.10 |
| -20 | (- 4) | 283 | 71 | 83 | 34 | 0.30 | 0.89 | 8.29 | 2.09 | 2.43 |
| -15 | (+ 5) | 366 | 92 | 107 | 39 | 0.33 | 1.15 | 9.49 | 2.39 | 2.78 |
| -10 | (+14) | 463 | 117 | 136 | 43 | 0.36 | 1.46 | 10.80 | 2.72 | 3.16 |
| -5 | (+23) | 573 | 144 | 168 | 47 | 0.40 | 1.81 | 12.25 | 3.09 | 3.59 |
| 0 | (+32) | 699 | 176 | 205 | 50 | 0.43 | 2.22 | 13.90 | 3.50 | 4.07 |

| TEST CONDITIONS: @220V1600RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 82 | 21 | 24 | 19 | 0.20 | 0.26 | 4.27 | 1.08 | 1.25 |
| -30 | (-22) | 131 | 33 | 39 | 25 | 0.24 | 0.41 | 5.33 | 1.34 | 1.56 |
| -25 | (-13) | 191 | 48 | 56 | 30 | 0.27 | 0.60 | 6.33 | 1.59 | 1.85 |
| -20 | (- 4) | 261 | 66 | 76 | 36 | 0.31 | 0.82 | 7.30 | 1.84 | 2.14 |
| -15 | (+ 5) | 343 | 86 | 100 | 41 | 0.35 | 1.08 | 8.28 | 2.09 | 2.43 |
| -10 | (+14) | 438 | 110 | 128 | 47 | 0.39 | 1.38 | 9.31 | 2.35 | 2.73 |
| -5 | (+23) | 547 | 138 | 160 | 52 | 0.43 | 1.73 | 10.44 | 2.63 | 3.06 |
| 0 | (+32) | 671 | 169 | 197 | 57 | 0.48 | 2.13 | 11.70 | 2.95 | 3.43 |

| TEST CONDITIONS: @220V2000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 159 | 40 | 47 | 26 | 0.25 | 0.50 | 6.09 | 1.54 | 1.79 |
| -30 | (-22) | 218 | 55 | 64 | 31 | 0.28 | 0.68 | 7.11 | 1.79 | 2.08 |
| -25 | (-13) | 291 | 73 | 85 | 35 | 0.31 | 0.91 | 8.22 | 2.07 | 2.41 |
| -20 | (- 4) | 380 | 96 | 111 | 40 | 0.35 | 1.19 | 9.48 | 2.39 | 2.78 |
| -15 | (+ 5) | 487 | 123 | 143 | 45 | 0.38 | 1.53 | 10.91 | 2.75 | 3.20 |
| -10 | (+14) | 615 | 155 | 180 | 49 | 0.41 | 1.94 | 12.57 | 3.17 | 3.68 |
| -5 | (+23) | 765 | 193 | 224 | 53 | 0.43 | 2.42 | 14.48 | 3.65 | 4.24 |
| 0 | (+32) | 939 | 237 | 275 | 56 | 0.45 | 2.97 | 16.68 | 4.20 | 4.89 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V2000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 139 | 35 | 41 | 26 | 0.24 | 0.44 | 5.31 | 1.34 | 1.56 |
| -30 | (-22) | 197 | 50 | 58 | 32 | 0.28 | 0.62 | 6.23 | 1.57 | 1.83 |
| -25 | (-13) | 268 | 67 | 78 | 37 | 0.32 | 0.84 | 7.18 | 1.81 | 2.10 |
| -20 | (- 4) | 353 | 89 | 103 | 43 | 0.36 | 1.11 | 8.20 | 2.07 | 2.40 |
| -15 | (+ 5) | 455 | 115 | 133 | 49 | 0.40 | 1.43 | 9.34 | 2.35 | 2.74 |
| -10 | (+14) | 576 | 145 | 169 | 54 | 0.43 | 1.82 | 10.62 | 2.68 | 3.11 |
| -5 | (+23) | 717 | 181 | 210 | 59 | 0.47 | 2.27 | 12.09 | 3.05 | 3.54 |
| 0 | (+32) | 881 | 222 | 258 | 64 | 0.50 | 2.79 | 13.79 | 3.47 | 4.04 |

| TEST CONDITIONS: @220V2000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 112 | 28 | 33 | 25 | 0.24 | 0.35 | 4.48 | 1.13 | 1.31 |
| -30 | (-22) | 172 | 43 | 51 | 32 | 0.28 | 0.54 | 5.43 | 1.37 | 1.59 |
| -25 | (-13) | 244 | 62 | 72 | 38 | 0.33 | 0.77 | 6.35 | 1.60 | 1.86 |
| -20 | (- 4) | 329 | 83 | 97 | 45 | 0.38 | 1.04 | 7.26 | 1.83 | 2.13 |
| -15 | (+ 5) | 430 | 108 | 126 | 52 | 0.43 | 1.35 | 8.22 | 2.07 | 2.41 |
| -10 | (+14) | 547 | 138 | 160 | 59 | 0.48 | 1.73 | 9.26 | 2.33 | 2.71 |
| -5 | (+23) | 683 | 172 | 200 | 66 | 0.52 | 2.16 | 10.42 | 2.63 | 3.05 |
| 0 | (+32) | 841 | 212 | 246 | 72 | 0.56 | 2.67 | 11.73 | 2.96 | 3.44 |

| TEST CONDITIONS: @220V3000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 231 | 58 | 68 | 39 | 0.33 | 0.72 | 5.85 | 1.47 | 1.71 |
| -30 | (-22) | 321 | 81 | 94 | 47 | 0.39 | 1.01 | 6.77 | 1.71 | 1.98 |
| -25 | (-13) | 434 | 109 | 127 | 56 | 0.44 | 1.36 | 7.81 | 1.97 | 2.29 |
| -20 | (- 4) | 571 | 144 | 167 | 64 | 0.50 | 1.79 | 8.96 | 2.26 | 2.63 |
| -15 | (+ 5) | 732 | 185 | 215 | 72 | 0.55 | 2.30 | 10.22 | 2.57 | 2.99 |
| -10 | (+14) | 918 | 231 | 269 | 80 | 0.60 | 2.90 | 11.58 | 2.92 | 3.39 |
| -5 | (+23) | 1130 | 285 | 331 | 86 | 0.65 | 3.57 | 13.03 | 3.28 | 3.82 |
| 0 | (+32) | 1366 | 344 | 400 | 92 | 0.69 | 4.33 | 14.57 | 3.67 | 4.27 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V3000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 207 | 52 | 61 | 40 | 0.34 | 0.65 | 5.16 | 1.30 | 1.51 |
| -30 | (-22) | 289 | 73 | 85 | 48 | 0.40 | 0.91 | 5.98 | 1.51 | 1.75 |
| -25 | (-13) | 397 | 100 | 116 | 58 | 0.46 | 1.25 | 6.89 | 1.74 | 2.02 |
| -20 | (- 4) | 531 | 134 | 156 | 67 | 0.52 | 1.67 | 7.89 | 1.99 | 2.31 |
| -15 | (+ 5) | 690 | 174 | 202 | 77 | 0.59 | 2.17 | 8.97 | 2.26 | 2.63 |
| -10 | (+14) | 877 | 221 | 257 | 87 | 0.65 | 2.77 | 10.13 | 2.55 | 2.97 |
| -5 | (+23) | 1090 | 275 | 319 | 96 | 0.71 | 3.45 | 11.36 | 2.86 | 3.33 |
| 0 | (+32) | 1330 | 335 | 390 | 105 | 0.77 | 4.22 | 12.66 | 3.19 | 3.71 |

| TEST CONDITIONS: @220V3000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 186 | 47 | 55 | 40 | 0.35 | 0.58 | 4.66 | 1.17 | 1.36 |
| -30 | (-22) | 262 | 66 | 77 | 49 | 0.41 | 0.82 | 5.41 | 1.36 | 1.59 |
| -25 | (-13) | 366 | 92 | 107 | 59 | 0.48 | 1.15 | 6.23 | 1.57 | 1.83 |
| -20 | (- 4) | 497 | 125 | 146 | 70 | 0.55 | 1.56 | 7.12 | 1.79 | 2.09 |
| -15 | (+ 5) | 655 | 165 | 192 | 81 | 0.62 | 2.06 | 8.06 | 2.03 | 2.36 |
| -10 | (+14) | 842 | 212 | 247 | 93 | 0.70 | 2.66 | 9.06 | 2.28 | 2.66 |
| -5 | (+23) | 1058 | 267 | 310 | 105 | 0.78 | 3.35 | 10.11 | 2.55 | 2.96 |
| 0 | (+32) | 1303 | 328 | 382 | 116 | 0.86 | 4.13 | 11.19 | 2.82 | 3.28 |

| TEST CONDITIONS: @220V4000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 301 | 76 | 88 | 54 | 0.44 | 0.94 | 5.58 | 1.41 | 1.63 |
| -30 | (-22) | 409 | 103 | 120 | 64 | 0.51 | 1.28 | 6.41 | 1.61 | 1.88 |
| -25 | (-13) | 545 | 137 | 160 | 74 | 0.58 | 1.71 | 7.33 | 1.85 | 2.15 |
| -20 | (- 4) | 713 | 180 | 209 | 85 | 0.65 | 2.24 | 8.37 | 2.11 | 2.45 |
| -15 | (+ 5) | 917 | 231 | 269 | 96 | 0.73 | 2.89 | 9.54 | 2.40 | 2.79 |
| -10 | (+14) | 1159 | 292 | 339 | 107 | 0.80 | 3.65 | 10.85 | 2.73 | 3.18 |
| -5 | (+23) | 1442 | 363 | 422 | 117 | 0.87 | 4.56 | 12.33 | 3.11 | 3.61 |
| 0 | (+32) | 1770 | 446 | 519 | 127 | 0.93 | 5.61 | 13.98 | 3.52 | 4.10 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V4000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 286 | 72 | 84 | 56 | 0.45 | 0.89 | 5.09 | 1.28 | 1.49 |
| -30 | (-22) | 390 | 98 | 114 | 67 | 0.52 | 1.22 | 5.85 | 1.47 | 1.71 |
| -25 | (-13) | 519 | 131 | 152 | 78 | 0.60 | 1.63 | 6.68 | 1.68 | 1.96 |
| -20 | (- 4) | 677 | 171 | 198 | 89 | 0.68 | 2.13 | 7.58 | 1.91 | 2.22 |
| -15 | (+ 5) | 868 | 219 | 254 | 101 | 0.76 | 2.73 | 8.59 | 2.16 | 2.52 |
| -10 | (+14) | 1093 | 275 | 320 | 112 | 0.84 | 3.45 | 9.71 | 2.45 | 2.84 |
| -5 | (+23) | 1357 | 342 | 398 | 124 | 0.92 | 4.29 | 10.96 | 2.76 | 3.21 |
| 0 | (+32) | 1662 | 419 | 487 | 134 | 0.99 | 5.27 | 12.36 | 3.12 | 3.62 |

| TEST CONDITIONS: @220V4000RPM | | ASHRAE32 Static | | | (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] |
| -35 | (-31) | 256 | 64 | 75 | 56 | 0.44 | 0.80 | 4.52 | 1.14 | 1.32 |
| -30 | (-22) | 358 | 90 | 105 | 68 | 0.52 | 1.12 | 5.25 | 1.32 | 1.54 |
| -25 | (-13) | 483 | 122 | 142 | 80 | 0.61 | 1.52 | 6.01 | 1.51 | 1.76 |
| -20 | (- 4) | 633 | 160 | 186 | 93 | 0.70 | 1.99 | 6.82 | 1.72 | 2.00 |
| -15 | (+ 5) | 813 | 205 | 238 | 106 | 0.80 | 2.56 | 7.70 | 1.94 | 2.26 |
| -10 | (+14) | 1024 | 258 | 300 | 118 | 0.89 | 3.23 | 8.67 | 2.18 | 2.54 |
| -5 | (+23) | 1270 | 320 | 372 | 130 | 0.98 | 4.02 | 9.74 | 2.45 | 2.85 |
| 0 | (+32) | 1555 | 392 | 456 | 142 | 1.06 | 4.93 | 10.92 | 2.75 | 3.20 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard VES | | |
| 2 Tray holder | Yes | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 79° up + 0° back | | |
| 3.2 DISCHARGE | 5.1 +0.10/+0.00 | [mm] | (0.201" +0.004"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted 47° up + 24° to Back | | |
| 3.3 PROCESS | 6 +0.08/-0.08 | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material | Copper(OD) | | |
| 3.3.2 Shape | Slanted 47° up + 59° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |