

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | VES F9C |
| Nominal Voltage/Frequency | 230 V 32-150 Hz |
| Engineering Number | 513907070 |

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 | 9.04 | [cm ³] (0.552 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 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) | 6.8 | [kg] (14.99 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] | |
| 160 | 40 | 47 | 25 | 0.24 | 0.50 | 6.48 | 1.63 | 1.90 | |

| | | | | | | | | | |
|----------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|--|
| 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] | |
| 225 | 57 | 66 | 34 | 0.30 | 0.71 | 6.62 | 1.67 | 1.94 | |

| | | | | | | | | | |
|----------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|--|
| 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] | |
| 362 | 91 | 106 | 55 | 0.44 | 1.14 | 6.63 | 1.67 | 1.94 | |

| | | | | | | | | | |
|----------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|--|
| 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] | |
| 641 | 162 | 188 | 105 | 0.81 | 2.01 | 6.10 | 1.54 | 1.79 | |

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) | 98 | 25 | 29 | 15 | 0.17 | 0.31 | 6.32 | 1.59 | 1.85 |
| -30 | (-22) | 133 | 34 | 39 | 18 | 0.19 | 0.42 | 7.27 | 1.83 | 2.13 |
| -25 | (-13) | 175 | 44 | 51 | 21 | 0.21 | 0.55 | 8.33 | 2.10 | 2.44 |
| -20 | (- 4) | 226 | 57 | 66 | 24 | 0.23 | 0.71 | 9.54 | 2.40 | 2.79 |
| -15 | (+ 5) | 287 | 72 | 84 | 26 | 0.24 | 0.90 | 10.95 | 2.76 | 3.21 |
| -10 | (+14) | 360 | 91 | 105 | 29 | 0.26 | 1.13 | 12.62 | 3.18 | 3.70 |
| -5 | (+23) | 446 | 112 | 131 | 30 | 0.28 | 1.41 | 14.60 | 3.68 | 4.28 |
| 0 | (+32) | 547 | 138 | 160 | 32 | 0.30 | 1.73 | 16.94 | 4.27 | 4.96 |

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) | 87 | 22 | 26 | 16 | 0.17 | 0.27 | 5.46 | 1.38 | 1.60 |
| -30 | (-22) | 121 | 30 | 35 | 19 | 0.20 | 0.38 | 6.27 | 1.58 | 1.84 |
| -25 | (-13) | 161 | 41 | 47 | 23 | 0.22 | 0.51 | 7.11 | 1.79 | 2.08 |
| -20 | (- 4) | 211 | 53 | 62 | 26 | 0.24 | 0.66 | 8.03 | 2.02 | 2.35 |
| -15 | (+ 5) | 272 | 68 | 80 | 30 | 0.26 | 0.85 | 9.08 | 2.29 | 2.66 |
| -10 | (+14) | 344 | 87 | 101 | 33 | 0.28 | 1.09 | 10.32 | 2.60 | 3.02 |
| -5 | (+23) | 431 | 109 | 126 | 37 | 0.31 | 1.36 | 11.79 | 2.97 | 3.45 |
| 0 | (+32) | 533 | 134 | 156 | 40 | 0.34 | 1.69 | 13.54 | 3.41 | 3.97 |

| 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) | 70 | 18 | 21 | 16 | 0.17 | 0.22 | 4.36 | 1.10 | 1.28 |
| -30 | (-22) | 102 | 26 | 30 | 20 | 0.20 | 0.32 | 5.19 | 1.31 | 1.52 |
| -25 | (-13) | 142 | 36 | 42 | 24 | 0.22 | 0.45 | 5.98 | 1.51 | 1.75 |
| -20 | (- 4) | 192 | 48 | 56 | 28 | 0.25 | 0.60 | 6.77 | 1.71 | 1.98 |
| -15 | (+ 5) | 252 | 64 | 74 | 33 | 0.28 | 0.79 | 7.62 | 1.92 | 2.23 |
| -10 | (+14) | 326 | 82 | 95 | 38 | 0.31 | 1.03 | 8.58 | 2.16 | 2.51 |
| -5 | (+23) | 413 | 104 | 121 | 43 | 0.34 | 1.31 | 9.70 | 2.45 | 2.84 |
| 0 | (+32) | 517 | 130 | 152 | 47 | 0.38 | 1.64 | 11.04 | 2.78 | 3.24 |

| 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) | 137 | 35 | 40 | 21 | 0.20 | 0.43 | 6.40 | 1.61 | 1.87 |
| -30 | (-22) | 185 | 47 | 54 | 25 | 0.22 | 0.58 | 7.36 | 1.85 | 2.16 |
| -25 | (-13) | 243 | 61 | 71 | 29 | 0.25 | 0.76 | 8.44 | 2.13 | 2.47 |
| -20 | (- 4) | 314 | 79 | 92 | 32 | 0.27 | 0.99 | 9.67 | 2.44 | 2.83 |
| -15 | (+ 5) | 398 | 100 | 117 | 36 | 0.30 | 1.25 | 11.08 | 2.79 | 3.25 |
| -10 | (+14) | 499 | 126 | 146 | 39 | 0.33 | 1.57 | 12.69 | 3.20 | 3.72 |
| -5 | (+23) | 617 | 155 | 181 | 42 | 0.36 | 1.95 | 14.55 | 3.67 | 4.26 |
| 0 | (+32) | 754 | 190 | 221 | 45 | 0.39 | 2.39 | 16.68 | 4.20 | 4.89 |

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) | 123 | 31 | 36 | 22 | 0.21 | 0.38 | 5.59 | 1.41 | 1.64 |
| -30 | (-22) | 170 | 43 | 50 | 26 | 0.24 | 0.53 | 6.43 | 1.62 | 1.88 |
| -25 | (-13) | 227 | 57 | 66 | 31 | 0.27 | 0.71 | 7.32 | 1.85 | 2.15 |
| -20 | (- 4) | 296 | 75 | 87 | 36 | 0.30 | 0.93 | 8.30 | 2.09 | 2.43 |
| -15 | (+ 5) | 379 | 95 | 111 | 40 | 0.33 | 1.19 | 9.40 | 2.37 | 2.75 |
| -10 | (+14) | 477 | 120 | 140 | 45 | 0.36 | 1.51 | 10.64 | 2.68 | 3.12 |
| -5 | (+23) | 593 | 149 | 174 | 49 | 0.40 | 1.87 | 12.06 | 3.04 | 3.53 |
| 0 | (+32) | 728 | 183 | 213 | 54 | 0.44 | 2.31 | 13.69 | 3.45 | 4.01 |

| 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) | 104 | 26 | 31 | 22 | 0.21 | 0.33 | 4.78 | 1.20 | 1.40 |
| -30 | (-22) | 150 | 38 | 44 | 27 | 0.25 | 0.47 | 5.57 | 1.40 | 1.63 |
| -25 | (-13) | 205 | 52 | 60 | 32 | 0.28 | 0.64 | 6.35 | 1.60 | 1.86 |
| -20 | (- 4) | 272 | 69 | 80 | 38 | 0.32 | 0.85 | 7.16 | 1.80 | 2.10 |
| -15 | (+ 5) | 352 | 89 | 103 | 44 | 0.36 | 1.11 | 8.02 | 2.02 | 2.35 |
| -10 | (+14) | 447 | 113 | 131 | 50 | 0.40 | 1.41 | 8.96 | 2.26 | 2.63 |
| -5 | (+23) | 560 | 141 | 164 | 56 | 0.44 | 1.77 | 10.02 | 2.52 | 2.94 |
| 0 | (+32) | 691 | 174 | 202 | 62 | 0.49 | 2.19 | 11.22 | 2.83 | 3.29 |

| 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) | 167 | 42 | 49 | 26 | 0.24 | 0.52 | 6.36 | 1.60 | 1.86 |
| -30 | (-22) | 225 | 57 | 66 | 31 | 0.27 | 0.70 | 7.25 | 1.83 | 2.13 |
| -25 | (-13) | 296 | 75 | 87 | 36 | 0.31 | 0.93 | 8.30 | 2.09 | 2.43 |
| -20 | (- 4) | 384 | 97 | 112 | 40 | 0.34 | 1.21 | 9.51 | 2.40 | 2.79 |
| -15 | (+ 5) | 489 | 123 | 143 | 45 | 0.37 | 1.54 | 10.90 | 2.75 | 3.19 |
| -10 | (+14) | 613 | 154 | 180 | 49 | 0.40 | 1.93 | 12.49 | 3.15 | 3.66 |
| -5 | (+23) | 757 | 191 | 222 | 53 | 0.42 | 2.39 | 14.29 | 3.60 | 4.19 |
| 0 | (+32) | 924 | 233 | 271 | 56 | 0.44 | 2.93 | 16.32 | 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) | 155 | 39 | 45 | 27 | 0.25 | 0.48 | 5.67 | 1.43 | 1.66 |
| -30 | (-22) | 210 | 53 | 61 | 33 | 0.28 | 0.66 | 6.42 | 1.62 | 1.88 |
| -25 | (-13) | 279 | 70 | 82 | 38 | 0.32 | 0.88 | 7.27 | 1.83 | 2.13 |
| -20 | (- 4) | 364 | 92 | 107 | 44 | 0.36 | 1.14 | 8.24 | 2.08 | 2.41 |
| -15 | (+ 5) | 466 | 117 | 136 | 50 | 0.40 | 1.47 | 9.32 | 2.35 | 2.73 |
| -10 | (+14) | 586 | 148 | 172 | 55 | 0.44 | 1.85 | 10.56 | 2.66 | 3.09 |
| -5 | (+23) | 726 | 183 | 213 | 61 | 0.48 | 2.30 | 11.95 | 3.01 | 3.50 |
| 0 | (+32) | 888 | 224 | 260 | 66 | 0.51 | 2.81 | 13.52 | 3.41 | 3.96 |

| 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) | 133 | 34 | 39 | 27 | 0.25 | 0.42 | 4.85 | 1.22 | 1.42 |
| -30 | (-22) | 188 | 47 | 55 | 34 | 0.29 | 0.59 | 5.58 | 1.41 | 1.63 |
| -25 | (-13) | 256 | 64 | 75 | 40 | 0.33 | 0.80 | 6.35 | 1.60 | 1.86 |
| -20 | (- 4) | 339 | 85 | 99 | 47 | 0.38 | 1.07 | 7.17 | 1.81 | 2.10 |
| -15 | (+ 5) | 439 | 111 | 129 | 54 | 0.43 | 1.38 | 8.08 | 2.04 | 2.37 |
| -10 | (+14) | 556 | 140 | 163 | 61 | 0.48 | 1.76 | 9.07 | 2.28 | 2.66 |
| -5 | (+23) | 694 | 175 | 203 | 68 | 0.53 | 2.19 | 10.16 | 2.56 | 2.98 |
| 0 | (+32) | 852 | 215 | 250 | 75 | 0.58 | 2.70 | 11.39 | 2.87 | 3.34 |

| 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) | 211 | 53 | 62 | 33 | 0.29 | 0.66 | 6.31 | 1.59 | 1.85 |
| -30 | (-22) | 281 | 71 | 82 | 39 | 0.33 | 0.88 | 7.17 | 1.81 | 2.10 |
| -25 | (-13) | 367 | 92 | 108 | 45 | 0.37 | 1.15 | 8.15 | 2.05 | 2.39 |
| -20 | (- 4) | 472 | 119 | 138 | 51 | 0.41 | 1.48 | 9.27 | 2.34 | 2.72 |
| -15 | (+ 5) | 599 | 151 | 175 | 57 | 0.45 | 1.88 | 10.53 | 2.65 | 3.08 |
| -10 | (+14) | 749 | 189 | 220 | 63 | 0.49 | 2.36 | 11.95 | 3.01 | 3.50 |
| -5 | (+23) | 926 | 233 | 271 | 68 | 0.53 | 2.93 | 13.55 | 3.42 | 3.97 |
| 0 | (+32) | 1131 | 285 | 331 | 74 | 0.57 | 3.58 | 15.35 | 3.87 | 4.50 |

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) | 194 | 49 | 57 | 35 | 0.30 | 0.61 | 5.62 | 1.42 | 1.65 |
| -30 | (-22) | 265 | 67 | 78 | 42 | 0.34 | 0.83 | 6.39 | 1.61 | 1.87 |
| -25 | (-13) | 352 | 89 | 103 | 49 | 0.39 | 1.10 | 7.24 | 1.82 | 2.12 |
| -20 | (- 4) | 456 | 115 | 134 | 56 | 0.44 | 1.43 | 8.18 | 2.06 | 2.40 |
| -15 | (+ 5) | 581 | 146 | 170 | 63 | 0.49 | 1.83 | 9.22 | 2.32 | 2.70 |
| -10 | (+14) | 728 | 184 | 213 | 70 | 0.54 | 2.30 | 10.38 | 2.62 | 3.04 |
| -5 | (+23) | 901 | 227 | 264 | 77 | 0.59 | 2.85 | 11.67 | 2.94 | 3.42 |
| 0 | (+32) | 1100 | 277 | 322 | 84 | 0.64 | 3.49 | 13.11 | 3.30 | 3.84 |

| 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) | 169 | 43 | 50 | 34 | 0.29 | 0.53 | 4.96 | 1.25 | 1.45 |
| -30 | (-22) | 242 | 61 | 71 | 42 | 0.35 | 0.76 | 5.69 | 1.43 | 1.67 |
| -25 | (-13) | 329 | 83 | 96 | 51 | 0.41 | 1.03 | 6.45 | 1.63 | 1.89 |
| -20 | (- 4) | 432 | 109 | 127 | 60 | 0.47 | 1.36 | 7.26 | 1.83 | 2.13 |
| -15 | (+ 5) | 555 | 140 | 163 | 68 | 0.54 | 1.75 | 8.13 | 2.05 | 2.38 |
| -10 | (+14) | 699 | 176 | 205 | 77 | 0.60 | 2.21 | 9.08 | 2.29 | 2.66 |
| -5 | (+23) | 867 | 218 | 254 | 86 | 0.67 | 2.74 | 10.12 | 2.55 | 2.97 |
| 0 | (+32) | 1061 | 267 | 311 | 94 | 0.74 | 3.36 | 11.26 | 2.84 | 3.30 |

| 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) | 309 | 78 | 90 | 52 | 0.43 | 0.97 | 5.94 | 1.50 | 1.74 |
| -30 | (-22) | 422 | 106 | 124 | 61 | 0.50 | 1.32 | 6.87 | 1.73 | 2.01 |
| -25 | (-13) | 556 | 140 | 163 | 71 | 0.57 | 1.74 | 7.83 | 1.97 | 2.29 |
| -20 | (- 4) | 714 | 180 | 209 | 81 | 0.64 | 2.24 | 8.83 | 2.23 | 2.59 |
| -15 | (+ 5) | 900 | 227 | 264 | 91 | 0.71 | 2.83 | 9.91 | 2.50 | 2.90 |
| -10 | (+14) | 1118 | 282 | 327 | 101 | 0.78 | 3.52 | 11.09 | 2.79 | 3.25 |
| -5 | (+23) | 1372 | 346 | 402 | 110 | 0.85 | 4.34 | 12.40 | 3.13 | 3.63 |
| 0 | (+32) | 1666 | 420 | 488 | 120 | 0.91 | 5.28 | 13.87 | 3.50 | 4.07 |

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) | 282 | 71 | 83 | 53 | 0.43 | 0.88 | 5.35 | 1.35 | 1.57 |
| -30 | (-22) | 395 | 100 | 116 | 64 | 0.52 | 1.24 | 6.17 | 1.55 | 1.81 |
| -25 | (-13) | 528 | 133 | 155 | 75 | 0.61 | 1.66 | 7.00 | 1.76 | 2.05 |
| -20 | (- 4) | 686 | 173 | 201 | 87 | 0.70 | 2.16 | 7.86 | 1.98 | 2.30 |
| -15 | (+ 5) | 873 | 220 | 256 | 99 | 0.79 | 2.75 | 8.79 | 2.21 | 2.57 |
| -10 | (+14) | 1093 | 275 | 320 | 112 | 0.88 | 3.45 | 9.80 | 2.47 | 2.87 |
| -5 | (+23) | 1349 | 340 | 395 | 124 | 0.97 | 4.27 | 10.92 | 2.75 | 3.20 |
| 0 | (+32) | 1647 | 415 | 482 | 135 | 1.06 | 5.22 | 12.20 | 3.07 | 3.57 |

| 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) | 248 | 63 | 73 | 52 | 0.43 | 0.78 | 4.77 | 1.20 | 1.40 |
| -30 | (-22) | 359 | 91 | 105 | 65 | 0.52 | 1.13 | 5.52 | 1.39 | 1.62 |
| -25 | (-13) | 492 | 124 | 144 | 78 | 0.62 | 1.54 | 6.26 | 1.58 | 1.84 |
| -20 | (- 4) | 649 | 164 | 190 | 92 | 0.73 | 2.04 | 7.03 | 1.77 | 2.06 |
| -15 | (+ 5) | 836 | 211 | 245 | 107 | 0.84 | 2.63 | 7.83 | 1.97 | 2.30 |
| -10 | (+14) | 1056 | 266 | 310 | 121 | 0.95 | 3.33 | 8.71 | 2.20 | 2.55 |
| -5 | (+23) | 1314 | 331 | 385 | 136 | 1.06 | 4.16 | 9.70 | 2.44 | 2.84 |
| 0 | (+32) | 1613 | 407 | 473 | 150 | 1.17 | 5.12 | 10.81 | 2.72 | 3.17 |

| 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) | 384 | 97 | 112 | 70 | 0.54 | 1.20 | 5.52 | 1.39 | 1.62 |
| -30 | (-22) | 503 | 127 | 147 | 82 | 0.64 | 1.57 | 6.16 | 1.55 | 1.81 |
| -25 | (-13) | 666 | 168 | 195 | 95 | 0.73 | 2.09 | 7.01 | 1.77 | 2.06 |
| -20 | (- 4) | 873 | 220 | 256 | 108 | 0.82 | 2.74 | 8.04 | 2.03 | 2.35 |
| -15 | (+ 5) | 1122 | 283 | 329 | 122 | 0.91 | 3.53 | 9.19 | 2.31 | 2.69 |
| -10 | (+14) | 1413 | 356 | 414 | 136 | 1.01 | 4.46 | 10.42 | 2.63 | 3.05 |
| -5 | (+23) | 1743 | 439 | 511 | 149 | 1.10 | 5.51 | 11.71 | 2.95 | 3.43 |
| 0 | (+32) | 2113 | 532 | 619 | 162 | 1.19 | 6.70 | 13.01 | 3.28 | 3.81 |

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) | 372 | 94 | 109 | 72 | 0.57 | 1.16 | 5.14 | 1.30 | 1.51 |
| -30 | (-22) | 484 | 122 | 142 | 85 | 0.68 | 1.52 | 5.71 | 1.44 | 1.67 |
| -25 | (-13) | 637 | 161 | 187 | 99 | 0.78 | 2.00 | 6.46 | 1.63 | 1.89 |
| -20 | (- 4) | 830 | 209 | 243 | 113 | 0.88 | 2.61 | 7.36 | 1.85 | 2.16 |
| -15 | (+ 5) | 1062 | 268 | 311 | 127 | 0.99 | 3.34 | 8.35 | 2.10 | 2.45 |
| -10 | (+14) | 1332 | 336 | 390 | 142 | 1.09 | 4.20 | 9.40 | 2.37 | 2.75 |
| -5 | (+23) | 1639 | 413 | 480 | 157 | 1.20 | 5.18 | 10.47 | 2.64 | 3.07 |
| 0 | (+32) | 1981 | 499 | 580 | 171 | 1.32 | 6.28 | 11.51 | 2.90 | 3.37 |

| 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) | 347 | 87 | 102 | 73 | 0.58 | 1.08 | 4.72 | 1.19 | 1.38 |
| -30 | (-22) | 456 | 115 | 134 | 87 | 0.68 | 1.43 | 5.24 | 1.32 | 1.54 |
| -25 | (-13) | 603 | 152 | 177 | 102 | 0.79 | 1.89 | 5.92 | 1.49 | 1.73 |
| -20 | (- 4) | 786 | 198 | 230 | 117 | 0.90 | 2.47 | 6.70 | 1.69 | 1.96 |
| -15 | (+ 5) | 1005 | 253 | 295 | 133 | 1.02 | 3.17 | 7.55 | 1.90 | 2.21 |
| -10 | (+14) | 1259 | 317 | 369 | 149 | 1.14 | 3.97 | 8.44 | 2.13 | 2.47 |
| -5 | (+23) | 1545 | 389 | 453 | 166 | 1.27 | 4.89 | 9.31 | 2.35 | 2.73 |
| 0 | (+32) | 1864 | 470 | 546 | 182 | 1.40 | 5.91 | 10.14 | 2.55 | 2.97 |

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 45° up + 15° to Back | | |
| 3.2 DISCHARGE | 4.9 +0.10/-0.05 | [mm] | (0.193" +0.004"/-0.002") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted 0° 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 | | |