

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | VEG Z11C |
| Nominal Voltage/Frequency | 230 V 53-120 Hz |
| Engineering Number | 513802041 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 230 / 53-120 | [V / Hz] | |
| 4 Application type | Low Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -10°C | (-31°F to 14°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 | 187 to 255 V | 187 to 255 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 187 to 255 V | 187 to 255 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 | 1/4 | [hp] |
| 2 Displacement | 11.14 | [cm ³] (0.680 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 21.000 | |
| 3 Lubricant charge | 430 | [ml] (14.54 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 10.99 | [kg] (24.23 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|-----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 230 V 53-120 Hz 3 ~ (Three phase) | |
| 2 Starting device type | Inverter | |
| 2.1 Starting device | VCC32456XXXX | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | VCC32456XXXXX | |
| 6 Start winding resistance | 8.06 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 8.06 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - UKCA - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| 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] |
| 450 | 113 | 132 | 70 | 0.64 | 1.41 | 6.47 | 1.63 | 1.90 |

| | | | | | | | | |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V3600RPM | | | 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] |
| 849 | 214 | 249 | 134 | 1.16 | 2.67 | 6.33 | 1.60 | 1.85 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|----------------------------------|----------------------------|----------|--------------------|-----------------------------|---------------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 236 | 59 | 69 | 36 | 0.36 | 0.74 | 6.62 | 1.67 | 1.94 |
| -30 (-22) | 293 | 74 | 86 | 42 | 0.40 | 0.92 | 7.13 | 1.80 | 2.09 |
| -25 (-13) | 371 | 94 | 109 | 47 | 0.46 | 1.16 | 7.91 | 1.99 | 2.32 |
| -20 (- 4) | 480 | 121 | 141 | 54 | 0.53 | 1.51 | 8.94 | 2.25 | 2.62 |
| -15 (+ 5) | 628 | 158 | 184 | 61 | 0.60 | 1.98 | 10.22 | 2.58 | 3.00 |
| -10 (+14) | 826 | 208 | 242 | 70 | 0.69 | 2.61 | 11.73 | 2.96 | 3.44 |

| | | | | | | | | | |
|----------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 230 | 58 | 68 | 39 | 0.38 | 0.72 | 5.88 | 1.48 | 1.72 |
| -30 (-22) | 292 | 73 | 85 | 46 | 0.43 | 0.91 | 6.32 | 1.59 | 1.85 |
| -25 (-13) | 367 | 92 | 107 | 53 | 0.49 | 1.15 | 7.00 | 1.76 | 2.05 |
| -20 (- 4) | 465 | 117 | 136 | 59 | 0.56 | 1.46 | 7.88 | 1.99 | 2.31 |
| -15 (+ 5) | 597 | 150 | 175 | 67 | 0.65 | 1.88 | 8.96 | 2.26 | 2.63 |
| -10 (+14) | 771 | 194 | 226 | 75 | 0.75 | 2.43 | 10.22 | 2.57 | 2.99 |

E - PERFORMANCE - CURVES

| 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) | 215 | 54 | 63 | 41 | 0.39 | 0.67 | 5.28 | 1.33 | 1.55 | |
| -30 (-22) | 284 | 72 | 83 | 49 | 0.45 | 0.89 | 5.70 | 1.44 | 1.67 | |
| -25 (-13) | 360 | 91 | 106 | 57 | 0.53 | 1.13 | 6.31 | 1.59 | 1.85 | |
| -20 (- 4) | 453 | 114 | 133 | 64 | 0.62 | 1.42 | 7.08 | 1.78 | 2.07 | |
| -15 (+ 5) | 572 | 144 | 168 | 72 | 0.73 | 1.80 | 8.00 | 2.02 | 2.34 | |
| -10 (+14) | 727 | 183 | 213 | 80 | 0.85 | 2.29 | 9.05 | 2.28 | 2.65 | |

| TEST CONDITIONS: @220V1600RPM | | ASHRAE32 Static | | | (Condensing temperature 65°C (+149°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) | 187 | 47 | 55 | 40 | 0.40 | 0.59 | 4.72 | 1.19 | 1.38 | |
| -30 (-22) | 269 | 68 | 79 | 51 | 0.48 | 0.84 | 5.16 | 1.30 | 1.51 | |
| -25 (-13) | 350 | 88 | 103 | 60 | 0.58 | 1.10 | 5.73 | 1.44 | 1.68 | |
| -20 (- 4) | 441 | 111 | 129 | 69 | 0.71 | 1.39 | 6.43 | 1.62 | 1.88 | |
| -15 (+ 5) | 552 | 139 | 162 | 77 | 0.85 | 1.74 | 7.23 | 1.82 | 2.12 | |
| -10 (+14) | 691 | 174 | 203 | 86 | 1.01 | 2.18 | 8.12 | 2.05 | 2.38 | |

| 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) | 287 | 72 | 84 | 44 | 0.45 | 0.90 | 6.53 | 1.65 | 1.91 | |
| -30 (-22) | 360 | 91 | 105 | 51 | 0.50 | 1.13 | 7.01 | 1.77 | 2.06 | |
| -25 (-13) | 462 | 116 | 135 | 59 | 0.56 | 1.45 | 7.82 | 1.97 | 2.29 | |
| -20 (- 4) | 594 | 150 | 174 | 67 | 0.64 | 1.87 | 8.91 | 2.24 | 2.61 | |
| -15 (+ 5) | 755 | 190 | 221 | 74 | 0.73 | 2.38 | 10.24 | 2.58 | 3.00 | |
| -10 (+14) | 946 | 238 | 277 | 81 | 0.84 | 2.98 | 11.78 | 2.97 | 3.45 | |

| 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) | 266 | 67 | 78 | 47 | 0.46 | 0.83 | 5.73 | 1.44 | 1.68 | |
| -30 (-22) | 339 | 85 | 99 | 55 | 0.52 | 1.06 | 6.18 | 1.56 | 1.81 | |
| -25 (-13) | 442 | 111 | 129 | 64 | 0.59 | 1.39 | 6.91 | 1.74 | 2.02 | |
| -20 (- 4) | 574 | 145 | 168 | 72 | 0.68 | 1.80 | 7.87 | 1.98 | 2.31 | |
| -15 (+ 5) | 735 | 185 | 215 | 81 | 0.79 | 2.31 | 9.03 | 2.28 | 2.65 | |
| -10 (+14) | 926 | 233 | 271 | 90 | 0.90 | 2.92 | 10.35 | 2.61 | 3.03 | |

E - PERFORMANCE - CURVES

| 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) | 256 | 65 | 75 | 49 | 0.47 | 0.80 | 5.29 | 1.33 | 1.55 | |
| -30 (-22) | 326 | 82 | 96 | 57 | 0.54 | 1.02 | 5.70 | 1.44 | 1.67 | |
| -25 (-13) | 425 | 107 | 125 | 67 | 0.62 | 1.33 | 6.34 | 1.60 | 1.86 | |
| -20 (- 4) | 554 | 140 | 162 | 77 | 0.73 | 1.74 | 7.16 | 1.80 | 2.10 | |
| -15 (+ 5) | 712 | 179 | 209 | 87 | 0.84 | 2.24 | 8.13 | 2.05 | 2.38 | |
| -10 (+14) | 899 | 226 | 263 | 98 | 0.97 | 2.84 | 9.20 | 2.32 | 2.70 | |

| TEST CONDITIONS: @220V2000RPM | | ASHRAE32 Static | | | (Condensing temperature 65°C (+149°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) | 249 | 63 | 73 | 49 | 0.49 | 0.78 | 5.03 | 1.27 | 1.47 | |
| -30 (-22) | 312 | 79 | 91 | 58 | 0.57 | 0.98 | 5.38 | 1.36 | 1.58 | |
| -25 (-13) | 404 | 102 | 118 | 69 | 0.67 | 1.27 | 5.91 | 1.49 | 1.73 | |
| -20 (- 4) | 525 | 132 | 154 | 80 | 0.78 | 1.65 | 6.57 | 1.66 | 1.93 | |
| -15 (+ 5) | 676 | 170 | 198 | 93 | 0.91 | 2.13 | 7.33 | 1.85 | 2.15 | |
| -10 (+14) | 856 | 216 | 251 | 105 | 1.04 | 2.70 | 8.15 | 2.05 | 2.39 | |

| TEST CONDITIONS: @220V3600RPM | | 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) | 497 | 125 | 146 | 88 | 0.87 | 1.56 | 5.59 | 1.41 | 1.64 | |
| -30 (-22) | 617 | 155 | 181 | 101 | 0.94 | 1.93 | 6.18 | 1.56 | 1.81 | |
| -25 (-13) | 793 | 200 | 232 | 113 | 1.05 | 2.49 | 7.03 | 1.77 | 2.06 | |
| -20 (- 4) | 1022 | 257 | 299 | 126 | 1.17 | 3.21 | 8.12 | 2.05 | 2.38 | |
| -15 (+ 5) | 1299 | 327 | 381 | 138 | 1.29 | 4.09 | 9.40 | 2.37 | 2.76 | |
| -10 (+14) | 1622 | 409 | 475 | 150 | 1.39 | 5.11 | 10.84 | 2.73 | 3.18 | |

| TEST CONDITIONS: @220V3600RPM | | 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) | 477 | 120 | 140 | 93 | 0.86 | 1.49 | 5.18 | 1.30 | 1.52 | |
| -30 (-22) | 607 | 153 | 178 | 106 | 0.95 | 1.90 | 5.73 | 1.44 | 1.68 | |
| -25 (-13) | 788 | 199 | 231 | 121 | 1.08 | 2.47 | 6.49 | 1.64 | 1.90 | |
| -20 (- 4) | 1017 | 256 | 298 | 136 | 1.23 | 3.20 | 7.43 | 1.87 | 2.18 | |
| -15 (+ 5) | 1290 | 325 | 378 | 151 | 1.37 | 4.06 | 8.50 | 2.14 | 2.49 | |
| -10 (+14) | 1602 | 404 | 469 | 166 | 1.49 | 5.05 | 9.67 | 2.44 | 2.83 | |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V3600RPM | | 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) | 460 | 116 | 135 | 96 | 0.88 | 1.44 | 4.83 | 1.22 | 1.42 |
| -30 | (-22) | 595 | 150 | 174 | 111 | 0.99 | 1.87 | 5.35 | 1.35 | 1.57 |
| -25 | (-13) | 777 | 196 | 228 | 128 | 1.13 | 2.44 | 6.02 | 1.52 | 1.77 |
| -20 | (- 4) | 1001 | 252 | 293 | 146 | 1.28 | 3.15 | 6.81 | 1.72 | 1.99 |
| -15 | (+ 5) | 1264 | 319 | 370 | 164 | 1.43 | 3.98 | 7.67 | 1.93 | 2.25 |
| -10 | (+14) | 1561 | 393 | 457 | 183 | 1.55 | 4.93 | 8.56 | 2.16 | 2.51 |

| TEST CONDITIONS: @220V3600RPM | | ASHRAE32 Static | | | (Condensing temperature 65°C (+149°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) | 445 | 112 | 130 | 97 | 0.95 | 1.39 | 4.55 | 1.15 | 1.33 |
| -30 | (-22) | 581 | 147 | 170 | 116 | 1.05 | 1.82 | 5.03 | 1.27 | 1.47 |
| -25 | (-13) | 759 | 191 | 222 | 135 | 1.19 | 2.38 | 5.61 | 1.41 | 1.64 |
| -20 | (- 4) | 973 | 245 | 285 | 157 | 1.33 | 3.06 | 6.24 | 1.57 | 1.83 |
| -15 | (+ 5) | 1221 | 308 | 358 | 178 | 1.47 | 3.85 | 6.88 | 1.73 | 2.02 |
| -10 | (+14) | 1498 | 378 | 439 | 200 | 1.58 | 4.73 | 7.51 | 1.89 | 2.20 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 8.2 +0.12/-0.08 | [mm] | (0.323" +0.005"/-0.003") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Straight | | |
| 3.2 DISCHARGE | 4.94 +0.08/-0.08 | [mm] | (0.194" +0.003"/-0.003") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Straight | | |
| 3.3 PROCESS | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |