

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | VEG Z6H |
| Nominal Voltage/Frequency | 230 V 53-150 Hz |
| Engineering Number | 513802044 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 230 / 53-150 | [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 pressures/temperature | | | |
| 9.1 Operating (gauge) | 16.2 | [kgf/cm ²] (230 psig) | / °C - °F |
| 9.2 Peak (gauge) | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/5 | [hp] |
| 2 Displacement | 6.36 | [cm ³] (0.388 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 16.000 | |
| 3 Lubricant charge | 430 | [ml] (14.54 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 10.05 | [kg] (22.16 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 | 230 V 53-150 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 | 6.40 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 6.40 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | 3.30 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | 3.30 | [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 | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | | |
|---|----------|-----|-------------------------------------|-------------------------------|---|---------------------------|--|-------|--|
| TEST CONDITIONS: @230V1600RPM | | | 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] | |
| 344 | 87 | 101 | 58 | 0.81 | 1.95 | 5.94 | 1.50 | 1.74 | |

| | | | | | | | | | |
|---|----------|-----|-------------------------------------|-------------------------------|---|---------------------------|--|-------|--|
| TEST CONDITIONS: @230V2000RPM | | | 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] | |
| 428 | 108 | 125 | 71 | 0.97 | 2.43 | 6.02 | 1.52 | 1.76 | |

| | | | | | | | | | |
|---|----------|-----|-------------------------------------|-------------------------------|---|---------------------------|--|-------|--|
| TEST CONDITIONS: @230V3000RPM | | | 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] | |
| 660 | 166 | 193 | 111 | 1.46 | 3.75 | 5.92 | 1.49 | 1.73 | |

| | | | | | | | | | |
|---|----------|-----|-------------------------------------|-------------------------------|---|---------------------------|--|-------|--|
| TEST CONDITIONS: @230V4500RPM | | | 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] | |
| 900 | 227 | 264 | 161 | 2.06 | 5.11 | 5.60 | 1.41 | 1.64 | |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|---|----------------------------|----------------------------------|---------|-----------------------------|-------------------------------|---|---------------------------|--------|----------|-----------|
| TEST CONDITIONS: @230V1600RPM | | 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) | 214 | 54 | 63 | 36 | 0.47 | 1.21 | 5.88 | 1.48 | 1.72 |
| -30 | (-22) | 294 | 74 | 86 | 44 | 0.58 | 1.67 | 6.68 | 1.68 | 1.96 |
| -25 | (-13) | 382 | 96 | 112 | 51 | 0.68 | 2.17 | 7.54 | 1.90 | 2.21 |
| -20 | (- 4) | 483 | 122 | 142 | 57 | 0.76 | 2.75 | 8.52 | 2.15 | 2.50 |
| -15 | (+ 5) | 602 | 152 | 176 | 62 | 0.83 | 3.44 | 9.70 | 2.45 | 2.84 |
| -10 | (+14) | 744 | 188 | 218 | 67 | 0.90 | 4.26 | 11.15 | 2.81 | 3.27 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @230V1600RPM | | 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) | 189 | 48 | 55 | 36 | 0.48 | 1.07 | 5.26 | 1.32 | 1.54 |
| -30 | (-22) | 267 | 67 | 78 | 44 | 0.58 | 1.51 | 6.01 | 1.51 | 1.76 |
| -25 | (-13) | 353 | 89 | 104 | 52 | 0.69 | 2.01 | 6.73 | 1.69 | 1.97 |
| -20 | (- 4) | 454 | 114 | 133 | 60 | 0.80 | 2.58 | 7.48 | 1.88 | 2.19 |
| -15 | (+ 5) | 573 | 145 | 168 | 68 | 0.91 | 3.27 | 8.33 | 2.10 | 2.44 |
| -10 | (+14) | 718 | 181 | 210 | 76 | 1.02 | 4.11 | 9.36 | 2.36 | 2.74 |

| TEST CONDITIONS: @230V1600RPM | | 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) | 154 | 39 | 45 | 37 | 0.52 | 0.87 | 4.18 | 1.05 | 1.23 |
| -30 | (-22) | 228 | 57 | 67 | 45 | 0.61 | 1.29 | 5.04 | 1.27 | 1.48 |
| -25 | (-13) | 311 | 78 | 91 | 54 | 0.71 | 1.77 | 5.76 | 1.45 | 1.69 |
| -20 | (- 4) | 410 | 103 | 120 | 64 | 0.83 | 2.33 | 6.43 | 1.62 | 1.88 |
| -15 | (+ 5) | 529 | 133 | 155 | 74 | 0.97 | 3.02 | 7.11 | 1.79 | 2.08 |
| -10 | (+14) | 674 | 170 | 197 | 85 | 1.13 | 3.86 | 7.86 | 1.98 | 2.30 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.5 +0.12/-0.08 | [mm] | (0.256" +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 | | |