



| Technical Datasheet | | GB763B6 | |  | |
|---|-------------|--------------------------------|--|--|--|
| 93800050012_V03_US | with engine | 8V4000L62 | | | |
| Fuel | | Biogas | | | |
| Voltage / Frequency | | 480 V | | 60 Hz | |
| Heating water temperatur (in/out) | | °F | | | |
| NOx emissions ¹⁾ | | g/bhp-hr | | | |
| Intercooler 2nd stage temperatur (in) | | °F | | | |
| Exhaust gas temperature | | °F | | | |
| Electrical power COP, parallel to grid acc. ISO 8528-1 | | 100 | | 75 50 | |
| Electrical power PRP, prime power acc. ISO 8528-5 G1 | | % | | | |
| Electrical power PRP, prime power acc. ISO 8528-5 G1 | | % | | | |
| Energy balance | | | | | |
| Electrical power ^{2) 3)} | | kWe | | | |
| Energy input ^{5) 7)} | | kBTU/hr | | | |
| Thermal output total ⁴⁾ | | kBTU/hr | | | |
| Thermal output engine (block, lube oil, 1st stage intercooler) ⁴⁾ | | kBTU/hr | | | |
| Thermal exhaust gas heat exchanger (180°C) ⁴⁾ | | kBTU/hr | | | |
| Thermal output 2nd stage intercooler ⁴⁾ | | kBTU/hr | | | |
| Engine power ISO 3046-1 ³⁾ | | bhp | | | |
| Generator efficiency at power factor = 1 | | % | | | |
| Electrical efficiency ^{5) 6)} | | % | | | |
| Total efficiency | | % | | | |
| CHP Coefficient | | % | | | |
| Power consumption ¹⁵⁾ | | kW | | | |
| Combustion air / Exhaust gas | | | | | |
| Combustion air volume flow ¹⁾ | | ft ³ /min | | | |
| Combustion air mass flow | | lb/hr | | | |
| Exhaust gas volume flow, wet ¹⁾ | | ft ³ /min | | | |
| Exhaust gas volume flow, dry ¹⁾ | | ft ³ /min | | | |
| Exhaust gas mass flow, wet | | lb/hr | | | |
| Exhaust temperature after turbocharger | | °F | | | |
| Reference Fuel | | | | | |
| Natural gas | | BTU/ft ³ | | | |
| Sewage gas | | BTU/ft ³ | | | |
| Biogas | | CH4 > 60 Vol. %; CO2 40 Vol. % | | | |
| Landfill gas | | BTU/ft ³ | | | |
| CO₂ / CH₄ volume ratio | | | | | |
| Minimum methane number | | MN | | | |
| Range of heating value: design / operation range | | BTU/ft ³ | | | |
| Exhaust gas emissions ⁶⁾ | | | | | |
| NOx, stated as NO₂ (dry) | | g/bhp-hr | | | |
| CO (dry) | | g/bhp-hr | | | |
| HCHO (dry) ⁷⁾ | | g/bhp-hr | | | |
| VOC (dry) | | g/bhp-hr | | | |
| Otto-gas engine, lean burn operation with turbocharging | | | | | |
| Number of cylinders / configuration | | 8 V | | | |
| Engine typ | | 8V4000L62 | | | |
| Engine speed | | rpm | | | |
| Bore | | in | | | |
| Stroke | | in | | | |
| Displacement | | in ³ | | | |
| Mean piston speed | | ft/sec | | | |
| Compression ratio | | 13,9 | | | |
| BMEP at nominal engine speed min⁻¹ | | psi | | | |
| Lube oil consumption ⁸⁾ | | gal/hr | | | |
| Max. exhaust back pressure after genset / module | | in H ₂ O | | | |
| Generator | | | | | |
| Rating power (F) | | kVA | | | |
| Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) ¹⁶⁾ | | 0,8 / 1,0 | | | |
| Voltage tolerance / frequency tolerance | | % | | | |
| Max. ambient temperature | | °F | | | |
| Max. installation altitude | | ft | | | |
| Engine cooling water system | | | | | |
| Coolant temperature (in/out) | | °F | | | |
| Coolant flow rate ⁹⁾ | | gal/min | | | |
| CVs value (Block, lubeoil and 1st stage) ¹⁰⁾ | | psi delta p | | | |
| Max. operation pressure (coolant before engine) | | psi | | | |
| Exhaust gas heat exchanger (EGHE) | | | | | |
| Exhaust gas temperature (out) | | °F | | | |
| Coolant temperature (in/out) | | °F | | | |
| Coolant volumetric flow ⁹⁾ | | gal/min | | | |
| CVs value ¹⁰⁾ | | psi delta p | | | |
| Max. operation pressure (coolant water) | | psi | | | |

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| Oilcooler, external | | | | | |
| Coolant temperature (in/out) | °F | | | | |
| Coolant volumetric flow ⁹⁾ | gal/min | | @ | | psi delta p |
| CV-Value ¹⁰⁾ | | | | | |
| Max. operation pressure | psi | | | | |
| Intercooler 2nd stage, external | | | | | |
| Coolant temperature (in/out) | °F | 104 / 109 | | | |
| Coolant volumetric flow ⁹⁾ | gal/min | 118,88 | @ | 7,25 | psi delta p |
| CVs value ¹⁰⁾ | | | | 38,2 | |
| Max. operation pressure in front of intercooler | psi | | | 87 | |
| Plate heat exchanger | | | | | |
| Coolant temperature (in/out) | °F | | | | |
| Heating water temperatur (in/out) | °F | | | | |
| Heating water volumetric flow ⁹⁾ | gal/min | | @ | | psi delta p |
| CVs value ¹⁰⁾ | | | | | |
| Max. operation pressure (heating water) | psi | | | | |
| Space ventilation | | | | | |
| Genset ventilation heat ¹¹⁾ | kBTU/hr | 262,7 | | | |
| Combustion air temperature: (min./design/max.) | °F | | | 68 / 77 / 86 | |
| Min. engine room temperature ¹²⁾ | °F | | | 59 | |
| Max. temperature difference ventilation air (in/out) | °F | | | 36 | |
| Min. ventilation air flow in (combustion+ventilation) ¹³⁾ | ft ³ /min | | | 8126 | |
| Gearbox | | | | | |
| Gear ratio | | | | 1:1,191 | |
| Thermal output gearbox (watercooled) | kBTU/hr | | | 34,12 | |
| Efficiency | | 98,88 | 98,66 | 98,19 | |
| Filling quantities | | | | | |
| Lube oil for engine | gal | | | 42 | |
| Coolant for engine | gal | | | 35,7 | |
| Coolant for intercooler | gal | | | 3,96 | |
| Heating water for plate heat exchanger | gal | | | | |
| Engine sound level ¹⁴⁾ (1 meter distance, free field) | | | | | |
| Frequency | Hz | 63 | 125 | 250 | 500 |
| Sound pressure level | dB | 70,7 | 80,4 | 83,4 | 80,8 |
| Frequency | Hz | 1000 | 2000 | 4000 | 8000 |
| Sound pressure level | dB | 81,9 | 81,8 | 88,3 | 93,6 |
| Sum of pressure levels | Lin dB | 99,2 | | | |
| | dB A | 98,1 | | | |
| Sound power level | dB A | 117,2 | | | |
| Undampened exhaust noise (1 meter distance to outlet within 90°, free field) | | | | | |
| Frequency | Hz | 63 | 125 | 250 | 500 |
| Sound pressure level | dB | 97,1 | 110,0 | 102,2 | 97,7 |
| Frequency | Hz | 1000 | 2000 | 4000 | 8000 |
| Sound pressure level | dB | 90,6 | 88,2 | 85,4 | 75,8 |
| Sum of pressure levels | Lin dB | 118,7 | | | |
| | dB A | 106,0 | | | |
| Sound power level | dB A | 118,2 | | | |
| Dimensions | | | | | |
| Length | in | | | 196,9 | |
| Width | in | | | 78,7 | |
| Height | in | | | 96,5 | |
| Gross weight / dry weight | lb | | | 26455 / 25728 | |
| Power derating | | | | | |
| Altitude | | | | | |
| Combustion air temperature | | | | | |
| Intercooler 2nd stage temperature (in) | | | | | |
| Methane number | | | | | |
| Boundary conditions and consumables | | | | | |
| DK-BS-0002 | | | | | |
| <p>1) Normal ft3 at p = 14.696 psi und T = 32 °F</p> <p>2) Generator gross power at nominal voltage, power factor = 1 and nominal frequency</p> <p>3) At standard reference conditions (ISO 3046-1); atmospheric pressure: 14.5 psi; air temperature: 77 °F; rel. air humidity 30 %</p> <p>4) Thermal output at layout temperature; tolerance +/- 8 %</p> <p>5) According to ISO 3046 (+ 5 % tolerance), using reference fuel used at nominal voltage, power factor = 1 and nominal frequency</p> <p>6) Deviations from the layout parameters respectively the reference fuel can have influence to the obtained efficiency and exhaust emissions</p> <p>7) Emission values during system parallel operation - where required with Oxcat</p> <p>8) Reference value at nominal load (without amount of oil exchange)</p> <p>9) Stated values for pure water, adaption for other cooling fluid composition necessary</p> <p>10) The CVs value declares the volumetric flow in gal/min at a pressure drop of 1 psi</p> <p>11) Only generator- and surface losses</p> <p>12) Frost-free conditions must be guaranteed</p> <p>13) Amount of ventilation air must be adapted to the gas safety concept</p> <p>14) All sound pressure levels at nominal load COP</p> <p>15) Power consumption of all electrical consumer, which are mounted at the module / aggregate</p> <p>16) Max. allowable cos phi at nominal power (view of producer)</p> | | | | | |

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