



**BIOGAS COGENERATING UNIT
 WITH SPARK IGNITION ENGINE**

**MARTIN POWER
 LIEBHERR**

Cogenerating unit model

Electric power @ cos phi 0.8
Electric power @ cos phi 1.0
Energy input in fuel ³⁾
Gas consumption (min/max) @ 6 kWh/m ³
Thermal power from engine cooling
HT-stage intercooler thermal power
LT-stage intercooler thermal power ¹⁾
Thermal power from suction air cooling
Thermal power from exhaust
Thermal power on the output ²⁾
Electric power efficiency
Thermal power efficiency
Total efficiency
Current
Control panel current
Speed

MP 400 L - BCU

407 kVA / 325 kW
332 kW
846 kW
76/141 m ³ /h
124 kW
41 kW
27 kW
68 kW
200 kW
392 kW
38,4%
46,3%
84,7%
587 A
630 A
1500 min ⁻¹

Engine model

Nominal power
Intake
Speed governor
Cylinders
Bore
Stroke
Displacement
Compression ratio
Ignition sequence
Ignition timing
Lambda
Max. mixture temperature
Max. intake temperature
Air mass flow
Exhaust gas flow
Max. back pressure at exhaust
Max. exhaust temperature (@ rated power)
Radiated heat (incl. exhaust under 120°C)
Specific gas consumption
Gas consumption (CH ₄) @ 100% load
Gas consumption (CH ₄) @ 75% load
Gas consumption (CH ₄) @ 50% load
Engine oil volume (min/max)
Engine oil consumption
Coolant volume (engine only)
Coolant pressure (min/max)
Minimal coolant flow through engine
Coolant temperature (@ engine outlet) (min/max)
Max. temperature difference over engine
HT stage intercooler inlet temperature
HT stage intercooler coolant flow
LT stage intercooler inlet temperature
LT stage intercooler coolant flow
Battery voltage
Starter
Battery

G 9508

344 kW
turbocharged with intercooler
electronic
8V
130 mm
157 mm
16,7 dm ³
13:1
1-5-7-2-6-3-4-8
26 °BTDC
1,55
45 °C
35 °C
1601 kg/h
1770 kg/h
10 kPa (6 kPa)
475 °C
106 kW
189,8 g/kWh
63 kg/h
53 kg/h
41 kg/h
48/60 l
0,07 kg/h
40 l
1/2,5 bar
412 l/min
80/88 °C
5 °C
80 °C
10 m ³ /h
35 °C
6,5 m ³ /h
24 V
7,8 kW
2 x 110 Ah



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LIEBHERR**

Cogenerating unit model

Generator manufacturer

Generator model

Nominal power

F class power

Engine - generator connection

Voltage regulation

Voltage precision

MP 400 L - BCU

SINCRO

SK 355 MM

550 kVA / 440 kW

500 kVA

SAE 1

electronic

1,5 %

Emissions

NO_x

CO

HC

@ 5% O₂

500 mg/Nm³

650 mg/Nm³ (with Oxi-Cat)

2000 mg/Nm³

Canopy (genset only)

Length

Width

Height

Weight

HR 11

4425 mm

1635 mm

2226 mm

4750 kg

Open CHP version

Length

Width

Height

Weight

4700 mm

1400 mm

2725 mm

Canopied CHP version

Length

Width

Height

Weight

5000 mm

1800 mm

3000 mm

4800 kg

Container CHP version

Length

Width

Height

Weight

20'

6058 mm

2438 mm

2591 mm

Installation - connections

Gas inlet

Heating HT circuit

Heating LT circuit (optional)

Exhaust (pipe up to 6 m)

DN 65

DN 65

DN 200

1) The thermal power is available if the cooling water temperature input is below 35°C

2) Theoretical usable thermal power; tolerance +/- 8 %

3) According to ISO 3046 (+ 5 % tolerance), using reference fuel used at 400 V, p.f. 1.0, 50 Hz

4) Emission values during grid parallel operation