



**NATURAL GAS COGENERATING UNIT  
 WITH SPARK IGNITION ENGINE**

**MARTIN POWER  
 LIEBHERR**

**Cogenerating unit model**

Electric power @ cos phi 0.8
<b>Electric power @ cos phi 1.0</b>
<b>Energy input in fuel <sup>3)</sup></b>
Gas consumption (min/max) @ 9,6 kWh/m <sup>3</sup>
Thermal power from engine cooling
HT-stage intercooler thermal power
LT-stage intercooler thermal power <sup>1)</sup>
Thermal power from suction air cooling
Thermal power from exhaust
<b>Thermal power on the output <sup>2)</sup></b>
<b>Electric power efficiency</b>
Thermal power efficiency
<b>Total efficiency</b>
Current
Control panel current
Speed

**MP 400 L - CU**

407 kVA / 325 kW
<b>332 kW</b>
<b>824 kW</b>
45/85,8 m <sup>3</sup> /h
124 kW
41 kW
27 kW
68 kW
200 kW
<b>392 kW</b>
<b>40,3%</b>
47,6%
<b>87,9%</b>
587 A
630 A
1500 min <sup>-1</sup>

**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 <sub>4</sub> ) @ 100% load
Gas consumption (CH <sub>4</sub> ) @ 75% load
Gas consumption (CH <sub>4</sub> ) @ 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 <sup>3</sup>
13,3:1
1-5-7-2-6-3-4-8
23 °BTDC
1,74
45 °C
35 °C
1769 kg/h
1830 kg/h
10 kPa (6 kPa)
475 °C
106 kW
190,8 g/kWh
62 kg/h
51 kg/h
39 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 <sup>3</sup> /h
35 °C
6,5 m <sup>3</sup> /h
24 V
7,8 kW
2 x 110 Ah



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**MP 400 L - CU**

<b>Generator manufacturer</b>
<b>Generator model</b>
Nominal power
F class power
Engine - generator connection
Voltage regulation
Voltage precision

<b>SINCRO</b>
<b>SK 355 MM</b>
550 kVA / 440 kW
500 kVA
SAE 1
electronic
1,5 %

<b>Emissions <sup>4)</sup></b>
NO <sub>x</sub>
CO
HC

@ 5% O <sub>2</sub>
500 mg/Nm <sup>3</sup>
650 mg/Nm <sup>3</sup> (with Oxi-Cat)
2000 mg/Nm <sup>3</sup>

<b>Canopy (genset only)</b>
Length
Width
Height
Weight

HR 11
4425 mm
1635 mm
2226 mm
4750 kg

<b>Open CHP version</b>
Length
Width
Height
Weight

4700 mm
1400 mm
2725 mm

<b>Canopied CHP version</b>
Length
Width
Height
Weight

5000 mm
1800 mm
3000 mm
4800 kg

<b>Container CHP version</b>
Length
Width
Height
Weight

20'
6058 mm
2438 mm
2591 mm

<b>Installation - connections</b>
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