



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

**MARTIN POWER
 MAN**

Cogenerating unit model

Electric power @ cos phi 0.8
Electric power @ cos phi 1.0
Energy input in fuel ³⁾
Gas consumption (min/max) @ 9,6 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 500 N - CU

500 kVA / 400 kW
404 kW
1037 kW
58/108 m ³ /h
197 kW
48 kW
12 kW
60 kW
215 kW
472 kW
39,0%
45,5%
84,5%
714 A
1000 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 (engine)
Specific gas consumption
Gas consumption @ 100% load
Gas consumption @ 75% load
Gas consumption @ 50% load
Engine oil volume (min/max)
Engine oil consumption
Coolant volume (engine only)
Coolant pressure (max)
Minimal coolant flow through engine
Coolant temperature (@ engine outlet) (min/max)
Max. temperature difference over engine
HT stage intercooler inlet temperature (max)
HT stage intercooler coolant flow (min)
LT stage intercooler inlet temperature (max)
LT stage intercooler coolant flow (min)
Battery voltage
Starter
Battery

E 2842 LE 322

420 kW
turbocharged with intercooler
electronic
12V
128 mm
142 mm
21,9 dm ³
12:1
1-12-2-11-3-10-6-7-5-8-4-9
16 °BTDC
1,58
50 °C
40 °C
2022 kg/h
2097 kg/h
4 kPa
433 °C
35 kW
186 g/kWh
75 kg/h
57 kg/h
41 kg/h
40/90 l
0,2 kg/h
23 l
3 bar
628 l/min
80/88 °C
6 °C
85 °C
293 l/min
45 °C
70 l/min
24 V
6,5 kW
143 Ah



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Generator manufacturer
Generator model
Nominal power
F class power
Engine - generator connection
Voltage regulation
Voltage precision

SINCRO
SK 355 LM
650 kVA / 520 kW
600 kVA
SAE 1
electronic
1,5 %

Emissions ⁴⁾
NO _x
CO
NMHC
Formaldehyd

@ 5% O ₂
500 mg/Nm ³
650 mg/Nm ³
150 mg/Nm ³
60 mg/Nm ³

Open CHP version
Length
Width
Height
Weight

4000 mm
2000 mm
2300 mm

Canopied CHP version
Length
Width
Height
Weight

6000 mm
2400 mm
2600 mm

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)

Rp 2"
Rp 2,5"
DN 250

- 1) The thermal power is available if the cooling water temperature input is below 40°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