

**BIOGAS 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) @ 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 80 N - BCU

79 kVA / 63 kW
64 kW
179 kW
16/29,8 m ³ /h
52 kW
6 kW
3 kW
9 kW
35 kW
96 kW
35,2%
53,6%
88,8%
115 A
125 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 (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 (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 0834 LE 302

68 kW
turbocharged with intercooler
electronic
4R
108 mm
125 mm
4,6 dm ³
11:1
1-3-4-2
22° BTDC
1,4
50 °C
40 °C
334 kg/h
370 kg/h
4 kPa
430 °C
15 kW
203,1 g/kWh
13 kg/h
10 kg/h
8 kg/h
9/13 l
0,1 kg/h
12 l
2 bar
169 l/min
80/88 °C
6 °C
85 °C
39 l/min
45 °C
19 l/min
24 V
4 kW
110 Ah



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BIOGAS COGENERATING UNIT WITH SPARK IGNITION ENGINE

MARTIN POWER MAN

Cogenerating unit model

Generator manufacturer

Generator model

Nominal power

F class power

Engine - generator connection

Voltage regulation

Voltage precision

MP 80 N - BCU

MECC ALTE

ECP 34 - 2S/4

105 kVA / 84 kW

95 kVA

SAE 2 / 11,5"

electronic

1,5 %

Emissions ⁴⁾

NO_x

CO

NMHC

Formaldehyd

@ 5% O₂

500 mg/Nm³

1000 mg/Nm³

150 mg/Nm³

60 mg/Nm³

Open CHP version

Length

Width

Height

Weight

3500 mm

1100 mm

1500 mm

Canopied CHP version

Length

Width

Height

Weight

2600 mm

1200 mm

2350 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 6/4"

DN 100

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