



TTS MARTIN, s.r.o., 038 42 Příbovce 343, SLOVAKIA

tel. +421 43 42 94 466, fax +421 43 42 94 026

e-mail: tts@tts-martin.sk, http: www.tts-martin.sk

## BIOGAS COGENERATING UNIT WITH SPARK IGNITION ENGINE

## MARTIN POWER MAN

### 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) @ 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 130 N - BCU

129 kVA / 103 kW
<b>105 kW</b>
<b>274 kW</b>
24/45,7 m <sup>3</sup> /h
68 kW
8 kW
6 kW
14 kW
59 kW
<b>141 kW</b>
<b>38,3%</b>
51%
<b>89,3%</b>
188 A
200 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 (engine)
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 (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 0836 LE 202

110 kW
turbocharged with intercooler
electronic
6R
108 mm
125 mm
6,9 dm <sup>3</sup>
11:1
1-5-3-6-2-4
16° BTDC
1,4
50 °C
40 °C
470 kg/h
525 kg/h
4 kPa
470 °C
12 kW
200 g/kWh
21 kg/h
16 kg/h
11 kg/h
24/34 l
0,125 kg/h
16 l
2 bar
221 l/min
80/88 °C
6 °C
85 °C
43 l/min
40 °C
32 l/min
24 V
4 kW
110 Ah



TTS MARTIN, s.r.o., 038 42 Příbovce 343, SLOVAKIA

tel. +421 43 42 94 466, fax +421 43 42 94 026

e-mail: tts@tts-martin.sk, http: www.tts-martin.sk

## 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 130 N - BCU

#### MARELLI

MJB 250 MA4

165 kVA / 132 kW

145 kVA

SAE 2 / B3-B14

electronic

1,5 %

#### Emissions <sup>4)</sup>

NO<sub>x</sub>

CO

NMHC

Formaldehyd

@ 5% O<sub>2</sub>

500 mg/Nm<sup>3</sup>

600 mg/Nm<sup>3</sup>

150 mg/Nm<sup>3</sup>

#### Open CHP version

Length

Width

Height

Weight

2600 mm

1200 mm

2000 mm

2100 kg

#### 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 40

DN 125

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