TTS MARTIN, s.r.o., 038 42 Príbovce 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

NATURAL GAS COGENERATING UNIT WITH SPARK IGNITION ENGINE — MARTIN POWER MAN

Cogenerating unit model	MP 280 N2 - CU
Electric power @ cos phi 0.8	260 kVA / 207 kW
Electric power @ cos phi 1.0	**211 kW**
Power from fuel	**529 kW**
Thermal power from engine cooling	110 kW
HT-stage intercooler thermal power	17 kW
LT-stage intercooler thermal power [1)]	19 kW
Thermal power from suction air cooling	36 kW
Thermal power from exhaust [2)]	121 kW
Thermal power on the output	**267 kW**
Electric power efficiency	**39,9%**
Thermal power efficiency	50,5%
Total efficiency	**90,4%**
Current	375 A
Control panel current	400 A
Speed	1500 min^{-1}

Engine model	E 2676 LE 202
Nominal power	220 kW
Intake	turbocharged with intercooler
Speed governor	electronic
Cylinders	6R
Bore	126 mm
Stroke	166 mm
Displacement	12,4 dm^3
Compression ratio	12,6:1
Ignition sequence	1-5-3-6-2-4
Ignition timing	30 °BTDC
Lambda	1,73
Max. mixture temperature	50 °C
Max. intake temperature	40 °C
Air mass flow	1157 kg/h
Exhaust gas flow	1196 kg/h
Max. back pressure at exhaust	4 kPa
Max. exhaust temperature (@ rated power)	470 °C
Radiated heat (engine)	10 kW
Specific gas consumption	185 g/kWh
Gas consumption @ 100% load	39 kg/h
Gas consumption @ 75% load	30 kg/h
Gas consumption @ 50% load	21 kg/h
Engine oil volume (min/max)	35/70 l
Engine oil consumption	0,15 kg/h
Coolant volume (engine only)	50 l
Coolant pressure (max)	2 bar
Minimal coolant flow through engine	330 l/min
Coolant temperature (@ engine outlet) (min/max)	80/88 °C
Max. temperature difference over engine	6 °C
HT stage intercooler inlet temperature (max)	85 °C
HT stage intercooler coolant flow (min)	51 l/min
LT stage intercooler inlet temperature (max)	40 °C
LT stage intercooler coolant flow (min)	56 l/min
Battery voltage	24 V
Starter	7 kW
Battery	143 Ah

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NATURAL GAS COGENERATING UNIT WITH SPARK IGNITION ENGINE

MARTIN POWER MAN

Cogenerating unit model	**MP 280 N2 - CU**
Generator manufacturer	**MECC ALTE**
Generator model	**ECO 38 - 2LN/4**
Nominal power	300 kVA / 240 kW
F class power	275 kVA
Engine - generator connection	SAE 1
Voltage regulation	electronic
Voltage precission	1,5 %

Emissions	@ 5% O_2
NO_x	500 mg/Nm^3
CO	300 mg/Nm^3
NMHC	20 mg/Nm^3
Formaldehyd	60 mg/Nm^3

Open CHP version	
Length	4000 mm
Width	1300 mm
Height	2600 mm
Weight	

Canopied CHP version	
Length	4000 mm
Width	1550 mm
Height	2800 mm
Weight	

Container CHP version	20'
Length	6058 mm
Width	2438 mm
Height	2591 mm
Weight	

Installation - connections	
Gas inlet	Rp 6/4"
Heating HT circuit	DN 50
Heating LT circuit (optional)	
Exhaust (pipe up to 6 m)	DN 150

1) The thermal power is available if the cooling water temperature input is below 35℃
2) Theoretical usable thermal power only