



**BIOGAS 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) @ 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 300 L - BCU**

|                          |
|--------------------------|
| 288 kVA / 231 kW         |
| <b>236 kW</b>            |
| <b>606 kW</b>            |
| 57/101 m <sup>3</sup> /h |
| 89 kW                    |
| 30 kW                    |
| 20 kW                    |
| 50 kW                    |
| 143 kW                   |
| <b>282 kW</b>            |
| <b>38,9%</b>             |
| 46,5%                    |
| <b>85,4%</b>             |
| 416 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 946**

|                               |
|-------------------------------|
| 246 kW                        |
| turbocharged with intercooler |
| electronic                    |
| 6R                            |
| 130 mm                        |
| 150 mm                        |
| 12 dm <sup>3</sup>            |
| 13:1                          |
| 1-5-3-6-2-4                   |
| 26 °BTDC                      |
| 1,55                          |
| 45 °C                         |
| 35 °C                         |
| 1146 kg/h                     |
| 1267 kg/h                     |
| 10 kPa (6 kPa)                |
| 475 °C                        |
| 75 kW                         |
| 190,7 g/kWh                   |
| 45 kg/h                       |
| 38 kg/h                       |
| 29 kg/h                       |
| 32/40 l                       |
| 0,05 kg/h                     |
| 20 l                          |
| 1/2,5 bar                     |
| 297 l/min                     |
| 80/88 °C                      |
| 5 °C                          |
| 80 °C                         |
| 7,7 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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|                               |
|-------------------------------|
| <b>Generator manufacturer</b> |
| <b>Generator model</b>        |
| Nominal power                 |
| F class power                 |
| Engine - generator connection |
| Voltage regulation            |
| Voltage precision             |

|                  |
|------------------|
| <b>Emissions</b> |
| NO <sub>x</sub>  |
| CO               |
| HC               |

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

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

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

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

|                                   |
|-----------------------------------|
| <b>Installation - connections</b> |
| Gas inlet                         |
| Heating HT circuit                |
| Heating LT circuit (optional)     |
| Exhaust (pipe up to 6 m)          |

**MP 300 L - BCU**

|                       |
|-----------------------|
| <b>MECC ALTE</b>      |
| <b>ECO 38 - 3LN/4</b> |
| 350 kVA / 280 kW      |
| 320 kVA               |
| SAE 1                 |
| electronic            |
| 1,5 %                 |

|                                       |
|---------------------------------------|
| @ 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>               |

|         |
|---------|
| HR 11   |
| 4425 mm |
| 1635 mm |
| 2226 mm |
| 4300 kg |

|         |
|---------|
|         |
| 3800 mm |
| 1300 mm |
| 2725 mm |
| 4000 kg |

|         |
|---------|
|         |
| 4500 mm |
| 1550 mm |
| 2800 mm |
| 4500 kg |

|         |
|---------|
| 20'     |
| 6058 mm |
| 2438 mm |
| 2591 mm |

|        |
|--------|
|        |
| Rp 2"  |
| DN 65  |
|        |
| DN 150 |

- 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