

The ENERGIN® GEN generator set produces electricity either parallel with the public network or load. As an option, automatic emergency operation and/or island-parallel operation with other generators is possible.

The unit is supplied as a compact, fully functional unit, with or without a sound attenuating enclosure. The engine, generator, and the control and power panel are mounted, ready for operation on the vibration-decoupled base frame. A lubrication oil system, which allows operation of up to 2000 hours without manual lube oil refilling, is integrated on the unit.

The electrical control system provides protection and control functions for automatic or manual operation. A 12" touch panel informs about operating conditions and allows the operation and parameterization of the system. Various interfaces are available for communication with other power generators and an overhead control system. An Ethernet interface allows connection to the Internet for remote monitoring and remote maintenance.

The entire system is certified according to the BDEW medium voltage directive (Grid code).

TECHNICAL DATA

| | | |
|------------------------------------|-------------------|-------|
| Manufacturer | R Schmitt Enertec | |
| ENERGIN® Type | M12 GEN B500 | |
| Electrical power ¹ | kW | 500 |
| Gas consumption ² (LHV) | kW | 1.170 |
| Self consumption ³ | kW | 9,7 |

DESIGN

| | | |
|--------------------------------|---------------------|-----------|
| Fuel type | Biogas | |
| Lower heating value LHV | kWh/Nm ³ | 5,0 |
| Gas flow pressure ⁴ | kPa | 3,5 - 5,0 |
| Inlet air temperature | °C | 20 |
| Exhaust temperature | °C | 487 |

EXHAUST EMISSIONS⁵ WITHOUT CATALYST

| | | |
|------------------------------|--------------------|------|
| NO _x ⁶ | mg/Nm ³ | 500 |
| CO | mg/Nm ³ | 1000 |
| Formaldehyde | mg/Nm ³ | 100 |

ENGINE

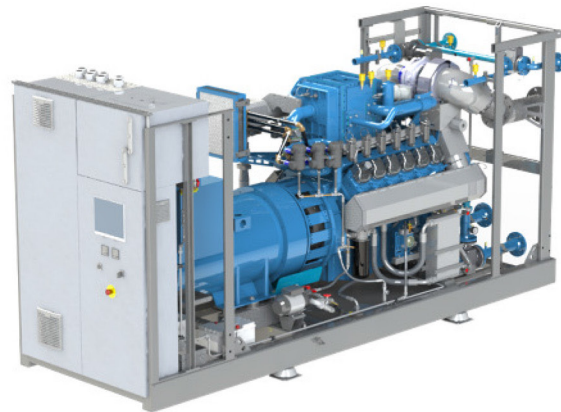
| | | |
|------------------------|-------------------|------|
| Manufacturer | R Schmitt Enertec | |
| ENERGIN® Type | M12-BT2D41 | |
| Working principle | 4-stroke | |
| Cylinder configuration | 12 in V / 90° | |
| Valves per cylinder | 4 | |
| Aspiration | turbocharged | |
| Mixture cooling | 2-staged | |
| Displacement | ltr | 22,6 |

LUBE OIL

| | | |
|---------------------|--------|------|
| Lube oil volume | ltr | 240 |
| Make up tank volume | ltr | 170 |
| Consumption | ltr/OH | 0,14 |

ALTERNATOR

| | | |
|--------------|-------------|----------|
| Manufacturer | Leroy Somer | |
| Type | LSA 49.3 M6 | |
| Voltage | V / Hz | 400 / 50 |
| Speed | 1/min | 1.500 |
| Efficiency | % | 96,1 |



PERFORMANCE⁷

| Load | | 100 % | 75 % | 50 % |
|-------------------------------|--------------------|--------|-------|-------|
| Electrical power | kW | 500 | 375 | 250 |
| Fuel consumption | kW | 1.170 | 897 | 642 |
| Gas flow at LHV | Nm ³ /h | 235 | 180 | 129 |
| Electrical efficiency | % | 42,7 | 41,8 | 38,9 |
| Exhaust gas flow ⁸ | m ³ /h | 4.927 | 3.728 | 2.627 |
| Air requirement | m ³ /h | 11.267 | 9.039 | 7.289 |
| Exhaust air ⁹ | m ³ /h | 9.371 | 7.652 | 6.345 |

DIMENSIONS AND WEIGHTS WITH SOUND ENCLOSURE

| | | |
|-----------------------|----|-------|
| Length | mm | 4.380 |
| Height | mm | 2.030 |
| Height with 90° elbow | mm | 3.190 |
| Width | mm | 1.440 |
| Dry weight | kg | 5.590 |
| Operational weight | kg | 5.990 |

CONNECTIONS

| | | |
|------------------|---------|----------|
| Exhaust | DN / PN | 150 / 10 |
| Fuel gas | DN / PN | 80 / 16 |
| Cooling water LT | DN / PN | 50 / 16 |
| Cooling water HT | DN / PN | 80 / 16 |

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