

## B310SE3

### Diesel Generator Set, Powered by Baudouin



#### Main technical data

| Rated voltage    |        | 380                | 400       | 415       | 440       |      |
|------------------|--------|--------------------|-----------|-----------|-----------|------|
| Prime power      | kVA/kW | 313 / 250          | 313 / 250 | 313 / 250 | 313 / 250 |      |
| Standby power    | kVA/kW | 350 / 280          | 350 / 280 | 350 / 280 | 350 / 280 |      |
| Ampere           | A      | 476                | 452       | 436       | 407       |      |
| Frequency        | Hz     | 50                 |           |           |           |      |
| Rotate speed     | RPM    | 1500               |           |           |           |      |
| Phase            | P      | 3                  |           |           |           |      |
| Power factor     | cosφ   | 0.8                |           |           |           |      |
| Structure        |        | Soundproof type    |           |           |           |      |
| Model            |        | B310SE3            |           |           |           |      |
| Tank capacity    | L      | 1500               |           |           |           |      |
| Dimensions       | mm     | 4242 x 1463 x 2482 |           |           |           |      |
| Dry weight       | kg     | 4140               |           |           |           |      |
| Noise Level      | dBA@7m | 74                 |           |           |           |      |
| Load             |        | 25%                | 50%       | 75%       | 100%      | 110% |
| Fuel consumption | L/h    | 18.2               | 30.04     | 47.7      | 61.2      | N/A  |

## Main Specification

### Advantage

- Low fuel consumption
- Optimized system
- High reliability
- High availability
- Long maintenance cycle

### Design standards

- Conformite Europeene CE)
- ISO8528-5:2005
- GB/T2820.5-2009

### Environmental operating conditions

- Installation place: indoor (well ventilated)
- Ambient temperature: -25°C to 50°C (the coolant heater is needed when the temperature is below 5°C)
- Humidity: Less than 90%
- Altitude: Below one thousand (1000) meters.

### Performance guarantee

- Product design, manufacturing and performance integrity verified by standards
- Generator set passed transient response test according to ISO8528-5
- Both engine and alternator are prototype and factory tested

### Service support

- Provide global product service support

### Factory inspection

- Protection devices working test
- Starting ability in normal temperature
- 50% rated power load moment capability
- Voltage deviation and speed variation: 0, 25%, 50%, 75%, 100%, 110%



## Power System

### Engine

|                           |            |                        |                |
|---------------------------|------------|------------------------|----------------|
| Manufacturer              | Baudouin   | Intake system          | Turbocharged   |
| Model                     | 6M16G8D3/5 | Intake resistance: kPa | ≤7.5           |
| Cylinders and arrangement | 6L         | Back power: kPa        | ≤12            |
| Bore: mm                  | 126        | Oil capacity: L        | 30             |
| Stroke: mm                | 130        | Coolant capacity: L    | 50             |
| Displacement: L           | 9.726      | Battery voltage: V     | 24             |
| Compression ratio         | 17         | Dimensions: mm         | 2042x1100x1300 |
| Rotate speed: RPM         | 1500       | Dry weight: kg         | 880            |
| Prime power: kWm          | 290        |                        |                |
| Standby power: kWm        | 320        |                        |                |
| Rotate speed governor     | ECU        |                        |                |
| Type of injection         | Direct     |                        |                |

### Alternator

|                 |             |                                   |       |
|-----------------|-------------|-----------------------------------|-------|
| Manufacturer    | PowerLink   | Insulation class                  | H     |
| Model           | PL4M        | Temperature rising class          | H     |
| Exciter         | PMG         | Drip proof                        | IP23  |
| AVR model       | MX321       | Overspeed: RPM                    | 2250  |
| Windings        | 100% copper | Voltage regulation                | ±0.5% |
| Winding pitch   | 2/3         | Telephone harmonic factor THF     | <2%   |
| Number of poles | 4           | Telephone interference factor TIF | <50   |
| Terminals       | 12          |                                   |       |

## Control System

|              |           |
|--------------|-----------|
| Manufacturer | POWERLINK |
| Model        | PLC7420   |

### General functions

- Automatic start/stop control
- Manual/remote start control
- Automatically start when mains is abnormal (AMF)
- Real time monitoring and display of multiple parameters
- RS232, RS485 port and ethernet can be used
- CAN and Modbus communication
- Provide complete control solutions

### Monitoring and protection

|                   |                |
|-------------------|----------------|
| Oil pressure      | Overload       |
| Water temperature | Overcurrent    |
| Rotate speed      | Overvoltage    |
| Start             | Undervoltage   |
| Running time      | Overfrequency  |
| Battery voltage   | Underfrequency |
| .....             | .....          |

## Product Configuration

### Standard Configuration

| Engine                   | Alternator            | Control switchgear     | Canopy (soundproof)     | Base frame          |
|--------------------------|-----------------------|------------------------|-------------------------|---------------------|
| Electrical start motor   | Insulation class H    | PLC control system     | Electrogalvanized sheet | Steel base frame    |
| Battery system           | Temp. rising class H  | GCB, 3P                | Anti-corrosion coating  | Engine bracket      |
| Speed control system     | Drip proof class IP23 | Breaker cabinet        | Access door             | Alternator bracket  |
| Turbocharger             | AVR                   | Communi. connector     | Stainless steel hinge   | Radiator bracket    |
| Lockable isolator switch |                       | ATS connector          | Sound absorbing cotton  | Vibration isolators |
| Battery charger          |                       | Mains floating charger |                         |                     |

  

| Fuel system          | Lubrication system   | Cooling system       | Intake/exhaust system              | Documents                         |
|----------------------|----------------------|----------------------|------------------------------------|-----------------------------------|
| Base frame fuel tank | Oil pressure sensor  | 50°C radiator        | Air filter                         | Installation and operation manual |
| Fuel level sensor    | Oil temp. sensor     | Coolant level sensor | Muffler                            | Test report                       |
| Flexible pipe        | Oil filter           | Jacket water pipe    | Exhaust bellows                    | Wiring diagram                    |
| Fuel filter          | Manual drain pump    | Intercooling pipe    | Exhaust pipe and flange            | Warranty manual                   |
| Fuel inlet           | Oil drain ball valve |                      | High temperature protective sleeve | Engine manual                     |
|                      |                      |                      |                                    | Standard package                  |

### Optional Configuration

| Engine                 | Alternator                              | Control system      | Fuel system          | Lubrication system  |
|------------------------|---|---------------------|----------------------|---------------------|
| Jacket water preheater | PMG                                     | GCB, 4P             | Fuel-water separator | Electric drain pump |
| Oil preheater          | Anti-condensation heater                | ATS cabinet         | Fuel three-way valve |                     |
|                        | Treatments against humidity & corrosion | Paralleling control | Daily fuel tank      |                     |

### Power Class Definition

- Prime Power (PRP): the genset runs continuously with variable load, the number of operating hours is not limited, and 1h overload 10% operation is allowed per 12h, and the average load factor is less than 80% per 24h.
- Standby Power (ESP): operating time does not exceed 500h per year, continuous operating time does not exceed 300h, the average load factor is less than 80% per 24h. Overload operation is not allowed.

### Product Statement

- The data of specifications is based on the following standard environmental conditions test
  - Ambient temperature 25°C
  - Altitude 100m
  - Relative temperature 30%
- Dimensions, weight and other parameters are for reference only, please refer to the final design drawing.