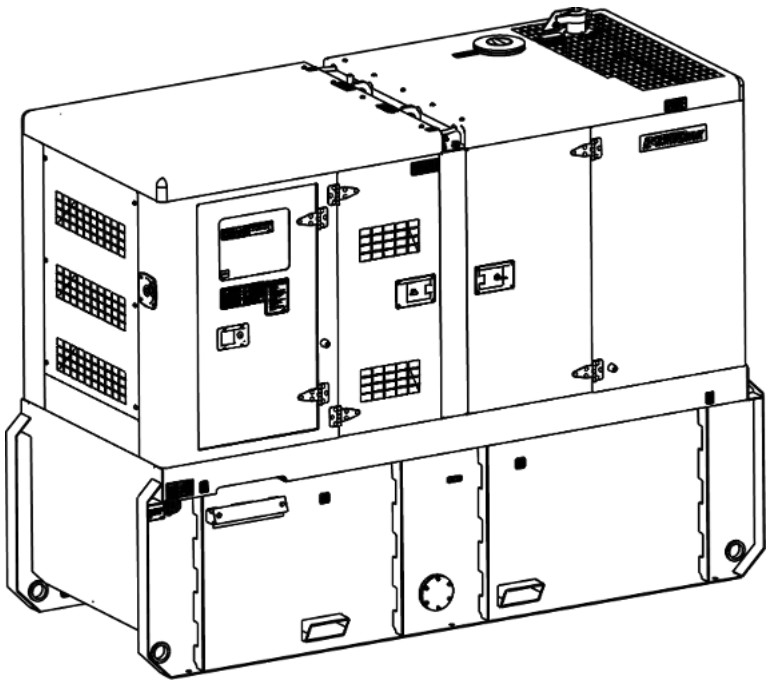
# WPS100D6S

# DIESEL GENSET SPECIFICATION

125 kVA (ESP)

**ID：1000037416**



Diesel Genset Specification

WPS100D6S

## General technical data

| | | | |
|---|---|---|---|
| Model | WPS100D6S | Rated voltage V | Current A |
| Structure | R | 208 | 346.9 |
| Prime power (PRP)：kVA / kW | N/A | | |
| Standby power (ESP)：kVA / kW | 125 / 100 | | |
| Frequency: Hz | 60 | | |
| Rotate speed: RPM | 1800 | | |
| Phase: P | 3 | | |
| Power factor: cosφ | 0.8 | Load | Fuel consumption L/h |
| Protection class | IP54 | 25% | N/A |
| Noise level: dB@7m | 64.8 | 50% | 15.9 |
| Tank capacity: L | 1200 | 75% | 22.2 |
| Dimensions: mm | 2788×1148×2137 | 100% | 27.5 |
| Dry weight: kg | 1900 | 110% | 29.8 |

## Main Features

**Advantage**

- Low fuel consumption
- Optimized system
- High reliability
- High availability

**Design Standards**

- Conformite Europeenne (CE)
- ISO8528-5:2022

**Environmental Operating Conditions**

- Installation place: outdoor / indoor (well ventilated).
- Ambient temperature: -25℃ to 45℃ (the coolant heater is needed when the temperature is below 5℃)
- Humidity: Less than 80%
- Altitude: Below one thousand (1000) meters.

**Factory Inspection**

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

**Service Support**

- Global product service support

**Performance Guarantee**

- Product design, manufacturing and performance have been verified by standards
- Generator set has passed transient response test according to ISO8528-5
- Both engine and alternator have passed prototype factory testing.

Diesel Genset Specification

WPS100D6S

## Power System

### Engine

| | | | |
|---|---|---|---|
| Manufacturer / brand | Perkins | Intake system | Turbocharged |
| Model | 1104D-E44TAG2 | Intake resistance: kPa | ≦5.0 |
| Cylinders | 4L | Exhaust back pressure: kPa | ≦15.0 |
| Bore: mm | 105 | Oil capacity: L | 8.4 |
| Stroke: mm | 127 | Coolant capacity: L | 17.0 |
| Displacement: L | 4.4 | Battery voltage: V | 12 |
| Compression ratio | 16.7 | Dimensions: mm | 1358×749×1086 |
| Rotate speed: RPM | 1800 | Dry weight: kg | 439 |
| Prime power: kWm | 110 | | |
| Standby power: kWm | 120 | | |
| Rotate speed governor | Electronic | | |
| Type of fuel Injection | Direct | | |

### Alternator

| | | | |
|---|---|---|---|
| Manufacturer / brand | LSA | Insulation class | H |
| Model | LSA44.3S5 | Temperature rising class | H |
| Exciter | Standard self-excitation, SHUNT | Protection class | IP23 |
| 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

| | |
|---|---|
| Brand | POWERLINK |
| Model | PLC-7420 |

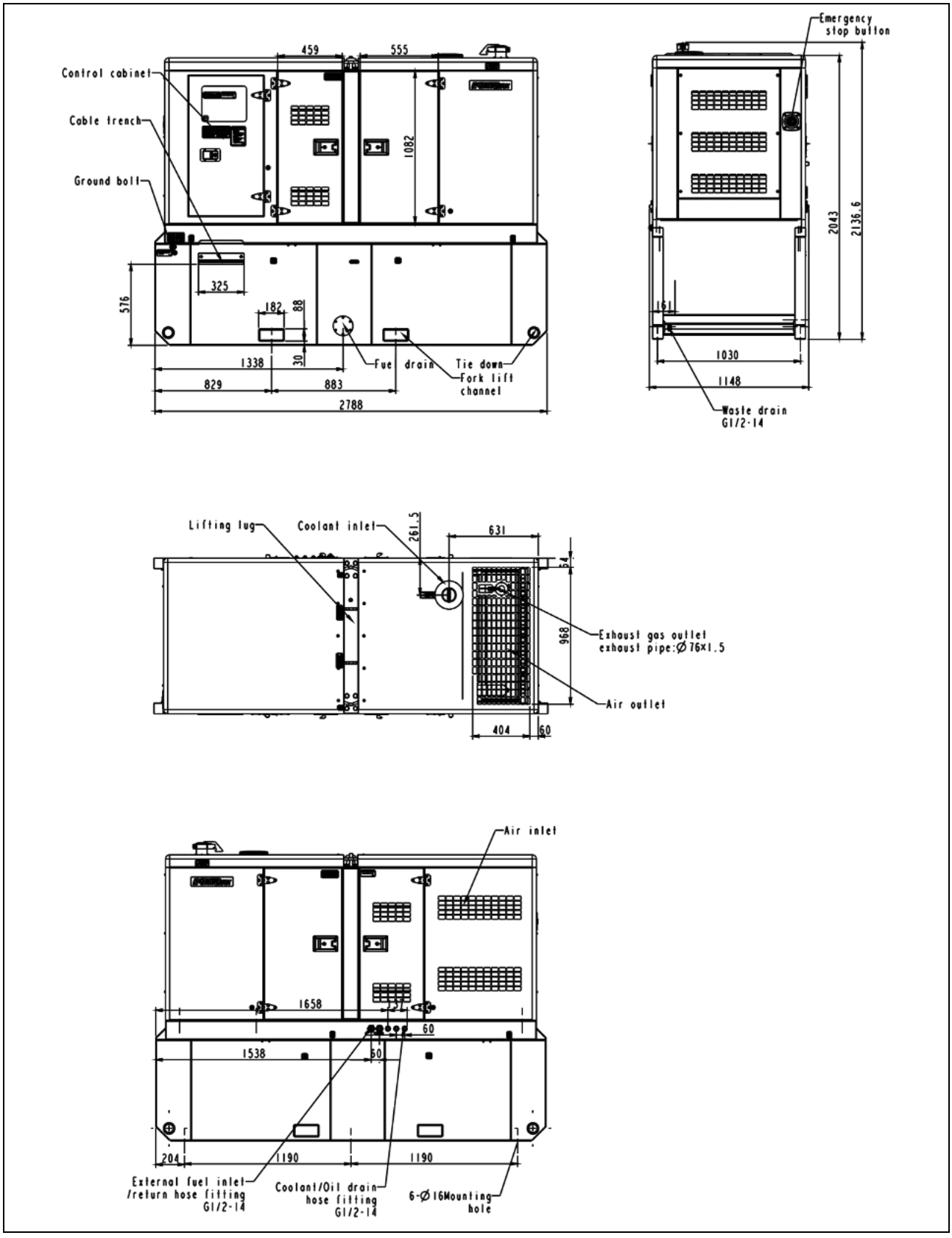
General Functions

- 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 interface and Ethernet can be used simultaneously
- CAN and Modbus communication
- Provide complete control solutions

Monitoring and protection

| | |
|---|---|
| Oil pressure | Over load |
| Water temperature | Over current |
| Rotate speed | Over voltage |
| Start | Under voltage |
| Running time | Over frequency |
| Battery voltage | Under frequency |
| …… | …… |

## Product Appearance



## Product Configuration

### Standard configuration

| Engine | Generator | Control switchgear | Canopy (sound-proof) | Base Frame |
|---|---|---|---|---|
| Electrical start motor | Alternator | PLC control system | SECC Electrogalvanized sheet | Steel base frame |
| Battery system | H class insulation | Main circuit breaker | Corrosion-resistant coating | Engine bracket |
| Speed control system | H class temperature rising | Breaker cabinet | Access door | Alternator bracket |
| Turbocharger | IP23 protection | Communication connector | Stainless steel hinge | Radiator bracket |
| Lockable isolator switch | AVR voltage regulator | ATS connector | Sound absorbing cotton | Vibration isolators |
| Battery charger | | Mains floating charger | | |

| Fuel system | Lubrication system | Cooling system | Intake / exhaust system | Service documents |
|---|---|---|---|---|
| Base frame fuel tank | Oil pressure sensor | 50℃ radiator | Air filter | Installation and operation manual |
| Fuel level sensor | Oil temperature sensor | Water level sensor | Exhaust muffler | Test report |
| Flexible connection pipe | Oil filter | Jacket water pipe | Exhaust bellow | Circuit diagram |
| Fuel filter | Manual oil drain pump | Intercooling pipe | Exhaust pipe and flange | Warranty manual |
| | Oil drain ball valve | | High temperature protective sleeve | Engine operation and maintenance manual |
| | | | | Standard package |

### Optional configuration

| Engine | Alternator | Control switchgear | Fuel system | Lubrication system |
|---|---|---|---|---|
| Jacket water preheater | Anti-condensation heater | 4P Circuit breaker | Fuel three-way valve | Electric oil drain pump |
| Oil preheater | Treatments against humidity and corrosion | ATS cabinet | Daily fuel tank | |
| | | Paralleling control system | | |
| | | Grid-connection system | | |

### Power Class Definition

- Prime Power (PRP): the unit 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 70% 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 test conditions.
  - Ambient temperature 25℃
  - Altitude 100m
  - Relative humidity 30%
- Dimensions, weight and other parame0ters are for reference only, which shall be subject to the final design drawing.