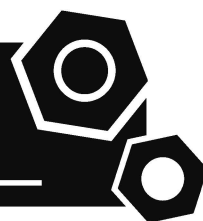


**Generator set**  
**Sound-proof type**  
**WPS80D6S-EPA**

# **SPECIFICATIONS**



## T3 series

### WPS80D6S-EPA

60 Hz @ 1800rpm, 3-phase/4-wiring



## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- ISO8528-5:2005
- GB/T2820.5-2009

### Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 50°C. The coolant heater is needed when the temperature is below 5°C
- Humidity: Less than 80%.
- Altitude: Below one thousand (1000) meters.

### Factory Inspection

- Inspection items.
- 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% Load.

### Painting Process

- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

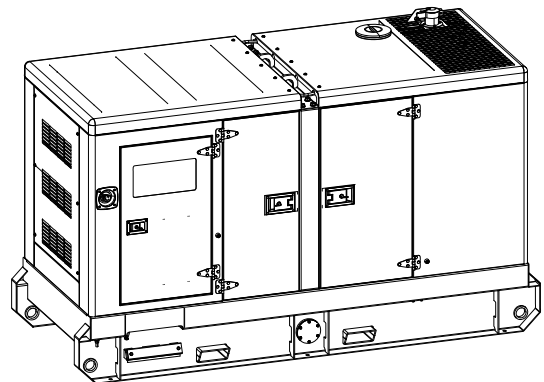
## 2 General Features

- Perkins engine 1104D-E44TAG1
- Close coupled to Leroy Somer alternator LSA 44.3 S4
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 320A
- Rotate speed governor: ECU
- Excitation system: Self excited , SHUNT
- A.V.R model: R250
- Key switch

- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 1x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Power coated canopy
- 50°C radiator
- Oil pump on the engine
- Steel base frame with forklifts
- Vibration isolators between the engine/alternator and base frame
- Dry type air
- Base fuel tank for 9 hours running
- Drain points for fuel tank
- Operation Manual /

## 3 Equipment Specification

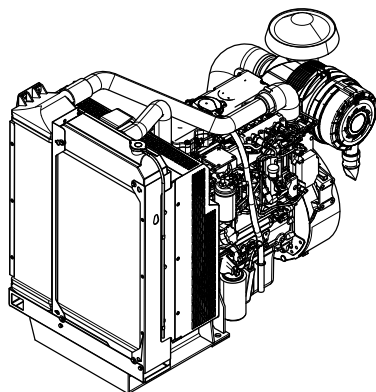
### General technical data



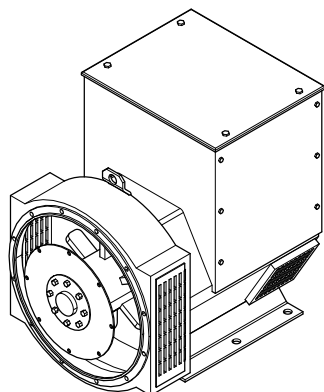
Model..... WPS80D6S-EPA  
Structure type ..... R  
Tank capacity.....180L  
Dry weight..... 1765kg  
Noise level @7m ..... 69.7dBA  
Dimensions L×W×H..... 2888x1165x1680mm  
Standby Power ..... 100kVA/80kW

|                         |        |        |        |        |      |
|-------------------------|--------|--------|--------|--------|------|
| Voltage                 | 208V   | 220V   | 230V   | 240V   |      |
| Ampere                  | 222.1A | 210.0A | 200.8A | 192.5A |      |
| Genset Fuel Consumption |        |        |        |        |      |
| Frequency/Load          | 25%    | 50%    | 75%    | 100%   | 110% |
| 60Hz (L/h)              | N/A    | 11.2   | 16.9   | 22.3   | 24.5 |

## Power System

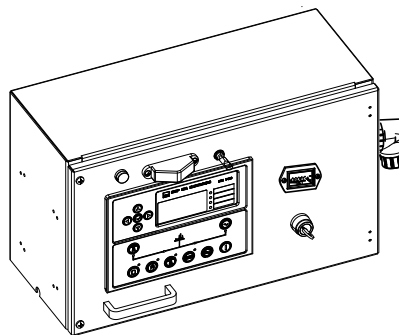


|                                 |                                        |
|---------------------------------|----------------------------------------|
| Engine Manufacturer/Brand.....  | Perkins                                |
| Engine Model.....               | 1104D-E44TAG1                          |
| Dimensions L×W×H.....           | 1358×749×1086mm                        |
| Dry Weigh (approx.) .....       | 465kg                                  |
| Number of Cylinders.....        | 4                                      |
| Bore.....                       | 105mm                                  |
| Stroke .....                    | 127mm                                  |
| Displacement.....               | 4.4L                                   |
| Compression Ratio.....          | 16.2                                   |
| Type of Injection .....         | Direct                                 |
| Intake System.....              | Turbocharged, air-to-air charge cooled |
| Intake Resistance.....          | ≤8.0kPa                                |
| Cooling System .....            | Water cooled                           |
| Fan .....                       | Pusher                                 |
| Battery Voltage .....           | 12V                                    |
| Type of Fuel.....               | EPA2D 89.330-96                        |
| Type of Oil .....               | API-CC/SE or CCMC-D1                   |
| Oil Capacity .....              | 8.0L                                   |
| Type of Coolant .....           | Glycol mixture                         |
| Coolant Capacity .....          | 17L                                    |
| Back Pressure .....             | ≤15kPa                                 |
| Standby Power .....             | 96kW                                   |
| Prime Power .....               | 88kW                                   |
| Fuel Consumption(100%load)..... | 24.2L/h                                |



|                                                           |                                 |
|-----------------------------------------------------------|---------------------------------|
| Alternator Manufacturer/Brand .....                       | Leroy Somer                     |
| Alternator Model .....                                    | LSA 44.3 S4                     |
| Exciter.....                                              | Brushless                       |
| Cooling Fan .....                                         | Cast alloy aluminum             |
| Windings.....                                             | 100% copper                     |
| Insulation Class .....                                    | H                               |
| Winding Pitch.....                                        | 2/3                             |
| Terminals .....                                           | 12                              |
| Drip Proof .....                                          | IP23                            |
| Altitude.....                                             | ≤1000m                          |
| Overspeed .....                                           | 2250 rpm                        |
| Air Flow.....                                             | 0.514m³/s(50HZ),0.617m³/s(60HZ) |
| Voltage Regulation .....                                  | ±1.0%                           |
| Total harmonic TGH / THCat no load < 1.5 % - on load < 5% |                                 |
| Telephone Interference.....                               | THF<2%;TIF<50                   |

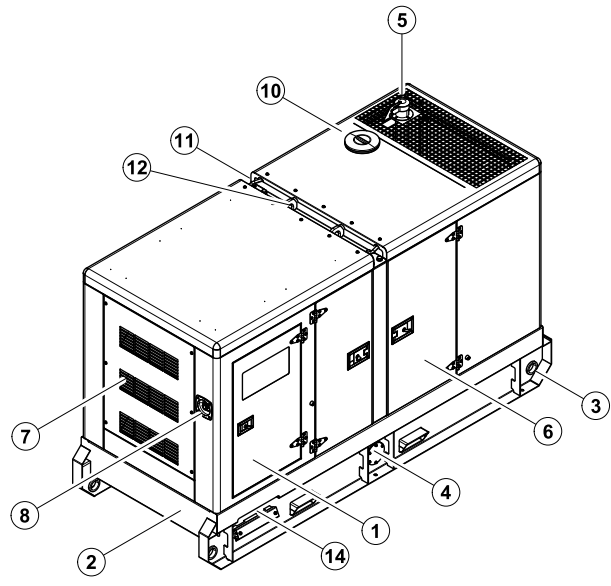
## PLC-7420 Control System



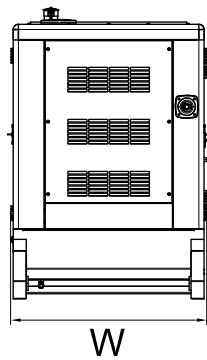
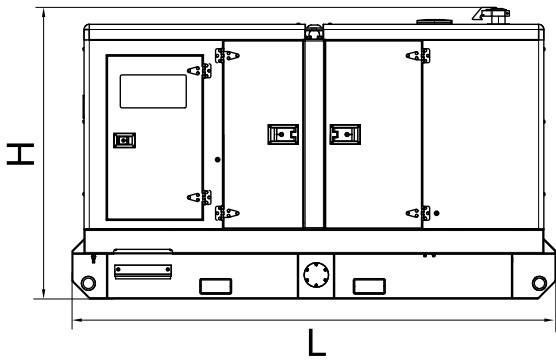
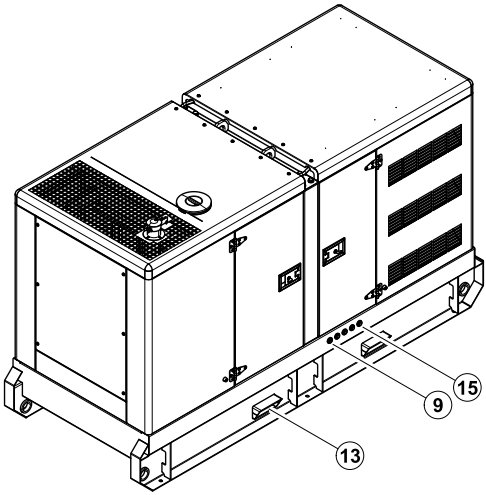
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and display all values and alarms information on the LCD. In addition, the control module can automatically shut down the engine and indicate the engine failure.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the mains supply and genset
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like pressure, temp. etc.
- Manual, automatic and remote work mode selectable
- Real time clock for time and date display, overall runtime display, 250 log entries
- Overall power output display
- Integral speed/frequency detecting, telling status of start, rated operation, overspeed etc.
- Communication with PC via RS485 OR RS232 interface, using MODBUS protocol

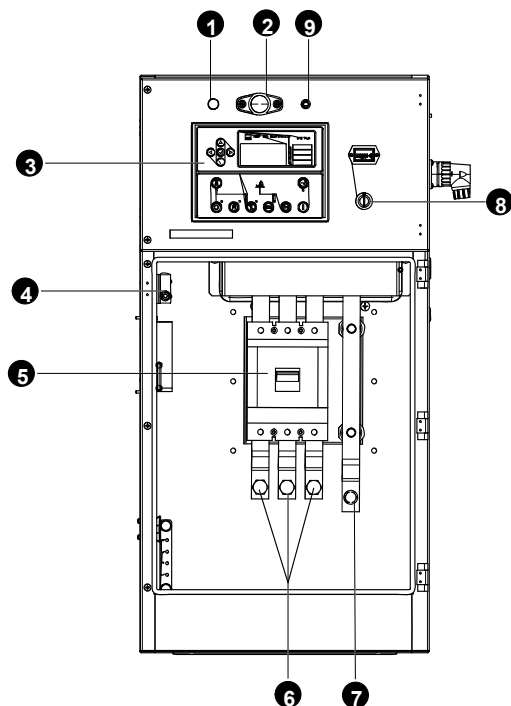
# 4 Overall Dimensions



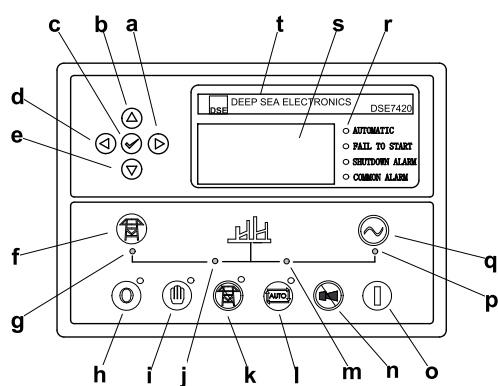
- ⑧ Emergency stop switch
- ⑦ Air inlet
- ⑥ Access door
- ⑤ Exhaust gas outlet
- ④ Fuel drain
- ③ Tie down
- ② Base frame
- ① Control cabinet
- ⑮ External fuel inlet/return hose fitting
- ⑭ Cable trench
- ⑬ Fork lift channel
- ⑫ Lifting lug
- ⑪ Roping lug
- ⑩ Coolant inlet
- ⑨ Coolant/Oil drain hose fitting



# 5 Control System



**Control & field wiring cabinet**



**Control module**

| Ref. | Description                 |
|------|-----------------------------|
| 1    | Charge indicator            |
| 2    | Control cabinet lamp        |
| 3    | Control module              |
| 4    | Limit switch                |
| 5    | Main circuit breaker        |
| 6    | Live wire terminals         |
| 7    | Neutral wire terminal       |
| 8    | Key switch                  |
| 9    | Control cabinet lamp switch |

|   |                                                                          |
|---|--------------------------------------------------------------------------|
| a | Button (next page)                                                       |
| b | Button (increase value / previous item)                                  |
| c | Button (accept)                                                          |
| d | Button (previous page)                                                   |
| e | Button (decrease value / next item)                                      |
| f | Button (transfer the load to the mains supply, when in Manual mode only) |
| g | Mains supply available LED                                               |
| h | Stop / Reset button                                                      |
| i | Manual button (Manual control mode)                                      |
| j | Mains supply on load LED                                                 |
| k | Test button (Test mode)                                                  |
| l | Auto button (Auto mode)                                                  |
| m | Genset on load LED                                                       |
| n | Mute/Lamp test button                                                    |
| o | Start button (Manual)                                                    |
| p | Genset available LED                                                     |
| q | Button (transfer the load to the genset, when in Manual mode only)       |
| r | Alarm LED (4 alarm items)                                                |
| s | LCD display                                                              |
| t | Control module name                                                      |

|                 |
|-----------------|
| 1000033153-E2-E |
| 11.2022         |