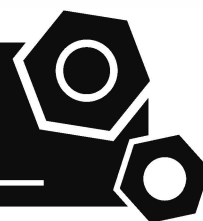


**Generator set**  
**Sound-proof type**  
**A180J**

# **SPECIFICATIONS**



# **T4 series**

## **A180J, Tier 4 Final**

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

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## **1 Standards & Conditions**

### **Design Standards**

The designs and the productions are in conformity with:

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

Electrical devices have obtained the certification of:

- CSA
- UL

### **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.

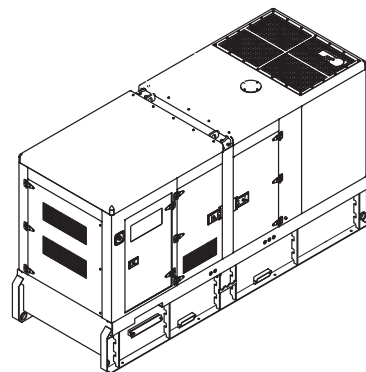
## **2 General Features**

- John Deere engine 6068HG550\_A
- Close coupled to Leroy Somer alternator LSA44.3VL13
- Intelligent control module PLC-7420
- ABB main circuit breaker: 500A
- Rotate speed governor: ECU
- Exhaust gas purification system with DOC, SCR
- Excitation system: Self excited, SHUNT
- Key switch

- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 1x12V/120AH battery and charger
- Lockable battery isolator switch
- Power coated canopy
- 50°C radiator
- Oil pump on the engine
- Steel base frame
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 24 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

## **3 Equipment Specification**

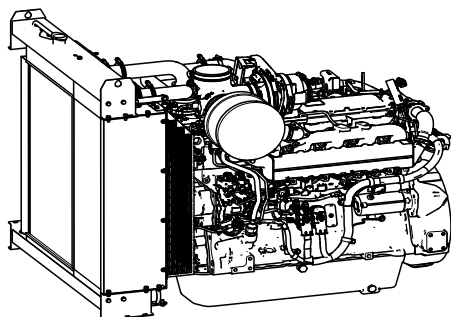
### **General technical data**



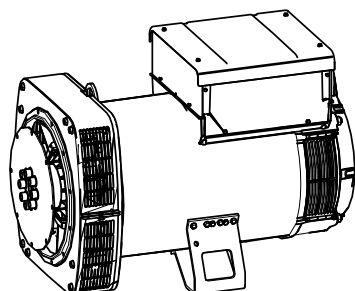
Model..... A180J  
Structure type ..... R  
Tank capacity.....800L  
Dry weight..... 3063kg  
Sound pressure level @7m ..... 73dBA  
Dimensions L×W×H.....3650x1300x1985mm  
Prime Power ..... 180kVA/144kW  
Standby Power ..... 200kVA/160kW

|                         |        |        |        |        |      |
|-------------------------|--------|--------|--------|--------|------|
| Voltage                 | 208V   | 220V   | 230V   | 240V   |      |
| Ampere                  | 496.9A | 470.0A | 449.3A | 430.6A |      |
| Genset Fuel Consumption |        |        |        |        |      |
| Frequency/Load          | 25%    | 50%    | 75%    | 100%   | 110% |
| 60Hz (L/h)              | 8.6    | 16.9   | 27.3   | 33.7   | 37.1 |

## Power System

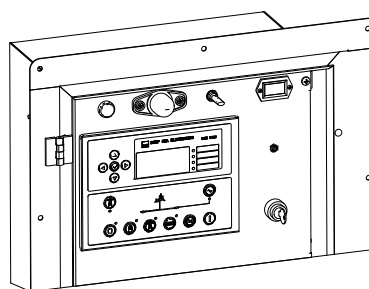


|                                 |                                               |
|---------------------------------|-----------------------------------------------|
| Engine Manufacturer/Brand.....  | Johndeere                                     |
| Engine Model.....               | 6068HG550_A                                   |
| Dimensions L×W×H.....           | 1140×720×1315mm                               |
| Dry Weigh (approx.) .....       | 770Kg                                         |
| Number of Cylinders.....        | 6                                             |
| Bore.....                       | 106mm                                         |
| Stroke .....                    | 127mm                                         |
| Displacement.....               | 6.8L                                          |
| Compression Ratio .....         | 17.2                                          |
| Type of injection.....          | High pressure common rail                     |
| Intake System.....              | Turbocharged                                  |
| Intake Resistance .....         | ≤3.75kPa                                      |
| Cooling System .....            | Water cooled                                  |
| Fan .....                       | Pusher                                        |
| Battery Voltage .....           | 12V                                           |
| Type of Fuel.....               | Ultra Low Sulfur Fuel Only                    |
| Type of Oil .....               | Class CJ-4/CK-4 oil as per API classification |
| Oil Capacity .....              | 31.0L                                         |
| Type of Coolant .....           | Glycol mixture                                |
| Coolant Capacity .....          | 11.9L                                         |
| Back Pressure .....             | ≤14.0kPa                                      |
| Standby Power .....             | 180kW                                         |
| Prime Power .....               | 164kW                                         |
| Fuel Consumption(100%load)..... | 33.7L/h                                       |



|                                                           |                                 |
|-----------------------------------------------------------|---------------------------------|
| Alternator Manufacturer/Brand .....                       | Leroy Somer                     |
| Alternator Model .....                                    | LSA44.3VL13                     |
| 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                   |

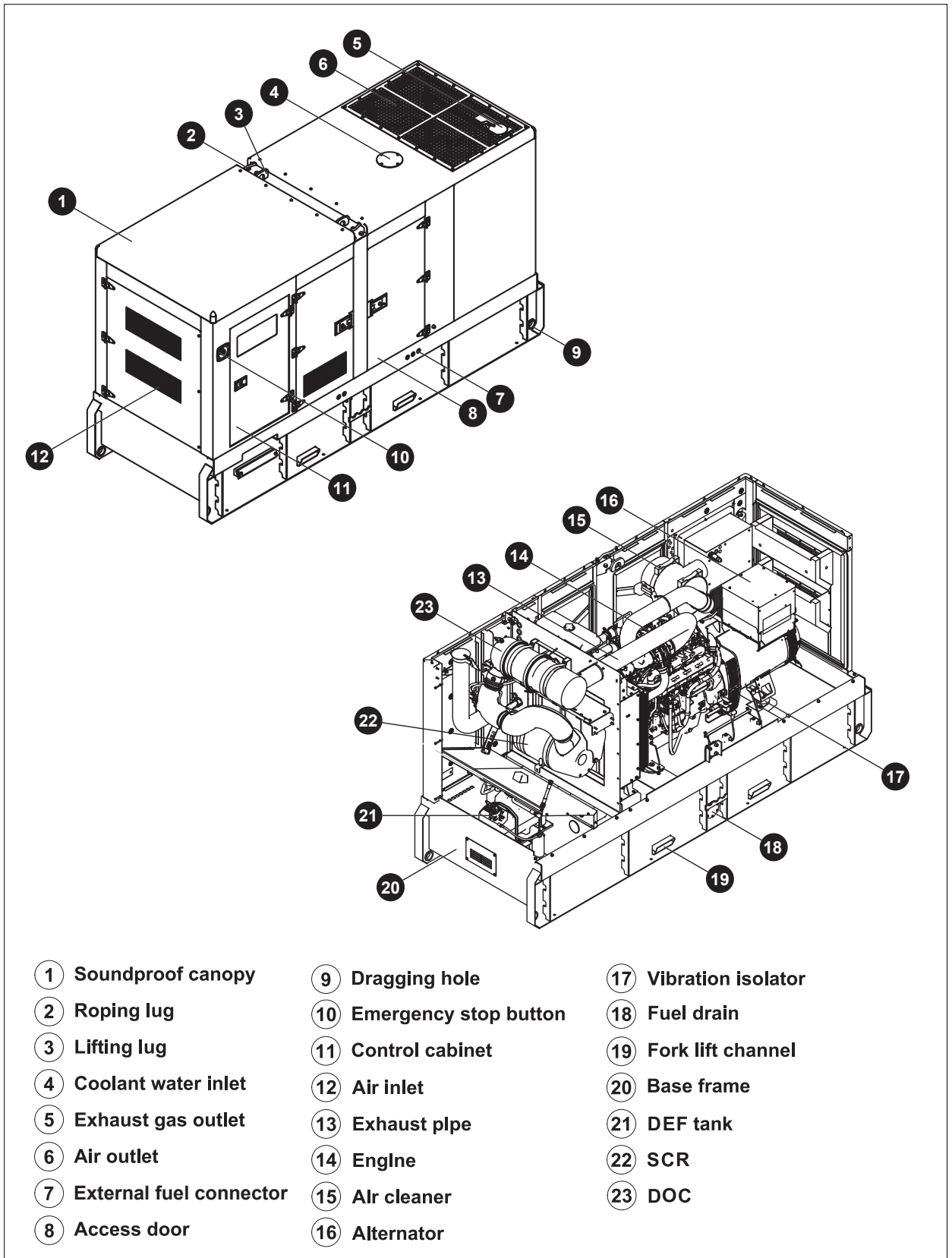
## PLC-7420 Control System



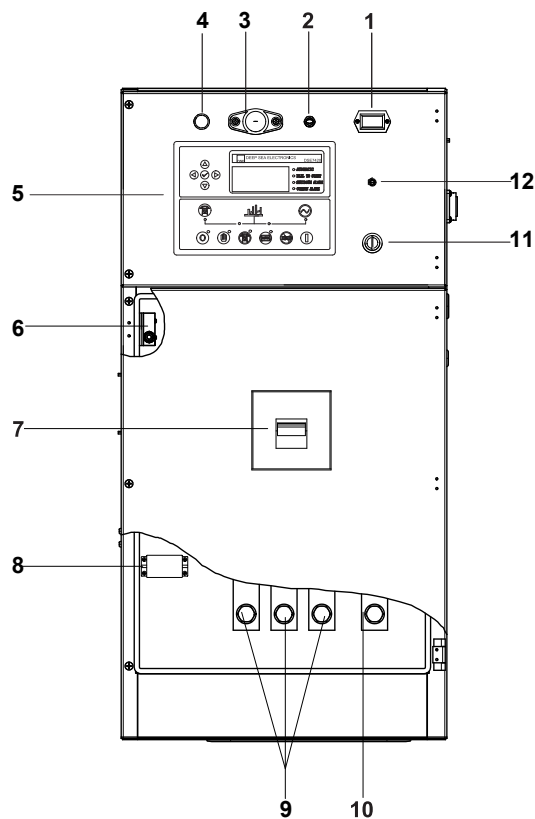
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and 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

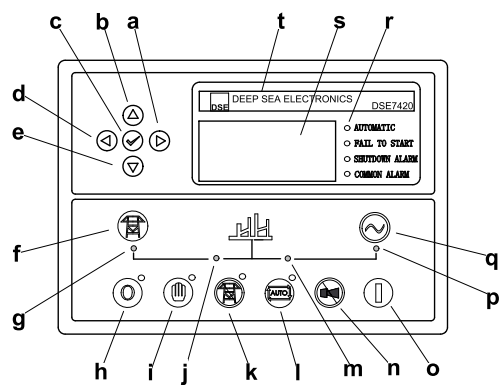
## 4 Overall Dimensions



# 5 Control System



**Control & field wiring cabinet**



**Control Panel**

| Ref. | Description                                     |
|------|-------------------------------------------------|
| 1    | Time counter                                    |
| 2    | Control panel lamp switch                       |
| 3    | Control panel lamp                              |
| 4    | Charge indicator                                |
| 5    | Control module                                  |
| 6    | Limit switch                                    |
| 7    | Main circuit breaker                            |
| 8    | Mains input/ remote/AMF communication connector |
| 9    | Live wire terminals                             |
| 10   | Neutral wire terminal                           |
| 11   | Key switch                                      |
| 12   | Voltage adjusting knob                          |

|   |                                                                          |
|---|--------------------------------------------------------------------------|
| 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                                                      |