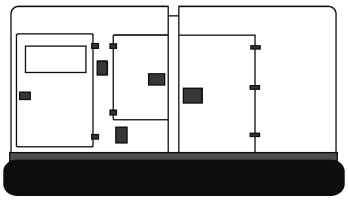
ASO genset



# Generator set
# Sound-proof type
# E660VS

# SPECIFICATIONS

# *EV series*
# *E660VS, Tier 5 Final*
***60 Hz @ 1800rpm,3-phase/4-wiring***

## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- Conformite Europeenne (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℃ to 50℃. The coolant heater is needed when the temperature is below 5℃
- 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

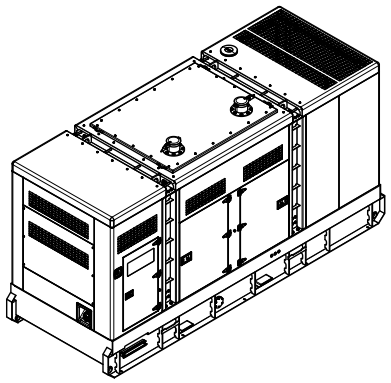
- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

## 2 General Features

- Volvo engine TAD1683GE
- Close coupled to Leroy Somer alternator LSA47.3L10
- Intelligent control module PLC-500
- ABB main circuit breaker: 1000A
- Rotate speed governor: ECU
- Exhaust gas purification system with DOC and SCR
- Excitation system: Self excited, SHUNT
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/150AH battery and charger
- Lockable battery isolator switch
- Power coated canopy
- 50℃ 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 8 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

## 3 Equipment Specification

### General technical data



Model..... E660VS

Structure type .....MC

Tank capacity.....1000L

Dry weight.....8394kg

Sound pressure level @7m .....76dBA

Dimensions L×W×H.....5200x1900x2500mm

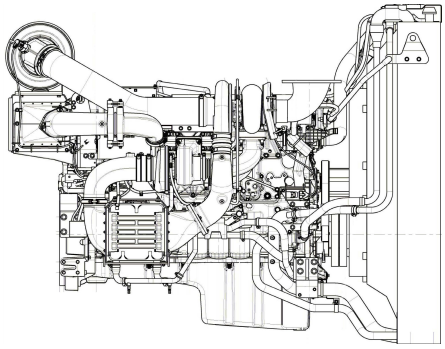
Prime Power .....660kVA/528kW

Standby Power .....726kVA/581kW

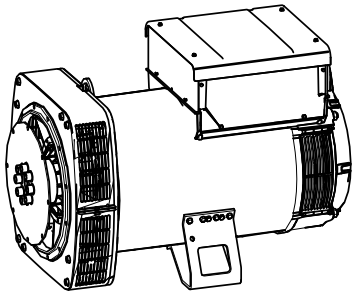
| Voltage | 416V | 440V | 460V | 480V |
|---|---|---|---|---|
| Ampere | 1007.6 | 952.7A | 911.2A | 873.3A |

| ***Genset Fuel Consumption*** | | | | | |
|---|---|---|---|---|---|
| Frequency/Load | 25% | 50% | 75% | 100% | 110% |
| 60Hz (L/h) | 35.3 | 62.7 | 90.9 | 121.1 | 134.7 |

## Power System

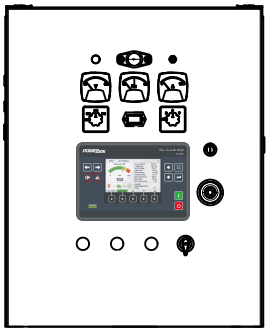


Engine Manufacturer/Brand.....Volvo
Engine Model..... TAD1683GE
Dimensions L×W×H.....1550×1320×1465mm
Dry Weigh (approx.) ..... 1810Kg
Number of Cylinders.....6
Bore .....144mm
Stroke .....165mm
Displacement.....16.12L
Compression Ratio .....16.8
Type of injection..... High pressure common rail
Intake System..... Turbocharged
Intake Resistance .....≤5.0kPa
Cooling System .....Water cooled
Fan ..... Pusher
Battery Voltage ..... 24V
Type of Fuel..... Ultra Low Sulfur Fuel Only
Type of Oil .....Class CJ-4/CK-4 oil as per API classification
Oil Capacity .....42.0L
Type of Coolant ..... Glycol mixture
Coolant Capacity (Engine only).....33.0L
Back Pressure .....≤19.0kPa
Standby Power .....685kW
Prime Power .....625kW
Fuel Consumption(100%load).....121.1L/h



Alternator Manufacturer/Brand ..... Leroy Somer
Alternator Model ..... LSA47.3L10
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..... 0.9m³/s(50HZ),1.1m³/s(60HZ)
Voltage Regulation .....±0.5%
Total harmonic TGH / THCat no load < 1.5 % - on load < 2%
Telephone Interference..... THF<2%;TIF<50

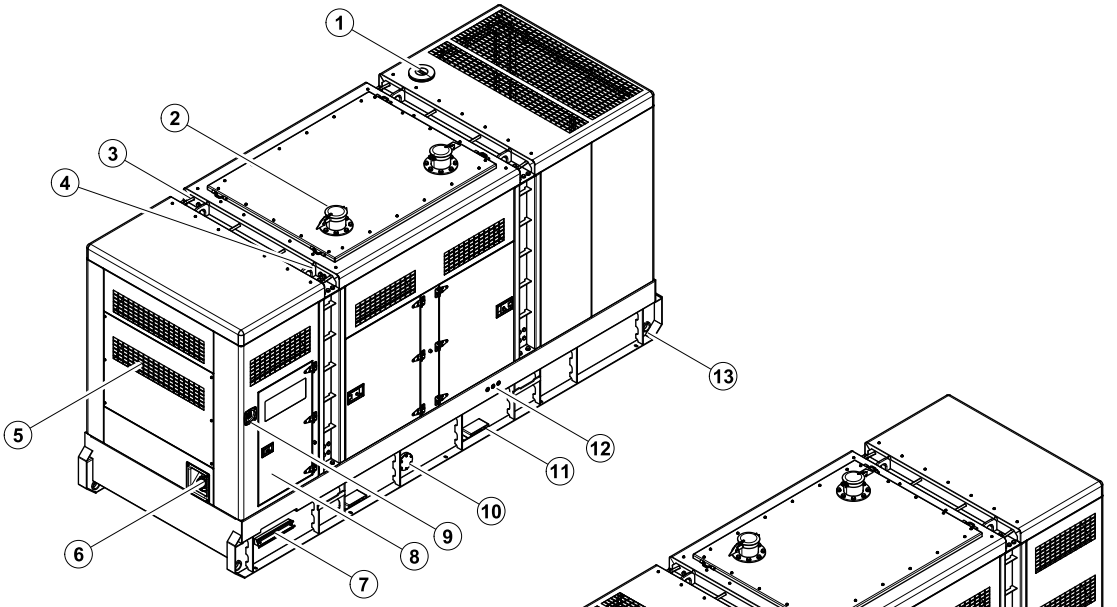
## PLC-500 Control System



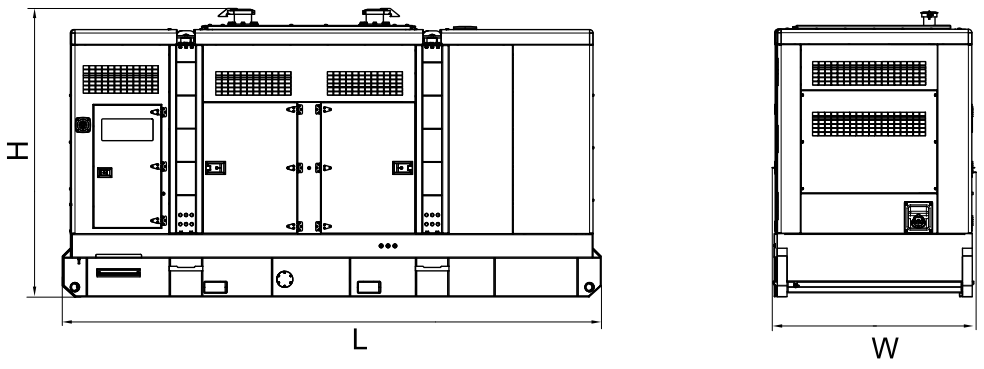
PLC-500 is a microprocessor based control unit containing all necessary functions for protection of the genset and the breaker control. Furthermore, it contains all necessary three-phase measuring circuits and presents all values and alarms on the LCD display. The module has the function of load sharing which enables the module to share the active load (kW) equally when operating in parallel with other gensets. The load sharing is performed so each genset takes a portion of the load that is calculated in percent according to the nominal power.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the 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
- RS232 & RS485 can be used at the same time
- Real time clock for time and date display, overall runtime display, 250 log entries

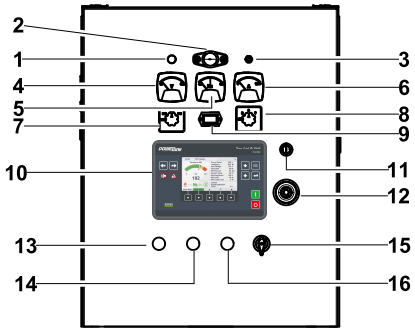
## 4 Overall Dimensions



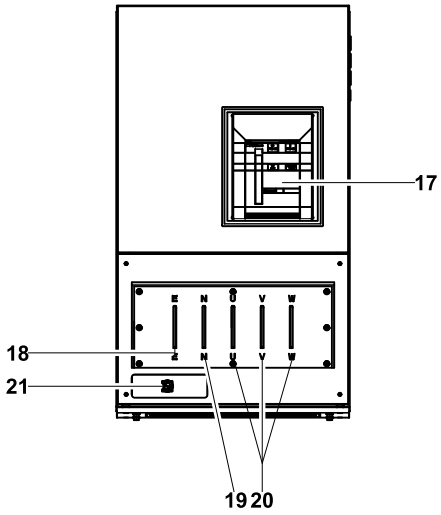

| | | | |
|---|---|---|---|
| 8 | Control cabinet | 16 | Base frame |
| 7 | Cable trench | 15 | Access door |
| 6 | Fuel inlet | 14 | Coolant/Oil drain hose fitting |
| 5 | Air inlet | 13 | Tie down |
| 4 | Lifting lug | 12 | External fuel inlet/return hose fitting |
| 3 | Roping lug | 11 | Fork lift channel |
| 2 | Exhaust gas outlet | 10 | Fuel drain |
| 1 | Coolant inlet | 9 | Emergency stop switch |



# 5 Control System




**Control cabinet**




**Field wiring cabinet**

| Ref. | Description |
|---|---|
| 1 | Charge indicator |
| 2 | Control cabinet lamp |
| 3 | Control cabinet lamp switch |
| 4 | Voltage meter |
| 5 | Frequency meter |
| 6 | Current meter |
| 7 | Changerover switch-Voltage |
| 8 | Changerover switch-Current |
| 9 | Time counter |
| 10 | Control module |
| 11 | Key switch |
| 12 | Emergency stop switch |
| 13 | GCB closed indicator |
| 14 | GCB opened indicator |
| 15 | Control power switch |
| 16 | Alarm reset button |
| 17 | Main circuit breaker |
| 18 | Ground wire terminal |
| 19 | Neutral wire terminal |
| 20 | Live wire terminals |
| 21 | Paralleling connector with the mains |