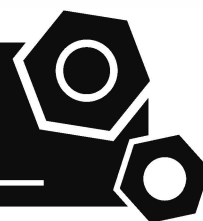


Generator set
Sound-proof type
E12KS

SPECIFICATIONS



EV series

E12KS, Tier 5 Final

60 Hz @ 1800rpm, 3-phase/5-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

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.

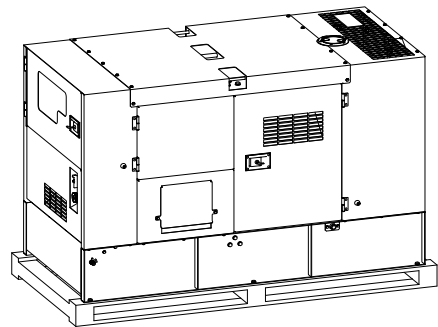
2 General Features

- Kubota engine V1505-E4BG2
- Close coupled to Leroy Somer alternator LSA40VS2
- Intelligent control module PLC-7420
- ABB main circuit breaker: 32A
- Rotate speed governor: Mechanical governor
- Excitation system: Self excited, SHUNT
- Key switch

- Emergency stop switch
- Remote control / mains input receptacle
- 1x12V/70AH 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 27 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

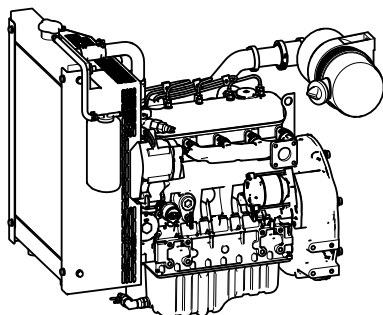
General technical data



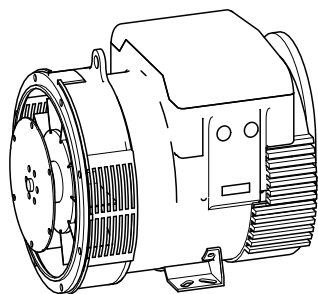
Model.....	E12KS
Structure type	RS
Tank capacity.....	100L
Dry weight.....	850kg
Sound pressure level @7m	64dBA
Dimensions L×W×H.....	2042x1026x1353mm
Prime Power	12kVA/9.6kW
Standby Power	13kVA/10.5kW

Voltage	208V	220V	230V	240V	
Ampere	36.4A	34.5A	33.0A	31.6A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
60Hz (L/h)	N/A	2.1	3.0	4.1	4.5

Power System

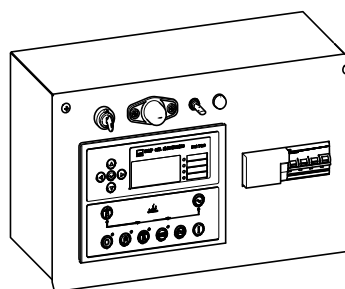


Engine Manufacturer/Brand.....	Kubota
Engine Model.....	V1505-E4BG2
Dimensions L×W×H.....	637×396×607mm
Dry Weigh (approx.)	127Kg
Number of Cylinders.....	4
Bore.....	78mm
Stroke	78.4mm
Displacement.....	1.498L
Compression Ratio	23.0
Type of injection.....	Direct injection
Intake System.....	Natural aspirated
Intake Resistance	≤4.90kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	12V
Type of Fuel.....	Fuel No.2-D S500 or S15 - Low sulfur fuel
Type of Oil	Class CF oil as per API classification
Oil Capacity	6.7L
Type of Coolant	Glycol mixture
Coolant Capacity	2.0L
Back Pressure	≤ 7.1kPa
Standby Power	15.1kW
Prime Power	14.5kW
Fuel Consumption(100%load).....	4.1L/h



Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA40VS2
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.....	0.06m³/s(50HZ),0.072m³/s(60HZ)
Voltage Regulation	±0.5%
Total harmonic TGH / THCat	no load < 3% - on load < 2%
Telephone Interference.....	THF<2%;TIF<50

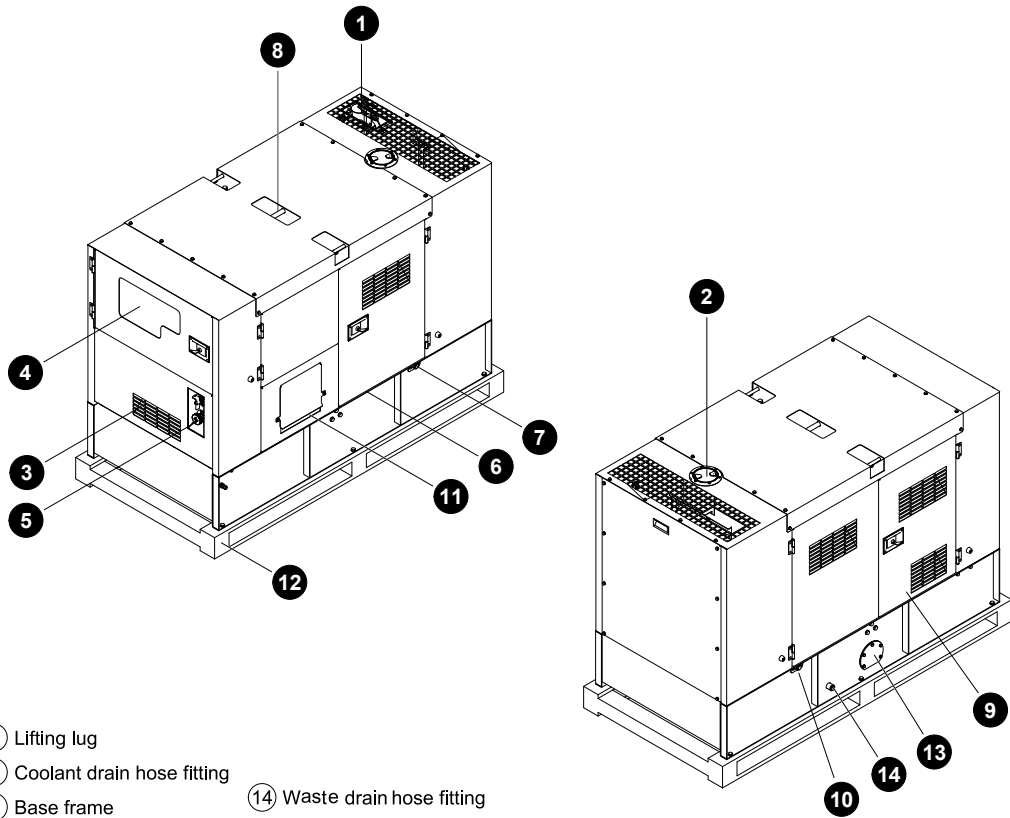
PLC-7420 Control System



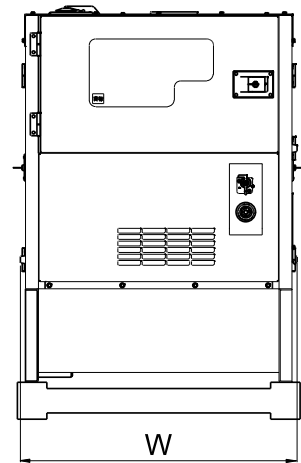
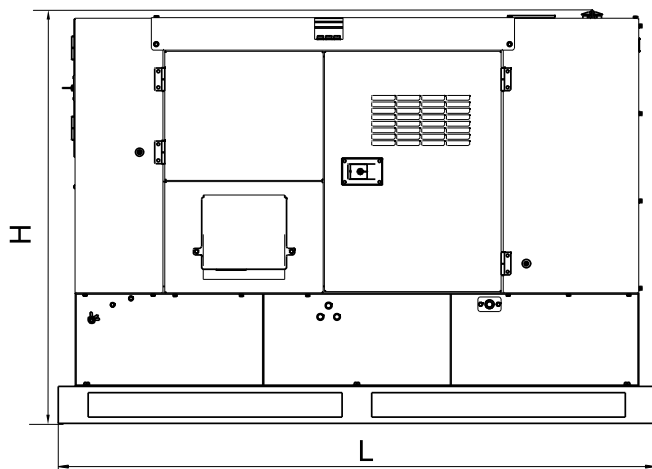
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

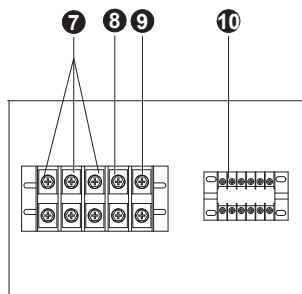
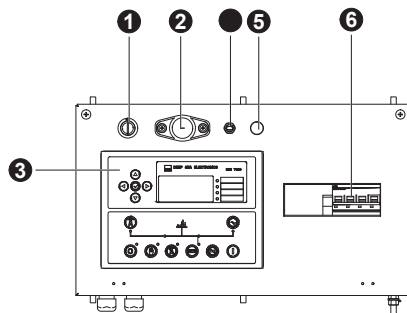
4 Overall Dimensions



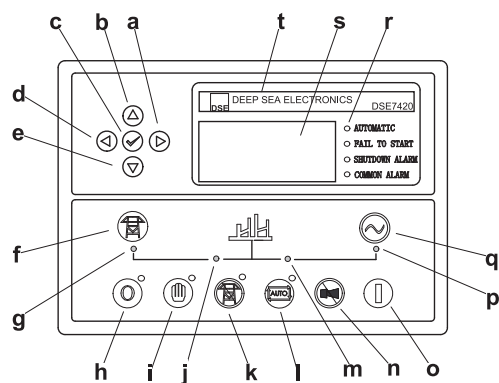
- ⑧ Lifting lug
- ⑦ Coolant drain hose fitting
- ⑥ Base frame
- ⑤ Emergency stop switch
- ④ Control cabinet
- ③ Air inlet
- ② Coolant inlet
- ① Exhaust gas outlet
- ⑭ Waste drain hose fitting
- ⑬ Fuel drain
- ⑫ Wooden tray
- ⑪ Cable trench
- ⑩ Oil drain hose fitting
- ⑨ Access door



5 Control System



Control & field wiring cabinet



Control module

Ref.	Description
1	Key switch
2	Control cabinet lamp
3	Control module
4	Control cabinet lamp switch
5	Charge indicator
6	Main circuit breaker
7	Live wire terminal
8	Neutral wire terminal
9	Ground wire terminal
10	Remote control/Mains input

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