

## DGPL44C-3

50 Hz @ 1500rpm, 3-phase / 5-wiring

**44kVA**  
**CUMMINS**  
**DGPL44C-3**

### A. STANDARDS & CONDITIONS

#### Design Standards

The designs and the productions are in conformity with:

- Conformance Europeenne (CE)
- ISO8528-5:2005
- AS 3000-2018
- AS 3010-2017

#### 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 90%
- Altitude: Below one thousand (1000) meters above sea level

#### Factory Inspection

- Inspection items
- Protection devices working test
- Starting ability in normal temperature
- 50% rated power load moment capability
- Voltage deviation and speed varying: 0%, 25%, 50%, 75%, 100%, 110% Load

#### Painting Process

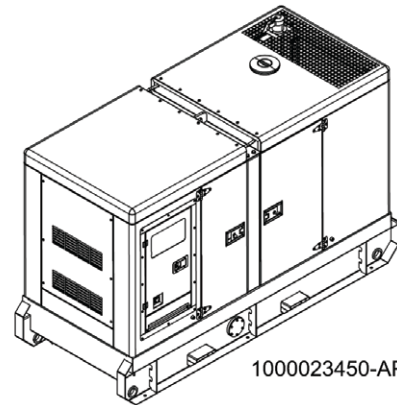
- Painting process specifications and colors are based on the manufacturer's standard
- The customer could also choose the color which the manufacturer offers

### B. GENERAL FEATURES

- Cummins engine 4BT3.9G1
- Close coupled to a Stamford alternator PI144K
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 80A
- Rotate speed governor: Mechanical governor
- Excitation System: Self Excited SHUNT
- A.V.R. Model: AS480
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- Remote run connector
- 2x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Oil pump on the engine
- Non-returning valve for fuel inlet hose of the engine
- Steel base frame with forkslots

- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 21 hours running
- Drain points for fuel tank
- Breather valve for fuel tank
- Operation Manual / Specifications

### C. GENERAL TECHNICAL DATA



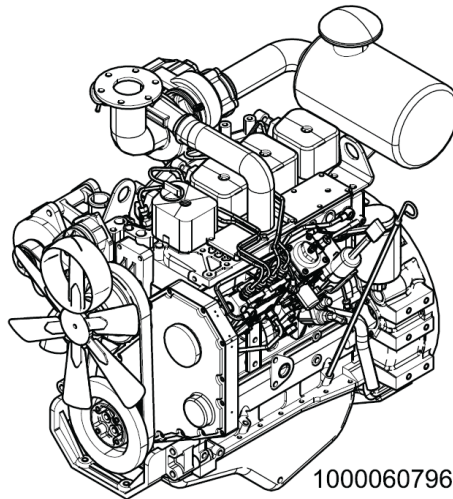
1000023450-AP1-D4

<b>MODEL</b>	DGPL44C-3
<b>STRUCTURE TYPE</b>	R
<b>TANK CAPACITY</b>	270 L
<b>DRY WEIGHT</b>	1410 kg
<b>NOISE LEVEL @ 7M</b>	67.5 dBA
<b>DIMENSIONS</b>	2588 x 1115 x 1710 mm
<b>STANDBY POWER</b>	47 kVA / 37 kW
<b>PRIME POWER</b>	43 kVA / 34 kW
<b>VOLTAGE/AMPERE</b>	41 5V / 59.8 A

GENSET FUEL CONSUMPTION					
Freq./Load	25%	50%	75%	100%	110%
<b>50Hz (L/h)</b>	5.0	7.5	10.0	13.0	14.0

**44kVA**  
**CUMMINS**  
**DGPL44C-3**

**DIESEL ENGINE**



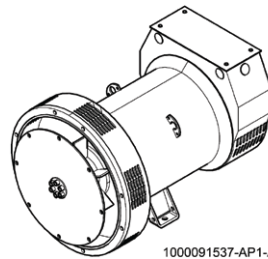
1000060796-S-AP1-B7

**ENGINE SPECIFICATIONS**

1	ENGINE MANUFACTURER/BRAND	Cummins
2	ENGINE MODEL	4BT3.9G1
3	DIMENSIONS	N/A
4	DRY WEIGHT (APPROX.)	321 kg
5	NUMBER OF CYLINDERS	4
6	BORE	102 mm
7	STROKE	120 mm
8	DISPLACEMENT (LITER)	3.9 L
9	COMPRESSION RATIO	N/A
10	TYPE OF INJECTION	Direct Injection
11	INTAKE SYSTEM	Turbocharged
12	INTAKE RESISTANCE	6.2 kPa
13	COOLING SYSTEM	Water Cooled
14	FAN	Pusher
15	BATTERY VOLTAGE	24V
16	TYPE OF FUEL	No.2 or ASTM D2
17	TYPE OF OIL	API CD/SE or CCMCD4
18	OIL CAPACITY	10.9 L
19	TYPE OF COOLANT	Glycol Mixture
20	COOLANT CAPACITY	20.8 L
21	BACK PRESSURE	10.1 kPa
22	STANDBY POWER	40 kW
23	PRIME POWER	36 kW
24	FUEL CONSUMPTION (100% LOAD)	214 g/kWh

**44kVA  
CUMMINS  
DGPL44C-3**

**ALTERNATOR**

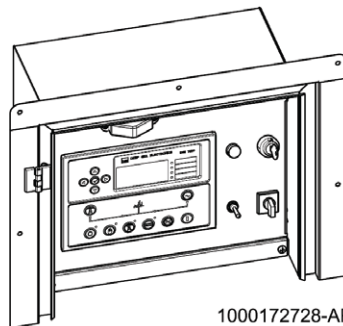


1000091537-AP1-A1

**ALTERNATOR SPECIFICATIONS**

1	ALTERNATOR MANUFACTURER/BRAND	Stamford
2	ALTERNATOR MODEL	PI144K
3	EXCITER	Brushless
4	COOLING FAN	Plastic
5	WINDINGS	100% Copper
6	INSULATION CLASS	H
7	WINDING PITCH	2 / 3
8	TERMINALS	12
9	DRIP PROOF	IP23
10	ALTITUDE	≤ 1000m
11	OVERSPEED	2250rpm
12	AIR FLOW	0.11m³/s(50Hz),0.135m³/s(60Hz)
13	VOLTAGE REGULATION	± 0.5%
14	TOTAL HARMONING TGH / THCat No Load < 1.5%	on load < 5%
15	TELEPHONE INTERFERENCE	THF < 2%; TIF <50

**PLC-7420 CONTROL SYSTEM**



1000172728-AP1-C4

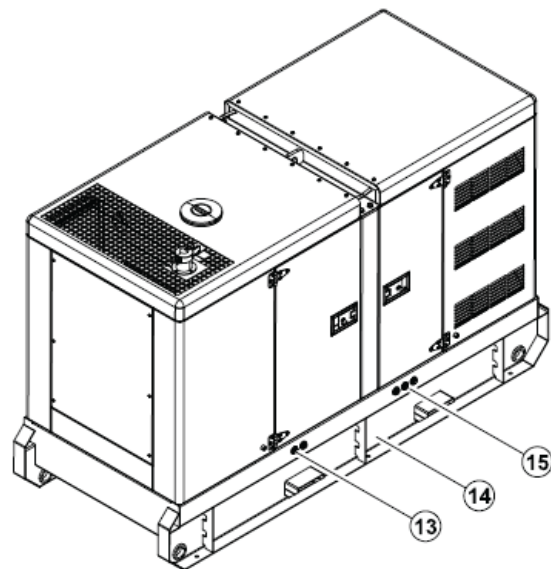
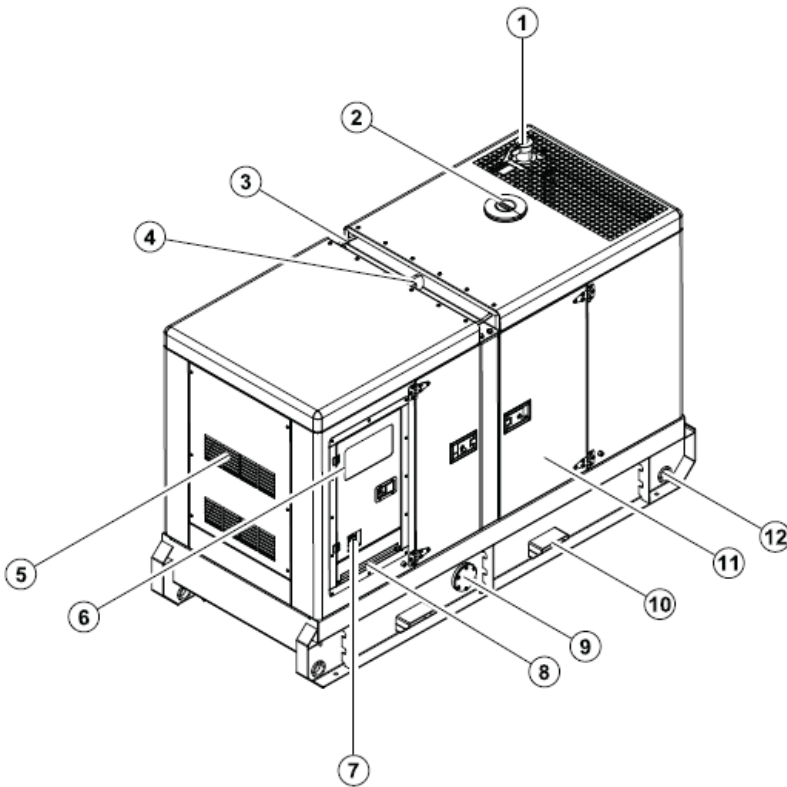
PLC-7420 is an advanced control module based on microprocessor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

**D. OVERALL DIMENSION**

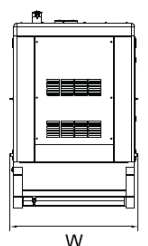
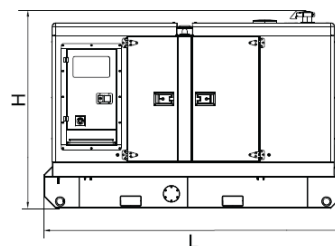
**44kVA  
CUMMINS  
DGPL44C-3**

Dry weight	1398kg
Fuel tank capacity	270L
Dimensions L x W x H	2588x1081x1709mm



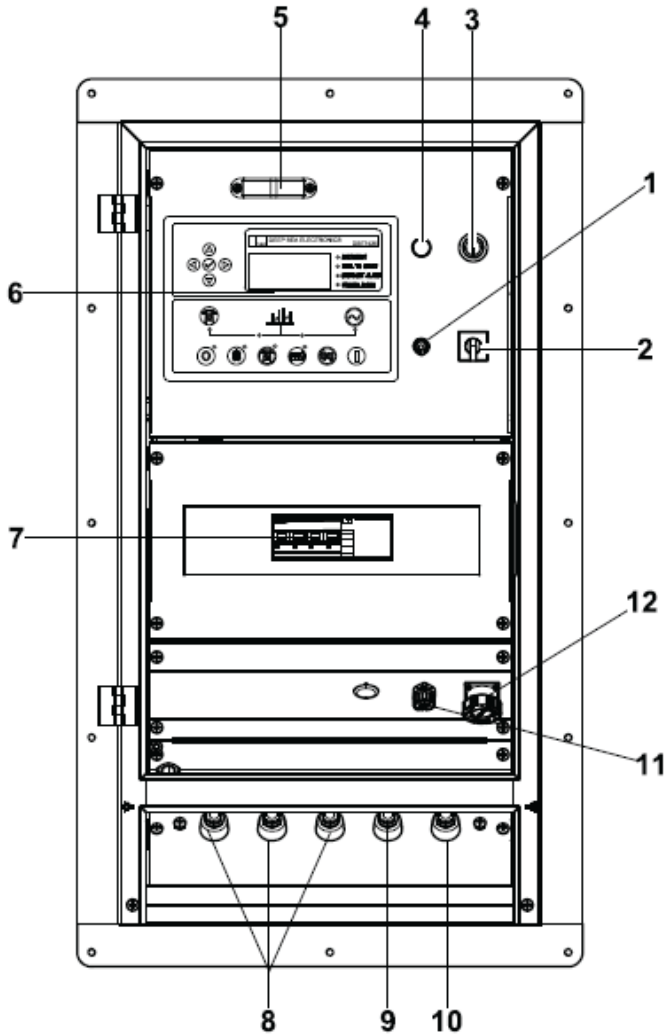
- ⑧ Cable trench
- ⑦ Emergency stop switch
- ⑥ Control cabinet
- ⑤ Air inlet
- ④ Lifting lug
- ③ Roping lug
- ② Coolant inlet
- ① Exhaust gas outlet
- ⑮ Coolant/Oil drain hose fitting
- ⑭ Base frame
- ⑬ External fuel inlet/return hose fitting
- ⑫ Tie down
- ⑪ Access door
- ⑩ Fork lift channel
- ⑨ Fuel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

<b>DIMENSIONS</b>	2588 x 1115 x 1710 mm
<b>DRY WEIGHT</b>	1410 kg

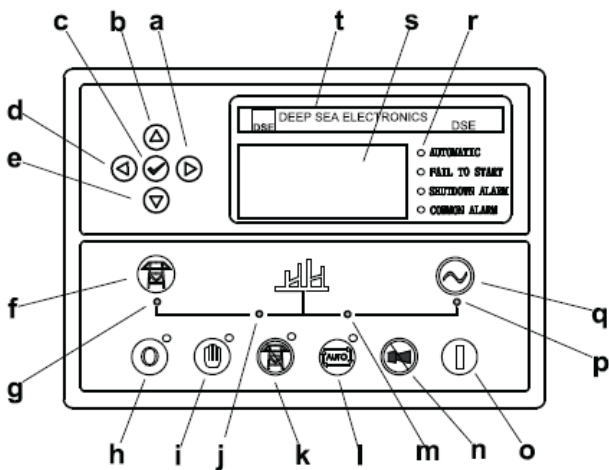


**44kVA**  
**CUMMINS**  
**DGPL44C-3**

**E. CONTROL SYSTEM**



**Control & Field wiring cabinet**



**Control module**

Ref.	Description
1	Mains Input Changeover Switch
2	Control Cabinet Lamp Switch
3	Key Switch
4	Charge Indicator
5	Control Cabinet Lamp
6	Control Module
7	Limit Switch
8	ATS Connector
9	Remote Run Connector
10	Live Wire Terminals
11	Neutral Wire Terminal
12	Main Circuit Breaker
13	Emergency Stop 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)
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)
r.	Alarm LED (4 alarm items)
s.	LCD Display
t.	Control Module Name

1000023450-F5-E

10.2020