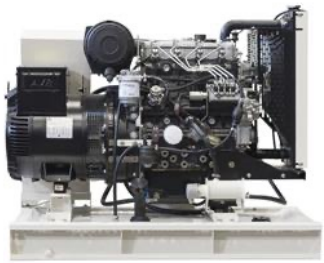
Perkins GP22PE (400 VAC)

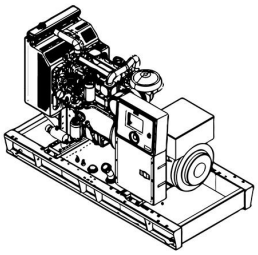
50 Hz Diesel Generator Sets

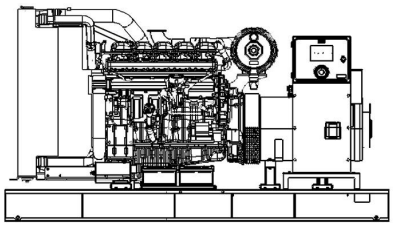
Representative PPG image; legacy configuration may differ.

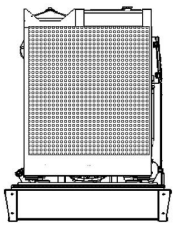


Output Power		
Standby Power (ESP)	kVA	22
	kW	17.6
Prime Power (PRP)	kVA	20
	kW	16

Size	W x L x H (mm)	Weight (kg)	Fuel Tank (lt)	Noise dB(A) @ 7m
Canopied	700x1750x1200	612	75	66
Open Skid	700x1350x1050	439	75	N/A







Continuous Power

The maximum power which a generating set is capable of delivering continuously whilst supplying a constant electrical load. Average load can be 100%. The generator must not be overloaded.

Standby Power

The max power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 hrs of operation per year under average of 70% load. Overloading isn't permissible.

Prime Power

The maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load. Average load should be 70%. The generator can be overloaded 10% for 1 hour per 12 hrs.

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Engine

Manufacturer		PERKINS
Model		**404A-22G1**
Cylinder Configuration		IN-LINE
No of Cylinders		4
Displacement	lt	2,216
Bore	mm	84
Stroke	mm	100
Compression Ratio		23,3:1
Aspiration		NATURALLY ASPIRATED
Governor Type		MECHANICAL
Cooling System		WATER
Coolant Capacity	lt	7
Lubrication Oil Capacity	lt	10,6
Electrical System	VDC	12
Speed / Frequency 50 Hz	rpm	1500 rpm / 50 Hz
Engine Gross Power (Standby 50 Hz)	kW	20,6
Fuel Consumption %110 ESP 50 Hz	lt/h	6,1
Fuel Consumption %100 PRP 50 Hz	lt/h	5,3
Fuel Consumption %75 PRP 50 Hz	lt/h	4
Fuel Consumption %50 PRP 50 Hz	lt/h	2,9
Exhaust Outlet Temperature 50 Hz	°C	505
Exhaust Gas Flow 50 Hz	m3/min	3,94
Combustion Air Flow 50 Hz	m3/min	1,45
Cooling Air Flow 50 Hz	m3/min	35,4

Alternator

No of Phases		3
Power Factor		0,8
No of Bearings		SINGLE
No of Poles		4
No of Leads		6-12
Insulation Class		H-F
Degree of Protection		IP 23
Excitation System		AVR (Automatic Voltage Regulator), Brushless

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Standard Equipments

E
In PPG generator sets, leading engine brands that have state of the art technology and have compliance with ISO 8528, ISO 3046, BS 5514, DIN 6271 standarts, are being used. These engines with low fuel consumption, provide accurate speed setting and order, mount to the fuel pump, also have mechanic or electronic type governors.

Alternato
In products PPG produced, leading alternator brands of the world that have state of the art technology, high quality, productivity and durability, are being used. All alternators, which pass necessary test process and found appropriate according to EC 60034-1; CEI EN 60034-1; BS 4999-5000; VDE 0530, NF 51- 100,111; OVE M-10, NEMA MG 1.22. standarts, have bearing system that does not need maintenance, with electronic type voltage regulator providing voltage setting.

Control Panel
Standard control panel, that is used in PPG generator sets, ensures comfortable and safe usage. All measured and statistical parameters, operating modes, notice and alarms and condition of generator, are monitored easily from the control panel. On the front of the panel's metal body has electronic control module and the emergency stop button and the panel's metal body is made of steel sheet and is painted with electrostatic powder paint.

PPG offers panel design and solutions that comply with special requirements of customers as well as quality standard panels.

Chassis and Fuel Tank
Chassis is manufactured from steel that has features and durability for carrying burden of generator set. Thanks to its rigid structural design and anti-vibration mounts, it reduces vibration level to minimum. All chassis contain lifting lugs. Apart from chassises that are produce by GenPro, special solutions that design in accordance with customer desires, make transportation and positioning easier.

In less than 1600 kVA power generator sets, fuel tank is produced integratedly to the chassis. In more than 1600 kVA power generator sets, rectangular type fuel tank is provided with generator set seperately. In all types of fuel tank have its level and indicator.

Cooling System
System, that consists of quality industrial - type radiator, expansion tank and cooler fan, keeps the temprature of generator set's equipments constant at a proper level.

Representative PPG image; legacy configuration may differ.

Canopy Features

PPG Standard Canopies' default features are as follows;

- Compatible with 2000/14/EC directives, certified noise emission level,
- 2 or 4 points transport possibility according to cabin size,
- Hidden exhaust inside the canopy,
- Emergency stop button located on the canopy,
- Improved air suction channel to ensure homogenous cooling in the canopy,
- Radiator air outlet and exhaust with designed towards above,
- Lid on cab that provides to be filled up water and antifreeze easily to the radiator,
- Amplified paint system against corrosion and rust,
- Improved performance in terms of sound insulation,
- Demounted parts that make transportation and maintenance easier,

As well as the standard range of canopies, PPG can also design tailormade canopies with specific sound level or size upon customer requests.

Optional Equipments

Some Optional Equipments that PPG provides with Generator Sets;

- Medium voltage alternator,
- Remote radiator applications,
- Automatic fuel filling system,
- Fuel tank, oil pan, dashboard, alternator, coil heaters,
- Alternator with double AVR and PMG,
- Synchronization systems,
- The generator output breaker,
- Grid-generator transfer switches,
- Accordance with the specific volume of demand-insulated cabins,
- Seismic solutions,
- Trailer,
- Remote monitoring.

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Control Panel Features-DSE-7320

- 4-Line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- Customisable status screens
- Power save mode
- Support for up to three remote display units
- 9 configurable inputs
- 8 configurable outputs
- Flexible sender inputs
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time scheduler
- Configurable event log (250)
- Tier 4 CAN engine support
- Integral PLC editor
- Easy access diagnostic page
- CAN and Magnetic Pick-up/Alt. sensing
- Fuel usage monitor and low fuel alarms
- Charge alternator failure alarm
- Manual speed control (on compatible CAN engines)
- Manual fuel pump control
- Engine exerciser
- “Protections disabled” feature
- kW & kV Ar protection
- Reverse power (kW & kV Ar) LED and LCD alarm indication
- Power monitoring (kW h, kV Ar, kV A h, kV Ar h)
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer (DSE7320)
- Unbalanced load protection
- Independent Earth Fault trip
- True dual mutual standby with load balancing timer (DSE7310 only)
- USB connectivity
- Backed up real time clock
- Fully configurable via DSE Configuration Suite PC software
- Configurable display languages
- Remote SCADA monitoring via DSE Configuration Suite PC software
- User selectable RS232 and RS485 communications
- Configurable Gencomm pages
- Advanced SMS messaging(additional external modem required)
- Start & stop capability via SMS messaging
- Additional display screens to help with modem diagnostics
- Idle control for starting & stopping.
- DSENet® expansion compatible
- Heated display option available

Functions

- AMF unit
- Remote start controller
- Manuel start controller
- Engine controller
- Remote display & control unit
- CTs at genset or load side

Communications

- Web monitoring
- GSM-SMS (requeired externally modem)
- e-mail
- USB Device
- RS-232
- J1939-CANBUS

Connection Topologies

- 2 phase 3 wires, L1-L2
- 2 phase 3 wires, L1-L3
- 3 phase 3 wires
- 3 phase 4 wires, star
- 3 phase 4 wires, delta
- 1 phase 2 wires

- Technical information and values are according to ISO8528, ISO3046,NEMA MG-1.22, IEC 600341, BS 4999-5000, VDE 0530 standards.
- Producing with ISO9001, ISO14001, OHSAS18001, TSE, CE standards.
- All information given in this leaflet is intended for general purposes only.
- Due to a policy continuous improvement PPG reserves the right to amend details and specifications without notice and all information given is subject to the PPG's current condition of sales.

TBA: To Be Asked TBD: To Be Determined NA: Not Available N/A: Not Applicable