



# AP1650D5

## 50 Hz Diesel Generator

**3**

Phase

**1650**

kVA Standby

**1539**

kVA Prime

**50**

Hz

**400**

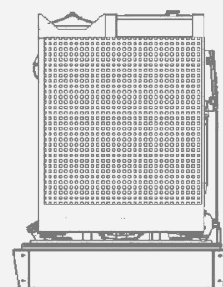
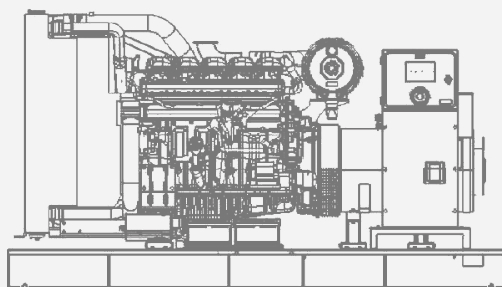
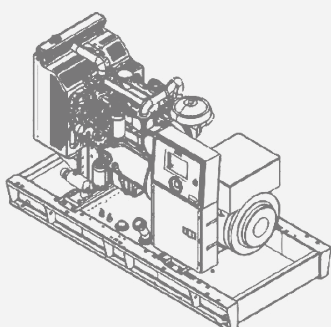
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\*Image for illustration purposes only, actual product may differ

Output Power	kVA	kW
Standby Power (ESP)	1650	1320
Prime Power (PRP)	1539	1231

Size	L x W x H (mm)	Weight (kg)	Fuel Tank (lt)	Noise dB(A) @ 7m
Canopied	9145 x 2470 x 3100	16052	2350	92
Open Skid	5000 x 2250 x 2420	9972	2500	N/A



### Continuous Power

The rated power of a generating set represents the maximum continuous power it can deliver while providing a constant electrical load. The average load can reach 100%. However, it is crucial not to overload the generator to ensure its optimal performance and longevity.

### Standby Power

The maximum available power during a variable electrical power sequence, under specified operating conditions, refers to the generating set's capacity to deliver power in the event of a utility power outage.

### Prime Power

The rated power of a generating set represents the utmost capacity it can consistently deliver while accommodating a variable electrical load. It is recommended to maintain an average load of 70% for optimal performance. However, the generator can handle brief overloads of up to 10% for a duration of 1 minute.

**VIEW ONLINE**



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Engine	
Manufacturer	Perkins
Model	4012-46TAG2A
Cylinder Configuration	V Type
No of Cylinders	12
Displacement	45.842 lt
Stroke	190 mm
Bore	160 mm
Compression Ratio	13:1
Aspiration	Turbocharge-Intercooler
Governor Type	Electronic
Cooling System	Water
Coolant Capacity	210 lt
Lubrication Oil Capacity	177 lt
Electrical System	24 VDC
Speed / Frequency 50 Hz	1500 rpm / 50 Hz
Engine Gross Power (Standby 50 Hz)	1459 kW
Fuel Consumption %110 ESP 50 Hz	335 lt/h
Fuel Consumption %100 PRP 50 Hz	301 lt/h
Fuel Consumption %75 PRP 50 Hz	237 lt/h
Fuel Consumption %50 PRP 50 Hz	162 lt/h
Exhaust Outlet Temperature 50 Hz	455 °c
Exhaust Gas Flow 50 Hz	320 m³/min
Combustion Air Flow 50 Hz	128 m³/min
Cooling Air Flow 50 Hz	1212 m³/min

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	IP23
Excitation System	AVR (Automatic Voltage Regulator), Brushless





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### Standard Equipments

#### Engine

ADE generators exclusively employ industry-leading engine brands that boast cutting-edge technology and full compliance with ISO 8528, ISO 3046, BS 5514, and DIN 6271 standards. These engines are specifically designed for low fuel consumption while offering precise speed control and seamless integration with the fuel pump. Furthermore, they are equipped with either mechanic or electronic type governors to suit diverse operational requirements.

#### Alternator

We use leading alternator brands with state-of-the-art technology, high quality, and durability. All alternators meet rigorous international standards, such as EC 60034-1, CEI EN 60034-1, BS 4999-5000, VDE 0530, NF 51-100,111, OVE M-10, and NEMA MG 1.22. They feature maintenance-free bearing systems and electronic voltage regulators for precise voltage setting.

#### Control Panel

ADE generator sets feature a standard control panel for comfortable and safe usage. The panel allows easy monitoring of measurements, statistics, operating modes, alerts, and generator condition. Its metal body, made of steel sheet, contains an electronic control module and an emergency stop button, coated with electrostatic powder paint. ADE offers quality standard panels and can also customize designs to meet specific customer requirements.

#### Chassis and Fuel Tank

ADE generator sets feature robust steel chassis for superior durability, capable of bearing the generator's weight. Anti-vibration mounts minimise disturbances, ensuring smooth operation. Lifting lugs facilitate easy transportation and positioning. Custom solutions cater to specific customer preferences.

Generators below 1600 kVA have integrated fuel tanks, optimizing space, while larger sets have separate rectangular fuel tanks. All tanks include level indicators for convenient fuel monitoring. ADE's meticulous design approach guarantees reliable and high-performance generator sets.

#### Cooling System

The system comprises a high-quality industrial-type radiator, an expansion tank, and a cooler fan, meticulously designed to maintain the temperature of the generator set's components at a consistently optimal level. This thoughtful integration ensures the efficient and reliable performance of the generator set throughout its operational lifespan.



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### Canopy Features

ADE 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 designed to expel vertically.
- Easy-access cap to add water and antifreeze to the radiator.
- Amplified paint system against corrosion and rust,
- Improved performance in terms of sound insulation,
- Demountable parts that make transportation and maintenance easier.

In addition to our comprehensive standard range of canopies, ADE offers the flexibility to design tailor-made canopies, specifically catering to individual requirements for desired sound levels or dimensions on request. Our team of experts is dedicated to providing customized solutions that perfectly match your unique needs, ensuring a seamless and optimal performance for your generator set.

### Optional Equipments

Some optional equipments that ADE 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/Mt. 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 k protection
- Reverse power (kW & kV k) LED and LCD alarm indication
- Power monitoring (kW h, kV h, kV Ah, kV k h)
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer (DSE7320)
- Unbalanced load protection
- Independent Earth Fault trip
- 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



DEEP SEA ELECTRONICS

## Functions

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

## Communications

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

## 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

**DSE** DEEP SEA ELECTRONICS





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### WARRANTY CERTIFICATE DURATION

Manufacturers warranty applies to new diesel generator sets to be free from defects in material and workmanship in production for 24 months or 1000 hours from the date of delivery to first user (which occurs first). Warranty period is limited by 30 months from the date of shipment ex-works.

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