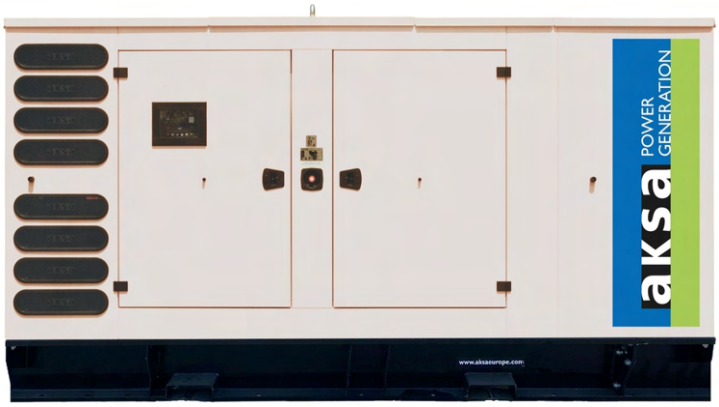
AD 750 (EU)



INTRODUCTION

Aksa power generation system, providing optimum performance, and reliability, for stationary standby, prime power, and continuous duty applications. All generator sets are factory built, and production tested.

POWER

3 Phase,50 Hz, PF 0.8

VOLTAGE (V)	STANDBY RATING (ESP)		PRIME RATING (PRP)		STANDBY CURRENT (A)
	kW	kVA	kW	kVA	
400/231	600.00	750.00	544.00	680.00	1082.53

STANDBY RATING (ESP) Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. ESP is in accordance with ISO 8528-1. Overload is not allowed.

PRIME RATING (PRP) Applicable for supplying power to varying electrical load for unlimited hours. PRP is in accordance with ISO 8528-1. 10 % overload capability is available for a period of 1 hour within 12-hour period of operation.

GENERAL CHARACTERISTICS

Model Name	AD 750 (EU)
Frequency (Hz)	50
Fuel Type	Diesel
Engine Make and Model	DOOSAN DP222LB
Alternator Make and Model	Mecc Alte ECO 40-3L/4 C
Control Panel Model	DSE 7320
Canopy	MS85 Trp. EU (RAL-1015)
Noise Level (@1m./@7m.) (dB(A))	91.6/83.6

ENGINE SPECIFICATIONS

General Data

Manufacturer	DOOSAN
Engine Model	DP222LB
Number of Cylinders	12 cylinders - V type
Bore (mm.)	128
Stroke (mm.)	142
Displacement (lt.)	21.927
Compression Ratio	15:1
Engine Speed (rpm)	1500

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Standby Power (kW/HP)	664/903
Prime Power (kW/HP)	604/821
Block Heater QTY	1
Block Heater Power (Watt)	3000
Governor System	Electric
Air Filter	Dry Type
Lubrication System	
Oil Capacity (Total With Filter) (lt)	40
Max. Oil Temperature (ºC)	120
Fuel System	
Fuel Type	Diesel
Injection Type and System	Direct
Type of Fuel Pump	Boch in-line "P" Type
Electrical System	
Operating Voltage (Vdc)	24
Battery and Capacity (Qty/Ah)	2x143
Charge Alternator (A)	45
Cooling System	
Aspiration	Turbo Charged and Intercooled (Air to Air)
Cooling Method	Water Cooled
Coolant Capacity (engine only) (lt)	23
Exhaust System	
Exhaust Gas Flow (m^3/min.)	120
Exhaust Back Pressure (kPa)	5,9
Exhaust Gas Temp. (ºC)	496
Heat Rejection to Exhaust (kW)	602
Radiator	
Total Coolant Capacity (lt)	104.2
Cooling Fan Air Flow (m^3/min.)	860
External Restriction to Cooling Airflow (Pa)	125
Fuel Consumption	
Fuel Cons. Prime With %100 Load (lt/hr)	147.1
Fuel Cons. Prime With %75 Load (lt/hr)	109.2
Fuel Cons. Prime With %50 Load (lt/hr)	73

AD 750 (EU)

ALTERNATOR CHARACTERISTICS

Manufacturer	Mecc Alte
Alternator Model	ECO 40-3L/4 C
Frequency (Hz)	50
Power (kVA)	680
Voltage (V)	400
Phase	3
Regulator	DER-1/A
Voltage Regulation	(+/-)0.5%
Insulation System	H
Protection	IP23
Rated Power Factor	0.8
Weight Complete Generator (kg)	1534
Temperature Rise	H

CANOPY SPECIFICATIONS

Length (mm)	5297
Width (mm)	1605
Height (mm)	2723
Dry Weight (kg.)	5400
Tank Capacity (lt.)	1000

CONTROL PANEL

Manufacturer	DSE
Control Module Model	DSE 7320
Communication Ports	MODBUS

1. Menu navigation buttons
2. Close mains button
3. Main Status and instrumentation display
4. Alarm LED's
5. Close generator button
6. Status LED's
7. Operation selecting buttons

Standard Devices

DSE model 7320, Auto Mains Failure control module, Static battery charger, Emergency stop push button and Fuses for control circuits

Control Unit

- The DSE 7320 control module is a standard addition to our generator sets from 220 kVA upwards and it has been designed to start and stop diesel and gas generating sets that include electronic and non electronic engines.
- The DSE 7320 includes the additional capability of being able to monitor a mains (utility) supply and is therefore suitable for controlling a standby generating set in conjunction with an automatic transfer switch.
- The DSE7320 also indicates operational status and fault conditions, automatically shutting down the generating set and indicating faults by means of its LCD display on the front panel.

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Construction and Finish

- Components installed in sheet steel enclosure.
- Phosphate chemical, pre-coating of steel provides corrosion resistant surface
- Polyester composite powder topcoat forms high gloss and extremely durable finish
- Lockable hinged panel door provides for easy component access

Installation

Control panel is mounted generating set baseframe on robust steel stand or power module. Located at side of generating set with properly panel visibility.

Standard Specifications

- Microprocessor controlled
- 132 x 64 pixel LCD display makes information easy to read
- Front panel programming and also via PC software
- Soft touch membrane keypad and five key menu navigation
- Remote communications via RS232, RS485 and Ethernet.
- Event logging (50) showing date and time
- Multiple date and time engine exercise mode and maintenance scheduler
- Engine block heater control.
- Controls; stop, manual, auto, test, start, mute lamb test/transfer to generator, transfer to mains, menu navigation.

Instruments

Engine

- Engine speed
- Oil pressure
- Coolant temperature
- Run time
- Battery volts
- Engine maintenance due

Generator

- Voltage (L-L, L-N)
- Current (L1-L2-L3)
- Frequency
- Earth current
- kW
- Pf
- kVAr
- kWh, kVAh, kVArh
- Phase sequence

Mains

- Voltage (L-L, L-N)
- Frequency

Shut Downs

- Fail to start
- Emergency stop
- Low oil pressure
- High engine temperature
- Low coolant level
- Under/over speed
- Under/over generator frequency
- Under/over generator voltage
- Oil pressure sensor open
- Phase rotation

Pre-alarms

- Low oil pressure
- High engine temperature
- Low engine temperature
- Under/over speed
- Under/over generator frequency
- Under/over generator voltage
- ECU warning

Warning

- Charge failure
- Battery under voltage
- Fail to stop
- Low fuel level (opt.)
- kW over load
- Negative phase sequence
- Loss of speed signal

Electrical Trip

- Earth fault
- kW over load
- Generator over current
- Negative phase sequence

Expansion

- Additional LED module (2548)
- Expansion relay module (2157)
- Expansion input module (2130)

Options

- High oil temperature shut down
- Low fuel level shut down
- Low fuel level alarm
- High fuel level alarm

Standards

- Electrical Safety / EMC compatibility
- BS EN 60950 Electrical business equipment
- BS EN 61000-6-2 EMC immunity standard
- BS EN 61000-6-4 EMC emission standard

AD 750 (EU)

Static Battery Charger

- Battery charger is manufactured with switching-mode and SMD technology and it has high efficiency.
- Battery charger models' output V-I characteristic is very close to square
- 2405 has fully output shot circuit protection and it can be used as a current source.
- 2405 charger has high efficiency, long life, low failure rate, light-weight and low heat radiated in accordance with linear alternatives.
- The charger is fitted with a protection diode across the output.
- Charge fail output is available.
- Connect charge fail relay coil between positive output and CF output.
- Input: 196-264V.
- Output: 27,6V 5A or 13,8V 5A.

STANDARD EQUIPMENT

- Water cooled, Diesel engine
- Mounted radiator with mechanical fan drive
- Protective grille for rotating and hot parts
- Electric starter and charge alternator
- Lead acid starting battery (with battery switch) including rack and cables
- Engine coolant heater
- Bunded base frame design incorporates an integral fuel tank, anti-vibration isolators and forklift pockets
- Flexible fuel connection hoses
- Single bearing, class H alternator with Anti-condensation Heater
- Industrial exhaust silencer and steel bellows supplied separately (for open sets)
- Static battery charger and battery switch
- Non-ferro plate for anlternator and panel side
- 4P Circuit Breaker
- Manual for application and installation
- Generators Sets' voltage and frequency regulation comply with ISO 8528-5
- Manual oil drain pump

OPTIONAL EQUIPMENT

Engine
- Fuel-Water Separator Filter
- Oil heater

Alternator
- Over sized alternator
- PMG excitation + AVR
- Main line circuit breaker

Exhaust
- Residential Silencer
- Critical Silencer
- Silencer Spark Arrester
- Catalytic Convertor

Transfer Switch
- Three or four pole contactor
- Three or four pole motor operated circuit breaker

Auxiliary Equipment
- Main Fuel Tank
- Automatic or manual fuel filling system
- Electrical oil drain pump
- Low and high fuel level alarm
- Inlet and outlet motorized louvers
- Inlet and outlet acoustic baffles
- Tool kit for maintenance
- 1500/3000 hours maintenance kit
- Supplied with oil and coolant - 30 °C

AD 750 (EU)

Control System

- Automatic synchronising and power control system (Multi gen-set Parallel)
- Parallel system with mains.
- Transition synchronization with mains
- Remote relay output
- Alarm output relays
- Remote communication with modem
- Earth fault, single set
- Charge Ammeter

Canopy

- ISO Container
- Galvanized Coating
- Marine Grade Paint

Optional Alternator and Control Panel Models

- Please contact to your reseller for additional Alternator, Control Panel and Breaker Switch options.

AKSA CERTIFICATES

Directives

- 2006/42/EC : Machinery Safety Directive
- 2004/108/EC : Electromagnetic Compatibility Directive
- 2006/95/EC : Low Voltage Directive

Standards

- EN ISO 12100-1:2010 : Safety of machinery -Basic concepts, general principles for design - Risk Assessment and Risk Reduction
- EN ISO 3744:2010 : Acoustics. Determination of sound power levels of noise sources using sound pressure. Engineering method in an essentially free field over a reflecting plane
- EN 60204-1:2018 : Safety of machinery-Electrical equipment of machines General Requirements
- EN ISO 8528-13:2016 : Reciprocating internal combustion engine-driven alternating current generating sets- Part:13: Safety
- BS EN 61000-4-2:2009 : Electromagnetic compatibility (EMC). Testing and Measurement Techniques-Electrostatic Discharge Immunity Test
- BS EN 61000-4-6 : Electromagnetic Compatibility (EMC). Testing and Measurement Techniques-Immunity to Conducted Disturbance Induced by Radio - Frequency Fields
- EN 614-1:2006+A1(2009) : Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles