

INTRODUCTION

AKSA POWER GENERATION

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

Power (kVA) 3				3 Phase,50 Hz, PF 0.8	
VOLTAGE	STANDBY RATING (ESP)		PRIME RATING (PRP)		Standby Amper
VOLIAGE	kW	kVA	kW	kVA	
400/231	576,00	720,00	520,00	650,00	1039,26

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.

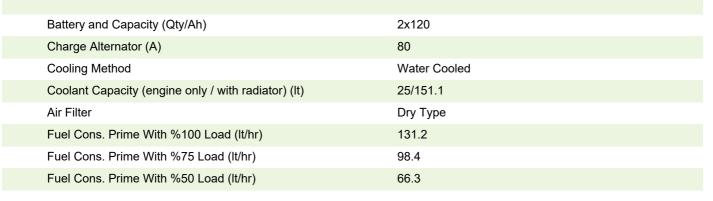
General Characteristics

Model Name	AVP 720
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	VOLVO TWD1644GE
Alternator Made and Model	ECO 40-3L/4C
Control Panel Model	DSE 7320
Canopy	MS 85

ENGINE SPECIFICATIONS

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Engine	VOLVO
Engine Model	TWD1644GE
Number of Cylinder (L)	6 cylinders - in line
Bore (mm.)	144
Stroke (mm.)	165
Displacement (lt.)	16.12
Aspiration	Turbocharged with Intercooling and Aftercooling
Compression Ratio	16.8:1
RPM (d/dk)	1500
Oil Capacity (Total With Filter) (It)	48
Standby Power (kW/HP)	630/857
Prime Power	575/783
Block Heater QTY	1
Block Heater Power (Watt)	3000
Fuel Type	Diesel
Injection Type and System	Direct
Type of Fuel Pump	Delphi E3
Governor System	Volvo / EMS 2.3
Operating Voltage (Vdc)	24 Vdc

AKSA POWER GENERATION AVP 720



ALTERNATOR CHARACTERISTICS

HEIGHT

TANK CAPACITY (It.)

Manufacturer	Mecc Alte
Alternator Made and Model	ECO 40-3L/4C
Frequency (Hz)	50
Power (kVA)	680
VOLTAGE (V)	400
Phase	3
A.V.R.	DER1
Voltage Regulation	(+/-)0.5%
Insulation System	Н
Protection	IP23
Rated Power Factor	0.8
WEIGHT COMP. GENERATOR (Kg)	1534
COOLING AIR (m³/min)	54
Open Gen.Set Dimensions (mm)	
LENGTH	3470
WIDTH	1550
HEIGHT	2253
TANK CAPACITY (It.)	1000
Gen.Set Canopy Dimensions (mm)	
LENGTH	5282
WIDTH	1605

2504	
1000	
1. Ste	el structures.

2. Emergency stop push button.

3. Control panel is mounted on the baseframe . Located

at the right side of the generator set.

4. Corrosion-resistant locks and hinges.

5. Oil could be drained via valve and a hose

6. Exhaust system in the canopy.

7. Special large access doors for easy maintenance

8. In front and back side special large access doors for



AVP 720

easy maintenance
9. Base frame -fuel tank.
10. Lifting points similar to ISO container, located on each top corner of the canopy.
11. The cap on the canopy provides easy access to radiator cap.
12. Soundproofing materials

13. Plastic air intake pockets.

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Sound-attenuated and weather-protective enclosures for generating sets from Aksa, meet event the sound requirements and provide optimum protection from inclement weather and development by our specialist acoustic engineers. Our modular designed sound insulated canopies provide ease of access for servicing and general maintenance and interchangeable components permitting on-site repair. Enclosures are designed to optimize genset cooling performance, providing you with confidence that genset ratings and ambient capability.

Control Panel

Control Module	DSE
Control Module Model	DSE 7320
Communication Ports	MODBUS
	 Menu navigation buttons Close mains button Main Status and instrumentation display Alarm LED's Close generator button

- Close generato
- 6. Status LED's
- 7. Operation selecting buttons

Devices

DSE 7320 Auto Mains Failure control module

Static battery charger

Emergency stop push button and fuses for control circuits

CONSTRUCTION and **FINISH**

Components installed in a sheet steel enclosure.

Phosphate chemical, pre-coating of steel provides corrosion resistant surface

Polyester composite powder topcoat forms a high gloss and extremely durable finish

Lockable hinged panel door provides for easy component access

INSTALLATION

Control panel is mounted to gen-set baseframe on robust steel stand or power module. Located on the side of generating set with proper panel visibility.

GENERATING SET 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.

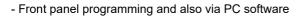
The DSE7320 also indicates operational status and fault conditions, automatically shutting down the generating set and indicating faults by means of its LCD display on the front panel.

STANDARD SPECIFICATIONS

Microprocessor controlled

- 132 x 64 pixel LCD display makes information easy to read





- 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.

AVP 720

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
WARNING
Charge failure
Battery under voltage
Fail to stop
Low fuel level (opt.)
kW overload
Negative phase sequence
Loss of speed signal
PRE-ALARMS
Low oil pressure
High engine temperature

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Low engine temperature

Over /Under speed

Under/over generator frequency

Under/over generator voltage

ECU warning

SHUTDOWNS

Fail to start

Emergency stop

Low oil pressure

High engine temperature

Low coolant level

Over /Under speed

Under/over generator frequency

Under/over generator voltage

Oil pressure sensor open

Phase rotation

ELECTRICAL TRIP

Earth fault

kW overload

Generator over current

Negative phase sequence

Options

High oil temperature shut down

Low fuel level shut down

Low fuel level alarm

High fuel level alarm

EXPANSION MODULES

Additional LED module (2548)

Expansion relay module (2157)

Expansion input module (2130)

Standards

Elecrical 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

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 short circuit protection and it can be used as a current source.

2405 charger has high efficiency, long life, low failure rate, lightweight 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 the positive output and CF output.

Input: 196-264V.

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Output: 27,6V 5A or 13,8V 5A.

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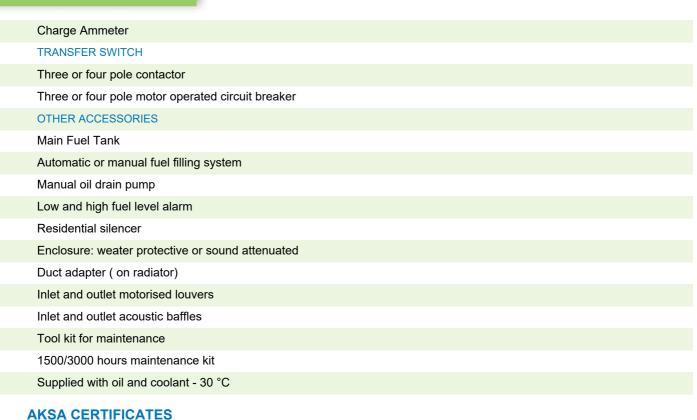
- Water cooled, Diesel engine
- Radiator with mechanical fan
- Protective grille for rotating and hot parts
- Electric starter and charge alternator
- Starting battery (with lead acid) including rack and cables
- Engine coolant heater
- Base frame design incorporates an integral fuel tank and anti-vibration isolators
- Flexible fuel connection hoses
- Single bearing, class H alternator
- Industrial exhaust silencer and steel bellows supplied separately(for open sets)
- Static battery charger
- Manual for application and installation
- Generators Sets' voltage and frequency regulation comply with ISO 8528-5

OPTIONAL EQUIPMENTS

ENGINE
Remote Radiator Cooling
Fuel-Water Seperator Filter
Oil heater
ALTERNATOR
Anti-Condensation Heater
PMG excitation + AVR
Main line circuit breaker
CONTROL SYSTEM
Automatic synchronising and power control system (multi gen-set Parallel)
Paralel system with mains.
Transition synchronization with mains
Remote relay output
Alarm output relays
Remote communication with modem
Earth fault, single set

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- TS ISO 8528
- TS ISO 9001-2008
- CE
- SZUTEST
- 2000/14/EC