APD 145 C

INTRODUCTION

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 Phase,50 Hz, PF 0.8

Voltage	STANDBY RATING (ESP)		PRIME RATING (PRP)		Standby Amper
	kW	kVA	kW	kVA	
400/231	116,00	145,00	105,60	132,00	209,30

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 perod of operation.

General Characteristics

Model Name	APD 145 C
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	CUMMINS 6BTAA5.9-G2
Alternator Made and Model	AK 4110
Control Panel Model	DSE 6120
Canopy	AK 49

ENGINE SPECIFICATIONS

Engine	CUMMINS
Engine Model	6BTAA5.9-G2
Number of Cylinder (L)	6 cylinders - in line
Bore (mm.)	102
Stroke (mm.)	120
Displacement (lt.)	5.90
Aspiration	Turbo Charged and Charge Air Cooled
Compression Ratio	17.3:1
RPM (d/dk)	1500

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Oil Capacity (Total With Filter) (lt)	16.4
Standby Power (kW/HP)	130/174
Prime Power	120/161
Block Heater QTY	1
Block Heater Power (Watt)	1000
Fuel Type	Diesel
Injection Type and System	Direct
Type of Fuel Pump	BYC PB
Governor System	Electronic
Operating Voltage (Vdc)	24 Vdc
Battery and Capacity (Qty/Ah)	2x66
Charge Alternator (A)	40
Cooling Method	Water Cooled
Cooling Fan Air Flow (m3/min)	148
Coolant Capacity (engine only / with radiator) (lt)	10/54
Air Filter	Dry Type
Fuel Cons. Prime With %100 Load (lt/hr)	30
Fuel Cons. Prime With %75 Load (lt/hr)	23
Fuel Cons. Prime With %50 Load (lt/hr)	16

ALTERNATOR CHARACTERISTICS

Manufacturer	Aksa
Alternator Made and Model	AK 4110
Frequency (Hz)	50
Power (kVA)	137,5
Voltage (V)	400
Phase	3
A.V.R.	AS460
Voltage Regulation	(+/-)1,5%%
Insulation System	H
Protection	IP22
Rated Power Factor	0.8
WEIGHT COMP. GENERATOR (Kg)	492
COOLING AIR (m^3/min)	30,84

Open Gen.Set Dimensions (mm)

LENGTH	2290
WIDTH	1000
HEIGHT	1474
DRY WEIGHT (kg.)	1360
TANK CAPACITY (lt.)	195

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Gen.Set Canopy Dimensions (mm)

LENGTH	3404
WIDTH	1136
HEIGHT	2020
DRY WEIGHT (kg.)	1780
TANK CAPACITY (lt.)	340

1. Steel structures
2. Emergency stop push button
3. Control panel is right side of the set.
4. Corrosion.resistant locks and hinges
5. Sump drains valves
6. Sound proof foam metarial
7. Lifting Points

INTRODUCTION

Sound–attenuated and Weather-protective Enclosures 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 6120
Communication Ports	CANBUS

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

Devices

-DSE, model 6120 Auto Mains Failure control module.

-Battery charger input 198-264 volt, output 27,6 V 5 A (24 V) or 13,8 Volt 5A (12V)

-Emergency stop push button and fuses for control circuits.

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 and hinged panel door provides easy access to components.

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INSTALLATION

Control panel is mounted on baseframe with steel stand. Located at the right side of the generator set (When you look at the Gen.Set. from Alternator)

GENERATING SET CONTROL UNIT

The DSE 6120 module has been designed to monitor generator frequency, volt, current, engine oil pressure, coolant temperature running hours and battery volts.

Module monitors the mains supply and switch over to the generator when the mains power fails.

The DSE6120 also indicates operational status and fault conditions, Automatically shutting down the Gen. Set and giving true first up fault condition of Gen. Set failure.The LCD display indicates the fault.

STANDARD SPECIFICATIONS

-Microprocessor controlled.

-LCD display makes information easy to read.

-Automatically transfers between mains (utilty) and generator power.

-Manual programming on front panel.

-User-friendly set-up and button layout.

-Remote start.

-Event logging (50) showing date and time.

-Controls: Stop/Reset, Manual, Auto, Test, Start, buttons. An additional push button next to the LCD display is used to scroll through the modules' metering displays.

Instruments

ENGINE

-Engine speed.

-Oil pressure.

-Coolant temperature.

-Run time.

-Battery volts.

-Configurable timing.

GENERATOR

-Voltage (L-L, L-N).

-Current (L1-L2-L3).

-Frequency.

-Gen. Set ready.

-Gen. Set enabled.

MAINS

-Mains ready.

-Mains enabled.

WARNING

-Charge failure.

-Battery Low/High voltage.

-Fail to stop.

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-Low /High generator voltage.

-Under /Over generator frequency.

-Over /Under speed.

-Low oil pressure.

-High coolant temperature.

SHUT DOWNS

-Fail to start.

-Emergency stop.

-Low oil pressure.

-High coolant temperature.

-Over /Under speed.

-Under/over generator frequency.

-Under/over generator voltage.

-Oil pressure sensor open.

-Coolant temperature sensor open.

ELECTRICAL TRIP

-Generator over current.

Options

-Flexible sensor can be controlled with temperature, pressure, percentage (warning/shutdown/electrical trip)

-Local setting parameters and monitoring from PC to control module with USB connection (max 6 mt).

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 ıt has high efficiency.

- Battery charger models' output V-I characteristic is very close to square and output is 5 amper, 13,8 V for 12 volt and 27,6 V for 24 V . Input 198 - 264 volt AC.

- The charger is fitted with a protection diode across the output.

- Connect charge fail relay coil between positive output and CF output.

- They are equipped with RFI filter to reduce electrical noise radiated from the device.

- Galvanically isolated input and output typically 4kV for high reliability.

STANDARD SPECIFICATIONS

- Water cooled, Diesel engine

- Radiator with mechanical fan

- Protective grille for rotating and hot parts

- Electric starter and charge alternator

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- 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

OPTIONAL EQUIPMENTS

ENGINE

Fuel-Water Seperator Filter

Oil heater

ALTERNATOR

Anti-Condensation Heater

Main line circuit breaker

CONTROL SYSTEM

Charge Ammeter

TRANSFER SWITCH

Three or four pole contactor

Three or four pole motor operated circuit breaker

OTHER ACCESSORIES

Main Fuel Tank

Enclosure: weater protective or sound attenuated

Trailer

Tool kit for maintenance

AKSA CERTIFICATES

- TS ISO 9001-2008
- CE

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