



## 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 |               |
| 400/230 | 9.6                  | 12  | 8,8                | 11  | 17            |

**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. 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. 10 % overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046.

## General Characteristics

|                           |              |
|---------------------------|--------------|
| Model Name                | APD 12 E     |
| Frequency (Hz)            | 50           |
| Fuel Type                 | Diesel       |
| Engine Made and Model     | AKSA A2CRX08 |
| Alternator Made and Model | Mecc Alte    |
| Control Panel Model       | P4520        |
| Canopy                    | AK 01        |

**ENGINE SPECIFICATIONS**

|   |                       |
|---|-----------------------|
| Engine                                      | AKSA                  |
| Engine Model                                | A2CRX08               |
| Number of Cylinder (L)                      | 2 cylinders - in line |
| Bore (mm.)                                  | 80                    |
| Stroke (mm.)                                | 79                    |
| Displacement (lt.)                          | 0.794                 |
| Aspiration                                  | Naturally Aspirated   |
| Compression Ratio                           | 23:1                  |
| RPM (d/dk)                                  | 3000                  |
| Fuel Type                                   | Diesel                |
| Governor System                             | Electronic            |
| Oil Capacity (lt.)                          | 4                     |
| Coolant Capacity (lt)                       | 6.4                   |
| Cooling Fan Air Flow (m <sup>3</sup> /min.) | 1                     |
| Radiator Air Flow (m <sup>3</sup> /min.)    | 48                    |
| Exhaust Gas Flow (m <sup>3</sup> /min.)     | 2.07                  |
| Exhaust Gas Temperature (°C)                | 500                   |
| Operating Voltage (Vdc)                     | 12 Vdc                |
| Fuel Cons. Prime With %100 Load (lt/hr)     | 4                     |

**ALTERNATOR CHARACTERISTICS**

|                    |                    |
|--------------------|--------------------|
| Manufacturer       | Mecc Alte          |
| Frequency (Hz)     | 50                 |
| Power (kVA)        | 10                 |
| Design             | With Brush, 2 Pole |
| Rated Power Factor | 0.8                |
| Phase              | 3                  |
| VOLTAGE (V)        | 400/230            |
| Insulation System  | H                  |



**Gen.Set Canopy Dimensions (mm)**

|                     |       |
|---------------------|-------|
| MODEL               | AK 01 |
| LENGHT              | 1152  |
| WIDTH               | 776   |
| HEIGHT              | 890   |
| DRY WEIGHT (kg.)    | 270   |
| TANK CAPACITY (lt.) | 15    |



1. Steel structures.
2. Emergency stop push button.
3. Control panel
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 maintanance
8. Base frame -fuel tank.
9. Lifting Points.
10. Cover for radiator water filling

**INTRODUCTION**

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 (8 – 275kVA) fit directly to the open generator set to 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 | P4520 |



1. Main Status Display.
2. Menu Navigation Buttons.
3. Automatic Location.
4. Manual Start Button.
5. Reset/Stop Button.

**Devices**

- DSE, model P4520 Auto Mains Failure control module.
- Battery charger.
- 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.

## INSTALLATION

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

## GENERATING SET CONTROL UNIT

The DSE P4520 is a standard control module for APD 12E and it has been designed to start and stop diesel and gas generator sets.

The DSE4520 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 Specification

- Microprocessor controlled.
- LCD display makes information easy to read.
- 4-line, 64 x 132 pixel display.
- Automatically transfers between mains (utility) and generator power.
- Manual programming on front panel.
- User-friendly set-up and button layout.
- Remote start.
- Event logging (5) showing date and time.

## 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. MAINS
- Voltage (L-L, L-N).
- Frequency.
- Mains ready.
- Mains enabled.
- Gen. Set ready.
- Gen. Set enabled.

### WARNING

- Charge failure.
- Battery Low/High voltage.
- Fail to stop.
- Low /High generator voltage.
- Under/over generator frequency.
- Over /Under speed.

### 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.

### 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



## **STATIC BATTERY CHARGER**

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- 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 and output is 5 amper, 13,8 V for 12 volt and 24 V for 24 V . Input 198 - 264 volt AC.
- Proline DC12V charger has high efficiency, long life, low failure rate, light weight and low heat radiated in accordance with linear alternatives.