## 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.

### Certificate

TS ISO 8528

TS ISO 9001-2008

CE

SZUTEST

2000/14/EC

### General Characteristics

| | |
|---|---|
| **Model Name** | AP 150 |
| **Frequency (Hz)** | 50 |
| **Fuel Type** | Diesel |
| **Engine Made and Model** | PERKINS - 1106A-70TG1 |
| **Alternator Made and Model** | Mecc Alte - ECP 34-2M/4 C |
| **Control Panel Model** | DSE 6120 |
| **Canopy** | AK 49 |

Производитель сохраняет за собой право без предварительного уведомления делать изменения в моделях, технических характеристиках, цветах, оборудовании, аксессуарах и чертежах.

## 3 Phase, 50 Hz, PF 0.8

| VOLTAGE | STANDBY RATING (ESP) | | PRIME RATING (PRP) | | Standby Amper |
|---|---|---|---|---|---|
| | kVA | kW | kVA | kW | |
| 400/231 | 150 | 120.0 | 135 | 108.0 | 216.51 |

**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.

## ENGINE SPECIFICATIONS

| | | |
|---|---|---|
| **Engine** | | PERKINS |
| **Engine Model** | | 1106A-70TG1 |
| **NO. OF CYLINDERS AND BUILD** | | 6 cylinders - in line |
| **BORE AND STROKE** | **mm** | 105 X 135 |
| **TOTAL DISPLACEMENT** | **L** | 7.01 |
| **Aspiration** | | Turbo Charged |

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| | | |
|---|---|---|
| **COMPRESSION RATIO** | | 18.2:1 |
| **RATED SPEED (RPM)** | **d/dk** | 1500 |
| **OIL CAPACITY** | **L** | 18 |
| **Standby Power (kW/HP)** | | 135.8/182,03 |
| **Prime Power** | | 122.7/164,47 |
| **Block Heater QTY** | | 1 |
| **Block Heater Power (Watt)** | | 1500 |
| **Fuel Type** | | Diesel |
| **Injection Type and System** | | Direct |
| **Type of Fuel Pump** | | Delphi DPG Rotary Type |

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| | | |
|---|---|---|
| **Governor System** | | Mechanic |
| **Operating Voltage (Vdc)** | | 12 Vdc |
| **Battery and Capacity (Qty/Ah)** | | 1x85 |
| **Charge Alternator (A)** | | 65 |
| **Cooling Method** | | Water Cooled |
| **Coolant Capacity (engine only / with radiator) (lt)** | | /21 |
| **Air Filter** | | Dry Type |
| **Fuel Cons. Prime With %100 Load (lt/hr)** | | 30.3 |

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| | | | |
|---|---|---|---|
| **Fuel Cons. Prime With %75 Load (lt/hr)** | | | |
| | | 22.7 | |
| **Fuel Cons. Prime With %50 Load (lt/hr)** | | | |
| | | 15.9 | |

## ALTERNATOR SPECIFICATIONS

| | | |
|---|---|---|
| **Manufacturer** | | Mecc Alte |
| **Alternator Made and Model** | | ECP 34-2M/4 C |
| **Frequency (Hz)** | **Hz** | 50 |
| **Power (kVA)** | **kVA** | 135 |
| **DESIGN** | | 4 Pole, Brushless |
| **VOLTAGE** | **V** | 400 |
| **Phase** | | 3 |
| **A.V.R.** | | DSR |
| **Voltage Regulation** | **(+/-)** | 1 |

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| | | |
|---|---|---|
| **Insulation System** | | H |
| **Protection** | | IP23 |
| **Rated Power Factor** | | 0.8 |
| **WEIGHT COMP. GENERATOR (Kg)** | | 388 |
| **COOLING AIR ($m^3$/min)** | **$m^3$** | 29.2 |

## SIZE and WEIGHT

| Open Type | DRY WEIGHT (kg.) (kg.) | LENGTH (mm.) | WIDTH (mm.) | HEIGHT (mm.) | TANK CAPACITY (lt.) (Lt.) |
|---|---|---|---|---|---|
| Image not found or type unknown | 1260 | 2300 | 1080 | 1629 | 340 |
| **CANOPY** | **DRY WEIGHT (kg.) (kg.)** | **LENGTH (mm.)** | **WIDTH (mm.)** | **HEIGHT (mm.)** | **TANK CAPACITY (lt.) (Lt.)** |
| AK 49<br>Image not found or type unknown | 1850 | 3404 | 1136 | 2020 | 340 |

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## STANDART SPECIFICATIONS

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

## OPTIONAL EQUIPMENTS

ENGINE
• Fuel-Water Seperator Filter
• Low water level alarm
• Oil heater
ALTERNATOR
• Anti-Condensation Heater
• Over sized alternator
• Main line circuit breaker
CONTROL SYSTEM
• Remote annunciator panel
• Remote relay output
• Alarm output relays
• Remote communication with modem
• Earth fault, single set
• Charge Ammeter
TRANSFER SWITCH
• Three or four pole contactor
• Three or four pole motor operated circuit breaker
OTHER ACCESSORIES
• Main Fuel Tank
• Automatic or manual fuel filling system
• Manual oil drain pump
• Residential silencer
• Enclosure: weater protective or sound attenuated

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- Duct adapter ( on radiator)
- Inlet and outlet motorised louvers
- Inlet and outlet acoustic baffles
- Trailer
- Tool kit for maintenance
- Supplied with oil and coolant - 30 °C
- Battery isolating switch

## 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.

## 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.

**Стандартные функции**
● 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.

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● 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.

**Измерительные приборы**

**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.

**Схема защиты**

**WARNING**

● Charge failure.
● Battery Low/High voltage.
● Fail to stop.
● 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.

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● Coolant temperature sensor open.

**ELECTRICAL TRIP**

● Generator over current.

**Опционные особенности**

● 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).

**Стандарты**

● 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.

## 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.

## STANDARD SPECIFICATIONS

Compact footprint, low profile design.

Enclosure, generator set, exhaust system and fuel tank are pre-ssembled, pre-integrated and shipped as one package

Body made from steel components treated with polyester powder coating

Fire retardant foam insulation

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Easy access to all service points
Exhaust system inside canopy
Large doors on each side
Control panel viewing window in a lockable access door
Emergency stop push button mounted on enclosure exterior
Cooling fan and battery charging alternator fully guarded
Fuel fill and battery can only be reached via lockable access doors.
Lifting points on the top of canopy and base frame
Customer options available to meet your applications needs.
Aksa makes its generating sets' noise level tests in accordance with directive 2000/14/EC validation of the noise level test has been aproved by the notified body Szutest

| | | |
|---|---|---|
| **CANOPY MODEL** | | AK 49 |
| **WIDTH** | **mm.** | 1147 |
| **LENGTH** | **mm.** | 3402 |
| **HEIGHT** | **mm.** | 2007 |
| **TANK CAPACITY (lt.)** | **Lt.** | 340 |

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