

## ISO8528

This generator set has been designed to meet ISO 8528 regulation.

## SZUTEST

This generator set is manufactured in facilities certified to ISO 9001.



This generator set is available with CE certification.

## 2000/14/EC

Enclosed product is tested according to EU noise legislation 2000/14/EC

### 3 Phase Ratings, 50 Hz, PF 0,8

Voltage	Standby Rating (ESP)		Prime Rating (PRP)		
	kVA	kW	kVA	kW	Amp
400/230	93,00	74,40	84,00	67,20	121,2

#### 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.

### STANDARD 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 Separator Filter
- Oil heater

#### ALTERNATOR

- Anti-Condensation Heater
- Over sized alternator
- PMG excitation + AVR
- Main line circuit breaker

#### CONTROL SYSTEM

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

#### OTHER ACCESSORIES

- Automatic or manual fuel filling system
- Manual oil drain pump
- Low and high fuel level alarm
- Residential silencer
- Enclosure: weather protective or sound attenuated
- Duct adapter ( on radiator)
- Inlet and outlet motorised louvers
- Inlet and outlet acoustic baffles
- Trailer
- Tool kit for maintenance
- 1500/3000 hours maintenance kit
- Double wall chassis
- Main Fuel Tank

#### TRANSFER SWITCH

- Three Pole Contactor
- Four Pole Contactor
- Motor Switch

## DIESEL ENGINE SPECIFICATIONS

Manufacturer		Doosan			
Model		D1146			
No. of Cylinders and Build		6 Cylinder, In Line			
Aspiration and Cooling		Natural Aspirated			
Maximum Standby Power		1500 rpm			
		85,00 kW 114,00HP]			
Total Displacement	L	8,071			
Bore and Stroke	mm	111X139			
Compression Ratio		17,5:1			
Rated Speed (rpm)	rpm	1500			
Governor		Mechanical			
Oil Capacity	L	15,50			
Coolant Capacity	L	34,00			
Intake Air Flow	m³ /min.	10,58			
Radiator Cooling Air	m³ /min.	200,00			
Exhaust Gas Flow	m³ /min.	N/A			
Exhaust Gas Temperature	° C	N/A			
Start System		24 V d.c.			
Fuel Consumption	Load	%100	%75	%50	
	L/h	20,6	15,9	11,3	

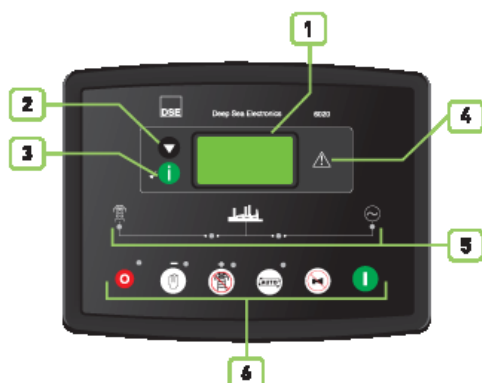
## ALTERNATOR SPECIFICATIONS

Make		Mecc Alte
Model		ECP 34 1S4A
Frequency	Hz	50
Power	kVA	85,00
Design		Brushless, 4 poles
Cos Phi		0,80
Phase		3
Voltage	V	400/230
Current	A	122,70
Insulation Class		H
Temperature		H
Stator		2 / 3 steps
Rotor		Single Bearing System, Flexible Disc
Excitation System		Electronic ( AVR )

## DIEMENSIONS AND WEIGHT

	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
Open Type	1420	2300	950	1633	380
AK 50	1840	3400	1220	1940	380

## 1 P 602 - Control System



- 1 ● Main status display.
- 2 ● Display scroll button.
- 3 ● Page(information) button.
- 4 ● Common alarm indicator.
- 5 ● Status LED's.
- 6 ● Operation selecting buttons.

## 2 Devices

- DSE, model 6020 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.

## 3 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.

## 4 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)

## 5 Generating Set Control Unit

- The DSE 6020 is a standard control module for our generator sets up to 200kVA and it have been designed to start and stop diesel and gas generator sets. The DSE 6020 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 DSE6020 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.
- 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.
- Front panel programming.
- Remote start.
- Event logging (10) 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.

### MAINS

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

## ● 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).

## ● 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 and output is 5 amper, 13,8 V for 12 volt and 27,6 V for 24 V . Input 198 - 264 volt AC. Proline 2405 has fully output short circuit protection and it can be used as a current source. Proline 1205/2405 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. 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.

## ● Protection Circuits

### 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.
- Coolant temperature sensor open.

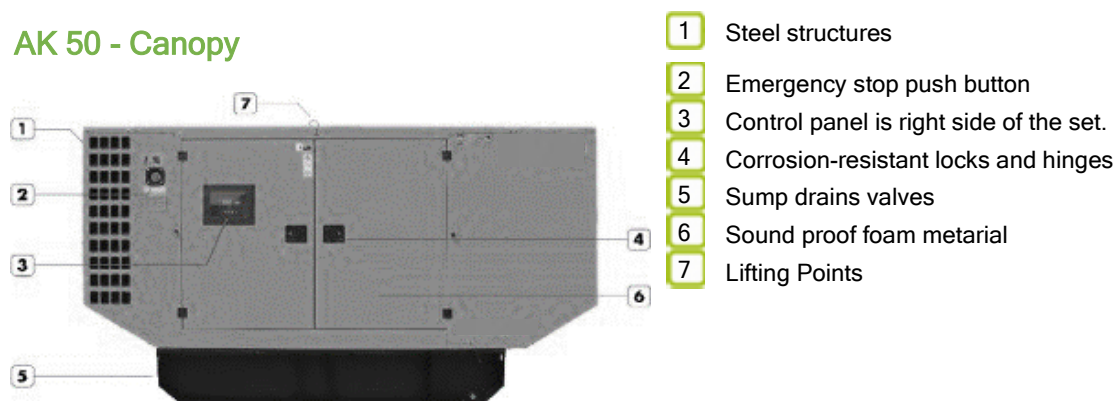
### ELECTRICAL TRIP

- 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.

## AK 50 - Canopy



## Introduction

Sound-attenuated and Weather-protective Enclosures Sound-attenuated and weather protective enclosures for generating sets from us, 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

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.

We make our generating sets' noise level tests in accordance with directive 2000/14/EC validation of the noise level test has been approved by the notified body Szutest

Width	mm.	1220
Length	mm.	3400
Height	mm.	1940
Fuel Tank Capacity	L	380