



Engine: Doosan Alternator: Mecc Alte

Control System: P 732 control system





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

CE 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

	Standby Ra	nting (ESP)	Prime Rating (PRP)		
Voltage	kVA	kw	kVA	kw	Amp
400/230	550,00	440,00	500,00	400,00	722,00

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 Seperator 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
- Electrical oil drain pump
- Low and high fuel level alarm
- Residential silencer
- Enclosure: weater protective or sound attenuated
- Duct adapter (on radiator)
- Inlet and outlet acoustic baffles
- Trailer
- Tool kit for maintenance
- Main Fuel Tank
- Automatic transfer switch

#### TRANSFER SWITCH

- Three Pole Contactor
- Four Pole Contactor
- Three or four pole motor operated circuit breaker



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## DIESEL ENGINE SPECIFICATIONS

Manufacturer		Doosan			
Model		P180LE			
No. of Cylinders and Build		10-cylinder, V - Type			
Aspiration and Cooling		Turbo Charged and Change Air Cooled			Cooled
Maximum Standby Power		1500 rpm 494,00 kv [662,50HF	v		
Total Displacement	L	18,300	_		
Bore and Stroke	mm	128 x 142			
Compression Ratio		15,0:1			
Rated Speed (rpm)	rpm	1500			
Governor		Electronic			
Oil Capacity	L	35,00			
Coolant Capacity	L	91,00			
Intake Air Flow	m³ /min.	33,70			
Radiator Cooling Air	m³ /min.	565,00			
Exhaust Gas Flow	m³ /min.	97,90			
Exhaust Gas Temperature	° C	580,00			
Start System		24 V d.c.			
Fuel Consumption	Load	%100 %	<b>67</b> 5	%50	
i dei consumption	L/h	111,60	31,30	54,80	

## • ALTERNATOR SPECIFICATIONS

Make		Mecc Alte
Model		ECO 40-3S/4
Frequency	Hz	50
Power	kVA	500,00
Design		Brushless, 4 poles
Cos Phi		0,80
Phase		3
Voltage	V	400/230
Current	А	722,00
Insulation Class		H
Temperature		H
Stator		2/3 steps
Rotor		Single Bearing System, Flexible Disc
Excitation System		Electronic ( AVR )

### DIEMENSIONS AND WEIGHT

Open Type	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
AD 550	3600,00	3264,00	1550,00	1991,00	850,00
Canopy	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
MS 80	4790	4810	1606	2615	850



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# P 732 control system - Control System



- 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 7320 Auto Mains Failure control module Static battery charger Emergency stop push button and fuses for control circuits

#### Construction and Finish

Comonents 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 hinged panel door provides for easy component access

#### Installation

Control panel is mounted generating set baseframe on robust steel stand or power module. Located at side of generating set with properly panel visibility.

#### Generating Set Control Unit

The DSE 7320 conrol module is a standard addition to our generator sets from 220 kVA upwards and it has been designed to start and stop diesel andgas 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

Front panel programming and also via PC software

Soft touch membrane keypad and five key menu navigation

Remote communications via RS232, RS485 and ethernet and SMS messaging

Event logging (50) showing date and time

Multiple date and time engine exercise mode and maintenance scheduler

Engine block heater control.

Controls; stop, manuel, auto, test, start, mute lamb test/transfer to generator, transfer to mains, menu navigation.



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#### 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 kVAr kWh, kVAh, kVArh Phase sequence MAINS Voltage (L-L, L-N) Frequency

#### Options

High oil temperature shut down Low fuel level shut down Low fuel level alarm High fuel level alarm EXPANSION MODULES Editional LED module (2548) Expension relay module (2157) Expansion input module (2130)

# Static Battery Charger

Protection Circuits

WARNING Charge failure Battery under voltage Fail to stop Low fuel level (opt.) kW over load Negative phase sequence Loss of speed signal PRE-ALARMS Low oil pressure High engine temperature Low engine temperature Over /Under speed Under/over generator frequency Under/over generator voltage ECU warning SHUT DOWNS 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** Farth fault kW over load Generator over current Negative phase sequence

#### 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

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- 1 Steel structures.
- 2 Emergency stop push button.
- 3 Control panel is mounted on the baseframe. Located at the right side
- of the generator set locks and hinges. 4
- 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 in front and back side special large access doors for easy maintanance
- 9 Base frame -fuel tank.
- 10 Lifting points similar to ISO container, located on each top corner of
- 11 The cap on the canopy provides easy accsess to radiator cap.
- 12 sound proofing materials
- 13 Plastic air intake pockets.

### 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 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.

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

Width	mm.	1606
Lenght	mm.	4810
Height	mm.	2615
Fuel Tank Capacity	L	850