





ISO8528

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

SZUTEST

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

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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 Rating (ESP)		Prime Rating (PRP)		
Voltage	kVA	kW	kVA	kW	Amp
400/230	330,00	264,00	300,00	240,00	433,00

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.

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#### 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

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
- Low and high fuel level alarm
- Residential silencer
- Enclosure: weater 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			تولید کننده
Model		P126TI-II			مدل
No. of Cylinders and Build		6 Cylinder,	In Line		تعداد سیلندرها و نوع آرایش آنها
Aspiration and Cooling		Turbo Cha	rged and	After Cooled	سیستم تنفس و خنک کاری
Maximum Standby Power		1500 rp 294,00 k [394,00k	κW		توان Standby
Total Displacement	L	11,050	]		جابه جایی کل
Bore and Stroke	mm	123 x 155			قطر سیلندر و کورس پیستون
Compression Ratio		17,0:1 تراکم			نسبت تراکم
Rated Speed (rpm)	rpm				سرعت مجاز
Governor		قر Electronic			گاورنر
Oil Capacity	L	ت روغن		ظرفيت روغن	
Coolant Capacity	L	بت خنک کننده 65,00			ظرفیت خنک کننده
Intake Air Flow	m³/min.	هوای مصرفی 20,10		جریان هوای مصرفی	
Radiator Cooling Air	m³/min.	هوای خنک کننده رادیاتور 295,00		میزان هوای خنک کننده رادیاتور	
Exhaust Gas Flow	m³/min.	· ·			جریان گاز خروجی از اگزوز
Exhaust Gas Temperature	° C	590,00			دمای گاز خروجی از اگزوز
Start System		24 V d.c.			استارتر
Fuel Consumption	Load	%100	%75	%50	مصرف سوخت
Tuel Consumption	L/h	63,10	47,00	31,30	سفرف سوحت

# • ALTERNATOR SPECIFICATIONS

Make		Mecc Alte	تولید کننده
Model		ECO 38-2LN/4	مدل
Frequency	Hz	50	فركانس
Power	kVA	300,00	توان
Design		Brushless, 4 poles	طراحى
Cos Phi		0,80	طراحی کسینوس فی
Phase		3	فاز
Voltage	V	400/230	ولتاژ
Current	А	433,00	جریان کلاس عایق بندی
Insulation Class		Н	كلاس عايق بندى
Temperature		Н	دما
Stator		2 / 3 steps	استاتور
Rotor		Single Bearing System, Flexible Disc	روتور
Excitation System		Electronic ( AVR )	سیستم تحریک

# • DIEMENSIONS AND WEIGHT

Open Type	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
AD 330	2375,00	2950,00	1300,00	1588,00	450,00
Canopy	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
MS 60	3065	4000	1300	1970	450

# 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.

### 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 Pf 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)

## 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** Earth 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

# Static Battery Charger

Battery charger is manufactured with switching-mode and SMD technology and it has high efficincy.

Battery charger models' output V-I characteristic is very close to square 2405 has fully output shot circuit protection and it can be used as a current source.

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. Charge fail output is available. Connect charge fail relay coil between positive output and CF output.

Input: 196-264V.

Output: 27,6V 5A or 13,8V 5A.



- Steel structures.
- 2 Emergency stop push button.
- 3 Control panel is mounted on the baseframe. Located at the right side
- of the generator set. 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 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 capony the canopy provides easy access to radiator cap.
- 12 sound proofing materials
- 13 Plastic air intake pockets.

# Introduction

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

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.	1300
Lenght	mm.	4000
Height	mm.	1970
Fuel Tank Capacity	L	450