



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 | 660,00 | 528,00 | 611,00 | 488,00 | 881,00 |

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 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
- Electrical oil drain pump
- Low and high fuel level alarm
- Residential silencer
- Enclosure: weater protective or sound attenuated
- Inlet and outlet acoustic baffles
- Trailer
- Tool kit for maintenance
- 1500/3000 hours maintenance kit
- Double wall chassis
- Supplied with oil and coolant - 30 °C
- Main Fuel Tank
- Automatic transfer switch

TRANSFER SWITCH

- Three Pole Contactor
- Four Pole Contactor
- Motor Switch

● DIESEL ENGINE SPECIFICATIONS

| | | | | | |
|----------------------------|----------------------|--------------------------------|---------------------------------|-------|-----------|
| Manufacturer | | Doosan | تولید کننده | | |
| Model | | P222LE | مدل | | |
| No. of Cylinders and Build | | 12-cylinder, V - Type | تعداد سیلندرها و نوع آرایش آنها | | |
| Aspiration and Cooling | | Turbo Charged and After Cooled | سیستم تنفس و خنک کاری | | |
| Maximum Standby Power | | 1500 rpm | توان Standby | | |
| | | 574,00 kW [769,00HP] | | | |
| Total Displacement | L | 21,930 | جابه جایی کل | | |
| Bore and Stroke | mm | 128 x 142 | قطر سیلندر و کورس پیستون | | |
| Compression Ratio | | 15,0:1 | نسبت تراکم | | |
| Rated Speed (rpm) | rpm | 1500 | سرعت مجاز | | |
| Governor | | Electronic | گاورنر | | |
| Oil Capacity | L | 40,00 | ظرفیت روغن | | |
| Coolant Capacity | L | 113,00 | ظرفیت خنک کننده | | |
| Intake Air Flow | m ³ /min. | 38,00 | جریان هوای مصرفی | | |
| Radiator Cooling Air | m ³ /min. | 650,00 | میزان هوای خنک کننده رادیاتور | | |
| Exhaust Gas Flow | m ³ /min. | 117,50 | جریان گاز خروجی از اگزوز | | |
| Exhaust Gas Temperature | ° C | 580,00 | دمای گاز خروجی از اگزوز | | |
| Start System | | 24 V d.c. | استارتر | | |
| Fuel Consumption | Load | %100 | %75 | %50 | مصرف سوخت |
| | L/h | 134,00 | 97,60 | 65,80 | |

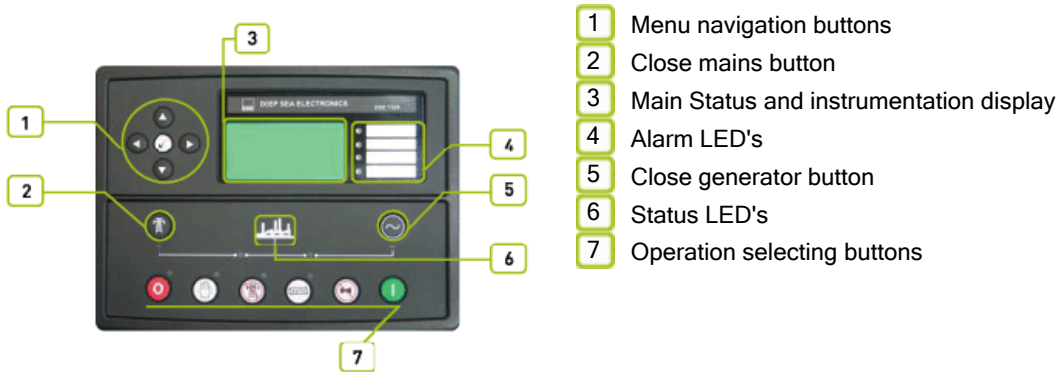
● ALTERNATOR SPECIFICATIONS

| | | | |
|-------------------|----|--------------------------------------|----------------|
| Make | | Mecc Alte | تولید کننده |
| Model | | ECO 40-1,5L/4 | مدل |
| Frequency | Hz | 50 | فرکانس |
| Power | kW | 620,00 | توان |
| Design | | Brushless, 4 poles | طراحی |
| Cos Phi | | 0,80 | کسینوس فی |
| Phase | | 3 | فاز |
| Voltage | V | 400/230 | ولتاژ |
| Current | A | 894,00 | جریان |
| Insulation Class | | H | کلاس عایق بندی |
| Temperature | | H | 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 660 | 4010,00 | 3470,00 | 1550,00 | 2157,00 | 1000,00 |
| Canopy | Dry Weight | Lenght | Width | Height | Tank Capacity |
| | kg. | mm. | mm. | mm. | L |
| MS 85 | 5565 | 5297 | 1606 | 2656 | 1000 |

1 P 732 control system - Control System



1 Devices

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

1 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 hinged panel door provides for easy component access

1 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.

1 Generating Set Control Unit

The DSE 7320 control module is a standard addition to our generator sets from 220 kVA upwards and it has been designed to start and stop diesel and gas 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 DSE 7320 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, manual, 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
kVAh
kWh, kVAh, kVAh
Phase sequence
MAINS
Voltage (L-L, L-N)
Frequency

• 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

• 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)
Expansion relay module (2157)
Expansion input module (2130)

• 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 efficiency. Battery charger models' output V-I characteristic is very close to square 2405 has fully output short 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.



- 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.
- 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 maintainance
- 8 in front and back side special large access doors for easy maintainance
- 9 Base frame -fuel tank.
- 10 Lifting points similar to ISO container , located on each top corner of the canopy
- 11 the canopy provides easy access to radiator cap.
- 12 sound proofing materials
- 13 Plastic air intake pockets.

Introduction

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 approved by the notified body Szutest

| | | |
|--------------------|-----|------|
| Width | mm. | 1606 |
| Lenght | mm. | 5297 |
| Height | mm. | 2656 |
| Fuel Tank Capacity | L | 1000 |