

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 EU noise legislation 2000/14/EC

3 Phase Ratings, 60 Hz, PF 1,0

Voltage	Standby Rating (ESP)		Prime Rating (PRP)		
	kVA	kW	kVA	kW	Amp
480/277		300,00		275,00	413,00
380/220		300,00		272,00	517,00
208/120		300,00		275,00	954,00

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 fan and rotating parts
 Electric starter and charge alternator
 Starting battery (with lead acid) including rack and cables
 Engine jacket cooling 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 belows supplied separately
 Static battery charger
 Manual for use and installation.



OPTIONAL EQUIPMENTS

ENGINE

- Fuel-Water Separator Filter

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)
- Parallel system with mains.
- 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: weather protective or sound attenuated
- Duct adapter (on radiator)
- 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
- Battery isolating switch
- Main Fuel Tank
- Automatic transfer switch

TRANSFER SWITCH

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- Four Pole Contactor
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➤ DIESEL ENGINE SPECIFICATIONS

Manufacturer		Cummins				تولید کننده
Model		QSL 9-G5				مدل
No. of Cylindirs and Build		6 Cylinder, In Line				تعداد سیلندرها و نوع آرایش آنها
Aspiration and Cooling		Turbo Charged and After Cooled				سیستم تنفس و خنک کاری
Total Displacement	L	8,80				جابه جایی کل
Bore and Stroke	mm	114 X 145				قطر سیلندر و کورس پیستون
Compression Ratio		14,0:1				نسبت تراکم
Rated Speed (rpm)	rpm	1800				سرعت مجاز
Governor		Electronic				گاورنر
Oil Capacity	L	26,50				ظرفیت روغن
Coolant Capacity	L	36,00				ظرفیت خنک کننده
Intake Air Flow	m³ /min.	24,60				جریان هوای مصرفی
Exhaust Gas Flow	m³ /min.	38,40				جریان گاز خروجی از اگزوز
Exhaust Gas Tempratures	° C	580				دمای گاز خروجی از اگزوز
Start System		24 V d.c.				استارت تر
Fuel Consumption	Load	%100	%75	%50		مصرف سوخت
	L/h	75,00	55,00	36,00		

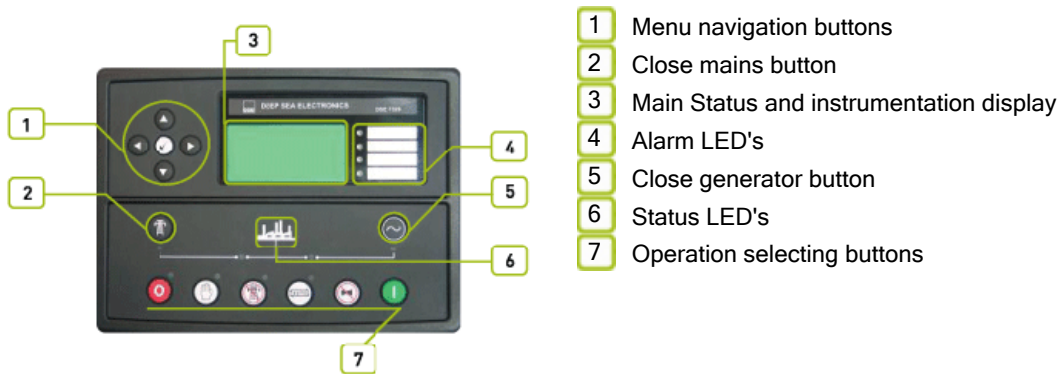
➤ ALTERNATOR SPECIFICATIONS

Make		Stamford	تولید کننده
Model		HCI 444E	مدل
Frequency	Hz	60	فرکانس
Power	kVA	352	توان
Design		Brushless, 4 poles	طراحی
Cos Phi		0,80	کسینوس فی
Phase		3	فاز
Voltage	V	480/277	ولتاژ
Current	A	529	جریان
Insulation Class		H	کلاس عایق بندی
Temperatur		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
ACQ 300-6	3150	3000	1150	1900	330
Sound Attenuated Type	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
AK 70	4400	4550	1460	2300	650

1 P 732 control system - Control System



2 Devices

DSE, model 7320 Auto Mains Failure control module
 Static battery charger 5A, 220/240 volt
 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 hinged panel door provides for easy component access

4 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.

5 Generating Set Control Unit

The DSE 7320 control module is a standard addition to our generator sets from 250kVA 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

➤ 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
kVA_r
kWh, kVA_h, kVA_r_h
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
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)
Expension relay module (2157)
Expansion input module (2130)

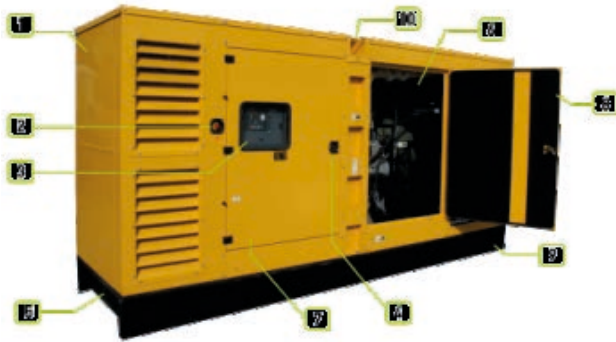
➤ Standards

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 and output is 5 amper, 24 volt DC. Input 198 - 260 volt AC. 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.

AK 70 - Canopy



- 1 Steel structures
- 2 Emergency stop push button
- 3 Control panel is right side of the set.
- 4 Corrosion-resistant locks and hinges
- 5 Sump drains valves
- 6 Exhaust system in the canopy
- 7 Lockable, large doors on each side
- 8 Sound proof foam material
- 9 Base frame -tank
- 10 Lifting Points

Introduction

Sound-attenuated and Weather-protective Enclosures Sound-attenuated and weather protective enclosures for generating sets from abyaran, meet even the sound requirements and provide optimum protection from inclement weather and development by our specialist acoustic engineers. Our modular designed sound insulated canopies (300 - 1100kVA) 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-assembled, 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.	1460
Length	mm.	4550
Height	mm.	2300
Fuel Tank Capacity		650