



#### 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

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

Voltage	Standby Rating (ESP)		Prime Rating (PRP)		
	kVA	kw	kVA	kw	Amp
230 Monofaze		11,50		10,50	57,00

**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

- Remote Radiator Cooling

##### ALTERNATOR

- Main line circuit breaker

##### CONTROL SYSTEM

- Charge Ammeter

##### OTHER ACCESSORIES

- Automatic or manual fuel filling system
- Manual oil drain pump
- Residential silencer
- Enclosure: weather protective or sound attenuated
- Trailer
- Tool kit for maintenance
- Main Fuel Tank

##### TRANSFER SWITCH

- Three or four pole contactor
- Three or four pole motor operated circuit breaker

## ❶ DIESEL ENGINE SPECIFICATIONS

Manufacturer		Mitsubishi	تولید کننده
Model		S4L2	مدل
No. of Cylinders and Build		4 Cylinder, In Line	تعداد سیلندرها و نوع آرایش آنها
Aspiration and Cooling		Naturally Aspirated	سیستم تنفس و خنک کاری
Maximum Standby Power		1500 rpm 15,40 kw [20,70HP]	توان Standby
Total Displacement	L	1,758	جابه جایی کل
Bore and Stroke	mm	78 x 92	قطر سیلندر و کورس پیستون
Compression Ratio		22:1	نسبت تراکم
Rated Speed (rpm)	rpm	1500	سرعت مجاز
Governor		Mechanical	گاورنر
Oil Capacity	L	6,00	ظرفیت روغن
Coolant Capacity	L	7,75	ظرفیت خنک کننده
Start System		12 V d.c.	استارت
Fuel Consumption	Load	%100	مصرف سوخت
	L/h	4,90	

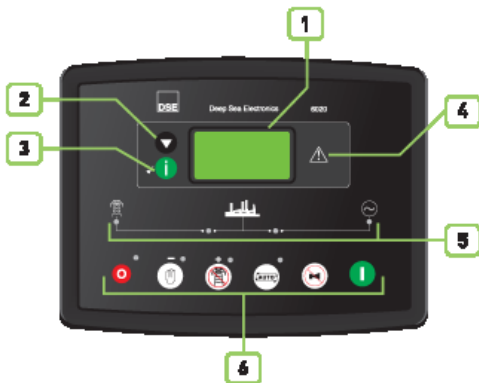
## ❷ ALTERNATOR SPECIFICATIONS

Make		Stamford	تولید کننده
Model		PI144E	مدل
Frequency	Hz	50	فرکانس
Power	kw	12,00	توان
Design		Brushless, 4 poles	طراحی
Cos Phi		0,80	کسینوس فی
Phase		1	فاز
Voltage	V	230	ولتاژ
Current	A	65,20	جریان
Insulation Class		H	کلاس عایق بندی
Stator		2 / 3 steps	استاتور
Excitation System		Electronic ( AVR )	سیستم تحریک

## ❸ DIEMENSIONS AND WEIGHT

Open Type	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
AMT 12 M	405,00	1350,00	850,00	935,00	50,00
Canopy	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
AK 10	585.00	1850	910	1131	50

## 1 P 602 - Control System



- 1 A U]b'gUhi g'X]gd'Um'
- 2 8]gd'Um]gVfc''Vi h'cb"
- 3 DU[ Yf]bZcfa U]hcb'Vi h'cb"
- 4 7 ca a cb U'Ufa ']bX]W]hcf"
- 5 GHUhi g'@98fg"
- 6 C dYfU]hcb'gY'YV]b[ 'Vi h'cbg"

## 2 Devices

8G9ža cXY''\*\$\$'5i h'A U]bg: U]i fY V'ebfc''a cXi Y"  
6UHYfmVUf[ Yf]bdi h%, !&\* ( 'j c'h'ci hdi h''&+Z'J ' ) '5'f&( 'J E'cf% ž 'J c'h) 5'f&J Ł  
9a Yf[ YbVh'cd di g\ 'Vi h'cb'UbX Ž gYg Z'fV'ebfc''V]fV]hg"

## 3 Construction and Finish

7 ca dcbYb]g]b]gU'YX' ]b'g'YYgh'Y'YbW'cg' fY''D\cgd\UHY'WYa ]W'ždfY!V'U]b[ 'cZgh'Y' d'fcj ]XYg V'ffcg]cb  
fYg]g]U]b]g' fZ]W''Dc'mYg]YfV'a d'cg]Y' d'ck XYf' h'cdV'U]h'Z'fa g\ ] [ 'cgg'UbX'YI h'Ya Y'mXi fUV'Y Ž]b]g\''@cW\UV'Y  
UbX\ ]b[ ]YX'dUbY'Xccf d'fcj ]XYg YUgmUWV'gg' h' V'a dcbYb]g"

## 4 Installation

7 cbl'fc'dUbY' ]g'a ci bHYX'cb VUgYZ'Ua Y'k ]h' gh'Y'gh'UbX''@cW]HYX'Uhi'Y'f[ \hig]XY'cZ'HY' [ YbYfU]hcf'gYh'fK \Yb'nci  
'cc\_ Uhi'Y'; Yb''GYH'Z'ca '5'HYfbU]h'fŁ

## 5 Generating Set Control Unit

H\Y''8G9''\*\$\$' ]g'U'gh'UbXUfX V'ebfc''a cXi Y'Z'f'ci f[ YbYfU]hcf'gYhg'i d'h'&\$\$\_J 5'UbX'ih\Ug'VYYb'XYg][ bYX'h'  
ghUfh'UbX'gh'cd'X]YgY'UbX'[ Ug[ YbYfU]hcf'gYhg''H\Y'8G9''\*\$\$'a cXi Y'\Ug'VYYb'XYg][ bYX'h'a cb]hcf[ YbYfU]hcf  
Z'YeI YbW'žj c'ŁW'fYb]h'Yb[ ]bY'c' d'fYgg' fYžV'c'UbhiYa dYfUhi fY'fi bb]b[ \ci fg'UbX' VU]HYfmj c'hg''A cXi Y'  
a cb]hcf'g'h'Y'a U]bg'gi dd'mUbX'gk ]W'c' Yf' h' h'Y' [ YbYfU]hcf'k \Yb'h'Y'a U]bg'd'ck Yf'Z]g''H\Y'8G9''\*\$\$'U'gc  
]bX]W]HYg'cdYfU]hcbU'ghUhi g'UbX'Z]i 'hV'ebX]h'cbgž'5i h'ca U]h'W'm'gvi h]b[ 'Xck b'h'Y'; Yb''GYh'UbX'[ ]j ]b[ 'h'f'Y'Z'fghi d  
Z]i 'hV'ebX]h'cb'cZ; Yb''GYh'Z]i fY''H\Y'@7 8'X]gd'Um]bX]W]HYg'h'Y'Z]i 'h'

### Standard Specifications

A ]W'cd'fcW'ggcf'V'ebfc''YX"  
@7 8'X]gd'Uma U\_Yg' ]bZcfa U]hcb'YUgm'h'fYUX"  
( !' ]bYž\* ( ' ! '% & d] Y'X]gd'Um'

5i h'ca U]h'W'm'f'Ub]gZ'fg'VYh'YYb'a U]bg'fi h]'h'UbX'[ YbYfU]hcf'd'ck Yf"  
A Ubi U'd'fc[ fUa a ]b[ 'cb'Z'cbhdUbY''  
I gYf]Z]YbX'mgYh'i d'UbX'Vi h'cb''U]h'ci h'  
F Ya c'h'ghUfh'  
9j Ybh'c[ [ ]b[ 'f' h'g\ck ]b[ 'XUHY'UbX'h'a Y"  
7 cbl'fc'g' Gh'cd#F YgYh'Z'A Ubi U'ž'5i h'Z'HYgh'Z'GHUfh'Z'Vi h'cbg''5b'UXX]h'cbU'di g\ 'Vi h'cb'bYI h'hc'h'Y'@7 8'X]gd'Um]g  
i gYX'h'g'V'c''h'fci [ \ h'Y'a cXi Y'g'fa YH'f]b[ 'X]gd'Um]g"

## ● Instruments

9B: 49  
9b[ ]bY'gdYYX"  
C]'dFYggi fY"  
7cc'UbhY'a dYfUhi fY"  
F i b'hja Y"  
6UHYfmj c'hg"  
7cbZ[ i fUV'Y'hja ]b[ "  
; 9B9F5HCF  
J c'fU[ Y'f@ @B' "  
7i fFYbhf@ @B' "  
: fYei YbVW"  
A5-BG  
J c'fU[ Y'f@ @B' "  
: fYei YbVW"  
A U]bg'fYUXn"  
A U]bg'YbUV'YX"  
; Yb"GYhfYUXn"  
; Yb"GYhfYbUV'YX"

## ● Options

: 'YI J'Y'gYbgcfVWb VY V'ebfc'YX'k ]h' h'Ya dYfUhi fYz  
dfYggi fYz dYfVWbU[ Y'fk Ufb]b[ #g\i fXck b#Y'VWf]VW' f]dL  
@cVW' gYH]b[ 'dUfUa YHfg'UbX'a cb]hcf]b[ 'Zca 'D7' h'  
V'ebfc'a cXi 'Y'k ]h' 'I G6 V'ebBYVW]cb'fa UI '\* 'a H'

## ● Static Battery Charger

'6UHYfmVXUf[ Yf]g'a Ubi ZUVh fYX'k ]h' gk ]hVX]b[ !a cXY'UbX'GA 8' fYVXbc'c[ mUbX'ih\Ug\][ \YZZVYbVW' 6UHYfmVXUf[ Yf  
a cXY'gfci hdi hJ !=VXUfUWVf]gh]W]g'j YfmVWcgY'h'gei UfY'UbX'ci hdi h]g' 'Ua dYfz% ž 'J 'Zcf%&j c'hUbX'&+ž' 'J 'Zcf'&('J '"  
#di h% , 'I'&\*( 'j c'h57'" "Dfc]bY'&(\$)' \Ug'Z' "mici hdi hg\chVWVW]hdfchVW]cb'UbX'ihVWb'VY'i gYX'Ug'U'VW'ffYbhgci fVW"  
Dfc]bY'&(\$)' #&(\$)' VXUf[ Yf\Ug\][ \YZZVYbVW]cb[ " ]Z'Z'ck ZU]i fY'fUYZ' ][ \hk Y][ \hUbX'ck \YUhfUX]UHYX' ]b  
UVV'fXUbVW'k ]h' " ]bYUf'U'HYfbU]j Yg" H\Y VXUf[ Yf]g'Z'hYX'k ]h' 'U'dfchVW]cb'X]cXY'UVV'cggh'Y'ci hdi h'7 cbbYVWVXUf[ Y'ZU]  
fY'UmV' ]VYhk Yyb'dcg]h]j Y'ci hdi hUbX'7: 'ci hdi h' H\YmUfY'Yei jddYX'k ]h' F: =Z'hYf'h' fYXi VV'Y'VWf]VW'bc]gY'fUX]UHYX'  
Zca 'hY'XYj jVW"; Uj Ub]VW'm]gc'UHYX' ]bdi hUbX'ci hdi h]md]VW'm( \_J 'Zcf\][ \fY' ]UV] ]h'

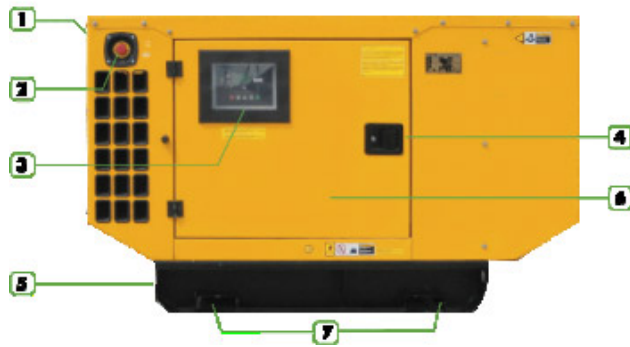
## ● Protection Circuits

K 5F B-B;  
7\Uf[ Y'ZU]i fY"  
6UHYfm@ck #][ \j c'fU[ Y"  
: U]'h'ghcd"  
@ck #][ \j [ YbYfUhf'j c'fU[ Y"  
I bXYf#j Yf[ YbYfUhf'Z'Yei YbVW"  
Cj Yf# bXYf'gdYYX"  
@ck'c]'dFYggi fY"  
<][ \V'c'UbhY'a dYfUhi fY"  
G<I H8CK BG  
: U]'h'ghUf"  
9a Yf[ YbVW'ghcd"  
@ck'c]'dFYggi fY"  
<][ \V'c'UbhY'a dYfUhi fY"  
Cj Yf# bXYf'gdYYX"  
I bXYf#j Yf[ YbYfUhf'Z'Yei YbVW"  
I bXYf#j Yf[ YbYfUhf'j c'fU[ Y"  
C]'dFYggi fY'gYbgcf'cdYb"  
7cc'Ubh'Y'a dYfUhi fY'gYbgcf'cdYb"  
9@97 HF → 5@HF →  
; YbYfUhf'c] YfVW'ffYbH'

## ● Standards

9'YVW]VW' GUZYhm#9A 7 V'ea dUHV] ]hm6G'9B '\* \$- ) \$  
9'YVW]VW' Vi g]bYgg'Yei ]da YbH'  
6G'9B '\*%\$ \$! \*!& 9A 7 'ja a i b]hmg]UbXUfX"  
6G'9B '\*%\$ \$! \*!( '9A 7 'Ya jgg]cb'ghUbXUfX

## AK 10 - 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 Sound proof foam material
- 7 Base frame -tank

## 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 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.	910
Length	mm.	1850
Height	mm.	1131
Fuel Tank Capacity	L	50