



#### 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, 60 Hz, PF 0,8

Voltage	Standby Rating (ESP)		Prime Rating (PRP)		
	kVA	kW	kVA	kW	Amp
480/277		97,00		88,00	132,00
380/220		97,00		86,00	163,00
208/120		96,00		88,00	305,00

**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

- Electronic governor control
- Fuel-Water Separator Filter
- Low water level alarm
- Oil heater

##### ALTERNATOR

- Anti-Condensation Heater
- Over sized alternator
- PMG excitation + AVR
- Main line circuit breaker

##### CONTROL SYSTEM

- 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: weather protective or sound attenuated
- Duct adapter (on radiator)
- Inlet and outlet motorised louvers
- Inlet and outlet acoustic baffles
- Trailer
- Tool kit for maintenance
- Double wall chassis
- Supplied with oil and coolant - 30 °C
- Battery isolating switch
- Battery heater
- Main Fuel Tank
- Automatic transfer switch

##### TRANSFER SWITCH

- Three Pole Contactor
- Four Pole Contactor

## 1 DIESEL ENGINE SPECIFICATIONS

Manufacturer		John Deere	تولید کننده		
Model		4045 HF120	مدل		
No. of Cylinders and Build		4 Cylinder, In Line	تعداد سیلندرها و نوع آرایش آنها		
Aspiration and Cooling		Turbo Charged and Change Air Cooled	سیستم تنفس و خنک کاری		
Total Displacement	L	4,500	جابه جایی کل		
Bore and Stroke	mm	106 X 127	قطر سیلندر و کورس پیستون		
Compression Ratio		17.0:1	نسبت تراکم		
Rated Speed (rpm)	rpm	1800	سرعت مجاز		
Governor		Mechanical	گاورنر		
Oil Capacity	L	17,00	ظرفیت روغن		
Coolant Capacity	L	32,00	ظرفیت خنک کننده		
Intake Air Flow	m <sup>3</sup> /min.	8,60	جریان هوای مصرفی		
Exhaust Gas Flow	m <sup>3</sup> /min.	23,40	جریان گاز خروجی از اگزوز		
Exhaust Gas Temperature	° C	564,00	دمای گاز خروجی از اگزوز		
Start System		12 V d.c.	استارتر		
Fuel Consumption	Load	%100	%75	%50	مصرف سوخت
	L/h	27,00	20,70	13,06	

## 2 ALTERNATOR SPECIFICATIONS

Make		Stamford	تولید کننده
Model		UCI 274D	مدل
Frequency	Hz	60	فرکانس
Power	kW	117,00	توان
Design		Brushless, 4 poles	طراحی
Cos Phi		0,80	کسینوس فی
Phase		3	فاز
Voltage	V	480/277	ولتاژ
Current	A	176,00	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

## 3 DIEMENSIONS AND WEIGHT

Open Type	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
AJD 97-6	1200,00	2150,00	1050,00	1450,00	240,00
Canopy	Dry Weight	Lenght	Width	Height	Tank Capacity
	kg.	mm.	mm.	mm.	L
AK 40	1550	3100	1113	1741	240

## 1 P 602 - Control System



- 1 A U]b`gHh g`X]gd`Um`
- 2 8]gd`UmgVc`Vi`Hcb`
- 3 DU[ Yf]bZcfa U]cbk`Vi`Hcb`
- 4 7 ca a cb`U`Ufa` ]bX]W]Hc`
- 5 GHh g`@98`
- 6 C dYfU]cb`gY`YV]b[ `Vi`Hcbg`

## 2 Devices

8G9`za`cY`\*`\$\$`5i`hc`A`U]bg`:`U]i`fY`V`b]fc`a`cXi`Y`  
 6UHY`fmV`Uf[ Yf`]bdi`h%`,`!&`(`j`c`h`z`ci`rdi`h`+`z`j`)`5`f&`(`j`E`cf`%`z`j`c`h`5`f%&j`k`  
 9a`Yf[ YbV]h]cd`di`g`Vi`Hcb`UbX`Z`gYg`Z`f`V`b]fc`V]fV`]jg`

## 3 Construction and Finish

7 ca`dcbY`b]g`]b]g`U`YX`]b`g`Y`Y`h`Y`Y`b`W`c`g`i`fY`D`c`gd`U`H`Y`W`Y`a`]W`z`dfY`V`U`H`b[ `c`Z`g`H`Y`d`f`c`j`]X`Y`g`V`e`f`c`g`]cb`  
 f`y`g`]g`]b`h`g`i`f`Z`U`V`D`c`m`Y`g`Y`f`V`e`a`d`c`g`]Y`d`c`k`X`Y`f`h`c`d`V`e`U`h`z`c`f`a`g`\\`[ `c`g`g`U`b`X`Y`I`H`Y`a`Y`m`X`i`f`U`Y`Y`Z`]b`g`\\`@`c`V`U`V`Y`  
 U`b`X`\\`b[ YX`d`U`b`Y`X`c`c`f`d`f`c`j`X`Y`g`Y`U`g`m`U`V`W`V`g`g`h`c`V`e`a`d`c`b`Y`b]g`

## 4 Installation

7`c`b]f`c`d`U`b`Y`]g`a`c`i`b`H`Y`X`c`b`V`U`g`Y`Z`U`a`Y`k`]h`g`H`Y`g`H`U`b`X`\\`@`c`W`H`Y`X`U`h`H`Y`f[ `\\`h`g`]X`Y`c`Z`H`Y`[ Y`b`Y`f`U`h`c`f`g`Y`h`f`k`\\`Y`b`m`c`i`  
 `c`c`\_`U`h`H`Y`:`Y`b`G`Y`H`Z`c`a`5`H`Y`f`b`U`h`c`f`k`

## 5 Generating Set Control Unit

H`Y`8`G`9`\*`\$\$`]g`U`g`H`U`b`X`U`f`X`V`e`b]f`c`a`c`X`i`Y`Z`f`c`i`f`[ Y`b`Y`f`U`h`c`f`g`Y`h`g`i`d`h`c`&`\$`\_`j`5`U`b`X`i`h`\\`U`g`V`Y`Y`b`X`Y`g`][ b`Y`X`h`c`  
 g`H`U`f`h`U`b`X`g`h`c`d`X`]Y`g`Y`U`b`X`[ U`g`[ Y`b`Y`f`U`h`c`f`g`Y`h`g`H`Y`8`G`9`\*`\$\$`a`c`X`i`Y`\\`U`g`V`Y`Y`b`X`Y`g`][ b`Y`X`h`c`a`c`b`]h`c`f`[ Y`b`Y`f`U`h`c`f`  
 Z`Y`e`i`Y`b`V`e`z`j`c`i`z`W`f`f`Y`b`h`z`Y`b[ ]b`Y`c`d`f`Y`g`g`i`f`Y`Z`V`e`c`U`b`h`Y`a`d`Y`f`U`h`i`f`Y`f`i`b`b`]b[ `\\`c`i`f`g`U`b`X`V`U`H`Y`f`m`j`c`h`g`A`c`X`i`Y`  
 a`c`b`]h`c`f`g`H`Y`a`U`]b`g`g`i`d`d`i`m`U`b`X`g`k`]H`W`c`j`Y`f`h`c`H`Y`[ Y`b`Y`f`U`h`c`f`k`\\`Y`b`h`Y`a`U`]b`g`d`c`k`Y`f`Z`]g`H`Y`8`G`9`\*`\$\$`U`g`c`  
 ]b`X`]W`H`Y`g`c`d`Y`f`U`h`c`b`U`g`H`U`h`g`U`b`X`Z`i`h`V`e`b`X`]h`c`b`g`z`5`i`h`c`a`U`]W`m`g`\\`i`H`]b[ `X`c`k`b`H`Y`:`Y`b`G`Y`h`U`b`X`[ ]j`]b[ `h`f`i`Y`Z`f`g`h`i`d`  
 Z`i`h`V`e`b`X`]h`c`b`c`Z`:`Y`b`G`Y`h`Z`]i`f`Y`H`Y`@`7`8`X`]g`d`U`m`]b`X`]W`H`Y`g`H`Y`Z`i`H`

### Standard Specifications

- A ]W`c`d`f`c`W`g`g`c`f`V`e`b]f`c`Y`X`
- @7`8`X`]g`d`U`m`a`U`\_`Y`g`]b`z`c`f`a`U`]c`b`Y`U`g`m`h`c`f`Y`U`X`
- (!`]b`Y`z`\*(`1`%`&`d`])Y`X`]g`d`U`m`f`
- 5`i`h`c`a`U`]W`m`i`f`U`b`g`Z`f`g`V`Y`h`k`Y`Y`b`a`U`]b`g`f`i`h`m`h`c`U`b`X`[ Y`b`Y`f`U`h`c`f`d`c`k`Y`f`
- A`U`b`i`U`d`f`c`[`f`U`a`a`]b[ `c`b`Z`c`b`h`d`U`b`Y`
- I`g`Y`f`Z`]Y`b`X`m`g`Y`H`i`d`U`b`X`Vi`H`c`b`U`h`c`i`H`
- F`Y`a`c`H`g`H`U`f`H`
- 9`j`Y`b`h`c`[ ]j`b[ `f`]e`g`\\`c`k`]b[ `X`U`H`Y`U`b`X`h`a`Y`
- 7`c`b]f`c`g`G`h`c`d`#`Y`g`Y`h`Z`A`U`b`i`U`Z`5`i`h`c`Z`H`Y`g`h`Z`G`H`U`f`h`Z`Vi`H`c`b`g`5`b`U`X`X`]h`c`b`U`d`i`g`\\`Vi`H`c`b`b`Y`I`h`h`c`H`Y`@`7`8`X`]g`d`U`m`]g`  
 i`g`Y`X`h`c`g`V`c`h`h`c`i`[ `\\`H`Y`a`c`X`i`Y`g`f`a`Y`H`f`]b[ `X`]g`d`U`m`g`

## • Instruments

```

9B: #9
9b[ ]bY'gdYYX"
C]'dfYggi fY"
7cc'UbhY'a dYfUhi fY"
F i b'ha Y"
6UHYfmj c'rg"
7cbZ[i fUV'Y'ha ]b[ "
; 9B9F5HCF
Jc'hu[ Y f@ @B'
7i ffYbhf@&! @ '
: fYei YbVW"
A5-BG
Jc'hu[ Y f@ @B'
: fYei YbVW"
A U]bg'fYUXn"
A U]bg'YbUV'YX"
; Yb"GYhfYUXn"
; Yb"GYhYbUV'YX"

```

## • Protection Circuits

```

K5FB-B:
7\Uf[YZ]i fY"
6UHYfm@ck#[ ]\j c'hu[Y"
: U]'hc'ghcd"
@ck#[ ]\ [ YbYfUhc'f'j c'hu[Y"
I bXYf#j Yf[ YbYfUhc'f'Z'Yei YbVW"
Cj Yf# bXYf'gdYYX"
@ck'c]'dfYggi fY"
<][\ V'c'UbhY'a dYfUhi fY"
G<I H8CK BG
: U]'hc'ghUf"
9a Yf[ YbVW'ghcd"
@ck'c]'dfYggi fY"
<][\ V'c'UbhY'a dYfUhi fY"
Cj Yf# bXYf'gdYYX"
I bXYf#j Yf[ YbYfUhc'f'Z'Yei YbVW"
I bXYf#j Yf[ YbYfUhc'f'j c'hu[Y"
C]'dfYggi fY'gYbgcf'cdYb"
7cc'UbhY'a dYfUhi fY'gYbgcf'cdYb"
9@97HF -75@HF -D
: YbYfUhc'f'j YfW'ffYbh"

```

## • Options

```

: 'YI J'Y'gYbgcf'Wb VY V'c'bfcc'YX'k ]h' h'Ya dYfUhi fYz
dfYggi fYz dYfVW'bhU[ Y f'k Ufb]b[ #]i h'Xck b# 'YVW'VW' hf]dL
@c'W'gYh]b[ 'dUfUa YHfg'UbX'a cb]hc'f]b[ 'Zca 'D7' hc
V'c'bfcc'a cXi 'Y'k ]h' I G6 V'c'bbYVW]cb'fa Ul '* 'a H"

```

## • Standards

```

9'YVW]W' GUZYhm#9A 7 'V'a dUfV']hm6G'9B '* $-) $
9'YVW]W' Vi g]bYgg'Yei ]da Ybh"
6G'9B '*%$!*&9A 7 'ja a i b]mighUbXUfX"
6G'9B '*%$!*&('9A 7 'Ya ]gg]cb'ghUbXUfX

```

## • Static Battery Charger

```

'6UHYfmVUf[ Yf ]g'a Ubi ZVW' fYX'k ]h' 'gk ]hVW]b[ !a cXY'UbX'GA 8 'YVW'bc'c[ mUbX'ih\Ug\ ] [ \ YZ]VYbVW' 6UHYfmVUf[ Yf
a cXY'gfci hdi hJ !=VUfUWV'f]gh]W]g'j YfmV'cgY'hc'gei UfY'UbX'ci hdi h]g' ]'Ua dYfz% z' ]'Z'f'&j'c'hUbX'&+Z' ]'Z'f'&(' ]'
#bdi h% , ' !&* ( j c'h57 "' Dfc]bY'&($) \Ug'Z' "mici hdi hg\chVW]hdfchVW]cb'UbX'ihVWb VY i gYX'Ug'U'W'ffYbhgci fVW"
Dfc]bY'&($)' #&($)' VUf[ Yf\Ug\ ] [ \ YZ]VYbVW'cb[ " ]Z'Z' "ck' ZU]i fY'fUYZ' ] [ \hk Y] [ \hUbX' "ck' \YUhfUX]UfYX ]b
UVW'cfXUbW'k ]h' " ]bYUf'U'HYfbU]j Yg" H\Y'VUf[ Yf ]g'Z'hYX'k ]h' U'dfchVW]cb'X]cXY'UV'cgg'h'Y'ci hdi h'7 cbbYVW'VUf[ Y'ZU]
fY'UmV'c] VYhk Yyb'dcg]h]j Y'ci hdi hUbX'7: 'ci hdi h' H\Y'mUfY'Yei ]ddYX'k ]h' F: =Z]h'f'hc' fYXi V'Y'YVW]W'bc]gY'fUX]UfYX
Zca 'h'Y'XY'j]VW"; Uj Ub]W' m]gc'UfYX ]bdi hUbX'ci hdi h]md]W' m(_J 'Z'f'\ ] [ \ fY' ]UV] ]m"

```

## AK 40 - 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 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 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.	1113
Length	mm.	3100
Height	mm.	1741
Fuel Tank Capacity	L	240