



# TECNOGEN

**PERKINS GENSETS SERIES**

**DATA SHEET AP59**

**47 KW STAND BY**

**43 KW PRIME**



**TECNO GENERACION SAC**

**Lima - Perú**

## General Performance Data

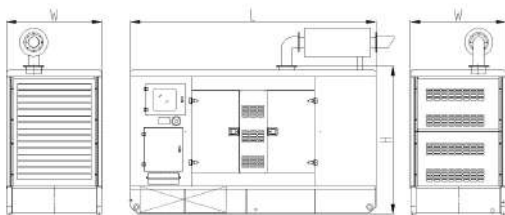
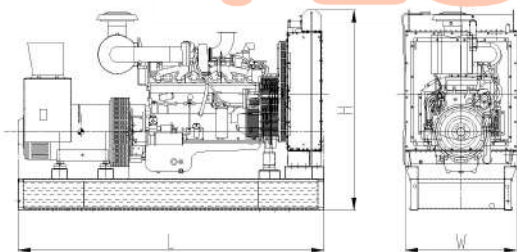
Prime Power	54KVA/43KW	Engine	Brand	Perkins
Stand by Power	59KVA/47KW		Model	1103A-33TG1
Frequency/Speed	60Hz/1800rpm	Control module	Deepsea 6120	
Rated Power Factor(cosφ)	0.8	Rated Current	142A	
Standard Voltage	220V	Capacity of Breaker	160A	
Phases	3	Starting Voltage	DC12V	

## Fuel consumption

Rated output	Fuel consumption rate	
100%Standby	216.1g/KW.h	14.3L/h
100%Prime	211.1g/KW.h	12.9L/h
75%Prime	216g/KW.h	9.9L/h
50%Prime	235.4g/KW.h	7.1L/h
25%Prime	309g/KW.h	4.3L/h

## Standards followed

ISO9001	ISO14001
ISO8528	ISO12100
ISO13849	EN12601
GB12786	GB/T2820
IEC60034	IEC60204
CE	RETIE



## Dimensions and Weights

Type	Open	Silent
Length(mm)	1770	2250
Width(mm)	810	1000
Height(mm)	1260	1540
Weight(kg)	880	1280
Base fuel tank volume (L)	100	100

## Engine specification

### Basic parameter

Manufacturer	Perkins
Model	1103A-33TG1
No. of cylinder	3
Type	4 cycle, Vertical In-line
Prime Power	50.5kw /68.68HP
Standby Power	55.6kw /75.62HP
Induction system	Naturally aspirated
Governor	Mechanical/electronic
Bore x Stroke	105x127mm
Displacement	3.3L
Compression ratio	17.25:1
Oil Capacity(Total)	8.3L
Coolant Capacity(Engine only)	10.2L
Cranking Motor Voltage	DC12V

### Fuel System

Type Injection system	Indirect injection
Flow/hour	120 - 150 litres/h (211 - 264 pt/m)

### Lubrication system

Oil Pressure	
Relief valve opens	415 - 470 kPa
at maximum no-load speed	276 - 414 kPa
Max. allowable oil temperature	125°C
Oil Pan capacity - Low/High	6.2L/7.8L
Total system capacity	8.3L
Angularity of oil pan-Front Down	25°

### Air induction system

Maximum allowable intake air restriction	
---with clean filter element	5.0kPa
---with dirty filter element	8.0kPa
---air filter type	Dry element type

### Exhaust system

Max. allowable back pressure	15.0kPa
Standard exhaust pipe diameter	56mm

### Cooling system

Coolant capacity	
---Engine only	4.4L
---Total system	10.2L
---With heat exchanger	-
Standard thermostat(modulating) range	82-93 °C
Max. coolant temperature	110 °C
Max. allowable top tank temperature for stand by/prime power	110 °C

### Electric system

Min. recommended battery capacity (12V)	
---10°C(50°F) & above- 0°F CCA	660A
--- 0°C(32°F) to 10°C(50°F)- 0°F CCA	660A
---18°C(0°F) to 0°C(32°F)- 0°F CCA	660A
Max. allowable resistance of Starting circuit	0.002ohm
Starter(heave,Anode)	DC12V
Battery recharge system, negative ground	65ampere

## Alternator specification

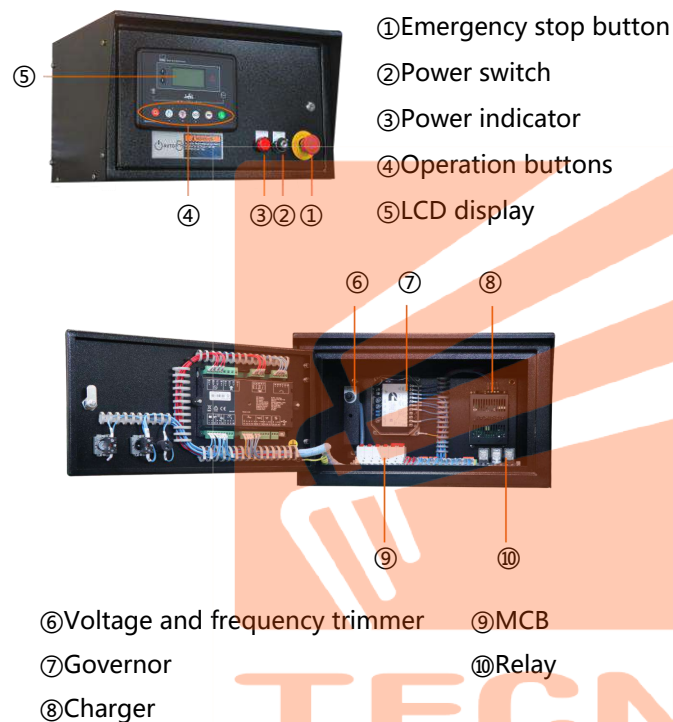
Phases	3
Poles	4
Power factor(cosφ)	0.8
Winding connection	Star
Winding pitch	2/3
Voltage regulator type	AVR

Coating	Vacuum impregnation
Insulation class	H
Protection	IP23
Excitation system	Self-excited
Bearing	Single Bearing
Coupling	Flexible disc

## Control system Introduction

### Deepsea 6120 Auto start & auto mains failure control panel

**Deepsea 6120** is an auto mains failure controller for single generator, it can monitor and protect the generator working all the time. it has a LCD display which clearly shows the status of the engine. this controller include seven inputs and six outputs. This controller can also be programmed using the front panel or by using DSE configuration Suite PC software



### Key Features:

- Auto start/stop, load transfer and alarming of generator
- Remote start on or off load
- With hierarchical loading function
- Multiple start/stop cycles can be preset
- 3 phase generator and mains voltage monitoring.
- Generator/load power detection(kW, kVA, kVA<sub>r</sub> PF)
- Overload protection (kW)
- Load current monitoring and protection
- Engine speed protection
- Engine pre-heat
- Engine start idle & stop idle
- Battery voltage monitoring
- Start under the low battery
- 4 active outputs
- 4 digital inputs and 3 analogue inputs.
- 6 Custom digital input
- 6 outputs(4 configurable on magnetic pick-up, 6 configurable on Canbus version)
- DSE2130,DSE2157,DSE2548 expansion module can be connected
- Support 0-10V or 4-20mA oil pressure sensor

### Main features:

- Multi language display
- Mains failure self starting
- The running time of the engine can be recorded to facilitate the maintenance and repair of the unit
- User-friendly set-up and button layout
- LCD display can display multiple parameters at the same time
- Support EFI engine
- IP65 rating (with optional gasket)
- PC and front panel configuration
- 100 event records
- Data recording and trend analysis

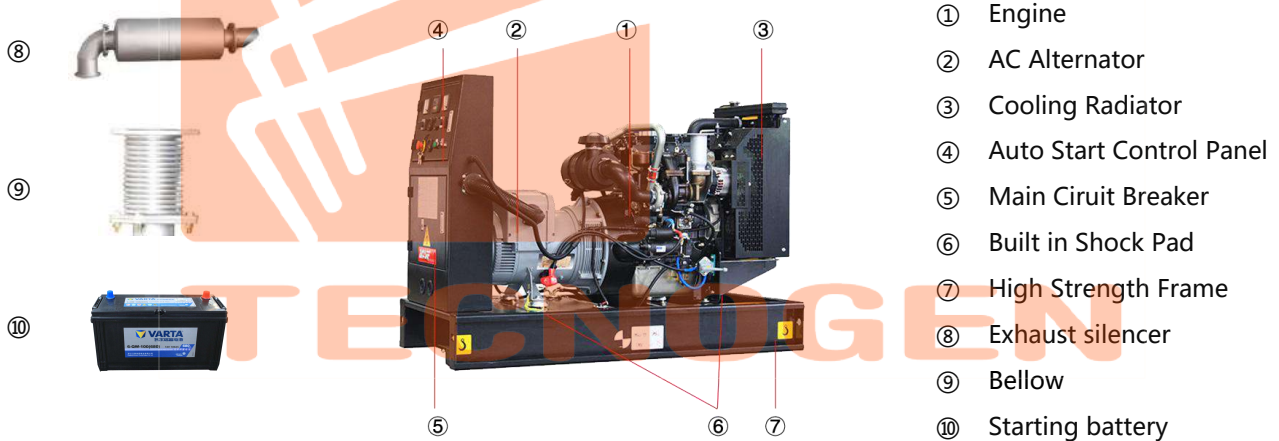
### Protection:

- Two sets of protection parameters can be preset
- Normal alarm, electrical trip and shutdown alarm can be set to effectively monitor the engine speed,oil pressure, water temperature and oil level, as well as the frequency, voltage, current and power of the alternator, for complete engine/alternator protection
- Low Oil Pressure
- High water Temperature
- High voltage and low voltage
- Overspeed
- Emergency stop
- Fail to start

## Decomposition diagram introduction of AOSIF Typical Canopy



## Standard supply scope:



## Optional supply scope:

Genset	Engine	Alternator	Control system
<ul style="list-style-type: none"> <li>Tool box</li> <li>Base fuel tank</li> <li>External daily fuel tank</li> <li>Trailer</li> </ul>	<ul style="list-style-type: none"> <li>Fuel heater</li> <li>Fuel and water separator</li> </ul>	<ul style="list-style-type: none"> <li>Temp. detector for winding and bearing</li> <li>PMG</li> <li>Antirust, mildew and salt fog treatment</li> <li>Anti condensation heater</li> </ul>	<ul style="list-style-type: none"> <li>ATS</li> <li>Synchronization System</li> <li>Adjustable earth relay</li> </ul>
Breaker	Fuel system	Lub-oil system	Cooling system
<ul style="list-style-type: none"> <li>ABB</li> <li>Schneider</li> </ul>	<ul style="list-style-type: none"> <li>Low fuel level alarm</li> <li>Auto Fuel Pump</li> <li>T Valve</li> </ul>	<ul style="list-style-type: none"> <li>Lub oil heater</li> <li>Temp.-sensor</li> <li>Oil drain Pump</li> </ul>	<ul style="list-style-type: none"> <li>Elec.coolant Heater</li> </ul>

Contact your local distributor for more information:



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