



# TECNOGEN

**DOOSAN GENSETS SERIES**

**DATA SHEET AD213**

**170 KW STAND BY**

**154 KW PRIME**



**TECNO GENERACION SAC**

**Lima - Perú**

## General Performance Data

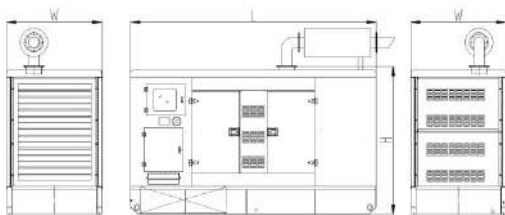
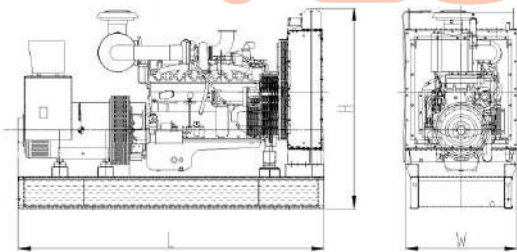
Prime Power	193KVA/154KW	Engine	Brand	Doosan
Stand by Power	213KVA/170KW		Model	P086TI-1
Frequency/Speed	60Hz/1800rpm	Control module	Deepsea 6120	
Rated Power Factor(cosφ)	0.8	Rated Current	506A	
Standard Voltage	220V	Capacity of Breaker	630A	
Phases	3	Starting Voltage	DC24V	

## Fuel consumption

Rated output	Fuel consumption rate	
100%Standby	*g/KW.h	46.7L/h
100%Prime	*g/KW.h	42.4L/h
75%Prime	*g/KW.h	31.6 L/h
50%Prime	*g/KW.h	22.1 L/h
25%Prime	*g/KW.h	12.2L/h

## Standards followed

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



## Dimensions and Weights

Type	Open	Silent
Length(mm)	2480	3500
Width(mm)	950	1250
Height(mm)	1700	2000
Weight(kg)	1800	2500
Base fuel tank volume (L)	300	300

## Engine specification

### Basic parameter

Manufacturer	Doosan
Model	P086TI-1
No. of cylinder	4
Type	4 cycle, In-line, Water cooled
Prime Power	174kw /237HP
Standby Power	191kw /260HP
Induction system	Turbo charged & intercooled (air to air)
Governor	Electric
Bore x Stroke	111x139mm
Displacement	8.071L
Compression ratio	16.4:1
Oil Capacity(Total)	15.5L
Coolant Capacity(Engine only)	14L
Cranking Motor Voltage	DC24V

### Fuel System

Type Injection system	Zexel in-line "P" type
Min. Allowable flow of fuel to fuel pump	*L/h

### Lubrication system

Oil Pressure	
---Idle speed	Min 100kPa
---Rated speed	Min 250kPa
Max. allowable oil temperature	120°C
Oil Pan capacity - Low/High	12/15.5L
Total system capacity	*L
Angularity of oil pan-Front Down	25°

### Air induction system

Maximum allowable intake air restriction	
---with clean filter element	2.16kPa
---with dirty filter element	6.23kPa
Intake Air alarm temperature	*°C

### Exhaust system

Max. allowable back pressure	5.9kPa
Standard exhaust pipe diameter	*mm

### Cooling system

Coolant capacity	
---Engine only	14L
---Total system	-
---With heat exchanger	-
Standard thermostat(modulating) range	71-85 °C
Max. coolant temperature	100 °C
Max. allowable top tank temperature for stand by/prime power	103 °C

### Electric system

Min. recommended battery capacity (12V)	
---10°C(50°F) & above- 0°F CCA	950A
--- 0°C(32°F) to 10°C(50°F)- 0°F CCA	950A
---18°C(0°F) to 0°C(32°F)- 0°F CCA	950A
Battery capacity(recommended)	100AH
Starter(heave,Anode)	DC24V
Battery recharge system, negative ground	45ampere

## Alternator specification

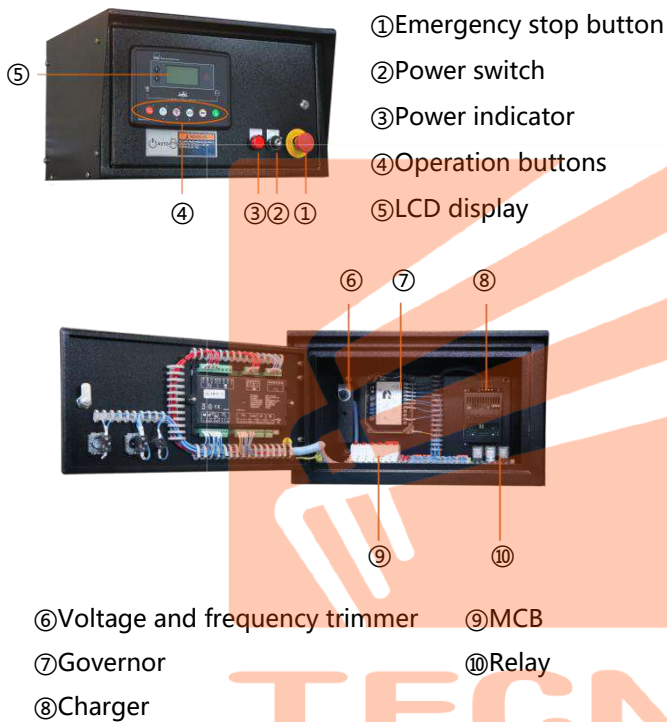
Phases	3
Poles	4
Power factor(cosφ)	0.8
Winding connection	Star
Winding pitch	2/3
Voltage regulator type	AVR

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

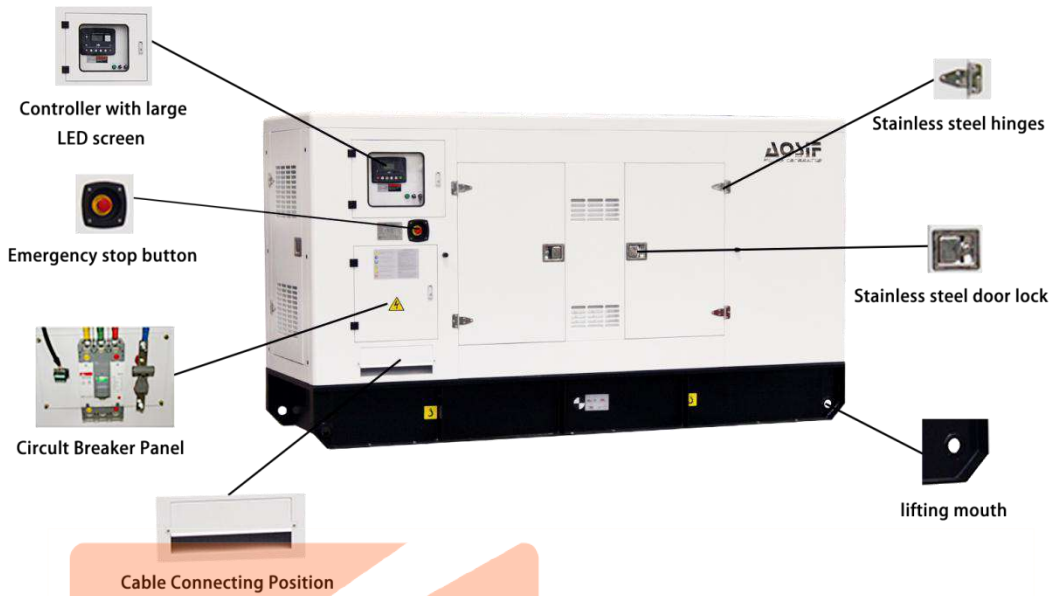
### Main features:

- 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

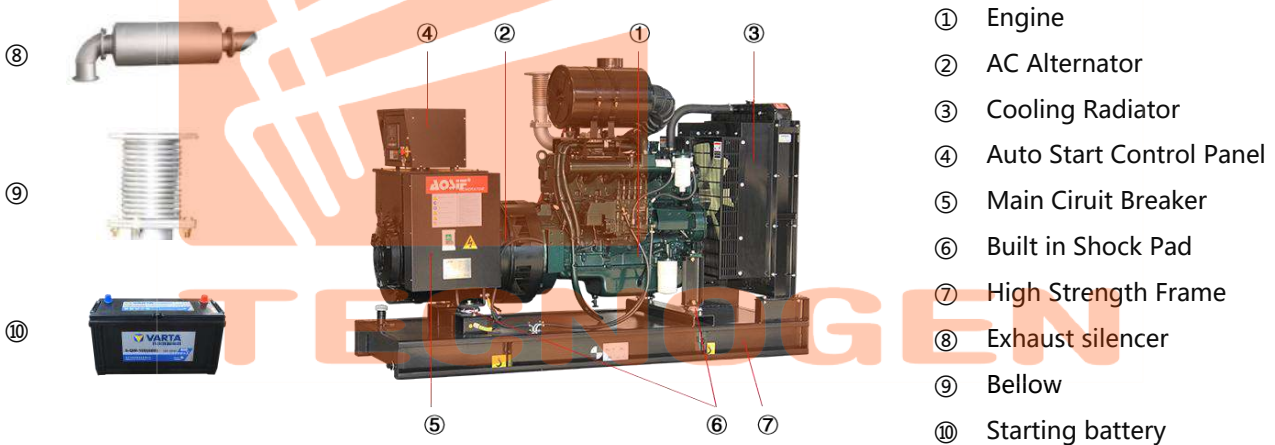
### Protection:

- 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:



**TECNOGEN**



[www.tecnogen.pe](http://www.tecnogen.pe)



[comercial@tecnogen.pe](mailto:comercial@tecnogen.pe)



[+ 51 986 364 537](tel:+51986364537)



[Jr. Ayacucho 226, Callao, Perú](#)

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