

**AD185**



POWER  
YOUR  
FUTURE

185kVA / 148kW  
POWERED by Doosan

**DIESEL GENERATING SET 400/230 V - 50 Hz**

| MODEL            |         |     | AD185 |
|------------------|---------|-----|-------|
| Power<br>Pf. 0.8 | Standby | kVA | 185   |
|                  |         | kW  | 148   |
|                  | Prime   | kVA | 168   |
|                  |         | kW  | 134   |

**Standby** : Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with ISO 3046 .

**Prime** : Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period. In accordance with ISO 8528,ISO 3046.

- ✓ High quality, reliable and complete power unit
- ✓ Compact design
- ✓ Easy start and maintenance possibility
- ✓ Every generating set is subject to a comprehensive test program which includes full load testing, checking and provision of all control and safety shut down functions testing
- ✓ Fully engineered with a wide range of options and accessories: Canopy, sound proof canopy and on-road trailer



Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.

## ENGINE

| DOOSAN                           |                     |                             |
|----------------------------------|---------------------|-----------------------------|
| Model                            |                     | P086TI-1                    |
| Engine Power Output at rated rpm | kWm                 | 164                         |
|                                  | HP                  | 220                         |
| Aspiration and Cooling           |                     | Turbo charged & intercooled |
| Total Displacement               | Litre               | 8.071                       |
| No. of Cylinders and Build       |                     | 6-Cylinder ,in-line         |
| Engine Speed                     | rpm                 | 1500                        |
| Bore and Stroke                  | mmxmm               | 111 x 139                   |
| Compression Ratio                |                     | 16.4:1                      |
| Governor                         |                     | Electric                    |
| Fuel Consumption at full load    | L/hr                | 35.4                        |
| Fuel Tank Capacity               | Litre               | Open: 380/Canopy: 380       |
| Oil Capacity                     | Litre               | 15.5                        |
| Coolant Capacity                 | Litre               | 44                          |
| Radiator Cooling Air             | m <sup>3</sup> /min | 190                         |
| Air Intake – Engine              | m <sup>3</sup> /min | 15.01                       |
| Exhaust Gas Flow                 | m <sup>3</sup> /min | 38.8                        |

- ✓ Heavy duty DOOSAN diesel engine
- ✓ Four stroke, water cooled, Turbocharged intercooled
- ✓ Direct injection fuel system
- ✓ Electric Governor system
- ✓ 12/24 V D.C. starter and charge alternator
- ✓ Replaceable fuel filter, oil filter and dry element air filter
- ✓ Cooling radiator and fan
- ✓ Starter battery (with lead acid) including Rack and Cables
- ✓ Flexible fuel connection hoses and manual oil sump drain valve
- ✓ Industrial capacity exhaust silencer and steel bellows
- ✓ Jacket water heater(at automatic models)
- ✓ Operation manuals and circuit diagram documents

## ALTERNATOR

|                                       |  |
|---------------------------------------|--|
| Design                                | Brushless single bearing, revolving field                |
| Stator                                | 2/3 pitch  |
| Rotor                                 | Single bearing, flexible disc                            |
| Insulation System                     | Class H  |
| Standard Temperature Rise             | 125 - 163°C Continuous                                   |
| Exciter Type                          | Self Excited   |
| Phase Rotation                        | A (U), B (V), C (W)                                      |
| Alternator Cooling                    | Direct drive centrifugal blower fan                      |
| AC Waveform Total Harmonic Distortion | No load < 1.5%. Non distorting balanced linear load < 5% |
| Telephone Influence Factor (TIF)      | <50 per NEMA MG1-22.43                                   |
| Telephone Harmonic Factor (THF)       | <2%  |

- ✓ Brushless, single bearing system, flexible disc, 4 poles
- ✓ Insulation class H
- ✓ Standard degree of protection IP21 (\*IP22/IP23 is available.)
- ✓ Self-exciting and self-regulating
- ✓ Impregnation with tropicalised epoxy varnish
- ✓ Solid state Automatic Voltage Regulator
- ✓ Stator winding with 2/3 pitch for improved harmonics

## CONTROL SYSTEM

Control supervision and protection panel is mounted on the genset base frame. The control panel is equipped as follows:

### 1. Auto Mains Failure Control Panel

Panel equipments:

- ✓ Control with AMF module
- ✓ Static battery charger
- ✓ Emergency stop push button

### a) Generating set control module DSE6120 features:

- ✓ The module is used to monitor main supply and starts and stops of a standby generating set
  - ✓ Micro-processor based design
  - ✓ Automatic control of main and generator contactors
  - ✓ Monitors engine performance and AC power output LED alarm indication
  - ✓ Front panel configuration of timers and alarm trip points
  - ✓ 4 configurable analogue/digital inputs, 8 configurable digital inputs
  - ✓ 6 configurable DC outputs
  - ✓ Easy push button control
- STOP/RESET - MANUAL - AUTO - TEST – START

### b) Metering via LCD display:

- ✓ Generator Volts (L-L / L-N)
  - ✓ Engine oil pressure (PSI-Bar)
  - ✓ Generator Ampere (L1,L2,L3)
  - ✓ Engine temperature (° C & ° F)
  - ✓ Generator Frequency (Hz)
  - ✓ Plant battery volts
  - ✓ Engine hours run
  - ✓ Mains Volts (Ph-Ph/Ph-N)
- Generator kVA  
Generator kW  
Generator Cos ( $\sigma$ )



DSE 6120

### c) Alarms:

- ✓ Over and Under Speed
- ✓ Low and High Battery Volt.
- ✓ Start and Stop Failure
- ✓ Charge fail
- ✓ Over Current
- ✓ Under / Over Generator Voltage
- ✓ Low Oil Pressure
- ✓ Emergency stop
- ✓ High engine temperature

### d) LED indications

- ✓ Mains available
- ✓ Generator available
- ✓ Mains on load
- ✓ Generator on load

## 2. Power Outlet Terminal Board Mounted on the Gen-set Base Frame

## OPTIONAL EQUIPMENTS

### Diesel Engine

- ✓ Oil heater

### Alternator

- ✓ 3/4 Pole Output Circuit Breaker
- ✓ Anti-condensation Heater

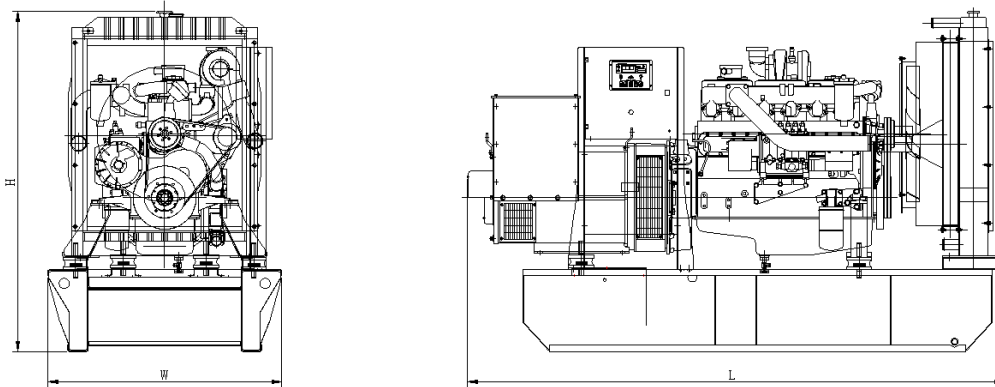
### Panel

- ✓ Charge ammeter
- ✓ Transfer Switch 3 Pole
- ✓ Transfer Switch 4 Pole
- ✓ Earth Fault, single set

### Accessories

- ✓ Bulk fuel tank
- ✓ Automatic filling system
- ✓ Fuel-water separator filter
- ✓ Low fuel level alarm
- ✓ Residential silencer
- ✓ Enclosure or sound proof canopy
- ✓ Trailer
- ✓ Manual oil drain pump
- ✓ Tool kit for maintenance

## CHASSIS

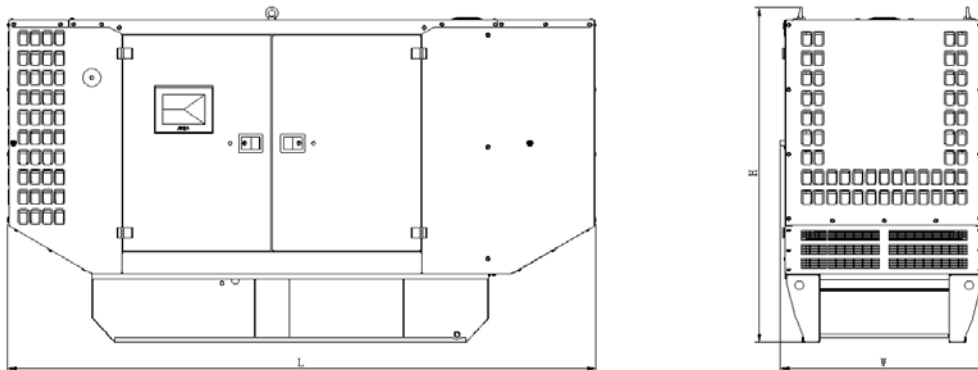


- ✓ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates an integral fuel tank (Up to 1000 kVA)
- ✓ The generating set can be lifted or carefully pushed / pulled by the base frame
- ✓ Dial type fuel gauge and drain plug on the fuel tank
- ✓ Forklift pockets within base frame (up to 500kVA)

## DIMENSIONS

| OPEN TYPE          |    |                |
|--------------------|----|----------------|
| DIMENSIONS (LxWxH) | mm | 2522x1150x1715 |
| DRY WEIGHT         | kg | 1740           |
|                    |    |                |
| DIMENSIONS (LxWxH) | mm | 3417x1206x2022 |
| DRY WEIGHT         | kg | 2210           |

## CANOPY



- ✓ All canopy parts are designed with modular principles
- ✓ Without welding assembly
- ✓ Doors on each side
- ✓ All metal canopy parts are painted by electrostatic polyester powder paint
- ✓ Exhaust silencer is protected against environment influences
- ✓ Thermally insulated engine exhaust system
- ✓ Emergency stop push button is installed outside of the canopy
- ✓ Easy lifting and moving
- ✓ Easy maintenance and operation

### Aksa Power Generation

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