

# ELEGEN



## 10kVA Single Phase Diesel Generator

Power Pft 0.8	Standby	kVA	11
		kW	8.8
	Prime	kVA	10
		kW	8

**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

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## ENGINE

Model		A4CRX18
Engine Power Output at at rated rpm	kWm	11.0
	HP	14.8
Aspiration and cooling		Natural
Total Displacement	Litre	1.808
No. of Cylinders and Build		4 - Inline
Engine Speed	rpm	1500
Bore and Stroke	mm x mm	80 x 90
Compression Ratio		18.1
Governor		Mechanical
Fuel Consumption at Full Load	L/hr	4.1
Fuel Tank Capacity	Litre	32
Oil Capacity	Litre	6.5
Coolant Capacity	Litre	18.5
Radiator Cooling Air	m <sup>3</sup> /min	210
Air Intake - Engine	m <sup>3</sup> /min	1.26
Exhaust Gas Flow	m <sup>3</sup> /min	5.8

- ✓ Heavy duty diesel engine
- ✓ Four stroke, water cooled, Natural
- ✓ Direct injection fuel system
- ✓ Mechanical 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
- ✓ Impregnation with tropicalised epoxy varnish
- ✓ Insulation class H
- ✓ Solid state Automatic Voltage Regulator
- ✓ Standard degree of protection IP21 (\*IP22/IP23 is available.)
- ✓ Stator winding with 2/3 pitch for improved harmonics
- ✓ Self-exciting and self-regulating

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## 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 equipment:

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



### DSE 6020

#### a) Generating set control module DSE 6020 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
- CAN and magnetic pick-up versions (specify on ordering)
- 4 digital inputs/3 analogue inputs
- 6 outputs (4 configurable on Magnetic Pick-up, 6 configurable on CANbus version)
- Easy push button control

**STOP/RESET - MANUAL - AUTO - TEST - START**

#### b) Metering via LED display:

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

#### 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

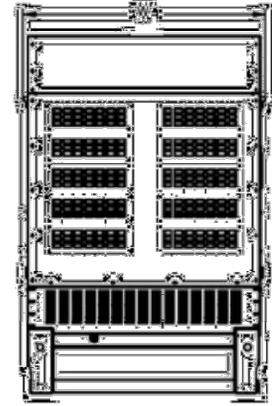
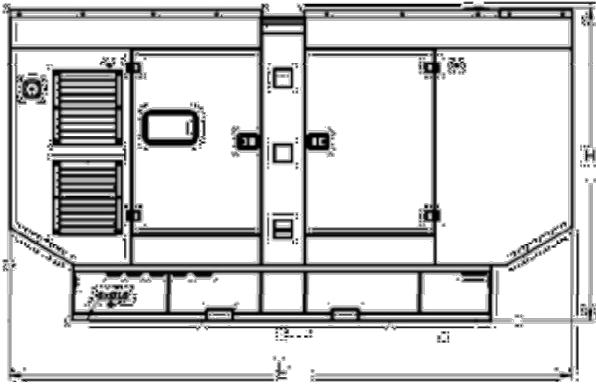
- ✓ Mains available
- ✓ Generator available
- ✓ Mains on load
- ✓ Generator on load

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- 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
- 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

## SOUND ATTENUATED TYPE

DIMENSIONS (LxWxH)	mm	1672x823x1127
DRY WEIGHT	kg	520



### 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