RICARDO
RR220

1500 d/dak.50 Hz.

231/400 VAC

Standby Power (ESP)
Standby power is defined as the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable ofdelivering in theevent of a utility power outage orunder test conditions for up to 500 hours of operation per year under average of 70% load.Overloading is not permissible

Prime Power (PRP)
Prime power is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load. Average load should be 70%. The generator can be overloaded 10% for 1 hour per 12 hours.

Power Output Ratings		50 Hz. / 400 V
Standby Power (ESP)	kVA	220
	kW	176
Prime Power (PRP)	kVA	200
	kW	160

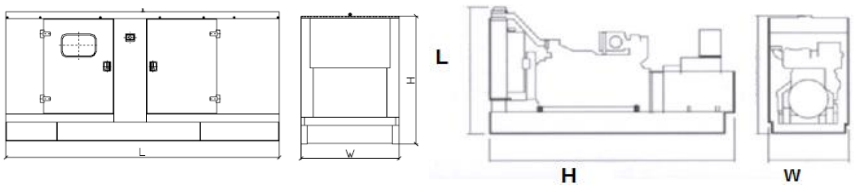
Engine		
Manufacturer		RICARDO
Model		R 6110 ZLD
No of Cylinder / Configuration		6 IN-LINE
Displacement lt	lt	7,5
Bore / Stroke	mm	113x125
Compression Ratio		17:1
Aspiration		Turbo charged
Governor Type		MECHANIC
Cooling System		WATER
Coolant Capacity	lt	60
Lubrication Oil Capacity	lt	35
Electrical System	VDC	24
Speed / Frequency	rpm	1500 rpm / 50 Hz
Engine Prime Power (with fan)	kWm	172
Fuel Consumption lt/h	100%	39,8
Radiator Cooling Air	m³/min	590
Air Intake-Engine	m³/min	25
Exhaust Gas Flow	m³/min	148
Exhaust Gas Temparature	°C	

Alternator		
Power Factor		0,8
No of Bearing		SINGLE
No of Poles		4
No of Leads		12
Voltage Regulation (Steady State)		± %0,5
Insulation		H
Degree of Protection		IP23
Excitation System		AVR, BRUSHLESS
Connection Type		STAR
Total Harmonic Content (No Load)		< %2
Frequency	Hz	50
Voltage Output	VAC	231/400

DIMENSION			
	L x W x H (mm)	Weight (kg)	Fuel Tank (lt)
Canopied	2800 x 1100 x 1850	2150	350
Open Skid	2400x 1000 x 1650	1515	350

Technical information and values are according to ISO8528, ISO3046,NEMA MG1.22, IEC 600341, BS 49995000, VDE 0530 standards. Producing with ISO9001, CE standards.

All information given in this leaflet is intended for general purposes only. Due to a policy continuous improvement REAL reserves the right to amend details and specifications without notice and all information given is subject to the REAL's current condition of sales.



CE TSE ISO 9001:2000

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DESIGN SPECIFICATIONS

High quality, reliable and complate power unit,Compact design,Easy start and maintenance possibility,Every generating set is subjected to a comprehensive test programme which includes full load testing and checking and providing of all control and safety shut down functions testing,Full engineered with a wide range of options and accessories:Canopy,soundproof and on road trailer

STANDARD GENSET SPECIFICATIONS

ENGINE

RICARDO heavy duty diesel engine,Four cycle, water cooled, turbo charged and after cooled,Electronic Governor Control System,Direct injection fuel,4 valves per cylindersystem,Replaceable wet type cylinder liners,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 pump,Industrial capacity exhaust silencer and steel bellows,Jacket water heater (at automatic models),Operation manuals and circuit diagram documents

ALTERNATOR

Brushless, single bearing system, 4 poles,Insulation class H,Standard degree of protection IP21 or IP23,Self-exciting and self-regulating,Stator winding with 2/3 pitch,Impregnation with tropicalised epoxy varnish,Solid state Automatic Voltage Regulator

BASE FRAME

The complete genset is mounted as whole on a heavy-duty fabricated, steel base frame. Antivibration 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,Lifting eyes allow easy transportation by a crain

CANOPY

All canopy parts are designed with modular principles
Without welding assembly
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 canopy
To enable for lifting easy mainteneance and operation

CONTROL SYSTEM

Panel Equipments;

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

Control Panel Equipments:
Conrtol panel with TPH 309 module
Static battery charger
Emergency stop push button

1.1 Generating Set control module TPH 309 features:
The module is used to monitor a mains supply and automatic start a stand-by generating set.
Micro-processor based design
Monitors engine performance and AC power output
LED and LCD alarm indication
Front panel configuration of timers and alarm trip points
provides signal to change over switch panel
event logging of shutdown alarms
Remote communication via RS232 port or RS485 modbus output
easy push button control
STOP/RESET-MANUAL-AUTO-TEST-START
Operation indicators accesed by the LCD display scroll push button.

Metering via LCD Display:

Generator Volts (L-L/L-N)
Generator Amps (L1-L2-L3)
Generator Frequency (Hz)
Engine hours run
Engine oil pressure (PSI&Bar)
Engine speed RPM
Engine temperature (C & F)
Generator kVA
Generator kW
Generator power factor
Mains Frequency (Hz)
Mains Volts (F-F/F-N)
Plant battery volts

Automatic shutdown on fault conditions

Under/Over Speed
High Engine Temperature
Low Oil Pressure
Under/over generator volts
Under/over generator frequency
under/over mains frequency
under/over mains voltage
Low/High battery volts
Fail to start
Fail to stop
Charge fail
Over current
Emergency stop
CAN data fail
CAN ECU fail

LED indications

Mains available
Generator available
Mains on load
Generator on Load

2. Power Outlet Terminal Board Mounted on the Genset Baseframe

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