

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 of delivering in the event of a utility power outage or under 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.



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.

Power Output Ratings

50 Hz. / 400 V

Standby Power (ESP)	kVA	190
	kW	152
Prime Power (PRP)	kVA	171
	kW	139

Engine

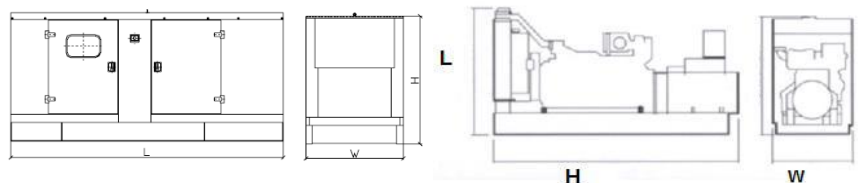
Manufacturer		RICARDO	
Model		R6105BZLDS	
No of Cylinder / Configuration		6 IN-LINE	
Displacement lt	lt	7,5	
Bore / Stroke	mm	100x127	
Compression Ratio		17:01	
Aspiration		Turbo charged intercooled	
Governor Type		MECHANIC	
Cooling System		WATER	
Coolant Capacity	lt	35	
Lubrication Oil Capacity	lt	15	
Electrical System	VDC	24	
Speed / Frequency	rpm	1500 rpm / 50 Hz	
Engine Prime Power (with fan)	kWm	136	
	110%	40	
	100%	35	
	75%	31	
Fuel Consumption lt/h	50%	19	
	Radiator Cooling Air	m ³ /min	540
	Air Intake-Engine	m ³ /min	30,2
Exhaust Gas Flow	m ³ /min	16,65	
Exhaust Gas Temperature	°C	150	

Alternator

Power Factor		Stamford - Mecc alte - Falcon
No of Bearing		
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
Efficiency	%	95
Frequency	Hz	50
Voltage Output	VAC	231/400

DIMENSION

	L x W x H (mm)	Weight (kg)	Fuel Tank (lt)
Canopied	3400 x 1100 x 1850	1800	300
Open Skid	2700x 1100 x 1650	1250	300



DESIGN SPECIFICATIONS

High quality, reliable and complete 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 cylinder system, 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 crane

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 maintenance 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:
- Control 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 accessed 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