

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 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.

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

WTP DIESEL (RICARDO) heavy duty diesel engine,
Four stroke, water cooled, turbocharged, charge air cooled
Direct injection fuel system,
24 VDC 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 oil sump drain valve,
Industrial capacity exhaust silencer and steel bellows,
Jacket water heater (at all models)
Operation manuals documents

ALTERNATOR

Brushless, single bearing system, 4 poles,
Insulation class H,
Standard degree of protection IP21-IP23,
Self-exciting and self-regulating,
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.
Dial type fuel gauge and drain plug on the fuel tank.

CANOPY

All canopy parts are designed with modular principles without welding assembly.
Doors on each side.
All metal canopy parts are painted by electrostatic.
Exhaust silencer is protected against environment influences polyester powder paint.
Thermally insulated engine exhaust system.
Emergency stop push button is installed outside of canopy
Easy lifting and moving
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 DKG 309 module
- Static battery charger
- Emergency stop push button
- Circuit Breaker



DATAKOM

1.1 Generating Set control module DKG 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.

a) Metering via LCD Display:

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

b) Automatic shutdown on fault conditions

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

ISO 9001:2008

OHSAS 18001:2007

LED indications

Mains available
Mains on load

Generator available
Generator on Load



ISO 14001:2004

ISO 1002:2004



MODEL		NPR 110	
Power Output Ratings		50 Hz - 400/231 V	
Standby Power (ESP)	kVA	110	
	kW	88	
Prime Power (PRP)	kVA	100	
	kW	80	

ENGINE			
Manufacturer		WTP DIESEL (RICARDO)	
Model		WTPD 110	
Engine Stand-by Power	kWm	84	
Speed	rpm	1500 rpm	
No of Cylinder / Configuration		6-In line	
Displacement	lt	4,5	
Bore x Stroke	mm	105x125	
Compression Rate		16:01	
Aspiration		Turbo Charged Aftercooler	
Governor Type		Mechanical	
Cooling System		Water cooled	
Coolant Capacity	lt	20	
Lubrication Oil Capacity	lt	19	
Electrical System		24V. DC	
Fuel Consumption lt/h	100%	19	
	75%	14	
	50%	10	

ALTERNATOR			
Brand		WATTPOWER	
Model		WPA 110	
Voltage Output	VAC	231/400	
Frequency	Hz	50	
Power Factor	Cos ϕ	0,8	
No of Bearing		1	
No of Poles		4	
No of Leads		12	
Voltage Regulation		Automatic voltage regulation \pm 2%	
Insulation		H	
Degree of Protection		IP 21	
Excitation System		Self excitation	
Connection Type			

OPEN TYPE			
Diemensions (LxWxH)	mm	2900x1120x1450	
Dry Weight	kg	1430	
SILENT CANOPY TYPE			
Diemensions (LxWxH)	mm	2900x1120x1600	
Dry Weight	kg	1780	