## **KEY FEATURES:**

Generator made by OEM-Perkins

Every generating set carries a comprehensive test program & report thereon

#### Certifications

ISO 8528/1, ISO 3046/1:1986, BS5514/1, NEMA MG 1-22, NEMA MG 1.32-33, IEC 60034, BS 5000 PART 99, VDE 0530, ISO 8528/3,

UL 1446, UL 1004, ISO 9001, ISO 14001, AS 1359, IEC 34

Complete protection functions & safety labels

Easy & Economical availability of Spares

Advanced digital control system, long service life, easy to operate, low fuel consumption & anti-vibrating isolators

After Sales support all over Pakistan

High quality, reliable & complete generating set

Easy for operation & maintenance





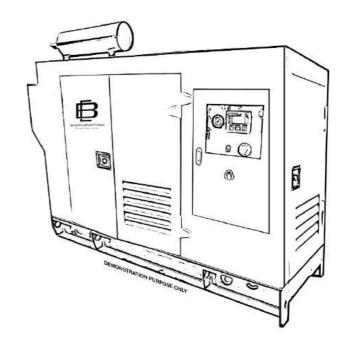
**GENERATOR SET:** 







Generator Model		EPG50		
Prime Power		45-KVA	36-KW	
Standby Power		50-KVA	40-KW	
Configuration		380-415 V, 3Ph, 50 Hz, 1500 RPM at 0.8 PF		
FUEL CONSUMPTION				
Consumption @ 100% load		10.7 Ltrs		
Consumption @ 75% load		8.2 Ltrs		
Consumption @ 50% load		5.7 Ltrs		
DIMENSIONS, WEIGHT & FUEL TANK (Approx.)				
Particulars	Open	Canopy-R	Canopy-S	
Length (Inches)	73	72	79	
Width (Inches)	29	40	39	
Height (Inches)	53	45	46	
Net Weight (Kg)	915	1369	1392	
Fuel Tank (L)		117	102	













# ALTERNATOR DATA:

Manufacturer		STAMFORD	Equivalent
Model /Series	TAL Series	ТВА	ТВА
Frequency /Speed		50 Hz / 1500 RPM	
Coupling		Direct	
No. of Bearings		Single Bearing	
Phase / Poles		3-Phase/4-Pole	
Over speed		2250 mn-1	
AVR Model		R120	
Voltage Regulation		± 1%	
Insulation Class		Н	
Ingress Protection		IP 23	
Excitation		Shunt	
Winding Pitch		2/3 (wdg 3)	
CONTROLLER D	ATA:		

Make

Model

Deep Sea-UK

**DSE 4520** 

#### **ENGINE DATA:**

Manufacturer	Perkins	
Model	1103-33TG1	
Cylinders	3	
Cylinders Arrangement	Vertical In-Line	
Displacement	3.3 L	
Aspiration System	Turbocharged	
Combustion System	Direct Injection	
Governor	Mechanical	
Bore	105 mm	
Stroke	127 mm	
Speed	50 Hz & 1500 RPM	
Cooling System	Water Cooled	
Cycle	4-Stroke	
Gross Power PRP (KWm)	42.2-KWm /56-HP	
Gross Power STP (KWm)	45.5-KWm /62-HP	
Gross Power PRP	56 HP	
Compression Ratio	17.25:1	
Rotation	Anti-Clockwise	
Lubricating Capacity	8.3 L	
Coolant Capacity	10.2 L	
Radiator Cooling air flow m <sup>3/</sup> s	0.88 Min	
Thermostat Operation Range	82-93° C	
Coolant & water Ratio	50:50	
Exhaust Gas Temperature	492° C	
Combustion Air flow m³/ min	2.9	
Exhaust Gas Flow m <sup>3/</sup> min	7.0	
Allowable Back Pressure	10 kPa	
Exhaust Outlet Size	56 mm	
Battery Charging Alternator	65 Amps	
Starter Motor	3 KW, 12V	
Oil Pressure	415-470 kPa	
Dry Weight (Kg)	420	
Recommended Oil Grade	API-CH4-SAE15W-40	
Battery Voltage	12 V	
Fuel Type	Diesel	
Recommended Fuel	Grade # 2	

#### OTHER INFORMATION:

ATS /AMF Panel	Optional	
External Fuel Tank	Optional	
Trailor/Trolley	Optional	
Remote Monitoring	Optional	
Operating Temperature	Up to 50° C	
Low Fuel Level Sensor	Available	
4-Pole Breaker	Optional	
Sound Level @ 7M	76 dBs (Approx.)	
Synchronizing System	Optional	
Customized Color	Optional	
Customized Sound Level	Optional	

#### STANDARD SPECIFICATIONS:

- **1.ENGINE** Perkins 4 stroke heavy duty high performance industrial type diesel engine.
- **2.ENGINE FILTRATION SYSTEM** Air filter. Fuel filter. Full flow lube oil filter. All filters have replaceable elements.
- **3.COOLING RADIATOR.** Radiator and cooling fan, complete with safety guards, designed to cool the engine at high ambient temperatures
- **4.EXHAUST SYSTEM** Heavy duty Industrial Exhaust Silencer.
- 5. CIRCUIT BREAKER TYPE 3 pole MCB. (4 pole is optional)
- **6. FUEL SYSTEM** On Generating Sets up to 500 KVA, the base frame design is incorporated with an integral fuel tank with capacity of approx. 5-8 hours running at Full Load. The tank is supplied complete with fill cap breather, fuel feed and return lines to the Engine and drain plug.
- 7. ALTERNATOR 7.1 INSULATION SYSTEM The insulation system is Class H. All windings are impregnated in either a triple dip thermosetting liquid, oil and acid resisting polyester varnish or vacuum pressure impregnated with a special polyester resin. Heavy coat of anti-tracking varnish additional protection against moisture or condensation. 7.2 AUTOMATIC VOLTAGE REGULATOR (AVR) The fully sealed Automatic Voltage Regulator maintains the Voltage Regulation at ±0.5%. Nominal adjustment by means of a trim pot incorporated on the AVR.
- **8. MOUNTING ARRANGEMENT** 8.1 BASE FRAME The complete Generating Set is mounted as a whole on a heavy duty fabricated steel Base frame. 8.2 COUPLING The Engine and Alternator are directly coupled by means of an SAE flange. The Engine flywheel is flexibly coupled to the Alternator rotor. 8.3 ANTI-VIBRATION MOUNTING PADS Anti-Vibration pads are affixed between the Engine / Alternator feet and the Base frame thus ensuring complete vibration isolation of the rotating assembly. 8.4 SAFETY GUARDS The Fan & Fan Drive along with the Battery Charging Alternator are Safety Guard protected for personnel protection.
- **9. FACTORY TESTS** The Generating set is load tested before dispatch All protective devices control functions and site load conditions are simulated. The generator and it's systems are checked before dispatch.
- **10. DOCUMENTATIONS** Operation & Maintenance manual, Circuit wiring diagrams and Commissioning / Fault Finding instruction leaflets are accompanied with the Generator.
- 11. WARRANTY All of the Generating Sets are covered under a warranty policy for a period of 12 months or 1000 Hours Warranty of the equipment is in line with manufacturers warranty terms & conditions. (check warranty statement for more details, as it may vary for different countries)

**Disclaimer:** In-line with continuous product development, we reserve the right to change specifications without prior notice.

CONTROLLER LCD DISPLAY:	Deep Sea DSE 4520	Deep Sea DSE 6020
Voltage between Phases (L-L)	<b>✓</b>	✓
Voltage between Neutral and Phase (L-N)	✓	✓
Frequency	✓	✓
3 Phase Current	✓	✓
Real Power (KW) and Apparent Power (KVA)	✓	✓
Power Factor	✓	✓
Engine Speed	✓	✓
Running Hours	✓	✓
Coolant Temperature	✓	✓
Oil Pressure	✓	✓
Battery Voltage	✓	<b>√</b>
LCD Alarm Indication	✓	✓
3 Phase Mains (Utility) Sensing	✓	✓
PROTECTING FUNCTIONS:		
Emergency Stop Button	✓	✓
High coolant Temperature	✓	✓
Low Oil Pressure	✓	✓
Over Current / Load	✓	✓
Under/Over Speed, Frequency & Voltages	✓	✓
Low / High Battery Voltages	✓	✓
Low Fuel Level Warning at 20%	✓	✓
Low Fuel Level Shutdown at 10%	✓	✓

### **RATINGS DEFINITIONS:**

**Prime Power:** These ratings are applicable for supplying continuous electrical power at variable load in lieu of commercially purchased power. 10% overload power is available for 1 hour in 12 hours continuous operation.

**Standby Power:** These ratings are applicable for supplying continuous electrical power at variable load in the event of a utility power failure. No overload is permitted.

## STANDARD REFERENCE CONDITIONS:

Output ratings are presented at 25° C air inlet temperature, barometric pressure 100 kPa relative humidity 30%. This rating set is designed to operate at high ambient temperate up to 50° C, humidity up to 99% and higher altitude. De-ration may apply. (Some of the specifications are not standard on all Genset models)

### **OPTIONAL ITEMS**









