

## KEY FEATURES:

Generator made by OEM-Cummins

Every generating set carries a comprehensive test program & report thereon

### Certifications

ISO 8528/1, NEMA MG 1-22, NEMA MG 1.32-33, IEC 60034, BS 5000 PART 99, VDE 0530, ISO 8528/3, ISO TS16949, OHSAS 18001, UL 1446, UL 1004, ISO 9001, ISO 14001, AS 1359, IEC 34

Complete protection functions & safety labels

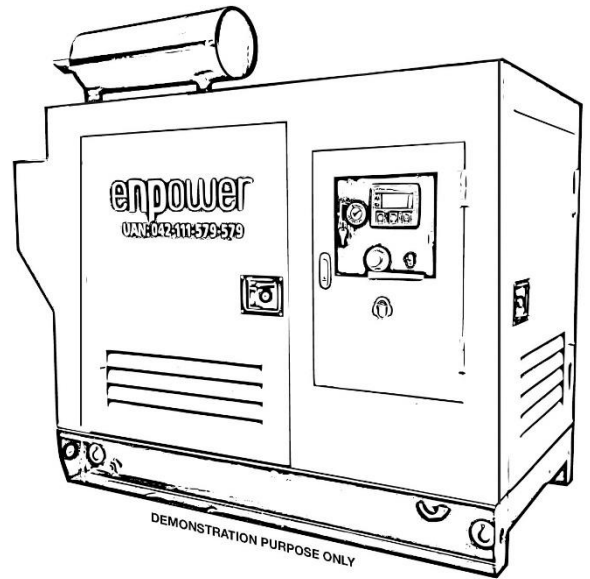
Easy & Economical availability of Spares

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



## POWERED BY:



## GENERATOR SET:

Generator Model	ECG27	
Prime Power	27-KVA	22-KW
Standby Power	29.7-KVA	24-KW
Configuration	380-415 V, 3Ph, 50 Hz, 1500 RPM at 0.8 PF	

## FUEL CONSUMPTION

Consumption @ 100% load	5.7Ltrs
Consumption @ 75% load	4.6Ltrs
Consumption @ 50% load	3.7 Ltrs

## DIMENSIONS, WEIGHT & FUEL TANK (Approx.)

Particulars	Open	Canopy-R	Canopy-S
Length (Inches)	69	69	82
Width (Inches)	24	40	40
Height (Inches)	53	53	52
Net Weight (Kg)		1233	1267
Fuel Tank (L)		104	102

## ALTERNATOR DATA:

Brand	Enpower	Leroy Somer	Equivalent
Model /Series	Current	TAL Series	TBA
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	SX 460		
Voltage Regulation	± 1%		
Insulation Class	H		
Ingress Protection	IP 23		
Excitation	Self Excited		
Winding Pitch	2/3 (wdg 3)		

## CONTROLLER DATA:

Make	Deep Sea-UK
Model	DSE 4520

## ENGINE DATA:

Manufacturer	Cummins
Model	4B3.9-G11
Cylinders	4
Cylinders Arrangement	Vertical In-Line
Displacement	3.9 L
Aspiration System	Naturally Aspirated
Combustion System	Direct Injection
Governor	Mechanical
Bore	102 mm
Stroke	120 mm
Speed	50 Hz & 1500 RPM
Cooling System	Water Cooled
Cycle	4-Stroke
Gross Power PRP (KWm)	25-KWm /32-HP
Gross Power STP (KWm)	27.5-KWm /36-HP
Gross Power PRP	36 HP
Compression Ratio	17.3:1
Rotation	Anti-Clockwise
Lubricating Capacity	10.9 L
Coolant Capacity	17.2 L
Thermostat Operation Range	82-95° C
Coolant & water Ratio	50:50
Exhaust Gas Temperature	410° C
Heat Rejection Coolant	29-KW
Intake Air Flow L/sec	33
Exhaust Gas Flow L/sec	67.5
Allowable Back Pressure	10 kPa
Exhaust Outlet Size	75 mm
Battery Charging Alternator	63 Amps
Starter Motor	3 KW, 12V
Oil Pressure	207-345 kPa
Dry Weight (Kg)	308
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
Trailer/Trolley	Optional
Remote Monitoring	Optional
Operating Temperature	Up to 50° C
Low Fuel Level Sensor	Available
4-Pole Breaker	Optional
Sound Level @ 7M	74 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  $\pm >2\%$ . 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)	✓	✓
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	✓	✓
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 temperature up to 50° C, humidity up to 99% and higher altitude. De-rating may apply. (Some of the specifications are not standard on all Genset models)

### OPTIONAL ITEMS



**enpower**  
engineering company

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