

# WEBER



WES 160



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## GENERATING SET MODEL WES 160

Output Ratings	Prime
400 V,3 ph,50 Hz,1500 rpm	160 Kva
	128 kW
	Power Factor : 0.8

## ENGINE / TECHNICAL DATA

Engine Make	Volvo Eicher
Engine Model	EE694TCI
Governing Type	Mechanical
Number of Cylinders	6
Rated BHP	201
Bore and Stroke mm	100 X 120
Displacement ltrs	5.7
Electric System	12 V DC
Compression Ratio	17.5:01
Injection system	Direct
Cylinder arrangement	Inline
Nature of Aspiration	TCI

## STANDARD SPECIFICATIONS

1. Eicher heavy duty high performance industrial type diesel engine
2. ENGINE FILTRATION SYSTEM
  - Cartridge type dry air filter
  - Two cartridge type fuel filters
  - 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 (consult your dealer for deration factors)
4. EXHAUST SYSTEM  
Heavy duty Industrial Exhaust Silencer  
  
Silencer noise reduction level 15 (dB)  
Maximum allowable back pressure 10.0(kPa)
5. CIRCUIT BREAKER TYPE  
ABB 3 pole MCCB, (4 pole is optional)
6. FUEL SYSTEM  
On Generating sets upto 700kVA, the baseframe design is incorporated with an integral fuel tank with a capacity of approx. 8 hours running at full load. The tank is supplied complete with fill cap breather, fuel speed and return lines to the engine and drain plug.
7. ALTERNATOR
  - 7.1 INSULATION SYSTEM
    - Insulation : 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 antitracking varnish additional protection against moisture or condensaton.
  - 7.2 AUTOMATIC VOLTAGE REGULATOR (AVR)  
The fully sealed AVR maintains the voltage regulation at  $\pm 0.5\%$ . Nominal adjustment by means of a trim pot incorporated on the AVR.
  - 7.3 MOTOR STARTING  
An overload capacity equivalent to 300% of the full load impedance at zero power factor can be sustained for 10 sec., when AREP or PMG option is fitted.
8. MOUNTING ARRANGEMENT
  - 8.1 BASE FRAME  
The complete generating set is mounted as a whole on a heavy duty fabricated steel baseframe.
  - 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 baseframe thus ensuring complete vibration isolation of the rotating assembly.

## ENGINE / TECHNICAL DATA (continued)

Frequency and Engine Speed	50Hz & 1500rpm
Prime	
No. of Valves / Cyl	4
Cooling system	Liquid
Dimensions (L x W x H) mm	1526X1039X1309
Dry Weight kg	610
Noise Level dB(A) (Without Canopy)	96 @ 1 mtr
FIP Make	Bosch Inline
Lube oil sump capacity (Ltrs.)	23.8
BSFC @ 100% load (gms/hp-Hr)	163
BSFC @ 75% load (gms/hp-Hr)	155
Lube Oil Consumption (% of Fuel Cons.)	0.1

Dimension (mm) & Weight (Kg)	Length	Width	Height	Weight
Open	2400	1100	1528	1824
Soundproof	3510	1210	1970	2374

## ALTERNATOR DATA

Make	Leroy Somer TAL / Stamford
Model	TAL 044K / UCI274G
No. of bearings	1
Insulation Class	H
Total Harmonic Content	on load < 5%
Wires	6 / 12
Ingress Protection	IP23
Excitation System	Shunt / Self Excited
Winding Pitch	2/3(n°3)
AVR Model	R120 / SX460
Overspeed	2250 mn <sup>-1</sup>
Voltage Regulation	±1% / ±1.5%
Short Circuit Capacity	-
AREP & PMG Excitation System Available as optional	

### STANDARD SPECIFICATIONS

#### 8.4 SAFETY GUARDS

The fan and 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 its systems are checked before dispatch.

#### 10. EQUIPMENT FINISHING

All mild steel components are fully degreased and painted with powder coated paint to ensure maximum scuff resistance and durability.

#### 11. DOCUMENTATIONS

Operation and Maintenance manual and circuit wiring diagrams are accompanied with the generator.

### CONTROL PANEL

Make Deep Sea  
Model DSE4510

The DSE4510 is an Auto Start Control Module for single genset applications. It includes a backlit LCD display which clearly shows the status of the engine all the times. This module can either be programmed using the front panel or by using the DSE configuration suite PC software.

#### Metering and Alarm Indications:

- Generator Frequency
- Underspeed, Overspeed
- Generator volts(L-L, L-N)
- Generator Current
- Engine Oil Pressure
- Engine Coolant Temperature
- Fuel Level
- Hours Run Counter
- Battery Volts
- Fail to start/stop
- Emergency Stop
- Failed to reach loading voltage/frequency
- Charge fail
- Loss of magnetic pick-up signal-Optional
- Low DC Voltage
- CAN diagnostics and CAN fail/error



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