

# WEBER



## WBS 400



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## GENERATING SET MODEL WBS 400

Output Ratings	Prime	Standby
400 V,3 ph,50 Hz,1500 rpm	400 kVA	440 kVA
	320 kW	352 kW
		Power Factor : 0.8

## ENGINE / TECHNICAL DATA

Engine Make	Baudouin
Engine Model	6M21G440/5
Governing Type	Electronic
Number of Cylinders	6
Cylinder Arrangement	In Line
Bore and Stroke mm	127 x 165
Displacement / Cubic Capacity ltrs	12.54
Aspiration	Turbocharged & Air-Air aftercooled
Cycle	4 stroke
Cooling System	Liquid (water + 50% antifreeze)
Injection System	Direct
Fuel System	Mechanical Pump
Compression ratio	16 : 1

## STANDARD SPECIFICATIONS

### 1. ENGINE

Baudouin four stroke 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 20 (dB)  
Maximum allowable back pressure 10.2(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 condensation.

#### 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	Standby	
Gross Engine Output kWm			368	405	
Fuel Consumption	@50%load L/hr		43.2	-	
	@75%load L/hr		63.5	-	
	@100%load L/hr		85.5	94.8	
Flywheel housing			SAE 1		
Flywheel			14"		
Recommended air flow (m³/min)			25	26.7	
Exhaust flow (m³/min)			63	69	
Coolant capacity of radiator and pipes (L)			30	30	
Coolant capacity of the engine (L)			25	25	
Fuel supply flow (L/hr)			169	169	
Dimension (mm) & Weight (Kg)		Length	Width	Height	Weight
Open		3350	1150	1850	3470
Soundproof		3985	1560	2450	4887
STANDARD SPECIFICATIONS					

## ALTERNATOR DATA

Make	Leroy Somer TAL / Stamford
Model	TAL 047A / HCI444F
No. of bearings	1
Insulation Class	H
Total Harmonic Content	on load <3.5% / <2%
Wires	6 / 12
Ingress Protection	IP23
Excitation System	Shunt / Self Excited
Winding Pitch	2/3(n°6)
AVR Model	R150 / SX440
Overspeed	2250 mn <sup>-1</sup>
Voltage Regulation	±1%
Short Circuit Capacity	-
AREP & PMG Excitation System Available as optional	

### STANDARD SPECIFICATIONS

#### 84 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, circuit wiring diagrams and commissioning/fault finding instruction leaflets 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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