

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 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 | 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 (m ³ /min) | 25 | 26.7 |
| Exhaust flow (m ³ /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 |

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 ⁻¹ |
| 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 Model Deep Sea 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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