SB-90

DIESEL GENERATING SET • 50 Hz



90 kVA	82 kVA	400/230 V	1500 rpm
STANDBY / 72 kW	PRIME / 66 kW	RATED VOLTAGE	RATED SPEED

Power Ratings

Continuous Power

Continuous varying power under constant load. Average load may be 100%; overload is not permitted.

Standby Power

Variable-load emergency power, average load 70%, maximum 200 hours/year; overload is not permitted.

Prime Power

Continuous variable-load duty, average load 70%; 10% overload permitted for 1 hour every 12 hours.

STANDARD GENERATOR SET FEATURES

ENGINE
Heavy-duty, water-cooled, four-stroke industrial diesel engine.

COOLING SYSTEM
Industrial radiator, expansion tank and cooling fan for optimum engine temperature.

ELECTRICAL SYSTEM
Complete 12V/24V starting and charging system with battery and cables.

FUEL SYSTEM
Integrated base-frame tank; larger and double-walled tanks optionally available.

LUBRICATION SYSTEM
Integrated oil pump, filters and oil-pressure protection.

EXHAUST SILENCER
Heavy-duty industrial silencer; higher attenuation options available.

SPECIAL PROJECT SOLUTIONS
Engineered power solutions with flexible manufacturing.

SOUND ATTENUATED CANOPY
Modular galvanized canopy with service access and optimized noise control.

ALTERNATOR
4-pole, 3-phase brushless alternator, Class H insulation and AVR regulation.

FACTORY TEST
Load-tested before shipment; control and protection functions verified.

DOCUMENTATION
Operation/maintenance manuals and electrical wiring diagrams supplied.

WARRANTY
Covered against manufacturing defects under applicable warranty terms.

SB-90

DIESEL GENERATING SET • 50 Hz

Engine

Brand / Model	**Baudouin / 4M11G90/5**
Rated Speed	**1500 rpm**
Standby Power	**81 kW**
Prime Power	**74 kW**
Displacement	**4.5 L**
Cylinders	**4**
Aspiration	**Turbocharged**
Cooling	**Water Cooled**
Injection	**Direct Injection**
Bore x Stroke	**105 x 130 mm**
Governor	**Electronic**
Fuel Consumption @ 100% Load	**18.6 L**
Fuel Consumption @ 75% Load	**13.95 L**
Fuel Consumption @ 50% Load	**9.5 L**
Oil Capacity	**11 L**
Coolant Capacity	**17 L**
Voltage	**12V/24V**

Alternator

Rated Voltage	**230 / 400 V**
Frequency	**50 Hz**
Voltage Regulation	**Automatic ±4%**
Engine Regulator	**±1.0%**
Standby	**90 kVA**
Prime	**82 kVA**
Power Factor	**0.8**
Insulation	**IP21 / H**
Excitation	**Self Excited**

Optional Alternator Brands

Leroy-Somer **Mecc Alte** **STAMFORD**

Available as optional alternator configurations subject to project specification and availability.

Dimensions & Configuration

Configuration	Width	Length	Height	Weight	Tank
Silent / Canopied	1050 mm	2700 mm	1875 mm	1400 kg	180 L
Open Type	1000 mm	2090 mm	1650 mm	1100 kg	180 L

Standard Features

- Antivibration Pads
- Radiator Mounted on the Genset
- Battery Charger
- Charge Alternator
- Datakom D-300 Control Module
- Integrated Fuel Tank up to 1250 kVA
- Oil and Coolant
- Air, Oil and Fuel Filters
- Battery Group and Cables
- Engine Jacket Water Heater
- Starter Motor
- Emergency Stop Button
- Industrial Type Exhaust Silencer
- User & Maintenance Manual

Optional Features

- 3P or 4P Alternator Protection Circuit Breaker
- 3P or 4P Automatic Transfer Panel
- Fuel-Water Separator
- Oil Heater
- Alternator Winding Heater
- Alternator Temperature Sensors (RTD's)
- Charging Current Ammeter
- Battery Circuit Breaker
- PMG Excitation System
- Control Panel with Analog Gauges
- Set Mounted or Separately Designed Synchronization Systems
- External Fuel Tanks
- Underbase or External Type Double-Walled Fuel Tank
- Automatic Fuel Transfer Pump
- Electrical or Manual Oil Drainage Pump
- Electrical or Manual Air Intake and Exhaust Louvers
- Air Intake Heater
- Remote Cooling System
- Different Voltage and/or Frequency Options
- Modular Type Sound Attenuated Canopy
- Container Type Sound Attenuated Canopy

SARO Generator reserves the right to modify the specifications and features stated on this page without prior notice as part of its continuous product development policy.

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SB-90

DIESEL GENERATING SET • 50 Hz

STANDARD GENSET CONTROLLER

DATAKOM D-300



Advanced multifunction controller for automatic mains failure, transfer switching, remote/manual start and engine control applications.

OPERATING FUNCTIONS

AMF unit • ATS unit • Remote start • Manual start • Engine controller • Remote display panel

COMMUNICATION

USB Device • RS-232 (2400–57600 baud) • J1939-CANBUS • Modbus RTU • Optional 4-band GPRS • GSM geolocation • GPS via RS-232 • Internet Central Monitoring • Rainbow Plus PC software

MEASUREMENT & DISPLAY

128×64 graphical LCD • Voltage/current waveform display • Harmonic analysis • Detailed power measurements • 400 event logs • Real-time clock • Downloadable language support

PROTECTION & AUTOMATION

Excess/reverse power • Overload IDMT • Current/voltage unbalance • Load shedding & dummy load • Multiple load management • Service alarms • Automatic exerciser • Weekly schedule • Fuel filling/theft alarms

ENGINE / GENSET CONTROL

CANBUS-J1939 & MPU • Configurable digital/analog I/O • Speed fine adjust • Automatic fuel pump • Idle speed • Battery charge run • Dual genset mutual standby • Combat mode • Disable protections function

Optional Controller Alternatives



DATAKOM D-500

Synchronizing / load sharing, AMF/ATS and remote monitoring.



DATAKOM Smart 200

Compact genset control option for simpler applications.



Deep Sea DSE7320

Single-genset AMF, mains monitoring and configurable I/O.



Deep Sea DSE6120

Compact AMF control for automatic mains-failure duty.



ComAp AMF25

Standby/prime control, remote monitoring and PLC logic.

Optional controllers may require panel, wiring, communications or switchgear changes. Final configuration is confirmed during engineering.

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