

625 kW Standby | 560 kW Prime Power



Image used for illustration purposes only

Leading the way with proven power designs

PowerSecure has taken its robust design on the road with the mobile PowerBlockM. Utilizing a Tier 4 Final EPA and CARB Certified engine, the PowerBlock Mobile is ready to provide backup power with the versatility of transport from site to site.

With its on-board 24-hour 100% load fuel tank and DEF tank, load demands are met with extended run times between fueling. Another valuable benefit is the ability to parallel multiple PowerBlock Mobile Generators for redundancy and to meet additional kW/kVAR load share.

Servicing of the PowerBlock Mobile is backed by PowerSecure's nationwide network of highly trained service technicians along with EGSA certified technicians. PowerSecure is available 24/7/365 for all maintenance and troubleshooting needs.

PowerSecure PowerBlockM Series Generators - safely powering your world.

Application and Engineering Data

Engine Specifications

Make	Volvo
Cylinder #	6
Type	4-Cycle
Displacement – in ³ (L)	983.9 (16.12)
Bore – in (mm)	5.67 (144)
Stroke – in (mm)	6.50 (165)
Compression Ratio	16.8:1
Intake Air Method	Turbocharged/ Aftercooled
Number of Main Bearings	7
Cylinder Head	Cast Iron 4
Ignition	Electronic
Piston Type	Steel
Crankshaft Type	Drop Forged Steel
Lifter Type	Solid Overhead Cam Roller
Intake Valve Material	Nimonic
Exhaust Valve Material	Nimonic
Hardened Valve Seats	Proprietary Alloy
Crankcase Ventilation	Closed

Engine Governing

Governor	Electronic
Frequency Regulation	± 0.25%

Engine Electrical System

System Voltage (DC)	24
Battery Charger Alternator (Volts/Amps)	28/80
Battery Size	2, Group 31

Cooling System

Cooling System Type	Unit Mounted Radiator
Fan Type	Pusher
Fan Speed - RPM	1,080
Fan Diameter – in (mm)	37.99 (965)

Fuel System

Fuel Type	ULSD #2
System Supply Flow, Max— 1800 RPM Gal/HR (L/HR)	55.5 (210.0)
Fuel Filtering (3)	30 / 10 / 5 microns
Fuel Injectors	Electromechanical

Lubrication System

Oil Pump Type	Full Pressure
Oil Filter Type	Spin on
Crankcase Capacity with Filter— Gal (L)	12.7 (48)

DEF System

Recommended Brand	AdBlue®
Solution	32.5% per ISO 22241
Total Capacity	24-hour Full Load Run Time

Alternator Specifications

Standard Model	573RSL4033	Standard Excitation	Permanent Magnet
Poles	4	Bearings - Single	Sealed Cartridge
Field Type	Rotating	Coupling	Direct via Flexible Disc
Insulation Class – Rotor	H	Prototype Short Circuit Test	Yes
Insulation Class – Stator	H	Voltage Regulator Type	Fully Digital
Total Harmonic Distortion	<5% (3-Phase)	Number of Sensed Phases	All
Telephone Interference Factor (TIF)	<50	Regulation Accuracy (Steady State)	± 0.25%

Cooling

		Standby (Prime)
Air Flow (Fan Air Flow Over Radiator)	SCFM (m ³ /min)	28,817 (816)
Coolant Flow	Gal/s (L/s)	1.59 (6)
Coolant System Capacity	Gal (L)	43.85 (166)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
For altitudes greater than 1000m and temperatures greater than 50°C, contact PowerSecure		
Maximum Radiator Backpressure	in H ₂ O (kPa)	0.5 (0.125)

Combustion Air Requirements

	Standby	Prime
Flow at Rated Power – SCFM (m ³ /min)	1,805 (51.1)	1,699 (48.1)

Engine

		Standby	Prime		Standby	Prime
Rated Engine Speed	RPM	1,800	1,800	Exhaust Flow - Rated Output	SCFM (m ³ /min)	4866 (137.8) 4471 (126.6)
Horsepower at Rated kW	hp	891	809	Max. Allowable Back Pressure Post Turbocharger	psi (kPa)	2.9 (20) 2.7 (19)
Piston Speed	ft/sec (m/sec)	32.6 (9.9)	32.6 (9.9)	Exhaust Temp Post Turbocharger	°F (°C)	903 851
Effective Mean Pressure	psi (kPa)	411 (2,800)	375 (2,555)			

Control System

Controller

- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication via PowerSecure PowerControl
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Built-in Programmable Logic Eliminates Need for External Controllers under Most Conditions
- CAN or Ethernet Based Communication between Generator Sets
- Programmable I/O Channel Properties
- Built-in Diagnostics
- SAE J1939 Communication to Engine ECM
- Time Synchronization between Controllers

Alarms and Warnings

- Engine ECM SPN/FMI Codes via J1939
- Overload
- Overcurrent
- Over/Under Frequency
- Over/Under Speed
- Over/Under Voltage
- Battery Charger Fail
- High/Low Battery Voltage
- Reverse Power
- High/Low Coolant Temperatures
- Low Coolant Level
- Low Oil Pressure
- High/Low Fuel and DEF Levels where applicable
- Six (6) Alarm Classes Including Warnings and Shutdowns

Paralleling Controls

- Paralleling Control (Synchronizing)
- Loss of Communication among Generator Sets
- kW/kVAR Sharing

Digital Display

- Easily Identifiable Icons
- On-screen Editable Parameters
- Key Function Monitoring
- 3-Phase Voltage, Amperage, kW, kVA, and KVAR
- Synchroscope
- Selectable Line-to-Line or Line-to-Neutral Measurements
- Frequency
- Engine Speed
- Battery Voltage
- Engine Coolant Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Fuel and DEF Levels where applicable
- Engine Hour Meter
- Warning and Alarm Indications
- Diagnostics
- J1939 Analog Data and Diagnostic Trouble Codes
- Multilingual



Standard Features

Alternator System

- UL 2200
- Class H Insulation Material
- 2/3 Pitch
- Permanent Magnet Excitation
- Sealed Bearings
- Amortisseur Winding
- Low Temperature Rise
- Motorized Main Line Circuit Breaker
- Digital Voltage Regulator

Cooling System

- On-board Factory-installed Radiator
- Closed Coolant Recovery System
- VCS Ready Mixed Coolant
- Radiator Drain Extension
- Block Heater

Electrical System

- Battery Charging Alternator
- Solenoid Activated Starter Motor
- Sealed Batteries
- Battery Charger
- House Power Connection
- DC Lights with Timer Switch
- Exterior Generator Interface Cabinet
- Engine Control Cabinet with Display Panel
- Exterior and Interior E-Stops
- Exterior Accessed Breaker Panel

Enclosure

- 20' ISO Container
- 20' Air Ride Chassis
- Padlock-style Door Handles
- Internal Release Handle
- Aluminum Fixed Intake Louvers
- Aluminum Backdraft Damper
- Access Ladder
- Cable Storage Boxes

Engine System

- Air Filtration
- Factory-filled Oil and Coolant
- Oil Drain Extension
- Critical Silencer/SCR
- Stainless Steel Flexible Exhaust Connection
- 24-Hour, 100% Load DEF Tank

Fuel System

- 24-hour 100% Load Diesel Tank
- Primary Fuel Filter & 2 Pre-filters
- Primary Fuel Fill Port
 - Camlock Connection
 - Check Valve
 - Fuel Spill Box
 - Local Fuel Fill Gauge
- Secondary Fuel Fill Port at top of tank
- Fuel Removal Port with integral Camlock fitting

Generator Set

- Generator Set Vibration Isolators
- Separation of Circuits – High/Low Voltage
- Insulated Exhaust Piping
- Standard Factory Testing
- Standard Warranty

Operating Data

Power Ratings

	Standby	Amps	Prime	Amps
Three-Phase 208/120 VAC @ 0.8 pf kW (kVA)	625 (781)	2000	560 (700)	1943.1
Three-Phase 480/277 VAC @ 0.8 pf kW (kVA)	625 (781)	940	560 (700)	842

Diesel Exhaust Fluid (DEF) Consumption Gal/HR (L/HR)

Percent Load	Standby	Prime
25%	0.79 (2.99)	0.72 (2.73)
50%	1.47 (5.56)	1.34 (5.07)
75%	2.30 (8.71)	2.09 (7.91)
100%	2.62 (9.92)	2.48 (9.39)

Fuel Consumption Rates Gal/HR (L/HR)

Percent Load	Standby	Prime
25%	11.6 (43.9)	11.1 (42.0)
50%	20.9 (79.1)	20.1 (76.1)
75%	30.9 (117.9)	29.1 (110.2)
100%	40.9 (154.8)	38.8 (146.8)

Ratings Definitions:

Emergency Standby Power:

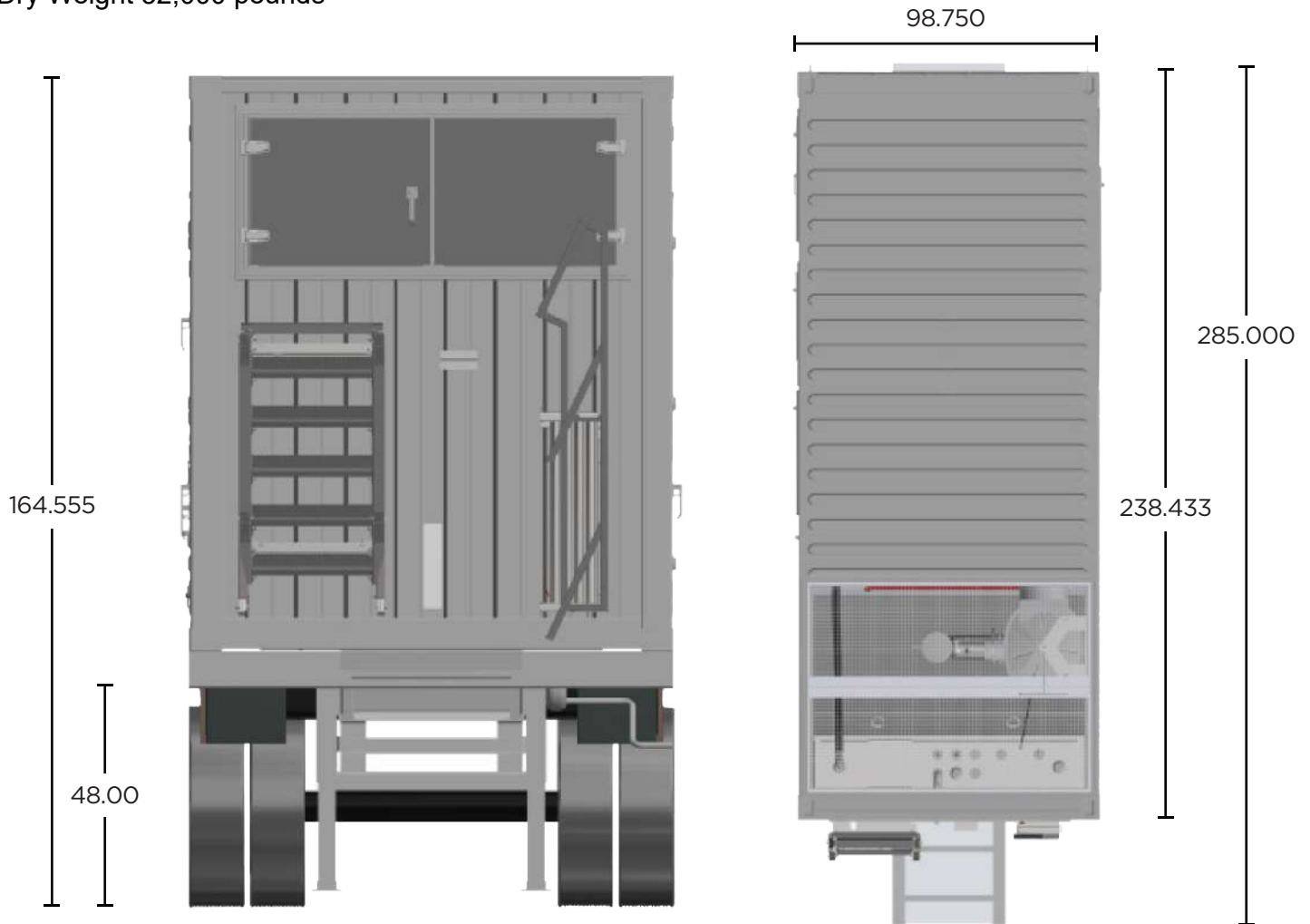
Maximum power available from the Generator Set to energize a variable electrical load profile, where it has been determined that the total annual run time does not exceed 200 hours of operation with an average load factor over a 24-hour period not exceeding 70 percent of Standby Rating unless otherwise approved by manufacturer.

Prime Power:

Maximum power which a Generator Set can provide a variable electric load sequence for an unlimited number of hours per year. In addition, the maximum average load factor over a 24-hour period shall not exceed 70 percent of Prime Power Rating unless approved by manufacturer.

Dimensions and Weights*

Dry Weight 32,000 pounds



** All weights and measurements are approximate and for estimation purposes only.*

Specification characteristics may change without notice. Please contact PowerSecure for detailed installation drawings.

Codes and Standards

- Optional UL 891
- ISO 8528
- NEC 70
- DOT-Compliant Chassis

Not all codes and standards apply to all configurations. Contact PowerSecure for details.