

QUAD Voltage Optional



### Key Features

- Designed and manufactured in an ISO9001-certified facility in Statesville, North Carolina, USA.
- Heavy duty mobile generator system designed for prime power operation in rental, construction and special events applications.
- Generator is CSA certified for electrical equipment per C22.2, No. 14.

Voltage Configuration	Frequency (Hz)	Power Factor	Prime Power Rating		
			kVA	kW	Current (A)
600/346V - 3Ø WYE	60	0.8	125	100	120
480/277V - 3Ø WYE	60	0.8	125	100	150
240/139V - 3Ø WYE	60	0.8	125	100	301
240/120V - 3Ø DELTA	60	0.8	N/A	N/A	N/A
208/120V - 3Ø WYE	60	0.8	106	85	294
240/120V - 1Ø ZIG ZAG	60	1.0	62	62	258
400/230V - 3Ø WYE	50	0.8	106	85	153

\* Note: Not all listed voltages are available on standard product. Some voltages may require selection of optional features.

### Skidbase and Enclosure

- Package foundation is a heavy duty, oilfield-ready skidbase equipped with four-point tie downs.
- The skidbase is a fully bonded, Environmental Containment design, sized to contain at least 110% of total oil and fuel volume, to prevent any leakage of hazardous fluids from the package.
- Ducted air intakes ensure near-zero water ingress into the containment area, even during operation in the heaviest rain conditions.
- The enclosure is constructed from corrosion-resistant galvanealed steel and coated with a 13 stage powder paint process for long life even in harsh environments.
- The enclosure panels are fitted with sound-absorbing acoustical material to help reduce noise for quiet operation in noise sensitive applications such as concerts, events and nighttime construction.
- Wide opening access doors are side hinged, providing easy access to service and maintenance points and are equipped with recessed, pad-lockable handles and safety latches to hold doors open during servicing.
- Package is equipped with a center-point lifting eye for safe, well-balanced hoisting, designed with a 5 x safety factor for the weight of a fully fueled unit with running gear.

### Diesel Engine

- Heavy-duty Cummins diesel engine is emissions certified to EPA Tier 4-interim standards and provides the optimum mix of performance and fuel economy.
- Dual frequency capability allows operation at 50 hertz or 60 hertz with the flip of a switch.
- Electronically controlled engine provides isochronous frequency control and advanced diagnostic monitoring and protection.
- The engine generator assembly is mounted on fail-safe vibration isolators.
- Coolant and oil drains are piped to bulkhead fittings mounted on the enclosure and all filters and maintenance points are easily accessed for safe and easy servicing.
- Engines are globally supported by the engine OEM and Doosan Portable Power.

### CoolBox+ Cooling System

- Doosan's CoolBox+ cooling system brings cool air into the enclosure through ducted inlet panels to ensure low noise levels.
- Cooling air flows through the package by an engine-driven pusher fan which moves airflow from the inlet panels, across the powertrain and through the heat exchangers before being exhausted through the roof outlets in the discharge plenum.
- The engine driven fan is equipped with a clutch to allow the fan to operate at variable speeds to optimize cooling system performance and maintain internal enclosure temperature at a broad range of ambient temperatures and load conditions.
- The CoolBox+ solution maximizes performance to achieve the lowest noise levels and minimum water ingress within a compact footprint.
- Doosan generators provide performance at the full prime power rating at ambient temperatures up to 104°F (40°C) without derating.

### Alternator

- Leroy Somer alternators feature AREP brushless excitation providing industry leading motor starting kVA and 300% overload capability.
- R450M automatic voltage regulator provides precision control of voltage level and fast response to load changes.
- Class H insulation with upgraded environmental coating for ultimate resistance to high temperature and humidity.
- Three position Voltage Selector Switch (VSS) to easily configure the units for operation at most common voltages.
- Optional QuadVoltage capability adds 600V-3Ø selection to the standard range of available voltages to support 600V applications without the need for a transformer.

### Control System

- A complete array of operator-preferred analog gauges provide at-a-glance monitoring of vital engine and generator parameters.
- Solid state engine control module provides convenient, microprocessor-controlled startup at the push of a button and protects the generator system from an array of faults while providing the operator with indication of any faults on the LED display.
- Standard Run / Idle selector switch allows operators to start and warm up the generator at low engine speed to prevent excess engine wear when operating in cold climates.
- Engine Diagnostic Trouble Codes (DTCs) are displayed on the LCD screen, providing operators and technicians with a numeric and text explanation of the fault code, minimizing the need for expensive hand-held code scanners.

- Standard remote Auto Start / Stop capability via two wire, closed contact logic, allows for connection to automatic transfer switchgear and other remote starting devices.
- Industry-leading Voltage Selector Switch (VSS) protection feature prevents switching the VSS while generator is operating.
- Pad-lockable battery disconnect switch is mounted inside the enclosure.

### Power Connections

- All controls and connection points are grouped at the rear of the unit for safety and operator convenience.
- Power cables are connected at an oversized five lug (L1 L2 L3 N PE) terminal board capable of accepting bare end cable or terminated cables.
- Convenience receptacle panel includes individual branch circuit breakers.
- Optional camlock panel includes a panel mounted set of 400A female connectors to further expand connection capabilities.

### Fuel System

- Single fuel tank sized for 24 hour runtime at full load is mounted within the skid base, providing double wall protection.
- Fuel tank mounted low in frame and centered to ensure balanced lifting and low center of gravity.
- The fuel filler is located within the containment basin, minimizing possible spillage.
- Standard primary fuel / water separator and fine micron secondary fuel filter keep contaminants out of the system and increase reliability.
- The containment system features a three-inch drain plug for easy cleaning, and the fuel tank is equipped with a drain plug mounted behind the containment plug for easy cleaning.
- Leak-proof fuel vents eliminate the potential for fuel purge during out-of-level conditions during transport and load / unload.
- Low fuel shutdown ensures the engine will not lose prime if it runs out of fuel.

### Running Gear

- Integrated running gear system mounts directly to generator skidbase providing an industry-best low center of gravity for safe, stable towing, on-road or off-road.
- Tandem axle torsion suspension with E-Z-Lube hub assemblies and electric brakes or optional hydraulic surge brakes.
- All models feature high quality, grommet-mount lighting and meet Federal Motor Vehicle Safety Standards for lighting and conspicuity.
- Trailer-to-vehicle connector is a 7-pole "RV"-style plug with a high quality, jacketed wiring harness.
- All units are equipped with a 3-inch pintle eye or optional 2-5/16" ball hitch, heavy duty safety chains and a high quality, heavy-duty jack stand.

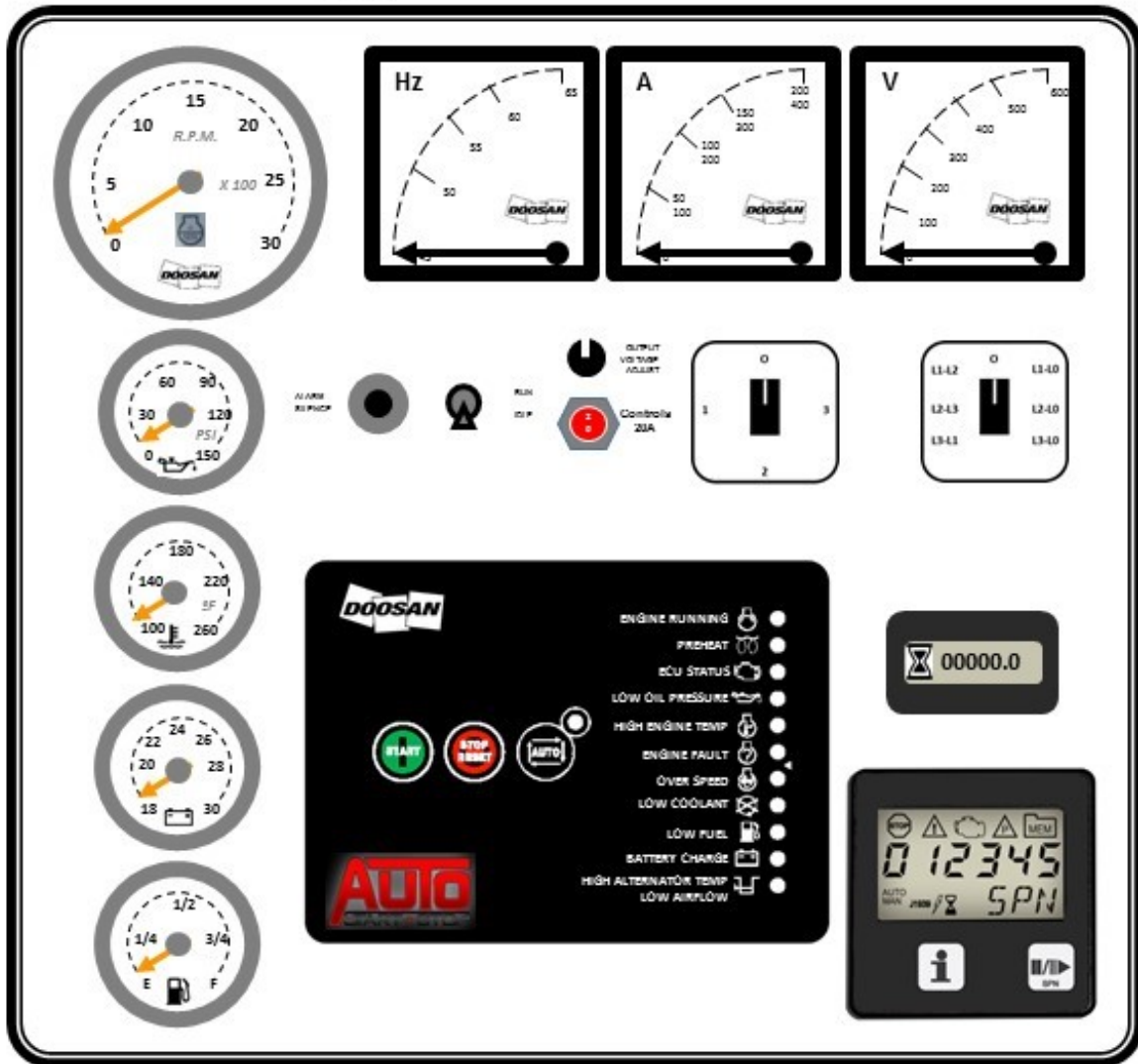
### Options

- Doosan models can be equipped with a broad array of optional equipment to meet the need of specific applications. Common selections include:
  - Cold start options including engine coolant heater, battery pad warmers, and heated crankcase breather systems
  - Three-way fuel valve for connection to a remote fuel tank
  - Battery charger
  - Automatic oil level maintainer
  - Running gear options including rear stabilizer jacks, drawbar-mounted tool box and spare tire.

### Warranty

- All models are covered by a comprehensive limited warranty:
  - Package: 1 year / 2000 hours
  - Cummins Engine: 1 year / unlimited hours or 2 years / 2000 hours
  - Leroy Somer Alternator: 2 years / 4000 hours

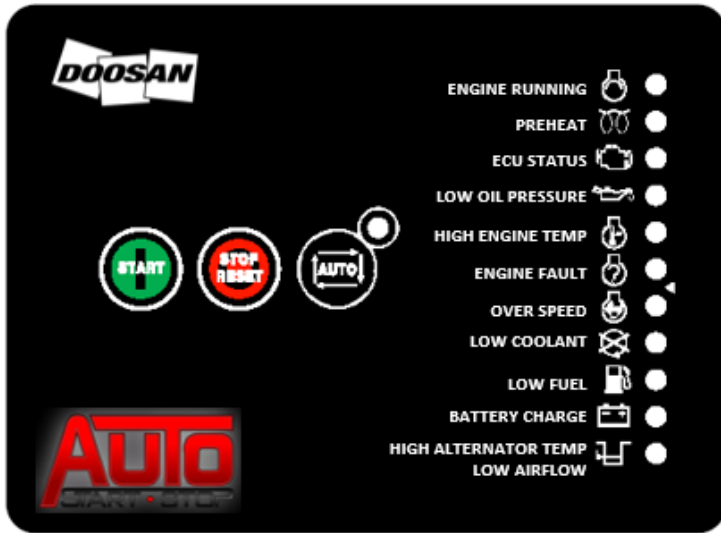
Operator Panel



Operator Panel Features

1. Tachometer: 0-3000 RPM scale
2. Oil Pressure: 0-150 PSI scale
3. Coolant Temperature: 100°-260°F scale
4. DC System Voltage: 18-30 VDC scale
5. Fuel Level: E-1/4-1/2-3/4-F scale
6. Panel Lamp
7. Hourmeter 0-99999.9 scale
8. JDR050 Diagnostic Display
9. Alarm Silence Button (optional)
10. Run / Idle Control Switch
11. Automatic Start Stop Controller (ASSC)
12. Frequency-meter: 45-65 Hz scale
13. AC Ammeter: Dual scale: 0-200 A @ 480V / 0-400A @ 208V
14. AC Voltmeter: 0-600 V scale
15. Voltage Adjustment Control
16. Phase selector switch for ammeter (OFF-L1-L2-L3)
17. Phase selector switch for voltmeter (OFF-L1/L2-L2/L3-L3/L1-L1/N-L2/N-L3/N)

## Automatic Start Stop Controller (ASSC) with JDR050 Diagnostic Display



## Automatic Start Stop Controller Features

## Functionality

- Simple push button start / stop control
- Microprocessor controlled start sequence manages the engine preheat and cranking cycles to ensure reliable starting.
- Three cranking cycles with crank rest / pre-heat cycles.
- Automatic shutdowns and warnings.
- Manual and remote autostart.
- Sleep mode ensures low power consumption when unit is not operating.
- SAE J1939 electronic engine communication.

## Form Factor

- 3-Button control
- 12 Red or Green Status LEDs annunciate operating status, warnings and shutdowns.
- Front Gasket Seal for water ingress prevention to NEMA4 / IP65 protection.
- Conformal coated circuit board for protection against moisture and contaminants.
- Rugged polycarbonate enclosure designed to survive extreme applications and abuse.
- Controller functions in ambient conditions ranging from -40°F/C to 185°F (85°C).
- Meets or exceeds 6G with respect to vibration, and 10G with respect to impact.
- CE-listed and C-UL-listed.

## JDR050 Diagnostic Display Features

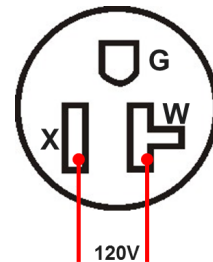
## Functionality

- Three-line LCD display has icons to annunciate warnings and shutdowns, large numeric display of fault codes, and text readout of the fault code description.
- Allows operators to read standard J1939 engine fault codes that are transmitted by the engine ECM during a warning or shutdown condition without the need for an engine diagnostic tool.
- Engine Fault Code Annunciation includes Suspect Parameter Number (SPN), Failure Mode Indicator (FMI) and Occurrence Count (OC) which provides detailed diagnostic data to quickly troubleshoot the fault.
- Simple to operate two-button control allows the operator to scroll through detailed fault data.

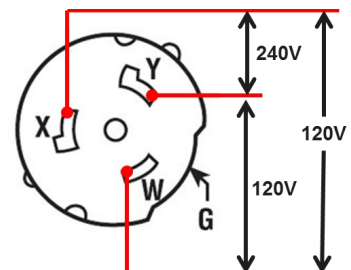
Engine Data			
Engine Manufacturer	Cummins		
Model Number	QSB5-G9		
Prime Output @ 1800 RPM	156 bhp	116 kWm	
Standby Output @ 1800 RPM	173 bhp	129 kWm	
Prime Output @ 1500 RPM	135 bhp	101 kWm	
Standby Output @ 1500 RPM	156 bhp	116 kWm	
Engine Type	Four Cycle, Inline		
Engine Control	ECU		
Emissions Certification	EPA Tier 4 Interim		
Number of Cylinders	4		
Aspiration	Turbocharged / Intercooled / cEGR		
Aftertreatment Technology	Diesel Oxidation Catalyst (DOC)		
Bore × Stroke	4.21 x 4.88 in	107 x 124 mm	
Displacement	275 in <sup>3</sup>	4.5 L	
Compression Ratio	17.2:1		
Governor Type	Isochronous		
Speed Regulation Accuracy	+ / - 0.25% Steady State		
Single Step Load Acceptance	100%		
Cooling System	50% Glycol / 50% Water		
Charging Alternator Output	70A		
DC System Voltage	24 V		
Battery Size / Output	2 × Group 31 / 1000CCA		
Fluid Capacities		Gal	L
Engine Crankcase Lubricant Capacity		4.6	17.4
Cooling System Capacity		6.1	23
Usable Fuel Cell Capacity		171.6	649.6
Usable DEF Tank Capacity		N/A	N/A
60Hz Fuel Consumption	Gal / h	L / h	Runtime
@ 25% Load	2.2	8.0	78.0
@ 50% Load	4.0	15.0	42.9
@ 75% Load	5.8	22.0	29.6
@ 100% Load	7.7	29.0	22.3
DEF Runtime		N/A	
Reference Conditions			
Rated Ambient Temperature		-20°F—104°F	-29°C—40°C
Minimum Starting Temperature (Standard)		0°F	-18°C
Minimum Starting Temperature (w/ Cold Start Opt)		-20°F	-29°C
Maximum Altitude			

Alternator Data		
Alternator Manufacturer	Leroy Somer	
Alternator Model	LSA 44.2 S7 C7	
Alternator Type	Four Pole Revolving Field	
Number of Leads	12	
Insulation Class	H	
Winding Pitch	2/3	
Voltage Connection Method	Three Position Voltage Selector Switch	
Excitation Method	Brushless w/ AREP	
Voltage Regulator Model	R450	
Voltage Regulation Accuracy	+/-0.5%	
Maximum Unbalance Load	25%	
Total Harmonic Distortion (THD)	<2% @ 0% Load	
Telephone Influence Factor (TIF)	<50	
Motor Starting Capability	480V	600V
SKVA @ 20% Voltage Dip	130	204
SKVA @ 25% Voltage Dip	174	272
SKVA @ 30% Voltage Dip	223	349
SKVA @ 35% Voltage Dip	281	439

Power Connections	
Main Circuit Breaker Thermal Trip Rating (208V)	400 A
Overcurrent Trip Setpoint (240V-1Ø)	N/A
Overcurrent Trip Setpoint (208V-3Ø & 240V-3Ø)	N/A
Overcurrent Trip Setpoint (240V-3Ø Delta)	N/A
Overcurrent Trip Setpoint (480V-3Ø)	155 A
Overcurrent Trip Setpoint (600V-3Ø)	N/A
20A—125V GFCI Duplex (NEMA 5-20R) Receptacles	2
50A—125/250V Temp Power (CS6369) Receptacles	3
400A-600V Camlock Connectors (Optional)	1 Set
Terminal Board Maximum Cable Size (Bare Wire)	2 × AWG 2—600MCM
Terminal Board Maximum Cable Lug Size	1/2 in (12.7 mm)



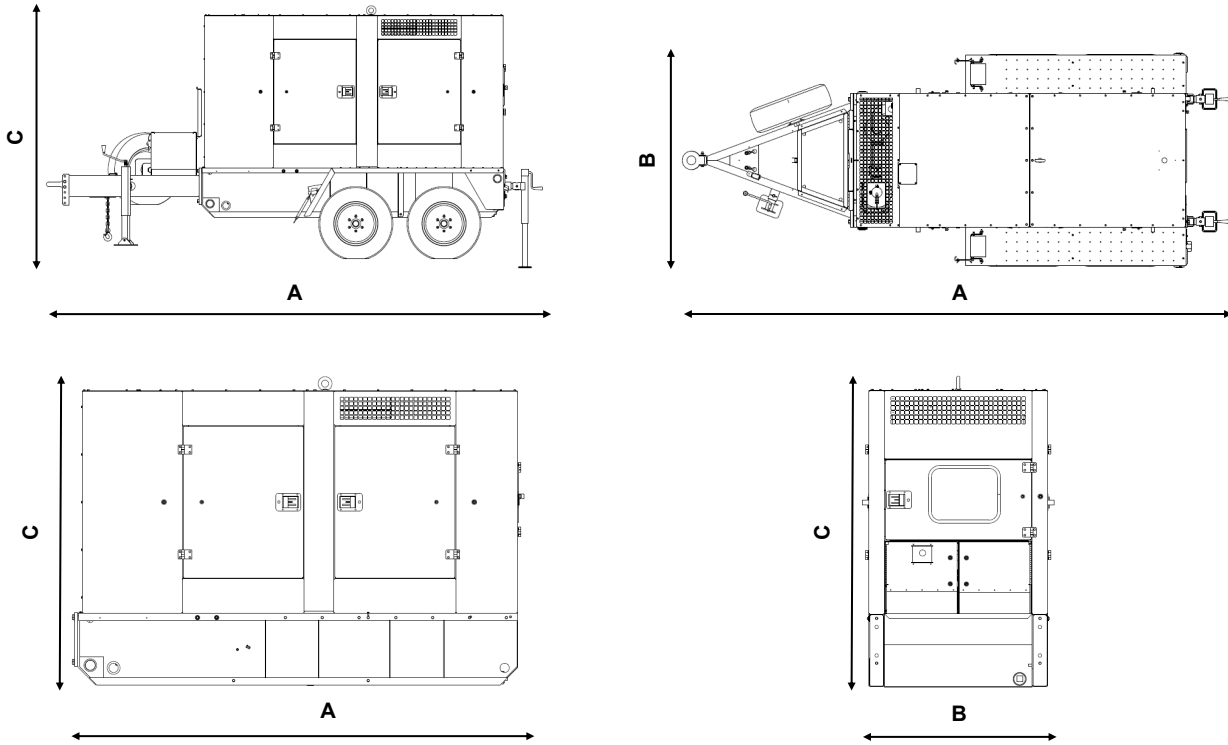
**NEMA 5-20R Receptacle**



**CS6369 Receptacle**

Running Gear	To 49CFR571 requirements	
Gross Vehicle Weight Rating (GVWR)	7280 lb	3302 kg
Gross Axle Weight Rating (GAWR)	7723 lb	3503 kg
Configuration	Tandem Axle	
Suspension	Torsion	
Standard Brake System Configuration	Electric	
Optional Brake System Configuration	Hydraulic Surge	
Tires	ST205/75D15, Bias Ply	
Wheels	15" x 6", 6 lug on 5.5" bolt circle	
Track Width	63 in	1600 mm
Lighting and Reflectors	Meets Federal/Canada Motor Vehicle Safety Standard 571.108	
Electrical Connection to Towing Vehicle	7-Pole Round "RV" Blade Connector	
Standard Trailer Coupling	3" (78 mm) Pintle Eye	
Optional Trailer Coupling	2-5/16-Inch Ball Coupler	
Hitch Height	5-Position Adjustment 20 in—28 in	
Safety Chains	2 x 5/16" with slip hooks and safety latches	
Jack Stand Configuration	Trunion Mount, 5000 lb Capacity	

Package Data	With Running Gear		Skidmount	
Length (A)	171.6 in	4359 mm	113.7 in	2888 mm
Width (B)	72.5 in	1840 mm	45.3 in	1150 mm
Height (C)	94.3 in	2397 mm	79 in	2008 mm
Weight (Shipping)	5650lb	2563 kg	lb	kg
Weight (Ready to Run)	6850 lb	3107 kg	lb	kg
Sound Level @ 23ft (7m), 100% Load	67 dB(A)			



**DOOSAN**

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 Due to continuous product improvement, specifications are subject to change without notice  
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