

SD025 | 2.2L | 25 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

GENERAC® | **INDUSTRIAL
POWER**

Standby Power Rating
25 kW, 32 kVA, 60 Hz

Prime Power Rating*
23 kW, 28 kVA, 60 Hz



*Assembled in the USA using domestic and foreign parts

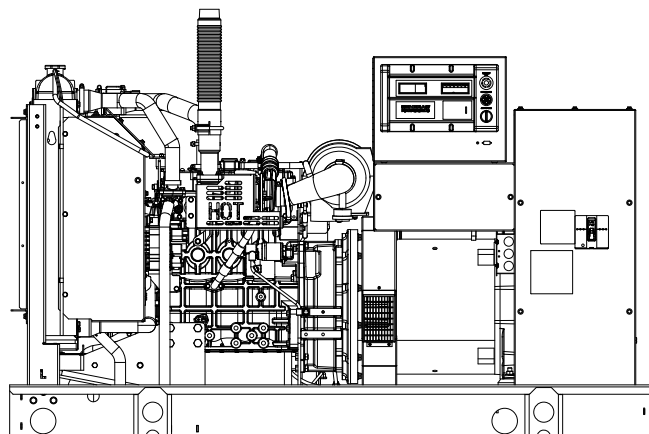


Image used for illustration purposes only

Codes and Standards

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



UL2200, UL6200, UL1236, UL489,
UL142



CSA C22.2, ULC S601



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC700, 701, 702, 708



NEMA ICS10, MG1, 250, ICS6,
AB1



ANSI C62.41

Powering Ahead

For over 60 years, Generac has provided innovative design and superior manufacturing.

Generac provides superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally for the most reliable engines to power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Enclosed Unit Only)
- Engine Coolant Heater
- Level 1 Fan and Belt Guards (Open Set Only)

FUEL SYSTEM

- Fuel Lockoff Solenoid
- Primary Fuel Filter

COOLING SYSTEM

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

ELECTRICAL SYSTEM

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Rotor Dynamically Spin Balanced
- Amortisseur Winding (3-Phase Only)
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping (Enclosed Units Only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)

ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS (If Selected)

- UL 142/ULC S601
- Double Wall
- Normal and Emergency Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM



Digital H Control Panel- Dual 4x20 Display

Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)

- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® Protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display \

Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Oil Heater
- Critical Silencer (Open Set Only)
- Radiator Stone Guard
- Level 1 Fan and Belt Guards (Enclosed Units Only)

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

GENERATOR SET

- Extended Factory Testing (3-Phase Only)
- 8 Position Load Center
- Pad Vibration Isolation

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

ENCLOSURE

- Weather Protected Enclosure
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Door Open Alarm Switch
- Enclosure Heater (with Motorized Dampers Only)

WARRANTY (Standby Gensets Only)

- 2 Year Extended Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indicator and Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 100 dB Alarm Horn
- Ground Fault Annunciator
- 120V GFCI and 240V Outlets
- 10A Engine Run Relay
- Damper Alarm Contacts (with Motorized Dampers Only)

FUEL TANKS (Sizes On Last Page)

- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension
- Overfill Protection Valve
- 5 Gallon Spill Box Return Hose
- 5 Gallon Spill Box
- Tank Risers
- Fuel Level Switch and Alarm
- 12' Vent System
- Fire Rated Stainless Steel Fuel Hose

ENGINEERED OPTIONS

ENGINE SYSTEM

- Coolant Heater Ball Valves
- Fluid Containment Pan

CONTROL SYSTEM

- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch

ALTERNATOR SYSTEM

- 3rd Breaker System

GENERATOR SET

- Special Testing

FUEL TANKS

- UL 2085 Tank
- Stainless Steel Tanks
- Special Fuel Tanks
- Vent Extensions

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

| | |
|-------------------------------------|-------------------------|
| General | |
| Make | Perkins |
| EPA Emissions Compliance | Stationary Emergency |
| EPA Emissions Reference | See Emission Data Sheet |
| Cylinder # | 4 |
| Type | In-line |
| Displacement - in ³ (L) | 135 (2.22) |
| Bore - in (mm) | 3.3 (84) |
| Stroke - in (mm) | 3.9 (100.0) |
| Compression Ratio | 23.3:1 |
| Intake Air Method | Turbocharged |
| Cylinder Head | Cast Iron |
| Piston Type | Aluminum |
| Crankshaft Type | Forged Steel |
| Engine Governing | |
| Governor | Electronic Isochronous |
| Frequency Regulation (Steady State) | ±0.5% |
| Lubrication System | |
| Oil Pump Type | Gear Driven |
| Oil Filter Type | Full-Flow Cartridge |
| Crankcase Oil Capacity - qt (L) | 9.3 (10.6) |

| | |
|----------------------------|------------------------------|
| Cooling System | |
| Cooling System Type | Closed Recovery |
| Water Pump Type | Pre-Lubed, Self Sealing |
| Fan Type | Pusher |
| Fan Speed - RPM | 1,980 |
| Fan Diameter - in (mm) | 18.0 (457.2) |
| Fuel System | |
| Fuel Type | Ultra Low Sulfur Diesel Fuel |
| Fuel Specifications | ASTM |
| Fuel Filtering (Microns) | 5 |
| Fuel Inject Pump | Distribution Injection Pump |
| Fuel Pump Type | Engine Driven Gear |
| Injector Type | Mechanical |
| Fuel Supply Line - in (mm) | 0.31 (7.94) ID |
| Fuel Return Line - in (mm) | 0.19 (4.76) ID |
| Engine Electrical System | |
| System Voltage | 12 VDC |
| Battery Charger Alternator | Standard |
| Battery Size | See Battery Index 0161970SBY |
| Battery Voltage | 12 VDC |
| Ground Polarity | Negative |

ALTERNATOR SPECIFICATIONS

| | |
|-------------------------------------|--------------------|
| Standard Model | K0025124Y21 |
| Poles | 4 |
| Field Type | Revolving |
| Insulation Class - Rotor | H |
| Insulation Class - Stator | H |
| Total Harmonic Distortion | <5% (3-Phase Only) |
| Telephone Interference Factor (TIF) | <50 |

| | |
|------------------------------------|--------------------------|
| Standard Excitation | Synchronous Brushless |
| Bearings | Single Sealed |
| Coupling | Direct via Flexible Disc |
| Load Capacity: Standby | 100% |
| Prototype Short Circuit Test | Yes |
| Voltage Regulator Type | Digital |
| Number of Sensed Phases | All |
| Regulation Accuracy (Steady State) | ±0.25% |

OPERATING DATA

POWER RATINGS

| Standby | | |
|---------------------------------|-------|-----------|
| Single-Phase 120/240 VAC @1.0pf | 25 kW | Amps: 104 |
| Three-Phase 120/208 VAC @0.8pf | 25 kW | Amps: 87 |
| Three-Phase 120/240 VAC @0.8pf | 25 kW | Amps: 75 |
| Three-Phase 277/480 VAC @0.8pf | 25 kW | Amps: 38 |
| Three-Phase 346/600 VAC @0.8pf | 25 kW | Amps: 30 |

MOTOR STARTING CAPABILITIES (skVA)

| | | | skVA vs. Voltage Dip | | |
|----------------|-----|----------------|----------------------|----------------|-----|
| 120/240 VAC 1Ø | 30% | 277/480 VAC 3Ø | 30% | 208/240 VAC 3Ø | 35% |
| A0025044N21 | 12 | K0025124Y21 | 38 | K0025124Y21 | 28 |
| A0035044N21 | 20 | K0035124Y21 | 61 | K0035124Y21 | 46 |
| A0040044N21 | 24 | K0040124Y21 | 76 | K0040124Y21 | 58 |

FUEL CONSUMPTION RATES*

| Fuel Pump Lift - ft (m) | | Diesel - gph (Lph) | |
|--|--|---|-----------|
| 3 (1) | | Percent Load | Standby |
| | | 25% | 0.9 (3.2) |
| | | 50% | 1.2 (4.6) |
| | | 75% | 1.6 (6.1) |
| | | 100% | 2.1 (7.9) |
| Total Fuel Pump Flow (Combustion + Return) - gph (Lph) | | *Fuel supply installation must accommodate fuel consumption rates at 100% load. | |
| 16.6 (63.0) | | | |

COOLING

| | | Standby |
|---|-----------------------------|--------------|
| Coolant Flow | gpm (Lpm) | 48.9 (56.2) |
| Coolant System Capacity | gal (L) | 2.5 (9.5) |
| Heat Rejection to Coolant | BTU/hr (kW) | 119,460 (35) |
| Inlet Air | cfm (m³/min) | 2,800 (79) |
| Maximum Operating Ambient Temperature | °F (°C) | 122 (50) |
| Maximum Operating Ambient Temperature (Before Derate) | See Bulletin No. 0199280SSD | |
| Maximum Additional Radiator Backpressure | in H ₂ O (kPa) | 0.5 (0.12) |

COMBUSTION AIR REQUIREMENTS

| | Standby |
|------------------------------------|-------------|
| Flow at Rated Power - cfm (m³/min) | 87.9 (2.49) |

ENGINE

| | | Standby |
|--------------------------|----------------|---------------|
| Rated Engine Speed | RPM | 1,800 |
| Horespower at Rated kW** | hp | 39 |
| Piston Speed | ft/min (m/min) | 1,181 (360) |
| BMEP | psi (kPa) | 129.8 (894.9) |

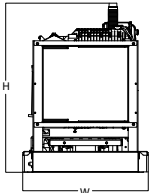
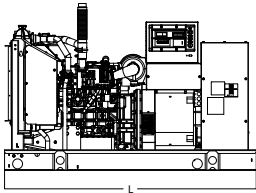
**Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

EXHAUST

| | | Standby |
|--|--------------|-------------|
| Exhaust Flow (Rated Output) | cfm (m³/min) | 265 (7.5) |
| Maximum Allowable Exhaust Backpressure (Post Turbocharger) | inHg (kPa) | 1.5 (5.1) |
| Exhaust Temperature (Rated Output) | °F (°C) | 690 (365.5) |

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
 Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with BS5514 and DIN6271 standards.
 Standby - See Bulletin 0187500SSB
 Prime - See Bulletin 0187510SSB

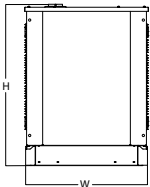
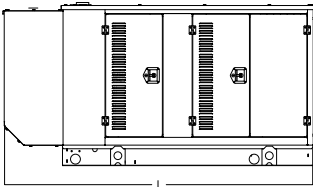
DIMENSIONS AND WEIGHTS*



OPEN SET

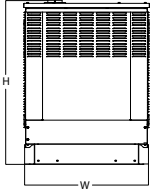
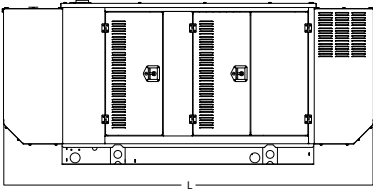
| Run Time - Hours | Usable Capacity - gal (L) | L x W x H - in (mm) | Weight - lbs (kg) |
|---------------------|---------------------------------|---|-------------------------------|
| No Tank | - | 76.0 (1,930) x 37.4 (950) x 44.8 (1,138) | 1,456 - 1,641 (661 - 745) |
| 25 | 54 (204) | 76.0 (1,930) x 37.4 (950) x 57.8 (1,468) | 1,936 - 2,121 (879 - 963) |
| 62 | 132 (500) | 76.0 (1,930) x 37.4 (950) x 69.8 (1,773) | 2,166 - 2,351 (983 - 1,067) |
| 90 | 190 (719) | 106.0 (2,692) x 37.4 (950) x 79.3 (2,014) | 2,380 - 2,565 (1,081 - 1,165) |
| 100 | 211 (799) | 76.0 (1,930) x 37.4 (950) x 81.8 (2,078) | 2,375 - 2,560 (1,078 - 1,162) |
| 142 | 300 (1,136) | 92.9 (2,360) x 37.4 (950) x 85.3 (2,167) | 2,438 - 2,623 (1,106 - 1,190) |

WEATHER PROTECTED ENCLOSURE



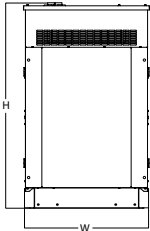
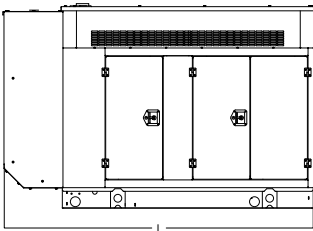
| Run Time - Hours | Usable Capacity - gal (L) | L x W x H - in (mm) | Weight - lbs (kg) Enclosure Only | |
|---------------------|---------------------------------|---|-------------------------------------|-----------|
| | | | Steel | Aluminum |
| No Tank | - | 94.8 (2,408) x 38.0 (965) x 49.5 (1,257) | 372 (169) | 241 (109) |
| 25 | 54 (204) | 94.8 (2,408) x 38.0 (965) x 62.5 (1,588) | | |
| 62 | 132 (500) | 94.8 (2,408) x 38.0 (965) x 74.5 (1,892) | | |
| 90 | 190 (719) | 106.0 (2,692) x 38.0 (965) x 75.5 (1,917) | | |
| 100 | 211 (799) | 94.8 (2,408) x 38.0 (965) x 86.5 (2,197) | | |
| 142 | 300 (1,136) | 94.8 (2,408) x 38.0 (965) x 90.0 (2,286) | | |

LEVEL 1 SOUND ATTENUATED ENCLOSURE



| Run Time - Hours | Usable Capacity - gal (L) | L x W x H - in (mm) | Weight - lbs (kg) Enclosure Only | |
|---------------------|---------------------------------|---|-------------------------------------|-----------|
| | | | Steel | Aluminum |
| No Tank | - | 112.5 (2,857) x 38.0 (965) x 49.5 (1,258) | 505 (229) | 338 (153) |
| 25 | 54 (204) | 112.5 (2,857) x 38.0 (965) x 62.5 (1,588) | | |
| 62 | 132 (500) | 112.5 (2,857) x 38.0 (965) x 74.5 (1,893) | | |
| 90 | 190 (719) | 112.5 (2,857) x 38.0 (965) x 84.0 (2,134) | | |
| 100 | 211 (799) | 112.5 (2,857) x 38.0 (965) x 86.5 (2,198) | | |
| 142 | 300 (1,136) | 112.5 (2,857) x 38.0 (965) x 90.0 (2,287) | | |

LEVEL 2 SOUND ATTENUATED ENCLOSURE



| Run Time - Hours | Usable Capacity - gal (L) | L x W x H - in (mm) | Weight - lbs (kg) Enclosure Only | |
|---------------------|---------------------------------|---|-------------------------------------|-----------|
| | | | Steel | Aluminum |
| No Tank | - | 94.8 (2,408) x 38.0 (965) x 61.9 (1,572) | 510 (231) | 341 (155) |
| 25 | 54 (204) | 94.8 (2,408) x 38.0 (965) x 74.9 (1,903) | | |
| 62 | 132 (500) | 94.8 (2,408) x 38.0 (965) x 86.9 (2,207) | | |
| 90 | 190 (719) | 106.0 (2,692) x 38.0 (965) x 87.9 (2,232) | | |
| 100 | 211 (799) | 94.8 (2,408) x 38.0 (965) x 98.9 (2,512) | | |
| 142 | 300 (1,136) | 94.8 (2,408) x 38.0 (965) x 102.4 (2,601) | | |

* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings. Extended and not extended tank offerings vary. Contact dealer for options.