INDUSTRIAL DIESEL GENERATOR SET

**EPA Certified Stationary Emergency** 

## **Standby Power Rating**

25 kW, 32 kVA, 60 Hz



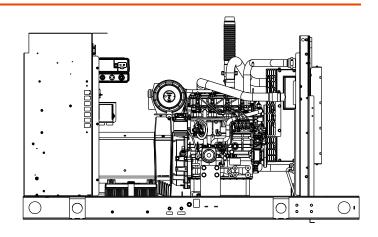


Image used for illustration purposes only

## Codes and Standards

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





UL2200, UL6200, UL1236, UL489





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 ensures 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 to ensure the most reliable engines 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.

# GENERAC\* INDUSTRIAL POWER

## **STANDARD FEATURES**

#### **ENGINE SYSTEM**

- · Oil Drain System
- · 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 Units Only)
- · Engine Coolant Heater

#### **FUEL SYSTEM**

- · Fuel Lockoff Solenoid
- · Primary Fuel Filter

#### **COOLING SYSTEM**

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

## **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 Bearings
- 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)
- 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)
- RhinoCoat<sup>™</sup> Textured Polyester Powder Coat

## **FUEL TANKS (IF SELECTED)**

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

## **CONTROL SYSTEM**



## Power Zone® 410 Controller

#### **Features**

- · Programmable Auto Crank
- · Selectable Low Speed Exercise
- RS-232 x2
- RS-485 x2
- All-Phase Sensing Digital Voltage Regulator
- · On/Off/Manual Switch

- Not in Auto (Flashing Light)
- · Emergency Stop
- Modbus® RTU
- CANbus
- · Full Range Standby Operation
- · Power Factor
- Ruptured Tank Detection
- · Auxiliary Shutdown Switch
- · Remote Communications
- NFPA110 Module Included (Key Switch, Alarm, EStop)
- I<sup>2</sup>T Function for Full Generator Protection (Contact Factory)

#### **Full System Status Display**

- Full System Status Display
- · Multilingual 128x64 Graphical Display with Heater
- Easy Status View LED Screen
- 3-Phase AC Volts
- 3-Phase Amps
- kW

- · Line Power/Gen Power
- Time
- Date
- Run Hours
- Service Reminders
- Fault History (Alarm Log)
- Oil Pressure
- · Oil Temperature Indication and Alarm
- Output for Fuel Level High/Low Warning
- Water Temperature
- · Water Level
- Fuel Pressure/Level
- Engine Speed
- Battery Voltage
- · Alternator Frequency

## **Alarms and Warnings**

- Common Alarm Output
- Audible Alarm and Silence

## SD025T | 2.2L | 25 kW

## INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

## **CONFIGURABLE OPTIONS**

# GENERAC\* INDUSTRIAL POWER

#### **ENGINE SYSTEM**

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

## **FUEL SYSTEM**

o NPT Flexible Fuel Line

#### **ELECTRICAL SYSTEM**

- o 10A UL Listed Battery Charger
- o Battery Warmer

#### **ALTERNATOR SYSTEM**

- o Anti-Condensation Heater
- Tropical Coating
- o Permanent Magnet Excitation

#### **GENERATOR SET**

- o Extended Factory Testing
- o 8 Position Load Center
- o Pad Vibration Isolation

#### **CIRCUIT BREAKER OPTIONS**

- o Main Line Circuit Breaker
- o 2nd Main Line Circuit Breaker
- o 3rd Main Line Circuit Breaker
- o Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

## **ENCLOSURE**

- o Level 0 Sound Attenuated
- o Level 1 Sound Attenuated
- o Level 2 Sound Attenuated
- o Steel Enclosure
- o Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- o AC/DC Enclosure Lighting Kit
- o Door Open Alarm Switch

## **WARRANTY (STANDBY GENSETS ONLY)**

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

#### **CONTROL SYSTEM**

- o NFPA Module
- NFPA 110 Compliant 21-Light Remote Annunciator
- o Remote Relay Assembly (8 or 16)
- o Oil Temperature Indicator and Alarm
- o Inputs (x12) / Outputs (x12)
- o Battery Disconnect Switch
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- o 100 dB Alarm Horn
- o Ground Fault Annunciator
- o 120V GFCI and 240V Outlets
- o 10A Engine Run Relay

## **FUEL TANKS (SIZES ON LAST PAGE)**

- o 8 in (203.2 mm) Fill Extension
- o 13 in (330.2 mm) Fill Extension
- o 19 in (482.6 mm) Fill Extension
- o Overfill Protection Valve
- o 5 Gallon Spill Box Return Hose
- o 5 Gallon Spill Box
- o Tank Risers
- o 12' Emergency Vent
- o Fire Rated Stainless Steel Fuel Hose
- o Fuel Drop Tube
- Vent Extensions
- All Tanks Above 52 gal Available in Extended Option

## **ENGINEERED OPTIONS**

## **ENGINE SYSTEM**

- o Coolant Heater Ball Valves
- o Fluid Containment Pan

## **GENERATOR SET**

o Special Testing

## **FUEL TANKS**

- UL 2085 Tank
- o Stainless Steel Tank
- Special Fuel Tanks

# SD025T | 2.2L | 25 kW

## INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



## **APPLICATION AND ENGINEERING DATA**

ENGINE SPECIFICATIONS		Cooling System	
General		Cooling System Type	Closed Recovery
		Fan Type	Pusher
Make	Perkins	Fan Speed - RPM	1,980
EPA Emissions Compliance	Stationary Emergency	Fan Diameter - in (mm)	18.0 (457.2)
PA Emissions Reference	See Emission Data Sheet		
Cylinder #	4	Fuel System	
Гуре	In-line		
Displacement - in <sup>3</sup> (L)	135 (2.22)	Fuel Type	Ultra Low Sulfur Diesel Fuel
Bore - in (mm)	3.3 (84)	Fuel Specifications	ASTM
Stroke - in (mm)	3.9 (100)	Fuel Filtering (Microns)	5
Compression Ratio	23.3:1	Fuel Inject Pump	Distribution Injection Pump
ntake Air Method	Turbocharged/Aftercooled	Fuel Pump Type	Cassette
Cylinder Head	Cast Iron	Injector Type	Indirect
Piston Type	Aluminum	Fuel Supply Line - in (mm)	0.31 (7.94) ID
Crankshaft Type	Forged Steel	Fuel Return Line - in (mm)	0.19 (4.76) ID
Engine Governing		Engine Electrical System	
Governor	Electronic Isochronous	System Voltage	12 VDC
Frequency Regulation (Steady State)	±0.5%	Battery Charger Alternator	Standard
		Battery Size	See Battery Index 0161970SBY
Lubrication System		Battery Voltage	12 VDC
·		Ground Polarity	Negative
Oil Pump Type	Gear Driven		
Oil Filter Type	Full-Flow Cartridge		
Crankcase Oil Capacity - qt (L)	11.2 (10.6)		

## STANDARD ALTERNATOR SPECIFICATIONS

Standard Model	K0035124Y26
Poles	4
Field Type	Revolving
Insulation Class - Rotor	Н
Insulation Class - Stator	Н
Total Harmonic Distortion	<5% (3-Phase Only)
Telephone Interference Factor (TIF)	< 50

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

## INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



#### **OPERATING DATA**

## **POWER RATINGS**

	Sta	ndby
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

		o. voitago bip	
277/480 VAC 3Ø	30%	208/240 VAC 3Ø	35%
K0050124Y26	54	K0050124Y26	74
K0035044N26	54	K0035044N26	74

#### **FUEL CONSUMPTION RATES\***

Fuel Pump Lift - ft (m)
3 (1)
Total Fuel Pump Flow (Combustion + Beturn) - gob (Lph)

16.6 (63.0)

Diesel - gph (Lph)			
Percent Load	Standby		
25%	1.0 (3.7)		
50%	1.2 (4.5)		
75%	1.6 (6.0)		
100%	2 1 (8 1)		

<sup>\*</sup>Fuel supply installation must accommodate fuel consumption rates at 100% load.

## **COOLING**

		Standby
Coolant Flow	gpm (Lpm)	14.9 (56.4)
Coolant System Capacity	gal (L)	3.3 (12.5)
Heat Rejection to Coolant	BTU/hr_(kW)	128,638 (37.7)
Inlet Air	cfm (m³/min)	3,841 (109)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No.	0199280SSD
Maximum Additional Radiator Backpressure	in H2O (kPa)	0.5 (0.12)

## **COMBUSTION AIR REQUIREMENTS**

Standby
Flow at Rated Power - scfm (m³/min) 87.9 (2.5)

**EXHAUST** 

## ENGINE

		Standby
Rated Engine Speed	RPM	1,800
Horespower at Rated kW**	hp	41
Piston Speed	ft/min (m/ min)	1,182 (360.3)
BMEP	psi (kPa)	132.5 (913.4)

		Otaliaby
Exhaust Flow (Rated Output)	scfm (m <sup>3</sup> / min)	198.1 (5.6)
Maximum Allowable Exhaust Backpressure (Post Silencer)	inHg (kPa)	3.1 (10.5)
Exhaust Temperature (Rated Output)	°F (°C)	756.5 (402.5)

<sup>\*\*</sup>Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

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

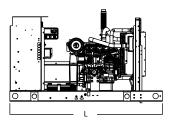
Standhy

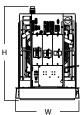
2,347 (1,064)

# INDUSTRIAL DIESEL GENERATOR SET

**EPA Certified Stationary Emergency** 

## **DIMENSIONS AND WEIGHTS\***

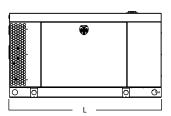




	OPEN SET	•
	Run Time - Hours	(
	No Tank	
	24	
	26	
42		4

Run Time - Hours	Usable Capacity - gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	83.6 (2,122) x 35.0 (888) x 46.3 (1,177)	1,291 (586)
24	52 (197)	83.6 (2,122) x 35.0 (888) x 59.7 (1,517)	1,826 (828)
26	55 (208)	96.0 (2,438) x 35.0 (888) x 59.7 (1,517)	1,870 (848)
61	130 (492)	83.6 (2,122) x 35.0 (888) x 72.7 (1,847)	2,093 (949)
89	190 (719)	96.0 (2,438) x 35.0 (888) x 82.3 (2,091)	2,368 (1,074)

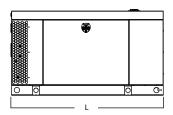
237 (897) 83.6 (2,122) x 35.0 (888) x 82.3 (2,091)





## LEVEL O SOUND ATTENUATED ENCLOSURE

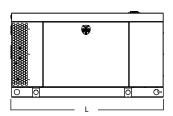
LLVLL	OUGHD AT I	ENOATED ENOLOGOTIE	Weight - Ibs (kg)	
Run Time - Hours	Usable Capacity - gal (L)	L x W x H - in (mm)	Steel	Aluminum
No Tank	-	83.6 (2,122) x 35.0 (888) x 47.4 (1,203)	1,476 (669)	1,665 (755)
24	52 (197)	83.6 (2,122) x 35.0 (888) x 60.8 (1,543)	2,011 (912)	2,200 (998)
26	55 (208)	96.0 (2,438) x 35.0 (888) x 60.8 (1,543)	2,055 (932)	2,244 (1,018)
61	130 (492)	83.6 (2,122) x 35.0 (888) x 73.8 (1,874)	2,278 (1,033)	2,467 (1,119)
89	190 (719)	96.0 (2,438) x 35.0 (888) x 83.4 (2,117)	2,553 (1,158)	2,742 (1,244)
111	237 (897)	83.6 (2.122) x 35.0 (888) x 83.4 (2.117)	2.532 (1.148)	2.721 (1.234)





## **LEVEL 1 SOUND ATTENUATED ENCLOSURE**

				Weight - Ibs (kg)		
	Run Time - Hours	Usable Capacity - gal (L)	L x W x H - in (mm)	Steel	Aluminum	
	No Tank	-	83.6 (2,122) x 35.0 (888) x 47.4 (1,203)	1,480 (671)	1,669 (757)	
	24	52 (197)	83.6 (2,122) x 35.0 (888) x 60.8 (1,543)	2,015 (914)	2,204 (999)	
	26	55 (208)	96.0 (2,438) x 35.0 (888) x 60.8 (1,543)	2,059 (934)	2,248 (1,020)	
	61	130 (492)	83.6 (2,122) x 35.0 (888) x 73.8 (1,874)	2,282 (1,035)	2,471 (1,121)	
	89	190 (719)	96.0 (2,438) x 35.0 (888) x 83.4 (2,117)	2,557 (1,160)	2,746 (1,245)	
	111	237 (897)	83.6 (2,122) x 35.0 (888) x 83.4 (2,117)	2,536 (1,150)	2,725 (1,236)	





#### **LEVEL 2 SOUND ATTENUATED ENCLOSURE**

			Weight - Ibs (kg)		
Run 7 - Ho	Time Capacity - ours gal (L)	L x W x H - in (mm)	Steel	Aluminum	
No T	ank -	83.6 (2,122) x 35.0 (888) x 47.4 (1,203)	1,481 (672)	1,670 (758)	
24	4 52 (197)	83.6 (2,122) x 35.0 (888) x 60.8 (1,543)	2,016 (914)	2,205 (1,000)	
20	6 55 (208)	96.0 (2,438) x 35.0 (888) x 60.8 (1,543)	2,060 (934)	2,249 (1,020)	
6	1 130 (492)	83.6 (2,122) x 35.0 (888) x 73.8 (1,874)	2,283 (1,036)	2,472 (1,121)	
89	9 190 (719)	96.0 (2,438) x 35.0 (888) x 83.4 (2,117)	2,559 (1,160)	2,748 (1,246)	
11	1 237 (897)	83.6 (2.122) x 35.0 (888) x 83.4 (2.117)	2.537 (1.151)	2.726 (1.236)	

<sup>\*</sup> 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.

6 of 6