

**MD300 | 10.3L | 300 kW**

**INDUSTRIAL DIESEL GENERATOR SET**

EPA Certified Stationary Emergency

**GENERAC®** | **INDUSTRIAL POWER**

**Standby Power Rating**

300 kW, 375 kVA, 60 Hz

**Prime Power Rating**

270 kW, 338 kVA, 60 Hz

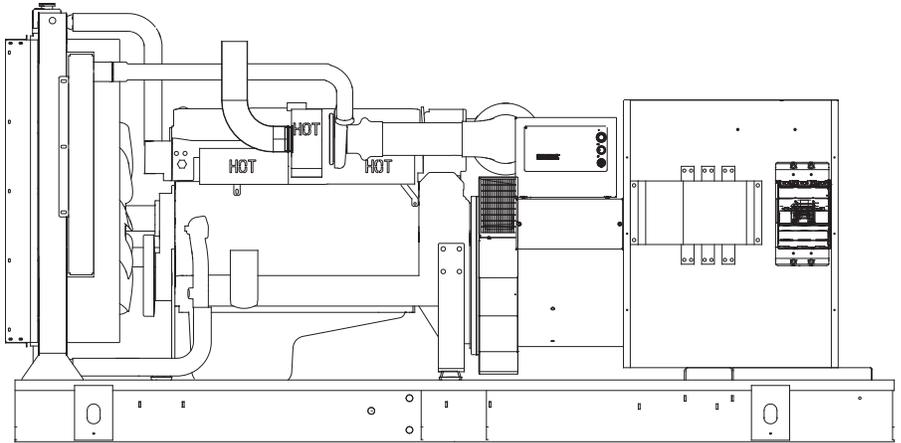


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\*EPA Certified Prime ratings are not available in the US or its Territories

**Codes and Standards**

Generac products are designed to the following standards:

 UL2200, UL508, UL142, UL489

 NFPA 37, 70, 99, 110

 NEC700, 701, 702, 708

 ISO 3046, 7637, 8528, 9001

 NEMA ICS10, MG1, 250, ICS6, AB1

 ANSI C62.41

 IBC 2009, CBC 2010, IBC 2012, ASCE 7-05, ASCE 7-10, ICC-ES AC-156 (2012)

**Powering Ahead**

For over 50 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.

**STANDARD OPTIONS**

**ENGINE SYSTEM**

- Oil Drain Extension
- Heavy Duty Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil & Coolant
- Radiator Duct Adapter (Open Set Only)

**Fuel System**

- Fuel Lockoff Solenoid
- Secondary Fuel Filter

**Cooling System**

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

**Electrical System**

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

**ALTERNATOR SYSTEM**

- GENprotect™
- 12 Leads (3-Phase, Non 600V)
- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Auxiliary Voltage Regulator Power Winding
- Permanent Magnet Excitation
- Sealed Bearing
- Automated Manufacturing (Winding, Insertion, Lacing, Varnishing)
- Rotor Dynamically Spin Balanced
- Amortisseur Winding
- 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
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Only)

**ENCLOSURE (if selected)**

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

**TANKS (if selected)**

- UL 142
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested (2 psi)
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- Rhino Coat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

**CONTROL SYSTEM**

**Digital G Paralleling Control Panel - Touchscreen**

**Program Functions**

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- 3 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
- 0.2msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

**Full System Status Display**

- Power Output (kW)
- Power Factor
- kW Hours, Total & 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 & Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms & Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

**PARALLELING CONTROLS**

- Auto-Synchronization Process
- Isochronous Load Sharing
- Reverse Power Protection
- Maximum Power Protection
- Electrically Operated, Mechanically Held Paralleling Switch
- Sync Check System
- Independent On-Board Paralleling

- Optional Programmable Logic Full Auto Back-Up Controls (PLS)
- Shunt Trip and Auxiliary Contact

**CONFIGURABLE OPTIONS**

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**ENGINE SYSTEM**

- Oil Make-Up System
- Oil Heater
- Critical Exhaust Silencer

**FUEL SYSTEM**

- Flexible Fuel Lines
- Primary Fuel Filter

**ELECTRICAL SYSTEM**

- 10A UL Battery Charger
- Battery Warmer

**ALTERNATOR SYSTEM**

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating

**CIRCUIT BREAKER OPTIONS**

- Main Line Circuit Breaker
- Electronic Trip Breakers

**GENERATOR SET**

- GenLink® Communications Software (English Only)
- IBC Seismic Certification
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty
- 7 Year Extended Warranty
- 10 Year Extended Warranty

**ENCLOSURE**

- Weather Protected
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating\*
- AC/DC Enclosure Lighting Kit

**CONTROL SYSTEM**

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Sender with Indication 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)
- Remote Communication - Modem
- Remote Communication - Ethernet
- 10A Run Relay
- Ground Fault Indication and Protection Functions

**TANKS (SIZE ON LAST PAGE)**

- Electric Fuel Level
- Mechanical Fuel Level
- 8" Fill Extension
- 13" Fill Extension
- 19" Fill Extension

**ENGINEERED OPTIONS**

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**ENGINE SYSTEM**

- Coolant Heater Ball Valves
- Fluid Containment Pan

**CONTROL SYSTEM**

- Battery Disconnect Switch

**ALTERNATOR SYSTEM**

- 2<sup>nd</sup> Breaker System

**GENERATOR SET**

- Special Testing

**ENCLOSURE**

- Motorized Dampers

**TANKS**

- Overfill Protection Valve
- UL2085 Tank
- ULC S-601 Tank
- Special Fuel Tanks
- Vent Extensions

**RATING DEFINITIONS**

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition.

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### APPLICATION AND ENGINEERING DATA

#### ENGINE SPECIFICATIONS

##### General

Make	Iveco/FPT
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emission Data Sheet
Cylinder #	6
Type	In-Line
Displacement - L (cu. in)	10.3 (628.54)
Bore - mm (in)	125 (4.92)
Stroke - mm (in)	140 (5.51)
Compression Ratio	16.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head	4-Valve
Piston Type	Aluminum
Crankshaft Type	Dropped Forged Steel

##### Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.25%

##### Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full Flow
Crankcase Capacity - L (qts)	30 (31.68)

##### Cooling System

Cooling System Type	Closed Recovery
Water Pump Type	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Speed (rpm)	2250
Fan Diameter - mm (in)	762 (30.0)

##### Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Carburetor	ASTM
Fuel Filtering (microns)	5
Fuel Inject Pump Make	Electronic
Fuel Pump Type	Engine Driven Gear
Injector Type	Common Rail
Engine Type	Direct Injection
Fuel Supply Line - mm (in.)	12.7 (0.5) NPT
Fuel Return Line - mm (in.)	12.7 (0.5) NPT

##### Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(2) 12 VDC
Ground Polarity	Negative

#### ALTERNATOR SPECIFICATIONS

Standard Model	Generac 520 mm
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Permanent Magnet
Bearings	Single Sealed Cartridge
Coupling	Direct, 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%

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### OPERATING DATA

#### POWER RATINGS

		Standby		Prime
Three-Phase 120/208 VAC @0.8pf	288 kW	Amps: 1000	270 kW	Amps: 937
Three-Phase 277/480 VAC @0.8pf	300 kW	Amps: 451	270 kW	Amps: 406
Three-Phase 346/600 VAC @0.8pf	300 kW	Amps: 361	270 kW	Amps: 325

#### STARTING CAPABILITIES (sKVA)

##### sKVA vs. Voltage Dip

480 VAC								208/240 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%	Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	350	383	575	767	958	1150	1342	Standard	300	227	341	454	568	681	794
Upsize 1	400	387	581	775	968	1162	1356	Upsize 1	400	210	350	500	680	875	1100
Upsize 2	500	457	686	914	1143	1371	1600	Upsize 2	450	345	570	835	1100	1460	1710

#### FUEL CONSUMPTION RATES\*

Fuel Pump Lift - ft (m)		Diesel- gph (lph)		
		Percent Load	Standby	Prime
3 (1)		25%	7.6 (28.7)	6.9 (26.1)
		50%	12.6 (47.7)	11.6 (43.9)
Total Fuel Pump Flow (Combustion + Return) gph (lph)		75%	17.4 (65.9)	15.8 (59.8)
31 (117)		100%	22.1 (83.7)	19.9 (75.3)

\* Fuel supply installation must accommodate fuel consumption rates at 100% load.

#### COOLING

		Standby	Prime
Coolant Flow per Minute	gal/min (l/min)	95 (360)	95 (360)
Coolant System Capacity	gal (l)	16.6 (63)	16.6 (63)
Heat Rejection to Coolant	BTU/hr	814,783	733,673
Inlet Air	cfm (m <sup>3</sup> /hr)	14,505 (411)	14,505 (411)
Maximum Radiator Backpressure	in H <sub>2</sub> O	0.5	0.5

#### COMBUSTION AIR REQUIREMENTS

	Standby	Prime
Flow at Rated Power cfm (m <sup>3</sup> /min)	850 (24.07)	765 (21.67)

#### ENGINE

		Standby	Prime
Rated Engine Speed	rpm	1800	1800
Horsepower at Rated kW**	hp	480	432
Piston Speed	ft/min	1654	1654
BMEP	psi	336	302

#### EXHAUST

		Standby	Prime
Exhaust Flow (Rated Output)	cfm (m <sup>3</sup> /min)	2240 (63.4)	2016 (57.1)
Max. Backpressure (Post Silencer)	in Hg (Kpa)	1.5 (5.1)	1.5 (5.1)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1020 (549)	918 (492)
Exhaust Outlet Size (Open Set)	mm (in)	101.6 (4)	101.6 (4)

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

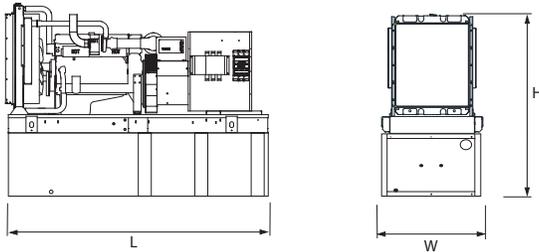
Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

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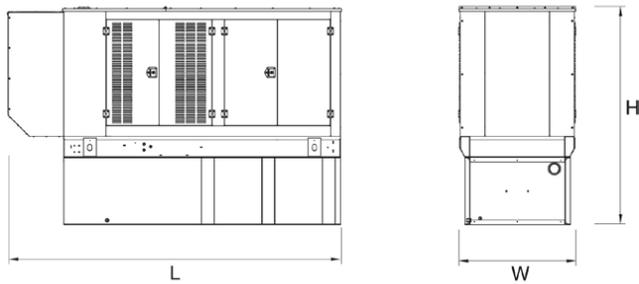
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### DIMENSIONS AND WEIGHTS\*



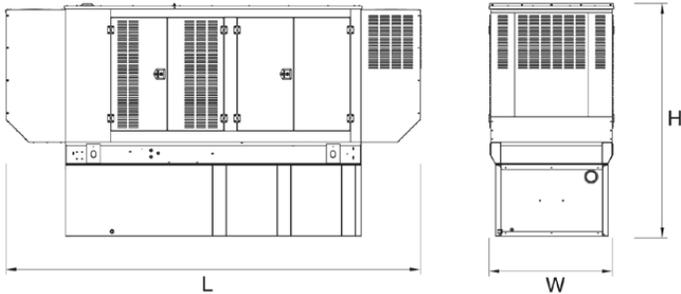
#### OPEN SET (Includes Exhaust Flex)

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg)
No Tank	-	136 (3454) x 58 (1473) x 68 (1727)	5816 (2638)
8	183 (693)	136 (3454) x 58 (1473) x 81 (2057)	6764 (3068)
20	438 (1659)	136 (3454) x 58 (1473) x 93 (2362)	7076 (3210)
31	693 (2624)	136 (3454) x 58 (1473) x 105 (2667)	7379 (3347)
43	946 (3518)	208 (5283) x 58 (1473) x 108 (2743)	8841 (4010)
60	1325 (5015)	278 (7061) x 58 (1473) x 108 (2743)	9856 (4471)



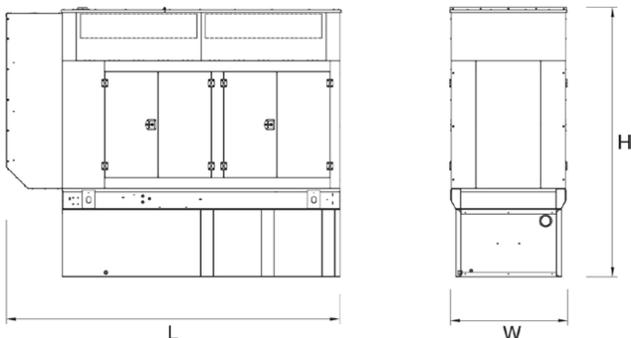
#### STANDARD ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	175 (4445) x 58 (1473) x 78 (1981)		
8	183 (693)	175 (4445) x 58 (1473) x 91 (2311)		
20	438 (1659)	175 (4445) x 58 (1473) x 103 (2616)	1295 (588)	501 (227)
31	693 (2624)	175 (4445) x 58 (1473) x 115 (2921)		
43	946 (3518)	208 (5283) x 58 (1473) x 118 (2997)		
60	1325 (5015)	278 (7061) x 58 (1473) x 118 (2997)		



#### LEVEL 1 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	200 (5080) x 58 (1473) x 78 (1981)		
8	183 (693)	200 (5080) x 58 (1473) x 91 (2311)		
20	438 (1659)	200 (5080) x 58 (1473) x 103 (2616)	1470 (667)	935 (425)
31	693 (2624)	200 (5080) x 58 (1473) x 115 (2921)		
43	946 (3518)	234 (5944) x 58 (1473) x 118 (2997)		
60	1325 (5015)	304 (7722) x 58 (1473) x 118 (2997)		



#### LEVEL 2 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	180.6 (4588) x 57.6 (1463) x 107.2 (2724)		
8	183 (693)	180.6 (4588) x 57.6 (1463) x 120 (3048)		
20	438 (1659)	180.6 (4588) x 57.6 (1463) x 132 (3353)	2515 (1141)	1131 (514)
31	693 (2624)	180.6 (4588) x 57.6 (1463) x 144 (3658)		
43	946 (3518)	208 (5283) x 57.6 (1463) x 148 (3759)		
60	1325 (5015)	278 (7061) x 57.6 (1463) x 146 (3708)		

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

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.