

# PROTECTOR PLUS GENERATORS

GASEOUS 35–250kW • DIESEL 10–250kW



**GENERAC**<sup>®</sup>



# MORE POWER FOR MORE APPLICATIONS

No two facilities are alike. Each one has unique power requirements. That's why Generac has power solutions to meet every facilities' needs - no matter how unique. Generac will make sure you stay up and running no matter what.

# THE RIGHT COMPONENTS FOR YOUR APPLICATION

Generac's generator sets use an integrated approach to building the optimum system for each application. This approach matches the right engine, alternator, control panel, enclosure, base tank and software for the most effective solution.

Whether our generators are powered by one of our own spark-ignited engines, designed and built in-house, or one of our best-in-class sourced engines, you'll find the reliability and flexibility to handle any power need.

## GENERATOR SET OPTIONS

- Open model suited for indoor placement within a dedicated building or mechanical room.
- Weather protective enclosure provides outdoor protection against the elements.
- Sound attenuated enclosure options – two levels provide significantly lower sound levels and are offered in weather protective enclosures.

## CERTIFICATES

- **UL2200 Listed:** Generac was the first to introduce its complete product line in conformance with UL2200 safety standards.
- **EPA:** Environmental Protection Agency
- **NEMA:** National Electrical Manufacturers Association
- **CSA:** Canadian Standards Association\*
- **CARB:** California Air Resources Board\*
- **SCAQMD:** South Coast Air Quality Management District (CA)\*

*\*Select models only*

## MODERN ENGINE TECHNOLOGY

In addition to meeting EPA emissions standards and sound & endurance testing, a comprehensive set of highly specialized tests including torsional analysis, transient response and maximum motor starting are preformed.

## GUARDING

Meeting UL2200 and CSA standards, Generac guards cover fan, belts, and pulleys for safety.

## ALTERNATORS

Generac alternators are machine wound, machine inserted and machine varnished for the ultimate in consistent manufacturing.

## ADVANCED DIGITAL CONTROL

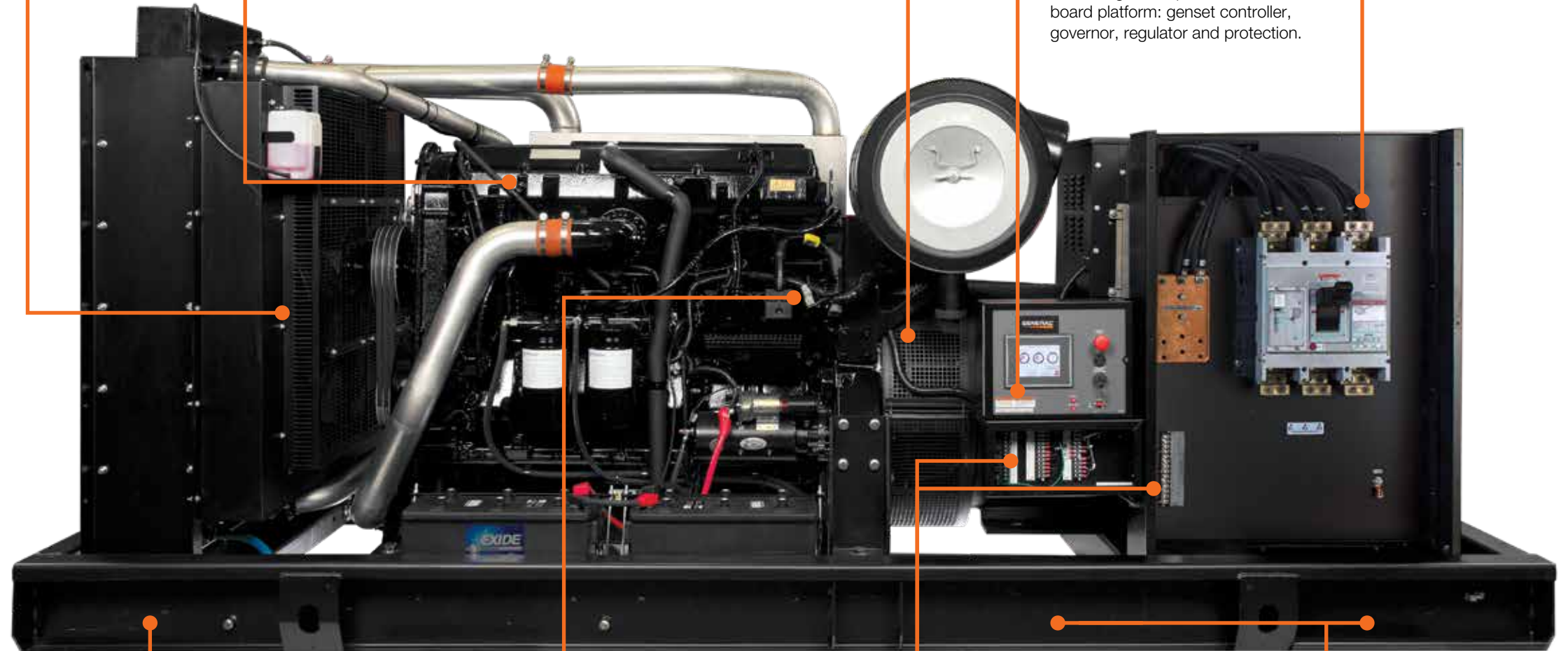
The control panel combines durable construction with seamlessly integrated components and features such as constant monitoring, built-in alarms and adjustable parameters, helping ensure reliable generator operation.

### Fully Integrated Design

All control functions are integrated into a single encapsulated circuit board platform: genset controller, governor, regulator and protection.

## EASIER TO WIRE

Circuit breaker positioned to provide maximum room for cable regrouping, and to allow cables to run straight into the breaker bays – with or without cable glanding.



## RIGID BASE FRAMES

Built to withstand high-torque transient conditions and eliminate vibrations. Fully welded for strength and then finished with RhinoCoat™ paint finish.

## ADVANCED HARNESS & CONNECTION DESIGN

Advanced wire harness design with waterproof connectors assures reliable, repeatable interconnection between electronic and sensor components. Special sealed boots are used on interconnects and termination points for environmental protection.

## DISCRETE HIGH AND LOW VOLTAGE TERMINAL CONNECTIONS

Separated to improve customer safety.

Low voltage control connections located beneath the control panel. These include two-wire start, communications, alarm relay outputs, and more.

High voltage power connections located in the main breaker box, and used for auxiliary items such as the battery charger, block heater, and GFCI. This strip is removed if a load center is used.

## SEPARATE HIGH AND LOW VOLTAGE STUB-UP LOCATIONS

Low voltage stub-up will be either in the middle area, between the breaker stub-up (on units with a fuel tank), or directly below the low voltage terminal strip (on units without a fuel tank). High voltage stub-up is directly below circuit breakers.

# A COMPLETE LINE OF GENERATOR ENCLOSERS

By manufacturing our own generator enclosures, Generac is able to ensure each unit combines the highest level of durability with the latest engineering advancements in noise reduction and weather resistance.

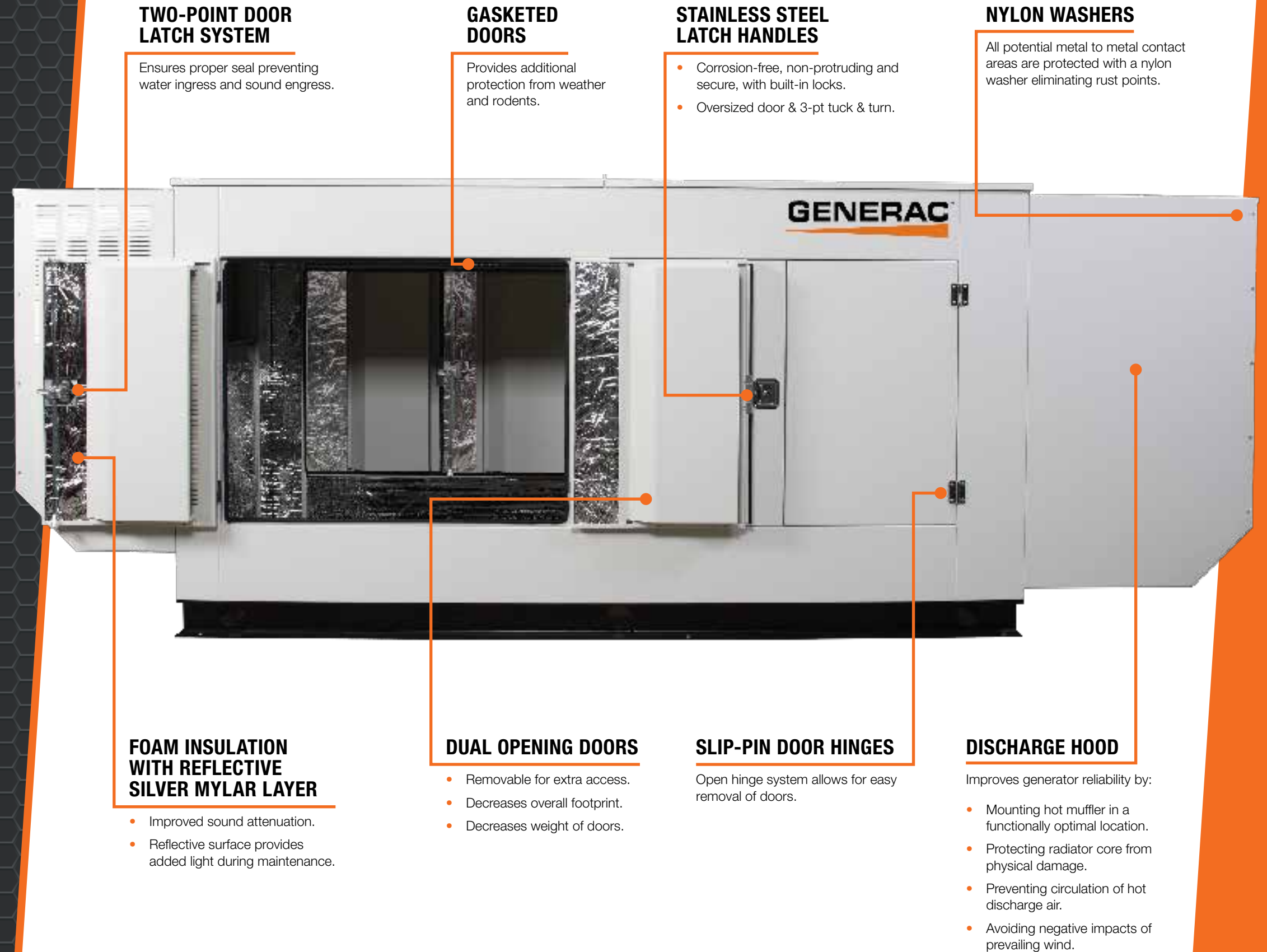
## COMPONENT DURABILITY

Corrosion resistant SermaGard® silver coated fasteners are utilized throughout the enclosure. Heavy-duty door hinges, latches, and striker plates are polished stainless steel. Internal flanges and fastener locations reduce corrosion and improve external aesthetic appearance.

- Large access doors have been engineered with a slip-pin hinge design for easy door removal. Slip-pin door hinges are mounted with stainless steel fasteners and polyurethane gaskets for long life durability though dissimilar metals separation.
- Door jambs have closed-cell polyurethane gasketing around 100% of the door perimeter to prevent water ingress and sound egress.
- Sound attenuated enclosures have adhesive backed acoustic silver Mylar® foam panels for maximum sound absorption, heat reflection and resistance to oil and water.
- Roof acoustic foam panels are held with mechanical retention caps and pins that are capacitive discharge welded to enclosure panels.

## ADDITIONAL PERFORMANCE FEATURES

- Door latches are keyed for equipment security.
- A full 180° door swing provides full access to generator equipment.
- Our RhinoCoat™ finish system uses a superior process that takes thermo plastic and bakes it on to the metal. This process is used on not only the enclosure, but also the base frame, fuel tank, and other sheet metal components.



### TWO-POINT DOOR LATCH SYSTEM

Ensures proper seal preventing water ingress and sound egress.

### GASKETED DOORS

Provides additional protection from weather and rodents.

### STAINLESS STEEL LATCH HANDLES

- Corrosion-free, non-protruding and secure, with built-in locks.
- Oversized door & 3-pt tuck & turn.

### NYLON WASHERS

All potential metal to metal contact areas are protected with a nylon washer eliminating rust points.

### FOAM INSULATION WITH REFLECTIVE SILVER MYLAR LAYER

- Improved sound attenuation.
- Reflective surface provides added light during maintenance.

### DUAL OPENING DOORS

- Removable for extra access.
- Decreases overall footprint.
- Decreases weight of doors.

### SLIP-PIN DOOR HINGES

Open hinge system allows for easy removal of doors.

### DISCHARGE HOOD

Improves generator reliability by:

- Mounting hot muffler in a functionally optimal location.
- Protecting radiator core from physical damage.
- Preventing circulation of hot discharge air.
- Avoiding negative impacts of prevailing wind.

# ENGINES, ALTERNATORS, FUELTANKS & BASE FRAMES. DESIGNED FOR OPTIMIZED PERFORMANCE.

## SPARK-IGNITED ENGINES

Applying gaseous fuel to standby power systems takes advanced engineering expertise to ensure reliability and long life. That's why Generac builds its spark-ignited engines from the block up. Hardening the valves and seats to address the rigors of hotter-burning dry fuel. Adjusting engine timing to accommodate the unique combustion characteristics of natural gas. This allows Generac engines to last longer, require less maintenance, and perform more reliably in a standby power system than a third-party spark-ignited engine. Because we control the supply chain, we can also provide some of the shortest turnaround times in the industry. And as an additional benefit, every Generac engine meets the required EPA emission standards at the factory.



## DIESEL-FUELED GENERATORS

Diesel-fueled generators are an efficient choice for many applications, as well as for facilities where code requirements call for on-site fuel storage. To provide the best possible diesel-fueled standby power solutions, Generac identifies and pre-qualifies diesel engines proven in real-world applications under adverse conditions. Then we work hand-in-hand with best-in-class diesel engine manufacturers to optimize designs specifically to meet Generac Power requirements.



## ALTERNATORS

Generac commercial alternators are machine wound, machine inserted and machine varnished for the ultimate in consistent manufacturing. Precision winding and stack bracing ensures reliable performance. Rotor spin balancing eliminates vibration, and double venting contributes to cooler operation, longer life and enhanced efficiency. All alternators are built with high temperature 150°C rise Class H insulation. Maximum operating temperatures are designed not to exceed a temperature rise of 120°C. This provides an extra margin of thermal capability for standby applications with single phase and non-linear loads.



## FUEL TANKS – UL-142/ULC S601

The fuel tanks for Generac gensets are designed and manufactured by Generac. This gives us total quality control over this critical genset component. Every detail is designed to protect against fuel leaks and contamination:

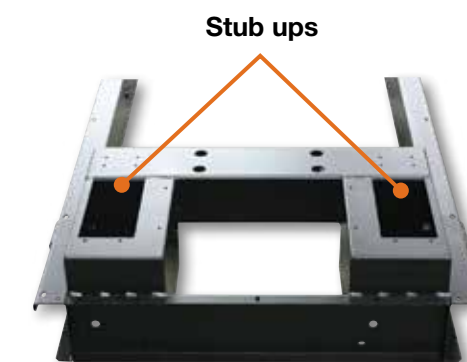
- Robotic weld system provides consistent welds to eliminate defects
- Factory pressure tested and double wall construction minimize concerns of onsite fuel leaks
- Generac RhinoCoat powder coat paint system offers maximum protection against the elements
- Sloped tops shed water to prevent corrosion and extend tank life
- Sloped bottom ensures separation of potential water contamination
- Meets a variety of filling, venting and localized certifications
- Options include spill fill containment, vents and alarm



## BASE FRAME

Generac's heavy duty base frames assure accurate engine-alternator alignment remains intact:

- Fully welded construction resists high-torque transients while providing solid weldments for smooth, undisturbed painting surfaces
- Oil and water drain points located for easy access
- Vibration isolators contribute to smoother operation
- Power cable stub up for the easiest installation
- Battery trays are also welded in place prior to receiving Generac's RhinoCoat paint system
- Heavy duty lifting eyes



# ONE OF THE LARGEST SUPPLIERS IN THE INDUSTRY

No matter what you need standby power for, whether to keep a business open or a factory producing, count on Generac to provide the right product to meet your demands. With our expansive product line, you'll find the reliability, consistency and flexibility to handle any power need.

## NATURAL GAS THE SMARTEST FUEL CHOICE

- **Long Running Times:** Because natural gas is supplied by a utility, refueling is not an issue.
- **Natural gas-fueled engines** emit fewer nitrogen oxides and particulate matter, while also avoiding the fuel containment, spillage, and environmental concerns associated with fuel storage.
- **Fuel Reliability:** With natural gas, there's no onsite fuel storage or ongoing maintenance required in order to keep a clean and reliable supply of fuel.

## DIESEL THE TRADITIONAL CHOICE

Diesel-fueled generators are an efficient choice for many applications, as well as for facilities where code requirements call for on-site fuel storage, like hospitals and 911 call centers. To provide the best possible diesel-fueled standby power solutions, Generac identifies and prequalifies diesel engines proven in real-world applications under adverse conditions. Then we work hand-in-hand with best-in-class diesel engine manufacturers to optimize designs specifically to meet Generac requirements.

### GASEOUS

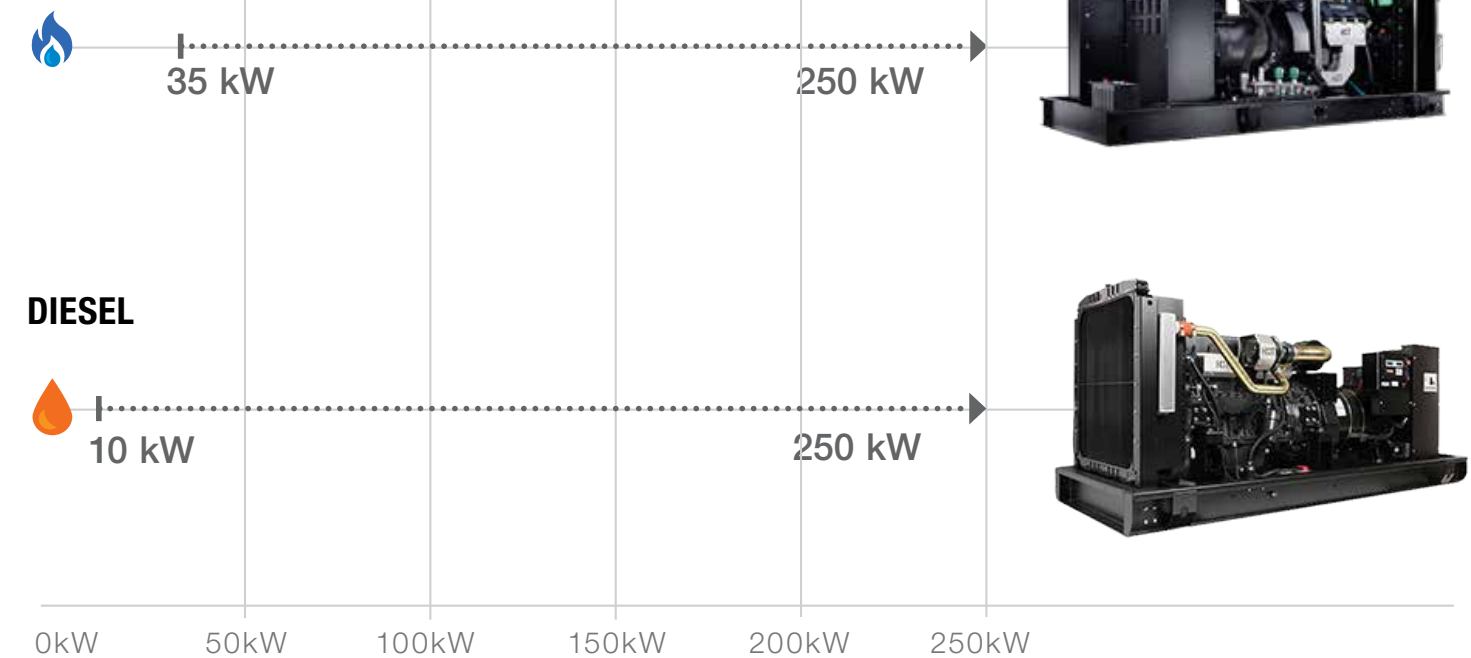
Power Range - Standby *	35, 40, 45, 50NA, 50T, 60, 70kW	80, 100, 130, 150 kW	175, 200, 230, 250 kW
Engine Manufacturer	Generac		
Displacement	4.5L	9.0L	14.2L
Alternator	Generac		
Available Voltages †	A, G, J, K, or L		
Fuel Type ‡	NG, LPV, or Dual Fuel NG/LPV		NG
Control System	Power Zone® Pro	Generac Digital H-Panel	Power Zone® Pro Sync
Enclosure Options	Open - Unenclosed		
	Level 0 Sound Attenuated		
	Level 1 Sound Attenuated		
	Level 2 Sound Attenuated with Motorized Dampers		

### DIESEL

Power Range - Standby **	10, 15, 20, 25, 30 kW	35, 40, 50, 60, 80 kW	100, 130, 150, 175 kW	200, 230, 250 kW
Engine Manufacturer	Generac	FPT		
Displacement	2.2L	4.5L	6.7L	8.7L
Alternator	Generac			
Available Voltages †	A, G, J, K, or L			
Fuel Type ‡	ULSD			
Control System	10-20 kW PowerZone 410 Controller 25-30 kW Generac Digital H-Panel	PowerZone 410 Controller	PowerZone 410 Controller	Generac Digital H-Panel
Enclosure Options	Open - Unenclosed			
	Level 0 Sound Attenuated			
	Level 1 Sound Attenuated			
	Level 2 Sound Attenuated with Motorized Dampers			

\* All ratings in accordance with ISO 8528-1  
 \*\* All ratings in accordance with ISO8528-1; EPA Certified Prime Ratings are not available in the U.S. or its Territories  
 † A - Single Phase 120/240 VAC; D - Single/Three Phase 120/240 VAC; G - Three Phase 120/208 VAC; J - Three Phase 120/240 VAC; K - Three Phase 277/480 VAC; L - Three Phase 346/600 VAC  
 ‡ NG - Natural Gas; LPV - Liquid Propane, vapor withdrawal; LPL - Liquid Propane, liquid withdrawal; USLD - Ultra Low Sulfur Diesel  
 Not all features available in all configurations. Contact factory for assistance.

### GASEOUS



## SALES, DESIGN AND SERVICE SUPPORT

Just as important as product quality and reliability is Generac's commitment to customer support, both before, during and after the purchase. Generac Dealer sell and service all Generac generators, controllers and switching systems. Our worldwide network has factory-trained and certified technicians with trusted expertise in system design, sizing, installation, commissioning, diagnostics and repairs.

- 24/7/365 emergency response
- Engineering and project management capabilities include professional and complete design and installation consultative services

For more information, such as FAQ's,  
visit us online at



**GeneracIndustrialPower.com**



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# GENERAC®

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