

Modular Power Systems (MPS) 130 - 600 kW & Gemini



THE PREMIUM IN GENERATOR PARALLELING

GENERAC® | **INDUSTRIAL
POWER**






More **power** for
more applications.

No two facilities are alike.
Each one has unique power
requirements. But every
enterprise has one standby
power need in common. Stay
up and running, no matter what.
And one company does the job,
no matter how small, or big.

Generac Industrial Power.

GENERAC[®] | **INDUSTRIAL
POWER**



Generac Industrial Power offers an expansive product lineup from 15 kW through 2 MW single generators, and as much as 100 MW utilizing our innovative Modular Power System (MPS) technology. Check out additional brochures at www.generac.com/industrial.

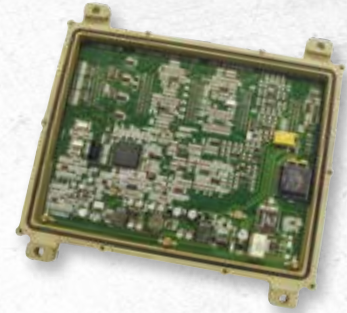
Don't lose a single second.

Generac's Modular Power System (MPS) is a powerful combination of the industry's most reliable generators and state of the art integrated paralleling technology, providing the highest level of reliability in automatic standby power.

Not only does MPS boast a rate of up to 99.999% reliability, it is more cost effective and flexible than single gensets with the same load capacity. MPS is appropriate for numerous types of businesses, including hospitals, airports, office buildings, manufacturing plants, data centers and retail superstores.

The PowerManager Control System.

Generac's PowerManager® control system is the heart of the Modular Power System. It provides an integrated approach that simplifies generator paralleling while providing unsurpassed reliability.



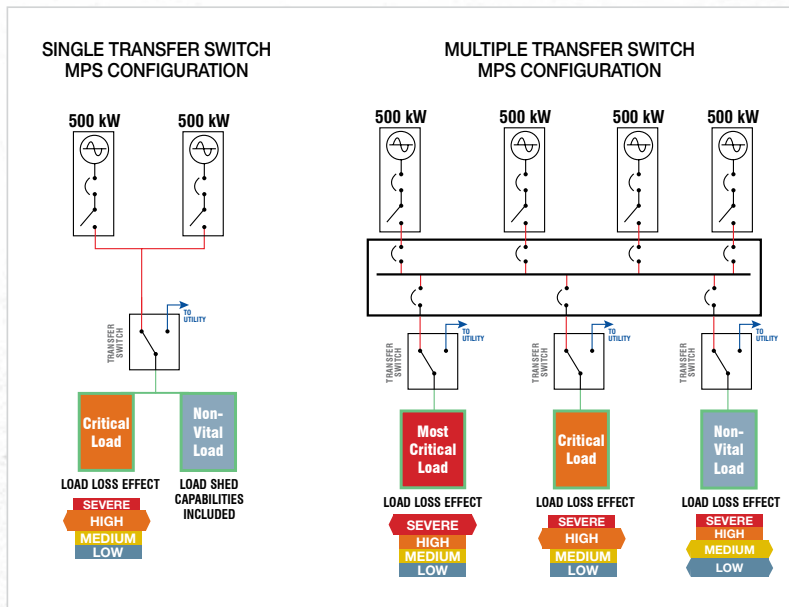
HOW IT WORKS

Each MPS generator includes a single, fully integrated controller and a paralleling switch. A traditional approach to paralleling three generators would typically require 14 to 20 controllers from five different manufacturers. Through the use of our control technology, the PowerManager handles the operation of individual gensets by utilizing one digital control per generator to control all generator functions: speed governing, voltage regulation, genset alarm and monitoring, synchronizing, load sharing and protection.

The paralleling switch allows the main power leads of each generator to be connected together at a common point of connection – junction box, distribution panel or simply the transfer switch generator lugs.

The consolidation of these functions significantly simplifies the system while increasing system performance and providing the ability to effectively manage up to 15 units at a time. Advantages are redundancy, flexibility and scalability while being cost competitive with large single gensets and significantly less than traditional paralleling systems.

- Generator Controller
- Speed Governor
- Voltage Regulator
- Auto Synchronizer
- Load Share Module (kW)
- Load Sharing (kVAR)
- Protective Relaying
- Bi-Fuel Controller
- Digital Communications
- PLC Logic



The right components for your application.

Generac's industrial 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.

CERTIFICATIONS

- **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)*
- **IBC 2009 & 2012:** International Builder Code seismic compliance
- **OSHPD:** Approved with shaker table testing. SDS value=2.5

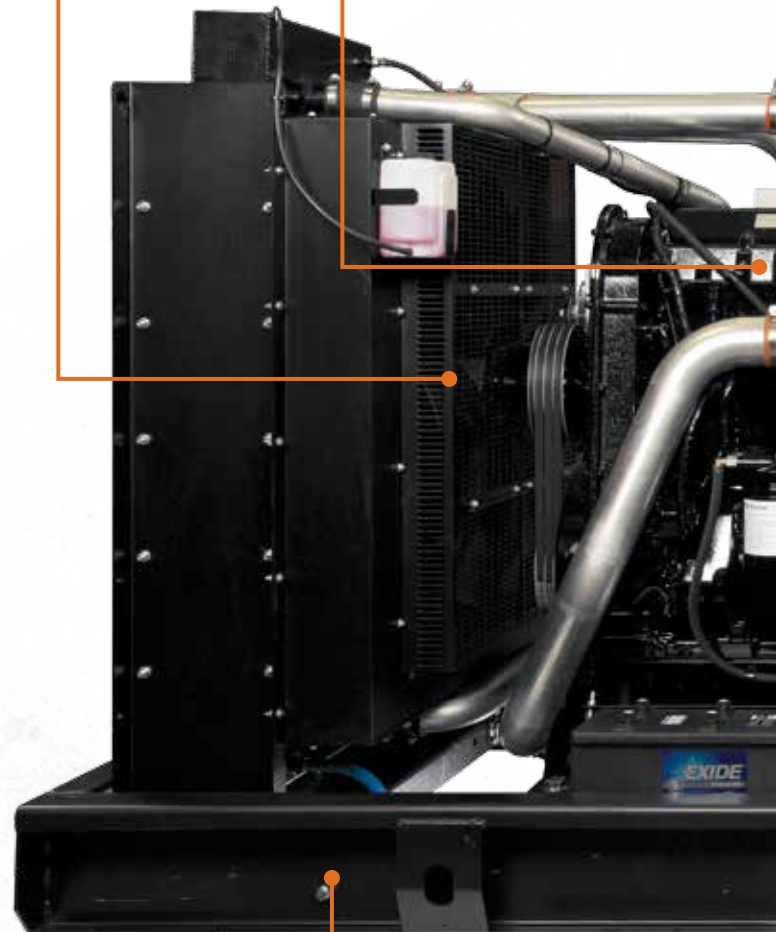
* Select models only

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, maximum motor starting and structural soundest are preformed

Guarding

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



Rigid Base Frames

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

Industrial Alternators

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

Advanced Digital Controls

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

Fully Integrated Design

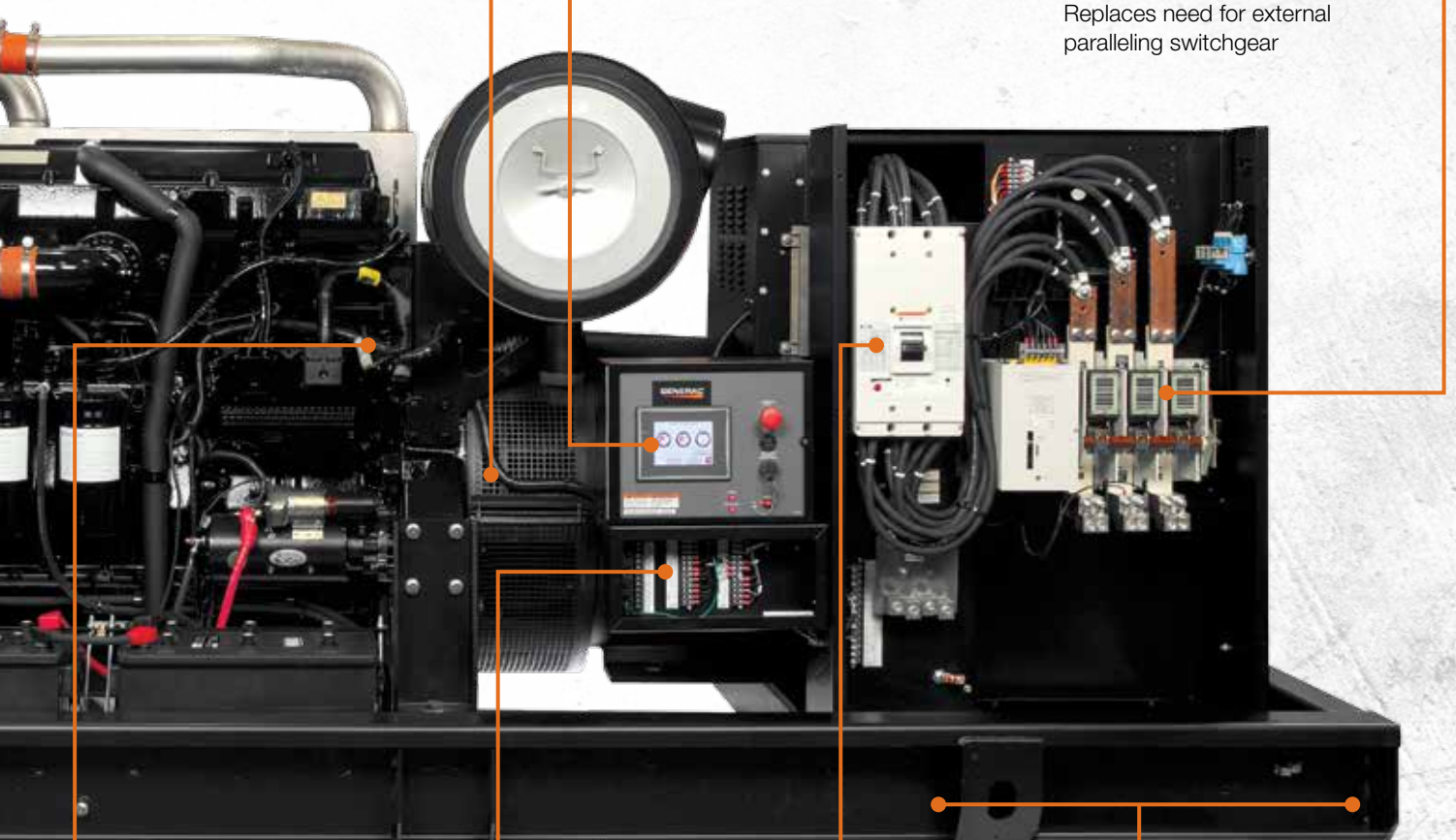
All control functions are integrated into a single encapsulated circuit board platform: genset controller, governor, regulator and protection

Touch Screen Interface

User-friendly access to alarm and generator operation information

Integrated Paralleling Switch

Replaces need for external paralleling switchgear



Advanced Harness & Connection Design

The 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

Low Voltage Separation

Low voltage control connections located beneath the control panel include two-wire start, communications, alarms, relay outputs, etc. and allow for improved customer safety

Circuit Breakers

Available in thermal magnetic configurations or electronic trip. Multiple breaker solutions supported

Easy Stub Ups

Power cabling stub up is directly below the paralleling switch, for the easiest installation

A system dedicated to **reliability.**

Generac builds additional reliability into more areas of our parallel generator system than any other supplier. It's these extras that make Generac's Modular Power System the premium solution in parallel generation.

REDUNDANCY IS THE BASIS OF MPS RELIABILITY

Reliability through redundancy is the cornerstone of a parallel generator system. In most applications, the loads that require the highest degree of reliability are only a percentage of the generator's total capacity. Given the typical load factors in most applications and the potential for minimal load shedding as needed, an MPS solution can easily offer system redundancy without increasing capacity. This is a significant advantage over single gensets which offer no redundancy.

HARDENED CONTROLS

Reliability is maximized by placing each generator's controller in a protective aluminum enclosure and carefully sealing the plug connections. Other systems leave control boards exposed to potential physical damage and external electrical noise that can interfere with performance. An MPS configuration ensures vital components are given extra protection.

HARDENED SWITCHING

Reliability is increased through the premium switching components Generac employs. While other systems utilize circuit breakers as switches, the MPS system is the only one to use a cyclic rated power contactor for the active switching, and a shunt trip molded case breaker for over-current protection and redundant isolation capabilities. These advanced components create a power switching device that has an extended lifespan and is significantly more durable and reliable than any other standard system available.

NO SINGLE POINT FAILURES

Generac's MPS system is the only one that automatically supports paralleled generator operation through all failure modes: loss of communications, loss of system controller, loss of a generator, etc. This means that when active communications go down, MPS generators are still fully capable of automatic starting, paralleling, and load balancing without manual starting. No other system is able to supply this level of automatic backup, making Generac's standard MPS configuration the most reliable system available today. As an option, Generac also offers an independent programmable load sequencer allowing for automatic control of load sequence capabilities in an emergency.



G-Panel Board



Paralleling Switch

FLEXIBILITY

Utilizing multiple smaller gensets versus a single large unit offers greater location flexibility. MPS units may be located where a comparably powered single genset can't so space can be better utilized. Weight distribution makes rooftop installations possible and a low profile allows for parking garage installations. In addition, less electrical space is required because of the elimination of switchgear and large external panel boards.

MANAGE CAPITAL EXPENDITURES

An MPS installation manages costs in several ways versus a traditional single genset or paralleling system.

SCALABILITY

The ability to expand your MPS solution can mean a significant reduction in your initial capital investment. There is no need to install more power than you currently need. Simply add more modules as your business grows and power requirements increase.

SIMPLIFIED INSTALLATION

The light weight of MPS gensets makes them easier to move and place on job sites, requiring smaller, less expensive lifting equipment. The simple design means installation time is decreased.

SERVICEABILITY

Enhanced serviceability and reduced total owning cost are achieved with the MPS solution. If one unit is down for service, the other units continue to provide system critical, back-up power support. This protects the user from the potential losses that would occur if the power failed during equipment maintenance. It also significantly reduces the total cost of ownership by removing the need for a rental generator during service.

SHORT LEAD TIMES

Because they are engineered with readily available engines, MPS units typically ship with much shorter lead times than gensets manufactured with specialized engines.



Pack in the power with the Gemini[®] – MPS Twin Pack.

When space is at a premium and reliability is critical, no other product comes close to Generac's Gemini Twin Pack. By housing two generators within a single enclosure, the Gemini Twin Pack is able to provide the same amount of power in a footprint that is 20% smaller. Features provide built-in redundancy for superior system reliability and scalability along with load management capabilities.



MPS Solution for Large kW Projects

- Parallel up to seven Gemini systems without additional switchgear
- Easily achieve N+1 and N+2 redundancy for critical loads
- Compatible with other Generac MPS nodes



Two Gensets in One Enclosure

- Improved footprint density for large applications
- Inherent redundancy

Touchscreen Operator Interface

- For easy customer interaction

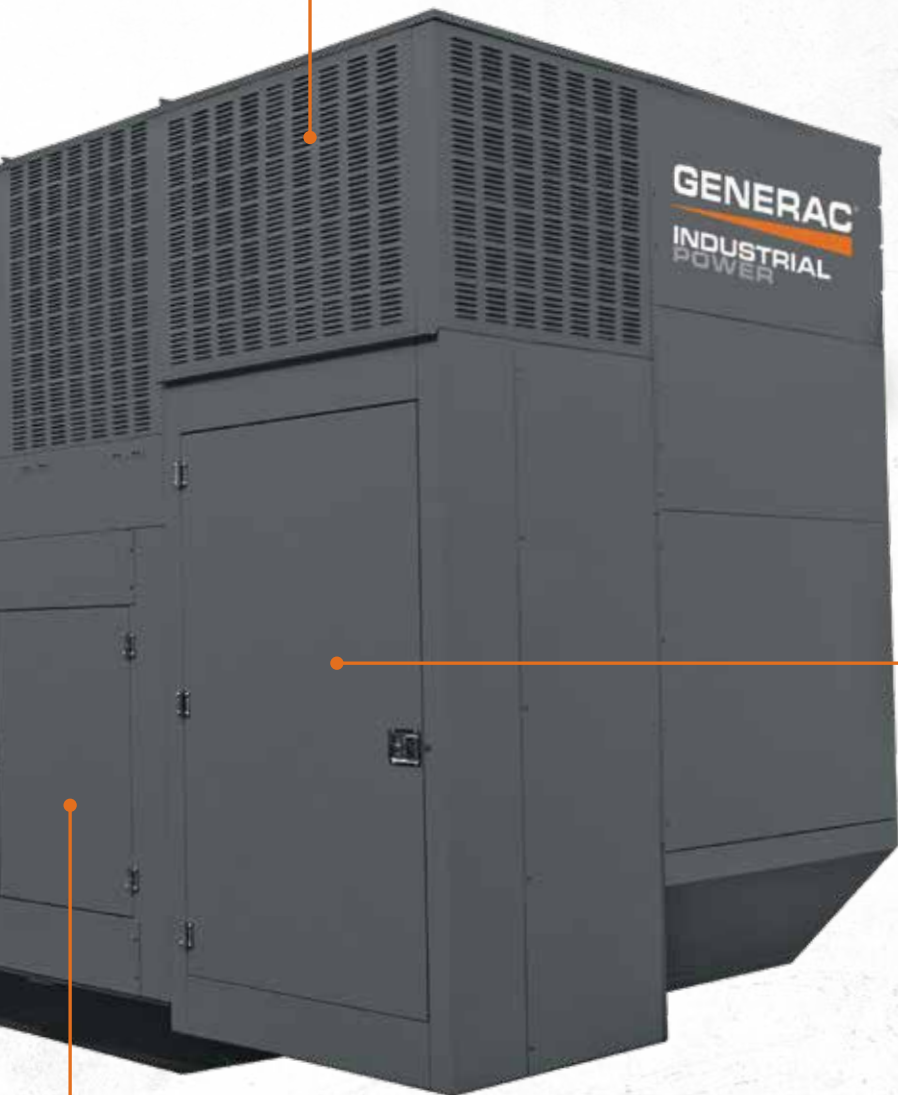


Serviceability

- Serviceable items located to the outside
- Lift-off doors provide complete access to entire side of the generator

Integrated Genset Controller

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



Sound Attenuated Enclosure

- Air intake on side and discharge out the top for no re-circulation issues
- Built-in muffler isolated from engine compartment for enhanced reliability

Circuit Breakers

- Various options available
- Breakers equipped with shunt trip for redundant isolation



Integrated Paralleling Switch

- Premium contactor technology for enhanced cyclic duty

Load Center Standard

- Single point connection for 120/240 auxiliary power

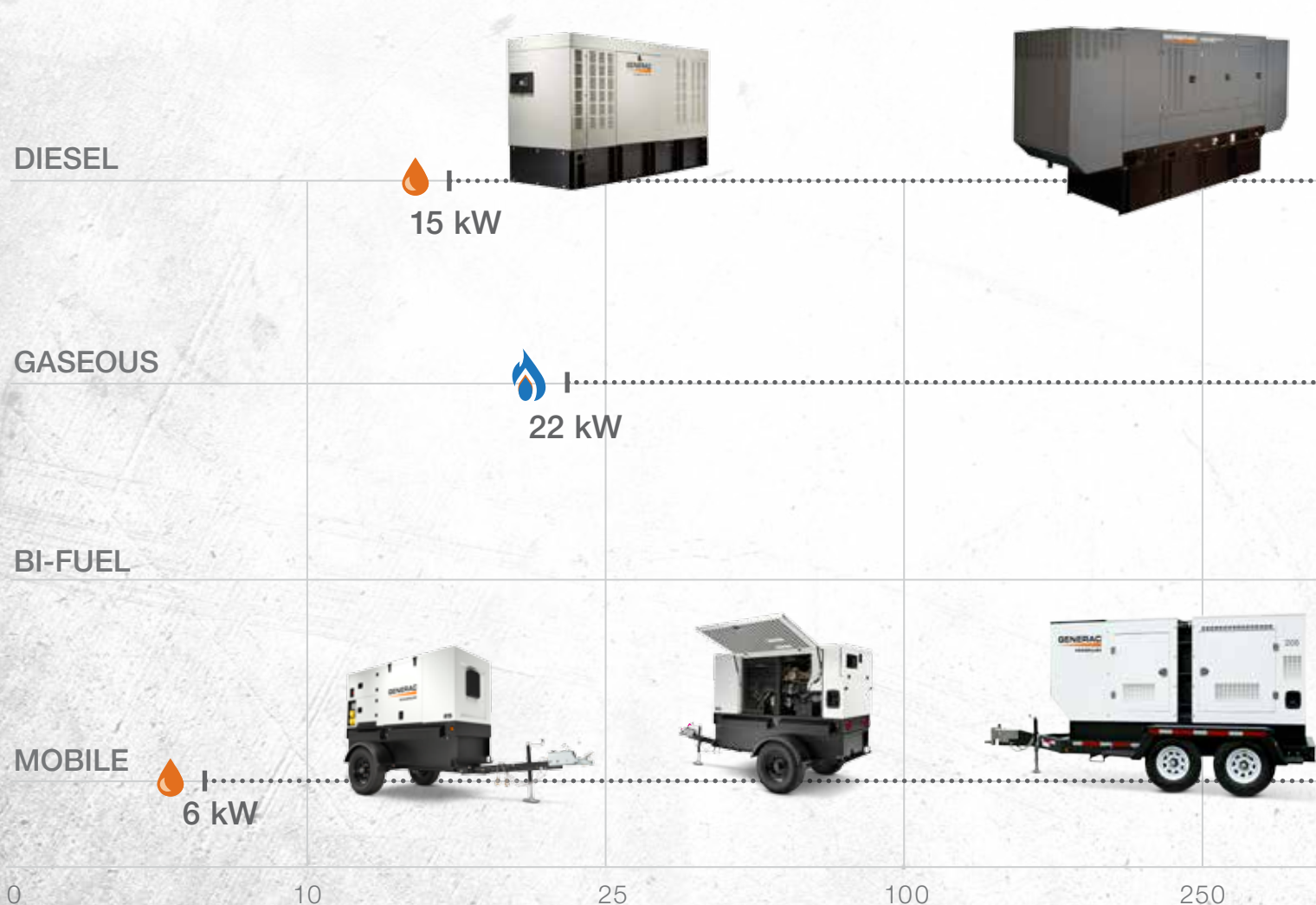
One of the largest suppliers in the industry.

No matter what you need standby power for, whether to keep a hospital operating, a data center functioning or a factory producing, count on Generac Industrial Power to provide the right product to meet your demands. With our newly expanded product line, you'll find the reliability, consistency and flexibility to handle any power need.

Diesel

The Traditional Choice for Standby Power

Diesel-fueled generators are an efficient choice for high kW 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.



Natural Gas

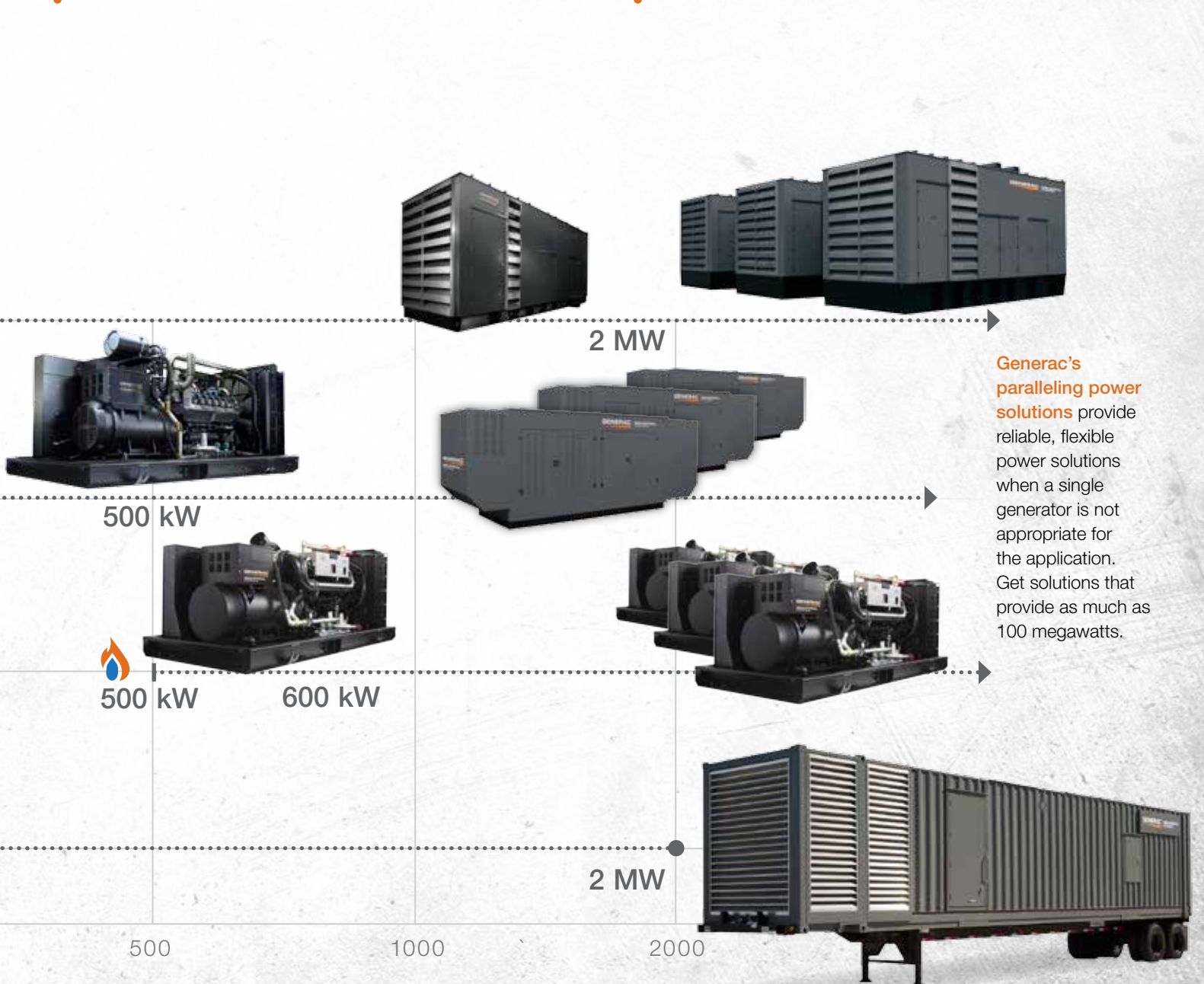
The Smartest Fuel Choice

- Long Running Times: Because natural gas is supplied by a utility, refueling is not an issue.
- Environmentally Friendly: 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.

Bi-Fuel

The Only True Bi-fuel Solution.

Generac Bi-Fuel generators start on diesel fuel and add natural gas as load is applied, until the unit runs primarily on natural gas. Unlike practically every other bi-fuel solution on the market, Generac's Bi-Fuel generators are fully integrated solutions. That means every fuel train component, every sensor, every actuator is specifically designed, engineered, and factory tested to work together. This gives Generac Bi-Fuel generators the added benefit of being EPA compliant from the factory—the only bi-fuel systems on the market that can make such a claim.





The right generator starts with the right tools.

With more than 57 years of power generation experience, Generac has built a tool set for electrical engineers and contractors to simplify and save time sizing, specifying or installing generators. The less time you spend up front, the sooner you'll have a generator on the job. No other manufacturer matches our capability to support generator design needs.

explore now at
www.generac.com/ResourceCenter

RESOURCES

GENERAC CITY

Commercial, Industrial, and Mission Critical Facilities rely on Generac Industrial Power every day. Explore Generac City to learn more.

VIDEOS

Learn more about Generac Industrial Power and see how other businesses selected Generac standby products.

CASE STUDIES

Read how other businesses and industries selected their Generac standby power systems, and how the investment paid off for them through a vast collection of case studies.

POWERCONNECT NEWSLETTER

Subscribe to Generac Industrial Power's newsletter to receive regular updates on new products, case studies, and trends in standby power.

WHITEPAPERS

There are many issues to consider when selecting a standby power system. Generac has a number of white papers that can help you understand all the considerations.

NEWS & ARTICLES

Stay up-to-date on the latest news, trends, and product information related to power generation in this collection of industry articles.

TOOLS

POWER DESIGN PRO

The most powerful electrical and mechanical design and sizing tool on the market. Generac's Power Design Pro is a one stop solution center for the consulting engineer

SPECEXPERT BY MASTERSPEC

Helping to make spec writing easier, faster, and more accurate with SpecExpert by MasterSpec – an easy to use, guided program for creating specifications.

BIM DOCUMENTS

Create intelligent designs utilizing BIM. Download Generac Industrial Power product models which have undergone quality assurance testing to meet the strict requirements of Revit.

EDUCATION

POWER TRIP EXPERIENCE TOUR

Our 53' Power Trip Experience has been on the road for over a decade educating tens of thousands of engineers, and this year we're bringing new solutions, products and more trusted expertise right to your city.

PROFESSIONAL DEVELOPMENT SEMINAR SERIES (PDSS)

These courses are oriented towards practicing design, sales and consulting engineers involved in supplying emergency and standby power to industrial, commercial and mission critical facilities. Earn free CEU's and PDH's!

GENERAC INDUSTRIAL POWER ENGINEERING SYMPOSIUM

The Generac Industrial Power Engineering Symposium is a 3-day event designed for the practicing engineer to walk away with a better understanding of generator sizing, application, and code compliance.

PRODUCT INFORMATION

INDUSTRIAL PRODUCT WEBPAGES

Explore the full line of Generac Industrial Power products including gaseous, diesel, and bi-fuel generators in a variety of configurations and outputs.

SPEC SHEETS

Download any of Generac Industrial Power's product spec sheets all from one place.

BROCHURES & LITERATURE

View, save, or download brochures and literature to explore the full line of Generac Industrial Generators.

SALES, DESIGN AND SERVICE SUPPORT

Just as important as product quality and reliability is Generac Industrial Power's commitment to customer support, both before, during and after the purchase. Generac Industrial Distributors 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
- Dedicated strategic account support and regional or national program implementation programs

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For more information, such as
FAQ's, visit us online at
www.generac.com/industrial

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