

# MODULAR POWER SYSTEMS



# 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 99.9999% reliability, it is more cost effective and flexible than single gensets with the same load capacity, making expensive stand-alone switchgear systems obsolete. MPS is appropriate for numerous types of businesses, including hospitals, airports, office buildings, manufacturing plants, data centers and retail superstores.

# Generac's Modular Power System (MPS)

The Premium in Generator Paralleling

## THE POWERMANAGER® CONTROL SYSTEM SIMPLE AND RELIABLE

Generac's Powermanager control system is the heart its 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 in a modular type paralleling system that's cost competitive with large single gensets and significantly less than a traditional paralleling system.

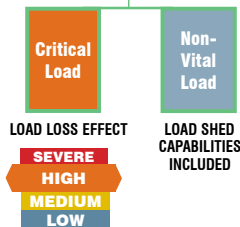
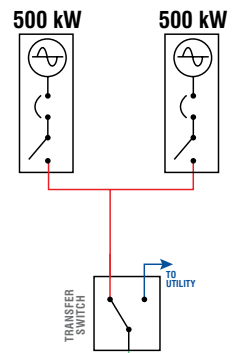


- HMI
- Bi-Fuel Controller
- Generator Control
- PLC Logic
- Load Share Module (kW)
- Load Sharing (kVAR)
- Protective Relaying
- Digital Communications
- Auto Synchronizer
- Speed Governor
- Voltage Regulator
- Bi-Fuel Controller

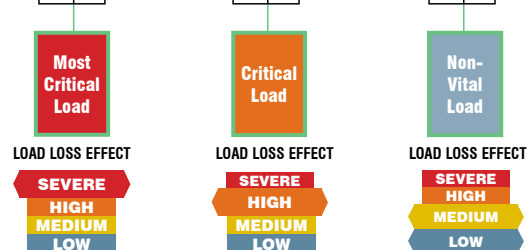
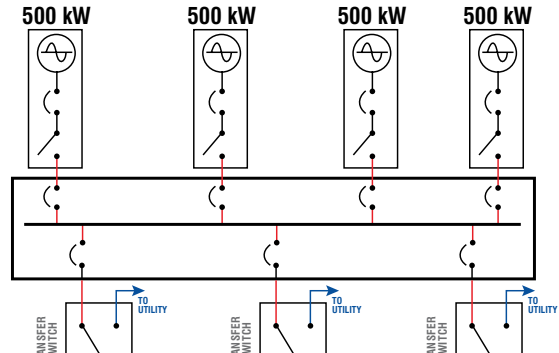
### SINGLE TRANSFER SWITCH CONFIGURATION MPS PARALLEL SYSTEM



Generator Paralleling Switch



### MULTIPLE TRANSFER SWITCH CONFIGURATION TRADITIONAL PARALLEL GENERATOR SYSTEM



DATA CENTER



HEALTHCARE



## A SYSTEM DEDICATED TO RELIABILITY

Generac builds additional reliability into more areas of their parallel generator system than any other available, incorporating components that deliver superior performance. 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 significant advantage over single gensets which offer no redundancy.

### SUPERIOR PROTECTION OF CRITICAL COMPONENTS

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.

### THE MOST DURABLE SWITCHING INCREASES SYSTEM RELIABILITY

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.

### NEVER EXPERIENCE SINGLE POINT SYSTEM FAILURE

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.

## REMOTE MONITORING WITH GENLINK®

GenLink is a remote generator monitoring software package that connects to a genset equipped with Generac's PowerManager control system. It allows both the user and the servicing Industrial Generac Dealer to connect directly with a Modular Power System (MPS) system controller via direct serial connection, phone line or Ethernet connection.

If an alarm occurs, it is immediately displayed on connected remote computers. The PowerManager control panel can be programmed to immediately send out a call to both the user's and dealer's cell phones. The dealer can use GenLink to remotely diagnose the problem and modify generator configurations and parameters as needed. The dealer can then dispatch a service truck with the necessary parts to quickly correct the problem.



MUNICIPALITIES

AIRPORT

## 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

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

### SCALABILITY

The ability to scale your MPS can mean a significant reduction in your capital investment. Because each module is designed to easily integrate with an existing MPS, 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.

## FUEL OPTIONS

Modular Power Systems offer the most choices in primary fuel in the industry. Three emissions compliant options are available:

### Diesel

Traditional and reliable fuel source powers compression ignition engines.

### Gaseous

Eliminates fuel storage issues and provides smoother, quieter operation.

### Bi-Fuel™

Only Generac manufactures the ideal genset, combining diesel and natural gas for reduced on-site fuel storage and dramatically increased run times in addition to the combined benefits of both fuels.

## SERVICIBILITY

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® 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 than many single engine units. Features provide built-in redundancy for superior system reliability and scalability along with load shedding capabilities. Parallel up to seven Gemini systems without additional switchgear.

1 MW Gemini



MANUFACTURING



CONDOMINIUM COMPLEX



**GENERAC<sup>®</sup>**  
**INDUSTRIAL  
POWER**

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