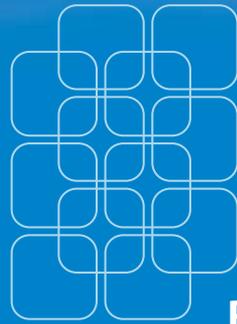


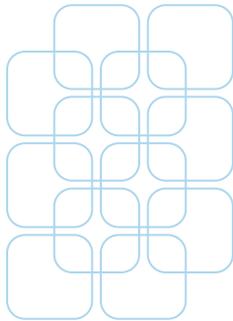


Satcon™



PowerGate Plus
Commercial Solar PV Inverters

Clean power.



PowerGate Plus

Making PV Power Profitable

The rate of return on your solar photovoltaic investment is tied directly to performance—the more power your system can harvest and convert efficiently, the shorter your payback period will be.

Satcon® PowerGate® Plus solar PV inverters have a significant impact on the profitability dynamic of commercial- and utility-scale solar PV systems. With their unparalleled system intelligence, next-generation Edge™ MPPT technology, and industrial-grade engineering, PowerGate Plus inverters provide rugged and reliable solutions that maximize system uptime and power production, even in the harshest environments.

Rugged and Reliable

Streamlined Design

With all components encased in a single, space-saving enclosure, PowerGate Plus PV inverters are easy to install, operate, and maintain.

Single Cabinet with Small Footprint

No clearance required for sides and back

Convenient access to all components

Large in-floor cable glands make access to DC and AC cables easy

Rugged Construction

Engineered for outdoor environments

Proprietary enclosure made of G-90 galvanized steel for longevity

Output Transformer

Provides galvanic isolation

Matches the output voltage of the PV inverter to the grid

High-speed anti-islanding algorithm

Transformer built in; standalone transformer available as an option

Quiet Operation

65 dB(A) standard

55 dB(A) optional

PowerGate Plus Solar PV Inverters

Commercial and Utility Scale

The world's largest solar power installations depend on Satcon PowerGate Plus PV inverters to provide efficient and stable power—even in the harshest climates.

Broad Range of Power Ratings

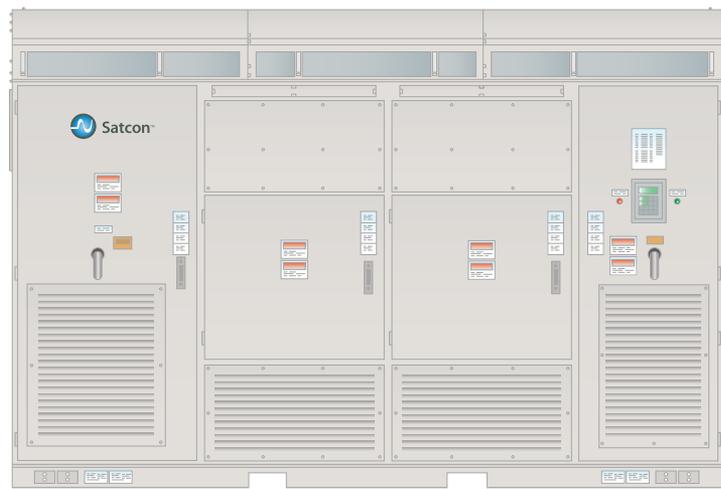
With 11 power ratings—ranging from 30 kW to 1 MW (UL and CE certified)—Satcon offers the widest range of solar PV inverter solutions in the industry.

Advanced, Rugged, and Reliable

Engineered from the ground up to meet the demands of large-scale installations, Satcon PV inverters feature an outdoor-rated enclosure, advanced monitoring and control capabilities, and Edge,[™] Satcon's next-generation MPPT solution.

History of Innovation

The proven leader in solar PV inverter solutions for commercial installations, Satcon sets the standards for efficient large-scale power conversion. From the introduction of the first single-cabinet PV inverter, to the first high-efficiency power conditioning system for commercial PV inverters, to the groundbreaking 1 MW PV inverter—Satcon continues to lead the way.



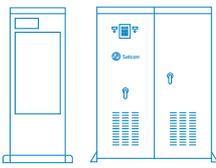
PowerGate Plus 500 kW

Wide Range of Power Ratings

PowerGate Plus Models



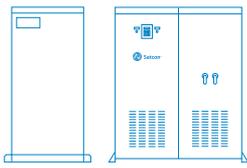
PowerGate Plus 30 kW



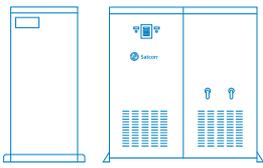
PowerGate Plus 50 kW



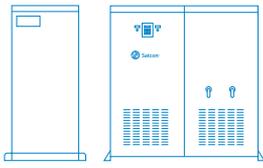
PowerGate Plus 75 kW



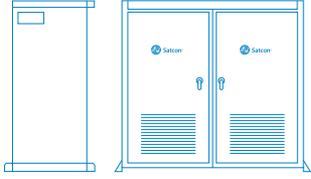
PowerGate Plus 100 kW



PowerGate Plus 135 kW



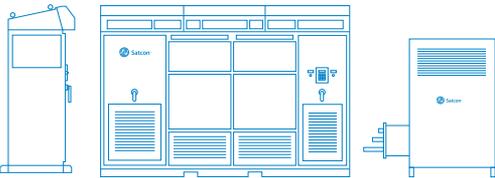
PowerGate Plus 150 kW



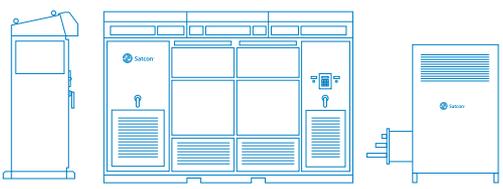
PowerGate Plus 225 kW



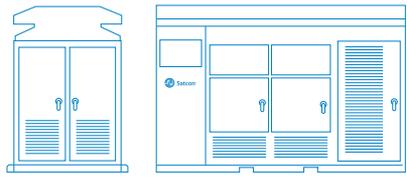
PowerGate Plus 250 kW



PowerGate Plus 375 kW



PowerGate Plus 500 kW



PowerGate Plus 1 MW
(External Transformer Required)

Proven Reliability

Rugged and reliable, PowerGate Plus PV inverters are engineered from the ground up to meet the demands of large-scale installations.

Low Maintenance

- Proven track record of reliable performance
- Modular components make service efficient
- Dual cooling fans

Safety

- Seismic Zone 4 compliant
- Built-in DC and AC disconnect switches
- Integrated DC two-pole disconnect switch isolates the inverter (with the exception of the GFDI circuit) from the photovoltaic power system to allow inspection and maintenance
- Built-in isolation transformer
- Protective cover over exposed power connections

Testing and Certification

- UL1741
- CSA 107.1-01
- IEEE 1547
- IEEE C62.41.2

Warranty

- Five years (standard)
- Extended service agreement (optional)

Performance Optimization



Unparalleled Performance

With 11 power ratings—ranging from 30 kW to 1 MW—Satcon offers the widest range of solar PV inverter solutions in the industry, enabling you to closely match array capacities and achieve maximum energy throughput.

Edge MPPT

Features a proprietary maximum power point tracking (MPPT) system

Provides rapid and accurate control

Improves performance by up to 20%, even in challenging climate conditions

Boosts overall PV plant kilowatt yield

Provides a wide range of operation across all photovoltaic cell technologies, including thin film, monocrystalline, and polycrystalline PV panels

Power and Efficiency Ratings

Eleven power ratings, ranging from 30 kW to 1 MW (UL and CE certified)

CEC efficiency rating:
97% to 98% (without transformer)
96% to 97% (with transformer)

CE efficiency rating:
97% to 98% (without transformer)

Ambient temperature range: -20° C (-4° F) to 50° C (122° F)

Full array nameplate power rating maintained throughout the entire MPPT DC voltage range

Superior dynamic performance in cloudy conditions

DC Inputs at Full Power

305–320V DC to more than 600V DC

420V DC to 850V DC

Printed Circuit Board Durability

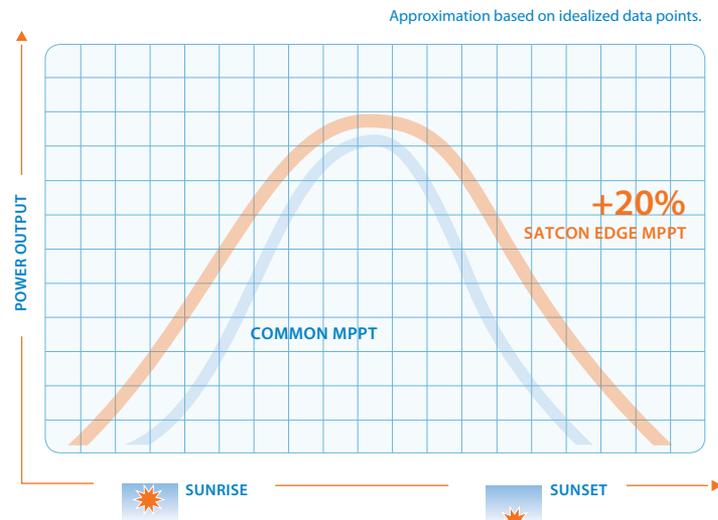
Wide thermal operating range: -40° C (-40° F) to 85° C (185° F)

Conformal coated to withstand extreme humidity and air-pollution levels

Satcon Edge MPPT

Boost PV plant yield up to 20 percent.

At the heart of PowerGate Plus is Edge, Satcon's next-generation power optimization solution. With rapid and accurate MPPT control, Edge increases PV plant kilowatt yield up to 20 percent by extending the production window of arrays, enabling them to operate at optimal voltage and current levels for longer periods of time—even in varied sun conditions. To maximize efficiency, Edge improves the performance of all PV technologies, including fixed and tracking solar arrays, enabling you to get the most from your investment.



Optimize voltage and current, even in harsh climates.

Edge achieves full nameplate power ratings across the entire MPPT DC voltage range. By optimizing output at the lowest end of the DC voltage range without limiting full kilowatt yield, Edge ensures that your PV system delivers maximum throughput, across all photovoltaic cell technologies, including thin film, monocrystalline, and polycrystalline PV panels. Rugged operating temperature ratings—up to 50° C (122° F)—enable PowerGate Plus PV inverters to achieve maximum efficiency, even when DC voltage output is at its lowest.

Maximize system throughput from end to end.

Edge accommodates a wide range of solar array input voltages—from 305–320V DC to more than 600V DC and from 420V DC to 850V DC—and converts DC power to grid-compatible AC power with unparalleled efficiency. With PowerGate Plus, you'll achieve maximum throughput and optimized performance—from the array to the grid.

Satcon PV View Plus

Monitor and control system performance and increase ROI.

Uptime, output, and overall profitability are dramatically reduced when system performance issues go unnoticed. To maximize efficiency, you need a comprehensive view of the array's performance—critical information that will help your team identify issues, improve throughput, and increase system uptime.

With Satcon PV View® Plus, an advanced layer of intelligence is added to PowerGate Plus, giving you complete visibility into and control over the variables that affect energy conversion. Real-time data acquisition and performance monitoring make it easy to assess array output, evaluate site conditions, pinpoint problems, and identify maintenance needs rapidly—before performance is compromised.

Manage your entire system through a single dashboard.

Using real-time sensing, PV View Plus monitors, analyzes, and delivers critical performance information through a centralized dashboard. By aggregating data, PV View Plus establishes benchmarks for normal performance, predicts anomalies, and provides system health information, making it easy to keep your PV plant operating at peak performance.



Intelligent Insight

With Satcon PV View Plus, you have unparalleled access to the critical information you need to keep your PV plant running at its peak efficiency.

Variables Monitored

Solar array power production (digital display that shows AC voltage, current, kVA, kVAR, and kW)

Power and energy output

Greenhouse gasses (emissions avoidance)

Inverter status

Inverter faults history

AC grid conditions

Weather station data

Photovoltaic system performance

Real-Time Sensing

Air temperature

PV array cell temperature

Irradiance

Wind speed and direction

Third-Party Compatibility

PowerGate Plus PV inverters are also compatible with leading third-party monitoring systems

Satcon. The standard for clean power.

www.satcon.com/go/powergateplus

PowerGate Plus Solar PV Inverters

Specifications			30 kW	50 kW	75 kW	100 kW	135 kW	150 kW	225 kW	250 kW	375 kW	500 kW	1 MW
Full-Power MPPT DC Input Range (V DC)	US	305–600	o	o									
		315–600			o	o							
		320–600						o		o	o	o	o
Low Voltage Tap Line ¹	EU	430–850				o		o		o		o	o
		20%	o	o	o	o	o	o	o	o	o	o	o
		Maximum Voc (V DC)	UL	600	o	o	o	o	o		o	o	o
Nominal Frequency Range (Hz)	CE	900				o		o		o		o	o
		US	59.5–60.5	o	o	o	o	o		o	o	o	o
AC Voltage Range Set Points	EU	49.5–50.5				o		o		o		o	o
		+/- 10%	o	o	o	o	o	o	o	o	o	o	o
Power Factor = Unity		>0.99	o	o	o	o	o	o	o	o	o	o	o
Harmonic Distortion		<3% THD	o	o	o	o	o	o	o	o	o	o	o
Efficiency w/ Transformer (CEC)		95%	o										
		95.5%		o					o				
		96%–97%			o	o	o	o		o	o	o	
Efficiency w/o Transformer		97%–98%						o		o		o	
Forced Air Cooling			o	o	o	o	o	o	o	o	o	o	o
Noise Level		<65 dB(A)	o	o	o	o	o	o	o	o	o	o	o
Ambient Temperature Range (°C)		-20 to +50	o	o	o	o	o	o	o	o	o	o	o
Enclosure Rating		NEMA 3R	o	o	o	o	o	o	o	o	o	o	o
Cabinet Finish (16-Gauge, Powder-Coated Steel)			o	o	o	o		o		o	o	o	o
Base and Door Finish (14-Gauge Powder-Coated Steel)			o	o	o	o		o		o	o	o	o
Cabinet, Base, and Door Finish (11-Gauge, Powder-Coated Steel)							o		o				
Seismic Rating		Zone 4	o	o	o	o	o	o	o	o	o	o	o

¹ Accommodates low solar array voltages by reducing minimum input voltage requirements by 20%.

o Standard o Optional Specifications are subject to change without notice.

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