

CAT® 3500 SERIES DIESEL GENERATOR SETS

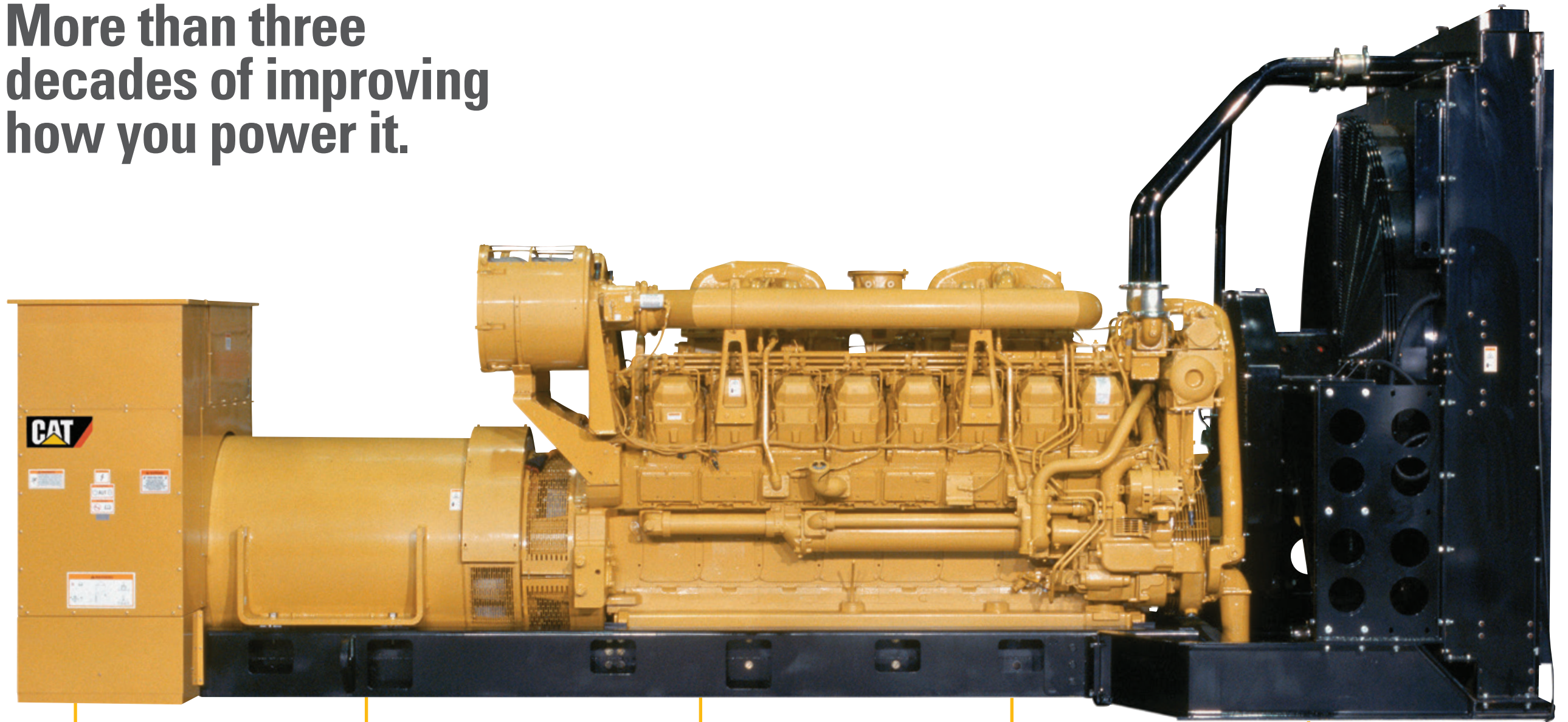
BUILT FOR IT.™



CAT® 3500 SERIES

WHAT'S YOUR APPLICATION?

More than three decades of improving how you power it.



HEALTHCARE

Our generator sets are trusted to provide any time, fully integrated, standby power to some of the world's largest hospitals. Extended oil change intervals and easy-to-maintain power systems mean less downtime for maintenance. With fast start times and the ability of all 3500 generator sets to accept 100 percent block load, power for your critical loads will be restored within 10 seconds.

DATA CENTER

We're supplying power so data centers around the world can seamlessly store and deliver information at their clients' request. Our standby power is configured to accommodate available space and environmental conditions: from open rooftops to crowded power rooms. And a customizable integrated system ensures non-stop power for an industry that never sleeps.

NUCLEAR

Our nuclear standby generator sets are engineered to meet specific regional requirements, from operation after a seismic disturbance to radiation-resistant materials – backed with the documentation to prove it. It's an industry with some of the most stringent standards and we're building to every one.

UTILITIES

We're providing continuous grid support to some of the largest cities and most remote communities, covering daily demands, peaks and sags in power. Our prime and backup generator sets are designed for permanent or temporary installation, capable of running in any environment. With leading fuel efficiency and low life cycle costs – it's a smarter way to supply power.

MINING

Our generator sets are a prime power source for mining operations across the globe. Far from available grid power, we're supplying the energy that production relies on. Our field-tested power capabilities and reliability make us a preferred power source for work in some of the most extreme climates.

WE'RE TAILORING POWER TO YOUR OPERATION — WHEREVER IT IS.



Dubai, United Arab Emirates

ROAD AND TRANSPORT AUTHORITY (RTA)/DUBAI METRO

The Dubai Metro system consists of a Red and Green line, spanning 46 miles (75 kilometers) with 47 stations. Backup power was needed to provide emergency power to the electric rails. Eight Cat® 3516 generator sets and eight Cat 3512 generator sets were installed as standby power for the electric rails responsible for the commute of 170,000 passengers a day.

Nashville, Tennessee

VANDERBILT UNIVERSITY MEDICAL CENTER

A leader in teaching and medical research, Vanderbilt University Medical Center (VUMC) needed backup systems to power acute, around-the-clock medical care. Four Cat 3512B generator sets and two 3512C generator sets were installed, providing 4500 kW with the capability to switch from main to backup units within 10 seconds of any interruption. New power systems were equipped to match strict noise, exhaust and fuel storage requirements.

“One of the main entrances to our clinic is directly across from this plant ... we start our generator sets up, and no one even looks over to see what’s happening. It’s truly impressive.”

— Chris Buckner
Lead Electrical Engineer with VUMC’s
Office of Space and Facilities Planning

Santo Domingo, Dominican Republic

CENTRO CUESTA NACIONAL (CCN)

Prone to heavy wind, rain and hurricane conditions capable of wiping out power for weeks, CCN installed two Cat 3512 diesel generator sets, producing up to 1,500 kW. The units are part of a Cat fleet supporting the company’s headquarters, as well as a 65,000-square-foot distribution facility, in the event of a power outage.

Moose Deer Point, Ontario, Canada

NIIGON TECHNOLOGIES LTD.

This state-of-the-art injection mold manufacturing company, Niigon, needed prime power to replace the unpredictable supply from the local grid. Niigon installed a Cat 3516 generator set producing 1,500 kW, in addition to a fleet of other Cat power systems to keep the factory running 24/7, free from costly disturbances.

Budapest, Hungary

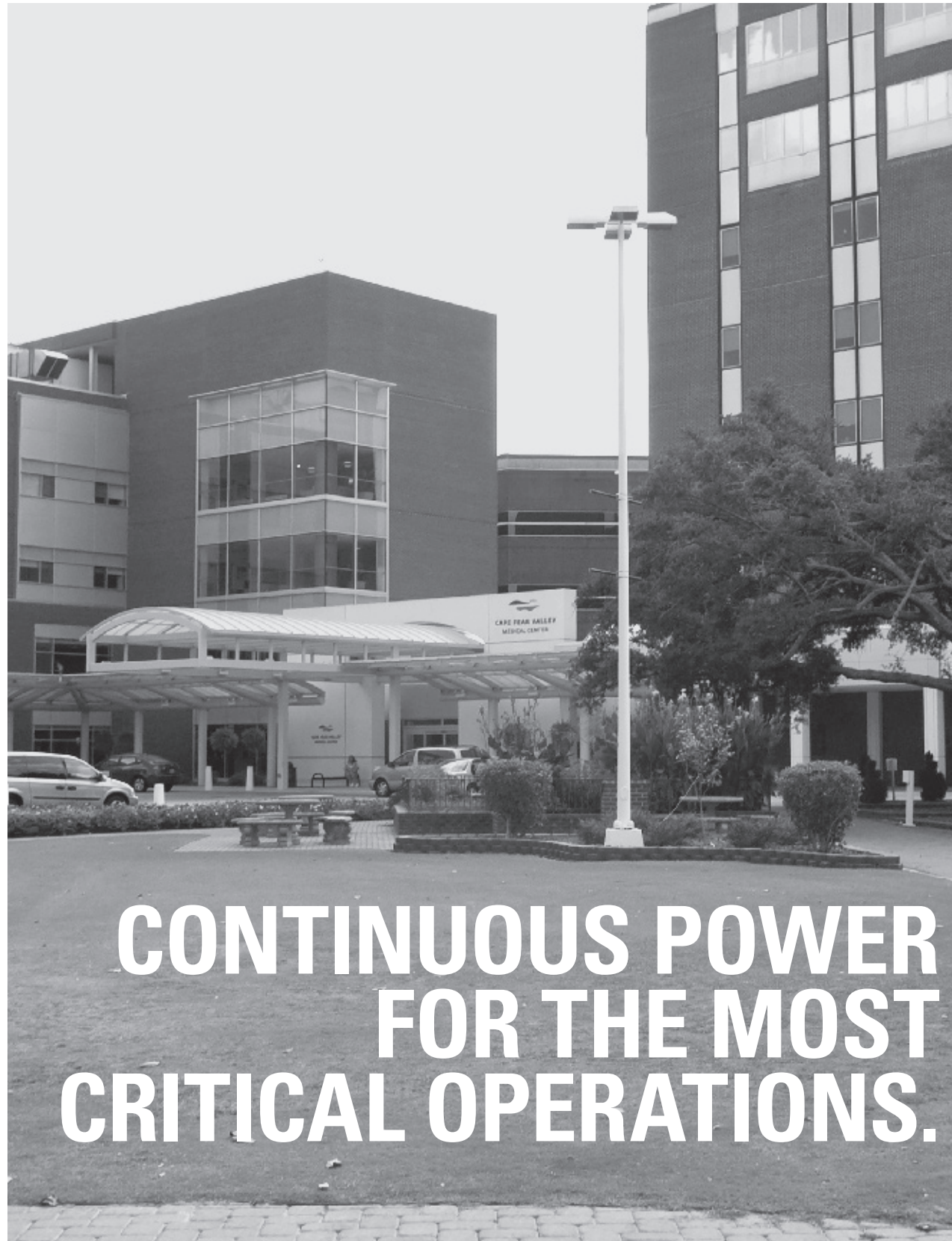
DOCLERWEB DATA CENTER

Providing co-location server hosting and application hosting to hundreds of customers around the world, DoclerWeb needed a standby power system capable of stepping in during even minor voltage sags or spikes. The company installed a Cat 3516B-HD diesel generator set, producing 2,500 kVA of low maintenance, cost-effective power.

Jakarta, Indonesia

P.T. SUMMARECON AGUNG/SUMMARECON MALL BEKASI

Summarecon Mall Bekasi is a modern shopping center located in West Java, Indonesia, part of the upcoming integrated commercial zone, east of Jakarta in the city of Bekasi, Indonesia. Four units of Cat 3516B-HD diesel generator sets provide a total of 8,000 kVA standby power for the family-centric mall with over 80,000 square meters of space for over 220 tenants and stores, spread across four floors.



CONTINUOUS POWER FOR THE MOST CRITICAL OPERATIONS.



"Reliability and service are the two biggest reasons we chose Cat products for our power needs. I sleep better at night knowing Cat generator sets are on the job."

— Pat Kear, Assistant Engineer for Cape Fear Valley Medical Center

Even though Cape Fear Valley Medical Center is located nearly 900 miles (1,450 kilometers) from New Orleans and 90 miles (145 kilometers) inland from the Atlantic Ocean, in 2005 Hurricane Katrina had a significant impact on its facility management team.

The medical center had always been proactive in emergency preparedness but, after hearing of several hospitals without functioning

emergency backup power systems, Cape Fear upgraded their emergency system. They purchased four Cat 3516C generator sets and paralleling switchgear to power critical loads in the event of a natural disaster. The units are capable of producing 10 MW of power and have additional fuel stored on site for 114 hours of operation. A Supervisory Control and Data Acquisition (SCADA) system enables power units to be remotely monitored at all times.

WHAT'S YOUR DEMAND?

DISCOVER A GENERATOR SET – MADE TO TAKE IT ON.

Cat 3500 Series diesel generator sets contain four-cycle diesel engines and provide leading startup capabilities. Our power systems are built to your industry's crucial conditions, demands, emissions standards and footprint. And every generator set installed comes backed by our global dealer network, offering genuine parts and on-site service.

PROVEN PERFORMANCE

We have over 150,000 engines in the field. They're trusted to power applications ranging from generator sets to trains, from boats to trucks.

RELIABLE POWER

Our generator sets have quick start capabilities and are designed to recover from a 100 percent block load. And every platform is built, inspected and tested to Caterpillar reliability and durability standards.

FLEXIBLE CONFIGURATIONS

Make our engines meet your needs. We optimize engines to minimize fuel consumption or emissions output, depending on your requirements. Select from optional attachments to fit your application, including high ambient radiators, heavy-duty air cleaners and on-package paralleling controls. And customize your power with output voltages ranging from 220V to 13,800V at 60 Hz and 220V to 11,000V at 50 Hz.

THE CAT 3500 SERIES LINEUP

YOU DECIDE THE DETAILS. WE'LL BUILD IT.

EPA TIER 4 FINAL / EMERGENCY STATIONARY EXEMPT (ESE)					
60 HZ MODEL	RATINGS (ekW)				PERFORMANCE STRATEGY
	STANDBY	MISSION CRITICAL	PRIME	CONTINUOUS	
3512C	1500	1500	1360	1230	EPA ESE
3516C	2000	2000	1825	1650	EPA ESE
3516C-HD	2500	2500	2250	2050	EPA ESE
3516C-HD	2000	2000	1825	—	Tier 4 Final
3516C-HD	2500	2500	2250	2050	Tier 4 Final

LOW FUEL CONSUMPTION / LOW EMISSIONS					
60 HZ MODEL	RATINGS (ekW)				PERFORMANCE STRATEGY
	STANDBY	MISSION CRITICAL	PRIME	CONTINUOUS	
3512	1100	1100	1000	890	Low Fuel Consumption
3512	1250	1250	1135	1010	Low Fuel Consumption
3512B	1400	1400	1275	—	Low Fuel Consumption, Low Emissions
3512B	1500	1500	1360	1230	Low Fuel Consumption, Low Emissions
3516	1750	1750	1600	1450	Low Fuel Consumption
3516B	2000	2000	1825	1640	Low Fuel Consumption, Low Emissions
3516B	2250	2250	—	—	Low Fuel Consumption, Low Emissions

LOW FUEL CONSUMPTION / LOW EMISSIONS					
50 HZ MODEL	RATINGS (kVA)				PERFORMANCE STRATEGY
	STANDBY	MISSION CRITICAL	PRIME	CONTINUOUS	
3512	1250	1250	1150	1000	Low Fuel Consumption
3512	1400	1400	1275	1206	Low Fuel Consumption
3512B	1500	1500	1360	—	Low Fuel Consumption, Low Emissions
3512B	1600	1600	1500	1320	Low Fuel Consumption, Low Emissions
3512B-HD	1750	1750	1600	—	Low Fuel Consumption, Low Emissions
3512B-HD	1875	1875	1700	1500	Low Fuel Consumption, Low Emissions
3516	2000	2000	1825	1600	Low Fuel Consumption
3516B	2250	2250	2000	1750	Low Fuel Consumption, Low Emissions
3516B-HD	2500	2500	2275	2000	Low Fuel Consumption, Low Emissions
3516C-HD	2750	2750	2500	—	Low Fuel Consumption, Low Emissions

ENGINEERING EVERY COMPONENT FOR THE MOST CRITICAL POWER NEEDS.



CAT® 3500 SERIES ENGINES

The 3500 Series engine platform is based on over 30 years of experience and is available in a number of configurations. From the mechanical engines that provide reliable operation to advanced electronic engines that can be optimized for either low emissions or low fuel consumption, there is a 3500 Series engine that will meet your needs.

EMCP 4 CONTROL PANEL

The 3500 Series generator set features the EMCP 4 series control. The EMCP 4 controllers provide engine and generator monitoring, control and protection. Modbus communications over optional Ethernet provide a high-speed connection for remote monitoring. The EMCP 4.3 and 4.4 controllers provide larger displays and multi-generator set paralleling.

COOLING SYSTEMS

The cooling system design has been matched to the performance characteristics of the engine. The design includes a 4°C temperature rise across the engine and a fouling factor to ensure performance for the life of the generator set. Package-mounted radiators are available for standard and high ambient installations.

GENERATORS

The generators have been specifically designed to work with the 3500 Series engine. Generators are available in cost-effective, random-wound configurations to robust form-wound generators for harsh environments.

Generators are available in a wide range of voltages, from 220V to 13,800V at 60 Hz and 220V to 11,000V at 50 Hz.

GENERATOR TERMINAL BOX

A number of extension boxes are available to enable the generator set to be configured to your needs. The terminal box allows for right-hand, left-hand, or rear access, with both top and bottom cable entry. The extension boxes support a plethora of circuit breaker options, including a full range of UL-listed and IEC-certified options.

PROVIDING A SEAMLESS POWER SUPPLY

INTEGRATED SYSTEMS

1 UNINTERRUPTIBLE POWER SUPPLY (UPS)

Surges, sags, spikes and failures aren't options, because when it comes to your business, every second counts. The Cat UPS storage with flywheel energy provides immediately available power to ride through disturbances and conditions power from the source. When integrated with other Cat products – including generator sets, Automatic Transfer Switch (ATS) and switchgear – you can be assured of the cleanest, most reliable source of power protection.

ADVANTAGES OF THE FLYWHEEL UPS TO YOU:

- 98 percent total flywheel system efficiency
- Lower operating/maintenance/replacement costs
- Smallest available footprint
- Complete system capable of operating at 40°C; no need to upsize HVAC systems
- Industry leading Total Cost of Ownership (TCO)

2 PARALLELING SWITCHGEAR

The amount of control you need changes depending on the demand. That's why, for simple or complex applications, Cat switchgear provides paralleling capability for multiple generator sets, with single or multiple points of utility connection.

Our switchgear also provides a single point of monitoring and control of your complete solution, including Cat ATS and Cat UPS. When you combine Cat switchgear with Cat generator sets, you get an integrated solution that meets your unique requirements.

ADVANTAGES TO YOU:

- Available 208 V to 35 kV
- Intuitive and easy-to-use graphical operator interface (minimizing potential for operator errors, and integrating other elements of your Cat system such as generator sets, ATS and UPS)
- Redundant communications bus and distributed control processing ensure the utmost in reliability for your business
- Automated reporting capability, including generation of custom reports and real-time PUE
- Available in a broad array of configurations, including highly customized designs, developed to address specific site requirements

3 AUTOMATIC TRANSFER SWITCH (ATS)

To ensure you have the power you need, a fully integrated system designed to operate together is crucial. And if your first indicator – your ATS – isn't reliable, your entire system can be compromised. Caterpillar offers you a broad range of transfer solutions and ATS products designed for mission critical applications. These transfer schemes can be arranged to suit any application from simple to highly complex multiple ATS/generator set switchgear systems.

ADVANTAGES TO YOU:

- Available in sizes from 40 to 5,000 amps in 2, 3 and 4 pole configurations
- Contactor and circuit breaker based solutions for flexible coordination
- Open, closed and delayed transition designs available to meet your specific needs
- Bypass / Isolation type ATS (UL/IEC type)
 - ATS and bypass mechanisms rack in/out with door closed to maximize operator safety
 - Load is not interrupted during bypass operation
 - Interchangeable ATS and bypass mechanisms provide the utmost in redundancy
 - Full automatic mode functionality is maintained with ATS in bypass

4 CUSTOM PACKAGING SOLUTIONS

No matter your location, a custom package containing Cat electric power equipment can meet your project specific needs. We've designed enclosures to withstand the most extreme environments and to provide solutions for your most complex design issues. Caterpillar can provide the flexible resources to design and procure parts not available in our standard price list, so that you can meet and exceed your project goals.

ADVANTAGES TO YOU:

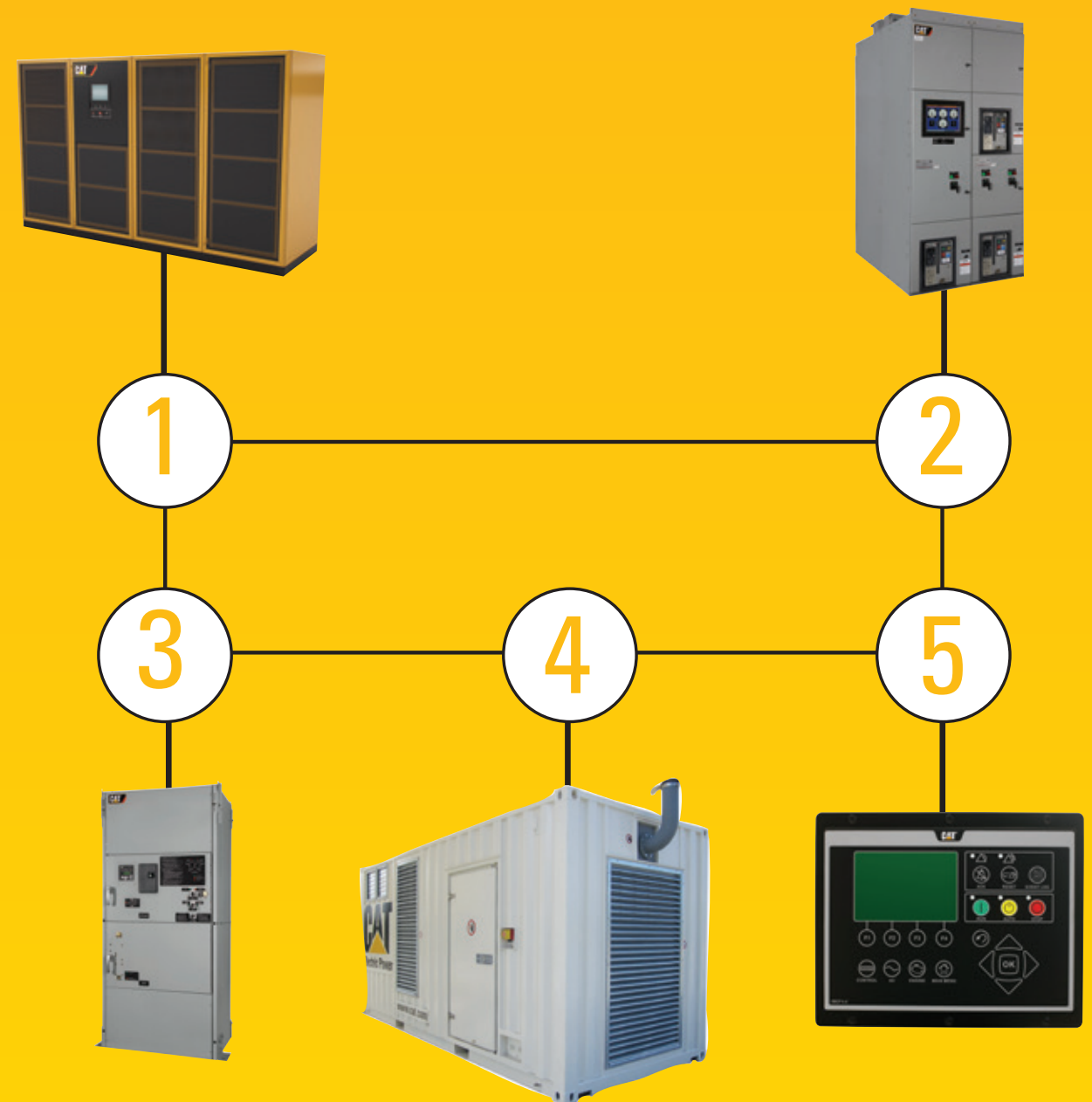
- Accountability for entire package and system integration
- Complete set of documentation from single provider
- Reduction of inventory carrying costs and labor resources
- Ability to leverage global Cat parts and service network
- Worldwide Caterpillar warranty

5 CONTROLS – EMCP 4

The EMCP 4 controllers feature the reliability and durability you have come to expect from your Cat equipment. EMCP 4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. These systems can be further customized to meet your needs through programming and expansion modules.

ADVANTAGES TO YOU:

- Intuitive navigation and configuration
- Advanced telemetry capabilities for remote communications to ensure safety for operators
- Complete engine and generator monitoring, protection and control
- Generator protective relays, including over/under voltage, over/under frequency, over current and reverse power
- Communication options over Modbus and Ethernet
- Expansion modules, including local annunciators, remote annunciators, input/output and generator temperature monitoring



PROTECTING YOUR OPERATION WITH EXPERT SUPPORT.

FINANCING SERVICES

Whether you're installing an entire fleet or adding units for redundancy, Cat Power Finance can offer you customized payment plans and competitive rates. We're in a better position than any bank or lender to value equipment and structure options: from project to structure financing, leasing to general financing. We're working to make our solutions match your needs and fit your schedule.

PARTS AVAILABILITY

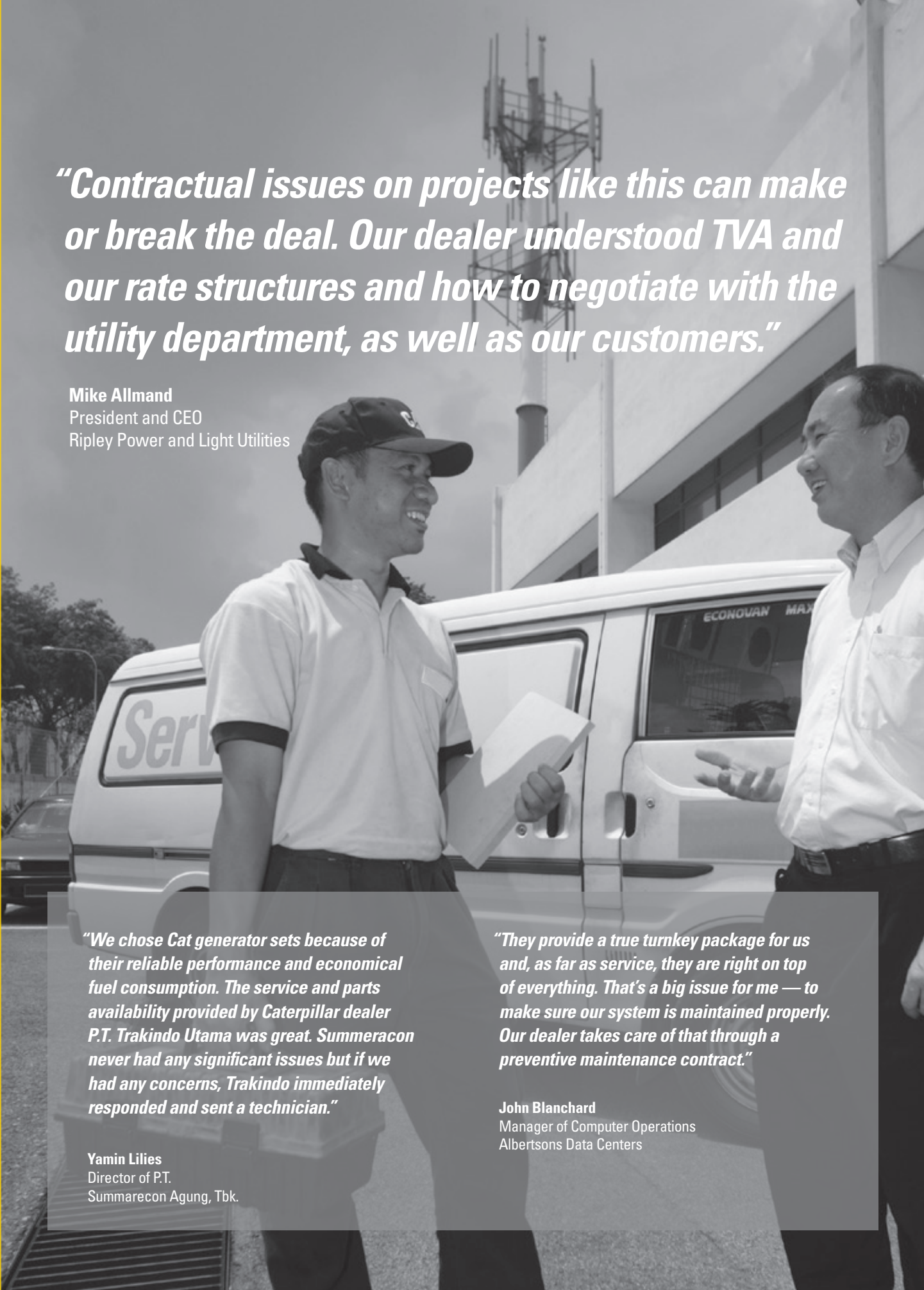
Your Cat dealer is equipped with a parts inventory and access to the global Cat parts network to fulfill 98 percent of parts orders within 24 hours from the time of order. We know that having the right parts on hand is crucial to keep your power system running, so we also provide 24/7 access to information at parts.cat.com. Here you will find videos, reference material and specs on Cat original, Classic™ and remanufactured parts, as well as information on repair and maintenance parts for your Cat Electric Power products, all manufactured to original equipment specifications and recommended by Caterpillar.

EXTENDED SERVICE COVERAGE (ESC)

Your ESC offers transferable coverage beyond the standard warranty period for all Cat Electric Power equipment. ESC protects against unexpected repair bills, and offers a hedge against rising parts and labor costs by providing 100 percent parts and labor reimbursement for covered components, less any applicable deductible. The broad range of coverage options, which can be customized to suit your individual needs, combined with simple pricing terms, provides confidence and peace of mind toward your power system's performance.

CUSTOMER SUPPORT AGREEMENTS (CSA)

Your CSA is an individualized arrangement between you and your Cat dealer that helps you maintain your products while lowering your cost per unit of production, regardless of the size or age of your product. Agreements are tailored to fit your business needs and can range from simple preventive maintenance kits to sophisticated total cost performance guarantees. No matter which option you choose, you can be assured that your Cat dealer will provide you with the careful planning and ongoing attention that will help you succeed.



“Contractual issues on projects like this can make or break the deal. Our dealer understood TVA and our rate structures and how to negotiate with the utility department, as well as our customers.”

Mike Allmand
President and CEO
Ripley Power and Light Utilities

“We chose Cat generator sets because of their reliable performance and economical fuel consumption. The service and parts availability provided by Caterpillar dealer P.T. Trakindo Utama was great. Summarecon never had any significant issues but if we had any concerns, Trakindo immediately responded and sent a technician.”

Yamin Lilies
Director of P.T.
Summarecon Agung, Tbk.

“They provide a true turnkey package for us and, as far as service, they are right on top of everything. That's a big issue for me — to make sure our system is maintained properly. Our dealer takes care of that through a preventive maintenance contract.”

John Blanchard
Manager of Computer Operations
Albertsons Data Centers

BUILT FOR IT.



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