

**FOLEY**  
POWER SOLUTIONS

**CAT**

# FOLEY POWER SOLUTIONS

Dedicated to empowering progress by providing unmatched support and service for over 80 years.





# POWERING WHAT MATTERS

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**MOST.**

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## 4 HISTORY

# KEEPING YOU PRODUCTIVE AND PROFITABLE FOR OVER 80 YEARS

Whether it's your job to keep a factory running, to light a city, unearth hidden resources, power the places that save lives, or distribute data, we know it's more than the job you show up for, it's what you've been entrusted with.

With over 80 years of customer service excellence and market leading technical experience, Foley Power Solutions is the exclusive specialized Cat Power Systems dealer in Kansas and NW Missouri. We supply the full range of integrated Cat Power System solutions, full turnkey installations, project management, service delivery and support for electric power, microgrids, energy as a service, industrial engines, petroleum and oil and gas applications.

Our in-house Advanced Electrical Services Team focus on complex and comprehensive modifications and repairs to Peak Shave/Parallel Switchgear Controls, Automatic Transfer Switches (ATS) and Generator Control Systems. We also specialize in providing the infrastructure needed for powering zero emission vehicles.



## SYSTEMS

We deliver standalone engines, diesel and gas generators and renewable energy and hybrid options. Our fleet also comprises rental power generators, air compressors and temperature control units, switchgear, battery and flywheel interruptible power systems (UPS) and critical power solutions. All of our integrated power systems provide continuous reliable and seamless prime and standby power with 24/7 dependability.

## SOLUTIONS

We are market leaders in developing customized solutions encompassing engineering, installation and commissioning, testing, in-house design and sourcing of control systems. Our turnkey solutions are delivered by our Project Services Division who are proven leaders in 'Build Own Operate' project management and construction services. We also lease power generation, air compressors and temperature control equipment, sell new and used products and offer finance options to purchase.

## SUPPORT

Our end-to-end solutions are supported by the unparalleled engineering, technical and after-sales servicing expertise of our internal experts and wider dealer and network partners. This combination gives us a market-leading strategic presence across North America.

# A HISTORY OF SOLVING YOUR NEXT CHALLENGE

Foley Power Solutions is structured around our key service and solution offering to best cater to the needs of the market. The four primary divisions are Sales, Project Services, Advanced Electrical Systems and Rental/Used.

### NEW POWER SALES

New generator, engine, microgrid and power storage sales.

### PROJECT SERVICES

In-house engineering team for design assistance and complete turnkey solutions.

### ADVANCED ELECTRICAL

Switchgear controls, automatic transfer switches, and Uninterrupted Power Supply (UPS) control systems.

### POWER RENTAL & USED SALES

Rental and used generators, compressed air and temperature control equipment

### ENERGY AS A SERVICE

Managed services, and cutting-edge technology to enhance opportunities of distributed generation and storage assets.

## 6 CAPABILITIES

# CUSTOMIZED SOLUTIONS

As specialists in the design, engineering, procurement, packaging, installation and commissioning of diesel and gas fueled engine power generation systems, our engineering team delivers turnkey projects of all sizes and applications. This includes management of cost estimation and planning, design and engineering, project management, scheduling and construction, testing, installation and commissioning.



### POWER GENERATION DEVELOPMENT

We can also combine Caterpillar's technology and finance services with EPSA-integrated project delivery capabilities to provide customized Build Own Operate (BOO) and Build Own Operate Transfer(BOOT) structured deals.



### PROJECT MANAGEMENT AND CONSTRUCTION

Turnkey project and site management, health, safety and environment documentation and management, quality system documentation and management, risk assessment and management, sub-contractor management, procurement, off-site fabrication, and customized project-specific manuals and documentation.



### TURNKEY PROJECT MANAGEMENT

Cost estimation and planning, design and scheduling, procurement, installation, and commissioning.



### DESIGN AND ENGINEERING

Feasibility and concept design, load analysis, engine sizing/selection, noise modeling, grounding and protection studies, utility approvals and permitting, environmental and emissions modeling, construction approvals, mechanical and electrical design, systems integration, and whole-of-life costing..



### INSTALLATION AND COMMISSIONING

Integrated site installation and construction, construction supervision, specialist engine and generator technicians, installation of electrical and balance of plant systems, fuel system and exhaust system installation; and specialist on-site services.



### TESTING

Factory assessment testing, on-site testing, surveys, and control and monitoring system testing.

# CAT POWER PRODUCTS

We supply new and used Cat engines, generator sets and engineered solutions including electric power engines and generators, renewable energy, microgrid systems, marine power products and services and industrial engines and packages. We also supply petroleum, oil and gas engines, generators and transmissions, rental generators, temperature control units, HVAC and air compressors, and used products (Cat-certified, ex-rental fleet and Cat quality rebuilds).

## Electric Power

Diesel generators (12-4000 kW), gas generators (25-2000kW).

## Advanced Electrical Systems

Flywheel and battery Uninterrupted Power Supply (UPS), Switchgear & Transfer Switches (Cat, ASCO, Enercon, Russelectric, GE Zenith) and critical power solutions.

## Microgrids

Renewable resources, (solar hybrid generation packages).

## Industrial & Marine Engines

Industrial diesel and natural gas engines, industrial power packs, repower packages, transmissions, commercial and pleasurecraft.

## Petroleum, Oil and Gas

Petroleum engines and generators, hazardous area packages, transmissions, and wellhead gensets.

## Energy as a Service (EaaS)

Distributed generation and storage assets, energy monitoring and resource management systems.



# BUILDING YOUR GENERATOR SET WITH ADVANCED SYSTEMS

### ENGINE CONTROLS

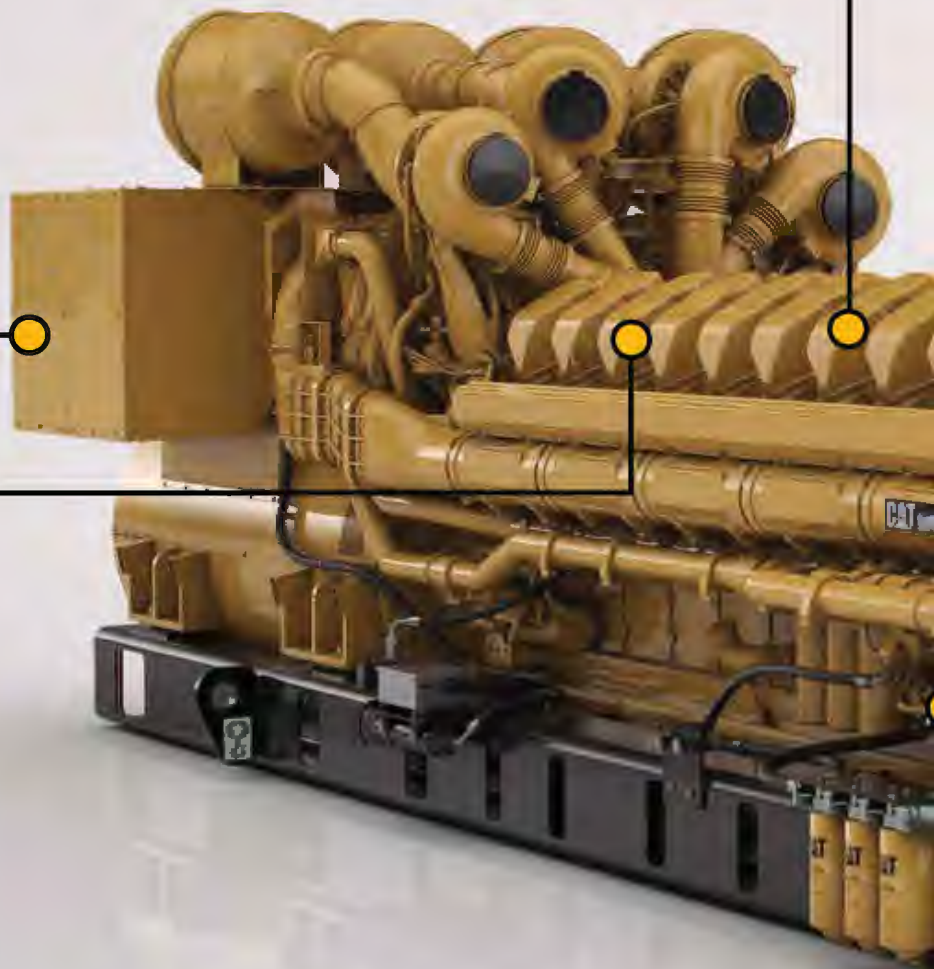
A robust control system features more pressure and temperature sensors for enhanced engine monitoring.

### MANAGING AIRFLOW

- A tall cross-flow cylinder head accommodates larger ports and helps direct a large amount of cool air into the cylinder with the least resistance for best port performance.
- Improved breathing enables a greater amount of cool air in and out of the engine, to help produce higher power ratings.

### FUEL SYSTEM

- Features the Cat Common Rail fuel system for full control of fuel delivery and fuel pressure at any load or speed, for superior transient response and block load acceptance, as well as shorter recovery time.
- Improves cold start capability and lowers fuel consumption.



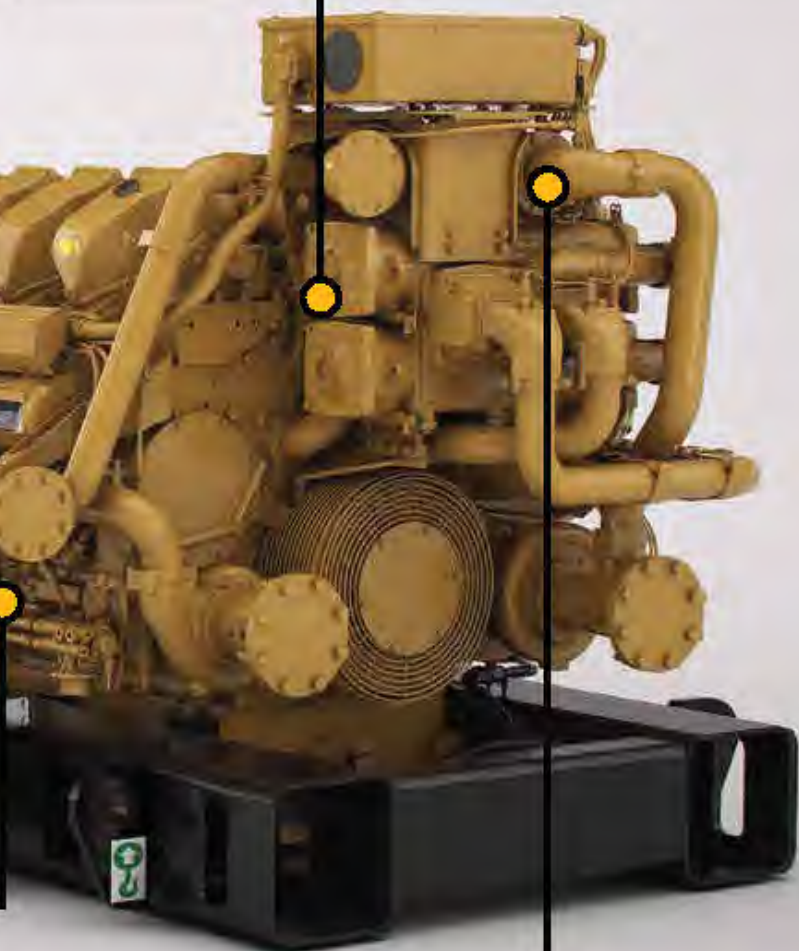


**CORE ENGINE COMPONENTS**

- Designed for higher strength, durability, and compactness.
- A bigger, robust steel-forged crankshaft handles higher loads while the cast iron engine block provides increased strength and lighter weight so you get more power out of a small package.

**LUBE SYSTEM**

Features two piston cooling jets per piston, plus a large capacity oil pump and a pressure regulation valve that help maintain optimum oil pressure at all speeds and loads throughout the life of the engine.



**COOLING SYSTEM**

Designed to minimize heat rejection by cooling only the parts that require it, resulting in up to a 30 percent improvement in heat rejection per kW produced.

# CAT QUALITY & RELIABILITY GENERATOR SETS

need consistency in power. The C175-16 and C175-20 generator sets are built with ingenuity.

Our service excellence is underpinned by the Caterpillar guarantee of dependability, reliability and efficiency. Our modularly designed equipment allows for scalable, customized solutions for differing energy demands. This improves mobilization, set-up and commissioning and in turn reduces costs and delay risks, which can affect production and/or service delivery. Our fleet size and footprint allows for rapid mobilization by land, sea and air when an emergency arises. Our expertise to deliver the right solution at the right time underpins our reputation as a supplier of choice.

**ADVANTAGES:**

- Powered by Cat engines for the reliability you demand
- Wide range of factory-designed options to meet your requirements
- Easy to specify, permit, install, and test
- Low life cycle costs
- Excellent transient response and steady-state performance
- Emissions compliance with most worldwide regulations
- Single source and turnkey support from the Cat dealer network

# INTEGRATED SOLUTIONS WITH YOU IN MIND

## UNINTERRUPTIBLE POWER SUPPLY (UPS)

Surges, sags, spikes, and failures aren't options, because when it comes to your business, every second counts. 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, ATS, and switchgear – you can be assured of the cleanest, most reliable source of power protection.

### ADVANTAGES OF THE FLYWHEEL UPS:

- 98% total flywheel system efficiency
- Lower operating/maintenance/replacement costs
- Smallest available footprint
- Complete system capable of operating at 40°C; no need to up-size HVAC systems
- Industry leading total cost of ownership

## 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.

### CONTROLS - EMCP 4 ADVANTAGES:

- 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, overcurrent and reverse power
- Communication options over Modbus and Ethernet
- Expansion modules, including local annunciators, remote annunciators, input/output and generator temperature monitoring

## 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.

Saving you time, effort, money – and worry. That's our role in developing a customized power system for you. You can expect strong, expert support throughout the configuration, installation and operation of your system.

And with Foley Power Solutions, you have the benefit of a single-source provider for all of the products you need to power your operation, and the necessary parts and support to keep it up and running. **What does an integrated solution mean for you?** It means getting the answers you need from one convenient partner, saving you time and work so you can keep focused on the job ahead.

## 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.

### PARALLELING SWITCHGEAR ADVANTAGES:

- 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 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 power use effectiveness (PUE)
- Available in a broad array of configurations, including highly customized designs, developed to address specific site requirements

### PACKING SOLUTION ADVANTAGES:

- Accountability for entire package and system integration
- Complete set of documentation from single provider
- Reduction of inventory carrying costs and labor resources

## 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. Foley Power Solutions 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.

### ATS ADVANTAGES:

- Available in sizes from 40 to 5,000 amps in 2, 3, and 4 pole configurations
- Contractor 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

- Ability to leverage global Cat parts and service network
- Worldwide warranty

# POWER FOR A CHANGING WORLD

## SOLAR POWER

Businesses need a reliable power source that meets their specific requirements.

Cat® solar power systems increase your energy efficiency with no reliance on the grid, while smart energy storage conserves excess power to be used during peak periods or power outages, providing sustainable, low-cost power that achieves your business needs and sustainability goals.

- Maximum energy efficiency
- Lower operating costs
- Reliable even in the most challenging environments

## ENERGY STORAGE & DISTRIBUTION

Energy storage will be one way to offer short-term backup power. Foley Power Solutions can provide on-site Cat energy storage systems to help stabilize transient loads, supply and absorb AC power, and transfer energy from time-of-generation to time-of-use with the added benefit of being carbon free.

Stored energy can also be used to participate in grid services markets to avoid costs or receive financial compensation.

Meet with our energy experts to develop an Energy as a Service offering, customized to your unique operation.

## GAS-FUELED GENERATORS

From natural disasters to unplanned power outages, industry-leading Cat gas-fueled generator sets provide reliable power when the grid no longer can. Our gas generators can run on natural gas or renewable fuels such as hydrogen to make your operation more sustainable and reduce your utility costs.

- Quick start capability
- EPA certified
- Flexible fuel options



**PICTURED:**  
Cat's XES120 (50 Hz)  
Compact Energy  
Storage System

- Monitor and manage all on-site assets with distributed energy management technology
- Anticipate grid conditions and monitor changes in demand across utility service areas with distributed asset monitoring software
- Automatically dispatch on-site assets for power generation and storage during peak demand times for optimal savings
- Export power to the grid to receive compensation from utilities
- Increase revenue and ensure energy supply without disrupting operations



## MICROGRIDS

What happens when you combine high efficiency solar power, smart energy storage, and reliable gas generators?

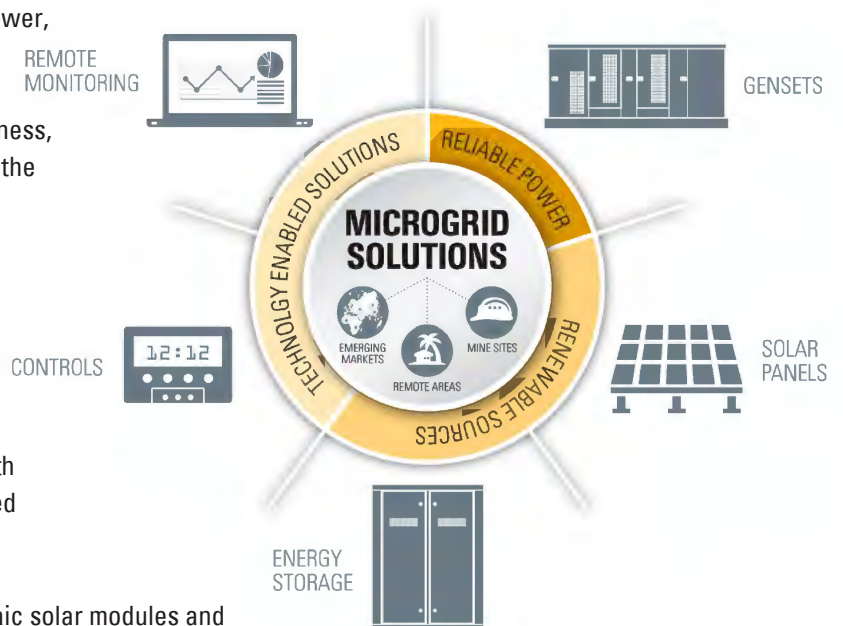
You get a complete microgrid system to support your business, lower your total energy costs, and reduce your burden on the utility grid.

- Flexible, reliable power when and where you need it
- Stay powered up even when the grid goes down
- Optimize cost of ownership and meet your sustainability goals

Foley Power Solutions can integrate renewable power with smart energy storage and conventional diesel or gas fueled power generation.

The Cat Microgrid system, which contains both photovoltaic solar modules and energy storage, provides:

- Increased energy efficiency with no reliance on the grid and optimal total cost of ownership
- Smart Microgrids mean efficient power that can be produced where and when it's needed without transmission lines and transformer losses
- High performance, scalable system designed and built using standardized building blocks that are easy and quick to install even in challenging environments



## ZERO EMISSION VEHICLE CHARGING

Commercial electric vehicle charging infrastructure is part of Foley Power Solutions offerings. We will guide you through this process and offer a comprehensive solution to support your transition to zero-emissions. We have charging systems that include fixed DC fast charging infrastructure, coordinating with power utility companies, smart charging software, networking, permitting requirements and estimated project timelines.



# 14 PRODUCT GUIDE

## Electric Power Generator Set Packages - Diesel



### 60 Hz, 36 - 750 kW Diesel Ratings

Single Phase Output* 1800 rpm			
ekW			
Model	Standby/Prime	Engine	Configuration
D40S	40/36	C4.4	ESE
D50S	50/45	C4.4	ESE
D60S	60/55	C4.4	ESE
D80S	80/72	C4.4	ESE
D100S	100/90	C4.4	ESE
Three Phase Output** 1800 rpm			
Model	Standby/Prime	Engine	Configuration
D40	40/36	C4.4	ESE
D50	50/45	C4.4	ESE
D60	60/55	C4.4	ESE
D80	80/72	C4.4	ESE
D100	100/90	C4.4	ESE
D125	125/114	C7.1	ESE
D150	150/136	C7.1	ESE
D175	175/158	C7.1	ESE
D200	200/NA	C7.1	ESE
200	200/180	C9	ESE
250	250/225	C9	ESE
300	300/275	C9	ESE
350	350/320	C13	ESE
400	400/365	C13	ESE
350	350/320	C15	ESE
400	400/365	C15	ESE
450	450/410	C15	ESE
500	500/455	C15	ESE
500	500/455	C18	EPA Tier 4 Final
550	550/500	C18	ESE
600	600/545	C18	ESE
650	650/600	C18	ESE
700	700/635	C18	ESE
750	750/680	C18	ESE

\*All ratings at 1.0 pf.

\*\*All ratings at 0.8 pf. ESE = "EPA Stationary Emergency"

### 60 Hz, 180 - 4000 kW Diesel Ratings

Three Phase Output* 1800 rpm			
ekW*			
Model	Standby/Prime	Continuous	Configuration
C9	200/180	-	ESE
C9	250/225	-	ESE
C9	300/275	-	ESE

### 60 Hz, 180 - 4000 kW Diesel Ratings (Cont.)

Three Phase Output* 1800 rpm			
ekW*			
Model	Standby/Prime	Continuous	Configuration
C13	350/320	-	ESE
C13	400/350	-	ESE
C15	450/410	-	ESE
C15	500/455	-	ESE
C18	500/455	-	EPA Tier 4 Final
C18	550/500	-	ESE, Low BSFC
C18	600/545	-	ESE, Low BSFC
C18	650/600	-	ESE, Low BSFC
C18	700/635	-	ESE, Low BSFC
C18	750/680	-	ESE, Low BSFC
C27	750/680	-	ESE, Low BSFC
C27	800/725	-	ESE, Low BSFC
C32	1000/910	830	ESE, Low BSFC
C32	1100/1000	-	ESE, Low BSFC
C32	1250/1136	-	ESE, Low BSFC
3512C	1500/1360	1230	ESE
3512C	1750/NA	-	ESE
3516C	2000/1825	1650	ESE
3516C	2000/1825	1650	EPA Tier 4 Final
3516C	2250/2045	-	ESE
3516C	2500/2250	2050	ESE
3516C	2500/2250	-	EPA Tier 4 Final
3516E	2750/2500	-	ESE
3516E	3000/2725	-	ESE
C175-16	3000/2725	2500	EPA Tier 4 Final ESE, Low BSFC
C175-16	3250/3000	-	ESE
C175-20	3500/3180	-	ESE
C175-20	3900/3500	3150	ESE, Low BSFC
C175-20	4000**/3600**	3250**	ESE, Low BSFC

\*All ratings at 0.8 pf.

\*\*Rating does not include package mounted radiator. ESE = "EPA Stationary Emergency"

### 60 Hz, 1525 - 5320 kW Diesel Ratings

900 rpm			
ekW			
Model	Standby/Prime	Continuous	Configuration
C280-8*	NA/2420	2200	EPA Tier 4 Final
C280-12*	NA/3640	3300	EPA Tier 4 Final
C280-16*	NA/4840	4400	EPA Tier 4 Final

\*Tier 4 Final is met using AVERAGE, BANKING, and TRADING PROGRAM.

## 60 Hz, 40 - 1250 kW Diesel - GC North America

Single Phase Output* 1800 rpm			
ekW			
Model	Standby/Prime	Engine	Configuration
D40 GC	40/NA	C4.4	EPA Tier III
D50 GC	50/NA	C4.4	EPA Tier III
D60 GC	60/NA	C4.4	EPA Tier III
D80 GC	80/NA	C4.4	EPA Tier III
D100 GC	100/NA	C4.4	EPA Tier III
D125 GC	125/NA	C7.1	EPA Tier III
D150 GC	150/NA	C7.1	EPA Tier III
D175 GC	175/NA	C7.1	EPA Tier III
D200 GC	200/NA	C7.1	EPA Tier III
D250 GC	250/NA	C9	ESE
D300 GC	300/NA	C9	ESE
D350 GC	350/NA	C13	ESE
D400 GC	400/NA	C13	ESE
D450 GC	450/NA	C15	ESE
D500 GC	500/NA	C15	ESE
D550 GC	550/NA	C18	ESE
D600 GC	600/NA	C18	ESE
D800 GC	800/NA	C27	ESE
D1000 GC	1000/NA	C32	ESE
D1250 GC	1250/NA	C32	ESE

\*All ratings at 0.8 pf. ESE = "EPA Stationary Emergency"

## 60 Hz, 59 - 2500 kVA Diesel Ratings - Rental Power

1800 rpm			
kVA			
Model	Standby/Prime	Continuous	Configuration
XQ60	NA/59	-	EPA Tier 4 Final
XQ125	138/125	-	EPA Tier 4 Final
XQ230	250/228	-	EPA Tier 4 Final
XQ425	469/425	-	EPA Tier 4 Final
XQ570	625/568	-	EPA Tier 4 Final
XQ1140	1250/1136	-	EPA Tier 4 Final
XQ2280	2500/2280	-	EPA Tier 4 Final

## Electric Power Generator Set Packages - Gas



### 60 Hz, 175 - 450 kW Ratings - Natural Gas

Three Phase Output* 1800 rpm			
ekW			
Model	Standby	Engine	Configuration
DG175-1 GC	175	14.2	ESE
DG175-2 GC	175	14.2	ESE
DG200-1 GC	200	14.2	ESE
DG200-2 GC	200	14.2	ESE
DG230-1 GC	230	14.2	ESE
DG230-2 GC	230	14.2	ESE
DG250-1 GC	250	14.2	ESE
DG250-2 GC	250	14.2	ESE
DG275-1 GC	275	14.2	ESE
DG275-2 GC	275	14.2	ESE
DG300-1 GC	300	14.2	ESE
DG300-2 GC	300	14.2	ESE
DG350-1 GC	350	21.9	ESE
DG350-2 GC	350	21.9	ESE
DG400-1 GC	400	21.9	ESE
DG400-2 GC	400	21.9	ESE
DG450-1 GC	450	21.9	ESE
DG450-2 GC	450	21.9	ESE

\*All ratings at 0.8 pf.

### 60 Hz, 350 - 2500 kW Ratings - Natural Gas

Three Phase Output* 1800 rpm			
ekW			
Model	Standby	Engine	Configuration
DG350	350	CG18	EPA Factory Certified
DG400	400	CG18	EPA & ESE Factory Certified
DG450	450	CG18	EPA Factory Certified
DG500	500	CG18	EPA Factory Certified
G3412C	423	G3412C	-
G3412C	500	G3412C	-
G3412	500	G3412 with FAST RESPONSE	EPA Factory Certified
G3512	750	G3512 with FAST RESPONSE	EPA Factory Certified
G3512	1000	G3512 with FAST RESPONSE	EPA Factory Certified
G3516	1500	G3516 with FAST RESPONSE	EPA Factory Certified
G3520	2000	G3520 with FAST RESPONSE	EPA Factory Certified
G3520	2500	G3520 with FAST RESPONSE	EPA Factory Certified

\*All ratings at 0.8 pf.

The following Certifications are applicable for US Sales:

ESE = "EPA Stationary Emergency"

SCAQMD = "South Coast Air Quality Management District"

EPA = "EPA Non-Emergency"

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## 60 Hz, 253 - 4050 ekW Ratings - Natural Gas

1800 rpm	
Model	ekW Continuous*
G3406	235
G3412	253
CG132B-8	400
G3412	423
G3412C	453
CG132B-12	600
CG132B-16	800
G3516	1300
G3516C	1663
G3520C	2077
1500 rpm	
CG170-12	1125
CG170-12	1200
G3512H	1490
CG170-16	1500
CG170-16	1560
G3516H	1982
CG170-20	2000
G3520H	2483
900 rpm	
CG260-12	3000
CG260-16	4000
CG260-16	4050

\*All ratings at 0.8 pf. Note: Electric output depends on final generator specification. <250 mg NO<sub>x</sub>/Nm<sup>3</sup> at an oxygen content of 5% O<sub>2</sub>.

## 60 Hz, 194 - 3510 ekW Ratings - Biogas

1800 rpm	
Model	ekW Continuous*
G3412	194
CG132B-8	400
CG132B-12	600
CG132B-16	800
1200 rpm	
G3516	824
G3516+	1000
G3520C	1626
1500 rpm	
CG170-12	1200
CG170-16	1560
G3520C	1950
CG170-20	2000
900 rpm	
CG260-16	3510

\*All ratings at 0.8 pf.

## 60 Hz, Gas Power Solution Ratings - 1500 - 2500 ekW

Three Phase Output* 1800 rpm		
Model	Continuous	Engine/ Configuration
G3512H	1500	CHP1500
G3516H	2000	CHP2000
G3520H	2500	CHP2500

For additional information, please consult the electric power experts at our dealership or refer to the Cat Electric Power Ratings Guide online.



## Electric Power Renewable Hybrid Solutions

### Inverter Options - UL Listed

Output	Voltage	Frequency
3 kW	208V - 240V, 1 Phase	60 HZ
3.8 kW	208V - 240V, 1 Phase	60 HZ
5 kW	208V - 240V, 1 Phase	60 HZ
6 kW	208V - 240V, 1 Phase	60 HZ
7 kW	208V - 240V, 1 Phase	60 HZ
7.7 kW	208V - 240V, 1 Phase	60 HZ
33.3 kW	480V, 3 Phase	60 HZ
50 kW	480V, 3 Phase	60 HZ
62.5 kW	480V, 3 Phase	60 HZ
125 kW	480V, 3 Phase	60 HZ
150 kW	480V, 3 Phase	60 HZ

**Note 1:** Inverter Products are not Cat branded.

**Note 2:** Check with our dealership for product availability which varies by region and delivery date.

### Weather Stations

Weather Stations provide a pre-engineered system that cost-effectively scales to Microgrid Solution size and complexity. The Weather station delivers best-practice PV performance tracking and correlation technology.



Basic Features	Class A	Class B	Class C
Plane of Array	•	•	•
Back of Module Temperature	•	•	•
Air Temperature	•	•	•
Relative Humidity	•	•	-
Wind Speed	•	•	-
Wind Direction	•	•	-
Barometric Pressure	•	•	-
Global Horizontal Irradiance	•	-	-



### Microgrid Master Controller (MMC)

Model	
<b>MMC-S</b>	The MMC-S is designed for applications with a limited number of power generation assets. It integrates the photovoltaic (PV) system, generator set, and energy storage system. It provides basic controls functionality.
<b>MMC-M</b>	The MMC-M is designed for applications with a moderate number of power generation assets. It integrates with the photovoltaic (PV) system, generator set, and energy storage system. The MMC-M provides intermediate controls functionality.
<b>MMC-Custom</b>	The MMC-Custom is designed for applications with a high number of power generation assets. It integrates with the photovoltaic (PV) system, generator set, and energy storage system. The MMC-Custom provides advanced or specialized controls functionality.



### Power Grid Stabilization (PGS)

Power Grid Stabilization modules provide a pre-engineered solution to energy storage needs. The modules integrate with diesel or gas generator sets, photovoltaic (PV), or other renewable systems to provide short duration power. The module holds closely regulated system voltage and frequency during periods of rapid load addition or removal, or during periods of intermittent output from the renewables.



Model	Nameplate Energy kWh	15 Minute Output kW	10 Second Output kW
<b>PGS840</b>	448	840	840
<b>PGS1260</b>	672	1170	1260
<b>PGS1260 HD Mobile</b>	672	1170	1260

### Energy Time Shift (ETS)

Energy Time Shift modules provide a pre-engineered solution to energy storage needs. The scalable system integrates with photovoltaic (PV) or other renewable systems to store energy from renewables, generator sets, or the grid for use at a later time. The ETS module contains the bi-directional power inverter with a fixed number of batteries and support equipment.



Model	Nameplate Energy kWh	Continuous Output kW
<b>ETS1500</b>	1518	570
<b>ETS1500</b>	1518	1000

### Energy Capacity Expansion (ECE)

The Energy Capacity Expansion modules provide increased energy capacity and discharge duration when connected for use with the ETS module.



Model	Energy kWh
<b>ECE 1500</b>	1518
<b>ECE 2000</b>	2024
<b>ECE 2500</b>	2530

## Mobile Generator Sets



### Rental Generator Sets

Model	Rating
<b>XQP30</b>	30 kVa
<b>XQ35</b>	35 kVa
<b>XQ60</b>	60 kVa
<b>XQP60</b>	60 kVa
<b>XQP100</b>	100 kVa
<b>XQ125</b>	125 kVa
<b>XG135</b>	170 kVa
<b>XQP150</b>	150 kVa
<b>XQ230</b>	228 kVa
<b>XQP275</b>	275 kVa
<b>XQP300</b>	300 kVa
<b>XG400</b>	500 kVa
<b>XQ425</b>	425 kVa
<b>XQP500</b>	500 kVa
<b>XQ570</b>	568 kVa
<b>XQP1100</b>	1100 kVa
<b>XQC1200</b>	1438 kVa
<b>XQ1475G</b>	1844 kVa
<b>XQC1600</b>	1893 kVa

## Electrical Systems



### Uninterruptible Power Supply

Cat® Flywheel UPS	
<b>UPS 300</b>	300 kVA
<b>UPS 600G</b>	300 kVA - 600 kVA
<b>UPS 750</b>	300 kVA - 1200 kVA
<b>UPS 1200Z</b>	300 kVA 1200 kVA

### Paralleling Switchgear

<b>Fully Customizable</b>	
<b>Modularization Capable</b>	
<b>Breaker Based - 208V to 38 kV</b>	
<b>Human Machine Interface (HMI) Controls</b>	
<b>Typical Applications:</b>	Emergency Standby Utility Paralleling Load Management

# 18 PRODUCT GUIDE

## Electrical Systems (50 Hz)



### Multi-Generator Paralleling Controls

#### Engine Paralleling and Integration Control

#### Integration Controls

#### Generator Set Paralleling Controls (External Circuit Breaker)

#### On-Package Genset Paralleling Controls

#### Field Expandable

Typical Applications:	Emergency Standby Utility Paralleling Load Management
-----------------------	---

### Automatic Transfer Switch (ATS)

Molded Case	UL-ANSI Type 600 V Class 30 A - 1600 A Open Transition Closed Transition Delayed Transition Bypass Isolation
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### Power Breaker

Features:	UL-ANSI Type 600 V Class 200 A - 5000 A Open Transition Closed Transition Delayed Transition Bypass Isolation
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## Electrical Systems (60 Hz)



### Uninterruptible Power Supply (UPS)

Uninterruptible Power Supply	480 V
Flywheel Standalone System (SMS and MMS)	300 kVA - 1200 kVA
Flywheel Parallel System	300 kVA - 8400 kVA
Double Conversion Stand Alone System	40 kVA - 225 kVA
Double Conversion Parallel System	40 kVA - 800 kVA

### Paralleling Switchgear

#### Fully Customizable

#### Modularization Capable

#### Breaker Based - 220V to 38 kV

#### Human Machine Interface (HMI) Controls

Typical Applications:	Emergency Standby Utility Paralleling Load Management
-----------------------	---

### Engine Transfer Load Manager (EXL)

#### Integration Controls

#### Generator Set Paralleling Controls (External Circuit Breaker)

#### Human Machine Interface (HMI) Controls

Typical Applications:	Utility Import and Export Base Load Operations Peak Shaving Emergency Standby
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### Multi-Generator Paralleling Controls

#### Engine Paralleling and Integration Control

#### Integration Controls

#### Generator Set Paralleling Controls (External Circuit Breaker)

#### On-Package Genset Paralleling Controls

#### Field Expandable

Typical Applications:	Emergency Standby Utility Paralleling Load Management
-----------------------	---

### Automatic Transfer Switch (ATS)

Features:	Molded Case 600 V Class 30 A - 4000 A Open Transition Closed Transition Delayed Transition Bypass Isolation
-----------	---

### Power Breaker

Features:	600 V Class 200 A - 5000 A Open Transition Closed Transition Delayed Transition Bypass Isolation
-----------	---

## Industrial Power Systems<sup>1</sup>



### Industrial Engines - Diesel

Model	hp	Model (cont.)	hp
C0.5	11 - 13.7	C4.4	142
C0.7	11.8 - 17.8	C7	300
C1.1	19.7 - 28	C7.1	217
C1.5	25 - 40	C7.1	275
C1.7	24 - 48	C9.3B	416
C2.2	42 - 74	C9	375
C2.8	67 - 74	C11	450
C3.6	74 - 134	C13	520
C4.4	99 - 200	3406C	361 - 465
C7.1	150 - 320	C15	595
C9.3B	308 - 456	C18	800
C9.3	400	C27	1150
C13B	456 - 577	C32	1350
C13	380 - 520	3412	624 - 724
C15	415 - 595	3508	630 - 1000
C18	575 - 800	3508B	1000 - 1100
C27	800 - 1050	3512	1020 - 1500
C32	951 - 1200	3512B	1500 - 1650
3516E	2100	3512C	1500
C0.5	13.7	3516	1356 - 2000
C0.7	20.5	3516B	2200
C1.1	28.2	3516C	2100
C1.5	40.2	3516E	2100
C2.2	66	3606	1988 - 2883
C2.8	74	3608	2800 - 2634
C3.6	121	3612	3983 - 5702
3054C	75 - 130	3616	5431 - 7644
C4.4	111.3		

### Industrial Power Units - Diesel

Model	hp	Model (cont.)	hp
C3.4B	74	C32	857 - 1000
C3.4B	115	C4.4	108.6
C4.4	100 - 188	C4.4	129.4
C7.1	150 - 320	C7.1	275
C9.3B	308 - 456	C9	350
C9.3	400	C9	350
C13	385 - 520	C11	385
C13B	456 - 577	C13	440
C15	475 - 595	C15	540
C18	575 - 630	C18	630
C27	800 - 876	3516C	2100

<sup>1</sup>Includes ratings for both highly regulated and lesser or non-regulated territories, unless noted.

## Fire Pumps



### Diesel

Model	hp
C18 Acert	600 - 800
3406C <sup>1</sup>	292 - 482
3412C <sup>1</sup>	638 - 739
3508 <sup>1</sup>	950 - 1065
3512 <sup>1</sup>	1430 - 1600
3516 <sup>1</sup>	1900 - 1985

<sup>1</sup>For use in lesser regulated territories.

## Oil & Gas Products



### Gas Compression Engines

Model	bhp
G3520J	1725
G3304B	95
G3306B	108 - 157
G3406	215 - 325
G3408 <sup>1</sup>	255 - 400
G3408C <sup>1</sup>	425
G3412 <sup>1</sup>	600
G3412C	637
CG137-8	400
CG137-12	600
G3508 LE <sup>1</sup>	524 - 670
G3508B	690
G3512TA	790 - 1004
G3512B	1035
G3516NA	660 - 1340
G3516B	1380
G3516J	1380
G3520B	1480 - 1725
G3606A4	1875 - 2010
G3608A4	2500 - 2675
G3612 A4	3750 - 4000
G3616A4	5000 - 5350
G12CM34 Gas	6135
G16CM34 Gas	8180
G3516TA	1380

<sup>1</sup>For use in lesser regulated territories.

# 20 PRODUCT GUIDE

## Oil & Gas Products



### Land Electric - Drive Engines

Model	bhp
3512E Tier 4	1750

### Land Electric - Drive Modules

Model	ekW
3508	610
3508B	835
3512	665 - 1035
3512B	1045 - 1245
3512C	1045
3512C HD	1245
3512C with DBG	SR48 Generator
3516	1245
3516B	SR48 Generator
G3516B	1320
C18 Tier 4	Displacement 1106.36 in <sup>3</sup>

### Land Mechanical Engines

Model	ekW
C15 ACERT Tier 3	440 - 595
C15 ACERT Tier 4i	475 - 580
C18 ACERT Tier 3	575 - 800
C18 ACERT Tier 4 Final	755 - 800
C18 ACERT Tier 4i	600 - 755
C27 ACERT Tier 2	800 - 1150
C27 ACERT Tier 4 Final	800 - 950
C32 ACERT Tier 2	800 - 1500
C32 ACERT Tier 4 Final	1125
3508	680 - 1135
3508B	760 - 900
3508C	900
3512	1020 - 1800
3512C	1250 - 1475
3516	1649

### Land Generator Sets - Diesel

Model	kVA
C15 Acert Tier 2	365 - 570
C15 Acert Tier 4i	450
C18 Acert Tier 2	550 - 680
C27 Acert Tier 4i	1035
C27 Acert Tier 2	907 - 1035

### Land Generator Sets - Multiple Fuels

Model	kVA
3516B with Dynamic Gas Blending	2000
CG137-12	500
G3306B	138 - 170

### Offshore Generator Sets

Model	kVA
3500 Family	738 - 2625
C175C Family	2619 - 3325
C280 Family	2076 - 7857
CM20C Family	1230 - 2050
8CM20C Family	1640 - 1830
9CM20C Family	4023 - 3600
6CM25C Family	2400
8CM25C Family	3200
9CM25C Family	3600
C280-6	2320 - 2722
C280-8	3084 - 3634
C280-12	4640 - 5444
C280-16 FMT	7510 - 7684
6CM32C	3630
6CM32E	3630
8CM32C	4850
9CM32C	5460
12CM32C	5460
16CM32C	5460
12CM43C	14550
16CM43C	19400
6CM34DF	3600
8CM34DF	4800
6CM46DF	7020
7CM46DF	7640 - 8190
8CM46DF	8730 - 9360
12CM46DF	14040
16CM46DF	18720

### HazPak

Model	bhp	bkW
C2.2 NA	27 - 41	20 - 30
C4.4 NA	57 - 65	43 - 49
C4.4 TA	130 - 151	97 - 112
C7	211	158
C9	304	227
C15	504	376
C18	715 - 803	533 - 599
3406C	490	365

## Well Service Engines

Model	Power	Weight	Gear Ratio
	bhp	lb-ft	
<b>WS255</b>	2500	16000	6.353:1
<b>WS273 XD</b>	2700	18000	5.55:1
<b>WS305 XD</b>	3000	24000	5.55:1

## Well Service Pumps

Model	bhp
<b>C7 ACERT</b> Water-cooled Manifold	205 - 275
<b>C7 ACERT</b> Dry Manifold	225 - 300
<b>C7 ACERT</b> Hazardous Location	205 - 275
<b>C9 ACERT</b> Water-cooled Manifold	325 - 340
<b>C9 ACERT</b> Dry Manifold	275 - 375
<b>C9 ACERT</b> Hazardous Location	340
<b>C9.3 ACERT</b> Tier 4i	300 - 350
<b>C9.3 ACERT</b> Tier 4 Final	300 - 400
<b>C11 ACERT</b> Dry Manifold	325 - 450
<b>C13 ACERT</b> Dry Manifold	385 - 520
<b>C13 ACERT</b> Tier 4i	385 - 520
<b>C13 ACERT</b> Tier 4 Final	385 - 520
<b>C15 ACERT</b> Water-cooled Manifold	536 - 540
<b>C15 ACERT</b> Dry Manifold	440 - 595
<b>C15 ACERT</b> Hazardous Location	536
<b>C15 ACERT</b> Tier 4i	475 - 580
<b>C18 ACERT</b> Dry Manifold	575 - 800
<b>C18 ACERT</b> Tier 4i	600 - 755
<b>C18 ACERT</b> Tier 4 Final	755 - 800
<b>C27 ACERT</b> Tier 4 Final	800 - 950
<b>C27 ACERT</b> Dry Manifold	800 - 1050
<b>C32 ACERT</b> Hazardous Location	800 - 1110
<b>C32 ACERT</b> Tier 4 Final	1125
<b>C32 ACERT</b> Water-cooled Manifold	800 - 1225
<b>C32 ACERT</b> Dry Manifold	800 - 1500
<b>3512B</b> Well Stimulation	2000 - 2250
<b>3512C DGB</b>	2150 - 2500
<b>3512C</b>	2250 - 2500
<b>3512C HD</b> Offshore	2250 - 2500
<b>3512E DGB</b> Tier 4 Final	2250 - 2500
<b>3516C HD</b>	3070 - 3300
<b>3512E</b> Tier 4 Final	2250 - 2500

## Transmissions

Model	Power	Torque	Weight
	bhp	lb-ft	lb
<b>CX31-P600</b>	600	2025	456
<b>CX35-P800</b>	800	2700	651
<b>TH48-E70</b>	1200	4422	3735
<b>TH48-E80</b>	2300	6656	4878
<b>CX48-P2300</b>	2300	6656	3530
<b>TH55-E70</b>	3300	9350	6330
<b>TH55-E90</b>	3300	9350	6330

## Marine Engines



Model	Propulsion Ratings	Generator Set Rating
	bhp	ekW
<b>C1.5</b>	-	10 - 12
<b>C2.2</b>	-	15 - 25
<b>C4.4</b>	-	38.0 - 95.0
<b>C4.4</b>	-	58 - 118
<b>C7.1</b>	280 - 500	100 - 163
<b>C8.7</b>	641	-
<b>C9.3</b>	375 - 476	224 - 300
<b>C12</b>	340 - 705	-
<b>C12.9</b>	838 - 985	-
<b>C18</b>	469 - 1136	395 - 300
<b>C32</b>	750 - 1900	880 - 940
<b>3508C</b>	775 - 1000	-
<b>3512C</b>	1280 - 2551	-
<b>3512E</b>	1341 - 2549	-
<b>3516C</b>	2501 - 3386	-
<b>3516E</b>	2501 - 3386	-
<b>C175-16</b>	2683 - 3420	-
<b>C280-6</b>	2320 - 2722	1650 - 1940
<b>C280-8</b>	3299 - 3634	2200 - 2420
<b>C280-12</b>	4962 - 5444	3300 - 3690
<b>C280-16</b>	6169 - 7577	4400 - 4840
<b>C4.4</b>	-	-
<b>C7.1</b>	280	-
<b>C9.3</b>	292 - 436	-
<b>C18</b>	404 - 803	-
<b>C32</b>	791 - 1333	-
<b>3500</b>	903 - 3176	-
<b>C280</b>	2320 - 7268	-

# 22 COOPERATIVE PURCHASING



## COOPERATIVE PURCHASING FOR GOVERNMENTAL, EDUCATIONAL & NON-PROFIT AGENCIES



### GENERATOR SETS

All GC Models

Benefits

- GC Models save up to 14% installed space
- Reliability tested for 500 hours
- Scalable System



### STANDBY GENERATORS

All diesel retail models, 3400 & 3500 series

Benefits

- Over 1,000 hours continuous runtime
- Remote Monitoring
- Seamless Design



### LARGE GENERATOR SETS

Prime Power (Gas) G3508, G3512, G3516H, G3520

Benefits

- Runs on wide range of fuels
- Ready to accept 100% blockload
- Flexible packaging options



### RENTAL GENERATORS

All Models

Benefits

- Durable design
- Sound attenuated
- User-friendly interface

## WHY COOPERATIVE PURCHASING?

Cooperative contracts help you get the equipment you need quickly and better manage your budget, so you never have to compromise on machines and service.

### SAVE TIME

Improve procurement efficiency so you can put new equipment to work faster.

### CONTROL COSTS

Don't spend valuable budget dollars soliciting bids, reviewing proposals and awarding contracts.

### MANAGE RISK

Avoid unexpected repair costs and other budget surprises that may arise when you buy the low-bid option.

## LIFE CYCLE COST CALCULATION

It's important to evaluate equipment purchases from a total cost perspective, as purchase price is just one small component. Choosing the low bid can actually cost more in the long run. Here is one well-accepted method to determine total cost:

### INITIAL PURCHASE PRICE

- Trade-In
- + Maintenance
- + Repairs
- + Fuel and inputs
- Resale value

### TOTAL COST OF OWNERSHIP

## TAKE YOUR PICK

Caterpillar is pleased to make our equipment available through two cooperative purchasing contracts: Sourcewell and OMNIA Partners. Get the assets you need to be more successful when you buy Cat® products with one of these agreements:



### SOURCEWELL CONTRACT #032119-CAT

New and used equipment, parts, service and rental

### SOURCEWELL CONTRACT #120617-CAT

Backup power systems and services

### OMNIA PARTNERS CONTRACT #161534

New and used equipment, backup power systems, parts, service and rental

Foley Power Solutions can help determine which contract is right for you and can also provide information about state and local cooperative purchasing options. Contact us today at 888-454-5416.

## MORE THAN NEW POWER EQUIPMENT

Cooperative purchasing contracts often go beyond equipment to include the parts and service you need to keep your operation running. With Caterpillar, you'll have access to:



### Service

Whether equipment needs routine maintenance or an unplanned repair, Foley Power Solutions is well equipped to meet any service need.



### Parts

Genuine OEM parts are the best option to keep your machines running. Foley Power Solutions can accept POs using your Sourcewell or OMNIA Partners member number.



### Rental Equipment

Foley Power Solutions has a full line of equipment available to rent for short- or long-term needs. From light towers to air compressors, Foley has you covered.

### Used Equipment

Good used equipment can be an excellent value. Caterpillar ensures you have access to this buying option if you decide it's right for you.

## BECOME A MEMBER TODAY

In just a few minutes, you can start reaping the benefits of a free, no obligation Sourcewell or OMNIA Partners membership. It's the easiest way to take advantage of cooperative purchasing agreements that will save your agency time and money procuring equipment. Memberships are available for all government, education and non-profit entities.

Join Sourcewell at: <https://www.sourcewell-mn.gov/>

Sign up for OMNIA Partners at: <https://www.omniapartners.com/>

### Succeeding Together

No matter how you define success, we will work to help you achieve it. We invite you to learn more about how to use cooperative purchasing to reach your goals.

Learn more at:  
[FoleyPowerSolutions.com](https://FoleyPowerSolutions.com).

# CUSTOMER VALUE AGREEMENTS (CVAS)

Customer Value Agreements (CVAs) are equipment maintenance plans designed to make machine ownership hassle-free. CVAs match equipment and level of coverage to your needs and the needs of your machine. Maintenance is performed where and when it is needed.

Foley Power Solution's legendary service allows operators to do and achieve more by removing the hassle of maintenance and allowing them to focus on what they do best. Here is what you can expect with a CVA from Foley Power Solutions:

- Savings of 10% when signing up for a CVA at time of purchase
- Increased uptime and extended life of equipment
- Increased resale value per machine
- Transferable coverage
- Lower owning and operating costs with superior parts and efficient maintenance
- Access to equipment management tools like My.Cat.Com and VisionLink
- Flexible payment options
- No need for dedicated maintenance personnel
- Stay informed of machine health and status with the Cat app
- Knowledgeable and trained CVA techs with 80+ training hours annually
- Multiple locations and on-site maintenance options
- Over 450 service techs for quick response time
- Parts shipped as needed
- Available equipment rentals during critical repairs
- Detailed inspection documents for customer records
- OEM parts, even on most competitive machines
- Maximize equipment uptime with flexible scheduling of planned maintenance including after hours





## FIND THE RIGHT CVA PLAN



EASY TO OWN

### THREE LEVELS OF OFFERS FOR ELECTRIC POWER CUSTOMERS



Hassle-Free Ownership



Hassle-Free Maintenance



Peace of Mind from Equipment Health Management



Security of Expert Dealer Support

#### LEVEL 1



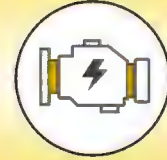
PM

#### LEVEL 2



PM + LABOR

#### LEVEL 3



REPAIR/OVERHAUL

FROM DO-IT-MYSELF TO DO-IT-FOR-ME SERVICES



## EXTENDED SERVICE COVERAGE (ESC)

Extended Service Coverage (ESC) offers coverage beyond the Standard Warranty period and, because it is transferable, it may increase the resale value of your Cat engine or generator set.

ESC from Foley Power Solutions offers protection against unexpected repair bills and a hedge against rising parts and labor costs by providing 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 towards your power system's performance today and tomorrow.

ESC is available for power generators and all power engines.

## 26 SERVICE & REPAIR



# SERVICE & REPAIR

Your power system can't take time off. Foley Power Solutions can get your system operating smoothly with our extensive professional services. Whether you are renting or have purchased a power system, we will be there to support you every step of the way. Our service and repair options extend the life of your generator sets, increase original generator set performance and are designed to reduce owning and operating costs.

Foley Power Solutions maintains and services all brands of gas and diesel generators as well as electrical distribution equipment, automatic transfer switch (ATS), switchgear, circuit breakers, protective relays, uninterrupted power supply (UPS) and transformers.



### PARTS AVAILABILITY

Foley Power Solutions has the parts inventory and access to the global Cat parts network to fulfill 98% of parts orders within 24 hours from the time the order is placed. Having the right parts on hand is crucial to keep your power system running.

Three easy ways to order: in-store, by phone at 888-288-2296 or online at [FoleyParts.com](http://FoleyParts.com).



### ENGINE OVERHAUL, REBUILD & REPLACEMENT

From basic repairs to complete rebuilds, we can help you get the most out of your generator set.

- New components
- New with Core\*: New components at a discount with your used part return
- Reman\* Remanufactured components with your used part return

\*Supported through Cat Remanufacturing (Reman)

## SHOP AND FIELD SERVICE

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Generator Service: We also have technicians to service your generator needs. If an emergency occurs where your facility loses power, Foley Power Solutions technicians respond quickly to restore power to your business. We offer routine maintenance, inspection of equipment and can perform troubleshooting as needed to ensure your Cat generator is working correctly. Foley Power Solutions technicians provide peace of mind and help you keep your operations on schedule.

Our capabilities include:

- Inspections and repairs on all makes & models
- Monthly, quarterly, semi-annual & annual inspections
- Oil, fuel & coolant sampling
- Annual oil & filter replacements
- Belts, hoses & battery replacements
- Inspection reports & recommendations



With fast turnaround times and expert service in the shop and in the field, Foley Power Solutions legendary service gives you peace of mind that your power generation system is well cared for. In addition to basic services and equipment testing, we use genuine parts to ensure your system is ready to respond when you need it most.



# ADVANCED ELECTRICAL SERVICES (AES)

Foley Power Systems can provide the resources you need for switchgear, automatic transfer switches and uninterrupted power supply (UPS) maintenance, modernization and enhancements.

As your Advanced Electrical Services solutions partner, our trained technicians are ready to provide you the most effective electrical energy solutions you need, regardless of make or model to help prevent total energy loss.

## ADVANCED ELECTRICAL SERVICES SUPPORT & MAINTENANCE ON:

- Switchgear Maintenance & Modernization
- Protective Relays Testing
- Infrared Thermography
- Turn Key Project Management
- Risk Mitigation
- Preventive Maintenance
- Extended Service Agreements
- Automatic Transfer Switch (ATS) Inspections & Repairs
- Remote Services (Cat Switchgear)
- All Manufacturers: Low & Medium Voltage Controls Modernization
- Station Batteries
- Breaker Testing/Modernizing
- Cat Financing
- Roll Up Generator Enclosures
- Emergency Systems
- Tap Boxes
- Loadbanks
- Coordination Studies
- UPS Batteries
- UPS Systems
- Arc Flash Study
- Arc Flash Detection with Upstream Tripping
- Safety and Arc Flash Training



**CIRCUIT BREAKER TESTING**

### Low-Voltage Primary and Secondary Injection Testing

- Test under real conditions to validate trip settings and manufacturer specifications
- Operate, lubricate and inspect for damage and deterioration
- Provide comprehensive reports detailing test results and condition of the circuit breaker
- Recommended frequency: Every 12 – 36 months

### Medium-Voltage Circuit Breaker Testing

- Test contact and insulation resistance
- Test vacuum bottle integrity
- Verify mechanical operation
- Lubricate current-carrying moving parts
- Recommended frequency: Every 24 – 36 months

Foley Power Solutions has a staff of Project Managers that can facilitate the kick-off of your project and see it through to completion and successful system operation. We have a long and proven history of complete turnkey projects. Our experienced project team manages every aspect of your project, lowering your risk and removes the hassle of working with multiple vendors.

At Foley Power Solutions, we understand downtime in critical power application is costly, that is why we train and update our technicians on any new service offerings and regulations to ensure your businesses' needs are met and risks are minimized.

## UPGRADES & RETROFITS:

Advanced Electrical Services that are needed to maintain and test the components and/or systems performance, include:

- Polarization Index
- Infrared Survey Reporting & Thermography
- Battery Maintenance for UPS
- Circuit Breaker Injection Testing
- Protective Relay Testing
- Transformer Testing

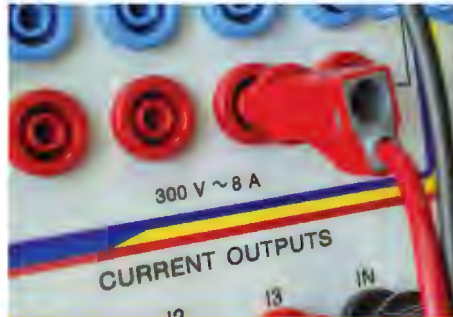
Services relate to retrofitting and/or upgrading components of a customer's existing system to improve the system's performance and reliability, include:

- Circuit Breakers
- Protective Relays
- Controls
- System Integration Analysis
- Data Communication System Support



**INFRARED THERMOGRAPHY**

- Survey key components, including energized bus, load lugs, cable termination points, control cabinets, contractors, fuses and control transfers
- Record temperature differences between troubling areas and reference area
- Provide comprehensive reports detailing deficient areas with photographs and recommended actions
- Recommended frequency every 12-14 months



**PROTECTIVE RELAY MAINTENANCE**

- Foley certified Advanced Electrical Services technicians can help you protect your power with comprehensive relay inspection maintenance and testing
- Our technicians have experience with a variety of relays including microprocessor, electromechanical and solid state
- Technicians will perform testing to manufacturer specifications making necessary calibrations and adjustments with a comprehensive report
- Recommended frequency varies



**SWITCHGEAR MAINTENANCE**

Switchgear Inspection, Maintenance and Testing

- Clean and inspect physical and mechanical condition
- Determine accuracy of meters and calibrate as applicable
- Check anchorage, alignment, clearances and grounding

Switchgear Mode/Operation Testing

- Test sequence of operations
- Run a complete functional test to verify correct operation
- Confirm all equipment corresponds with drawings and coordination

# RENTAL POWER

Foley Power Solutions Rental is hard at work providing single-source access to all product and accessory needs, including continuous power systems, cooling systems and air compressors.



From unexpected surges to unplanned power outages, having a temporary power plan in place is crucial to ensuring you have power when you need it. Foley Power Solutions carries a large inventory of power equipment, including generator sets, temperature control, chillers, load banks and ancillary equipment.

Our electric power rental fleets offer experienced technicians and engineers to help support your business in managing emergency contingency plans, backed by the strength of Caterpillar to get your equipment delivered, installed, fueled up and ready to run.

### WIDE RANGE OF POWER

Rental power is available in fully self-contained, mobile gas and diesel, from 20 to 2000 ekW.

### SUPPORT

Experts available every step of the way to help you design a system, deliver equipment, provide technical support, service, maintenance, and training programs for rental projects.

### RESPONSE

Supported by our network of rental power experts in the field, we can immediately outfit your system, deliver it (with all the ancillary equipment included), provide the connection, fuel, start-up, service, and maintenance, and can remain on-site to provide support when necessary.

### ENVIRONMENTAL CONSIDERATIONS

Our units are specially engineered to produce lower gas/diesel emissions and meet or exceed local emission standards, and we offer options such as sound attenuation.



# KVA/KW AMPERAGE CHART 31

## KVA/KW AMPERAGE CHART

### 80% POWER FACTOR

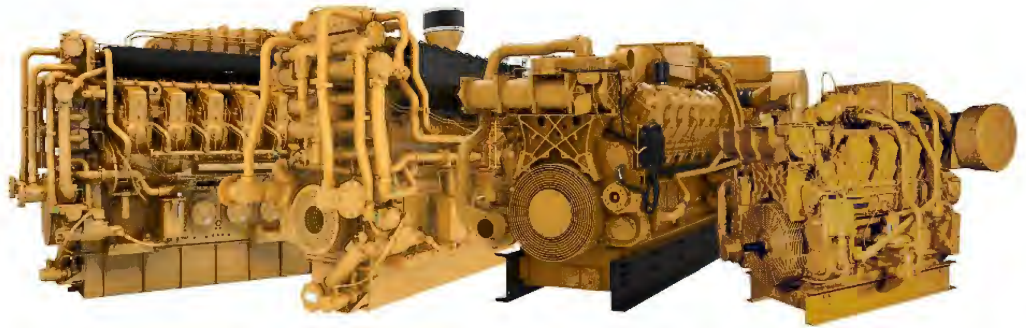


kVA	kW	208 V	220 V	240 V	380 V	440 V	480 V	600 V	2400 V	3300 V	4160 V
6.3	5	17.5	16.5	15.2	9.6	8.3	7.6	6.1			
9.4	7.5	26.1	24.7	22.6	14.3	12.3	11.3	9.1			
12.5	10	34.7	33	30.1	19.2	16.6	15.1	12			
18.7	15	52	49.5	45	28.8	24.9	22.5	18			
25	20	69.5	66	60.2	38.2	33.2	30.1	24	6	4.4	3.5
31.3	25	87	82.5	75.5	48	41.5	37.8	30	7.5	5.5	4.4
37.5	30	104	99	90.3	57.6	49.8	45.2	36	9.1	6.6	5.2
50	40	139	132	120	77	66.5	60	48	12.1	8.8	7
62.5	50	173	165	152	96	83	76	61	15.1	10.9	8.7
75	60	208	198	181	115	99.6	91	72	18.1	13.1	10.5
93.8	75	261	247	226	143	123	113	90	22.6	16.4	13
100	80	278	264	240	154	133	120	96	24.1	17.6	13.9
125	100	347	330	301	192	166	150	120	30	21.8	17.5
156	125	433	413	375	240	208	188	150	38	27.3	22
187	150	520	495	450	288	249	225	180	45	33	26
219	175	608	577	527	335	289	264	211	53	38	31
250	200	694	660	601	384	332	301	241	60	44	35
312	250	866	825	751	480	415	376	300	75	55	43
375	300	1040	990	903	576	498	451	361	90	66	52
438	350	1220	1155	1053	672	581	527	422	105	77	61
500	400	1390	1320	1203	770	665	602	481	120	88	69
625	500	1735	1650	1504	960	830	752	602	150	109	87
750	600	2080	1980	1803	1150	996	902	721	180	131	104
875	700	2430	2310	2104	1344	1274	1052	842	210	153	121
1000	800	2780	2640	2405	1540	1330	1203	962	241	176	139
1125	900	3120	2970	2709	1730	1495	1354	1082	271	197	156
1250	1000	3470	3300	3009	1920	1660	1504	1202	301	218	174
1563	1250	4350	4130	3765	2400	2080	1885	1503	376	273	218
1875	1500	5205	4950	4520	2880	2490	2260	1805	452	327	261
2188	1750			5280	3350	2890	2640	2106	528	380	304
2500	2000			6020	3840	3320	3015	2405	602	436	348
2812	2250			6780	4320	3735	3400	2710	678	491	392
3125	2500			7520	4800	4160	3765	3005	725	546	435
3750	3000			9040	5760	4980	4525	3610	904	654	522
4375	3500			10550	6700	5780	5285	4220	1055	760	610
5000	4000			12040	7680	6640	6035	4810	1204	872	695

# OIL & GAS ENGINE SERVICE

## MEETING TIGHT PRODUCTION DEADLINES WITH THE HIGHEST QUALITY STANDARDS & SERVICE

Many Cat engines are rebuilt for additional life at the Foley Engine Rebuild Center located in Park City, Kansas. We specialize in Cat 3616 to 3304 engines, with our main area of focus being in the oil and gas industry.



The performance Foley promises is the performance you get. No bull. If we can't meet your schedule, we tell you upfront before the work begins. Straight up answers with quoted upfront costs.

Our technicians have decades of experience and know exactly what it takes to build a high quality engine with a tight deadline. You will have one point of contact that will supply you with clear communications, timely answers and realistic expectations throughout the entire rebuild process.

- 3304 to 3616 capability
- Exchange engines & components
- 24 Hour field service
- Large parts inventory
- Machine shop
- 1,500 & 5,000 H.P. Dynamometers
- Two paint booths
- 5-Star contamination control rating
- Field Service
  - Gas Compression
  - Well Service
  - Drilling







# CAT CONNECT

Cat Connect combines technology and services to boost your business performance. Using the data from technology-equipped assets, you'll get more information and insight into your equipment and operations than ever before!

Here are six ways to make the most of your data to help manage your assets and reduce operating costs.

## 1. Preventive Maintenance

Take advantage of electronic data, alerts, and records to schedule and complete all recommended maintenance and service.

## 2. Maintain Peak Unit Performance

Use alerts to prevent problems that may reduce fuel efficiency. Using your investment properly by running at peak performance can positively impact your bottom line.

## 3. Offsite Support

Diagnostic information sent to offsite experts can help eliminate the need for unnecessary onsite visits by technical staff throughout the life cycle of your system, reducing labor costs.

## 4. Repair Before Failure

Use equipment data and electronic alerts to catch small problems early. Schedule repairs quickly to avoid breakdowns and keep repair costs low. Unscheduled downtime can have a huge impact on your profitability and sustainability.

## 5. Monitor Operator Training

Operating practices dramatically impact performance and component wear. Remotely monitor your day-to-day usage to spot training opportunities.

## 6. Record-keeping

Automatically gather data on equipment history, component life, and operating costs. Good records help you identify high-cost or problem areas and control expenses.

# CAT FINANCING OPTIONS

Just as every power situation is not the same, not every financial situation is the same either. That's why we provide you with highly customized financing packages based on your business needs.

# 34 INDUSTRIES SERVED



## YOU NEED IT TO KEEP WORKING

We can help you maintain, protect, and update your electric power system for life, so unplanned outages don't happen. You can rely on Foley Power Solutions to be your partner through it all.

### WE CAN HELP YOU DO THE WORK IN THESE INDUSTRIES:

- Agriculture
- Airports
- Cogeneration/Combined Heat and Power (CHP)
- Commercial Business
- Construction
- Data Centers
- Greenhouses
- Healthcare
- Landfills
- Manufacturing
- Microgrids
- Mining
- Municipalities/Wastewater Treatment Plants
- Nuclear
- Power Plants
- Rental Power
- Telecom
- Utilities

What is better than real-world examples? Our case studies show how Foley Power Solutions helps businesses across different industries, develop and implement power system solutions that help them reach their goals. Browse our case studies for a full picture of what it is like to work with Foley Power Solutions.



**UTILITY - JOHNSON CITY, KANSAS**

As a small community of 1,495, Johnson City in southwest Kansas internally operated its standby power with equipment aged over 50 years old. Faced with the crucial decision of restructuring, Johnson City turned to Foley Power Solutions to help them modernize.

**SCAN TO READ THE CASE STUDY**



**EDUCATION - SHAWNEE HEIGHTS SCHOOL DISTRICT**

Shawnee Heights USD 450 is a unified suburban school district located in southeastern Shawnee County, Kansas. The district worked with Foley Power Solutions to install a Cat DG150-2 generator set fueled by natural gas.

**SCAN TO READ THE CASE STUDY**



**DATA CENTER - TIERPOINT**

TierPoint's data center in Lenexa, Kansas, comprises 56,000 square feet, with 10,000 square feet of production floor space in operation and an additional 10,000 square feet that can be built out for future clients. Foley Power Solutions installed two Cat 3516C diesel generator sets that supply a combined 2.5 MW of power to the data center in an N+1 configuration along with two switchgear rooms.

**SCAN TO READ THE CASE STUDY**



**GOVERNMENTAL - KANSAS CITY INTERNATIONAL AIRPORT**

Kansas City unveiled a modern new airport terminal in February of 2023. Behind the scenes a critical systems upgrade took place. As construction continued on the \$1.5 billion Single Airport Terminal, technicians from Foley Power Solutions assisted specialists from Caterpillar in upgrading electrical switchgear that provides emergency backup power to the airport's runway lights.

**SCAN TO READ THE CASE STUDY**



**COMMERCIAL - TVH PARTS**

TVH Parts, a leader in replacement parts and accessories for the material handling and industrial equipment industries, selected Foley Power Solutions to supply a 1 MW rooftop solar system for the company's Americas headquarters in Olathe, Kansas.

**SCAN TO READ THE CASE STUDY**

# 15 Convenient Locations to Serve You

## KANSAS

### Chanute

501 W. 35th Pkwy. · Chanute, KS 66720 · (620) 431-3600

### Colby

205 E. Horton Ave. · Colby, KS 67701 · (785) 462-3913

### Concordia

1805 Lincoln St. · Concordia, KS 66901 · (785) 243-1960

### Dodge City

1600 E. Wyatt Earp Blvd. · Dodge City, KS 67801 · (620) 225-4121

### Great Bend

701 E. Tenth St. · Great Bend, KS 67530 · (620) 792-5246

### Liberal

1701 E. 5th St. · Liberal, KS 67901 · (620) 626-6555

### Manhattan

5104 Skyway Dr. · Manhattan, KS 66503 · (785) 537-2101

### Olathe

19968 W 157th St. · Olathe, KS 66062 · (913) 393-0303

### Park City

1601 East 77th St. North · Park City, KS 67147 · (316) 943-4211

### Salina

2225 N. Ohio St. · Salina, KS 67401 · (785) 825-4661

### Topeka

1737 SW 42nd St. · Topeka, KS 66609 · (785) 266-5770

### Wichita

1550 S. West St. · Wichita, KS 67213 · (316) 943-4211

## MISSOURI

### Kansas City

5701 E. 87th Street · Kansas City, MO 64132 · (816) 753-5300

### Sedalia

1040 Sedalia Road · Sedalia, MO 65301 · (660) 829-7400

### St. Joseph

3619 Pear Street · St. Joseph, MO 64503 · (816) 233-2516

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