



Image shown reflect design of CP250 model

## FEATURES

- High system efficiency
- Smallest available footprint
- Harmonic cancellation
- Transient protection
- High-speed voltage regulation
- Power factor correction
- Bottom cable entry
- 40°C rating on entire system
- Low input current distortion
- Utilizes kinetic power cell technology
- Remote monitoring
- Simple installation
- Low maintenance
- Quiet operation
- Generator set start module
- Options available on request

## RELIABLE POWER PROTECTION FOR CRITICAL APPLICATIONS

Cat® CRITICAL POWER MODULE systems provides constant power protection against surges, sags, and power interruptions that can disrupt operations or cause loss of valuable data or system capacity. Additionally, the use of the optional generator set start module can dramatically increase generator set starting reliability in a continuous power configuration.

## CRITICAL POWER MODULE

CP250	250 kVA / 225 kW, 50 Hz
CP500	500 kVA / 450 kW, 50 Hz
CP750	750 kVA / 675 kW, 50 Hz
CP1000	1000 kVA / 900 kW, 50 Hz

Caterpillar® is leading the power generation marketplace with Power Quality Solutions engineered to deliver unmatched flexibility, expandability, reliability and cost effectiveness.

## SUPERIOR DESIGN

Superior system design and the use of robust digital components throughout the system yield the most reliable and trouble-free UPS system on the market. Protection is delivered in the industry's smallest package with the highest efficiency and superior performance.

## LOWER TOTAL COST

Caterpillar's high operating efficiency means yearly savings versus traditional battery UPS products. In addition, lower Cat® UPS heat rejection reduces up front HVAC costs and electrical consumption over the life of the product.

## GENERATOR SET INTEGRATION

By cancelling harmonic distortion, the system operates seamlessly with generator sets to provide a higher total electrical load capacity without oversizing the generator set. Cat® UPS effectively insulates the generator set from block loads and transient, and can improve its fault clearing capabilities. Programmable integration with standby generator set assures greater system reliability and improves the total system operation.

## WORLDWIDE PRODUCT SUPPORT

- Parts Distribution Centers are located worldwide with available service support through Caterpillar and the Cat® Dealer Network.
- Factory certified service and technicians are trained to support every aspect of your Cat® UPS system.

**FEATURES AND BENEFITS OF FACTORY INSTALLED EQUIPMENT**

<b>Features</b>	<b>Benefit</b>
Flywheel Energy Storage	Battery free, low cost maintenance, low cost operation, compact, genset friendly, Infinite cycle life and no environmental concerns. Voltage regulation and power factor improvement. Harmonic cancellation. Static Bypass Switch. 4 Wire input output
Diesel Engine	4-stroke water-cooled diesel engine with electronic governor – ADEM <sup>TM</sup> . Jacket water heater with shut off valve.
Generator	Class insulation H. Electronic voltage regulation with load adjustment module. Anti condensation space heaters.
Starting System	Generator set start module provides up to 1725 cold cranking amps @ 24 VDC to assist and backup the generator set starting batteries for improved system reliability. Redundant electric motor starters. Battery charger integrated.
Communication with Integrated System	Integral modem for remote communication. MODBUS (RTU or TCP/IP). Remote notification and monitoring via ethernet and e-mail. RS232 or RS485 serial connection. UPS View – real-time monitoring software available.
Control system	LCD monitor/control HMI panel installed on UPS and generator set. Monitoring and alarms for critical components w/self-diagnostics. Two (2) warning tower lights installed outside.
Cooling System	Louvers installed on input and output of the container. Redundant cooling fans on UPS with speed regulation by temperature control unit. Coolant level sight gauge. Coolant drain line with valve terminated at edge of base.
Switchgear Integration	Containing circuit breakers for input, output, standby-output, bypass and ATS – controlled by microprocessor-based unit. Convenient customer connection.
Fuel System	Integrated fuel system with 8-hour fuel tank, primary fuel filter with integral water separator, secondary fuel filters, priming fuel pump, engine transfer fuel pump.
Lube oil	Lubricating oil and filter. Oil drain line. Fumes disposal. Gear lube oil pump.
Container Packaging	Entire system is packaged in industrial type ISO container prepared for quick handling, transport and installation on site.
Emergency Power Off (EPO)	Local Emergency Power Off button installed on UPS and generator set. Two (2) installed on the container – industrial type, protected by glass window.
Certifications and Standards	<ul style="list-style-type: none"> <li>• ISO 9001 Components and integration in certified</li> <li>• IEC88528-11 Combustion engine driven alternating current generating sets</li> <li>• IEC60204-1 Safety of machinery, Electrical equipment of machines</li> <li>• IEC66100 Electromagnetic compatibility (EMC)</li> <li>• IEC60446 Safety principles for interface, marking and identification</li> <li>• IEC60439-1 LV switchgear – Type-tested and partially type-tested assemblies</li> <li>• IEC60439-2 LV switchgear – Particular requirements for busbar trunking</li> <li>• IEC 60529 Degree of protection</li> <li>• ISO 668 Freight Containers – Classification, dimensions and rating</li> <li>• ISO 3874 Freight Containers – Handling and securing</li> <li>• ISO 1161 Freight containers – Container fittings.</li> <li>• ISO 3744 Acoustic</li> <li>• ISO 1496-1 Tolerance</li> <li>• IEC 62271 Metal enclosed switchgear</li> <li>• IEC 60694 Common clauses</li> <li>• IEC 62271 Circuit breakers, Earthing switches</li> <li>• IEC 60185 Current transformer</li> <li>• IEC 60255 Protective relays</li> <li>• CE marking</li> </ul>
Options Available on request	<ul style="list-style-type: none"> <li>• Fire fighting system, automatic fuel transfer pumps, lower noise level</li> <li>• Switchgear for customized projects</li> <li>• Arctic (-30 °C) and tropical (+50 °C) ambient temperature conditions</li> </ul>

**SPECIFICATIONS**

Harmonic Current Distortion	
Linear Load	<3% at 100% resistive load
Non-linear load	<8% with 100% non-linear load
Surge Withstand	Meets IEEE 587/ANSI C62.41
Walk-in	1 to 15 seconds (programmable)
Bypass Source	Synchronized as input source

Overload Capability of UPS (normal operation)	
Continuous	Up to 105%
10 Minutes	125%
2 Minutes	150%
30 Seconds	200%
10 milliseconds	>200%

**TECHNICAL DATA**

	CP250	CP500	CP750	CP1000
UPS – Type	300 Series	300 Series	300 Series	iZ Series
Model	250i	500iE	750iE	1000iZ
Number of flywheels	1	2	3	4
Maximum kVA	250	500	750	1000
Maximum kW	225	450	675	900
Generator set type	C15	C18	C32	3512
Maximum kVA	400	660	1100	1400
Maximum kW	320	528	880	1120
Input current of UPS [A]				
Nominal at 380 VAC	355	709	1064	1419
Nominal at 400 VAC	327	674	1011	1348
Nominal at 415 VAC	325	650	975	1299
Max. Continuous current [A]	400	800	1200	1600
Max. Non-Continuous current [A]	420	840	1260	1680
Output current of UPS [A]				
Nominal at 380 VAC	380	761	1141	1521
Nominal at 400 VAC	361	723	1084	1445
Nominal at 415 VAC	348	696	1045	1393
UPS efficiency	97%	98%	98%	98%
System Withstand Rating	65kA / 1 sec.			
Input Voltage	380 / 400 / 415 VAC 3-phase, 4 wire plus ground from grounded wye source			
Input Voltage Range	+10% / -15% (programmable) ±10% at 380 VAC			
Frequency	50 Hz (±10% maximum - programmable)			
Power Factor	0.99 at rated load and nominal voltage			
Output Voltage	380 / 400 / 415 VAC, 3-phase, 4-wire plus ground			
Voltage regulation	Steady state: ±1% of nominal for ±10% input Transient: ±1% within 50m Sec for 100% load step			
Physical dimensions				
Length [mm / ft]	6.058 / 20'	9.125 / 30'	12.192 / 40'	
Width [mm / ft]	2.438 / 8'			
Height [mm / ft]	2.896 / 9'6"			
Total Dry Weight [kg / lb]	11.500 / 25.353	22.840 / 50.353	28.500 / 62.832	37.200 / 82.012
Operating Temperature	-20 to 40 °C			
Storage Temperature	-25 to 70 °C			
Humidity	Up to 95% non-condensing			
Altitude Above Sea Level	Up to 914 m			
Noise at 1 m - UPS	65 dBA			
Noise at 1 m - UPS and Genset	85 dBA			
Autonomy	8 hours at 100% load			