ACTIVE POWER
DRIVEN BY MOTION

CLEANSOURCE® XT SMS
SINGLE MODULE SYSTEM UPS

250kW | 480V

FLYWHEEL TECHNOLOGY

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SINGLE MODULE SYSTEM UPS

Overview

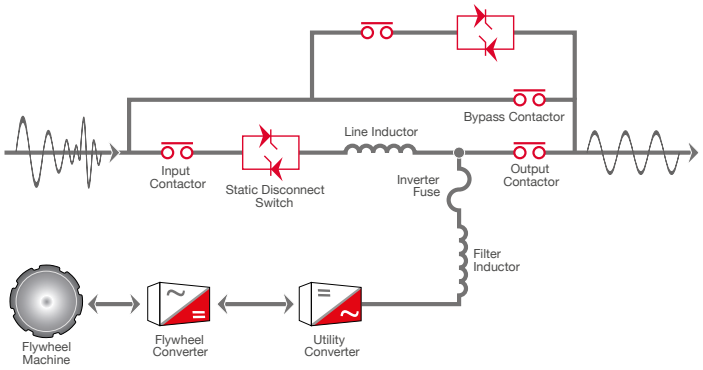
Active Power's Single Module System Flywheel UPS is the perfect combination of total cost of ownership, reliability and sustainability for any mission critical application.

Designed with highly predictable, battery-free energy storage, the Single Module System offers unmatched total cost of ownership for high availability organizations.

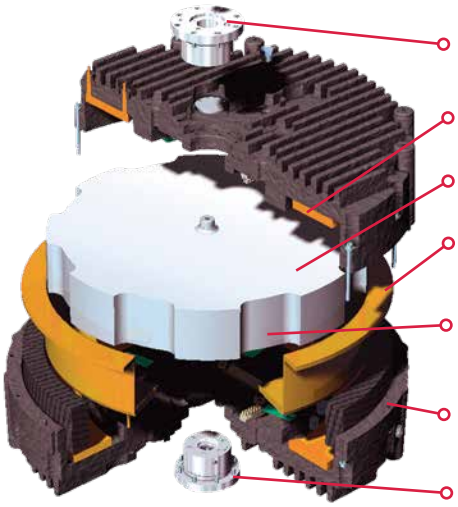
Parallel Online Architecture

The CLEANSOURCE® XT SMS is based on Active Power's Parallel Online Architecture which provides excellent isolation between input and output, while delivering Class 1 voltage regulation and dynamically cancelling effects of non-linear load harmonics.

This topology continuously provides online power protection to your data center, creating a clean sinusoidal output waveform and protecting critical operations against all nine IEEE power disturbances in a power dense, reliable, and energy-efficient package.



FLYWHEEL TECHNOLOGY



- STORES 6.2 MJ OF ENERGY
- UP TO 2 MINS. OF RUN-TIME (LOAD DEPENDENT)
- WIDE OPERATING TEMPERATURE RANGE FROM 32°F TO 104°F
- HIGH DENSITY, HIGH EFFICIENCY DESIGN

KEY BENEFITS AND FEATURES

- UP TO 98% EFFICIENT
- HALF THE SPACE OF LEGACY BATTERY-BASED UPS
- PARALLEL UP TO 8 SYSTEMS
- REDUNDANT FANS AND CONTROL POWER UNITS
- LOWER INSTALLATION COSTS
- LESS HEAT REJECTION
- LOWER COOLING REQUIREMENTS
- LOWER MAINTENANCE AND SERVICE
- COST-EFFECTIVE INSTALLATION
- COLOR LCD TOUCH SCREEN DISPLAY
- REMOTE MONITORING CAPABILITY
- BUILT-IN POWER FACTOR CORRECTION
- GENERATOR COMPATIBILITY
- DUAL INPUT (OPTIONAL)
- INTEGRATED MAINTENANCE BYPASS OPTION
- SEISMIC PROVISIONS – CONSULT FACTORY
- 20-YEAR DESIGN LIFE

40%

TCO SAVINGS

PERMANENT ENERGY STORAGE

UP TO 98% ENERGY-EFFICIENT

LESS EXPENSIVE TO INSTALL AND COMMISSION

12x

LESS LIKELY TO FAIL

MOST RELIABLE ENERGY STORAGE SYSTEM

MINIMIZE RISK AND DISRUPTION FROM MAINTENANCE AND REPLACEMENT

9x

LESS CARBON EMISSIONS

OVER 40% LESS CARBON EMISSIONS OVER 20 YEARS TO HELP YOU ACHIEVE YOUR SUSTAINABILITY GOALS

CLEANSOURCE® XT SMS combines a competitive initial cost with lower ongoing operational expense – up to 40% lower than traditional UPS over 20 years. The result is a dramatic TCO benefit for your application, with net savings.

▶ **SUPERIOR ENERGY EFFICIENCY**

Over 96% efficient at 40% load.

▶ **REDUCED COOLING NEEDS**

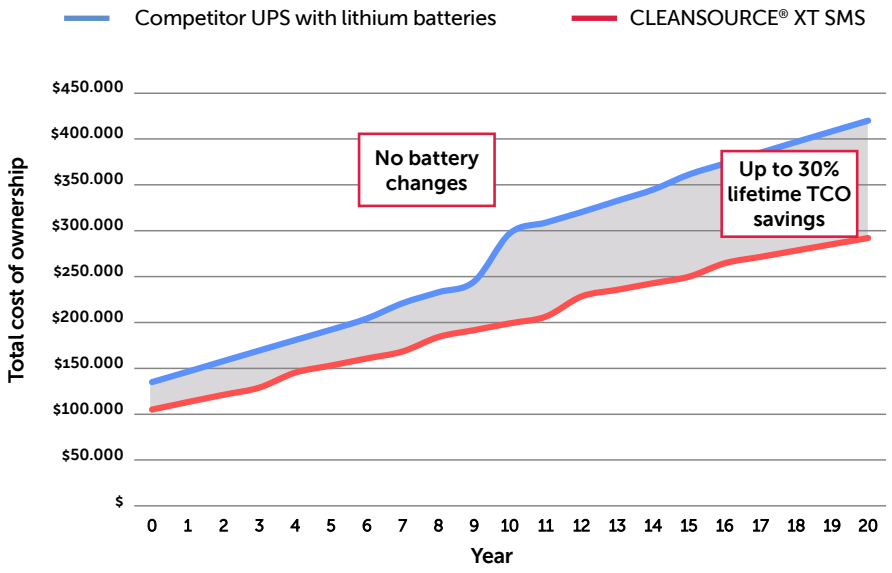
No need for dedicated cooling for batteries

▶ **LOWER MAINTENANCE REQUIREMENTS**

Routine annual check-up and bearing change every third year.

▶ **NO BATTERY CHANGES**

Integrated flywheel with 20-year life.



250kW | 480V

PRODUCT SPECIFICATIONS

RATING		
Maximum kVA		275
Maximum kW		250
INPUT		
Voltage[1]		480 VAC 3-phase, 3-wire plus ground
Voltage Range		+10% / -15% (programmable)
Frequency[2]		60 Hz +/- 10% maximum (programmable) +/- 3% (default)
Power Factor		0.99 at rated load and nominal voltage
Harmonic Current Distortion	Linear load	<2% at 100% load
	Non-linear	<8% at 100% load
Current – Nominal (480 VAC)		312A
Current – Max. Continuous		400A
Current – Max. Non Continuous		420A
Surge Withstand		Meets IEEE 587/ANSI C62.41
Walk-in		1 to 15 seconds (programmable)
Internal Back Feed Protection		Yes
OUTPUT		
Voltage		480 VAC 3-phase, 3-wire plus ground
Voltage Regulation	Steady State	+/-1% for +/-10% input
	Flywheel Mode	+/-1% steady state
	Transient	+/-1% within 50 mSec for 100% load step
Voltage Distortion[3]		<1% linear loads and <5% for 100% non-linear loads
Inverter		PWM with IGBT switching
Frequency		60Hz (mains synchronized) (normal operation +/- 0.2% free running)
Load Power Factor Range		0.7 lagging / 0.9 leading without derating
Slew Rate		Adjustable from 0.2Hz/second to 3.0Hz/second
Current – Nominal (480 VAC)		331A
Overload Capability-Mains Operation	Cont: 10 min: 5 min: 1 min: 10s: Immediate:	105% <110% <125% <150% <200% >200%
UPS Efficiency[3]		98%

ENERGY STORAGE		
Type		Integrated Steel Flywheel spinning at 10,000RPM
Flywheel Run Time (% Load)	100%: 75%: 50%: 25%:	24.5s 32s 47s 84s
Flywheel Recharge Time		<3 min (nominal) at 65kW
GENERAL DATA		
Source Input		Single or Dual
Parallel Capability		Yes, up to 8 systems
Internal Static Bypass		Included
Display		10-inch Color Touch Screen Graphical Display
Withstand Capability[4]		65kA
Remote Monitoring		Yes (optional)
External Customer Contacts		8 Input and 8 Outputs (programmable)
ENVIRONMENTAL		
Audible Noise		<70 dBA at 1 meter
Temperature	Operating	32 to 104° F (0 to 40°C)
	Storage	-13 to 158° F (-25 to 70°C)
Humidity		5% to 95% (non-condensing)
Altitude		Up to 3,000ft (914m) 1.2°C derating for every 1,000ft above 3,000ft
Emissions and Immunity		FCC Class A, Subpart J of Part 15/ EN 62040-2
PHYSICAL DATA		
Height		78.0in/1,981mm
Width		58.6in/1,488mm
Depth		34.1in/865mm
Weight		4,598.8lbs/2,086kg
Cable Entry		Top or Bottom
SAFETY		
UL/cUL 1778 and CAN/CSA 22.2 No.107.1 Listed		

[1] From grounded WYE source, 4 wire optional
[2] 50Hz available
[3] Energy storage offline
[4] Design per UL891 (w/o maint. bypass)

ACTIVE POWER
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