



ACTIVE POWER

CSHD750 UPS



High-density 750 kVA UPS systems
engineered for large system applications.



ACTIVE POWER CSHD750 UPS

The Active Power CSHD UPS is specifically engineered for large-scale data center operations, providing industry-leading efficiency and reliability, all backed by Active Power's comprehensive service and support.

Get the key benefits of rotary UPS systems in a static UPS package that competes on acquisition cost and outperforms on operation expenses.

KEY FEATURES & BENEFITS

- **Smallest available footprint**
- **Most efficient UPS architecture**
- **Cost-effective product lifecycle**
- **Extended runtime options**
- **Parallelable up to seven units**
- **Rugged, on-line & fault-tolerant UPS**
- **Predictable flywheel energy storage**
- **20-year design life**
- **Low service and maintenance**
- **Rapid recharge time**
- **Predictive failure analysis**
- **10" color LCD touch-screen display**
- **Wide operating temperature range**
- **Remote and local monitoring**
- **Simple and cost-effective installation**
- **Multi-vendor generator and switchgear compatibility**

SERVICE & MONITORING



Active Power provides expert assessment, implementation, maintenance and support during every phase of your critical power system deployment and operation. PowerService plans, ranging from basic recommended scheduled maintenance and support to priority dispatch and on-site parts, provide complete lifecycle support for your Active Power solution.

Active Power also provides a variety of system visibility and management tools to improve your awareness of power-related events and ultimately increase your power system reliability. Active Power's proprietary CleanSource View™ (CSView) monitoring and control software enables real-time system visibility from virtually anywhere.

intelligently EFFICIENT

- Precision engineered to be up to 97% efficient without sacrificing performance like offline "eco" solutions
- Industry leading power density with smallest footprint in the 750 kVA class

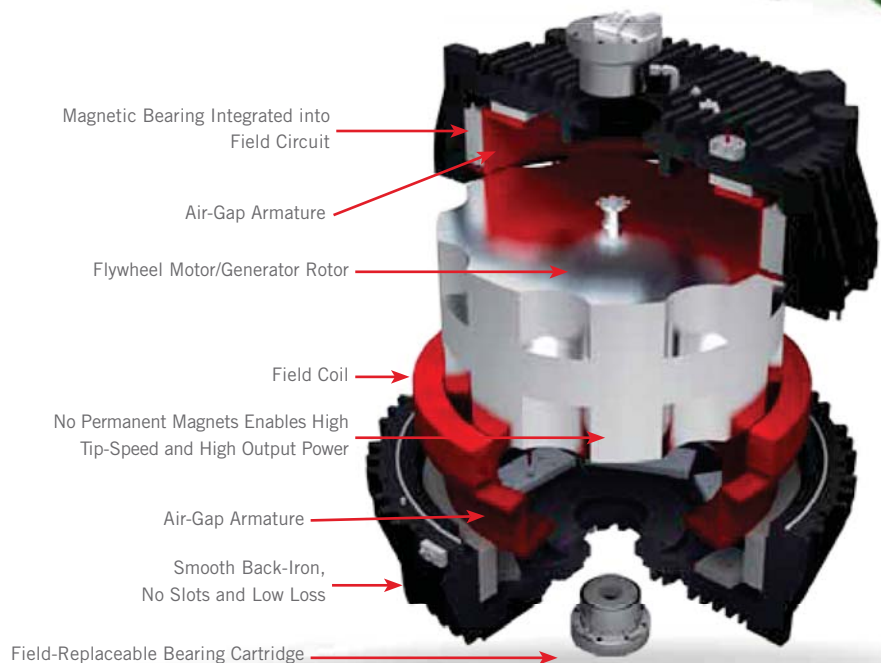
inherently RELIABLE

- Unique design delivers predictable, consistent back up power
- Active Power flywheel UPS platform proven to be 7x less likely to fail vs. legacy UPS systems

economically GREEN

- Reduces carbon footprint, environmental impact and operating expenses (up to 30% annual savings in total cost of ownership)
- Potential LEED point credit based on energy efficiency and innovation

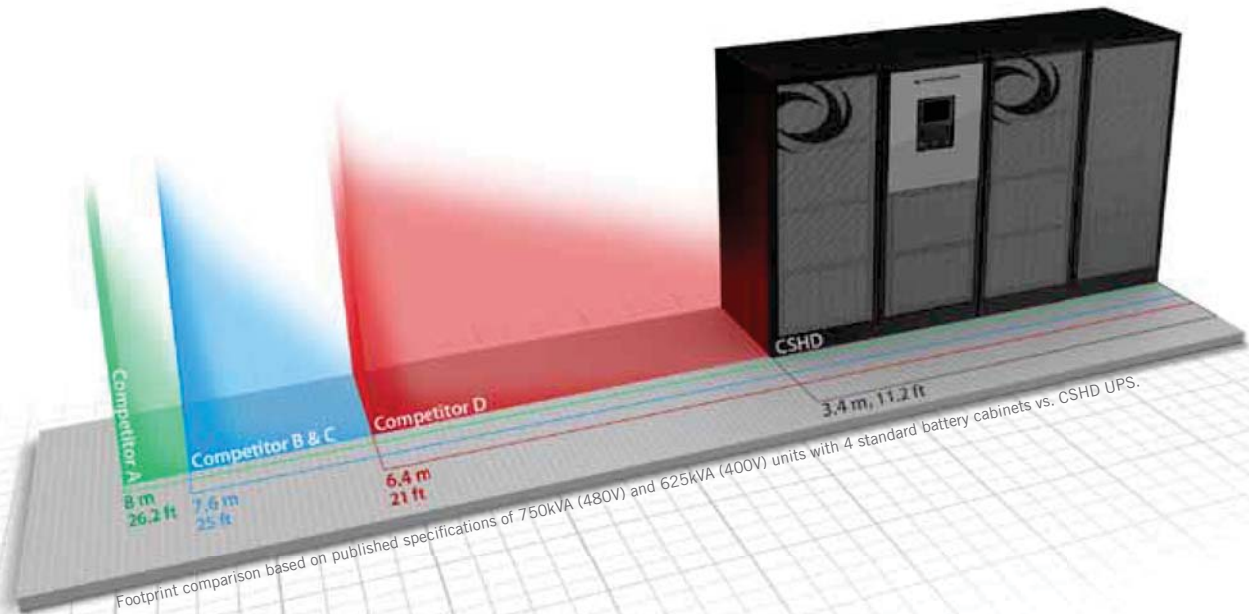
CSHD FLYWHEEL TECHNOLOGY



POWER DENSE

750 kVA UPS FOOTPRINT COMPARISON

Power density sounds good, but what does it look like? Here is a comparison of floor space requirements for 750 kVA UPS competitors and associated costs to put things in perspective. What could your operation do with the additional space and money?



FLOOR SPACE COST SAVINGS

The Active Power CSHD750 dramatically reduces your floor space costs by an average of 57% compared to legacy double conversion UPS systems.

Model	kVA Rating	KW per sq. foot	Annual space cost savings*
AP CSHD	750	19.6	
Vs. Competitor A	750	8.0	\$11,592
Vs. Competitor B & C	750	8.7	\$10,893

*Cost calculated at \$1,000 per sq. foot

GET THE BEST OF BOTH WORLDS WITH EXTENDED RUNTIMES

Active Power is the first to integrate a flywheel UPS with an extended runtime solution. Alternate back-up energy storage is available with VRLA batteries in 5, 7 and 10 minutes of runtime with extended warranty. Not only will you get extended runtime in the event of a complete utility failure, the flywheel will enhance overall battery reliability by eliminating short duration battery discharges, a primary factor in battery degradation.

ENERGY EFFICIENT

ANNUAL POWER SAVINGS VS. COMPETITION

Not only does UPS equipment occupy valuable floor space, it takes power and cooling resources, which affects your utility expenses. The CSHD750 saves an average of 56% of power and cooling costs compared to legacy double conversion UPS systems.

Model	kVA Rating	Annual power savings-Efficiency	Annual power savings-Cooling	Total power savings
Vs. Competitor A	750	\$17,042	\$3,933	\$20,975
Vs. Competitor B & C	750	\$12,646	\$2,918	\$15,564

As compared to legacy UPS systems with 93% efficiency (Competitor A) and 94% efficiency (Competitor B & C) at 50% load

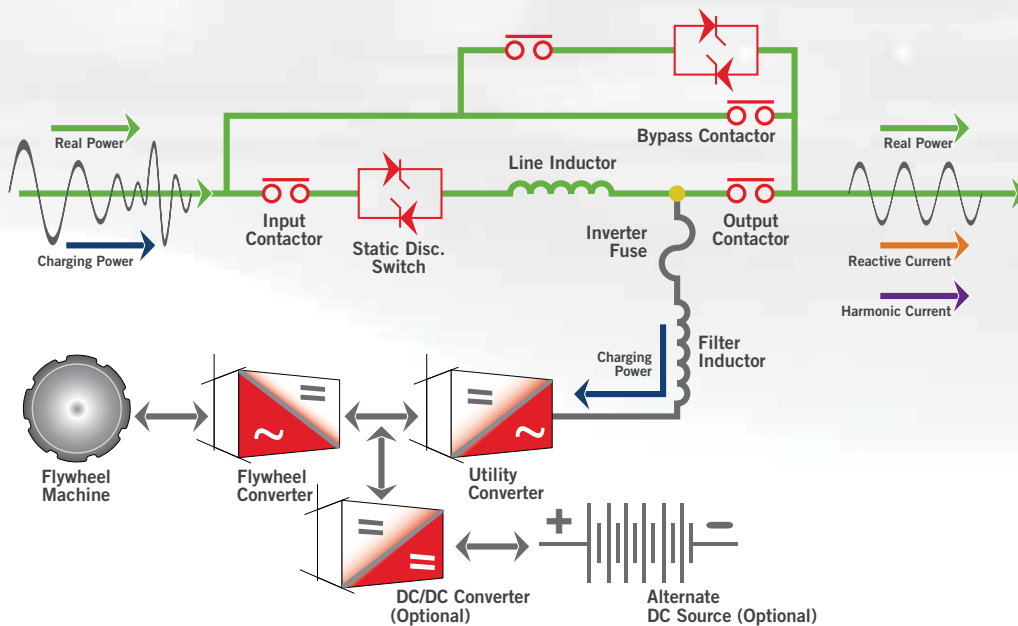
ACTIVE POWER CSHD750 UPS

RATING	
Maximum kVA	750
Maximum kW	675
INPUT	
Voltage ¹	480 VAC 3-phase, 3-wire plus ground (4-wire optional)
Voltage Range	+10% / -15% (programmable)
Frequency	60 Hz +/- 10% maximum (programmable) +/- 3% (default)
Power Factor	0.99 at rated load and nominal voltage
Harmonic Current Distortion	
Linear Load	<3% at 100% load
Non-Linear Load	<5% at 100% load
Current - Nominal (480 VAC)	846
Current - Maximum	1050
Surge Withstand	Meets IEEE 587/ANSI C62.41 (planned)
Walk-In	1 to 15 seconds (programmable)
OUTPUT	
Voltage ¹	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 ²	
	<3% linear loads and <5% for 100% non-linear loads
Frequency	
	60Hz (mains synchronized) (normal operation +/- 0.2% free running)
Slew Rate	
	Adjustable from 0.2Hz/second to 3.0Hz/second
Current - Nominal (480 VAC)	903
Overload Capability-Mains Operation	
	Cont. 10 Min 10 Sec Immediate 105% 110% 150% 200%
UPS Efficiency ³	
	97%

Environmental	
Audible Noise	<83 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 ⁴	Up to 3,000 feet (914 meter)
Emissions and Immunity	
	FCC Class A, Subpart J of Part 15/ EN 62040-2 (planned)
Heat Rejection- Online ⁵	
kW	20.43
BTU/Hr	69,766
PHYSICAL DATA	
Height	80.0 in 2,032 mm
Width	132.0 in 3,353 mm
Depth	39.3 in 998 mm
Weight	11,850 lbs 5,375 kg
Cable Entry	Top or Bottom
Safety	
	UL 1778 (planned) CUL CAN/CSA 22.2 No. 107.1 (planned)

- ¹ Optional 4-wire
- ² EN 62040-3
- ³ DC energy storage offline
- ⁴ Derate operating temperature for higher elevations
- ⁵ DC energy storage online

PARALLEL ONLINE ARCHITECTURE



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