

POWERSMITHS™

e-Power For The Information Age



Energy Station™ (power distribution unit)

Harmonic cancellation for
3rd, 5th, 7th, 9th harmonics

Provides energy efficient
harmonic correction with
Powersmiths transformer
technology

Harmonic correction at point
of use or on a system basis

Active filter ready

Highest efficiency: U.S. DOE
performance validated

Available with up to 6 panel
boards, up to 225 kVA

NEMA TP-1 certified

Energy Star® Compliant

Ecologo™ certified

Integrated main distribution
panel - Industry Standard
Square-D I-Line panel

Ideal for feeding remote load
centers

Distributing e-power is more demanding than the data processing applications of the past. Greater power density, larger numbers of individual pieces of equipment and critical environmental needs are what today's internet / server and communications settings are all about. Powersmiths understands the competitive requirements of critical power loads and designs solutions to ensure cleaner power, maximum circuit capacity, energy efficiency and lowest amount of real estate.

The Energy Station offers a convenient way to provide point of use power distribution where reliability, space, and efficiency are critical.

Space Saver



Harmonic
Cancellation
for
3rd, 5th, 7th, 9th
Harmonics

Minimum Footprint Provides
**Reduced Real Estate
and Increased Revenue**

Efficiency & Savings Through Power Quality



The Powersmiths Advantage

In a time when power performance is absolutely critical and maximum uptime is essential, Powersmiths expands on its already successful line of power distribution units and enhances its harmonic cancellation transformer technology.

Today's technology and communications infrastructure has advanced faster than the technology of the electrical system that supports it. High-tech facilities are jammed tighter and tighter with equipment,

workstations, and servers. These electrical loads are dramatically different than the computer systems of the past. The harmonics generated by these loads create excessive heat, operational problems, and safety issues

Powersmiths: e-Power for the information age.

Powersmiths' innovative engineering has solved this problem with a line of products geared toward the specific needs of the e-business world.

That is why companies such as Yahoo, Cable & Wireless, Sun Microsystems and Southwestern Bell have come to Powersmiths to improve their power quality, energy efficiency and reduce harmonic distortion.

The Powersmiths *Energy Station* is a power distribution unit that utilizes our harmonic cancellation transformers to provide energy-efficient solutions for your electrical systems needs. This proprietary design has led to small footprint products such as the *Energy Station Space Saver* and *Remote Load Center*, perfect for optimizing space and efficiency while minimizing maintenance and associated running costs.



Powersmiths 150 kVA Dual Output Energy Station with Harmonic Cancellation

“Powersmiths equipment will become the foundation for harmonic protection for computer applications.”

Charles Avery,
C.A. Energy Designs, Phoenix AZ

“Will provide clean power for critical power supply for all computers and data center applications.”

Arnold Katz,
Advanced Engineering Design, Illinois

The Energy Station Product Line

Powersmiths Energy Station™ (PDU)

- Available with 1 to 6 panels, 30 to 225 kVA
- Dimensions: 36-67"W (depending on kVA and number of panels) x 32"D x 69"H
 - Active filter ready



Remote Load Center™

- Fits directly on 24 by 24 inch tile resulting in minimal construction
 - Can be placed close to load for minimal wiring
- Can be fed from 2 different power sources for Parallel protection
 - Smoked glass doors for convenient viewing
 - 2 or 4 panels, 42 circuits per panel
 - Different levels of monitoring available

Energy Station Space Saver™ (Very Small Footprint)

- Dimensions (small footprint) 24"d x 36"w x 75"h
- Each space saver provides efficient harmonic correction with Powersmiths transformer technology
- Harmonic correction at point of use or on a system basis
 - High Efficiency under non-linear load
- up to 10 square-D, I-Line, 225 Amp sub-feed breakers, with monitoring, through 225 kVA capacity



T1000™

- High efficiency under both linear & non-linear loads up to 5000 kVA
- Enhanced energy efficient harmonic cancellation transformer
 - Treats 3rd, 5th, 7th, 9th and other harmonics
 - Facilitates system wide compliance with IEEE-519
- Provides all the benefits of the energy station without the power distribution capabilities
 - small footprint



K-Star-D™

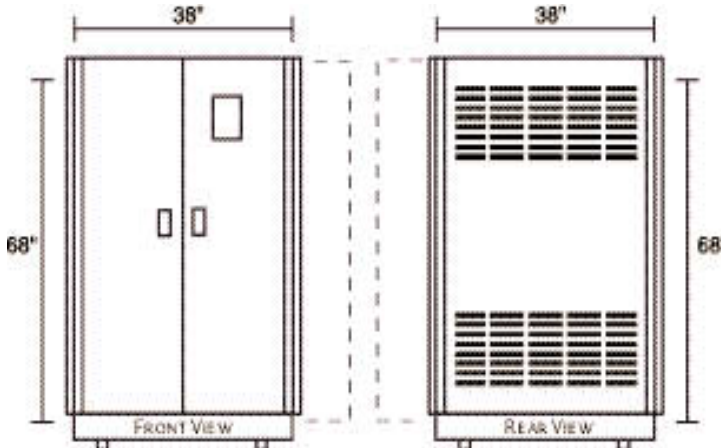
- High efficiency under both linear & non-linear loads up to 500 kVA
- Advanced dual output harmonic cancellation transformer
 - Treats 3rd, 5th, 7th, 9th and other harmonics
 - Delivers cleanest voltage to critical equipment



Computers and other electrical devices are a modern reality, so don't blame them for system interruptions or crashes. Instead, look behind the wall plug for the true cause of your problems - your electrical system infrastructure. Powersmiths specifically harnesses those load related 3rd, 5th, 7th, 9th, and other harmonics while operating at up to 98% efficiency.

Technical Information

Energy Station



Data

kVA	# Circuits	Case Size in Inches
45	84 pole	38w x 32d x 69h
45	126 pole	49w x 32d x 69h
45	168 pole	49w x 32d x 69h
75	84 pole	38w x 32d x 69h
75	126 pole	49w x 32d x 69h
75	168 pole	49w x 32d x 69h
112.5	84 pole	38w x 32d x 69h
112.5	126 pole	49w x 32d x 69h
112.5	168 pole	49w x 32d x 69h
150	84 pole	38w x 32d x 69h
150	126 pole	48w x 32d x 69h
150	168 pole	49w x 32d x 69h
200,225	168 pole	55w x 32d x 69h
200,225	252 pole	66w x 32d x 69h

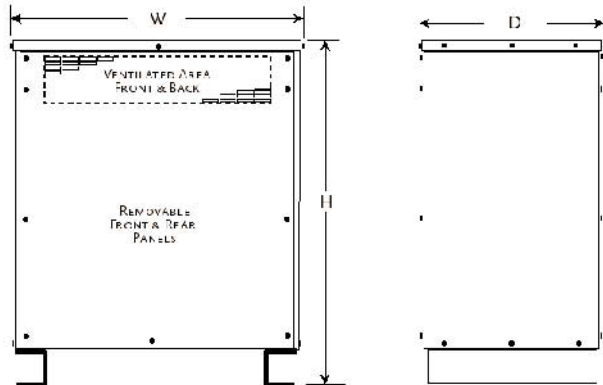
The above data is based on a basic configuration and may vary depending on the options selected.

T1000™

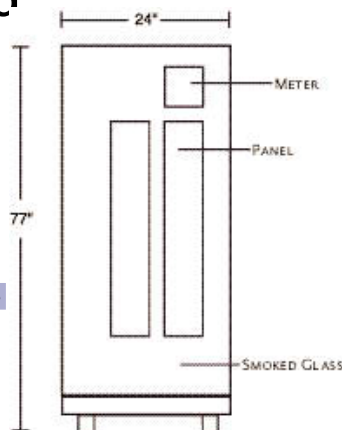
Data

kVA	Impedance	Weight in Lbs	Case Size in Inches
15	3.0 - 4.0%	200-230	a•17w x 17d x 27h
30	3.0 - 4.0%	370-420	b•26w x 18d x 30h
45	3.0 - 4.0%	460-530	b•26w x 18d x 30h
75	3.0 - 4.0%	720-770	c•32w x 22d x 40h
112.5	3.0 - 4.8%	880-950	c•32w x 22d x 40h
150	3.0 - 4.8%	1100-1240	d•38w x 26d x 48h
225	3.0 - 4.8%	1400-1650	d•38w x 26d x 48h
300	3.0 - 4.8%	2000-2300	e•52w x 30d x 60h
500	3.0 - 4.8%	2830-2950	e•52w x 30d x 60h

The above data applies to configurations up to 600V, with NEMA 1 enclosure and standard temperature rise. Consult factory for detailed product data sheet for these and other configurations. NEMA 3R and non-ventilated enclosures also available.



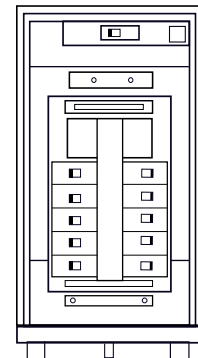
Remote Load Center



Data

- 2-4 42-circuit panel boards
- 24"W x 24"D x 77"H

Energy Station Space Saver



Data

- Dimensions: 36"W x 24"D x 75"H
- 45-225 kVA
- Weight: 1100-3500 lbs*

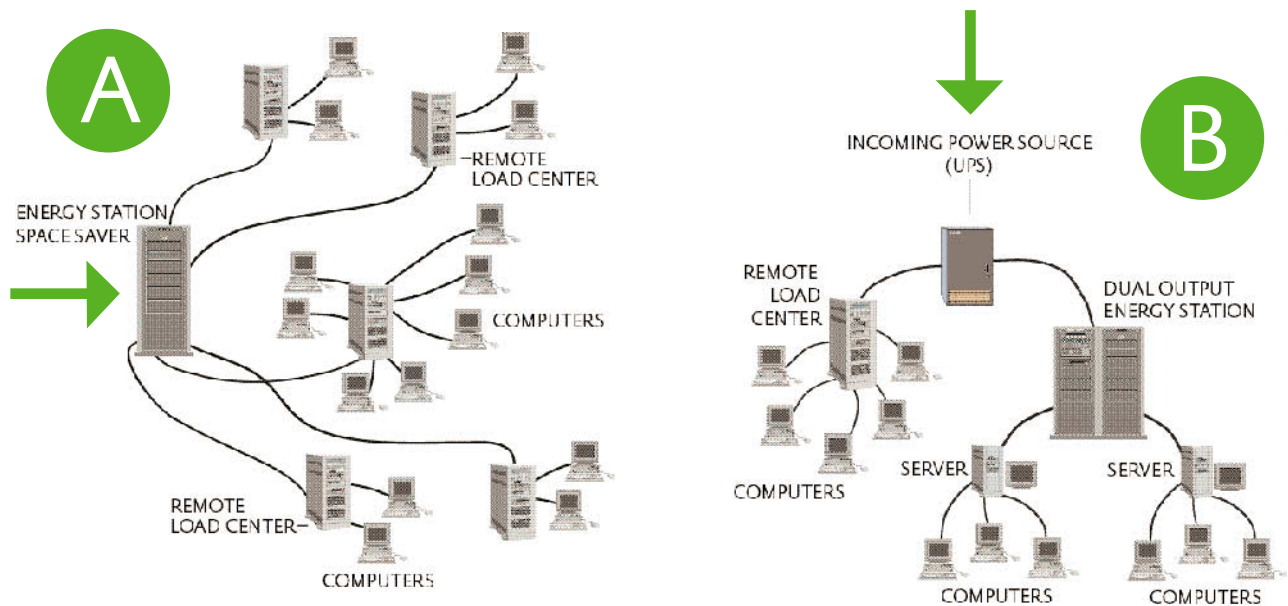
Top fed units can take up to ten 225 Amp sub-feed breakers**, bottom fed units can take up to six 225 Amp sub-feed breakers.

* depending on kVA and number of panels
 ** All sub-feed breakers are I-line breakers

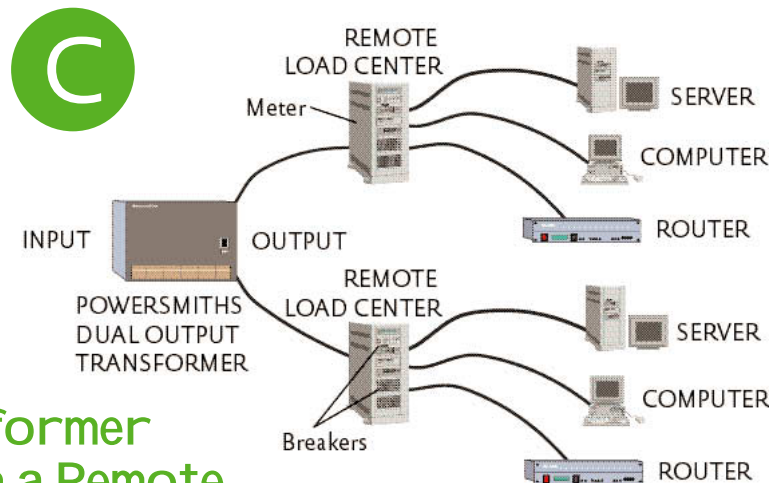
Energy Station/Space Saver Diagrams

Powersmiths *Energy Station Space Saver* is a quantum leap towards optimizing footprint space and minimizing running costs in computer rooms, server farms and other raised and non raised floor applications. With the use of our harmonic cancellation transformers and *Remote Load Centers*, the *Energy Station Space Saver* can be installed outside the computer room, freeing up valuable floor space for additional servers and other revenue generating equipment. The possible configurations using these products are endless. Here are examples of how the *Energy Stations* can be used in conjunction with the *Remote Load Center*.

Flexible Product Line



By providing options such as power meters and main breakers on the *Remote Load Centers*, Powersmiths single and dual output transformers may also be used for specific applications offering you a wide variety of electrical system solutions.



Dual Output Transformer in Conjunction with a Remote Load Center

360 Networks • **3M** • Aerocentre • **Air Canada** • AirTouch • **Allied Signal** • American Funds • **AOL**
 Apotex • Arlington Courthouse • **AT&T** • **Atmel** • Austin Legislative Buildings
B2B Communications • **Bank of Montreal** • Bell ExpressVu • Bell South • BMC Software • **Boeing**
 Bosch • Bombardier • BP Amoco • **Cable & Wireless** • Cadillac Fairview • **Cantel AT&T** • Case Corp
 CBC Television • Charles Town Casino • CIBC • **Cisco Systems** • Citicorp Credit • Cinram • CITY-TV
CNN • Coconino County • Cochise College • Convergys • Corporate Express
 Defense Information Systems Agency • **Dell Computer** • Department of General Services • Digex
 Digital Cinema • Discover Card • Dupont Photomask • ebaseOne • Echostar • EDS
 Egyptian Defense Office • Electronic Arts • Epson • **Ericsson** • ExxonMobil • Fidelity Investments
 First National Bank and Trust • **Ford Motor Company** • **Fox Communications** • Future Shop
General Motors • **Global Center** • **GTE** • Great Blue Heron Casino • Great-West Life Insurance
 Guidant • Gun For Hire • Harris • Headline Sports • Holy Spirit Hospital • Hughes Electronics • **IBM**
 ICBC • Imperial Oil • **Intel** • Intria • J.P. Morgan • John Hancock • Kaiser Permanente • Kellogg's
 KPMG • Kuehne & Nagel • LBJ Hospital • Lifetime TV • Lockheed Martin • **Los Angeles Times** • LSI Logic
Lucent Technologies • Maxtor • **MCI Worldcom** • McMaster University
MetroMedia Fiber Network • Midland-Walwyn • Mississippi University • Motel 6 • **Motorola** • NASA
 National Ground Intelligence • NCS Communications • Netcentives • Netcom
 Newbridge Networks • Nokia • **Nortel Networks** • Occidental Petroleum • Ontario Hydro
 Pace University • PageMart • PanCanadian Petroleum • Pennzoil • POCO Petroleum
Price Waterhouse Coopers • Prudential Insurance • **Qualcomm** • Quantum Corporation • R.O.B.
 TV Raytheon • **Real Networks** • Revenue Canada • Rogers Communications • **Royal Bank**
 Savoy Medical Center • Scotiabank • Sears • Shoppers Drug Mart • Southwestern Bell • **Sprint**
Sun Microsystems • SWIFT • Sybase • **TD Bank** • Teligent • Tempe City Center • Texas Casino
 Texas History Museum • TiVo • Toronto Stock Exchange • Toys 'R' Us • **Trimark Financial** • TSN
Tucows • TV Filme • TXU Energy • Unisys • **United Airlines** • United HealthCare
United Parcel Service • University of Arkansas • University of California • University of Michigan
 University of Southern California • University of Texas • University of Toronto
 U.S. Bureau of National Affairs • **U.S. Department of State** • **US West** • **UUNET** • Veritas Software
 Vulcan Ventures • **Wal-Mart** • Walt Disney • Wang • Warner Brothers • Washington Post
Williams Communications • Winstar Communications • Wisconsin Energy • **World Bank**
 WorldSpace • **YAHOO!** • Yuma High School • Zama Networks

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