

# Closing In On Efficiency

## AFCO's New Environmental Enclosure Systems Are Energy- & Parts-Efficient

by Curt Harler

THE CLASSIC KISS rule exhorts SMEs to “keep it simple.” However, as IT infrastructures become more complex and more demanding of power and cooling, keeping it simple isn’t always an easy thing to do.

In an effort to help SMEs simplify their parts management, AFCO Systems (631/249-9441; [www.afcosystems.com](http://www.afcosystems.com)) has developed a newly upgraded version of its environmental enclosures that provide a prepackaged, scalable thermal management platform. The product line, which features many interchangeable components, is scheduled for release this month.

### Upgrade With Ease

“We’re out of cooling!’ is something I have heard frequently,” says John Consoli, chief technical officer for AFCO Systems. “While the easy answer is to throw more energy at the cooling problem through spot air conditioning, a far better technique for the environment and for the bottom line is to implement an intelligent air management system.”

The changes AFCO has made to its offerings make the systems more upgradeable, meaning IT managers will be able to swap parts and components and expedite tasks such as cable management. The new line will help to reduce the number of individualized replacement parts and components required to be warehoused by data centers, which is good news for budget-conscious SMEs.

Among the interchangeable parts are panel fillers, rail assemblies, and wire management troughs. Additionally, the units will offer a common plenum that can be used with or without a diverter, which means airflow is more readily adjusted.



The systems will also be field-upgradeable, meaning in-house staff will be able to make the changes required to upgrade or fix a system.

### A Full Line

AFCO now has three major offerings in its line: the Passive, the HD (High-Density), and the EHD (Extra High-Density) units, all of which make use of the company’s award-winning Kool-IT technology.

The Passive, HD, and EHD products offer prepackaged and scalable thermal management enclosure platforms that include cable management configuration options, an intelligent power distribution solution, and the integrated Resource Manager for local and remote system monitoring and management.

“The new Passive enclosures are perfect for the SME that doesn’t have the CAPEX or need right now but knows it might want to upgrade to an active airflow management system,” Consoli says.

Of interest to SMEs with critical data protection needs are the HD and EHD units. The HD enclosures are designed to handle heat loads in excess of 8kW. Each of the HD units ships ready to go to work without any further modification. They are backward-compatible with the Passive line for both cable and power management.

“The heart of the HD is our AMM (Airflow Management Module), which includes the controller and fan tray,” Consoli says. These used to be a single component; now, the AMM is separate from the fan tray, connected by a ribbon cable. If there is a failure—and Consoli notes that the failure rate on 30,000 units is less than 0.5%—it usually comes on the control module. So, IT can pop off the control module but still have the fans run.

The new HD’s airflow is enhanced to 1,450cfm (cubic feet per minute) from the old 1,350cfm. “The HD cabinet is a cleanly defined device,” says Tony Wilson, senior director of marketing at AFCO. “You don’t have to guess on fan kits. You don’t have to configure anything. It’s designed to handle the heat out of the box.”

The top-of-the-line EHD units operate in the 16 to 24kW load range. The EHD units originally were conceived with the banking and financial industry in mind and come in two flavors: The EHD-6 has six fans that move 1,740cfm air, and the EHD-10 has 10 fans moving 2,900cfm.

For those concerned about hot aisle containment, Consoli notes, “Hot

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aisle containment is inside the cabinet. You don't have to hang butcher plastic. It's all in the rack." To facilitate that, AFCO engineers designed directional airflow into the cabinet with built-in air diverters and blanking panels.

The company's power strip mounting brackets provide access for as many as four power strips and a side cable pull-through. All units across the product line come with side car cable management. This gives IT greater flexibility to use the cabinets in a wide range of depths and widths, Wilson says. Around back, they have split rear doors that make it easier to get into the units. "They allow IT to manage cable systems without having to open the cabinet and fiddle with the servers," Wilson says.

### Keeping It Balanced

At some SMEs' data centers, management runs megawatts of power to their switches. Often, this is done with complex power distribution power strips. "We make a complete series of strips with intelligent capabilities down to the outlet level so data center managers can see if their loads are accurate and balanced," Consoli says. The company's Resource Manager software also gathers power data that can be analyzed and visualized to

enhance an SME's overall data center management suite.

AFCO's Resource Manager software can also aid SMEs in monitoring energy efficiency. The U.S. EPA (Environmental Protection Agency) recently released a report detailing the ever-increasing amount of energy used by data centers and offering specific recommendations on how to change data center operations to lessen a threatening energy crunch. With AFCO's Resource Manager, an SME can find exactly where its data center stands on power consumption and how well its power and cooling needs are reduced by implementing guidelines suggested by the U.S. EPA.

All of these new units are built much tougher than the previous models. "We found customers often take the front doors off the units, especially when they replace blade servers," Consoli says. Thus, AFCO changed the door design from a spring-loaded hinge to an easily removable post-and-pin design.

"We beefed up the frame from 16-gauge to a 14-gauge steel fully welded frame. With everyone putting more things into their cabinets, the industry always talks about increasing heat load,



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### PRODUCT OF THE WEEK

## AFCO Systems Passive, HD & EHD Enclosures

**Description:** An expanded line of prepackaged and scalable thermal management enclosure platforms designed for energy efficiency and upgradeability.

**Interesting fact:** AFCO claims the world's largest installed base of active, air-cooled, HD (5 to 8kW), and EHD (up to 20kW) server and network cabinets.

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but we think it is important to beef up the structure of the cabinets, as well," Consoli says. "Our major goal was to drive commonality throughout our frames and to give customers flexibility with their rollouts." ■