

# Belden's New Adaptive Enclosure Heat Containment System "Greens" The Data Center By Slashing Cooling Costs



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RICHMOND, IN – Belden (NYSE: BDC), a world leader in the development of signal transmission products for industrial, enterprise, building management, broadcast, and security applications, has introduced a new adaptive enclosure heat containment (AEHC) system

for data centers that will ensure the entire room is normalized with cold air to just the right amount, with no wasteful oversupply of cooling.



Carl Bruckner, General Manager of Belden's Cable Management Group, states: "The AEHC system is a key addition to Belden's enclosure products, allowing our partners to effectively manage the deployment of high density, high heat

load equipment in both new and existing data centers."

In the new Belden system, a pressure reading made by a sensor inside the enclosure plenum modulates the rotational speed of the fans in the two cartridges mounted atop the enclosure. The speed is varied so that they pull out exactly the correct amount of air from the enclosure and send it back to the air conditioner return via a ceiling plenum.

The process of cooling enclosures in a data center today wastes excessive amounts of energy, largely due to oversupply of cold air by computer room air conditioner (CRAC) units attempting to compensate inefficiency in the enclosure cooling process.

A recent study on 19 large computer rooms found that, on average, the amount of cold air supplied to a data center room is 2.6 times the amount of cold air actually consumed by the IT load. The CRAC is oversupplying the room with cold air to overcome both bypass leakage and the effects of hot/cold mixing. The result is a significant waste of energy and dollars.

However, because of its innovative heat containment design, the new Belden AEHC system overcomes these problems. Since it completely separates the hot and cold side of operations, the room will be normalized with cool air which never experiences mixing with exhaust heat from the enclosure. The bypass problem is eliminated, too.

There is no need to oversupply cold air to the room.

The physical position of the CRAC unit and its proximity to the enclosures are no longer a concern, a fact which greatly simplifies the challenge of data room infrastructure design. Cool air can be fed to the computer room via a raised floor or an overhead duct which enhances your freedom of infrastructure design.

When designing a totally new data center with the AEHC system, you can now install bigger and fewer CRAC units, instead of relying on many smaller units that are less efficient. And when retrofitting an existing room, you can use the same amount -- and same type -- of cooling equipment currently installed. In either scenario, Belden's advanced management software will help you better control your IT environment by giving you real time assessment of enclosure cooling load or demand.

You will be able to deploy more IT load in the same room, a great efficiency benefit in today's economy. If you have space left in your enclosures but aren't deploying more devices there because your

cooling system is already at full capacity, you can retrofit Belden's new heat containment system on those enclosures that have the highest heat loads, to be able to host even more IT equipment.

As a bonus, the AEHC system increases the temperature differential between the inlet and outlet temperatures of the CRAC unit for much greater operational efficiency, giving you an important savings in energy consumption. With no mixing of hot and cold air, it is possible to raise the temperature of the cooling air supplied to enclosures to be closer to the ASHRAE recommended upper limit. The cold/hot air paths are fully separated by the system, so the CRAC supplies less air to the room at a higher temperature, and still assures better cooling with no hot spots.

For more information about the AEHC system, download NP 300 at <http://www.belden.com>, or contact Belden, P.O. Box 1980, Richmond, Indiana 47375, 1.800.BELDEN.1. FAX: 765.983.5294.

### **About**

### **Belden**

Belden is a customer focused company. We ensure that our customers' communications infrastructure issues are resolved and that they benefit from the best signal transmission performance for their investment. We deliver leading-edge copper and fiber cabling/connectivity systems, wireless technologies, and active switch devices. We employ customer-centric go-to-market strategies and we implement and retain world class manufacturing processes. Our partners span the globe, helping our customers design, install, operate and maintain their communications applications. And our experience is vast, including expertise in Enterprise, Industrial, Infrastructure, Transportation, Professional and Enterprise Audio and Video, and Government applications. To obtain additional information contact Investor Relations at 314-854-8054, or visit our website at <http://www.belden.com>.

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