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## **Data Center Cooling – Simplex AirBlock Pays Off**

PASADENA, CA – The California Institute of Technology—known as Caltech—reports that by at least one measure they have reduced the energy usage in one of their data center rooms by more than 50% by installing AirBlock™ data center partitions from Simplex.

“We were originally employing 35 tons of air conditioning to cool that room,” said Eugene Hacopians, senior system engineer at Caltech. “We are now using 16 tons of air conditioning.”

“We are also able to reduce the temperature in that room by ten degrees without resetting the thermostat,” Hacopians added.

The data center partitions from Simplex were installed earlier this year.

Data centers contain racks of computers used to store and administrate vast amounts of information. Heat generated by these computers routinely reaches levels high enough to cause system failure. To combat this, standard procedure in data centers is to position racks so that computers are front-to-front and back-to-back. Cool air is then vented into the front-to-front rows (referred to as cold-air rows), directed through the racks to cool the computers, and then exhausted out the rear of the rack into the back-to-back rows (known as the hot-air rows). By using these transparent partitions to separate the rows, data center managers keep cold air and warm air from mixing, increasing the efficiency of the operation.

“This was the third data center at Caltech in which we employed these hot/cold aisle isolation measures,” said David Mispagel, project manager for architectural and engineering services at Caltech. “We are currently seeking funding to install a similar system from Simplex in a fourth computer room, which is one of the largest data centers on campus. This data center already has utility monitoring in place allowing baseline benchmarking which will enable Caltech to analyze actual energy consumption through empirical data trending from which actual cost savings can be known.”

“This is all part of Caltech’s more sustainable approach,” added Mispagel. “We want to be ecologically sensitive and achieve reductions in energy costs while at the same time expanding capacity.”

The recent results from Caltech come on the heels of positive results reported by NetApp, a fortune 1000 company located in California's Silicon Valley. NetApp installed AirBlock™ data center curtains in their 7,000 square foot data center in 2008. When incorporating a \$56,000 rebate from the PG&E, local electrical utility, NetApp reported that the system paid for itself in less than a month and a half. The entire energy cost savings is anticipated to exceed \$100,000 annually.

"Simplex is excited about these initial results from our clients," said Duane McKinnon, president of Simplex. "They are right in line with our projections. Managers in legacy data centers are under pressure to maintain optimum operating temperatures in their computer rooms, lower energy costs and reduce their carbon footprint, and be able to add capacity—to accommodate more computers. Every day we talk to data center managers who just can't get any more out of their facility. They have reached maximum capacity. AirBlock™ data center curtains and partitions allow them to lower temperatures in their data centers, increase capacities, and contribute to a more sustainable use of energy—all the while reducing energy costs."

Founded in 1979, Simplex Isolation Systems designs and manufactures custom isolation products and systems for the semi-conductor, pharmaceutical, medical device and aerospace industry. Simplex products are distributed in the U.S and Canada through a nationwide dealer network. To find out more about Simplex products for computer data centers or to learn more about the complete line of cleanroom components and solutions from Simplex, call 1-800-854-7951, or visit the Simplex website at <http://www.simplexstripdoors.com/dccurtains.htm>.