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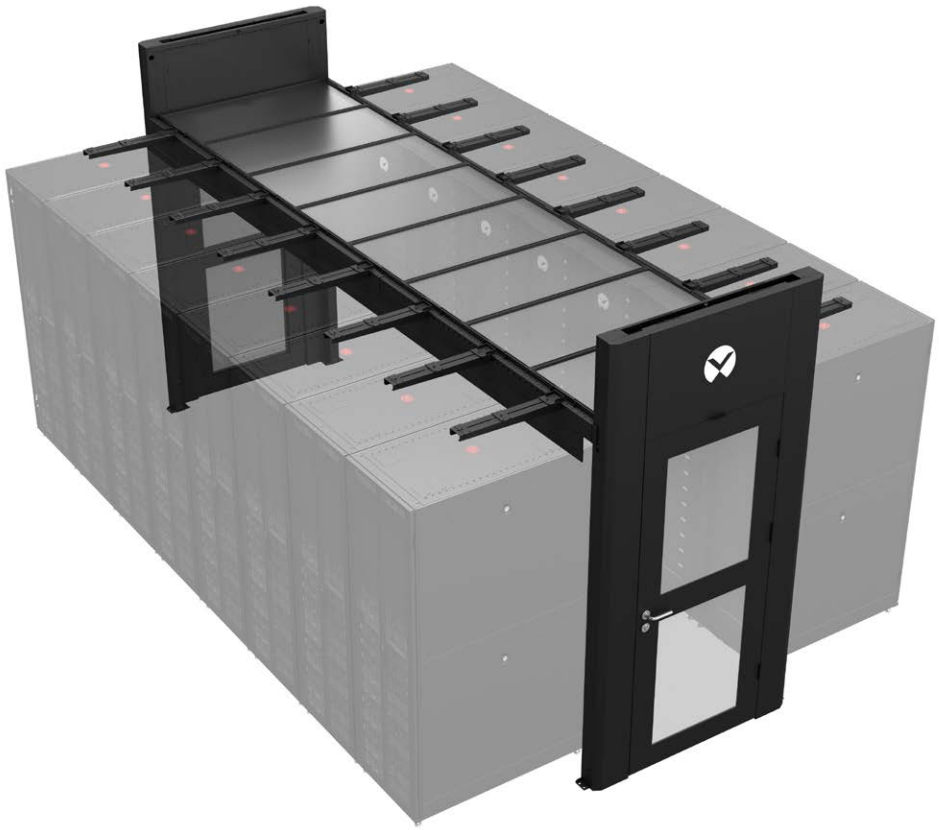
Vertiv™ Aisle Containment System

Simple, Flexible and Efficient Containment for Every Data Center.

Free Standing, Rack-Independent Containment Configurable to Any Application



The Vertiv Aisle Containment System is a rack-independent system with the flexibility to maximize efficiency and capacity from the core to the edge for raised floor and slab data centers.

Adaptable to hot and cold aisle containment, the Vertiv Aisle Containment System allows you to deploy containment before racks are installed to simplify installation and speed deployment of new data center equipment.

With ceiling heights adjustable to 52U, and a full range of blanking panels & height adapters, the Vertiv Aisle Containment System can support standard-size racks as well as auxiliary equipment, such as in-row UPS and cooling systems.

Horizontal beams telescope from 10 to 16 feet to adapt to any aisle length and the system support aisle widths from three to six feet. A variety of roof options enable different approaches to fire suppression and airflow management. The system can also support above-rack cable management.

While the Vertiv Aisle Containment System is highly configurable, it uses standardized components that simplify ordering and enable short delivery windows.

Vertiv™ Aisle Containment System

At Vertiv we believe that being mindful of product design, development, use, and disposal are important to the longevity of our industry.

Checkout these environmentally conscious features of the Vertiv™ Aisle Containment System:

- Reduces cooling power consumption up to 40%
- Eliminates the need for humidifiers, saving energy and water
- Reduces over-provisioning and waste related to room upgrades and modifications

More Features

- Flexible aisle widths 3ft (900mm), 4ft (1200 mm), 6ft (1800mm)
- Adjustable posts to support rack heights up to 52U
- Translucent, thermal drop out or ducted roof options
- Telescoping 10-16 ft (3048-4087 mm) aisle-length beams
- Swing or sliding lockable doors
- Support for above-rack cable management
- Full complement of blanking panels & height adapters

Increase Density, Capacity and Efficiency

Aisle containment has proven benefits in data center management. The Vertiv™ Aisle Containment system allows you realize the full benefits of containment by delivering easy-to-configure and deploy containment matched to your data center and equipment.

Optimize Cooling System Efficiency

- 30+% efficiency increase
- Continuous dynamic adaptation to load
- Reduced fan power per kW cooling

Increase Space Efficiency

- 30+% increase in IT equipment density
- Up to 12kW/rack with perimeter cooling
- Up to 30kW/rack with localized cooling

Fast Return on Investment (ROI)

- Payback within a few months to less than 2 years
- Low initial investment
- Simple configuration and ordering

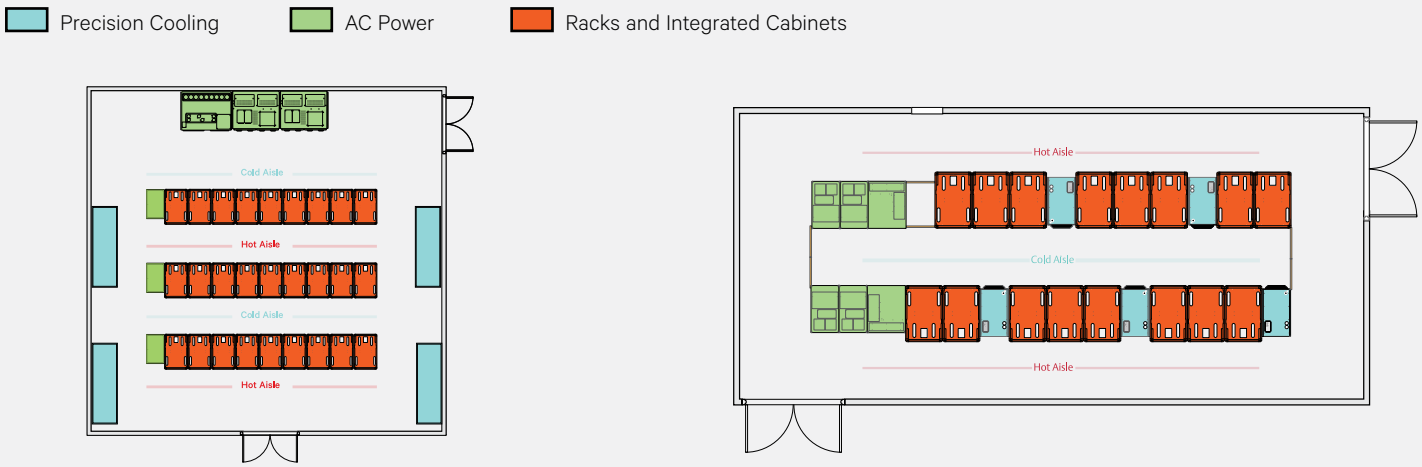
Eliminate Hot and Cold Air Mixing

- Uniform and predictable temperature to all IT equipment
- Integrate the cooling unit air flow delivery with the IT equipment requirements

Increase Capacity

- 25+% increase in available cooling capacity
- Extend capacity of existing precision cooling system

Calculating the Savings from Containment



Conventional Design

Number of Racks:	27
Density:	5.9 per rack
Total IT Load:	160 kW
Cooling units:	4 x 20 ton Precision Cooling systems Units
Power:	2 x 100 kVA room-level UPS systems and power distribution

Aisle Containment

Number of Racks:	16
Density:	10kW per rack
Total IT Load:	160 kW
Cooling units:	6 row-based precision cooling units Cold Aisle Containment
Power:	2 Row-based UPS systems Modular Power Busway

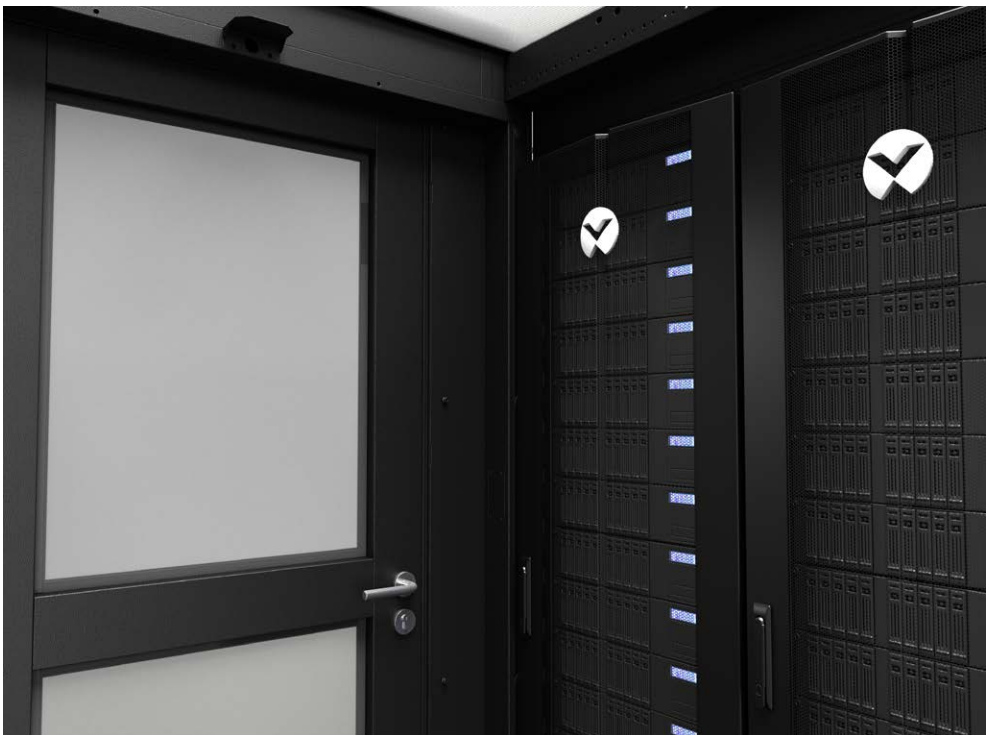
	Conventional Data Center Design	Aisle Containment Design	Cost Savings	% Advantage Aisle Containment
Room Costs	$515,000	$459,000	$56,000	11%
Infrastructure Costs	$415,000	$391,000	$24,000	6%
Total Capital Expense	**$930,000**	**$850,000**	**$80,000**	**9%**
Energy Consumption	$63,500	$46,500	$17,000	27%
5 year OpEx	**$318,000**	**$233,000**	**$85,000**	**27%**
5 Year TCO	**$1,248,000**	**$1,083,000**	**$165,000**	**13%**

Standard Components that Adapt to Your Needs

The core components of the Vertiv™ Aisle Containment System provide the strength and flexibility to adapt to any data center configuration.

Vertical Posts

The sturdy vertical posts create the foundation for aisle containment system with adjustability to support racks from 42U to 52U in one U increments and aisle widths from three feet to six feet. Optional floor stands provide weight-bearing support for raised floor environments.



Extendable Horizontal Beams

Telescoping horizontal beams are adjustable from 10 to 16 ft in 2-inch increments (50 mm). They support three roofing options, as well as optional accessory arms and blanking panels.

Translucent, Ducted or Thermal Drop-Out Roofing

Choose one of three roofing options. The twin-wall polycarbonate translucent option supports hot or cold aisle containment and in-row cooling while the height adjustable ducting option enables ducted heat removal with heights to 16 feet. The thermal drop-out option enables fire suppression strategies that require ceiling tiles to shrink out of their casing when a temperature threshold is reached.

Doors

The system includes sliding or swinging doors, lockable from the inside and outside.

Configurable to Your Equipment and Application

A host of accessories enable easy configurability to equipment variations and cable management requirements. Not sure what accessories you need? Your Vertiv partner can guide you through our simple configuration process.

Blanking Panels

Whether you need the flexibility to add racks to your containment system after deployment or have equipment of varying heights, blanking panels help ensure your containment system delivers the highest possible efficiency.

Rack-size panels with widths of 300, 600, or 800 mm can be installed in open spaces in the row and replaced with equipment racks when additional capacity is required. Smaller panels can be attached to the horizontal support beams to close gaps created by equipment racks shorter than the roof height.

Raised Floor Stands

When installing the Vertiv™ Aisle Containment System in a raised floor environment, floor stands reduce the weight load on the floor and enhance stability.

Accessory Arms

With the optional cantilevered accessory arms, the Vertiv Aisle Containment System can be configured to support cable trays, fiber runners, busways, and other cable management options.

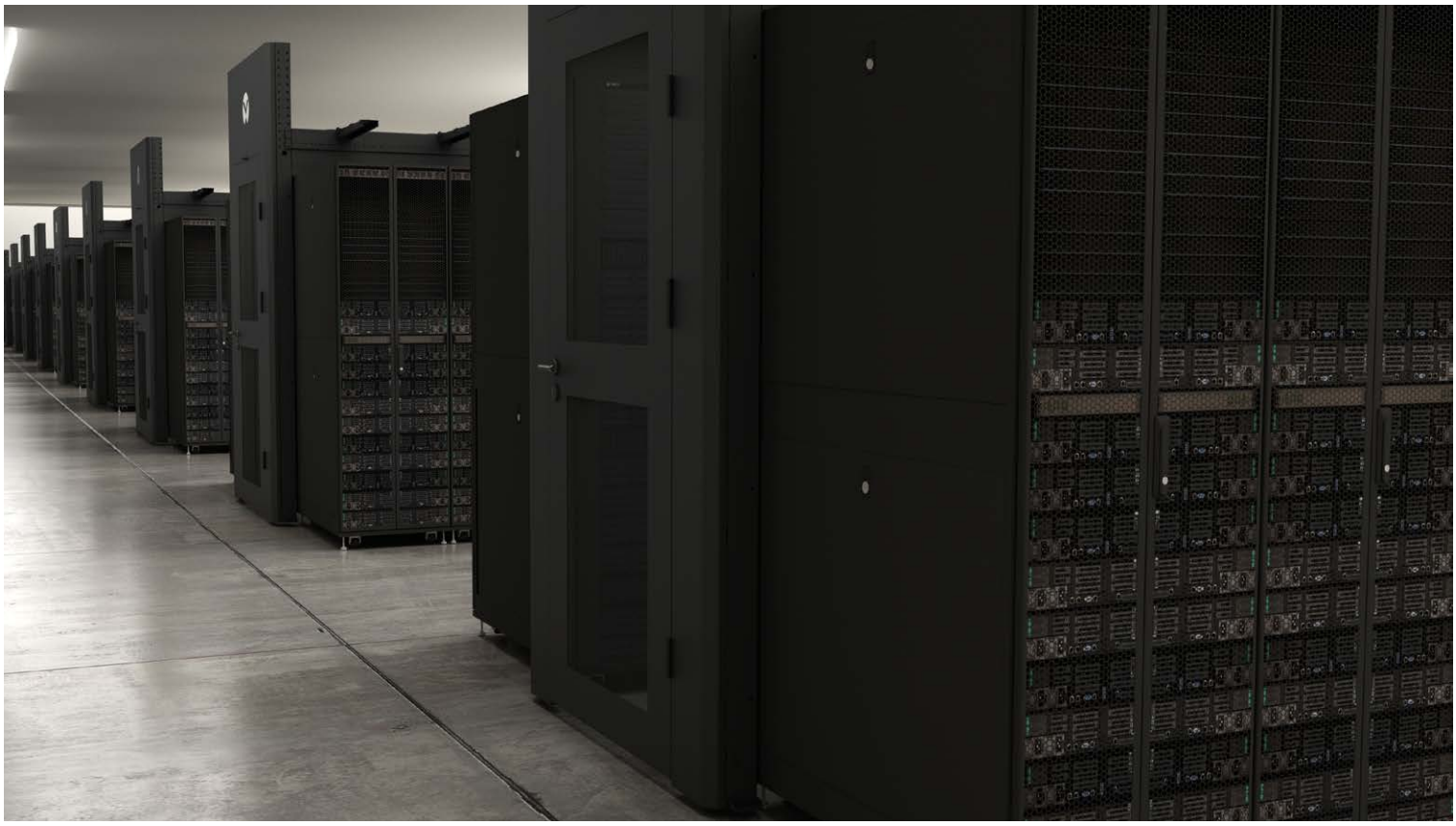
Lighting

For environments without overhead lighting, lighting fixtures are available.

Enhance Operating Flexibility and Efficiency in Non-Raised Floor Environments

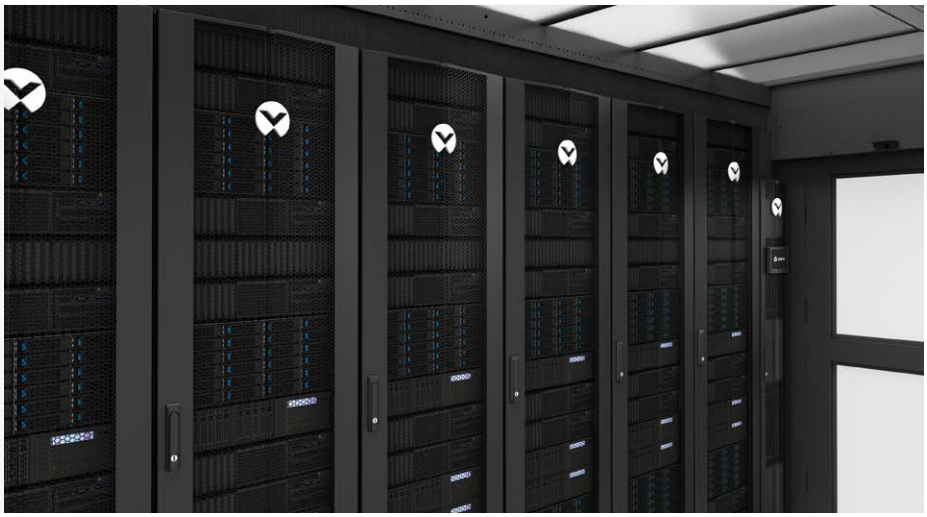
For slab floor colocation, enterprise and hyperscale data centers, the Vertiv Aisle Containment System delivers efficient and flexible hot aisle containment that maximizes data center efficiency and capacity.

The rack-independent design of the system enables the structure to be built before equipment racks are installed. Using rack-sized blanking panels ensures complete containment while providing the flexibility to add racks as capacity demands changes.



Get More from the Edge

The Vertiv™ Aisle Containment System helps ensure fast and simple deployment of edge computing sites. With easy installation and configuration, the Vertiv Aisle Containment System enables a highly efficient self-contained edge data center with integrated power protection, cooling and overhead cable management.



Easy to Configure and Install

Simplified Configuration

While the Vertiv Aisle Containment System is highly configurable, you don't have to navigate a long list of part numbers to configure your system. Working with your Vertiv partner, you just answer some simple questions about your application, such as the height of your tallest cabinet, aisle length and width, the type of roofing required and the accessories you'll need.

Based on your responses, our configuration tool assembles a complete bill of materials for your system.

Fast Delivery

Because the Vertiv Aisle Containment System uses standardized components, you don't have to wait for customization. Regardless of your configuration, all components are available within 3-5 day delivery.

Easy Installation

The Vertiv Aisle Containment System is designed for customer installation. Components go together easily, and we offer an aisle-width tool to ensure precise measurement. The system can be installed before racks arrive on site to streamline deployment of new IT equipment.

Efficient Operation

With the Vertiv Aisle Containment System, you get the full efficiency and capacity benefits of containment in a system designed for simplicity and flexibility.

With benefits that include a 30% improvement in efficiency and IT equipment density, few investments you make will deliver a faster ROI than the Vertiv Aisle Containment System.

Vertiv.com | **Vertiv Headquarters,** 1050 Dearborn Drive, Columbus, OH, 43085, USA

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