

Enclosed Cold Aisle and Cabinet Systems



Article Overview

Enclosed cold aisle cabinet systems isolate cold supply air from hot exhaust air, delivering precise cooling to IT equipment, improving energy efficiency, and enhancing equipment reliability.

Overview of Cold Aisle Containment

Cold aisle containment (CAC) creates a physically enclosed corridor in front of server racks, ensuring that cold air from cooling units is directed exclusively into server inlets, preventing mixing with hot exhaust air. This controlled environment maintains uniform, predictable temperatures, reduces hotspots, and allows cooling systems to operate more efficiently, lowering energy consumption and operating costs. CAC is particularly effective in high-density data centers where thermal management is critical.

Core Components and Architecture

A typical enclosed cold aisle system integrates four main modules :

- Cabinet System:
- Standardized cabinets (e.g., 600×1200×2000mm) support high-density IT equipment with a load-bearing capacity $\geq 1500\text{kg}$.
- Anti-seismic design (Level 8 compliance) ensures stability during environmental disturbances.
- Air duct isolation features, such as 1U blanking panels and L-shaped guide rails, prevent cold air leakage and optimize airflow.
- Internal cable management reduces obstruction to airflow and simplifies mainten...

Article Content

Hot / Cold Aisle Containment

Filler Panels AisleLok Filler Panels are removable or fixed aluminum framed wall structures that provide separation between data

Cold Aisle Containment | Legrand

The Contain-IT FLEX system is comprised of stock components that are assembled to create containment systems. The components

Aisle containment system buying guide

Aisle containment system buying guide Discover the key factors to consider when choosing a hot aisle/cold aisle containment

Aisle Containment Systems Physical Containment Systems ...

Aisle Containment Systems by Vertiv™ Aisle Containment is the logical extension of the hot aisle/cold aisle concept of data center

KabinPLUS Aisle Containment Solutions

Aisle Containment Solution - Cold Aisle Cold Aisle Containment for rack cabinets with single or double sliding doors and sliding roof

Data Centre Aisle Containment Systems

Data Centre Aisle Containment Systems A data centre aisle containment system separates the supply of the cold air and hot exhaust

CONTAINMENT SYSTEM

Cold Aisle drop away ceiling panels (clear or opaque) Class A rated, CA State Fire Marshal, UL & FM Global listed and approved Hot

Hot and Cold Aisle Containment

EFS offers tailored cold and hot aisle containment solutions, effectively avoiding temperature air crossover to achieve lower

Data Center Aisle Containment Solutions | HAC & CAC | Enconnex

Enconnex offers customizable hot & cold aisle containment solutions. Save energy, reduce hotspots, & improve airflow with data

Aisle containment | Airflow management | Eaton

Aisle containment ceilings, walls and end of row doors are designed to help maintain optimal operating temperature in server rooms

Contact Us

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