

Case Study of Intelligent Cold Aisle Construction in a Mexican Data Center



Overview

The data center deployed Sensocon wireless LoRaWAN® temperature sensors, wireless differential pressure sensors, and airflow sensors at strategic locations inside and outside the cold aisle. With specialized services in retail, wholesale, and edge computing, MTP aimed to enhance the customer experience and connect more closely with end-users through a data center with an installed int in Mexico City. The center had to meet the objectives of energy efficiency and. With rising IT loads and increasing demand for sustainability, containment strategies such as Hot Aisle Containment (HAC) and Cold Aisle Containment (CAC) have become pivotal in thermal management. By separating cold supply air from hot exhaust air, operators can raise supply temperatures, reduce fan energy, and increase rack densities. ASHRAE studies show that effective containment. Reviewing Power Usage Effectiveness (PUE) is a logical starting point. The average PUE across data centers globally is more than 1.



Article Content

Influence of floor air supply methods and geometric parameters on ...

This paper compares four commonly used air supply methods, namely hot and cold aisle open air supply systems,

Optimizing Cooling Efficiency in Modern Data Centers

Cooling systems in data centers account for roughly 30% to 40% of total energy consumption. As rack densities grow

Cold & Hot Aisle Containment For Data Center Efficiency

Therefore, data center operators are constantly looking for ways to improve thermal management while maintaining or

Sensocon | Cold Aisle Containment Use Case | Data Center

Learn how LoRaWAN wireless monitoring supports cold aisle containment in data centers by tracking temperature differentials,

Cold Aisle Containment & Hot Aisle Containment

Executive Summary of Aisle Containment This article examines cold aisle containment and hot aisle containment (also known as

Liquid vs Air Cooling for Data Centers 2026: Cost & Efficiency Analysis

Data Center Cooling 2026: Liquid Immersion vs Air — TCO & Performance Institutional TCO comparison of liquid immersion vs air

Data Center Cooling Market

The key trends and disruptions set to influence the data center cooling market over the next several years. The data center industry

Nigerian Data Center Intelligent Cold Aisle Construction Case

Case studies from South Africa, Kenya, and Nigeria demonstrate how data centers have bridged the digital divide, created job

Numerical and experimental investigation of thermal performance in

An innovative method of airflow optimization applying deflector in cold aisle containment (CAC) is proposed to improve

Numerical and experimental investigation of thermal performance in

The main purpose of this study is to analyze the impact of cold aisle containment on the thermal management

Numerical and experimental investigations on thermal management

This study proposes the container data center with the featured cold aisle containment (CAC) as effective thermal

FOCUSED COOLING USING COLD AISLE CONTAINMENT

Aisle containment can improve cooling performance of a data center, assuming it is arranged in a hot aisle/ cold aisle configuration.

Case Study: Choosing the Right Aisle Containment Strategy for Data ...

The goal of this case study is to provide a clear framework for deciding between the two primary approaches—Hot Aisle Containment

Cold Aisle Containment

Cold Aisle Containment or CAC is a proven, relatively easy to deploy solution for effectively managing

Optimizing Thermal Performance in Data Centers: A ...

Through a combination of theoretical insights and practical examples, this study provides engineers, designers, and

Impact of aisle containment on energy performance of a data center

Abstract The main purpose of this study is to analyze the impact of cold aisle containment on the thermal management

A DEEP DIVE INTO THE WORLD OF HOT & COLD AISLE

AISLE CONTAINMENT Aisle containment is a crucial strategy in data center management. It involves the use of physical barriers or

Cold Aisle Containment: The Ultimate Guide To

Data Centre professionals see cold aisle containment as a key strategy to improve cooling systems and

Numerical and experimental investigations on thermal management

This study presents a container data center via the cold aisle containment design combining with a HX on the airside

Hot aisle/Cold Aisle Containment in Data Centers For Most Energy

Topics Why is energy efficiency important for data centers? Basics of Airflow Management for Data centers Hot and

Cold & Hot Aisle Containment For Data Center Efficiency

Learn how cold and hot aisle containment improves airflow, reduces energy use, and boosts reliability in data centers.

Energy and water dynamics in data center cooling: Insights from a ...

The rapid growth of data centers (DCs) has led to increased energy and water consumption for cooling, which is heavily

Hot Aisle & Cold Aisle Containment Solutions & Case Studies

The document discusses hot aisle and cold aisle containment strategies for data centers, highlighting their importance in improving

COMBINING COLD AISLE CONTAINMENT WITH INTELLIGENT CONTROL

In a typical raised-floor data center, cold aisle containment without integrated Liebert® iCOM controls reduces energy consumption

Google's Green Data Centers: Network POP Case Study

The st.practices scribed

.this.case.study.form.the.key.elements.of.Google's.power.optimization.

Case Study: Choosing the Right Aisle Containment Strategy for Data ...

5. Conclusion: From Analysis to Action The core lesson from this case study is that the choice between Hot and Cold Aisle

Optimizing Data Center Cooling for Energy Efficiency

Explore the benefits of optimizing data center cooling systems and how monitoring can improve efficiency and

MTP case of success

MTP Develops 2.7 MW Data Center in Exclusive Mexico City Location with Vertiv Solutions Background financial district. With

Impact of Hot and Cold Aisle Containment on Data Center

Executive summary Both hot-air and cold-air containment can improve the predictability and efficiency of traditional data center

Contact Us

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