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Cold Aisle CAC Containment System Solution

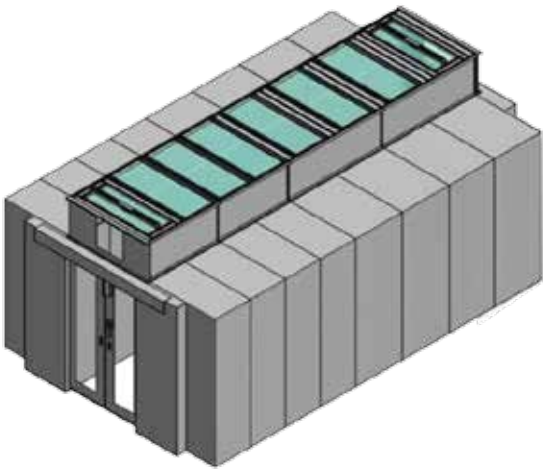


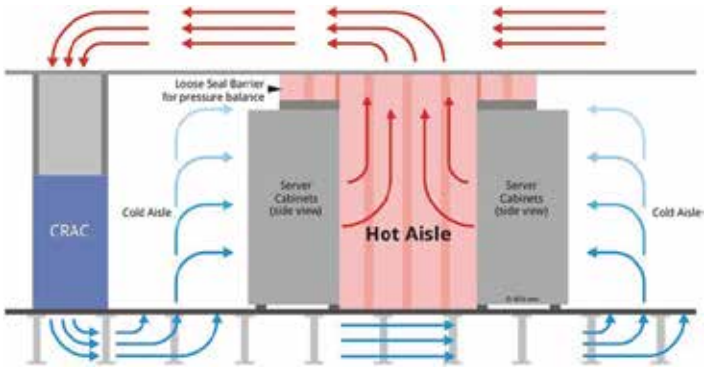
Cold Aisle
Containment System

Litech Cold Aisle Containment System is designed to optimize airflow management and reduce energy consumption In today's data centers. Litech's Aisle Containment System offers a cutting-edge solution for data centers seeking to enhance their operational efficiency and minimize their environmental footprint.

FEATURES

- Enhanced Airflow Management : creates a physical barrier between the hot and cold air streams , prevents the mixing of hot and cold air, reducing the chances of hot spots and enabling more predictable and efficient cooling.
- Scalability and Flexibility : designed to be flexible and adaptable to various data center layouts and configurations. Customized and modular containment solution allows for easy installation and scalability
- Enhanced Equipment Reliability: helps maintain optimal operating temperatures for servers and other critical equipment. , enhances equipment reliability and longevity, reducing the risk of downtime and costly equipment failures.
- Compliance with Industry Standards: Litech understands the importance of adhering to industry standards and guidelines, and ensures that its solution meets the requirements of modern data centers while supporting efficient and sustainable operations.
- Cost Effective & Easy of installation – modular solutions are cost effective and easy to deploy, rack integrated or free-standing options are available
- Full range of cooling solution : Various cooling capacity of In-Row Cooling and In-Rack Cooling for higher thermal management
- Airflow Management Accessories: complete range of accessories to optimize airflow management such as tooless blank panels, brush panels and grommets
- Monitoring and Control Sensor : Various sensor are available to provide real-time visibility and management of temperature, humidity, and other environmental factors within the contained hot aisle





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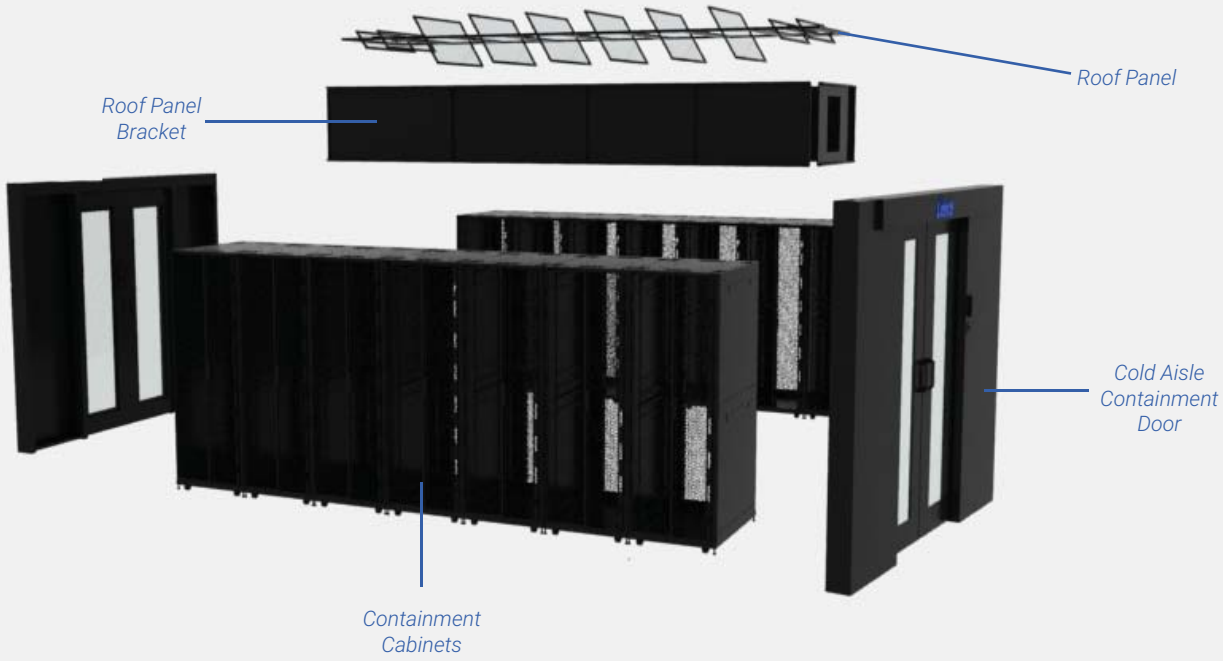


Specification

Parameter	Specification
Door	Single-Sliding Door ,Dual-Sliding Door, Single Swing Door, Double Swing Door
Door Access	Mechanical or smart lock access control with ID card reader, Biometric Fingerprint Scanner, Digital keypad or Facial Recognition Access
Aisle Width	1200mm, 1500mm, 1800mm
Aisle Length	Customizable
Roof	UL94-V0 Polycarbonate or Glass with metal panel
Aisle Extinguishing	Swing down panel with electronic control box integrated into the existing fire suppression control system
Monitoring Sensors	Lights, temperature , humidity, water leak

Cold Aisle Containment (CAC) System Solution **Overview**

Cold aisle containment in data centers is to optimize cooling efficiency and reduce energy consumption. Cold aisle containment is a combination of door and roof components which facilitate consistent separation of the hot and cold air in the data centre.



1. Enclosed aisles: Cold aisle containment typically involves enclosing the cold aisles with doors or panels to create a sealed environment that prevents hot air from mixing with the cold air.
2. Roof panels: Roof panels are installed over the cold aisle to further seal off the containment area and prevent hot air from escaping into the cold aisle.
3. End-of-row doors: End-of-row doors are installed at the end of the cold aisle to create a barrier that helps maintain the separation between the cold and hot aisles.
4. Adjustable panels: Some cold aisle containment systems feature adjustable panels that can be reconfigured to accommodate changes in equipment layout or cooling requirements.
5. Airflow management accessories: Accessories such as blanking panels are often used in cold aisle containment to optimize airflow and prevent hot spots.

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Cold Aisle Containment (CAC)
Door

Cold aisle containment sliding doors create a structure including end of row doors and ceiling panels that enclose the cold aisle between rows of cabinets to segregate cold and hot air streams to and from equipment. These doors are designed to slide open and closed horizontally, allowing for easy access to the cold aisle while maintaining the separation between the cold and hot aisles. Cold aisle containment sliding doors are typically made of durable materials such as aluminum and are equipped with seals to ensure a tight fit when closed.

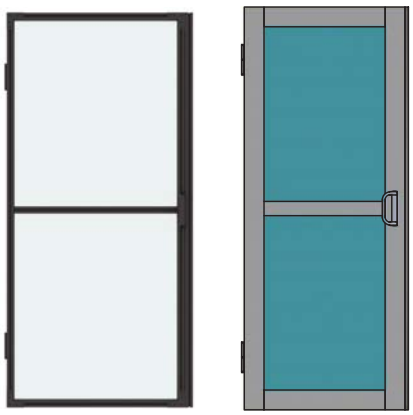
Cold aisle containment sliding doors are an important component of cold aisle containment systems, helping to optimize airflow management, improve cooling efficiency, and reduce energy consumption in data center environments.

FEATURES

- Sturdy aluminum framing, ergonomically designed with angled handles
- Easy installation with integrated door slide locks
- Self-aligning doors require no adjustment, allowing for smooth operation
- Comes with various sliding door, multiwall panel option and customizeable as per requirements

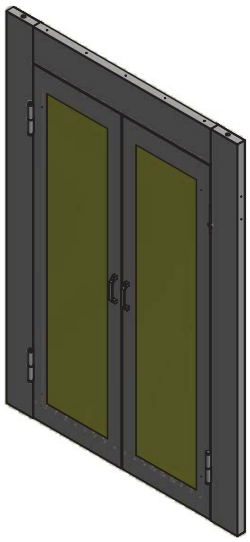
Product Diagram

Single Swing Door



Dual Swing Door





Soft Close Dual Sliding Door



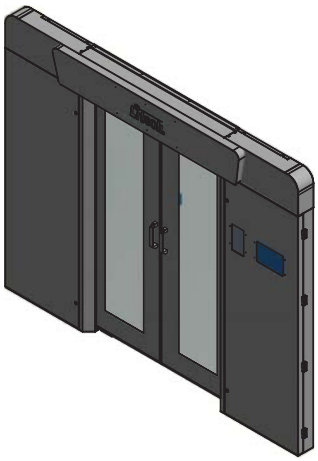


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Cold Aisle Containment (CAC)
Door

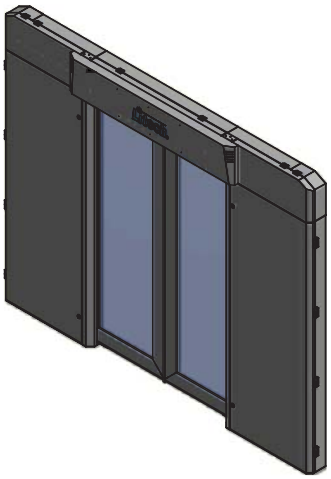
Pneumatic Dual Sliding Soft Close Door





Automatic Sliding Door





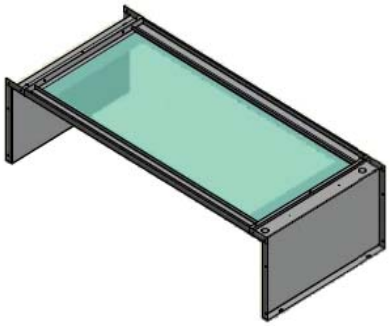
Ordering Information

Part Number	Description
LCAC-SD-SSW-01	Single Swing Door
LCAC-SD-DSW-02	Dual Swing Door
LCAC-SD-SC-03	Soft Close Dual Sliding Door
LCAC-SD-AP-04	Pneumatic Dual Sliding Soft Close Door
LCAC-SD-AS-05	Automatic Sliding Door

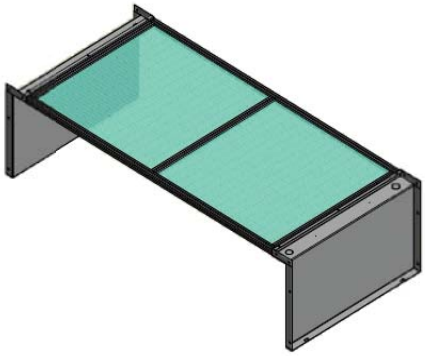
** Customizable doors options available upon request*

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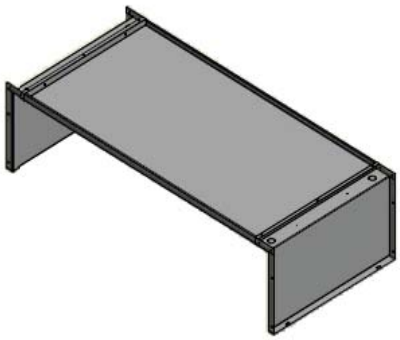
Cold Aisle Containment (CAC)
Fixed Roof Panel



Fixed roof panel with single window



Fixed roof panel with dual windows



Fixed roof blank panel

Roof panels to enclose the top of the cold aisle and create a sealed environment for efficient airflow management. These panels help prevent hot air recirculation by containing the cold air within the aisle, ensuring that it is directed towards the IT equipment for optimal cooling. Cold aisle containment roof panels are typically made of lightweight and durable materials and they are designed to fit securely on top of the cold aisle structure.

By installing roof panels in the cold aisle containment system, data center operators can improve cooling efficiency, reduce energy consumption, and maintain a consistent temperature throughout the data center.

FEATURES

- Clear lightweight panels allow for light pass through.
- Framed panels can be lifted off to access above contained area for maintenance.
- Framed panels can be pre-installed for fast installation.
- Flexible, modular design and customizable to different aisle lengths and widths.
- Panels are UL94-V0 rated for use under fire suppression systems

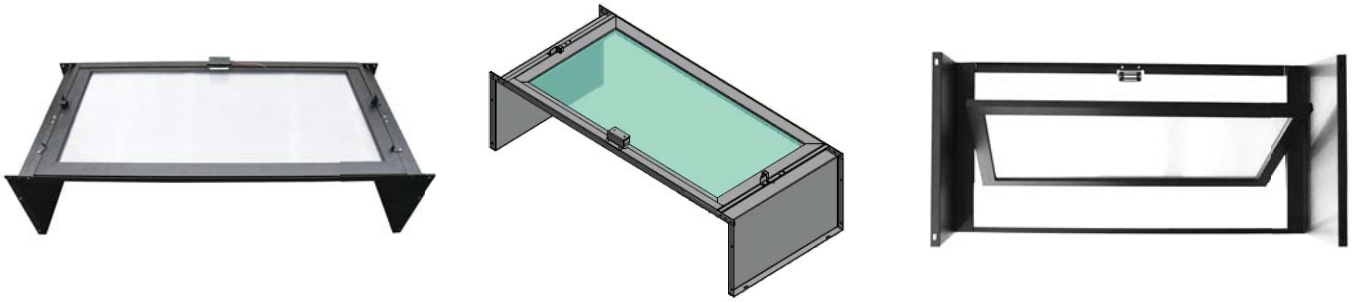
Ordering Information

Part Number	Dimension (mm)	Description
LCAC-FRP-01	600 (D) * 1337 (W)	Fixed roof clear polycarbonate panel with single window opening
LCAC-FRP-02	600 (D) * 1328 (W)	Fixed roof clear polycarbonatepanel with dual windows opening
LCAC-FRP-03	600 (D) * 1328 (W)	Fixed roof blank panel

** Customizable sizes and colours available upon request*

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Cold Aisle Containment (CAC)
Drop Down Roof Panel



Drop down magnetic roof panel single opening



Drop down magnetic roof panel dual opening

The drop down magnetic panels are electrically controlled by the CAC controller and will automatically open in the case of fire/smoke, to allow gas suppressant or water from an overhead sprinkler system to pass through to the aisle. The drop-away thermal panels enable the fire suppression system to work as designed.

FEATURES

- Fire suppression compliant to flammability UL94 - V0 rating
- High transparency polycarbonate glazed panels.
- Framed panels can be lifted off to access above contained area

Ordering Information

Part Number	Dimension (mm)	Description
LCAC-DMP-01	600 (D) * 1371 (W)	Single opening drop down magnetic clear polycarbonate roof panel
LCAC-DMP-02	600 (D) * 1337 (W)	Dual opening drop down magnetic clear polycarbonate roof panel

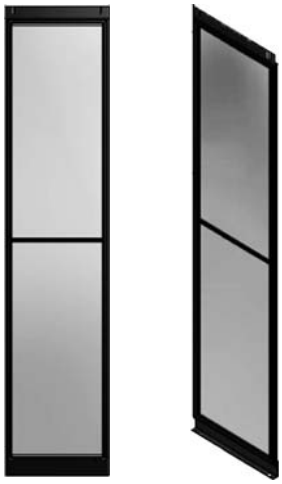
** Customizable sizes and colours available upon request*

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Cold Aisle Containment (CAC)
Blanking Panel

Cold aisle containment blanking panels are used in data centers to fill gaps in server racks and cabinets to prevent hot air recirculation. Blanking panels help optimize airflow management and improve cooling efficiency by ensuring that cold air is directed where it is needed most. By installing blanking panels in the CAC system, data center operators can reduce the risk of hot spots and improve overall cooling effectiveness.

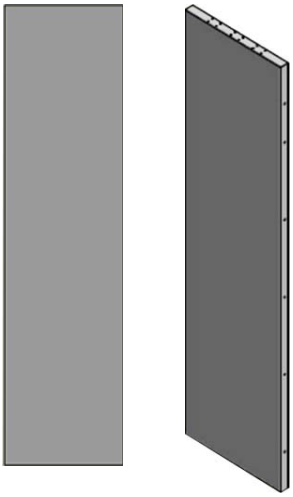
Blanking panels come in various sizes and materials to fit different rack configurations and aisle layouts. Made of durable materials such as steel or aluminium with polycarbonate, making them easy to install and remove as needed.



Aluminium frame with Twinwall Polycarbonate Type 1



Aluminium frame with Twinwall Polycarbonate Type 2



Metal Blank Panel

Product Specification

Parameter	Specification
Frame	Aluminium extruded profile 6063-TS/6063-T6
Panel Material	Polycarbonate UL94 Compliance

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