PRODUCT BROCHURE

Custom Data Center Air Flow Containment Solutions

Custom systems for hot and cold aisles, from complete freestanding structures to doors, walls, ceilings and gap seals.

Containment separates cool supply air from hot exhaust air to improve airflow control. Custom sizing brings the enclosure around the cabinets, access points and existing infrastructure.

Designed around your facility

- Reduce air mixing and help control hot spots.
- Support cooling efficiency through more consistent airflow paths.
- Accommodate cabinet layouts, obstructions and future changes.

Containment configurations

Choose the containment approach to match the facility supply and return air paths. Both approaches combine aisle end doors with panels that close the remaining openings.

Hot aisle example

Cold aisle example

Design consideration	Hot aisle containment	Cold aisle containment
Airflow being enclosed	Hot exhaust from the backs of the racks.	Cool supply air delivered to the rack fronts.
Typical enclosure	Aisle end doors and upper walls or a chimney to guide air toward the return system.	Aisle end doors and ceiling panels to enclose the supply aisle.
Layout coordination	Connect the enclosure to the intended exhaust return path.	Coordinate the enclosure with the supply air arrangement.

Control the gaps around the aisle

Rigid wall panels close openings between cabinets, above rows and around offset aisle ends. Foam seals address smaller, irregular gaps. Flexible curtains can complement rigid panels where existing infrastructure creates difficult transitions.

Put cooling where it is needed

Reducing supply and exhaust air mixing helps improve inlet temperature consistency and reduce hot spots. Cooling controls can then be optimized for the contained environment.

Actual energy savings depend on the existing airflow conditions, IT load and cooling controls.

Freestanding containment systems

Modular steel and aluminum structures combine airflow containment with provisions for cable trays, busway, lighting and other overhead infrastructure.

Steel structure

Aluminum structure

Feature	Steel system	Aluminum system
Construction	Steel frame with a modular bolt-together design and aluminum doors.	Modular aluminum frame and doors, configured for expansion and customization.
Overhead support	Vertically adjustable cantilever arms.	Vertically adjustable cantilever arms.
Containment access	Sliding panels above cabinets and sealed docking bays.	Sliding or removable chimney panels and sealed docking bays.
Standard inserts	8 mm twin-wall polycarbonate.	8 mm twin-wall polycarbonate.
Sizing	Custom overall dimensions and arm arrangement.	Published maximums: 16 ft height, 12 ft overall width and 12 ft bay width.

Configure the complete aisle

Select the overall dimensions, cabinet bay layout and cantilever arm quantity, size and location. Single sliding, double sliding and hinged doors can be combined with either structure.

Specify required infrastructure loads and attachment details during design. Confirm structural capacity and final dimensions for the selected configuration.

Sliding doors

Single and double sliding doors provide aisle access with a clear floor transition. Choose manual or automatic closing to suit day-to-day operation.

Double sliding door

Single sliding door

Configuration	Closing	Operating highlights
Double sliding	Automatic	Soft closing, hold-open feature and synchronized dual opening.
Double sliding	Manual	Manual operation with double ball bearing door guides.
Single sliding	Automatic	Soft closing and a hold-open feature.
Single sliding	Manual	Manual operation with a hold-open feature.

Common construction and options

All sliding models use aluminum frames, double ball bearing guides and a threshold-free design. Options include clear or black anodized finishes, custom powder coating, aluminum handles, freestanding configurations and selected locking hardware.

Size for the aisle and access route

Doors are built to size. Standard double sliding door headers are 96 in. and single sliding door headers are 80 in. Door frame height and width are sized to accommodate layout.

Frame width is not the clear opening. Confirm door travel space and header clearance in project drawings. Door headers add approx. 4” to the Frame Height.

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Hinged doors

A familiar swing-door format for custom aisle access, with adjustable pneumatic closing control and clear panels for visibility.

Standard features

- Custom sizing and a sturdy aluminum frame.
- Threshold-free design for a clear floor transition.
- Clear polycarbonate panel for visibility through the enclosure.
- Adjustable pneumatic closer with adjustable closing speed.

Options for the installation

Select clear or black anodized finishes, custom powder coating, aluminum handles and freestanding configurations. Additional customizations can address the aisle layout.

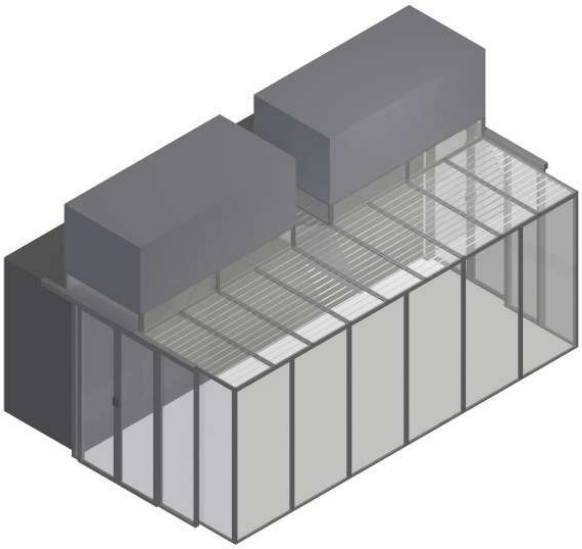
Coordinate the opening

Doors are custom built to size. Confirm the required clear opening, swing space and access route as part of the project layout.

Rigid wall panels

Complete the airflow boundary around cabinet rows with custom panels for larger openings, cabinet height changes and aisle offsets.

Chimney and gap filler panels



Custom wall enclosure

Product detail	Rigid wall panels
Applications	Hot aisle chimneys, air partitions, gaps in cabinet rows and offset aisle extensions.
Construction	Aluminum frame with selectable panel inserts. Applicable mounting hardware and foam gasket seals included.
Published size	Maximum standard panel: 49.75 in. wide by 97.75 in. high. (custom size available)
Options	Sliding access panels, custom cutouts, freestanding arrangements and custom finishes.

Fit around existing conditions

Use custom panels to accommodate cabinet height changes, penetrations and aisle offsets. Measure each opening and coordinate the panel layout with equipment access and future cabinet changes.

Larger wall layouts can use a project-specific panel arrangement. Confirm individual panel sizes and all field dimensions before fabrication.

Ceiling panels

Close the top of an aisle while maintaining a planned approach to overhead access and fire protection coordination.

Removable ceiling panels

Ceiling enclosure example

Heat activated ceiling panels

Individual aluminum-framed panels can be removed for access above cabinets. The clear PVC insert is designed to shrink and drop away when exposed to heat.

- 15 mil clear PVC inserts with installation track and hardware.
- Individual panel sizes up to 26 in. wide by 96 in. long.
- Clear or black anodized finishes and custom powder coating.
- Optional leveling kits for uneven cabinet heights.

Soft containment

Vinyl curtains provide a flexible option for complex existing layouts and areas where cabinets are frequently moved.

Vinyl curtain aisle enclosure

Custom fit around overhead infrastructure

Adapt to existing infrastructure

Curtains can be used on their own or combined with rigid containment to close difficult transitions. Custom layouts accommodate existing infrastructure where rigid panels are hard to fit neatly.

- Flexible curtain layouts for irregular openings and cabinet arrangements.
- Custom sizing to suit the containment boundary.
- Installation options that accommodate changing equipment layouts.

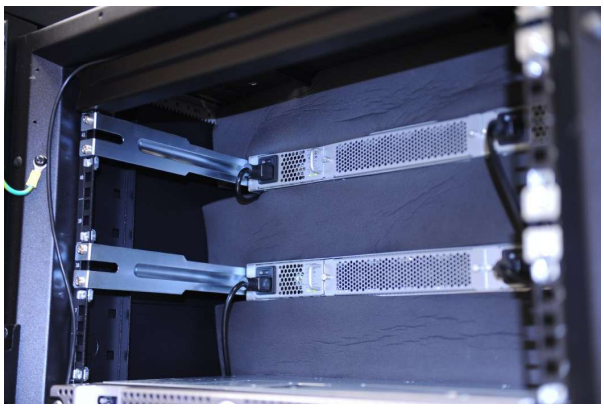
Attachment and release options

Heat-release attachments are available for coordinated fire protection designs. Fusible links can allow curtain supports to release when exposed to abnormal heat.

Coordinate the curtain layout, attachment method and release behavior with the project fire protection design and equipment access needs.

Foam gap seals

Close small air leaks and irregular gaps around data center hardware with flexible foam that can be cut to fit on site.



Installed around rack hardware

Cut to fit on site

Seal irregular openings

Use foam seals around cables, protrusions and other uneven edges where a rigid panel is difficult to fit. The material can be trimmed with scissors to match the opening.

Product detail	Foam gap seals
Material	Impregnated fire-retardant polymer foam.
Published sheet size	Up to 54 by 60 in.
Thickness	1 in.
Available formats	Full sheets, custom sizes and precut pieces.

Fit around existing hardware

Measure the opening, cut the foam to suit the surrounding equipment and fit the seal around irregular edges. Coordinate the final fit with cable routing and equipment access.

Customize your containment

Bring the structure, doors and panel layout together around the aisle dimensions, operating needs and existing infrastructure.

Panel material options

Material	Thickness	Product applications
Standard clear polycarbonate	3 or 4 mm	Doors and rigid wall panels.
Premium clear polycarbonate	4 mm	Doors and rigid wall panels.
Clear PVC sheet	3 mm	Doors and rigid wall panels.
Twin-wall polycarbonate	8 mm	Rigid wall panels and freestanding systems.
Clear PVC film	15 mil	Heat activated ceiling panels.

Select material grades and confirm applicable test documentation for the project. Material test results are specific to the selected insert.

Finish and access choices

Clear or black anodized finishes and custom colors are available on selected aluminum components. Coordinate door operation, locking hardware, removable access panels and cutouts with the facility requirements.

Information to start the design

- Aisle length and width, including offsets and the widest point.
- Cabinet, in-row cooling and UPS heights, plus ceiling clearances.
- Door locations, required clear openings, travel or swing space.
- Cable trays, busway, lighting, sprinklers and other obstructions.
- Required support loads, bay layout and future expansion needs.
- Preferred panel materials, finishes and equipment access points.

Develop the project scope

Share the floor plan, cabinet elevations and project requirements to develop a custom containment layout. Confirm dimensions, materials, support loads and fire protection coordination during design and submittal review.