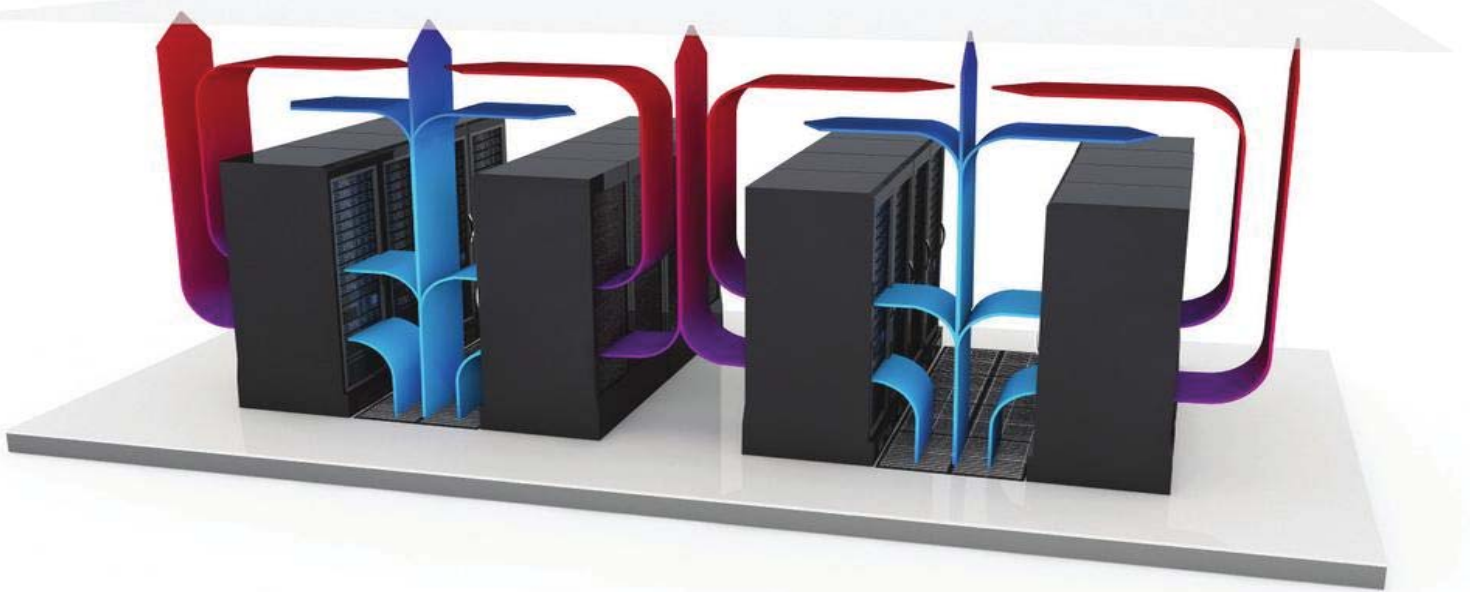




COLD AND HOT CONTAINMENT





Cold & Hot Containment/Enclosures

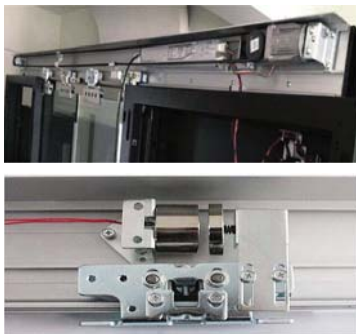
Custom and Factory made



Containment type-A (custom)



Containment type-B (factory)



Automatic door



Roof top panel type-A



Roof top panel type-B

Description

Cold or Hot Containment refers to the various physical barriers used in addition to a hot aisle/cold aisle arrangement that further eliminate the mixing of cold ("supply") air and hot exhaust air. Containment structures lead to higher allowable temperatures in data centers.

Higher temperatures save energy because fan speeds can be lowered, chilled water temperatures can be raised, and free cooling can be utilized more often.

ASHRAE revised their recommendations, stating that computer intake air could be as high as 80F/27C and air returning to air handlers could be as high as 95F/35C. This makes hot aisles slightly uncomfortable for people but it has no negative effect for computers since the exhaust air is effectively pulled back to air handlers.

Hot and Cold Aisles

In the past, IT gave little concern about airflow and instead just sought to make the entire computer room cold. In other words, they diluted heat by mixing it with very cool air. This strategy was satisfactory when computer rooms were relatively small and scarce. Once data centers became ubiquitous and computer densities in racks exponentially increased, the archaic approach utterly failed to keep the equipment cool while wasting vast amounts of electricity.

Savings and Costs

In data centers with hot/cold aisle arrangements, containment systems can reduce energy expense by 5% to 10%.

Containment can reduce fan energy by 20% to 25% and deliver 20% energy savings from the chiller.

We're experience with containment retrofits indicated that typical paybacks can be less than two years.

With the advent of hot/cold aisles, hot air return plenums, and finally containment, noticeably warmer air returns to the air handlers. A higher return air temperature makes it much easier for air handlers to extract the heat. Mechanical engineers refer to the temperature differential between return air and cooled air as "Delta T (ΔT).". A heat differential of 20F/11C or more brings significant efficiency gains.



Cold & Hot Containment/Enclosures

Custom and Factory made



Type of Doors

- Dual Sliding Doors – Manual Open and Close.
- Dual Sliding Doors – Manual Open and Auto Close.
- Dual Sliding Doors with remote open and Auto Close.
- Dual Swing Doors – Outward Swing.
- Standard dual door panel 120x210 cm.



Type of Roof.

- Flat Roof with auto removable panel. (works with automatic fire suppression system.)
- Flat Roof with fixed panel.
- Standard roof panel 120x60 cm or 120x80 cm.

Type of Materials

- Steel type material or Aluminium. (Standard use aluminium with black or white color , thickness 1.2 mm)
- For doors the customers can choose the type of Tempered Glass or Glass or Acrylic or Poly Carbonate. (Standard use glass type , thickness 6 mm).
- For roof panels, use polycarbonate for safety as it is lightweight. (polycarbonate thickness 8 mm).

Magnetic lock roof panel

- Holding Force:60kg(100Lbs).
- Input Voltage:DC 12V+10%, 300mA.
- Surface Temperature:≤+20degree.
- Operating Temperature:-10~+55degree(14-131F).
- Suitable Humidity: 0~90%(Relative humidity).
- Finishes for Shell:Anodized aluminum.
- Finishes for Magnetic:Zinc electroplating.
- Lock Size: 80 x 33 x 19mm / 3.1 x 1.3 x 0.7in(L x W x H).
- CE standard.



Optional

- Access control (card, fringerprint, keypad).
- Smoke or/and Heat detector.
- CCTV system.
- Operation LED lighting.
- Motion detector lighting.
- Automatic door open and close.
- Brush blank panel.
- Custom roof panel.
- Air booster with perforated raised floor.
- Alarm when door open sensor.
- Fiber optic and Data cable wire way.



This could be mix and match and will be suggested by our Containment Specialist keeping in mind site conditions, type of containment, cost, and natural light flow inside the Aisle etc.