

Hot Aisle Containment

Hot aisle containment systems (HACs) channel the heat from the server exhaust directly back to the returns on the cooling units. This results in two circumstances, both of which can significantly improve cooling efficiency. First and foremost, containing the hot exhaust air prevents it from re-circulating over the top of server cabinets to mix with the supply air. In addition, returning warmer air to the cooling units will improve the performance of the cooling units. This double benefit generally makes hot aisle containment preferable to cold aisle containment. However, many existing sites are not set up to take advantage of hot aisle containment.



<https://cool-shield.com/hot-aisle-containment/>



As great as hot aisle containment, it can be difficult to implement unless the site conditions are well suited. The following conditions are ideal for hot aisle containment:

- **Unobstructed drop ceiling return plenum at least 24" high**
- **Top return CRAC/ CRAH units with vertical extensions to drop ceiling**
- **Variable speed fans on cooling units**

Fully sealed cabinets with blanking panels, floor covers and no gaps between cabinets. These conditions can allow for huge efficiency gains and energy savings. It is not unrealistic to reduce cooling costs by as much as 40%. If your site does not have these ideal conditions, it will not prevent you from implementing an effective containment solution. Contact one of our experience Project Managers for a free site assessment.

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