

COLD / HOT

AISLE CONTAINMENT SYSTEM

Frog Engineering's Cold & Hot Aisle containment solution is an Aisle Frame Containment system – separating the cold supply air from the hot server exhaust. It maximizes the system's efficiency, minimizes its power consumption, and reduces its footprint, making it the perfect solution for medium- to large-scale data centers.

The Cold & Hot Aisle Containment system is retrofitable – making it ideal for improving the performance of older server rooms facing upgrades. It's also modular and scalable, which helps future-proof investment against growing needs. As demand on your system increases, and your data center grows, our Cold & Hot Aisle Containment solution can grow proportionally.



- Enables isolation of hot and cold aisles to maximize cooling system efficiency and minimize cooling energy requirement
- Highly modular, scalable, expandable, and retrofitable
- Optimum cooling solution for big and medium scale Data Centers coupled with CRAC or Inrow cooling units to increase efficiency of cooling system
- Provides moderate efficiency, energy saving and free cooling capabilities.

Advantages:

- More efficient than traditional cooling technologies up to 50% energy savings
- Scalable, expandable
- Increase server performance and cooling efficiency in Data Centers
- Modular concept
- Retrofitable
- Green IT
- Complete system solution:
 - Power management
 - Monitoring
 - Cooling
 - Security
- Efficient energy management
- Customizable design options with various air conditioning solutions



Maxi DC Air-Conditioner (AC) Alternatives



Precision Inrow AC Systems (DX/CW)



Precision AC (In-room) Systems (DX/CW)



Indirect Adiabatic Systems

MAXI DATA CENTER COMPONENTS



Automatic Opening Door System



Manual Sliding Door System



Standard (Key Display)



Face Recognition Device (Optional)



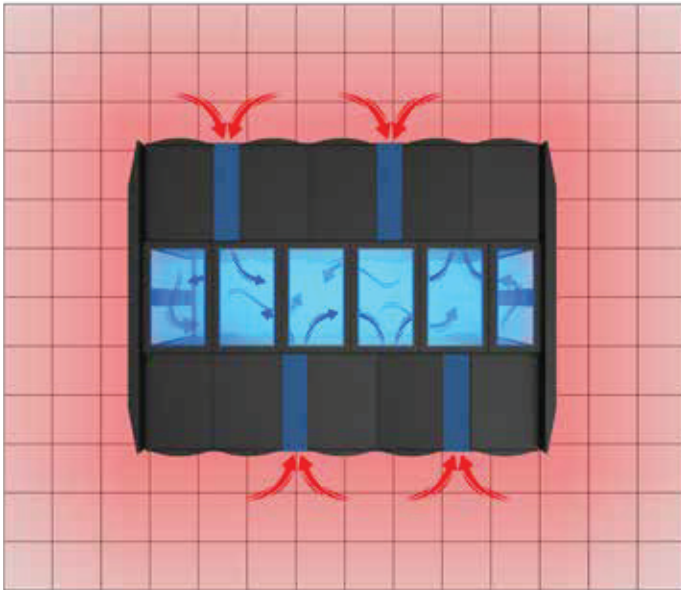
12" Color Touch Screen (Optional)

Commonly used components:

- Manual, or automatic sliding doors allow highly light transparency
- Various access controllers which are card reader, keypad, or fingerprint
- Fixed, or pivot type top cover elements
- Touchscreen display for local monitoring

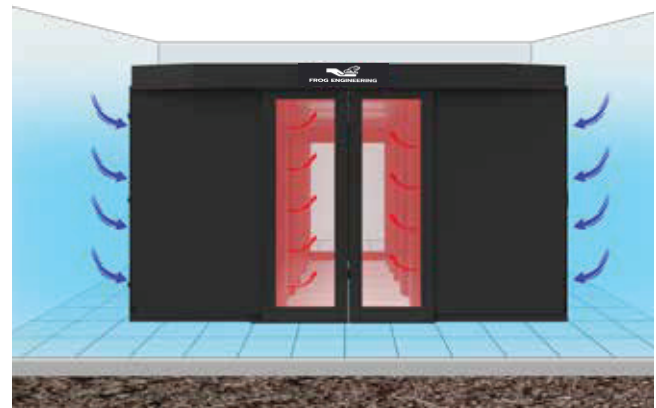
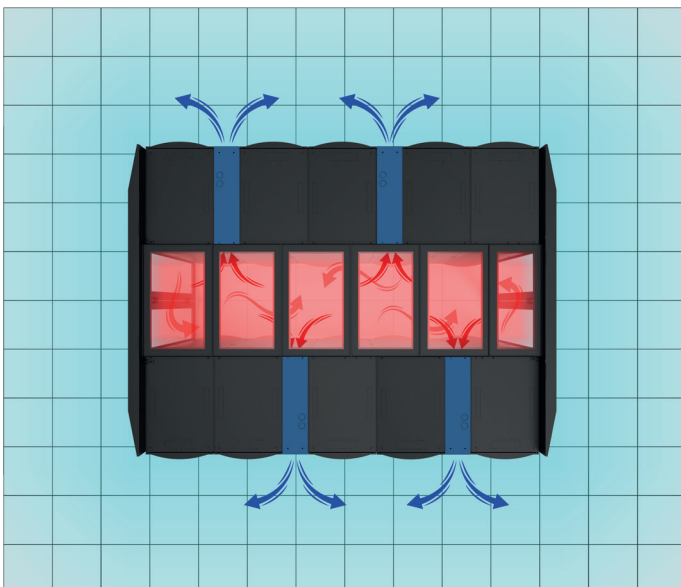
MAXI DATA CENTER APPLICATIONS

COLD AISLE CONTAINMENT WITH INROW COOLING SOLUTIONS



It is indeed possible to implement a cold aisle containment structure with Inrow precision air conditioners in a Maxi DC (Data Center) environment. This setup helps in achieving higher energy efficiency (measured by Power Usage Effectiveness or PUE) and effective cooling performance by separating the hot and cold air streams.

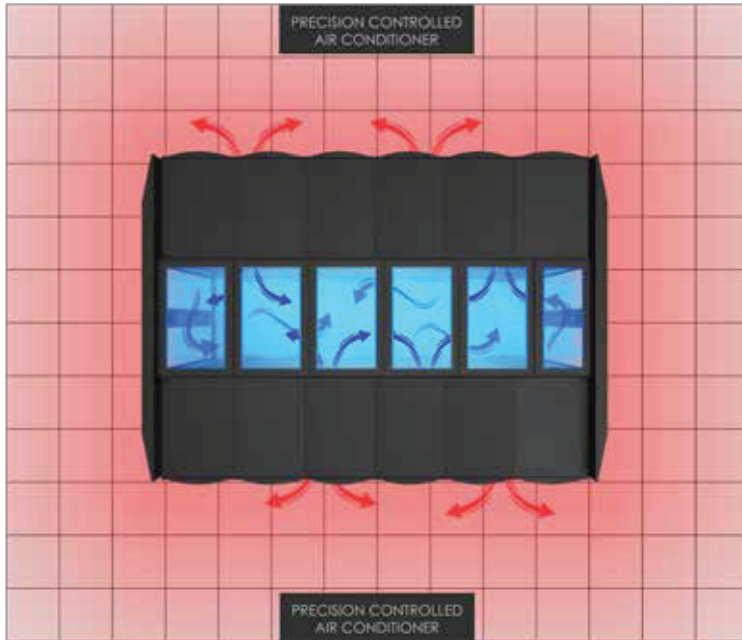
HOT AISLE CONTAINMENT WITH INROW COOLING SOLUTIONS



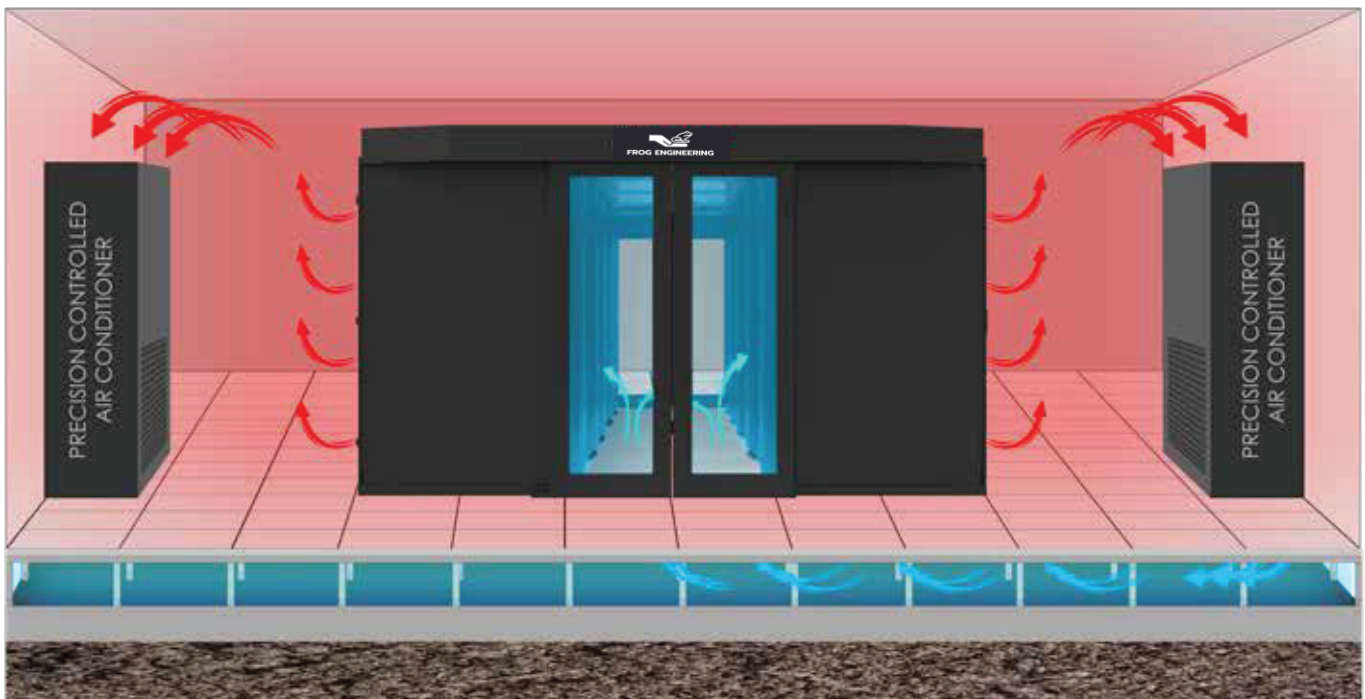
In-room based air conditioning solutions, commonly known as CRAC (Computer Room Air Conditioner) or CRAH (Computer Room Air Handler) units, are often preferred for aisle containment systems in Data Centers. These units play a crucial role in maintaining optimal temperatures within the facility.

MAXI DATA CENTER

COLD AISLE CONTAINMENT WITH CRAC/CRAH COOLING SOLUTIONS



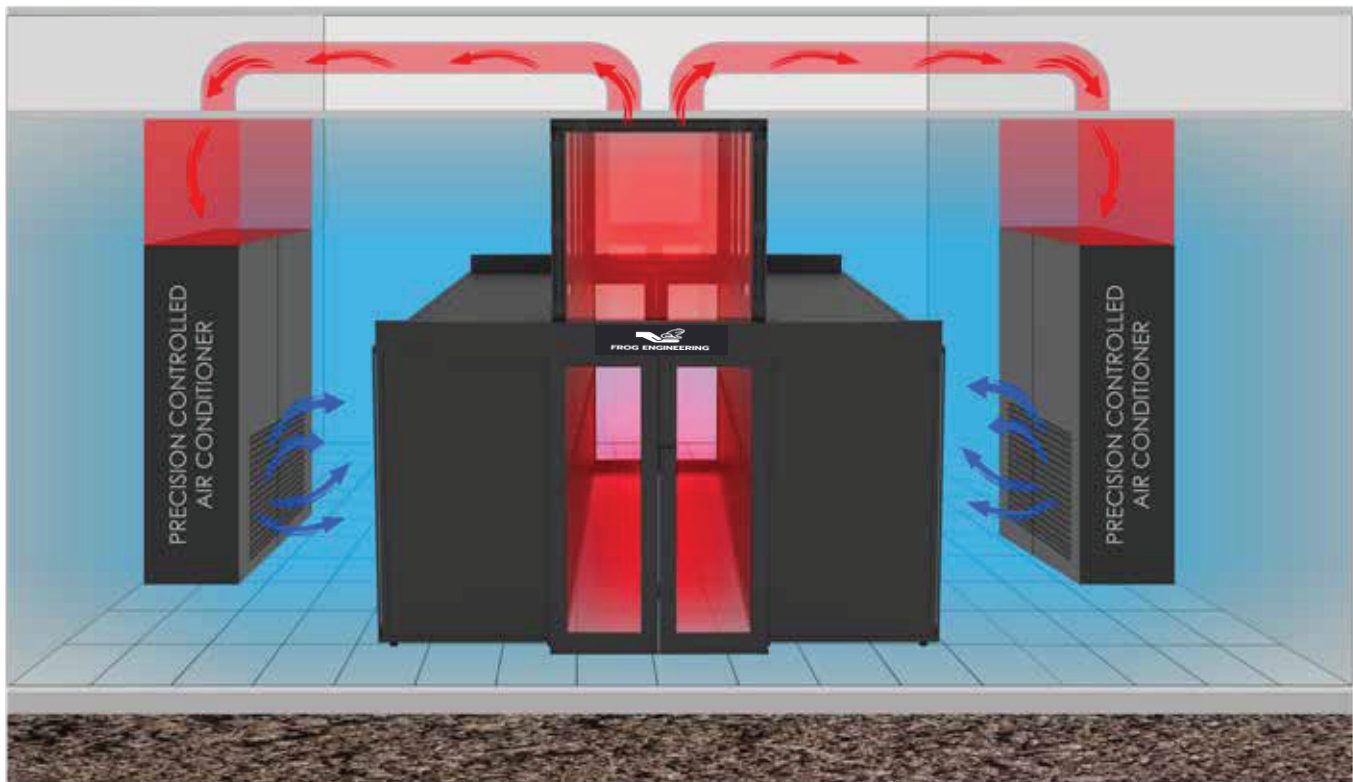
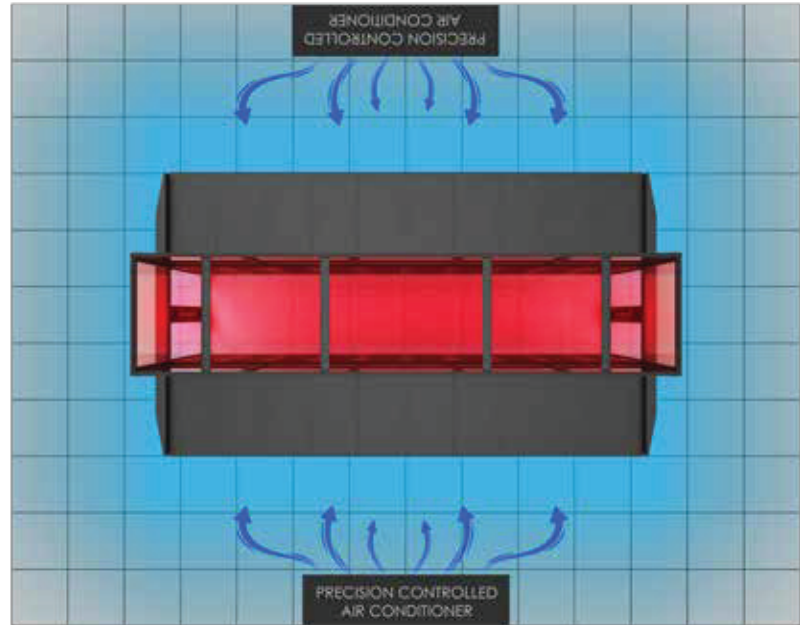
In an aisle containment system, CRAC (Computer Room Air Conditioner) or CRAH (Computer Room Air Handler) units are often used as the preferred air conditioning solution. These units supply cold air into the data center by blowing it under a raised floor through perforated tiles located between the rows of cabinets.



MAXI DATA CENTER

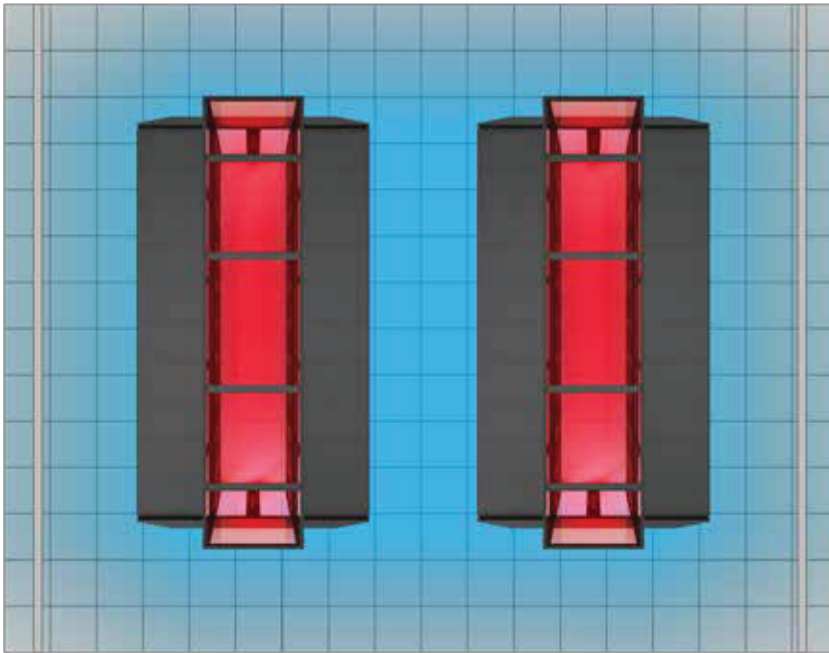
HOT AISLE CONTAINMENT WITH CRAC/CRAH COOLING SOLUTIONS

CRAC/CRAH units can also be used in a Hot Aisle Containment (HAC) setup where the cooling units blow cold air into the room environment, and hot air is collected from air ducts at the top, including a chimney slot positioned just above the hot area between the rows of cabinets.



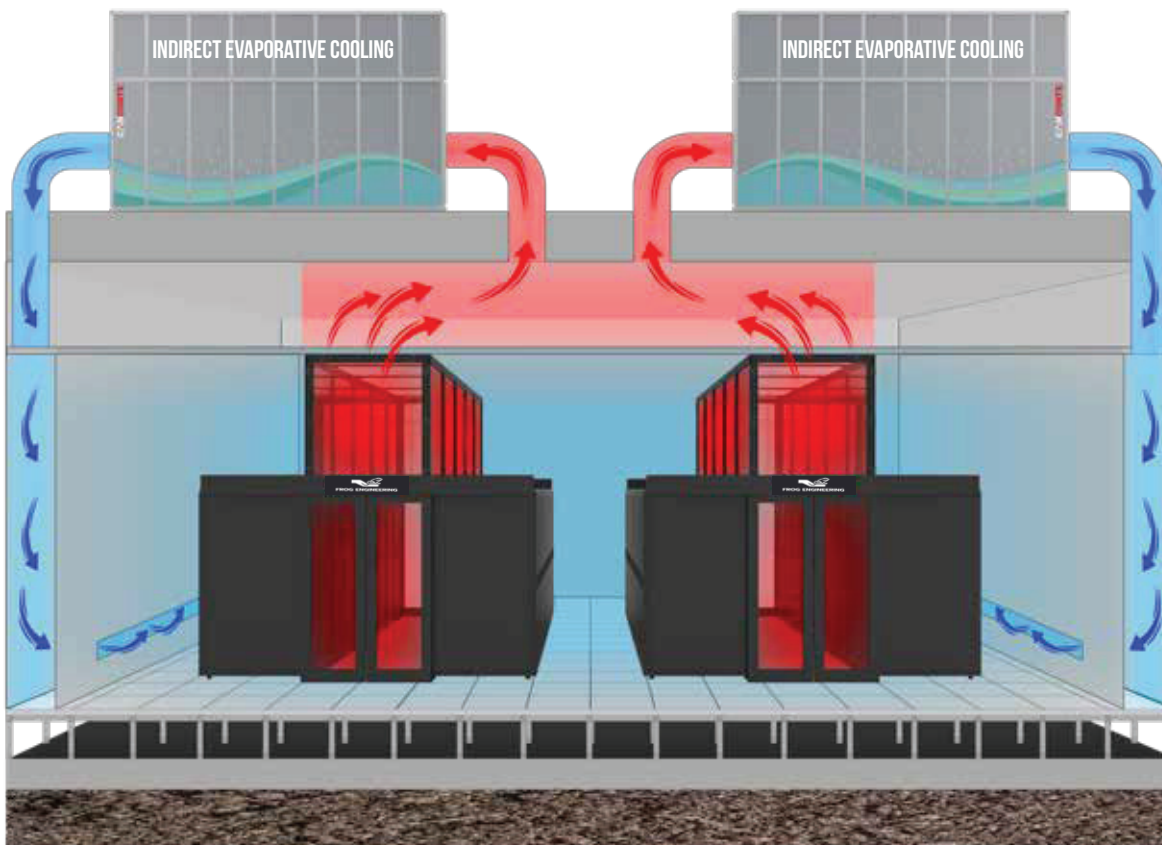
MAXI DATA CENTER

HOT AISLE CONTAINMENT WITH INDIRECT EVAPORATIVE COOLING (IEC) SOLUTIONS



Hot Aisle Containment (HAC) systems can indeed be used in conjunction with Indirect Evaporative Cooling (IEC) units to achieve efficient cooling in data centers.

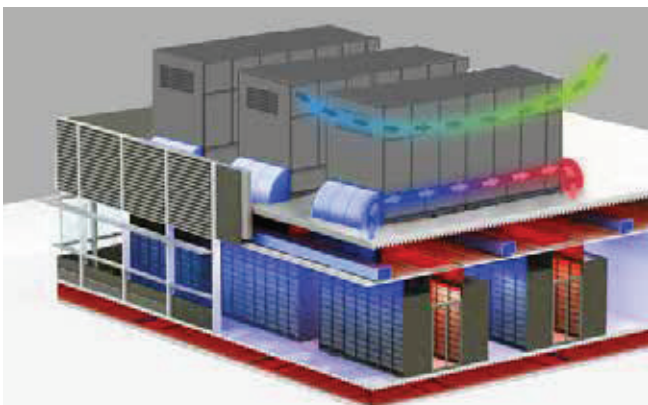
Indirect Evaporative Cooling units are known for their high efficiency and ability to provide significant energy savings compared to traditional cooling systems. In an IEC system, the cooling process involves the separation of the cooling air stream from the conditioned air stream, which eliminates the risk of introducing contaminants into the data center environment.



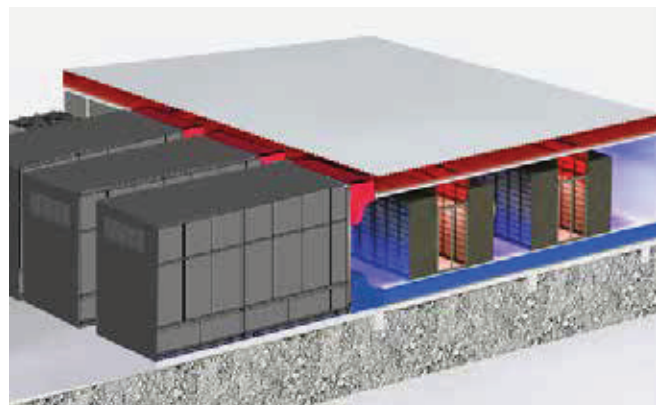
Visit [Indirect Evaporative Cooling Solutions](#) pages for more details.



Roof Configuration



Wall Configuration



MAXI DATA CENTER APPLICATION AREAS



MAXI DATA CENTER APPLICATION AREAS



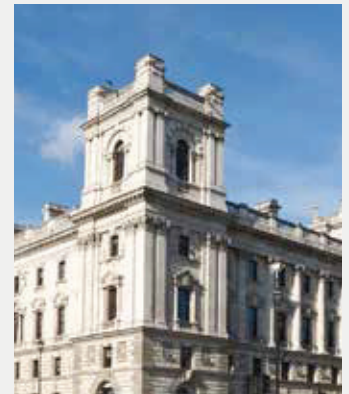
Small and Medium Size Enterprises (SME's)



Branch offices of financial institutions (Banks, Insurance companies)



Instant data center



Branch offices of government institutions and utilities (Police, Army, Schools, Electricity, Water companies etc)



Companies who want to connect the cloud instead of investing in a big data center



Exchange offices & Hubs of Telco's and GSM companies



Remote locations where there is no available dedicated IT personal



Manufacturing companies for automation control and IT services



Disaster recovery