

ITCage Containment

Airflow Management Solutions
for Data Centers

HOT & COLD AISLE CONTAINMENT

Data Center aisle containment plays a vital role in modern Data Centers by preventing mixing of hot & cold air. Recent studies suggest that up to 50% of airflow within a typical Data Center is wasted, bypassing the equipment that it is supposed to cool and return directly to the CRAC units (Computer Room Air Conditioner).

The use of ITRack's ITCage Data Center aisle containment system allows performance optimization of IT equipment, increases energy efficiency, reduces hot spots, thus maximizing and optimizing the cooling of IT equipment.

ITCAGE CONTAINMENT FROM ITRACK

ITRack's ITCage aisle containment allows the implementation of energy efficient solutions, maximizes performance and creates a flexible infrastructure. With our innovative products you can optimize investments in infrastructure, thanks to longer lifespan and adaptability for future expansions and modifications as well as simplicity in installation and maintenance. Their level of cost-efficiency is second to none.

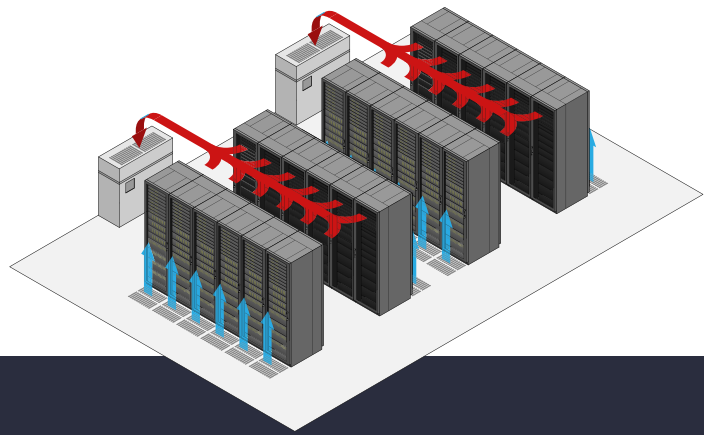
▶ **Implementing a Data Center with the ITCage aisle containment system offers significant advantages, such as:**

- Greater energy efficiency
- Reduction of the bypass airflow
- Increase in cooling efficiency (up to 90%)
- Increase of the overall server load
- Longer lifespan of IT equipment

ITCage is an infrastructure that can be "tailored" to specific requirements, to the end of obtaining in a Data Center both hot & cold air aisle containment.

HOT AISLE CONTAINMENT (HAC)

In a Hot Aisle Containment system, the flow of hot air is enclosed to collect the hot exhaust air from the servers, separating the supply and return airflows, and eliminating mixing of hot & cold air. The exhaust air from IT equipment is returned directly to the CRAC units (Computer Room Air Conditioner), thus allowing the rest of the data hall to become a large plenum for supply of cold air. The cooled air is then introduced directly into the Data Center via the raised floor, directly into the data hall via AC units or ducts.



BENEFITS

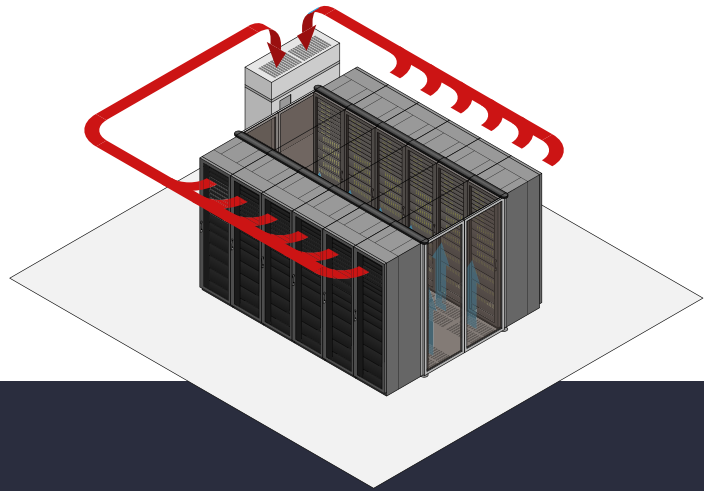
- Separates of chilled and hot airflow, preventing mixing of hot and cold air
- Increases cooling efficiency in Data Center equipment by up to 30%
- Reduces energy consumption
- Improves the overall comfort level within the Data Center

COOLING EFFICIENCY

Hot Aisle Containment can increase significantly the efficiency of Data Center cooling capacity. The separation of hot exhaust air from the rest of the data hall ensures that chilled air stays cool and the exhaust air remains hot and dry while it returns to the main AC unit. The return hot air is kept at the hottest temperature possible, with low humidity. This is increasing the AC cooling ability and can even double the efficiency of the CRAC / CRAH.

COLD AISLE CONTAINMENT (CAC)

The Cold Air Containment, through the use of raised floor with grates, conveys chilled air to the front of the rack, thus creating a uniform and targeted airflow, directly towards the IT equipment and guaranteeing a constant temperature at any rack height. This is because containment eliminates thermal gradient. With the isolation of chilled air from the rest of the environment, the cold aisle solution guarantees an increase of cooling system efficiency, by confining air treatment and airflow management to the quantity of chilled air inside the Island.



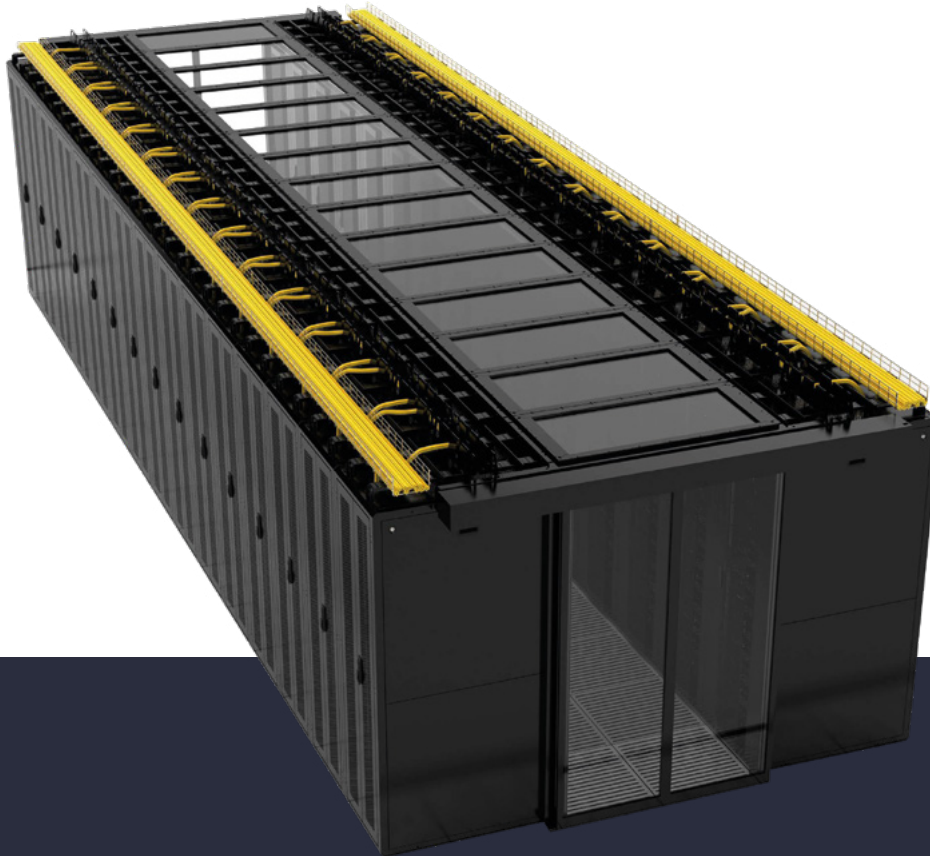
BENEFITS

- Provides targeted cooling towards IT equipment
- Generates uniform temperature at any rack height
- Can cool higher heat peaks
- Increases thermal efficiency, and the consequent energy savings
- Thanks to Cold Aisle Containment combined with InRow cooling, it can cool more than 30kW of thermal load per rack

EFFICIENCY AUGMENTATION OF RACK SPACE

Inefficient cooling or recirculation of hot air generate hot spots thus causing inability to use the upper/top part of the rack (up to 15%). This configuration allows a constant temperature at any height of the rack, because containment eliminates the default thermal gradient. Cold aisle containment allows DC Operators to fully populate racks with Servers hosted, thus significantly improving their ROI.

CONFIGURE YOUR AISLE CONTAINMENT



RS ÉLITE 4DC SERVER CABINETS

- Sliding door for Cold / Hot Aisle Containment based on RS Élite 4DC Series cabinets
- Available with single or double opening
- Manual, automatic, photocell and remote controlled
- Materials: steel, aluminium, certified tempered glass
- Colours Black RAL9005 or white RAL9016

ITRack customizes Data Center infrastructure projects according to specific Customer needs.

ITRACK SERVER RS ÉLITE 4DC SERVER RACK

Data Centers, irrespective of size, have become the neuralgic center of network and IT infrastructures. Each component installed in a Data Center is designed to ensure data processing and hardware usability with maximum security. Within this context, ITRack have engineered the RS Élite 4DC Series, a Rack Cabinet studied and designed to fully meet the requirements of professionals building Data Centers, Micro Data Centers and Datacom infrastructures.



ROBUST

Elevated load capacity,
tested to support over
1800 kg



APPLICATION

Designed for Data Center,
Micro Data Center and
Datacom



COOLING

Greater exchange of air
and cooling within
the rack cabinet



FLEXIBLE

Side panels, single or double
doors and PDU brackets



HIGH DENSITY

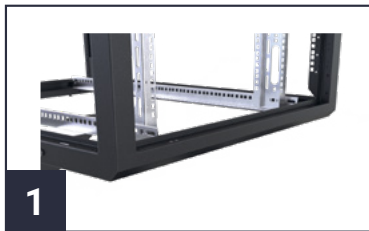
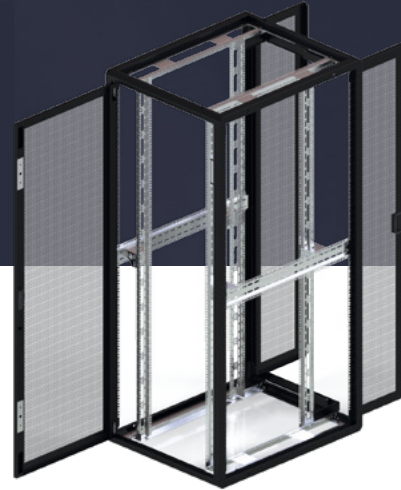
Ideal for creating infrastructures
of IT equipment, Networking
and Cabling



SECURITY

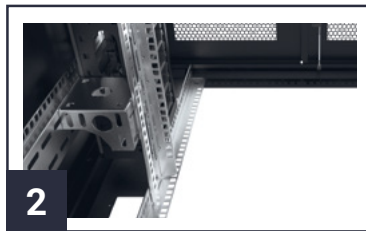
Handle with key, wireless
and with keypad

**ROBUSTNESS, SCALABILITY,
FLEXIBILITY, MODULARITY,
SAFETY, HIGH LOAD CAPACITY,
ARE THE MAIN ASPECTS
ON WHICH THE **RS ÉLITE
4DC SERIES** HAVE BEEN
ENGINEERED ON.**



CONSTRUCTION

- Supports loads up to 1800 Kg
- Steel frame
- Totally disassemblable



19" VERTICAL UPRIGHTS

Adjustable depth with 19" rack pitch sectioned into 2 or 3 parts numbered units (RU) for easy identification



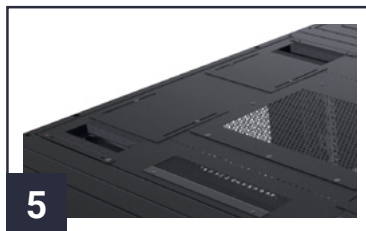
DOORS

- Single or Double
- Perforation rate up to 80%
- 180° aperture angle



AIRFLOW MANAGEMENT

- Horizontal blanking panels and vertical
- Side air infill plates anti-mixing plinth
- Bottom plate with cable entry brushes



CABLE MANAGEMENT

- Entry from the roof
- Over the entire depth of the base
- Vertical duct with lid



INTEGRATION

- Containment of the hot and / or cold island
- Co-location
- Carries 2 PDUs, has handles and smart sensors for data monitoring

CONFIGURE YOUR RS ÉLITE 4DC SERVER CABINET



TECHNICAL SPECIFICATIONS

- Totally disassemblable steel frame
- Static load up to 1800 Kg
- Four (4) vertical 19" uprights adjustable in depth with numbered U
- 19" vertical uprights sectioned in 2 or 3 parts (on request)
- Front and rear 80% perforated single or double door
- Front and rear door with 3-point lock and 180° aperture angle
- Cable entry from the roof with cable brushes
- Open base with possibility to close it using a blind plate (on request)
- Grounding on all parts of the cabinet
- Standard wheels and levelling feet
- Epoxy powder coating
- Black RAL 9005 or white RAL 9016 colours
- Supplied assembled on pallets (flat pack on request)
- Degree of protection IP20 according to EN 60529
- RoHS 2 compliant as per Directive 2011/65 / EU
- CE Certification

CONFIGURE YOUR RS ÉLITE 4DC SERVER CABINET

CO-LOCATION



TECHNICAL SPECIFICATIONS

- Totally disassemblable steel frame
- Static load up to 1800 Kg
- Four (4) vertical 19" uprights adjustable in depth with numbered U
- Front and rear 80% perforated single or double door
- Front and rear door with single point locking with 180° opening angle
- Cable entry for the concerned section only
- Grounding on all parts of the cabinet
- Standard wheels and leveling feet
- Epoxy powder coating
- Black RAL 9005 or white RAL 9016 colours
- Supplied assembled on pallets (flat pack on request)
- Degree of protection IP 20 according to EN 60529
- RoHS 2 compliant as per Directive 2011/65 / EU
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ITRACK SMART PDU

HIGH QUALITY ENERGY DISTRIBUTION IN THE DATA CENTER

ITRack's Smart Power Distribution Units are designed to provide, primarily in Data Centers, reliable and combined power distribution to IT equipment with extremely accurate monitoring and control, allowing the Facility Manager to use and optimize the energy available and consequently control operating expenses.

Key features include remote monitoring of input-level current, voltage, total energy consumption, total power, and power factor with world-class accuracy that allows you to track, analyze, and utilize all available power.

With the option of connecting sensors, the unit can form a complete environmental monitoring system to monitor temperature, humidity, flooding, rack cabinet door openings, etc.



GAMMA

Basic - Locally Monitored
IP Metered - Switched
Managed



QUALITY

Every single PDU is tested
before shipping



TAYLORMADE

We design PDUs for any of
your IT applications



PRICE

The automated production
process ensures the
competitiveness of products



DELIVERY

We are committed to
delivering in 7 to 10 days
throughout the EMEA region



Organize and Protect your IT infrastructure

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