

DATA CENTER CONTAINMENT



TOPWELL TECH

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ABOUT US

Was established in 2006 as a leading manufacture of network cabling solution to building service industry.

Our aim is supply high quality network cabling containment products and solution by by topwell techonogy leading manufacture which suit your needs.

Ensuring you get what you want, where you want it.

2006–2007

First Manufacture Launched.

2010–2011

Aid-seeking strategies include selecting suitable overseas companies as strategic partners, OEM,as well asusing favorable financial proposal and national foreign-aid policy in large projects.

2014–2015

Brand-new workshop covers an area of 10000Sqm.40 more machine was installed.

2018–2019

The fourth brand-new workshop,covers an area of 70000Sqm,a team of 400 people,leading supplier,manufacturing excellence in China.

2008–2009

Providing DEM/ODM Service for Global Famous Brands.

2012–2013

Establish Our New Brand TOPWELL TECH,Get ISO9001 Quality Approval.

2016–2017

The third brand-new workshop covers an area of 30000Sqm,100 more machines were installed, 60% of the automation equipment. one stop OEM.



Our customers come first

Listening first, flexibility and transparency are just a few of the ways we put our customers first.



Extensive engineering knowledge

We lead with engineering meaning no surprises in lead time or cost when entering production.



A Chinese supplier globally

China is called "world factory" we make it our priority to be what you need us.

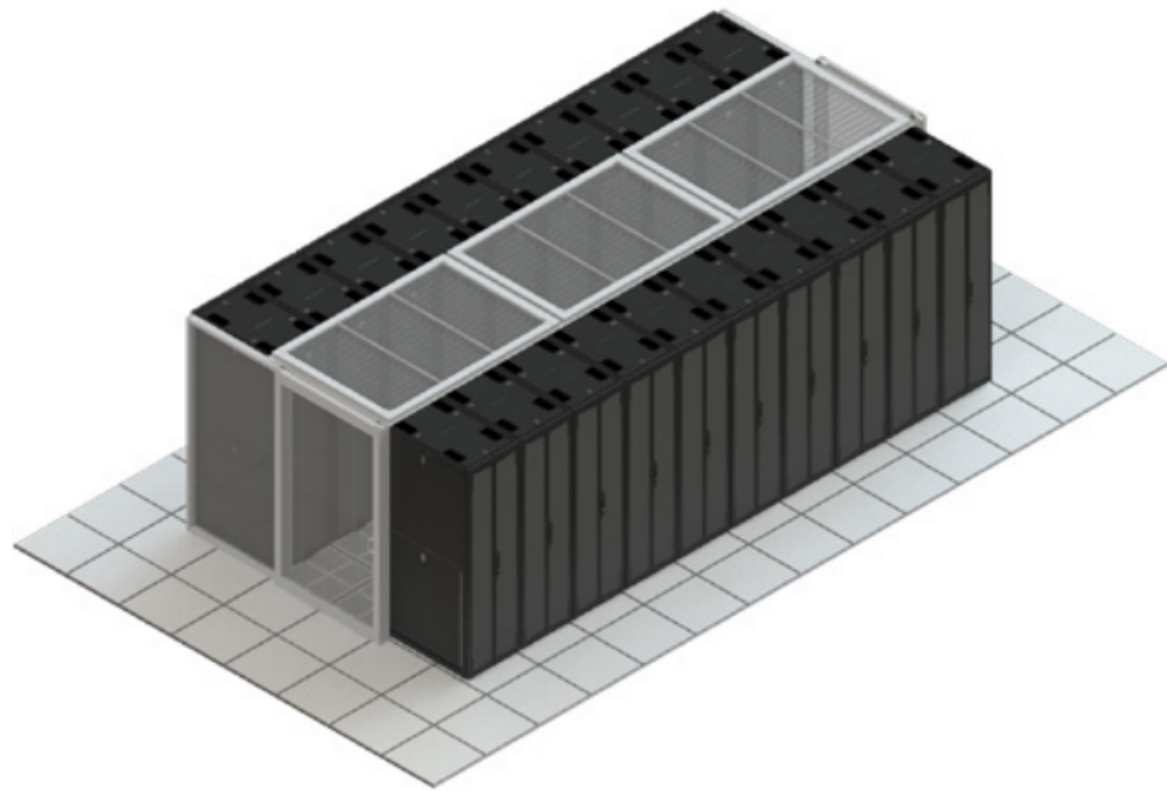


Unmatched industry expertise

For our customer's first program their 50th, we participate in specific industries because we understand the mission critical specs, best practices and customers' expectations.

We are

Topwell Tech



Topwell Tech is the leader in data center infrastructure solution

Topwell Tech's offerings have always been about three things:

1. CUSTOMIZATION

Data centers are varied and dynamic, the solutions that go inside them should be too. Topwell Tech's entire line of products are all completely customizable allowing the ability to quickly design, ship, and install.

2. QUALITY

A culture of best-in-class has been a part of Topwell Tech from the beginning. From the raw materials used, to the components sourced, this self-imposed standard ensures that a great design becomes an even greater product.

3. FIT AND FINISH

Flexibility and quality are important, but it needs to look good too. High precision machining combined with thoughtfulness in design guarantees a great looking product. Highly trained and experienced site service teams ensure each project is deployed to meet the quality standards above.

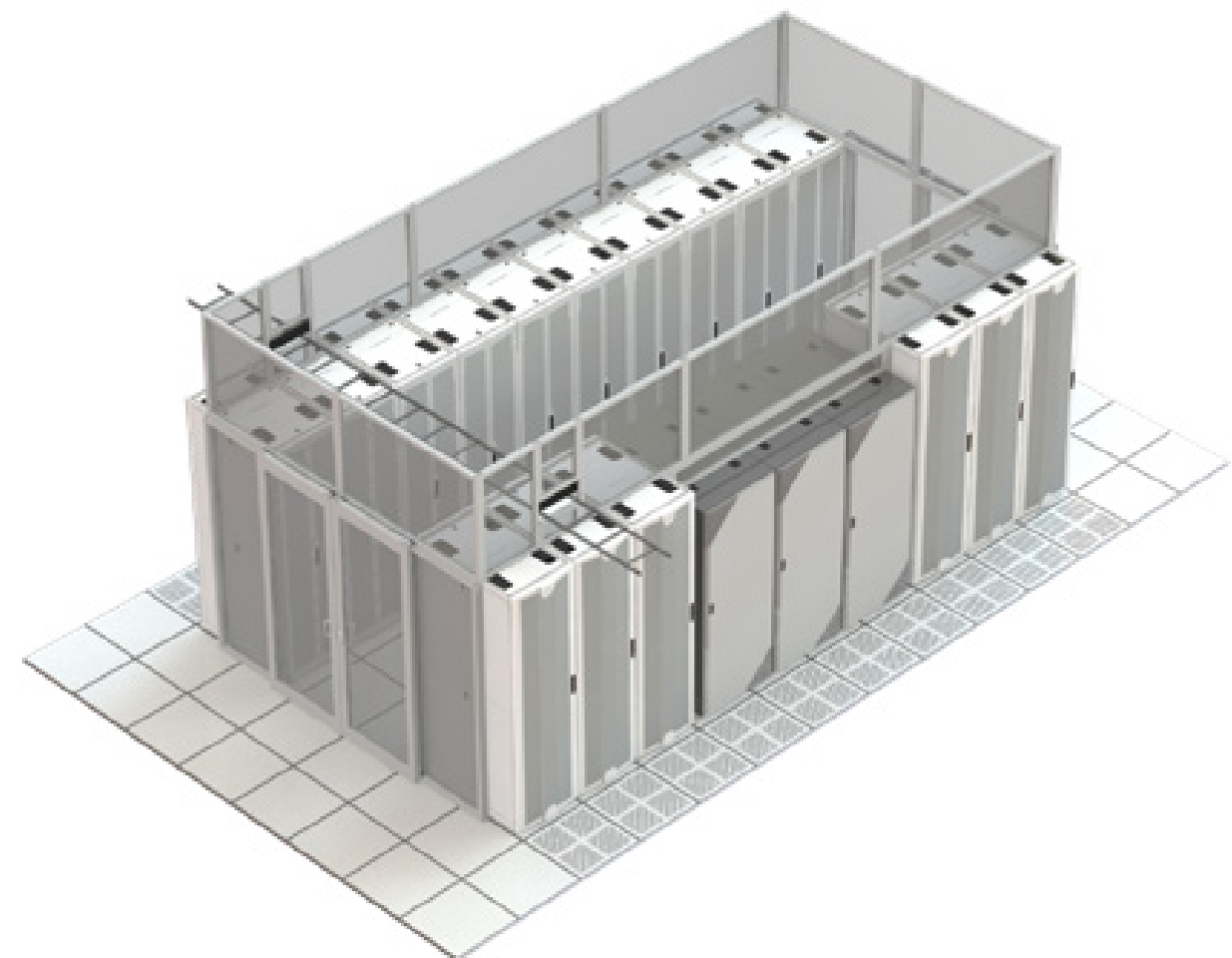
What is Data Center Containment?

Data center containment fully separates the cold supply airflow from the hot equipment exhaust air. This simple separation creates a uniform and predictable supply temperature to the intake of IT equipment as well as a warmer, drier return air to the AC coil.

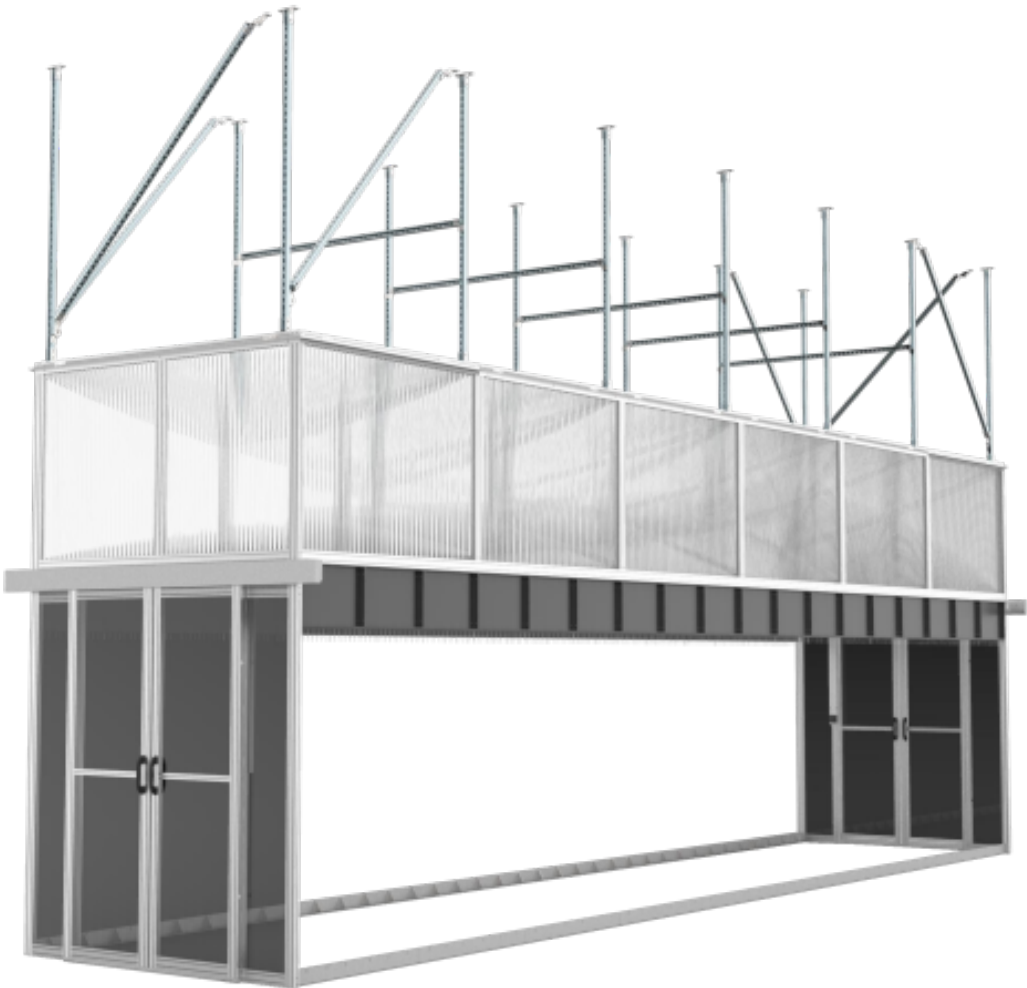
Hot aisle and cold aisle containment is a primary way leading businesses today help reduce the use of energy and optimize their equipment's performance within their data center. Adopting a cold and/or hot aisle containment solution increases air efficiency, translating to increased up-times, longer hardware life and valuable energy savings.

Key Benefits of Cotainment

- Reduced Energy Consumption
- Increased Cooling Capacity
- Increased Rack Population
- Consistent Acceptable Supply to IT Intake
- More Power Available for IT Equipment
- Increased Equipment Up-time
- Longer Hardware Life



Asile Frame



Specifications		Property	Material	Result
Frame	Physical properties	Structural Fram	Mild Steel	3.00" x 3.00" Tube w/.25" Wall
	Additional commitments	Strut Arms	Mild Steel	Unistrut - P2580 - High Capacity
	Features	Painted	Structural components are painter as per request	
Side Containment Panels -4mm Twin Wall Polycarbonate	Flammability	Flame Spread	ASTM E84	5
		Smoke Developed	ASTM E84	40
	Physical properties	Thickness: 4mm (.15) R-Value: 1.45t Light Transmittance: 94%		

AisleFrame by Topwell Tech takes a simplistic approach to a typically complex design. The flexible Super Structure is designed to provide a complete solution for aisle containment. In addition, it provides a floor-supported structure that serves as a support platform for cable tray, busway, etc.

Elegance through Simplicity
Traditional methods for supporting data center infrastructure such as aisle containment, power distribution, and cable routing are costly and time consuming. These methods require a structural ceiling and a building that can support the entire weight of it. This typically involves multiple trades working on the project to accomplish just the supporting of the ceiling which costs time and money.

AisleFrame provides a ‘ floor-supported’ method for providing infrastructure support and aisle containment. It can be erected quickly, and be placed in a building that does not have the expensive structural ceiling. This allows mission-critical facilites to build and scale data centers quickly and efficiently.

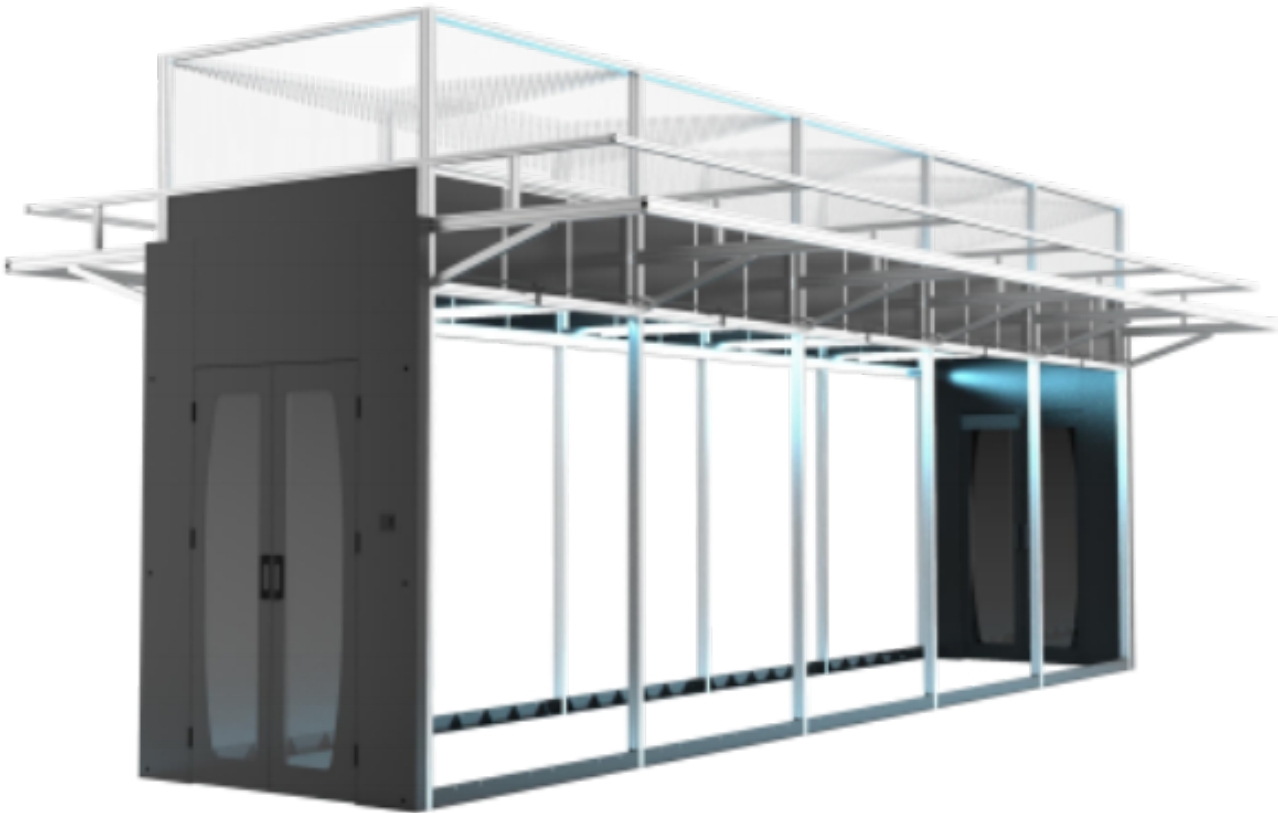
- KEY FEATURES
- Simplicity of Design

• High Loading Capacity

• Quick Installation

• Quality Containment Inc

• Completely Custom





The door is custom designed and built to meet your data center's needs. This design is recommended for very large aisles or when space is limited in front of each server cabinet. Each door is custom designed to meet any cabinet size while maintaining a superior fit and finish. The no-threshold design eliminates any tripping hazard and allows for easy movement of carts in and out of the aisles. Each door is built with an auto closing hinge that contains a soft closing damper. This ensures the containment integrity, while providing smooth operation.

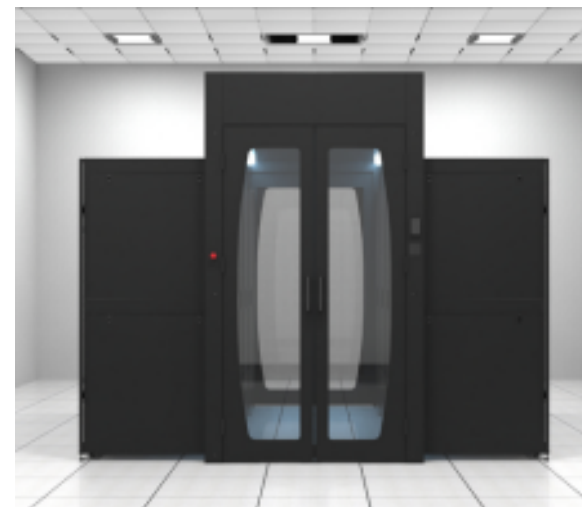
KEY FEATURES

- Custom Sizes
- Clear Panels
- Self Supporting
- Auto Door Closer
- Rigid Design
- Soft Closing
- No Threshold

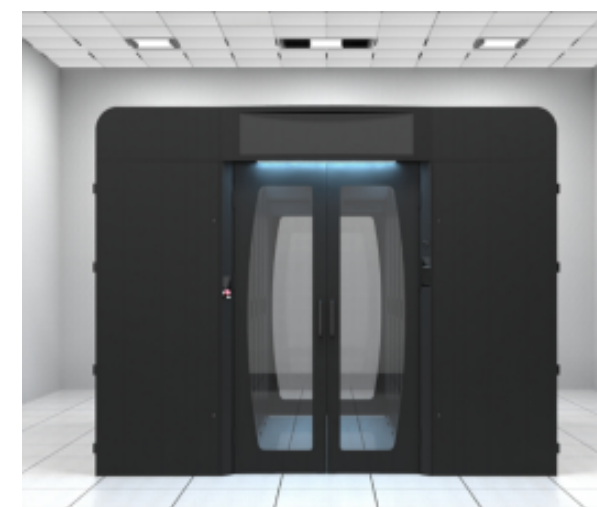
OPTIONS

- Custom Logo
- Clear or Black Finish

Specifications		Property	Material/Test	Result
Frame	Physical properties	Tensile Strength	Aluminum	22,000 psi
Panel Inserts —Optional	5mm —Acrylic Flammability	Smoke Dev.	ASTM E84	Class A
		Flame Spread	ASTM E84	Class A
		Horizontal Burn	ASTM D635	1.18 in/min [29.97mm]
		UL Horizontal	UL94	94 HB



A HINGED DOOR



B HINGED DOOR WITH LED SCREEN CABINET



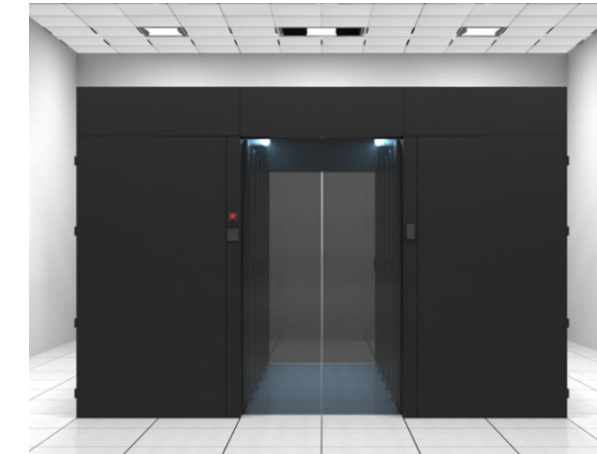
C ALUMINUM ALLOY FRAME SLIDING DOOR



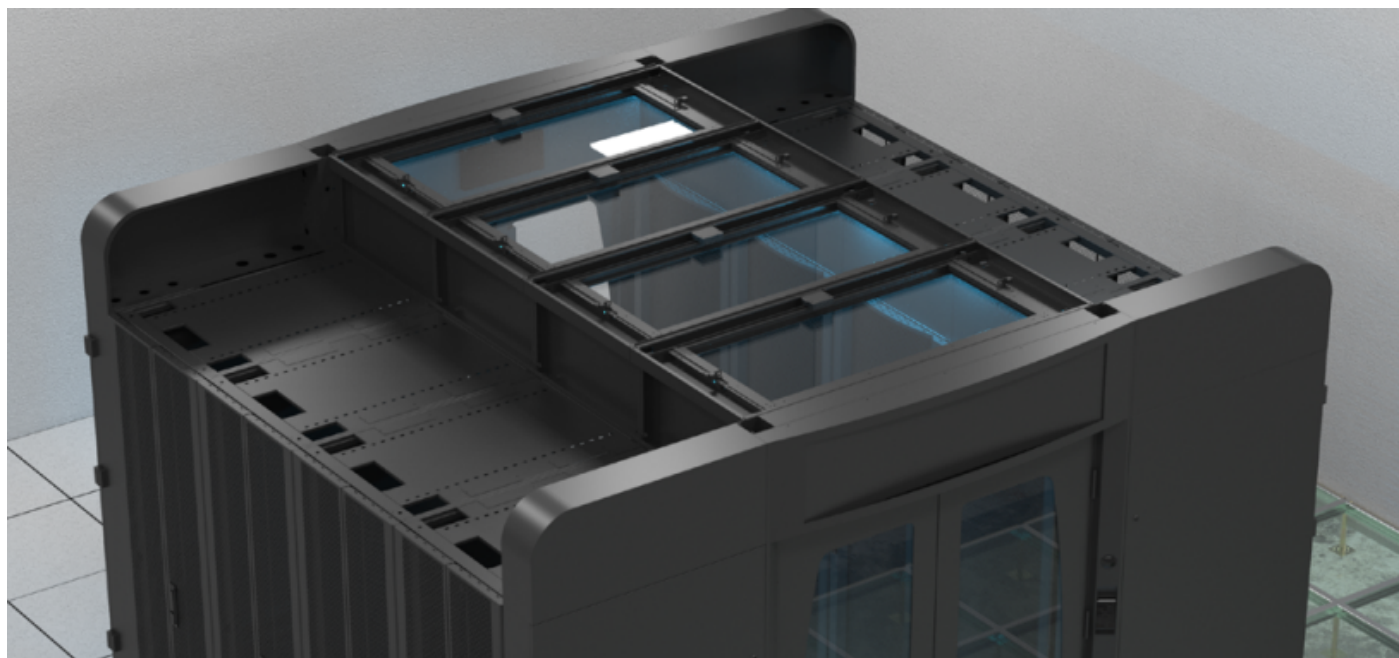
D METAL FRAME SLIDING DOOR



E AUTOMATIC DOOR



F AUTOMATIC DOOR WITH CABINET

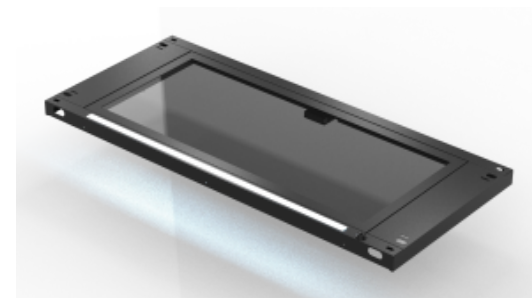


The Skylight System retractable roof system is a fully electric roof system that retracts into a metal housing when the fire suppression system is alarmed. Having a pre-action system that reacts to a smoke detector will ensure that the containment roof is fully retracted long before the fire suppression system is discharged.

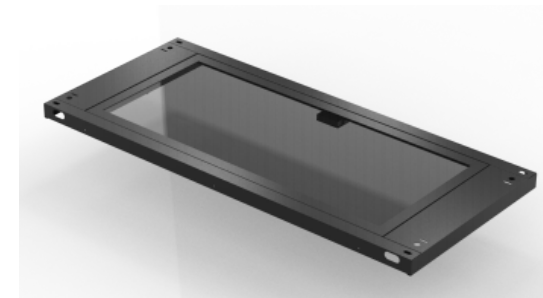
KEY FEATURES

- Modular Design
- Retracting Cover
- Stock Sizes
- Custom Sizes
- Install Kit
- Light Weight
- Fire Rated
- Clear Panels

Specifications		Property	Units	Result
Steel Frame	Physical properties	Tensile Strength	-	22,000 psi
Clean Panels	Tempered Glass	Thickness	Mils	15 Mil
		Material	-	Polyvinyl Chloride
		Light Transmittance	-	87.67%



SLIDING SUNROOF



FIXED SUNROOF

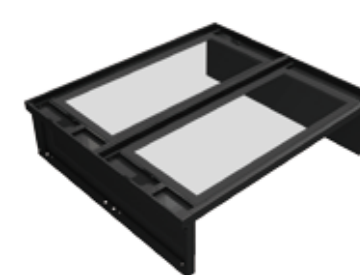


FUNCTION SUNROOF



SUPPORT

In the event of a fire, the panels shrink and drop away to preserve the fire sprinkler pattern. The lightweight drop-in panels have a thickness of only 0.013” and are completely clear, allowing in the light from overhead lighting systems. The panels can be easily customized according to specific length and width. As the Polar Roof containment system is modular in design, it can be easily attached to cabinets, doors, side wall systems, and even vinyl.



Ceiling panel closed



Ceiling panel opened

1. The ceiling panels are made from steel frame and tempered glass, the thickness of steel frame is more than 1.5mm, thickness of glass is more than 5mm, light pass rate is more than 99%.

2. All the panels has width of 600mm, each unit can be installed independently and connected to the next one.

3. All the panels are stuck by electro-magnet, panels will be opened when there is a fire alarm, sensor action time is less than 3 seconds, the panels occupies at least 60% volume against the whole cold aisle containment.

Accessories



DECORATIVE WALL

All-metal folding structure, combined with the cabinet to fill the vacant cabinet



ENCLOSED DECORATIVE WALL

All-metal folding structure, combined with the cabinet to fill the vacant cabinet



FIRE LINKAGE CONTROL UNIT

- 1. Each column of cold aisles is equipped with a set of control units, and the preset ports are integrated with the fire control of the engine room. Docking with the passive fire control signal in the computer room to automatically open the movable skylight and eliminate the danger in the passage.
- 2. The fire-fighting linkage control unit is equipped with a miniature circuit breaker to protect the equipment from overcurrent and short circuit, with indicator lights



7 INCH TOUCH SCREEN

Display the temperature, humidity and air pressure status, display the monitoring sunroof status, control the automatic reset of the sunroof, and cooperate with the cold aisle dynamic ring intelligent acquisition unit. Resistive screen, need to be used with 19-inch dynamic loop monitoring host.



10 INCH TOUCH SCREEN

Use a 10-inch touch screen, use Cortex A7 CPU, Android operating system 1 RS232, 5 RS485 serial ports, and 5 DI quantities and 2 DO quantities; Using Cortex A7 CPU, Android operating system; can be connected to sensors such as water leakage, lightning protection, infrared, and smoke.



SMOKE SENSOR

DC12V wired networking, dry contact switch output
Input voltage: DC12V;
Detection range: 20m²;
Size: 100*55mm
Volume: 85 decibels;
Working temperature: -10 ~50
Switch output: normally open normally closed



TEMPERATURE ALARM

12-24V wired networking, alarm temperature 50-70 degrees
,Dry contact switch output
Input voltage: DC12V/24V;
Size: 107*50mm;
Working temperature: 50 ~70 ;
Switch output: normally open and normally closed;
Installation height: below 4m



TEMPERATURE AND HUMIDITY ACQUISITION AND DISPLAY MODULE

Built-in probe type, can be set according to different temperature and humidity values
Lower limit, control hysteresis, control mode are set separately
Input voltage: DC12V/24V;
Size: 86*86*26mm
Temperature range: -40 ~+60 ;
Temperature accuracy: ±0.5 (25 environment);
Temperature resolution: 0.1 ;
Humidity range: 0%RH~80%RH;
Humidity accuracy: ±3%RH (25°C environment);
Communication port: RS485 port;



LED LIGHT

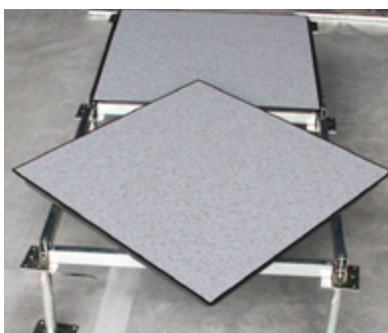
T5 white light illuminating lamp, using LED cold light source lighting, exposed installation, illuminance greater than 600 lumens



LED THREE PRIMARY COLOR LIGHT

LED three-primary color ambient light, available in three conventional colors: blue, green and red
Reflect the internal temperature and environmental status of the channel through different color lights

ACCESS FLOOR SYSTEMS FOR DATA CENTER



A Topwell Access Floor System

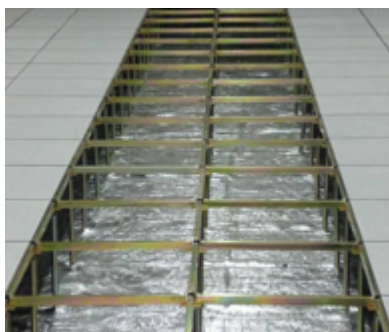
The Environmentally Preferred Flooring
Excellent load bearing strength, durable and acoustic performance

- TUV SUD PSB Certified Access Floor System.
- Green Label Certified by the Europe Environmental Council.
- Manufactured and tested with full compliance with PSA MOB PF2 PS/SPU March 1992, BSEN 12825 2001 and CISC Standards.
- Conductive epoxy powder coated for corrosion resistance.
- Factory applied Anti-Static High Pressure Laminate finish.
- Conductive panel's edge trim ensures electrical continuity.



B Topwell Rigid Grid understructure System

- Excellent axial design load of 22.75kN for standard pedestals and 35.6kN for a heavy-duty model.
- Bolted stringers installed in basketweave configuration increases lateral stability. Conductive black gasket on stringers acts as a sound deadener as well as an air seal preventing air leakage from the floor plenum.
- Zinc whisker free system.



C Underfloor Insulation

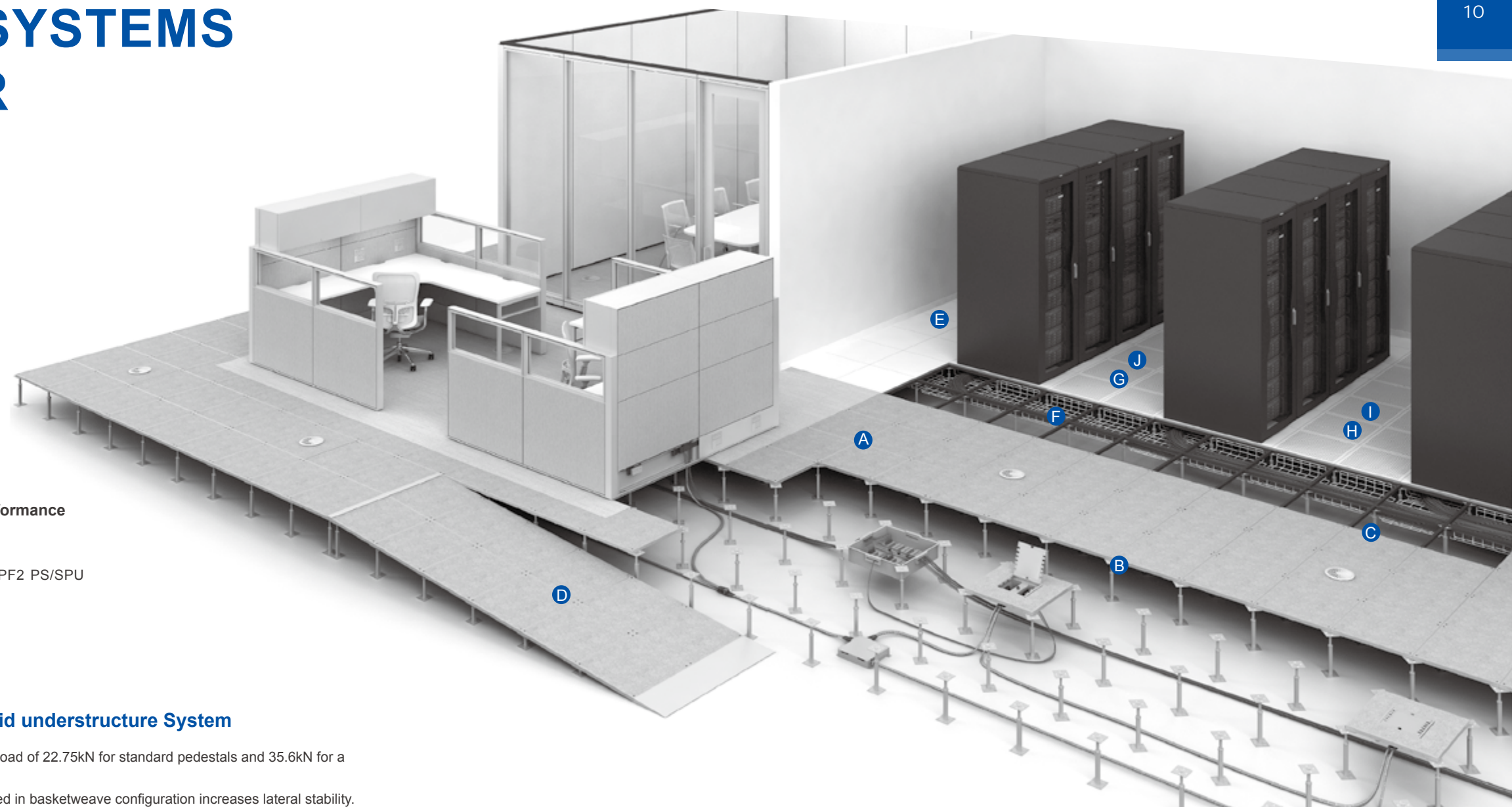
A 25mm thick closed cell elastomeric thermal insulation with Class O fire rating is laid over the sub-floor to prevent condensation on the soffit below. Aluminium sheet of at least 0.4mm laid on top to act as a mechanical protection to the insulation. Aluminium sheets joints overlapped at least 5mm and taped with reinforced aluminium tape.



D Custom Designed Ramp, Stairs, Railing and Stands

We design and fabricate

- Ramp & Steps.
- Metal Steps and ramps designed for heavy load bearing capacity are factory fabricated and installed on site with a 5mm thick non-slip black rubber studded mat finish.
- Portable ramp.
- Equipment stands like CRAC, ISO stands.
- Aluminium drip tray.
- Stainless steel railings.

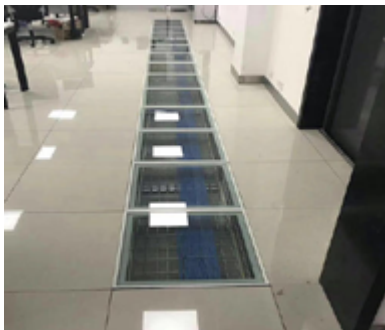




E Air Brush Grommets

Grommets are designed to eliminate bypass airflow, increase capacity, enable higher density and lower energy consumption.

- Increases overall cooling capacity.
- Increases underfloor static pressure.
- Fire retardant ABS Polycarbonate.



F Topwell Clear Glass Floor Panel

Natural anodised aluminium frame with 540mm x540mmx26mm tempered laminated clear glass insert.

- Enable monitoring of critical underfloor activity without having to lift any panels.
- Strong and safe.
- Easy to clean.
- Scratch resistant and shatterproof.
- Designed to fit most raised floor systems.
- Custom panels are also available.



G Perforated Panel

Topwell all-steel perforated panels option range from 17% to 45% open area.

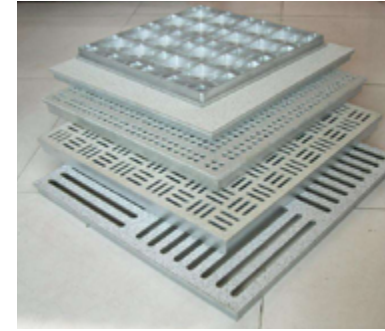
- Fits most hollow and cementitious infilled steel bolted stringer systems.
- All-steel structure conductive epoxy powder coated for corrosion resistance.
- Ant-static High Pressure Laminate/Conductive vinyl finish.
- Factory fitted surface adjustment control damper option available.
- Available in 600mm and 610mm square.



H Topwell Heavy Duty Aluminium Floor Air Grille

High-density airflow floor grille fabricated entirely from aluminium extrusions is designed to withstand heavy loads. Custom sizes are also available.

- High airflow volume.
- Standard aluminium brushed finish.
- The floor grille enhances air distribution performance.
- Customizable.



I Aluminium Grate High-Density Airflow Panels

- Die-cast aluminum panel.
- Lightweight high static load performance of 6.5kN.
- High airflow volume of 55%/56% and 68% directional airflow.
- Improves overall cooling capacity allow additional IT equipment without capital investment on infrastructure.
- Compatible and interchangeable with hollow and cementitious panels of any 600mm bolted stringer systems.



J Topwell Temperature Control VAV Damper

Automatically opens and closes the damper to adjust the amount of airflow maintaining constant cooling to the IT equipment

- Multi-loop PID control system.
- Power disruption fails safe to open position.
- No maintenance required.
- Quick and easy installation.
- High precision, quick response temperature measurement.
- Robust design for high reliability.



K Topwell Air Boost Fan System

Topwell Air Boost Fan System comes in a single fan and four fans modules. It is designed to provide a blast of cooling through a single directional airflow panel. The single fan unit is capable of cooling up to 25kW (18kW 4 fans unit) of IT load at 1'H2O making it an ideal solution for dealing with Data Centre's toughest hot spot.

- Effectively eliminate hot spots.
- Easy installation.
- Prevents expenditures for new cooling capacity to mitigate hot spots.
- Variable fan speed drive with temperature control sensors.
- Multi-loop PID control system.
- No maintenance required.
- Multiple control options are available.