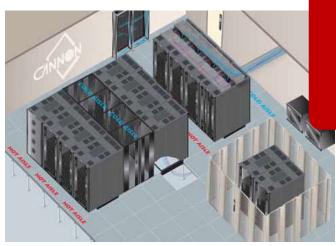
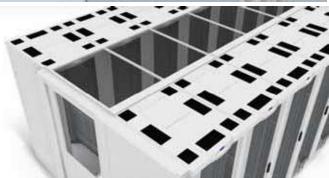


HOT & COLD AISLE CONTAINMENT







Cannon FREE pre-sales
Aisle Containment
site survey; terms &
conditions apply.



Images show examples of CANNON Hot/Cold Aisle Containment solutions including:

Cold Aisle and Cage solutions (TOP LEFT), Passive Slide-in Roof (MIDDLE LEFT), Standard Passive Roof (ABOVE), Hot Aisle (BOTTOM LEFT), Passive Roof with Integrated Raceway (BELOW)



For further details on Aisle Containment please contact the Cannon Sales Team.



HOT & COLD AISLE CONTAINMENT

THE CANNON HOT/COLD AISLE CONTAINMENT SYSTEM

Provides segregation of cold aisle air flow from hot aisle exhaust air in Datacentres. By preventing the contamination of cold air by hot air, the full effect of this cooling resource is available to servers and other power hungry equipment contained in 'IT' enclosures, ensuring effective cooling. Servers mounted at the upper levels of a cabinet are particularly prone to overheating due to the combined effects of:

- Upwards heat convection and radiation, from equipment below
- Heat gradient up the vertical height of the computer room
- Undesirable air recirculation, in which hot exhaust air is pulled to the front of the enclosure, re-entering the server with damaging effect.

Hot/Cold Air Aisle Containment, usually of the cold aisle, dramatically lowers the cold air temperature available to the servers by preventing contamination of the cold air by hot/exhaust air. This protects equipment against damage, prolongs equipment life, reduces the load on the computer room air-conditioning and saves energy, reducing your carbon footprint.

Aisle Containment Features and Benefits

- Segregated cold aisle air flow from hot aisle air flow.
- Maximises cooling effect of cold aisle.
- Reduces workload of computer room air-conditioning.
- Reduces energy cost.
- Reduces your carbon footprint.
- Active cotainment versions with automated roof panel opening for instances of fire/smoke.
- Totally integrated with cabinet infrastructure and not connected to the building.
- Can be quickly installed.
- Easily relocated.
- CannonGuard remote management upgrades.
- Can be retrofitted to existing bays of enclosures with the use of customising kits.
- Within aisle lighting upgrades.

Cannon Aisle Containment can be retro-fitted to other manufacturers cabinets if required



Specification

- Fully compatible with Cannon Smart Cab range.
- Modular overhead containment panels, with Quick-Fit mounting pins.
- High transparency polycarbonate glazing in panels.
- Standard aisle widths include 1200mm and 1800mm; alternative aisle widths available.
- Containment panels to match cabinet widths (600mm, 700mm and 800mm).
- Alternative containment panel widths available.
- Self-closing sliding end aisle doors.
- Half glazed end doors for increased damage resistance.
- Remote temperature monitoring of various aisle points using CannonGuard (optional upgrade).
- Active containment panels opened by electronic actuators for gas/fog/sprinkler water ingress in the event of fire/smoke.
- Will fit any cabinet size.
- Can be extended to form a complete Cannon Data Centre POD for disaster recovery development or temporary use.



HOT & COLD AISLE CONTAINMENT

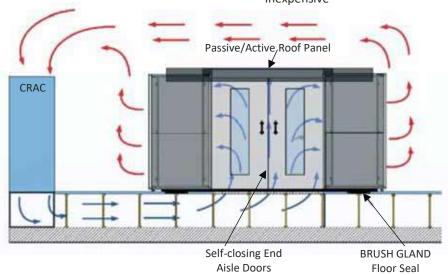
HOW DOES IT WORK?

The completed Cannon Hot/Cold Aisle Containment system is well-designed & technically superior, as all significant air pathways from the hot aisle to the cold aisle are blocked. The Cannon Hot/Cold Aisle Containment solution provides an arrangement of overhead aisle panels and end aisle doors to effectively seal and contain hot/cold air paths. This ensures that the cold air emitted from the floor is sealed in a cocoon and is therefore unaffected by hot exhaust air. The cooling air can only exit through the equipment for which it is intended.

All Aisle Cotainment components such as overhead panels and aisle end doors are fixed to the cabinet bay structure alone and not connected to the room structure.

The whole infrastructure is:

- Modular
- Quick-Fit
- Effective
- Relocatable
- Inexpensive



The Cannon Aisle Containment solution is available in two versions: Passive or Active

PASSIVE AISLE ROOF PANEL

In the passive version, the overhead panels which cocoon the aisle are mounted with Quick-Fit spring pins which fix the panel to the edge beam on the cabinet top cover.

These modular panels can be fixed in position or manually demounted in seconds.

ACTIVE AISLE ROOF PANEL

In the active version, the panels are electrically controlled by BMS(Building Management System) Control Panel and will automatically and instantly open in the case of fire/smoke, to allow gas suppressant or water from an overhead sprinkler system to pass through to the aisle. Remote control and monitoring is also available with this version.

In all other respects, the two versions are identical.





For further details on Aisle Containment please contact the Cannon Sales Team.

Size conversions: 1U = 44.45mm = 1 3/4" 600mm = 24" 700mm = 28" 800mm = 32" 1kg = 2.2lb

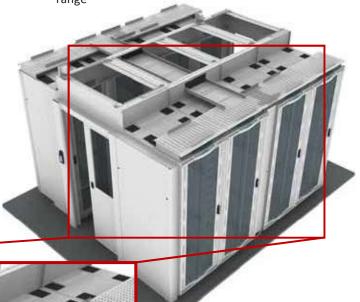


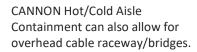
HOT & COLD AISLE CONTAINMENT

FEATURES

- A fully integrated infrastructure, end-to-end compliant Overhead, modular panels of Quick-Fit design to cocoon and contain the aisle (Cold or Hot aisle).
- Ideally, panel widths match the sizes of supporting cabinets (these can be of mixture widths) i.e. 600mm, 700mm or 800mm wide cabinets/panels.
- The roof panels can be mounted to non-matching cabinet widths, if required, by installing an adjustable edge beam (CANNON customising kit – available on request).
- In case of a fire/smoke activation, the CANNON Active roof system provides automatic panel opening (Via customer BMS link), to allow gas suppressant or water from sprinkler system to enter aisle (avoids the need to modify and extend room sprinklers).
- Roof Panel options: transparent or opaque polycarbonate.
- Panel mounting height options to suit room constraints and headroom requirements.
- Optional containment panel spans, to suit aisle widths
- Within-aisle lighting upgrades to supplement or replace room lighting.
- Sliding Aisle end doors of various widths, single or pairs.
- End Aisle sliding door(s) "auto close" when not manually held open, to rapidly preserve cotainment.
- Auto Opening End Aisle Door option available on request.

- Cannon Hot/Cold Aisle Containment is compatible with:
 - All Cannon enclosures.
 - With Cannon overhead cable raceway.
- Adaptor kits can be provided where non-Cannon enclosures are required within CANNON Hot/Cold aisle containment PODS.
- CannonGuard upgrades to enable temperature remote monitoring/mapping of aisles (hot and cold). Cannon Monitoring can provide alarm outputs to CANNON DCM or 3rd Party Systems
- CANNON provide design and installation retrofit service for any installed cabinet range







HOT & COLD AISLE CONTAINMENT

SELF CLOSING SLIDING DOOR: NON-LOCKING

Features & Benefits

- Non-intrusive sliding action.
- Solid construction and design with wide opening capacity.
- Filler panel options for obstructions, 3rd party racks etc.
- Self-closing/opening options.
- Electronic/RFID/BIOMETRIC lock upgrade options.
- Security upgrades for local and remote control & monitoring.
- See through viewing panel with solid lower area anti-kick panels.

Specification

- A single flat sliding door with top hung hanger rail system.
- Half glazed self closing, manual slide to open door.
- Viewing window 4mm clear toughened glass.
- Standard aisle width 1000/1200/1300/1400mm, alternative aisle widths available on request.
- Right hand or left hand opening options.
- 47U high door (independent of Rack height).
- Electronic Key-pad, Biometric and RFID upgrades available.

Finish: Standard: Powder painted Velvet Black to RAL 9005 or Chameleon (Grey White) to RAL 9002.

42U 1200mm AISLE DOOR - 1000D CAB

PART CODE

COLD421210SCNLRH

COLD471310SCNLLH

Additional colours available on request.

DESCRIPTION

A SELF CLOSING, NON-LOCKING SLIDING

A SELF CLOSING, NON-LOCKING SLIDING

DOOR, RIGHT HAND OPENING

DOOR, RIGHT HAND OPENING **SELF CLOSING**, NON-LOCKING SLIDING

DOOR, LEFT HAND OPENING







Optional: CA202 door holder



- Electronic Key-pad
- Biometric scanner (fingerprint or retinal scan) and Key-pad
- Radio-Frequency Identification (RFID) and Key-pad

42U 1000mm AISLE DOOR -1000D CAB		
DESCRIPTION	PART CODE	
A SELF CLOSING, NON-LOCKING SLIDING	COLD421008SCNLRH	
DOOR, RIGHT HAND OPENING		
A SELF CLOSING, NON-LOCKING SLIDING	COLD421008SCNLLH	
DOOR, LEFT HAND OPENING		

47U 800mm AISLE DOOR -1000D CAB		
DESCRIPTION	PART CODE	
A SELF CLOSING, NON-LOCKING SLIDING	COLD471006SCNLRH	
DOOR, RIGHT HAND OPENING		
A SELF CLOSING, NON-LOCKING SLIDING	COLD471006SCNLLH	
DOOR, LEFT HAND OPENING		

47U 1000mm AISLE DOOR - 800D CAB	
DESCRIPTION	PART CODE
A SELF CLOSING, NON-LOCKING SLIDING	COLD47100808SCNLRH
DOOR, RIGHT HAND OPENING	
A SELF CLOSING, NON-LOCKING SLIDING	COLD47100808SCNLLH
DOOR, LEFT HAND OPENING	

47U 1000mm AISLE DOOR -1000D CAB		
DESCRIPTION	PART CODE	
A SELF CLOSING, NON-LOCKING SLIDING	COLD471008SCNLRH	
DOOR, RIGHT HAND OPENING		
A SELF CLOSING, NON-LOCKING SLIDING	COLD471008SCNLLH	
DOOR, LEFT HAND OPENING		

47U 1400mm AISLE DOOR – 1000D CAB		
DESCRIPTION	PART CODE	
A SELF CLOSING, NON-LOCKING SLIDING	COLD47141010SCNLRH	
DOOR, RIGHT HAND OPENING		
A SELF CLOSING, NON-LOCKING SLIDING	COLD47141010SCNLLH	
DOOR, LEFT HAND OPENING		



HOT & COLD AISLE CONTAINMENT

SELF CLOSING MESH SLIDING DOOR:

NON-LOCKING

Provides security of Aisle whilst maintaining Computer Room Air Conditioning (CRAC) Down Flow Front Displacement into the Aisle

Features & Benefits

- Non-intrusive sliding action.
- Steel frame and mesh panel construction and design for maximum air-flow & security.
- Wide opening capacity.
- Filler panel options for obstructions, 3rd party racks etc.
- Self-closing/opening options.
- Electronic/RFID/BIOMETRIC lock options.
- Security upgrades for local and remote control & monitoring.

Specification

- A single flat mesh sliding door with top hung hanger rail system.
- Manual slide to open door.
- Standard aisle width 1200mm alternative aisle widths available.
- 1000mm door aperture with 880mm maximum door opening.
- Right hand or left hand opening option.
- 47U high door (independent of Rack height).
- Non-Locking.
- Electronic Key-pad, Biometric and RFID upgrades available.

Finish Standard: Powder painted Black RAL9005 or Grey White RAL9002.

Additional colours available on request.

47U 1200mm AISLE DOOR		
DESCRIPTION	PART CODE	
A SELF CLOSING, NON-LOCKING MESH	COLD471208SCNLMRH	
SLIDING DOOR, RIGHT HAND OPENING		
A SELF CLOSING, NON-LOCKING MESH	COLD471208SCNLMLH	
SLIDING DOOR, LEFT HAND OPENING		
PLEASE CONTACT CANNON FOR FURTHER SIZES.		



Locking Upgrades Include:

- Electronic Key-pad
- Biometric scanner (fingerprint or retinal scan) and Key-pad
- Radio-Frequency Identification (RFID) and Key-pad



HOT & COLD AISLE CONTAINMENT

BLANK END PANEL

Hot/Cold Aisle Containment that only require one door can have a Blank End Panel or Blank Window Panel instead of a second door at the opposite end of the aisle.

- Saves on the cost of an aisle compared to the door option.
- 42U, 45U or 47U high blank end panel.
- Standard aisle width 1000, 1200mm, 1300mm & 1400mm - alternative aisle widths available on request.

Finish Standard: Powder painted Black RAL9005 or Grey White RAL9002.





BLANK END PANEL

WINDOW END PANEL

Additional colours available on request.

END PANEL SIZE	BLANK	WINDOW
1000mm WIDE	PART CODE	PART CODE
42U 1000mm WIDE	BEP4210	BEPVW4210
45U 1000mm WIDE	BEP4510	BEPVW4510
47U 1000mm WIDE	BEP4710	BEPVW4710

470 1000mm WIDE	BEP4/10	BEPVW4/10
END PANEL SIZE	BLANK	WINDOW
1200mm WIDE	PART CODE	PART CODE
42U 1200mm WIDE	BEP4212	BEPVW4212
45U 1200mm WIDE	BEP4512	BEPVW4512
47U 1200mm WIDE	BEP4712	BEPVW4712
END PANEL SIZE	BLANK	WINDOW
1300mm WIDE	PART CODE	PART CODE
42U 1300mm WIDE	BEP4213	BEPVW4213
45U 1300mm WIDE	BEP4513	BEPVW4513
47U 1300mm WIDE	BEP4713	BEPVW4713
END PANEL SIZE	BLANK	WINDOW
1400mm WIDE	PART CODE	PART CODE
42U 1400mm WIDE	BEP4214	BEPVW4214
45U 1400mm WIDE	BEP4514	BEPVW4514
47U 1400mm WIDE	BEP4714	BEPVW4714



HOT & COLD AISLE CONTAINMENT

SELF CLOSING SLIDING DOOR: ELECTRO-MAGNETIC LOCKING WITH SECURE KEYPAD ENTRY

Features & Benefits

- Non-intrusive sliding action
- Solid construction and design for maximum security.
- Wide opening capacity.
- Filler panel options for obstructions, 3rd party racks etc.
- Self-Closing/Self-Opening options.
- Electronic lock:
 - The electronic lock provides increased security against unwanted access, keeping mission critical systems protected.
 - All access events into the protected aisle can be controlled from the NOC or by local door controller via electronic key pads, RFID or biometric device.
 - Entry events can be recorded through BMS/DCM, whether failed or successful.
- See through viewing panel with solid lower area anti-kick panels.

Specification

- A single sliding door with top hung hanger rail system.
- Half glazed self closing, manual slide to open door.
- Viewing window 4mm clear toughened glass.
- Standard aisle width 1000/1200mm alternative aisle widths available on request.
- Right hand or left hand opening options.
- Electro-Magnetic Locking with Secure Keypad Entry as standard.
- Biometric and RFID upgrades available on request.





Optional: CA202 door holder



Finish Standard: Powder painted Black RAL9005 or Grey White RAL9002.

Additional colours available on request.

47U 1000mm AISLE DOOR	
DESCRIPTION	PART CODE
SELF CLOSING, ELECTRONIC-LOCKING	COLD471008SCELRH
SLIDING DOOR, RIGHT HAND OPENING	
SELF CLOSING, ELECTRONIC-LOCKING	COLD471008SCELLH
SLIDING DOOR, LEFT HAND OPENING	

42U 1000mm AISLE DOOR	
DESCRIPTION	PART CODE
SELF OPENING, ELECTRONIC-LOCKING	COLD421008SOELRH
SLIDING DOOR, RIGHT HAND OPENING	
SELF OPENING, ELECTRONIC-LOCKING	COLD421008SOELLH
SLIDING DOOR, LEFT HAND OPENING	

47U 1200mm AISLE DOOR - 1000D CAB		
DESCRIPTION	PART CODE	
SELF CLOSING, ELECTRONIC-LOCKING	COLD471210SCELRH	
SLIDING DOOR, RIGHT HAND OPENING		
SELF CLOSING, ELECTRONIC-LOCKING	COLD471210SCELLH	
SLIDING DOOR, LEFT HAND OPENING		

42U 1200mm AISLE DOOR	
DESCRIPTION	PART CODE
SELF OPENING, ELECTRONIC-LOCKING	COLD421210SOELRH
SLIDING DOOR, RIGHT HAND OPENING	
SELF OPENING, ELECTRONIC-LOCKING	COLD421210SOELLH
SLIDING DOOR, LEFT HAND OPENING	

47U 1200mm AISLE DOOR -1200D CAB			
DESCRIPTION	PART CODE		
SELF CLOSING, ELECTRONIC-LOCKING	COLD471212SCELRH		
SLIDING DOOR, RIGHT HAND OPENING			
<u>SELF CLOSING</u> , ELECTRONIC-LOCKING	COLD471212SCELLH		
SLIDING DOOR, LEFT HAND OPENING			



HOT & COLD AISLE CONTAINMENT

SLIDING DOUBLE DOORS

Double Sliding Doors provide an exceptional solution for standard 1800mm and extra wide aisles i.e. when an infill panel combined with a single sliding door is not acceptable.

Double Sliding Doors operate with the same range of virtues as Single Sliding Doors.

Cannon Double Sliding Doors can be opened singularly with only one hand for quick personal access. Both doors can be opened wide to allow carts etc. to pass through. They automatically close with the same smooth two speed action as the single doors and can be upgraded to electronic locking if required.

47U 1800mm AISLE DOUBLE DOOR – 1200 CAB		
DESCRIPTION	PART CODE	
SELF CLOSING , NON-LOCKING SLIDING DOOR,	COLD471812SCNLDD	
RIGHT HAND OPENING		
SELF CLOSING , ELECTRONIC-LOCKING SLIDING	COLD471888SCELDD	
DOOR, LEFT HAND OPENING		

47U 2000mm AISLE DOUBLE DOOR		
DESCRIPTION	PART CODE	
SELF CLOSING , NON-LOCKING SLIDING DOOR,	COLD472010SCNLDD	
RIGHT HAND OPENING		
SELF CLOSING , ELECTRONIC-LOCKING SLIDING	COLD472010SCELDD	
DOOR, LEFT HAND OPENING		

Finish Standard: Powder painted Black RAL9005 or Grey White RAL9002.

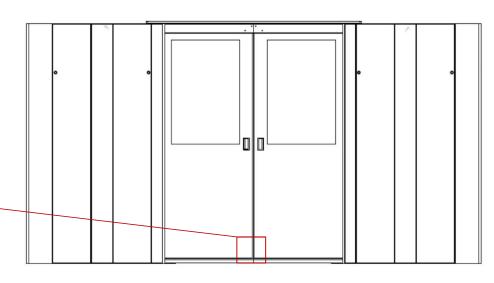
Additional colours available on request.







Optional: CA202 door holder (2 per double door kit)





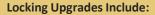
HOT & COLD AISLE CONTAINMENT

HIGH SECURITY KEYPAD AND ELECTRO-MAGNETIC

LOCK

Features

- Push button exit from Aisle
- A five second unlock time before auto-relock
- Failsafe mode and if power fails the door can be opened but rests in the closed position
- Four digit entry codes
- Up to 64 different entry pin codes of between 4 & 8 digits (remote option)
- Local or remote alarms for door status
- Aisle temperature display on keypad
- Cannon Data Centre Manager for full remote control and monitoring option including entry code changes or remote activation of lock



- Biometric scanner (fingerprint or retinal scan) and Key-pad
- Radio-Frequency Identification (RFID) and Key-pad



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OAO

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DESCRIPTION	PART CODE
Interface upgrade to Electronic Locking Aisle Door shown on 9.7 & 9.8 when using PAXTON RFID P75 Reader and NET2 Controller (Reader and Controller not supplied). Includes "push to Exit" internal aisle push button with 20 second delay, Cannon Magnetic Lock. Management provided by PAXTON NET2 Platform (not supplied).	405E-ELOC-CA-RFID-PAX
Interface upgrade to Electronic Locking Aisle Door shown on 9.7 & 9.8 which provides the additional of a CANNON BIO 1 finger print BIOMETRIC reader, Includes "push to Exit" internal aisle push button with 20 second delay, Cannon Magnetic Lock. Management provided by Cannon DCM Platform (Sold separately).	405E-ELOC-CA-BIO
Interface upgrade to Electronic Locking Aisle Door shown on 9.7 & 9.8 which provides the additional of a CANNON BIO 2 – PIN, RFID, face & finger print BIOMETRIC reader, Includes "push to Exit" internal aisle push button with 20 second delay, Cannon Magnetic Lock. Management provided by Cannon DCM Platform (Sold separately) – 2000 user templates, IP interface built in.	405E-ELOC-CA-BIO-MULTI



HOT & COLD AISLE CONTAINMENT

PASSIVE AISLE ROOF

In the passive version, the overhead panels enclose the aisle and are mounted with Quick-Fit spring pins for Quick removal. Passive panels are fixed to the edge beam which is located on top of the cabinet roof area.

These modular panels can be fixed in position and manually demounted in seconds.

Specification

- Compatible with the CANNON Smart Cab range.
 Modular overhead containment panels, with
 Quick-Fit mounting pins.
- High transparency polycarbonate glazed panels.
- Optional Opaque polycarbonate glazed panels.
- If possible, panel dimensions match the widths of supporting cabinets (these can be of mixed width if required) i.e. standard 600mm, 700mm or 800mm wide cabinets and panels.
- Passive panels can be mounted to 3rd party and nonmatching cabinet widths, by installing an optional adjustable edge beam (customised kits available on request).
- Panel mounting height options to suit room constraints and headroom obstructions i.e. lighting
- Standard aisle width 1200/1800mm; Additional sizes on request.

Finish Standard: Powder painted Black RAL9005 or Grey White RAL9002.

Additional colours available on request.

PASSIVE ROOF PANEL 1200mm AISLE	PART CODE
600mm WIDE PASSIVE ROOF PANEL	PAS6012
700mm WIDE PASSIVE ROOF PANEL	PAS7012
800mm WIDE PASSIVE ROOF PANEL	PAS8012
1000mm WIDE PASSIVE ROOF PANEL	PAS9912

PASSIVE ROOF PANEL 1800mm AISLE	PART CODE
600mm WIDE PASSIVE ROOF PANEL	PAS6018
700mm WIDE PASSIVE ROOF PANEL	PAS7018
800mm WIDE PASSIVE ROOF PANEL	PAS8018
1000mm WIDE PASSIVE ROOF PANEL	PAS9918





Fixed overhead Aisle Panel and fixed Edge Beam (Image above shows optional Raceway Entry point)



HOT & COLD AISLE CONTAINMENT

ACTIVE AISLE ROOF PANEL

In the active version, the panels are electrically controlled by the BMS* control panel and will automatically and instantly open in the case of fire/smoke, to allow gas suppressant or water from an overhead sprinkler system to pass through to the aisle.

Specification

- In case of a fire/smoke activation, the CANNON Active roof system provides automatic panel opening (Via customer BMS link), to allow gas suppressant or water from sprinkler system to enter aisle (avoids the need to modify and extend room sprinklers).
- Compatible with the CANNON Smart Cab range.
- Modular overhead panels, with Quick-Fit mounting pins.
- High transparency polycarbonate glazed panels.
- Optional Opaque polycarbonate glazed panels.
- Ideally panel widths match the widths of supporting cabinets providing matched modules (these can be of mixed width if required) i.e. 600mm, 700mm or 800mm wide cabinets and panels
- If possible, panel dimensions match the widths of supporting cabinets (these can be of mixed width if required) i.e. standard 600mm, 700mm or 800mm wide cabinets and panels.
- Passive panels can be mounted to 3rd party and non

 matching cabinet widths, by installing an optional adjustable
 edge beam (customised kits available on request).
- Panel mounting height options to suit room constraints and headroom obstructions i.e. lighting
- Standard aisle width 1200/1800mm; Additional sizes on request.

Finish Standard: Powder painted Black RAL9005 or Grey White RAL9002.

Additional colours available on request.

ACTIVE ROOF PANEL 1200mm AISLE	PART CODE
600mm WIDE ACTIVE ROOF PANEL	ACT6012**
700mm WIDE ACTIVE ROOF PANEL	ACT7012**
800mm WIDE ACTIVE ROOF PANEL	ACT8012

ACTIVE DOOF DANIEL 1000mm AIGLE	DART CODE
ACTIVE ROOF PANEL 1800mm AISLE	PART CODE
600mm WIDE ACTIVE ROOF PANEL	ACT6018**
700mm WIDE ACTIVE ROOF PANEL	ACT7018**
800mm WIDE ACTIVE ROOF PANEL	ACT8018**

DESCRIPTION	PART CODE
6 x ACTIVE ROOF PANEL ACTIVATION	KP5004
SYSTEM, PSU, CABLING ETC. KIT**	
12 x ACTIVE ROOF PANEL ACTIVATION	KP5004-12
SYSTEM, PSU, CABLING ETC. KIT**	
15 x ACTIVE ROOF PANEL ACTIVATION	KP5004-15
SYSTEM, PSU, CABLING ETC. KIT**	



- When a fire alarm is raised/activated the CANNON Active Roof Panels are able to rotate about their centre point to allow external Fire Suppressant Systems to extinguish a fire in the aisle or cabinets.
- Activation devices may be smoke and fire detectors or call points.
- Actuators are magnetic holding solenoids as per standard fire doors.
- System will normally be "power-on" to hold panels shut and automatically "open-on" fire/smoke or power-loss (equivalent to a retained fire door within a corridor).
- Voltages normally 24VDC SLEV

Cannon pre-wire the active roof system temporarily to prove its operation and to allow access to the area above the aisle and cabinets.

Any fixed wiring, PSU, alarm, actuator or detection installation may have to comply with the BS/EN requirements of an insurer or specified use of the space in the country of use.

Cannon recommends a certified fire installations company be employed to interface these systems with a customer's fixed fire/BMS installation and ensure compliance with relevant legislation.

*BMS = BUILDING MANAGEMENT SYSTEM

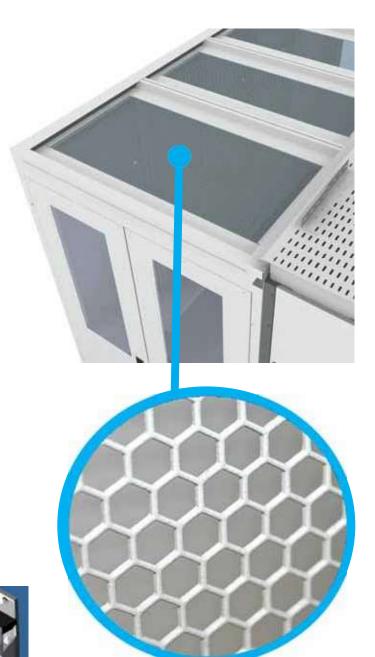
** KP5004-xx (xx=1/12/15 etc) KIT REQUIRED FOR ACTIVATION FOR ACTIVE ROOF. CONTACT CANNON TO CONFIRM NUMBER OF ACTIVE ROOFS REQUIRED AND NUMBER OF ACTIVATION KITS.



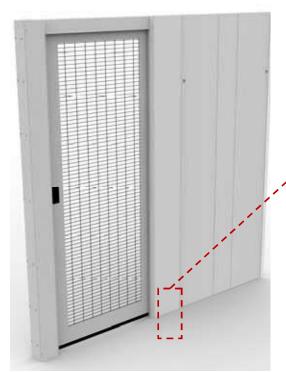
HOT & COLD AISLE CONTAINMENT

AISLE CAGE

- For use when door(s) are not installed on 19" rack cabinets in a COLO/Shared facility.
- Secure any individual or row of 19" cabinets against unauthorised entry, with high security mesh doors at aisle ends and overhead mesh panels to allow through flow of air.
- Avoid the wasteful, space consuming negatives of old fashioned security cages.
- Preserve maximum floor space for valuable data processing capacity.
- Maximise density and return on capital employed
- Add "Cannon Guard" for positive, controlled security and access control
- Combine electronic key pad entry with biometrics, interactive video surveillance and remote control
- Maintain a full audit trail of all access activity.
- Maintain high efficiency cooling and avoid the cooling inefficiencies interposed by out-dated cages.
- Combine cold aisle containment with "Aisle Cage" mesh for the hot aisle, to achieve high efficiency cooling and all round security.
- Aisle Cage can add 30%- 50% more capacity to your data hall when compared to outmoded security cages.
- Security can actually be enhanced with Cannon Aisle Cage and CannonGuard Access Control.







SELF CLOSING MESH SLIDING DOOR:

Provides security of Aisle whilst maintaining Computer Room Air Conditioning (CRAC) Down Flow Front Displacement into the Aisle



FREE FORM AISLE CONTAINMENT

FREE FORM AISLE CONTAINMENT

- Enables an installed Rack to be removed from a row of Racks, quickly and easily, within a few minutes.
- 3rd Party Racks or OEM equipment Racks can also be installed or removed from the row, allowing extreme versatility. CANNON Aisle Containment features and benefit continue to be maintained.
- There is no disturbance to the Aisle Containment infrastructure as it remains in place and operational.
- All rack mounted cable raceway also remains undisturbed and replacement Racks can be introduced into the row with similar ease.
- Achieves cost effective airflow and cabling containment in one cohesive system.

Complete Free Form Aisle Design Principles

End to end edge beam:

The edge beam which supports the overhead Containment panels above the Aisle is a full "end to end" beam, not individually dedicated to any one Rack. It is substantially fixed at each end to the Aisle end frame and Aisle end rack.

Moveable, intermediate support jacks:

To adjust the edge beam, taking out any slight downward deflection, simple small support jacks can be positioned anywhere along the edge beam.

Small support jacks can be positioned wherever a convenient surface exists, on a rack roof, easily fitting in clear space between glands, vents etc.

Jack removal/replacement

Intermediate support jacks can be quickly disengaged to allow removal of the required Racks.

The stiff edge beam design enables the support beam to span vacant Rack-pockets. Full height panels provisionally close off vacant Rack pockets until Racks are introduced.

Spanning, rack mounted cable raceway

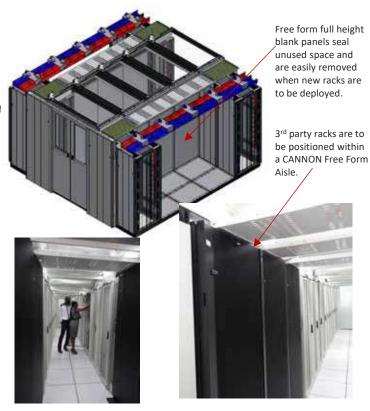
The Cannon cable raceway is designed to span vacant Rack-pockets and ensure continued cabling when vacant rack space is blanked off.

Vertical closure panels

Adjustable closure panel(s) cover and seal the small vertical space between the edge beam and the installed Rack roof.

Extended vertical closure panels

Where an installation is fed with down flow cold air from the ceiling, vertical closure panels can be of a type which extend upwards to meet and seal the ceiling. This option provided separation of the Cold Aisle & Hot Aisle air flow.



All Cannon Aisle Containment features are retained

All of the usual Active or Passive Aisle Containment features are maintained with the Cannon Free Form Aisle system.

Aisle upgrade of old installations

Where old Rack installations exist, even with mixed Rack types and sizes the Cannon Free Form Aisle Containment system provides a cost effective retrofit Aisle Containment solution.

It is good practice for a "Complete Free Form Aisle" to restrict any open span in the row to three rack widths e.g. 3 x 800mm cabinets = 2400mm (7-11") or four rack widths e.g. 4 x 600mm cabinets = 2400mm (7-11") – With "Basic Free Form Aisles" we recommend an open span of no more than 1600mm with each end of aisles including a minimum of 1 cabinet per aisle.

BLANK PANEL SIZE	600 WIDE	700 WIDE	800 WIDE
(Equivalent CANNON	PART CODE		PART CODE
cabinet height)			
42U Direct to Floor	BIWP4260CFF	BIWP4270CFF	BIWP4280CFF
42U Castor to Floor	BIWP4260COC	BIWP4270COC	BIWP4280COC
45U Direct to Floor	BIWP4560CFF	BIWP4570CFF	BIWP4580CFF
45U Castor to Floor	BIWP4560COC	BIWP4570COC	BIWP4580COC
47U Direct to Floor	BIWP4760CFF	BIWP4770CFF	BIWP4780CFF
47U Castor to Floor	BIWP4760COC	BIWP4770COC	BIWP4780COC



HOT & COLD AISLE CONTAINMENT

HOT AIR CONTAINMENT CHIMNEY

- Hot exhaust air can be contained and kept separate from room inlet air through the use of a CANNON vertical chimney.
- Exhaust air from one rack cabinet or a row can be efficiently directed to the room ceiling plenum/CRAC or external environment, without affecting aisle temperature.
- The CANNON Passive Containment Chimney enables the "IT" equipment fans to provide air pressure/movement through the chimney.
- To increase air pressure (positive or negative)/flow, The Active CANNON Containment Chimney includes fan units to provide forced air flow.
- CANNON temperature speed controlled fan trays are also available for Smart Energy Efficient Air Management.
- CANNON Containment Chimneys include adjustable telescopic designs for flexibility when installing into indeterminate installation heights or single piece construction for known ceiling heights.









Cannon rack mounted
Cable Raceway can
be combined with
Containment Chimney
installations.





HOT & COLD AISLE CONTAINMENT

VERTICAL AISLE CONTAINMENT

- For efficient down-flow air cooling or up-flow exhaust hot air extraction.
- Provides segregation of cold and hot air flow
- Maximises cooling efficiency in vertical airflow configurations.
- Compatible with CANNON Cable Raceway.
- Achieves cost effective cabling containment and air flow containment in one integrated system.
- Variable height containment panels/chimneys to accommodate various room heights











Cannon rack mounted
Cable Raceway can
be combined with
Containment Chimney
installations.



For further details on Aisle Containment please contact the Cannon Sales Team.



HOT & COLD AISLE CONTAINMENT

AISLE LIGHTING

LED Strip Light (White) Kit comprising the following:

Average Bulb Life: 50000h

CCT: 5000K

Current Rating: 500mALED Colour: White Power

Rating: 6VA

Supply Voltage: 110/230VAC - 12V output

External Depth: 16mm

External Length/Height: 520mm

External Width: 16mm

Illumination Colour: Pure White

Light Source: 56 x LED

Optional PIR Occupancy Sensor

2M LED Flexible Strip Light (Blue) Comprising of the following:

Flexible LED strips

Length: 2m

Available with white or blue LEDs

Self adhesive backing

Easy to install

Supply Voltage: 12V

72D high powered LEDs per strip

■ 50k hour life

AISLE LIGHTING KITS	PART CODE
5 LED STRIP LIGHTS (WHITE) KIT	405E-LIGHTKIT-CA-5
WITH 230VAC PSU	
8 LED STRIP LIGHTS (WHITE) KIT	405E-LIGHTKIT-CA
WITH 230VAC PSU	
9 LED STRIP LIGHTS (WHITE) KIT	405E-LIGHTKIT-CA-9
WITH 230VAC PSU	
10 LED STRIP LIGHTS (WHITE) KIT	405E-LIGHTKIT-CA-10
WITH 230VAC PSU	
10 LED STRIP LIGHTS (WHITE) KIT	405E-LIGHTKIT-PIR-10
WITH 230VAC PSU & PIR SENSOR	
10 LED STRIP LIGHTS (WHITE) KIT	405E-LIGHTKIT-CA-10S
WITH 110VAC PSU	
PIR SENSOR FOR ABOVE	405E-LIGHT-SEN-12DC
2M LED FLEXIBLE STRIP LIGHT (BLUE)	CA224
CABINET LED LIGHT STRIP WITH	405E-LIGHTKIT-01
DOOR SWITCH	









Size conversions: 1U = 44.45mm = 1 3/4" 600mm = 24" 700mm = 28" 800mm = 32" 1kg = 2.2lbs



HOT & COLD AISLE CONTAINMENT

CCTV SYSTEM

- A high performance CCTV system managed via the optional CannonGuard rack management Data Centre Manager.
- Can be integrated with the CannonGuard Electronic Locking system to provide a high security solution with access event audits.
- Overt and Covert camera's combine to cover a large visual range within your facility.
- Cost-effective security for use in co-hosted or enterprise data centres as well as larger corporates
- In/on rack covert camera system that records every access as well as provide live audio/video feeds
- Full and easy to access audit trail linking events with video and instant playback
- Alerts by; SNMP, Email, Cannon Data Centre Manager.
- Tiny, Covert analogue cameras can be fitted inside cabinets and aisles to provide viewpoints tailored to your requirements.
- A Digital Video Recording (DVR) system runs 24/7
- Still pictures/video clips are triggered from access events within the aisle or cabinet and stills can be sent via Email
- Live video can be viewed at any time over your network or the internet connection.
- Available with 4 or 8 cameras per DVR with 1 to 4 TB HDD providing weeks of recording.
- 2 Way Audio option with remote control interface.
- Quick deployment on site, plug and play.





DESCRIPTION	PART CODE
4 x CAMERA COVERT SYSTEM, 1TB, HIGHLINE DISPLAY	405E-CAMERA-4-HD
VERSION	
8 x CAMERA COVERT SYSTEM, 1TB, HIGHLINE DISPLAY	405E-CAMERA-8-HD
VERSION	

HD versions use Highline Displays to trigger audits and stills on Cabinet access

The kits above comprise 4 or 8 (as specified above) Camera Covert System, 1TB DVR, complete with cables and

connectors, plugs into optional Highline Display or Rack Monitor (405ELIMPITMC) for triggering alarms.

4 x CAMERA COVERT SYSTEM, 1TB, STANDALONE VERSION 405E-CAMERA-4-SA 8 x CAMERA COVERT SYSTEM, 1TB, STANDALONE VERSION 405E-CAMERA-8-SA

The kits above comprise 4 or 8 (as specified above) stand alone system Camera Covert System, 1TB DVR complete

with cables and connectors. This standalone system does <u>not</u> require any other CannonGuard modules such

Highline Display or Rack Monitor to function.

2 WAY AUDIO OPTION PLUGS INTO DVR 405E-CAMERA-AV

Size conversions: 1U = 44.45mm = 1 3/4" 600mm = 24" 700mm = 28" 800mm = 32" 1kg = 2.2lbs