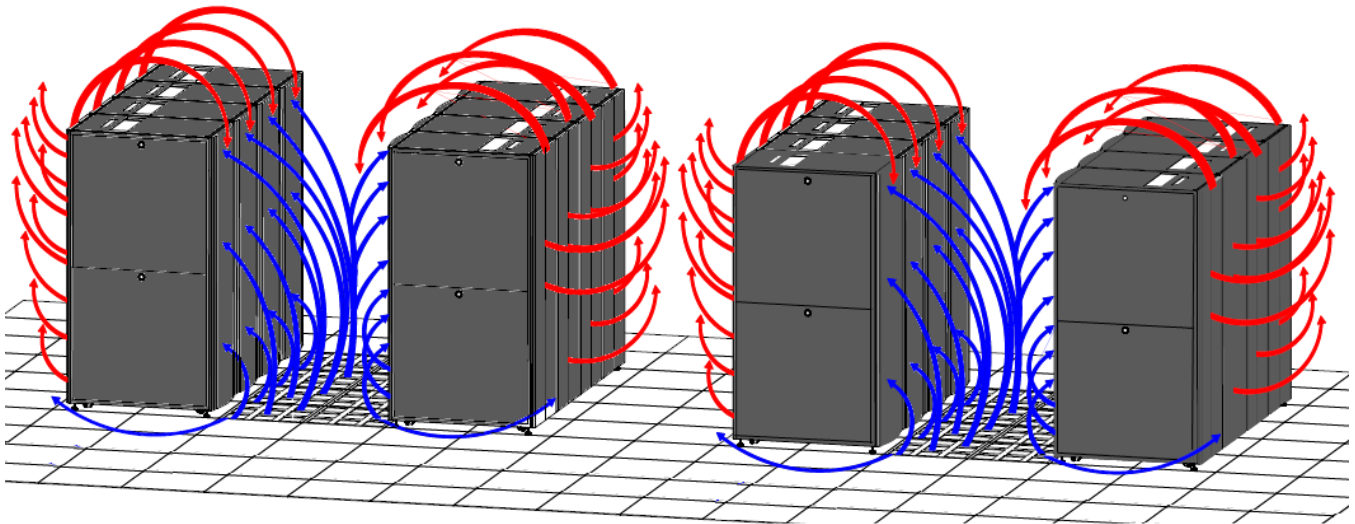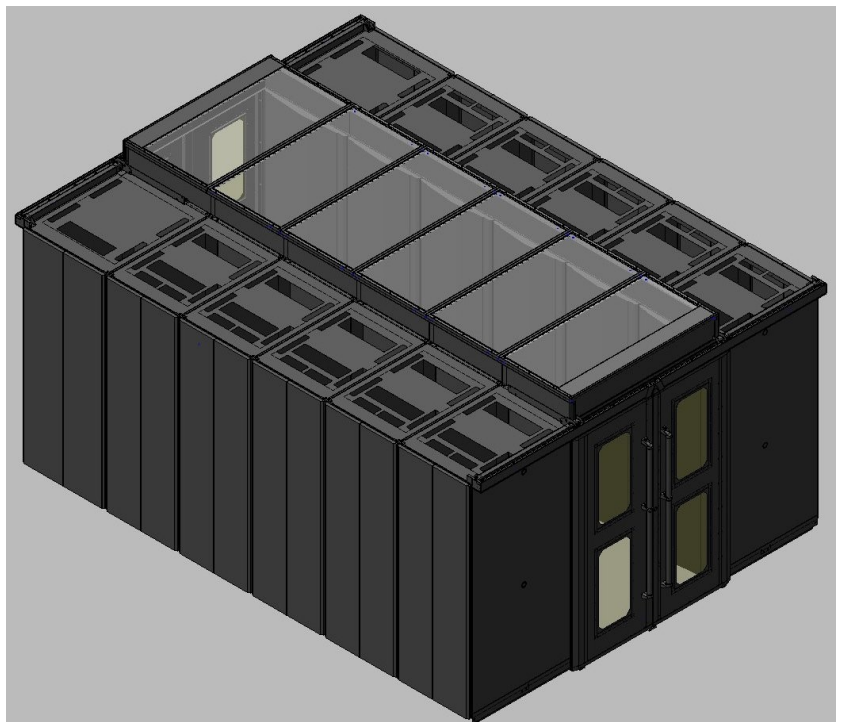# ARION Cold Aisle Containment

Product Information

Cooling is the hot topic in data center circles today. As heat densities and cooling costs rise, data center professionals are looking for more efficient cooling solutions. Aisle containment can improve cooling performance of a data center, assuming it is arranged in a hot aisle/ cold aisle configuration. Gartner reports that a 2007 Pacific Gas and Electric study estimated that containment could save 20 percent in chiller operating costs. Further, a 2007 study by Lawrence Berkeley National Laboratory found that the electricity used to move the cold supply air could be reduced 75 percent by implementing cold aisle containment. As an addition to a conventional precision cooling system, cold aisle containment consistently separates cold and warm areas without requiring structural changes to the data center. A cold aisle retrofit can be implemented easily and quickly, carries a payback time from weeks to a few months depending on whether energy utility rebates were available to help with funding and can reduce cooling related energy costs by as much as 30 percent.

ARION COLD AISLE CONTAINMENT

Arion racks are positioned in rows front to front. The cold aisle between two rows of racks will be covered on the top and at the both end of the rows. The result of this is a full separation between supply and return air. The cold air in front of racks shall be sucked into server and flow out entering the rest of the room. The cold aisle containment is focus on cooling the IT equipment, not the whole room, with targeted cooling at the equipment inlet. Cold Aisle containment can be a cost effective approach for older data centers with open room hot air return schemes.

Be sure to consider the cooling needs of non-contained IT equipment and airflow dynamics of the raised floor system. The temperature of free space in room is hot similar to exhausted air temperature.

The image in the first is the **Arion Cold Aisle containment 600W, 700W, 800W 42U 1200D**
A well-sealed cold aisle containment system not only offers a better thermal environment for the IT equipment but can also provide a longer ride-through time in case of cooling failure. For the scenario tested, the cold aisle containment system offered almost five times longer ride-through time for the IT equipment than without it. It is expected that the IT equipment's ability to pull the air through the cooling unit increases with the proper sealing of the containment system. Although not shown here, the analytical and CFD data for other types of air containment systems (e.g. chimney cabinets) revealed similar behavior and highlighted the advantage of having containment systems, even during the cooling failure.

Benefit :

● Ensures the cold air reaches the equipment in 19" rack at the lowest temperature
● Provides a more uniform air delivery temperature to each equipment space
● Helps to return hotter air temperatures back to the CRAC units
● Improves the efficiency of the data room by optimizing the cooling infrastructure
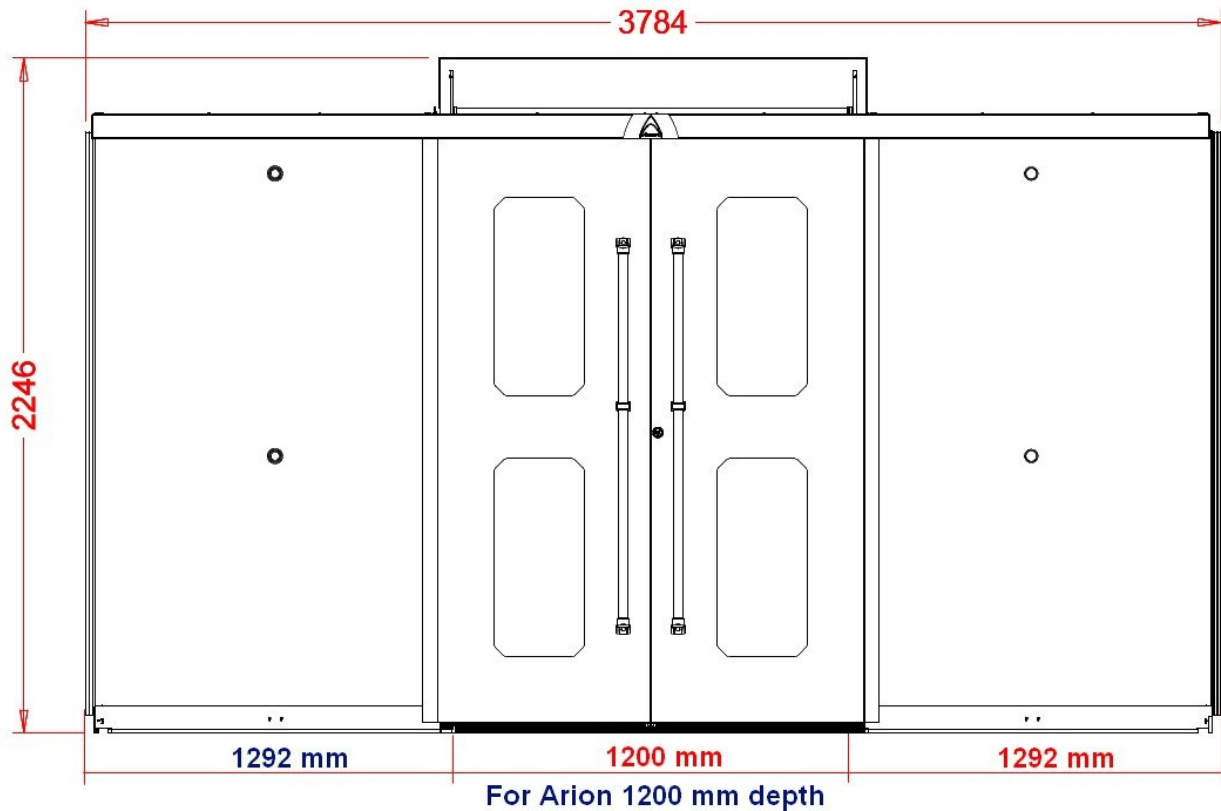● Increase equipment densities in 19" rack

Features

● Available for Arion rack 600W/700W/800W wide 42U/45U high and 1000D/1200D deep
● Sliding door with auto closure to minimize air leakage
● Manual release auto door closure system during maintenance period
● Polycabonat windows on slide door to eliminate static
● Installed Air baffles in all area from bottom to top of Arion cold aisle containment
● Transparent Polycabonat top roof with quick remove designed
● No need to drill any hole inside Datacenter during installation
● 150mm and 200mm Roof top height available.
● Aluminum top roof for environment device installation (Optional)

Standards and Materials Summary

● Premium grade Hot and cold rolled steel
● Premium grade Polymer has excellent transparency durable hard to fracture
● Fire retardant Polycarbonate
● 5 stage iron phosphate pretreatment with textured powder coat finish, tested to 500 hours salt spray under ASTM-D610-01 and ASTM-B117.
● Standard color is low gloss black.

www.chevalgrp.com

International Inquiries : Email: commce@chevalgrp.com Tel: +66 2315 1504-5 Fax: +66 2315 1506
Thailand Inquiries : Email: domestic_sales@chevalgrp.com Tel: +66 2744 1632 Fax: +66 2399 1783

Cheval strives to provide the latest information in all our product literature. Due to our continuous product development program, product appearance, specifications and dimensions may change without notice. To ensure you have the latest information, please contact Cheval or your local representative.

Dimensions

Dimension for Arion Cold Aisle containment 600W/800W 42U 1200 mm depth.

Part List : (STANDARD Configuration)

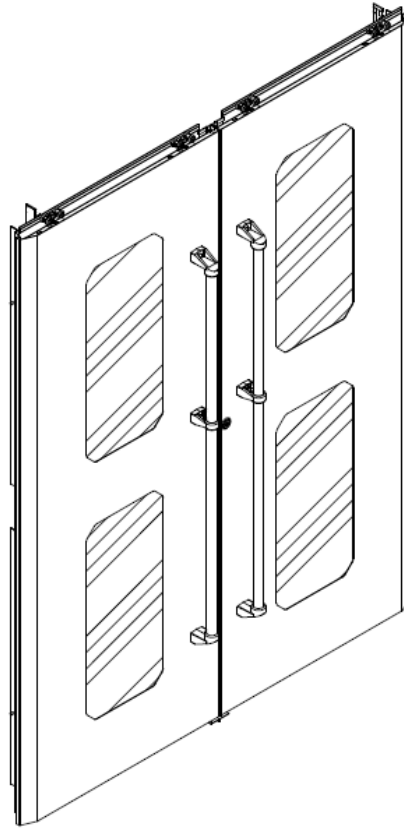| Description	Quantity	Part Number
1. AAC* Sliding Door 42U	2 set	**AACDC42**
2. AAC Slide Door 45U (For 45U high)	2 sets	**AACDC45**
3. AAC Slide Door Rail 1000D	2 sets	**AACDSR10**
4. AAC Slide Door Rail 1200D (For 1200D)	2 sets	**AACDSR12**
5. AAC Door Top panel 600W 60 high	2 sets	**AACDTP606**
6. AAC Door Top panel 600W 200 high	2 sets	**AACDTP620**
7. AAC Door Top panel 700W 200 high (For 700W)	2 sets	**AACDTP720**
8. AAC Door Top panel 800W 200 high (For 800W)	2 sets	**AACDTP820**
9. AAC Aisle Top Panel standard 600W 60 high	custom	**AACATPS606**
10. AAC Aisle Top Panel standard 600W 200 high	custom	**AACATPS620**
11. AAC Aisle Top Panel standard 700W 200 high	custom	**AACATPS820**
12. AAC Aisle Top Panel standard 800W 200 high	custom	**AACATPS820**

Note : AAC* = Arion Aisle Containment
For custom configuration, please contact local distributor.

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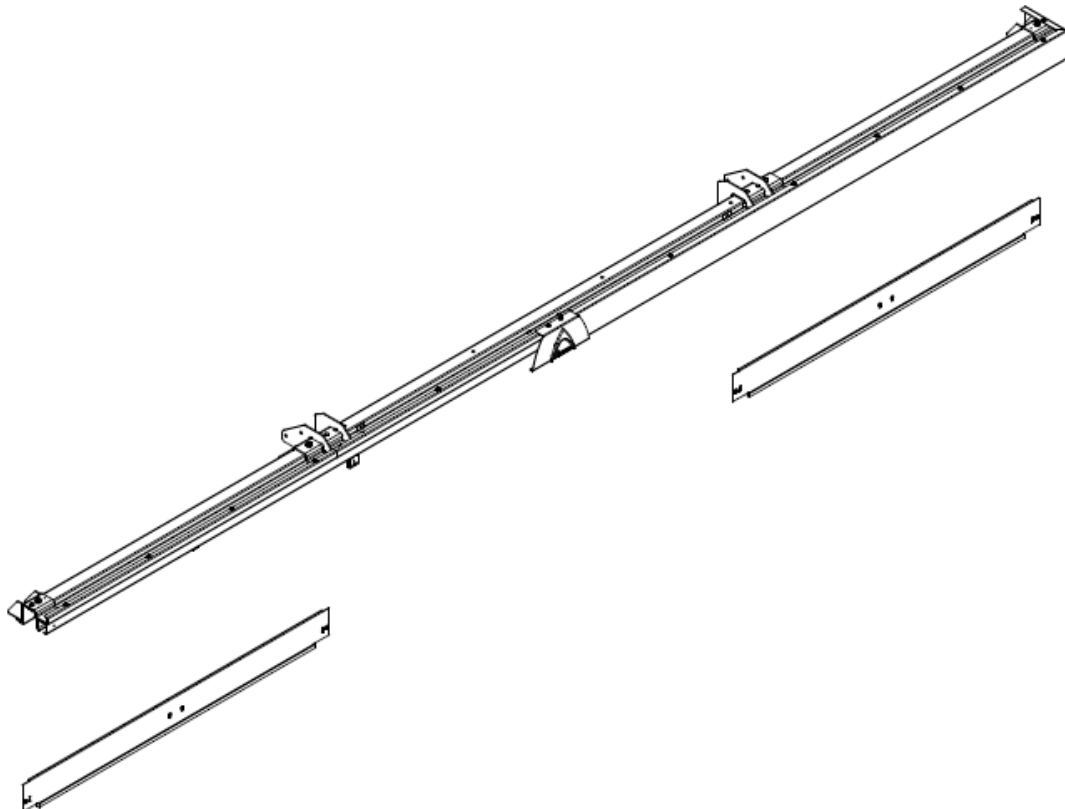
To buildup Arion cold Aisle containment we need part list like these :
1. Arion Aisle Containment Sliding Door 42U/45U

2. Arion Aisle Containment Sliding Door Rail 1000D/1200D

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3. Arion Aisle Containment Door Top Panel 600W/800W
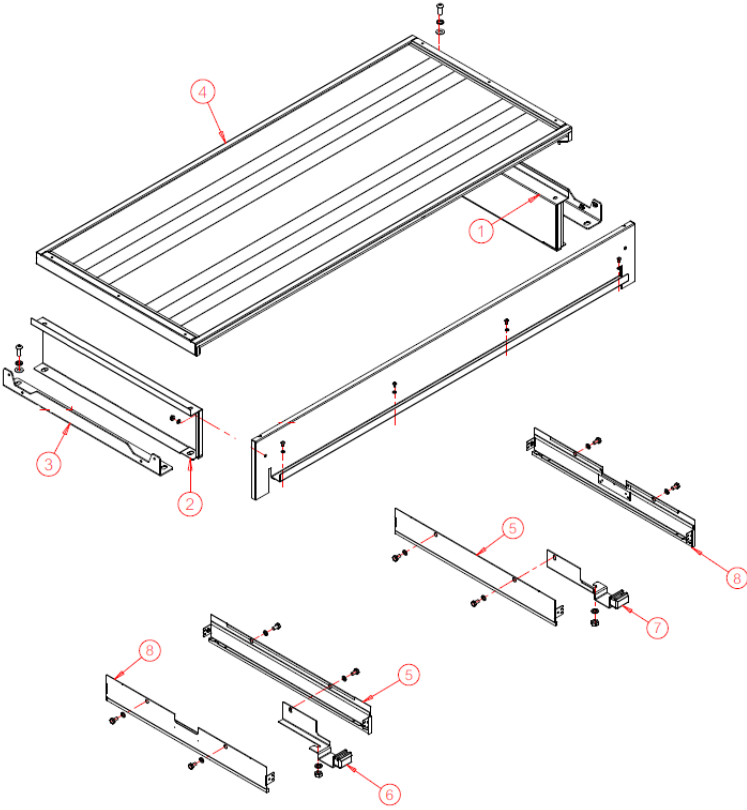
4. Arion Aisle Containment Top Panel standard 600W/800W
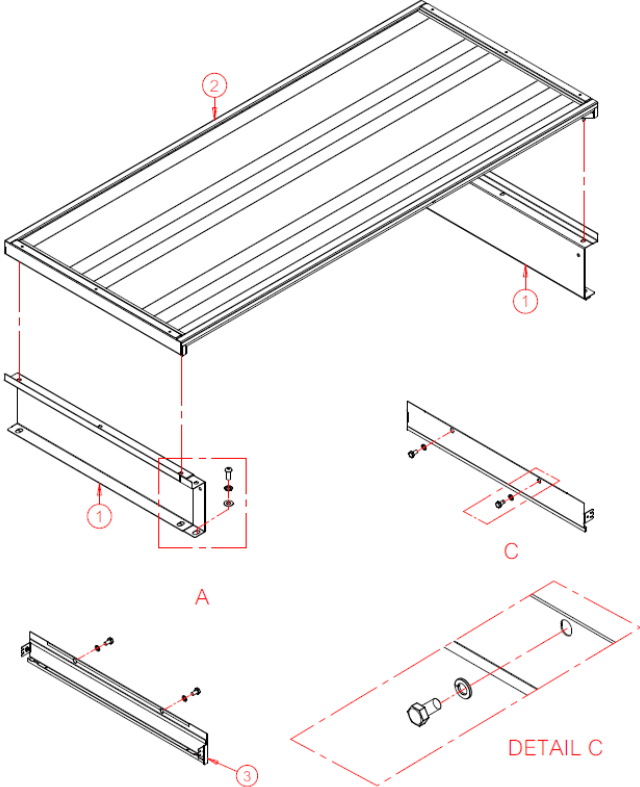
Please contact your local vendor for more detail about Arion Cold Aisle containment to fit your DataCenter requirement.

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