

PRODUCT APPLICATION

Frame Supported Hot Aisle Containment (HAC) Solution

The Frame Supported Hot Aisle Containment (HAC) Solution by Chatsworth Products (CPI) features a frame supported exhaust duct that is used over a contained hot aisle as part of a closed hot air return. This solution integrates with perimeter cooling, provides immediate improved cooling efficiency and is compatible with economization methods. The duct is supported by the frame instead of the cabinets, allowing a mix of cabinets to be installed within the row. It is ideal for colocation facilities and large scale data centers that support cabinet-level equipment installation and changes.



1 Frame Supported Exhaust Duct – Cabinet-independent frame and translucent exhaust duct cover the contained aisle to capture and vent airflow out of the aisle. Used as part of a closed return for the air handling system.

2 Aisle Containment Exhaust Duct Edge Seal – Flexible, curved seal used around the top of the duct to create a complete seal with overhead drop ceiling tiles.

3 Aisle Containment Double Door Assembly – Sliding double doors with automatic closing features and large transparent panels. Attaches to the ends of the Frame Supported Exhaust Duct to seal the ends of the contained aisle (this system not compatible with Single Door Assembly).

4 Adjustable Height Filler Panel or Universal Cabinet End Panel – Adjustable height panels used above standard equipment cabinets to seal gaps between the 52U Frame Supported Exhaust Duct and the cabinets. Alternately, Universal Cabinet End Panels adjusts in both height and width.

5 Full Height Blanking Panel – Translucent panel and seal used to fill gaps where entire cabinets are omitted from the cabinet row. Easy to trim to match required width. Supports “roll-in/roll-out” deployment and variable length cabinet rows created when cabinets of differing widths are deployed in the same row.

6 Aisle Containment Cabinet To Floor Seal Kit or AisleLok™ Under Rack Panel – Cabinet-specific trim panels used along the base of cabinets to seal the gap between the floor and the bottom of the cabinet frame. If not available from the cabinet manufacturer, trim and adhere AisleLok Under Rack Panel to seal gaps under cabinets.

Containment Accessories

- Floor Mounting Template

Cabinets and Accessories

- CPI Cabinet Systems
- Bottom Panels
- Air Dam
- Snap-In Filler Panels
- AisleLok™ Acrycell™ Sealing Tape
- KoldLok® Raised Floor Grommets

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CHATSWORTH
PRODUCTS

FRAME SUPPORTED HOT AISLE CONTAINMENT (HAC) SOLUTION

SOLUTION OVERVIEW

- Flexible frame supported duct installed before the cabinets allows you to add, remove or omit cabinets as required
- Compatible with virtually any mix of cabinets; any width and heights up to 52U high
- Large open spans with 12' (3 m) to 20' (6 m) clearance between frame support posts for bayed cabinets
- Built-in height, width and depth adjustments on frame beams, lateral supports and panels accommodate site differences and existing conditions reducing the need for complex, time-consuming, field modification or special-ordered parts
- Translucent duct and transparent door panels allow light to enter the contained aisle
- Doors close automatically to maintain containment and reduce recovery time
- A complete solution maximizes performance with baffles to seal around and within cabinets and the contained aisle
- Durable construction and maintenance-free design provide years of use

ORDERING INFORMATION

Frame Supported Exhaust Duct		
Part Number & Finish		Description
Black	Glacier White	
For 60" (1524 mm) to 76.5" (1943 mm) Wide Frame		
32990-701	32990-E01	12'L (3.6 m) Span/Cabinet Row
32990-702	32990-E02	14'L (4.2 m) Span/Cabinet Row
32990-703	32990-E03	16'L (4.8 m) Span/Cabinet Row
32990-704	32990-E04	18'L (5.4 m) Span/Cabinet Row
32990-705	32990-E05	20'L (6.0 m) Span/Cabinet Row

Note: Other widths/spans are available.

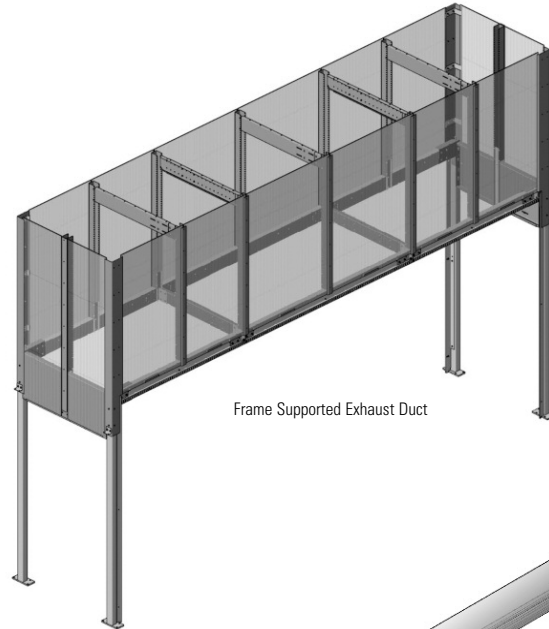
Aisle Containment Exhaust Duct Edge Seal		
Part Number & Quantity		Description
2 Pack	6 Pack	
32836-000	32836-001	8'L (2.4 m), clear plastic

Note: Order sufficient length to surround the top perimeter of the duct.

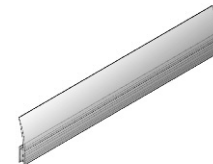
Aisle Containment Door Assembly		
Part Number & Finish		Description
Black	Glacier White	
Double Door		
32770-701	32770-E01	With Painted Door Frames
32770-702	32770-E02	With Anodized Aluminum Door Frames

Note: Order one Floor Mounting Template for each site, see Containment Accessories, page 4.

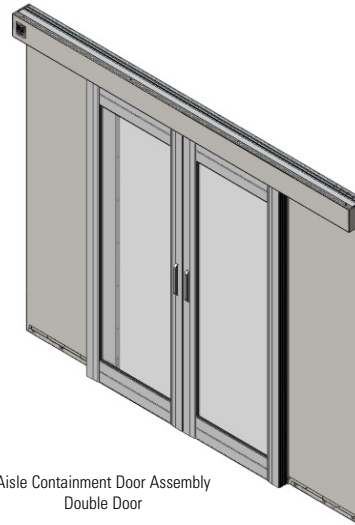
Adjustable Height Filler Panel		
Part Number & Finish		Description
Black	Glacier White	
For up to 3U High Cabinet Height Difference		
32728-701	32728-E01	For 23.6"W (600 mm) Cabinets
32728-704	32728-E04	For 24.0"W (610 mm) Cabinets
32728-707	32728-E07	For 27.6"W (700 mm) Cabinets
32728-710	32728-E10	For 29.5"W (750 mm) Cabinets
32728-713	32728-E13	For 31.5"W (800 mm) Cabinets
For up to 6U High Cabinet Height Difference		
32728-702	32728-E02	For 23.6"W (600 mm) Cabinets
32728-705	32728-E05	For 24.0"W (610 mm) Cabinets
32728-708	32728-E08	For 27.6"W (700 mm) Cabinets
32728-711	32728-E11	For 29.5"W (750 mm) Cabinets
32728-714	32728-E14	For 31.5"W (800 mm) Cabinets
For up to 9U High Cabinet Height Difference		
32728-703	32728-E03	For 23.6"W (600 mm) Cabinets
32728-706	32728-E06	For 24.0"W (610 mm) Cabinets
32728-709	32728-E09	For 27.6"W (700 mm) Cabinets
32728-712	32728-E12	For 29.5"W (750 mm) Cabinets
32728-715	32728-E15	For 31.5"W (800 mm) Cabinets
For up to 11U High Cabinet Height Difference		
32728-719	32728-E19	For 23.6"W (600 mm) Cabinets
32728-720	32728-E20	For 24.0"W (610 mm) Cabinets
32728-721	32728-E21	For 27.6"W (700 mm) Cabinets
32728-722	32728-E22	For 29.5"W (750 mm) Cabinets
32728-723	32728-E23	For 31.5"W (800 mm) Cabinets



Frame Supported Exhaust Duct



Aisle Containment Exhaust Duct Edge Seal



Aisle Containment Door Assembly Double Door



Adjustable Height Filler Panel

ORDERING INFORMATION

Universal Cabinet End Panel		
Part Number & Finish		Description
Black	Glacier White	
For up to 3U High Cabinet Height Difference		
32720-704	32720-E04	Adjusts from 19.7"W (500 mm) to 27.6"W (700 mm)
32720-710	32720-E10	Adjusts from 23.6"W (600 mm) to 31.5"W (800 mm)
For up to 6U High Cabinet Height Difference		
32720-705	32720-E05	Adjusts from 19.7"W (500 mm) to 27.6"W (700 mm)
32720-711	32720-E11	Adjusts from 23.6"W (600 mm) to 31.5"W (800 mm)
For up to 9U High Cabinet Height Difference		
32720-706	32720-E06	Adjusts from 19.7"W (500 mm) to 27.6"W (700 mm)
32720-712	32720-E12	Adjusts from 23.6"W (600 mm) to 31.5"W (800 mm)
For up to 11U High Cabinet Height Difference		
32720-717	32720-E17	Adjusts from 19.7"W (500 mm) to 27.6"W (700 mm)
32720-719	32720-E19	Adjusts from 23.6"W (600 mm) to 31.5"W (800 mm)

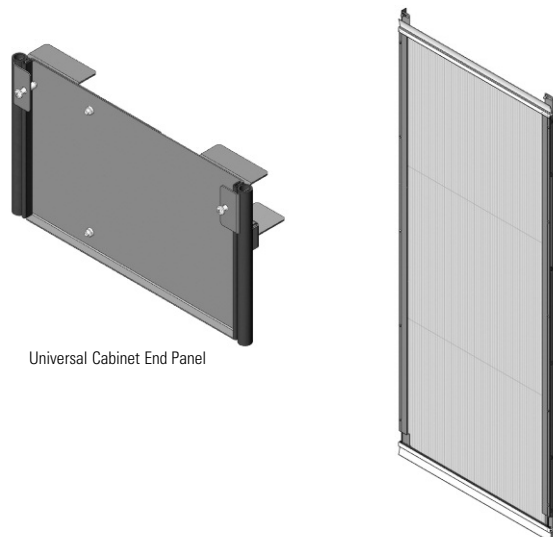
Note: Other widths available.

Full Height Blanking Panel		
Part Number & Finish		Description
Black	Glacier White	
32995-701	32995-E01	99.3"H (2522 mm) x 40"W (1016 mm), Each
32995-702	32995-E02	99.3"H (2522 mm) x 40"W (1016 mm), Pack of 6

Note: Center panel is translucent, sides are painted.

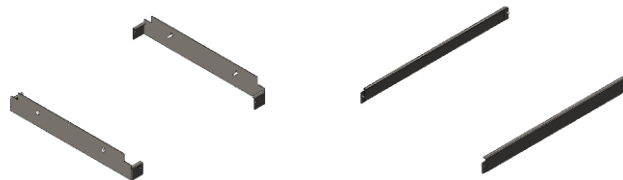
Aisle Containment Cabinet To Floor Seal Kit for F-Series TeraFrame® Gen 3 Cabinet and GF-Series GlobalFrame® Gen 2 Cabinet		
Part Number & Finish		Description
Black	Glacier White	
Front Seal Kits		
39208-700	39208-E00	Front Seal, For 23.6"W (600 mm) Cabinet
39208-701	39208-E01	Front Seal, For 27.6"W (700 mm) Cabinet
39208-703	39208-E03	Front Seal, For 29.5"W (750 mm) Cabinet
39208-702	39208-E02	Front Seal, For 31.5"W (800 mm) Cabinet
Side Seal Kits		
39209-700	39209-E00	Side Seal, For 31.5"D (800 mm) frame
39209-708	39209-E08	Side Seal, For 39.4"D (1000 mm) frame
39209-710	39209-E10	Side Seal, For 41.3"D (1050 mm) frame
39209-712	39209-E12	Side Seal, For 43.3"D (1100 mm) frame
39209-716	39209-E16	Side Seal, For 47.2"D (1200 mm) frame

Note: Order one Front Seal Kit for each cabinet. Order one Side Seal Kit for each end of the cabinet row. Other sizes are available. For existing cabinets, check with CPI Technical Support to identify the correct Floor Seal Kit.



Universal Cabinet End Panel

Full Height Blanking Panel



Aisle Containment Cabinet to Floor Front Seal Kit

Aisle Containment Cabinet to Floor Side Seal Kit

ACCESSORIES

Containment Accessory

The following accessory is used to help install the containment doors.

Floor Mounting Template	
Part Number & Finish	Description
Black	
32875-701	For Aisle Containment Double-Door

Note: Reusable, order one per site.



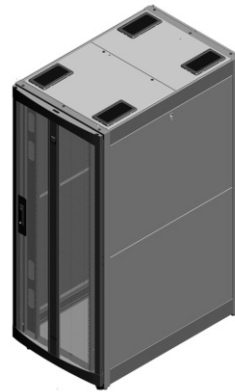
Floor Mounting Template

Cabinet and Thermal Management Accessories

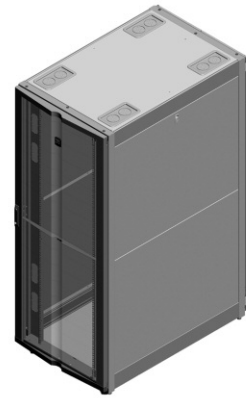
Combine the following cabinets and cabinet-specific accessories to seal gaps and block airflow through and around cabinets.

CPI Cabinet Systems		
Part Number & Finish		Description
Black	Glacier White	
F-Series TeraFrame Gen 3 Cabinet		
FF1U-113C-C42-B	FF1U-113C-E42-B	45U, 23.6"W (600 mm) x 51.2"D (1300 mm)
FF2U-113C-C42-B	FF2U-113C-E42-B	45U, 27.6"W (700 mm) x 51.2"D (1300 mm)
FF3U-113C-C42-B	FF3U-113C-E42-B	45U, 31.5"W (800 mm) x 51.2"D (1300 mm)
GF-Series GlobalFrame Gen 2 Cabinet		
GF-2A420-CB	GF-2A420-EB	45U, 23.6"W (600 mm) x 51.2"D (1300 mm)
GF-2D420-CB	GF-2D420-EB	45U, 27.6"W (700 mm) x 51.2"D (1300 mm)
GF-2C420-CB	GF-2C420-EB	45U, 31.5"W (800 mm) x 51.2"D (1300 mm)

Note: Other sizes are available.



F-Series TeraFrame Gen 3 Cabinet



GF-Series GlobalFrame Gen 2 Cabinet

ACCESSORIES

Air Dam, Bottom Panel and Rail Grommets for F-Series TeraFrame Gen 3 and GF-Series GlobalFrame Gen 2 Cabinets		
Part Number & Finish		Description
Black	Glacier White	
Air Dam For 45U High Cabinets		
39085-C03	39085-E03	For 23.6"W (600 mm) Cabinets
39085-C14	39085-E14	For 27.6"W (700 mm) Cabinets
39085-C25	39085-E25	For 31.5"W (800 mm) Cabinets
Bottom Panel For F-Series TeraFrame Gen 3 Cabinet		
39132-C00	39132-E00	For 23.6"W (600 mm) Cabinets
39132-C01	39132-E01	For 27.6"W (700 mm) Cabinets
39132-C02	39132-E02	For 31.5"W (800 mm) Cabinets
Bottom Panel For GF-Series GlobalFrame Gen 2 Cabinet		
39080-C00	39080-E00	For 23.6"W (600 mm) Cabinets
39080-C01	39080-E01	For 27.6"W (700 mm) Cabinets
39080-C02	39080-E02	For 31.5"W (800 mm) Cabinets
Equipment Rail Grommet Kit		
39133-001		For 27.6"W (700 mm) and 31.5"W (800 mm) GF-Series GlobalFrame Gen 2 Cabinet, Pack of 8

Note: Match cabinet color. Other sizes available.

Snap-In Filler Panels		
Part Number & Finish		Description
Black	Glacier White	
34537-002	34537-E02	1U x 19"EIA, Pack of 50
34538-002	34538-E02	2U x 19"EIA, Pack of 50

Note: Also sold individually and in packs of 6 each.

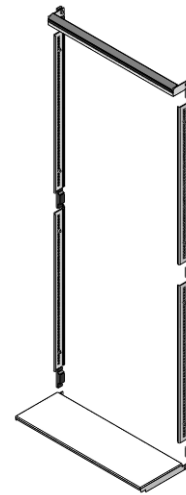
AisleLok™ Acrycell™ Sealing Tape		
Part Number & Finish	Description	
Black		
13876-000	Expands .2" (5 mm) to .5" (12.7 mm), 5 rolls, 32.8' L (10 m)	
13876-001	Expands .47" (12 mm) to 1" (25.4 mm), 5 rolls, 18.4'L (5.6 m)	
13876-002	Expands .87" (22 mm) to 2" (50.8 mm), 5 rolls, 8.5'L (2.6 m)	

AisleLok™ Under Rack Panel		
Part Number & Finish	Description	
Black		
13877-002	4.5"H (115 mm) x 27.5"W (699 mm) x 1"D (25 mm), Pack of 10	
13877-003	4.5"H (115 mm) x 31.5"W (800 mm) x 1"D (25 mm), Pack of 10	

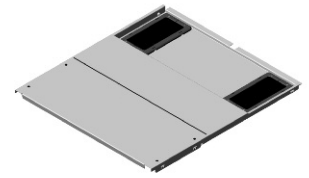
Note: Floor seal for other cabinets and equipment. Do not use with F-Series TeraFrame or GF-Series GlobalFrame Cabinets.

KoldLok® Raised Floor Grommets		
Part Number & Finish	Description	
Black		
13671-002	Split Integral Grommet, 8" (203 mm) x 4" (102 mm) opening, 10 each	
13872-002	Mini Grommet, 5"W (127 mm) x 2-1/2" (64 mm) opening, 10 each	
13874-002	Round Grommet, 3.5" (89 mm) Diameter, 10 each	

Note: Other styles and sizes available. Also sold individually.



Air Dam



Bottom Panel



Equipment Rail Grommet Kit



Snap-In Filler Panel



AisleLok™ Acrycell™ Sealing Tape



AisleLok™ Under Rack Panel



KoldLok® Raised Floor Grommets

FRAME SUPPORTED HOT AISLE CONTAINMENT (HAC) SOLUTION

HOW TO GET STARTED

The specific combination of components needed to create a complete Frame Supported Hot Aisle Containment (HAC) Solution will depend on a number of factors including room layout, ceiling height, whether there is a slab or raised access floor and what types of cabinet models are selected.

To ensure you have a complete solution that addresses site- and cabinet-specific requirements, please contact CPI Technical Support for assistance developing a Bill of Materials (BOM).

Based on your input, CPI Technical Support will propose a complete solution with a drawing and detailed BOM. They will take the time to explain each selection, so you have a complete understanding of how the CPI solutions will provide the desired results.

Example Bill Of Materials (BOM)			
Item	Part Number	Description	Qty
Frame Supported Hot Aisle Containment (HAC) Solution			
1	32990-E05	Frame Supported Exhaust Duct, For a 60"W (1524 mm) – 76.5"W (1943 mm) Aisle, 20'L (6.0 m), Glacier White	1
2	32836-001	Aisle Containment Edge Seal, 8'L (2.4 mm), Clear, 6 Pack	1
3	32770-E02	Aisle Containment Double Door Assembly, Glacier White with Anodized Door Frames	2
4	32728-E03	Adjustable Height Filler Panel, 9U, 23.6"W (600 mm), Glacier White	18
5	32995-E01	Full Height Blanking Panel, Glacier White	2
6	39208-E00	Cabinet To Floor Front Seal Kit, For 23.6"W (600 mm) F-Series TeraFrame Gen 3 Cabinet, Glacier White	18
	39209-E16	Cabinet To Floor Side Seal Kit, For 47.5"D (1200 mm) F-Series TeraFrame Gen 3 Cabinet frame, Glacier White	4
Recommended Accessories			
	32875-701	Installation Template, Aisle Containment Double Door Assembly	1
	FF1U-113C-E42-B	F-Series TeraFrame Gen 3 Cabinet, 45U, 23.6"W (600 mm) x 51.2"D (1300 mm), Perforated Doors, (2) Side Panels, Glacier White	18
	39132-E00	Bottom Panel For F-Series TeraFrame Gen 3 Cabinets, Glacier White	18
	39085-E03	Air Dam For F-Series TeraFrame Gen 3 Cabinets, 45U, 23.6"W (600 mm), Glacier White	18
	34537-E02	Snap-In Filler Panel, 1U x 19"EIA, Glacier White, Pack of 50	2
	34538-E02	Snap-In Filler Panel, 2U x 19"EIA, Glacier White, Pack of 50	2
	13876-002	AisleLok Acrycell Sealing Tape, 2"W (50 mm), 8.5'L (2.6 m), Pack of 5	1
	13671-002	KoldLok Split Integral Raised Floor Grommet, Black, Pack of 10	2

Notes: This example BOM is based on a solution for 18 each 45U, 23.6"W (600 mm) x 51.2"D (1300 mm) F-Series TeraFrame® Gen 3 Cabinets. Items 4 and 6 are cabinet-specific. Recommended Accessories include Cabinet Thermal Management Accessories. Contact CPI Technical Support to develop a BOM for your site.



For a more detailed analysis of your site, CPI offers a Pre-Installation Site Survey, a service where a CPI Technical Representative visits your site to provide a more detailed recommendation. To help ensure an optimized aisle containment installation, CPI offers On-Site Installation Supervision Services, which includes related training and examination of the initial pods. Both Pre-Installation Site Surveys and On-Site Installation Supervision Support are especially important if there are special conditions, concerns or required customization.

All suggestions and performance statements are based on using an overall approach to airflow containment through the use of CPI Products and solutions. For more information about CPI's Aisle Containment Services or products, call **800-834-4969**, email **techsupport@chatsworth.com** or contact your Regional Sales Manager.

All products quoted are subject to availability based on manufacturing capacity, and shipping dates should be considered estimates only. While every effort has been made to ensure the accuracy of all information, CPI does not accept liability for any errors or omissions and reserves the right to change information and descriptions of listed services and products.

Not exactly what you need? Additional products, sizes and configurations are available from CPI. Visit **www.chatsworth.com** or call **+1-800-834-4969**.