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Belden® Rack and Cabinet Systems Catalog



Our End-to-End Expertise
Your End-to-End Solution

**Racks and Cabinets
Cable Management
Airflow Management
Cabinet Power Distribution Units
Monitoring (Power, Environment,
Access)**

BELDEN



Belden — the most trusted brand for reliable signal transmission solutions — offers a complete selection of racking, cabinets, power distribution units, monitoring and airflow management products to meet your infrastructure needs and optimize system performance.

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Belden Infrastructure Solutions

Today's data center, broadcast, AV and security professionals must ensure that their infrastructure is highly available, scalable and flexible while also controlling operating expenses. These conflicting objectives have drawn attention to the performance of physical infrastructure elements, including heating and cooling, rack-level power, bandwidth and physical security management — all of which impact infrastructure availability and, therefore, mission-critical applications.

Belden understands the issues you face daily — cooling, power, density and security — and can help you capitalize on these opportunities by implementing the right blend of technologies to maximize the efficiency of your enterprise in a manner that complements your system's performance requirements — today and into the future.

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Application Guide for Belden Cabinets



Rack or Cabinet Style	Page Number	Enterprise Networking	Data Center/Telco	Broadcast	AV	Security	Cable TV, Head End	Harsh Environment, Networking	General Purpose, Retail, Office, K-12, House of Worship, etc.
XHM	13	●	●		●	●	●		■
XHS	16	●	●						
XHMS/XHSS*	27	●	●						
Passive/Active Containment	31	■	●						
XNM**	35							●	
CH Series	37	■	■		●	●			●
XWM	39	●			●	●			●
XDR	43	●	●	●					●
XWR/XWB	46	●							●
XSW	47	●							●
XSF	52			●					
XMF	54			●					
XME	57			●	●	●	●		●
XMER	60			●	●	●	●		●
PDU	69	●	●	●	●	●	●	●	●

● = Primary Application

* Seismic-certified cabinets.

■ = Secondary Application

** Production floor network equipment hosting.

Engineered to meet your specific needs.

Belden has leveraged its engineering and manufacturing expertise to bring you the most reliable cable, connectivity, cabinet and active systems solutions available – with the largest selection of products and the industry's most trusted technical support and service.

The products featured in this catalog of Infrastructure Solutions reflect the same quality and reliability you've come to expect from Belden for housing and storing data, broadcast, security and other equipment. Engineered for optimal cable routing,

ease of installation and maximum convenience, Belden racks and cabinets have also been designed to match the unique requirements of various industries and applications.

This table will help you select the Belden rack and cabinet family that best suits your specific application. If you need a custom design for a special application, please call us for assistance. Our cable management teams have many years of experience in modifying and customizing cabinet designs to suit many different requirements.

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Product Summary and Selection Guide

Infrastructure Product Family	Rack or Cabinet Style	Page Number	Application	Rack Unit	Width	Depth	Height	Equipment Mounting
Freestanding Modular Cabinets	XHM	13	Multi-Media and Server Cabinet	42, 45, 48RU	24", 30"	30", 36", 42", 48"	78.62", 83.87", 90"	19"
	XHS	16	Server, Networking and Switch Cabinets	42, 45, 48RU	30", 40"	42", 48"	78.62", 83.87", 90"	19"
	XHMS	27	Seismic Server Cabinet	42, 45, 48RU	24", 30"	36", 42", 48"	78.62", 83.87", 90"	19"
	XHSS	27	Seismic Switch/Networking Cabinet	42, 45, 48RU	30", 40"	42", 48"	78.62", 83.87", 90"	19"
	XNM	35	NEMA 12 Cabinet	45RU	29"	40"	84"	19"
	CH Series	37	Multi-Purpose Cabinets	42RU	23.6" or 31.5"	42.9", 50.8"	78.3", 83.5"	19"
	XSF	52	Mobile Broadcast Cabinet	10-48RU	19.2"	18", 24", 30"	20.5" to 87" (14 height options)	19"
	XMF	54	Broadcast Cabinets	11-57RU	22"	24", 30", 36", 40"	22.3" to 103" (26 height options)	19"
	XME	57	Multi-Media Cabinet (fixed sides)	24-44RU	22"	20", 26.5"	48.9" to 83.9" (4 height options)	19"
	XMER	60	Multi-Media Cabinet (removable sides)	24-44RU	22"	26.5", 31.5", 36"	48.9" to 83.9" (4 height options)	19"
Wall-Mount Cabinets	XWM	39	Multi-Purpose Wall-Mount Cabinets	9, 12, 20RU	21", 23"	22.9", 27.5"	20.1", 25.3", 39.3"	19"
Distribution Racks	XDR	41	Distribution Rack – 2-Post	45RU	20.3"	15"	84"	19"
	XDRS	41	Distribution Rack – 2-Post (steel), Zone 4 Seismic Rated	44RU	24"	15"	84"	19"
	BHRR	41	Distribution Rack – 2-Post (aluminum)	45RU	20.3"	15"	84"	19"
	XDR	41	Server Rack – 4-Post	45RU	20.3"	40", 44", 48"	84"	19"
	XSW	47	Swing Rack	43RU	34.4"	15"	84"	19"
	XWR	46	Wall-Mount Rack – Swing Out	19, 26RU	19.8"	18"	36", 48"	19"
	XWR/XWB	46	Wall-Mount Rack – Hinged	2, 4, 6RU	19", 19.5"	4", 9.5"	3.5", 7", 11"	19"



Unique Offerings From Belden End-to-End Infrastructure Solutions

Whether you're considering Belden racks and cabinets for use in a data center, broadcast studio, commercial enterprise, industrial facility or other application, it's important to look at the big picture. Chances are, you're managing a dynamic environment with evolving systems, technologies, logical architectures and business models. You need to ensure that your infrastructure is highly available, scalable and flexible while also controlling your operating expenses.

Manage Conflicting Objectives

These often-conflicting objectives focus attention on the performance of physical infrastructure elements, including heating and cooling, rack-level power, bandwidth and physical security management. The challenge is that these elements typically tend to work against each other. For example, as load is increased with high-density active equipment, the system's power and cooling requirements are increased and so are energy costs. Because these issues are directly interrelated, complications can arise from each system being manufactured, installed and supported by different vendors. That's why a systems approach for cost-effectively cooling, managing power usage and optimizing space usage is critical.

Belden Can Help

We optimize cooling, power and density opportunities because we have expertise in all three areas, offering solutions that effectively deal with all three at the rack/cabinet level.

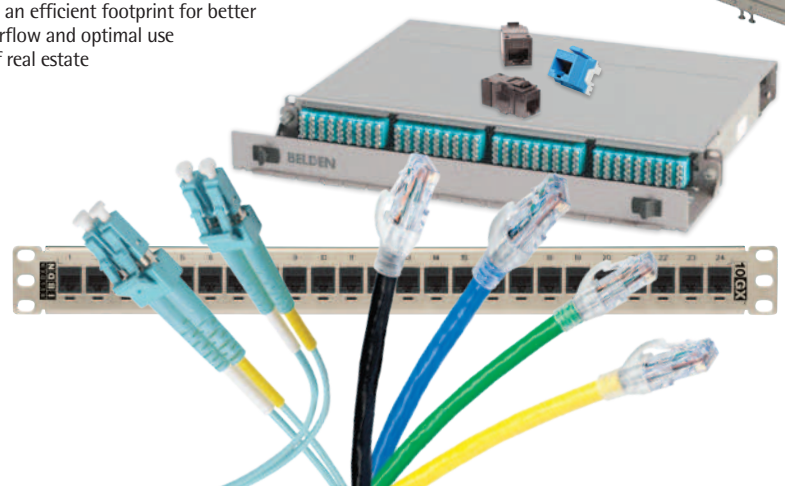
Belden Offers:

- Airflow, power distribution and power- and climate-monitoring devices designed for high-density computing environments
- High-density racks, cabinets, copper and optical fiber cabling system components, and cable management solutions that enable maximum bandwidth and availability in an efficient footprint for better airflow and optimal use of real estate

Advantages of Belden End-to-End Infrastructure Solutions

- Greater convenience when the entire solution is from a single source
- Assurance that all components work together
- The most reliable product performance in the industry
- Dependable service and superior support
- The most trusted name in the industry with a large global sales and distribution network

Delivering **complete infrastructure solutions** to maximize efficiencies.



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Unique Offerings From Belden

Data Center Ready Solutions

Data centers require adequate planning to address equipment hosting, power and thermal management. Once active equipment has been chosen, the next step is to make sure you have infrastructure to support the availability and performance your active equipment needs to deliver. Belden's dedicated engineering and manufacturing resources will design, build and deliver cabinets that support and optimize the performance of your selected active equipment. The result is a turnkey solution — from design to roll-out — on the data center floor. This service takes 100% of the guesswork out of the design process, making it ideal for data center designers, consultants, system integrators, facility planners and managers.



Optimized Integration

- Single-source physical infrastructure solutions designed to work together to support the optimal performance of the selected active equipment
- Pre-configured equipment hosting solution with optimal mix of fiber and copper connectivity, cable managers and power distribution units (PDUs), along with airflow management for heat containment

Reduction of Deployment Time and Costs

- Pre-configured, design-validated and labeled cabinets are ready to receive servers or switches at the specific data center location (as per the assigned label)
- Best-in-class, pre-terminated fiber and copper systems, smart PDUs and active heat containment ensure fast deployment and reduced labor costs

Streamlined Logistics

- Simplified coordination of all equipment hosting-related tasks — all passive components arrive pre-installed
- Designs can be templated, saved, duplicated and modified for future use

Ease of Standardization

- Single part number ordering for a fully configured solution enables easy standardization, specification, ordering and simplified supply-chain hurdles
- Deployment control across single or multiple sites for consistency and standardization

Green Deployment

- Configured components are pre-installed to specific requirements, eliminating the need for individual packaging and reducing waste from cartons, boxes and plastics
- Consolidated shipping allows efficient packaging and a reduction in CO₂ footprints

Contact Belden Today

Belden engineers are ready to work with you to design your Data Center Ready Solution. Contact us now to start the process of delivering the optimal support environment for your active equipment.

Designing the **optimal support environment** for your active equipment.

Customized Racks and Cabinets Meet the Unique Needs of Your Installation

In-House Design, Prototyping and Manufacturing

Belden's in-house engineering and state-of-the-art sheet-metal fabrication, powder-coating and silk-screening capabilities enable rack and cabinet production from raw materials to finished goods. We can quickly develop — and deliver — technically sound, cost-competitive and compromise-free custom solutions to meet the challenges of your specific project.



Cellular-Based Manufacturing for Fast, Flexible Service

- Communicate project needs, goals and challenges directly to the Belden design team
- Customization available for quantities as low as 10 cabinets
- Quick-turnaround service — only 4–6 weeks from concept to delivery

Varying Levels of Customization

- Custom paint-color matching and silk-screened logos
- Ability to modify standard cabinet frame sizes
- Complete design/build of project-specific cabinets in steel, aluminum or stainless steel

Value-Added Services

- NEMA-style cabinets for industrial networking and outdoor networking applications
- Kitting of racks or cabinets equipped with Belden and/or other manufacturers' components enable quick and easy logistics and deployment in applications like retail POS
- Integration of power, cable management, connectivity, cooling and climate monitoring systems into cabinets
- Cabinets designed for heat containment with ducting to support high-bandwidth blade servers and switches
- Rack power distribution unit (PDU) customization for specific numbers of receptacles, single- and three-phase power, and special overlays to enhance user experience
- Chimney containment customization to accommodate varying ceiling heights with options for passive or active sensors and fan-based units



Unequaled agility to develop and deliver **compromise-free custom solutions.**



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Features and Benefits of Belden Cabinets

Load Capacity

As data centers increase in density and bandwidth, with blade servers and high port-count switches, the need for higher-load-capacity cabinets is a growing trend. Most Belden cabinets have a welded frame construction to accommodate static loads of up to 3,000 lbs.

To accommodate flexibility in data centers during initial installation, cabinets come with casters rated to dynamic loads of up to 2,250 lbs.

Modularity

A modular cabinet design accommodates frame widths from 22" to 40", heights from 42RU to 52RU and depths from 30" to 48" — all while ensuring that cable management, power components and airflow management work seamlessly across different sizes. This modular approach enables field-upgradable changes to chimney containment systems, PDUs and cable management.



Scalability

With Zero U mounting options, fiber and copper connectivity in cabinets is scalable to address multiple-generation connectivity needs for servers and switches. Similarly, a broad portfolio of rack PDU offerings, from basic to 3-phase remote switched products, enables cabinets to support power requirements of multiple-generation active IT gear.



Adaptability

A selection of vertical and horizontal cable managers capable of handling a wide range of cable and connectivity density can be accommodated in the cabinets. The doors are field reversible with lift-off hinges.

In addition, the doors, top and bottom panels are configurable based on heat-management needs for hot-aisle/cold-aisle configuration or chimney containment.



Security and Intelligence

Cabinets can be configured with a key access or smart access system with lock control at the cabinet level or end-of-row pod level.



IP-based airflow management and environmental monitoring and alarming systems and sensors offer maximum availability.



A wide selection of smart PDUs with power monitoring and switching options offer optimized power management and PUE measurement.



Environmental and Seismic

Belden's seismic cabinets are designed to pass Zone 4 Telcordia and/or NEBS requirements in seismic zones, offering a stable working base for servers and switches. Similarly, the NEMA cabinets can accommodate factory floor or other harsh-environment equipment hosting requirements.



High-Capacity Hosting

The door is designed to provide low resistance to airflow passage and maximize the perforated surface with hexagonal 78% open perforated patterns.





SECTION ONE

Racks and Cabinets

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Seamlessly integrate power distribution, airflow containment and management, networking connectivity and **cable management into one comprehensive cabinet solution** — optimizing data center hosting conditions for servers and switches.

Specific Solutions for a Wide Array of Applications

As the premier supplier of cable and connectivity systems, Belden has leveraged its networking skills, engineering expertise and end-user experience to provide a broad portfolio of racks and cabinets that address security, availability and efficiency challenges.

With the X Series (XHM, XHS), Belden offers a cabinet solution that seamlessly integrates power distribution, airflow containment and management, networking connectivity and cable management to provide optimized hosting conditions for today's servers and switches. Designed to work seamlessly with Belden's market-leading fiber and copper connectivity solutions, the X Series vertical and horizontal cable management system supports high cabling/connectivity density while supporting easy moves, adds and changes.

Shipped fully assembled and configured to exact end-user requirements, the X Series modular design includes a myriad of options for doors, side panels, airflow through passive chimneys or active AEHC units and PDU mounting for easy installation and reconfiguration. Single part number ordering permits standardization and streamlined logistics.

Belden XHM (Server) and XHS (Server, Networking) cabinets reduce data center operational costs by:

- Offering a modular and scalable system that adapts to changing requirements for hosting multiple generations of IT equipment
- Enabling seamless heat-containment integration for reduced energy consumption
- Providing ganging compatibility for flexible arrangements in distributed, end-of-row or in-row switching environments
- Featuring a rigid yet light-weight door design with an integrated punched hexagonal pattern that offers an opening of 78% for superior airflow. A patent-pending hinge provides maximum security and flexibility with a dual 270-degree swing.

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XHM Series – Multi-Media, Server Cabinets

Value-minded but versatile and feature-rich

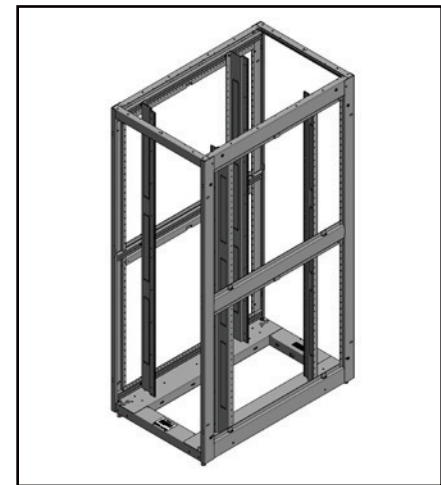
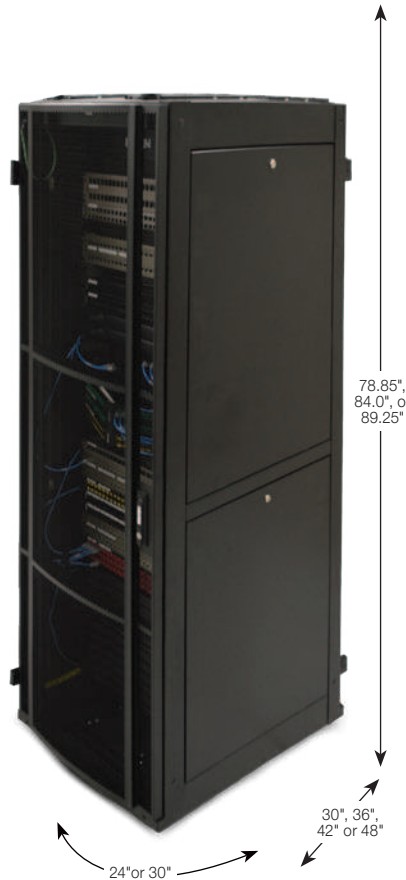


Applications

With multiple cabinet footprints to better suit your space and application needs, the XHM Series is ideal for security, broadband, enterprise networking and data center applications. Its basic yet highly functional construction makes for a technically sound and economical cabinet system.

Design and Structural Features

- Perforated door mesh opening: 78%
- Patent dc secure door hinge: Dual 270° swing prevents aisle blocking for end-of-row cabinets
- UL 2416 Listed
- Frame construction: Welded 14 gauge
- Fixture and robotic welded for squareness (after frame construction)
- Mounting-rails construction: 12 gauge, marked RU, RU 1 is at the bottom of the cabinet
- Static load capacity: 3,000 lbs
- Capacity on casters: 1,080 lbs on regular-capacity casters; 2,250 lbs with high-capacity casters
- EIA 310 compliant: 19" mounting standard with optional 23" mount for 30" wide cabinets
- Vertical cable management options
(See pages 19 for X Series Cabinet Accessories)
- Horizontal cable management options
(See page 63 for Accessories)
- Tool-less PDU mounting options
(See page 73)
- Heat containment options
(See pages 25-30)
- Engineered and made in the United States



Part No. shown: XH7M451300000
(45RU x 30" W x 42" D)

24" Wide Cabinets

XHM Series Type	XH1M42	XH2M42	XH3M42	XH4M42	XH1M45	XH2M45	XH3M45	XH4M45	XH1M48	XH2M48	XH3M48	XH4M48
Dimensions: W x D x H (of Frame)	24" x 30" x 78.85"	24" x 36" x 78.85"	24" x 42" x 78.85"	24" x 48" x 78.85"	24" x 30" x 84.00"	24" x 36" x 84.00"	24" x 42" x 84.00"	24" x 48" x 84.00"	24" x 30" x 89.25"	24" x 36" x 89.25"	24" x 42" x 89.25"	24" x 48" x 89.25"
Available Mounting Rack Units (RU)	42RU				45RU				48RU			
Front Frame Opening (W x H)	21.25" x 73.85"				21.25" x 79.10"				21.25" x 84.35"			
Depth with Two Perf. Doors	33.75"	39.75"	45.75"	51.75"	33.75"	39.75"	45.75"	51.75"	33.75"	39.75"	45.75"	51.75"
Usable Depth (1)	28.75"	34.75"	40.75"	46.75"	28.75"	34.75"	40.75"	46.75"	28.75"	34.75"	40.75"	46.75"
Single Door Perforated Area	1365 sq. in.				1465 sq. in.				1565 sq. in.			

Note: (1) Standard Cabinet w/ curved perf front door & split perf rear door (2) Distance from front-most mounting rail face to inside of rear frame (3) Based on curved perf door

30" Wide Cabinets

XHM Series Type	XH5M42	XH6M42	XH7M42	XH8M42	XH5M45	XH6M45	XH7M45	XH8M45	XH5M48	XH6M48	XH7M48	XH8M48
Dimensions: W x D x H (of Frame)	30" x 30" x 78.85"	30" x 36" x 78.85"	30" x 42" x 78.85"	30" x 48" x 78.85"	30" x 30" x 84.00"	30" x 36" x 84.00"	30" x 42" x 84.00"	30" x 48" x 84.00"	30" x 30" x 89.25"	30" x 36" x 89.25"	30" x 42" x 89.25"	30" x 48" x 89.25"
Available Mounting Rack Units (RU)	42RU				45RU				48RU			
Front Frame Opening (W x H)	27.25" x 73.85"				27.25" x 79.10"				27.25" x 84.35"			
Depth with Two Perf. Doors	33.75"	39.75"	45.75"	51.75"	33.75"	39.75"	45.75"	51.75"	33.75"	39.75"	45.75"	51.75"
Usable Depth (1)	28.75"	34.75"	40.75"	46.75"	28.75"	34.75"	40.75"	46.75"	28.75"	34.75"	40.75"	46.75"
Single Door Perforated Area	1805 sq. in.				1935 sq. in.				2065 sq. in.			

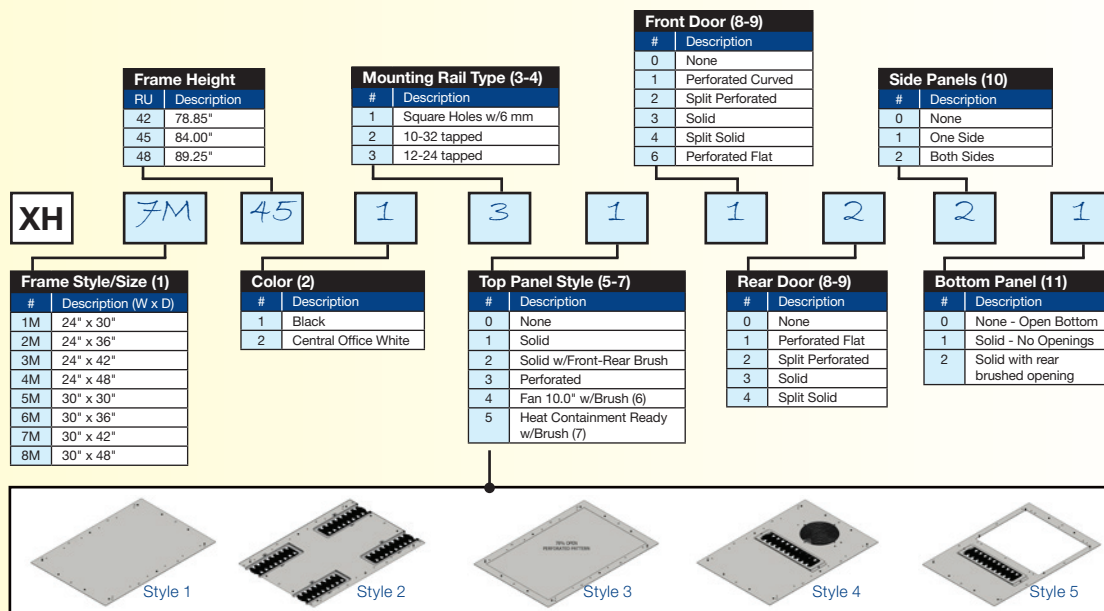
Note: (1) Standard Cabinet w/ curved perf front door & split perf rear door (2) Distance from front-most mounting rail face to inside of rear frame (3) Based on curved perf door

Ordering Matrix for XHM Series

Part number example:

XH7M451311221

30"x42"x45RU black frame with casters and levers, 12-24 tapped rails, solid top panel, perforated curved front door with lock handle, split perforated rear door with lock handle, two side panels with lock, solid bottom.



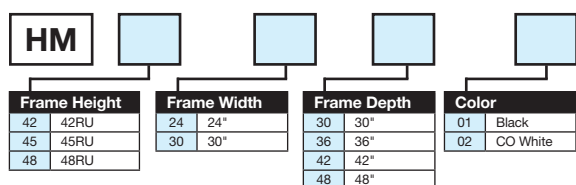
Notes:

- Frame includes casters, levers, ganging hardware, grounding studs in frame base front/rear.
- Other colors and silk-screening options available for volume orders.
- Includes two pairs of 19" mount EIA rails (marked RU, 1 bottom) with mounting hardware (qty = 50). 6 mm hardware standard with square rails. 30" wide cabinet uses wide EIA rails featuring three removable knock out per rails. Brush frame for knock out ordered separately. Knock out compatible with zero mounting of standard 1U patch panel.
- Default front rail position 3.0" from cabinet face and 24" between rails for 30" and 36" deep, 30" between rails for 42" and 48" deep.
- Custom top panel available for volume orders.
- Fan top panel included, 10" dia., 550 CFM fan (120V).
- Heat containment top (42" and 48" deep only) ready to accept passive or active containment chimney.
- Front and rear doors include latching handle with key lock and bonding strap. Refer to Cabinet Access System Section for other access options.
- Single door swings left to right and is field reversible
- Side panel includes embossed key lock and bonding strap. Side panel made of a lower and upper panel. Side panels are flush, do not add width to cabinet; can be used as separator panel between cabinets.
- Bottom brush panel can be rotated 180° for choice of front or rear brush entry.

XHM Series – Individual Component Ordering Options

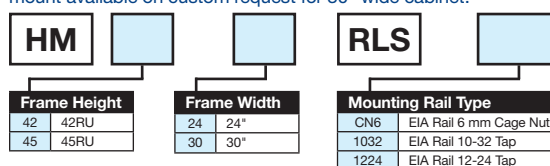
Cabinet Frame

Do not include rails, levers and casters



EIA Mounting Rails

Includes two pairs of rails and mounting hardware (50). Default hardware for cage nut style rails is M6. Black only. EIA 23" mount available on custom request for 30" wide cabinet.



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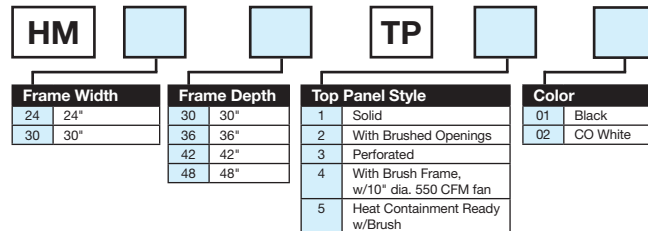


Racks and Cabinets

XHM Series – Options (continued)

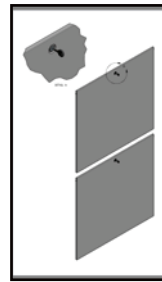
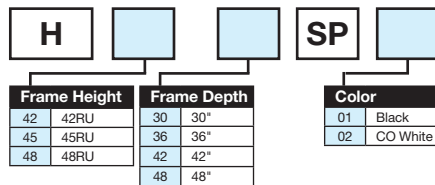
Top Panel

Style 5 heat containment ready top panel only applicable to 42" and 48" deep cabinet.



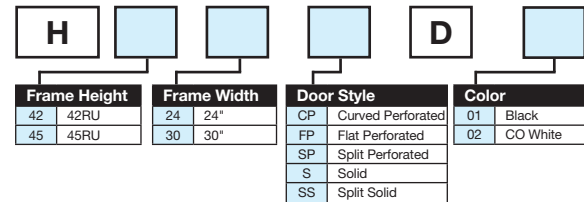
Side/Separator Panel

Side panel includes embossed key lock and bonding strap. Side panel made of a lower and upper panel. Side panels are flush, do not add width to cabinet; can be used as separator panel between cabinets.



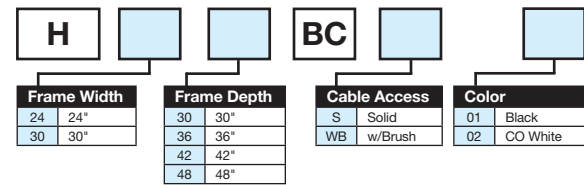
Side/Separator Panel with Lock

Door with Latch Lock Handle



Cabinet Bottom Cover

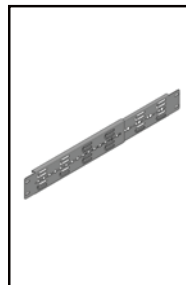
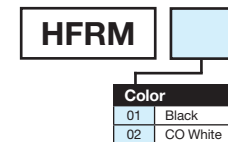
When panel with brush is selected, will ship with brush in cabinet rear.



XHM Series – Accessories

Front to Rear Cable Manager

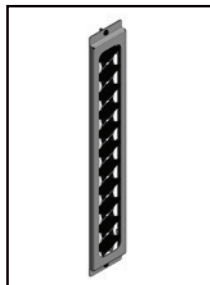
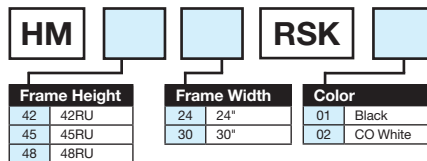
Adjustable-depth front to rear cable managers



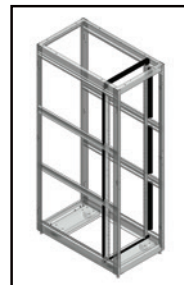
HFRM

Front Rail Air Seal Kit

To be used with passive or active containment chimneys. Rail seal kits are factory installed.



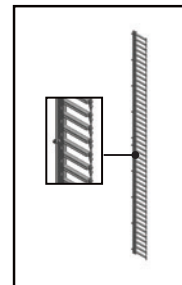
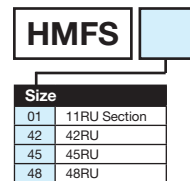
EIA rail cable pass through brush kit (1) for 30" wide XHM cabinet.



Front Rail Air Seal Kit (shown in black)

Cable Manager Fingers

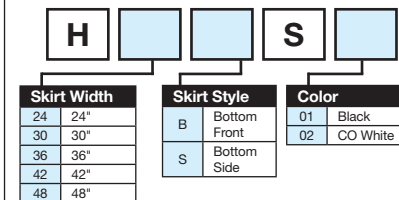
Cable management fingers mount to front and/or rear EIA rails.



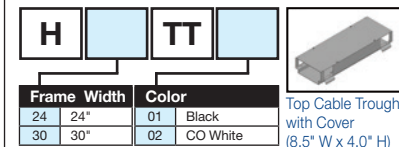
Fingers for Mounting Rails

Bottom Seal Skirt

Front and side skirt allow sealing below cabinets when on levelers.



Top Cable Trough with Cover





XHS Series – Server, Networking and Switch Cabinets

Supports high load capacities and proper airflow management



Part No. shown: XH1S451100000
(45RU H x 30" W x 42"D)



Part No. shown: X2S451121110 XHS Cabinet with optional Zeru U patch panel (30"W x 48"D x 45RU), rear view.



78.85",
84.0", or
89.25"

30" or 40"

42" or 48"

Aesthetics

- Designed and manufactured in the United States, and fully customizable to meet specific equipment hosting challenges
- Available in central office white for improved internal visibility and reduced lighting needs
- 270-degree door swing means doors won't block aisles on end-of-row cabinets

Construction

- Welded 14-gauge frame and 11-gauge mounting rails support a static load of 3,000 lbs (2,250 lbs on high-capacity casters) to host a full rack of blade servers
- Cabinet frames are fixtured and robotically welded for optimal squareness
- Rail seal and adaptive containment eliminate hotspots and provide energy efficiency, monitoring and alarming
- Designed and tested for use with Belden fiber and copper networking solutions

Ease of Installation

- Modular design with options on doors, side panels, airflow management, cable management and PDU monitoring, offering easy installation and scalability
- Doors can easily be removed and oriented for left or right swing to suit application needs
- Highly integrated and shipped fully assembled with power, airflow, connectivity and cable management
- Optimal physical density and networking bandwidth for easy moves, adds and changes

Cable and Airflow Management

- XHS Series cabinets are available in 30" and 40" wide versions for optimal server and switch hosting; intake and exhaust duct options allow side-to-side gear hosting
- Integrated punched hexagonal pattern is 78% open for low-resistance airflow through doors (legacy doors available upon request)
- Front rail seals enable physical separation of supply and return air for optimized hot/cold aisle and containment deployment
- 42" and 48" deep versions easily host deep equipment chassis with rear space for power and cable management
- Available in 42, 45 and 48RU for a variety of hosting requirements

Containment and Power Distribution

- Complete lineup of IP-based power distribution units (PDUs) with available monitoring, alarming and receptacle-level switching
- Enables up to 30 kW per cabinet with Belden's innovative passive and adaptive (AEHC) chimney-based containment systems

Faster.
Easier.
Better.



XHS Series – Server Cabinets (continued)

XHS Series Specifications

- Perforated door mesh opening: 78%
- Patented hinge design: Secure, dual 270° swing
- UL 2416 Listed
- Frame construction: Welded 14 gauge
- Fixture and robotically welded for squareness
- Mounting rails construction: 11 gauge, marked RU, RU 1 is at bottom of cabinet
- Static load capacity: 3,000 lbs
- Capacity on casters: 1,080 lbs on regular capacity casters; 2,250 lbs with high-capacity casters
- EIA 310 compliant: 19" mounting
- Vertical cable management options (See pages 19 for X Series Cabinet Accessories)
- Horizontal cable management options (See page 63 for Accessories)
- Zero U – Vertical patch panel (See page 19)
- Tool-less PDU mounting options (See page 73)
- Heat containment options (See pages 25–30)
- Engineered and made in the United States

30" Wide Cabinets

XHS Series Type	XH1S	XH2S	XH1S	XH2S	XH1S	XH2S
Available Mounting Rack Units (RU)	42RU		45RU		48RU	
Dimensions: W x D x H (of frame)	30" x 42" x 78.85"	30" x 48" x 78.85"	30" x 42" x 84.00"	30" x 48" x 84.00"	30" x 42" x 89.25"	30" x 48" x 89.25"
Front Frame Opening (W x H)	27.25" x 73.85"		27.25" x 79.10"		27.25" x 84.35"	
Depth w/ two Perf. Doors (1)	45.75"	51.75"	45.75"	51.75"	45.75"	51.75"
Usable Depth (2)	40.75"	46.75"	40.75"	46.75"	40.75"	46.75"
Single Door Perf Area (3)	1805 sq. in.		1935 sq. in.		2065 sq. in.	

Note: (1) Standard Cabinet w/ curved perf front door & split perf rear door (2) Distance from front-most mounting rail face to inside of rear frame (3) Based on curved perf door

40" Wide Cabinets

XHS Series Type	XH3S	XH4S	XH3S	XH4S	XH3S	XH4S
Available Mounting Rack Units (RU)	42RU		45RU		48RU	
Dimensions: W x D x H (of frame)	40" x 42" x 78.85"	40" x 48" x 78.85"	40" x 42" x 84.00"	40" x 48" x 84.00"	40" x 42" x 89.25"	40" x 48" x 89.25"
Front Frame Opening (W x H)	37.25" x 73.85"		37.25" x 79.10"		37.25" x 84.35"	
Depth w/ two Perf. Doors (1)	45.75"	51.75"	45.75"	51.75"	45.75"	51.75"
Usable Depth (2)	40.75"	46.75"	40.75"	46.75"	40.75"	46.75"
Single Door Perf Area (3)	2652 sq. in.		2782 sq. in.		2912 sq. in.	

Note: (1) Standard Cabinet w/ curved perf front door & split perf rear door (2) Distance from front-most mounting rail face to inside of rear frame (3) Based on curved perf door

XHS Series – Configured Cabinets

Belden will configure cabinets to your exact requirements. The following are commonly requested configured cabinets. Please contact your sales representative to discuss your specific needs.

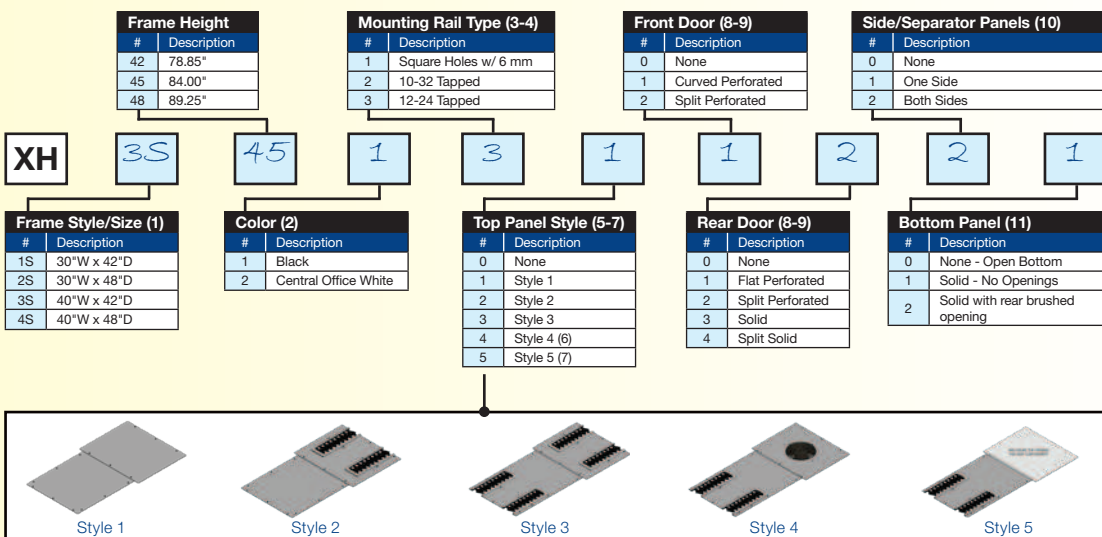
Item	Part #	Frame Size			Color	Rails	Top Panel	Doors		Side Panel	Bottom Panel	Lacing/PDU Panel	Vertical Mngr.	
		Width	Depth	Height				Front	Rear				Fingers on Rail	Box Style Mngr.
1	XH1S45-C1000	30	42	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	1 Solid	Open	2 x 3" + 2 x 7" Rear	No	No
2	XH2S45-C1000	30	48	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	1 Solid	Open	2 x 7" Rear	No	Rear Rails
3	XH2S45-C1001	30	48	45RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	1 Solid	w/brush	2 x 7" Rear	No	Rear Rails
4	XH1S45-C2000	30	42	45RU	CO White	Square Rails	Brush Front/Rear	Perf.	Split Perf.	1 Solid	Open	2 x 3" + 2 x 7" Rear	No	No
5	XH2S45-C2000	30	48	45RU	CO White	Square Rails	Brush Front/Rear	Perf.	Split Perf.	1 Solid	Open	2 x 7" Rear	No	Rear Rails
6	XH2S45-C2001	30	48	45RU	CO White	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	1 Solid	w/brush	2 x 7" Rear	No	Rear Rails

Ordering Matrix for XHS Series

Part number example:

XH3S451311221

30" x 42" x 45RU, black frame with casters and levers, 12-24 tapped rails, solid top, curved perforated front door with lock handle, split perforated rear door with locking handle, both side panels with locks, solid bottom.

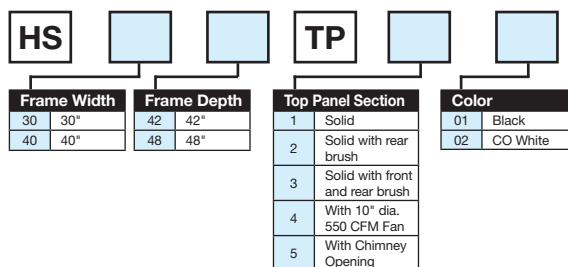


Notes:

- 1) Frame includes levelers, ganging hardware, grounding studs in frame base front and rear.
- 2) Other colors and silk-screening options available for volume orders.
- 3) Includes two pairs of 19" mount EIA rails (marked RU, 1 at bottom) with mounting hardware (qty = 50). 6 mm hardware standard with square rails.
- 4) Default front rail position 3" from cabinet face and 30" between front and rear rails.
- 5) Custom top panel available for volume orders.
- 6) Fan top panel included, 10" dia., 550 CFM fan (120V).
- 7) Style 5 top ready to accept passive or active containment chimney.
- 8) Front and rear doors include latching handle with key lock and bonding strap. Refer to Cabinet Access System Section for other access options.
- 9) Single door swings left to right and is field reversible. Refer to Cabinet Access System Section for other access options.
- 10) Side panel includes embossed key lock and bonding strap. Side panel made of a lower and upper panel. Side panels are flush, do not add width to cabinet; can be used as separator panel between cabinets.
- 11) Bottom brush panel can be rotated 180° for choice of front or rear brush entry.

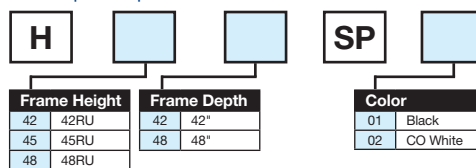
XHS Series – Individual Components Ordering Options

Top Panel Sections



Side/Separator Panel

Side panel includes embossed key lock and bonding strap. Side panel made of a lower and upper panel. Side panels are flush, do not add width to cabinet and can be used as separator panel between cabinets.



Faster.
Easier.
Better.



Racks and Cabinets

XHS Series – Options (continued)

EIA Mounting Rails

Includes two pairs of rails and mounting hardware (50).
Default hardware for cage nut style rails is M6.

HS				RLS	
Frame Height	Frame Width		Frame Depth	Mounting Rail Type	
42 42RU	30 30"	42 42"	CN6 EIA Rail 6 mm Cage Nut		
45 45RU	40 40"	48 48"	1032 EIA Rail 10-32 tap		
48 48RU			1224 EIA Rail 12-24 tap		

Door with Lock Latch Handle

H				D	
Frame Height	Frame Width		Door Style		Color
42 42RU	30 30"	40 40"	CP Curved Perforated	01 Black	
45 45RU			FP Flat Perforated	02 CO White	
48 48RU			SP Split Perforated		
			S Solid		
			SS Split Solid		

Cabinet Frame

Do not include rails, levelers and casters

HS				
Frame Height	Frame Width		Frame Depth	Color
42 42RU	30 30"	42 42"	01 Black	
45 45RU	40 40"	48 48"	02 CO White	
48 48RU				

Cabinet Bottom Cover

When panel with brush is selected, will ship with brush in cabinet rear.

H			BC	
Frame Width	Frame Depth	Cable Access		Color
30 30"	42 42"	S Solid	01 Black	
40 40"	48 48"	WB w/Brush	02 CO White	

Bottom Seal Skirt

Front and side skirt allow sealing below cabinets when on levelers.

H			S	
Skirt Width	Skirt Style		Color	
30 30"	B Bottom Front	01 Black		
40 40"	S Bottom Side	02 CO White		
42 42"				
48 48"				

XHS Series – Accessories

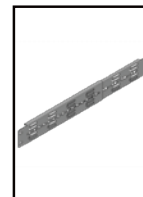
Front Rail Air Blocker

HS			RSK	
Frame Height	Frame Width		Color	
42 42RU	30 30"	40 40"	01 Black	
45 45RU			02 CO White	
48 48RU				

Front to Rear Cable Manager

Adjustable-depth front to rear cable managers

HFRM	
Color	
01 Black	
02 CO White	



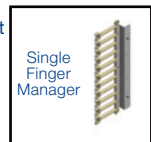
HFRM

Finger Strip Kit

Cable management fingers mount to front and/or rear EIA rails.

*For One Rail

HSFS	
Frame Height	
42 42RU	
45 45RU	
48 48RU	



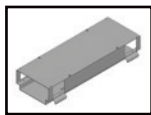
Single Finger Manager

Other Accessories

Description	Belden Part Number
Front rail air blocker cable pass through brush kit	
Brush kit (1) for rail air blocker, Black	HSRSBK01
Brush kit (1) for rail air blocker, White	HSRSBK02
40" Wide XHS cabinet top frame brush kit	
Brush Kit (1) for front knockout top, Black	HSTBK101
Brush Kit (1) for front knockout top, White	HSTBK102
Brush Kit (1) for middle knockout top, Black	HSTBK201
Brush Kit (1) for middle knockout top, White	HSTBK202
Brush Kit (1) for rear knockout top, Black	HSTBK301
Brush Kit (1) for rear knockout top, White	HSTBK302

Top Cable Trough with Cover

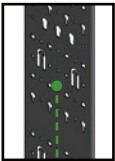
H		TT	
Frame Width		Color	
30 30"	40 40"	01 Black	
		02 CO White	



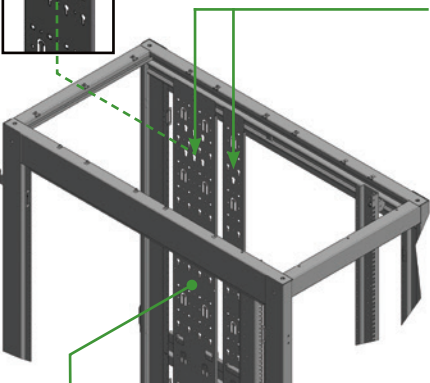
Top Cable Trough with Cover
(8.5" W x 4.0" H)



Lacing Panel (close-up)

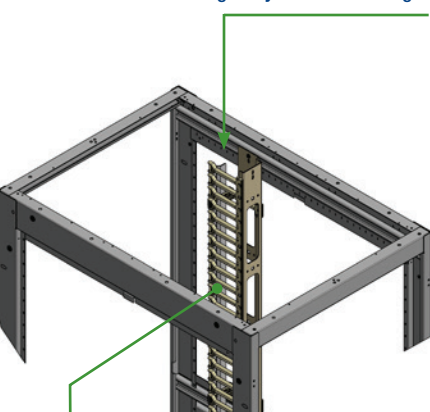


Vertical Lacing/PDU Mounting Panel 3.5" and 7" wide



Lacing Panel shown in cabinet

Finger Style Vertical Manager



Vertical Manager shown in cabinet

XHM and XHS Series Cabinets – Cable Management and Zero U Patching

Belden's XHM and XHS Series cabinets and cable management components were specifically designed for integration with the Belden IBDN copper and fiber networking system for a true end-to-end solution.

The combination of Belden's extensive cable and connectivity design knowledge and years of interaction with installers and system designers allows us to offer:

Features

- A broad selection of modular vertical and horizontal cable managers in configurations that meet your exact requirements for compromise-free hosting
- Flexibility to meet customer needs requiring low to extremely high networking/hosting density
- Modular cable management components and cabinets that protect your investment because they can be reconfigured to meet evolving hosting requirements (typical cabinet system will play host to three to five generations of active equipment)
- Vertical managers that enable easy moves, adds and changes, making management of your network fast and precise while still allowing you to maintain an organized, consistent look
- A cable management system designed to maintain proper cable bend radius and minimal tension through the use of support fingers, an attachment point for cable bundles and a slack management spool ensure maximum bandwidth from your copper and fiber networks

See page 63 for Horizontal Cable Management options.

Vertical Lacing/PDU Mounting Panel*

- Manager panel 7" and 3.5" wide
- Mounts on rail struts for depth adjustability
- Panels can be mounted side by side to create manager surface
- Tool-less PDU mounting
- Lacing of cable bundles
- Attachment of ring managers
- Attachment of slack management spools
- Attachment of quick-mount base

*Lacing-PDU mounting panels (p.21 and 75) are not included with cabinets or PDUs and need to be ordered separately. PDUs/panels uses tool-less "button"-style mounting.

Finger Style Vertical Managers

- Mounts on rail struts for depth adjustability
- Compatible with 30" wide cabinets
- Can be used in cabinet front and rear
- Includes doors to hide cables and provide an organized look
- Vertical manager can be oriented two different ways to optimize cable routing

Finger Style Features:

- 4" wide x 6" deep for 24 sq. in. of cross-sectional area
- For medium- and high-density applications
- Management fingers align with mounting rail RU
- Finger allows for cable support and bend radius control
- Oblong opening allows cable routing into the manager

Faster.
Easier.
Better.



XHM and XHS Series – Accessories



Vertical Lacing/PDU Mounting Panel

HVMP			
Panel Width	Frame Height	Color	
01 3.5"	42 42RU	01	Black
02 7"	45 45RU	02	CO White
	48 48RU		

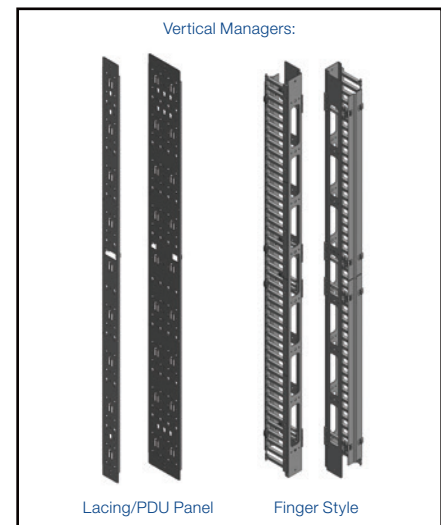
Vertical Manager – Finger Style

With door.

HVM	02		
Frame Height	Color		
42 42RU	01	Black	
45 45RU	02	CO White	
48 48RU			

Other Accessories

Description	Belden Part Number
Ring Kits	
Cable Management Ring Plastic (Qty = 5) 3" x 1.5" Reversible	XMR01
Cable Management Ring Kit (Qty = 5) 6.5" Wide x 3" Deep	XMR02
Cable Management Ring Kit (Qty = 5) 2.5" Wide x 3" Deep	XMR03
Fiber Slack Management Spools 6" deep (includes 2 spools)	BHSP020
Fiber Slack Management Spools 2" deep for lacing panels (includes 2 spools)	BHSP030
Quick Mount Base (Qty=10) includes Fastener, for 1/4" Holes	XTCM01
Velcro Cable Ties, 25 per Roll, 8"L	AX100783
Velcro Cable Ties, 25 per Roll, 12"L	AX100784
Vertical Ground Bars	
Vertical Ground Bar, Isolated, 42RU	HVGB0142
Vertical Ground Bar, Isolated, 45RU	HVGB0145
Vertical Ground Bar, Isolated, 48RU	HVGB0148
Miscellaneous	
Casters Kit (4), regular-capacity 1,080 lbs	XCK01
Casters Kit (4), high-capacity 2,250 lbs	XCK02
Levelers Kit (4)	XLK01
Bolt-together kit for cabinets	XBK01



Zero U – Vertical Patch Panel and Connectivity

Features

- Attach to mounting rails
- Vertical patch panels are compatible with Belden copper and fiber connectivity (FX UHD, FX Ultra Frames and Cassettes)



Description	Belden Part Number
Zero U – Vertical Patch Panel and Connectivity	
Vertical Patch Panel (7 positions), Compatible with XHS Cabinets	XZUK01
Vertical Patch Panel (14 positions), Compatible with XHS Cabinets	XZUK02
FXUHD KeyConnect Frame Blank	FFZH00BB
FXUHD KeyConnect Frame 6-Port, Black (Empty)	FFZH06KC
FXUHD KeyConnect Frame 8-Port, Black (Empty)	FFZH08KC
10GX KeyConnect Couplers for Vertical Mount Patch Panel, 8-Port, Black	AX105366
CAT6+ KeyConnect Couplers for Vertical Mount Patch Panel, 8-Port, Black	AX105367

Belden Zero U Vertical patch panel allows for optimal use of mounting space into XHS Series cabinets by providing high-density connectivity options along equipment mounting rails.



XHMS - Server Cabinets, XHSS - Networking Switch Cabinets

Certified to Seismic Zone 4 for mission-critical data centers

Applications

Belden's seismic cabinets feature robust steel frames for hosting servers, switches and network components in earthquake zones. Certified to Seismic Zone 4 requirements, these cabinets have passed vibration and shock testing per GR-063-CORE Network Equipment Building System (NEBS) requirements with no structural damage in a certified lab.

Design and Structural Features

- Welded steel frame construction reinforced with a heavy-gauge steel sub-frame for extra rigidity
- Highly perforated doors with stiffener channels ensure sturdiness while reducing risk of equipment damage during seismic events
- Adjustable EIA mounting rails support a 2,000 lb static load under normal operating conditions
- Finger-style vertical managers with brushed cable pass throughs enable front-to-rear routing while maintaining supply-return air sealing properties
- Compatible with passive and active chimney-based containment solutions
- Pre-configured switch cabinets with cable management, air baffles, intake and exhaust duct (for side-to-side venting) and power distribution units (PDUs) to host Cisco Catalyst 6000 and Nexus 7000 Series switches
- Offered in standard colors of black and central office white
- Integral anchoring floor mount locations*

*Belden recommends the use of a qualified contractor for the installation of seismic cabinets as per the local, state and federal building code requirements.



XHMS and XHSS Series Specifications

- Perforated door mesh opening: 78%
- Frame construction: 14-, 12- and 11-gauge welded steel
- Mounting rail construction: 12-gauge, marked RU, RU 1 is at bottom of cabinet
- Static load capacity: 2,000 lbs
- Static load capacity (seismic): 1,000 lbs
- Seismic certification: Zone 4 NEBS GR-063-CORE
- EIA 310 compliant: 19" mount equipment
- Horizontal cable management options
(See page 63 for Accessories)
- Heat containment options
(See pages 25-30)

Faster.
Easier.
Better.



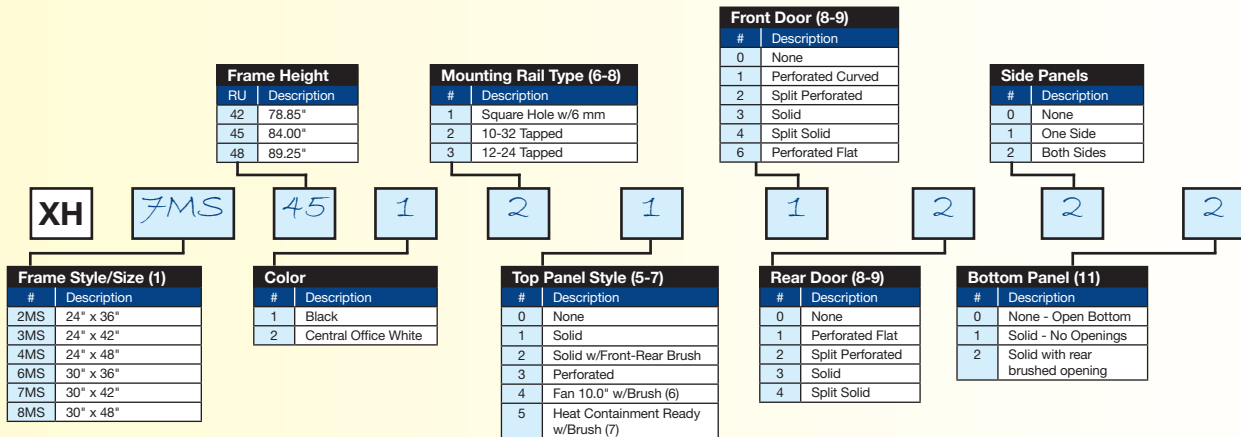
Racks and Cabinets

Ordering Matrix for Seismic Server Cabinets (XHMS)

Part number example:

XH7MS451211222

XHMS Cabinet 30"Wx42"D frame, 45RU, Black, 10-32 tapped rails, Solid top panel, Perforated (78% open area) front door, Split perforated (78% open area) rear door, 2 side panels, Bottom panel with brush opening.



Notes:

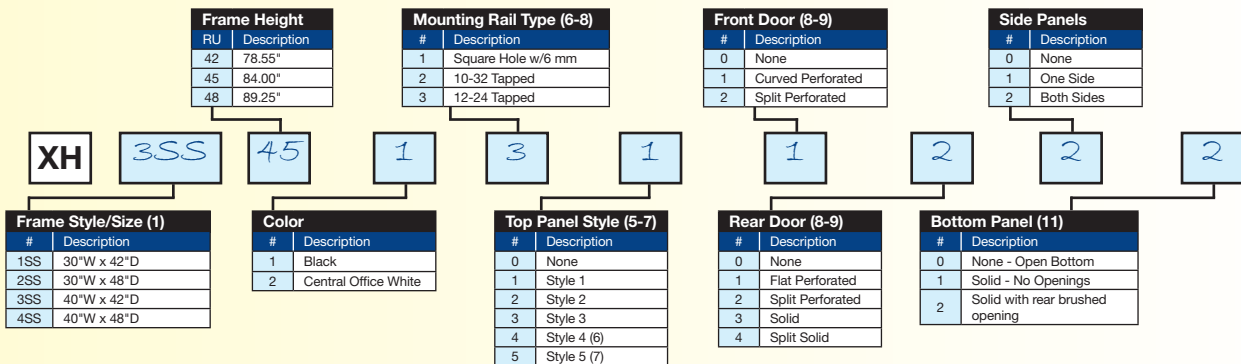
- Cabinet dimension (measured without doors).
- Cabinet construction: Welded steel, ganging hardware, grounding studs in frame base front and rear.
- Cabinet static load capacity is 2,000 lbs, Cabinet seismic load capacity is 1,000 lbs; BELLCORE GR-63-CORE, Section 5.4.1 Certification.
- Custom top panel available on request for volume orders.
- 30" wide frame is provided with six top brush openings for networking and power cable entry.
- 11 AWG mounting rails provide standard 19" rack spacing to EIA-310-D requirements.
- Equipment mounting hardware (50) included with rails (4).
- Each EIA Rail has numerical marking for each rack unit (starting at unit 1 at bottom).
- Doors are Surface-Mounted, reversible and provisioned with "swing handle" hardware, allowing changing of locksets.
- Split doors only available on 30" wide frame, with three-point latching "swing handle" hardware to facilitate change of lock set.

Ordering Matrix for Seismic Networking-Switch Cabinets (XHSS)

Part number example:

XH3SS451311222

XHSS Cabinet 40"Wx42"D Frame, 45RU, Black, 12-24 tapped rails, Solid top panel, Perforated (78% open area) front door, Split perforated (78% open area) rear door, 2 side panels, Bottom panel with brush opening.

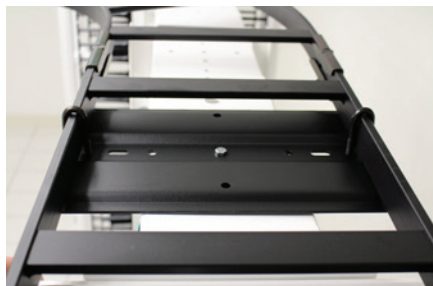


Notes:

- Cabinet dimension (measured without doors).
- Cabinet construction: Welded steel, ganging hardware, grounding studs in frame base front and rear.
- Cabinet static load capacity is 2,000 lbs, cabinet seismic load capacity is 1,000 lbs; BELLCORE GR-63-CORE, Section 5.4.1 Certification.
- Custom top panel available on request for volume orders.
- Cabinet frame is provided with six top brush openings for networking and power cable entry.
- 11 AWG mounting rails provide standard 19" rack spacing to EIA-310-D requirements.
- Equipment mounting hardware (50) included with rails (4).
- Each EIA Rail has numerical marking for each rack unit (starting at unit 1 at bottom).
- Doors are Surface-Mounted, reversible and provisioned with "swing handle" hardware, allowing changing of locksets.
- Split doors only available on 30" wide frame, with three-point latching "swing handle" hardware to facilitate change of lock set.

Ladder Racks Style Cable Runway

Speed up deployment time and maximize space with our runway systems, which are designed to optimize cable bandwidth and support maximum cabling density.



Design and Structural Features

- Complete line of ladder-rack-style runways and accessories
- Perfect complement to Belden cables for end-to-end solutions
- Available in black and white; other colors available upon special request
- Belden runways and accessories have direct match/cross to most competitors' brand and use the same installation practices
- Fully compatible with most ladder rack brand
- Belden runways are available from stock with a 5 to 8 day lead time
- Competitively priced

Ladder Runway Types/Dimensions

- Universal, TELCO and UL style runways
- 6", 12", 18", 24", 30" and 36" wide selections
- Overall length = 10' (individually boxed)
- Side stringer = 1.5" x 0.375" x 0.065"
- Cross member = 1.5" x 0.375" x 0.065" welded

Accessories include

- Butt splice
- Junction splice
- Corner bracket
- Retaining post
- Wall to rack kit
- Radius bend
- E-Bend
- Pipe stand
- Threaded rods
- J-bolts

Faster.
Easier.
Better.



Ladder Racks Style Cable Runway (continued)

Universal Style Cable Runways

Description	Belden Part Number
6" Universal Cable Runway - Black	BLRS250-06B
12" Universal Cable Runway - Black	BLRS250-12B
18" Universal Cable Runway - Black	BLRS250-18B
24" Universal Cable Runway - Black	BLRS250-24B
30" Universal Cable Runway - Black	BLRS250-30B
36" Universal Cable Runway - Black	BLRS250-36B
6" Universal Cable Runway - White	BLRS250-06W
12" Universal Cable Runway - White	BLRS250-12W
18" Universal Cable Runway - White	BLRS250-18W
24" Universal Cable Runway - White	BLRS250-24W
30" Universal Cable Runway - White	BLRS250-30W
36" Universal Cable Runway - White	BLRS250-36W
Universal Style Cable Runway	BLRS250-XXY

XX = 06, 12, 18, 24, 30, 26"; Y = B (Black), W (White)

UL Style Cable Runways

Description	Belden Part Number
6" UL Cable Runway - Black	BLRU275-06B
12" UL Cable Runway - Black	BLRU275-12B
18" UL Cable Runway - Black	BLRU275-18B
24" UL Cable Runway - Black	BLRU275-24B
6" UL Cable Runway - Gold	BLRU275-06G
12" UL Cable Runway - Gold	BLRU275-12G
18" UL Cable Runway - Gold	BLRU275-18G
24" UL Cable Runway - Gold	BLRU275-24G
UL Style Cable Runway	BLRU275-XXY

XX = 06, 12, 18, 24"; Y = B (Black), G (Gold)

90° Inside Radius Bend

Description	Belden Part Number
6" 90° Inside Radius Bend - Black	BLIR724-06B
12" 90° Inside Radius Bend - Black	BLIR724-12B
18" 90° Inside Radius Bend - Black	BLIR724-18B
24" 90° Inside Radius Bend - Black	BLIR724-24B
30" 90° Inside Radius Bend - Black	BLIR724-30B
36" 90° Inside Radius Bend - Black	BLIR724-36B
6" 90° Inside Radius Bend - White	BLIR724-06W
12" 90° Inside Radius Bend - White	BLIR724-12W
18" 90° Inside Radius Bend - White	BLIR724-18W
24" 90° Inside Radius Bend - White	BLIR724-24W
30" 90° Inside Radius Bend - White	BLIR724-30W
36" 90° Inside Radius Bend - White	BLIR724-36W
90° Inside Radius Bend	BLIR724-XXY

XX = 06, 12, 18, 24, 30, 36"; Y = B (Black), W (White)

Wall Angle Support Kit, Cable Runway

Description	Belden Part Number
6" Wall Angle Support Kit, Cable Runway	BLWAS421-06B
12" Wall Angle Support Kit, Cable Runway	BLWAS421-12B
18" Wall Angle Support Kit, Cable Runway	BLWAS421-18B
24" Wall Angle Support Kit, Cable Runway	BLWAS421-24B
Wall Angle Support Kit, Cable Runway	BLWAS421-XXB

XX = 06, 12, 18, 24"

TELCO Style Cable Runways

Description	Belden Part Number
6" TELCO Cable Runway - Black	BLRT252-06B
12" TELCO Cable Runway - Black	BLRT252-12B
18" TELCO Cable Runway - Black	BLRT252-18B
24" TELCO Cable Runway - Black	BLRT252-24B
6" TELCO Cable Runway - White	BLRT252-06W
12" TELCO Cable Runway - White	BLRT252-12W
18" TELCO Cable Runway - White	BLRT252-18W
24" TELCO Cable Runway - White	BLRT252-24W
TELCO Style Cable Runway	BLRT252-XXY

XX = 06, 12, 18, 24"; Y = B (Black), W (White)

Outside Radius Bend

Description	Belden Part Number
6" 90° Outside Radius Bend - Black	BLOR723-06B
12" 90° Outside Radius Bend - Black	BLOR723-12B
18" 90° Outside Radius Bend - Black	BLOR723-18B
24" 90° Outside Radius Bend - Black	BLOR723-24B
30" 90° Outside Radius Bend - Black	BLOR723-30B
36" 90° Outside Radius Bend - Black	BLOR723-36B
6" 90° Outside Radius Bend - White	BLOR723-06W
12" 90° Outside Radius Bend - White	BLOR723-12W
18" 90° Outside Radius Bend - White	BLOR723-18W
24" 90° Outside Radius Bend - White	BLOR723-24W
30" 90° Outside Radius Bend - White	BLOR723-30W
36" 90° Outside Radius Bend - White	BLOR723-36W
Outside Radius Bend	BLOR723-XXY

XX = 06, 12, 18, 24, 30, 36"; Y = B (Black), G (Gold)

Splice Kits

Description	Belden Part Number
Butt-Splice Kit - 1.5 x 3/8" Stringer - Black	BLBS301-15B
UL Classified Butt-Splice Kit - Black	BLBSU301-15B
Junction-Splice Kit - 1.5 x 3/8" Stringer - Black	BLJS302-15B
UL Classified Junction-Splice Kit - Black	BLJSU302-15B
Heavy-Duty Junction-Splice Kit - Black	BLJSH298-15B
90° Runway-Splice Kit - 1.5 x 3/8" Stringer -Black	BLRSK314-90B
UL Classified 90° Runway-Splice Kit - Black	BLRSK314-90B
45° Runway-Splice Kit - 1.5 x 3/8" Stringer - Black	BLRSK313-45B
UL Classified 45° Runway-Splice Kit - Black	BLRSK313-40B
Adjustable Junction Splice Kit - Black	BLAJS616-00B
Butt-Swivel Splice Kit - Black	BLBSS487-00B

Triangular Support Bracket Kit, Aluminum

Description	Belden Part Number
6" Triangular Support Bracket Kit, Aluminum	BLTSB312-06B
12" Triangular Support Bracket Kit, Aluminum	BLTSB312-12B
18" Triangular Support Bracket Kit, Aluminum	BLTSB312-18B
Triangular Support Bracket Kit, Aluminum	BLTSB312-XXB

XX = 06, 12, 18"

Cable Retaining Post

Description	Belden Part Number
Cable Retaining Post, 6", Single Black	BLCRP596-06B
Cable Retaining Post, 6", Qty = 50 Black	BLCRP596-56B



Open Bridge Rack

The Open Compute Project (OCP) initiative aims to create the most energy-efficient data center - one that is able to handle and manage the upcoming spike of people and data - while controlling costs and energy consumption. The ultimate goal of the Open Compute Project: Maximizing operational efficiency.

Because today's standards don't always fit upcoming needs, engineers had to rethink infrastructure to achieve their efficiency goals, and then shared their designs with the public.

Benefits/Features for the End-User

A solution you can count on

- The Belden Open Bridge Rack (OBR) can be field converted between EIA (19" mount) and OCP (21" mount) mounting standards for increased flexibility.
- Belden OBR is 28"W x 48"D and available in 400U/44RU or 440U/48RU.
- Migration from IEA to OCP gears is possible without having to purchase new cabinets, thanks to a reversible 440U/48RU rail kit.
- A modular approach allows cable management configuration specific to application requirements.
- Doors feature 78% opened integrated hexagonal mesh for low air resistance and optimal cooling of hosted gears.

Contractor-friendly solution helps achieve on-time installation

- The OBR rack ships fully assembled to exact requirements.
- Cabinets can be labelled with location-specific tagging on cabinets or racks to facilitate delivery on the data center floor.
- Cabinets come with casters rated to handle dynamic loads of up to 2,250 lbs and static loads of up to 3,000 lbs.
- Rack unit (RU) and Open unit (OU) identifiers are printed on mounting rails for quick identification.
- An open bottom offers easy cable access.
- Tool-less PDU mounting supports faster deployment (in EIA configuration).

Benefits/Features for the Architect/Consultant

Meets and exceeds standards

- Belden OBR rack meets TIA/EIA 310-D and OCP equipment mounting standards.
- Allows for greater data center design flexibility by enabling mixed use of EIA and OCP gears in the same computing space.
- All materials are RoHS compliant.



Open Bridge Racks

Description	Belden Part Number
Server Rack 44RU/400U	XFI44U2848-S002
Networking Rack 44RU/400U	XFI44U2848-S003
Open Bridge Rack 44RU/200U	XFI44U2848-S004
Server Rack 48RU/440U	XFI48U2848-S005
Network Rack 48RU/440U	XFI48U2848-S006
Open Bridge Rack 48RU/440U	XFI48U2848-S007

OBR in Server and Networking configuration are shipped in EIA configuration.

¹Open Computer: <http://www.opencompute.org/about/learn>

Faster.
Easier.
Better.



Heat Containment Systems

Aisle and Cabinet Containment Systems

Containment Overview

A major challenge faced by data center managers today is ensuring that cooling systems do not fail and continue to provide uninterrupted cool air to equipment, especially in high-density data center environments with advanced virtualized equipment that can reach exhaust air temperatures in excess of 125° F. Most data centers that use a standard cold-hot-aisle approach are oversupplied with cold air at a ratio of 2 to 2.5 (volume of cold air supplied to volume consumed by computing equipment). With cooling representing 30-40% of total operational costs for a typical data center, containment solutions present a strong ROI potential. A standard cold/hot aisle approach can also lead to hotspots that cause equipment overheating and failures, further resulting in higher operating costs.

Containment is an industry-proven method of eliminating cold air bypass and the mixing of hot and cold air that allows for optimal use of available cooling capacity for lower operating costs. With containment, hot exhaust air from equipment is directed to CRAC units either through aisle containment systems for groups of cabinets or through active or passive chimneys at the cabinet level. This increases the differential between the inlet and outlet temperatures of CRAC units, significantly improving overall cooling system efficiency and eliminating the need to oversupply cold air. Creating separation between the hot return air and cold supply air also allows for potentially raising the supply air temperature while maintaining stable intake temperature for networking equipment, providing a more efficient, reliable and hotspot-free computing space. The containment approach easily handles the high-temperature exhaust air from advanced data processing equipment, allowing data centers to host more equipment while lowering energy consumption and total operating costs.

Belden's complete line of containment options range from the cabinet to the cold/hot aisle, offering customers the greatest flexibility for upgrading, designing and implementing a tailored solution that fits their specific data center needs in brownfield and greenfield applications. Based on computing load, cabinet layout and computing space specifications, Belden engineers can recommend and design containment solutions that will optimize availability, efficiency and hosting capacity.



- Eliminates bypass air and air recirculation
 - Reduces or eliminates cold air oversupply (2.5 to <1.2)
 - Maximizes hosting density for up to 30 kW per cabinet without precision cooling
 - Increases supply air temperature (better use of economizer loop, 8–10°)
 - Increases return-air temperature for better CRAC efficiency
- Reduces cooling costs by 30–50% over traditional hot-cold-aisle deployment
- Creates a high level of separation between supply and return air
- Eliminates hotspots for increased IT equipment availability