# BELDEN

## 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.

# Faster.
# Easier.
# Better.

## 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.

## Table of Contents

## 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**

**■ = Secondary Application**

\* Seismic-certified cabinets.

\*\* 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.

## 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" |

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## 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.
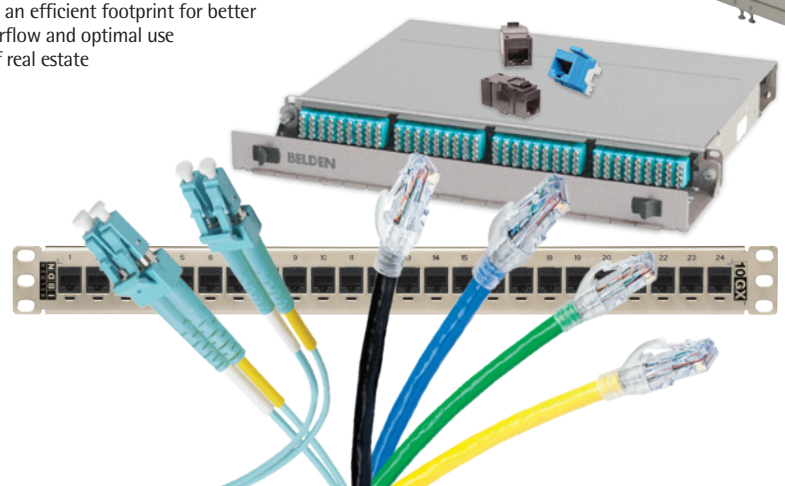
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## Unique Offerings From Belden

## 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 $CO_2$ 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.

## 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.

## 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.

## 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.

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## Racks and Cabinets

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 steamlined 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
- Fixtured 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

78.85", 84.0", or 89.25"

30", 36", 42" or 48"

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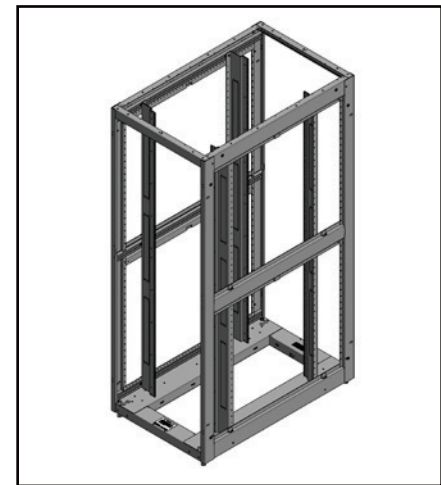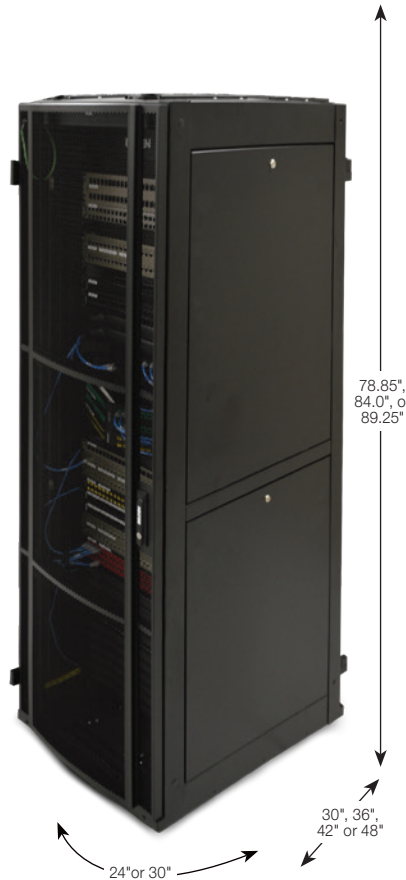
Part No. shown: XH7M451300000
(45RU x 30" W x 42" D)

### 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

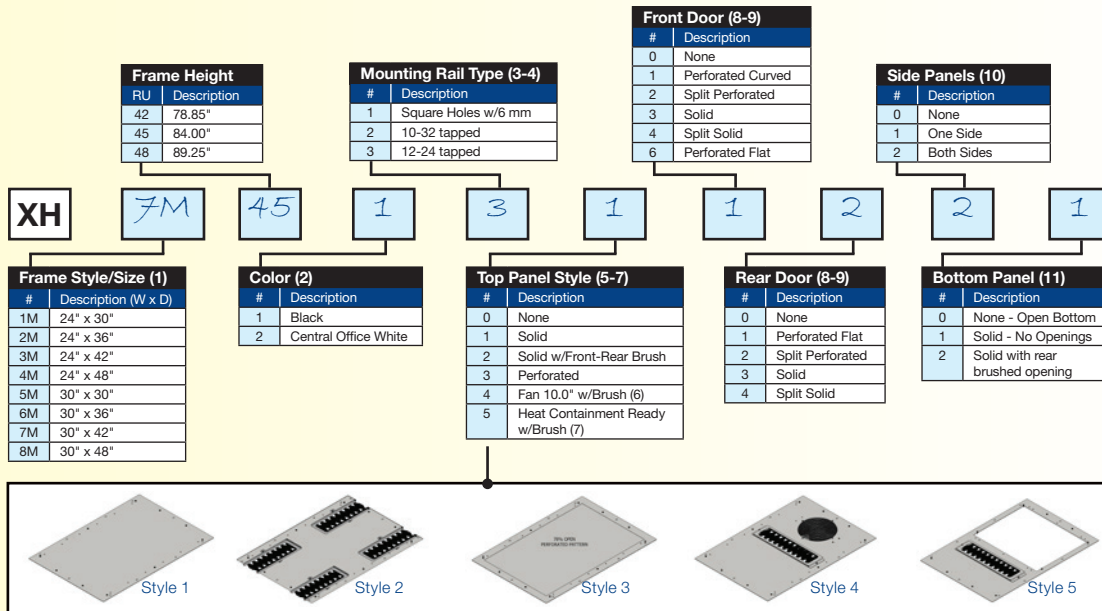| XHM Series Type | XH5M42 | XH6M42 | XH7M42 | XH8M42 | XH5M45 | XH6M45 | XH7M45 | XH8M45 | XH5M48 | XH6M48 | XH7M48 | XH8M48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions: W x D x H (of Frame) | 30" x 30" x 78.85" | 30" x 36" x 78.85" | 30" x 42" x 78.85" | 30" x 48" x 78.85" | 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

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## Ordering Matrix for XHM Series

**Part number example:**

## XH7M451311221

30"x42"x45RU black frame with casters and levelers, 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.
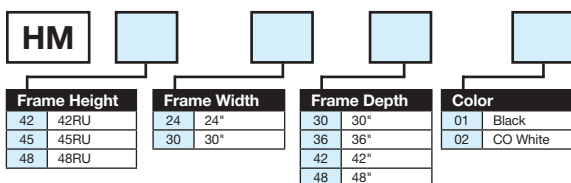
**Front Door (8-9)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Perforated Curved |
| 2 | Split Perforated |
| 3 | Solid |
| 4 | Split Solid |
| 6 | Perforated Flat |

**Frame Height**

| RU | Description |
|---|---|
| 42 | 78.85" |
| 45 | 84.00" |
| 48 | 89.25" |

**Mounting Rail Type (3-4)**

| # | Description |
|---|---|
| 1 | Square Holes w/6 mm |
| 2 | 10-32 tapped |
| 3 | 12-24 tapped |

**Side Panels (10)**

| # | Description |
|---|---|
| 0 | None |
| 1 | One Side |
| 2 | Both Sides |

| XH | 7M | 45 | 1 | 3 | 1 | 1 | 2 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|

**Frame Style/Size (1)**

| # | Description (W x D) |
|---|---|
| 1M | 24" x 30" |
| 2M | 24" x 36" |
| 3M | 24" x 42" |
| 4M | 24" x 48" |
| 5M | 30" x 30" |
| 6M | 30" x 36" |
| 7M | 30" x 42" |
| 8M | 30" x 48" |

**Color (2)**

| # | Description |
|---|---|
| 1 | Black |
| 2 | Central Office White |

**Top Panel Style (5-7)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Solid |
| 2 | Solid w/Front-Rear Brush |
| 3 | Perforated |
| 4 | Fan 10.0" w/Brush (6) |
| 5 | Heat Containment Ready w/Brush (7) |

**Rear Door (8-9)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Perforated Flat |
| 2 | Split Perforated |
| 3 | Solid |
| 4 | Split Solid |

**Bottom Panel (11)**

| # | Description |
|---|---|
| 0 | None - Open Bottom |
| 1 | Solid - No Openings |
| 2 | Solid with rear brushed opening |

Style 1    Style 2    Style 3    Style 4    Style 5

**Notes:**

1) Frame includes casters, levelers, ganging hardware, grounding studs in frame base front/rear.

2) Other colors and silk-screening options available for volume orders.

3) 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.

4) 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.

5) Custom top panel available for volume orders.

6) Fan top panel included, 10" dia., 550 CFM fan (120V).

7) Heat containment top (42" and 48" deep only) 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

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 180º for choice of front or rear brush entry.
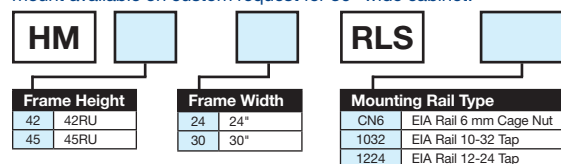
## XHM Series — Individual Component Ordering Options

### Cabinet Frame
Do not include rails, levelers and casters

| HM | | | | |
|---|---|---|---|---|

**Frame Height**

| 42 | 42RU |
|---|---|
| 45 | 45RU |
| 48 | 48RU |

**Frame Width**

| 24 | 24" |
|---|---|
| 30 | 30" |

**Frame Depth**

| 30 | 30" |
|---|---|
| 36 | 36" |
| 42 | 42" |
| 48 | 48" |

**Color**

| 01 | Black |
|---|---|
| 02 | CO White |

### 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.

| HM | | RLS | |
|---|---|---|---|

**Frame Height**

| 42 | 42RU |
|---|---|
| 45 | 45RU |

**Frame Width**

| 24 | 24" |
|---|---|
| 30 | 30" |

**Mounting Rail Type**

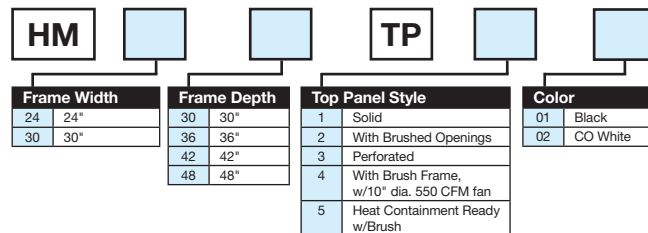| CN6 | EIA Rail 6 mm Cage Nut |
|---|---|
| 1032 | EIA Rail 10-32 Tap |
| 1224 | EIA Rail 12-24 Tap |

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## XHM Series — Options (continued)

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

**HM** ☐ ☐ **TP** ☐ ☐

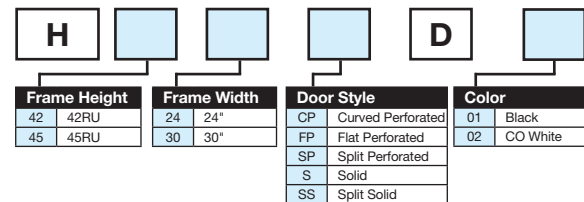| Frame Width | | Frame Depth | | Top Panel Style | | Color | |
|---|---|---|---|---|---|---|---|
| 24 | 24" | 30 | 30" | 1 | Solid | 01 | Black |
| 30 | 30" | 36 | 36" | 2 | With Brushed Openings | 02 | CO White |
| | | 42 | 42" | 3 | Perforated | | |
| | | 48 | 48" | 4 | With Brush Frame, w/10" dia. 550 CFM fan | | |
| | | | | 5 | Heat Containment Ready w/Brush | | |

### 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.
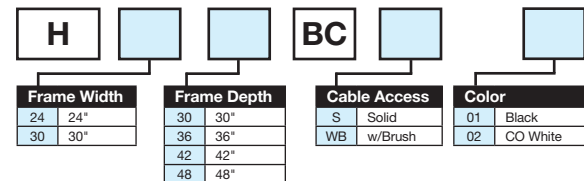
**H** ☐ ☐ **SP** ☐

| Frame Height | | Frame Depth | | Color | |
|---|---|---|---|---|---|
| 42 | 42RU | 30 | 30" | 01 | Black |
| 45 | 45RU | 36 | 36" | 02 | CO White |
| 48 | 48RU | 42 | 42" | | |
| | | 48 | 48" | | |
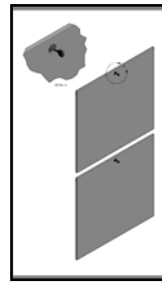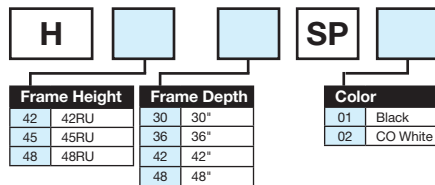

Side/Separator
Panel with Lock

### Door with Latch Lock Handle

**H** ☐ ☐ **D** ☐

| Frame Height | | Frame Width | | Door Style | | Color | |
|---|---|---|---|---|---|---|---|
| 42 | 42RU | 24 | 24" | CP | Curved Perforated | 01 | Black |
| 45 | 45RU | 30 | 30" | FP | Flat Perforated | 02 | CO White |
| | | | | SP | Split Perforated | | |
| | | | | S | Solid | | |
| | | | | SS | Split Solid | | |

### 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 | |
|---|---|---|---|---|---|---|---|
| 24 | 24" | 30 | 30" | S | Solid | 01 | Black |
| 30 | 30" | 36 | 36" | WB | w/Brush | 02 | CO White |
| | | 42 | 42" | | | | |
| | | 48 | 48" | | | | |

## XHM Series — Accessories

### Front to Rear Cable Manager
Adjustable-depth front to rear cable managers

**HFRM** ☐

| Color | |
|---|---|
| 01 | Black |
| 02 | CO White |
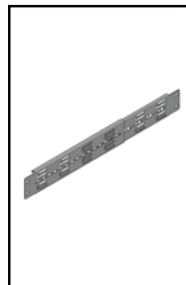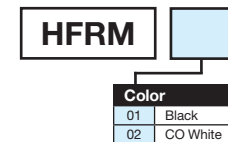
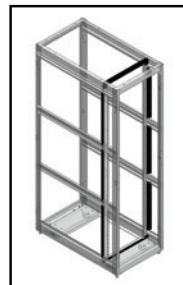### Front Rail Air Seal Kit
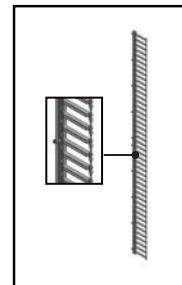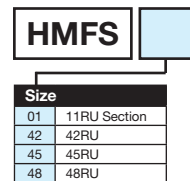To be used with passive or active containment chimneys. Rail seal kits are factory installed.

**HM** ☐ ☐ **RSK** ☐

| Frame Height | | Frame Width | | Color | |
|---|---|---|---|---|---|
| 42 | 42RU | 24 | 24" | 01 | Black |
| 45 | 45RU | 30 | 30" | 02 | CO White |
| 48 | 48RU | | | | |

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

**HMFS** ☐

| Size | |
|---|---|
| 01 | 11RU Section |
| 42 | 42RU |
| 45 | 45RU |
| 48 | 48RU |

### Bottom Seal Skirt
Front and side skirt allow sealing below cabinets when on levelers.

**H** ☐ ☐ **S** ☐

| Skirt Width | | Skirt Style | | Color | |
|---|---|---|---|---|---|
| 24 | 24" | B | Bottom Front | 01 | Black |
| 30 | 30" | S | Bottom Side | 02 | CO White |
| 36 | 36" | | | | |
| 42 | 42" | | | | |
| 48 | 48" | | | | |

### Top Cable Trough with Cover

**H** ☐ **TT** ☐

| Frame Width | | Color | |
|---|---|---|---|
| 24 | 24" | 01 | Black |
| 30 | 30" | 02 | CO White |


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


HFRM


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


Front Rail Air Seal Kit (shown in black)


Fingers for Mounting Rails

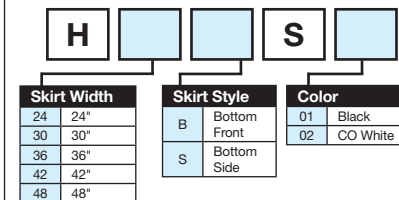## XHS Series — Server, Networking and Switch Cabinets
### Supports high load capacities and proper airflow management



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"

42" or 48"

30" or 40"

### 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 gears 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

### 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

# 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
- Fixtured 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.
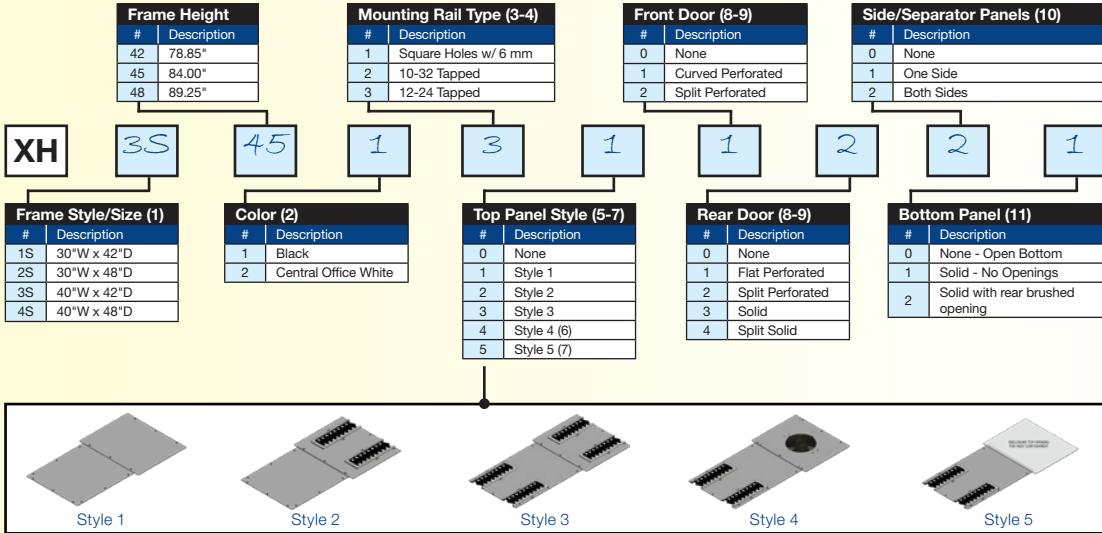Please contact your sales representative to discuss your specific needs.

| 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 levelers, 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.
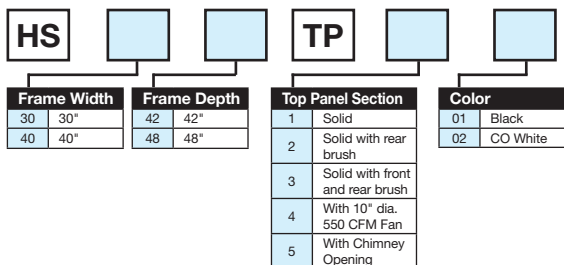
### Frame Height
| # | Description |
|---|---|
| 42 | 78.85" |
| 45 | 84.00" |
| 48 | 89.25" |

### Mounting Rail Type (3-4)
| # | Description |
|---|---|
| 1 | Square Holes w/ 6 mm |
| 2 | 10-32 Tapped |
| 3 | 12-24 Tapped |

### Front Door (8-9)
| # | Description |
|---|---|
| 0 | None |
| 1 | Curved Perforated |
| 2 | Split Perforated |

### Side/Separator Panels (10)
| # | Description |
|---|---|
| 0 | None |
| 1 | One Side |
| 2 | Both Sides |

**XH** | 3S | 45 | 1 | 3 | 1 | 1 | 2 | 2 | 1

### Frame Style/Size (1)
| # | Description |
|---|---|
| 1S | 30"W x 42"D |
| 2S | 30"W x 48"D |
| 3S | 40"W x 42"D |
| 4S | 40"W x 48"D |

### Color (2)
| # | Description |
|---|---|
| 1 | Black |
| 2 | Central Office White |

### Top Panel Style (5-7)
| # | Description |
|---|---|
| 0 | None |
| 1 | Style 1 |
| 2 | Style 2 |
| 3 | Style 3 |
| 4 | Style 4 (6) |
| 5 | Style 5 (7) |

### Rear Door (8-9)
| # | Description |
|---|---|
| 0 | None |
| 1 | Flat Perforated |
| 2 | Split Perforated |
| 3 | Solid |
| 4 | Split Solid |

### Bottom Panel (11)
| # | Description |
|---|---|
| 0 | None - Open Bottom |
| 1 | Solid - No Openings |
| 2 | Solid with rear brushed opening |



Style 1    Style 2    Style 3    Style 4    Style 5

**Notes:**

1) Frame includes levelers, ganging harware, 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.

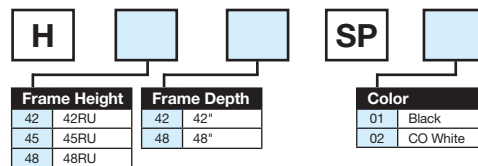11) Bottom brush panel can be rotated 180º for choice of front or rear brush entry.

## XHS Series — Individual Components Ordering Options

### Top Panel Sections

**HS** | | | **TP** | |

| Frame Width | | Frame Depth | |
|---|---|---|---|
| 30 | 30" | 42 | 42" |
| 40 | 40" | 48 | 48" |

### Top Panel Section
| # | Description |
|---|---|
| 1 | Solid |
| 2 | Solid with rear brush |
| 3 | Solid with front and rear brush |
| 4 | With 10" dia. 550 CFM Fan |
| 5 | With Chimney Opening |

### Color
| # | Description |
|---|---|
| 01 | Black |
| 02 | CO White |

### Side/Separator Panel

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

**H** | | | **SP** | |

| Frame Height | | Frame Depth | |
|---|---|---|---|
| 42 | 42RU | 42 | 42" |
| 45 | 45RU | 48 | 48" |
| 48 | 48RU | | |

### Color
| # | Description |
|---|---|
| 01 | Black |
| 02 | CO White |

# Faster.
# Easier.
# Better.

## 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" | CP | Curved Perforated | 01 | Black |
| 45 | 45RU | 40 | 40" | 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" | 01 | Black |
| 45 | 45RU | 40 | 40" | 02 | CO White |
| 48 | 48RU | | | | |

### Front to Rear Cable Manager
Adjustable-depth front to rear cable managers
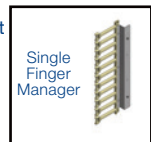
| HFRM | |

| Color | |
|---|---|
| 01 | Black |
| 02 | CO White |
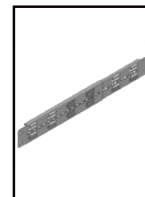
HFRM

### 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 | |

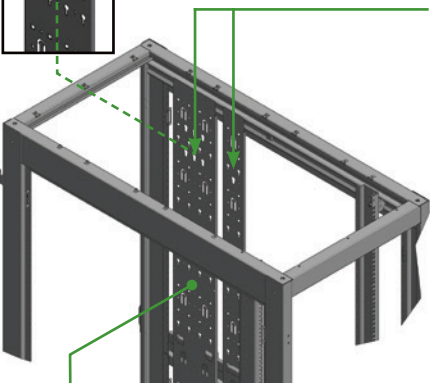| Frame Width | | Color | |
|---|---|---|---|
| 30 | 30" | 01 | Black |
| 40 | 40" | 02 | CO White |

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

# BELDEN
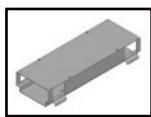
Lacing Panel
(close-up)
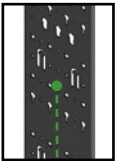


Vertical Lacing/PDU
Mounting Panel
3.5" and 7" wide



Lacing Panel shown in cabinet
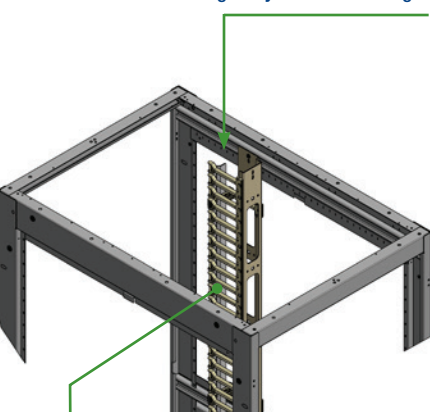
## XHM and XHS Series Cabinets —
## Cable Management and Zero U Patching

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

### 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

**Finger Style Vertical Manager**



### 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.



Vertical Manager shown in cabinet

# 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 |

Vertical Managers:

Lacing/PDU Panel          Finger Style
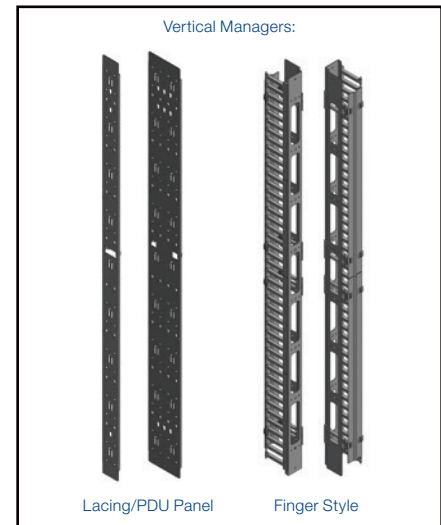
## Zero U — Vertical Patch Panel and Connectivity

### Features
• Attach to mounting rails
• Vertical patch panels are compatible with Belden copper and fiber connectivity (FX UHD, FX Ultra Frames and Cassettes)
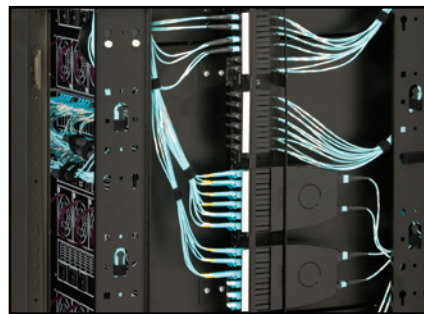
| Description | Belden Part Number |
|-------------|:------------------:|
| **Zero U — Vertical Patch Panel and Connectivity** | |
| Vertical Patch Panel (7 positions), Compatible with XHS Cabinets | XZUK01 |
| Vertical Patch Panel (14 positions), Compatible with XHS Cabinets | XZUK02 |
| FXUHD KeyConnect 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.

# BELDEN

## 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**)

**BELDEN**　　　1.800.BELDEN.1 (800.235.3361)　　　www.belden.com

# Faster.
# Easier.
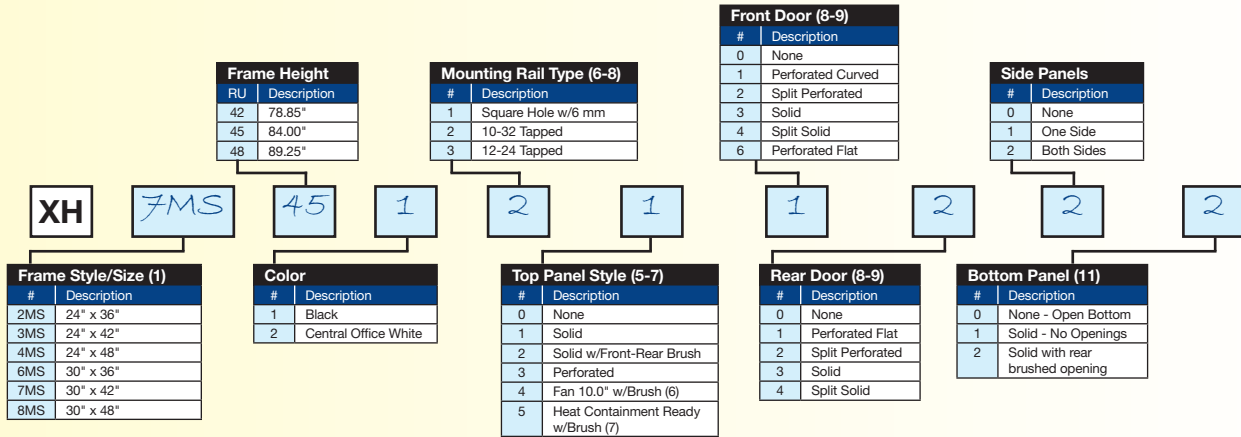# Better.



## 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) rea door, 2 side panels, Bottom panel with brush opening.
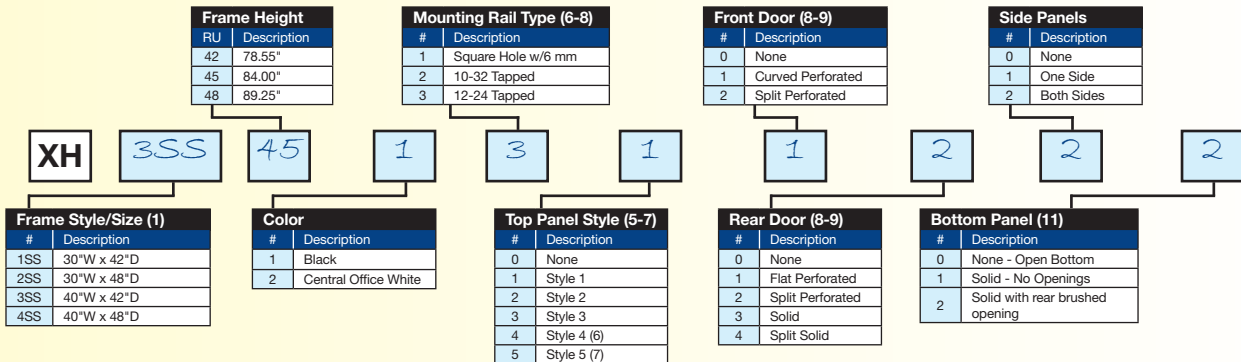
**Front Door (8-9)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Perforated Curved |
| 2 | Split Perforated |
| 3 | Solid |
| 4 | Split Solid |
| 6 | Perforated Flat |

**Frame Height**

| RU | Description |
|---|---|
| 42 | 78.85" |
| 45 | 84.00" |
| 48 | 89.25" |

**Mounting Rail Type (6-8)**

| # | Description |
|---|---|
| 1 | Square Hole w/6 mm |
| 2 | 10-32 Tapped |
| 3 | 12-24 Tapped |

**Side Panels**

| # | Description |
|---|---|
| 0 | None |
| 1 | One Side |
| 2 | Both Sides |

**Part number fields:** XH | 7MS | 45 | 1 | 2 | 1 | 1 | 2 | 2 | 2

**Frame Style/Size (1)**

| # | Description |
|---|---|
| 2MS | 24" x 36" |
| 3MS | 24" x 42" |
| 4MS | 24" x 48" |
| 6MS | 30" x 36" |
| 7MS | 30" x 42" |
| 8MS | 30" x 48" |

**Color**

| # | Description |
|---|---|
| 1 | Black |
| 2 | Central Office White |

**Top Panel Style (5-7)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Solid |
| 2 | Solid w/Front-Rear Brush |
| 3 | Perforated |
| 4 | Fan 10.0" w/Brush (6) |
| 5 | Heat Containment Ready w/Brush (7) |

**Rear Door (8-9)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Perforated Flat |
| 2 | Split Perforated |
| 3 | Solid |
| 4 | Split Solid |

**Bottom Panel (11)**

| # | Description |
|---|---|
| 0 | None - Open Bottom |
| 1 | Solid - No Openings |
| 2 | Solid with rear brushed opening |

**Notes:**

1) Cabinet dimension (measured without doors).

2) Cabinet construction: Welded steel, ganging harware, grounding studs in frame base front and rear.

3) 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.

4) Custom top panel available on request for volume orders.

5) 30" wide frame is provided with six top brush openings for networking and power cable entry.

6) 11 AWG mounting rails provide standard 19" rack spacing to EIA-310-D requirements.

7) Equipment mounting hardware (50) included with rails (4).

8) Each EIA Rail has numerical marking for each rack unit (starting at unit 1 at bottom).

9) Doors are Surface-Mounted, reversible and provisioned with "swing handle" hardware, allowing changing of locksets.

10) 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.

**Frame Height**

| RU | Description |
|---|---|
| 42 | 78.55" |
| 45 | 84.00" |
| 48 | 89.25" |

**Mounting Rail Type (6-8)**

| # | Description |
|---|---|
| 1 | Square Hole w/6 mm |
| 2 | 10-32 Tapped |
| 3 | 12-24 Tapped |

**Front Door (8-9)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Curved Perforated |
| 2 | Split Perforated |

**Side Panels**

| # | Description |
|---|---|
| 0 | None |
| 1 | One Side |
| 2 | Both Sides |

**Part number fields:** XH | 3SS | 45 | 1 | 3 | 1 | 1 | 2 | 2 | 2

**Frame Style/Size (1)**

| # | Description |
|---|---|
| 1SS | 30"W x 42"D |
| 2SS | 30"W x 48"D |
| 3SS | 40"W x 42"D |
| 4SS | 40"W x 48"D |

**Color**

| # | Description |
|---|---|
| 1 | Black |
| 2 | Central Office White |

**Top Panel Style (5-7)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Style 1 |
| 2 | Style 2 |
| 3 | Style 3 |
| 4 | Style 4 (6) |
| 5 | Style 5 (7) |

**Rear Door (8-9)**

| # | Description |
|---|---|
| 0 | None |
| 1 | Flat Perforated |
| 2 | Split Perforated |
| 3 | Solid |
| 4 | Split Solid |

**Bottom Panel (11)**

| # | Description |
|---|---|
| 0 | None - Open Bottom |
| 1 | Solid - No Openings |
| 2 | Solid with rear brushed opening |

**Notes:**

1) Cabinet dimension (measured without doors).

2) Cabinet construction: Welded steel, ganging harware, grounding studs in frame base front and rear.

3) 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.

4) Custom top panel available on request for volume orders.

5) Cabinet frame is provided with six top brush openings for networking and power cable entry.

6) 11 AWG mounting rails provide standard 19" rack spacing to EIA-310-D requirements.

7) Equipment mounting hardware (50) included with rails (4).

8) Each EIA Rail has numerical marking for each rack unit (starting at unit 1 at bottom).

9) Doors are Surface-Mounted, reversible and provisioned with "swing handle" hardware, allowing changing of locksets.

10) 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.
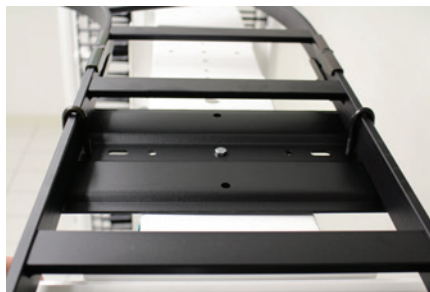












## Design and Structural Features

- 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 | BLRSK314-9UB |
| 45° Runway-Splice Kit - 1.5 x 3/8" Stringer - Black | BLRSK313-45B |
| UL Classified 45° Runway-Splice Kit - Black | BLRSK313-4UB |
| 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 40OU/44RU or 44OU/48RU.
- Migration from IEA to OCP gears is possible without having to purchase new cabinets, thanks to a reversible 44OU/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) indentifiers 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/40OU | XFI44U2848-S002 |
| Networking Rack 44RU/40OU | XFI44U2848-S003 |
| Open Bridge Rack 44RU/20OU | XFI44U2848-S004 |
| Server Rack 48RU/44OU | XFI48U2848-S005 |
| Network Rack 48RU/44OU | XFI48U2848-S006 |
| Open Bridge Rack 48RU/44OU | XFI48U2848-S007 |

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

[1]Open Computer: http://www.opencompute.org/about/learn

## 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.



- 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

- 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

Racks and Cabinets

Heat Containment (AEHC) System

## Heat Containment Systems (continued)
### Hot- and Cold-Aisle Containment Systems

### Aisle Containment

Belden's aisle containment solutions eliminate the mixing of hot and cold air in data center environments to maximize energy efficiency and lower operating costs. Our aisle containment systems are vendor agnostic, featuring innovative, transparent panels that are lightweight and easily attached horizontally or vertically to data center cabinets using a universal rail system. The panels are field modifiable to meet varying height and space requirements between rows of cabinets, and from the top of the cabinets to the ceiling. The aisle containment systems can also interact with smoke or fire alarm systems to ensure proper operation of critical fire suppression and safety systems.

Solutions offered are for hot-and cold–aisle containment system.

### Vertical Containment

Vertical panels direct hot return air to overhead return plenum, eliminating mixing and improving overall operating efficiency of perimeter CRAC units. Using a fully ducted cold-air delivery system with vertical panels also allows cold air to be placed directly into the cold aisle, eliminating the need to use underfloor space for supply air.

### Horizontal Containment

For raised–floor environments with overhead obstructions or no ceiling plenum, non-ducted panels form a roof to trap cold air, enabling higher supply temperatures and maximizing available cooling. This design can also be used for data centers utilizing in-row cooling solutions.

### Aisle Doors

Belden offers swinging and sliding door options for the end of the row.

## Heat Containment Systems (continued)
### Hot- and Cold-Aisle Containment Systems
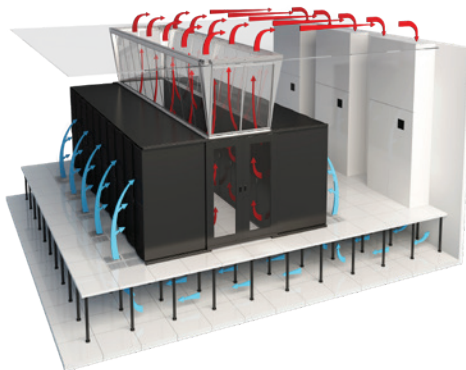


**Hot-Aisle Vertical Design**
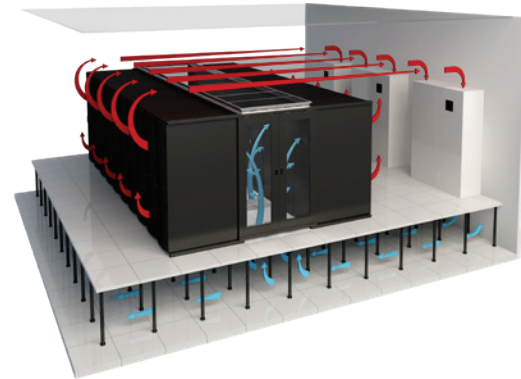


**Cold-Aisle Horizontal Design**

## Vertical-Style Heat Containment

| Fixed Letter Series | 1. Enter Cabinet Series | Fixed Letters | 2. Enter Hot or Cold Aisle Containment | 3. Enter Containment Panel Orientation | 4. Enter Floor to Ceiling Height Inches | 5. Enter Cabinet Row Length Inches | 6. Enter Aisle Width Inches | 7. Enter Door Type with Color Option |
|---|---|---|---|---|---|---|---|---|
| X | HS | AC | 1 | 2 | 120 | 240 | 1 | 1 |

**Cabinet Series End[1, 9]**

| # | Description |
|---|---|
| Z | Custom |
| HS | HS-Series |
| HM | HM-Series |
| C | C-Series |

**Hot Air/Cold Air[2]**

| # | Description |
|---|---|
| 1 | Hot Aisle |
| 2 | Cold Aisle |

**Panel Orientation[3]**

| # | Description |
|---|---|
| 1 | Vertical Hinged Black |
| 2 | Vertical Hinged White |
| 3 | Vertical Fixed Black |
| 4 | Vertical Fixed White |
| 5 | Horizontal Black |
| 6 | Horizontal White |

**Vertical Panel[4]**

| # | Description |
|---|---|
| ### | Floor to Ceiling Height |
| ### | If Horizontal (0) |

**Aisle Length[5]**

**Aisle Width[6]**

| # | Description |
|---|---|
| 1 | 48 |
| 2 | 54 |
| 3 | 60 |
| 4 | 66 |
| 5 | 72 |

**Door Options[7]**

| # | Description |
|---|---|
| 1 | (2) Sliding Door Black |
| 2 | (2) Sliding Door White |
| 3 | (2) Swing Door Black |
| 4 | (2) Swing Door White |

### Notes
1. Enter cabinet series. For custom cabinets contact customer service.
2. Enter Hot or Cold Aisle containment.
3. Enter containment panel type.
4. Enter floor to ceiling height in inches.
5. Enter row length in inches.
6. Enter aisle width in inches. For custom contact customer service.
7. Enter door type, sliding or swing.
8. Custom colors available on request.
9. There may have to be modifications to customer cabinets at location.

| Series | | Height | | | Width | |
|---|---|---|---|---|---|---|
| | | floor | levelers | caster | | |
| | | | max | min | | |
| HS-SERIES | 48U | 89.25 | 91.17 | 90.66 | 30 | 40 |
| HS-SERIES | 45U | 84 | 85.92 | 85.41 | 30 | 40 |
| HS-SERIES | 42U | 78.75 | 80.67 | 80.16 | 30 | 40 |
| HM-SERIES | 48U | 89.25 | 91.17 | 90.66 | 24 | 30 |
| HM-SERIES | 45U | 84 | 85.92 | 85.14 | 24 | 30 |
| HM-SERIES | 42U | 78.75 | 80.67 | 80.16 | 24 | 30 |
| C-SERIES | 42U | 78.75 | 80.67 | 80.16 | 24 | 30 |

**Racks and Cabinets**

**Heat Containment (AEHC) System**

## Heat Containment Systems (continued)
### Passive and Adaptive Enclosure Heat Containment (AEHC) System

**AEHC chimney shown here in through-the-ceiling version**

**Passive chimney shown here in adjustable and against-the-ceiling version**

**AEHC chassis (23.5"Wx16.9"Dx11.5"H) host the fans and controller**

Example of passive and active chimney systems

### Containment Cabinets
- Designed for chimney containment, Belden XHM, XHS and XHMS-XHSS Seismic cabinets feature sealing front mounting rails that separate cold supply air from hot return
- 42" or 48" deep cabinets are recommended for optimal chimney containment performance
- Gasketed solid rear door options and brushed cable entries prevent hot return air from leaking back into computing space
- All X Series cabinets can be equipped with passive or active chimneys

### Passive and Active Chimney Systems
- Active system can support up to 30 kW per cabinet for today's extremely high heat loads
- Passive systems rely on the effectiveness of server fans, combined with pressure differential between the cabinet and return spaces
- Passive system capacity peaks around 10 kW (but can be higher) and varies based on chimney length, position in relation to CRAC, return plenum pressure and exhaust air temperature
- Passive and active chimneys are available as through-ceiling chimneys that protrude approximately 2" into the return plenum, and against-the-ceiling chimneys that adjust and feature a rubber gasket for effective sealing against the drop ceiling
- To account for fans and controller units, chimney length for active containment should be sized by deducting 11.5" from distance between cabinet top and return ceiling
- Belden X Series cabinets equipped with containment top panels accept both passive and active chimneys, allowing for easy passive-to-active conversion

### AEHC Overview
Belden's active Adaptive Enclosure Heat Containment (AEHC) System is a highly efficient and cost-effective method for cooling cabinets while preventing the mixing of hot and cold air in the data center. When networked, AEHC chimneys allow aggregation of exhaust air volume of entire cabinet pods, enabling real-time control of CRAC units and creating a logical link between the cooling plant and the computing load. This unique attribute allows reduction of cooling-operating costs, particularly in virtualized, clustered computing environments characterized by highly dynamic computing loads.

- AEHC uses high-capacity fans controlled by a pressure sensor to ensure dynamic balancing of intake and exhaust air volumes
- Maintains neutral pressure in the cabinet plenum for highly efficient server fan operation
- Can be networked in a pod/row for redundancy in virtualized, clustered computing environments
- Multiple cabinets can share AEHC chimneys based on hosted computing density (three cabinets per chimney is typical)
- AEHC is highly scalable with chimneys added as needed with increased computing loads
- A pair of hot swappable brushless fans with a combined capacity of 10 kW or 30 kW connect to the AEHC controller, enabling quick and easy capacity upgrades (different capacity fans cannot be used in the same cabinet)
- Fan motors are engineered to ensure longevity, high air displacement and low power consumption for mission-critical facilities
- Ideal for existing data centers, and non-Belden cabinets can be retrofitted with chimney by using a customized adapter plate

Faster.
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## Heat Containment Systems (continued)
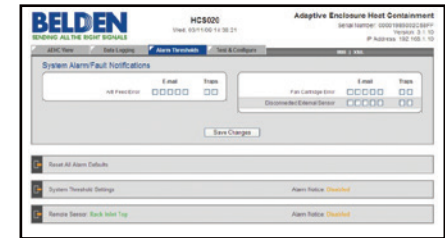### Pressure-based containment control for best use of cooling capacity

Containment Chimney

Fan B

Fan A

Dual Power
Feed C13 Cords
120/208V

AEHC IP-
Based
Controller

Pressure
Support
Connection
Port

Network
Connection
Port
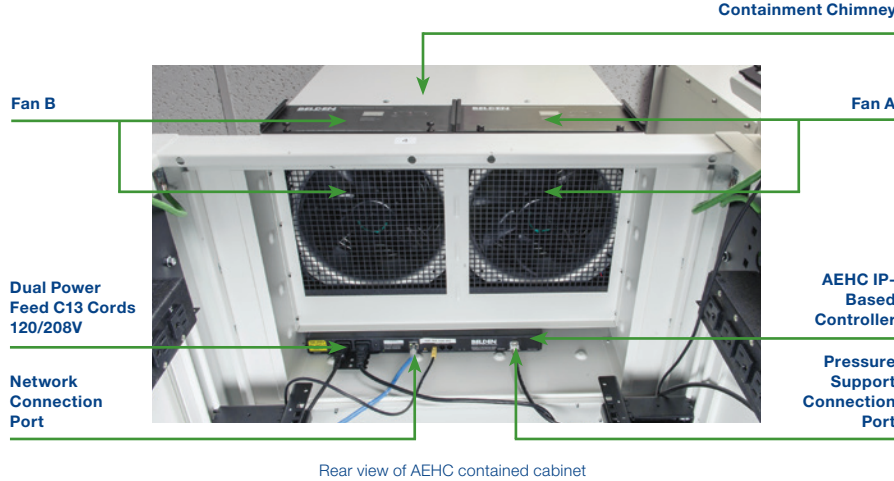
Rear view of AEHC contained cabinet

Embedded software allows each AEHC unit to be fully autonomous. The AEHC controllers have their own IP address, enabling network connection. The AEHC then allows for real-time monitoring of the heat load, temperature and alarm conditions for each IT cabinet.

- The AEHC system is powered (autosensing 120V or 208V) via the cabinet PDUs and accepts two distinct power feeds for redundancy
- A combination of temperature-humidity sensors with the AEHC controller can collect and store environmental data. When networked, real-time data can be accessed via the intuitive user interface or Belden Cormant-CS Infrastructure Management Software using SNMP (MIB file)
- Environmental, mechanical and electrical thresholds and alarms are easy to configure and can be sent directly to e-mail addresses (through an escalation process)

### Belden AEHC is comprised of:
- A cabinet configured to accept the AEHC system
- A chassis with a controller and two fans
- A controller for power input and system networking and control
- A pair of AEHC fans per chassis with a combined containment capacity of 10 kW or 30 kW
- A pressure sensor for fan speed control
- A dual-function temperature/humidity sensor to monitor intake air
- An AEHC chimney to provide the physical link between the chassis and return plenum

The threshold setting in Belden's AEHC system software provides early warning alarms for problem conditions. Alarms are automatically reported. Supported Network Protocols: DHCP, HTTPS, SMPT/POP3, HTTP, ICMP, TCP/IP, SNTP, DNS.
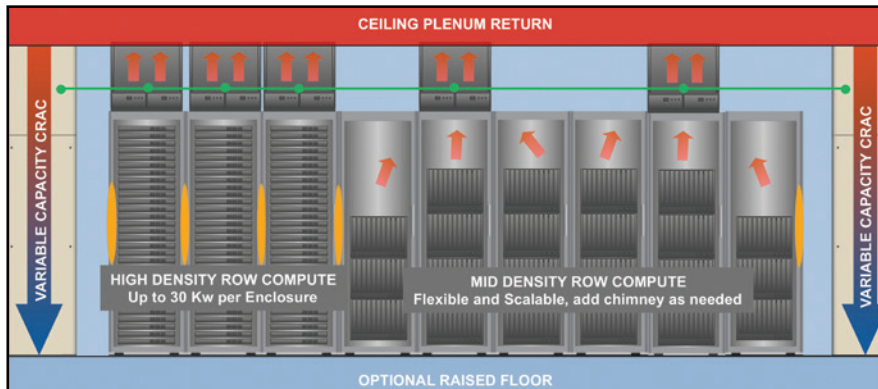
AEHC row function diagram
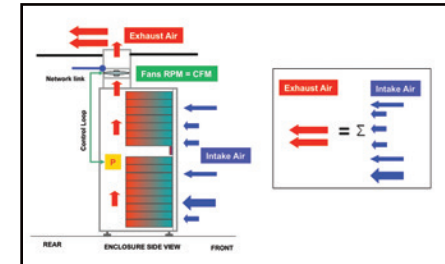
AEHC single cabinet diagram (side view)

AEHC controller


Intelligent hot swappable fan cartridges allow for easy maintenance and system scalability
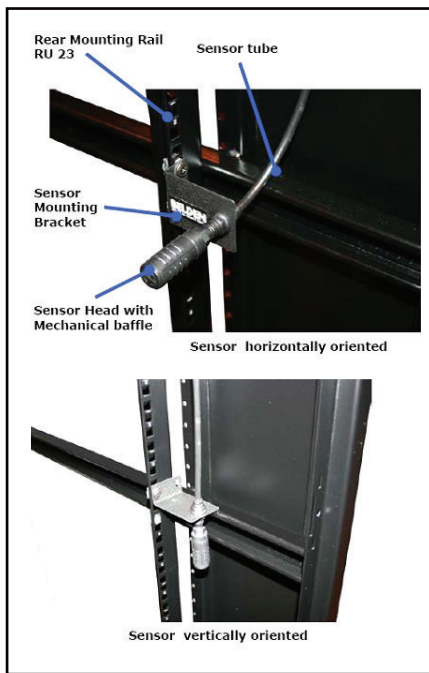

Belden's AEHC System utilizes pressure sensing to dynamically adjust for speed, resulting in perfect balance between intake and exhaust air volume

## Heat Containment Systems (continued)
### Options and Accessories

#### Passive Chimney — Through Ceiling

HCDP0 ☐ ☐

| Chimney Height | | | | Color | |
|---|---|---|---|---|---|
| 24 | 24" | 60 | 60" | B | Black |
| 33 | 33" | 66 | 66" | W | CO White |
| 36 | 36" | 72 | 72" | | |
| 42 | 42" | 78 | 78" | | |
| 48 | 48" | 84 | 84" | | |
| 54 | 54" | | | | |

#### Passive Chimney — Against Ceiling (Adjustable)

HCDPA0 ☐ ☐

| Chimney Height | | Color | |
|---|---|---|---|
| 24 | 21"– 27" | B | Black |
| 36 | 33"– 39" | W | CO White |
| 48 | 45"– 51" | | |
| 60 | 57"– 63" | | |
| 72 | 69"– 75" | | |
| 84 | 81"– 87" | | |

#### AEHC Chimney* — Through Ceiling

HCD0 ☐ ☐

| Chimney Height | | | | Color | |
|---|---|---|---|---|---|
| 24 | 24" | 60 | 60" | B | Black |
| 33 | 33" | 66 | 66" | W | CO White |
| 36 | 36" | 72 | 72" | | |
| 42 | 42" | 78 | 78" | | |
| 48 | 48" | 84 | 84" | | |
| 54 | 54" | | | | |

#### AEHC Chimney* — Against Ceiling (Adjustable)

HCDA0 ☐ ☐

| Chimney Height | | Color | |
|---|---|---|---|
| 24 | 21"– 27" | B | Black |
| 36 | 33"– 39" | W | CO White |
| 48 | 45"– 51" | | |
| 60 | 57"– 63" | | |
| 72 | 69"– 75" | | |
| 84 | 81"– 87" | | |

#### Adaptive Cabinet Heat Containment System
Includes (1) Black Chassis, (1) Controller, (2) Fan Cartridges, (1) Pressure Sensor, (1) Temperature/Humidity Sensor, (2) C13 Power Cords, (2) 5-15P Power Cords

HCS0 ☐ ☐

| Containment Capacity | | Color | |
|---|---|---|---|
| 10 | 10kW | B | Black |
| 30 | 30kW | W | CO White |

*Make sure to account for the 11.5" AEHC chassis height when determining the proper chimney height.

| Description | Belden Part Number |
|---|---|
| **Other Accessories** | |
| **AEHC Controller** | |
| AEHC Controller (1) with Power Cords C13 (2), 5-15P (2) | HCH001 |
| **AEHC Fans** | |
| AEHC 10kW AEHC Fan (1) with Digital Display | HCFD10 |
| AEHC 30kW AEHC Fan (1) with Digital Display | HCFD30 |
| **AEHC Sensors** | |
| AEHC Dual Function Temperature/Humidity Sensor (1) | HCP002 |
| AEHC Pressure Sensor (1) | HCP001 |
| **AEHC Chassis** | |
| AEHC Chassis, Black | HCC001-B |
| AEHC Chassis, Central Office White | HCC001-W |
| **AEHC Chassis Blank Panels** | |
| AEHC Chassis Blank Panels, includes Blank for Fans and Controller, Black | HCCBP-B |
| AEHC Chassis Blank Panels, includes Blank for Fans and Controller, Central Office White | HCCBP-W |
| **Chimney Blank Panel for Active or Passive Containment** (compatible with 24", 30" and 40" cabinets) | |
| Black | HCDBP-B |
| Central Office White | HCDBP-W |

## Faster.
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# XNM Series — NEMA 12 Cabinets
## Ideal for use in industrial networking

### Applications

Designed for dusty environments, Belden XNM Series cabinets allow hosting of networking/control equipment in factories and warehouses and on production floors. Optional air conditioning (AC) units allow temperature control for stand alone applications. Belden has extensive NEMA-style networking cabinet experience and capability to customize solutions.

### Design and Structural Features

- NEMA 12 compliant for hosting servers and switches in industrial environments
- Freestanding welded frame with modular construction
- 84"H x 29"W x 40"D
- Mounting rails are adjustable to either 19" or 23" EIA spacing
- Three-point compression-style lift-and-turn latch system
- Glass front door uses scratch-resistant tempered safety glass

84"

40"     29"

XNM Style NEMA 12 cabinet with front and rear doors, side panels, EIA mounting rails and optional side-mounted air conditioning unit. Part No. shown: XNM84-3-11212.

Solid side panel with cam lock and six-point clamping from interior

(4) Adjustable EIA Mtg. with 10-32 tapped holes; 43RU

Four 4" access holes with sealed removable covers

Solid rear door with three-point latch and three lift-off hinges

Optional AC unit mounted to side panel

Front door with 1/4" tempered glass with three-point latching and three lift-off hinges

Leveling legs and casters

XNM Front with Doors and Panels

**Racks and Cabinets**

## Ordering Matrix for NEMA 12 Cabinets

**Part number example:** XNM84311212

XNM Cabinet, 29"Wx40"D frame, 45RU, black, 19" mount 10-32 tapped rails, 2500 BTU AC, glass front door, solid rear door, 2 side panels.

### Frame Height
| # | Description |
|---|---|
| 84 | 84" (45RU) |

### Mounting
| # | Description |
|---|---|
| 1 | 19" Mounting, 10-32 Tapped |
| 2 | 23" Mounting, 10-32 Tapped |

### Front Door
| # | Description |
|---|---|
| 0 | None |
| 1 | Solid 3 Pt. Latch |
| 2 | Glass 3 Pt. Latch |
| 3 | Fan/Filtered 3 Pt. Latch |
| 4 | Glass 3 Pt. Latch w/Keyboard Compartment |

### Sides
| # | Description |
|---|---|
| 0 | None |
| 1 | One Solid Side |
| 2 | Two Solid Sides |

**XNM  84  3  1  1  2  1  2**

### Color
| # | Description |
|---|---|
| 3 | Black |

### Cooling (1)
| # | Description |
|---|---|
| 0 | None |
| 1 | 2500 BTU A/C |
| 2 | 5000 BTU A/C |

### Rear Door
| # | Description |
|---|---|
| 0 | None |
| 1 | Solid 3 Pt. Latch |
| 2 | Glass 3 Pt. Latch |
| 3 | Fan/Filtered 3 Pt. Latch |

Notes:

1) *Additional cooling options up to 20K BTU/AC available.

## Technical Specifications

| Belden Part Number | H | W | D | Mounting | Cabinet Weight* | Load Capacity** | Rack Spaces | Usable Depth | |
|---|---|---|---|---|---|---|---|---|---|
| **Cabinet Size** (Including gland plate, casters and levelers) | | | | | | | | At Latch | To Inside of Door |
| XNM84-3-10000 | 84" | 29" | 40" | 19" or 23" | 462 lbs | 2,000 lbs | 45RU | 37.5" | 38.5" |

* Cabinet weight is an estimate for shipping a fully configured cabinet with Top, Doors, Sides and Power Strip.

** Load capacity on levelers.

## Cabinet Components: Doors and Side Panels

| Description | Belden Part Number |
|---|---|
| **Front/Rear Doors** | |
| Solid w/3 pt. Swing Handle Latch and Lock | 8429-NSD-3 |
| Tempered Glass w/3 pt. Swing Handle Latch and Lock | 8429-NGD-3 |
| Fan/Filtered (7" fan = 235 CFM) with 3 pt. Swing Handle Latch and Lock | 8429-NFD-3 |
| Tempered Glass w/Keyboard Compartment with Fan/Filtered Latch | 8429-NKD-3 |
| **Side Panels** | |
| One Solid w/Lock | 8440-01-NSP-3 |
| Two Solid w/Lock | 8440-02-NSP-3 |

## Air Conditioners

Most Belden cabinets can be customized to accept highly efficient air-conditioning units.

Air-conditioning units

## Technical Specifications

| BTUs/Hr. | Volts (Hz) | Amps (max.) | Temp. (max.) | Weight | H | W | D |
|---|---|---|---|---|---|---|---|
| **Air-Conditioning Units** | | | | | | | |
| 2200 | 120/60 | 6.0 | 125º F | 57 lbs | 30.1" | 12.27" | 6.34" |
| 3000 | 120/60 | 8.1 | 125º F | 57 lbs | 30.1" | 12.27" | 6.34" |
| 3800 | 120/60 | 7.8 | 125º F | 65.5 lbs | 30.1" | 12.27" | 8.34" |
| 2500 | 120/60 | 7.9 | 125º F | 73 lbs | 28.5" | 19.25" | 6.38" |
| 3500 | 120/60 | 8.2 | 125º F | 73 lbs | 28.5" | 19.25" | 6.38" |
| 5000 | 120/60 | 8.7 | 125º F | 74 lbs | 28.5" | 19.25" | 6.38" |
| 12000 | 120/60 | 19.6 | 131º F | 139 lbs | 52.1" | 17.65" | 10.34" |

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## CH Series Cabinets
### Multi-use cabinet balances performance and value

Highly versatile, cost-efficient, 19" mount cabinet provides quality solutions for a wide variety of IT, security and data center applications. Perfect for stand alone or ganged configurations.

### Features
- Available in:
  - 24" and 30" width options
  - 42" and 48" depth options
  - 42RU height
- 2,500 lbs static load
- Fully welded 14 AWG frame, cold rolled steel construction
- Manufactured with premium-grade hot and cold rolled steel sheet
- Contoured high-density perforated quick-release, field-reversible doors
- Two-piece side panels provide convenient access to installed equipment in stand alone applications
- Standard 19" mount per EIA-310D per EIA-310E, cage nut style rail
- Fully adjustable mounting rail depth
- Rack unit (RU) identifier printed on mounting rails for quick identification
- Open bottom for easy cable access
- Top panel with knockouts in each front corner. Brush Kit sold separately
- All materials RoHS compliant

### Standard configuration includes
- Black powder-coat paint
- Perforated front door with lock handle
- Split perforated rear door with lock handle
- Four EIA mounting rails, cage nut style with M6 hardware included (50 pieces)
- Cable routing opening in mounting rails (only for 30" wide cabinet)
- Two solid side panels
- Top panel with brushed openings
- Open bottom
- Two rear cable lacing/PDU mount panels
- Casters, levelers and ganging kit/hardware included
- Grounding provision front/rear and top/bottom
- Bonding wires between frame and doors
- For shelves and horizontal managers
  see pages 62–63
- For PDUs see pages 67–76



42RU, 78"

42" or 48"

24" or 30"
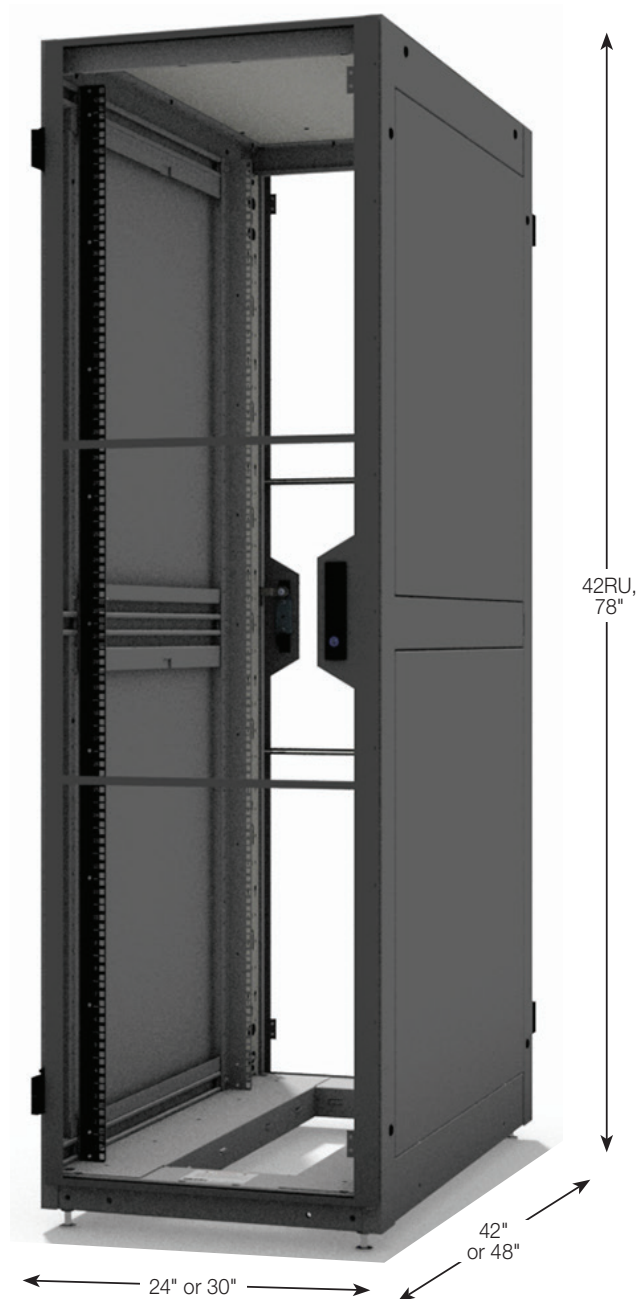
30" Wide Cabinet (front view)

# BELDEN

## CH Series Cabinets (continued)
### Available in 24" and 30" width options

### Ordering Information

| Description | Belden Part Number | | | | Belden Part Number | | | |
|---|---|---|---|---|---|---|---|---|
| | CH1S42211221 | | CH2S42211221 | | CH3S42211221 | | CH4S42211221 | |
| Width | 24 in | 610 mm | 24 in | 610 mm | 30 in | 762 mm | 30 in | 762 mm |
| Depth without Doors | 42 in | 1067 mm | 48 in | 1219 mm | 42 in | 1067 mm | 48 in | 1219 mm |
| Height | 42RU | | 42RU | | 42RU | | 42RU | |
| Height without Casters | 78.75 in | 2000 mm | 78.75 in | 2000 mm | 78.75 in | 2000 mm | 78.75 in | 2000 mm |
| Height with Casters | 80.13 in | 2035 mm | 80.13 in | 2035 mm | 80.13 in | 2035 mm | 80.13 in | 2035 mm |
| Net Weight with doors and sides | 236 lbs | 107 kg | 250 lbs | 113 kg | 282 lbs | 128 kg | 296 lbs | 134 kg |
| Static Load Capacity | 3000 lbs | 1361 kg | 3000 lbs | 1361 kg | 3000 lbs | 1361 kg | 3000 lbs | 1361 kg |
| Usable depth, max. distance between front and rear rails | 40.8 in | 1035 mm | 46.8 in | 1187 mm | 40.8 in | 1035 mm | 46.8 in | 1187 mm |
| Perforated doors mesh opening | 78% | | 78% | | 78% | | 78% | |
| Total depth with doors | 44.38 in | 1127 mm | 50.38 in | 1280 mm | 44.38 in | 1127 mm | 50.38 in | 1280 mm |
| Door opening angle - stand alone enclosure | 270˚ | | 270˚ | | 270˚ | | 270˚ | |



XWM-2109-GD



XWM-2312-SD

## XWM Series — Wall-Mount Cabinets
### Wall-Mount Cabinets are an ideal hosting option in confined spaces

### Applications
Wall-mount cabinets provide IT/networking hosting in spaces that often serve another primary function, or where space optimization is critical. They are designed for applications that require secure hosted devices and are ideal for locations where floor mounting space is limited (retail establishments, schools and offices).

Available in mounting unit increments of 9RU, 12RU and 20RU, Belden Wall-Mount Cabinets offer great aesthetics, rugged construction, optimized equipment access and flexible cable management and access features.

### Design and Structural Features
- Sturdy welded steel construction
- Durable black powder-coat finish
- Front door options: vented, smoked plexiglass or solid front
- Door swing direction is field reversible
- Lockable front door and rear section
- Open rear section for cable access through mounting wall
- Top and bottom holes in rear section for conduit connection and cable access
- Comes with mounting template for quick and easy Wall-Mounting

- Two pairs of 10-32 tapped 19" EIA depth-adjustable mounting rails (includes mounting hardware)
- Swing-out mid-section for rear access to equipment
- Vented front (plexiglass door only), sides, top and bottom panels for proper heat dissipation
- Top and bottom panel allow optional 4" fan mounting

**BELDEN**

**1.800.BELDEN.1** (800.235.3361)

www.belden.com

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## XWM Series — Wall-Mount Cabinets (continued)

### Dimensions

19.75"

20.125"

22.875"

21.00"

XWM-2109-GD

21.65"

25.25" or 39.25"

27.50"

23.00"

XWM-2312-GD and XWM-2320-GD
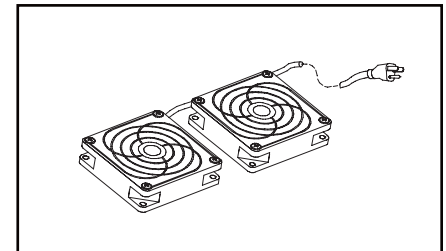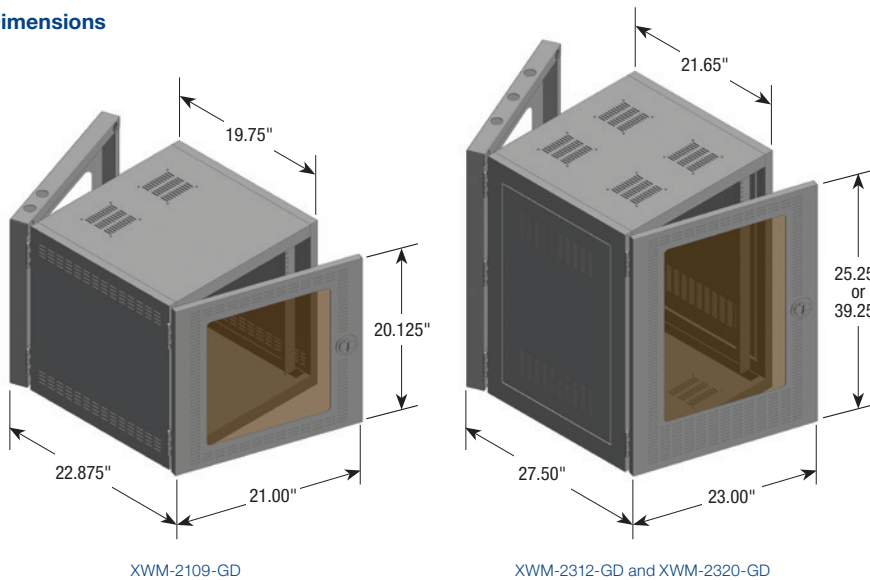
XWM-9312-1600 Fan Assembly

### Ordering Information

| Belden Part Number | W | H | D | Cable Entry | Mounting | Removable Side Panels | Rack Unit (RU) | Door Type | Weight | Weight Capacity |
|---|---|---|---|---|---|---|---|---|---|---|
| **Wall-Mount Cabinets** | | | | | | | | | | |
| **XWM-2109-GD** | 21" | 20.12" | 22.87" | (4) 1" Conduit | (4) 13/32" dia. | No | 9 | Plexiglass | 45 lbs | 130 lbs |
| **XWM-2109-SD** | 21" | 20.12" | 22.87" | (4) 1" Conduit | (4) 13/32" dia. | No | 9 | Solid | 45 lbs | 130 lbs |
| **XWM-2312-GD** | 23" | 25.25" | 27.5" | (6) 2" Conduit | (4) 13/32" dia. | Yes | 12 | Plexiglass | 70 lbs | 150 lbs |
| **XWM-2312-SD** | 23" | 25.25" | 27.5" | (6) 2" Conduit | (4) 13/32" dia. | Yes | 12 | Solid | 70 lbs | 150 lbs |
| **XWM-2320-GD** | 23" | 39.25" | 27.5" | (6) 2" Conduit | (6) 13/32" dia. | Yes | 20 | Plexiglass | 95 lbs | 175 lbs |
| **XWM-2320-SD** | 23" | 39.25" | 27.5" | (6) 2" Conduit | (6) 13/32" dia. | Yes | 20 | Solid | 95 lbs | 175 lbs |

| Description | Belden Part Number |
|---|---|
| **Optional Accessories** | |
| Fan Assembly (2-4" Diameter Fans, 160 CFM with Guard) | **XWM-9312-1600N** |
| Lacing Panel 3" Wide x 9RU | **XWMLP9** |
| Lacing Panel 3" Wide x 12RU | **XWMLP12** |
| Lacing Panel 3" Wide x 20RU | **XWMLP20** |
| 12-24 Mounting Hardware (Bag of 25) | **8917-0125** |

# BELDEN

## SecurePatch®
## Open Rack Security Door


Wall-Mounted SecurePatch BSP-22U-12SK

SecurePatch provides security for new and existing network components in an open 19" equipment rack. The SecurePatch cover provides a security solution to only the section of the rack space you need. Safeguard against unauthorized patch cord movement by retrofitting loaded equipment racks with the added security of a lockable door.

### Benefits
- Adds security without network downtime
- Controls rack access
- Provides second-level lock security
- Clamshell design allow back to back mounting of SecurePatch for securing front and rear
- No need to re-terminate
- Mounting flange allows one person to install each unit

### Features
- Can be rack or Wall-Mounted on a backboard
- Slotted mounting flange allows for single person install
- Multiple side knockout options allow for low-high-capacity cable feed through
- Connecting bracket enables 11U/22U units to be connected in any combination while allowing patch cord pass through from one unit to another

### Product Specifications
- 16 gauge cold rolled steel
- 19" Rack-Mounting per EIA-310-D
- Finish: black powder coat
- Door options: steel, mesh or plexiglass door
- Keyed locks standard on door
- Combination locks available
- Ships unassembled
- Easy-to-follow assembly instructions


11U 6" Deep - BSP-11U-6PK


BSP-D44U-6PK

## Ordering Information

| Description | Height | Depth | Belden Part Number |
|---|---|---|---|
| **11U" SecurePatch Complete Units (standard black powder coat)** | | | |
| 11U SecurePatch with keyed door | 19.25" | 6.00" | **BSP-11U-6(x)** |
| 11U SecurePatch with keyed door | 19.25" | 12.00" | **BSP-11U-12(x)** |
| **22U" SecurePatch Complete Units (standard black powder coat)** | | | |
| 22U SecurePatch with keyed door | 38.50" | 6.00" | **BSP-22U-6(x)** |
| 22U SecurePatch with keyed door | 38.50" | 12.00" | **BSP-22U-12(x)** |
| **44U" SecurePatch Kits Complete Units (standard black powder coat)** | | | |
| (2) 22U SecurePatch w/ connector brackets, keyed doors | 77.00" | 6.00" | **BSP-44U-6(x)** |
| (4) 22U front and rear kit with keyed doors | 77.00" | 6.00" | **BSP-D44U-6(x)** |

Replace (x) with door code: PK= Plexiglas, MK=Mesh, SK=Steel

## SecurePatch Accessories

| Description | Quantity | Belden Part Number |
|---|---|---|
| Connecting bracket - for retrofitting 2 SecurePatch together | 1 | **BSP-CBRKT** |
| Quarter-turn with 3 number combination lock | 1 | **BSP-LOCK-C1** |
| Adjustment plates for front and rear rack installation | 2-pack | **BSP-ADPLATE*** |

*Note: BSP-ADPLATE encloses the gap between two SecurePatch covers installed back to back on a 3" deep equipment rack. When the adjustment plates are installed, inside usable mounting space is reduced by 2U.

## Consolidation/MDU Enclosures: In-Suite Distribution
### Target Markets: Hospitality & Dwelling, Public Venue

To meet the needs of multi-dwelling, hospitality and public venues, Belden offers a tailored solution for terminating optical network terminals (ONTs) in the suite, breaking out signals and routing to the unit's data, voice, video and wireless.

### Wall Enclosures
Designed to house connectivity and provide cable routing options. Knockouts located in the bottom are designed to accommodate single or full-width AC power modules, mini and universal DC power supplies. Available in 14-, 21-, 28- and 42-inch sizes to suit your needs.
• Enclosure capable of housing different types of ONTs
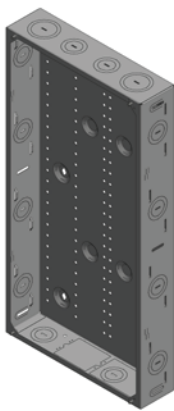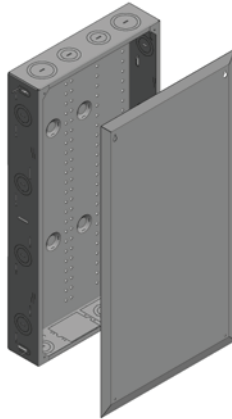


XRES2114    XRES2114FC

### Modules
• Coax Splitters
  - Passive: 1X2, 1X3
  - Active: 1X5, 1X9
• Input Distribution Panel: Allows voice split of 1-4 into 12 output lines. Includes security line as well.
• MoCA ready (1125-1675 MHz)
• Low output-to-output isolation in MoCA band
• Built-in PoE filter on input port
• All passive voice modem/eMTA port
• Return loss saver (RLS) technology
• Dual-color monitoring LED
• UL Listed for bonding
• Downstream unity gain
• Upstream unity gain
• Corrosion-resistant housing
• RoHS compliant



PPC-GHS-4E    PPC-9M-U/U

### Wall Enclosures

| Description | Belden Part Number |
|---|---|
| 14" Enclosure, 14.0" high x 14.38" wide x 3.63" deep | XRES1414 |
| 14" Vented Hinged Door | XRES1414VHD |
| 14" Screw on Flush Cover | XRES1414FC |
| 21" Enclosure, 21.0" high x 14.38" wide x 3.63" deep | XRES2114 |
| 21" Vented Hinged Door | XRES2114VHD |
| 21" Screw on Flush Cover | XRES2114FC |
| 28" Enclosure, 28.0" high x 14.38" wide x 3.63" deep | XRES2814 |
| 28" Vented Hinged Door | XRES2814VHD |
| 28" Screw on Flush Cover | XRES2814FC |
| 42" Enclosure, 42.0" high x 14.38" wide x 3.63" deep | XRES4214 |
| 42" Vented Hinged Door | XRES4214VHD |
| 42" Screw on Flush Cover | XRES4214FC |

### Brackets

| Description | Belden Part Number |
|---|---|
| Mini Cable Manager Bracket | XRESBR-007 |
| 90' front access | XRESBR-005 |
| Front acess, 21 POS | XRESBR-006 |
| PON box bracket | XRESBR-009 |

### Splitters

| Description | Belden Part Number |
|---|---|
| **Passive** | |
| 2-Way Digital Splitter, 1000 MHz | PPC-GHS-2E |
| 3-Way Digital Splitter, Unbalanced, 1000 MHz | PPC-GHS-3E |
| 4-Way Digital Splitter, 1000 MHz | PPC-GHS-4E |
| **Active** | |
| Entry, 5-output, 1002 MHz, Downstream Unity Gain, Upstream Unity Gain | PPC-5M-U/U |
| Entry, 5-output, 1002 MHz, Downstream Unity Gain, Upstream Unity Gain, w/Power Inserter | PPC-5M-U/UPI |
| Entry, 5-output, 1002 MHz, Downstream Unity Gain, Upstream Unity Gain, Power Supply w/built-in PI | PPC-5M-U/UPS |
| Entry, 9-output, 1002 MHz, Downstream Unity Gain, 0 db Loss Upstream | PPC-9M-U/U |
| Entry, 9-output, 1002 MHz, Downstream Unity Gain, 0 db Loss Upstream, w/Power Inserter | PPC-9M-U/UPI |
| Entry, 9-output, 1002 MHz, Downstream Unity Gain, 0db Loss Upsteam, Power Supply w/built-in PI | PPC-9M-U/UPS |

### Voice Splitter

| Description | Belden Part Number |
|---|---|
| 4 P In, 4-Pair 110 IDC Voice | AX107623 |

## Zone Enclosures

### Application Description

Ceiling-or floor-based zone connectivity replaces traditional homeruns to telecom rooms. Feeder category cables or pre-terminated cables are directed to a central distribution point in the zone where they interconnect to individual cable runs that fan out to each workstation outlet.

Zone connectivity provides a way to keep most cabling permanent and undisturbed while making moves, adds and changes (MACs) easier.

### Enclosures

### Versatile solution
• 7U Active Ceiling Enclosure
• 5U Passive Ceiling Enclosure
• 8U Active Ceiling Enclosure
• 8U Passive Ceilling Enclosure
• 2'x2' / 2'x4'
• Ceiling/floor
• Active/passive
• Removable door

### Robust
• UL 50/UL 1863/UL 2043
• Fire-rated sealing kit
• Plenum rated

Zone enclosures are compatible with other Belden products, including the REVConnect Pre-Load Patch Panel and Empty KeyConnect Patch Panel.

### Zone Enclosures

| Description | Part Class | Belden Part Number |
|---|---|---|
| **Raised-Floor Zone Enclosures** | | |
| 2U + 2U Passive Raised Floor Enclosure w/Rotating Brackets, 24"W x 24"H x 4.00"D | Passive | **XUFPE25254-S01** |
| 4U + 4U Passive Raised Floor Enclosure w/Rotating Brackets, 24"W x 24"H x 7.00"D | Passive | **XUFPE25257-S01** |
| 7U Active Raised Floor Enclosure w/Rotating Brackets, 24"W x 24"H x 12"D | Active | **XUFAE252512-S01** |
| 11U Passive Raised Floor Enclosure for Patch Panels, 24"W x 24"H x 12"D | Passive | **XUFPE252512-S01** |
| **Ceiling Zone Enclosures** | | |
| 7U Active Ceiling Enclosure w/NEMA Box-Access Ports, 24"W x 24"H x 12"D, White | Active | **XCAE242412-S01** |
| Cable Consolidation Ceiling Enclosure for Wiring Blocks, 24"W x 24"H x 12"D, White | Passive | **XCPE242412-S02** |
| 5U Passive Ceiling Enclosure with Equipment Bracket, 24"W x 24"H x 12"D, White | Passive | **XCPE242412-S01** |
| 8U Active Ceiling Enclosures w/NEMA Box, 4 Access Ports, 24"W x 48"H x 12"D, White | Active | **XCAE244812-S01** |
| 4U Passive Ceiling Enclosure, 4 Access Ports, 24"W x 48"H x 12"D, White | Passive | **XCPE244812-S01** |
| 8U Passive Ceiling Enclosure, 4 Access Ports, 24"W x 48"H x 12"D, White | Passive | **XCPE244812-S02** |
| **Zone Enclosures Accessories** | | |
| White Knob Replacement Non-Lock 1/4-Turn for A1222 & A1224 | Standard | **XLKS-1-S01** |
| Locking Door for Zone Floor Enclosures | Standard | **XLDES-S01** |
| Replacement Fan for the 2 X 2 Ceiling Active Zone Enclosures | Active | **XCAERF2X2-S01** |
| Replacement Fan for the 2 X 2 Ceiling Active Zone Enclosures | Active | **XCAERF2X4-S01** |

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# 2- and 4-Post Distribution Rack Systems
## Modular High-Density Racking System (HDRS) for network cross-connect

### Applications

These high-reliability products have been designed specifically for networking environments — from telecom closets to world-class data centers — to help you make the best use of valuable real estate and simplify MACs (moves, adds and changes).

The HDRS is a well-engineered cross connect and hosting platform that offers you a high level of versatility and flexibility in systems design for ultimate network density and manageability.

### How It Works

Create exactly the racking system you need from our selection of steel and aluminum distribution and server racks, combined with more than 50 standard cable management components and accessories. These items have been designed for complete compatibility and integration. The components include:

- Distribution and server racks in aluminum or steel; knockdown or welded; 2 or 4 posts
- Choice of low- or high-density vertical cable managers in single- or double-sided configurations
- High-density vertical manager half door allows easy cable access and hinging of the doors to both right and left side
- Horizontal cable managers with bend radius control and double-hinge cover
- **Accessories:** Retention Gates, Divider Bars, Transition Channels and more

### How to Order

Select any of the Distribution and Server Rack styles.

Select any of the Vertical Cable Managers listed for Distribution and Server Racks.

Choose any of the Accessories for the BHV Vertical Managers, Horizontal Managers or Transition Channels (**See pages 42–43** for Technical Specifications and Options Tables).



HDRS Modular High-Density Racking System
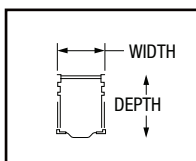


Single-Sided
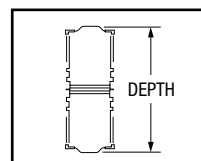


Double-Sided
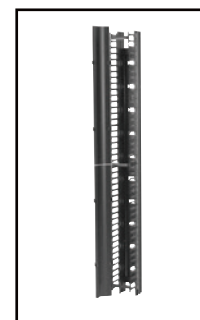


BHVH006*
High-Density, Single-Sided
Vertical Manager
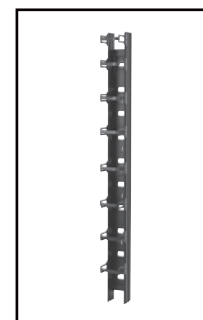


BHVL006*
Low-Density, Single-Sided
Vertical Manager



BHVHH06
High-Density, Double-Sided
Vertical Manager
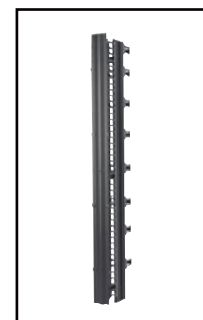


BHVHL06
High/Low-Density, Double-Sided Vertical Manager

*High- and low-density vertical manager shown here with optional back covers, BHBV06X.

### HDRS Vertical Manager Capacity

| Single-Sided Manager | | | | # of Cable 35% Fill | |
|---|---|---|---|---|---|
| High | Low | Width (in.) | Depth (in.) | Cat 6 0.250" dia. | Cat 6A 0.295" dia. |
| BHVH003 | BHVL003 | 3.6 | 9.40 | 194 | 126 |
| BHVH006 | BHVL006 | 6.0 | 9.40 | 321 | 209 |
| BHVH010 | BHVL010 | 10.0 | 9.40 | 535 | 348 |
| BHVH012 | BHVL012 | 12.0 | 9.40 | 642 | 417 |

| Double-Sided Manager | | | | # of Cable 35% Fill | |
|---|---|---|---|---|---|
| High/High | High/Low | Width (in.) | Depth (in.) | Cat 6 0.250" dia. | Cat 6A 0.295" dia. |
| BHVHH03 | BHVHL03 | 3.6 | 18.80 | 388 | 252 |
| BHVHH06 | BHVHL06 | 6.0 | 18.80 | 642 | 417 |
| BHVHH10 | BHVHL10 | 10.0 | 18.80 | 1070 | 696 |
| BHVHH12 | BHVHL12 | 12.0 | 18.80 | 1283 | 835 |

# BELDEN

## 2- and 4-Post Distribution Rack Systems (continued)
### High-Density Racking System Features
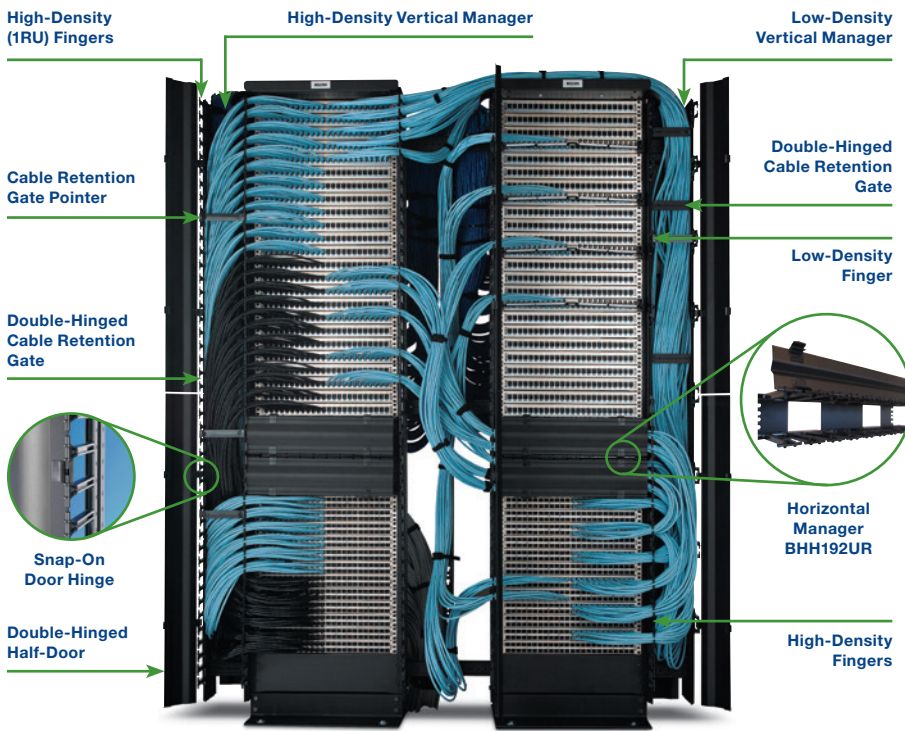
**High-Density (1RU) Fingers**

**High-Density Vertical Manager**

**Low-Density Vertical Manager**

**Cable Retention Gate Pointer**

**Double-Hinged Cable Retention Gate**

**Double-Hinged Cable Retention Gate**

**Low-Density Finger**

**Snap-On Door Hinge**

**Horizontal Manager BHH192UR**

**Double-Hinged Half-Door**

**High-Density Fingers**

### Vertical Manager Part Sets
- Includes a complete set of necessary components, including doors (on high-density managers), gates, push-in fasteners, cable strap mounts, cable retainer bars and mounting hardware

### Modular, Removable Finger Sections
- Available in high or low density, finger sections can be easily removed during reconfigurations and easily replaced as needed
- High-density 11RU sections easily screw into vertical managers and align with the rack units, eliminating horizontal managers

### System Scalability
- The HDRS is easily reconfigured and modified to handle future system growth, add-ons or changes

### Compatibility of Vertical Managers
- Compatible with any EIA-310-D compliant 2- and 4-post racks

### Mixed-Media Application
- Designed to handle both copper and optical fiber structured cable networks

### Accessory Mounting Holes
- 1/4" diameter mounting holes along length of each vertical manager enable easy attachment of accessories, like cable bundle fasteners

### Any-Point-to-Any-Point Routing Capability
- Cable can be easily routed from one patch panel to another within the same rack, to the back of the rack or to an adjacent rack while still maintaining proper cable bend radius

### Unmatched Density
- Designed to work seamlessly with Belden IBDN copper and fiber systems, cable management fingers align with rack RUs for easy routing of patch cords to vertical managers, eliminating the need for horizontal managers

### High Level of Modularity
- Enables ease of removal or reconfiguring Belden's wide selection of accessories and components
- Interchangeable cable retention gates, doors, fingers and accessories adapt to specific needs

### Easy Installation
- Only standard hand tools are required for quick installation and simple field reconfiguration and modification

### Great Aesthetics
- Professional flat-black finish is suitable for any world-class telecom environment
- Central office white color option allows for seamless integration where light-colored cabinets are used, improving visibility

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## 2- and 4-Post Distribution Rack Systems (continued)
### Suitable for single-rack to multi-rack high-density cross-connects

### Applications

Belden offers a complete line of open racks and rack accessories, from single-rack applications (retail, telecom closets) to high-density, multi-rack patching and switching fields (computer room, data centers, central offices). Belden's unique cable and connectivity expertise was central in the design of a feature-rich racking system that offers ease of installation, easy MACs and high levels of scalability.

### Rack Features: 2- and 4-Post

- EIA-310-D compliant, choice of 19" and 23" mounting
- Consult customer service for 23" rack and accessories (horizontal managers)
- Equipment mounting hardware is included
- 2-post rack uprights are front and rear tapped
- Easy rack unit identification for faster install
- Grounding stud standard on all 2-post and 4–post racks
- Steel or aluminum construction
- Seismic certified options
- Knockdown or welded construction
- 4-post racks are adjustable, providing for 28", 32" and 36" depths

### Color

- Black (standard)
- Central office white available on request

Zone 4 Seismic-Rated Distribution Rack Type XDRS
Part No. Shown: XDRS8419-610

### Dimensions

XDR8419-310 Rack (Steel)

XDR8419-3102836 Rack (Steel)

XDRS8419-610 Seismic Rack (Steel)

XDRS8419-610S02 Seismic Rack (Steel)
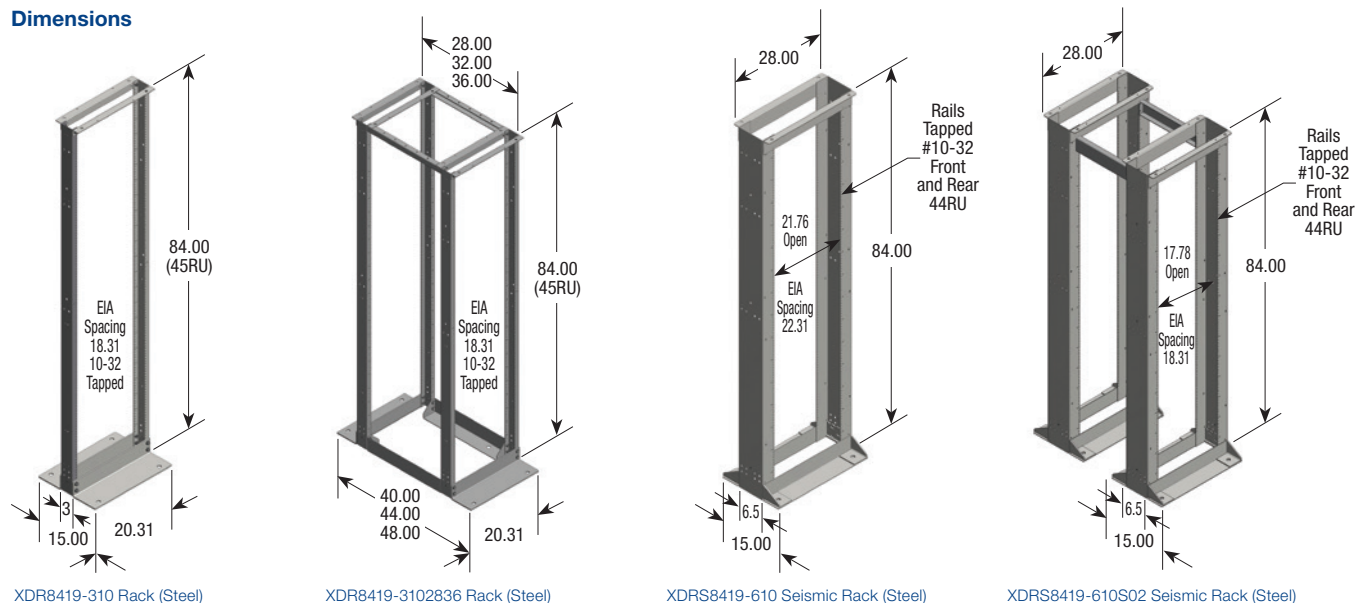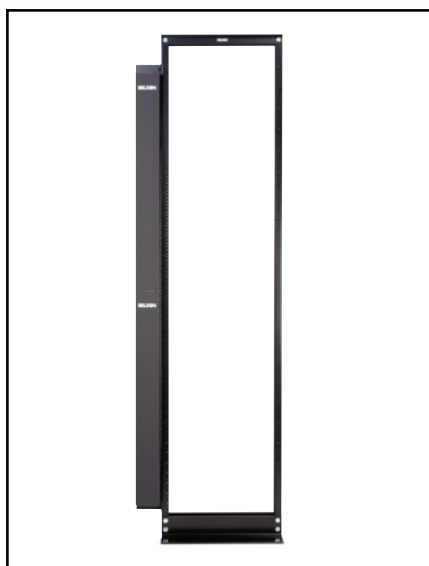
XDR8419-310N1M and XDR8419-312N1M



XDR8419-310N2M and XDR8419-312N2M

* Knockdown rack shipped not assembled, assembly hardware is included
** For EIA-23" mounting consult Belden customer service
*** 4-post seismic rack is made of two welded 2-post rack structures, linked with front to rear member, shipped unassembled
**** 4-post server rack is not compatible with vertical managers (see page 45)

## 2- and 4-Post Distribution Rack Systems (continued)
### Technical Specifications

### Ordering Information

| Description | Weight | Mounting** | Load Capacity | Height/Rack Spaces | Belden Part Number |
|---|---|---|---|---|---|
| **2-Post Distribution Racks — Steel — Knockdown*** | | | | | |
| #10-32 Tapped 3" Vertical Upright w/Angle Base | 63 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-310 |
| #12-24 Tapped 3" Vertical Upright w/Angle Base | 63 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-312 |
| Value Series Rack, #10-32 Tapped 3" Vertical Upright w/Angle Base | 63 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-310N |
| Value Series Rack, #12-24 Tapped 3" Vertical Upright w/Angle Base | 63 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-312N |
| **2-Post Distribution Racks Kit — Steel — Knockdown*** | | | | | |
| Value Series Rack Kit, #10-32 Tapped 3" Vertical Upright w/Angle Base, Includes One 4"x 4" Vertical Manager with Snap-On Cover (part # VCMFDR4X4) | 76 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-310N1M |
| Value Series Rack Kit, #10-32 Tapped 3" Vertical Upright w/Angle Base, Includes Two 4"x 4" Vertical Manager with Snap-On Cover (part # VCMFDR4X4) | 89 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-310N2M |
| Value Series Rack Kit, #12-24 Tapped 3" Vertical Upright w/Angle Base, Includes One 4"x 4" Vertical Manager with Snap-On Cover (part # VCMFDR4X4) | 76 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-312N1M |
| Value Series Rack Kit, #12-24 Tapped 3" Vertical Upright w/Angle Base, Includes Two 4"x 4" Vertical Manager with Snap-On Cover (part # VCMFDR4X4) | 89 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-312N2M |
| **2-Post Distribution Racks — Steel — Welded** | | | | | |
| #10-32 Tapped 3" Vertical Upright w/Angle Base – Welded | 66 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-310W |
| #12-24 Tapped 3" Vertical Upright w/Angle Base – Welded | 66 lbs | 19" | 1,000 lbs | 84"/45RU | XDR8419-312W |
| **2- and 4-Post Zone 4 Seismic Distribution Racks — Steel — Welded*** | | | | | |
| 2-Post Seismic Rack, #10-32 Tapped 6" Vertical Upright w/Angle Base | 105 lbs | 19" | 900 lbs | 84"/45RU | XDRS8419-610 |
| 4-Post Seismic Rack, 28" Deep, #10-32 Tapped 6" Vertical Upright w/Angle Base | 215 lbs | 19" | 900 lbs | 84"/45RU | XDRS8419-61028 |
| 4-Post Seismic Rack, 32" Deep, #10-32 Tapped 6" Vertical Upright w/Angle Base | 220 lbs | 19" | 900 lbs | 84"/45RU | XDRS8419-61032 |
| **2-Post Distribution Racks — Aluminum — Knockdown*** | | | | | |
| #12-24 Tapped, Black, Knockdown 3" Vertical Upright | 30 lbs | 19" | 1,200 lbs | 84"/45RU | BHRR194 |
| #12-24 Tapped, Black, Knockdown 6" Vertical Upright | 41 lbs | 19" | 1,200 lbs | 84"/45RU | BHRR6194 |
| **4-Post Distribution Racks — Steel — Knockdown*** | | | | | |
| 4-Post Rack with Adjustable Depth 28"-32"-36", #10-32 Tapped 3" Vertical Upright w/Angle Base | 115 lbs | 19" | 1,500 lbs | 84"/45RU | XDR8419-3102836 |
| 4-Post Rack with Adjustable Depth 28"-32"-36", #12-24 Tapped 3" Vertical Upright w/Angle Base | 115 lbs | 19" | 1,500 lbs | 84"/45RU | XDR8419-3122836 |
| 4-Post RAck with Adjustable Depth 28"-32"-36", M6 Cage Nut 3" Vetical Upright w/Angle Base | 115 lbs | 19" | 1,500 lbs | 84"/45RU | XNR8419CM62836 |
| **4-Post Server Rack — Steel — Welded**** | | | | | |
| XHM Series Black Frame with (4) Ajustable Mounting Rails, Square Hole Type with 6 mm Mounting Hardware Included. Frame Size 24"W x 42"D x 85.6"H (45RU), Includes Levelers and Casters | 240 lbs | 19" | 2,000 lbs | 85"/45RU | X3M45-1-100000 |

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# 2- and 4-Post Distribution Rack Managers and Accessories

## Ordering Information

| Description | Belden Part Number |
|---|---|
| **Vertical Cable Managers** | |
| Value Vertical Manager with Snap-On Cover 4"W x 4"D x 84"H, Black | VCMFDR4X4 |
| Single-Sided High-Density Vertical Manager w/Doors, 3 5/8"W x 84"H, Black | BHVH003 |
| Single-Sided High-Density Vertical Manager w/Doors, 6"W x 84"H, Black | BHVH006 |
| Single-Sided High-Density Vertical Manager w/Doors, 10"W x 84"H, Black | BHVH010 |
| Single-Sided High-Density Vertical Manager w/Doors, 12"W x 84"H, Black | BHVH012 |
| Single-Sided Low-Density Vertical Manager w/o Doors, 3 5/8"W x 84"H, Black | BHVL003 |
| Single-Sided Low-Density Vertical Manager w/o Doors, 6"W x 84"H, Black | BHVL006 |
| Single-Sided Low-Density Vertical Manager w/o Doors, 10"W x 84"H, Black | BHVL010 |
| Single-Sided Low-Density Vertical Manager w/o Doors, 12"W x 84"H, Black | BHVL012 |
| Double-Sided High-Density Vertical Managers w/Doors, 3 5/8"W x 84"H, Black | BHVHH03 |
| Double-Sided High-Density Vertical Managers w/Doors, 6"W x 84"H, Black | BHVHH06 |
| Double-Sided High-Density Vertical Managers w/Doors, 10"W x 84"H, Black | BHVHH10 |
| Double-Sided High-Density Vertical Managers w/Doors, 12"W x 84"H, Black | BHVHH12 |
| High/Low-Density Vertical Manager w/Front Door, 3 5/8"W x 84"H, Black | BHVHL03 |
| High/Low-Density Vertical Manager w/Front Door, 6"W x 84"H, Black | BHVHL06 |
| High/Low-Density Vertical Manager w/Front Door, 10"W x 84"H, Black | BHVHL10 |
| High/Low-Density Vertical Manager w/Front Door, 12"W x 84"H, Black | BHVHL12 |
| **Accessories for BHV Vertical Managers** | |
| 3 5/8"W, Black, Vertical Manager Backcover | BHBC03X |
| 6"W, Black, Vertical Manager Backcover | BHBC06X |
| 10"W, Black, Vertical Manager Backcover | BHBC10X |
| 12"W, Black, Vertical Manager Backcover | BHBC12X |
| 3 5/8"W, Black, Vertical Manager Doors (1 pr) | BHDK03X |
| 6"W, Black, Vertical Manager Doors (1 pr) | BHDK06X |
| 10"W, Black, Vertical Manager Doors (1 pr) | BHDK10X |
| 12"W, Black, Vertical Manager Doors (1 pr) | BHDK12X |
| Slack Management Spool Kit, Black | BHSK020 |
| Slack Management Spools (2), Black | BHSP020 |
| Gate Kit, 3 5/8"W, Black | BHGL03X |
| Gate Kit, 6"W, Black | BHGL06X |
| Gate Kit, 10"W, Black | BHGL10X |
| Gate Kit, 12"W, Black | BHGL12X |
| Retention Gate (6) 3 5/8"W, Black | BHGR03X |
| Retention Gate (6) 6"W, Black | BHGR06X |
| Retention Gate (6) 10"W, Black | BHGR10X |
| Retention Gate (6) 12"W, Black | BHGR12X |
| Finger Section, 11U, Black | BHFS11U |
| Rack-Mount Finger Bracket, 11U, Black | BHFB11U |
| Divider Bar, 3 5/8"W, Black | BHDB03X |
| Divider Bar, 6"W, Black | BHDB06X |
| Divider Bar, 10"W, Black | BHDB10X |
| Divider Bar, 12"W, Black | BHDB12X |
| Fastener for Vertical Manager (100) | BHPF100 |
| Tie Mount for Vertical Manager (100) | BHSM100 |
| **Horizontal Manager with Cover** | |
| 19"W x 1RU, Black | BHH191UR |
| 19"W x 2RU, Black | BHH192UR |
| 19"W x 3RU, Black | BHH193UR |
| 19"W x 4RU, Black | BHH194UR |
| 1RU, Rack-Mount, Finger Duct Manager 3.0"H x 3.0"D Deep with Cover | 9512-1901 |
| 2RU, Rack-Mount, Finger Duct Manager 3.0"H x 3.0"D Deep with Cover | 9512-1902N |
| **Transition Channel** (Top transition channels are only compatible with knockdown racks) | |
| Top Transition Channel, 19"W x 6"D x Y"H, Black | BHTT196 |
| Top Transition Channel High-Density, 19"W x 6"D x 6"H, Black | BHTTH196 |
| Lower Transition Channel, 19"W x 6"D x 1.75"H, Black | BHTL196 |
| Lower Transition Channel Double, 19"W x 6"D x 3.5"H, Black | BHTD196 |
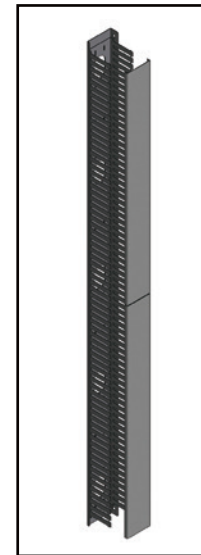


VCMFDR4X4
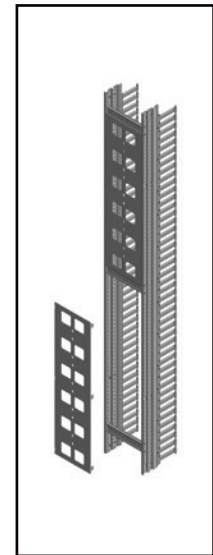


BHBC10X
(Vertical manager not included)



9512-1902N
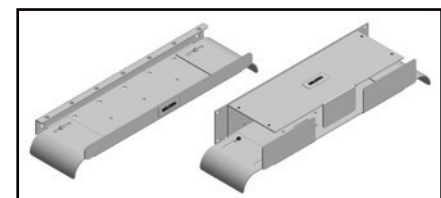


BHTT196 and BHTD196



BHH192UC Horizontal Manager

# BELDEN
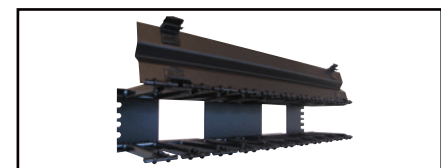
## XWR and XWB Series — Wall-Mount Racks
### Hinged and swing-out for rear access in tight spaces

Wall-Mount Racks are available in two styles: hinged and swing-out. The hinged rack is 12" in height and features an adjustable lower shelf (adjusts 2" to 6"). The swing-out rack is available in heights of 36" and 48" with 19" mounting rails. 2RU, 4RU and 6RU Wall-Mount Brackets are also offered for mounting a limited number of components or pieces of equipment.
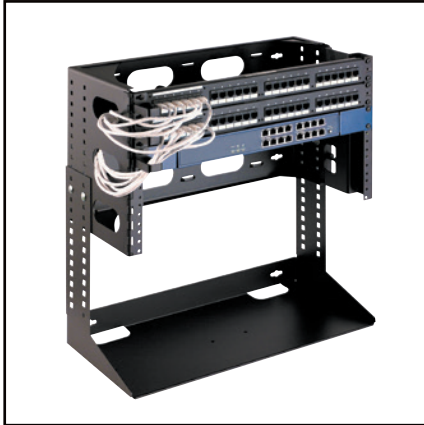
XWR-1219 Wall-Mount Rack in Hinged Style
(shown in closed position with equipment mounted)

XWR-3619-18 Swing-Out Style Wall-Mount Rack
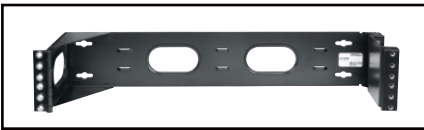
XWB-2U 2RU Wall-Mount Bracket
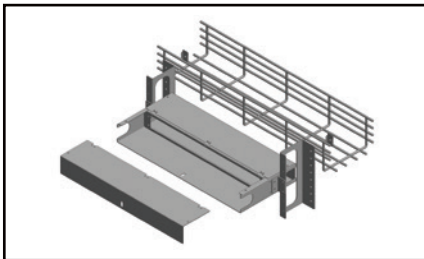
XPE-S0001 1RU rack attach to basket tray
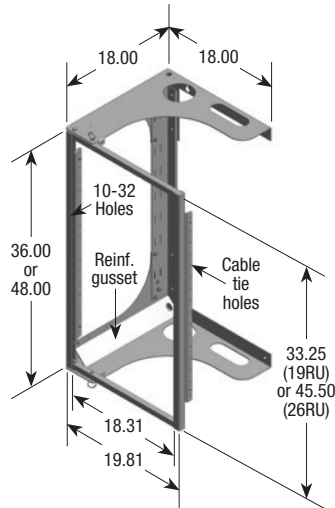
Heavy-Duty XWR Swing-Out Style Wall-Mount Rack
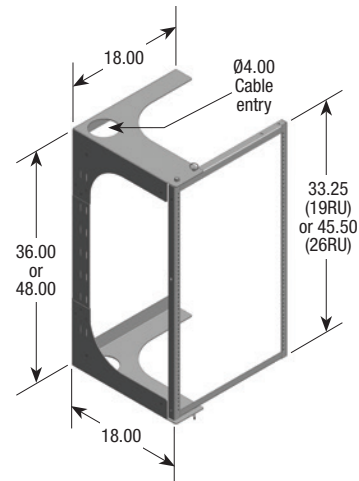
XWR Swing-out Style Wall-Mount Rack

## Ordering Information

| Description | H | W | D | Weight | Mounting | Load Capacity | Rack Spaces | Belden Part Number |
|---|---|---|---|---|---|---|---|---|
| **Wall-Mount Racks** | | | | | | | | |
| Standard Swing-Out Rack: 36" Wall-Mount Rack with 19" Mounting Rails | 36" | 19.75" | 18" | 30 lbs | 19" | 100 lbs | 19RU | **XWR-3619-18** |
| Heavy Swing-Out Rack: 36" Wall-Mount Rack with 19" Mounting Rails | 36" | 19.75" | 18" | 35 lbs | 19" | 200 lbs | 19RU | **XWR-3619-18HD** |
| Standard Swing-Out Rack: 48" Wall-Mount Rack with 19" Mounting Rails | 48" | 19.75" | 18" | 39 lbs | 19" | 100 lbs | 26RU | **XWR-4819-18** |
| Heavy-Duty Swing-Out Rack: 48" Wall-Mount Rack with 19" Mounting Rails | 48" | 19.75" | 18" | 40 lbs | 19" | 200 lbs | 26RU | **XWR-4819-18HD** |
| Hinged Rack: 12" Wall-Mount Rack, Hinged, 19" Mounting Rails, Adjustable Lower Shelf 2"–11" to Accomodate Equipment Space | 10.9" | 19.5" | 9.5" | 26 lbs | 19" | 50 lbs | 6RU | **XWR-1219** |
| **Wall-Mount Brackets** | | | | | | | | |
| 2RU Wall-Mount Bracket, Black | 3.5" | 19" | 8" | 4 lbs | 19" | 50 lbs | 2RU | **XWB-2U** |
| 4RU Wall-Mount Bracket, Black | 7.0" | 19" | 8" | 8 lbs | 19" | 50 lbs | 4RU | **XWB-4U** |
| 6RU Wall-Mount Bracket, Black | 10.50" | 19" | 8" | 10 lbs | 19" | 50 lbs | 6RU | **XWB-6U** |
| 1RU rack, includes basket tray attachment hardware | 2.0" | 19" | N/A | 12 lbs | 19" | 20 lbs | 1RU | **XPE-S0001** |

# Faster.
# Easier.
# Better.

## XSW Series — Swing Rack
### Free standing swing-out rack used where space is limited

The Swing Rack provides easy access to the rear of rack-mounted equipment in a free standing environment. It is ideal for applications where space is limited and rear access is essential.

• Rack can be assembled as a left or right hinge and open 90º
• Rack can be positioned as close as 7" from wall
• Equipment up to 18.5" deep can be pivoted
• Cable management allows for cable routing without interference of the swing rack
• Racks can be bolted side-to-side
• Friction lock prevents rack movement while servicing



XSW Top View



Optional Basket

XSW-8419 Swing Rack (shown with equipment mounted)
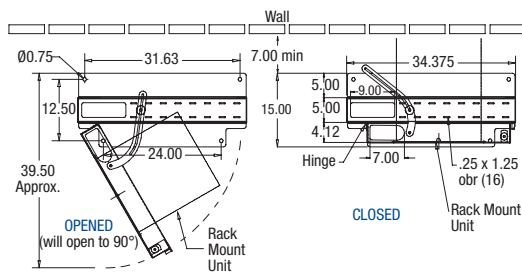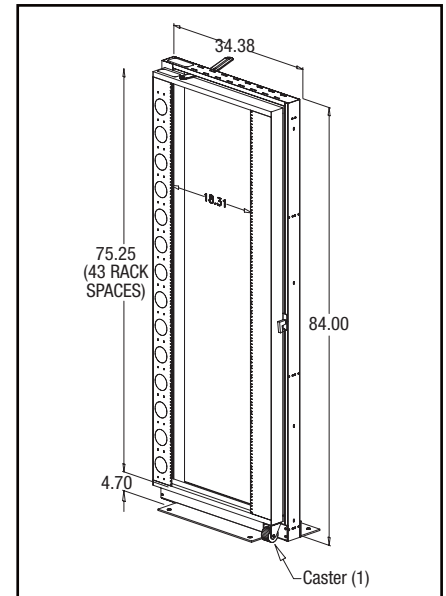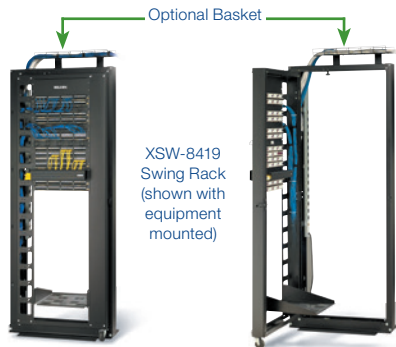


XSW Front View

## Ordering Information

| Description | Weight | Mounting | Load Capacity | Rack Spaces | Belden Part Number |
|---|---|---|---|---|---|
| **Swing Racks** | | | | | |
| 84" Swing-Out Distribution Rack | 179 lbs | 19" | 500 lbs | 34RU | **XSW-8419** |
| **Accessories** (Sold Separately) | | | | | |
| Top Mounting Wire Basket | — | — | — | — | **XSW-0200** |
| Power Strip Mounting Kit | — | — | — | — | **XSW-0100** |

# BELDEN

# Broadcast Racks and Cabinets

## Engineered for Performance and Ease of Installation for Broadcast, AV, Security, Head-End and Mobile Telecom Applications

Belden has designed its broadcast, AV and security rack/cabinet series using the same top-quality and user-friendly principles that go into all of our market-leading solutions. These uncompromisingly strong and well-built structures are combined with component features that optimize cable performance and provide extraordinary flexibility in cable management. These features provide a unique approach to equipment housing and storage needs.

The following pages detail the breadth of our rack/cabinet offering for the entertainment, security and broadcast industries. In addition, Belden offers a complete array of shelves for 19" mount racks and cabinets, including cantilevered, 4-point mount, sliding and keyboard-type shelves.

Belden offers four series of **high-quality racks and cabinets** for your unique entertainment, security, head-end and mobile telecom applications.

## Advantages of Belden Broadcast Rack and Cabinet Series

### Construction
• Welded frame construction for greater strength and structural integrity is standard on all broadcast racks and cabinets

### Accessories
• A full complement of accessories will outfit your cabinets with the needed mounting, shelving, work surface and cable management support

### Ease of Installation
• EIA rails are marked with rack space increments for ease of equipment mounting

### Cable Management
• Numerous top and bottom entry points simplify cabling
• The rounded, steel-formed cable tie bar (Photo A) reduces pressure points
• The multiple attachment points for our Quick Mount System — or nylon ties along the mounting rails, rail supports and cable tie bar (Photos B and C) — provide the utmost flexibility in cable routing and lacing
• The Quick Mount System (Photo D) is comprised of a unique swivel base and base fastener. Velcro ties are easily threaded through the fastener base, allowing the cable bundles to be secured to the rack. The system's swivel base allows for a 90° angle between the cable bundle and the cable tie to allow pressure distribution along the cables

### Aesthetics
• Powder-coating process provides a textured black finish for a highly resistant, high-end look that showcases your equipment
• Aesthetics can be tailored to your requirements with a variety of doors, panels and customized silk-screening options

### Temperature Control
• Perforated and vented doors, along with a variety of top panel options, provide flexible cooling options

### Power Distribution
• A complete line of Belden power distribution units, including rack-mount and vertical-mount options, can be found on <span style="background:yellow">**pages 67–76**</span>
• Grounding studs allow for integral grounding of cabinets and accessories

### Seismic Rating
• XME and XMER Series include NEBS seismic ratings when anchored with optional seismic anchor bracket kit

The cabinet shown here is the XMER Style (Media Cabinet)

Photo A

Photo C

Photo B

Photo D

Broadcast Racks and Cabinets

Broadcast Racks and Cabinets
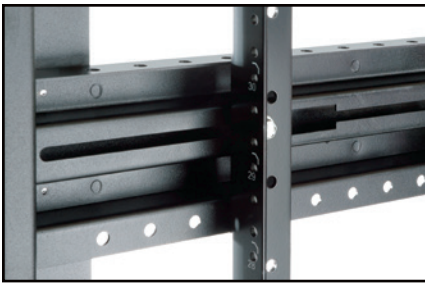

EIA Rail Kits


Side Panels



Solid

Vented

10" Fan

(4) 4" Fan

Top Panels



Solid    Vented    Tempered Glass    Perforated
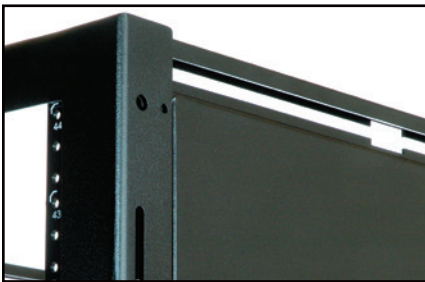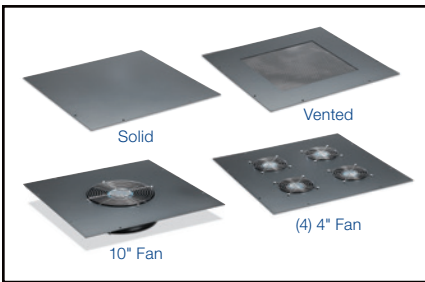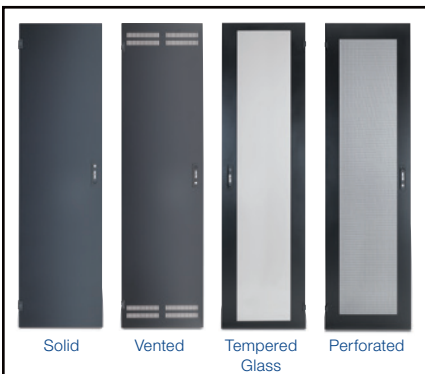
Doors

## Advantages of Belden Broadcast Rack and Cabinet Series (continued)
### Features and Benefits

**EIA Rail Kits**
- Rails are made of 12-gauge steel (XSF uses 16-gauge steel)
- Use standard EIA-310 hole-pattern (10-32 or 12-24 tapped holes)
- Fully adjustable depth; designed to be moved without need to remove rail support hardware
- Mounting hardware supplied with rack
- A series of lacing holes along the rails allow for the easy attachment of cables. Holes are also compatible with our Quick Mount fasteners
- RU marking on all rails facilitates equipment mounting
- RU marks are hidden once the equipment is mounted

**Side Panels**
- The tool-less, surface-mounted side panels are quick and easy to install
- Flush version side panels (available only on the XMF Series) can be installed in between joined racks (heat barrier) or end-of-row units without any additional floorspace requirements
- Panels can be used to transform a rack into a free standing cabinet or to close a row on ganged racks (enhancing the installed look and providing added security)
- Feature lifting handles for easy panel removal

**Top Panels**
- Solid tops prevent dust from entering the cabinet
- Vented tops allow for convection cooling
- Solid top with 10" (550 CFM) fan for forced hot air evacuation
- Solid top with four 4" (320 CFM), low-noise fans for forced hot air evacuation

**Doors**
- Rugged and rigid construction
- Doors mounted with lift-off hinges are capable of 180° swing, even when cabinets are ganged
- Door swing is field reversible
- Glass door uses anti-static tempered glass, allowing easy cleaning, rigidity and high-end look
- Perforated door features 63% mesh opening allowing for minimal air resistance for optimized cooling



- High-quality swing latch includes locking mechanism

**Side Cable Chase**
(Available on XMER Series)
- Adds 4" of valuable cable management space
- Can be mounted to the side of the cabinet and is compatible with the side panels — or can be mounted in between the cabinets to share cable management space





**Base**
- 4" riser base allows for easy cable routing from rack to rack
- Available in XMF Series: gangable 1-, 2- and 3-bay bases with easy-to-use anchoring holes
- Series of mounting holes allow rack to be secured using common nuts and bolts
- Feature power outlet mounting openings with cover plate
- Includes mounting hardware and grounding stud
- Multi-rack riser bases to meet your specific space requirements (length, height) are available on custom basis

**Recessed Caster Base**
- Allows for easy positioning of the rack
- Installs directly to bottom flanges of cabinet
- Recessed casters allow the leveling legs to be lowered when the cabinet is in position and raises the casters off the floor
- Includes hardware
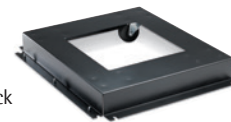


**Rack-Mount Drawer**
- Convenient sliding storage drawers
- 16" deep with lock
- Available in four heights



**Front-Mount Work Surface**
- Provides a convenient work surface
- 16" deep, single-bay (22") and double-bay (44") width

## Advantages of Belden Broadcast Rack and Cabinet Series (continued)
### Features and Benefits

### Vertical Lacing Bar
- 1" wide vertical lacing bar is supplied with mounting hardware
- Mounts to the rail supports; fully adjustable depth
- Series of lacing holes are compatible with Belden Quick Mount fasteners to provide flexibility in cable routing

### Grounding Provision
- Belden racks are provisioned with grounding studs, enabling integral grounding of rack and accessories
- The copper vertical ground bar mounts to the rack support
- Fully adjustable depth
- Bar is 3/4" wide x 1/8" thick

### Vertical Lacing Panel
- Mounts to the rail support
- Fully adjustable depth
- Panel is 3" wide and features multiple lacing points
- Ideal for attaching cable bundle

### Quick Mount Fasteners
- Velcro hook and loop with cable tie mount and fasteners provide a quick, flexible way to route the cable bundle within the rack
- Racks are designed with multiple attachment holes (rails, rail supports) for flexibility, ease of installation and cable integrity protection

### Power Distribution Units
- Extensive offering
- Includes monitored and IP-based smart PDUs
- Climate monitoring option available

(**See page 76**)

### Shelves
- Broad selection for 19" mount racks and cabinets
- Cantilevered, 4-point mounted, sliding and keyboard styles

(**See page 62**)

### Belden Broadcast Rack and Cabinet Series Comparison Chart

pg. 50    pg. 52    pg. 55    pg. 58

| Specifications | | XSF | XMF | XME | XMER |
|---|---|---|---|---|---|
| **Application** | | Broadcast, Mobile Telecom, Space Optimization | Broadcast | Broadcast, AV, Security | Broadcast, AV, Security, Head End |
| **Style** | | Rack Gangable | Rack/Cabinet Stand-Alone or Gangable | Cabinet with Fixed Side Panels Stand-Alone or Gangable | Rack/Cabinet Stand-Alone or Gangable |
| **Dimensions:** | Height | 20.5"–87" (10–48RU) | 22.25"–103" (11–57RU) | 48.87"–83.87" (24–44RU) | 48.87"–83.87" (24–44RU) |
| | Width | 19.19" | 22" | 22" | 22" |
| | Depth | 18", 24" or 30" | 24", 30", 36" or 40" | 20" or 26.5" | 26.5", 31.5" or 36" |
| **Frame Construction (Fully Welded)** | | 11-Gauge Steel | 11- and 14-Gauge Steel | 16-Gauge Steel | 14- and 16-Gauge Steel |
| **Front and Rear Mounting Rails** | | Yes: Tapped Corner Posts, (fixed front), Adjustable Rear Rails (5/8" increments) | Yes Fully Adjustable | Yes Fully Adjustable | Yes Fully Adjustable |
| **EIA-310 Compliant** | | Yes (#10-32 or 12-24 tapped) | Yes (#10-32 or 12-24 tapped) | Yes (#10-32 tapped) | Yes (#10-32 tapped) |
| **Door Options:** | Reversible Front and Rear Doors | No | Yes | Yes | Yes |
| | Solid, Perforated or Tempered Glass | — | Solid or Vented | Yes | Yes |
| **Top Options** | | No | Solid, Vented, Forced Air Fan | Solid, Vented, Forced Air Fan | Solid, Vented, Forced Air Fan |
| **Side Panel Options:** | Removable | No | Yes | No: Fixed | Yes |
| | Panel Style | — | Flush or Surface-Mount | Built-In Frame | Surface-Mount |
| **Shelves** (Solid, Vented and Keyboard) | | Yes | Yes | Yes | Yes |
| **Caster Base Option** | | No | Yes | Yes | Yes |
| **Power Strip Mounting Provision** | | Yes | Yes | Yes | Yes |
| **Cable Management Tie Bar** | | No | Yes, Optional | No | Yes, Optional |

Broadcast Racks and Cabinets

# BELDEN

## XSF Series — Slim Frame
Light and customizable frames for broadcast trucks and mobile telecom
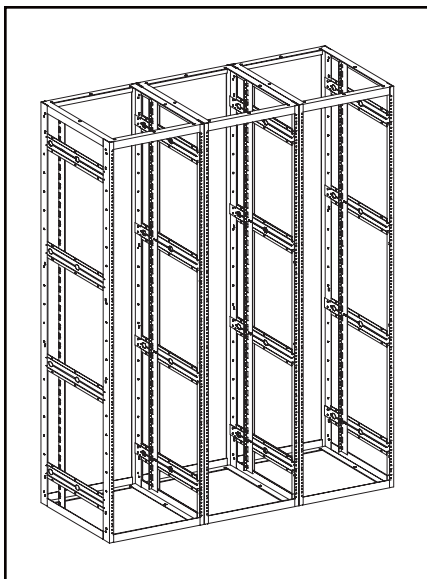
XSF Series Racks in ganged arrangement

### Applications

The ultra-slim XSF frame has been designed to minimize the footprint for installation and use in mobile TV trucks. The narrow 19.19" width will accommodate standard 19" mount equipment. The frames gain strength when ganged together in a series.

### Design and Structural Features

- Available in 14 heights and 3 depths
- 11-gauge steel, one-piece formed top and bottom; 11-gauge steel formed vertical corner posts
    - 20.5" (10RU) to 87" (48RU) Height x 19.19" Wide x 18", 24" or 30" Deep
- Optional aluminum, weight-saving version available on request
- Front corner post contains EIA-310 hole pattern: 10-32 or 12-24 tapped
- Rail support channels are 16-gauge steel, riveted and welded in place

### Ease of Installation

- One pair, 16-gauge steel EIA rails, moveable front to rear in 0.62" increments
- Each frame is supplied with 10-32 or 12-24 clip nuts for attaching equipment to the rails
- Holes in side flanges of each corner post are available for ganging purposes
- Open bottom with hole pattern to bolt frame to floor; captive grounding studs in bottom sills

### Color

- Black durable powder coat

18", 24" or 30"

19.19"

Part No. shown here: XSF473010000
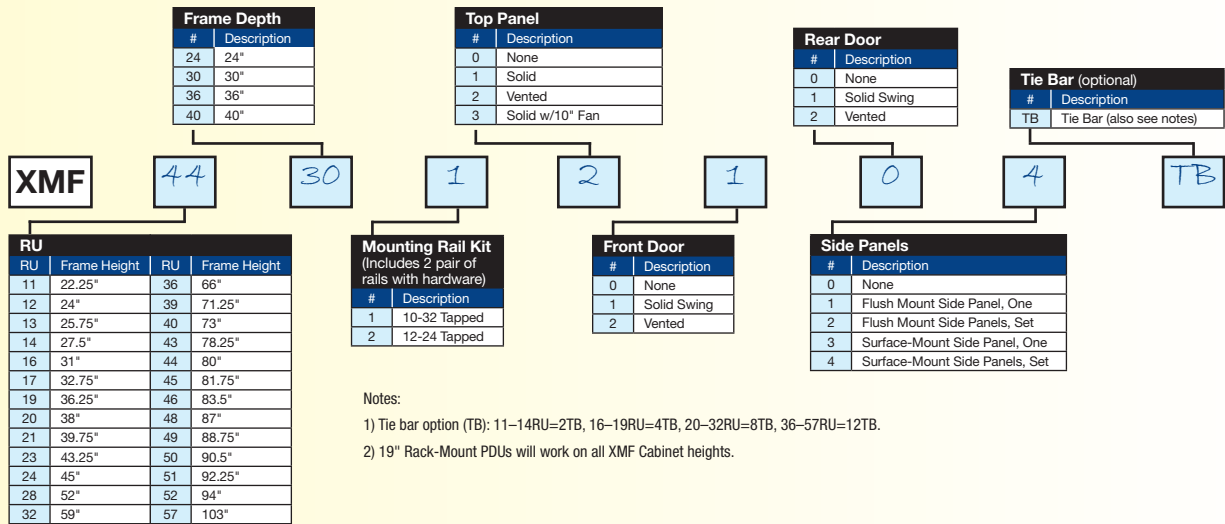(47RU H x 19.19"W x 30"D)

Broadcast Racks and Cabinets

## Ordering Matrix for XSF Series

Part number example:

**XSF282410000**

XSF Cabinet, 28RU, 24" depth, with 10-32 tapped frame,
no top panel, no rear panel, and no side panels.

**Frame Depth**

| # | Description |
|----|-------------|
| 18 | 18" |
| 24 | 24" |
| 30 | 30" |

**Top Panel**

| # | Description |
|---|-------------|
| 0 | None |

**Side Panels**

| # | Description |
|---|-------------|
| 0 | None |

XSF — 28 — 24 — 10 — 0 — 0 — 0

**Frame Height**

| # | Description |
|----|-------------|
| 10 | 20.5" |
| 11 | 22.25" |
| 14 | 27.5" |
| 19 | 36.25" |
| 28 | 52" |
| 29 | 53.75" |
| 31 | 57.25" |
| 34 | 62.5" |
| 39 | 71.25" |
| 42 | 76.5" |
| 44 | 80" |
| 46 | 83.5" |
| 47 | 85.25" |
| 48 | 87" |

**Mounting Rail Kit**
(Includes 1 pair of rails
with hardware)

| # | Description |
|----|-------------|
| 10 | 10-32 Clip Nuts |
| 12 | 12-24 Clip Nuts |

**Rear Panel**

| # | Description |
|---|-------------|
| 0 | None |

Note:

1) 19" Rack-Mount PDUs will work on all XSF Cabinet heights.

Broadcast Racks and Cabinets

## XSF Series — Options and Accessories

**EIA Rail Kit – 1 Pair**
Includes mounting hardware.

XSF — [ ] — CN — [ ]

| Rail Height (RU) | |
|---|---|
| Refer to RU in Frame Height Chart (above) | |

**Tapped Style**

| 10 | 10-32 Clip Nuts |
|----|-----------------|
| 12 | 12-24 Clip Nuts |
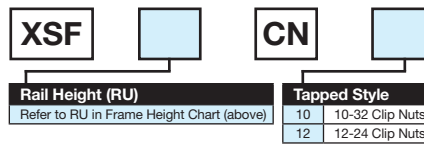
EIA Rail Kit – 1 pair with hardware

| Description | Belden Part Number |
|-------------|--------------------|
| **Other Accessories** | |
| **Lacing Accessories** | |
| Quick Mount with Fastener, 10 Pieces | **XMFCTM** |

# BELDEN

## XMF Series - Media Frame
Flexible cable management in a narrow frame for broadcast studios



Part No. shown here: XMF4424100000TB
(44RU H x 22" W x 24" D)



24", 30"
36" or 40"

22"

Part No. shown here: XMF4424102140
(44RU H x 22" W x 24" D)

### Cable Management
- Numerous lacing points on two surfaces of each rail support
- Cable tie holes span entire length of EIA rail on the attachment flange (spaced at 1.75")
- Unique cable tie bar is made of formed steel to eliminate sharp edges; provides multiple attachment points; features cable bend radius control and lacing holes; factory mounted when tie bar option is selected

### Design and Structural Features
- Available in 26 heights and 4 depths for versatility in designing studios or production facilities
- 11-gauge steel corner posts; 11-gauge formed top and bottom members; 14-gauge formed rail supports
    - 22.25" (11RU) to 103" (57RU) Height x 22" Wide x 24", 30", 36" or 40" Deep
- (4) 12-gauge EIA mounting rails (10-32 or 12-24 tapped)
- Frame is provisioned to accept optional front and rear doors, side and top panels
- **Reversible Doors:** Surface-Mount solid, 16-gauge doors or top and bottom vented styles
- **Side Panel:** Solid, 16-gauge flush side panel or 1-piece formed Surface-Mount panel; Surface-Mount panels add 1/2" per side to overall width
- **Top Panel:** Solid, vented or with 10" fan
- **Vertical Spacing Panel:** Easy-to-install; 2.75", 3.66", 4.40" and 5.50" widths; 11RU–57RU heights
- **Riser Base:** 4" height, 1-3 bays; fully welded, gangable; power outlet openings with covers; anchoring holes supplied to ease installation
- **Caster Base:** Recessed; 20", 30", 36" and 40" depths; adds 2.5" to frame height; caster bases install directly to bottom flanges of cabinets; casters are recessed, enabling leveling legs to be lowered when cabinet is in position, allowing the casters to be raised off the floor
- **Rack–Mount Drawers:** 16" deep sliding storage drawers with lock; available in four heights; mount on EIA rails (mounting hardware included); compatible with all 19" mount racks

### Ease of Installation
- Frame is provisioned for attaching a tool-less, formed Surface-Mount side panel or a flat, flush panel; flush side can be installed between joined cabinets without any additional floorspace
- Vertical spacing panels add cable management space between racks; includes two panels with attachment studs; panel features lifting handles
- Open top with optional configurable panels
- Open bottom with hole pattern to bolt frame to floor or a raised base; captive grounding studs in bottom sills
- Ganging can be done after equipment is placed in rack

### Color
- Black durable powder coat

### Static Load Capacity
- 1,000 lbs.

# Faster.
# Easier.
# Better.

## Ordering Matrix for XMF Series

**Part number example:**

**XMF443012104TB**

XMF Cabinet, 44RU height, 30" depth, with 10-32 tapped frame, vented top panel, solid swing front door, no rear door, set of surface-mount side panels, no power strip, tie bar.
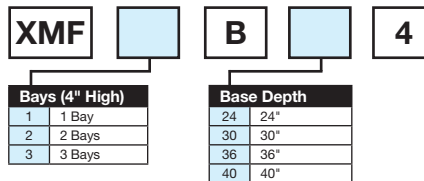
### Frame Depth

| #  | Description |
|----|-------------|
| 24 | 24"         |
| 30 | 30"         |
| 36 | 36"         |
| 40 | 40"         |

### Top Panel

| # | Description      |
|---|------------------|
| 0 | None             |
| 1 | Solid            |
| 2 | Vented           |
| 3 | Solid w/10" Fan  |

### Rear Door

| # | Description  |
|---|--------------|
| 0 | None         |
| 1 | Solid Swing  |
| 2 | Vented       |

### Tie Bar (optional)

| #  | Description              |
|----|--------------------------|
| TB | Tie Bar (also see notes) |

**XMF**  **44**  **30**  **1**  **2**  **1**  **0**  **4**  **TB**

### RU

| RU | Frame Height | RU | Frame Height |
|----|--------------|----|--------------|
| 11 | 22.25"       | 36 | 66"          |
| 12 | 24"          | 39 | 71.25"       |
| 13 | 25.75"       | 40 | 73"          |
| 14 | 27.5"        | 43 | 78.25"       |
| 16 | 31"          | 44 | 80"          |
| 17 | 32.75"       | 45 | 81.75"       |
| 19 | 36.25"       | 46 | 83.5"        |
| 20 | 38"          | 48 | 87"          |
| 21 | 39.75"       | 49 | 88.75"       |
| 23 | 43.25"       | 50 | 90.5"        |
| 24 | 45"          | 51 | 92.25"       |
| 28 | 52"          | 52 | 94"          |
| 32 | 59"          | 57 | 103"         |

### Mounting Rail Kit
(Includes 2 pair of rails with hardware)

| # | Description  |
|---|--------------|
| 1 | 10-32 Tapped |
| 2 | 12-24 Tapped |

### Front Door

| # | Description |
|---|-------------|
| 0 | None        |
| 1 | Solid Swing |
| 2 | Vented      |

### Side Panels

| # | Description                     |
|---|---------------------------------|
| 0 | None                            |
| 1 | Flush Mount Side Panel, One     |
| 2 | Flush Mount Side Panels, Set    |
| 3 | Surface-Mount Side Panel, One   |
| 4 | Surface-Mount Side Panels, Set  |

Notes:

1) Tie bar option (TB): 11–14RU=2TB, 16–19RU=4TB, 20–32RU=8TB, 36–57RU=12TB.

2) 19" Rack-Mount PDUs will work on all XMF Cabinet heights.

## XMF Series — Options and Accessories

Refer to RU and FRAME DEPTH charts (above).

### Top Panel Options

**XMF22**  ☐  **TP**  ☐

#### Panel Depth

| 24 | 24" |
|----|-----|
| 30 | 30" |
| 36 | 36" |
| 40 | 40" |

#### Panel Style

| 1 | Solid   |
|---|---------|
| 2 | Vented  |
| 3 | 10" Fan |

Top Panel Options: Solid, 10" Fan, Vented

### Base Options

**XMF**  ☐  **B**  ☐  **4**

#### Bays (4" High)

| 1 | 1 Bay  |
|---|--------|
| 2 | 2 Bays |
| 3 | 3 Bays |

#### Base Depth

| 24 | 24" |
|----|-----|
| 30 | 30" |
| 36 | 36" |
| 40 | 40" |

### Recessed Caster Base
Use of caster base adds 2.5" to cabinet height.

**XMF22**  ☐  **CB**

#### Base Depth

| 24 | 24" |
|----|-----|
| 30 | 30" |
| 36 | 36" |
| 40 | 40" |
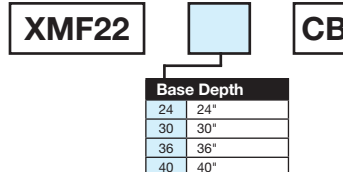
Base Options: 1 Bay, 2 Bays, 3 Bays and Recessed Caster Base

## XMF Series — Options and Accessories (continued)

Refer to RU and FRAME DEPTH charts (on previous page).

EIA Rail Kits


Doors — Solid | Vented


Side Panel Options: Flush Flat Panel (left), Formed Surface-Mount Panel (right)


Quick Mount System Components XMFCTM

### EIA Rail Kits – 1 Pair
Includes mounting hardware.

**XMF** [ ] **RT** [ ]

**Rail Height (RU)** — Refer to RU in Frame Height Chart

**Tapped Style**
| 10 | 10-32 Tapped |
| 12 | 12-24 Tapped |

### Door Options
Compatible with cabinet front or rear.

**XMF** [ ] **22** [ ]

**Door Height (RU)** — Refer to RU in Frame Height Chart

**Door Style**
| SD | Solid |
| VD | Vented Top and Bottom |

### Side Panel Options

[ ] [ ] [ ]

**Panel Height (RU)** — Refer to RU in Frame Height Chart

**Panel Depth** — Refer to Frame Depth Chart

**Panel Style**
| FS | Flush Flat Panel, Single |
| SS | Formed Surface-Mount Panel, Single |

### Vertical Spacing Panel

**XMFSP** [ ] [ ]

**Spacing Panel Height (RU)** — Refer to RU in Frame Height Chart

**Spacing Panel Width**
| 1 | 2.75" |
| 2 | 3.66" |
| 3 | 4.40" |
| 4 | 5.50" |

### Vertical Lacing Bar

**XMFVLB** [ ]

**Lacing Bar Height (RU)** — Refer to RU in Frame Height Chart

### Vertical Ground Bar

**XMFVGB** [ ]

**Ground Bar Height (RU)** — Refer to RU in Frame Height Chart

### Vertical Lacing Panel

**XMFVLP** [ ]

**Lacing Panel Height (RU)** — Refer to RU in Frame Height Chart

| Description | Belden Part Number |
| --- | --- |
| **Other Accessories** | |
| **Lacing Accesories** | |
| Quick Mount with Fastener, 10 Pcs. | XMFCTM |
| Velcro 12" Long, Hook and Loop, 10 Pcs./Kit | XCTV12 |
| Velcro 18" Long, Hook and Loop, 10 Pcs./Kit | XCTV18 |
| Velcro 24" Long, Hook and Loop, 10 Pcs./Kit | XCTV24 |
| **Seismic Anchor Bracket Kit** | |
| Seismic Anchor Bracket Kit | XMFSB |
| **Adjoining Kits** | |
| Bolt-Together Kit for Frames (incl. hardware) | XMFBK01 |
| Kit for Loaded Rack Application | XMFBK02 |
| Bolt-Together Kit for Bay Bases (incl. hardware) | XMFBK03 |
| **Edge Guard Kits** (for use with Base Bolt-Together Kit) | |
| 24"D, 30"D (1 base cutout) | XMFEG01 |
| 36"D, 40"D (1 base cutout) | XMFEG02 |

## XME Series — Media Cabinet

Cost effective and efficient design for broadcast, commercial AV and security applications

### Design and Structural Features

- Available in four heights and two depths
- 16-gauge, one-piece formed and vented sides; 16-gauge formed bottom and top
    - 48.87" (24RU) to 83.87" (44RU) Height x 22" Wide x 20" or 26.5" Deep
- Top and bottom EIA rail support channels are an integral part of the top and bottom; formed center rail support channels are spot welded to the sides
- Two 12-gauge EIA mounting rails (10-32 tapped); additional rails can be added (optional)
- Front and side ventilation for convection cooling
- Stand alone or gangable, with integrated side panels
- **Reversible Doors:** Frame is available with optional front and rear solid, glass or perforated Surface-Mount doors
- **Top Panel:** Solid, vented, with 10" fan or (4) 4" fans; depths of 20 and 26.5"
- **Caster Base:** Recessed, depths of 20" and 26.5"; adds 1" to height of frame; casters are recessed, allowing leveling legs to be lowered when cabinet is in position, allowing casters to be raised off the floor
- **Rack–Mount Drawers:** 16" deep sliding storage drawers with lock; available in four heights; mount on EIA rails (mounting hardware included); compatible with all 19" mount racks

### Cable Management

- **Rear Access —** Top: three antenna knockouts, each .62" dia. two conduit knockouts, .87" dia. and 1.12" dia. 9" x 2.25" opening with cover plate. Bottom: 4 conduit knockouts, two @ .87" dia., two @ 1.12" dia. 9" x 2.25" opening with cover plate
- **Side Access —** Top: 4" dia. knockout, located toward the rear. Bottom: 4" dia. knockout, located toward the rear. Optional edge guard to protect the cable is available
- **Top Access —** 1", 1.5" and 2" knockouts, located toward the rear of top panel
- Cable tie holes span entire length of EIA rail on the attachment flange (spaced at 1.75")
- Fully open top and bottom facilitate cable routing

### Ease of Installation

- Partially open top with optional configurable panels; rear of top contains various electrical knockouts for cable entry
- Open bottom with leveling legs and hole pattern to bolt frame to floor, captive grounding studs in bottom sills
- Ganging can be done after equipment is placed in rack

Part No. shown here: XME44260001
(44RU H x 22" W x 26" D)

20" or 26.5"

22"

Part No. shown here: XME442641310
(44RU H x 22" W x 26" D)

### Color

- Black durable powder coat

### Static Load Capacity

- 2,000 lbs.

Broadcast Racks and Cabinets

Broadcast Racks and Cabinets

## Ordering Matrix for XME Series

**Part number example:**

**XME44203131**

XME Cabinet, 44RU height, 20" depth, with 10" fan top panel, glass swing front door, perforated swing rear door, and two fixed vented side panels.

**Frame Depth**

| # | Description |
|----|-------------|
| 20 | 20" |
| 26 | 26" |

**Front Door**

| # | Description |
|----|-------------|
| 0 | None |
| 1 | Glass Swing |
| 2 | Solid Swing |
| 3 | Perforated Swing |

**Side Panels**

| # | Description |
|----|-------------|
| 1 | Two (2) Integrated Solid Sides w/Venting |

**XME** — *44* — *20* — 3 — 1 — *3* — 1

**RU**

| RU | Frame Height |
|----|-------------|
| 24 | 48.87" |
| 35 | 68.12" |
| 40 | 76.87" |
| 44 | 83.87" |

**Top Panel**

| # | Description |
|----|-------------|
| 0 | None |
| 1 | Solid |
| 2 | Vented |
| 3 | Solid w/10" Fan |
| 4 | Solid w/(4) 4" Fans |

**Rear Door**

| # | Description |
|----|-------------|
| 0 | None |
| 1 | Glass Swing |
| 2 | Solid Swing |
| 3 | Perforated Swing |
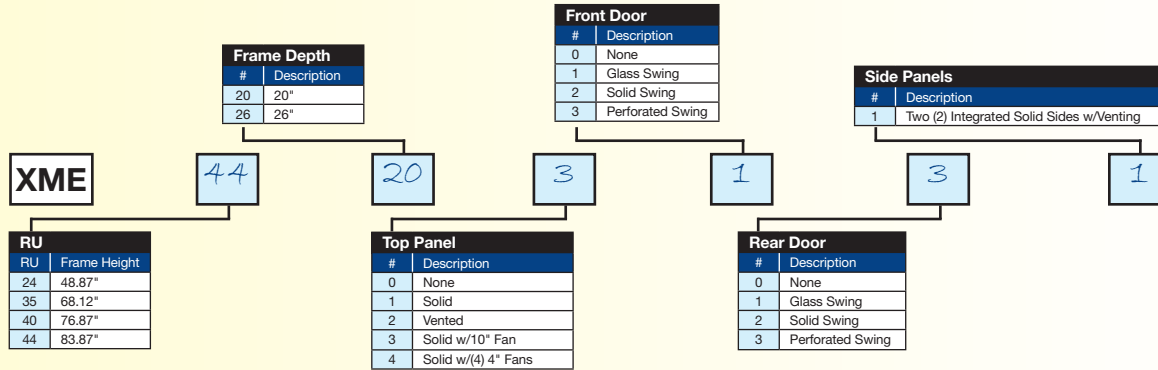
Note:
1) 19" Rack-Mount PDUs will work on all XME Cabinet heights.

## XME Series — Options and Accessories

Refer to RU and FRAME DEPTH charts (above) as needed.



Solid

Vented

(4) 4" Fan

10" Fan
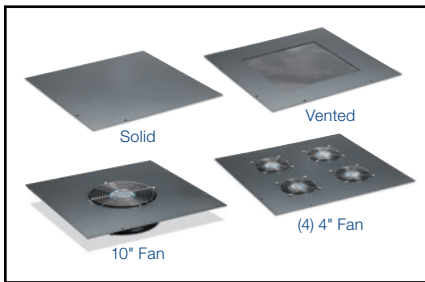
Top Panels

### Top Panel Options
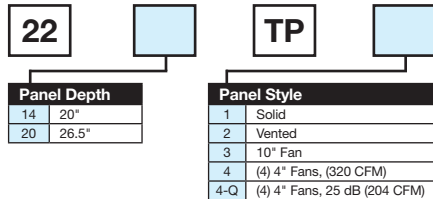
**22** □ **TP** □

**Panel Depth**

| 14 | 20" |
|----|-----|
| 20 | 26.5" |

**Panel Style**

| 1 | Solid |
|-----|-------|
| 2 | Vented |
| 3 | 10" Fan |
| 4 | (4) 4" Fans, (320 CFM) |
| 4-Q | (4) 4" Fans, 25 dB (204 CFM) |

### Door Options
Compatible with cabinet front or rear.

□ **22** □

**Door Height (RU)**

| Refer to RU in Frame Height Chart (above) | |

**Door Style**

| GD | Tempered Glass |
|----|----------------|
| SD | Solid |
| PD | Perforated |



Solid

Tempered Glass

Perforated
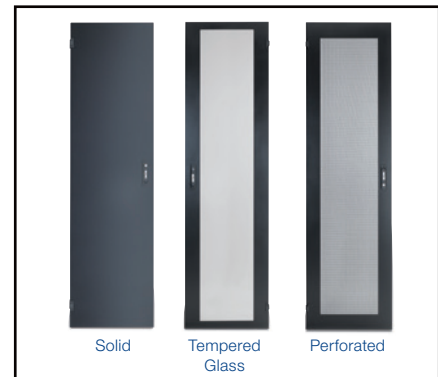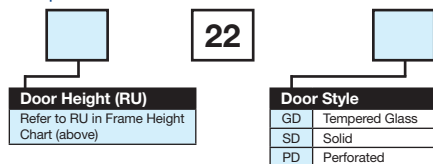
Doors

## XME Series — Media Cabinet Options and Accessories (continued)

Refer to RU and FRAME DEPTH charts (on previous page).

### Front-Mount Work Surface
For standard 19" mounting.
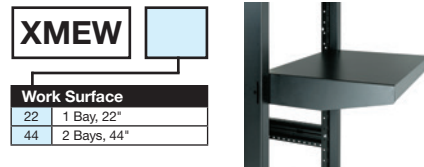
| XMEW | |
|---|---|

| Work Surface | |
|---|---|
| 22 | 1 Bay, 22" |
| 44 | 2 Bays, 44" |

### Vent Kits
Allows for top vent to be blocked to optimize forced air cooling (fanned top).
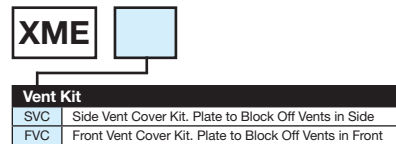
| XME | |
|---|---|

| Vent Kit | |
|---|---|
| SVC | Side Vent Cover Kit. Plate to Block Off Vents in Side |
| FVC | Front Vent Cover Kit. Plate to Block Off Vents in Front |
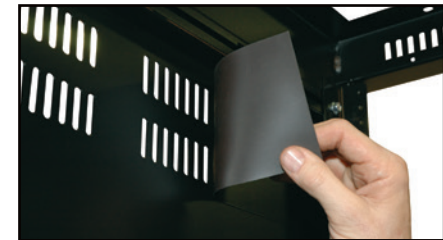


Vent Kits

### Vertical Lacing Panel
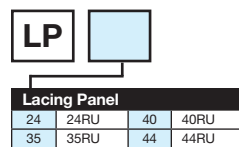
| LP | |
|---|---|

| Lacing Panel | | | |
|---|---|---|---|
| 24 | 24RU | 40 | 40RU |
| 35 | 35RU | 44 | 44RU |

### EIA Rail Kits — 1 Pair with Hardware
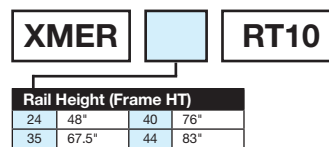
| XMER | | RT10 |
|---|---|---|

| Rail Height (Frame HT) | | | |
|---|---|---|---|
| 24 | 48" | 40 | 76" |
| 35 | 67.5" | 44 | 83" |



EIA Rail Kits

### Recessed Caster Base
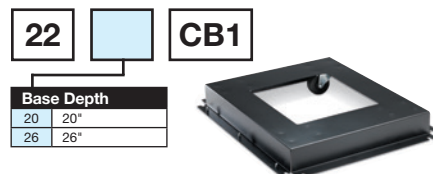
| 22 | | CB1 |
|---|---|---|

| Base Depth | |
|---|---|
| 20 | 20" |
| 26 | 26" |

### Rack-Mount Drawers
For standard 19" mounting.
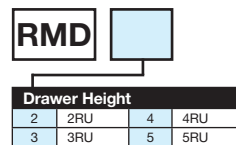
| RMD | |
|---|---|

| Drawer Height | | | |
|---|---|---|---|
| 2 | 2RU | 4 | 4RU |
| 3 | 3RU | 5 | 5RU |



Rack-Mount Drawers

| Description | Belden Part Number |
|---|---|
| **Other Accessories** | |
| **Lacing Accesories** | |
| Quick Mount with Fastener, 10 Pcs. | XMFCTM |
| Velcro 12" Long, Hook and Loop, 10 Pcs./Kit | XCTV12 |
| Velcro 18" Long, Hook and Loop, 10 Pcs./Kit | XCTV18 |
| Velcro 24" Long, Hook and Loop, 10 Pcs./Kit | XCTV24 |
| **Rack-Mount Lacing Bar** | |
| Rack-Mount Lacing Bar | 9512-1903 |
| **Top Mounted Ladder Rack Support** | |
| Top-Mounted Ladder Rack Support | XMELM |
| **Adjoining Kit** | |
| (4) 1/4" Whiz Bolt and Whiz Nuts | XMEBK01 |
| **Grounding Kit** | |
| Straps and 1/4" Wing Nuts | XMEGK01 |
| **Edge Guard Kits** | |
| Edge Guard Kit | XMEEG01 |
| **Seismic Anchor Bracket Kit** | |
| Seismic Anchor Bracket Kit | XMERSB |



Quick Mount Swivel Base Fastener XMFCTM

Broadcast Racks and Cabinets

# BELDEN

Part No. shown: XMER44310000
(44RU H x 22" W x 31.5" D)

## XMER Series - Media Cabinet
Flexible and economical design for broadcast, commercial AV, security and head-end applications



48.87"–83.87"

26.5", 31.5", or 36"

22"

Part No. shown: XMER443131320
(44RU H x 22" W x 31.5" D)

### Ease of Installation
- Open top with optional configurable panels
- Open bottom with leveling legs and hole pattern to bolt frame to floor; captive grounding studs in bottom sills
- Ganging can be done after equipment is placed in rack

### Design and Structural Features
- Available in four heights and three depths; taller units (48RU, 50RU and 52RU) available on demand
- 14-gauge, one-piece formed top and bottom; 16-gauge formed vertical corner posts
  - 48.87" (24RU) to 83.87" (44RU) Height x 22" Wide x 26.5", 31.5" or 36" Deep
- EIA rail support is integral part of the top and bottom with spot-welded inner support channel
- Middle rail support channels are spot-welded construction of two 16-gauge formed rail channels, creating .12" thick support channels per side
- (4) 12-gauge EIA mounting rails (10-32 tapped)
- **Reversible Doors:** Frame available with optional front and rear solid, glass or perforated surface-mount doors
- **Side Panels:** Surface-Mount removable side panels, adds 5/8" to overall width
- **Top Panel:** Solid, vented, with 10" fan or (4) 4" fans; depths of 26.5", 31.5" and 36"
- **Side Cable Chase:** 4" wide chase for added cable management; can be mounted between cabinets or used as side unit; will accept a side panel (44RU cabinets only)
- **Caster Base:** Recessed, depths of 26.5", 31.5" and 36"; adds 1" to frame height. Caster bases install directly to bottom flanges of cabinets; casters are recessed, allowing leveling legs to be lowered when cabinet is in position, and casters to be raised off floor

### Cable Management
- **Rear Access —** Top: three antenna knockouts, each 0.62" dia. two conduit knockouts, 0.87" dia. and 1.12" dia. 9" x 2.25" opening with cover plate; Bottom: four conduit knockouts, two @ 0.87" dia., two @ 1.12" dia. 9" x 2.25" opening with cover plate
- **Side Access —** Top: 4" dia. knockout, located toward rear; Bottom: 4" dia. knockout, located toward rear; optional edge guard to protect the cable available
- **Top Access —** 1", 1.5" and 2" knockouts, located toward rear of top panel
- Lacing points on two surfaces of each rail support facilitate cable management
- Cable tie holes span entire length of EIA rail on attachment flange (spaced at 1.75")
- Cable tie bar made of formed steel, eliminates sharp edges; provides multiple attachment points; features cable bend radius control and lacing holes; factory mounted when tie bar option is selected

### Color
- Black durable powder coat

### Static Load Capacity
- 2,000 lbs.

## Ordering Matrix for XMER Series

**Part number example:** XMER40362232

XMER Cabinet, 40RU height, 36" depth, with vented top panel,
solid swing front door, perforated swing rear door,
and two solid side panels.

**Frame Depth**

| # | Description |
|---|---|
| 26 | 26" |
| 31 | 31" |
| 36 | 36"* |

*36"D N/A in 24RU Frame Height

**Front Door**

| # | Description |
|---|---|
| 0 | None |
| 1 | Glass Swing |
| 2 | Solid Swing |
| 3 | Perforated Swing |

**Side Panels**

| # | Description |
|---|---|
| 0 | None |
| 1 | Surface-Mount Side Panel, One |
| 2 | Surface-Mount Side Panels, Set |

**Tie Bar** (optional)

| # | Description |
|---|---|
| TB | Tie Bar (also see notes) |

XMER — 40 — 36 — 2 — 2 — 3 — 2

**RU**

| RU | Frame Height |
|---|---|
| 24 | 48.87" |
| 35 | 68.12" |
| 40 | 76.87" |
| 44 | 83.87" |

**Top Panel**

| # | Description |
|---|---|
| 0 | None |
| 1 | Solid |
| 2 | Vented |
| 3 | Solid w/10" Fan |
| 4 | Solid w/(4) 4" Fans |

**Rear Door**

| # | Description |
|---|---|
| 0 | None |
| 1 | Glass Swing |
| 2 | Solid Swing |
| 3 | Perforated Swing |

Notes:
1) Tie bar option (TB) 24RU=8TB, 35–40–44RU=12TB.
2) 19" Rack-Mount PDUs will work on all XMER Cabinet heights.

## XMER Series — Options and Accessories

Refer to RU and FRAME DEPTH charts (above).

### Top Panel Options

22 — TP

**Panel Depth**

| | |
|---|---|
| 26 | 26.5" |
| 31 | 31.5" |
| 36 | 36" |

**Panel Style**

| | |
|---|---|
| 1 | Solid |
| 2 | Vented |
| 3 | 10" Fan |
| 4 | (4) 4" Fans (320 CFM) |
| 4-Q | (4) 4" Fans, 25 dB (204 CFM) |

Solid

Vented

10" Fan

(4) 4" Fan

### Door Options
Compatible with cabinet front or rear.

22

**Door Height (RU)**

Refer to RU in Frame Height Chart

**Door Style**

| | |
|---|---|
| GD | Tempered Glass |
| SD | Solid |
| PD | Perforated |
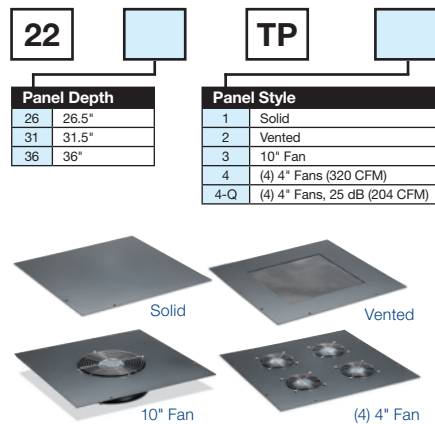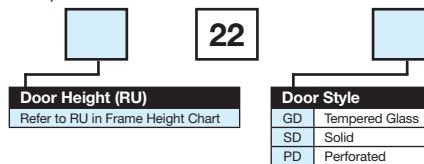
### Side Panel Options
Solid removable (single).

01SP

**Panel Height (RU)**

Refer to RU in Frame Height Chart

**Panel Depth**

| | |
|---|---|
| 26 | 26.5" |
| 31 | 31.5" |
| 36 | 36" |

Solid — Tempered Glass — Perforated
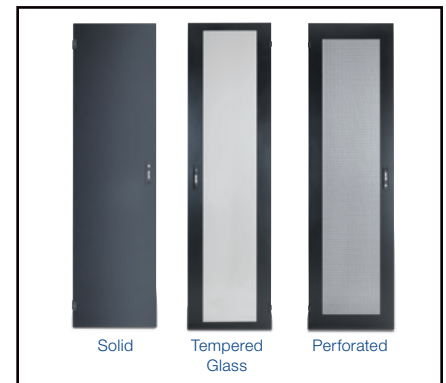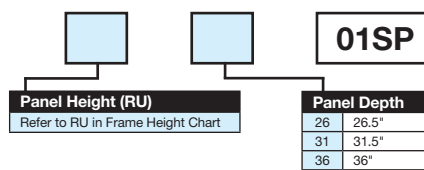
Doors

## XMER Series — Options and Accessories (continued)

Refer to RU and FRAME DEPTH charts (on previous page).

### EIA Rail Kits — 1 Pair with Hardware



EIA Rail Kits

| XMER | | RT10 |
|------|--|------|

| Rail Height (Frame HT) | | | |
|----|------|----|-----|
| 24 | 48" | 40 | 76" |
| 35 | 67.5" | 44 | 83" |

### Side Cable Chase (4" Wide)

| 44 | | CC |
|----|--|----|

| Chase Depth | |
|----|-------------|
| 26 | 26.5" (RU44) |
| 31 | 31.5" (RU44) |
| 36 | 36" (RU44) |

### Rack-Mount Drawers
For standard 19" mounting.



Rack-Mount Drawers

| RMD | |
|-----|--|

| Drawer Height | | | |
|----|-----|----|-----|
| 2 | 2RU | 4 | 4RU |
| 3 | 3RU | 5 | 5RU |

### Vertical Lacing Panel

| LP | |
|----|--|

| Lacing Panel | | | |
|----|------|----|------|
| 24 | 24RU | 40 | 40RU |
| 35 | 35RU | 44 | 44RU |
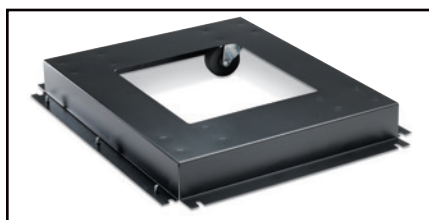
### Recessed Caster Base



Recessed Caster Base

| 22 | | CB1 |
|----|--|-----|

| Base Depth | |
|----|------|
| 26 | 26" |
| 31 | 31" |
| 36 | 36" |

### Front-Mount Work Surface
For standard 19" mounting.

| XMEW | |
|------|--|

| Work Surface | |
|----|-------------|
| 22 | 1 Bay, 22" |
| 44 | 2 Bays, 44" |



Seismic Anchor Bracket Kit

| Description | Belden Part Number |
|-------------|--------------------|
| **Other Accessories** | |
| **Lacing Accesories** | |
| Quick Mount with Fastener, 10 Pcs. | XMFCTM |
| Velcro 12" Long, Hook and Loop, 10 Pcs./Kit | XCTV12 |
| Velcro 18" Long, Hook and Loop, 10 Pcs./Kit | XCTV18 |
| Velcro 24" Long, Hook and Loop, 10 Pcs./Kit | XCTV24 |
| **Rack-Mount Lacing Bar** | |
| Rack-Mount Lacing Bar | 9512-1903 |
| **Top-Mounted Ladder Rack Support** | |
| Top-Mounted Ladder Rack Support | XMELM |
| **Adjoining Kit** | |
| (4) 1/4" Whiz Bolt and Whiz Nuts | XMEBK01 |
| **Grounding Kit** | |
| Straps and 1/4" Wing Nuts | XMEGK01 |
| **Seismic Anchor Bracket Kit** | |
| Seismic Anchor Bracket Kit | XMERSB |

**BELDEN**

# Components and Accessories

## Remotely manage server access

while maintaining an indisputable audit trail with Belden Cabinet Access Systems.

## Large Selection of Rack and Cabinet Accessories to Meet Equipment Mounting, Cable Management, Grounding/Bonding and Access Control Challenges

Components and accessories designed for seamless compatibility with Belden racks and cabinets products.

- Cantilevered and 4-point mount shelf mounting options for non-rack mount components

- Organize and manage patch cords and cables with horizontal managers available in multiple sizes and capacities

- Optimize air separation for improved availability with solid and brushed filler panels

- Ensure installation security and electrical conformance with bonding and grounding products

- Meet active equipment mounting requirements with multiple mounting hardware products

- Access control for cabinets protects your physical assets and data

# BELDEN

## Cabinet Shelves
### 19" Shelves
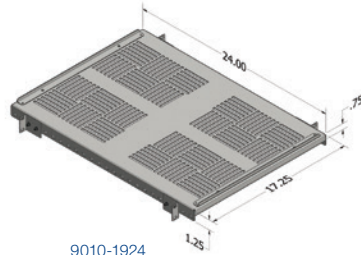


9010-1924
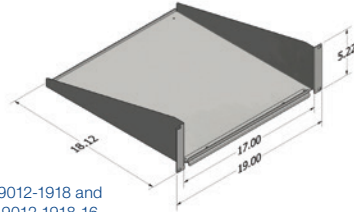


9012-1918 and
9012-1918-16



9010-1930



9011-1918 and
9011-1918-16
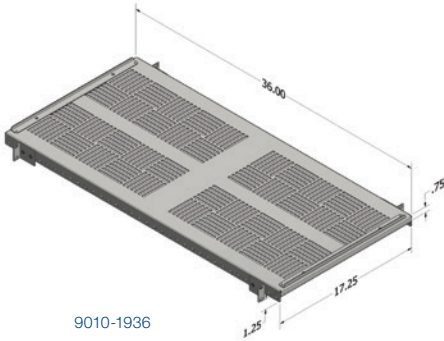


9010-1936



9011-1912



9015-1909

**Features**

- Compatible with 19" mount racks and cabinets (23" mount option available on request)
- Available in depths of 12" to 36" cantilevered or 4–point mount types
- Shelves include mounting hardware
- Load ratings range from 25 lbs to 200 lbs
- Standard shelf color is black (other colors are available on custom basis for volume orders)
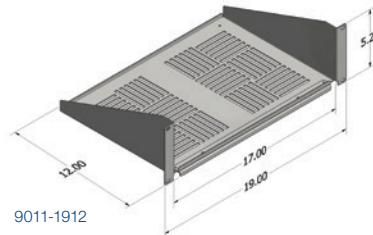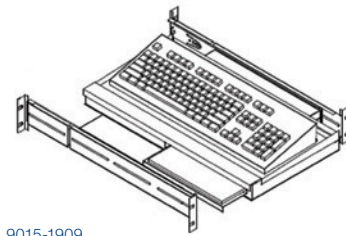
## Technical Specifications

| Description | Depth* | Load Rating | Belden Part Number |
|---|---|---|---|
| 19" Heavy-Duty Adjustable Shelf (Vented), 4-Point Mounting | 24" | 150 lbs | **9010-1924** |
| 19" Heavy Duty Adjustable Shelf (Vented), 4-Point Mounting | 30" | 150 lbs | **9010-1930** |
| 19" Heavy Duty Adjustable Shelf (Vented), 4-Point Mounting | 36" | 150 lbs | **9010-1936** |
| 19" Flush Mount Cantilevered Shelf (Vented) – Compatible with 27.5" Deep Wall-Mount Cabinets | 12" | 50 lbs | **9011-1912** |
| 19" Flush Mount Cantilevered Shelf (Vented) | 18" | 50 lbs | **9011-1918** |
| 19" Flush Mount Cantilevered Shelf (Vented) | 18" | 25 lbs | **9011-1918-16** |
| 19" Flush Mount Cantilevered Shelf (Solid) | 18" | 50 lbs | **9012-1918** |
| 19" Flush Mount Cantilevered Shelf (Solid) | 18" | 25 lbs | **9012-1918-16** |
| 19" Heavy-Duty Sliding Adjustable Shelf (Vented), 4-Point Mounting | 24" | 100 lbs | **9013-1924** |
| 19" Sliding Rotating Keyboard Shelf | N/A | N/A | **9015-1909** |

Note:
*Compatibility with cabinet frame size to be validated when selecting shelf depth.

**1.800.BELDEN.1** (800.235.3361)

www.belden.com

Components and Accessories

# Horizontal Cable Management

### Application

Horizontal managers allow routing of copper and fiber cables/patch cords in racks and cabinets while helping to maintain proper bend radius and organize array for ease of moves, adds and changes.

### Features include:

- 1RU to 4RU height
- 19" mount includes mounting hardware
- Compatible with racks and cabinets
- Selection of ring, finger and cable tie bar style horizontal managers
- Standard color is black (other colors available on volume orders)



Top: 9512-1901, Bottom: 9512-1902



9510-1901
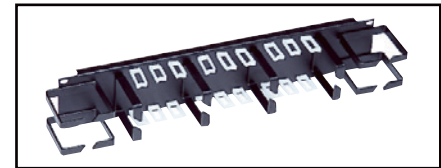


9511-1902
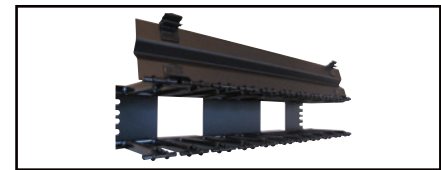


BHH192UC Horizontal Manager
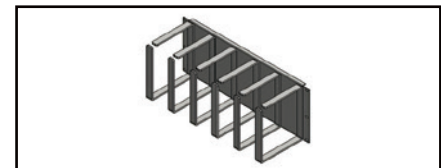


9511-1904-01

### Horizontal Managers

| Description | RU | Manager Cross Section | Belden Part Number |
|---|---|---|---|
| Horizontal Manager with Saddle Rings | 1RU | 1.65"H x 3"D | 9510-1901 |
| Horizontal Manager with Saddle Rings | 2RU | 3"H x 3"D | 9511-1902 |
| Horizontal Manager with Finger Stock and Cover | 1RU | 1.5"H x 2"D | 9512-1901 |
| Horizontal Manager with Finger Stock and Cover | 2RU | 3"H x 3"D | 9512-1902N |
| Horizontal Manager with Finger Stock and Cover, Front & Rear | 2RU | 3"H x 3"D Front/Rear | 9512-1902-FR |
| Horizontal Manager with Molded Fingers and Hinging Cover, Enclousure Application | 1RU | 1.75"H x 5.66"D | BHH191UC |
| Horizontal Manager with Molded Fingers and Hinging Cover, Enclousure Application | 2RU | 3.5"H x 5.66"D | BHH192UC |
| Horizontal Manager with Molded Fingers and Hinging Cover, Enclousure Application | 3RU | 5.25" x 5.66"D | BHH193UC |
| Horizontal Manager with Molded Fingers and Hinging Cover, Enclousure Application | 4RU | 7" x 5.66"D | BHH194UC |
| Horizontal Manager with Molded Fingers and Hinging Cover, Open Rack Application | 1RU | 1.75"H x 7.22"D | BHH191UR |
| Horizontal Manager with Molded Fingers and Hinging Cover, Open Rack Application | 2RU | 3.5"H x 7.22"D | BHH192UR |
| Horizontal Manager with Molded Fingers and Hinging Cover, Open Rack Application | 3RU | 5.25" x 7.22"D | BHH193UR |
| Horizontal Manager with Molded Fingers and Hinging Cover, Open Rack Application | 4RU | 7" x 7.22"D | BHH194UR |
| Horizontal Cable Tie Bar with 1.5" Deep Offset | 1RU | N/A | HCB-1932-1.5-01 |
| Horizontal Cable Tie Bar with 2.5" Deep Offset | 2RU | N/A | HCB-1932-2.5-01 |
| Horizontal Ring Style Manager, High Capacity, Open Rack Application | 2RU | 3.5"H x 6.8"D | 9511-1902-01 |
| Horizontal Ring Style Manager, High Capacity, Open Rack Application | 3RU | 5.25"H x 6.8"D | 9511-1903-01 |
| Horizontal Ring Style Manager, High Capacity, Open Rack Application | 4RU | 6.9"H x 6.8"D | 9511-1904-01 |

Components and Accessories

## Light Kits



9420-1905



9420-1906

### Construction

• Light Kits are compatible with all 19" mount racks or cabinets
• Uses one rack unit
• Includes 120V AC adapter and mounting hardware

### Options

| Description | Belden Part Number |
|---|---|
| Dual Adjustable 5W Halogen Lights & Dimmer, UL Listed | 9420-1905 |
| Single Adjustable 5W Halogen Light & Dimmer, UL Listed | 9420-1906 |



Steel Filler Panels



Plastic Filler Panel
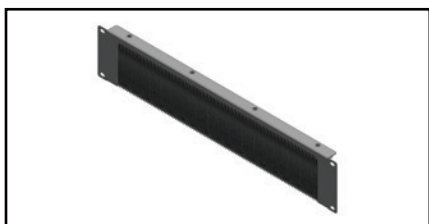


XFPWB2U101
Brushed filler panel allows routing of cable from front to rear while providing airflow separation. Panel is open ended, allowing mounting without having to unplug cables.

### Filler Panels

#### Application

• Filler Panels allow blocking of unused rack units (RU) for optimized airflow and separation between cold supply air and hot return air
• Best practices in data centers includes blanking of all unused rack units (RU)
• Filler Panels are compatible with 19" mount racks and cabinets

#### Options

| Description | Color | Belden Part Number |
|---|---|---|
| **Filler Panels, Steel** (includes Mounting Hardware) | | |
| 1RU Solid Filler Panel | Black/CO White | 9910-0100-01/-02 |
| 2RU Solid Filler Panel | Black/CO White | 9911-0200-01/-02 |
| 2RU Solid Filler Panel with "Belden" Logo Silk Screen | Black | 9911-0201-01 |
| 3RU Solid Filler Panel | Black/CO White | 9912-0300-01/-02 |
| 4RU Solid Filler Panel | Black/CO White | 9913-0400-01/-02 |
| 8RU Solid Filler Panel | Black/CO White | 9914-0800-01/02 |
| **Filler Panels, Plastic Tool-Less** | | |
| 1RU Solid Filler Panel (fits 10-32, 12-24 and square holes rails) | Black/CO White | 9910-0100PL-01/-02 |
| 2RU Solid Filler Panel (fits 10-32, 12-24 and square holes rails) | Black/CO White | 9911-0200PL-01/-02 |
| **Filler Panels with Brush Pass Through** (includes Mounting Hardware) | | |
| 1RU Filler Panel with Brush (open ended) | Black/CO White | XFPWB1U101/02 |
| 2RU Filler Panel with Brush (open ended) | Black/CO White | XFPWB2U101/02 |
| 3RU Filler Panel with Brush (open ended) | Black/CO White | XFPWB3U101/02 |
| 4RU Filler Panel with Brush (open ended) | Black/CO White | XFPWB4U101/02 |

Components and Accessories

## Grounding and Bonding

### Options

| Description | Belden Part Number |
| --- | --- |
| 19" Horizontal Isolated Copper Ground Bar, .25" Thickness x 1" W, Tapped 10-32 | **9714-0190** |
| Grounding/Bonding Strap Kit (11" strap with hardware) | **XBS-11-0002** |
| Grounding/Bonding Strap Kit (18" strap with hardware) | **XBS-18-0002** |
| **Grounding/Bonding Strap Kits** | |
| Bonding Strap Kit (11" strap with hardware and anti-oxidation compound) | **XBS-11-0001** |
| Bonding Strap Kit (18" strap with hardware and anti-oxidation compound) | **XBS-18-0001** |
| Grounding Lug Kit (Ground Lug and 1/4-20 Kep Nut) | **20128-KIT** |

Notes:
Bonding strap kit is included with cabinet doors, sides and top panels.
Grounding lug kit is for use with rack and cabinet welded ground studs.



.250 Thick · 17.250 Long · 1.00 Wide · 10-32 Holes · 1.00
9714-0190
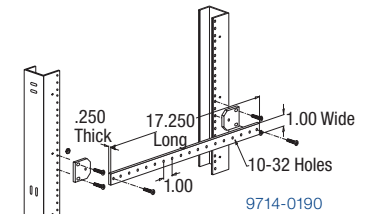
19" mount grounding bar is 0.25" thick x 1" wide, with #10-32 tapped holes; isolating mounts with hardware are included.

## Mounting Hardware

### Application

Included adjoining hardware for ganging of racks and cabinets, plus a variety of bolts, screws and nuts for mounting of active and passive networking devices into racks and cabinets.

| Description | Quantity/Package | Belden Part Number |
| --- | --- | --- |
| **10-32 Hardware** | | |
| 10-32 Mounting Screws | 50 | **8911-0100** |
| 10-32 Cage Nuts (for use with square hole rails) | 50 | **8915-0100** |
| 10-32 Cage Nuts (for use with square hole rails) | 20 | **8915-0220** |
| 10-32 Clip Nuts | 20 | **8915-0320** |
| **12-24 Hardware** | | |
| 12-24 Mounting Screws | 50 | **8917-0100** |
| 12-24 Cage Nuts (for use with square hole rails) | 50 | **8917-0220** |
| 12-24 Clip Nuts | 20 | **8917-0320** |
| **M6 Hardware** | | |
| M6 Cage Nut (for use with square hole rails) | 50 | **8913-0100** |
| M6 Cage Nut (for use with square hole rails) | 20 | **8913-0220** |
| M6 Clip Nut | 20 | **8913-0320** |
| M6 x 16 mm Mounting Screw | 50 | **8914-0100** |
| **Cable Ties** | | |
| Velcro Cable Ties, 8"L x 0.5"W, 25 per Roll | 25 | **AX100783** |
| Velcro Cable Ties, 12"L x 0.5"W, 25 per Roll | 25 | **AX100784** |
| 12" Fiber Optic Cable Manager | 1 | **AX102516** |
| 24" Fiber Optic Cable Manager | 1 | **AX102517** |
| Quick Mount Velcro Saddle with Fastener | 10 | **XMFCTM** |



AX102516 Cable Slack Management Ring - 12" diameter

## Adjoining Hardware

| Description | Cabinet Series | Belden Part Number |
| --- | --- | --- |
| Cabinet Adjoining Kit (4) 5/16-18 Hex Head Bolt; (4) 5/16-18 Hex Nut; (8) 5/16 Flat Washer) | XHM, XHS, XHMS, XHSS | **8910-0100** |
| Cabinet Adjoining Kit for NEMA 12 (4) 5/16-18 Hex Head Bolt; (4) 5/16-18 Hex Nut; (8) 5/16 Flat Washer, includes Gasketing | XNM | **XNM-0100** |
| Bolt-Together Kit for XSF Frames (incl. hardware) | XSF | **XSFBK01** |
| Adjoining Kit (4) 1/4-20 x 5/8 Carriage Bolt; (4) 5/16 External Tooth Lock Washer; (4) Whizlock Nuts | XMF | **XMFBK01** |
| Loaded Rack Application Bolt Kit (4) 12-24 x 1 3/4 Screw; (8) External Tooth Washer; (4) 12-24 Hex Nuts; (4) .5 x .125"W Tubing Nylon | XMF | **XMFBK02** |
| Adjoining Kit (4) 1/4-20 x 5/8 Whizlock Bolt; (4) 1/4-20 Whizlock Nut | XME, XMER | **XMEBK01** |
| Joining Kit (4) 5/16 x 1 Bolt, (8) 5/16 Washers, (4) 5/16 Nuts | — | **XBK01** |

Note:
Adjoining hardware is included with the cabinets.

Components and Accessories
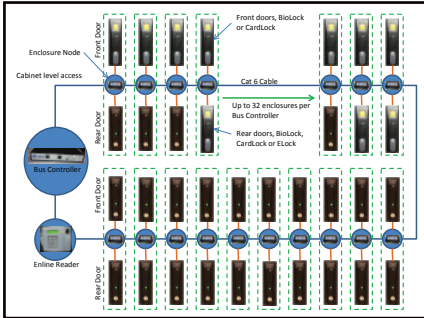
Access control with schematic


BEH-CTRL db BUS Controller


BEH-Nx Cabinet Node


BEH-Sx Sentry


BEH-EN db BUS Enline Reader w/PIN and Fingerprint


ELock, BioLock, DualLock, ProxLock, MulticardLock and KeypadLock/CodeLock

## Cabinet Access Sytems

### Application

Physical assets protection/access is key to IT operations, such as data centers, enterprise and remote computing locations. Belden cabinets can be equipped with a variety of locking handles, including state-of-the-art cabinet access control and management solutions, allowing conformance to privacy rules and regulations (PCI DSS, HIPAA, FISMA and more).

### Features

- Centralized administration of up to thousands of units
- Real-time monitoring and alerts
- Indisputable audit trails
- Cabinets or row-pod-level access
- Flexibility to choose between fingerprint or RFID card access

Stand alone cabinet access systems are for smaller or distributed installations. Each cabinet has a dedicated controller and biometric (BioLock) or card reader (CardLock) for user authentification.

In a networked cabinet access sytem, a central controller distributes control signals and power to up to 32 cabinets when authenticating at the cabinet level and 31 cabinets when authenticating at the end of row. For cabinet-level authentication, choose between fingerprint (BioLock) or RFID card (CardLock). For end-of-row authentication, the user enters the cabinet door they are attempting to access, then uses any combination of PIN, RFID card and fingerprint to authenticate.

| Description | Belden Part Number |
|---|---|
| **Smart Lock/Access System** | |
| BUS Controller | BEH-CTRL |
| **End of Row Reader** | |
| Enline reader w/PIN and fingerprint | BEH-EN |
| Enline reader w/PIN, fingerprint and LF (125 KHz Prox) RFID | BEH-ENLF |
| Enline reader w/PIN, fingerprint and HF (HID iClass 13.56 MHz) | BEH-ENHF |
| Enline reader w/PIN, fingerprint and HF (HID iClass 13.56 MHz) and LF (125 KHz Prox) RFID | BEH-ENHFLF |
| **Bus Node Kits - Networked Application (Multiple Cabinets)** | |
| Cabinet Node w/ 1 BioLock, 1 ELock, 2 Door Position Sensors | BEH-NBE2S |
| Cabinet Node w/ 2 BioLocks, 2 Door Position Sensors | BEH-NBB2S |
| Cabinet Node w/ 1 HF MULTICARDLOCK and 1 ELock, 2 Door Position Sensors | BEH-NMHE2S |
| Cabinet Node w/ 2 HF MULTICARDLOCKs, 2 Door Position Sensors | BEH-NMHMH2S |
| Cabinet Node w/ 2 ELocks, 2 Door Position Sensors | BEH-NEE2S |
| Cabinet Node w/ 1 KeypadLock and 1 Elock, 2 Door Position Sensors | BEH-NKE2S |
| Cabinet Node w/ 2 KeypadLocks, 2 Door Position Sensors | BEH-NKK2S |
| Cabinet Node w/ 1 HF CodeLock and 1 Elock, 2 Door Position Sensors | BEH-NCHE2S |
| Cabinet Node w/ 2 HF CodeLocks, 2 Door Position Sensors | BEH-NCHCH2S |
| Cabinet Node w/ 1 HF/LF CodeLock and 1 Elock, 2 Door Position Sensors | BEH-NCHLE2S |
| Cabinet Node w/ 2 HF/LF CodeLocks, 2 Door Position Sensors | BEH-NCHLCHL2S |
| **Sentry Kits - Cabinet (Stand-Alone) Applications** | |
| Sentry w/ 1 BioLock, 1 ELock, 2 Door Position Sensors | BEH-SBE2S |
| Sentry w/ 2 BioLocks, 2 Door Position Sensors | BEH-SBB2S |
| Sentry w/ 1 HF MULTICARDLOCK and 1 ELock Swing Handle, 2 Door Position Sensors | BEH-SMHE2S |
| Sentry w/ 2 HF MULTICARDLOCKs, 2 Door Position Sensors | BEH-SMHMH2S |
| Sentry w/ 1 KeypadLock and 1 Elock, 2 Door Position Sensors | BEH-SKE2S |
| Sentry w/ 2 KeypadLock , 2 Door Position Sensors | BEH-SKK2S |
| Sentry w/ 1 HF CodeLock and 1 Elock, 2 Door Position Sensors | BEH-SCHE2S |
| Sentry w/ 2 HF CodeLocks, 2 Door Position Sensors | BEH-SCHCH2S |
| Sentry w/ 1 HF/LF CodeLock and 1 Elock, 2 Door Position Sensors | BEH-SCHLE2S |
| Sentry w/ 2 HF/LF CodeLocks, 2 Door Position Sensors | BEH-SCHLCHL2S |
| Auxiliary Power Supply for Sentry | BEH-SAPS |
| **Software - Access Interface and Management** | |
| DAS server/client package for connection up to 10 units, includes enrollment scanner | BEH-SW10 |
| DAS server/client package for connection up to 20 units, includes enrollment scanner | BEH-SW20 |
| DAS server/client package for connection to 50 units, includes enrollment scanner | BEH-SW50 |
| DAS server/client package for connection to 100 units, includes enrollment scanner | BEH-SW100 |
| DAS server/client package for connection to 250 units, includes enrollment scanner | BEH-SW250 |

Note:
Includes door switch(es) and 14' of Cat 6 cables.

Components and Accessories

# BELDEN

# Power Distribution & Climate Monitoring

## Power Availability, Distribution, Allocation and Monitoring are Critical Data Center and Broadcast Studio Requirements

Precisely distribute, monitor, analyze and manage power distribution in your facility to **maximize processing capacity** and promote power efficiency.

Belden in-cabinet mounted power distribution units (PDUs) and environmental monitors and sensors are designed from high-quality components to support all your mission-critical applications.

A key component of our data center ready solution (DCRS), Belden PDUs allow configuration of integrated and optimized hosting systems, including fiber/copper connectivity and cabling, cabinets, cable management and airflow management. They are designed to facilitate seamless integration into Belden racks and cabinets, and include multiple mounting options for maximized airflow and cable management in high-density servers or switch hosting applications.

Paired with our extensive line of environmental monitors and sensors, which include alarm thresholds, reporting functionality and a built-in intuitive web interface for remote access, Belden has everything you need to precisely monitor, analyze and log key parameters, enabling you to identify current fluctuations and quickly troubleshoot potential problems.

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

# BELDEN

## Cabinet Power Distribution Units (PDUs)



Organized networking and power cable management for proper server airflow



Side-by-side PDU mounting using 7" wide PDU mounting panel (Part No. XVMP024501)



U-Lock Receptacles

### Belden PDU Options and Features

- All Belden PDUs are UL and cUL listed 60650
- Select from a wide offering of PDUs designed to meet your specific power requirements; single phase, 3-phase (WYE and Delta configurations)

| Power | Amp | Voltage | Phase | Plug |
|-------|-----|---------|-------|------|
| 3.3kW | 20A | 250V | 1 Phase | L6-20P or 2P, 3W |
| 5kW | 30A | 250V | 1 Phase | L6-30P or 2P, 3W |
| 11kW | 20A | 230/400V | 3 Phase WYE | L22-20P or 4P, 5W |
| 16.6kW | 30A | 230/400V | 3 Phase WYE | L22-30P or 4P, 5W |
| 1.4kW | 15A | 125V | 1 Phase | 5-15P or L5-15P |
| 1.9kW | 20A | 125V | 1 Phase | 5-20P or L5-20P |
| 2.8kW | 30A | 125V | 1 Phase | L5-30P |
| 5.7kW | 20A | 120/208V | 3 Phase WYE | L21-20P |
| 8.6kW | 30A | 120/208V | 3 Phase WYE | L21-30P |
| 8.6kW | 30A | 250V | 3 Phase Delta | L15-30P |
| 17.2kW | 60A | 208V | 3 Phase Delta | 3P/4W |
| 23kW | 80A | 208V | 3 Phase Delta | Hard Wired |
| 34kW | 120A | 208V | 3 Phase Delta | Hard Wired |

- Over 500 standard PDUs available to ship within 10 days of ordering, or custom PDUs available to ship within 20 days of ordering
- U-Lock IEC C13 and C19 receptacles feature an integrated locking mechanism built within the receptacle housing. The locking mechanism is protected against vibration and external elements that can easily dislodge external locking clips or guides. This self-contained locking mechanism works with any standard IEC plug. Locking receptacles come standard on some units and are available for custom orders.

## Faster.
## Easier.
## Better.

# Cabinet Power Distribution Units (PDUs) (continued)

### PDU Selection: Basic, with Local Monitoring and Intelligent

- PDU mounted display option for local current or power monitoring, making phase balancing easier (the PDU itself is not phase balancing)

### Intelligent PDU Options and Features

- Remote aggregate, circuit or receptacle power monitoring for granular PUE measurement
- Switched (on/off) options allow remote outlet management and equipment reboot with sequential delay features; avoid power interruption due to in-rush current, equipment start up in desired sequence

- Highly secure access with admin, control and view-only accounts
- Intuitive Ethernet-based firmware with email alarm or SNMP trap features prevents downtime with early notification of power threshold breaches
- SNMP (MIB) enabled for compatibility with all leading DCIM packages
- Integrated environmental monitoring capabilities; monitor temperature, airflow, humidity and dew point via optional connected sensors
- Internal memory for up to two week of trending of critical parameters for clear understanding of power allocation and usage
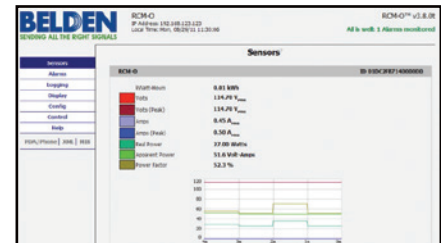

PDU Firmware, Trending Page


PDU Firmware, Alarm Setting Page

| Belden PDU Type | Local Display/ Monitoring | Intelligent Remote Monitoring (3) | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | Current | Power Circuit Level | Environmental Port (4) | Power Outlet Level (5) | Outlet Switched (6) |
| Basic (B) | No | No | No | No | No | No |
| Local (L) | Yes | No | No | No | No | No |
| Power (P) | Yes (2) | Yes | Yes | Yes | No | No |
| Power Outlet (O) | Yes (2) | Yes | Yes | Yes | Yes | No |
| Switched (S) | Yes (2) | Yes | Yes | Yes | Optional | Yes |

Notes:

(1) Local current/amp meter, monitoring at circuit level for multi-circuit PDU.

(2) Local power meter provides Amps, Volts, Watts, Volt-Amps, kWh and Power Factor.

(3) Remote functions (IP-based) accessible via web browser.

(4) Remote IP-based environmental monitoring, (2) port per PDU. Requires external sensor, refer to accessories (p. 78) for selection.

(5) Remote IP-based receptacle level monitoring, Amps, Volts, Watts, kWh.

(6) Remote IP-based receptacle level switching (on/off) with configurable time delay.


Intelligent PDU Communication and Environmental Monitoring Ports

### Power, Cooling and Air-Handling Relations

| PDU Nameplate Current Rating (A) | Branch Circuit Rating (A) | Nameplate Volts (V) | Volts Actual Delivered (V) | Phase* | PDU Nominal Power Watts (W) | PDU De-Rated Power (W) | PDU De-Rated Power (kW) | PDU De-Rated Power (BTU/hr.) | AC Tons** (BTU/12000) | Air Volume*** (120 CFM* kW) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 15 | 125 | 120 | 1 | 1,800 | 1,440 | 1.4 | 4,916 | 0.41 | 168 |
| 16 | 20 | 125 | 120 | 1 | 2,400 | 1,920 | 1.9 | 6,555 | 0.55 | 228 |
| 24 | 30 | 125 | 120 | 1 | 3,600 | 2,880 | 2.9 | 9,832 | 0.82 | 348 |
| 16 | 20 | 250 | 208 | 1 | 4,160 | 3,328 | 3.3 | 11,362 | 0.95 | 396 |
| 24 | 30 | 250 | 208 | 1 | 6,240 | 4,992 | 5.0 | 17,043 | 1.42 | 600 |
| 35 | 50 | 250 | 208 | 1 | 10,400 | 7,280 | 7.3 | 24,854 | 2.07 | 876 |
| 48 | 60 | 250 | 208 | 1 | 12,480 | 9,984 | 10.0 | 34,085 | 2.84 | 1,200 |
| 16 | 20 | 230 | 230 | 1 | 4,600 | 3,680 | 3.7 | 12,564 | 1.05 | 444 |
| 24 | 30 | 230 | 230 | 1 | 6,900 | 5,520 | 5.5 | 18,845 | 1.57 | 660 |
| 48 | 60 | 230 | 230 | 1 | 13,800 | 11,040 | 11.0 | 37,691 | 3.14 | 1,320 |
| 16 | 20 | 120/208 | 208 | 3 | 7,197 | 5,757 | 5.8 | 19,656 | 1.64 | 696 |
| 24 | 30 | 120/208 | 208 | 3 | 10,795 | 8,636 | 8.6 | 29,484 | 2.46 | 1,032 |
| 35 | 50 | 120/208 | 208 | 3 | 17,992 | 12,594 | 12.6 | 42,997 | 3.58 | 14,712 |
| 48 | 60 | 120/208 | 208 | 3 | 21,616 | 17,293 | 17.3 | 58,968 | 4.91 | 2,076 |
| 80 | 100 | 120/208 | 208 | 3 | 36,027 | 28,821 | 28.8 | 98,279 | 8.19 | 3,456 |
| 100 | 125 | 120/208 | 208 | 3 | 45,033 | 36,027 | 36.0 | 122,849 | 10.24 | 4,320 |
| 120 | 150 | 120/208 | 208 | 3 | 54,040 | 43,232 | 43.2 | 147,419 | 12.28 | 5,184 |
| 16 | 20 | 230/400 | 230 | 3 | 13,856 | 11,085 | 11.0 | 37,691 | 3.14 | 1,320 |
| 24 | 30 | 230/400 | 230 | 3 | 20,785 | 16,628 | 16.6 | 56,563 | 4.71 | 1,992 |

*3-Phase power is calculated by multiplying single phase by the square root of 3 or 1.73.

**Tons of air conditioning required to remove heat from associated IT load.

***The volume of air that is typically required by the IT equipment for each kW of IT load can typically range from 80 to 140 CFM. 120 CFM was used for calculation.

Power Distribution & Climate Monitoring

# BELDEN

## Single-Phase PDUs



Front View 9LF1-101001      Rear View 9LF1-101001



9PH2-241007

### UL Listed Single-Phase PDUs

Type: B = Basic; L = Local Monitored

| Belden Part # | Type | De-Rated Power (kW) | Amps (A)/ Volts (V) | Plug Type | Total Receptacle | Receptacle Type/Qty | Thermal Circuit Breaker | On-Off Switch | Surge Supression | Monitoring-Local | Mounting (4) | Dimensions L x W x D (in.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9BF1-061001 | B | 1.4 | 15/120 | 5-15P | 6 | 5-15R/6 | Yes | Yes | No | No | Rack - 19" | 17 x 1.72 x 3.75 |
| 9BF1-061002 | B | 1.4 | 15/120 | 5-15P | 6 | 5-15R/6 | Yes | Yes | Yes | No | Rack - 19" | 17 x 1.72 x 3.75 |
| 9BF1-081001 | B | 1.4 | 15/120 | 5-15P | 8 | 5-15R/8 | Yes | Yes | No | No | Vertical | 24 x 1.61 x 1.61 |
| 9LF1-101001 | L | 1.4 | 15/120 | 5-15P | 10 | 5-15R/10 | Yes | Yes | No | Power | Rack - 19" | 17 x 1.72 x 4.5 |
| 9BF1-141001 | B | 1.4 | 15/120 | 5-15P | 14 | 5-15R/14 | Yes | Yes | Yes | No | Vertical | 47.5 x 1.61 x 1.61 |
| 9BG2-081001 | B | 1.9 | 20/120 | L5-20P | 8 | 5-20R/8 | Yes | Yes | No | No | Vertical | 24 x 1.61 x 1.61 |
| 9BG1-101001 | B | 1.9 | 20/120 | 5-20P | 10 | 5-20R/10 | Yes | Yes | Yes | No | Rack - 19" | 17 x 1.72 x 3.75 |
| 9LG1-101001 | L | 1.9 | 20/120 | 5-20P | 10 | 5-20R/10 | Yes | No | No | Power | Rack - 19" | 17 x 1.72 x 4.5 |
| 9BG1-141001 | B | 1.9 | 20/120 | 5-20P | 14 | 5-20R/14 | Yes | Yes | No | No | Vertical | 47.5 x 1.61 x 1.61 |
| 9BG2-141001 | B | 1.9 | 20/120 | L5-20P | 14 | 5-20R/14 | Yes | Yes | No | No | Vertical | 47.5 x 1.6.1 x 1.61 |
| 9BG1-141002 | B | 1.9 | 20/120 | 5-20P | 14 | 5-20R/14 | Yes | No | Yes | No | Vertical | 47.5 x 1.6.1 x 1.61 |
| 9BG2-141002 | B | 1.9 | 20/120 | L5-20P | 14 | 5-20R/14 | Yes | No | Yes | No | Vertical | 47.5 x 1.6.1 x 1.61 |
| 9PH2-241007 | P | 1.9 | 30/120 | L5-30P | 24 | 5-20R/24 | No | No | No | Power | Vertical | 66.25 x 2 x 2 |
| 9PB2-101002 | P | 5 | 30/208 | L6-30P | 10 | C-13L/10 | Magnetic | Breaker | No | Power | Rack - 19" | 17 x 1.72 x 8.5 |
| 9PB2-361007 | P | 5 | 30/208 | L6-30P | 36 | C-13/30 + C-19/6 | Magnetic | Breaker | No | Power | Vertical | 66.25 x 2 x 2 |

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-301001 = 10 ft). Available in 10, 15 ft.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) Standard PDU chassis color is black, custom color overlay available on request.



Front View 9PG1-101001      Rear View 9PG1-101001



9OB2-241001

### UL Listed Single-Phase PDUs

Type: P = Remote Power Monitored; O = Outlet Monitored

| Belden Part # | Type | De-Rated Power (kW) | Amps (A)/ Volts (V) | Plug Type | Total Receptacle | Receptacle Type/Qty | Thermal Circuit Breaker | On-Off Switch | Monitoring-Local/ Remote | Environmental Monitoring | Mounting (4) | Dimensions L x W x D (in.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9PG1-101001 | P | 1.9 | 20/120 | 5-20P | 10 | 5-20R/10 + 0 | No | No | Power/Aggregate | Yes - 2 Port | Rack - 19" | 17 x 1.72 x 8.5 |
| 9PB2-361005 | P | 5 | 30/208 | L6-30P | 36 | C-13/30 + C-19/6 | Magnetic | Breaker | Power/Circuit Breaker | Yes - 2 Port | Vertical | 66.25 x 2 x 2 |
| 9PB2-361009 | P | 5 | 30/208 | L6-30P | 36 | C-13L/30 + C-19L/6 | Magnetic | Breaker | Power/Circuit Breaker | Yes - 2 Port | Vertical | 72 x 2 x 2 |
| 9PB2-421003 | P | 5 | 30/208 | L6-30P | 42 | C-13/36 + C-19/6 | Magnetic | Breaker | Power/Circuit Breaker | Yes - 2 Port | Vertical | 70 x 2 x 2 |
| 9OB2-241001 | O | 5 | 30/208 | L6-30P | 24 | C-13L/18 + C-19L/6 | Magnetic | Breaker | Power/Circuit Breaker + Outlet | Yes - 2 Port | Vertical | 72 x 2.25 x 2.25 |

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-301001 = 10 ft). Available in 10, 15 ft.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) C-13L, L refers to receptacles with locking feature.

(4) Standard PDU chassis color is black, custom color overlay available on request.

(5) These PDUs have no Surge Supression.

Power Distribution & Climate Monitoring

## 3-Phase PDUs


9PI2-421004


9BL3-241002

### UL Listed 3-Phase PDUs

Type: B = Basic; P = Power Monitored

| Belden Part # | Type | De-Rated Power (kW) | Amps (A) x Phases | Input Volts (V)/ Output Volts (V) | Plug Type | Total Receptacle | Receptacle Type/Qty(s) | Circuit Breaker (Amp/Qty) | Monitoring- Local/Remote | Mounting | Dimensions L x W x D (in.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9PI2-421004 | P | 5.7 | 20 x 3 Ph. | 120/208 WYE/208 | L21-20P | 42 | C-13L/36 + C-19L/6 | No | Amp (X,Y,Z)/No | Vertical | 72 x 2 x 2 Dog House - No |
| 9PJ2-421003 | P | 8.6 | 30 x 3 Ph. | 120/208 WYE/208 | L21-30P | 42 | C-13/36 + C-19/6 | 20/3D | Amp (X,Y,Z)/No | Vertical | 72 x 2 x 2 Dog House - No |
| 9BJ2-331001 | B | 8.6 | 30 x 3 Ph. | 120/208 WYE/120 & 208 | L21-30P | 33 | C-13/24 + C-19/3 + 5-20R/6 | 20/3D | Amp (X,Y,Z)/No | Vertical | 66.25 x 2 x 2 Dog House - No |
| 9PC2-301001 | P | 11 | 20 x 3 Ph. | 230/400 WYE/230 | L22-20P | 30 | C-13L/24 + C-19L/6 | No | Amp (X,Y,Z)/No | Vertical | 66.25 x 2 x 2 Dog House - No |
| 9PD2-301002 | P | 16.6 | 30 x 3 Ph. | 230/400 WYE/230 | L22-30P | 30 | C-13L/24 + C-19L/6 | 20/6D | Amp (X,Y,Z)/No | Vertical | 72 x 2 x 2.25 Dog House - No |
| 9PD3-301001 | P | 16.6 | 30 x 3 Ph. | 230/400 WYE/230 | 4P, 5W | 30 | C-13L/24 + C-19L/6 | 20/6D | Amp (X,Y,Z)/No | Vertical | 72 x 2 x 2.25 Dog House - No |
| 9BL3-241002 | B | 17.3 | 60 x 3 Ph. | 208 Delta/208 | 3P, 4W | 24 | C-13L/12 + C-19L/12 | 20/6 | Breaker/No | Vertical | 72 x 2.25 x 3.44 Dog House - No |

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-301001 = 10 ft). Available in 10, 15 ft.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) C-13L, L refers to receptacles with locking feature.

(4) Ex: 20/3D, D refers to double pole breakers (20A in this case).

(5) Standard PDU chassis color is black, custom color overlay available on request.

(6) These PDUs have no Surge Supression or On/Off Switch.

(7) PDU "Dog House" hosts the circuit breaker and protrude from the PDU chassis by 1.44".


9PL3-241006


9OJ2-241004

### UL Listed 3-Phase PDUs

Type: P = Power Monitored; O = Outlet Monitored

| Belden Part # | Type | De-Rated Power (kW) | Amps (A) x Phases | Input Volts (V)/ Output Volts (V) | Plug Type | Total Receptacle | Receptacle Type/Qty(s) | Circuit Breaker (Amp/Qty) (4) | Monitoring- Local/Remote | Environ. Monitoring | Dimensions L x W x D (in.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9PJ2-421001 | P | 8.6 | 30 x 3 Ph. | 120/208 WYE/208 | L21-30P | 42 | C-13/36 + C-19/6 | 20/3D | Current/Current | No | 72 x 2 x 2 Dog House - No |
| 9OJ2-241004 | O | 8.6 | 30 x 3 Ph. | 120/208 WYE/208 | L21-30P | 24 | C-13L/18 + C-19L/6 | 20/3D | Power/X, Y, Z + Outlet | Yes - 2 Port | 72 x 2.25 x 2.25 Dog House - Yes |
| 9OC2-241001 | O | 11 | 20 x 3 Ph. | 230/400 WYE/230 | L22-20P | 24 | C-13L/18 + C-19L/6 | No | Power/X, Y, Z + Outlet | Yes - 2 Port | 66.25 x 2 x 2 Dog House - No |
| 9OD3-241001 | O | 16.6 | 30 x 3 Ph. | 230/400 WYE/230 | 4P, 5W | 24 | C-13L/18 + C-19L/6 | 20/6 | Power/X, Y, Z + Outlet | Yes - 2 Port | 72 x 2.25 x 2.25 Dog House - Yes |
| 9PL3-241006 | P | 17.3 | 60 x 3 Ph. | 208 Delta/208 | 4P, 4W | 24 | C-13L/24 + C-19L/12 | 20/6D | Power/X, Y, Z | Yes - 2 Port | 72 x 2.25 x 3.44 Dog House - No |

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-301001 = 10 ft). Available in 10, 15 ft.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) C-13L, L refers to receptacles with locking feature.

(4) Ex: 20/3D, D refers to double pole breakers (20A in this case).

(5) Standard PDU chassis color is black, custom color overlay available on request.

(6) These PDUs have no Surge Supression or On/Off Switch.

(7) PDU "Dog House" hosts the circuit breaker and protrude from the PDU chassis by 1.44".

(8) All these 3-Phase PDUs are vertically mounted.

Power Distribution & Climate Monitoring

# Single- and 3-Phase PDUs

Front View 9SO5-080001          Rear View 9SO5-080001

9SJ2-241001     9SJ2-241002

## UL Listed Single- and 3-Phase PDUs

Type: S = Remotely Switched

| Belden Part # | Type | De-Rated Power (kW) | Amps (A) x Phases | Input Volts (V)/ Output Volts (V) | Plug Type | Total Receptacle | Receptacle Type/ Qty(s) | Circuit Breaker (Amp/Qty) (4) | Monitoring-Local/ Remote | Mounting (5) | Dimensions L x W x D (in.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9SG1-081001 | S | 1.9 | 20 | 120/120 | 5-20P | 8 | 5-20R/8 | No | Power/Agg Power | Rack - 19" | 17 x 1.72 x 8.5 Dog House - No |
| 9SO5-080001 | S | 1.9 or 3.3 | 20 | 120 or 208/120 or 208 | C-20 | 8 | C-13L/8 | No | Power/Agg + Outlet | Rack - 19" | 17 x 1.72 x 8.5 Dog House - No |
| 9SB2-241001 | S | 5 | 30 | 208/208 | L6-30P | 24 | C-13L/20 + C-19L/4 | 20/2D | Power/Agg, Circuit, Outlet | Vertical | 70 x 2.5 x 2.25 Dog House - Yes |
| 9SJ2-241001 | S | 8.6 | 30 x 3 Ph. | 120/208 WYE/208 | L21-30P | 24 | C-13L/18 + C-19L/6 | 20/3D | Power/Agg, Circuit | Vertical | 70 x 2.5 x 2.25 Dog House - Yes |
| 9SJ2-241002 | S | 8.6 | 30 x 3 Ph. | 120/208 WYE/208 | L21-30P | 24 | C-13L/18 + C-19L/6 | 20/3D | Power/Agg, Circuit, Outlet | Vertical | 70 x 2.5 x 2.25 Dog House - Yes |
| 9SC3-241001 | S | 11 | 20 x 3 Ph. | 230/400 WYE/230 | 3P, 4W | 24 | C-13L/21 + C-19L/3 | No | Power/Agg, Circuit | Vertical | 66.25 x 2.5 x 2.25 Dog House - No |
| 9SC3-241002 | S | 11 | 20 x 3 Ph. | 230/400 WYE/230 | 3P, 4W | 24 | C-13L/21 + C-19L/3 | No | Power/Agg, Circuit, Outlet | Vertical | 66.25 x 2.5 x 2.25 Dog House - No |
| 9SC2-241001 | S | 11 | 20 x 3 Ph. | 230/400 WYE/230 | L22-20P | 24 | C-13L/21 + C-19L/3 | No | Power/Agg, Circuit | Vertical | 66.25 x 2.5 x 2.25 Dog House - No |
| 9SC2-241002 | S | 11 | 20 x 3 Ph. | 230/400 WYE/230 | L22-20P | 24 | C-13L/21 + C-19L/3 | No | Power/Agg, Circuit, Outlet | Vertical | 66.25 x 2.5 x 2.25 Dog House - No |
| 9SD3-241001 | S | 16.6 | 30 x 3 Ph. | 230/400 WYE/230 | 4P, 5W | 24 | C-13L/21 + C-19L/3 | 20/6 | Power/Agg, Circuit | Vertical | 72 x 2.5 x 2.25 Dog House - No |
| 9SD3-241002 | S | 16.6 | 30 x 3 Ph. | 230/400 WYE/230 | 4P, 5W | 24 | C-13L/21 + C-19L/3 | 20/6 | Power/Agg, Circuit, Outlet | Vertical | 72 x 2.5 x 2.25 Dog House - No |
| 9SD2-241001 | S | 16.6 | 30 x 3 Ph. | 230/400 WYE/230 | L22-30P | 24 | C-13L/21 + C-19L/3 | 20/6 | Power/Agg, Circuit | Vertical | 72 x 2.5 x 2.25 Dog House - No |
| 9SD2-241004 | S | 16.6 | 30 x 3 Ph. | 230/400 WYE/230 | L22-30P | 24 | C-13L/21 + C-19L/3 | 20/6 | Power/Agg, Circuit, Outlet | Vertical | 72 x 2.5 x 2.25 Dog House - No |
| 9SL3-241005 | S | 17.2 | 60 x 3 Ph. | 208 Delta/208 | 3P, 4W | 24 | C-13L/18 + C-19L/6 | 20/6D | Power/Agg, Circuit | Vertical | 66.25 x 4 x 3.45 Dog House - No |
| 9SL3-241004 | S | 17.2 | 60 x 3 Ph. | 208 Delta/208 | 3P, 4W | 24 | C-13L/18 + C-19L/6 | 20/6D | Power/Agg, Circuit, Outlet | Vertical | 66.25 x 4 x 3.45 Dog House - No |

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-301001 = 10 ft). Available in 10, 15 ft. 9SO5-080001 Power Cord is sold separately.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) C-13L, L refers to receptacles with locking feature.

(4) Ex: 20/3D, D refers to double pole breakers (20A in this case).

(5) Standard PDU chassis color is black, custom color overlay available on request.

(6) These PDUs have no On/Off Switch or Surge Supression.

(7) PDU "Dog House" hosts the circuit breaker and protrude from the PDU chassis by 1.44".

(8) All these Single- and 3-Phase PDUs have a Switched Outlet and a 2-port Environmental Monitor.

## Faster.
## Easier.
## Better.

# PDU Accessories — Mounting, Cord Management and Cord Set

| Description | Belden Part Number |
|---|---|
| **Tool-Less PDU Mounting Panel** (for XHM and XHS Style Cabinets) | |
| Lacing-PDU Mounting Panel, 3.5"W, 42RU, Black | HVMP014201 |
| Lacing-PDU Mounting Panel, 3.5"W, 45RU, Black | HVMP014501 |
| Lacing-PDU Mounting Panel, 3.5"W, 48RU, Black | HVMP014801 |
| Lacing-PDU Mounting Panel, 7"W, 42RU, Black | HVMP024201 |
| Lacing-PDU Mounting Panel, 7"W, 45RU, Black | HVMP024501 |
| Lacing-PDU Mounting Panel, 7"W, 48RU, Black | HVMP024801 |
| Lacing-PDU Mounting Panel, 3.5"W, 42RU, White | HVMP014202 |
| Lacing-PDU Mounting Panel, 3.5"W, 45RU, White | HVMP014502 |
| Lacing-PDU Mounting Panel, 3.5"W, 48RU, White | HVMP014802 |
| Lacing-PDU Mounting Panel, 7"W, 42RU, White | HVMP024202 |
| Lacing-PDU Mounting Panel, 7"W, 45RU, White | HVMP024502 |
| Lacing-PDU Mounting Panel, 7"W, 48RU, White | HVMP024802 |
| **Power Cord Management** | |
| Cable Management Ring Plastic (Qty = 5) 3" x 1.5" Reversible | XMR01 |
| Cable Management Ring Kit (Qty = 5) 2.5"W x 3"D | XMR03 |
| Slack Management Spool Kit (includes 2 spools) | BHSP020 |
| Quick Mount Base (Qty=10) with Fastener, for 1/4" Holes | XCTM |
| Velcro Cable Ties, 25 per Roll, 8" L x 0.5"W | AX100783 |
| Velcro Cable Ties, 25 per Roll, 12" L x 0.5"W | AX100784 |
| **Cord Set*** (C13/C19, C19/C20 - UL - cUL Listed) | |
| C13 to C14 Non-Locking Cord Set - Y" Long — Black | CSC13C14yyBK |
| C13 to C14 Non-Locking - 36" Long — Black | CSC13C1436BK |
| C13 to C14 Non-Locking - 48" Long — Black | CSC13C1448BK |
| C19 to C20 Non-Locking Cord Set - Y" Long — Black | CSC19C20yyBK |
| C19 to C20 Non-Locking - 36" Long — Black | CSC19C2036BK |
| C19 to C20 Non-Locking - 48" Long — Black | CSC19C2048BK |
| C13 Locking to C14 - 20" Long — Blue | CSLC13C1420BL |
| C13 Locking to C14 - 20" Long — Orange | CSLC13C1420OR |
| C19 Locking to C20 - 20" Long — Blue | CSLC19C2020BL |
| C19 Locking to C20 - 20" Long — Orange | CSLC19C2020OR |
| C13 Locking to C14 - 39" Long — Blue | CSLC13C1439BL |
| C13 Locking to C14 - 39" Long — Orange | CSLC13C1439OR |
| C19 Locking to C20 - 39" Long — Blue | CSLC19C2039BL |
| C19 Locking to C20 - 39" Long — Orange | CSLC19C2039OR |
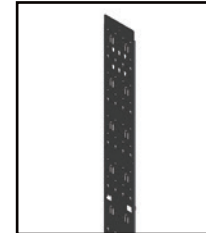


7" Lacing-PDU mounting panel
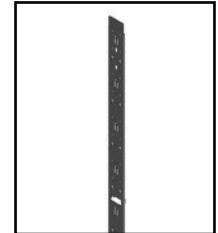


3.5" Lacing-PDU mounting panel



Cable Management Ring (Plastic)



Quick Mount Base



Locking Cord Set*

*Built within the plug housing on the female end (C13/C19) of the cord, the patented integrated locking mechanism is protected against vibration and external elements that can easily dislodge other plug securing solutions, like external locking clips and guides. This self-contained locking mechanism engages with any standard IEC male connector (C14/C20). The cord locking feature is only available at the device-end of the cord sets. A power strip with locking receptacles must be available to secure these cords to the PDU.

Notes: yy = 12, 24, 36 ... 96 = cord length 12 to 96 inches; 12 inch increments.

Power Distribution & Climate Monitoring

# Power Distribution Unit Configuration Guide
## Please select the desired configuration and specifications and submit to Belden.

Power Availability _____  Phone _____  E-mail _____

Quantity Required _____  Target Price _____  Project Timeline _____

First Unit Required by Date _____  Comparable Competitive Unit Brand/Model# _____

## Electrical Configuration

### Power Input

| Quantity** | Plug Type | Input AMPS | Input VOLTS |
|---|---|---|---|
| | 5-15P | 15 | 125 |
| | L5-15P | 15 | 125 |
| | 5-20P | 20 | 125 |
| | L5-20P | 20 | 125 |
| | 6-20P | 20 | 250 |
| | L6-20P | 20 | 250 |
| | L14-20P | 20 | 125/250 |
| | L21-20P | 20 x 3~ | 120/208 WYE |
| | L5-30P | 30 | 125 |
| | L6-30P | 30 | 250 |
| | L14-30P | 30 | 125/250 |
| | L15-30P | 30 x 3~ | 250 Delta |
| | L21-30P | 30 x 3~ | 120/208 WYE |
| | IEC C-20 Inlet (No Cord) | 20/16* | 125 or 250 |
| | IEC Pin & Sleeve 2 Pole/3 Wire | 20/16* | 250/230* |
| | IEC Pin & Sleeve 3 Pole/4 Wire | 20 | 250 3~ |
| | IEC Pin & Sleeve 2 Pole/3 Wire | 30/32* | 250/230* |
| | IEC Pin & Sleeve 3 Pole/4 Wire | 30 | 250 3~ |
| | IEC Pin & Sleeve 2 Pole/3 Wire | 60/63* | 250/230* |
| | IEC Pin & Sleeve 3 Pole/4 Wire | 60 | 250 3~ |

**Cord Length**

Notes:
*Rating for CE Products
**Quantity = # of Circuits

### Power Input

| Quantity | Receptacle Type | AMPS | VOLTS |
|---|---|---|---|
| | 5-15R Duplex | 15 | 125 |
| | 5-15R Individual | 15 | 125 |
| | L5-15R Duplex | 15 | 125 |
| | 5-20R Duplex | 20 | 125 |
| | 5-20R Individual | 20 | 125 |
| | L5-20R | 20 | 125 |
| | 6-20R Duplex | 20 | 250 |
| | L6-20R | 20 | 250 |
| | L5-30R | 30 | 125 |
| | L6-30R | 30 | 250 |
| | IEC C-13 | 15/10* | 125 or 250 |
| | IEC C-19 | 20/16* | 125 or 250 |
| | Other - Please Specify | | |

### Physical Configuration

| | Dimensional Limits | | Mounting Orientation |
|---|---|---|---|
| | Length | | Horizontal |
| | Width | | Vertical |
| | Height | | |

### Hardwire Options

| Quantity** | |
|---|---|
| | 6" Wire Tails with Removable Plate |
| | Flexible Conduit |
| | Terminal Block |

### Additional Information

_____
_____
_____
_____

### Power Switch / Surge Supression

| | Power Switch | | Surge Supression |
|---|---|---|---|
| | No | | No |
| | Yes | | Yes |
| | Yes - with Cover | | |

### Monitoring

| | Current Local | | Current Remote |
|---|---|---|---|
| | No | | No |
| | Yes - Current (Amps) Only | | Yes - Circuit Level |
| | Yes - Scrolling Display (Volts, Amps, Watts, Power Factor) | | Yes - Outlet Level |
| | Environmental | | Remote Switching |
| | No | | No |
| | Yes | | Yes |

### Circuit Breakers / Isolated Ground

| | Circuit Breakers | | Isolated Ground |
|---|---|---|---|
| | No (required by NEC in some units) | | No |
| | Yes | | Yes |

### 3rd Party Testing - Compliance

| | | | |
|---|---|---|---|
| | UL® Listed | | UR - UL® Recognized |
| | FCC Part 15 Class A | | CE® |
| | None Required | | Other - Please Specify |

# Plug and Receptacle Configuration Chart

## NEMA Plugs and Receptacles

| AMP | VOLTS | Straight-Blade Plug | Straight-Blade Receptacle | AMP | VOLTS | Straight-Blade Plug | Straight-Blade Receptacle |
|---|---|---|---|---|---|---|---|
| 15 | 125 | 5-15P | 5-15R | 20 | 250 | 6-20P | 6-20R |
| 20 | 125 | 5-20P | 5-20R | | | | |

| AMP | VOLTS | Twist-Lock Plug | Twist-Lock Receptacle | AMP | VOLTS | Twist-Lock Plug | Twist-Lock Receptacle |
|---|---|---|---|---|---|---|---|
| 15 | 125 | L5-15P | L5-15R | 20 | 120/208 x 3~ WYE | L21-20P | L21-20R |
| 20 | 125 | L5-20P | L5-20R | 20 | 230/400 x 3~ WYE | L22-20P | L22-20R |
| 30 | 125 | L5-30P | L5-30R | 30 | 120/208 x 3~ WYE | L21-30P | L21-30R |
| 20 | 250 | L6-20P | L6-20R | 30 | 230/400 x 3~ WYE | L22-30P | L22-30R |
| 30 | 250 | L6-30P | L6-30R | 30 | 250 x 3~ Delta | L15-30P | L15-30R |
| 20 | 125/250 | L14-20P | L14-20R | **AMP** | **VOLTS** | **California Style** | |
| 30 | 125/250 | L14-30P | L14-30R | 50 | 250 x 3~ Delta | 3P, 4W | 3P, 4W |

## IEC Plugs and Receptacles

| AMP | VOLTS | Power Inlet | Power Receptacle | AMP | VOLTS | Power Inlet | Power Receptacle |
|---|---|---|---|---|---|---|---|
| 15/10* | 125 or 250 | C-14 | C-13 | 20/16* | 125 or 250 | C-20 | C-19 |

| AMP | VOLTS | Pin & Sleeve | | AMP | VOLTS | Pin & Sleeve | |
|---|---|---|---|---|---|---|---|
| 20/16* | 250/230* | 2P, 3W | 2P, 3W | 60/63* | 250/230* | 2P, 3W | 2P, 3W |
| 20 | 250 | 3P, 4W | 3P, 4W | 60 | 250 | 3P, 4W | 3P, 4W |
| 30/32* | 250/230 | 2P, 3W | 2P, 3W | 20/16* | 230/400* x 3~ WYE | 4P, 5W | 4P, 5W |
| 30 | 250 | 3P, 4W | 3P, 4W | 30/32* | 230/400* x 3~ WYE | 4P, 5W | 4P, 5W |

*Rating for CE Products

### What is 3-Phase Delta?

3-Phase Delta from 208V Source

L15-20P Plug
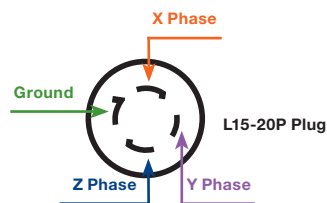
A 3-Phase Delta is a 4-wire configuration consisting of 3-Phase conductors (X, Y and Z) and a Ground. Without the neutral present, only phase-to-phase wiring is possible. The potential between any 2-Phase conductors is typically 208V.

### What is 3-Phase WYE?

3-Phase Delta from 120/208V Source

L21-20P Plug
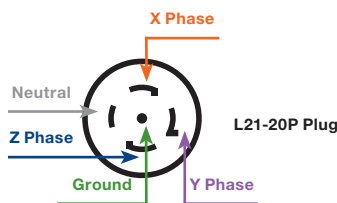
A 3-Phase Delta 120/208V WYE is a 5-wire configuration consisting of 3-Phase conductors (X, Y and Z), Neutral and Ground. The potential between any 2-Phase conductors is 208V. The potential between any phase and neutral is 120V. This configuration can be wired to provide 120V, 208V or a combination of both voltages within one PDU.



3 Phase Delta | 3 Phase WYE

X Phase
208V (XY) | 208V (XY)
Y Phase
208V (ZX) | 208V (ZX)
208V (YZ) | 208V (YZ) | 120V (XN)
Z Phase
120V (YN)
120V (ZN)
Neutral
Ground

Power Distribution & Climate Monitoring
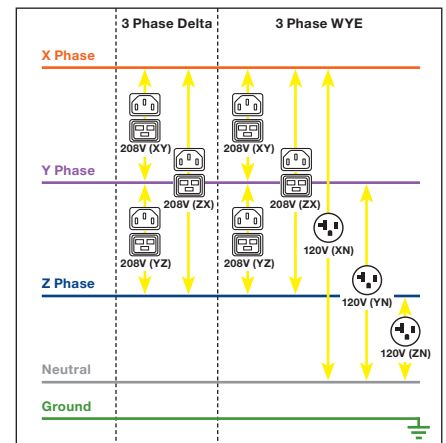
# Environmental Monitors and Sensors



9318-0500



9318-0521

## Applications

- Belden climate monitors and sensors allow precise monitoring/alarming of key environmental parameters for improved equipment availability in mission-critical applications (data center, networking closet, remote locations)
- Built-in intuitive web interface for remote access via Ethernet browser
- Built-in and external sensor options (temperature, humidity, airflow, water detection, door position, smoke)
- SNMP-enabled for compatibility with leading DCIM package
- Recognize IP-based camera for space viewing
- Set alarm threshold, can be sent to up to five e-mail addresses
- Allows viewing of data graphs and analysis of historical logs
- Power supply included
- UL and cUL listed



9318-0503 Temp/Airflow/Humidity Remote Sensor



9318-0506 Remote PDU Display

| Description | Belden Part Number |
|---|---|
| **Other Accessories** | |
| **Environmental Monitors** | |
| Compact Self-Contained Environmental Monitor (5.25"Lx1.75"Hx1.5"W); Provides Web-Based Remote Surveillance with On-Board Temperature and Humidity/Dew Point Sensors. Has Input Capacity for Two External Sensors | **9318-0500** |
| Rack-Mount 1RU Environmental Monitor. Provides Web-Based Remote Surveillance of Temperature and Relative Humidity. Up to (4) Additional Digital Sensors Can Be Connected to the Unit by daisy-chaining or using a splitter. | **9318-0521** |
| **Environmental Monitors Accessories** | |
| RJ12 5-Way Splitter | **9318-0520** |
| Remote PDU Display, RJ12 Connection | **9318-0506** |
| **Sensors** (compatible with environmental monitors and intelligent PDU) | |
| Remote Temperature Sensor with 12 Ft. Wire | **9318-0501** |
| Remote Temperature Sensor with 25 Ft. Wire | **9318-0501-025** |
| Remote Temperature Sensor with 50 Ft. Wire | **9318-0501-050** |
| Remote Temperature/Airflow/Humidity and Dew Point Sensor with 12 Ft. Wire | **9318-0503** |
| Remote Temperature/Airflow/Humidity and Dew Point Sensor with 20 Ft. Wire | **9318-0515** |
| Remote Temperature/Airflow/Humidity and Dew Point Sensor with 50 Ft. Wire | **9318-0516** |
| Remote Door Position Analog Sensor | **9318-0504** |
| Remote Water Detection Analog Sensor | **9318-0505** |

Power Distribution & Climate Monitoring

# Warranty and Shipping Policy

## Warranty

### Limited Warranty

Belden warrants that, for a period of one (1) year following the date of delivery to the original customer, the products it offers for sale in the catalog are free from defects in material and workmanship. The foregoing warranty is subject to the terms, limitations and conditions set forth below.

### Liability

Belden's sole liability under this warranty will be to repair or replace, at its discretion, products that do not meet the specifications and descriptions provided in the catalog or purchase order due to defects in material and workmanship. Under no circumstances shall Belden be liable for any consequential or special damages for breach of this warranty. Belden's total liability under this warranty shall be limited to the price actually paid by the customer for the product(s) covered. Except as specifically set forth above, Belden expressly disclaims any other representation or warranties of any kind, expressed or implied, arising by law or custom, with respect to products set forth in the catalog or otherwise sold by Belden, including without limitation, warranties or merchantability, fitness for a particular purpose, non-infringement or any other matter.

### Conditions of Warranty

This warranty applies only to standard products set forth in the catalog. Custom products are covered by warranties stated in the Terms and Conditions of Belden's quotation at the time of the order.

### Repairs or Adjustments

Belden, at its discretion, will make any repairs or adjustments to any products that are due to defects and/or workmanship. This warranty does not extend to any items that upon inspection by Belden are deemed to have been misused, neglected, improperly treated, improperly installed, or used in violation of instructions or specifications approved by Belden, or otherwise handled, installed, shipped or used in violation of industry standards for metal fabrication and solid state electronic equipment.

### Powerstrip Warranty

If a BELDEN power strip product becomes defective during the warranty period listed below, BELDEN will elect to either repair or replace the unit free of charge.

**Basic Power Strips** – Three Years

**Metered, Monitored and Managed Power Strips** – Three Years

**Environmental Monitoring Units** – Three Years

This warranty does not include damage to the product resulting from accident or misuse, including exposure to water or any other corrosive material. This warranty excludes damage to equipment if surge or spike reaches that equipment through an unprotected source connected to it (i.e., printer, modem, phone line, etc.). It shall not apply to any product, which has been connected, installed, used or otherwise adjusted other than in accordance with written instructions furnished by BELDEN. **WARRANTY WILL BE VOIDED IF THE UNITS ARE OPENED, MODIFIED OR ALTERED DURING THE WARRANTY PERIOD.**

### Containment and Cooling Warranty

BELDEN warrants Containment and Cooling products for a period of one (1) year following the date of delivery. If the BELDEN product becomes defective during the one (1) year warranty period, BELDEN will elect to either repair or replace the unit free of charge. This warranty does not include damage to the product resulting from accident or misuse, including exposure to water or any other corrosive material. **WARRANTY WILL BE VOIDED IF THE UNITS ARE OPENED, MODIFIED OR ALTERED DURING THE WARRANTY PERIOD.**

## Shipping Policy

### Freight Handling Charges

**Third-Party Billing** – Customer will specify carrier. Freight will be third-party billed other than to Belden or the customer.

The customer will supply a third-party account number or third-party billing address.

**Freight Collect** – Customer to specify carrier. Either a freight account number is provided or freight charges will be paid at destination upon delivery.

**Prepaid and Add** – Belden will specify carrier which has contractual agreements with select carriers.

All freight charges that appear on initial product invoice will be paid by the customer, and will not require any additional freight documentation. Belden's billing cycle will only indicate on the invoice a freight charge from dock to dock. Any accessorial charges (e.g., lift gate, union driver) will be billed on an additional invoice other than the initial billing that will show the accessorial charges.

### Shipping Policy

Belden will provide estimated freight charges and will not be liable for charges due to problems that may occur in transit or upon delivery or not known at the time of the initial quote (accessorial charges). All shipments leaving Belden are FOB origin.

**Inside Delivery** – A carrier driver will make an inside delivery if an adequate loading dock is available to roll off freight to a trailer level dock. The driver will be equipped to move the freight via hand truck or pallet jack and must be able to get to the inside destination without any problem of obstacles that would cause delays. The customer must supply a freight elevator if delivery requires it. This action may result in additional freight charges.

**Lift Gate Service** – Usually a lift gate is needed when a loading dock is not available. The freight is lowered to ground level and delivered to the customer's door "only." Not all trailers are equipped with a lift gate and most carrier terminals have a limited number of lift gate trailers. This may cause a delay in shipment. This procedure may require an additional fee.

**Notification** – To coordinate delivery between the customer and the carrier, the customer must supply a phone number and contact person. This procedure may require an additional fee.

**Re-Consignment** – Once freight has left the Belden dock, the delivery destination address will be scheduled in the carrier dispatch system. A change of destination address is possible, depending upon the timing of delivery. This action may result in additional freight charges.

**Redelivery** – When a delivery is refused by a customer for any reason, other than the fault of the carrier, the freight will be returned to the carrier's dock. A redelivery charge will apply.

### Damages

All damages must be reported to Belden within three (3) working days upon delivery. Failure to report any damages will release Belden from any and all claims. It is the responsibility of the customer's receiving personnel to check all shipping cartons for discrepancies (e.g., dents, punctures). All discrepancies to the shipping container should be noted on the carrier's paperwork and documented. If, after opening the container, it is found that there is damage to the product, the carton is to be examined to determine that the damage was due to shipping.

Failure to examine cartons at delivery, and signing the carrier's paperwork, releases the carrier and Belden from any and all freight claims.

Third-party billing customers will handle any and all freight claim damage with the carrier and are responsible for all freight charges.

### Packaging

BELDEN cabinets are packaged in cardboard protective corner posts and protective plastic cover. The cabinets are then secured to a skid by banding prior to shipment.

Less than truck load shipments (LTL) might require additional packaging due to multiple handling locations. Belden provides full protective packaging (i.e. 3" honeycomb cardboard corner posts, honeycomb top cardboard cover, cardboard wrap, shock-watch drop spot indicator) for an additional fee to accommodate LTL shipments with special needs. Please contact your customer service or sales rep to discuss the packaging options.

### Return Policy for Repair, Replacement, Modification or Credit

Prior approval must be obtained for any products being returned. Upon approval an RMA number will be assigned to the items being returned. This RMA number MUST appear on all shipping documents and on the outside of each carton. Failure to include the RMA number on the carton will result in the refusal of delivery and return to the customer, freight collect.

All products returned for reasons other than repair or replacement are subject to a 15% restocking fee and must be shipped prepaid. In addition to the 15% restocking fee, the customer is responsible for properly packaging and returning the product in reusable condition. If not, additional charges may be added to the restocking fee. If a customer holds a product for more than ten (10) days, a return for credit will be voided.

Any or all special customized products can only be returned for modifications or repair of damages.

All products being returned shall be prepaid (unless they are being returned due to defect or damage), packaged in good condition and shipped to:

**Belden**
**2001 North Main Street**
**Washington, PA 15301**

# Part Number Index

1.800.BELDEN.1 (800.235.3361)　　　www.belden.com

# Faster.
# Easier.
# Better.

## Belden Rack and Cabinet Manufacturing
### State-of-the-Art Manufacturing and Assembly Operation

### Lean Manufacturing

Belden's lean manufacturing philosophy is exemplified in its manufacturing plant, where infrastructure solutions, including racks, cabinets, heat containment and rack power distribution units, are produced. The plant is structured for cell-based manufacturing, where automated machines, such as the CNC punch press, CNC laser-punch combination machine and CNC $CO_2$ lasers, work seamlessly with semi-automated metal-bending machines and assembly operations.

### Packaging and Shipping

In order to provide our customers with high-performance cabinet systems and just-in-time delivery, the factory process flow is based on a value stream map, with raw materials received at a receiving dock (close to fabricating cells) and finished goods shipped from a shipping dock (close to the packaging cell). All cabinets are shipped with unique serial number tags, enabling full traceability.

### Environmentally Friendly Powder Coating

Belden's powder-coating process involves industry leading five-stage wash and pre-treatment steps, ensuring a lasting and durable finish. Each cabinet is baked in compliance with ASTM standards to prevent paint from scaling or chipping, thus ensuring rust-proof cabinets. The entire process is environmentally friendly, with complete conformance to both state and federal "Clean Air Act" guidelines.

### Quality Inspection

The cell-based assembly process includes stringent quality checks at each location within the cell, which are tracked in an assembly check list by each associate assembling a cabinet system. Throughout this manufacturing process, the external quality, measured in defects per million, is less than 100. Lean daily management (LDM) and continuous improvement processes drive manufacturing and design philosophy at Belden to ensure each customer's quality and delivery expectations are met in a safety conscious work environment.

### Fabrication

Precision $CO_2$ lasers with automated loading and unloading capabilities are at the heart of our sheet metal fabrication cell, with defect-free laser cutting at speeds up to 400 inches per minute. The parts are then sent through a continuous flow of metal forming, robotic welding, powder coating and assembly cells.

Our **modern manufacturing and assembly facility** ensures that customers receive the quality products they've come to expect.

Part Number Index

# BELDEN

## GLOBAL LOCATIONS

**For worldwide Sales and Technical Support, visit: www.belden.com**

### UNITED STATES

**Division Headquarters**

401 Pennsylvania Parkway, #200
Indianapolis, IN
USA
**Phone: (1)-317-818-6300**
Inside Sales: (1)-800-235-3361
Fax: (1)-317-818-6382
info@belden.com

**Infrastructure Solutions**
**Manufacturing Operations**

2001 N. Main Street
Washington, PA 15301
USA
**Phone: (1)-800-793-2954**
        (1)-724-228-7373
Fax:    (1)-724-228-3920

### CANADA

**National Business Center**

2310 Alfred–Nobel Boulevard
St-Laurent, Quebec H4S 2B4
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**Phone: 514-822-2345**
Fax: 514-822-7979
info@belden.com

### MEXICO

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Piso 1 Oficina 102
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Benito Juárez , C.P. 03940
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**Phone: +52 55-5523-7733**
Fax: +52 55-5528-8077
ventas.mexico@belden.com

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